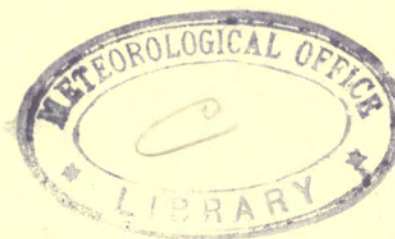


THE DAILY AEROLOGICAL RECORD

1st October to 31st December

F2913.

1950



METEOROLOGICAL OFFICE

LONDON, W.C.2

INTRODUCTION

THE DAILY AEROLOGICAL RECORD.

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



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

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

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

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

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

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

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

Heights.—The heights are computed from the values of temperature, pressure and humidity: the gravitational acceleration g is assumed constant and equal to $980.62 \text{ cm sec}^{-2}$, being that at latitude 45° at sea level: the gas-constant R is taken as $2.8703 \times 10^6 \text{ erg gm}^{-1} \text{ deg. C}^{-1}$: the air density at 1,000 mb. and 0°C . is taken as $.0012762 \text{ gm cm}^{-3}$. The height corresponding to the pressure of 1,000 mb. is interpolated or extrapolated, according as the M.S.L. pressure is above or below 1,000mb. In drawing the contours of the 700, 500 and 300 mb. surfaces as reproduced in the charts, assistance is obtained from the observations of wind at or near those levels.

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

- Type I. The tropopause is indicated by a definite inversion.
- Type II. There is no inversion, but a sharp discontinuity, the lapse rate above the discontinuity being 1°F . per 1,000 feet or less.
- Type III. There is neither an inversion nor a discontinuity, but the lapse rate falls gradually to a value less than 1°F . per 1,000 feet. The point where the lapse rate drops to the value is taken as the tropopause.

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

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

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

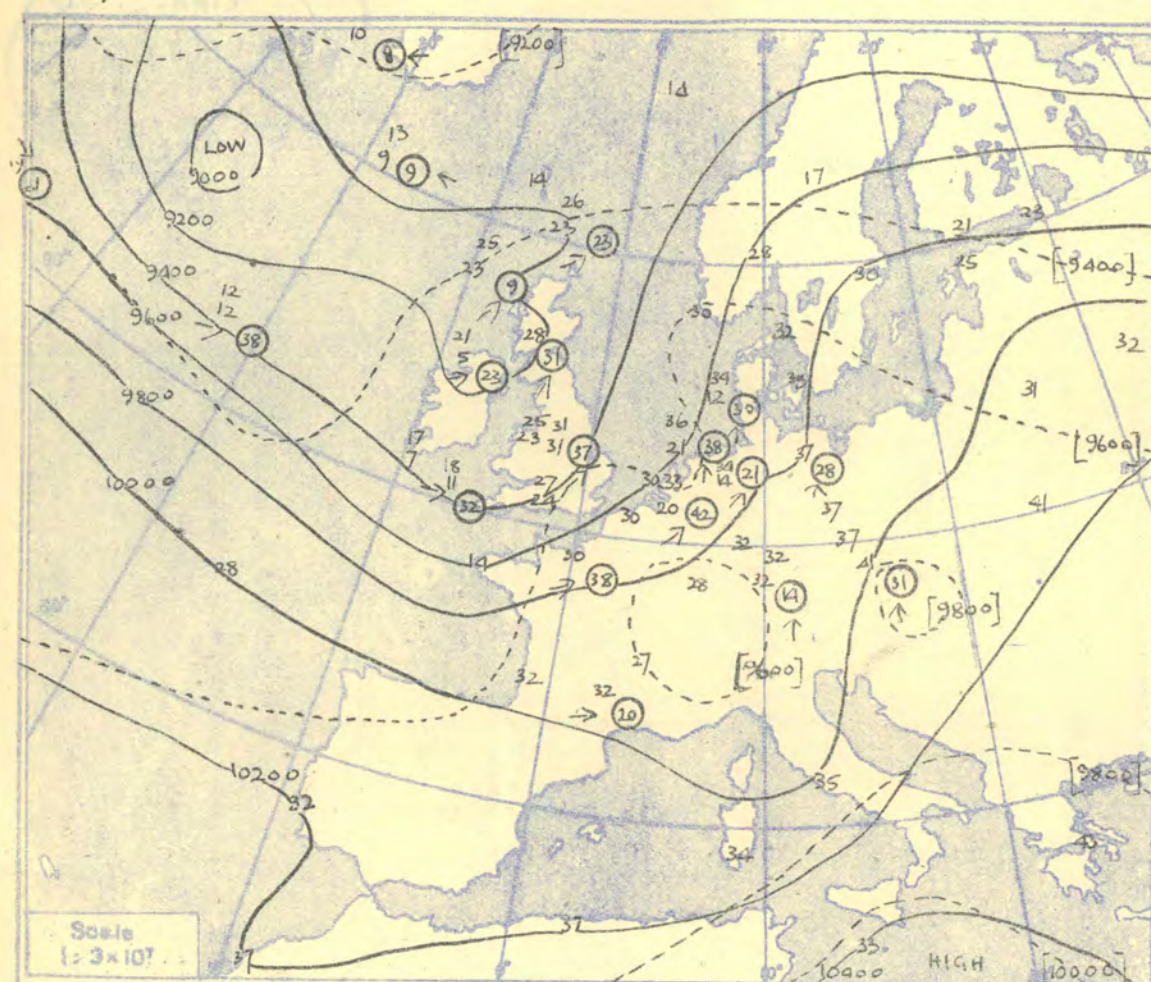
Abbreviations. Besides the standard abbreviations for cloud forms the following are also used:—

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

03h.
9217
996
18 OCT 1950
OFFICE

[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 02 h. GMT.

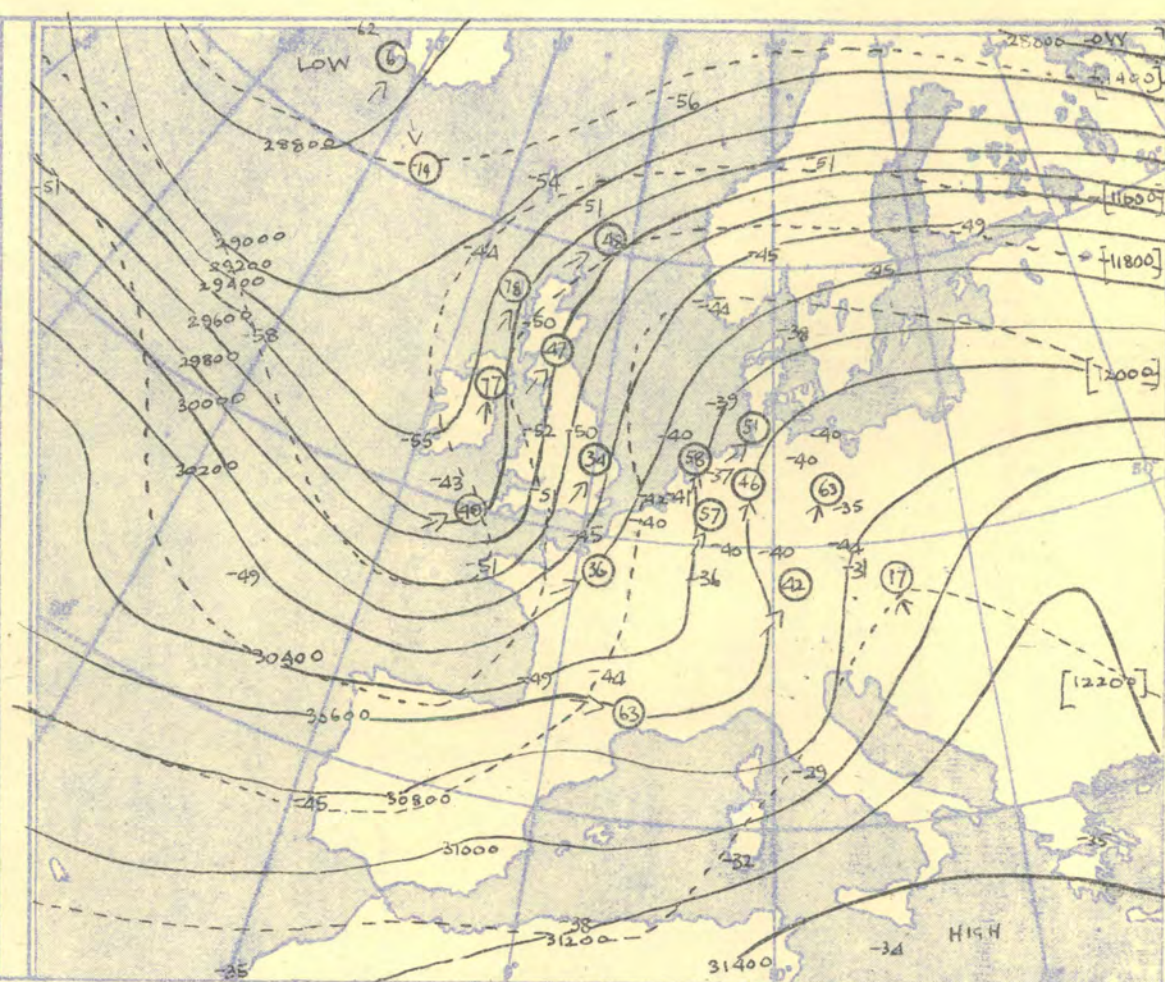


Scale
1:3x10⁷

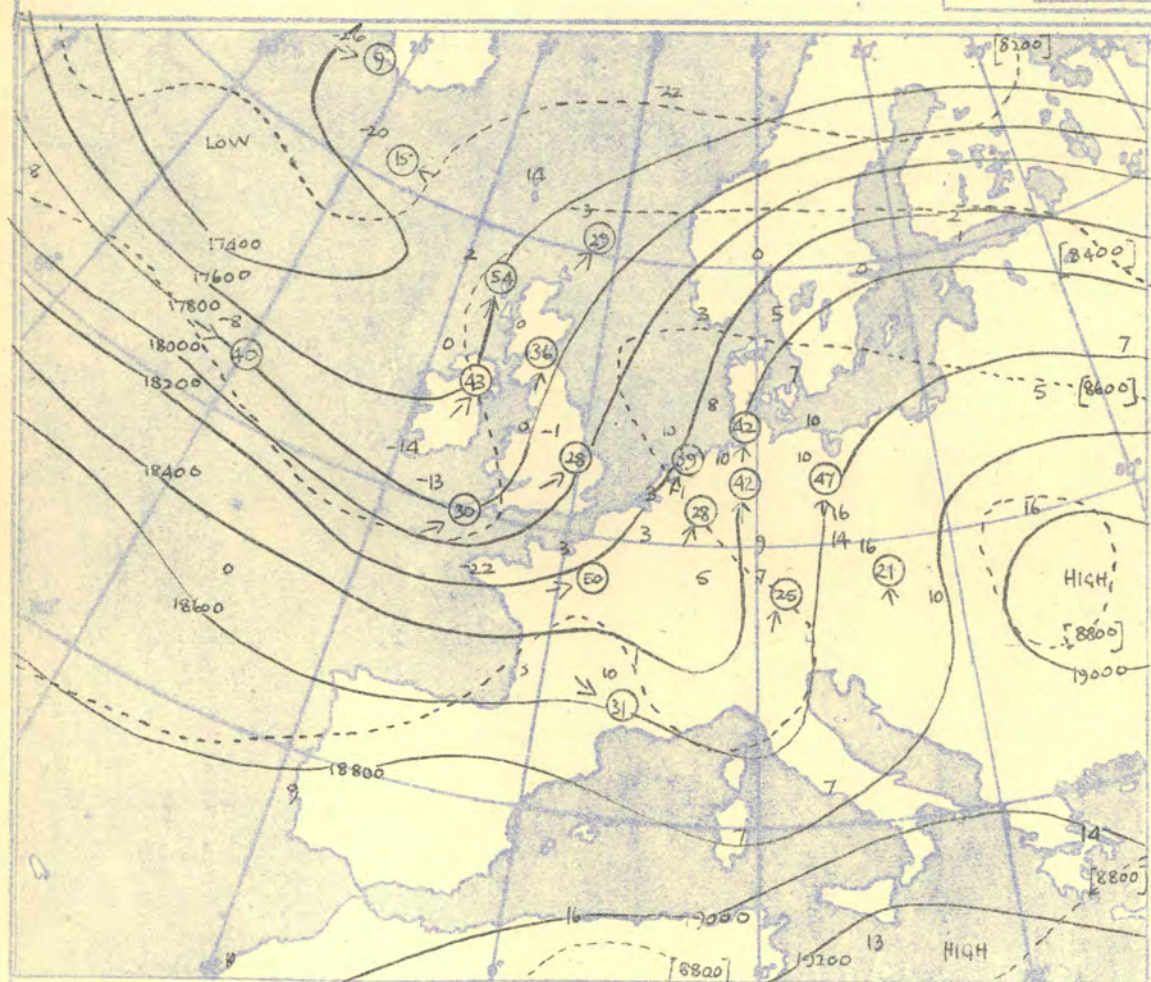
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

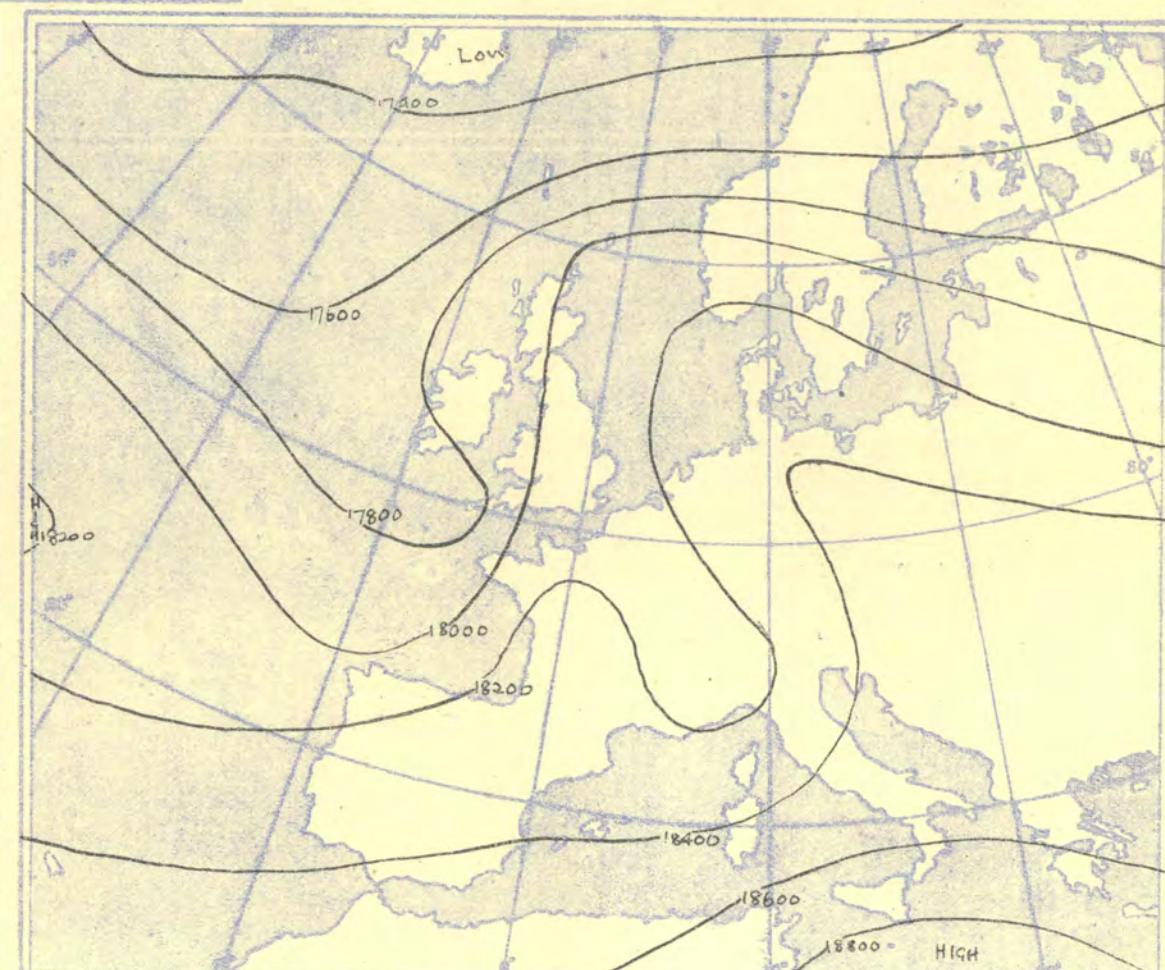
100 80 60 40 20 10 knots



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



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



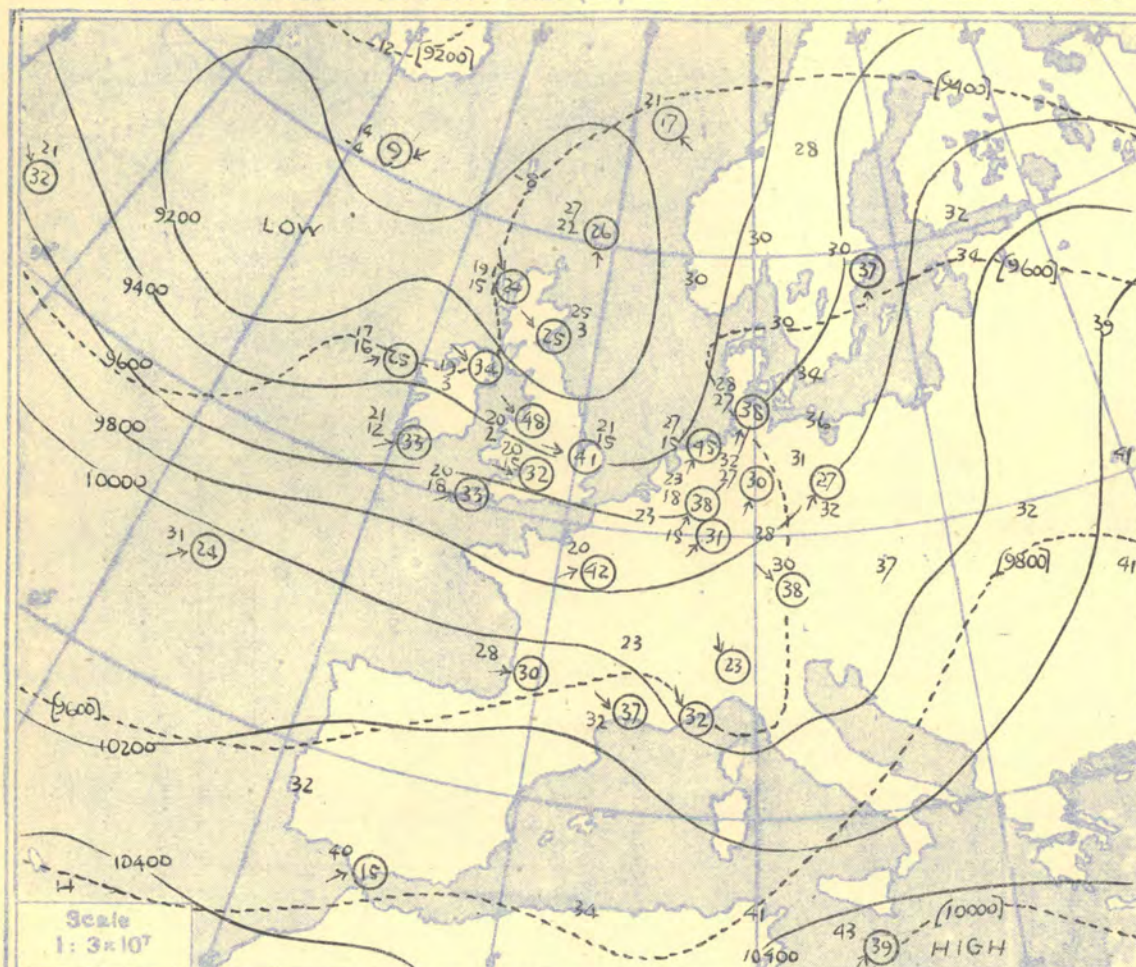
Isopleths of Thickness 500—1000mb.

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

NEPHOSCOPE OBSERVATIONS

Ship	CIRRUS.				CIRRUS.				CIRRUS.				CIRRUS.				WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				Ship
Lat/Long	52°5N 20°0W.				52°5N 20°0W.				52°5N 20°0W.				52°5N 20°0W.				60°5N 16°0W.				60°5N 16°1W.				60°5N 16°3W.				60°5N 16°1W.				Lat/Long
Time M.S.L. Surf Pressure	03L 1003 1003 885				09L 997 997 730				15L 997 998 875				21L 998 998 875				03L 998 998 865				09L 997 997 870				15L 998 998 895				21L 988 988 890				Time M.S.L. Surf Pressure
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				Pressure mb
Height ft./100	50 48 41				50 46				52 39				52 39				46 44				47 39				47 43				45 32				Height ft./100
Temp. °F.	50 48 41				50 46				52 39				52 39				46 44				47 39				47 43				45 32				Temp. °F.
Dew °F.	41				46				39				39				44				39				43				32				Dew °F.
Wind Dir. Vel. knots	For				For				For				For				For				For				For				For				Wind Dir. Vel. knots
Height ft./100	50 48 41				50 46				52 39				52 39				46 44				47 39				47 43				45 32				Height ft./100
Temp. °F.	50 48 41				50 46				52 39				52 39				46 44				47 39				47 43				45 32				Temp. °F.
Dew °F.	41				46				39																								

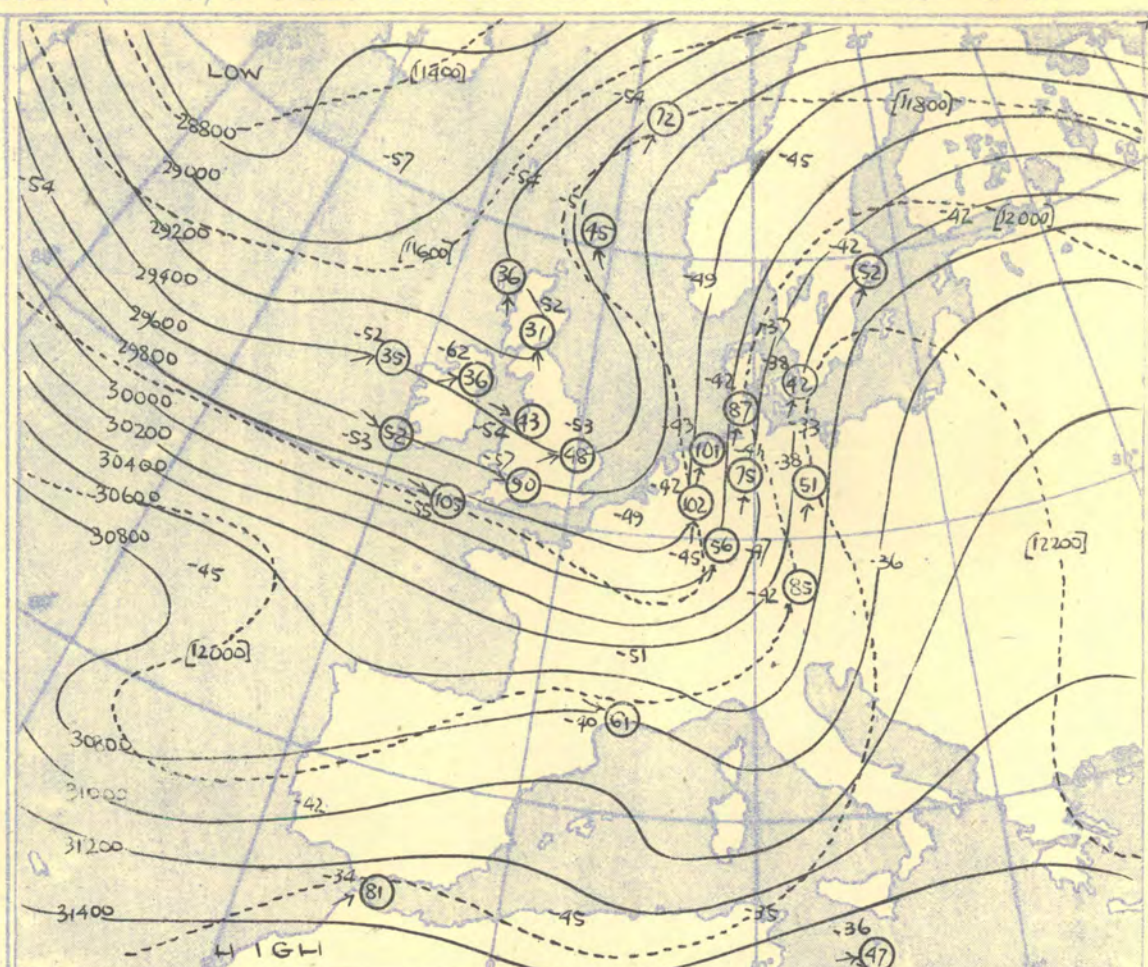
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15h G.M.T.



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

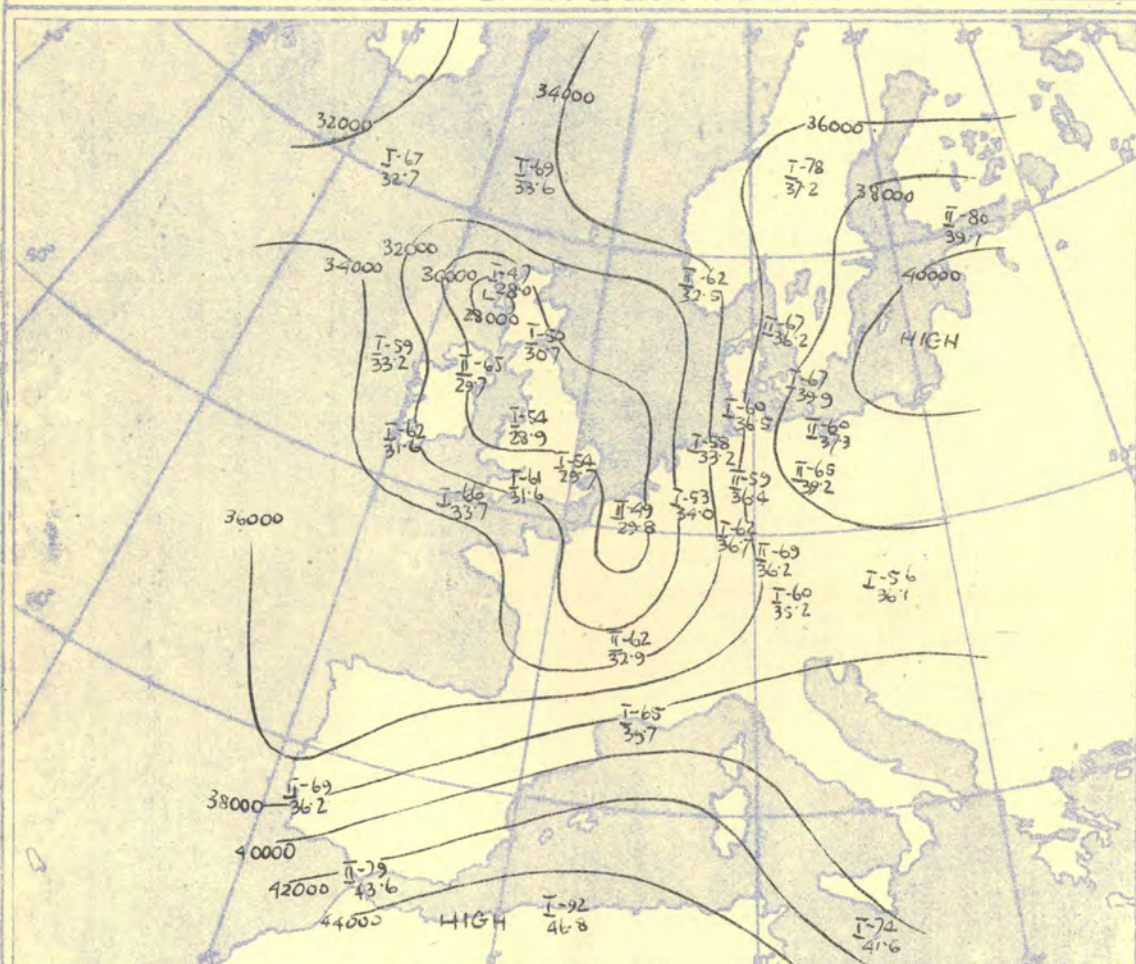
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



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

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



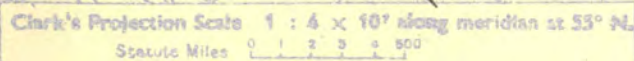
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A sharp cold trough South of Ireland moved across England during the day, followed by a small ridge with a renewal of the trough again behind the ridge. The tight thermal persisted over the low over Scotland but this depression moved only slowly northwards.

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



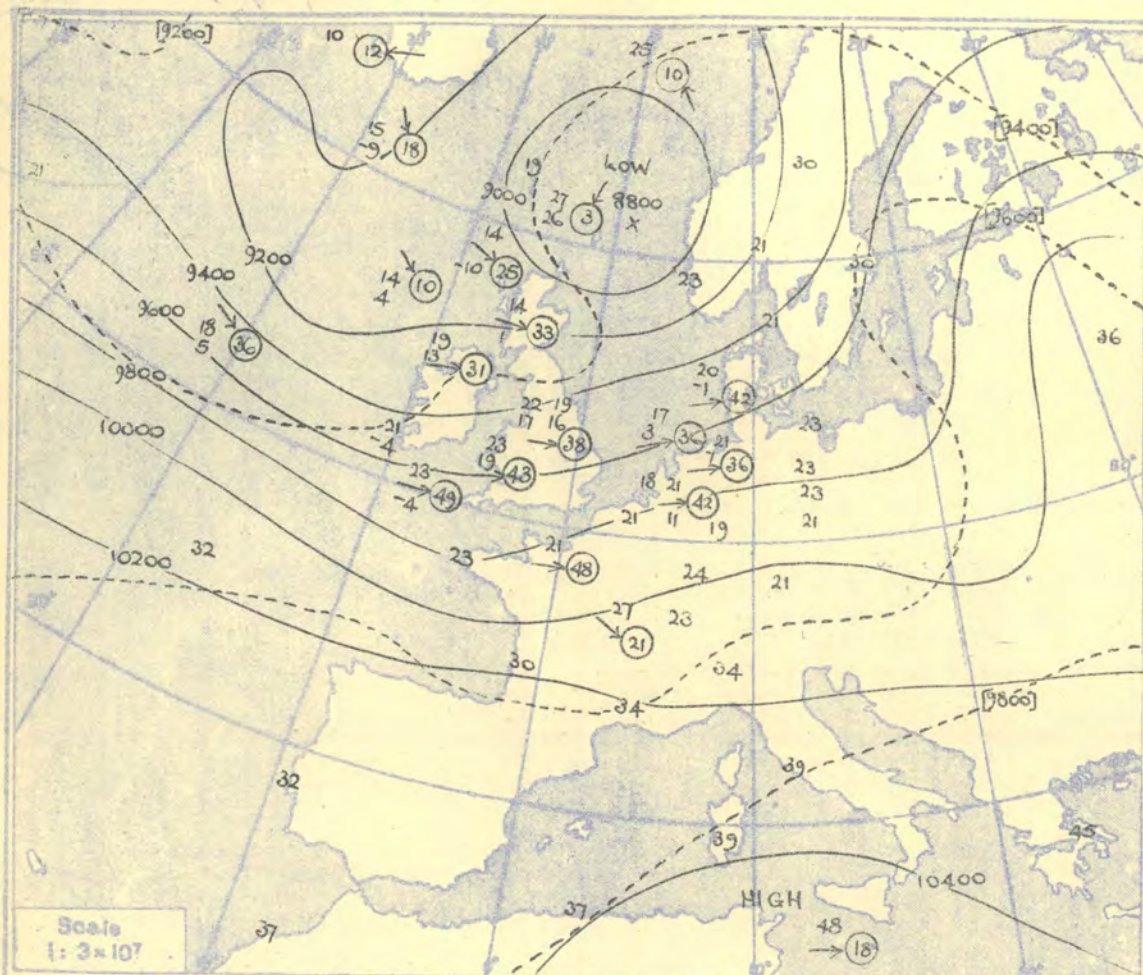
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

[illegible]

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA																																														
Time M.S.L. Surf Freezing	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.																																																
	974.2	mb			991.7	mb			993.0	mb			996.1	mb			998.9	mb			1004.5	mb			1005.0	mb			1006.3	mb			1015	mb																																													
	964.4	mb			989.8	mb			992.1	mb			987.6	mb			996.9	mb			1000.0	mb			988.4	mb			995.8	mb			1000	mb																																													
	760	mb			895	mb			863	mb			830	mb			800	mb			810	mb			789	mb			830	mb			820	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																																											
Surf	02.7	50	50	30S 13	00.5	44	36	29.0 20	00.2	44	40	23.0 05	02.3	45	43	19.0 18	00.6	47	45	18.0 04	01.2	47	45	18.5 05	04.4	51	50	23.0 20	02.9	53	49	25.0 15	00.3	51	45	1000																																											
1000	7.2				2.3				1.9				11.0				0.3								1.2				1.9				0.4	51	45	950																																											
950		49	49	299 21		40	33	30.5 27		43	37	26.5 31		43	41	22.7 22		47	43							48	47	22.0 33		48	43	25.6 35		47	39	900																																											
900	21.5	45	44	300 16	25.9	33	28	29.5 24	26.4	37	33	27.1 33	27.3	40	37	22.9 22	28.3	43	38		29.6	42	38	24.3 34	29.8	44	43	23.0 38	30.5	42	38	26.7 37	28.8	40	36	850																																											
850		42	40	303 17		27	26	30.0 27		31	24	27.1 34		34	31	24.2 24		37	33							39	38	24.0 42		36	32	26.8 42		35	29	800																																											
800	53.0	35	33	305 14	56.6	24	13	29.7 25	57.3	27	15	26.6 36	58.5	29	25	24.7 26	59.6	32	27		60.8	31	28	24.5 35	61.2	33	31	24.6 46	61.8	31	20	25.5 49	60.0	30	24																																												
750		31	31	216 07		20	02	28.9 26		21	02	26.5 34		25	21	24.1 19		26	21							28	25	24.8 44		26	10	25.4 51		23	18	750																																											
700	88.1	27	26	037 03	90.7	14	10	28.0 25	91.6	14	01	26.7 33	93.0	19	13	23.6 31	94.2	22	17		95.3	19	16	25.3 38	96.0	23	19	24.8 43	96.5	23	04	25.6 49	94.4	21	04	700																																											
650		21	20	065 05		04	17	27.0 21		06	02	26.5 33		12	04	23.6 32		16	11							16	11	25.1 44		20	08	25.8 55		17	07	650																																											
600	12.8	14	10	028 09	12.9	03	25	26.8 23	13.0	01	08	26.5 34	13.2	04	07	23.3 30	13.3	08	01		13.4	08	01	26.2 40	13.5	08	03	25.0 48	13.6	11	14	26.1 48	13.4	11	10	600																																											
550		05	01	014 08		11	32	27.0 16		05	16	26.3 34		05	19	22.6 30		00	08							00	16	25.3 53		03	20	26.3 56		03	37	550																																											
500	17.3	02	12	032 12	17.3	17	33	25.6 18	17.4	15	28	26.0 36	17.6	14	31	23.7 40	17.8	03	17							18	08	23	25.7 51	18.1	04	28	27.4 63	17.9	04	49	500																																										
450		13	22	026 10		27	38	23.5 09		26	37	25.4 35		19	41	25.0 47		19	32		17.9	12	19	25.8 56	18.0	08	33	25.7 51		15	34	27.2 69		15	53	450																																											
400	22.6	26	3.4	017 12	22.4	27	49	18.9 05	22.5	27	49	25.1 33	22.8	30	51	25.2 57	23.0	26	39		23.1	29	44	26.7 51	23.3	29	53	25.8 56	23.4	24	35	27.2 69	23.2	27	41	400																																											
350		41		027 13		51		17.9 09		4.9		26.0 48		42	56	25.0 60		3.7	50							43		26.7 53		41		27.2 66		41		350																																											
300	29.0	57		04.0 18	28.7	61		15.6 10	28.8	58		26.9 55	29.3	56		25.3 49	29.5	55								29.6	58	26.1 57	29.7	54		27.5 80	29.8	51		300																																											
250		59		15.3 06		53		23.7 19		59		26.1 34		59		25.6 47		63										25.9 56		67		27.5 78		70		250																																											
200	37.7	51		19.3 23	37.4	51		24.2 23	37.5	50		24.9 31	38.0	50		25.7 31	38.1	57								38.1	55	26.0 45	38.2	60		26.5 56	38.3	68		200																																											
170		51		20.5 17		54		25.6 20		51		25.7 30	(182) 55			25.7 30		55									54	25.7 39		58		26.4 49		65		170																																											
150		51				55		24.6 20		51		23.9 27					55										55	25.5 30		57		26.0 39		66		150																																											
130		52				54		25.0 20		57		25.6 23					55										56	25.0 36		61		25.6 40		63		130																																											
110		54				58		25.1 18		59		24.6 16					57										58	25.0 30		61		25.1 32		66		110																																											
100	52.8	55		22.0 18	52.4	57		24.6 19	52.5	59		24.8 27					53.1	58									53.0	58	25.0 28	53.0	61		25.5 36	52.9	65	100																																											
90		57				59		24.0 19										59										59								90																																											
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Isothermal 984-944mb. 46° 470-446mb. -19°																																																																															

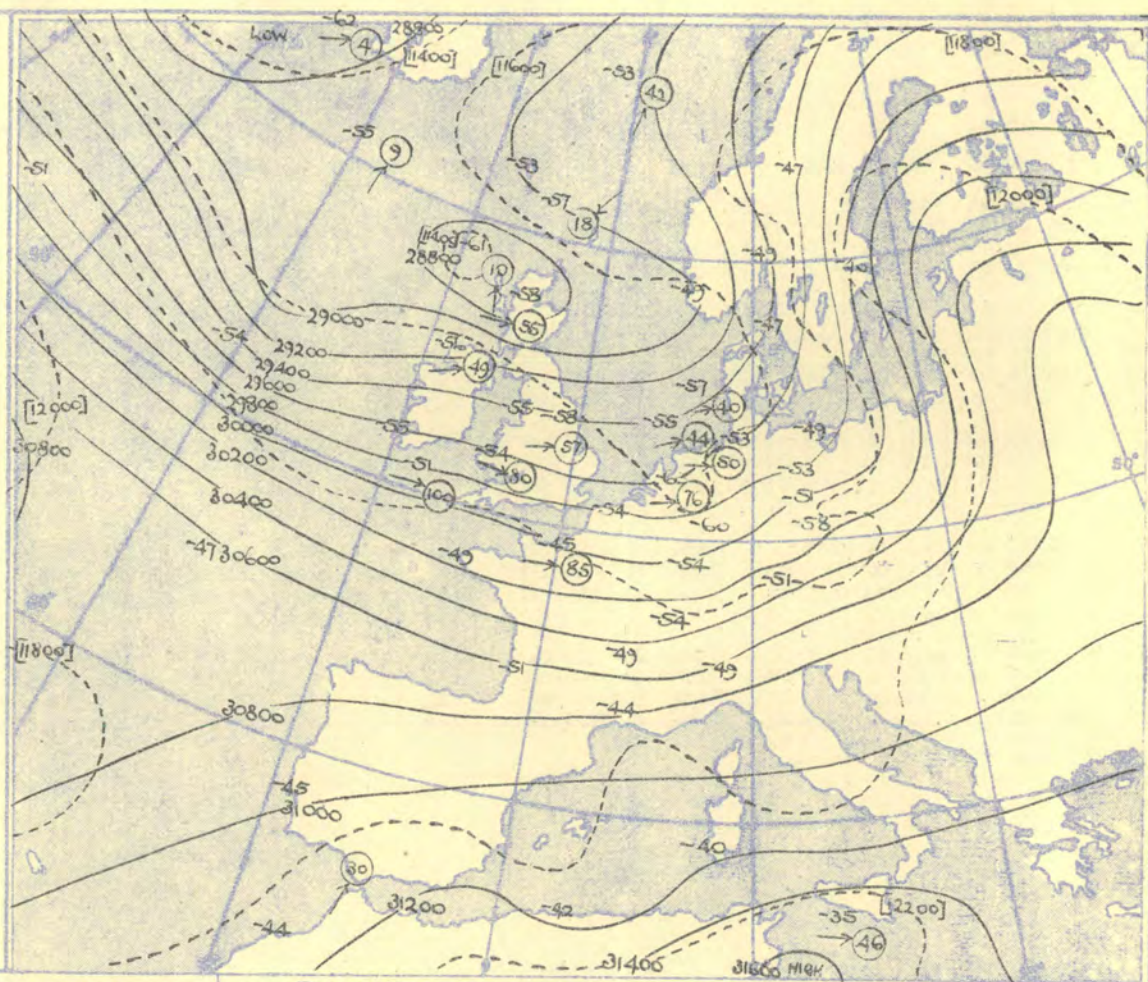
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb and 300 mb. levels at about 02 h. GMT.



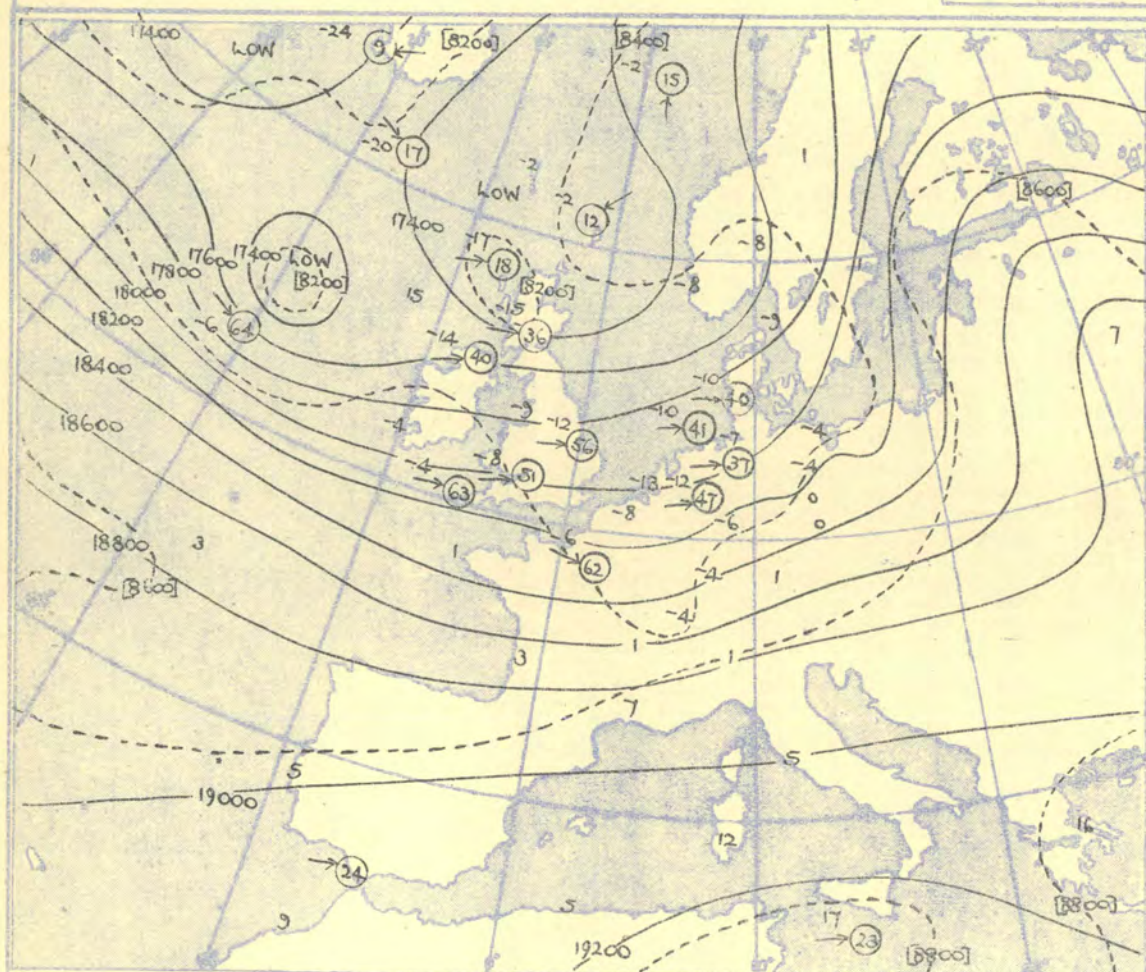
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

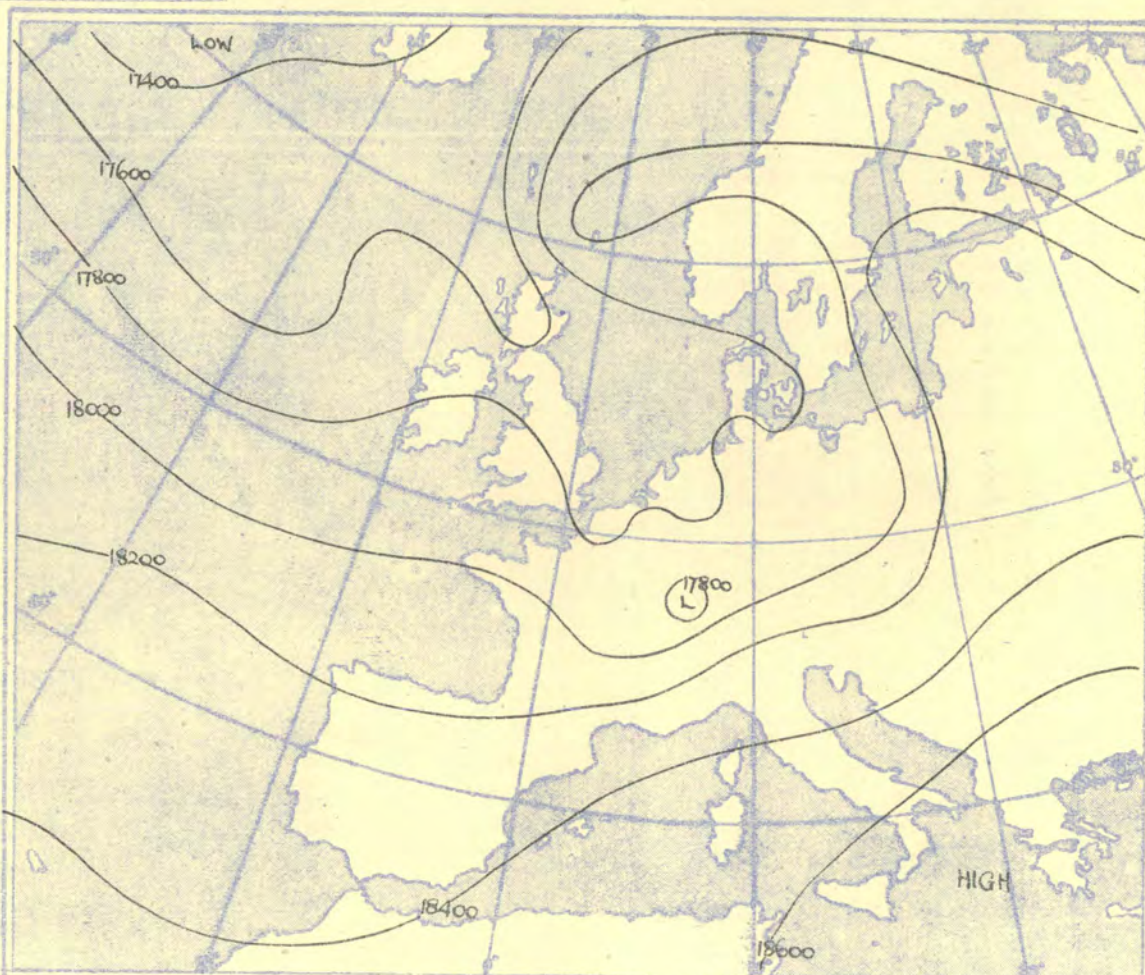
100 80 60 40 20 10 0 knots



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



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



Isopleths of Thickness 500-1000mb.

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

WIND Heights S.S.I.

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Time

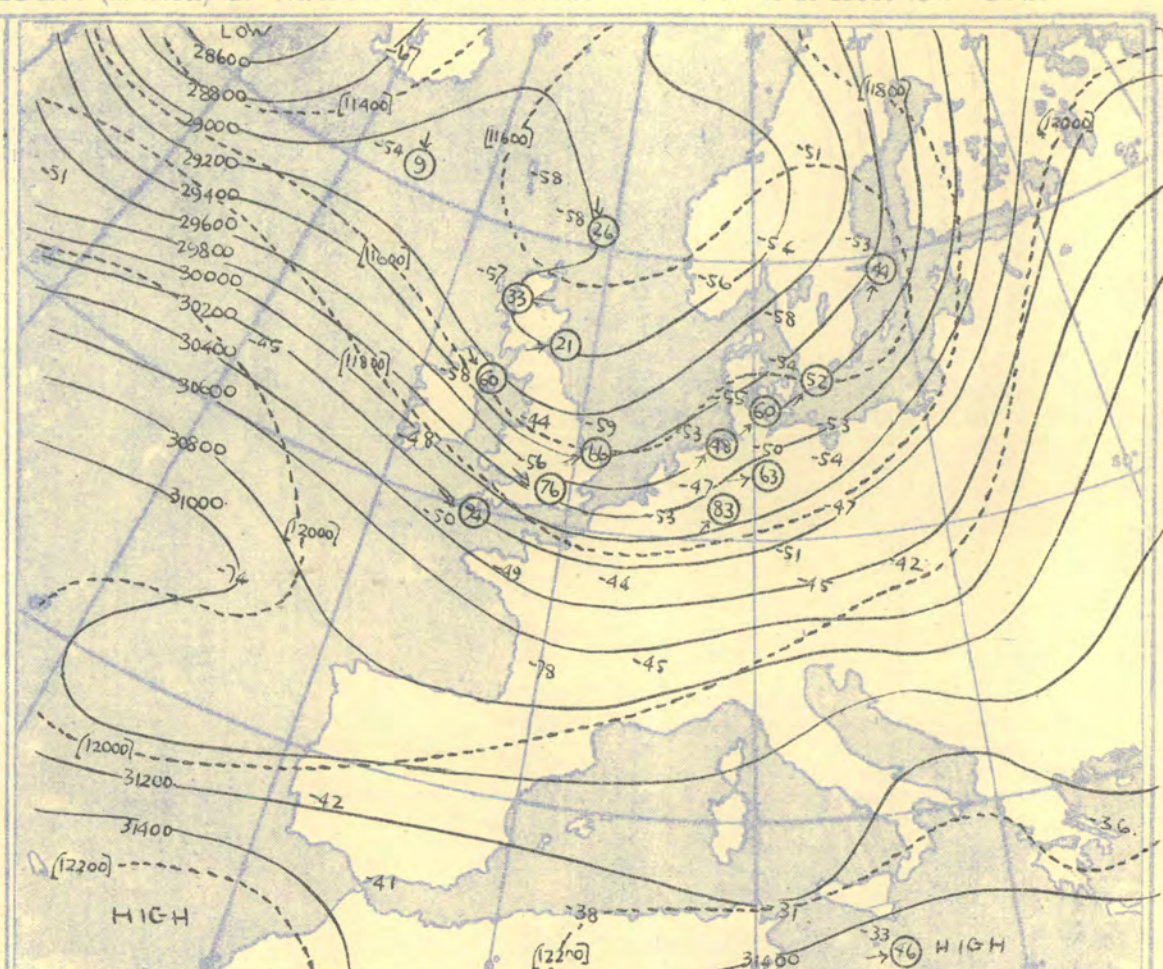
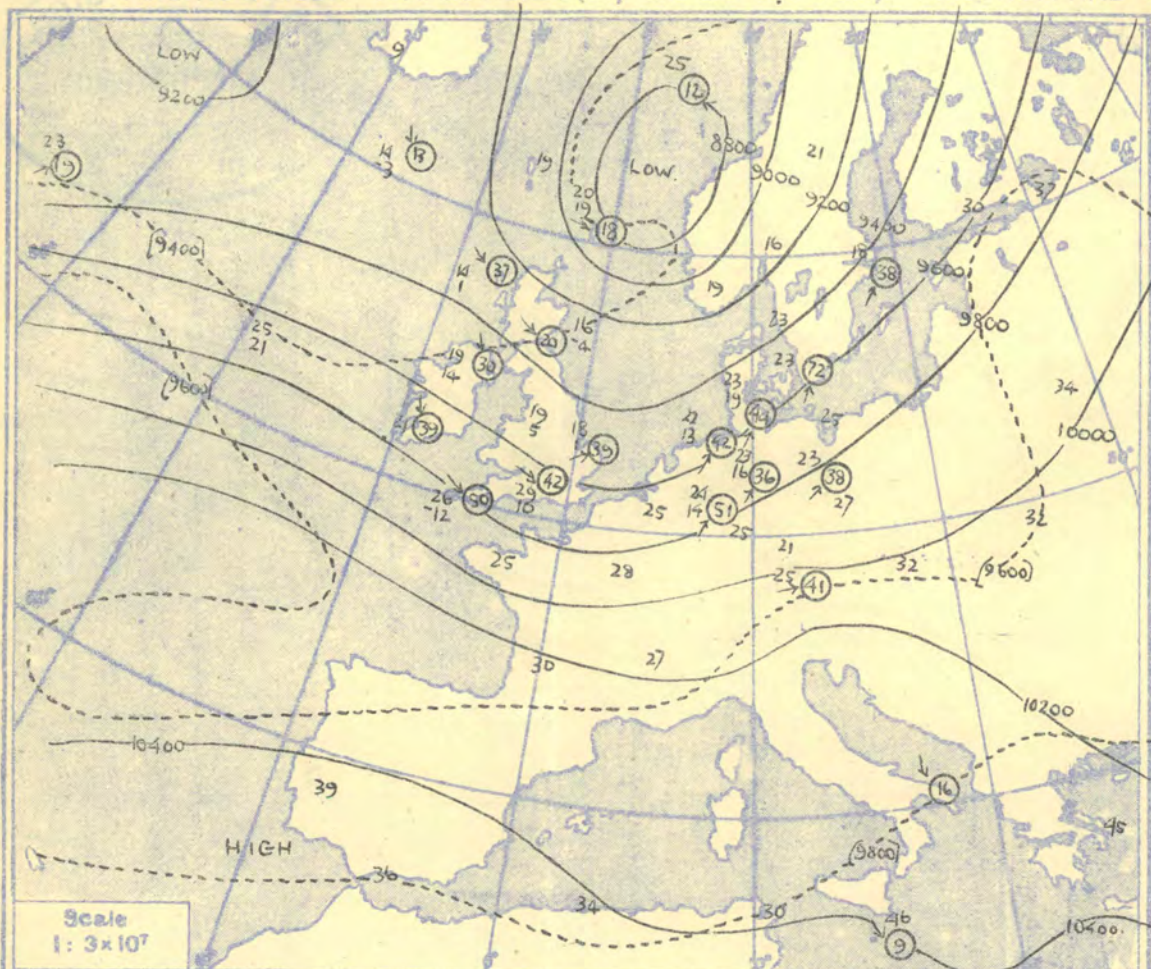
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Dir. Vel. Dir. Vel. Dir. Vel. Feet Surf.

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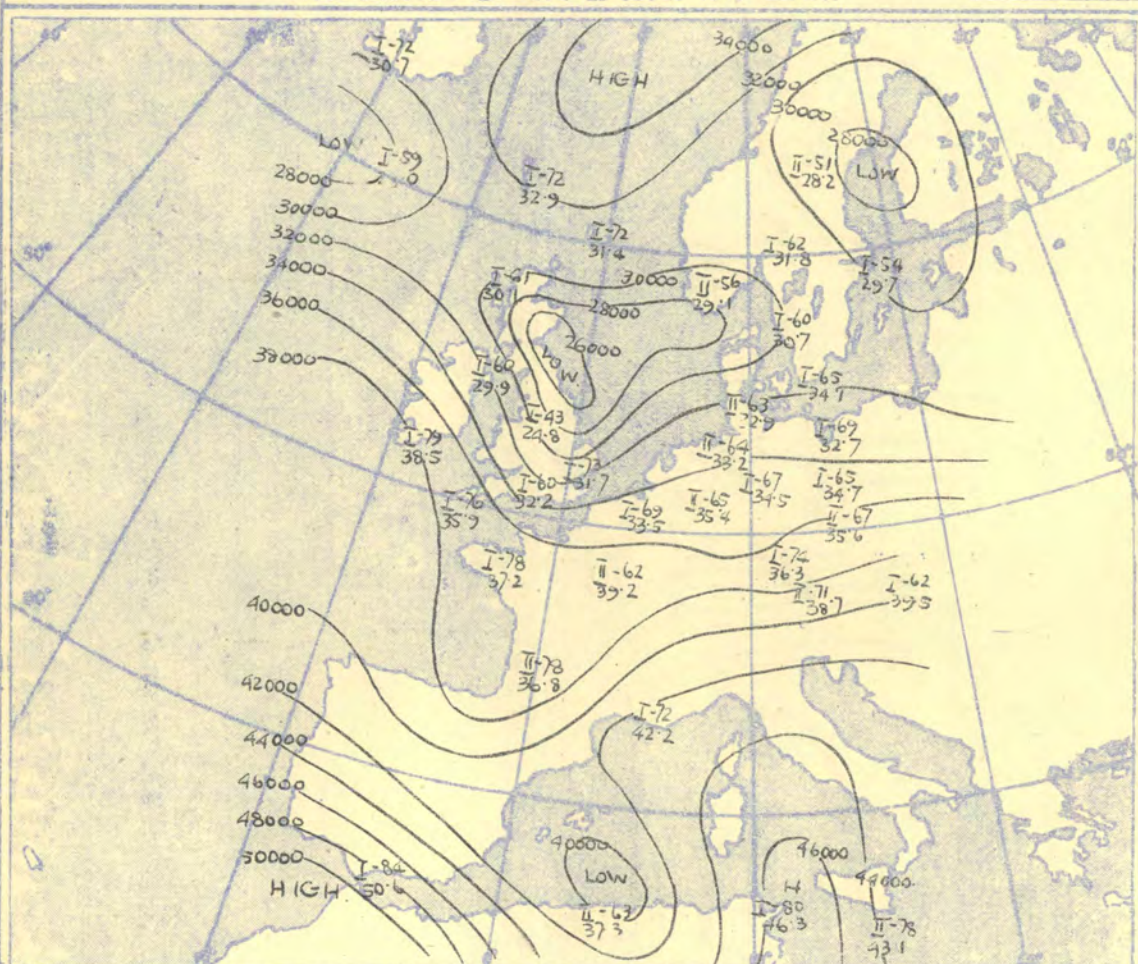
NEPHOSCOPE OBSERVATIONS

Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS				WEATHER OBSERVER				Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Lat/Long	60°-5N. 15°-7W.				60°-5N. 15°-7W.				60°-4N. 15°-7W.				60°-4N. 15°-7W.				52°-5N. 20°-0W.				52°-5N. 20°-0W.				52°-5N. 20°-0W.				52°-5N. 20°-0W.				52°-5N. 20°-0W.				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.	03h. G.M.T.			09h. G.M.T.			15h. G.M.T.			21h. G.M.T.			03h. G.M.T.			Time																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	M.S.L.	997 mb			998 mb	1001 mb			1003 mb	1001 mb			1008 mb	1010 mb			1008 mb	993 mb			1008 mb			1010 mb			1008 mb			993 mb			M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Surf	997 mb			998 mb	1001 mb			1003 mb	1001 mb			1008 mb	1010 mb			1008 mb	993 mb			1008 mb			1010 mb			1008 mb			993 mb			Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Pressure	910			880	860			880	852			850	865			790	860			860			865			790			860			Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Surf	1000	-08	45	35	290	14	47	38	245	18	2	47	38	020	12	47	39	Calm		52	45		52	41		52	39		52	46		49	39	010	04	Surf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
950			39	30	318	15	42	28	002	18		44	37	357	14	40	33	L.V.													44	36	356	06	950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
900		27-3	30	23	328	15	27-6	36	23	356	20	28-5	37	30	343	15	28-9	37	30	343	15									26-4	37	30	345	05	900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
850			26	18	346	15		30	18	347	19		30	25	333	12	27	21	"		32	28	For		30	25	For		31	19		37	31		31	21	336	07	850																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
800			57-9	23	13	002	15	58-5	24	06	342	20	59-4	24	17	332	13	59-6	23	15	"									57-3	25	15	323	04		57-3	25	15	323	04	800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
750			17	04	356	14		18	00	342	20		19	05	314	17	16	03	263	06													21	09	292	05	750																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
700			15	09	315	18	92-5	11	03	345	20	93-5	14	03	322	17	93-5	11	09	258	10	94-0	14	05		95-7	19	04		97-0	25	21		97-3	28	12		91-5	14	04	287	10	700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
650			08	-16	304	21		03	-12	343	15		06	02	320	17		05	-22	297	13													10	-02	286	14		10	-02	286	14	650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
600			130	00	-19	304	20	131	-03	-22	331	15	132	-02	-15	292	20	132	-03	-21	263	17													130	03	-08			130	03	-08	600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
550			-09	-24	295	19	-10	-34	298	22		-09	-27	289	19	-11	-24	285	29																						-06	-22		550																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
500			174	-20	-31	285	17	174	-18	-42	287	26	176	-16	-33	287	18	175	-20	-38	248	23	178	-06	-31		180	03	-15		182	03	-04		182	00	-09		174	-15	-28		500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
450			-25	-38	303	09		-27	-51	291	10		-24	-41	275	12		-29	-49	237	18																							450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
400			226	-34	-47	311	07	226	-34	-57	285	06	227	-35	-49	226	08	227	-37	-58	254	27																							400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
350			-41			272	05		-47		L.V.			-49		320	18		-45		263	56																							350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
300			290	-55		202	09	289	-62		Calm		291	-54		019	09	390	-56		273	66	295	-54			301	-36		302	-45		302	-44										300																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
250			-69			155	03		-55		L.V.			-45		251	32		-57		275	55																							250																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
200			375	-57		224	09	376	-48		290	12	380	-42		249	30	377	-55		266	37	380	-62			388	-76		387	-78		389	-76										200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
170			-54			224	20		-48		260	16		-42		249	30		-54		248	39																							170																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
150			-53			224	22		-47		249	24		-51		232	29		-51		248	41																							150																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
130			-54			219	24		-45		252	25		-51		265	23		-52		247	37																							130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
110			-52			245	22		-48		239	21		-51		268	18		-53		245	30																							110																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
100			637	-54		256	14	529	-50		286	13	(108)	-41		528	-54		-54		247	24	-65																					100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
90			-55			267	15		-51		253	13		-51		253	13		-54		251	24																							90																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
80			-56			263	16		-50		257	12		-50		257	12		-55		252	22																							80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
70			-56			242	20		-53		256	13		-53		256	13	(072)	-67																										70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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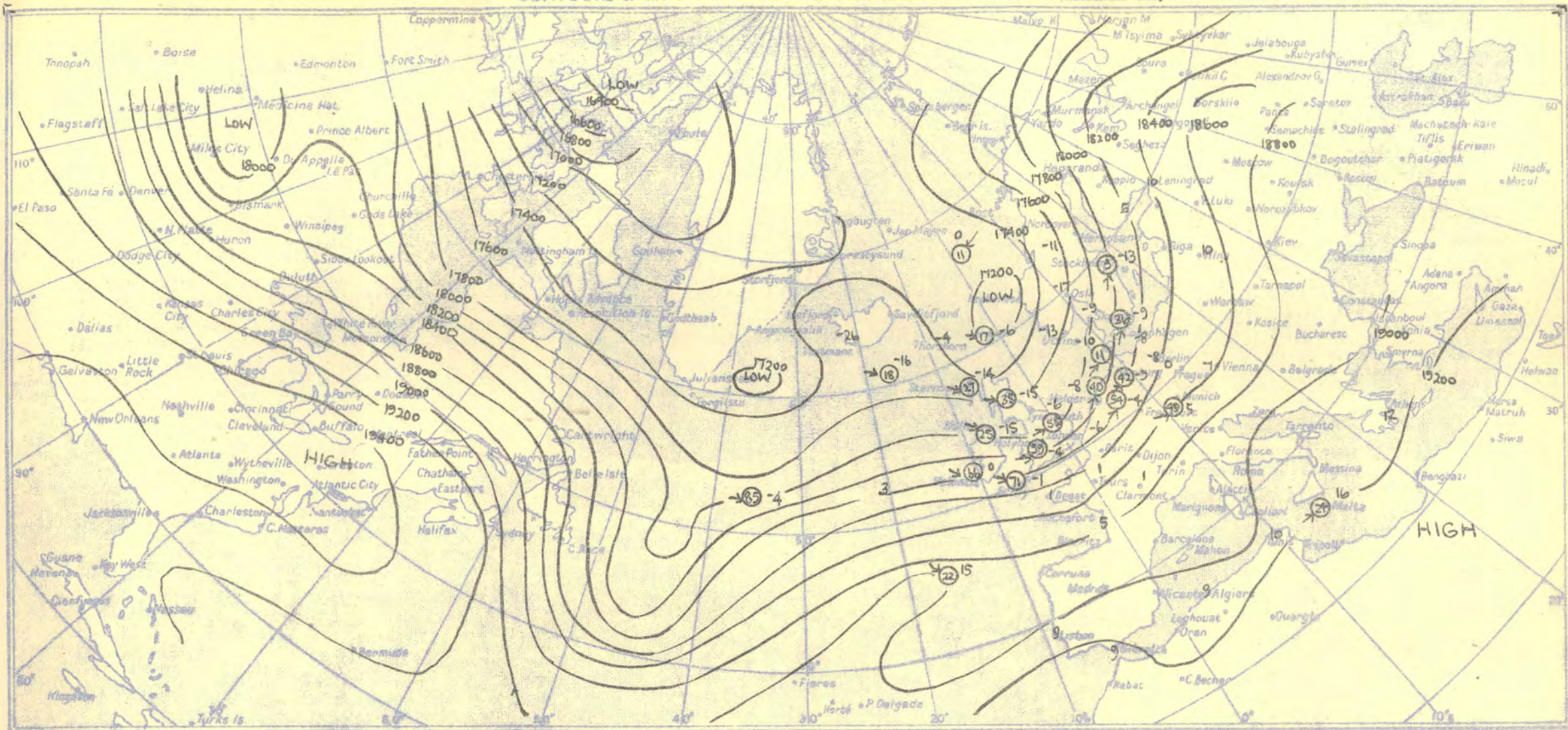
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52° N.

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

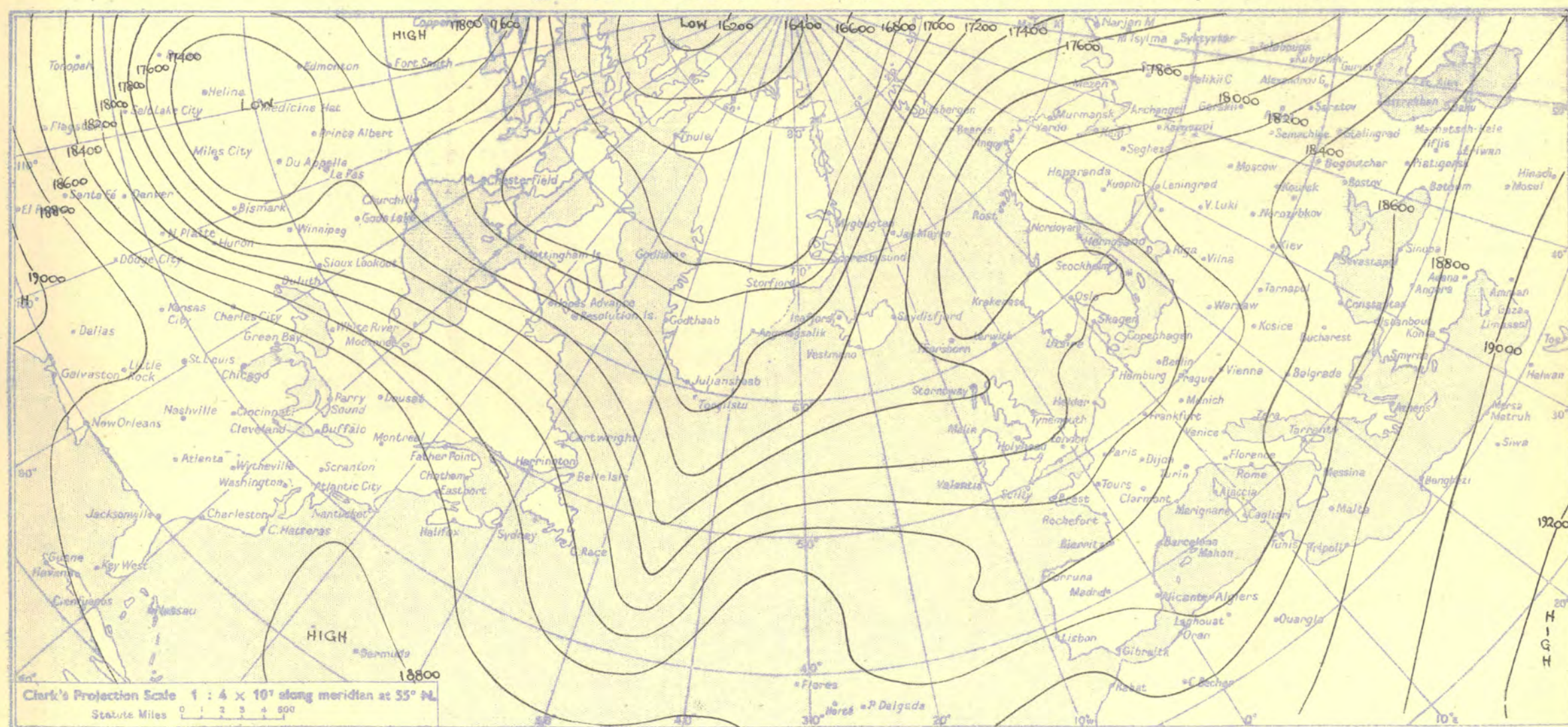


NOTES ON THE AEROLOGICAL SITUATION.

The main cold trough remained over Greenland and intensified while an offshoot eastwards to the North Sea gave showery weather over Britain. The Greenland cold trough extended down the Western Atlantic and became associated with a deepening depression northwest of the Azores.



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				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time	M.S.L.	Surf	Pressure	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	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				
				979.2	mb	995.0	mb	994.7	mb	1010.8	mb	999.6	mb	997.1	mb	1001.4	mb	997.9	mb	1005.9	mb	990.2	mb	1011.2	mb	1000.7	mb	1009.2	mb								
				855	mb	860	mb	838	mb	823	mb	818	mb	834	mb	822	mb	848	mb	848	mb	848	mb	848	mb	848	mb	848	mb	848	mb						
Pressure	Height	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Pressure					
mb	ft/100	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	mb					
Surf	02.7	44	42																													Surf					
1000	-57	43	41																													1000					
950	22.6	36	35																													950					
900	53.5	28	27																													900					
850	88.1	20	19																													850					
800	127	09	07																													800					
750	172	-06	-09																													750					
700	225	-16	-20																													700					
650	43	-52	-52																													650					
600	526	-52	-52																													600					
550	536	-52	-52																													550					
500	526	-52	-52																													500					
450	526	-52	-52																													450					
400	526	-52	-52																													400					
350	526	-52	-52																													350					
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250	526	-52	-52																													250					
200	526	-52	-52																													200					
170	526	-52	-52																													170					
150	526	-52	-52																													150					
130	526	-52	-52																													130					
110	526	-52	-52																													110					
100	526	-52	-52																													100					
90	526	-52	-52																													90					
80	526	-52	-52																													80					
70	526	-52	-52																													70					
60	526	-52	-52																													60					
Isothermal 875 - 855 mb 32°				Inversion 786 mb 23° - 762 mb 25°				(57) mb Inversion 998 mb 52° - 988 mb 53° Isothermal 756 - 732 mb 24°				Isothermal 663 - 629 mb 15°				Isothermal 741 mb 23° - 730 mb 26°				Isothermal 700 - 662 mb 21°																	
Tropopause I 265 mb - 72° 31,400'				I 285 mb - 61° 30,100'				NR.				I 289 mb - 60° 29,900'				I 366 mb - 43° 24,800'				I 272 mb - 63° 31,700'				I 267 mb - 60° 32,200'				I 227 mb - 76° 35,900'				I 211 mb - 79° 38,500'				Tropopause	
LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				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.	Time	M.S.L.	Surf	Pressure				
				982.3	mb	999.5	mb	1000.1	mb	1007.3	mb	1006.3	mb	1005.4	mb	1010.2	mb	994.2	mb	1016.2	mb	1005.6	mb														
				837	mb	876	mb	803	mb	865	mb	840	mb	836	mb	790	mb		mb	782	mb		mb														
Pressure	Height	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Temp.	Dew	Wind	Dir.	Vel.	Pressure					
mb	ft/100	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	knots	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	mb					
Surf	02.7	44	43																													Surf					
1000	-4.8	42	42																													1000					
950	23.5	38	38																													950					
900	54.6	29	28																													900					
850	89.2	25	24																													850					
800	128	11	08																													800					
750	174	-03	-09																													750					
700	226	-26	-30																													700					
650	41	-51	-51																													650					
600	291	-56	-56																													600					
550	377	-51	-48																													550					
500	498	-52	-52																													500					
450	521	-64	-64																													450					
400	532	-64	-64																													400					
350	532	-64	-64																													350					
300	532	-64	-64																													300					
250	532	-64	-64																													250					
200	532	-64	-64																													200					
170	532	-64	-64																													170					
150	532	-64	-64																													150					
130	532	-64	-64																													130					
110	532	-64	-64																													110					
100	532	-64	-64																													100					
90	532	-64	-64																													90					
80	532	-64	-64																													80					
70	532	-64	-64																													70					
60	532	-64	-64																													60					
Isothermal 755 - 737 mb 25°				Inversion 998 mb 44° - 985 mb 46°				Inversion 999 mb 44° - 961 mb 46°				Inversion 1004 mb 10° - 492 mb 09°				Inversion 456 mb 18° - 443 mb 17°				Inversion 432 mb 25° - 426 mb 24°				Inversion 436 mb 13° - 613 mb 15°				Inversion 828 mb 33° - 800 mb 34°									
Isothermal 765 - 750 mb 17°				Isothermal 856 - 803 mb 32°				Isothermal 587 - 563 mb 03°				Isothermal 1004 - 967 mb 48°				Isothermal 1001 - 976 mb 49°				Isothermal 436 - 18° - 425 - 16°				Isothermal 1006 - 990 mb 53°				Isothermal 750 - 732 mb 29°									
Tropopause I 259 mb - 72° 32,100'				I 286 mb - 70° 29,800'				I 296 mb - 55° 29,600'				I 274 mb - 70° 33,800'				I 235 mb - 61° 34,700'				I 285 mb - 57° 30,500'				I 221 mb - 80° 36,400'				I 206 mb - 86° 38,200'				Tropopause					

4 October 1950.	
MUSEOLOGICAL	
VALENTIA.	
G.M.T.	G.M.T.
mb	mb
mb	mb
mb	mb

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Time M.S.L. Surf Pressure	03h. 992.7 982.8 883	G.M.T. mb mb mb	03h.				G.M.T.				03h.				G.M.T.				03h.				G.M.T.				03h.				G.M.T.				03h.				G.M.T.				Time M.S.L. Surf Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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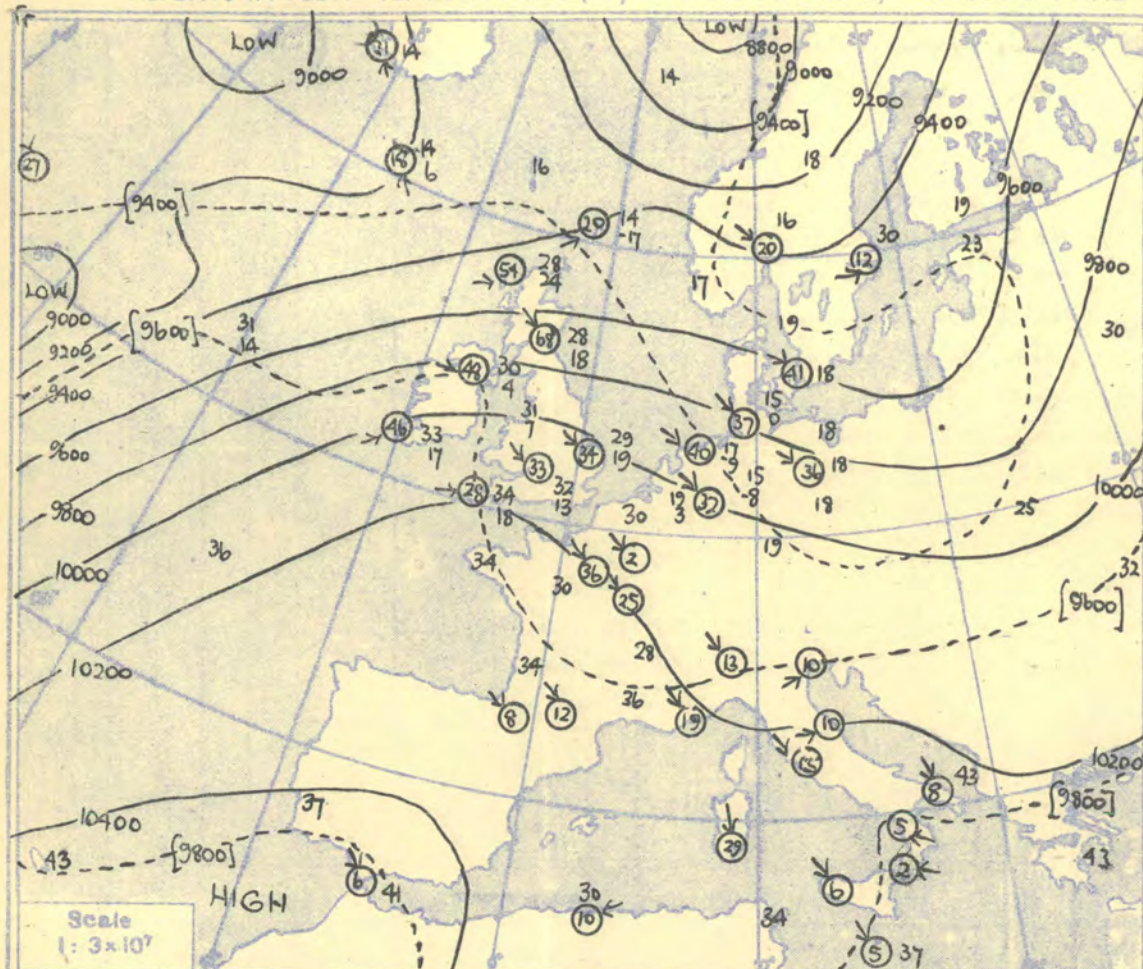
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

Ship	WEATHER EXPLORER								WEATHER EXPLORER								WEATHER EXPLORER								CIRRUS								CIRRUS								CIRRUS								CIRRUS								Ship																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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300	290	60	248	70	289	59	241	42	288	58	256	71	292	55	250	120	302	42																							300																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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	53	243	42																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

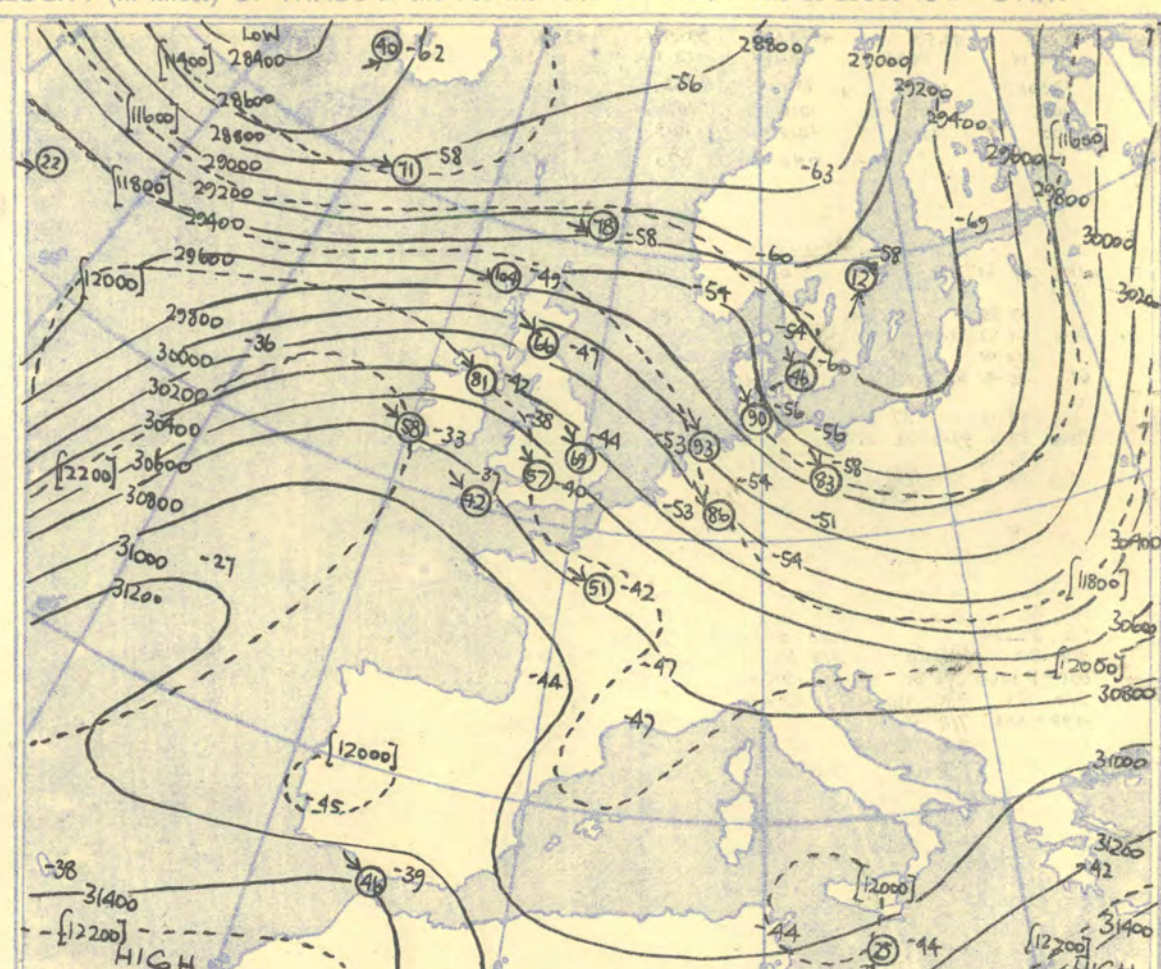
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

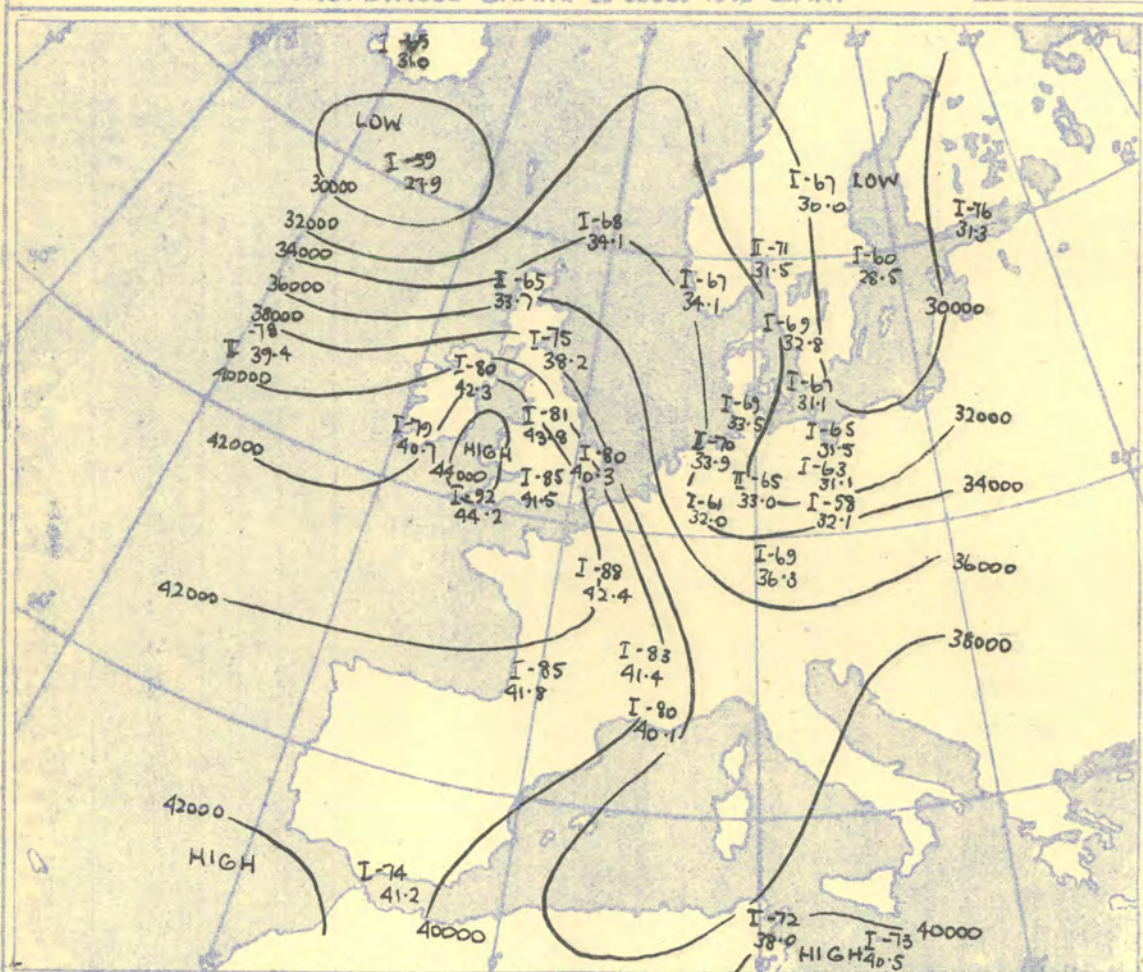
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

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 15 h. G.M.T.



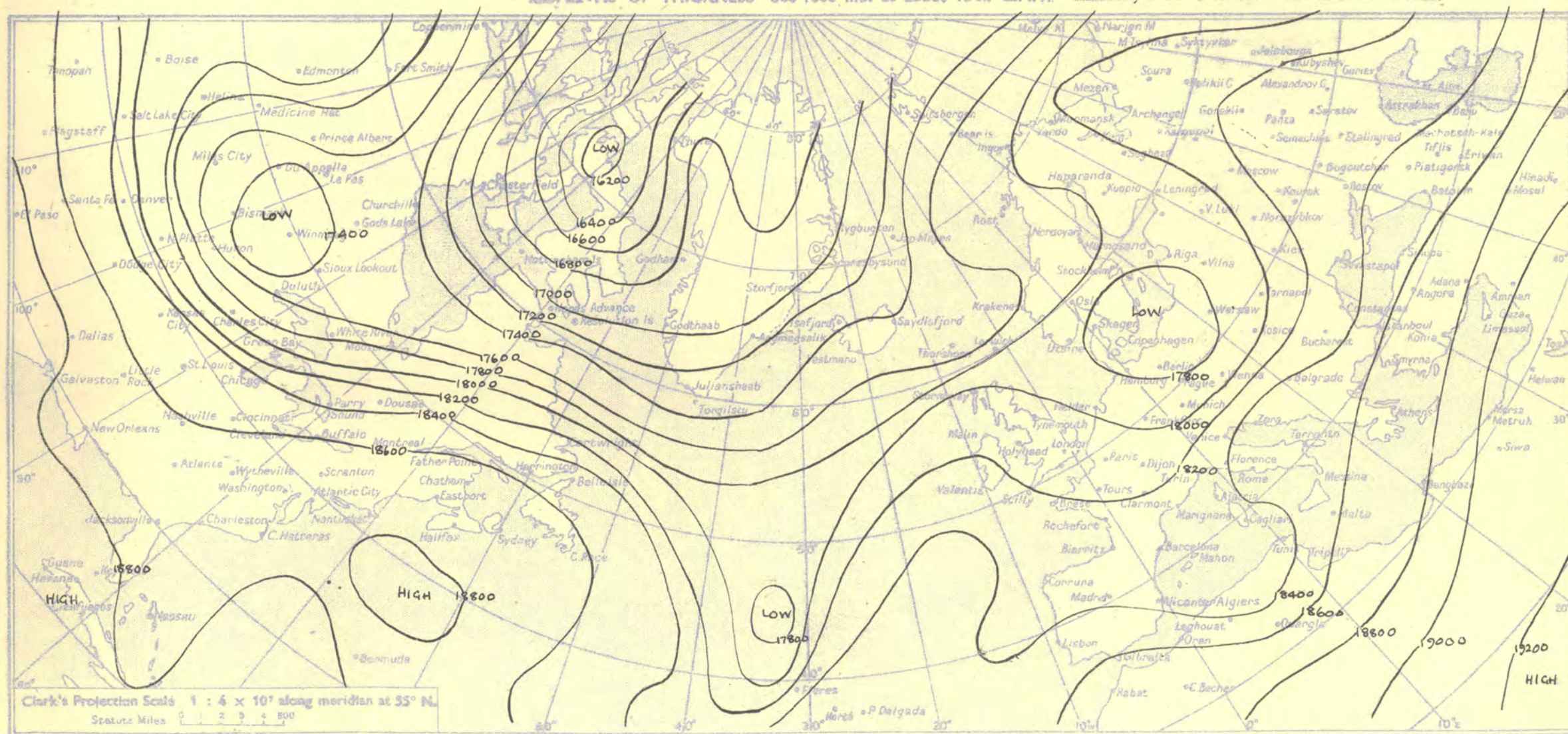
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough from Greenland down the Western Atlantic moved eastwards in its southern end, associated with a deepening depression north of the Azores. A small breakaway on the warm front of this depression moved quickly east-northeast to North Scotland. A good thermal ridge built up from Ireland to the Azores with consequent anticyclonic building over France and Spain.

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



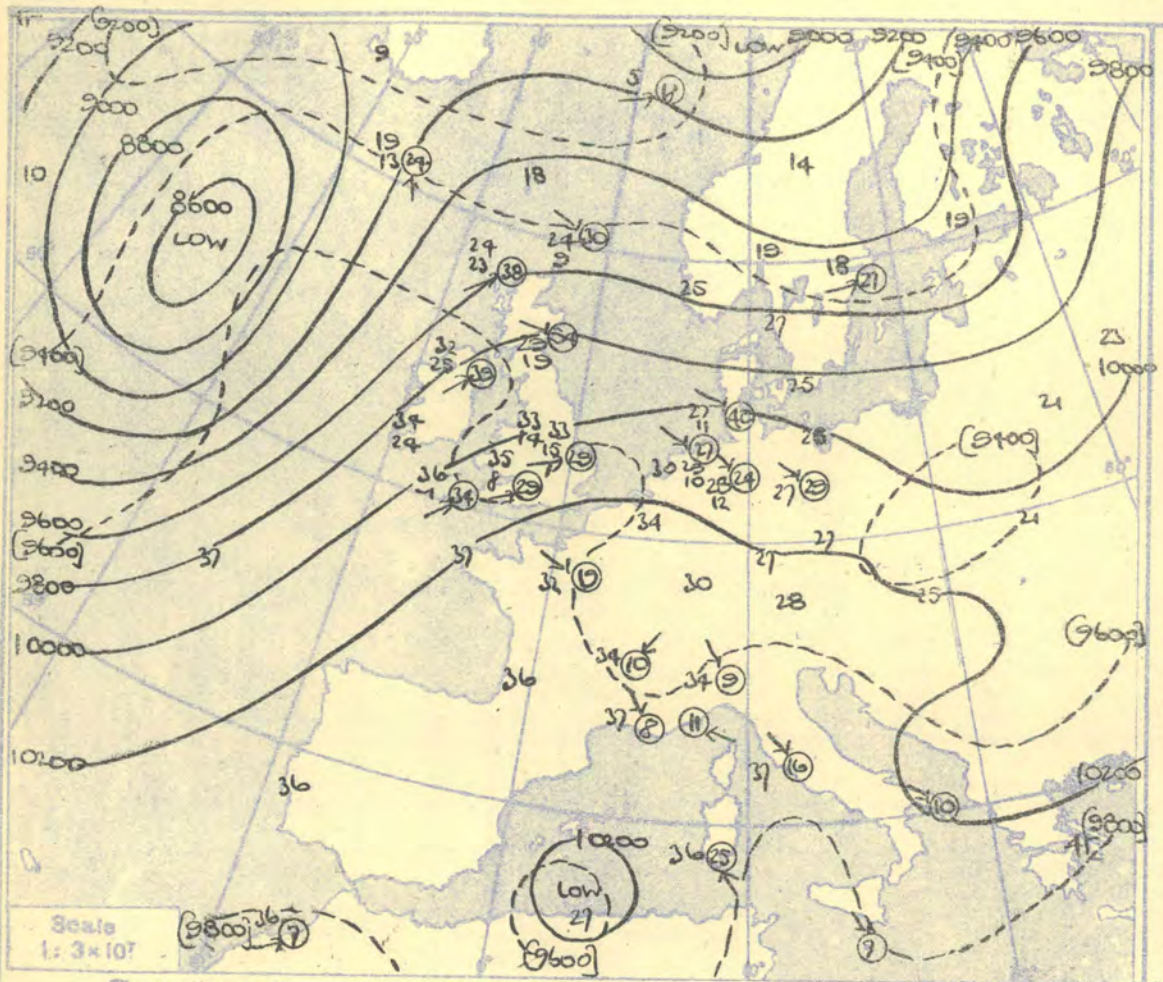
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION			
Time M.S.L. Surf (Freezing)	15h. 1002.3 992.4 872	G.M.T. mb mb mb		15h. 995.6 993.7 750	G.M.T. mb mb mb			15h. 1005.7 1004.9 727	G.M.T. mb mb mb			15h. 1009.9 1001.5 712	G.M.T. mb mb mb			15h. 1016.3 1014.3 705	G.M.T. mb mb mb			15h. 1019.5 1015.1 700	G.M.T. mb mb mb			15h. 1020.7 1004.9 700	G.M.T. mb mb mb			15h. 1021.4 1010.9 690	G.M.T. mb mb mb			15h. 1014.8 1013 695	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	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. Vel. knots	Height ft./100 Temp. °F. Dew °F. Wind Dir. 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 48 36 260 10				00.5 52 50				00.2 52 48 220 15				02.3 56 51 210 20				00.6 56 50				01.2 57 49 195 10				04.4 58 47 240 12				02.9 59 57 225 07				00.3 57 53 200 17			Surf			
1000	0.6				-1.2				15 51 47				2.7				4.5 54 49				5.4 54 46 230 21				5.7 57 46				5.9 57 56 233 18				4.0 56 52 205 20			1000			
950	28.9 34 27 240 17				51 49				47 45 241 44				51 47 208 36				49 45				47 40 237 24				49 42 235 16				50 50 245 24				54 50 222 20			950			
900	31 19 244 16				42 39				42 42 252 53				44 37 255 50				43 39				41 35 245 27				44 42 235 16				46 46 252 27				46 41 233 31			900			
850	57.8 26 05 243 16				59.2 37 34 For				61.5 41 35 267 57				63.2 42 35 265 54				64.7 35 29				35 18 251 30				41 33 270 26				41 41 253 25				46 41 238 31			850			
800																					65.2 33 03 263 32				65.9 32 28 272 27				66.3 45 25 258 22				64.9 39 32 234 34			800			
750	21 -12 241 17				32 28				35 24 273 59				38 15 258 48				34 13				33 23 270 36				38 16 277 31				39 19 252 25				37 22 220 41			750			
700	94.0 14 -17 243 20				94.3 28 24				96.9 28 18 276 68				98.6 30 04 254 48				99.9 31 07				29 -19 278 38				32 13 278 33				34 18 253 28				33 17 232 46			700			
650	09 -05 240 24				21 16				21 12 278 70				25 04 258 49				25 01				25 15 284 43				25 11 280 36				26 11 256 29				27 12 238 47			650			
600	133 04 -11 256 34				134 14 08				136 23 06 276 65				138 15 00 261 51				140 18 06				17 04 285 44				141 19 02 280 37				21 07 254 32				22 10 245 52			600			
550	00 -14 258 39				08 03				07 01 277 60				06 04 260 59				07 06				09 09 286 45				11 10 275 39				11 01 259 28				15 13 252 58			550			
500	177 -08 -24 262 40				179 00 -16				182 00 06 274 47				184 -03 -12 255 54				185 00 -15				186 02 -22 282 63				187 -09 -25 273 42				188 02 -11 262 36				187 07 -16 248 59			500			
450	-17 -32 265 56				-10 -28				-10 -17 271 52				-10 -19 257 59				-04 -17				-08 -26 283 55				-19 -32 275 46				-09 -24 264 39				-02 -15 253 56			450			
400	230 -28 -41 262 72				233 -22 -38				235 -20 -27 276 67				237 -16 -26 263 60				239 -14 -27				-18 -34 283 51				-27 -37 280 50				-15 -25 269 40				-07 -19 261 58			400			
350	-41 261 78				-35 -52				-31 -39 283 66				-29 -39 267 72				-23 -40				-29 -47 292 56				-40 -52 290 55				-24 -36 286 49				-19 -33 260 63			350			
300	294 -58 266 78				298 -49				301 -46 287 98				303 -42 276 81				306 -38 -57				305 -44 300 69				307 -59 305 55				308 -37 -49 294 42				309 -33 -49 274 58			300			
250	-66 270 88				-65				-63 287 83				-58 268 91				-57				-61 304 65				-77 307 65				-55 301 57				-51 280 69			250			
200	379 -62 272 60				384 -67				387 -74 287 83				390 -74 268 91				393 -71				-78 304 65				-83 307 65				-78 301 57				-73 296 76			200			
170	-58 265 45				-58				-64 287 83				-80 268 91				-79				-70 322 68				-79 315 66				-88 322 47				-80 296 76			170			
150	-56 260 36				-55				-63 287 83				-64 268 91				-74				-72 313 49				-74 288 37				-86 290 41				-81 274 58			150			
130	-57 256 37				-53				-62 287 83				-64 268 91				-70				-69 304 50				-72 288 33				-77 279 37				-73 274 58			130			
110	-56 244 29				-55				-62 287 83				-64 268 91				-65				-63 312 38				-73 294 38				-71 277 32				-71 274 58			110			
100	528 -58 237 22				535 -55				-53 287 83				-53 268 91				537 -61				535 -64 314 32				533 -69 294 36				535 -71 288 28				539 -68			100			
90	-56 239 20				-54				-53 287 83				-53 268 91				-60				-64 324 30				(0.96) -73 294 31				-72 293 25				-63 274 58			90			
80	-53 253 23				-53				-53 287 83				-53 268 91				-66				-64 326 45				(mb) -73 294 31				-73 293 25				-65 274 58			80			
70	-58 252 22				-52				-52 287 83				-52 268 91				-64				-62 326 45				(mb) -73 294 31				-73 293 25				-67 274 58			70			
60					-50				-50 287 83				-50 268 91				-55				-55 326 45				(mb) -73 294 31				-73 293 25				-67 274 58			60			
Isothermal 610 -58.7 mb. 04°				(550) 48 mb Inversion 994 mb. 82°-990 mb. 58°				Isothermal 922 -880 mb. 43°				Inversion 809 mb. 41°-782 mb. 44°				(550) -59 mb Inversion (0.93) -56 mb Inversion 750 mb. 34°-742 mb. 35°				Inversion 825 mb. 32°-759 mb. 34°				Inversion 807 mb. 34°-787 mb. 43°				Inversion 845 mb. 40°-800 mb. 45°				Inversion 780 mb. 36°-743 mb. 37°				Isothermal 385 mb. -19°-376 mb. -18°			
284 -268 mb. -62°				994 mb. 82°-990 mb. 58°				766 -750 mb. 35°				809 mb. 41°-782 mb. 44°				750 mb. 34°-742 mb. 35°				825 mb. 32°-759 mb. 34°				807 mb. 34°-787 mb. 43°				845 mb. 40°-800 mb. 45°				780 mb. 36°-743 mb. 37°				385 mb. -19°-376 mb. -18°			

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

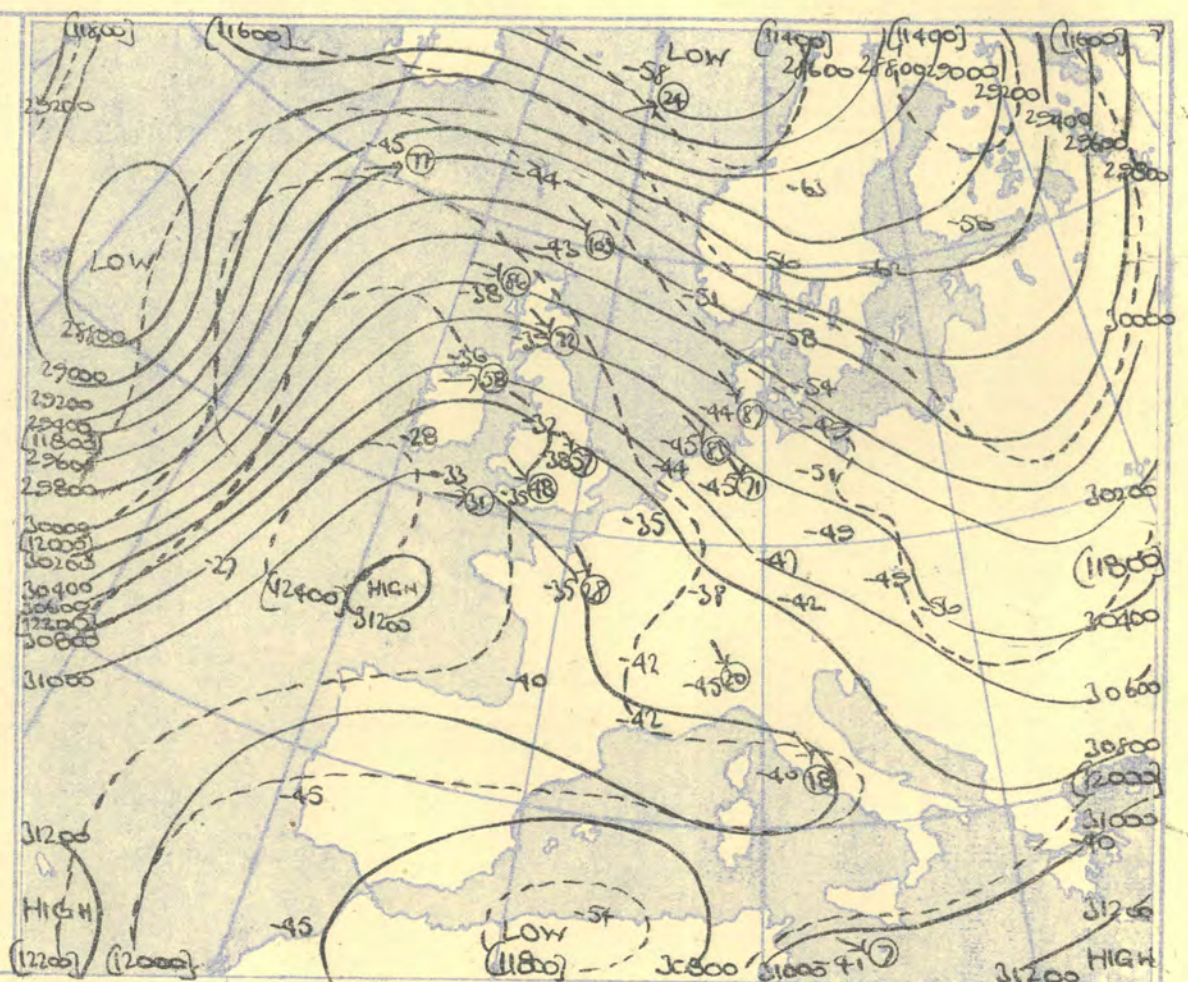
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Pressure mb	Time M.S.L.	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		Pressure mb				
		1000.1		mb		1004.6		mb		1008.3		mb		1009.9		mb		1015.2		mb		1018.6		mb		1019.7		mb		1018.2		mb		1007.9								
		990.1		mb		1002.7		mb		1007.1		mb		1001.4		mb		1013.2		mb		1013.9		mb		1003.7		mb		1007.7		mb		1004								
Freezing		825		mb		776		mb		772		mb		700		mb		687		mb		692		mb		676		mb		672		mb		685		Freezing						
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb					
Surf	02.7	46	45	090	13	00.5	50	48	250	15	00.2	56	54	220	15	02.3	55	51	190	15	00.6	56	52	01.2	52	50	170	05	04.4	56	54	230	12	02.9	56	55	180	15	00.3	57	54	Surf
1000	00.0	42	41	073	14	01.1	50	48		02.1	55	53		02.7	50	46	219	30	04.2	56	53		05.0	52	50	236	21	05.4	55	53		05.0	55	54		16	56	53	1000			
950		41	41	073	14	47	44	254	30	51	50	245	31	48	42	219	30	51	48		51	48		52	48	258	27	50	48	238	27	50	48	199	31	53	51	950				
900	28.3	38	35	043	12	29.7	45	43	258	27	30.9	45	44	260	32	31.5	48	42	225	35	33.0	46	43	33.8	49	42	270	30	34.1	44	42	240	31	33.8	48	37	214	31	30.5	51	48	900
850		34	30	328	13	40	39	253	29	41	40	265	34	48	40	228	36	42	39		42	39		47	31	266	30	42	37	246	32	42	33	215	33	48	44	850				
800	59.4	29	25	298	20	61.2	35	34	251	33	62.4	35	34	265	32	63.5	44	38	229	39	64.6	36	32	65.7	44	38	254	29	65.7	40	31	250	27	65.5	43	15	219	33	62.6	45	39	800
750		28	24	281	26	29	29	244	39	31	27	268	49	38	33	234	38	36	20		36	20		39	21	253	28	40	24	245	25	41	15	222	30	39	31	750				
700	94.1	24	09	280	30	96.1	24	23	248	38	97.5	29	19	271	54	99.0	32	25	235	29	99.8	33	14	10.1	33	15	259	29	10.1	35	08	244	29	10.1	36	01	220	34	98.3	34	24	700
650		20	17	282	33	20	18	287	42	23	16	277	53	27	13	229	39	28	12		28	12		29	07	245	32	28	06	251	33	28	02	221	39	28	02	650				
600	13.4	17	13	282	50	13.5	14	09	261	42	13.7	17	12	281	48	13.9	20	02	236	37	14.0	23	13	14.1	19	02	271	42	14.1	20	05	251	30	14.1	22	78	226	35	13.9	26	7	600
550		08	20	280	58	07	02	254	44	09	04	282	57	11	01	243	45	17	01		17	01		11	07	275	43	13	10	261	29	15	24	232	30	22	23	550				
500	17.9	-01	-29	281	60	18.1	00	-3	244	45	18.3	03	03	278	44	18.5	02	-06	246	58	18.6	07	-04	18.7	01	-14	275	44	18.7	04	-17	272	32	18.8	09	-29	236	26	18.5	73	-38	500
450		-09	-33	282	73	-8	-10	243	42	-06	-3	274	44	-01	-07	256	46	-04	-13		-04	-13		-10	-19	280	48	-8	-23	270	33	-1	-33	246	29	04	-28	450				
400	23.3	-20	-45	284	80	-16	-19	257	55	-17	-23	277	48	-23	-9	262	52	-24	-1		-24	-1		24.1	-12	-19	282	54	-11	-20	273	42	-6	-25	254	32	24.1	-1	-13	400		
350		-31	-58	282	84	-24	-27	264	66	-24	-29	278	60	-20	-28	261	60	-16	-27		-16	-27		-25	-32	286	59	-20	-28	287	52	-18	-31	268	36	-12	-24	350				
300	29.8	-43		293	103	30.1	-38	-43	272	86	30.3	-39	-45	284	72	30.6	-36	-44	262	58	30.9	-32	-42	30.8	-38	-44	300	57	30.9	-35	-52	295	48	31.0	-33	-42	266	31	30.9	-28	-38	300
250		-54		293	135	-55			272	105	-57			288	87	-55			261	65	-51			-57		307	62	-54		303	40	-52		278	22	-47		250				
200	38.6	-70		290	112	38.8	-76		269	100	39.0	-79				37.4	-77		270	50	39.6	-77		39.5	-78		319	75	39.6	-75		325	44	39.8	-71	298	24	39.8	-71	200		
170		-80		288	90	-79			274	60						-87			273	52	-90			-90		318	73	-88		319	40	-84		312	24	(79.4)	-80	170				
150		-67		282	75											45.1	-85		276	45	-84			45.2	-86		302	53	-87		309	43	-85		299	22			150			
130		-64														-85					-82			-80		300	36	-83		306	40	-81		296	24			130				
110		-63														-76					-74			-80		307	26	-81		292	23	-82		289	25			110				
100	530	-61														-77					-79			-80		307	26	-81		290	17	-82		287	24			100				
90		-61														-73					-79			-80		307	26	-81		290	17	-82		287	24			90				
80		-63														-68					-69			-80		307	26	-81		290	17	-82		287	24			80				
70		-63																			-69			-80		307	26	-81		290	17	-82		287	24			70				
60		-63																			-69																					

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

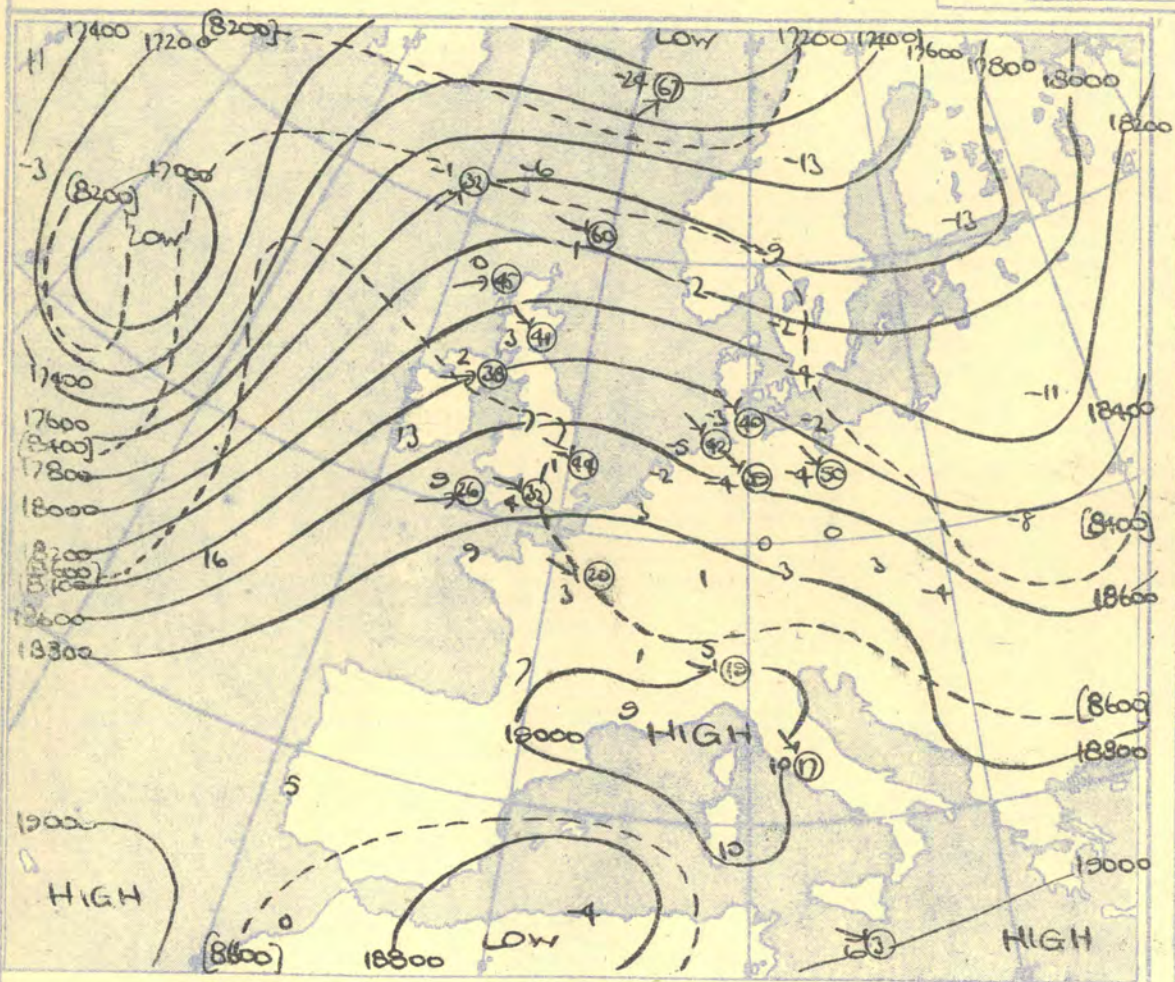


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

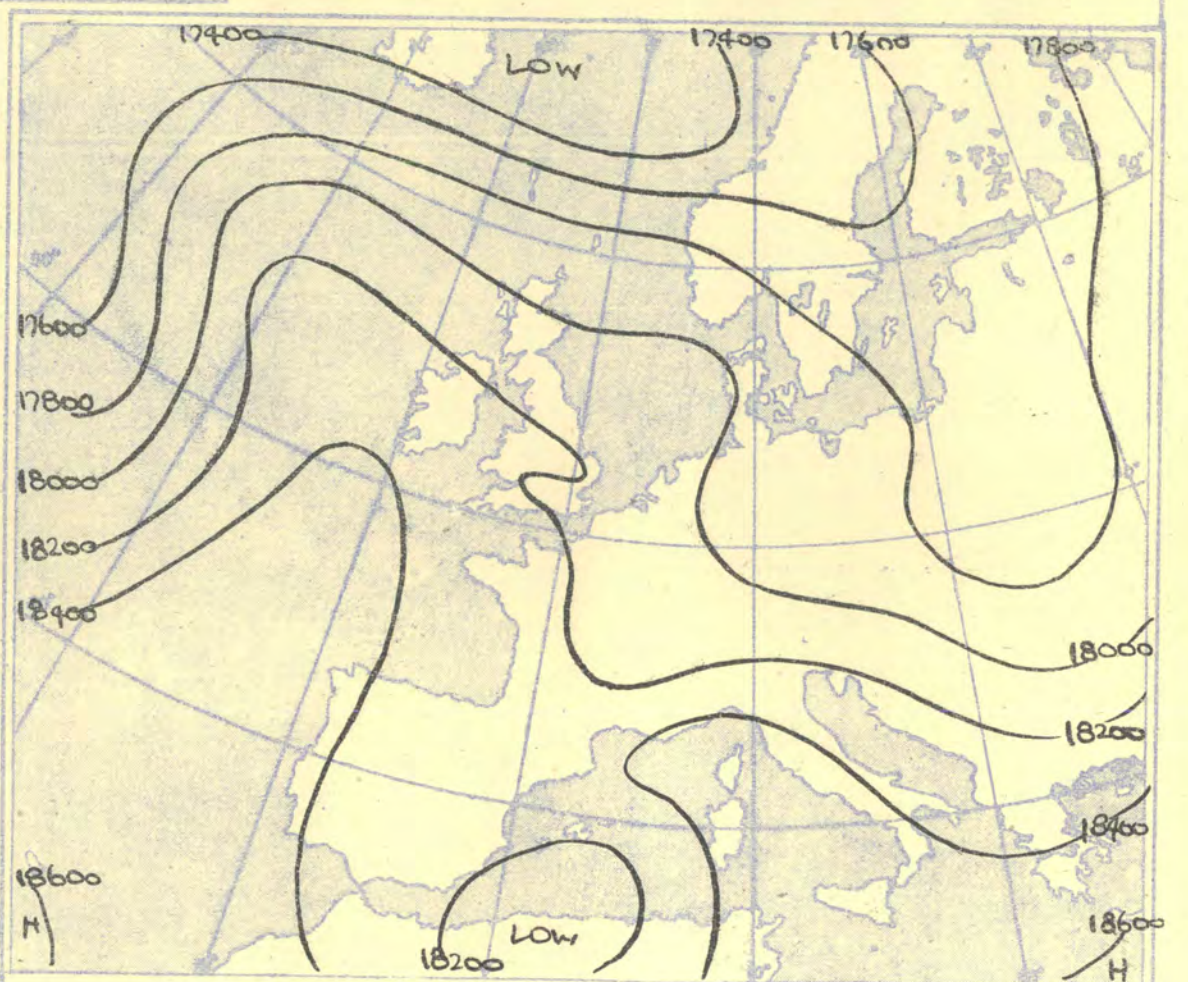
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.



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.



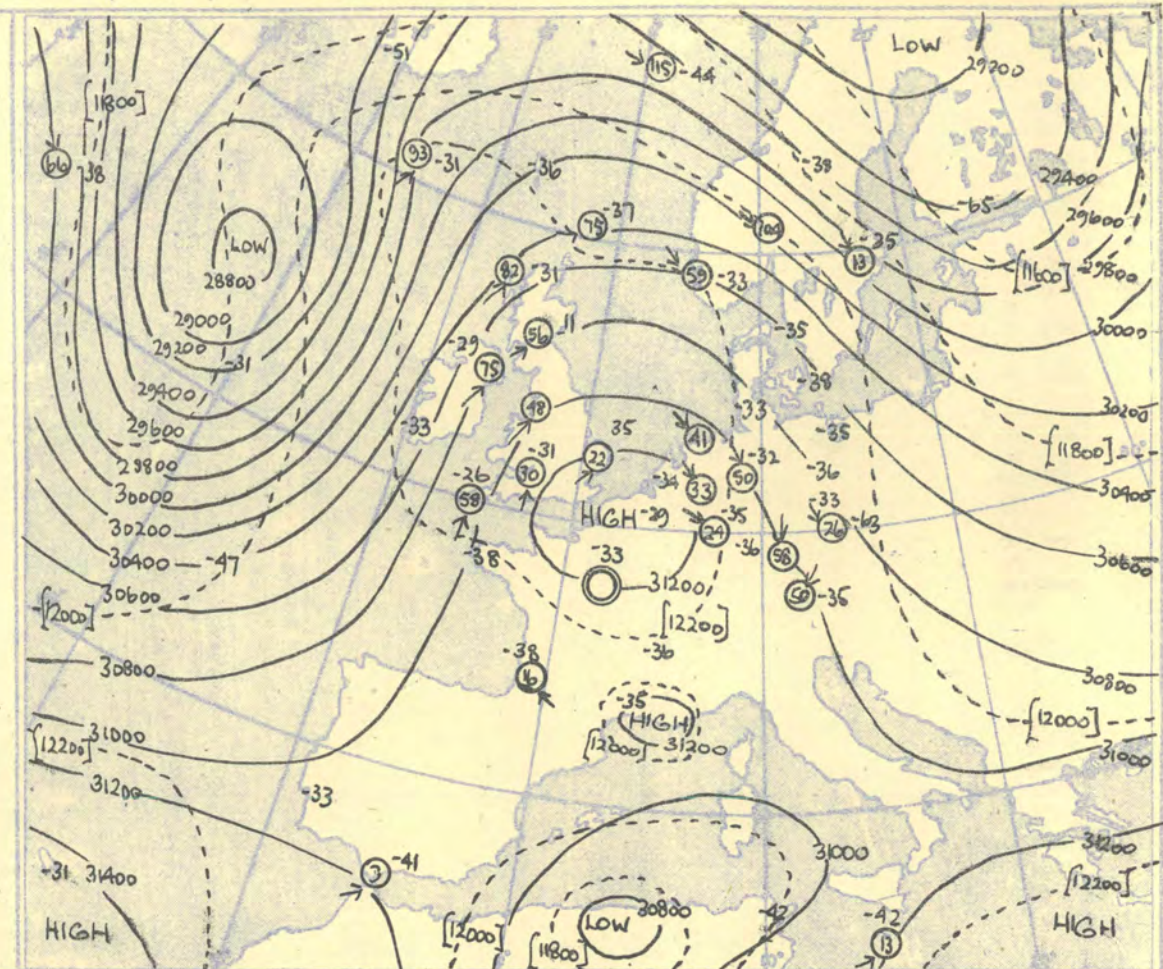
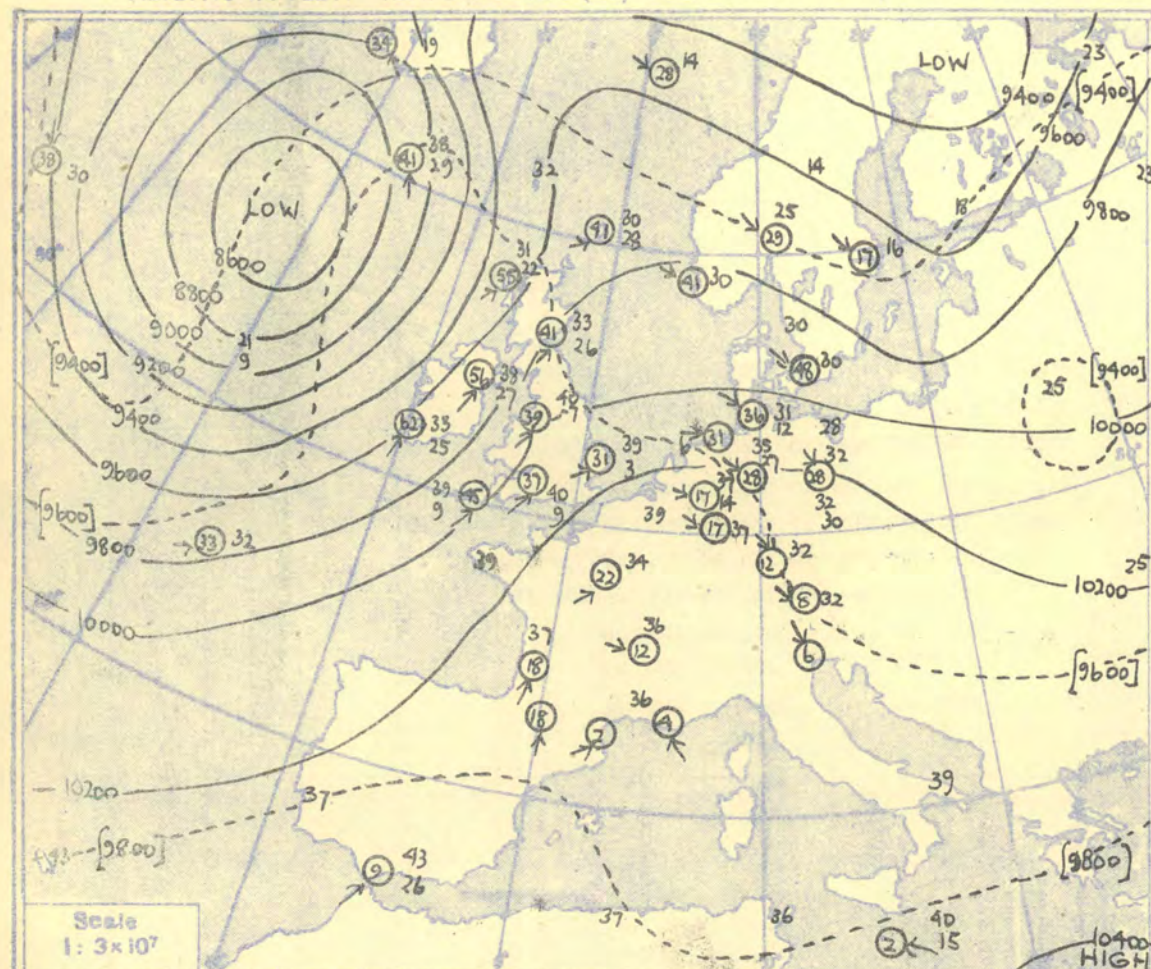
Isopleths of Thickness 500-1000mb.

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

NEPHOSCOPE OBSERVATIONS

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

[illegible]

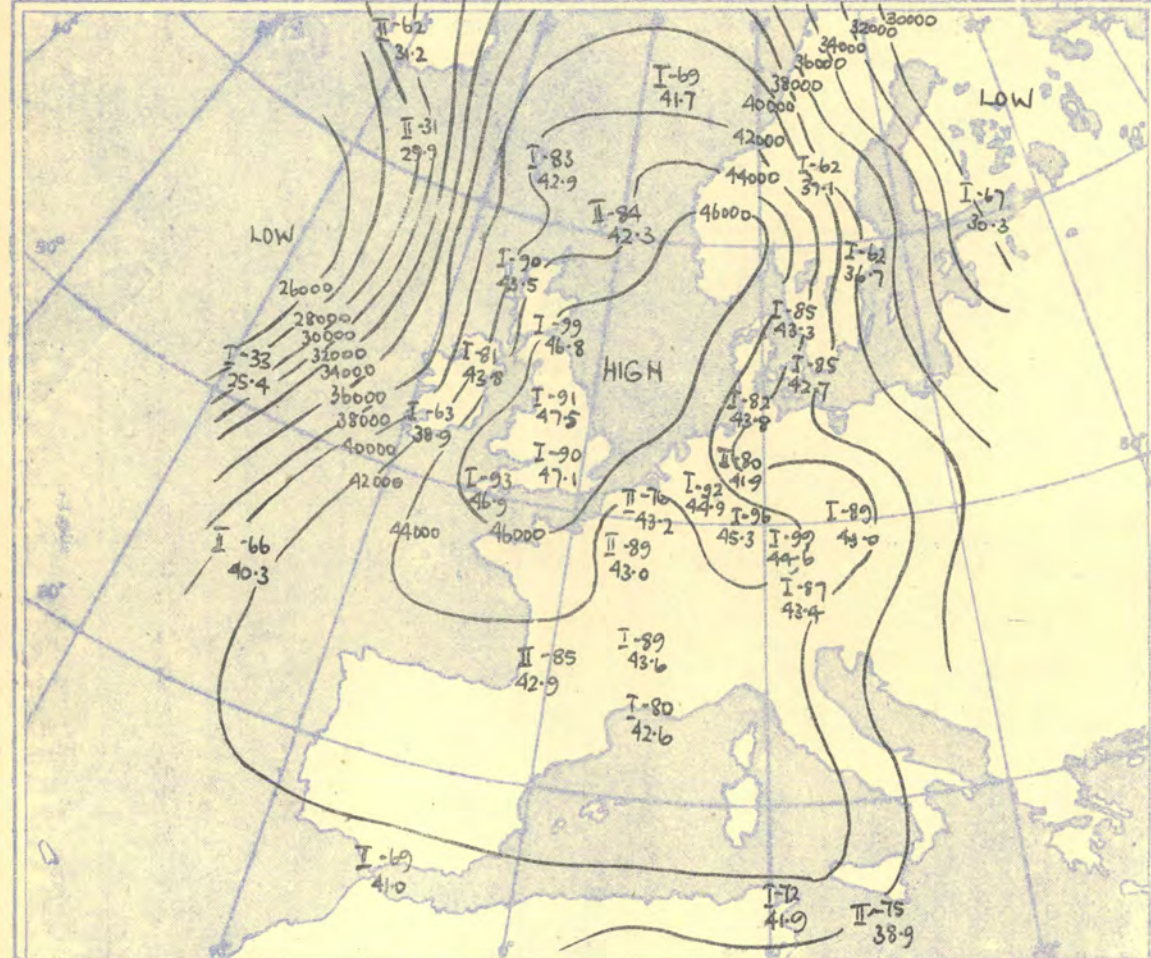


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

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.



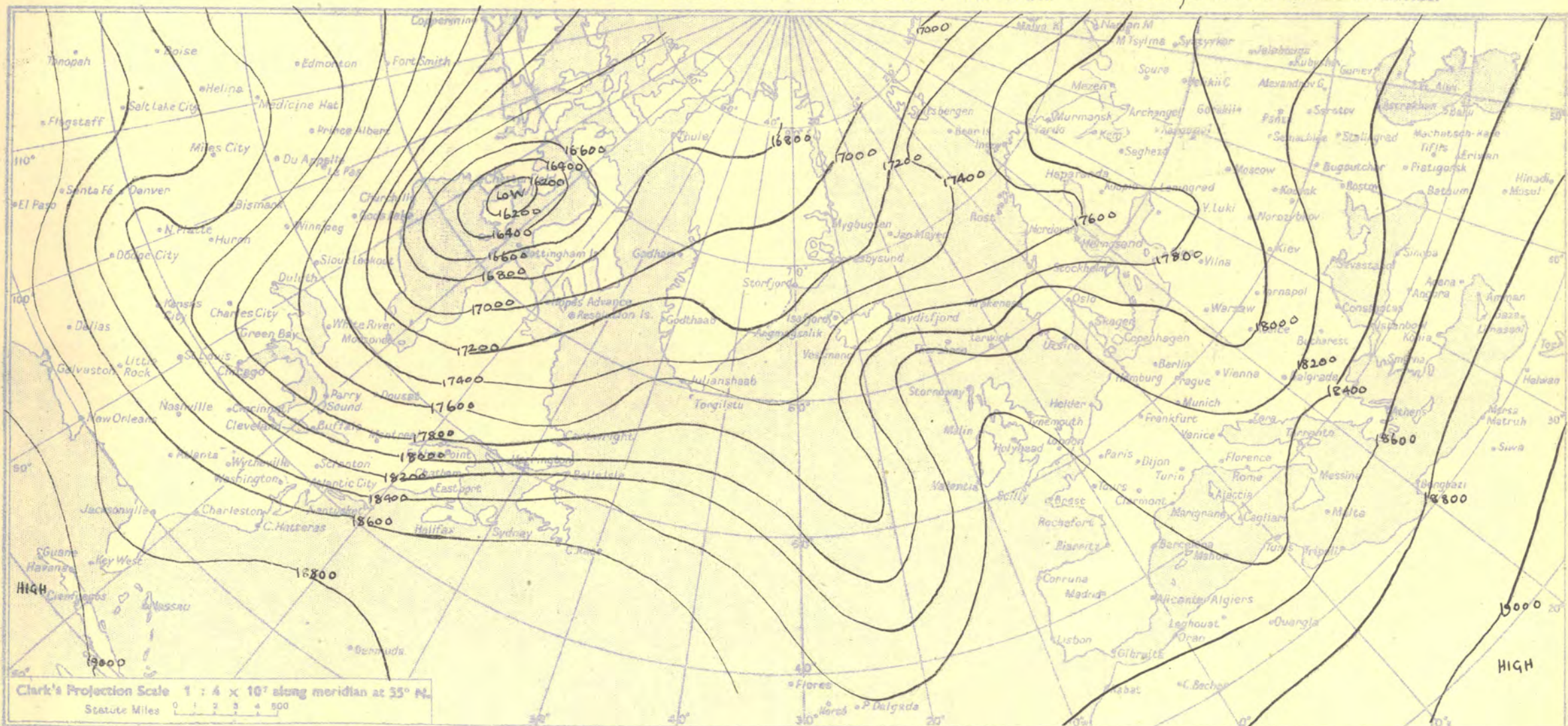
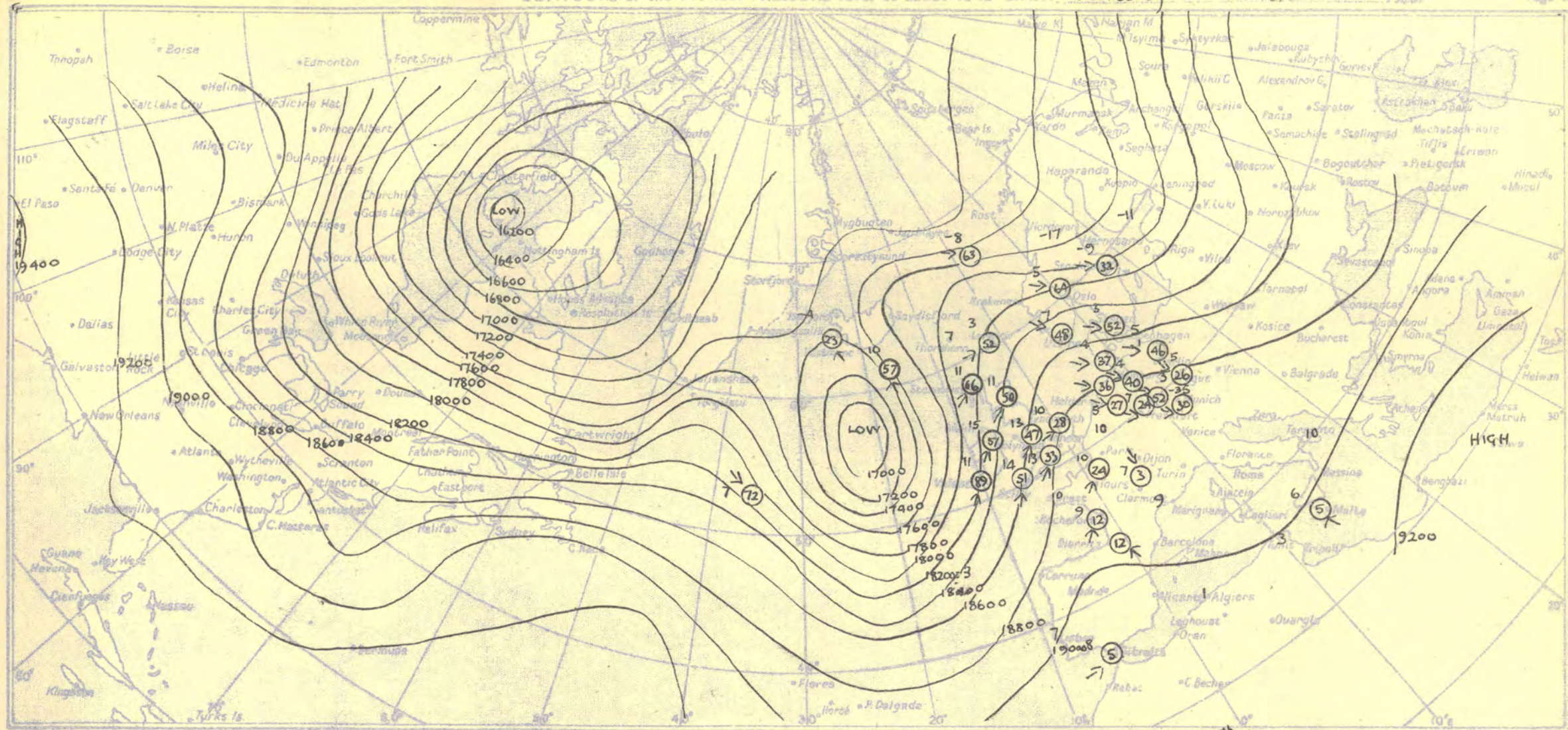
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Unusually warm air over the area between Scotland and Iceland.

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

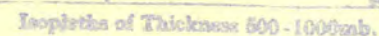
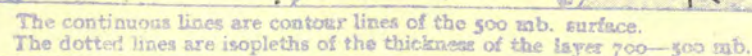
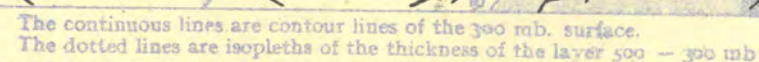
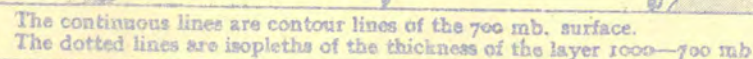


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Time	M.S.L.	15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	mb		15h.	G.M.T.	Time	M.S.L.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Surf	Pressure	1008.0		mb		998.7		mb		1008.1		mb		1004.9		mb		1011.9		mb		1017.5		mb		1016.8		mb		1000.6		mb		995.2		mb		993		mb		Surf	Pressure																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Freezing		722		mb		709		mb		695		mb		651		mb		625		mb		658		mb		650		mb		640		mb		655		mb		655		mb		Freezing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew

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

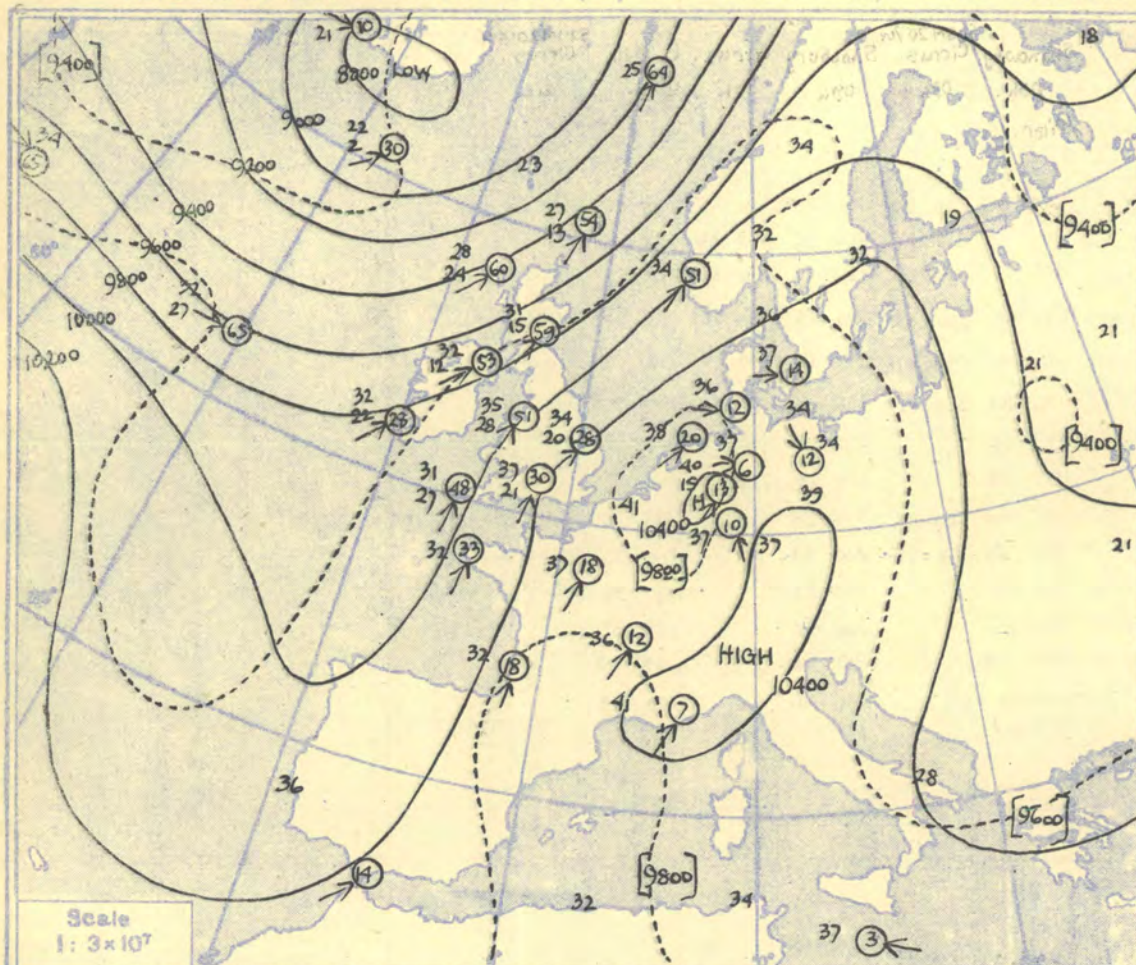
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																											
Pressure mb	Time M.S.L. Surf (Pressing)	03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.																											
		1000.6 mb 990.7 mb 716 mb				993.9 mb 992.0 mb 700 mb				1004.2 mb 1003.4 mb 667 mb				1002.0 mb 993.6 mb 700 mb				1008.4 mb 1006.4 mb 653 mb				1015.3 mb 1010.9 mb 647 mb				1014.2 mb 998.3 mb 670 mb				1009.0 mb 998.4 mb 681 mb				1001.8 mb 1000.3 mb 730 mb																															
		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots																																
Surf	02.7	55	51	190	24	0.5	54	51	0.2	59	53	190	20	02.3	57	52	200	16	00.6	60	54	01.2	54	53	150	06	4.4	55	54	180	12	2.9	58	58	180	25	0.3	55	53	180	12	Surf																							
1000	00.1	49	48	186	48	-1.7	52	43	1.2	58	53			00.6	54	51	206	36	02.4	59	53	04.2	54	53	189	27	3.9	54	43	199	81	2.5	57	57	195	38	5	55	53	180	12	1000																							
950	28.9	50	42	192	52	27.1	49	40	30.2	50	48	212	41	29.5	48	35	210	41	31.5	52	49	33.2	55	42	208	25	32.9	56	46	207	34	31.6	54	54	197	40	29.4	45	42	217	22	950																							
900		52	42	198	50		46	27	62.0	46	45	221	43	61.2	43	32	210	44	63.6	49	46	65.4	50	32	210	26	65.1	50	39	213	34	63.7	50	50	204	48	60.9	40	37			900																							
850	61.1	46	38	200	49	58.7	41	21		40	38	219	67		39	28	207	49		46	43		50	20	211	33		47	37	206	32		45	44	207	50		37	33			850																							
800																																										800																							
750		37	31	200	50		37	11	97.0	37	33	217	59	96.5	32	22	205	52		41	35	10.1	46	16	208	37		42	30	206	35		40	28	211	52		34	25			750																							
700	96.6	29	26	196	51	94.2	32	11	See Page 3.	34	25	213	60	96.5	32	22	203	56	99.4	38	29		101	36	22	215	36	99.4	34	28	213	50	96.1	29	15			29	15			700																							
650		23	17	197	54		25	-04		30	17	210	59		26	16	204	63		31	12		33	-08	206	40		29	15	215	34		27	23	205	47		24	10			650																							
600	136	18	13	205	59	134	21	-06	138	23	07	203	59	136	20	15	203	65	140	24	16	142	25	-18	212	37	141	26	-01	199	40	140	20	15	201	50	136	18	04			600																							
550		10	05	210	65		15	-06		16	-01	204	64		12	03	206	65		17	09		21	-26	210	33		21	-05	204	40		13	08	201	48		10	-04			550																							
500		07	-08	214	60	180	07	-05	184	09	-05	205	71	182	06	-12	207	67	186	08	-05	189	14	-35	221	44	188	10	-36	209	43	186	06	-11	197	56	182	00	-21			500																							
450		-02	-19	215	65		-03	-12		-02	-14	208	73		-06	-23	205	77		00	-28		04	-44	213	46		-01	-45	200	54		-03	-46	198	60		-10	-25			450																							
400	236	-12	-30	216	63	239	-16	-26	238	-15	-26	210	82	236	-19	-35	198	81	241	-11	-46	244	-05	-50	203	47	242	-12	-53	187	49	240	-15	-56	193	67	235	-20	-38			400																							
350		-22	-42			-26	-39			-25	-37	206	95		-32	-49	202	91		-23	-56		-15	-54	195	45		-24	-57	188	58		-29	-56	193	75		-33	-53			350																							
300	330 mb)	-27	-43						305	-38	-53	205	105	302	-46		197	96	308	-36	-59	312	-29	-56	200	53	309	-38	-58	188	65	306	-44		186	81	300	-48			300																								
250										-56					-61					-51			-46		199	61		-56		185	75		-60		196	92		-59			250																								
200									392	-74				388	-69				395	-69			-76		189	70	396	-76		184	84	392	-74			387	-56			200																									
170										-74					-62					-80			-76		191	57		-85		189	67		-76			-59			170																										
150										-80					-65					-75			-76		195	49		-81		203	42		-80			(178mb)			150																										
130										-82					-67					-79			-76		202	36		-84		213	37		-72					130																											
110										-70										-74			-74		216	24		-75		190	24		-75					110																											
100									534	-73									537	-73							537	-70		195	17	(116mb)						100																											
90																			(75 mb)	-70																		90																											
80																																								80																									
70																																								70																									
60																																								60																									
Inversion		950mb 49°-915mb 51°								Inversion				750mb 32°-724mb 35°				Isothermal				912-890mb 52°				Inversion				965mb 54°-950mb 56°				Inversion				998mb 55°-982mb 56°				Isothermal				600-586mb 20°				Isothermal				1000-997mb 55°				Isothermal				793-776° 36°			
900 - 50°-872 - 55°																						470-456 - 01°								1011-965mb 54°				933 - 53°-912 - 57°								626 - 26°-603° 27°																							
527 - 06°-505 - 08°																														950-910 - 56°				Isothermal				860-845mb 50°																											
Isothermal		991-980mb 53°																																																															
Tropopause		N.R.				I 153mb -68° 44' 500'				I 193mb -76° 40' 100'				I 190mb -69° 39' 900'				I 166mb -82° 43' 800'				I 166mb -78° 44' 000'				I 159mb -88° 44' 200'				I 205mb -75° 38' 700'				I 250mb -59° 33' 900'				Tropopause																											
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION																															
Pressure mb	Time M.S.L. Surf (Pressing)	09h G.M.T.				09h G.M.T.				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.																															
		998.0 mb 988.3 mb 702 mb				992.8 mb 992.3 mb 744 mb				G.M.T.				1004.2 mb 995.7 mb 608 mb				1009.4 mb 1007.4 mb 670 mb				1015.9 mb 1011.5 mb 672 mb				1013.9 mb 998.8 mb 670 mb				1009.5 mb 999.1 mb 695 mb				G.M.T.																															
		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots																												
Surf	02.7	54	52	210	32	0.5	55	49	02.3	56	49	200	10	00.6	59	57	180	15	01.2	55	53	135	08	4.4	57	54	190	04	2.9	59	56	170	12					Surf																											
1000	-0.9					-1.6			01.1					02.6	58	56			04.4					4.0					2.7									1000																											
950		52	50	202	48		50	45		52	45	212	33		55	52	203	31		62	49	202	26		64	50	191	25		57	56	198	36					950																											
900	28.1	50	46	204	51	27.1	44	40	30.0	48	40	215	31	31.7	52	49	215	38	33.7	57	47	215	27	33.2	58	48	193	28	31.9	53	50	201	36					900																											
850		45	40																																																														



AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

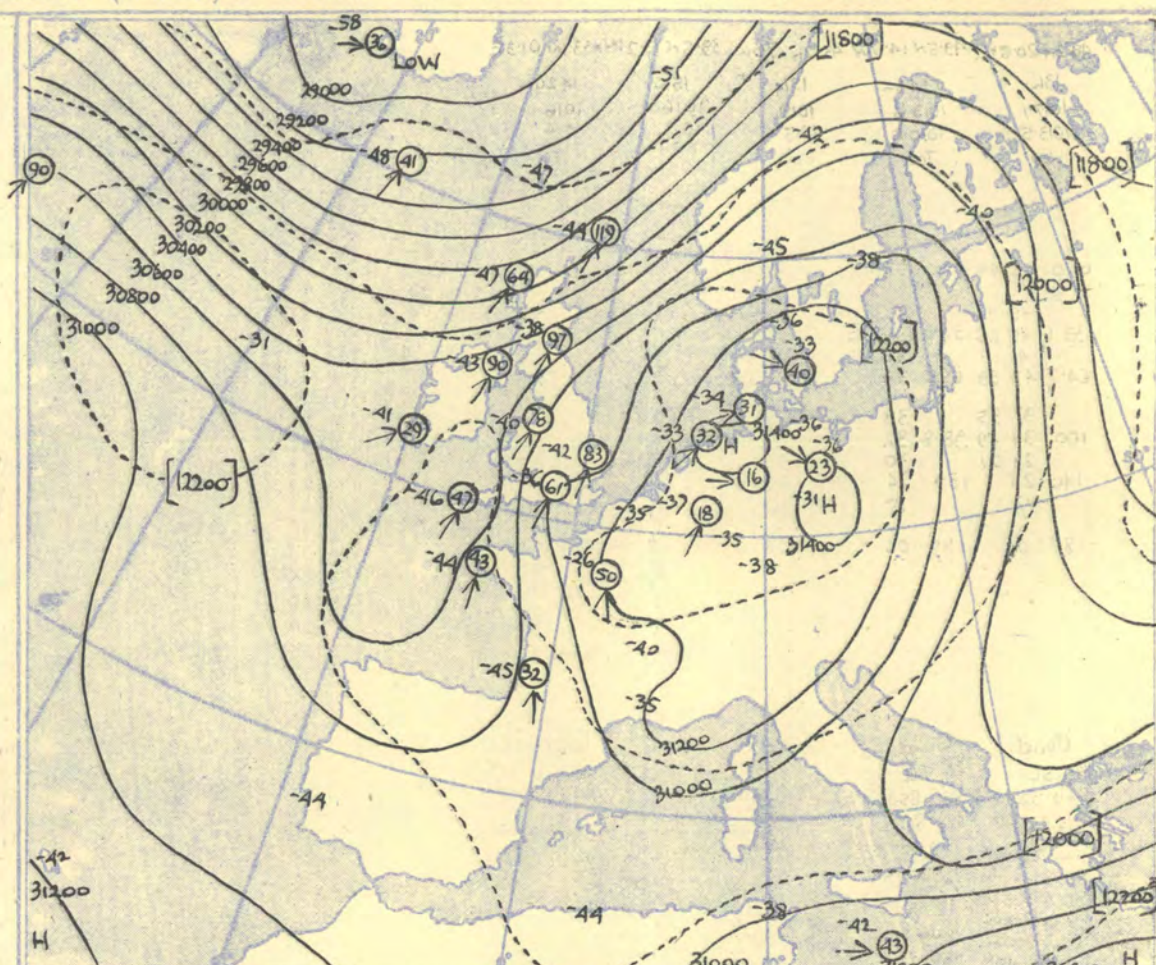
48°24'N 20°5'W			49°5'N 14°7'W			48°24'N 17°0'W			39°5'N 12°2'W			53°1'N 01°3'E																					
Time M.S.L. Surf Pressure	13h.			1445h			13h			15h.			1420h																		Time M.S.L. Surf Pressure		
	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb					
1017.1	1013.5	669.		1013.6	1010.0	700.		1019	1015	660.		1016	1013	680		1016	1014	659															
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	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew	Height ft./100	Temp.	Dew				
Surf	45	48	3.7	53	47	51	57	4.6	61	58	3.9	65	41	59	43	65	41	59	43	65	41	59	43	65	41	59	43	65	41				
1000	45	43	32.2	47	41	44	40	37	37	42	37	37	34	65	7	48	25	37	35	38	22	30	101	37	17	101	34	24					
950	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
900	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
850	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
800	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
750	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
700	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
650	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
600	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
550	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
500	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
450	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
400	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
350	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
300	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
250	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
200	41	11	32	32	32	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37				
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Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.	Cloud.			
4/8 Sc	2/8 Cu	5/8 Cu	4/8 Cu	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°				
74°-920mb.	880-850mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.					
7/8 Cs MR.	4/8 Sc	Surf Wind	2/8 Cs	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°				
Inversion.	880-850mb.	Surf Wind	2/8 Cs	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°	980..	53°	1014 mb	51°				
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1000- 43°	3/8 Cs MR.	N. 7-10kts.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.	910-810mb.					
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HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



Scale
1: 3x10⁷

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.

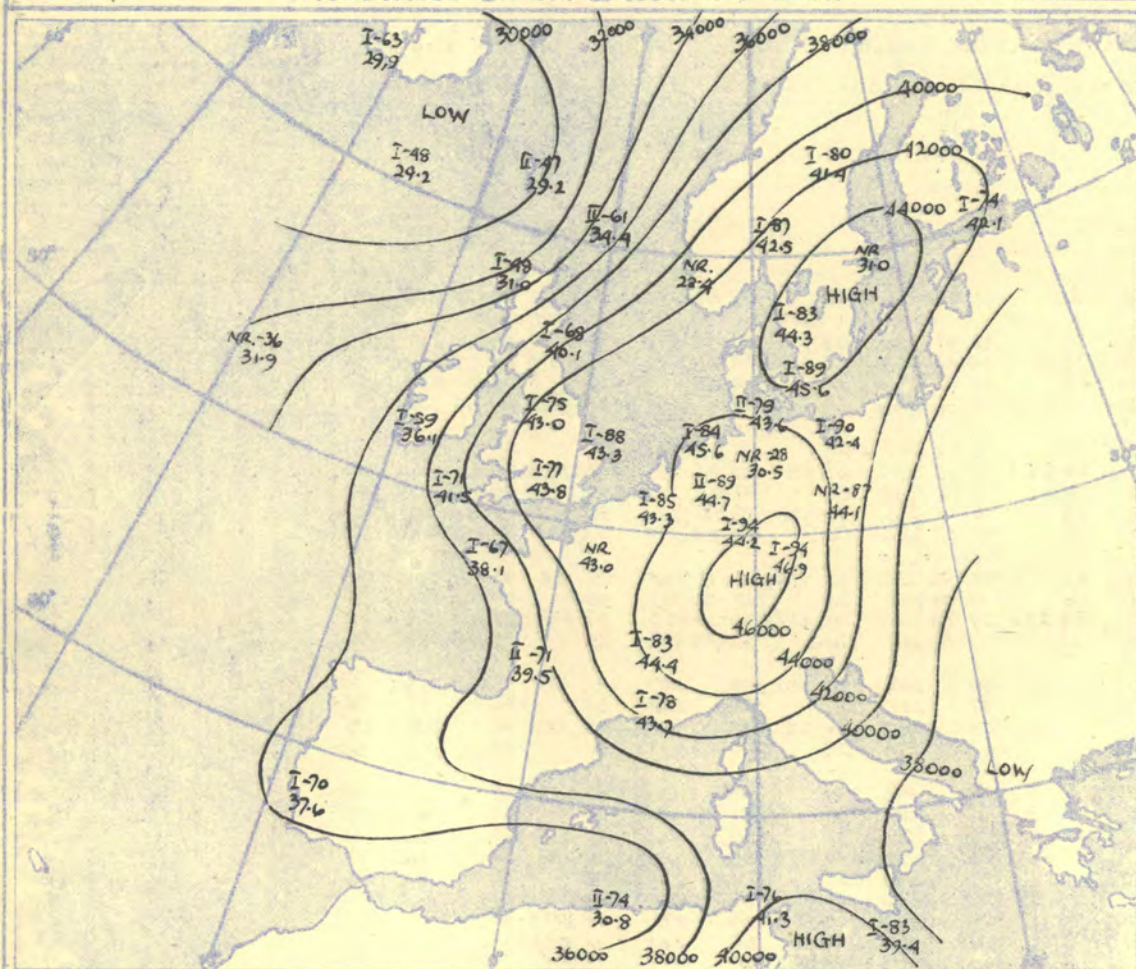


Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

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 15 h G.M.T.



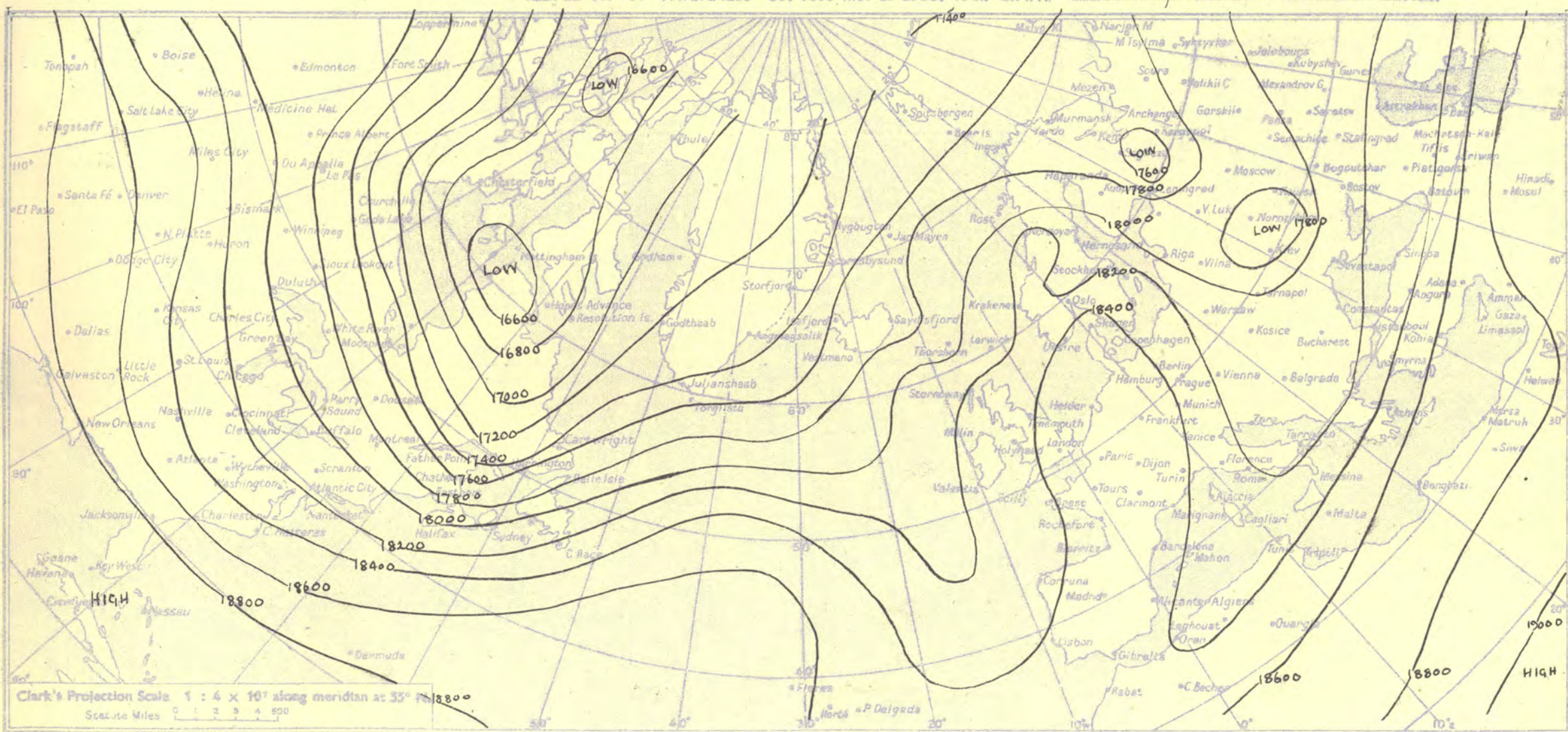
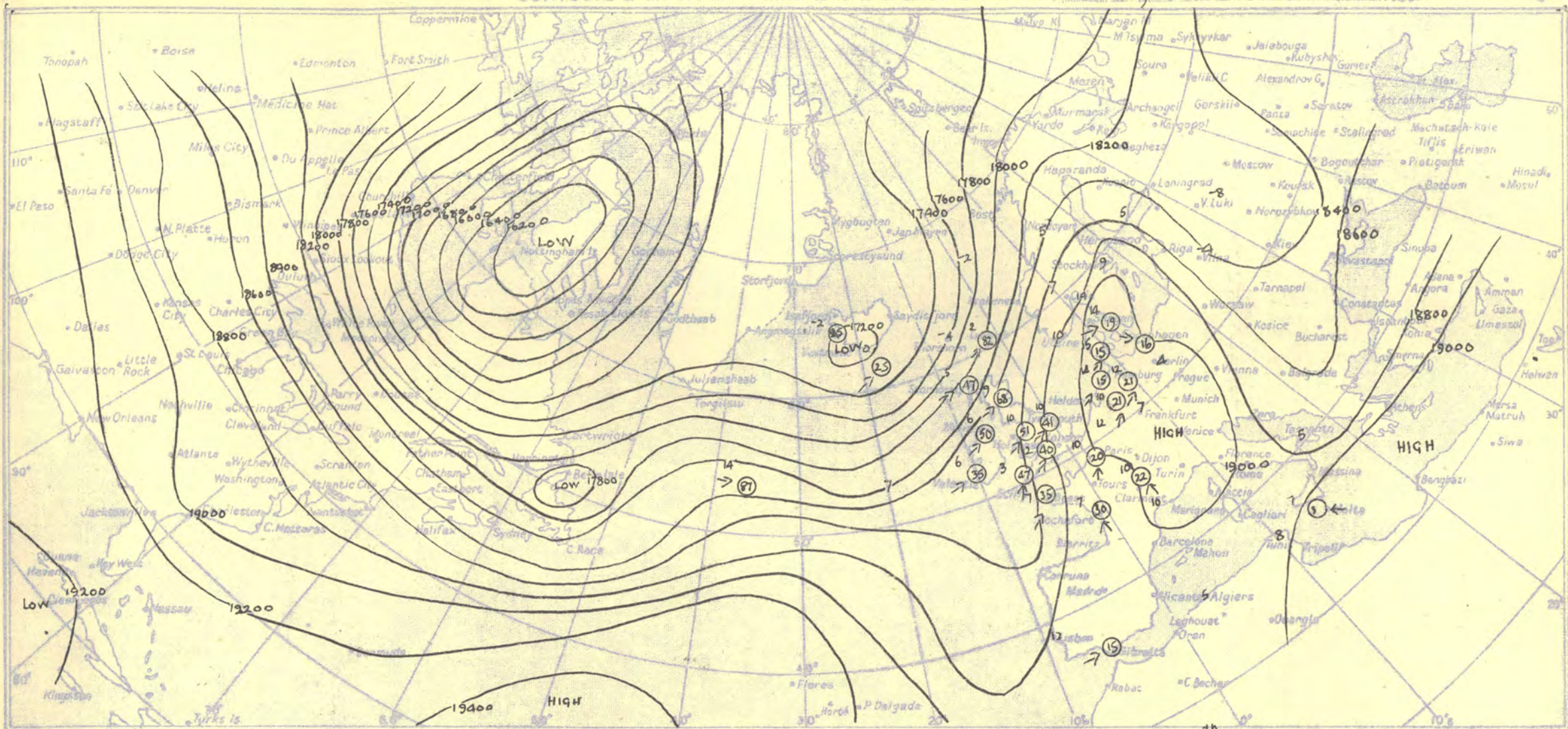
Contour lines of Height or Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Rapid warming of the cold trough southwest of Ireland, due partly to subsidence but mainly to advection from the west.

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



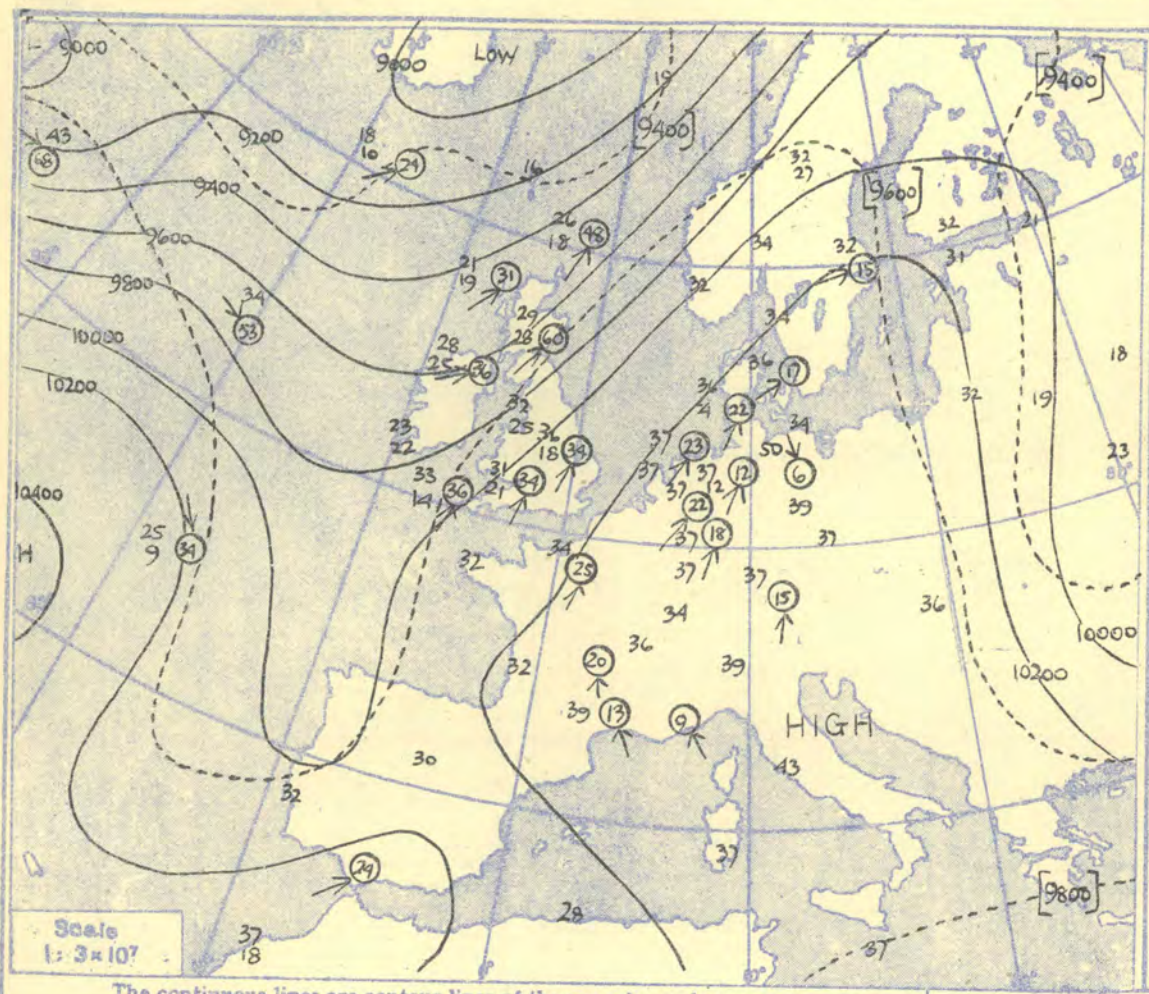
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time	
M.S.L.		997.9		mb		996.4		mb		1005.5		mb		1006.8		mb		1010.2		mb		1014.9		mb		1014.0		mb		1011.1		mb		1009.2		mb		M.S.L.	
Surf		988.1		mb		994.5		mb		1004.6		mb		998.4		mb		1008.2		mb		1010.5		mb		998.5		mb		1000.7		mb		1008		Surf			
Pressure		751		mb		770		mb		709		mb		700		mb		662		mb		988		mb		650		mb		705		mb		700		Pressure			
Height		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		Height	
Dir.		Vel.		ft./100		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.	
Wind		Vel.		ft./100		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind		Vel.		Wind	
Surf		02.7		56		00.5		54		00.2		63		02.3		60		00.6		71		01.2		70		04.4		67		02.9		62		00.3		58		Surf	
1000		-0.6		53		-1.0		49		-1.5		62		-1.9		60		-2.9		69		-4.2		68		-4.1		67		-3.1		62		-2.5		57		1000	
950		28.3		48		27.7		43		30.6		49		30.9		48		32.2		54		33.7		59		62		43		59		49		49		950			
900		42		35		40		38		43		32		45		24		48		43		54		42		55		38		50		41		40		900			
850		59.9		37		59.1		33		62.4		41		62.7		41		64.2		43		66.1		48		66.1		48		64.5		43		62.8		850			
800		32		23		31		29		35		20		38		24		40		34		40		25		42		29		38		34		37		800			
750		27		13		28		24		31		15		32		22		35		28		34		20		37		21		37		21		750					
700		27		00		28		24		31		15		32		22		35		28		34		20		37		21		37		21		700					
650		27		00		28		24		31		15		32		22		35		28		34		20		37		21		37		21		650					
600		135		18		134		19		138		19		138		23		07		218		142		25		143		28		103		206		139		600			
550		10		-0.4		14		-0.5		15		-0.3		15		-0.5		18		07		18		-27		20		15		20		13		17		550			
500		180		02		180		05		184		09		184		06		10		14		188		10		189		12		03		187		185		500			
450		-10		-19		-05		-25		-01		-18		-04		-28		01		-31		02		-41		02		-38		193		186		-05		450			
400		234		-19		-30		209		234		-17		-37		235		210		210		243		-15		244		-11		191		240		239		400			
350		-31		-44		-35		-52		-24		-24		-18		-50		216		84		-21		-42		-23		-48		187		-25		350					
300		300		-44		299		-47		306		-38		305		-43		213		90		309		-42		196		65		311		-36		306		300			
250		-59		214		114		-47		-53		-53		-54		-53		210		80		-59		-59		199		85		-53		184		-59					

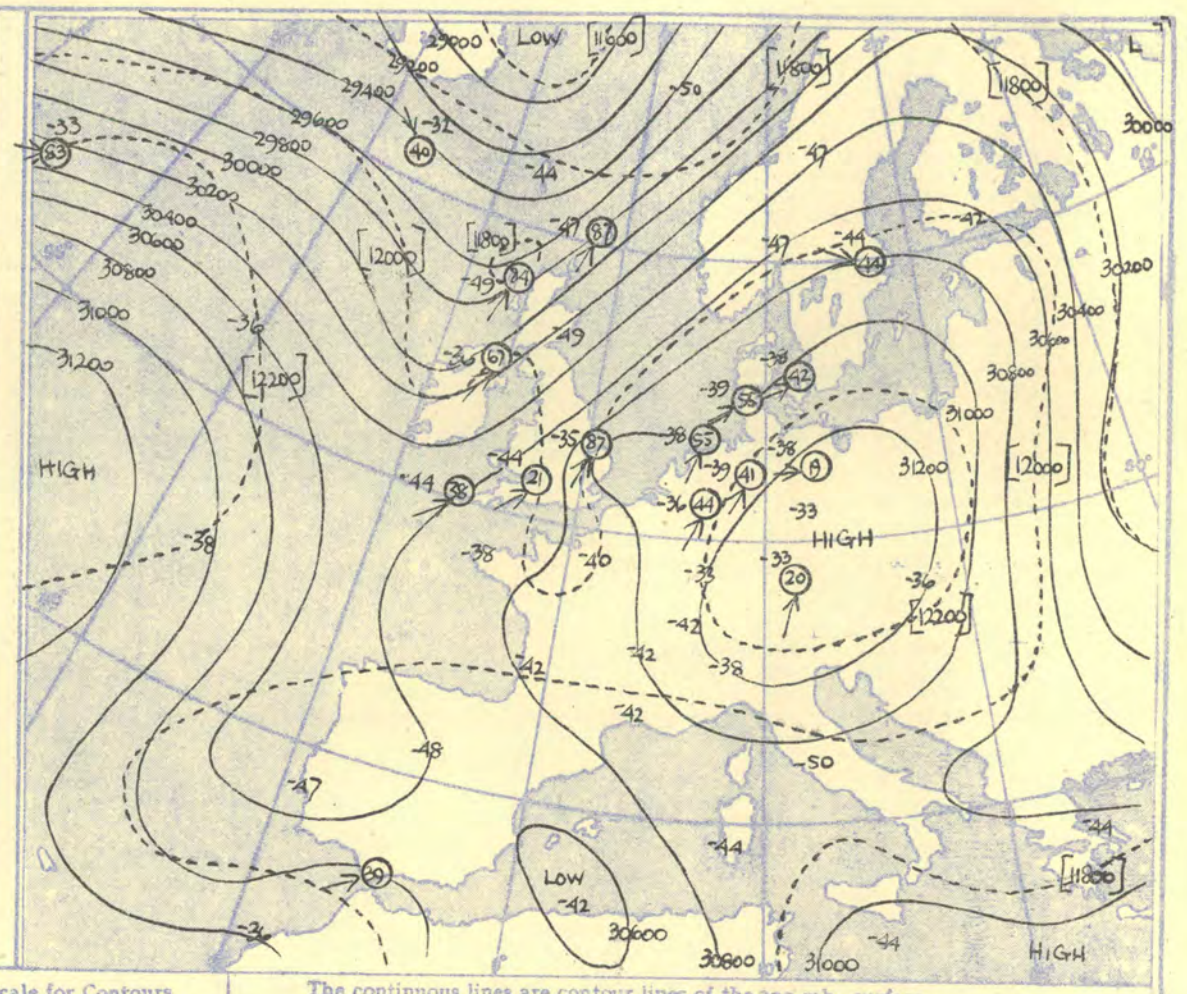
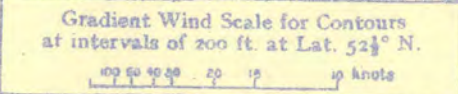
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Time		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Freezing		803		mb		825		mb		732		mb		744		mb		698		mb		706		mb		710		mb		695		mb		785		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.		Wind Dir.	Vel. knots	Pressure	mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°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.	°F.	°F.

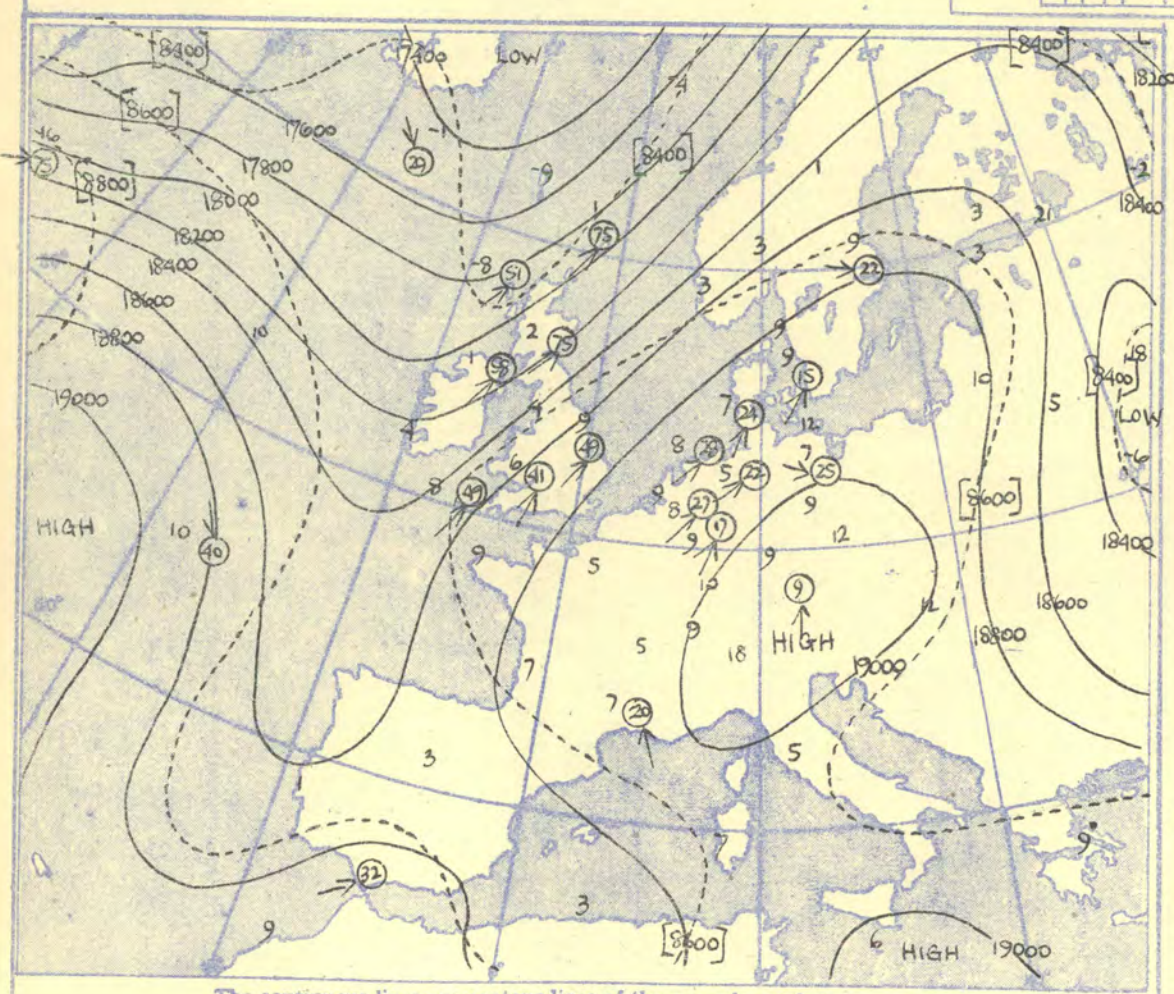
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb, levels at about 03 h. GMT.



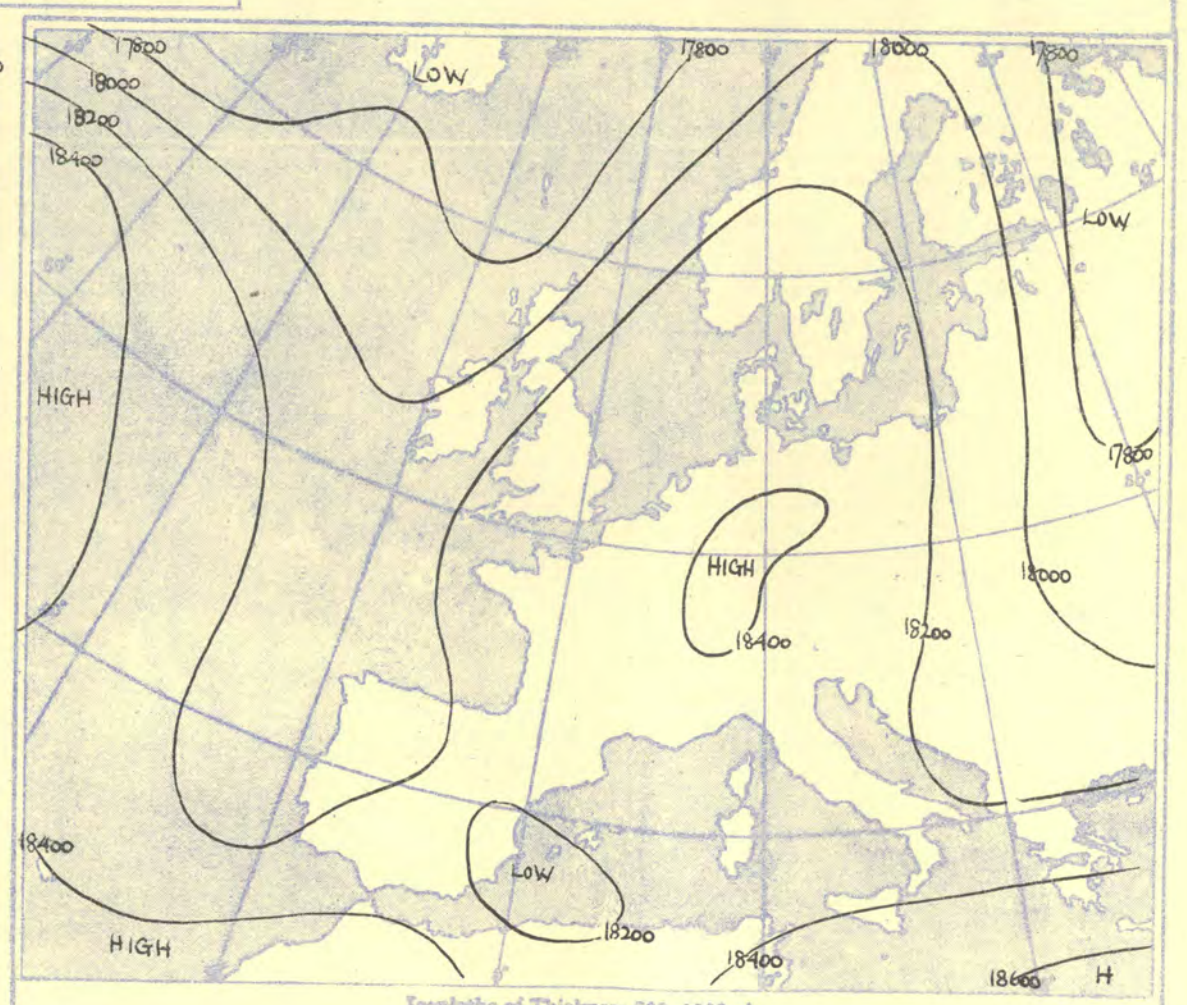
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb



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.

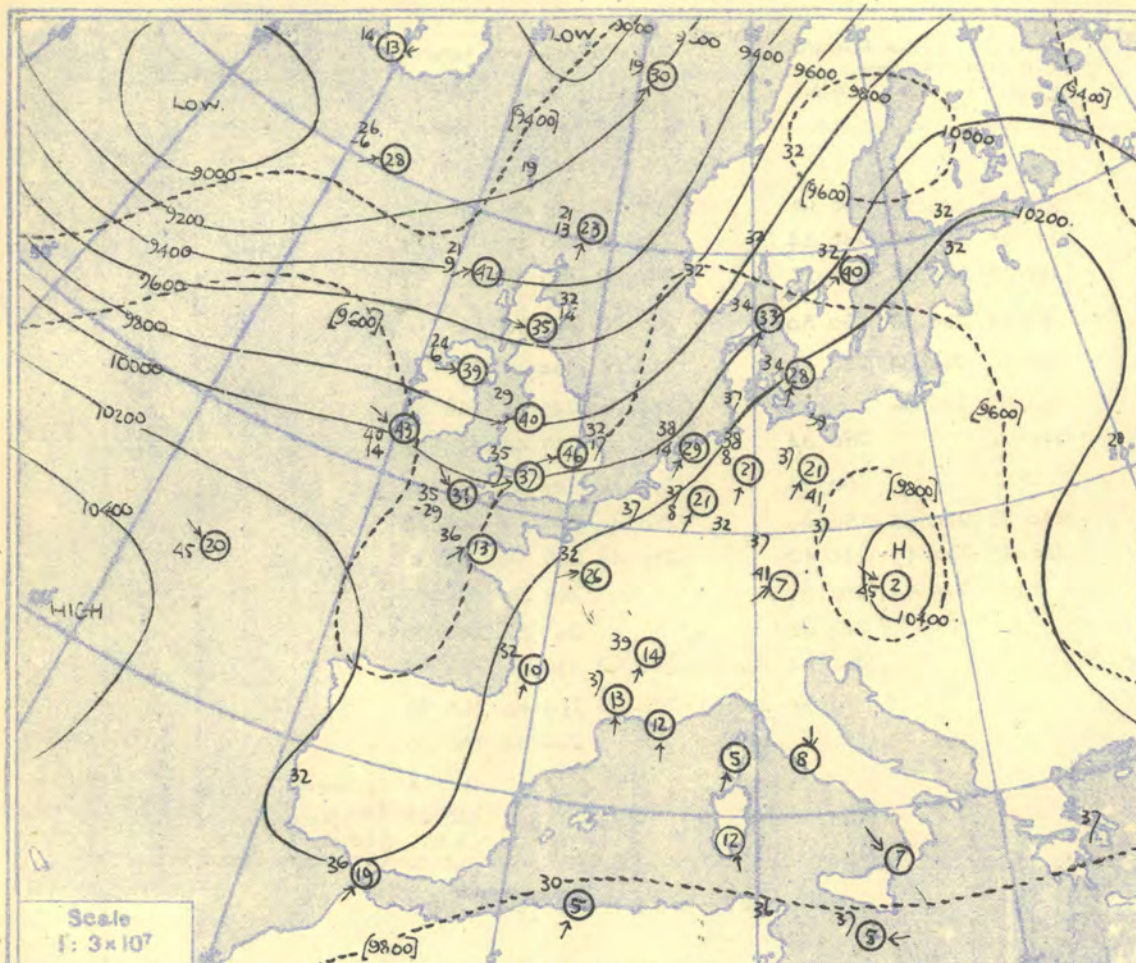
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

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

Ship	WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				CIRRUS.				CIRRUS.				CIRRUS.				CIRRUS.				Ship	
Lat/Long	60°4N 16°1W.				60°4N 16°3W.				60°3N 16°3W.				66°3N 16°1W.				52°2N 20°6W.				52°5N 20°4W.				52°3N 19°5W.				52°3N 19°7W.				Lat/Long	
Pressure M.S.L. Surf Freezing	03h.				09L				15L				21L				03h.				09L				15L				21L				G.M.T.	Time M.S.L. Surf Freezing
	990				991				992				986				1008				1005				1001				1005					
	mb				mb				mb				mb				mb				mb				mb				mb					
	820				880				879				870				690				640				605				600					
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		47	39	260	15		45	38	250	22		47	37	229	17		47	37	130	10										Surf				
1000	-28				-23							-23					-38													1000				
950		45	37	271	15		40	24	274	31		41	33	244	19		42	38	161	12										950				
900	25.6	40	33	256	18	25.9	34	21	276	30	26.0	35	30	243	19	24.5	36	31	164	17										900				
850		34	29	244	20		29	17	276	29		28	23	242	20		29	24	168	17										850				
800	56.7	30	26	242	21	56.7	25	14	275	29	56.7	27	15	245	25	55.4	32	26	172	13										800				
		24	19	250	21		27	06	275	32		26	02	248	25		26	22	179	16														
750		18	10	239	24	91.3	24	-03	275	31	91.3	26	-06	255	28	90.2	25	21	196	20										750				
700		17	01	241	25		21	-13	275	31		20	-31	268	25		20	16	207	25										700				
650	130	12	-02	248	20	131	18	-16	275	31	131	15	-34	266	31	30	17	13	211	34										650				
600		07	01	279	20		11	-20	275	29		10	-42	262	32		09	04	217	34										600				
550																															550			
500	176			299	29	177	03	-27	275	26	177	07	-38	265	34	175	03	-16	226	40										500				
450		-12	-17	316	36		-06	-39	275	38		-01	-13	270	43		-07	-11	216	39										450				
400	229	-21	-33	308	32	231	-08	-45	275	64	231	-12		248	49	229	-19	-34	210	46										400				
350		-26	-41	292	34		-14	-55	280	91		-24		243	54		-32	-50	220	52										350				
	295	-32	-52	294	40	299	-31	-58	290	104	(337)mb			295	-42	221	54														300			
250		-37	-58	293	54		-46		302	96				-44	228	48															250			
200	387	-44		295	42	389	-50		294	80			384	-51	230	48	394	-71												200				
170		-46		295	37		-53		285	53				-61	231	42															170			
		-44		283	36		-57		285	42				-62	238	36																		
150		-49		284	30		-55		285	31				-61	251	36															150			
130		-56		283	25		-57		285	23				-63	230	28															130			
110		-59		280	19		-58		285	19			532	-61	218	27															110			
100		-57		265	13		-58		285	11				-63	232	18															100			
90		-57		265	11		-58							-63	272																90			
80		-59		265	11																										80			
70																															70			
60																															60			
	Inversion 684 mb 16° - 645 mb 18° 390 - 23° - 374 - 22°				Inversion 800 mb 25° - 771 mb 27° 648 - 21° - 635 - 24°				Inversion 824 mb 25° - 783 mb 29° 728 - 25° - 709 - 27° 527 - 8° - 513 - 9°				Inversion 842 mb 28° - 811 mb 33° 740 - 24° - 700 - 25°				Inversion 888 mb 32° - 869 mb 41° 850 - 41° - 882 - 43° 562 - 18° - 554 - 19° 244 - -56° - 230 - -54°				Inversion 950 mb 46° - 900 mb 48° 880 - 37° - 776 - 41° 680 - 32° - 650 - 34°				Inversion 861 mb 43° - 833 mb 52° 799 - 50° - 776 - 52°				Inversion 865 mb 36° - 838 mb 46° 783 - 41° - 718 - 46°					
	Isothermal. 570 - 550 mb 7°				Isothermal. 803 - 800 mb 25° 650 - 648 - 21° 450 - 416 - -6°				Isothermal. 620 - 550 mb 10°				Isothermal. 714 mb -41° 28.400° 170 - -61° 41.700°				Isothermal. 869 - 850 mb 41° 42.800°				Isothermal. 850 - 807 mb 37°				Isothermal. 833 - 812 mb 52°									
Tropopause	II 200 mb - -44° 38.700°				I 234 mb -47° 35.200°				NR.				II 170 - -61° 41.700°				I 170 mb - 80° 42.800°				I 160 mb - 83° 44.000°				NR				II 210 mb -62° 38.200°				Tropopause	

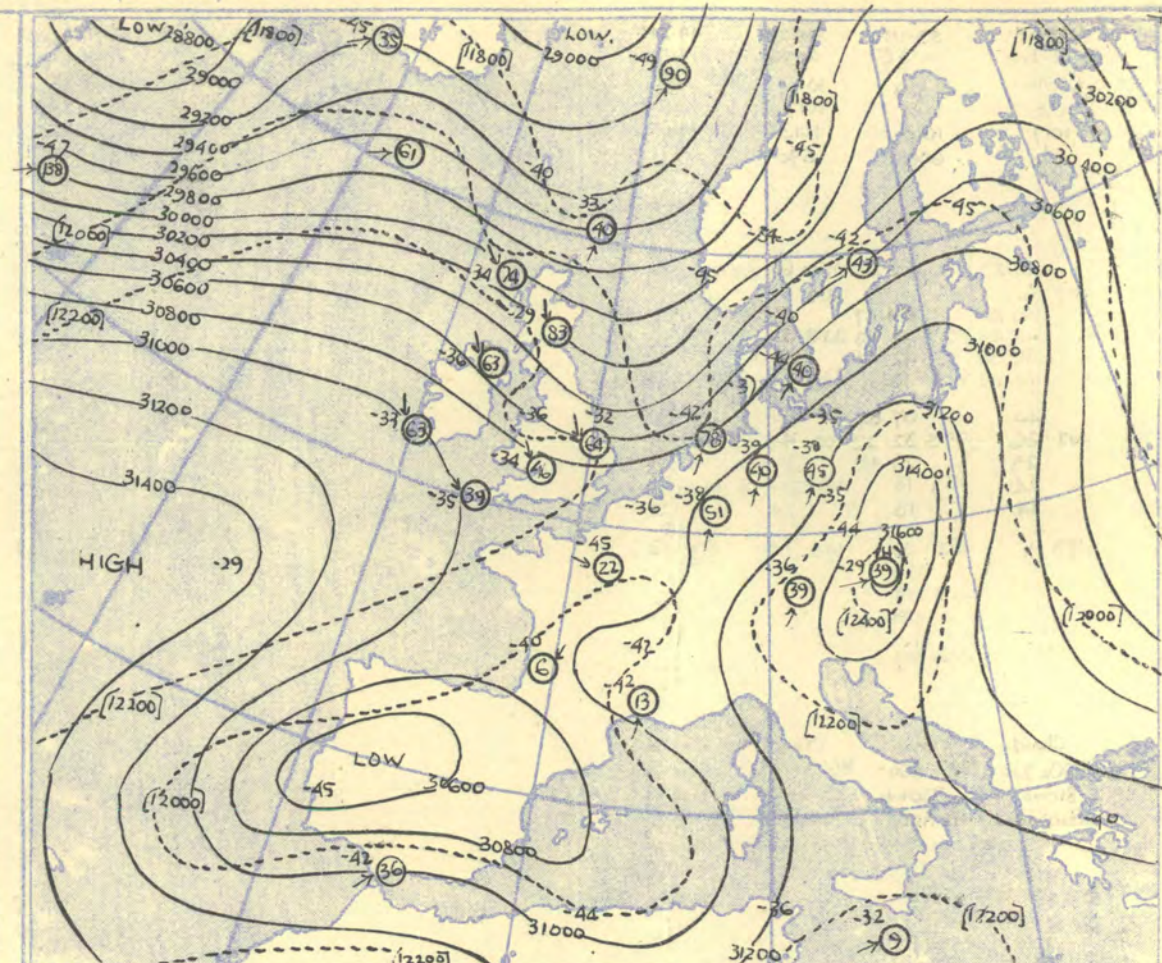
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb. levels at about 15h G.M.T.



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

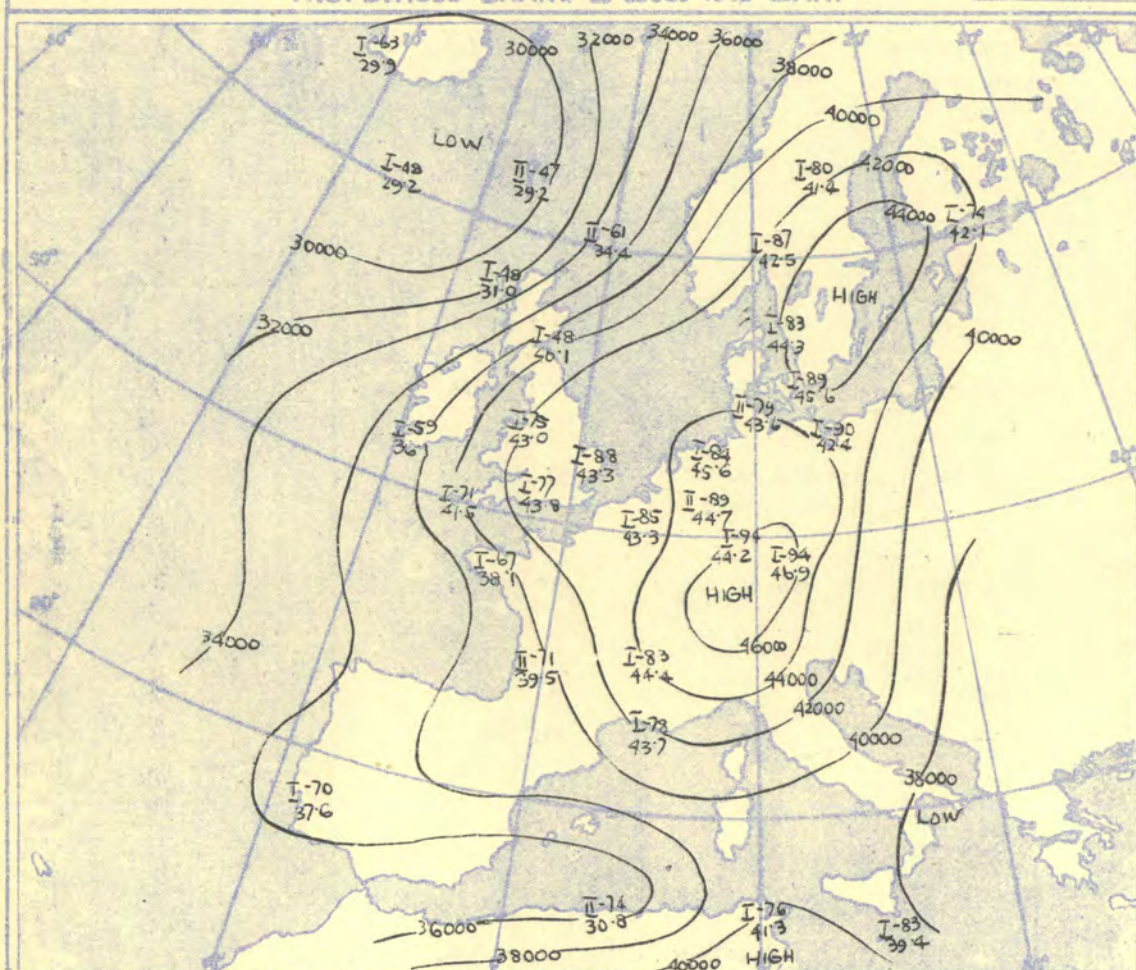
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



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

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



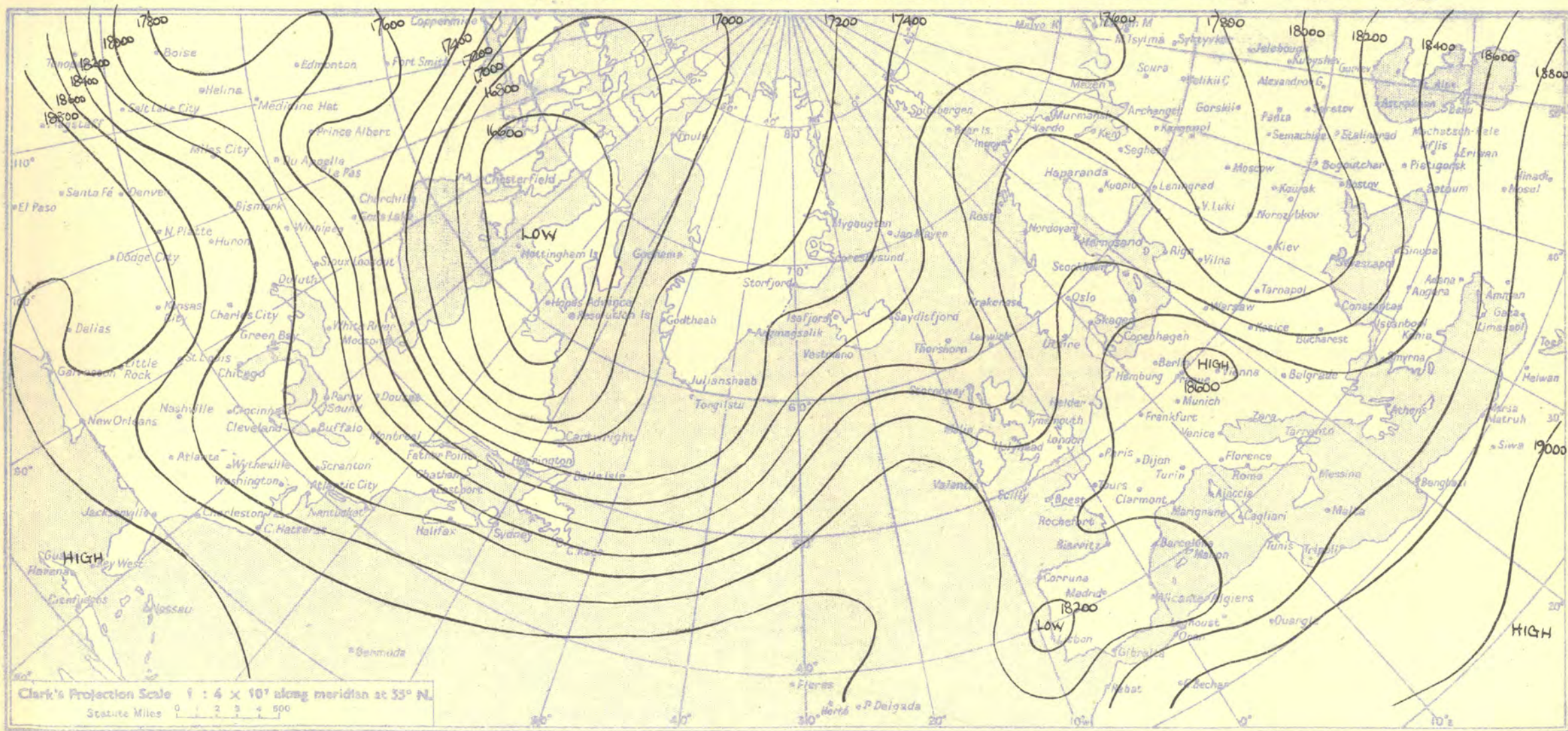
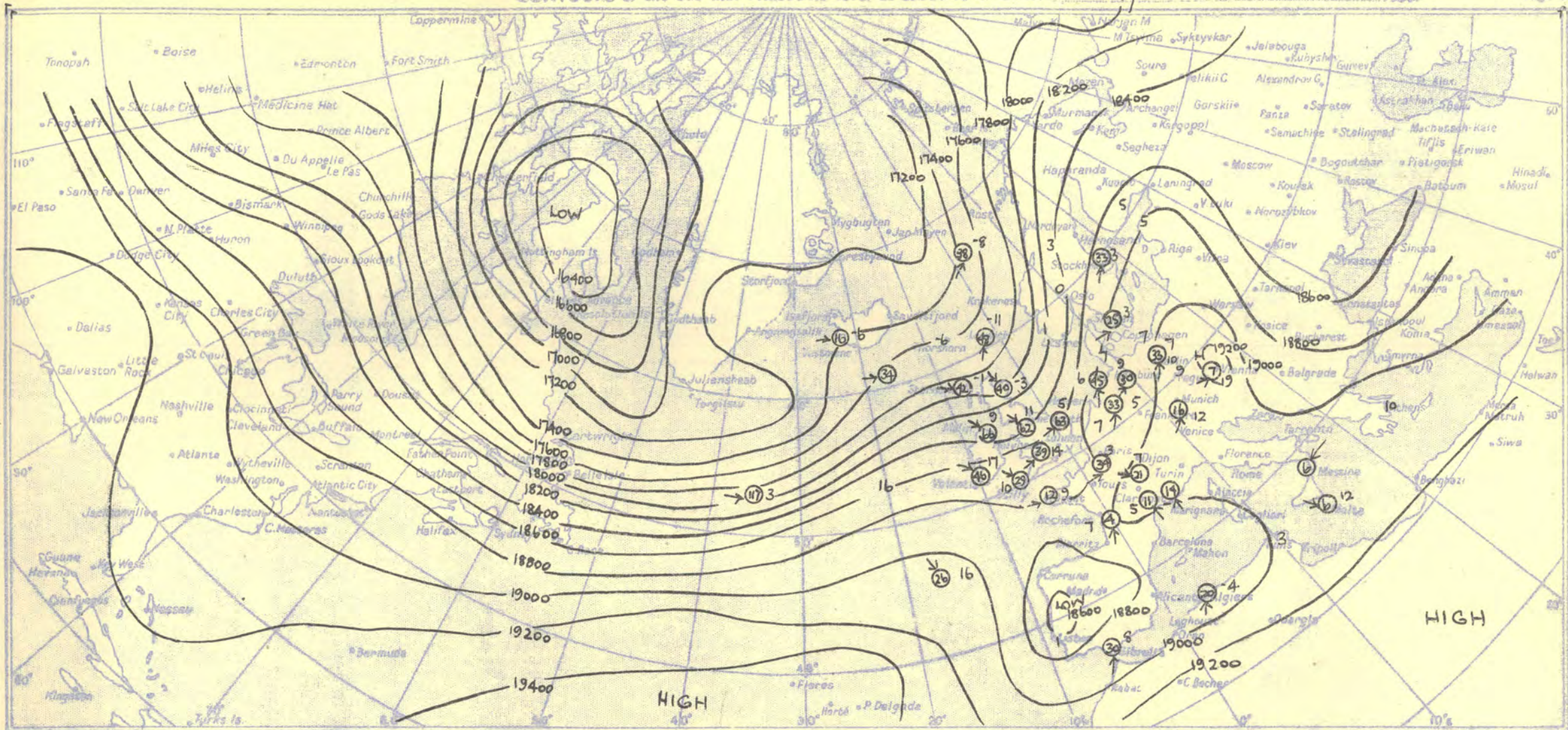
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Sharpening of the trough over the British Isles, due to the rapid eastwards advection of very warm air from the Atlantic.

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



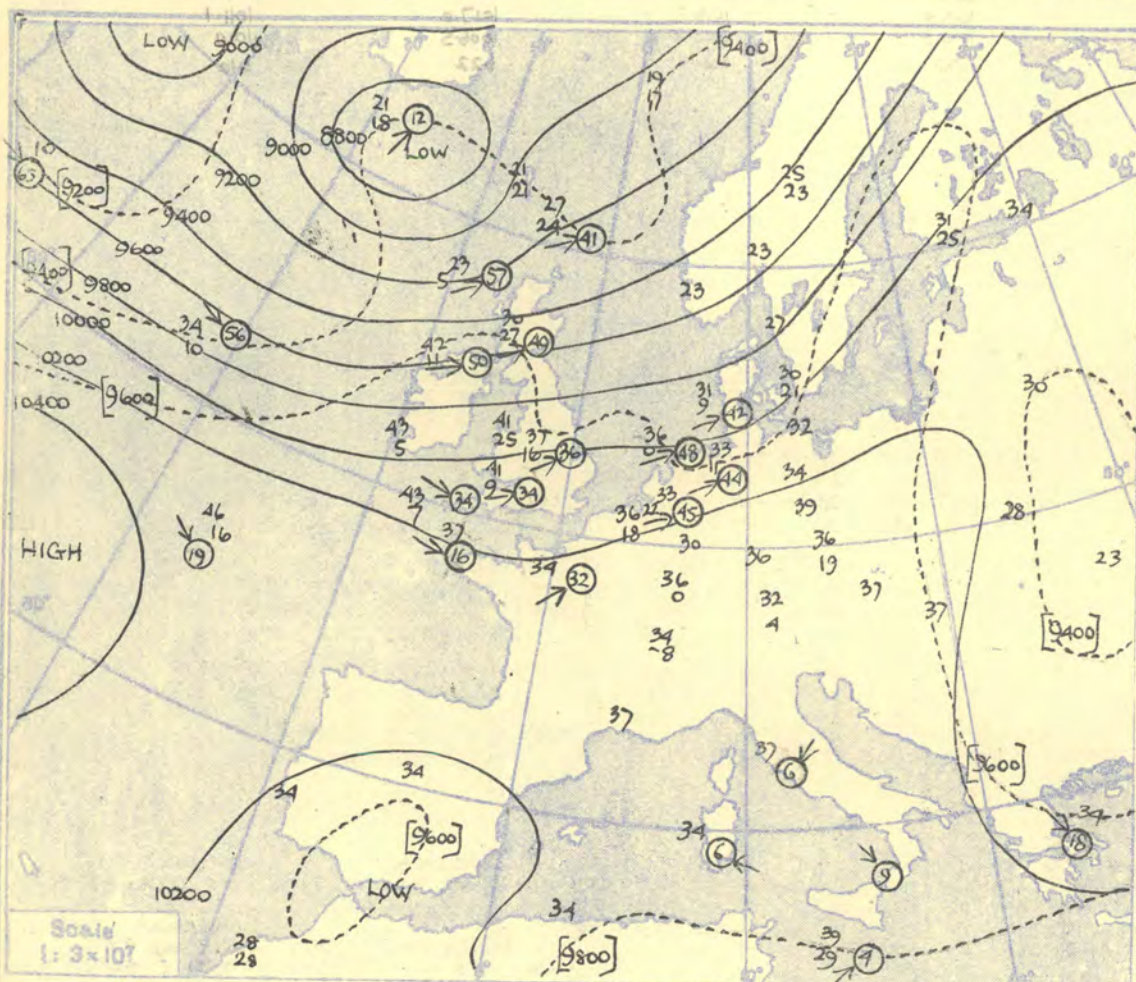
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				Station
Time M.S.L.	15h G.M.T.				15h G.M.T.				15h G.M.T.				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	995.7 mb				998.0 mb				1001.8 mb				1006.4 mb				1007.5 mb				1012.6 mb				1014.3 mb				1016.4 mb				1018.0 mb				Surf
Freezing	985.9 mb				996.1 mb				1001.0 mb				997.8 mb				1009.5 mb				1008.2 mb				998.6 mb				1005.9 mb				1011 mb				Freezing
Pressure mb	812				836				809				810				745				650				670				668 and 657				620				Pressure mb
Height ft./100	Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Temp. Dew Dir. Vel.				Height ft./100
Surf	02.7 52 47 210 12				00.5 52 46 250 15				00.2 55 47 250 18				02.3 54 49 250 18				00.6 61 48 270 12				01.2 61 50 210 12				04.4 59 50 245 11				02.9 55 54 225 10				00.3 57 49				Surf
1000	01.3 47 41 215 21				00.5 47 41 267 28				00.7 55 47 245 33				01.7 48 43 262 29				02.6 60 41 264 27				03.5 60 49 239 31				3.9 52 44 241 20				04.5 54 53 231 33				3.5 55 48				1000
950	27.3 40 34 212 21				28.0 40 36 262 31				29.4 43 37 249 34				30.2 42 38 266 29				31.4 43 31 258 32				32.4 46 40 248 30				32.8 46 40 257 26				33.2 45 45 252 28				32.1 41 39				950
900	35 31 209 22				34 28 256 30				37 31 261 37				37 33 269 28				36 27 252 35				41 36 253 33				42 36 256 30				41 41 252 33				49 07				900
850	58.5 31 27 207 22				59.1 28 25 249 29				60.6 31 21 26 270 39				61.5 31 27 269 27				62.6 30 25 260 34				64.1 42 36 266 40				64.5 40 32 244 36				64.8 37 37 252 32				63.9 43 36				850
800	27 23 207 21				26 18 248 33				27 21 275 37				25 18 269 33				32 03 266 36				37 29 253 42				39 25 246 40				40 08 263 24				40 20				800
750	21 13 208 23				21 09 243 32				22 14 278 35				24 06 270 39				29 09 264 40				32 17 250 46				35 07 254 37				35 29 282 31				39 06				750
700	15 02 207 24				17 02 254 31				17 04 281 36				25 04 282 44				28 17 262 51				32 22 240 49				29 04 256 42				31 32 284 37				33 25				700
650	182 06 11 205 33				183 12 04 262 33				135 13 09 279 35				136 23 08 291 52				138 20 25 265 52				140 23 38 236 53				140 22 13 263 48				141 27 03 270 37				140 28 03				650
600	102 15 204 36				08 03 274 38				07 21 286 34				20 11 301 59				11 37 284 52				14 45 240 57				19 15 262 52				20 12 266 28				25 15				600
550	177 11 35 203 48				178 01 15 282 42				180 03 27 297 40				182 09 02 298 66				183 04 36 305 62				186 05 27 245 63				187 14 16 258 39				187 10 09 288 29				187 17 21				550
500	17 45 194 57				08 26 295 57				07 34 301 57				06 03 291 60				04 13 297 69				01 41 262 52				02 25 286 32				02 01 281 32				05 33				500
450	229 28 56 193 49				232 11 31 298 80				234 09 38 302 73				238 02 19 288 63				239 05 23 293 61				241 09 57 274 63				242 07 23 298 44				242 07 12 290 36				243 06 31				450
400	31 58 209 46				21 32 296 84				15 47 310 88				18 34 288 56				20 39 293 59				19 59 288 72				20 31 299 49				20 27 302 40				19 35				400
350	295 33 60 228 40				299 34 45 300 74				302 29 56 310 83				305 36 49 286 63				306 36 51 306 58				308 32 59 307 64				309 34 45 304 46				310 35 43 300 39				310 33 48				350
300	40 60 250 36				42 294 85				41 298 82				47 285 70				52 291 58				48 300 70				49 303 46				57 304 39				45				300
250	386 45 258 36				389 51 294 63				392 55 301 73				394 56 305 70				394 59 312 69				397 70 325 66				398 74 325 55				398 74 325 61				74				250
200	50 251 39				57 287 52				57 301 57				66 307 55				67 316 67				74 319 45				78 333 43				80 337 28				84				200
170	51 261 33				60 284 41				62 302 42				76 299 45				71 316 49				73 308 30				78 317 18				82 305 17				87				170
150	536 57 258 21				538 63 259 24				539 65 259 24				539 68 278 25				539 65 259 24				541 67 299 14				540 76 278 12				540 76 278 12				80				150
130	59 258 2																																				

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Time M.S.L.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		05h		G.M.T.		0300-15h		G.M.T.		03h		G.M.T.		03h		G.M.T.		Time M.S.L.						
Surf Pressure		996.1		mb		990.8		mb		1001.7		mb		1004.8		mb		1004.4		mb		1015.0		mb		1016.3		mb		1017.0		mb		1011.0		mb		Surf Pressure						
Freezing		986.2		mb		988.6		mb		1000.9		mb		996.2		mb		1008.4		mb		1016.5		mb		1000.2		mb		1006.5		mb		1010.0		mb		Freezing						
834						740				738				630				610				670				608				622				610				800						
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.		Pressure mb				
Surf		02.7		47		46		220		12		00.5		53		53		00.2		53		47		230		25		02.3		52		46		230		15		00.6		55		46		Surf
1000		1.1		45		42		211		28		50		50				0.4		52		46		236		46		1.3		49		43		222		33		50		44		1000		
950		27.3		39		37		216		26		26.0		45		45		29.0		43		41		238		46		30.0		47		41		235		45		31.6		44		950		
900		58.4		29		18		223		27		57.6		38		38		60.6		38		36		240		47		61.8		44		38		245		43		63.3		42		900		
850																																										850		
800																																										800		
750																																										750		
700		93.2		27		24		246		31		92.8		26		23		95.8		30		27		248		49		97.7		42		11		251		50		98.9		41		25		700
650																																										650		
600		133		17		15		250		47		133		24		04		136		28		02		255		46		138		27		15		252		36		140		31		03		600
550																																												550
																																												500
500		178		04		06		258		56		179		07		36		183		09		24		271		47		185		11		47		261		56		187		13		02		500
450																																												450
400		232		17		39		258		60		233		16		57		237		12		53		264		59		240		10		49		258		66		242		07		13		400
350																																												350
																																												300
300		298		43				256		78		289		45				304		38		57		255																				

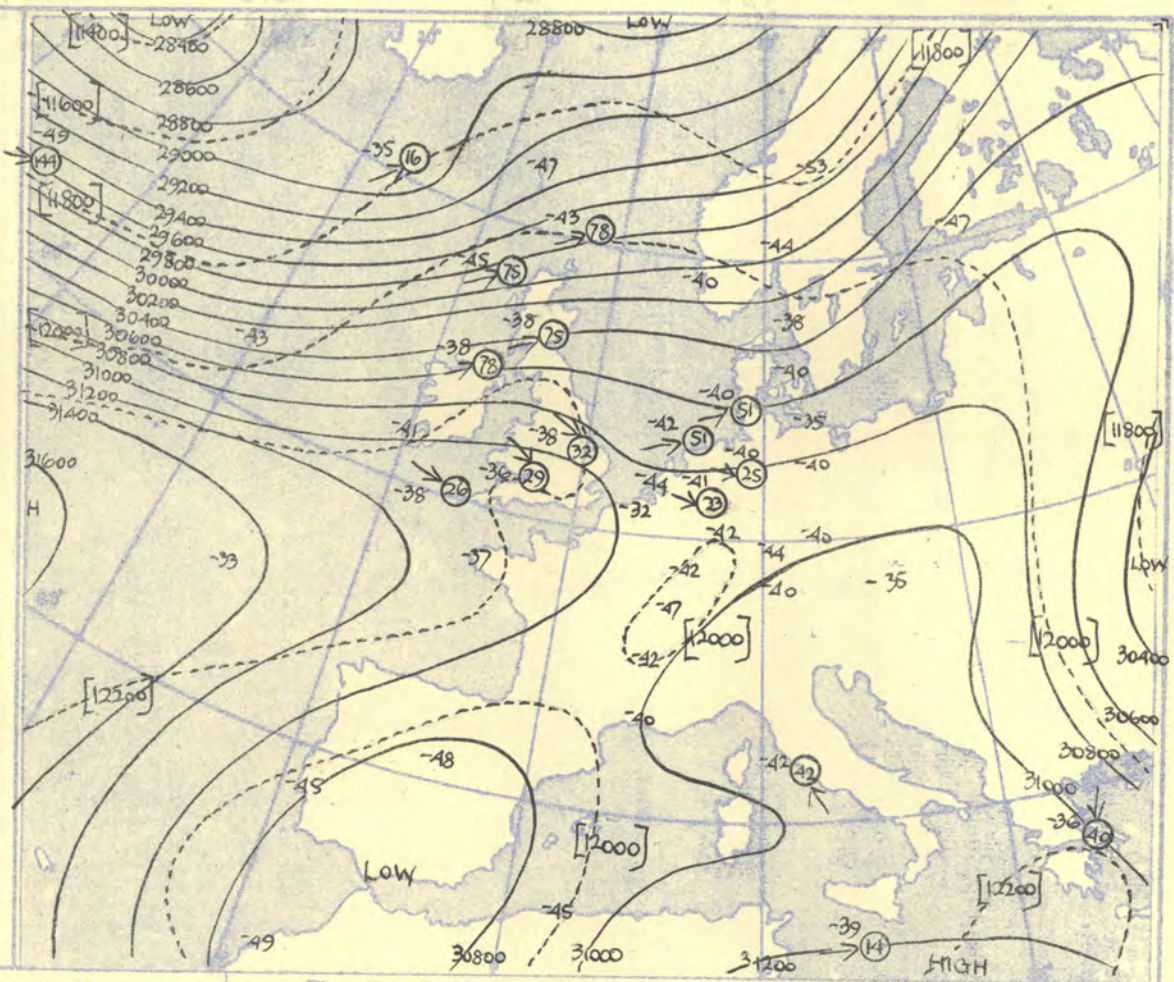
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb, levels at about 03 h. GMT.



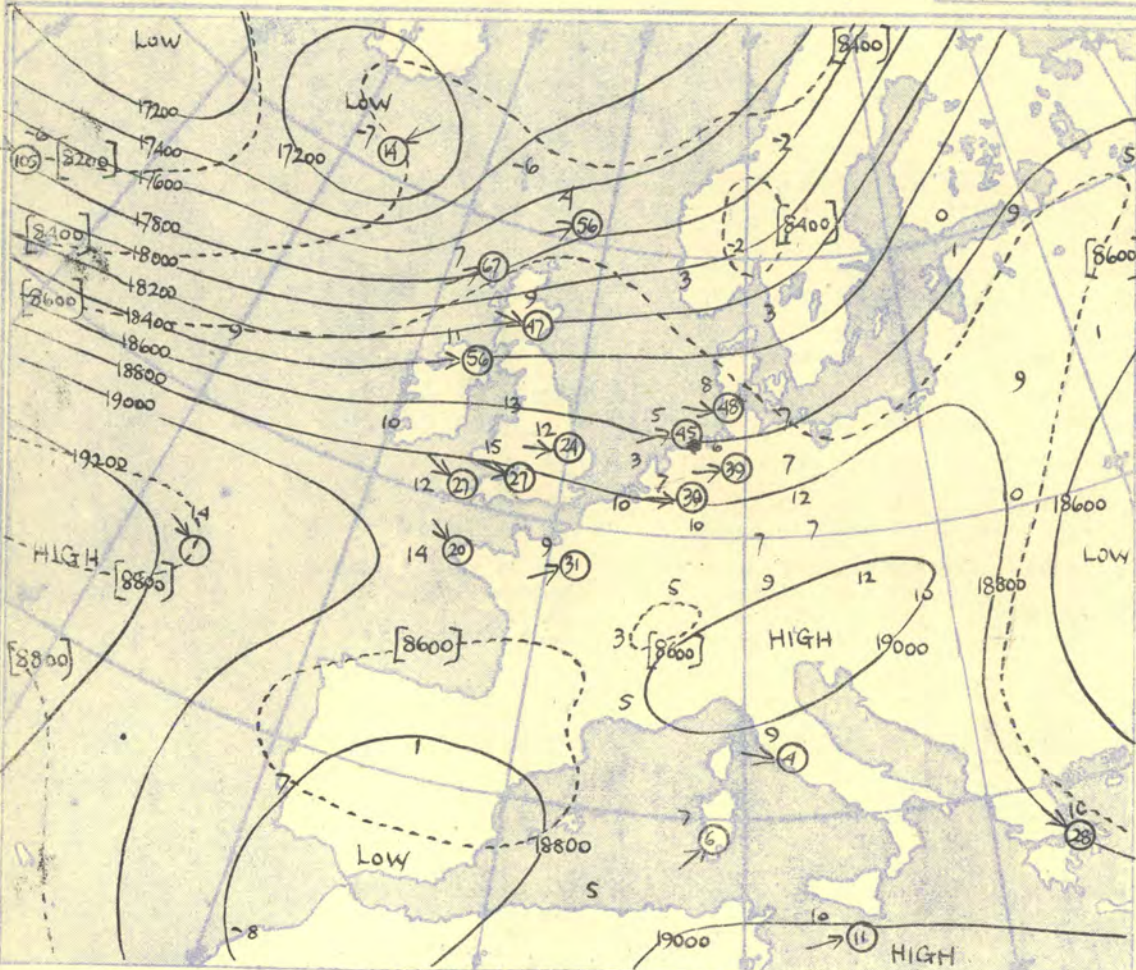
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

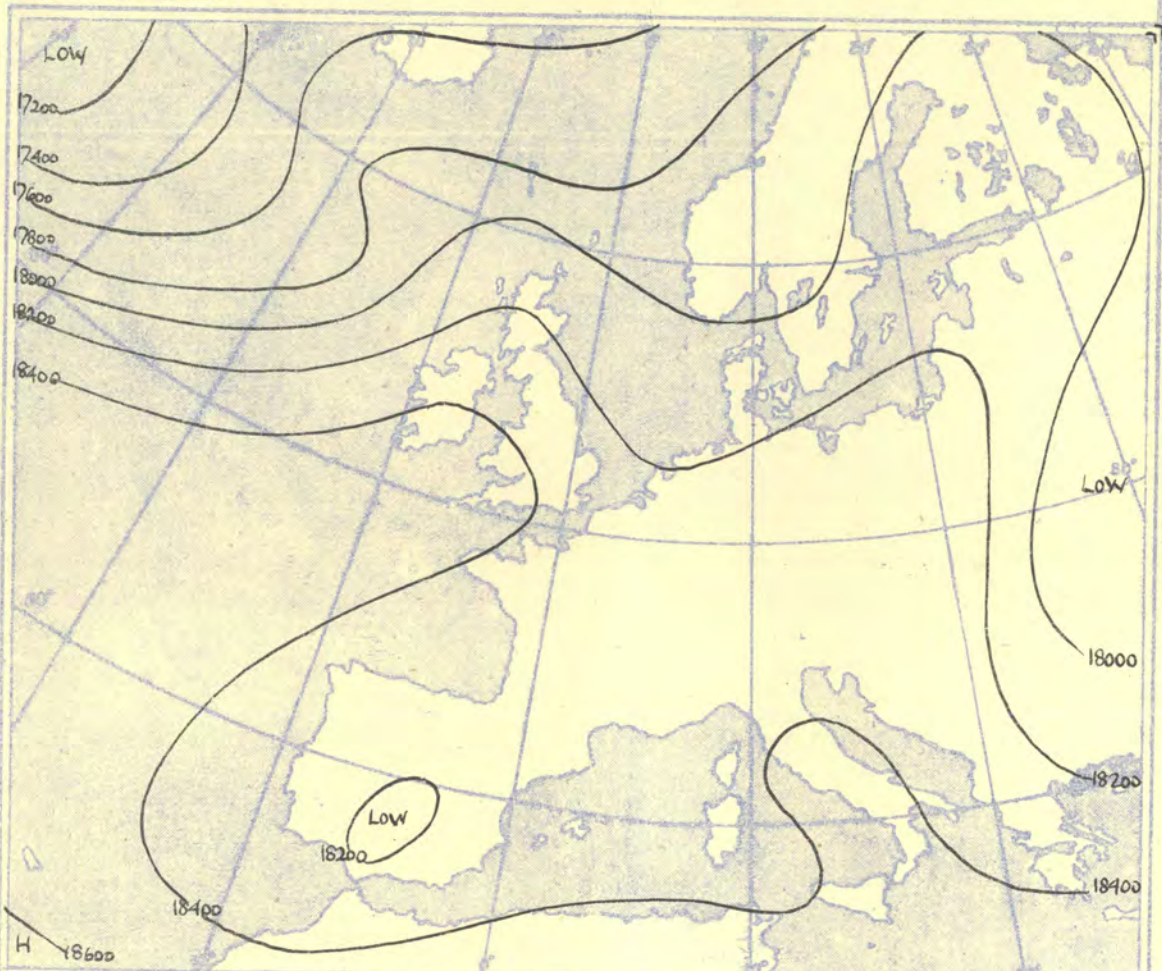
100 80 60 40 20 10 knots



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



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



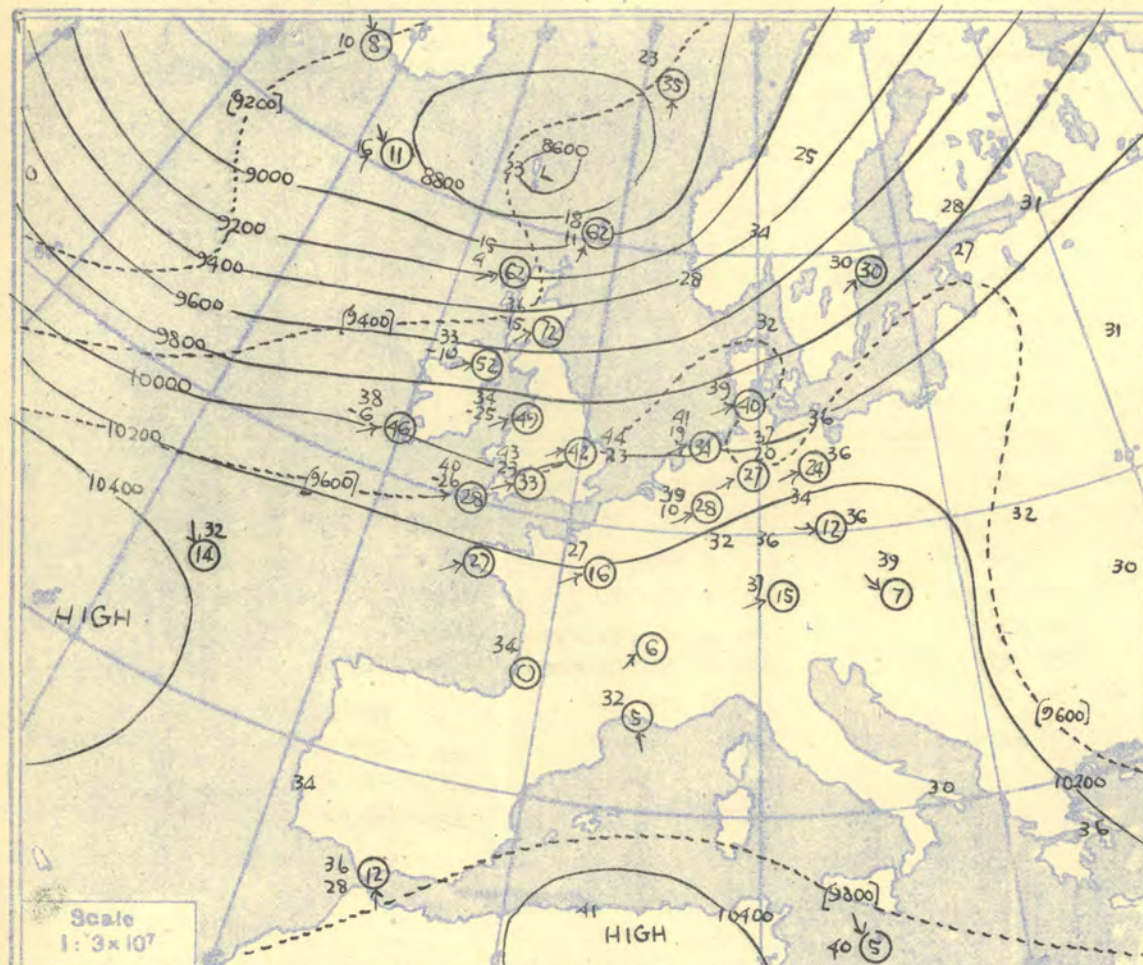
Isopleths of Thickness 500-1000mb.

[illegible]

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

Ship	WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				CIRRUS.				CIRRUS.				CIRRUS.				CIRRUS.				Ship				
Lat/Long	60°4N 16°3W.				60°4N 16°4W.				60°4N 16°4W.				52°4N 20°0W				52°4N 20°4W.				52°3N 20°3W				52°3N 20°3W				Lat/Long				
Time M.S.L. Surf Freezing	03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				Time M.S.L. Surf Freezing
	mb				mb				mb				mb				mb				mb				mb				mb				
	mb				mb				mb				mb				mb				mb				mb				mb				
	mb				mb				mb				mb				mb				mb				mb								
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	-81	47	45	050 24					-53	45	40	020 12	-48	44	41	040 20	2-6	52	45		3-2	52	43		3-3	50	43		3-4	46	43	Surf	
1000																															1000		
950		45	43	053 30						44	34	032 12		42	40	054 24															950		
900	20.4	41	39	093 18					23-0	38	30	021 13	23-5	35	34	057 23															900		
850		38	37	159 19						32	24	001 11		29	28	068 16	30	27			32	09			32	28	See		27	25	See	850	
800	51.7	32	30	205 24					54-0	27	19	328 08	54-5	23	22	077 14			See												800		
750		27	25	210 22						22	13	308 08		17	16	093 05																750	
700	86.4	21	18	193 12					88-3	16	07	303 09	88-3	11	08	L-4 65	96.6	34	10	top	97-1	28	13		97-1	23	11	top	95-7	09	01	top	700
650		16	13	208 10						10	00	289 09		05	03	336 16																650	
600	126	10	06	243 06					127	02	08	231 07	127	02	05	303 11																600	
550		02	03	241 06						05	15	265 17		11	14	278 10																550	
500	170	07	12	036 16						171	09	20	226 12	170	21	25 270 14	184	09	11	page	183	05	20		182	05		page	179	09	27	page	500
450		18	25	057 25						18	29	203 11		27	31	274 16																450	
400	223	27	38	082 29					224	29	41	241 06	223	36	40																	400	
350		35	51	166 07						42		358 06		48																		350	
300	288	35	54	214 16					288	57		051 07		65		020 03	303	45		Winds.	303	42							296	47		300	
250		37	57	220 35						45		223 18		52																		250	
200		44							377	43		234 24	373	48			390	60			391	58									200		
170	(204mb)									47		234 20		50																		170	
150										50		223 30		52																		150	
130										53		224 28		54																		130	
110										52		236 33		58																		110	
100										53		237 29		58																		100	
90										55		236 34		58																		90	
80										52		235 31																				80	
70										55		230 20																				70	
60										55		231 14																				60	
										56		232 15																					
	Isothermal.								(32mb)	57		232 15		Isothermal.							Isothermal.												
	879-862mb 39°													982-962mb 44°							Isothermal.												
														850-795mb 30°							Isothermal.												
														Inversion							Inversion												
														795mb 30°-710mb 36°							778mb 27°-725mb 30°												
															</																		

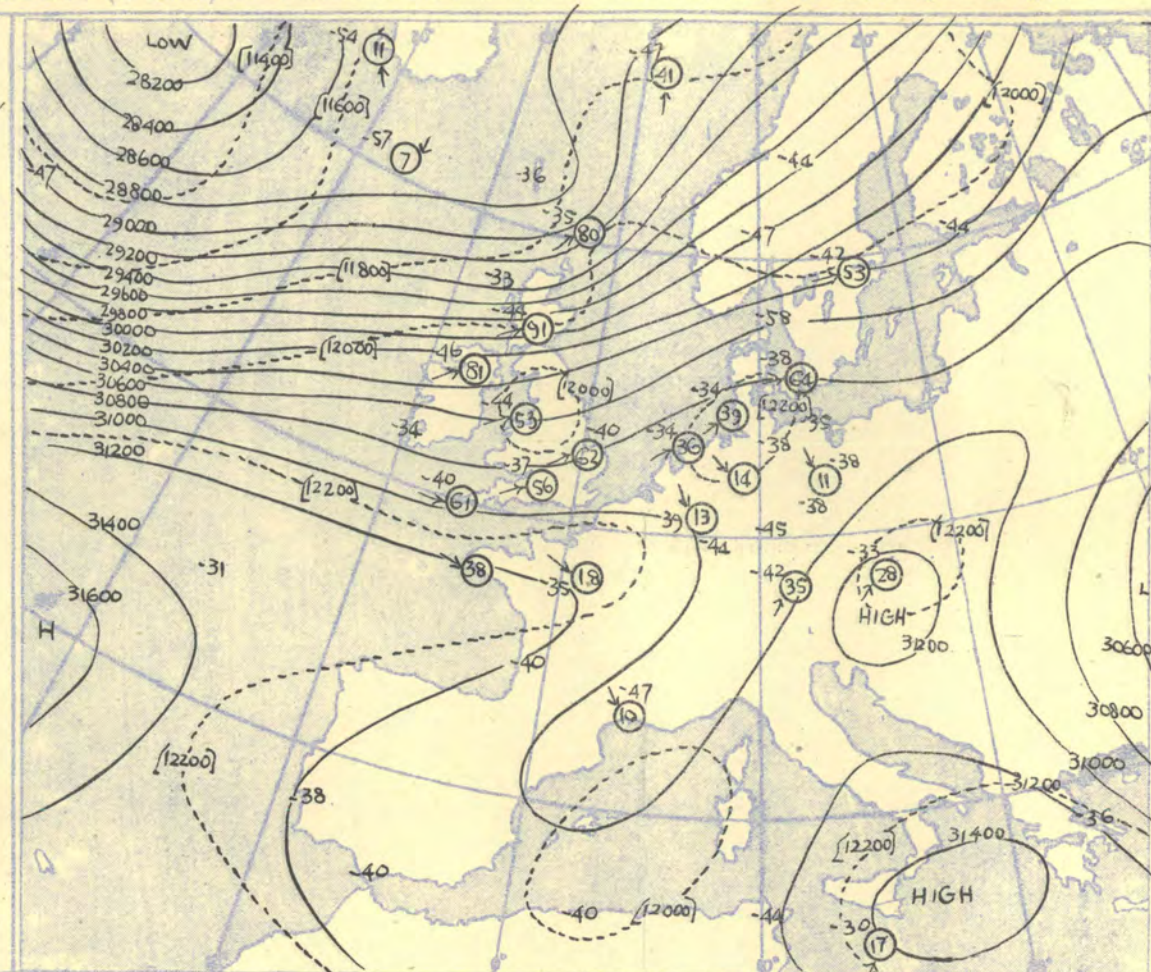
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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.

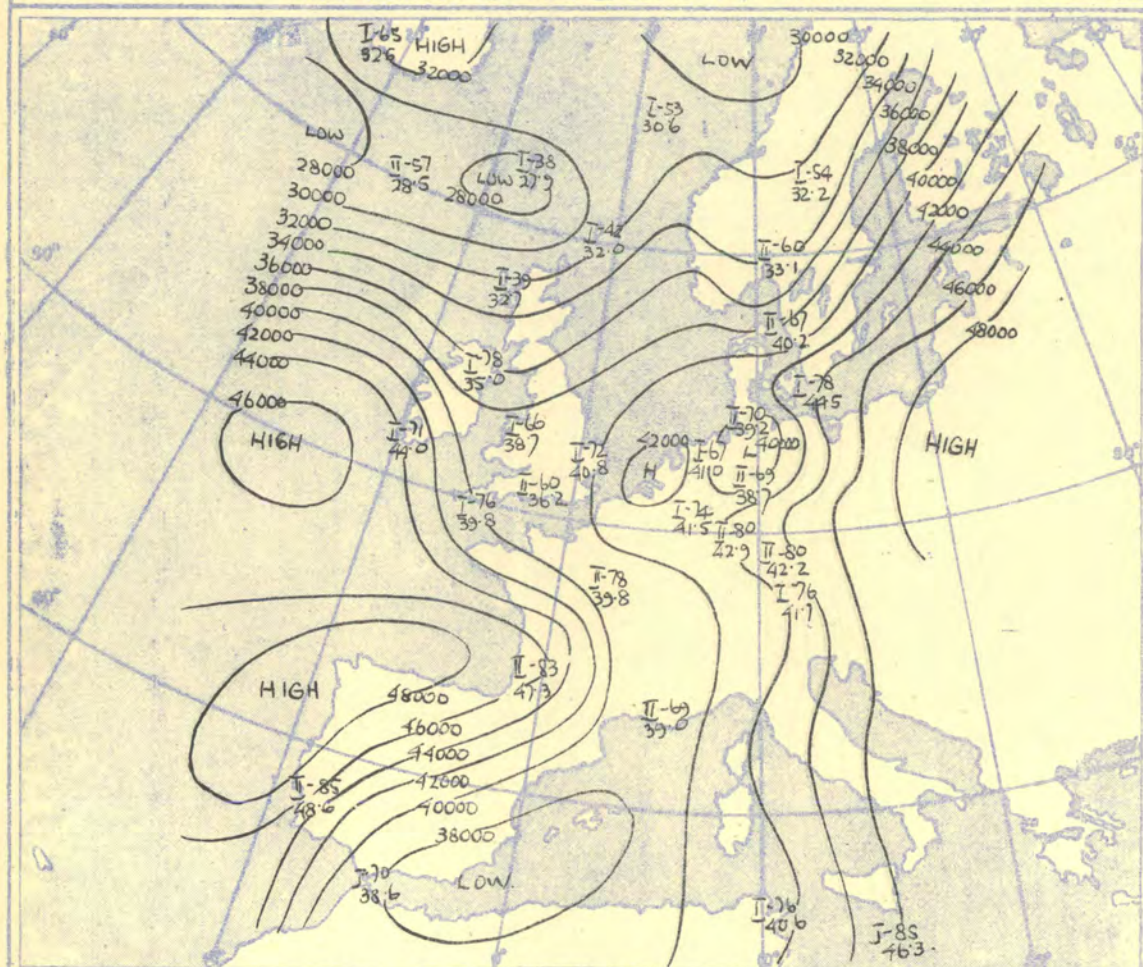
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 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 15 h G.M.T.



Contour lines of Height of Tropopause.
Temperature of Tropopause.

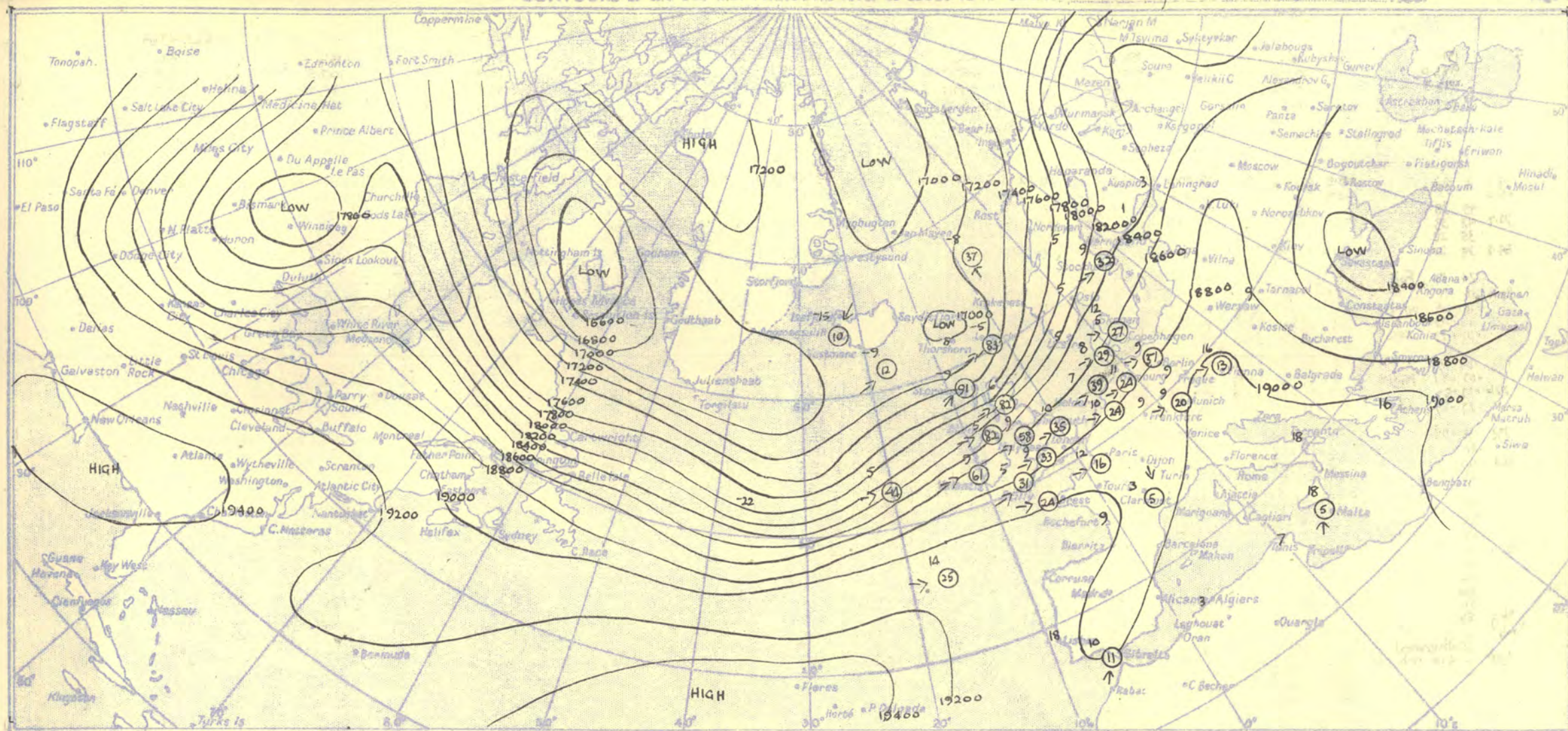
NOTES ON THE AEROLOGICAL SITUATION.

A weak ridge of warm air crossed the British Isles. Cold air flooded the Northern Atlantic and a light westerly thermal gradient developed across the Central Atlantic.

Winds at 300 mbs across Britain were markedly subgeostrophic.

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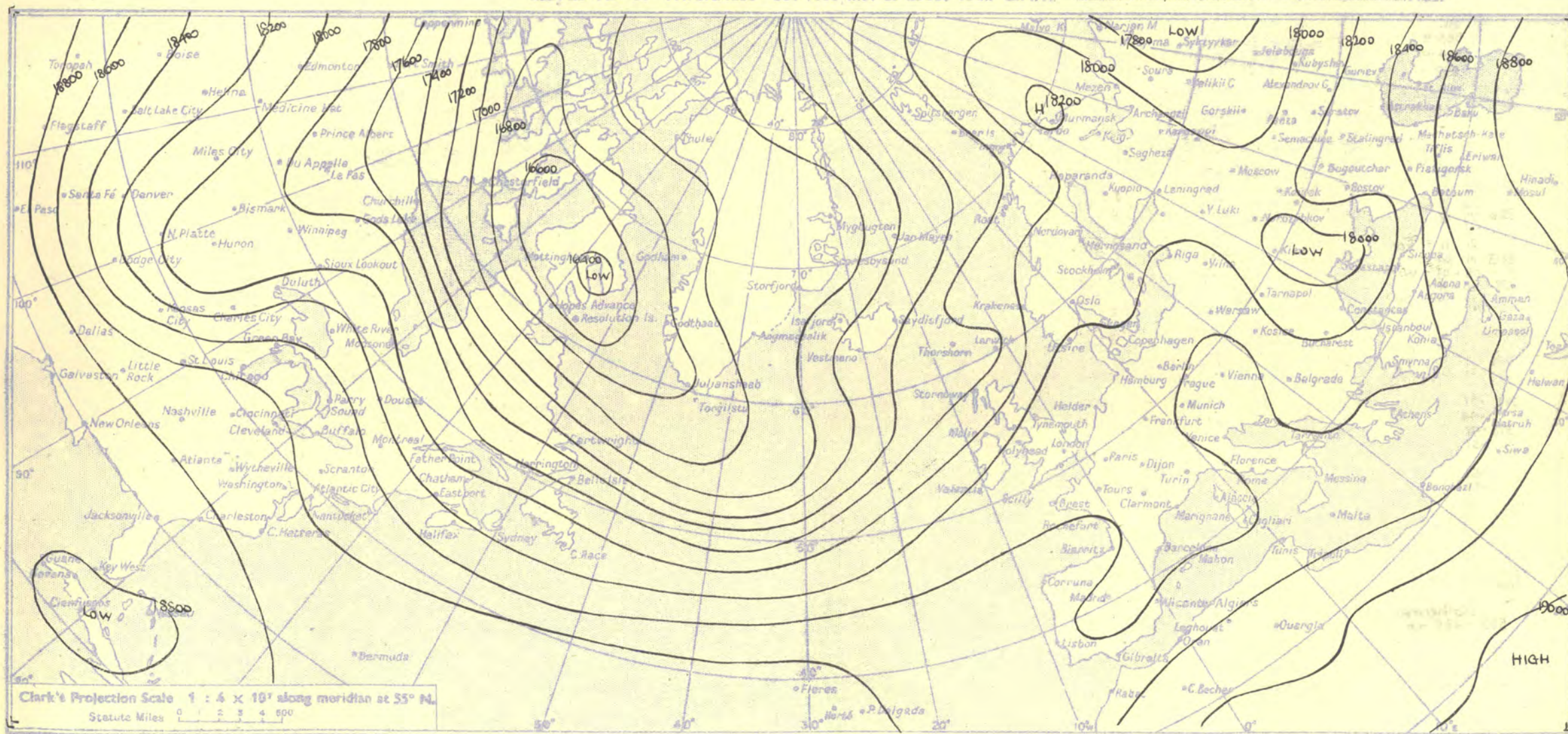
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Saturday 7th october

1950



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

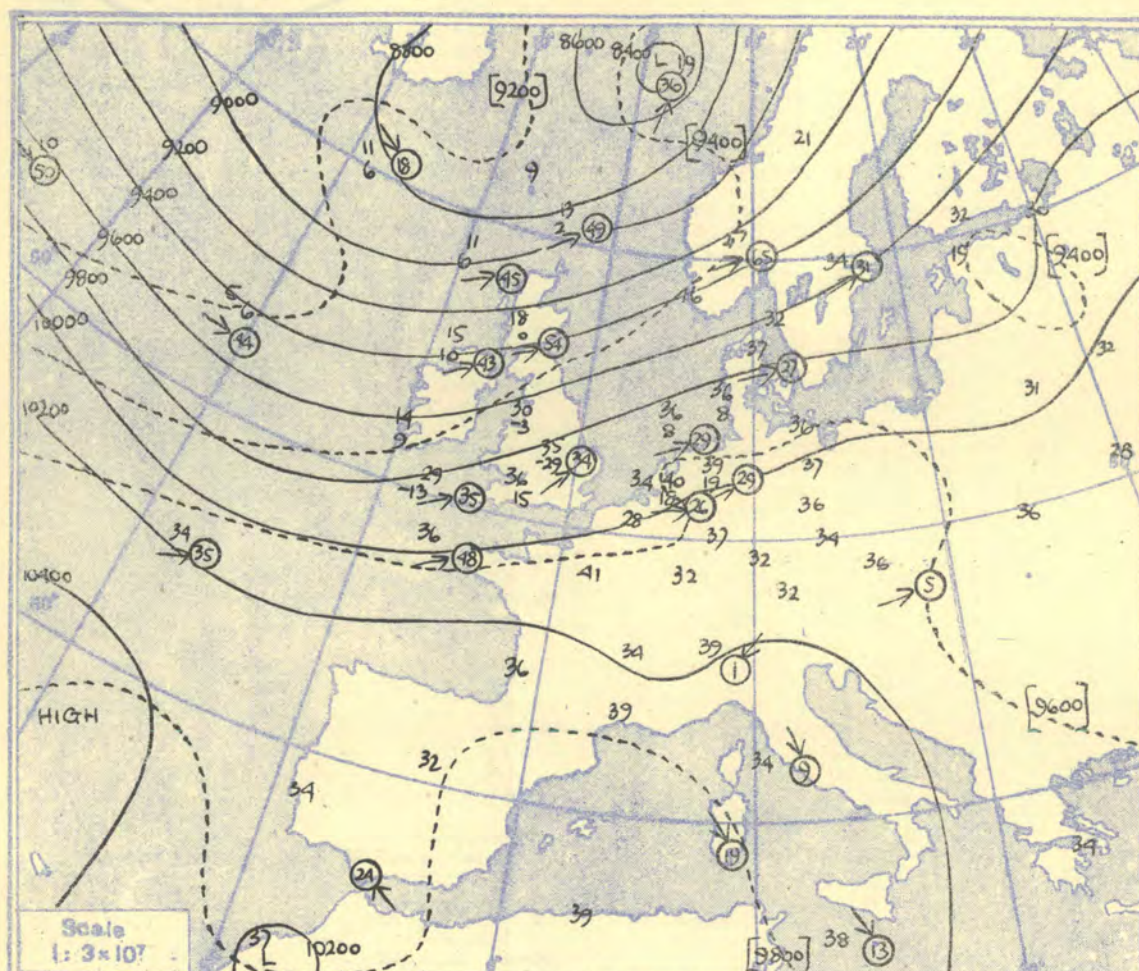
LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION													
Time M.S.L.	15h			G.M.T.			15h			G.M.T.			15h			G.M.T.			15h			G.M.T.			15h			G.M.T.			15h			G.M.T.			Time M.S.L.												
Surf	982.0			mb			989.4			mb			999.3			mb			1007.7			mb			1011.6			mb			1014.3			mb			1017.5			mb			Surf						
Freezing	972.3			mb			987.6			mb			998.3			mb			999.1			mb			1008.8			mb			1007.2			mb			1007.0			mb			Freezing						
Pressure mb	827						848						854						825 + 7.5						660						621						635						640						Pressure mb
Height ft./100																																																	Height ft./100
Temp. °F.																																																	Temp. °F.
Dew °F.																																																	Dew °F.
Wind Dir. Vel. knots																																																	Wind Dir. Vel. knots
Surf	02.7	51	42		00.5	51	44	240	28	00.2	57	42	270	30	02.3	51	46	250	20	00.6	59	48	270	18	01.2	61	53	215	08	04.4	57	50	280	10	02.9	57	47	270	12	00.3	57	50	230	14	Surf				
1000	-5.0				-2.9					0.2					2.2					3.0					3.2					4.8					4.1					5.5				1000					
950		49	38			46	40	245	49		50	37	255	39		46	42	256	34		49	35	273	30		54	49	248	27		49	44	266	23		47	41	275	22		48	44	260	23	950				
900	22.7	42	33		25.6	40	34	247	57	28.5	43	31	259	45	30.7	40	36	258	40	31.7	42	28	279	37	32.1	47	43	257	29	32.6	45	39	256	23	33.4	40	33	278	24	32.7	41	36	272	23	900				
850		35	28			33	28	248	61		38	27	261	53		35	32	260	44		41	24	278	39		47	35	269	31		39	33	258	25		51	24	271	25		36	31	277	31	850				
800	54.8	29	20		56.6	28	23	249	63	59.9	33	19	263	59	61.9	30	27	265	49	63.1	35	09	268	43	63.8	50	04	263	33	64.2	48	06	265	30	65.0	46	21	267	25	64.0	29	28	273	40	800				
750		24	17			21	11	251	63		31	07	254	61		24	17	270	53		34	17	262	49		48	20	259	38		47	21	267	32		43	23	265	26		41	21	264	40	750				
700	89.4	18	11		90.9	15	04	255	62	94.9	36	15	246	73	96.7	33	10	263	52	98.3	34	25	265	49	99.9	44	23	260	42	100	43	23	266	33	101	40	26	267	28	99.5	38	06	259	46	700				
650		11	04			09	02	247	62		31	11	248	72		27	35	259	66		31	16	258	49		37	28	258	44		35	29	260	33		34	30	272	31		32	13	260	60	650				
600	128	06	03		129	02	07	248	65	135	22	19	248	75	137	21	40	258	70	139	27	15	263	51	141	28	34	250	47	141	26	29	260	36	141	24	37	272	31	140	26	31	258	61	600				
550		01	25			03	19	247	72		13	26	246	85		14	45	254	77		17	34	262	56		19	39	255	41		17	36	265	35		14	45	270	29		16	41	252	63	550				
500		08	39		174	09	29	247	91	181	06	32	244	90	183	05	51	253	82	185	09	49	259	58	187	10	40	264	35	187	09	47	273	33	187	05	51	265	31	186	09	47	254	61	500				
450		09	51			13	34	247	108		03	34	246	86		05	59	252	94		04	58	255	58		01	52	267	39		00	50	273	32		05	59	265	35		01	56	252	68	450				
400	226	17	57		227	21	42	248	109	235	15	44	245	87	237	16	57	251	81	239	18	58	258	58	242	15	56	265	45	243	11	53	274	39	242	15	56	263	44	241	13	47	249	61	400				
350		27	59			28	49	248	96		28	52	248	91		31	58	257	87		32	59	257	55		27	59	249	53		21	54	259	48		26	58	265	54		22	50	251	70	350				
300	293	35	58		293	33	54			301	44				303	46		255	81	305	44		264	53	308	40	60	244	62	309	37	60	251	56	308	40	60	274	61	308	34					300			
250		40				38	58								303	63		255	101		56		261	49		59		245	60		55		257	55		57		282	78		57				250				
200	384	40			385	34	55								390	58		254	78	392	65		251	63	395	69		249	56	397	63		58	64	395	75		57		264	45		57			200			
170		46				42										58					67			249	60		69		252	45		67		256	48		73		264			70				170			
150		49				49										62					71			250	50		75		252	39		72		257	39		75		258	37		69				150			
130		55				56										66					73			259	45		80		252	36		78		256	33		74		247	32		67				130			
110		57				57										69					71						82		248	30		78		260	30		75		263	22		68				110			
100	535	57			536	51									536	70					73						80		246	29	540		75		260	30	537		75			70				100			
90		57				51										68					63						75		241	27		73		261	25		75				69				90				
80		56														63					65						75		233	32		63		252	18		75				69				80				
70		56														60					67						75		231	19		62		255	13						70				70				
60	(56) mb	56														60					67						75		266	11		59		253	13										60				
Isothermal 500 - 476 mb - 05° Isothermal 600 - 450 mb - 03° Isothermal 700 - 430 mb - 13° Isothermal 800 - 316 mb - 33° Inversion 764 mb 29° - 700 mb 36° Inversion 750 mb 24° - 710 mb 34° Max wind: 235 mb 35 400' 254° 12.2 kts Inversion 878 mb 39° - 850 mb 41° Max wind: 199 mb 39 200' 249° 7.7 kts Inversion 833 mb 38° - 813 mb 51° Inversion 836 mb 37° - 762 mb 49° Inversion 877 mb 38° - 850 mb 51° Inversion 800 mb 29° - 773 mb 41° Isothermal 780 - 723 mb 41° Tropopause I 267 mb - 42° 32,000' II 257 mb - 39° 32,700' NR. I 240 mb - 61° 35,000' I 204 mb - 66° 38,700' I 187 mb - 72° 40,800' II 235 mb - 60° 36,200' I 197 mb - 76° 39,800' I 163 mb - 71° 44,000' Tropopause																																																	
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				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.			Time M.S.L.												
Surf	983.9			mb			993.0			mb			1001.9			mb			10																														

18 OCT 1950

VALENTIA

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA					
Pressure	Time M.S.L. Surf Freezing	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.							
		987.4	mb			991.6	mb			1000.9	mb			1005.6	mb			1008.7	mb			1012.9	mb			997.8	mb			1014.6	mb			1008.8	mb				
		977.6	mb			991.2	mb			1000.1	mb			997.0	mb			1008.7	mb			1007.7	mb			997.8	mb			1004.0	mb			1008	mb				
		858				867				843				857				830				672				684				725				850					
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	47	37		00.5	45	40	240 15	00.2	47	41	250 18	02.3	46	41	250 20	00.6	52	48		01.2	48	45	210 07	04.4	48	45		02.9	51	48	225 05	00.3	51	47	210 13	Surf		
1000	-3.5				-1.9				0.2	47	41		1.5	46	41		2.3	51	41		3.3	48	45		3.8	48	45		4.0	51	48		2.5	50	46	217 15	1000		
950		46	38			43	36	245 30		42	36	240 35		42	36	250 30		48	39			48	41	250 19		46	39			46	43	252 20		44	37	253 23	950		
900	24.9	38	32		26.5	37	31	243 40	28.5	38	32	252 46	29.8	37	31	254 37	30.9	41	34		31.8	40	33	250 18	32.3	40	36		32.5	39	35	257 21	31.0	38	31		900		
850		31	27			30	26	245 42		33	27	254 52		31	26	256 38		35	28			33	26	245 19		33	27			33	27	258 24		32	28		850		
800	55.9	24	21	For	57.4	24	21	248 43	59.5	28	21	252 53	60.8	26	21	252 39	62.1	29	24		63.2	47	13	238 16	63.7	44	04		63.7	38	11	250 28	61.9	29	20		800		
750		19	16			17	12	248 44		22	11	252 51		20	15	249 41		24	14			42	19	234 31		43	07			35	05	248 30		22	15		750		
700	89.9	13	02	winds	91.4	11	06	246 45	94.0	18	00	245 54	95.1	15	10	250 43	97.9	30	03		98.9	35	29	235 34	99.5	36	15		98.9	29	13	258 35	96.2	14	09		700		
650		06	07			05	07	243 46		15	17	240 58		15	01	244 57		23	03			30	20	237 37		24	11			22	03	253 34		12	04		650		
600	128	01	22	see	130	03	16	239 46	133	08	23	235 64	134	10	07	240 62	138	15	11		139	21	40	234 40	139	16	09		139	18	10	253 37	135	06	03		600		
550		08	36			11	16	237 49		00	24	236 71		04	05	234 70		07	08			12	34	235 52		10	07			13	11	243 44		02	13		550		
500																																						500	
450	172	-15	-44	page	173	-19	-36	240 57	178	-10	-20	234 78	179	-05	-14	230 82	183	-02	-13			185	00	-23	226 50	185	05	02		184	05	02	246 48	180	-03	-25		450	
400		-23	-53			-27	-46	236 73		-16	-36	233 84		-12	-22	228 90		-09	-18				-08	-20	224 54		-03	-06			-04	-07	251 52		-11	-35		400	
350	224	-30	-57	3.	225	-34	-54	233 95	230	-26	-40	238 90	232	-23	-31	233 99	236	-17	-25		234	-12	-23	242 60	239	-15	-19		239	-15	-19	255 69	233	-23	-48		350		
		-39	-60			-43		230 117		-36	-48	232 94		-35	-45	233 98		-31	-40				-26	-35	239 61		-27	-33			-29	-33	252 72		-34	-60			
300	289	-48			289	-51		229 84	295	-55		229 93	297	-47		233 92	302	-47			305	-42		243 66	305	-41			305	-41		255 91	298	-46		300			
250		-50				-45		234 75		-68		231 90		-58		236 108		-65				-59		254 64		-58				-59		260 93		-59		250			
200	378	-48			378	-45		235 58	380	-62			384	-57		236 82	388	-71			392	-72		253 73	392	-74			391	-75		257 75	386	-58		200			
170		-50				-51		231 53		-65				-57		242 70		-70				-74		261 64		-76				-75		255 69		-59		170			
150		-52				-56				-68				-58		242 74		-73				-73		267 61		-77				-80				-63		150			
130		-55				-56				-67				-53		242 61		-75				-74		246 52		-77				-79				-70		130			
110		-59				-59				-63				-53				-78				-75		226 36		-78				-79				-66		110			
100	528	-62			528	-61			526	-66				-59				-71			531	-76		225 37	533	-80			532	-76				-68		100			
90		-62								-69				-71				-71				-76		231 34		-80				-73				-69		90			
80		-62								-74				-74				-76				-70		243 28		-77				-69				-69		80			
70	(077)	-62												-76				-75				(067)														70			
60																																					60		
		Isothermal 978 - 963mb. 47°				Inversion 991mb. 45° - 976mb. 46°				Isothermal 722 - 674mb. 19°				Inversion 685mb. 14° - 670mb. 16° 662mb. 14° - 650mb. 15° Max wind:- 277mb. 31,500ft. 234° 135kts.				Inversion (554)mb 685mb. 14° - 670mb. 16° 662mb. 14° - 650mb. 15° Max wind:- 277mb. 31,500ft. 234° 135kts.				Inversion (554)mb 1008mb. 48° - 956mb. 49° 829mb. 30° - 809mb. 45°				Inversion (554)mb 861mb. 33° - 830mb. 45° Isothermal 998 - 978mb. 48° 763 - 736mb. 43°				Inversion (554)mb 850mb. 33° - 785mb. 39° 632mb. 17° - 592mb. 18° Isothermal 1004 - 986mb. 51° Max wind:- 232mb. 36,000ft. 168° 105kts.				Inversion (554)mb 686mb. 11° - 664mb. 14°					
Tropopause		I 291mb. -49° 29,400'				I 300mb. -51° 28,900'				I 249mb. -69° 33,400'				I 220 -61° 36,500'				I 222mb. -75° 36,700'				I 178mb. -76° 41,500'				II 218mb. -72° 37,500'				I 202mb. -76° 39,100'				I 250mb. -59° 33,900'				Tropopause	
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE									
Pressure	Time M.S.L. Surf Freezing	09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.							
		989.5	mb			991.8	mb			1003.3	mb			1005.5	mb			1009.5	mb			1011.2	mb			1012.0	mb												
		979.6	mb			989.9	mb			994.6	mb			1003.5	mb			1005.0	mb			995.2	mb			1001.4	mb												
		873				868				888				833				817				732				800													
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	44	37	240 24	00.5	45	37						02.3	45	41	210 12	00.6	51	46	225 07	01.2	50	47		04.4	52	46	240 15	02.9	53	50	203 03			Surf				
1000	-2.9				-2.2								0.9	40	36	231 16		15	51	47		2.6	50	46		3.1				3.3	53	50			1000				
950		42	33	236 41		44	32							40	36	231 16		46	42	243 17		47	38	240 20		47	39	244 23		48	45	248 26			950				
900	25.4	36	29	237 41	26.1	37	28						29.0	34	30	251 29	30.0	40	37	248 24	31.1	42	33	255 24	31.6	41	33	252 23	31.9	43	31	260 28			900				
850		29	24	237 36		29	21							27	23	256 29		34	32	251 35		36	25	250 22		35	29	260 24		37	29	262 32			850				
800	56.2	23	16	238 35	56.9	22	12						59.7	22	18	258 33	61.1	29	28	249 41	62.4	30	24	244 28	62.8	30	23	255 33	63.2	32	24	257 36			800				
750		18	12	241 39		16	01							17	10	256 35		23	23	245 44		34	18	239 30		34	18	253 38		28	17	251 42			750				
700	90.2	12	06	242 37	90.7	09	-10						93.7	10	01	25																							

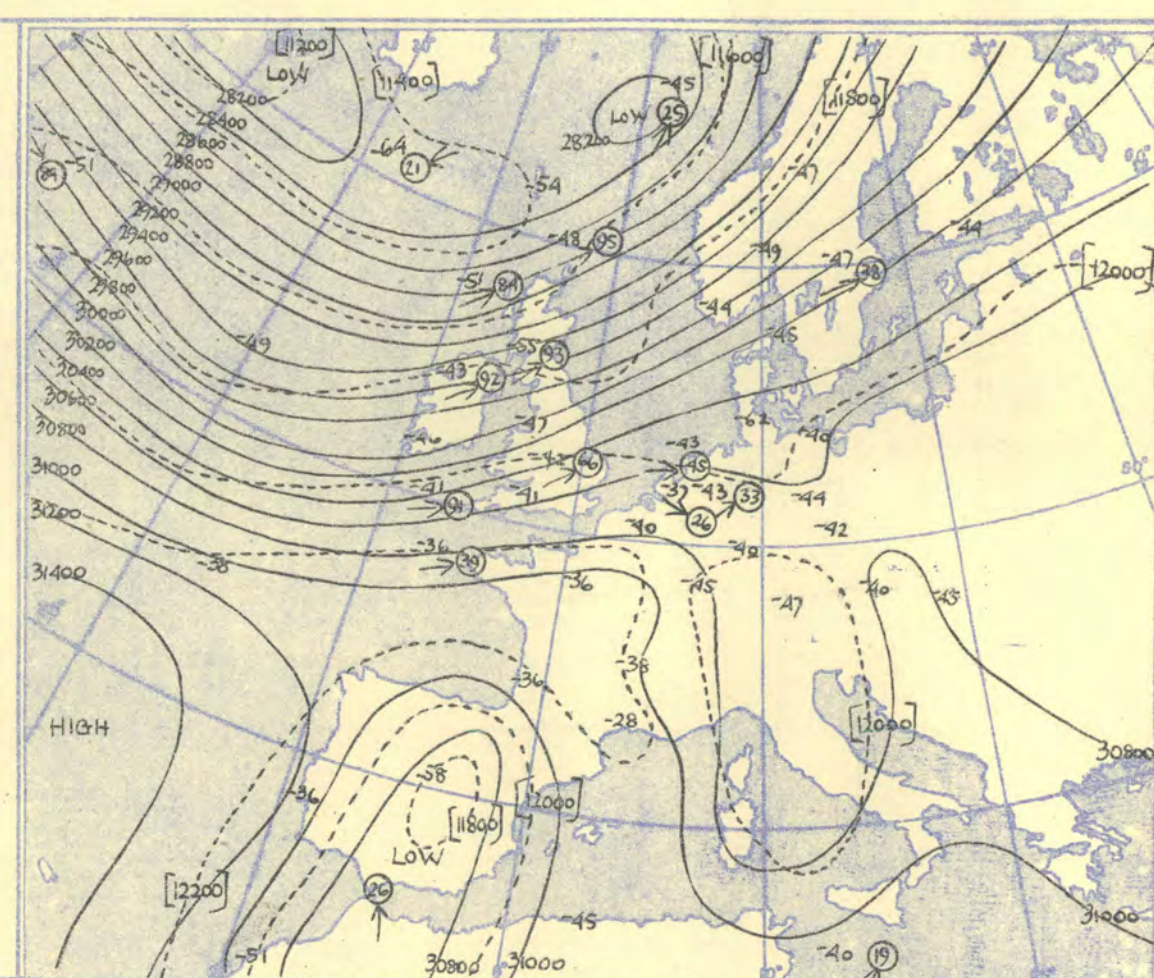
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



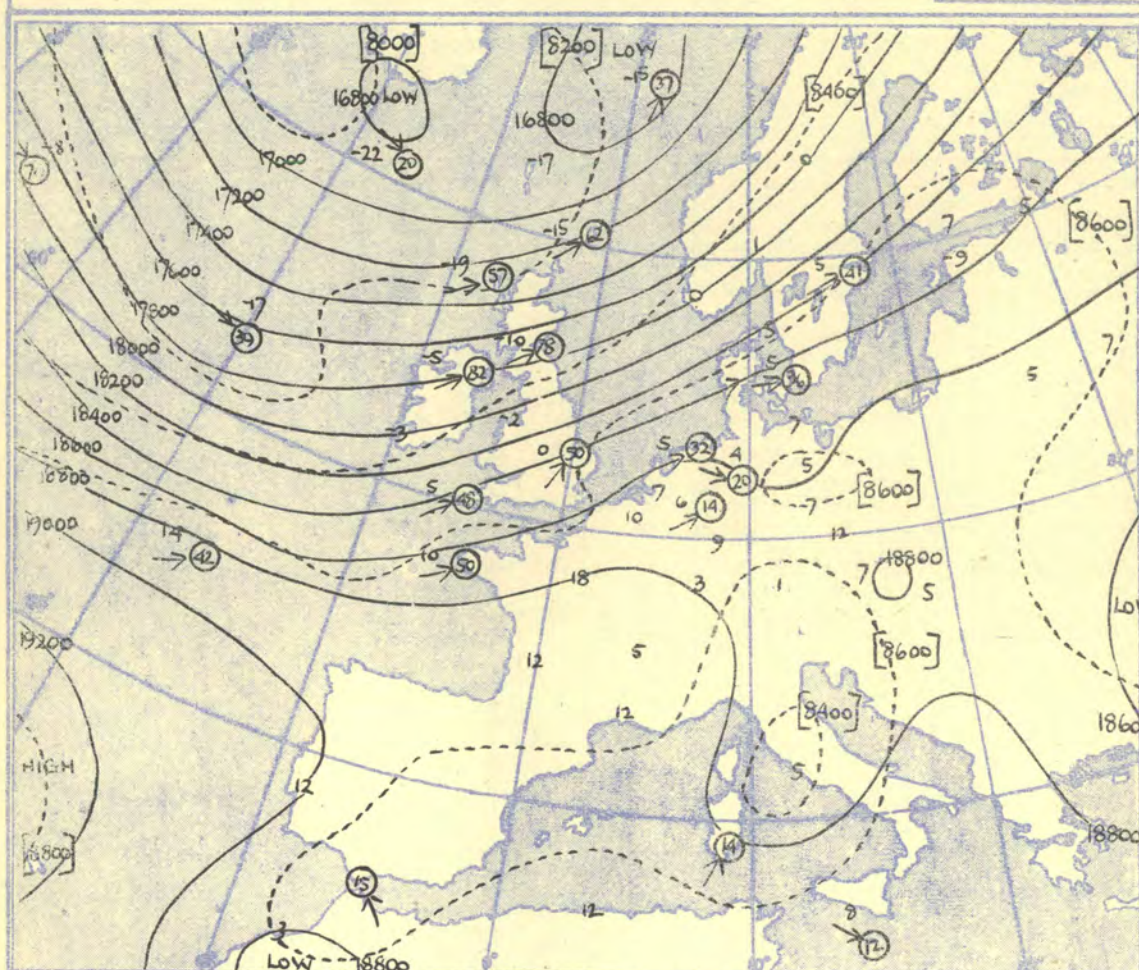
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

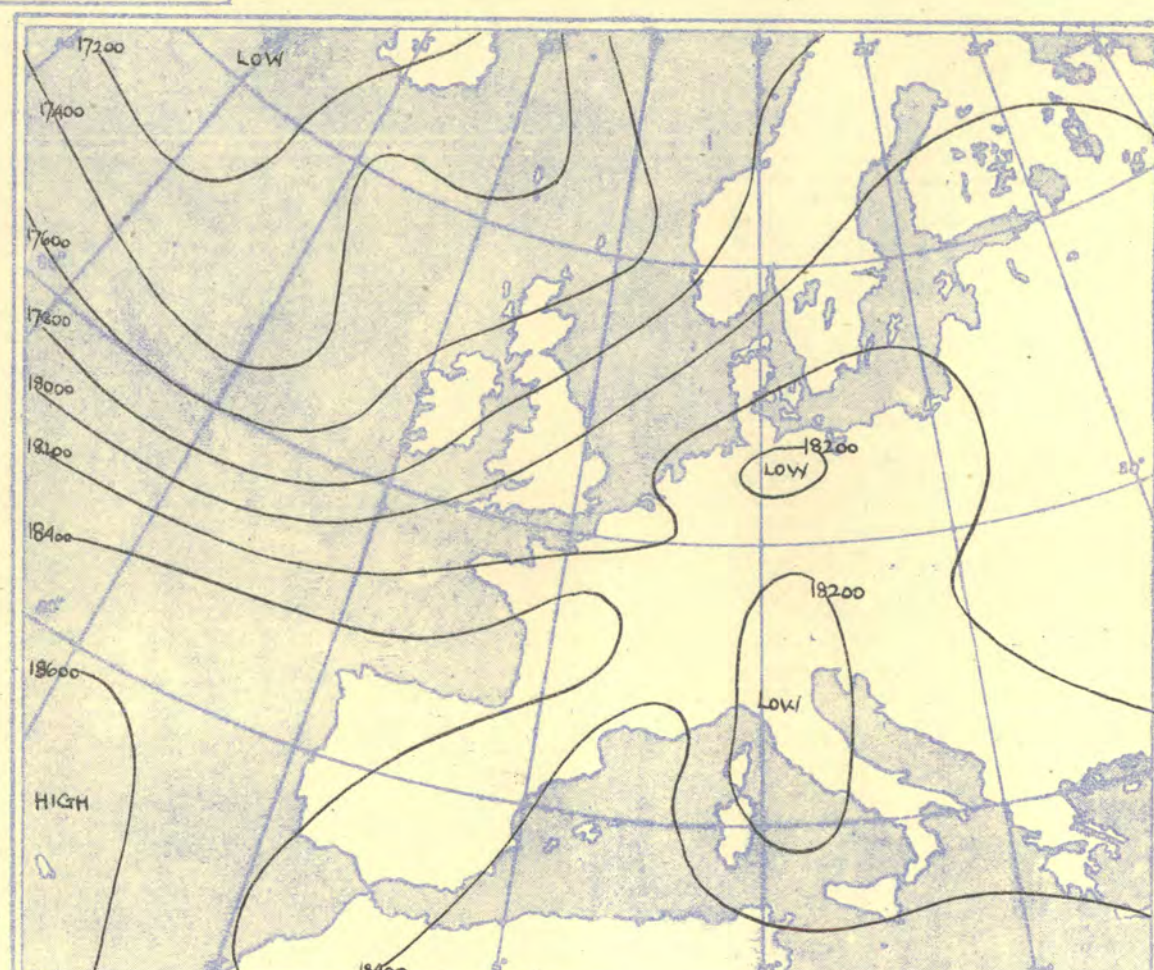
100 80 60 40 20 10 0 knots



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



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



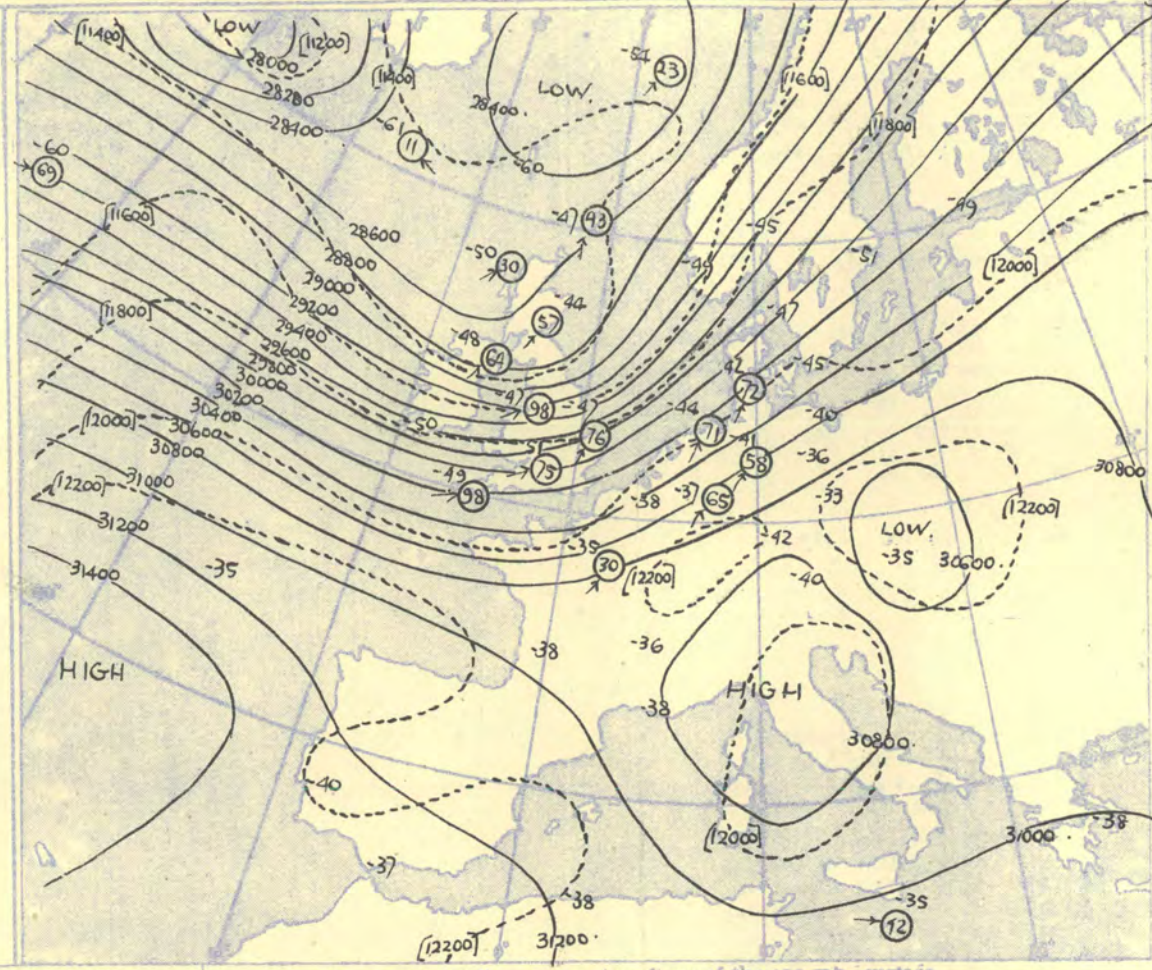
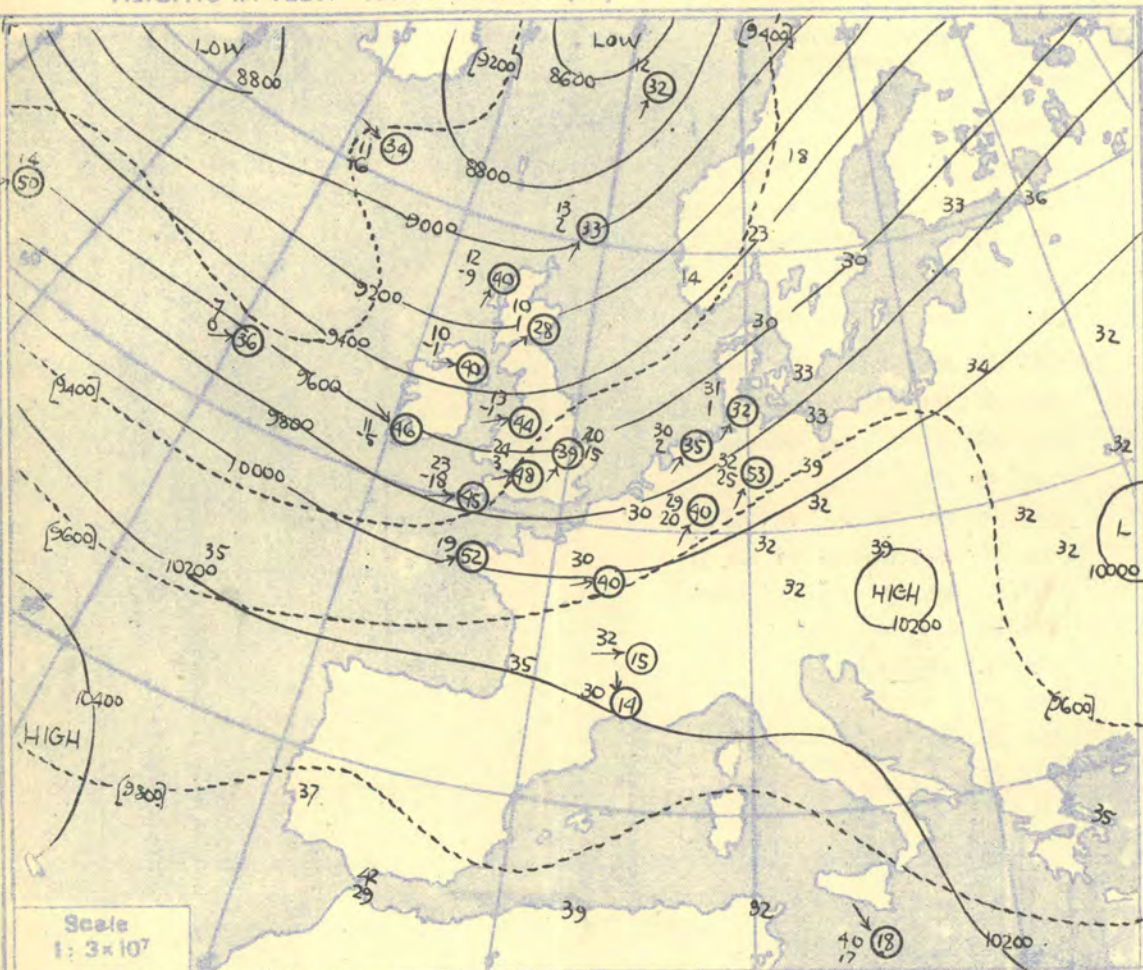
Isopleths of Thickness 800-1000mb.

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

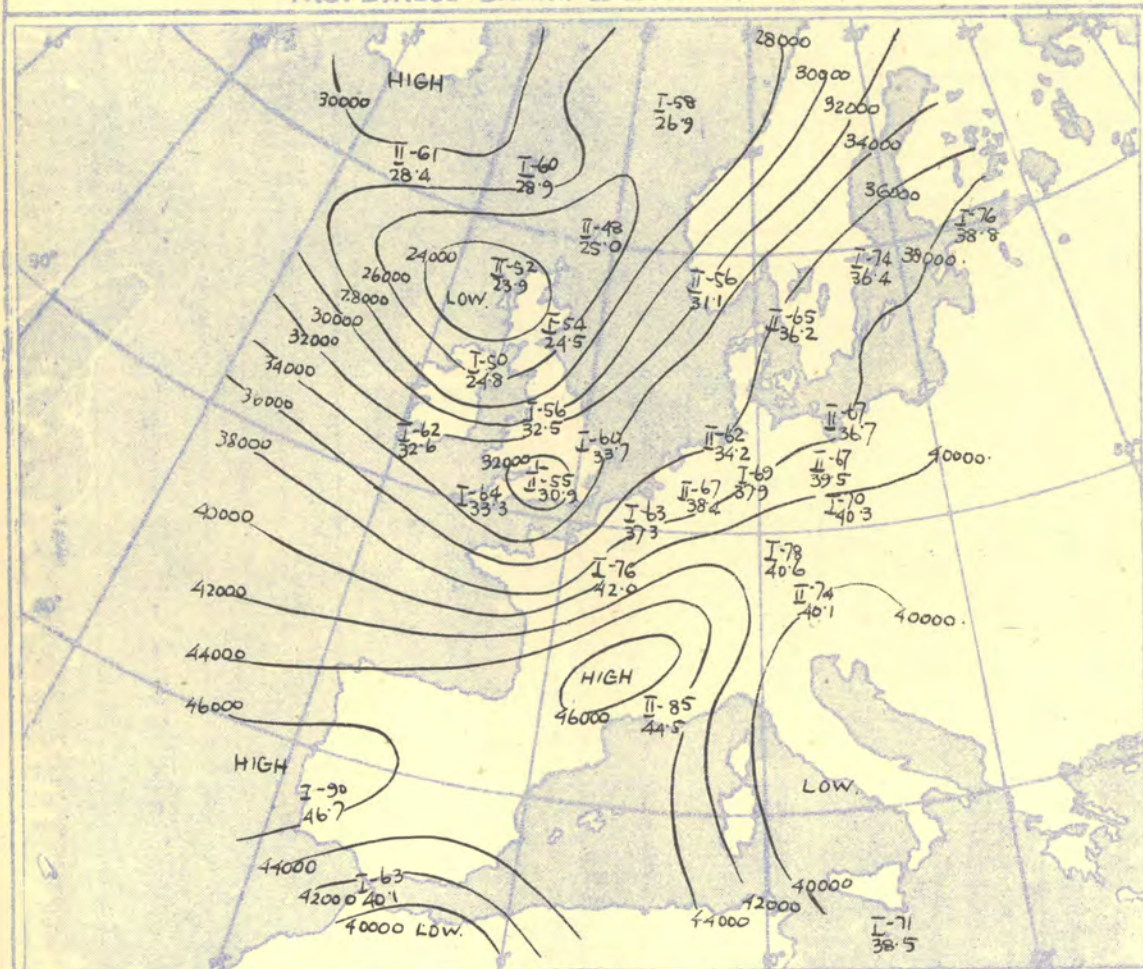
NEPHOSCOPE OBSERVATIONS									
Place	Blackbury Shawbury Plymouth								Place
Time Type	09L Ac	15L Ac	15L Ci						Time Type
Dir. Vel.	210 30	240 72	250 90						Dir. Vel.

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

Ship		WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				WEATHER EXPLORER.				CIRRUS.				CIRRUS.				CIRRUS.				CIRRUS.				Ship	
Lat/Long		60°N 15°W.				60°N 15°W.				60°N 15°W.				60°N 15°W.				52°N 20°W.				52°N 19°W.				52°N 20°W.				52°N 20°W.				Lat/Long	
Pressure	Time M.S.L. Surf	03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				Time M.S.L. Surf	
		mb				mb				mb				mb				mb				mb				mb				mb					
		mb				mb				mb				mb				mb				mb				mb				mb					
		mb				mb				mb				mb				mb				mb				mb				mb					
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vol. knots	Pressure mb						
Surf	1000	-49	45	38	040	12	42	37	330	08	45	35	170	25	45	30	270	25	46	39	45	36	3	46	45	48	39	48	43	Surf					
950	950	13.3	33	29	028	18	21.2	34	29	303	06	28.4	33	30	280	33	26.0	35	24	271	26	45	36	3	45	37	48	41	950						
900	900	27	23	23	022	17	29	24	289	09	25	25	280	33	29	20	270	30	27	14	25	16	25	25	25	25	28	21	900						
850	850	54.0	22	16	359	17	53.0	24	19	256	09	55.4	19	19	280	31	56.8	23	15	270	34	27	14	25	16	25	25	28	21	850					
800	800																														800				
750	750		17	12	344	16	18	13	262	15	14	02	280	30	17	07	270	36	95.5	07	-13	For	96.2	07	00	For	96.5	19	01	750					
700	700	87.3	11	06	324	18	87.0	11	06	262	15	89.1	11	06	280	37	90.7	11	02	270	36	95.2	05	-06	For	96.2	07	00	For	700					
650	650		03	01	316	17	04	01	262	15	05	10	280	37	03	07	267	36	95.2	05	-06	For	96.2	07	00	For	96.5	19	01	650					
600	600	126	03	08	312	16	125	03	09	270	26	127	02	10	280	34	129	05	18	260	30	95.2	05	-06	For	96.2	07	00	For	600					
550	550		13	18	307	21	10	17	277	23	11	18	278	36	14	26	255	31	95.2	05	-06	For	96.2	07	00	For	96.5	19	01	550					
500	500	169	22	28	297	20	169	29	26	290	29	171	21	28	267	38	172	25	39	249	30	177	17	44	For	96.2	07	00	For	500					
450	450		31	36	285	16	29	36	286	21	30	36	260	37	33	48	213	22	48	213	22	48	213	22	48	For	96.2	07	00	For	450				
400	400	220	39	44	035	08	220	38	45	262	07	22.2	39	45	200	09	223	43	18	188	18	178	09	-40	For	96.2	07	00	For	400					
350	350		49		058	14		47	038	03		49	110	10		51	136	19								For	96.2	07	00	For	350				
300	300	283	64		064	21	283	60	034	06	285	61	098	11	285	58	149	19	294	49	295	56	381	58	297	54	297	54	300						
250	250		55		141	19		54	057	11		50	320	12		52	187	10								297	54	297	54	250					
200	200	371	50			371	49		335	03	373	46	305	12	373	49	284	24	383	47	381	58	384	54	384	54	384	54	200						
170	170		50				47		240	11		44	217	21		49	244	26								384	54	384	54	170					
150	150		52				45		236	15		43	276	17		50	243	26	(161)	49										150					
130	130		52				47		225	22		44	240	15		48	244	27												130					
110	110		54				48		216	49		45	211	26		50	246	24												110					
100	100	521	55			524	47		218	17	527	45	208	29	525	50	247	21												100					
90	90		56				48		223	17		43	209	30		49	245	20												90					
80	80		56				49		218	25		44	211	30		52	234	20												80					
70	70		59				47		234	19		47	231	15		51	207	22												70					
60	60		59				52		235	20		46	238	14		50	206	26												60					
		(50mb)	61				52		242	13		48	235	16	(55)	50																			
							53				(18)	47																							

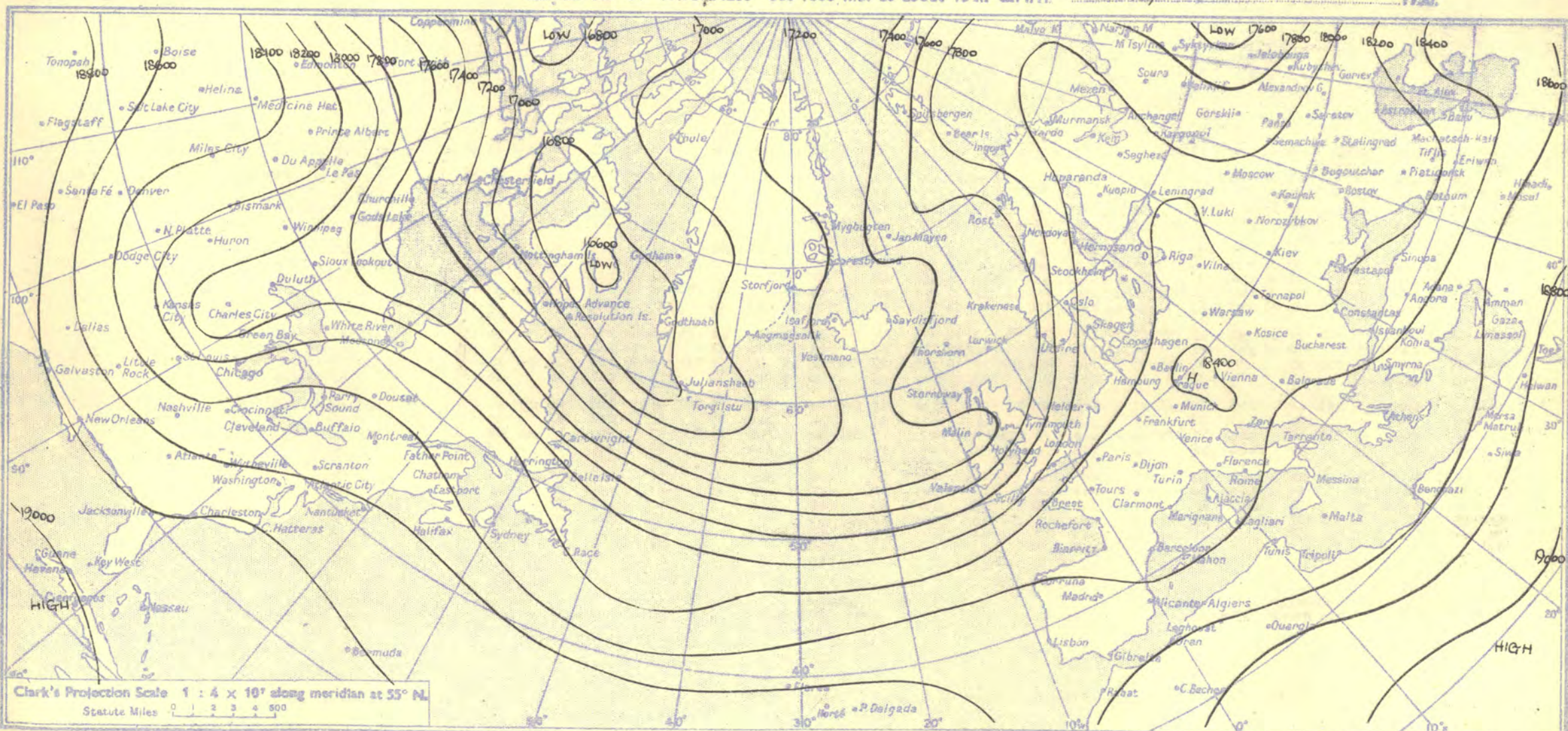
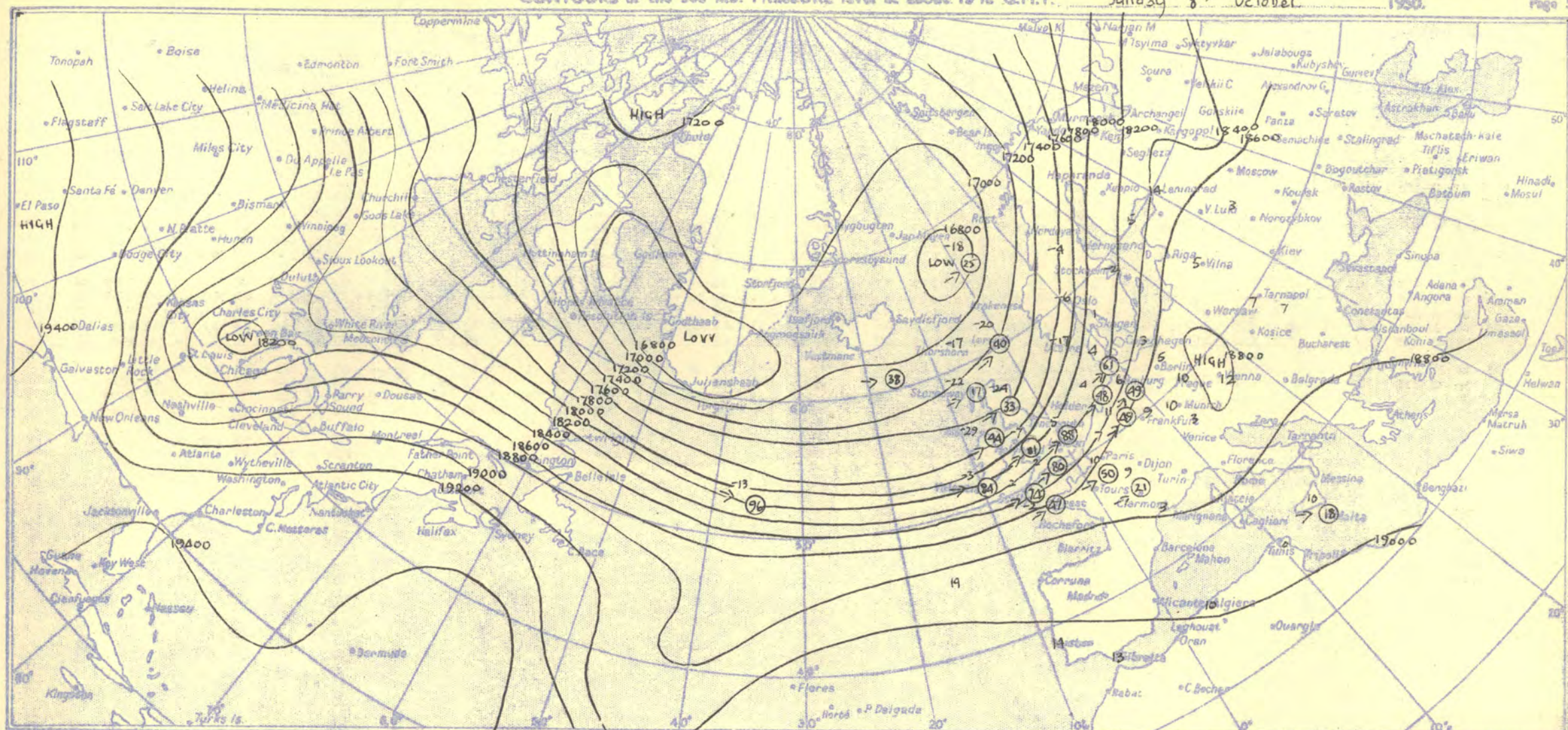


TROPOPAUSE CHART at about 15h G.M.T.



NOTES ON THE AEROLOGICAL SITUATION.

Cold air continued to flood the Northern Atlantic. The band of strong westerly thermal gradient extended eastwards across England to Norway. Winds at 300 mbs across Britain remained well below the geostrophic gradient e.g. Liverpool 98 kts with mean gradient from Aldergrove to Cardigan Bay some 170 kts.



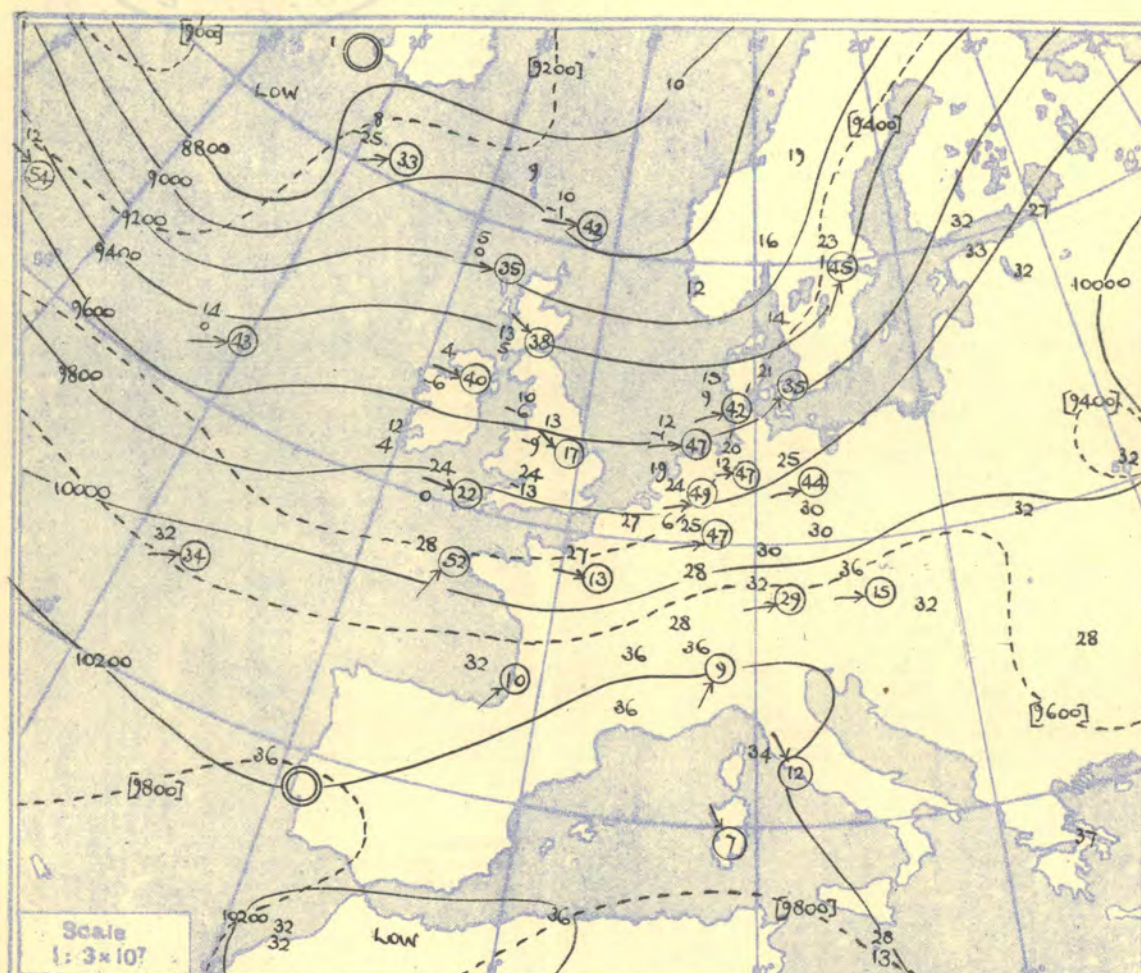
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION												
Time M.S.L.	Surf Pressure	15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				Time M.S.L.												
		Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.	Wind	Vel.	Surf	Temp.																			
990.2	980.3	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
980	980	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
970	970	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
960	960	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
950	950	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
940	940	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
930	930	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
920	920	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
910	910	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
900	900	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
890	890	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
880	880	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
870	870	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
860	860	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
850	850	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
840	840	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
830	830	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
820	820	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
810	810	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
800	800	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
790	790	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
780	780	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
770	770	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
760	760	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
750	750	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
740	740	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
730	730	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
720	720	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
710	710	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
700	700	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	31	27	248	45	62.6	31	25	252	40	63.1	24	22	275	37	62.4	22	15	290	42
690	690	850	25.7	45	38	222	33	25.6	38	27	236	36	31	21	235	36	30	26	246	36	29	21	270	34	36	60.6	26	16	268	38	61.7	3																		

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																						
Pressure (Freezing)	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.	Time M.S.L.	03h.		G.M.T.																											
	Surf	988.5		mb	Surf	997.3		mb	Surf	1001.4		mb	Surf	1008.8		mb	Surf	1010.6		mb	Surf	1013.9		mb	Surf	1016.2		mb	Surf	1017.8		mb																											
	Freezing	978.6		mb	Freezing	995.4		mb	Freezing	1000.5		mb	Freezing	1000.0		mb	Freezing	1000.6		mb	Freezing	1009.4		mb	Freezing	999.6		mb	Freezing	1007.1		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																											
Surf	02.7	44	38	29.0 26	00.5	41	39	26.9 07	00.2	44	39	25.0 13	02.3	43	37	24.0 18	00.6	48	37		01.2	39	36	21.0 08	04.4	37	36	25.0 05	02.9	46	44	27.0 05	00.3	47	40	22.0 10	Surf																						
1000	3.2	42	36	27.6 30	0.7	39	35	26.9 33	0.3	44	39	27.3 31	2.3	43	37	24.0 18	2.8	47	36		3.7	40	36	21.0 08	4.3	37	36	25.0 05	4.8	46	44	26.4 12	3.8	47	39	22.4 13	1000																						
950		36	32	27.8 33		33	30	26.8 35		42	36	27.3 31		38	32	25.8 33		42	33			41	34	27.5 31		41	34			44	43	28.4 13		43	36	24.1 19	950																						
900	25.1	36	32	27.8 33	27.4	33	30	26.8 35	28.6	37	31	27.5 37	30.4	34	27	27.2 36	31.1	36	30		31.9	36	32	28.3 31	32.4	36	25		33.2	38	37	29.0 17	32.1	35	30	24.5 19	900																						
850		29	24	27.8 36		27	24	26.5 38		32	26	27.8 39		28	21	27.5 36		29	22			30	22	27.8 28		30	16			31	31	28.2 15		29	25	25.5 18	850																						
800	55.9	24	15	27.5 37	58.0	20	19	26.3 39	59.6	27	19	27.4 38	61.1	22	13	27.6 39	61.9	21	15		62.8	26	10	27.8 23	63.3	27	01		64.0	26	18	27.2 14	63.1	24	21	25.7 18	800																						
750		17	09	26.9 39		12	10	26.1 37		20	12	27.5 37		17	00	27.0 40		16	07			19	01	27.9 21		21	06			23	02	26.9 15		18	13	25.6 19	750																						
700	89.9	10	01	26.7 42	91.7	05	00	24.8 35	93.8	13	05	27.7 38	95.0	11	06	26.8 40	95.8	10	06		96.9	13	09	27.9 17	97.7	24	13		98.5	24	00	26.5 22	97.1	12	04	700																							
650		03	09	26.8 42		00	05	23.8 36		05	03	26.9 34		05	17	27.2 39		08	09			08	17	28.3 26		18	26			24	03	26.3 30		13	02	25.5 05	650																						
600	128	07	15	26.9 42	130	07	14	23.5 36	132	04	12	26.3 33	133	01	16	27.3 48	134	06	25		135	07	21	28.4 52	137	13	25		138	14	10	25.7 35	136	12	08	600																							
550		16	21	26.3 42		16	24	22.9 33		14	20	26.1 35		07	19	27.0 55		03	26			01	26	27.8 60		03	29			02	18	25.4 35		06	15	550																							
500	171	25	30	25.8 40	173	25	33	23.2 29	175	23	32	26.6 44	177	17	25	26.8 58	179	11	29			09	35	27.4 61	182	06	37		183	08	26	25.1 43	180	12	20	500																							
450		34	40	25.6 36		38	47	24.4 37		32	44	27.5 58		25	33	26.4 66		22	38			20	43	26.6 69		14	41			18	28	25.7 53		21	28	450																							
400	222	47		25.7 34	223	51		25.5 44	226	40	53	28.0 77	229	35	44	26.0 60	231	34	48		232	32	54	26.9 73	235	26	47		236	22	28	26.3 70	232	31	36	400																							
350		60		26.0 39		63				49		28.4 88		48		26.6 75		47				44		27.0 78		35	49			30	35	26.4 93		43		350																							
300	283	63		25.2 33					289	59		28.0 84	292	62		26.4 75	294	59			296	58		26.8 94	300	47			301	46		26.7 108	296	53		300																							
250		52		24.2 33					61			27.1 70		71		26.2 77		68				67		27.0 91		60				60		27.7 118		65		250																							
200	371	52		24.0 31					376	49		26.1 57	378	53		26.2 67	380	61				61		26.0 75	386	67			387	73		28.7 96	382	63		200																							
170		50		23.6 32					54			26.0 54		57		26.0 60		64				62		26.2 57		59				69			63		170																								
150		51		23.3 27					57			25.5 47		56		25.8 63		66				63		26.6 57		63			(160)	71			63		150																								
130		52		23.1 27					58			25.1 42		60		25.5 43		69				67		26.3 55		63							65		130																								
110		55		22.7 27					64					65		25.6 38		64				71		24.5 51		67							65		110																								
100	521	57		22.4 30					524	59			526	66		25.7 35	526	61			527	75		24.4 45	530	66							65		100																								
90		58		22.9 26					52					64		26.0 34		73				76											64		90																								
80		55												73				73																64		80																							
70																																				70																							
60																																				60																							
Isothermal				979-962mb. 44°				Inversion				995mb. 41°-984mb. 43°				Inversion				1001mb. 44°-978mb. 45°				(mb) Isothermal				680-610mb. 08°				Inversion				1009mb. 39°-961mb. 42°				999mb. 36°-975mb. 43°				1007mb. 46°-975mb. 47°				700mb. 12°-674mb. 16°				Isothermal				1013-980mb. 47°			
Tropopause				I 332mb. -64° 26,100'				N.R.				I 287mb. -65° 32,200'				I 250mb. -71° 33,000'				I 260mb. -71° 32,400'				I 255mb. -68° 32,900'				I 215mb. -69° 37,100'				I 198mb. -74° 39,000'				I 234mb. -70° 34,900'				Tropopause																			
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE								STATION																						
Pressure (Freezing)	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.	Time M.S.L.	09h.		G.M.T.																							
	Surf	994.4		mb	Surf	997.4		mb	Surf	995.4		mb	Surf	1008.3		mb	Surf	1012.4		mb	Surf	1015.8		mb	Surf	1016.7		mb	Surf	1017.0		mb	Surf	1017.0		mb																							
	Freezing	984.4		mb	Freezing	995.4		mb	Freezing	884		mb	Freezing	865		mb	Freezing	882		mb	Freezing	870		mb	Freezing	879		mb	Freezing	870		mb	Freezing	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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots																							
Surf	02.7	42	37	24.0 16	00.5	44	39						02.3	41	37	20.0 15	00.6	47	38	24.5 02	01.2	42	38	21.0 05	04.4	40	38	Calm	02.9	46	45	Calm				Surf																							
1000	1.5	41	33	24.6 13	0.7	41	35						2.2	40	34	22.0 30	3.4	46	38		4.2	43	37		4.5	41	38		4.6	47	44				1000																								
950		35	28	24.9 17	27.5	34	28						30.3	36	28	23.5 34	31.6	35	27	25.6 25	32.5	35	24	26.8 19	32.8	35	30		33.0	44	36	20.8 15				950																							
900	26.6	35	28	24.9 17	27.5	34	28						30.3	36	28	23.5 34	31.6	35	27	25.6 25	32.5	35	24	26.8 19	32.8	35	30		33.0	44	36	20.8 15				900																							
850		29	23	25.0 20		27	20						61.2	30	21	24.0 33	62.4	28	21	25.9 27	63.3	30	16	26.0 17	63.6	29	25		63.8	29	19	22.1 16				850																							
800	57.4	21	16	24.8 22	58.2	21	13						61.2	24	12	24.3 37	62.4	25	14	26.3 27	63.3	25	08	25.8 17	63.6	24	08		63.8	23	12	24.8 23				800																							
750		15	10	24.9 23		16	09							18	06	24.5 36		19	09	26.0 25		20	04	25.6 20		20	04			16	08	25.9 21				750																							
700	91.2	08	03	24.9 27	92.1	10	01						95.3	14	03	23.6 35	96.5	16	06	25.7 26	97.6	21	06	25.2 30	97.8	20	11		97.8	14	10	24.4 21				700																							
650		00	11	24.9 30		02	08							08	01	23.1 36		13	01	25.6 28		16	08	24.8 25		14	28			11	08	22.8 29				650																							

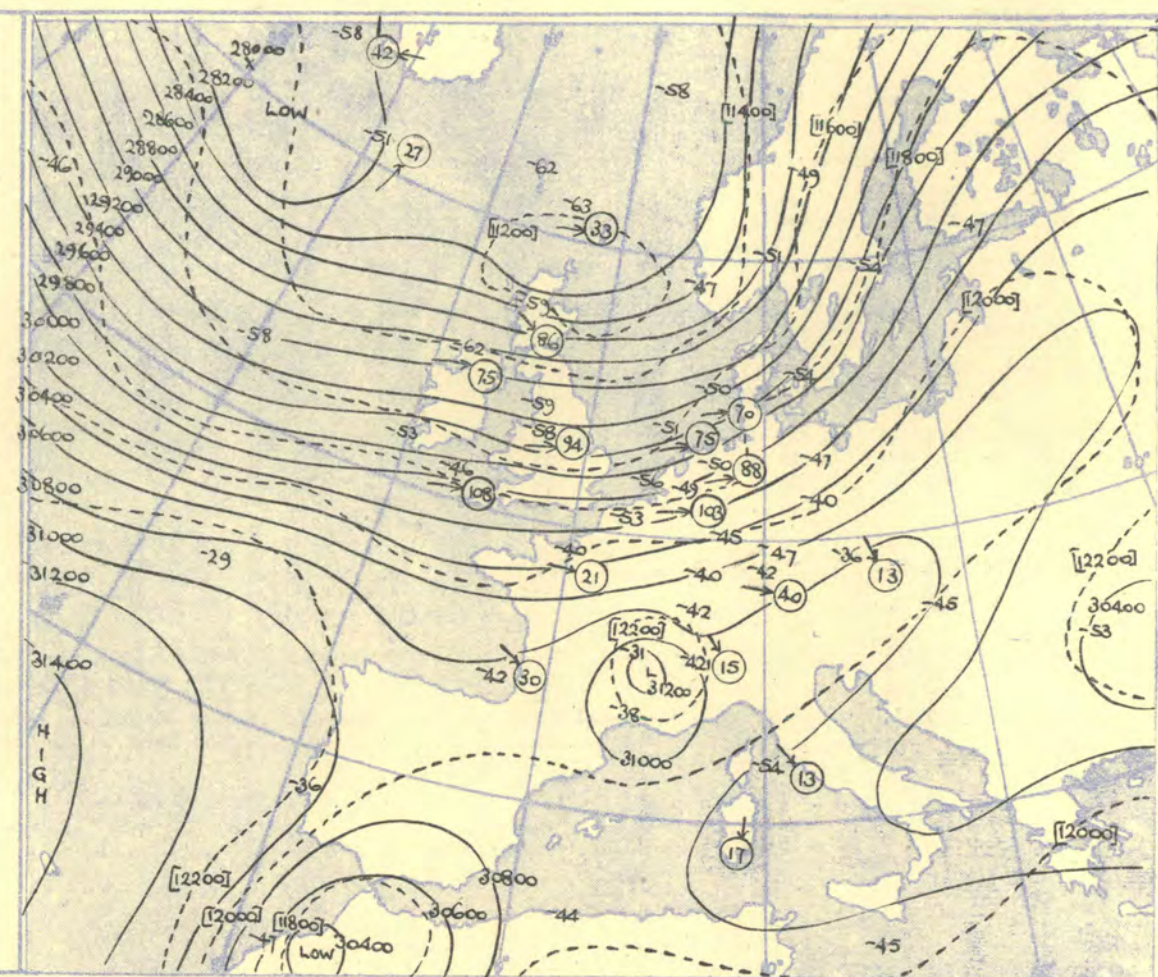
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



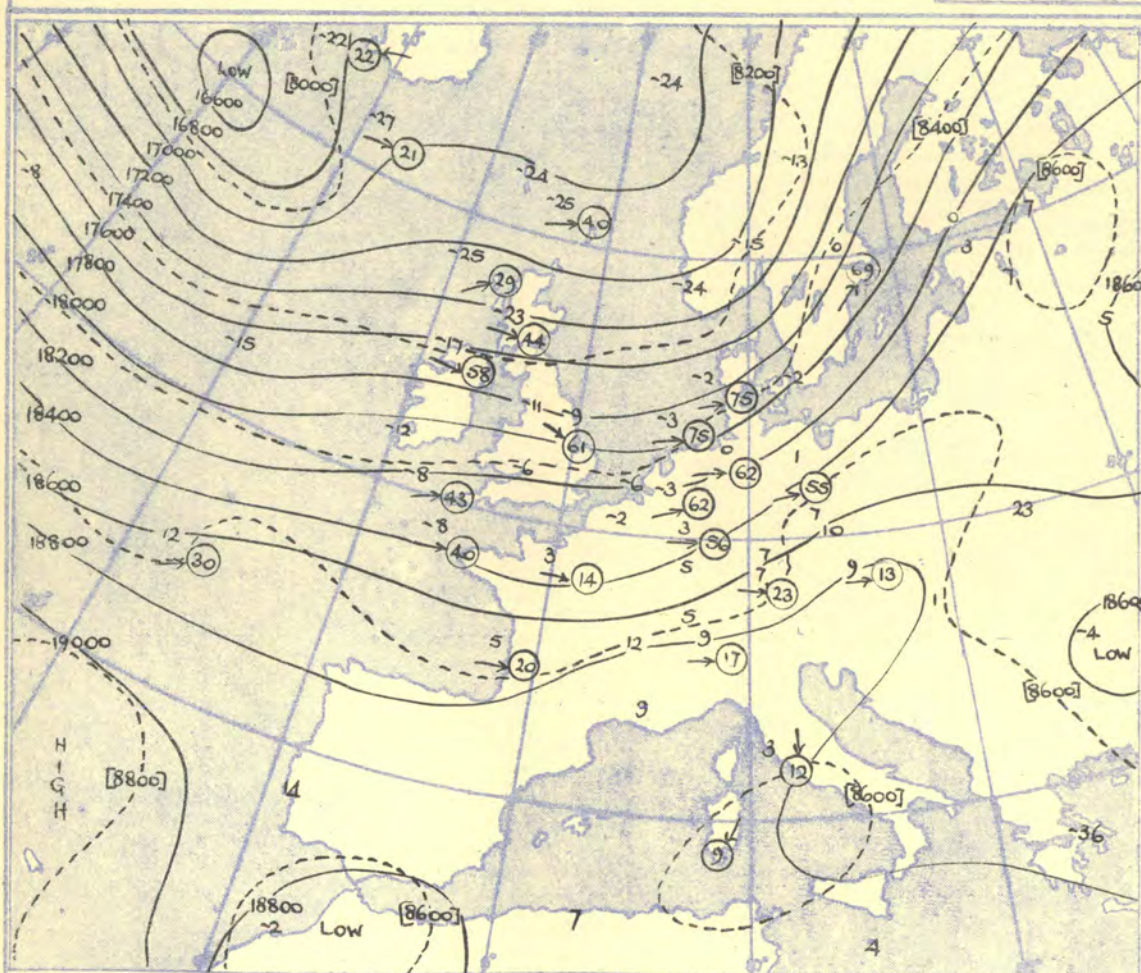
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

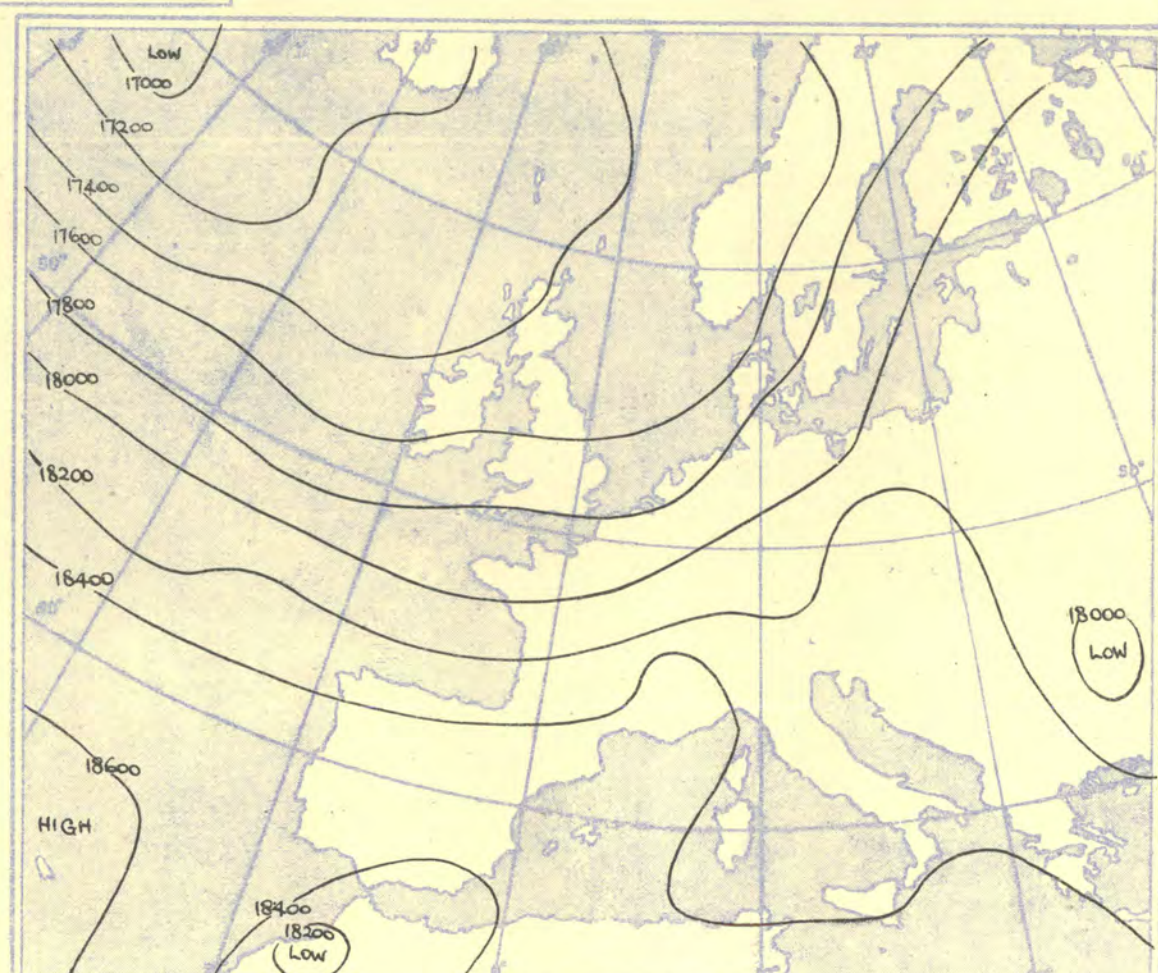
100 80 60 40 20 10 5 knots



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



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



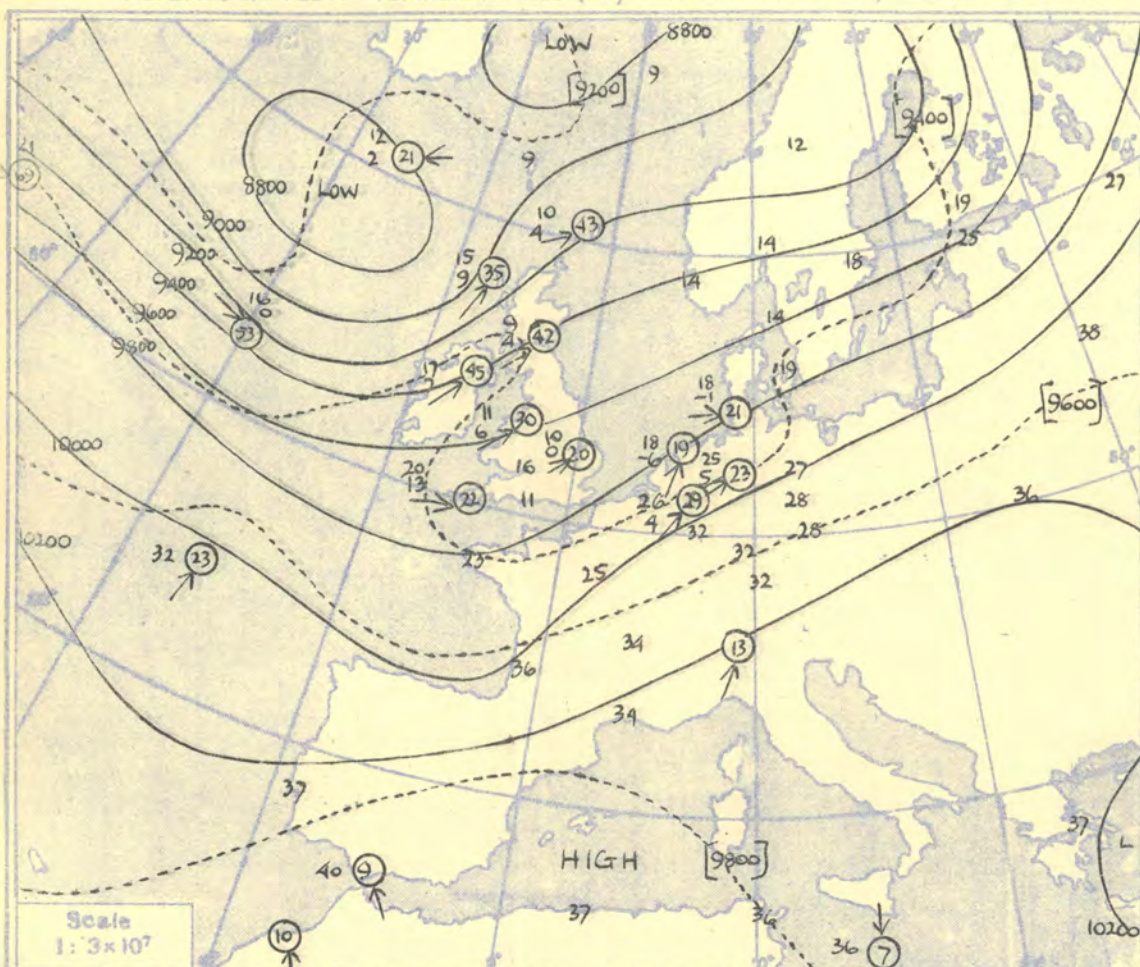
Isopleths of Thickness 500-1000mb.

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 EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS				Ship
Lat/Long	60.5 N 15.9 W				60.4 N 16.4 W				60.4 N 15.3 W				60.5 N 15.9 W				52.3 N 20.8 W				52.5 N 20.0 W				52.2 N 20.7 W				52.2 N 20.7 W				Lat/Long
Pressure	Time	09h.		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.	989		mb	986	mb		982	mb		980	mb		1005	mb		1005	mb		1003	mb		1004	mb		mb	M.S.L.						
	Surf	989		mb	986	mb		982	mb		980	mb		1005	mb		1005	mb		1003	mb		1004	mb		mb	Surf						
	Freezing	875		mb	900	mb		870	mb		855	mb		877	mb		877	mb		900	mb		889	mb		mb	Freezing						
Pressure	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Height ft./100	Temp.	Dew	Wind	Pressure				
Surf	1000	42	34	280	17	-3.7	43	34	120	10	-5.8	47	35	055	20	-5.5	46	37	260	25	1.3	50	43					Surf					
950		41	28	272	26		39	31	158	12		43	27	086	27		42	32	030	37								1000					
900	25.4	35	15	253	26	24.4	32	26	165	12	23.4	36	23	083	24	22.8	37	25	020	36								950					
850		29	3	238	32		24	18	171	15		29	18	085	22		31	19	022	28	28	18						900					
800	55.8	22	-6	239	37	54.9	19	12	180	12	54.2	23	8	093	20	53.7	24	14	022	27								850					
750		14	-5	245	35		13	0	187	11		15	2	093	19		21	6	027	28								800					
700	89.6	8	-15	248	33	88.6	9	-10	208	15	88.1	12	2	092	21	87.9	15	5	045	27	94.5	14	0					750					
650		0	-21	248	31		2	-20	242	21		5	-5	088	24		8	-3	050	25								700					
600	127	-9	-28	248	34	127	-7	-22	258	26	126	-2	-12	096	24	12.6	-1	-12	036	24								650					
550		-17	-34	248	29		-17	-25	241	24		-11	-21	112	22		-10	-21	030	19								600					
500		17	-27	244	248	21	170	-27	34	235	33	170	-22	31	132	19	170	-19	30	030	16	177	-15	-20				550					
450		-39	-47	248	22		-38	-44	235	33		-34	-44	136	18		-31	-43	030	09								500					
400	221	-45		205	25	220	-51		231	42	221	-45		129	22	221	-44		031	09								450					
350		-53		197	31		-65		239	42		-59		111	22		-58		053	13								400					
300	283	-51		193	27	281	-67		244	19	282	-64		122	17	283	-59		087	19	293	-58						350					
250		-48		174	26		-53		236	18		-53		202	13		-49		141	13								300					
200	372	-46		178	27	368	-49		230	17	370	-49		273	10	371	-48		210	10								250					
170		-47		207	24		-52		229	21		-49		288	8		-48		220	10								200					
150		-45		227	20		-51		234	19		-47		290	8		-49		230	11								170					
130		-48		241	21		-51		231	20		-46		290	11		-50		245	14								150					
110		-49		260	26		-51		231	21		-50		280	16		-51		287	32								130					
100	525	-49		253	28	519	-51		231	18	522	-49		259	15	523	-54		270	31	702 - 700 mb 14°							110					
90		-50		242	22	(946)	-52					-48		212	11		-54		258	35	574 - 556 " -2°							100					
80		-50		234	28							-50		208	13		-53		275	18	414 - 400 " -35°							90					
70		-50		231	21							-51		213	23		-54		199	17	Inversion							80					
60		-51			16							-50		260	16	(62mb) -55					577 mb -4° - 574 mb -2°												
	(42mb) -52										(42mb) -48					Inversion																	
	Isothermal										Isothermal																						
	989 - 961 mb 42°										733 - 719 mb 14°																						
	442 - 430 " -41°																																
Tropopause	I 360 mb -54°										I 316 mb -69°																						
	24,100'										26,900'																						

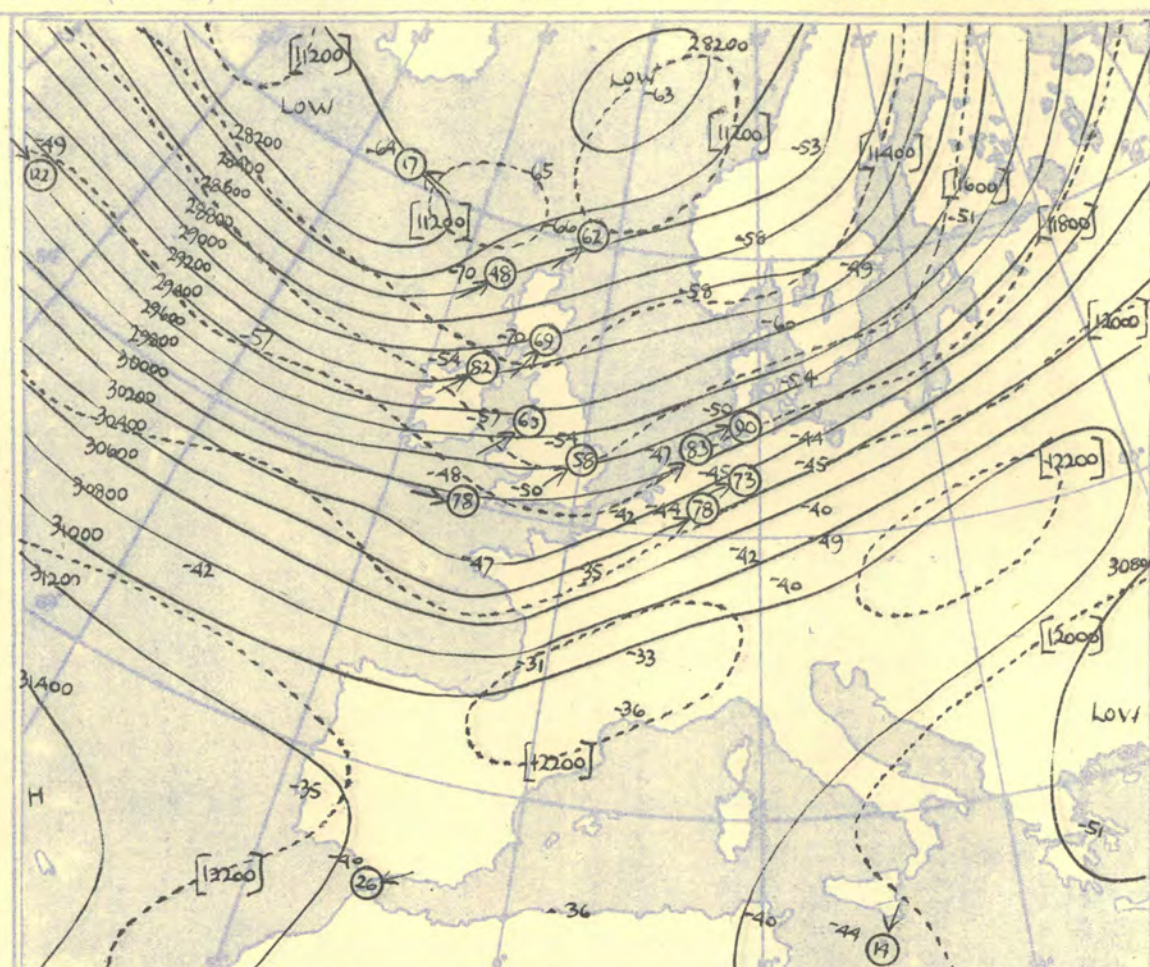
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15h G.M.T.



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

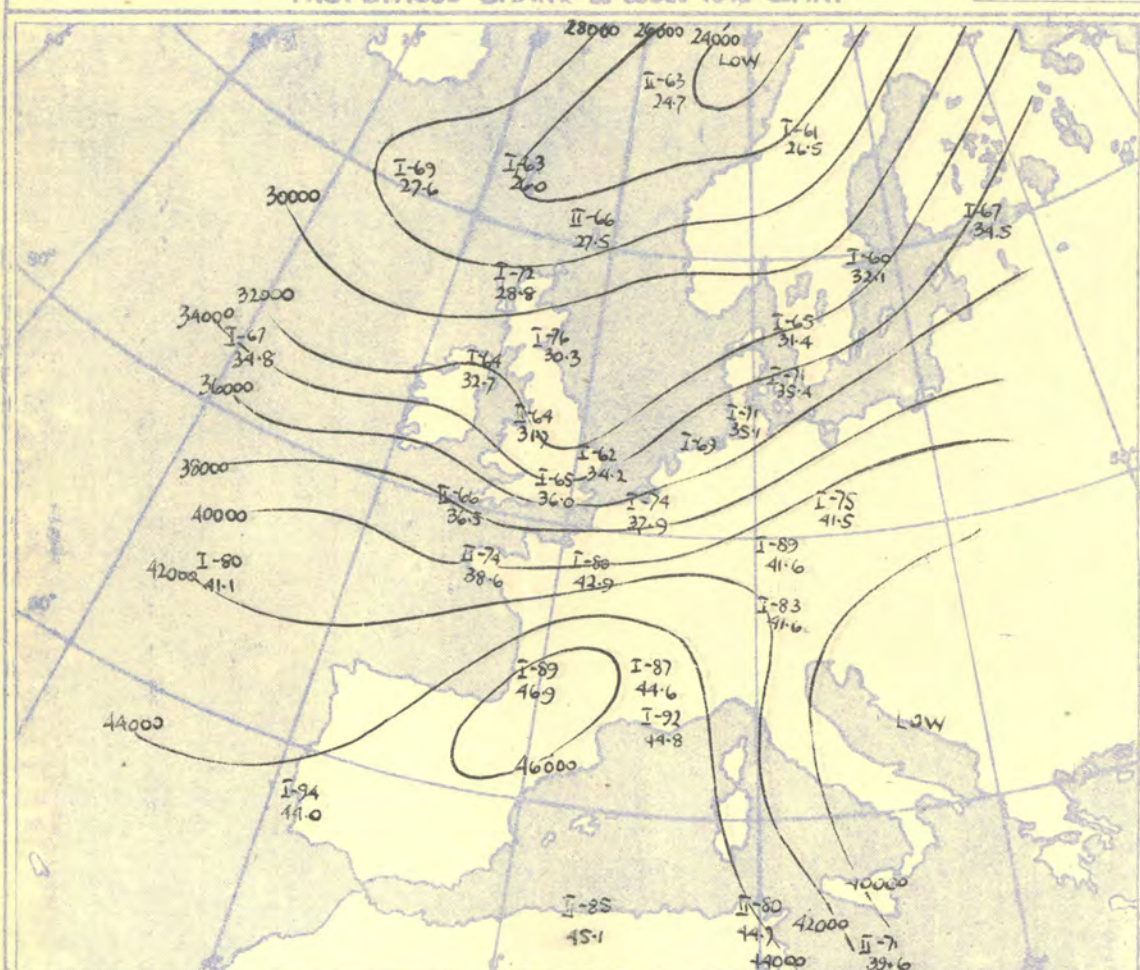
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

10 20 30 40 50 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.



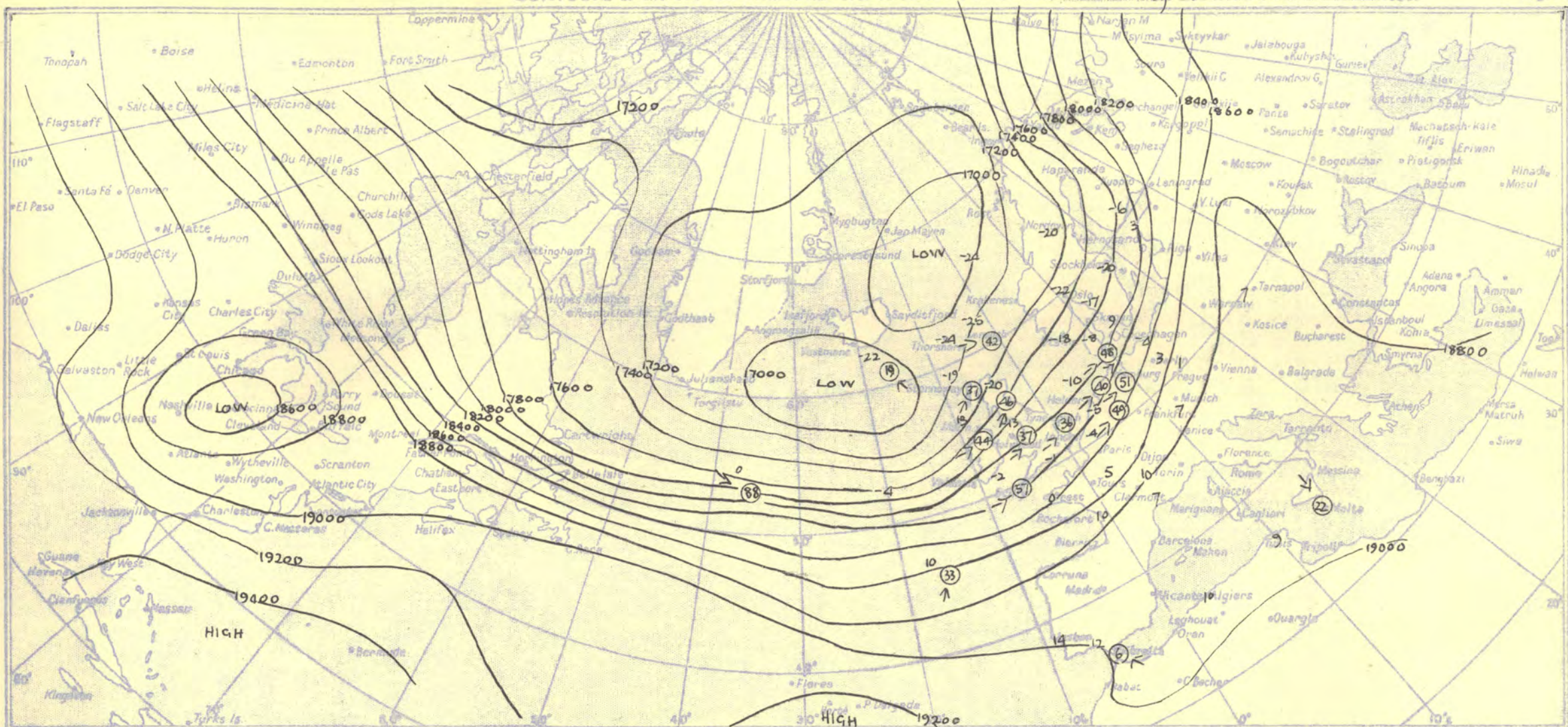
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Cold air continued to flood the Northern Atlantic with a fairly tight westerly thermal gradient across the central Atlantic and Europe. A weak thermal ridge crossed the British Isles.

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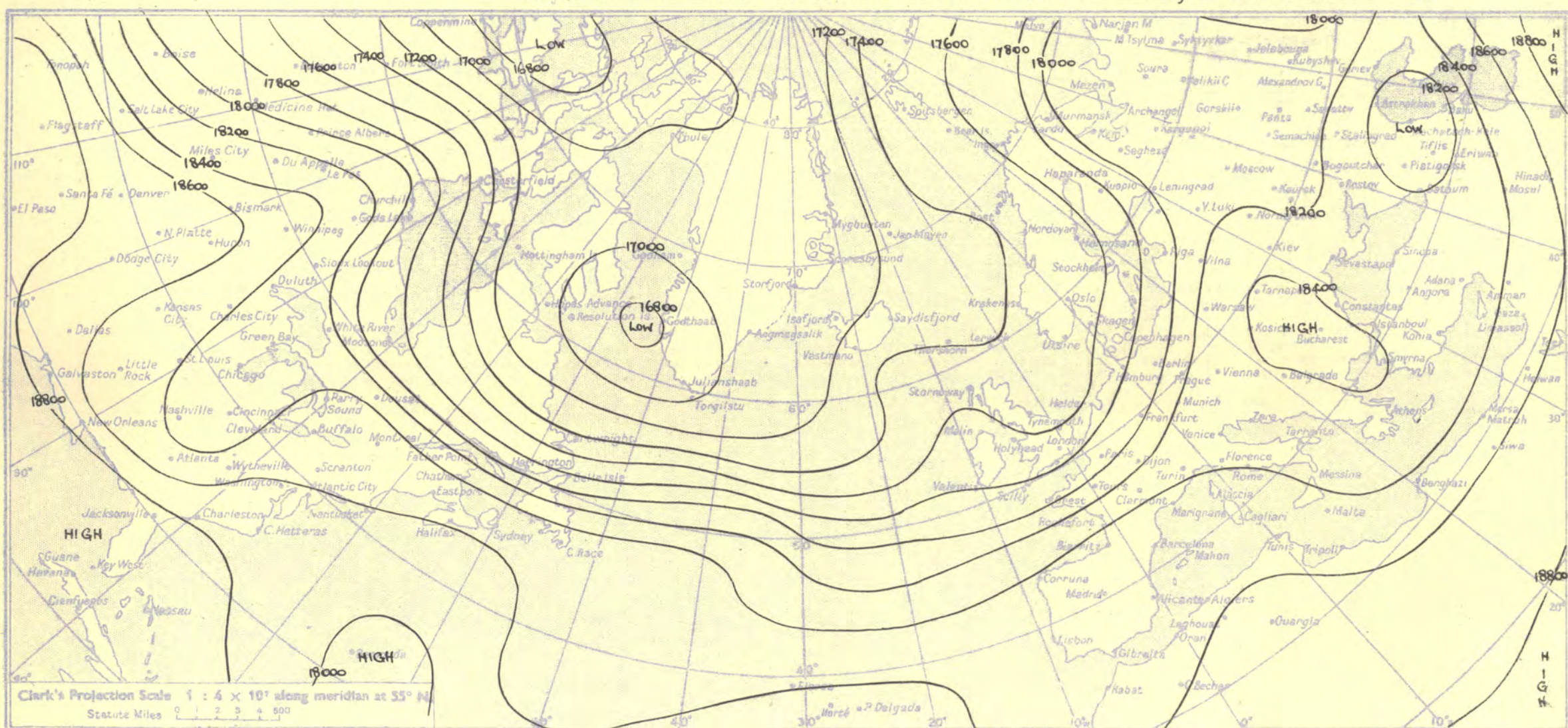
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director



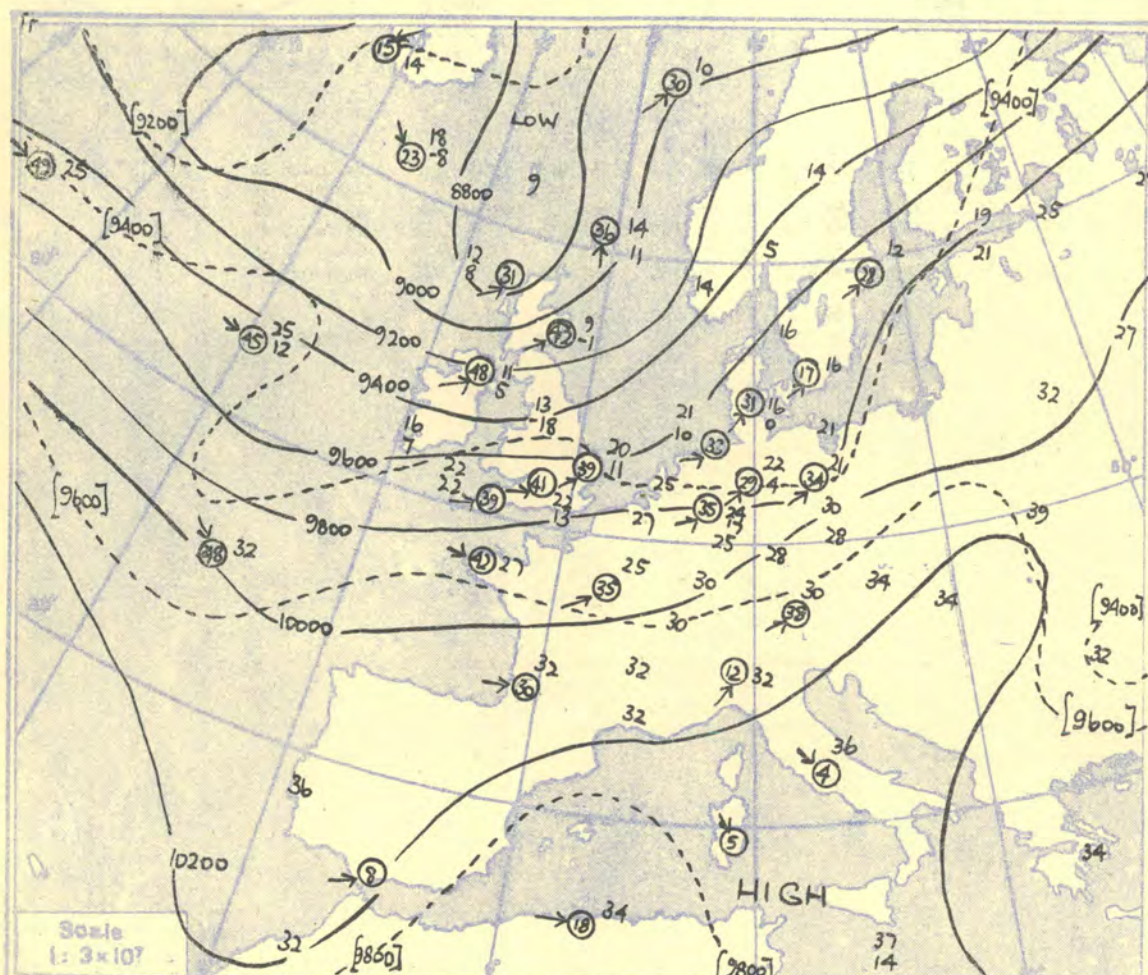
ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T.

Monday 9th October,

1950.



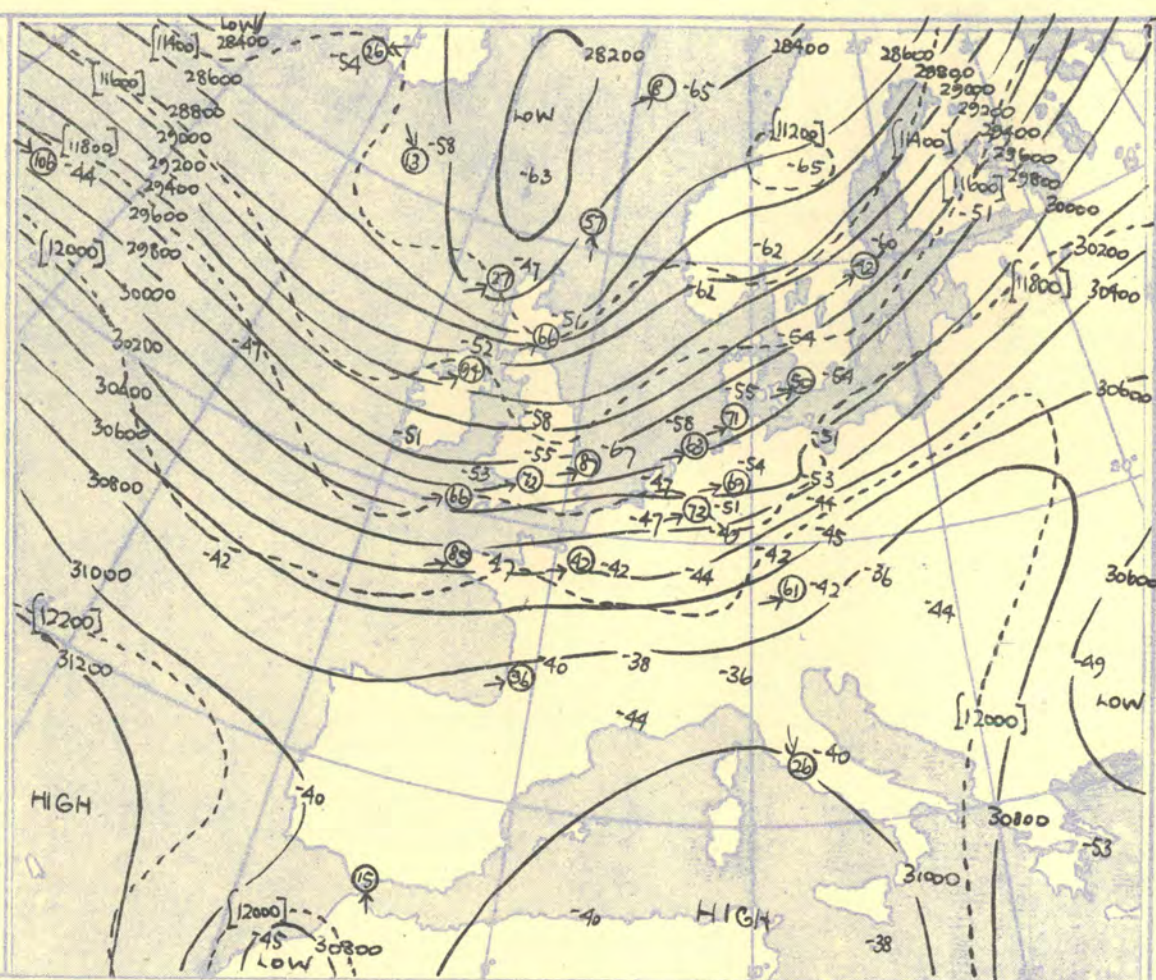
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb and 300 mb., levels at about 03 h. GMT.



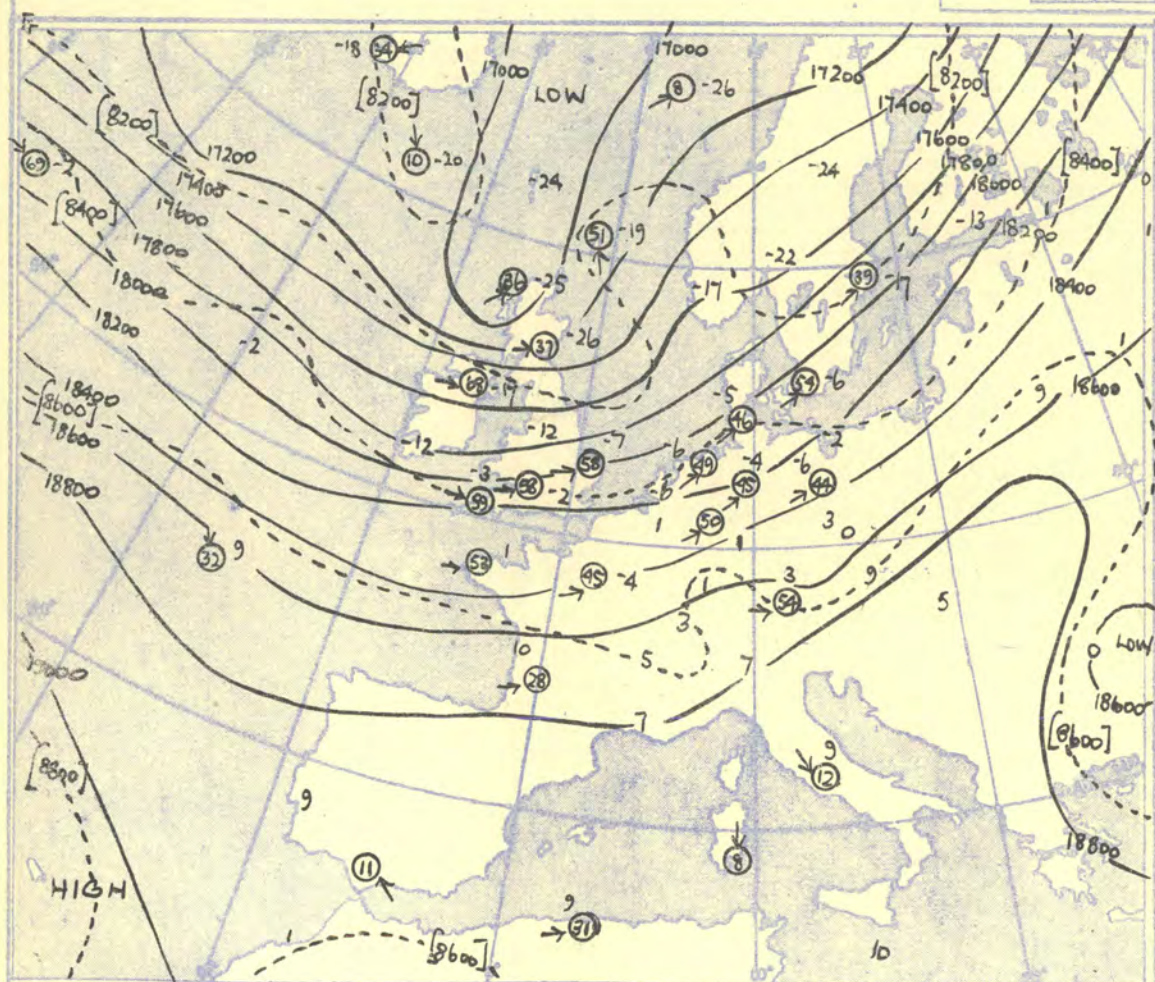
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isotherms of the thickness of the layer 1000-700 mb.

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

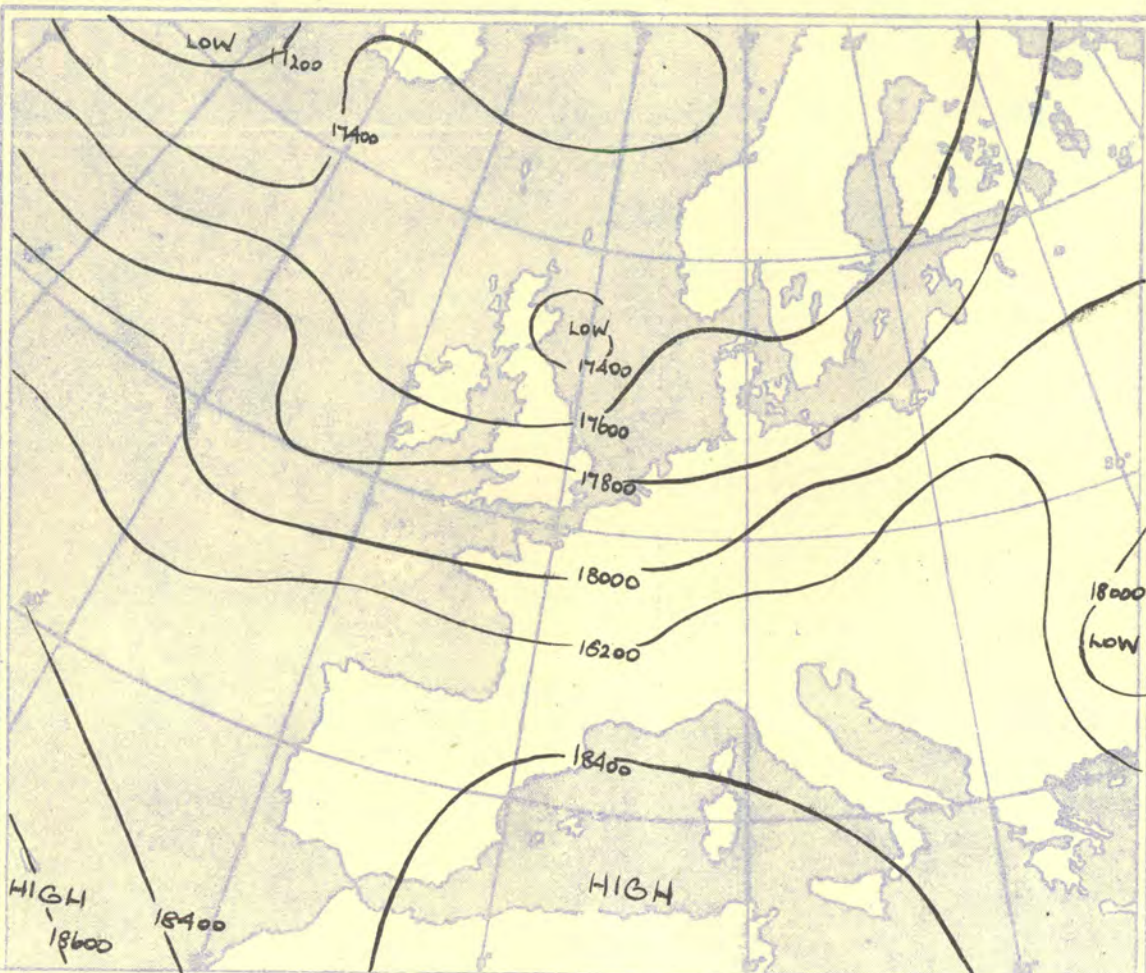
100 80 60 40 20 10 up knots



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.



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



Isotherms of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

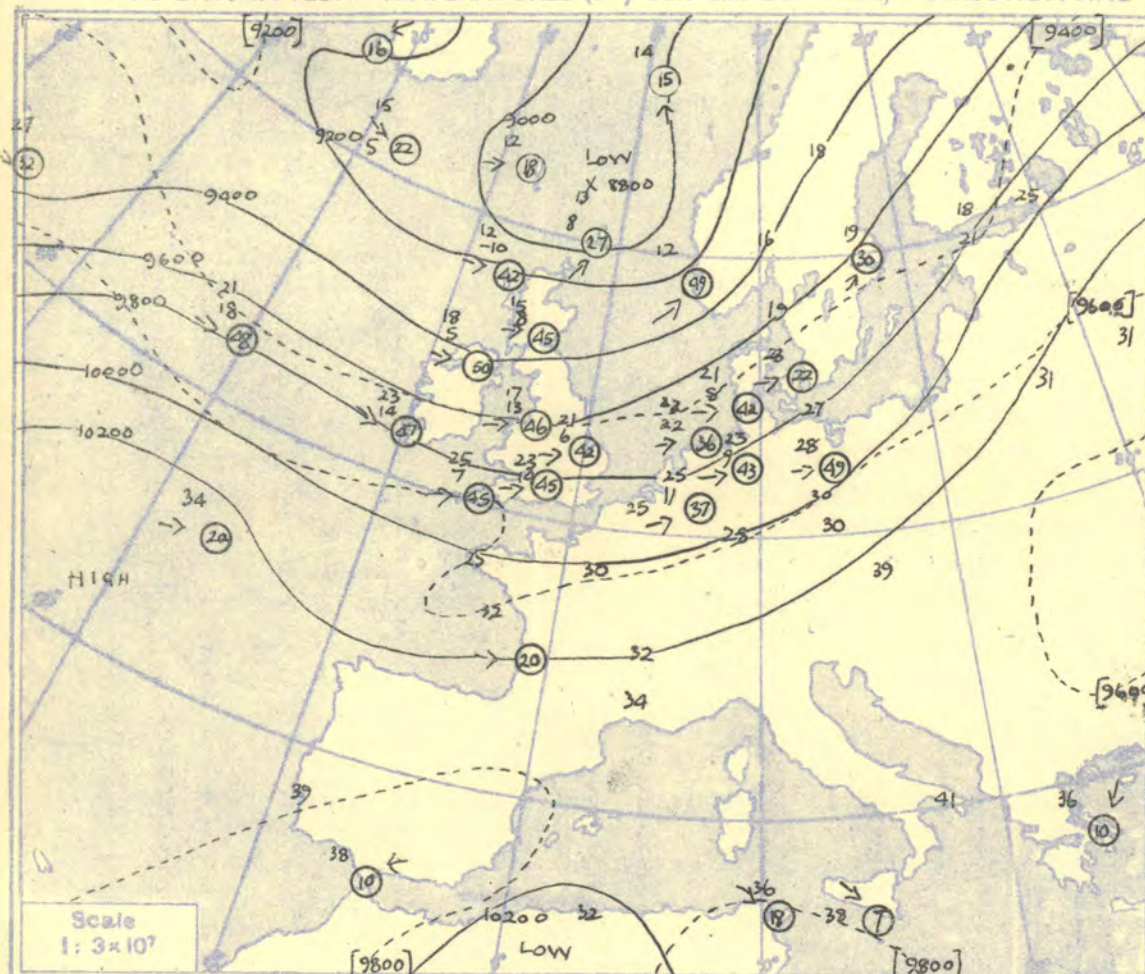
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

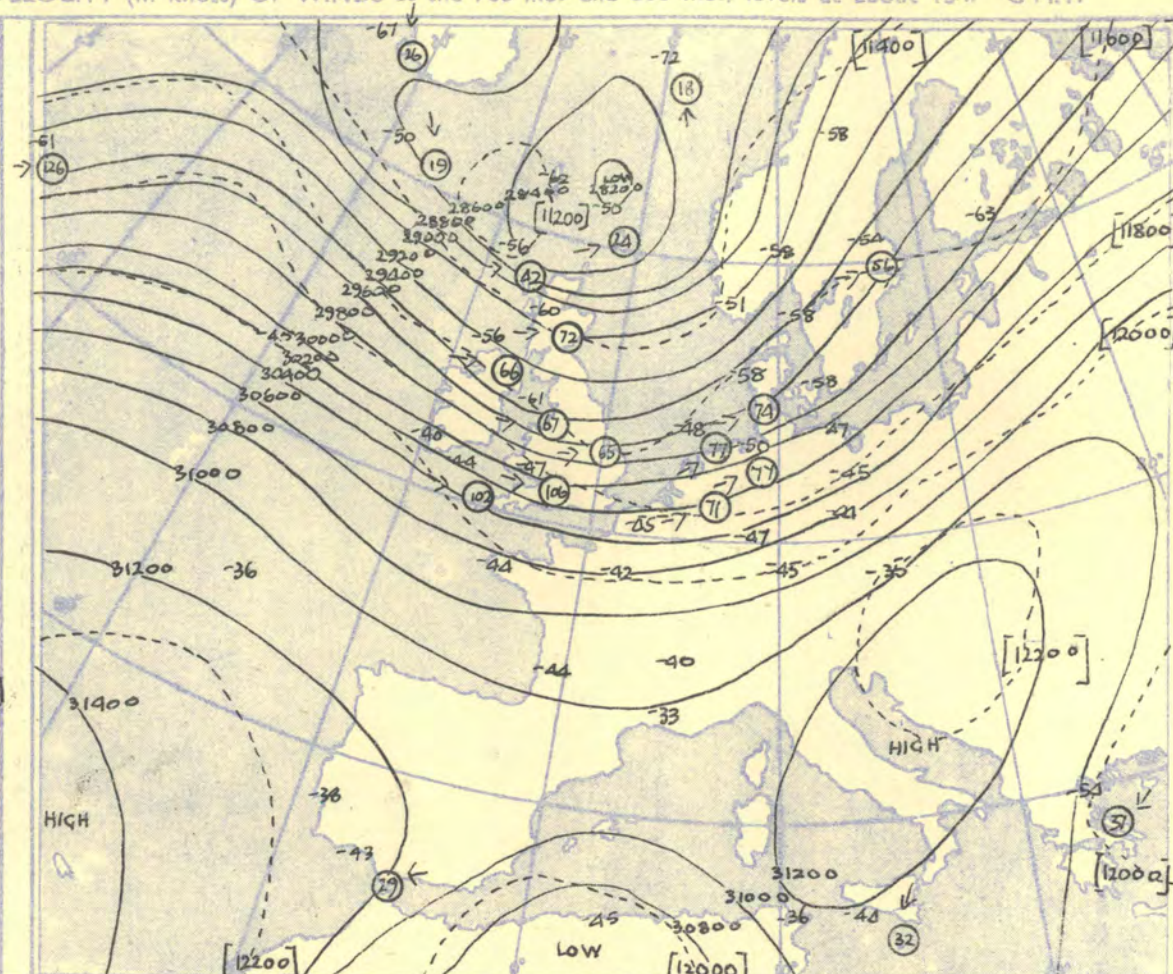
Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS								Ship
Lat/Lon	60°N. 16°W.		60°N. 16°W.		60°N. 16°W.		60°N. 16°W.		60°N. 15°W.		60°N. 15°W.		52°N. 21°W.		52°N. 21°W.		52°N. 21°W.		52°N. 19°W.		52°N. 19°W.		52°N. 19°W.		52°N. 19°W.				Time								
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.	985	mb		989	mb		993	mb		1000	mb		1000	mb		1003	mb		1008	mb		1010	mb				mb	M.S.L.								
	Surf	985	mb		989	mb		993	mb		1000	mb		1000	mb		1003	mb		1008	mb		1010	mb				mb	Surf								
	Freshing	870	mb		890	mb		885	mb		890	mb		785	mb		870	mb		800	mb		735	mb				mb	Freshing								
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	4.0	45	38	285 22	-2.9	44	28	180 16	-1.8	46	43	290 17	1	45	36	260 07	1				1.0				2.4	50 45			2.8	54 52	Surf						
1000																															1000						
950		41	37	332 22		41	27	276 18		41	35	303 20		39	35	267 10					2.4	48 46							2.8	52 50	950						
900	24.2	35	34	329 22	25.3	33	22	280 24	26.4	34	31	299 20	28.2	38	29	287 11															900						
850		30	30	319 24		27	18	283 30		27	27	290 22		28	22	284 13	36	28	For		30	30	For		36	32	For		39	34	For	850					
800	35.0	24	23	327 24	55.9	20	11	292 30	57.1	24	21	288 24	59.0	22	17	285 13																800					
750		21	01	339 19		18	04	297 29		20	15	290 24		16	09	277 14																750					
700	59.3	18	08	320 23	89.8	11	11	295 26	91.2	15	05	291 22	92.9	10	04	262 15	94.8	25	12	winds	94.7	19	16	winds	96.8	21	18	winds	98.1	28	12	winds	700				
650		10	19	309 25		06	26	285 22		07	09	288 19		02	06	255 15																650					
600	128	01	29	306 22	128	04	30	281 16	130	03	17	277 17	131	04	19	241 11																600					
550		09	24	337 12		14	36	272 11		12	26	260 16		14	31	233 11																550					
500	172	20	42	342 10	171	25	42	234 12	173	23	34	243 13	174	23	41	261 14	179	02		top	179	02		top	181	04	08	top	183	03	06	top	500				
450		32	51	314 12		38	51	224 17		35	45	204 12		31	48	291 21																450					
400	223	44		289 12	221	50		216 18	224	48		178 27	225	38	55	302 25				of				of								400					
350		59		154 14		63		203 21		53		213 16		44		287 44																350					
300	284	58		298 13	283	62		224 16	286	50		225 19	289	52		287 46	297	47		page.	297	44		page	301	40		page	303	40		page	300				
250		48		278 15		53		275 19		50		298 34		60		291 39																250					
200	373	48		282 23	370	52		290 21	375	48		276 42	376	56		280 44	384	65						384	72						200						
170		47		265 28		52		277 24		50		276 38		55		285 45																170					
150		48		249 29		52		270 26		51		276 38		59		291 42																150					
130		49		276 24		52		269 28		51		277 33		62		289 38																130					
110		51		265 24		52		269 26		50		276 27		60		279 36																110					
100	525	53		265 24	520	56		262 25	527	51		276 24	524	61		272 35																100					
90		55		266 21		56		277 22		53		276 37		62		269 42																90					
80		56		249 19		55		277 20		56		273 36		62		270 33																80					
70		54		238 20		57		271 18		58		265 30	675	63																	70						
60						59		259 16		54		257 32																				60					
					(650)	59		263 20		56		233 23																									

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

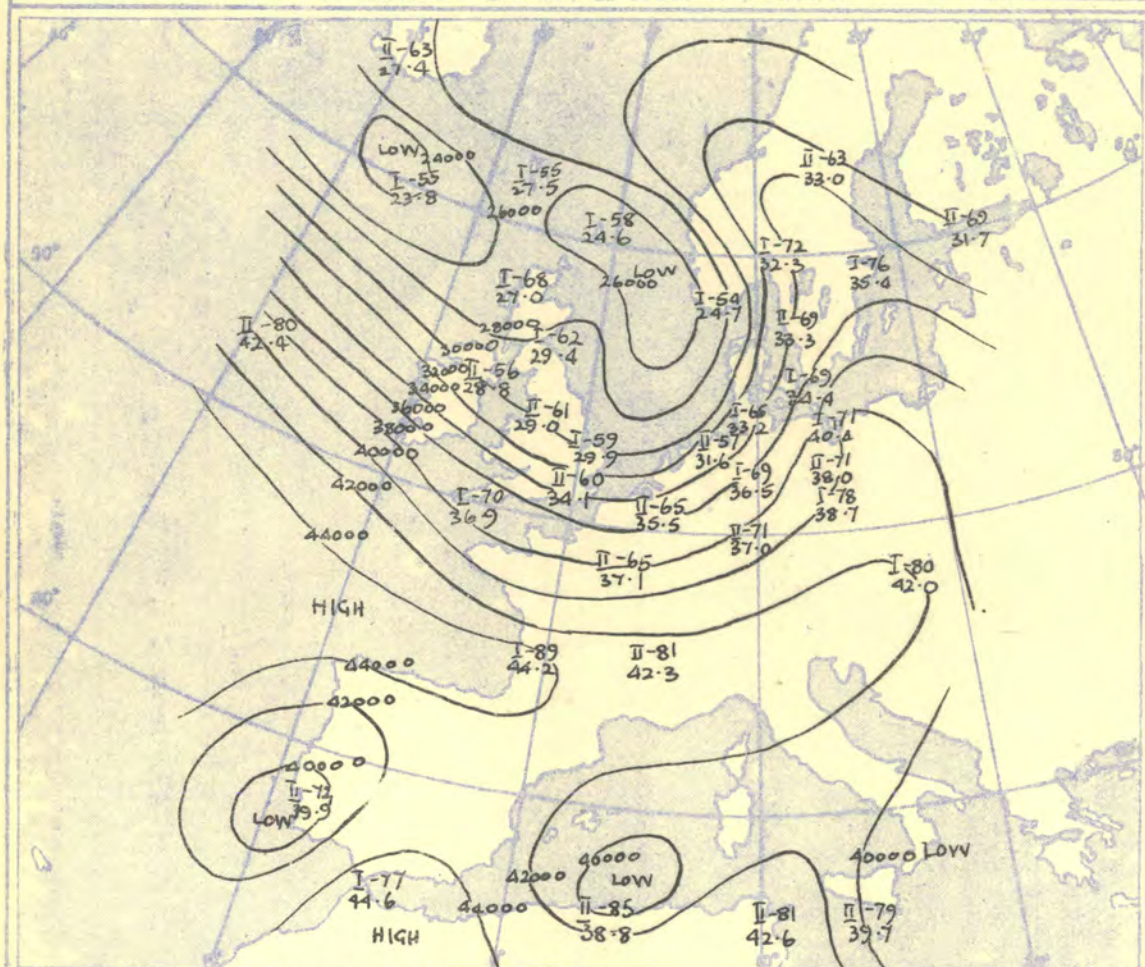


Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 10 0 knots



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

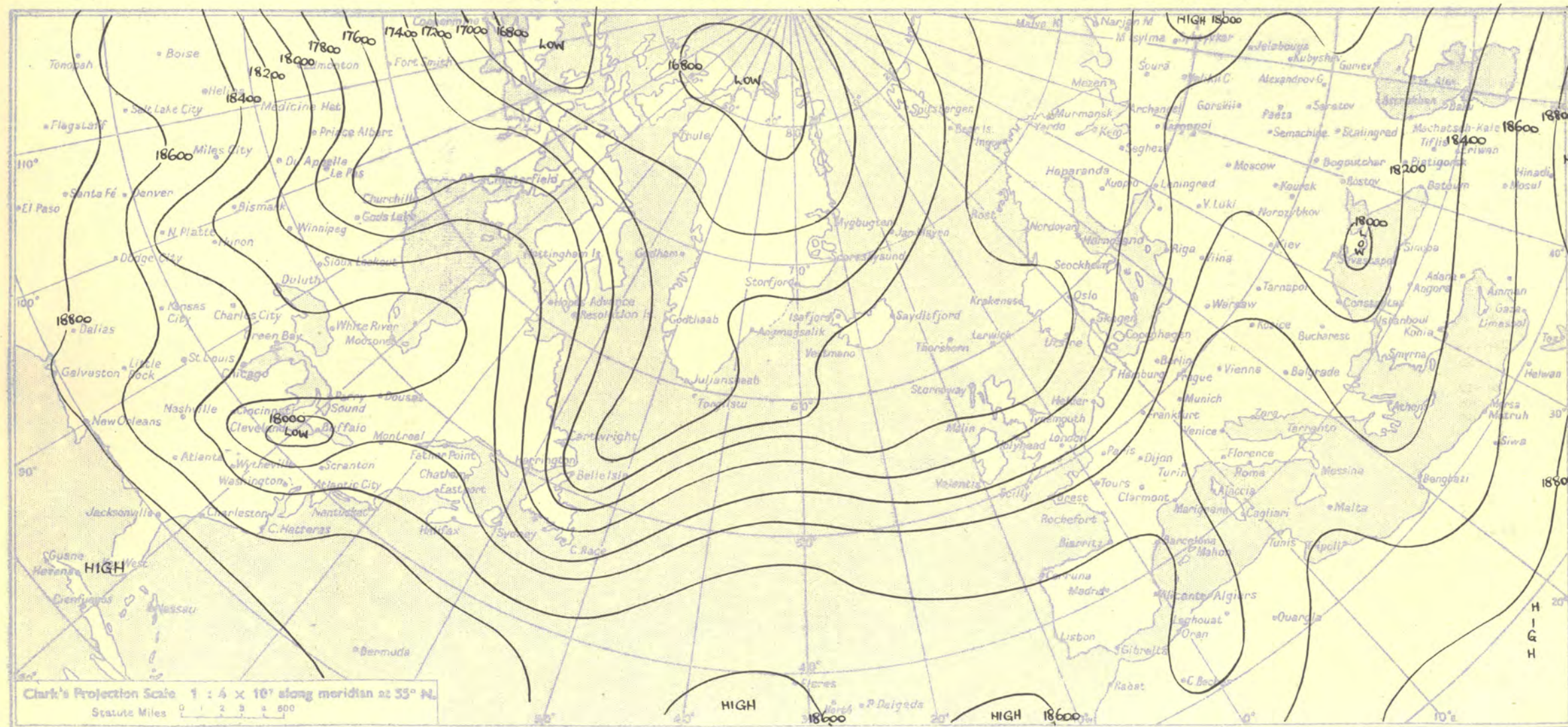
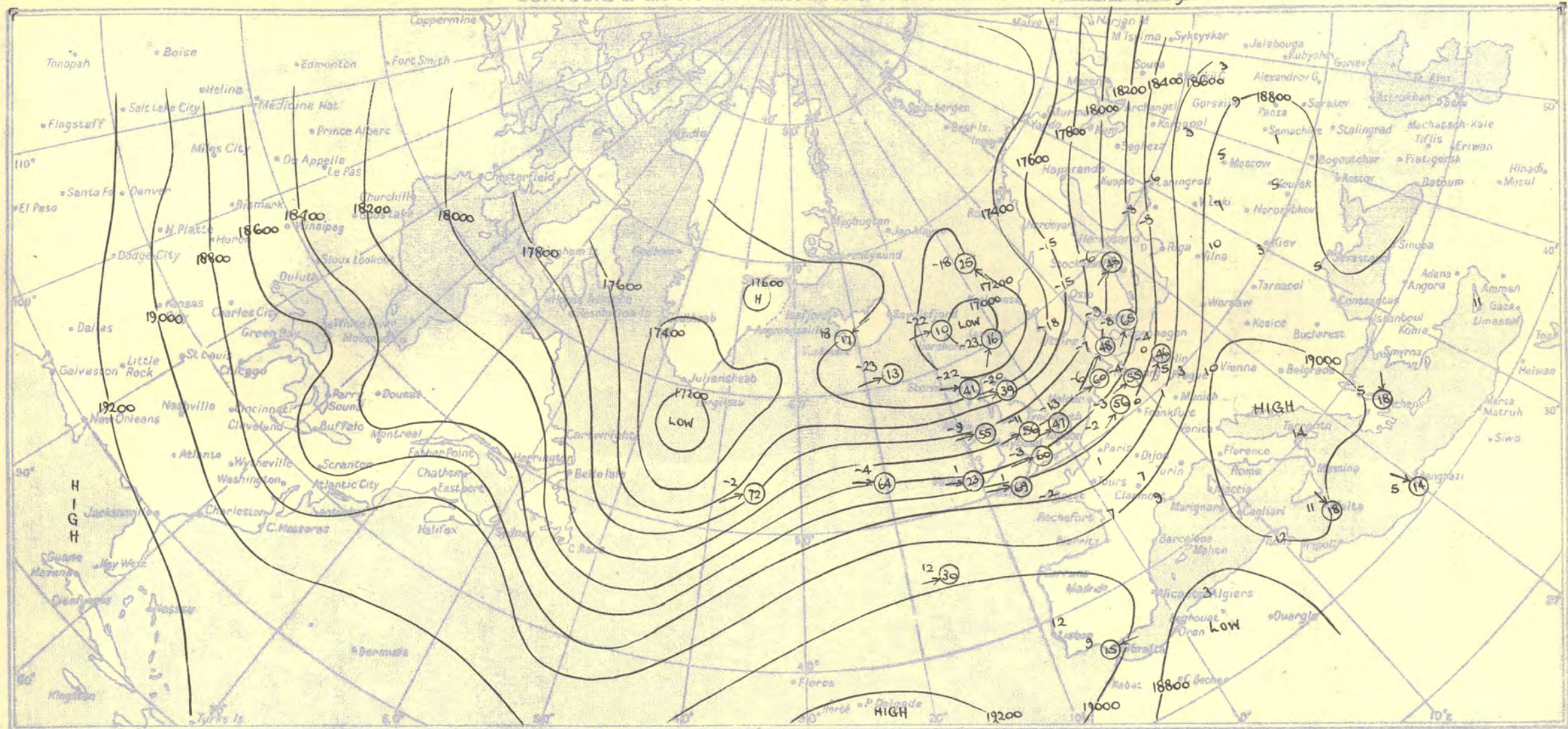


NOTES ON THE AEROLOGICAL SITUATION.

The tight thermal gradient over the Central Atlantic was maintained. Pronounced advective cooling occurred in the neighbourhood of Newfoundland with the consequent formation of a sharp cold trough from Greenland to Newfoundland setting up a wave length of some 60 degrees between this trough and the one over the British Isles.

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



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

		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																															
Time M.S.L. Surf Pressure	15h 982.7 972.9 875	G.M.T. mb mb mb	15h 990.8 989.0 870	G.M.T. mb mb mb	15h 995.6 994.8 850	G.M.T. mb mb mb	15h 1002.2 993.5 868	G.M.T. mb mb mb	15h 1005.4 1003.4 849	G.M.T. mb mb mb	15h 1008.7 1004.3 831	G.M.T. mb mb mb	15h 1010.5 994.8 787	G.M.T. mb mb mb	15h 1012.7 1002.2 790	G.M.T. mb mb mb	15h 1007.4 1006 800	G.M.T. mb mb mb	Time M.S.L. Surf Pressure																																																																																																																																																																																																																																																																																																		
																				Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	

19 OCT 1950

VALENTIA

03h. 1020.8 mb

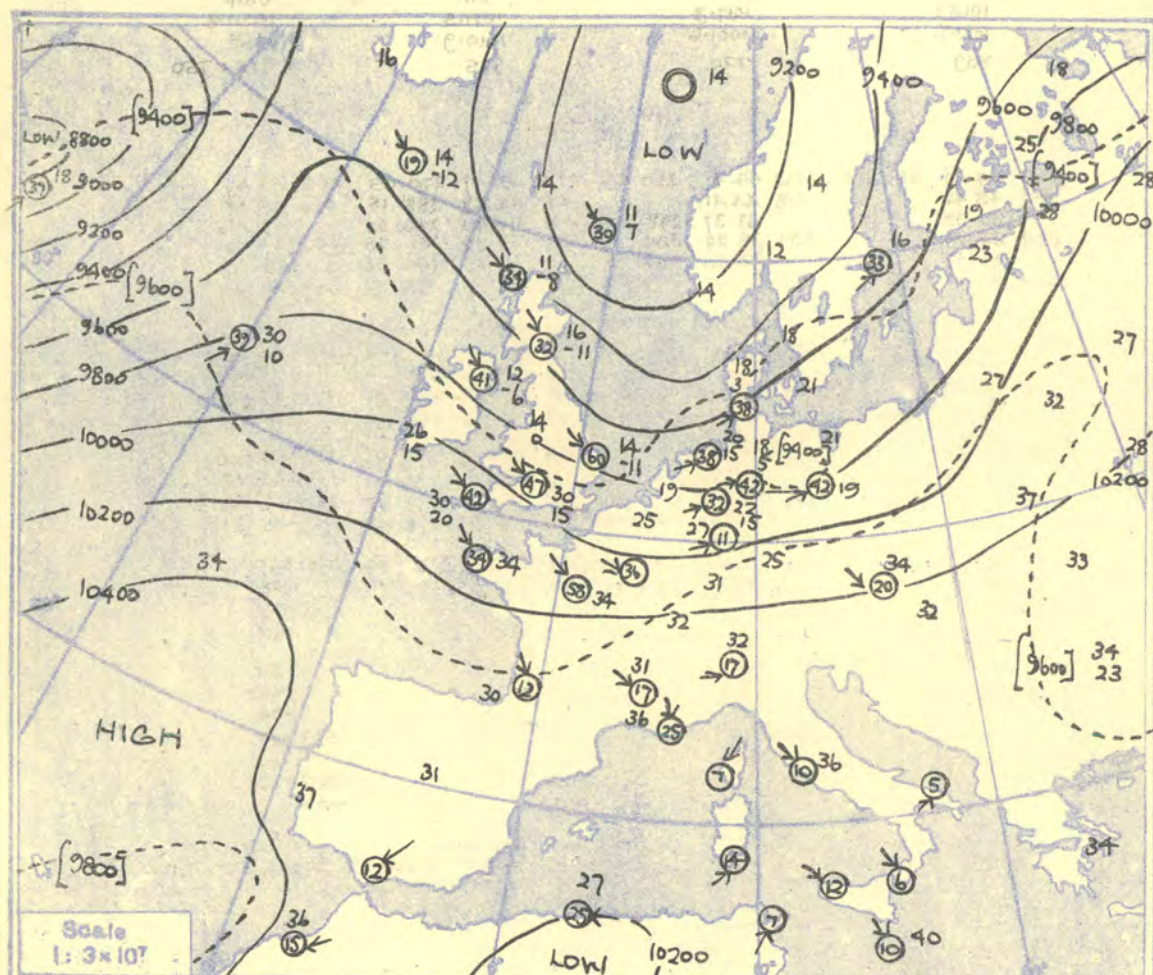
1015.1 mb

795 + 750

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				19 OCT 1950 VALENTIA		STATION	
Pressure mb	Time M.S.L. Surf Freezing	03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.	
		992.0		mb		1006.5		mb		1007.5		mb		1015.8		mb		1014.4		mb		1015.1		mb		1017.9		mb		1021.5		mb		1020.8		mb	
		982.1		mb		1004.6		mb		1006.6		mb		1007.0		mb		1012.4		mb		1010.6		mb		1001.6		mb		1010.9		mb		1015.1		mb	
874		mb		885		mb		888		mb		880		mb		859		mb		889		mb		720		mb		925		mb		795-750		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	43	41	290 23	00.5	45	39	270 20	00.2	41	37	250 12	02.3	38	36	280 08	00.6	45	40		01.2	44	42	260 12	04.4	44	41	250 08	02.9	51	47	270 05	00.3	50	47	Surf	
1000	2.2	41	39	278 31	1.7	45	40		1.9	41	37		4.2	38	36	280 08	00.6	45	40		4.0	45	42		4.8	44	41		5.9	52	48	285 15	5.6	50	47	1000	
950		35	32	285 30	30.0	34	28	289 38	30.0	34	30	298 39	32.3	34	33	285 26	32.2	33	28		33.1	38	37	298 16	33.1	38	37	298 16	34.4	39	32	301 25	34.2	42	42	950	
900	26.0	29	26	286 33	27	21	288 40		28	18	302 42		28	27	288 28		31	23			27	23			33	20	296 36		35	20	303 30		37	37	900		
850	56.8	23	21	286 34	60.7	23	11	290 40	60.7	25	17	307 40	63.0	22	20	291 29	63.1	26	14		62.9	23	13		64.2	32	18	292 43	65.7	38	27	303 35	65.6	33	29	850	
800		17	13	288 31		18	01	284 36		21	03	305 35		17	05	295 34		21	03			17	05	For		32	17	288 46		34	24	296 41		32	22	800	
750	90.8	11	07	291 30	94.7	11	08	280 34	94.9	16	11	305 32	96.9	12	01	295 41	97.3	14	00		96.9	14	11	Winds	99.2	30	15	286 47	101	30	20	291 42	101	26	15	750	
700		04	00	290 34		03	15	279 35		06	20	304 25		11	12	299 59		13	14			14	11			22	12	283 51		23	09	290 50		21	08	700	
650	129	05	10	289 37	133	06	23	289 23	133	04	26	298 24	136	10	15	298 71	136	12	23		136	09	21	See	139	14	06	290 51	141	17	01	290 61	141	17	06	650	
600		13	21	294 37		16	32	299 24		15	32	303 23		05	19	297 76		06	25			01	25	See		07	00	290 54		13	04	288 74		12	02	600	
550																																				550	
500	172	23	37	295 36	176	27	42	302 25	176	26	41	306 24	181	05	25	293 83	181	03	30		181	07	31	page	184	02	06	291 64	187	08	04	292 81	186	05	06	500	
450		34	46			37	52	296 24		36	46	308 34		15	35	291 84		15	37			17	40			07	16	290 74		03	15	292 90		05	17	450	
400	223	47		294 33	226	48		294 39	227	45		297 53	234	26	48	290 88	234	28	50		233	31	53	3.	238	13	32	291 84	241	15	29	289 87	240	16	28	400	
350		57		297 39		51		300 75		45		305 85		38		298 102		33	55			46				24	37	291 106		26	34	285 88		28	37	350	
300	285	52		300 36	288	56		294 73	290	52		301 86	299	44		297 139	299	40	60		297	45			305	35	45	294 105	320	33	39	287 84	306	41		300	
250		48		291 32		56		294 69		54		299 88		55		297 154		55				59				49		295 117						58		250	
200	374	50		285 39	376	56		292 61	378	53		300 72	386	61		294 112	387	58			67				393	67									200		
170		53		286 40		59		290 61		58		291 69		59		296 94		63				71				79									170		
150		53		288 40		62		290 53		61		294 73		62				67				72													150		
130		54		282 33		63				61				66				71				74													130		
110		55		276 28						64				67				70																	110		
100	524	57		264 27					525	65			533	66			532	69								535	74								100		
90		58		264 27						66				68				68																	90		
80		59		270 26						66				68				65																	80		
70		60		266 22						64				66				62																	70		
60		61		280 24						64				66				62																	60		
(050 mb)						Isothermal 1005-985mb. 45°						Inversion 1007mb. 38°-996mb. 41°		Inversion 1011mb. 44°-991mb. 45°		(053) 72 mb Inversion 1002mb. 44°-975mb. 45°		Isothermal 775-728mb. 17°		Isothermal 664-630mb. 14°		(053) 76 mb Inversion 1002mb. 44°-975mb. 45°		Isothermal 850-806mb. 33°		Inversion 860mb. 34°-812mb. 39°		Inversion 775mb. 30°-760mb. 33°									
												692mb. 10°-617mb. 12°		687mb. 18°-664mb. 14°		687mb. 18°-664mb. 14°		Isothermal 685-657mb. 12°		664-630mb. 14°		687mb. 18°-664mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°							
												Max wind 1-298° 168kts. 270mb. 32,200ft.		Isothermal 685-657mb. 12°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°		664-630mb. 14°							

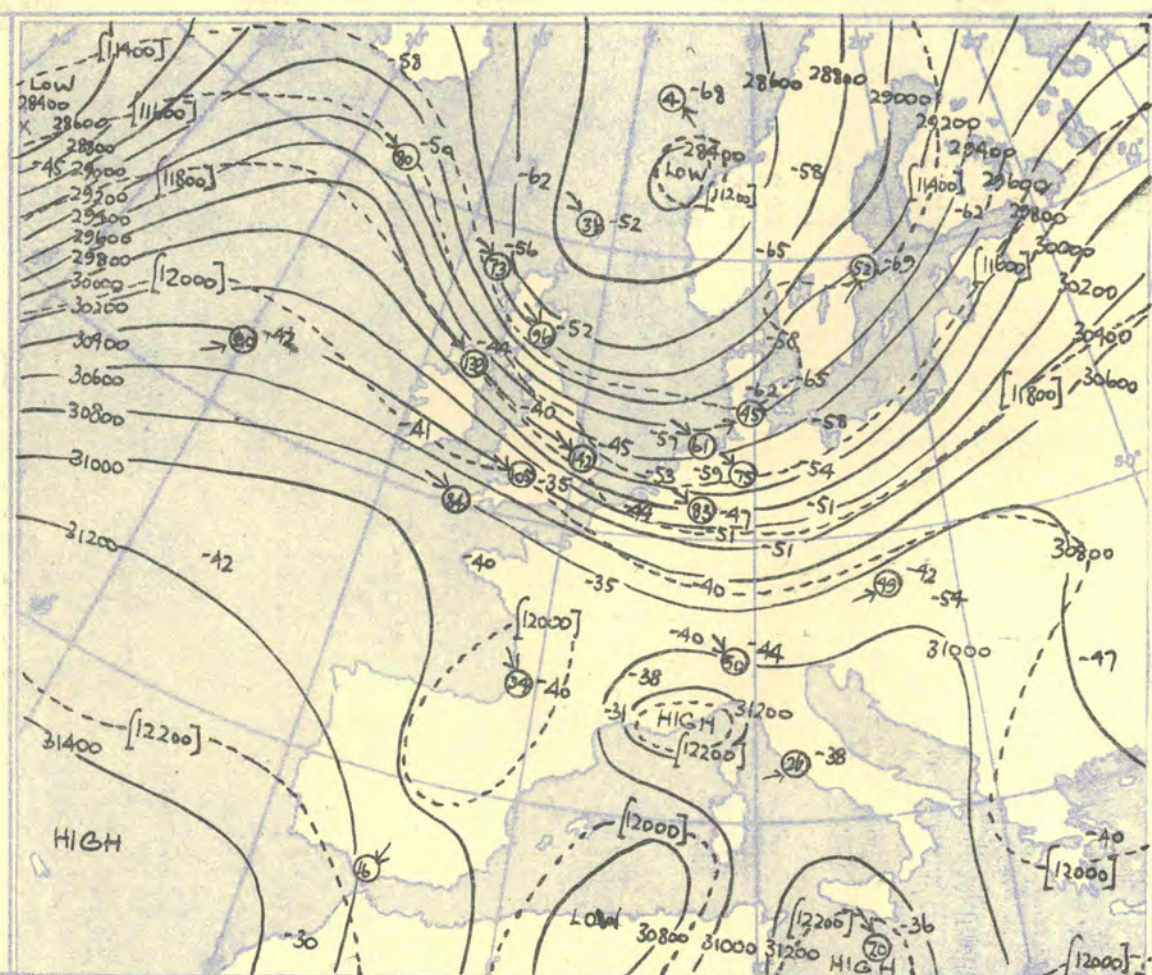
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 02h. GMT.



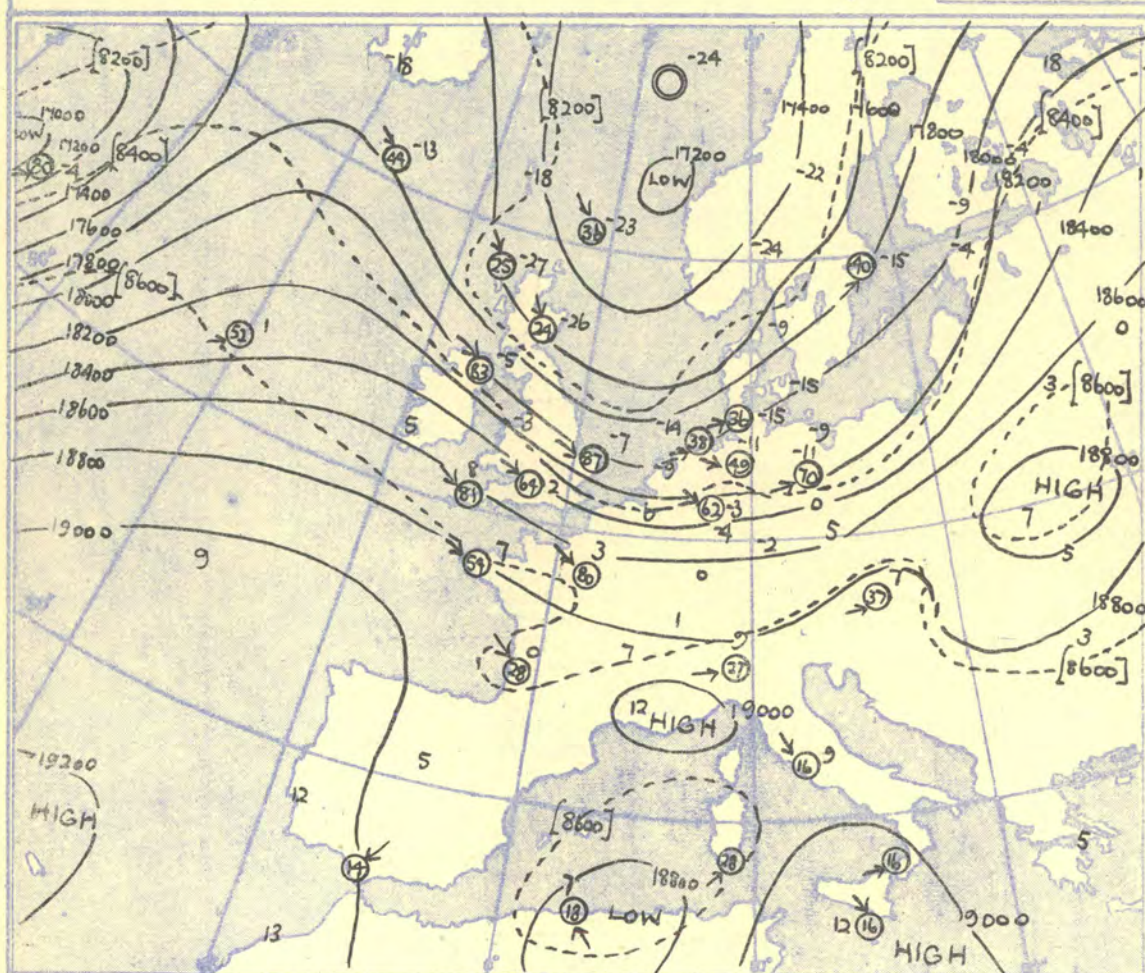
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

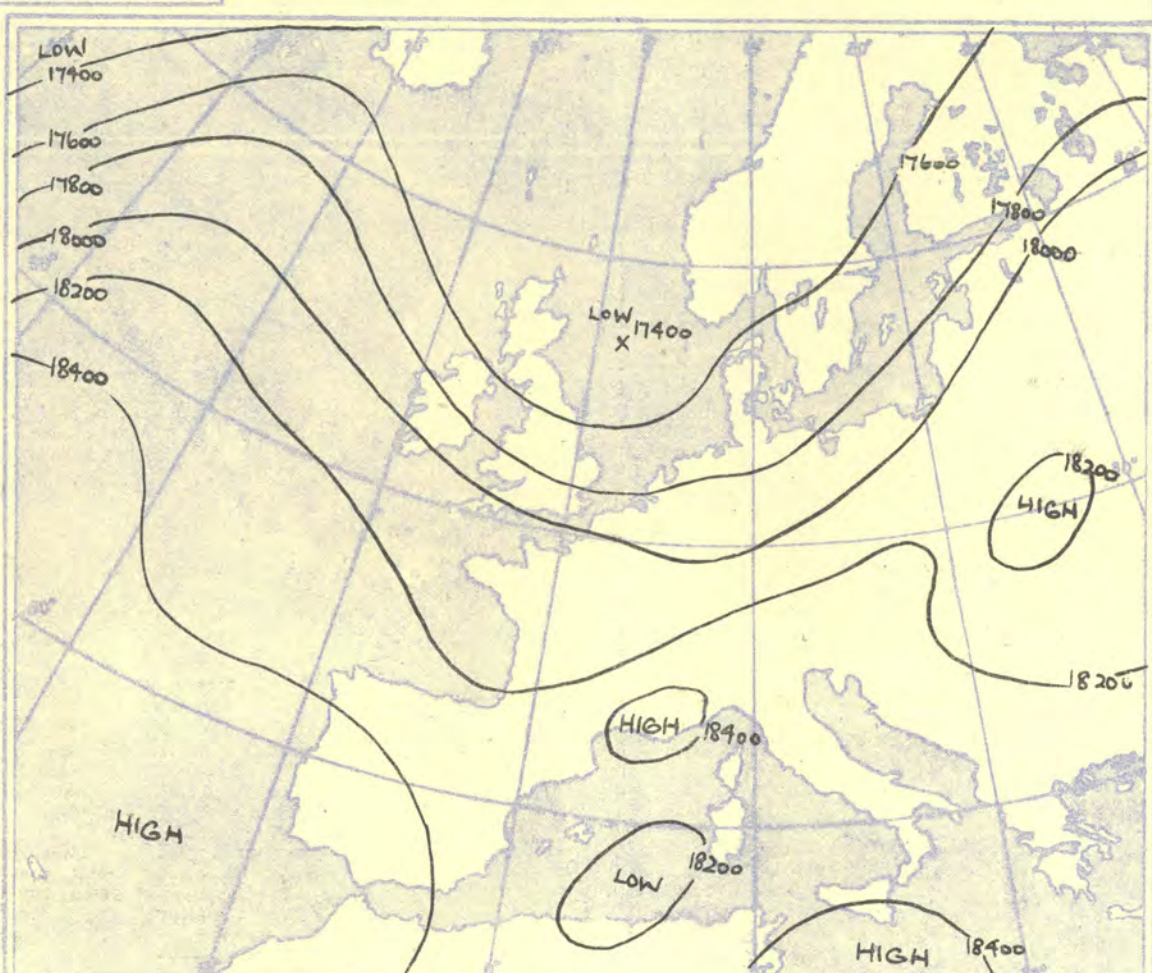
100 80 60 40 20 10 0 knots



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



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



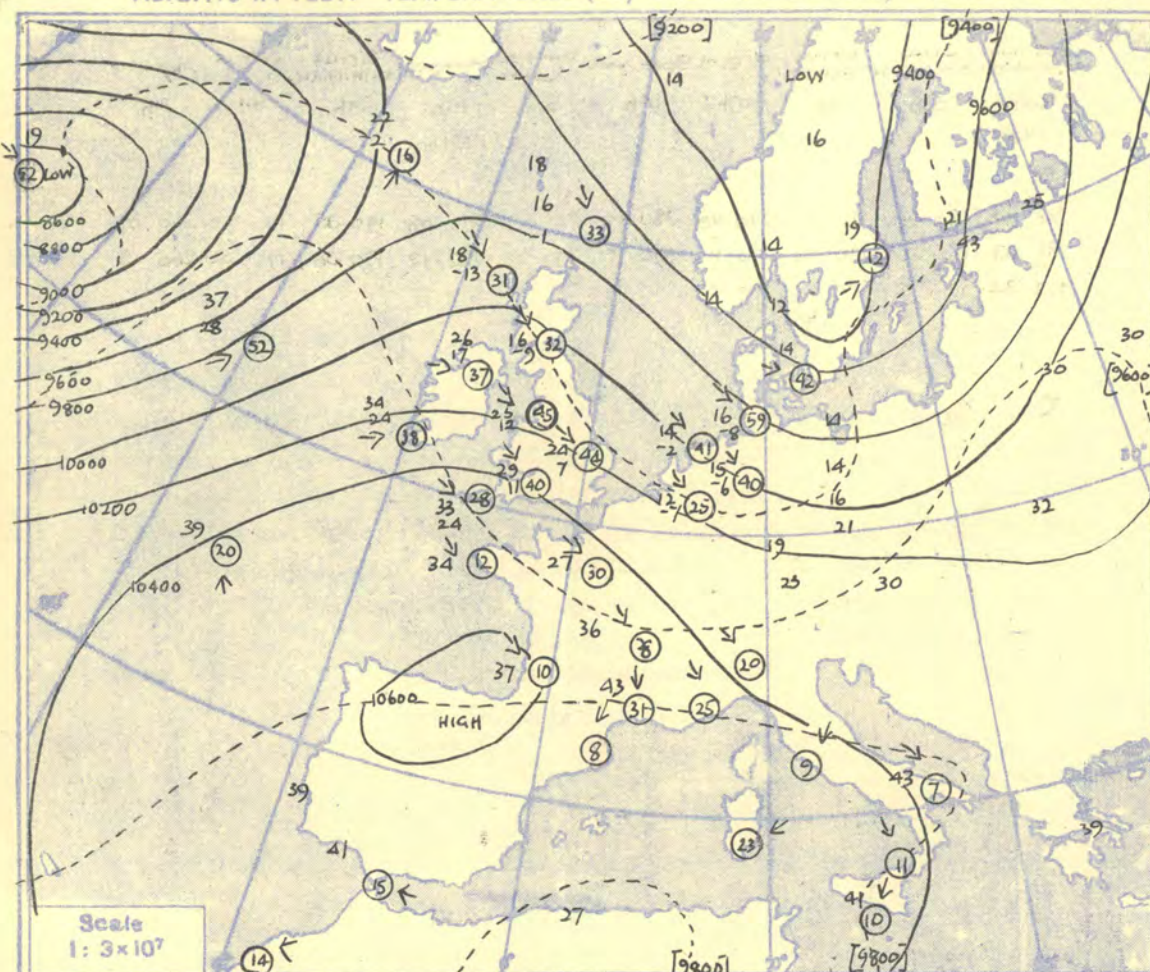
Isopleths of Thickness 500-1000mb.

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

	NEPHOSCOPE OBSERVATIONS								
Place	Shawbury	Plymouth							Place
Time Type	09h. Ci	15h. Ci							Time Type
Dir. Vel.	310 95	260 35							Dir. Vel.

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

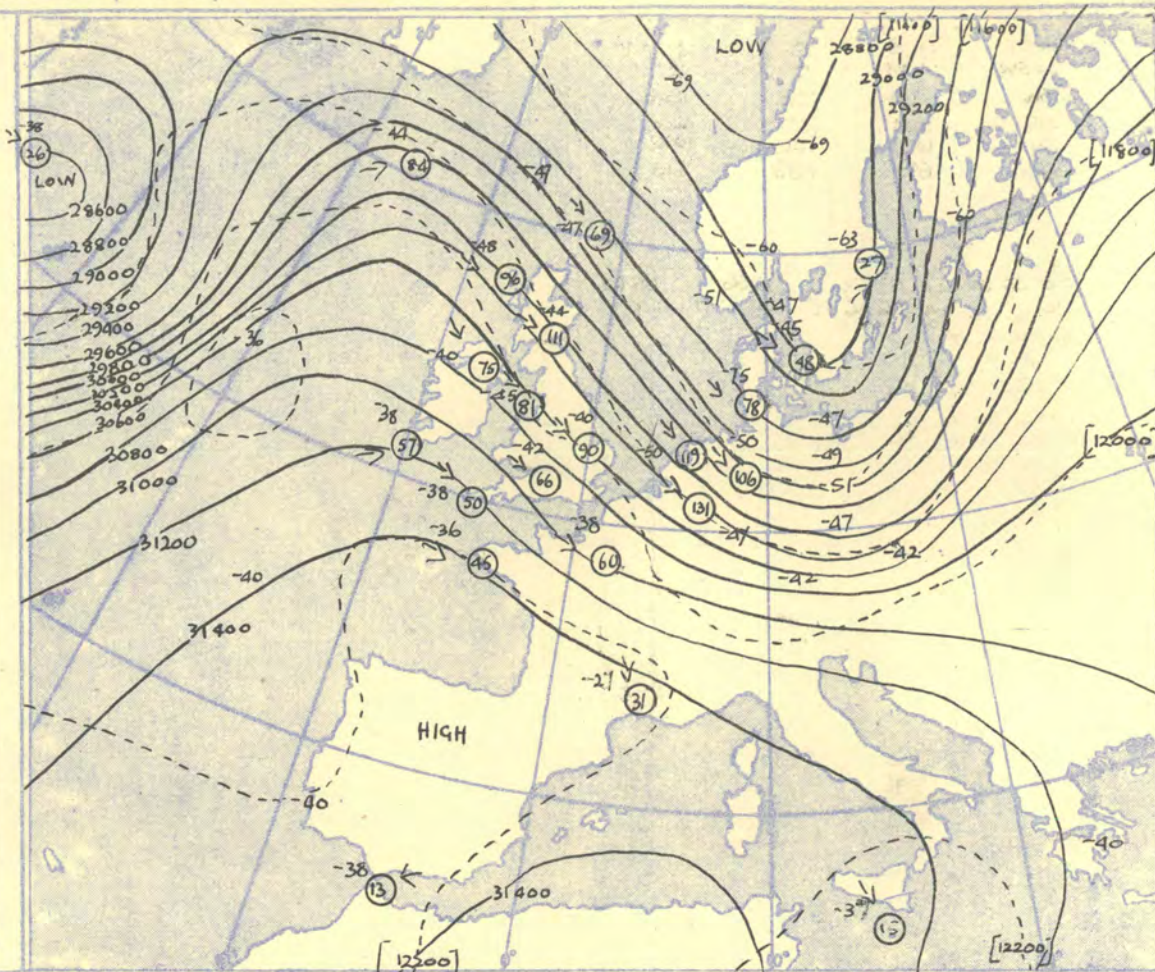
Ship	Weather Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Cirrus				Cirrus				Cirrus				Cirrus								Ship
Lat/Long	60°3N 15°8W				60°3N 15°7W				60°3N 15°8W				60°3N 15°9N				52°6N 20°0W				52°5N 20°0W				52°1N 19°4W				52°0N 19°4W								Lat/Long
Pressure	Time	03h G.M.T.			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.			Time				
	M.S.L.	1007 mb			M.S.L.	1012 mb			M.S.L.	1014 mb			M.S.L.	1008 mb			M.S.L.	1010 mb			M.S.L.	1004 mb			M.S.L.	1004 mb			M.S.L.	1000 mb			M.S.L.				
	Surf	1007 mb			Surf	1012 mb			Surf	1014 mb			Surf	1008 mb			Surf	1010 mb			Surf	1004 mb			Surf	1004 mb			Surf	1000 mb			Surf				
	Pressure	890			Pressure	890			Pressure	800			Pressure	790			Pressure	740			Pressure	650			Pressure	635			Pressure	660			Pressure				
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	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		46	36	Calm		48	35	Calm		48	39	120	16		48	41	080	32		54	52											Surf					
1000	2-0	46	36		3-1	47	36	210	06	3-7	46	37	139	15	2-2	47	40	080	32		54	52										1000					
950		40		258	08	40	30	210	05		40	31	140	22		41	32	113	42													950					
900	30-2	33	29	258	09	31-3	33	25	210	06	31-8	34	24	140	19	20-5	41	33	127	44												900					
850		27	15	256	09	30	21	208	06		34	03	140	16		35	26	133	42		37	25	For Winds		52	46	For winds		54	46	For Winds		48	48	For Winds	850	
800	61-0	25	14	264	10	62-1	26	10	209	05	62-8	32	09	152	16	61-8	33	23	133	36													800				
750		19	03	273	13		22	00	228	06		28	26	168	15		29	20	138	34													750				
700	95-2	14	12	282	19	96-4	20	05	266	08	97-5	22	02	188	16	96-7	26	16	163	34		98-1	30	10	See Top of Page		98-6	39	39	See top of page.	98-8	37	28	See Tap of Page	700		
650		09	17	294	27		12	12	286	10		18	08	212	17		24	14	188	33														650			
600	134	01	23	296	30	135	05	22	278	12	137	11	00	236	21	137	20	10	212	38														600			
550		07	31	293	39		01	31	274	22		07	05	248	30		15	02	225	47														550			
500	178	13	46	286	44	180	09	34	266	36	182	02	08	253	31	183	07	07	227	52		184	01	08										500			
450		21	49	284	57		16	34	263	49		08	20	247	37		03	16	232	46														450			
400	230	29	54	287	81	233	23	39	275	61	236	19	22	240	44	237	13	26	232	53														400			
350		39	64	287	84		34	49	273	79		31	44	247	58		27	41	231	62														350			
300	294	50		286	80	298	48		275	09	302	40		244	84	303	44		236	65		304	42											300			
250		57		286	75		61		273	115		60		251	112		63		232	78														250			
200	381	57		276	63	384	70		270	98	388	70		288	111	389	80		256	100		390	76											200			
170		57		286	61		62		270	76		72		286	76		78		273	110														170			
150		58		286	59		63		270	66		71		268	60		71		246	48														150			
130		58		273	52		59		270	52		64		253	48		73		234	39														130			
110		58		260	43		60		271	45		63		249	41		75		235	39														110			
100	530	59		263	40	531	60		270	42	534	63		249	48	531	77																	100			
90		60		260	36		61		271	40		64		249	45																			90			
80		62		269	30		61		254	42		63		249	41																			80			
70		62		280	32		59		264	36	073	64																						70			
60		61		264	27		59		268	34	mb)																							60			
		61		282	36	053	61																														
	1043-62 mb Inversion 816 mb 23°-807 mb 26°				Inversion 869 mb 28°-843 mb 31°				Isothermal 900-822 mb 34° 672-654 .. 19° 600-585 .. 11° 541-528 .. 06°				Inversion 934 mb 40°-900 mb 41° Isothermal 900-888 mb 41° 670-644 .. 24°				Inversion 860 mb 36°-850 mb 37° Isothermal 740-717 mb 32° 707-700 .. 30° 443-433 .. -08°				Inversion 887 mb 48°-864 mb 54° 751 .. 41° 725 .. 43° Isothermal 615-584 mb 37°				Inversion 940 mb 55°-900 mb 59°												
Tropopause	II 280 mb -55° 30,900'				I 194 mb -72° 39,100'				I 213 mb -74° 37,500'				I 197 mb -81° 39,200'				I 173 mb -87° 42,000'				II 206 mb -74° 38,800'				II 213 mb -65° 58,200'				I 075 mb -80° 60,300'								Tropopause



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

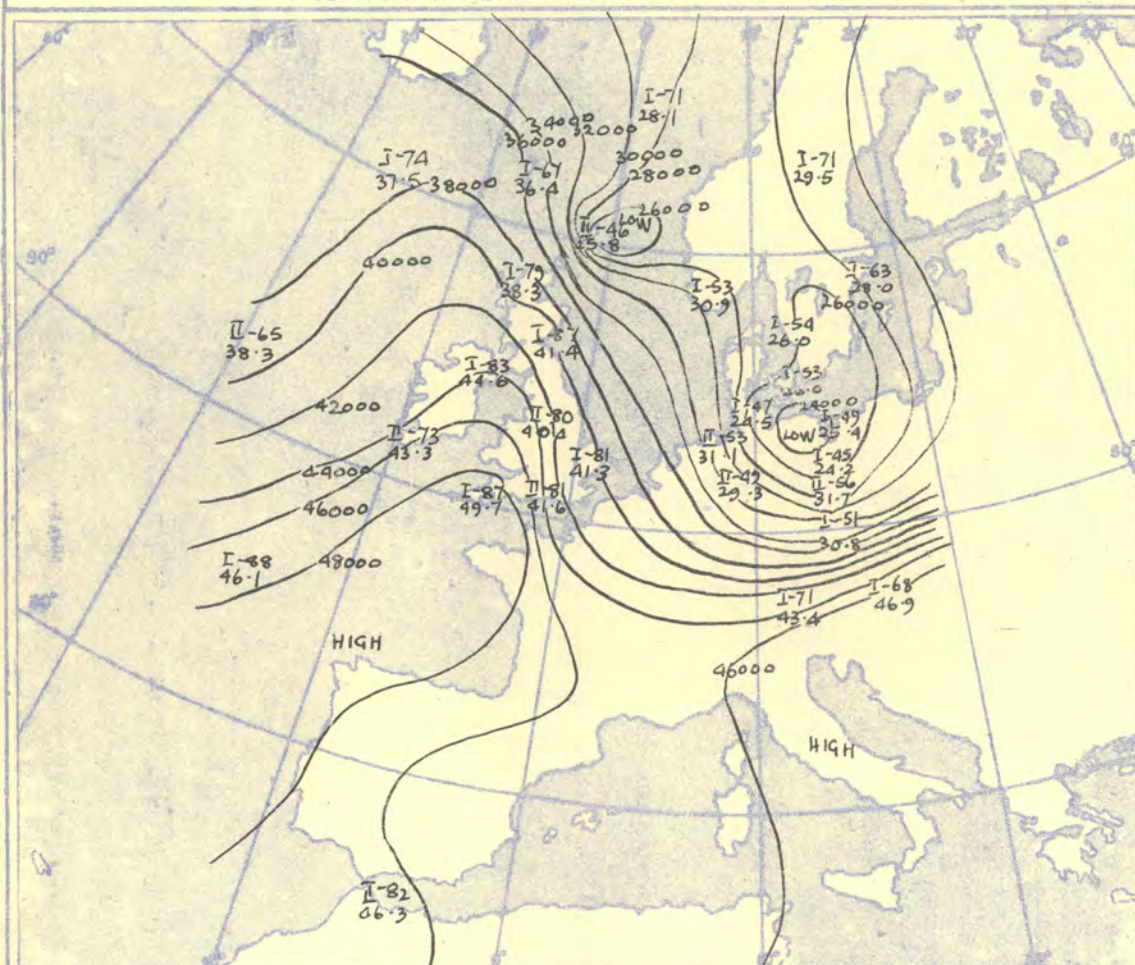
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 15 10 knots



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

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



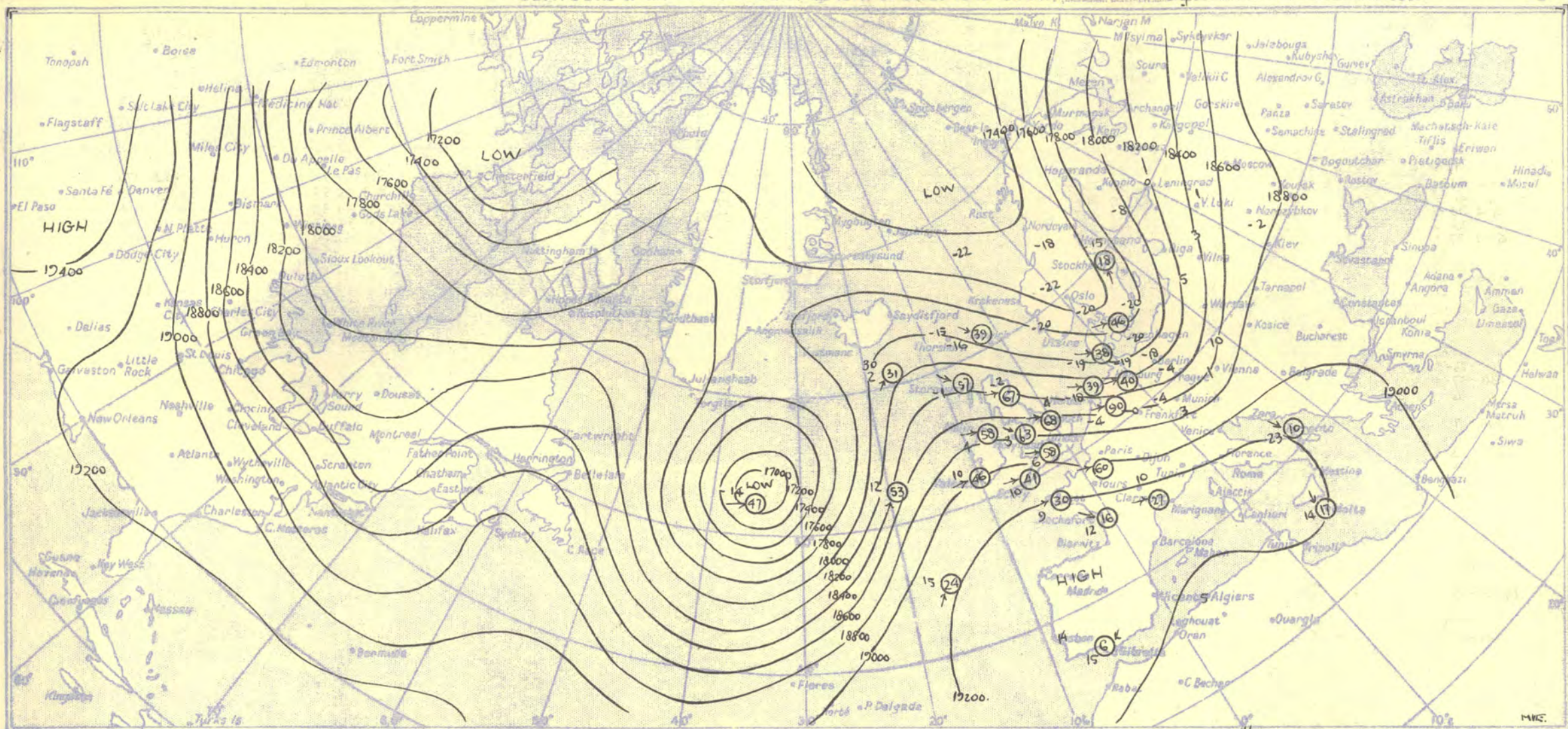
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over the Western Atlantic moved eastwards during the day with the formation of a cold pool to the rear of the surface depression. The warm ridge to the west of the British Isles moved northeastwards by advection with considerable warming over the British Isles, the cold trough at the same time moving across the North Sea into Europe.

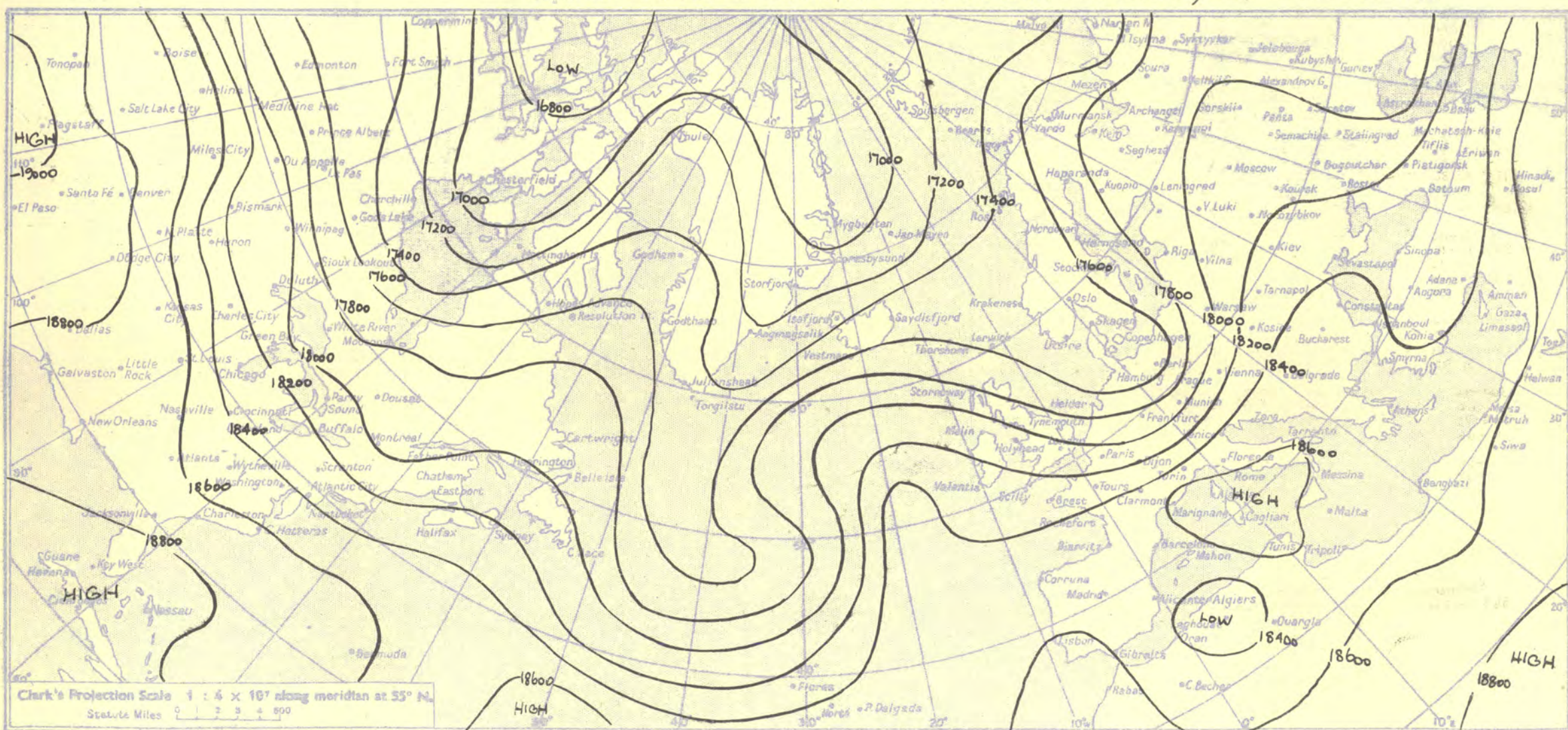
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Meteorological Office, Air Ministry, Kingsway, London, W.C.1
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Wednesday 11th October. 1950.



Clark's Projection Scale 1 : 4 x 10⁷ along meridian at 55° N.
Statute Miles 0 1 2 3 4 5 6 7 8 9 10

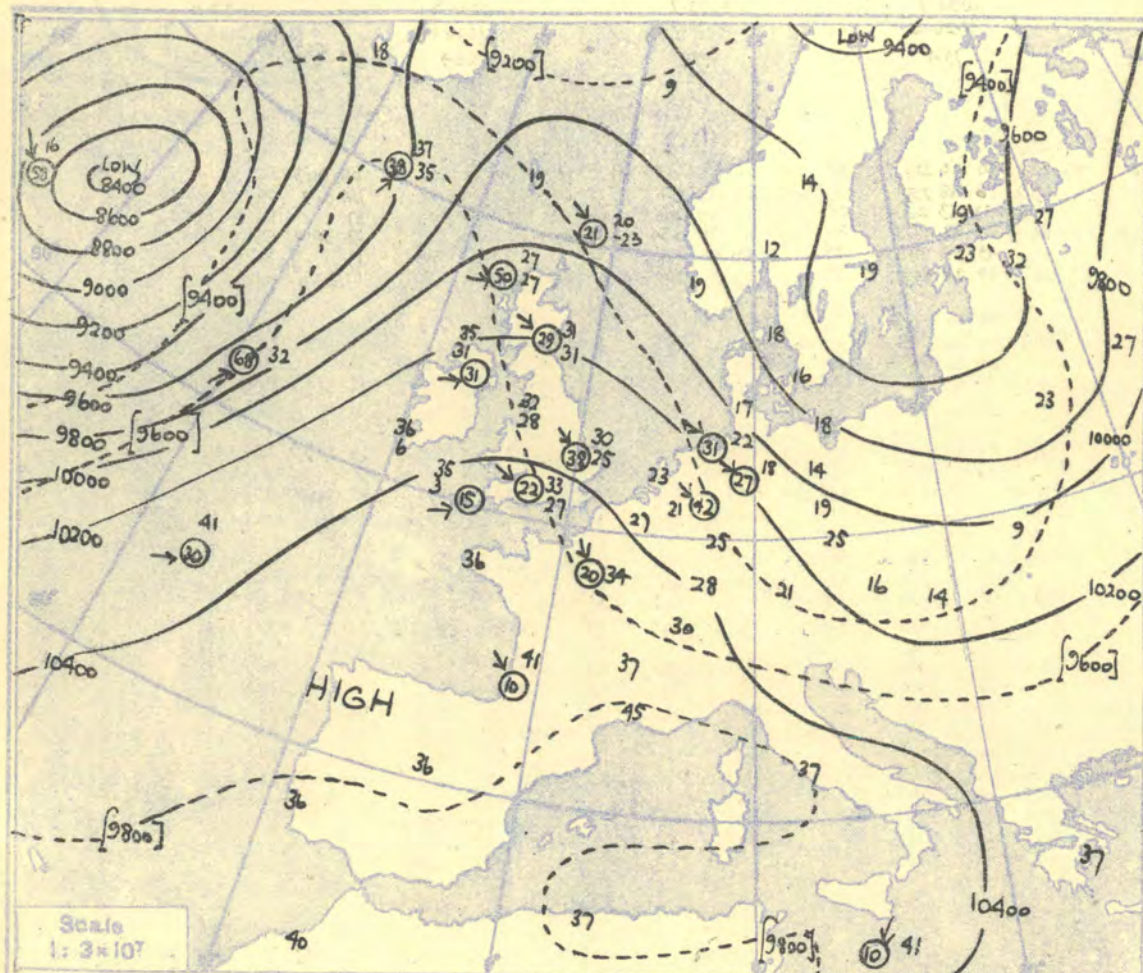
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

LERWICK										STORNOWAY										LEUCHARS										ALDERGROVE										LIVERPOOL										DOWNHAM MARKET										LARKHILL										CAMBORNE										VALENTIA										STATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Time		M.S.L.		Surf		Pressure		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew		Wind		Dir.		Vel.		Height		Temp.		Dew	

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION													
Pressure	Time M.S.L. Surf	03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.													
		1022.3 mb				1018.6 mb				1024.5 mb				1023.7 mb				1028.1 mb				1030.7 mb				1032.2 mb				1030.0 mb				1023.0 mb													
		1012.0 mb				1014.7 mb				1023.7 mb				1015.0 mb				1026.1 mb				1026.0 mb				1015.7 mb				1020.1 mb				1021.1 mb													
Freezing		823				730				722				680				700				724				695				659				OFFICE													
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Pressure mb																	
Surf	02.7	42	39	CALM	00.5	49	49	50	16	00.2	48	47	CALM	01.3	53	51	240	18	00.6	54	48	200	05	01.2	50	46	220	03	4.4	46	46	CALM	02.9	51	50	160	05	00.3	56	51	Surf						
1000	05.9	42	37	288	10	05.0	48	48	153	24	06.6	48	47	229	21	06.4	52	49	234	31	07.7	53	48		08.2	53	48	259	39	8.5	48	48	237	15	08.3	52	48	190	24	6.2	58	51	1000				
950		37	33	288			44	44	173	29		46	46	232	22		48	45	221	31		48	45			43	43	262	24		50	49	244	16		51	36	196	27		50	47	950				
900	33.9	31	24	284	10	33.5	42	42	200	41	35.0	41	41	240	21	35.1	50	47	227	29	36.3	42	36		36.9	43	37	268	20	37.2	47	39	254	17	37.2	53	22	201	22	35.0	43	40	900				
850		30	09	267	12		41	41	216	42		37	37	244	23		50	47	231	27		45	31			43	35	288	25		50	30	275	20		53	20	219	13		51	31	850				
800	65.0	30	-08	267	15	65.2	40	40	246	44	66.3	34	34	254	25	67.3	45	42	235	30	68.0	44	36		68.4	37	23	297	27	69.1	43	30	288	19	69.4	46	18	286	10	67.0	48	27	800				
750		25	-16	283			35	35	246	46		33	33	264	27		40	37	242	31		38	35			34	30	308	33		38	24	284	20		41	12	237	14		41	19	750				
700	99.6	20	-23	291	17	10.0	27	27	246	50	10.1	31	31	275	29	10.3	35	31	246	31	10.4	32	28			30	25	308	38	10.5	33	27	288	22	10.5	35	03	237	15	103	36	6	700				
650		15	-32	289	26		25	11	255	43		25	25	281	41		27	22	250	32		27	22			24	20	307	43		27	17	297	21		31	00	251	19		33	-6	650				
600	13.9	10	-20	291	37	14.0	19	09	260	43	14.1	18	18	282	50	14.3	25	07	260	33	14.4	21	13			19	13	315	42	14.5	22	14	299	20	14.5	24	-11	254	20	143	27	-8	600				
550		07	-01	294	48		14	12	261	43		11	10	286	52		16	00	266	35		15	-02			11	03	315	45		15	11	300	38		16	-25	264	21		20	-25	550				
500	18.4	-01	-07	298	57	18.6	03	01	263	45	18.7	04	-3	287	52	19.0	09	01	268	37	19.0	09	-22			18.9	07	-08	314	49	19.1	08	00	293	32	19.2	09	-22	269	25	19.0	10	-24	500			
450		-08	-14	297	68		-4	06	267	44		-5	-18	288	46		-02	-09	277	40		-3	-24				-03	-15	314	49		-02	-18	290	32		-2	-38	272	26		-2	-27	450			
400	23.7	-19	-23	298	73	24.0	-15	-16	273	48	24.1	-15	-28	293	43	24.4	-12	-19	279	40	24.4	-15	-26			24.4	-16	-29	310	44	24.5	-14	-25	296	38	24.6	-14	-47	277	28	244	-15	-33	400			
350		-32	-37	298	81		-27	-30	274	51		-28	-41	296	42		-25	-33	277	36		-27	-38				-28	-36	309	37		-28	-36	294	40		-27	-57	275	38		-28	-41	350			
300	30.3	29		298	93	30.7	-42		284	54	30.7	-43		307	57	31.1	-39	-49	270	22	31.0	-39	-53			31.0	-42		310	44	31.1	-43		289	34	31.2	-42		273	36	31.0	-44		300			
250		67		302	96		-59		286	64		-57		275	25		-57		275	25		-58					-59		317	42		-58		301	32		-60		278	41		-57		250			
200	38.8	-76		313	87	39.3	-76		286	74		-75		278	40	39.7	-75		278	40	39.7	-72				39.6	-75		308	56	39.8	-73		294	35	39.9	-71		266	35	39.7	-74		200			
170		-81		303	74		-55		286	72		-510		-975 mb 48°			-81		264	45		-80					-83		308	66		-81		294	39		-79		265	35		-77		170			
150		-76		299	67	45.1	-78		288	53		-83		273	42		-83		274	36		-85				45.4	-83		309	66	45.6	-81		290	44		-79		269	35		-80		150			
130		-75		299	61		-81		282	41		-83		274	36		-83		274	36		-85					-82		310	45		-85		291	42		-83		276	25		-84		130			
110		-73		299	48		-80		284	39		-75		273	25		-75		273	25		-85					-79		309	36		-88		304	36		-82		275	20	53.7	-85		110			
90	53.0	-73		299	36	53.3	-78		280	39		45.6		263	18	53.7			263	18	53.7						53.6			307	33	53.7		-80		297	31	53.9		-81		269	18		-83		90
80		-74		294	40		-77							275	28				275	28													-80		286	30		-79		268	18		-79		80		
70		-73		295	30																													-80		302	22		-78					70			
60																																													60		
Inversion		571 mb 05° - 556 mb 08°				670 - 23° - 660 - 25°				Isothermal 954 - 932 mb 44° 660 - 650 - 25°				Inversion 917 mb 46° - 888 mb 54° 542 - 14° - 526 - 15°				Isothermal 640 - 600 mb 25°				(30mb) 67. Inversion 893 mb 41° - 843 mb 46°				Inversion 1026 mb 50° - 995 mb 54° 879 - 41° - 850 mb 43° 764 - 33° - 750 - 34° 608 - 18° - 590 - 19° 545 - 10° - 530 - 12°				Inversion 1016 mb 46° - 986 mb 51° 915 - 46° - 850 - 50°				Inversion 900 mb 43° - 867 mb 52°													
Tropopause		I 214 mb -78° 37,400'				I 166 mb -86° 43,000'				NR.				II 165 mb -83° 43,600'				I 153 mb -86° 45,200'				I 158 mb -87° 44,300'				II 170 mb -81° 43,000'				I 135 mb -84° 47,800'				I 189 mb -78° 40,900'				Tropopause									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION													
Pressure	Time M.S.L. Surf	09h G.M.T.				09h G.M.T.				G.M.T.				09h G.M.T.				09h G.M.T.				09h G.M.T.				09h G.M.T.				09h G.M.T.				G.M.T.													
		1021.6 mb				1016.0 mb								1023.8 mb				1017.9 mb				1030.7 mb				1031.7 mb				1030.0 mb				1018.7 mb													
		1011.4 mb				1014.1 mb								1015.1 mb				1015.9 mb				1026.1 mb				1015.3 mb				1018.7 mb				1018.7 mb													
Freezing		785				700								660				679				685				683				624																	
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Pressure mb					
Surf	02.7	45	42	200	13	00.5	54	53						02.3	52	48	230	18	00.6	52	48	160	07	01.2	49	49	210	05	4.4	48	48	170	03	02.9	54	52	180	10					Surf				
1000	05.7	45	41			04.3	49	43	52					06.4	52	48	224	30	07.5	53	48	170	15	08.3	47	47	251	21	8.5	51	51			08.0	53	52	195	27					1000				
950		39	39	172	16		43	43							48	40	218	34		49	44	225	18			51	42	261	22		49	48	212	14		50	46	190	38					950			
900	33.9	33	33	161	16	33.0	44	44						35.1	50	27	218	35	36.2	49	39	257	21	37.0	48	36	263	24	37.3	51	41	238	14	36.8	54	33	183	31					900				
850		33	33	193	18		45	45							51	28	218	37		50	36	266	24			48	24	272	20		49	32	241	13		53	26	183	27					850			
800	64.9	32	32	217	20	64.7	41	41						67.2	45	22	218	39	68.3	46	32	267	23	69.0	43	22	276	22	69.4	45	28	246	10	69.1	48	24	187	23					800				
750		30	30	251	20		35	32							39	14	220	36		40	24	260	24			41	25																				

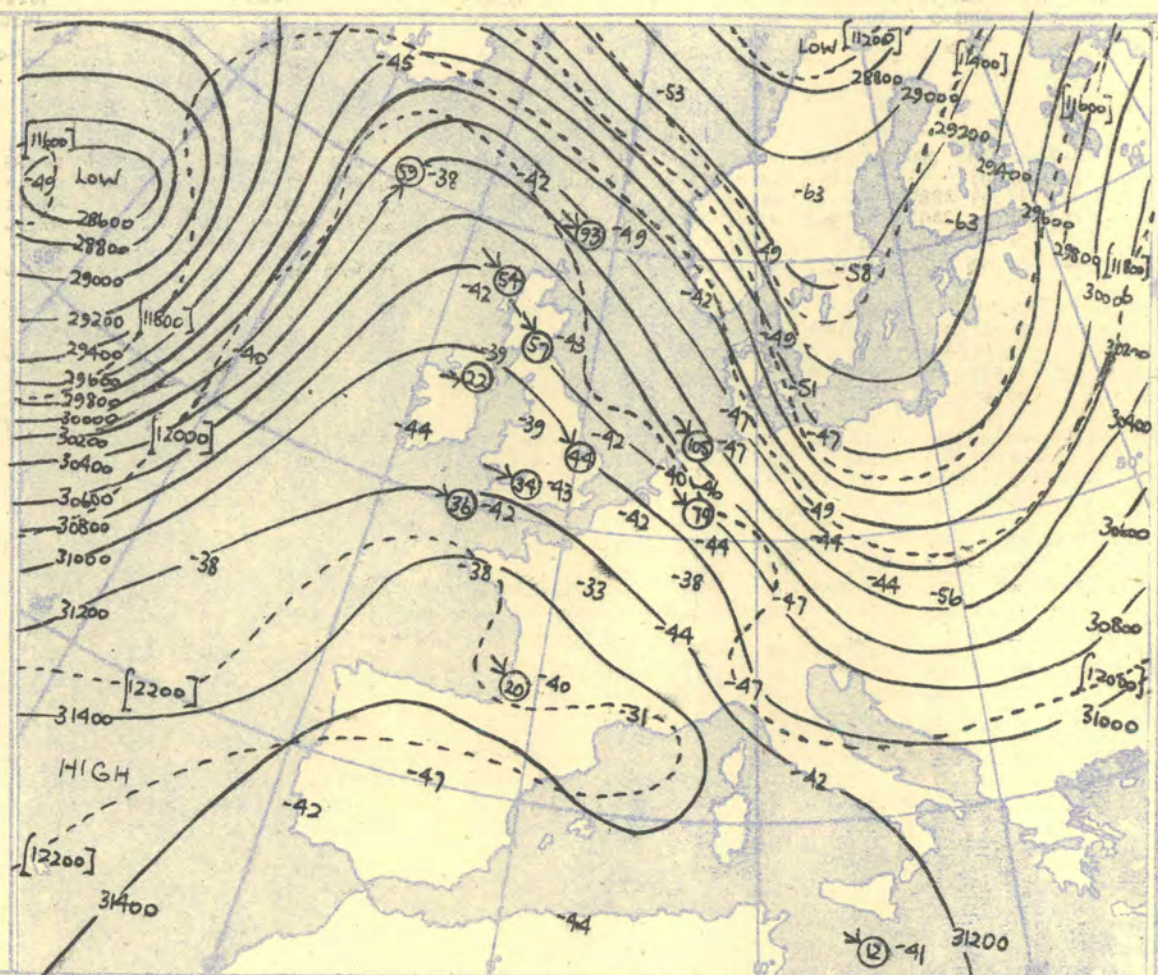
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb and 300 mb., levels at about 02 h. GMT.



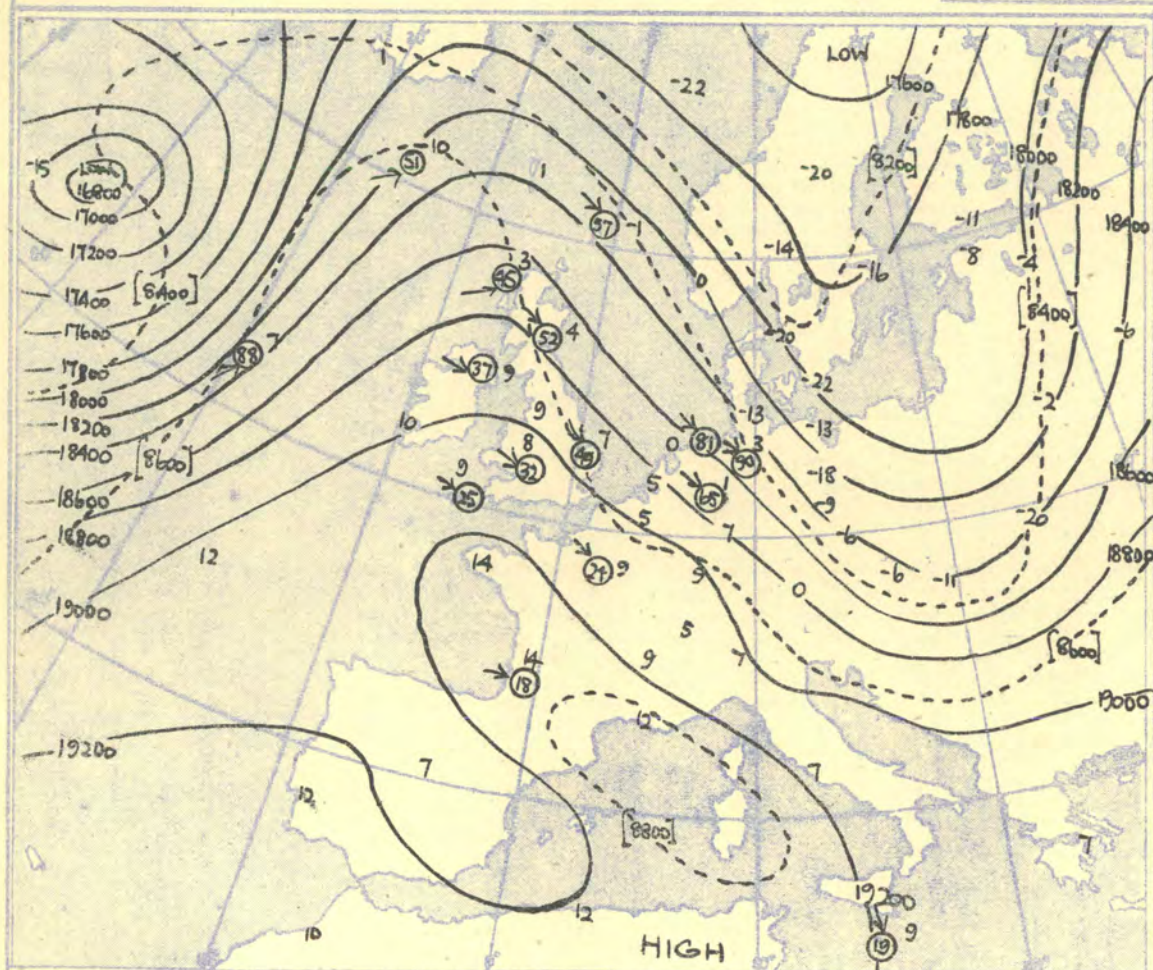
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

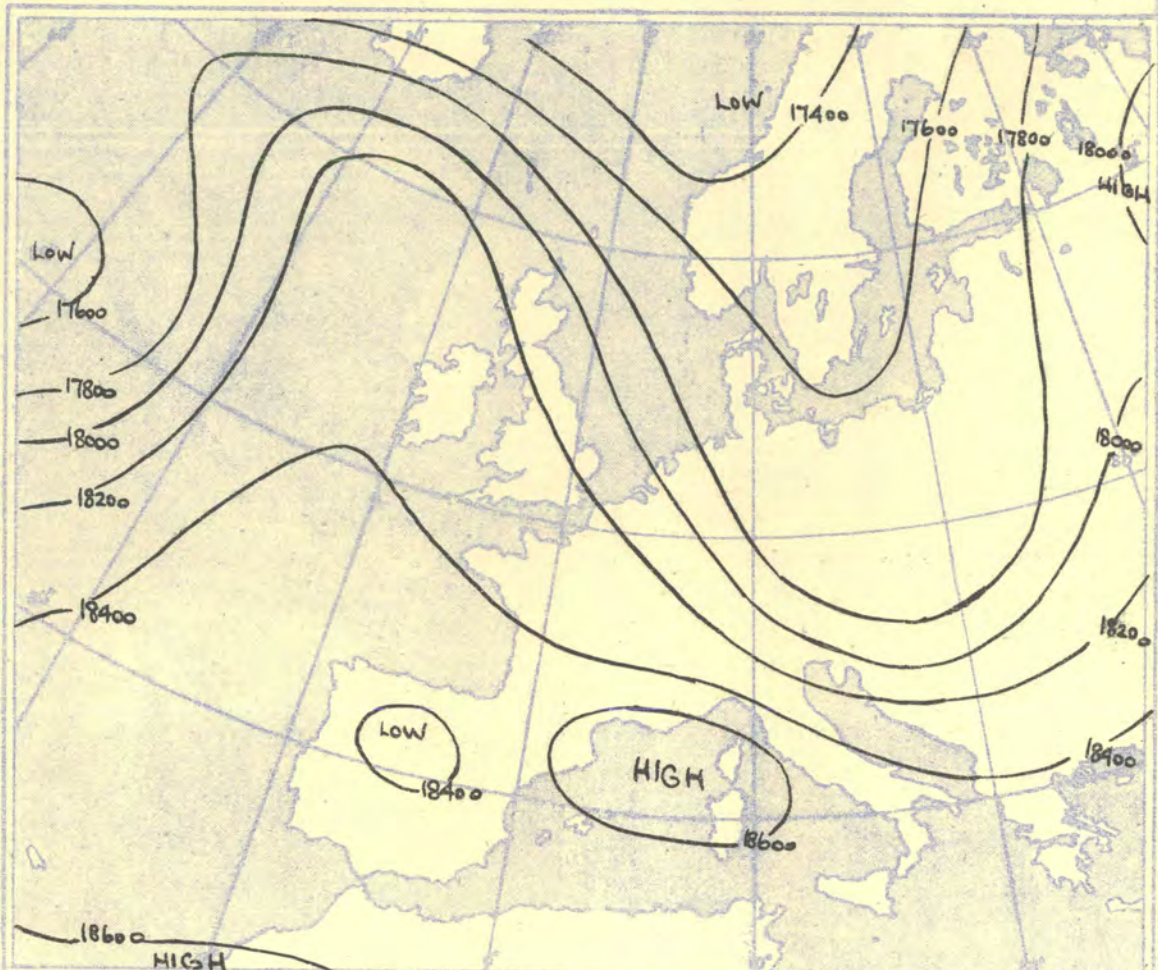
100 80 60 40 20 10 0 knots



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 300 mb. surface.
The dotted lines are isopleths of the thickness of the layer 700—300 mb.



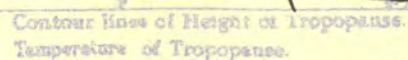
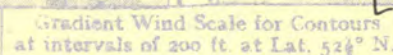
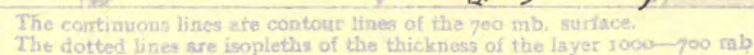
Isopleths of Thickness 500-1000mb.

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

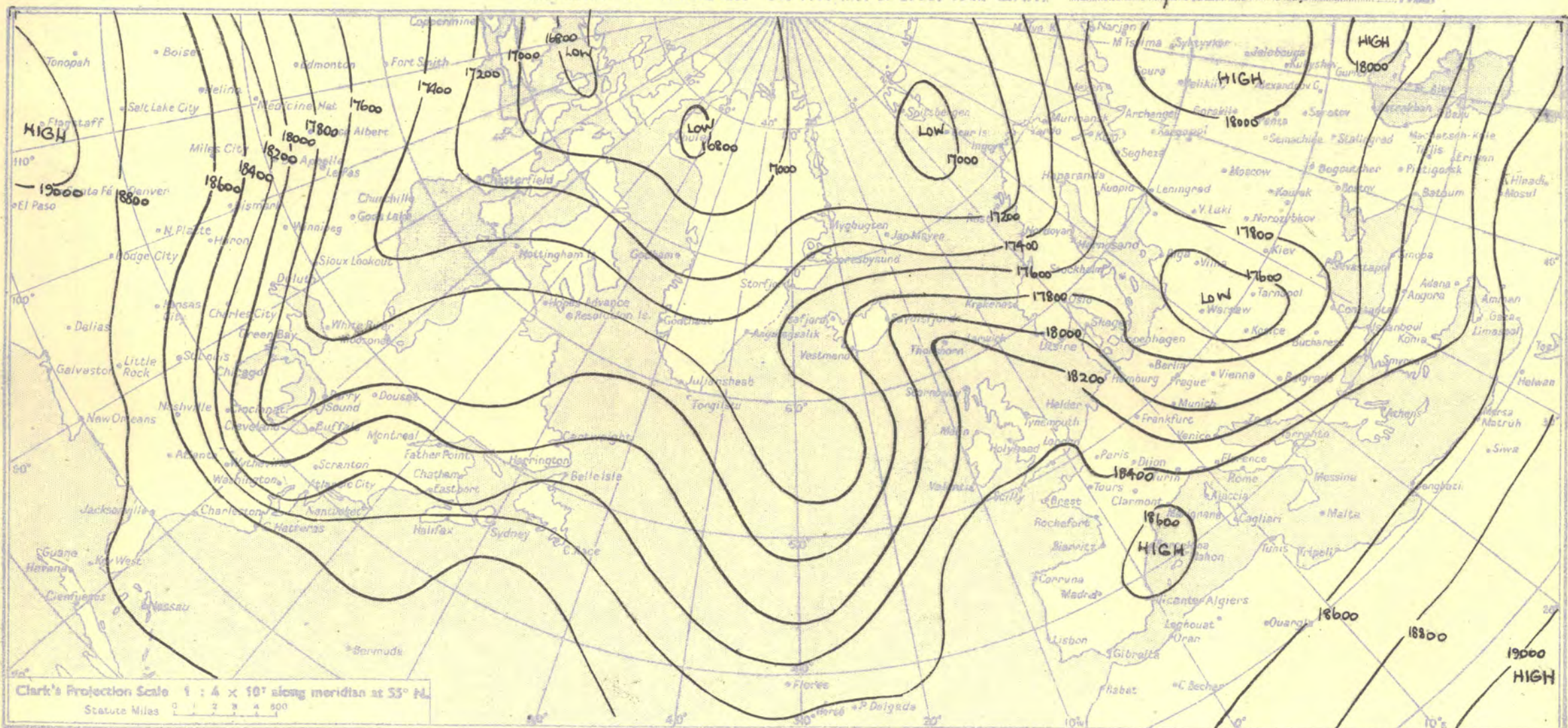
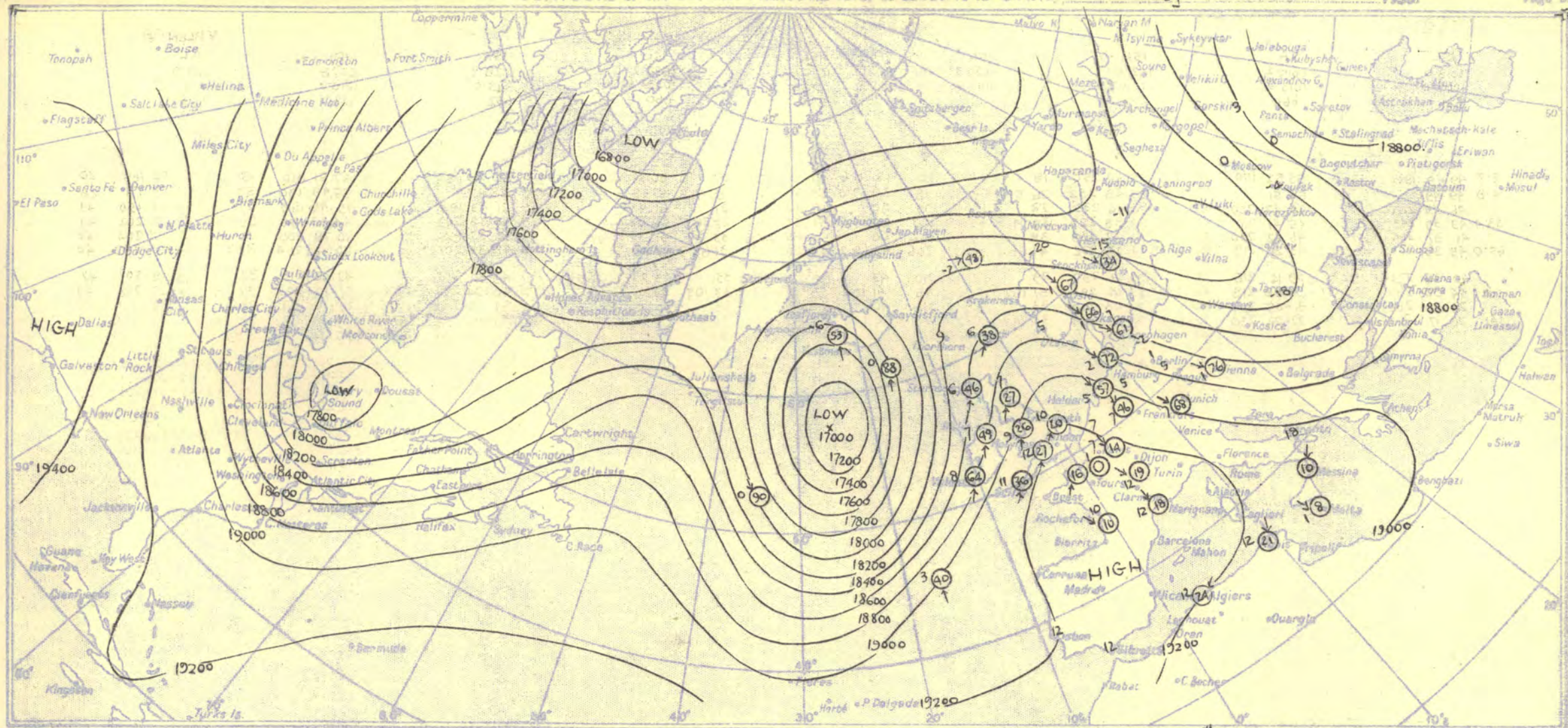
[illegible]

AND WIND (Heights above M.S.L.) FROM SHIPS

Ship	Weather Explorer				Weather Explorer				Weather Explorer				Weather Explorer				Cirrus				Cirrus				Cirrus				Cirrus				Ship
Lat/Long	60.4 N		16.0 W		60.5 N		15.9 W		60.6 N		15.8 W		60.7 N		15.8 W		51.8 N		19.5 W		51.4 N		19.3 W		51.2 N		19.6 W		51.1 N		19.6 W		Lat/Long
Pressure { Time M.S.L. Surf (Freezing)	03h		G.M.T.		09h		G.M.T.		15h		G.M.T.		21h		G.M.T.		03h		G.M.T.		09h		G.M.T.		15h		G.M.T.		21h		G.M.T.		G.M.T. Time M.S.L. Surf (Freezing)
	997		mb		996		mb		996		mb		995		mb		1000		mb		1002		mb		1002		mb		1000		mb		
	997		mb		996		mb		996		mb		995		mb		1000		mb		1002		mb		1002		mb		1000		mb		
	650		mb		680		mb		805		mb		815		mb		715		mb		715		mb		800		mb		800		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		49	49	100	32		53	53	140	20		50	39	180	17		51	48	140	23		55	52										Surf
1000	-08					-10					-1.2					-1.3					01	55	63										1000
950		50	50	120	36		51	51	174	28		46	41	210	26		47	45	165	56													950
900	28.0	50	49	151	34	27.8	46	46	174	34	27.3	41	35	213	29	27.3	42	38	173	35													900
850		49	48	186	28		45	45	174	40		38	26	213	30		36	32	177	53													850
800	60.1	47	45	186	28	59.6	42	41	174	45	58.6	31	18	213	37	58.6	30	26	174	36													800
750		43	40	187	31		37	36	176	54		26	03	199	42		25	19	171	39													750
700	95.9	37	35	201	38	96.1	34	33	176	66	93.2	20	04	188	54	93.1	19	12	180	37	96.1	32											700
650		32	30	201	44		29	28	180	64		12	08	189	54		12	07	191	40													650
600	136	26	23	188	51	135	23	22	180	67	132	09	19	186	57	132	06	01	190	40													600
550		19	18	203	50		16	14	175	61		05	25	183	64		03	09	189	48													550
500		183	10	06	229	51	182	07	04	175	63	177	00	32	181	88	177	11	19	188	51	182	10										500
450		00	05	208	46		02	06	171	63		07	40	179	110		20	27	182	56													450
400	237	11	17	203	48	236	13	17	175	63	231	18	51	171	128	229	31	40	177	57													400
350		24	31	198	52		27	32	179	96		31	52	179	128		43		180	57													350
300	304	38	46	200	59	302	42		194	78	297	44		179	32	293	55		187	70	303	38											300
250		58		212	68		57		190	92		59		180	112		50		183	78													250
200	(15mb)	74				389	73		202	90	384	63		181	105	381	51		185	66	391	67											200
170	(2.07mb)	76					74		196	80		64		184	79		54		187	64													170
150							69		204	50		65		184	54		54		184	52													150
130							68		212	36		64		184	44		56		184	33													130
110							71		212	34		65		184	34		60		185	26													110
100						534	69		211	30	530	66		184	28	531	62		192	26													100
90							68		212	26		65		189	28		65		222	24													90
80							67		211	18		66		200	25		65		219	22													80
70							68		223	20		67		207	22		65		208	22													70
60							68		228	18		65		220	22		64		196	22													60
							68					66		230	30	0	63																
												63		266	52																		
												64																					



The cold trough over the Central Atlantic moved steadily eastwards during the day being warmed somewhat at the same time resulting in the disappearance of the cold pool and a general relaxing of the trough. Advective warming led to the establishment of a warm ridge over the Western Atlantic and also over the British Isles.



Clark's Projection Scale 1 : 4 x 10⁷ along meridian at 55° N.
 Statute Miles 0 1 2 3 4 500

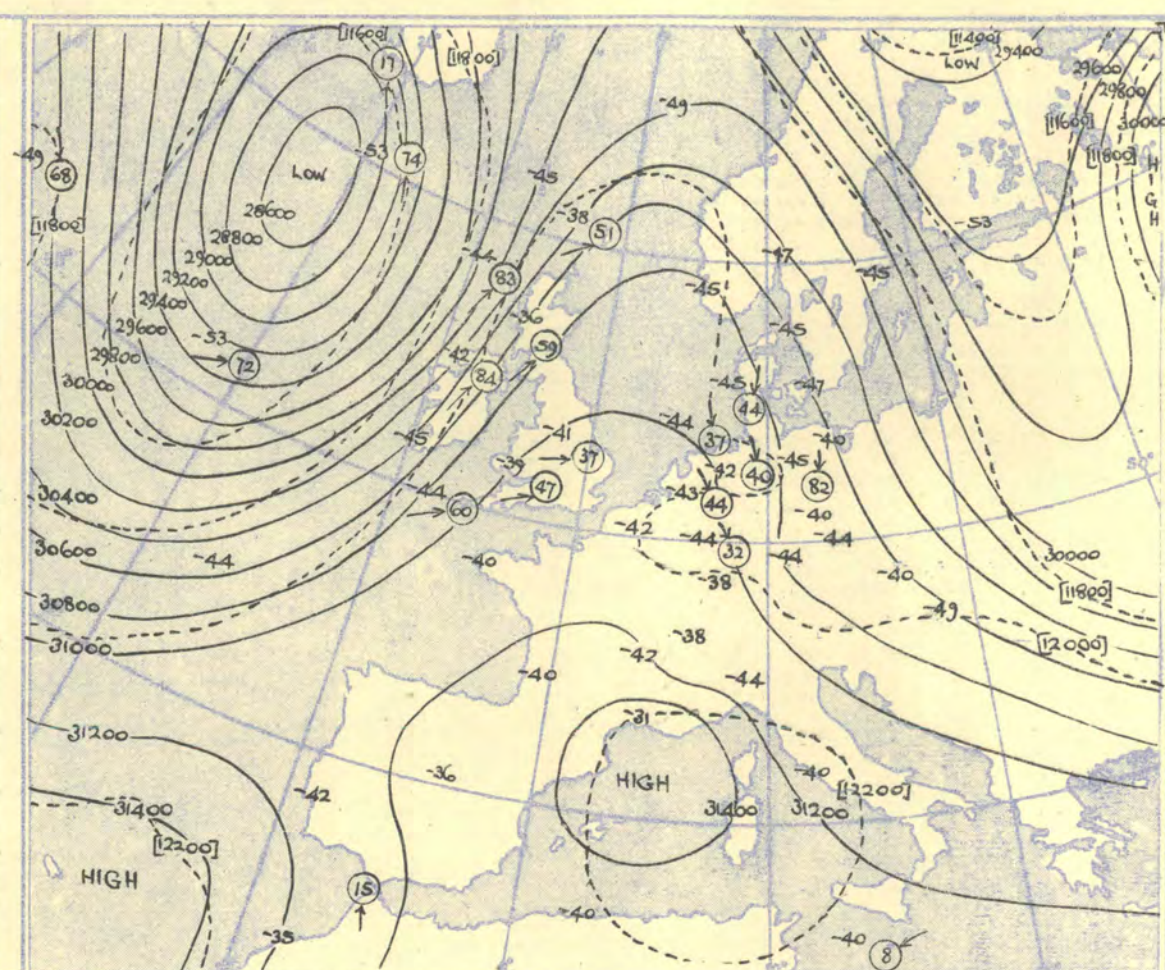
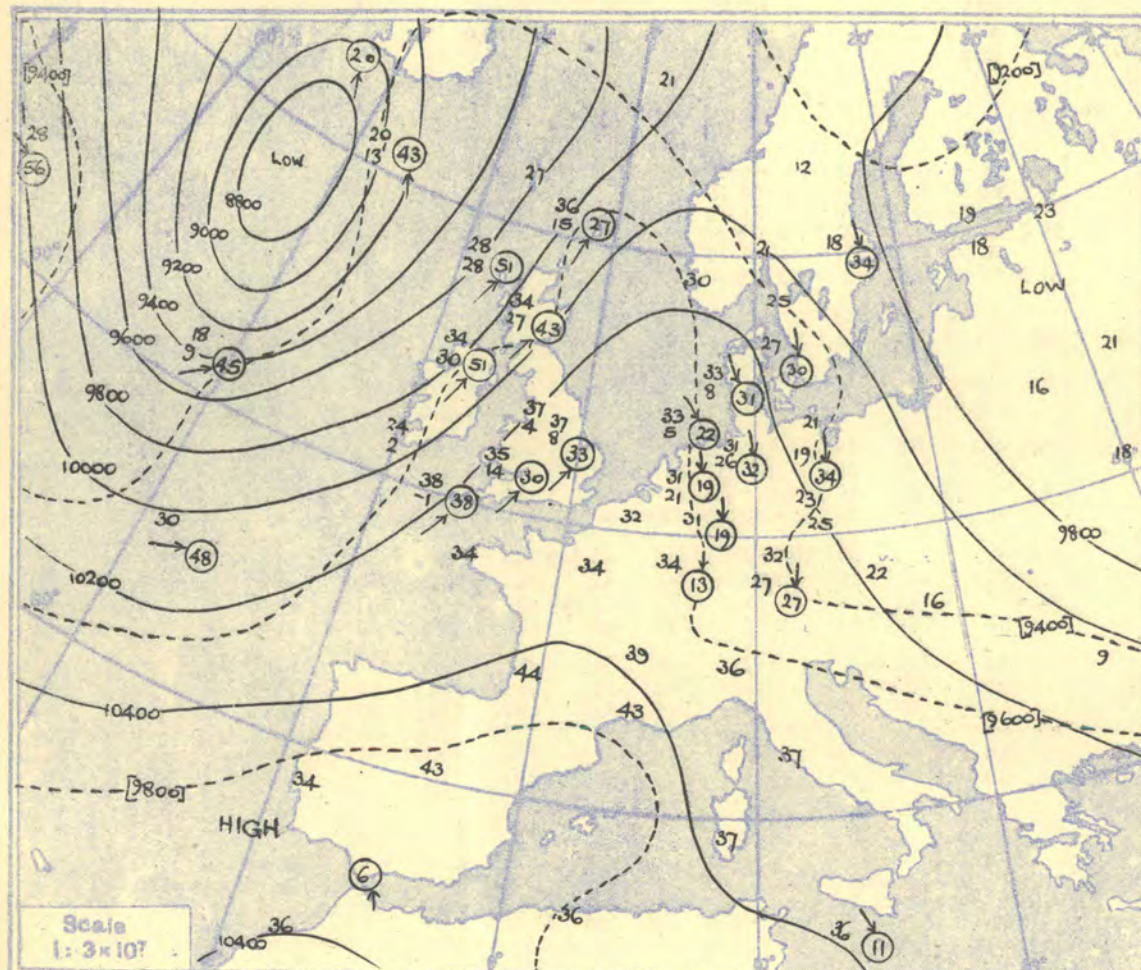
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION												
Time	M.S.L.	15L		G.M.T.	15h		G.M.T.	15h		G.M.T.	15h		G.M.T.	15L		G.M.T.	15L		G.M.T.	15L		G.M.T.	15h		G.M.T.	15L		G.M.T.	15h		G.M.T.	Time																		
Surf	Pressure	1018.0		mb	1015.2		mb	1021.5		mb	1020.3		mb	1025.6		mb	1028.2		mb	1028.4		mb	1027.2		mb	1017.0		mb	1015.0		mb	Surf																		
Forecast	Height	681		ft./100	660		ft./100	877		ft./100	630		ft./100	660		ft./100	660		ft./100	632		ft./100	618		ft./100	650		ft./100	650		ft./100	Forecast																		
Pressure	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Dir.	Temp.	Temp.	Wind	Pressure																		
Surf	2.7	49	49	180	14	0.5	55	52	170	25	0.2	57	50	250	18	2.3	58	49	190	0.6	61	51	160	07	1.2	60	51	190	05	4.4	60	49	180	15	0.7	57	55	165	20											
1000	4.8	49	49		4.2	54	51		5.8	55	48	232	26	5.5	56	48	198	30	7.0	59	58	172	15	7.8	57	48		8.0	58	47		7.4	55	49	190	30	4.6	57	55	171	26									
950		46	43	218	22		50	47	200	41		50	46	235	28		49	41	199	35		55	44	218	21		51	42			51	43	196	18		49	46	189	27		53	52	190	41						
900	33.4	43	39	243	26	32.9	45	41	210	45	34.8	54	38	229	35	34.3	44	38	200	39	36.0	51	31	216	25	36.7	56	38		36.9	54	38	209	20	36.2	44	43	193	29	33.6	49	48	202	41						
850		41	37	260	28		46	42	220	51		50	27	229	38		49	33	202	40		52	34	210	33		53	37	198	20		50	28	200	32		44	44	204	40		44	44	204	40					
800	65.0	43	39	273	26	64.7	43	20	219	50	66.9	44	27	232	41	66.1	46	07	206	43	68.2	45	26	207	31	68.9	45	29	For	69.2	48	33	207	20	68.1	50	16	204	32	65.4	40	40	202	40		40	40	202	40	
750		40	36	273	28		39	14	216	46		38	21	232	39		44	02	210	43		39	22	213	33		43	22	Winds		43	30	213	24		47	02	211	32		38	19	207	47		38	19	207	47	
700	101	34	30	263	28	100	34	06	218	42	102	33	14	234	37	102	40	05	215	41	104	33	10	227	33	105	37	16	See	105	40	24	235	23	104	41	10	224	37	101	38	27	212	49		38	27	212	49	
650		28	25	260	33		31	05	224	40		29	08	240	33		36	15	216	40		31	08	233	33		31	15			34	15	235	20		35	16	217	29		32	32	213	53						
600	141	20	17	261	32	141	21	22	230	41	143	25	01	249	30	143	27	20	214	44	144	25	00	236	31	145	25	02	page	146	28	10	242	24	145	29	21	223	30	141	26	33	208	60		26	33	208	60	
550		12	03	265	37		17	17	225	44		16	10	248	28		17	25	215	51		18	11	237	31		20	09			20	00	237	22		20	34	224	33		17	43	209	64		17	43	209	64	
500	187	06	13	264	38	187	06	27	218	46	189	07	21	243	27	189	07	31	219	49	191	09	26	231	26	192	10	19	3	192	12	10	255	27	191	11	40	228	36	188	08	49	212	64		08	49	212	64	
450		04	21	266	48		05	41	220	54		07	28	242	33		01	36	219	42		01	33	222	26		01	23			01	20	263	27		02	42	239	37		62	55	212	77		62	55	212	77	
400	241	15	32	270	42	241	18	43	219	54	243	26	33	247	36	243	14	44	226	41	245	15	44	237	27	247	11	26		247	11	31	250	22	246	09	21	234	33	242	14	36	213	68		14	36	213	68	
350		27	40	266	45		29	43	221	49		31	40	252	36		25	47	215	47		28	53	240	30		23	43			23	43	256	25		22	55	235	36		23	43	216	63		23	43	216	63	
300	307	42		276	43	309	44		222	55	308	47		252	45	310	41		216	49	298	43		247	33	313	40	50			314	38	57	268	31	313	38	58	246	39	309	34	56	220	59		34	56	220	59
250		57		270	50		61		225	51		62		257	48		60		230	48		58		259	35		53				54		269	39		57		241	34		52		215	56		52		215	56	
200	394	76		278	57	393	76		222	53	394	74		244	41	396	71		220	51		77		258	39	401	70				401	72		272	27	400	74		237	39	396	73		213	63		213	63		
170		76		272	44		74		230	50		74		256	28		74		232	33		80		251	44		75				78		262	24		82		239	31		69		211	62		69		211	62	
150		80		272	36		73		235	43		83		266	27		70		230	24		76		255	20		79				80		284	24		81		231	30		70		231	30						
130		78		276	36		74		240	35		68		257	33		73		230	30		82		254	18		81				78		268	30		79		247	30		75		247	30						
110		75		284	28		74		246	27		63		266	24		70		260	21		79		265	25		81				80		282	18		80		236	22		76		236	22						
100	535	75		285	27		75		246	27	538	61		258	22	541	70		263	20	538	75		266	18	542	80				543	77		268	17	541	80		242	22	539	70		66		242	22			
90		71		285	28		71		285	28		62		283	21		70		263	21		73		273	23		78				74		270	19		79		279	18		71		279	18						
80		71		285	28		71		285	28		62		283	21		70		263	21		73		273	23		78				74		270	19		79		279	18		71		279	18						
70		71		285	28		71		285	28		62		283	21		70		263	21		73		273	23		78				74		270	19		79		279	18		71		279	18						
60		71		285	28		71		285	28		62		283	21		70		263	21		73		273	23		78				74																			

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA																																																																																																																																																																																																																																																														
Time M.S.L. Surf Freezing	03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.				03h G.M.T.																																																																																																																																																																																																																																																														
	1011.7 mb				1007.8 mb				1014.8 mb				1012.5 mb				1019.0 mb				1023.5 mb				1022.7 mb				1019.6 mb				1012.9 mb																																																																																																																																																																																																																																																														
	1001.7 mb				1006.0 mb				1013.9 mb				1004 mb				1017.0 mb				1018.9 mb				1006.5 mb				1009.0 mb				1011 mb																																																																																																																																																																																																																																																														
Pressure	669				740				659				685				649				664				646				668				780																																																																																																																																																																																																																																																														
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure																																																																																																																																																																																																																																																														
mb	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	mb																																																																																																																																																																																																																																																														
Surf	2.7	50	50	190	04	0.5	54	54	180	20	0.2	54	50	140	06	2.3	57	53	180	22	0.6	54	50	1.2	45	44	160	03	4.4	49	49	Calm	2.3	56	55	180	15	0.3	53	51	180	15	Surf																																																																																																																																																																																																																																																				
1000	3.1	50	50			1.2	54	54			4.0	53	48			3.4	52	49	196	38	5.2	53	49	6.3	50	47	202	24	6.1	50	50		5.4	55	54	195	33	3.5	53	50	187	18	1000																																																																																																																																																																																																																																																				
950		48	47	194	22		49	49	194	39		49	45	221	25		52	49	196	38		51	48			53	44	210	26		51	45	199	25		52	51	204	32		48	46	218	29	950																																																																																																																																																																																																																																																		
900	31.7	46	38	198	22	30.9	45	45	206	45	32.6	43	39	225	36	32.3	48	45	200	41	34.0	49	47	35.2	52	37	212	27	34.9	53	31	201	27	34.3	48	47	212	30	32.2	43	40		900																																																																																																																																																																																																																																																				
850		45	28	206	24		41	41	207	42		41	38	225	33		48	41	207	40		43	41			50	30	212	31		53	15	205	30		54	17	217	30		37	30		850																																																																																																																																																																																																																																																			
800	63.5	43	23	207	26	62.5	38	38	201	41	64.2	39	34	223	31	64.1	42	35	216	40	65.8	46	35	67.3	47	18	213	31	67.2	49	21	211	30	66.5	50	11	216	31	63.5	35	23		800																																																																																																																																																																																																																																																				
750		44	20	211	29		33	33	200	42		42	36	227	43		38	31	216	41		42	13			41	18	210	33		43	17	222	30		43	04	213	35		28	13		750																																																																																																																																																																																																																																																			
700	99.3	36	15	209	27	97.7	28	28	203	51	100	34	21	223	43	99.6	34	30	210	51	102	37	04	103	37	08	217	33	103	35	14	221	30	102	38	01	214	38	98.3	24	02		700																																																																																																																																																																																																																																																				
650		31	10	206	30		22	20	201	56		31	15	212	40		27	25	207	56		32	15			31	05	225	33		33	06	217	30		30	14	214	40		22	08		650																																																																																																																																																																																																																																																			
600	140	26	05	209	34	137	15	00	201	67	140	25	02	212	40	140	20	19	209	57	142	26	20	143	25	00	234	30	143	24	15	214	31	143	25	35	213	39	138	19	31		600																																																																																																																																																																																																																																																				
550		18	01	213	36		12	12	201	57		17	11	211	48		12	11	210	57		18	17			18	07	241	27		17	19	217	33		17	29	210	41		12	34		550																																																																																																																																																																																																																																																			
500	186	09	06	216	37	183	05	20	205	70	186	07	21	213	48	186	03	00	208	56	188	09	24	190	09	17	245	24	190	07	28	222	31	189	06	33	211	44	184	02	41		500																																																																																																																																																																																																																																																				
450		02	13	217	43		04	17	197	73		02	25	216	52		04	10	208	59		01	34			01	25	243	23		00	37	225	30		03	39	214	51		08	47		450																																																																																																																																																																																																																																																			
400	241	11	19	222	45	237	16	23	193	66	241	12	31	218	56	240	14	20	204	61	243	12	46	244	12	35	230	30	244	11	49	229	31	243	15	50	214	50	237	20	54		400																																																																																																																																																																																																																																																				
350		23	29	221	45		30	37	197	76		23	39	220	59		28	34	206	75		24	49			26	47	257	36		25	57	239	40		22	59	222	60		30		350																																																																																																																																																																																																																																																				
300	307	38	44	219	51	303	44		206	83	308	36	49	221	59	306	42		213	84	310	39	59	311	41		257	37	311	39	59	235	47	309	44		218	60	303	45		300																																																																																																																																																																																																																																																					
250		54		222	54		60					51		222	57		59		204	79		56					59	247	29		57		241	48		221	60		303	61		250																																																																																																																																																																																																																																																					
200	395	74		228	51	390	76				396	70		223	55	393	71		208	80	396	74		397	75		248	28	398	73		232	42	395	77		216	61	389	72		200																																																																																																																																																																																																																																																					
170		74		235	52		82					81		218	51		74		207	63		83					251	33		79		237	41		218	49		170																																																																																																																																																																																																																																																									
150		73		233	40		82					80		218	50		68		212	51		87					252	27		77		238	24		217	40		150																																																																																																																																																																																																																																																									
130		73		231	33		65					77		222	48		71		206	43		84					252	20		76		242	22		219	30		130																																																																																																																																																																																																																																																									
110		72		242	25		67					76		228	42		70		209	42		80					262	17		76		219	16		232	27		110																																																																																																																																																																																																																																																									
100	537	72		245	24	533	72				537	71		229	30	536	68		207	13	536	83		536	83		253	15	540	77		253	20	535	77		219	16	534	68		100																																																																																																																																																																																																																																																					
90		71		246	22		73					73		227	20		66		192	21		78					249	13		74		278	21		228	16		90																																																																																																																																																																																																																																																									
80		70		247	20		67					73		234	13						74						255	12		70									80																																																																																																																																																																																																																																																								
70		69		261	20							71		244	16						72																		70																																																																																																																																																																																																																																																								
60		69		265	17							70		247	21						72																		60																																																																																																																																																																																																																																																								
Inversion 872mb 45°-82mb 46° 782 - 42°-750 - 44°																																Inversion 790mb 39°-773mb 43° Isothermal 800-790mb 39° 773-755 - 43°																																Isothermal 279-274mb 49° 236-230 - 65°																																Inversion 850mb 43°-820mb 48° Isothermal 785-767mb 44°																																Inversion 1019mb 45°-983mb 55° 865 - 49°-834 - 51° Isothermal 930-900mb 52°																																Inversion 1006.5mb 49°-976mb 53° 929 - 50°-874 - 54° 700 - 35°-668 - 36°																																Inversion 900mb 48°-877mb 49° 877 - 49°-818 - 55°																																Isothermal 1011mb-1000mb 53° 681 - 625 - 22°																																																															
Tropopause I 190mb -78° 40.500																																Tropopause I 162mb -83° 43.200																																Tropopause I 164mb -83° 43.500																																Tropopause I 214mb -71° 38.000																																Tropopause I 150mb -87° 45.450																																Tropopause I 165mb -86° 43.500																																Tropopause I 173mb -80° 42.600																																Tropopause I 170mb -83° 42.800																																Tropopause I 200mb -72° 38.900																															
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE																																																																																																																																																																																																																																																																		
Time M.S.L. Surf Freezing	09h G.M.T.				09h G.M.T.								03h G.M.T.				09h G.M.T.				09h G.M.T.				09h G.M.T.				09h G.M.T.																																																																																																																																																																																																																																																																		
	1008.7 mb				1005.3 mb								1011.7 mb				1014.4 mb				1020.2 mb				1019.4 mb				1017.1 mb																																																																																																																																																																																																																																																																		
	998.8 mb				1003.4 mb								1002 mb				1012.4 mb				1015.7 mb				1003.3 mb				1006.6 mb																																																																																																																																																																																																																																																																		
Pressure	700				770								760				650				689				670				688																																																																																																																																																																																																																																																																		
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure																																																																																																																																																																																																																																																														
mb	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	ft/100	°F	°F	Dir. Vel. knots	mb																																																																																																																																																																																																																																																														
Surf	2.7	51	51	180	41	0.5																																																																																																																																																																																																																																																																																									

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

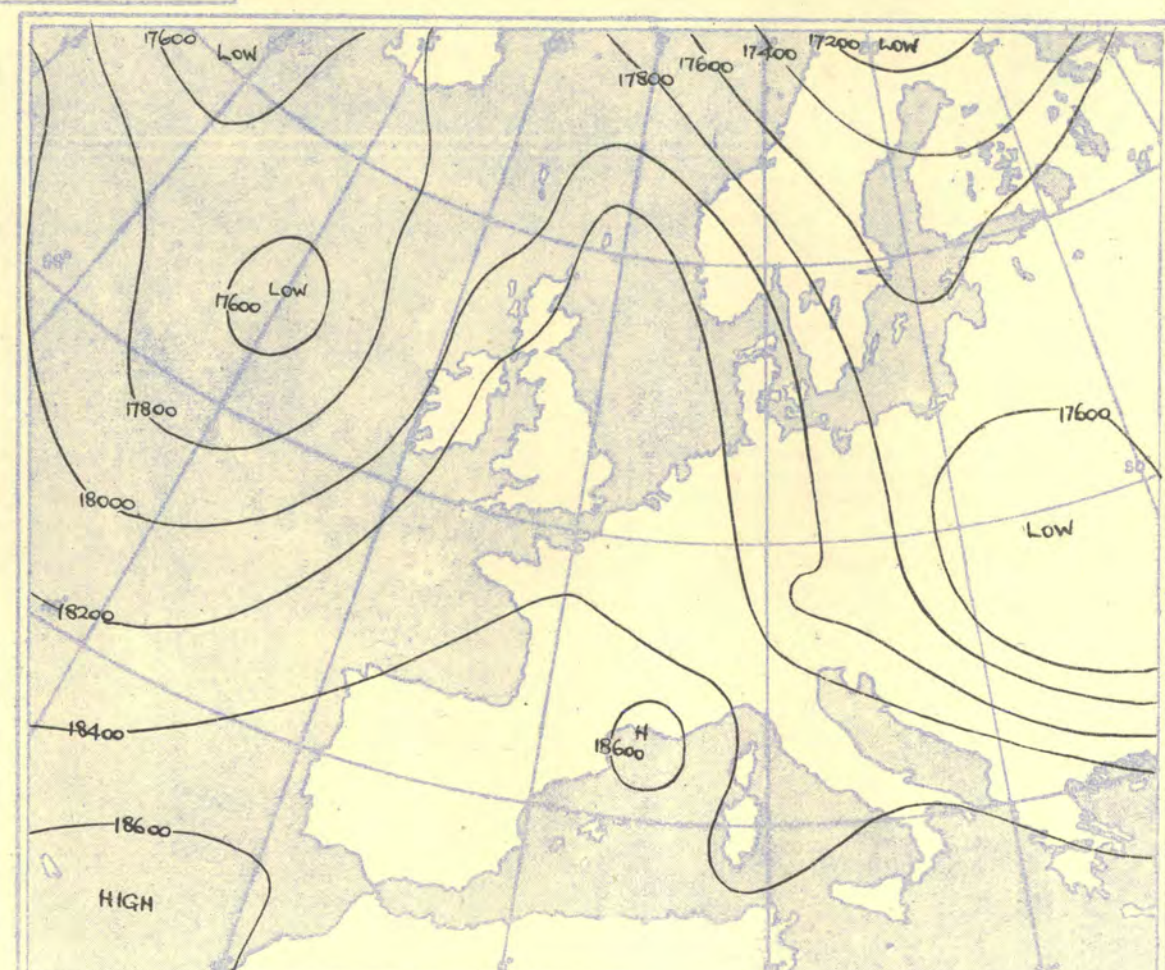
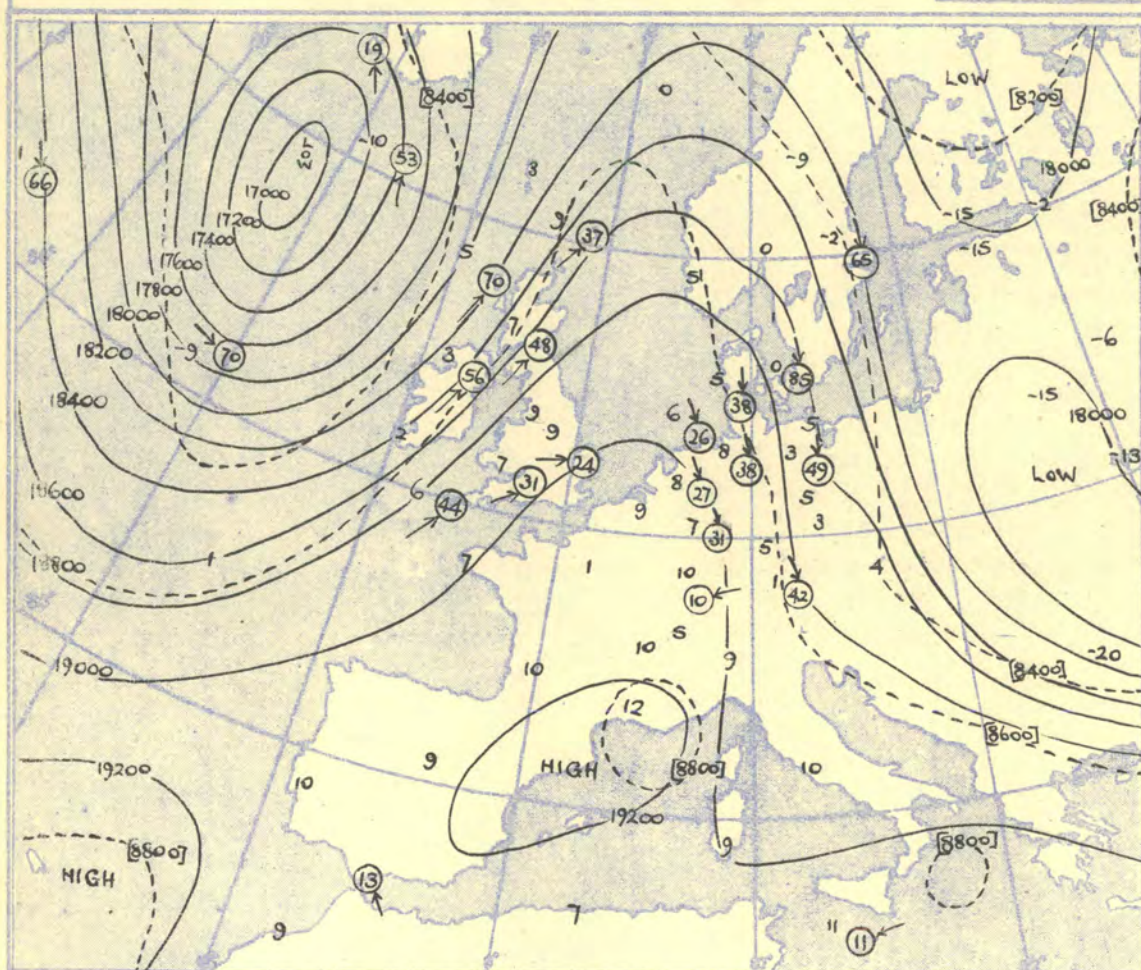


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

100 80 60 40 20 10 0 knots

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



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

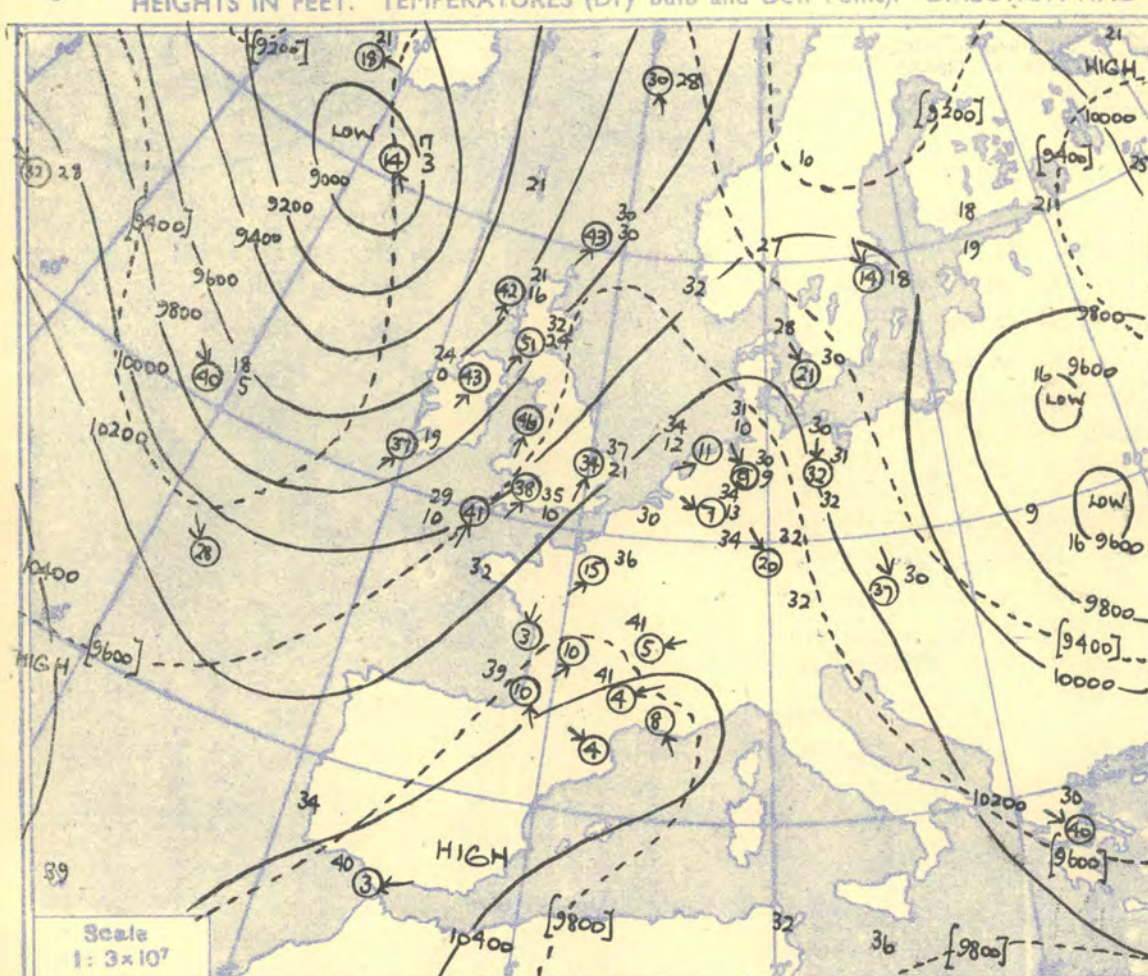
Isopleths of Thickness 600-1000mb.

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above 1751

NEPHOSCOPE OBSERVATIONS

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

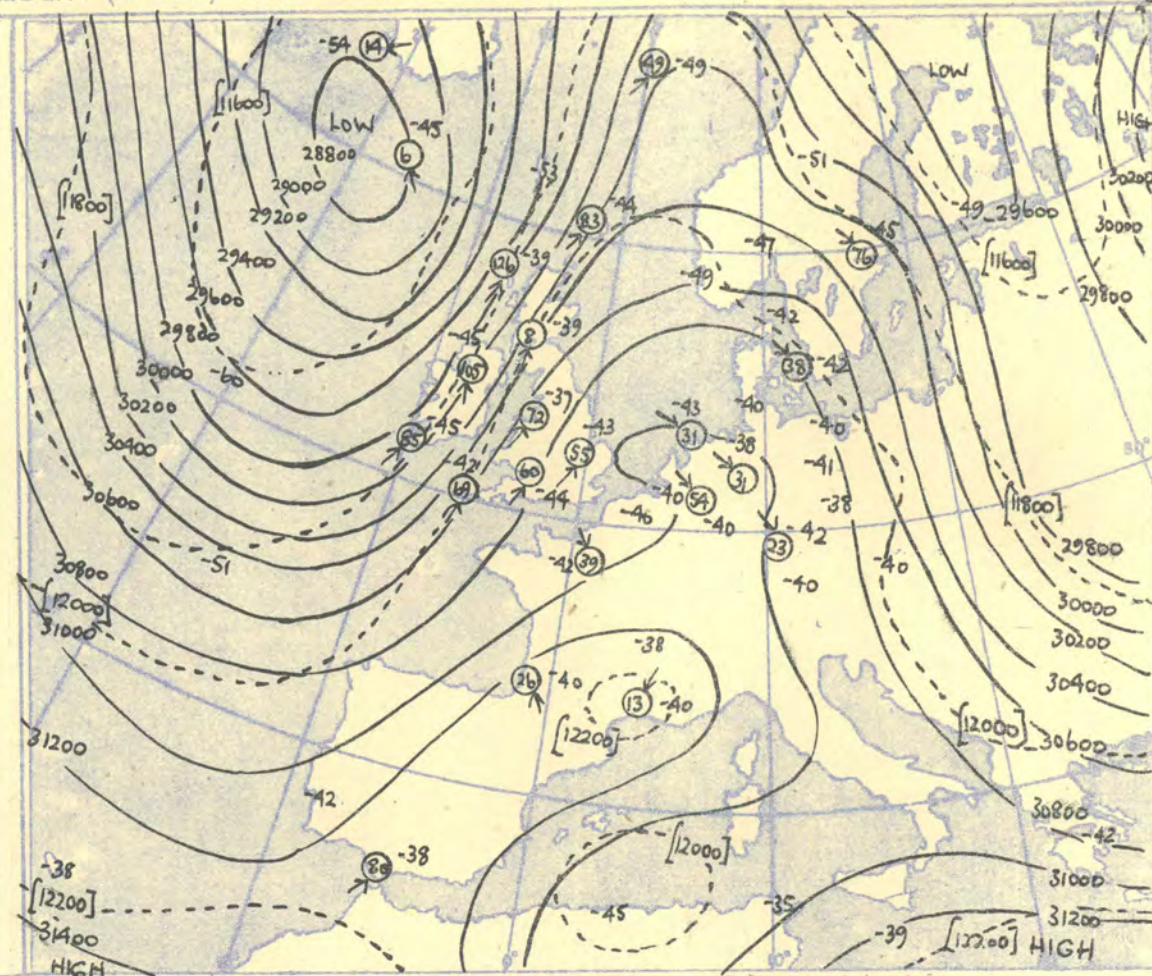
Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS								Ship
Lat/Long	60-7N		15-8W		60-6N		15-9W		60-5N		16-0W		60-6N		16-1W		51-0N		19-9W		50-7N		20-2W		50-6N		20-5W		50-8N		20-7W						Lat/Long
Pressure M.S.L. Surf Freezing	03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.		03L		G.M.T.		09L		G.M.T.		15L		G.M.T.		21L		G.M.T.						G.M.T. Time M.S.L. Surf Freezing
	991		mb		987		mb		984		mb		986		mb		1003		mb		1007		mb		1014		mb		1017		mb						
	991		mb		987		mb		984		mb		986		mb		1003		mb		1007		mb		1014		mb		1017		mb						
	810		mb		810		mb		820		mb		800		mb		850		mb		850		mb		880		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	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb				
Surf																																		Surf			
1000	-2.6	50	48	150	27	-3.6	51	45	130	21	-4.4	50	46	080	05	-4.0	46	40	310	13	1.0	52	46										1000				
950		47	40	158	40	47	43	148	28	48	40	100	02	46	40	310	17	1.0	52	46													950				
900	26.0	43	35	168	40	41	38	155	33	41	32	090	05	46	35	306	18																900				
850		38	30	172	39	36	32	166	32	36	26	057	05	39	32	302	24																850				
800	57.3	31	24	167	42	31	26	169	28	29	21	068	06	29	24	296	24	32	32														800				
750		26	20	166	44	24	18	163	28	23	15	122	08	25	17	297	22																750				
700	92.0	20	13	166	43	17	10	159	29	17	08	165	14	25	18	303	17	95.0	18	09													700				
650		15	07	166	46	11	04	159	30	10	01	170	16	12	01	308	17																650				
600	131	08	00	166	46	129	03	160	32	128	03	168	11	129	03	307	17																600				
550		00	-09	166	51	-05	10	164	33	-05	19	186	07	-04	21	302	20																550				
500	176	-10	-22	166	53	174	-15	-22	166	31	173	-15	-22	211	06	174	-15	-29	315	21	178	-09	-18										500				
450		-23	-30	166	49	-26	-31	169	26	-27	-44	152	05	-28	-44	322	24																450				
400	228	-32	-46	166	66	-37	-43	193	26	-41	-59	159	09	-39	-53	316	22	179	-11	-35													400				
350		-44		166	71	-44		180	30	-48		150	08	-45		308	16																350				
300	292	-53		166	74	-49		168	32	-45		150	06	-44		307	15	295	-51														300				
250		-49		171	64	-43		161	30	-42		173	07	-43		289	12																250				
200	380	-48		183	48	-379	-45	170	32	-43		221	23	-43		250	21	382	-54														200				
170		-49		185	45	-45		184	34	-44		225	30	-45		261	19																170				
150		-52		190	46	-46		195	27	-46		239	25	-45		270	17																150				
130		-51		194	41	-47		203	21	-49		225	11	-50		281	16																130				
110		-54		200	25	-51		202	21	-51		202	09	-55		295	13																110				
100	531	-57		204	17	-551		187	18	-51		217	12	-531	-57	297	12																100				
90		-58		208	25	-52		198	19	-51		229	13	-58		278	12																90				
80		-59		196	33	-55		206	18	-50		200	14	-60		255	13																80				
70		-62		197	18	-55		232	23	-54		213	20	-63		251	19																70				
60	(54 mb)	-65		189	19	-59		237	23	-57																							60				



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

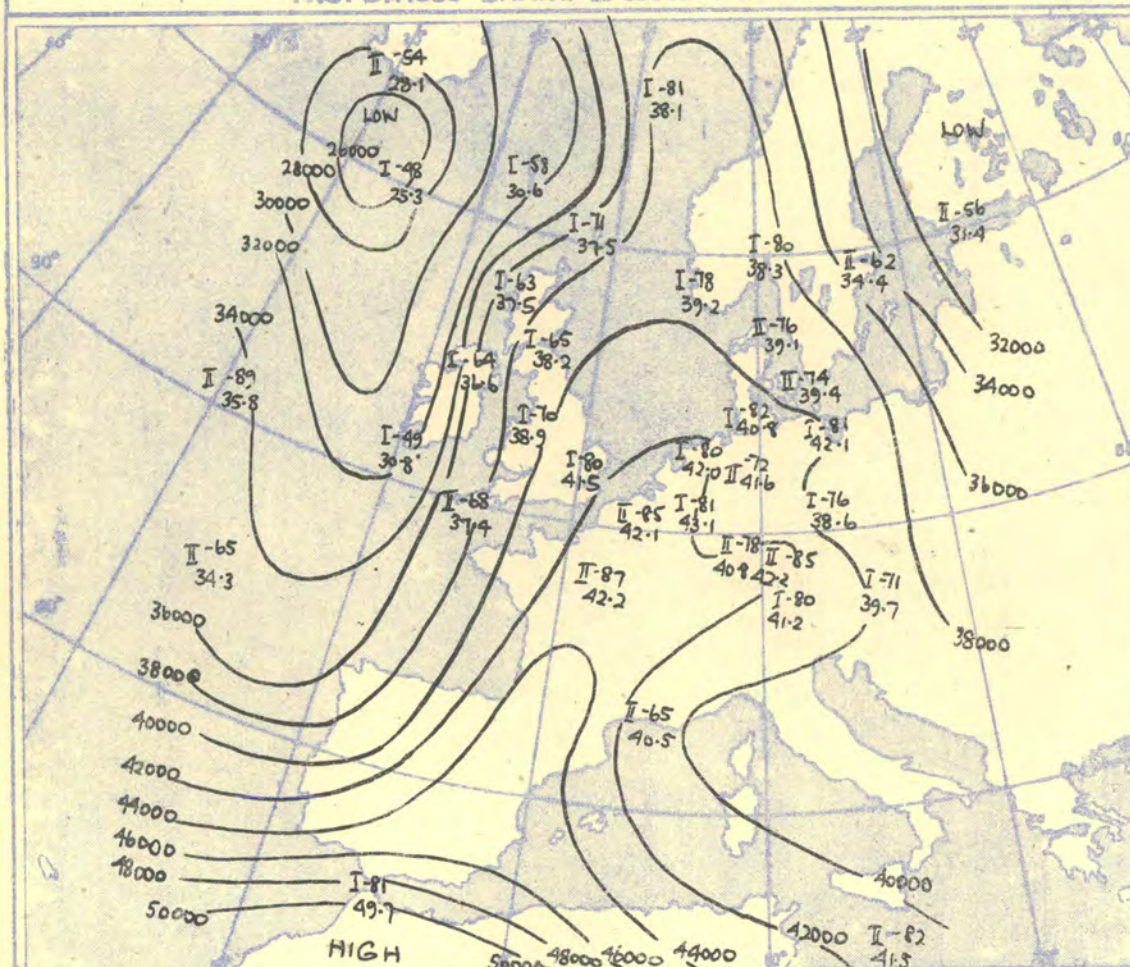
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots



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

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



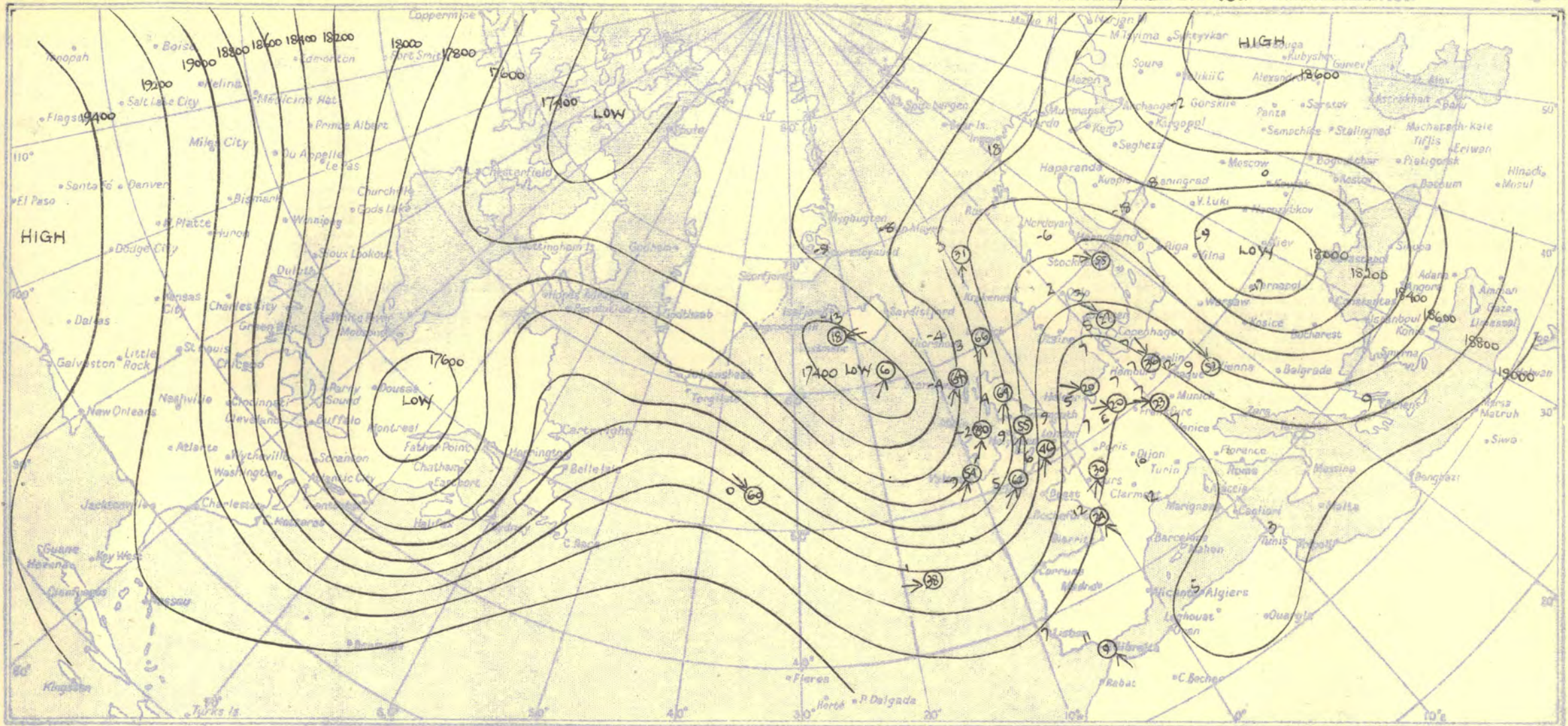
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough on the Atlantic has continued to move east and the relaxation continued for the first half of the period but then seems to have ceased.

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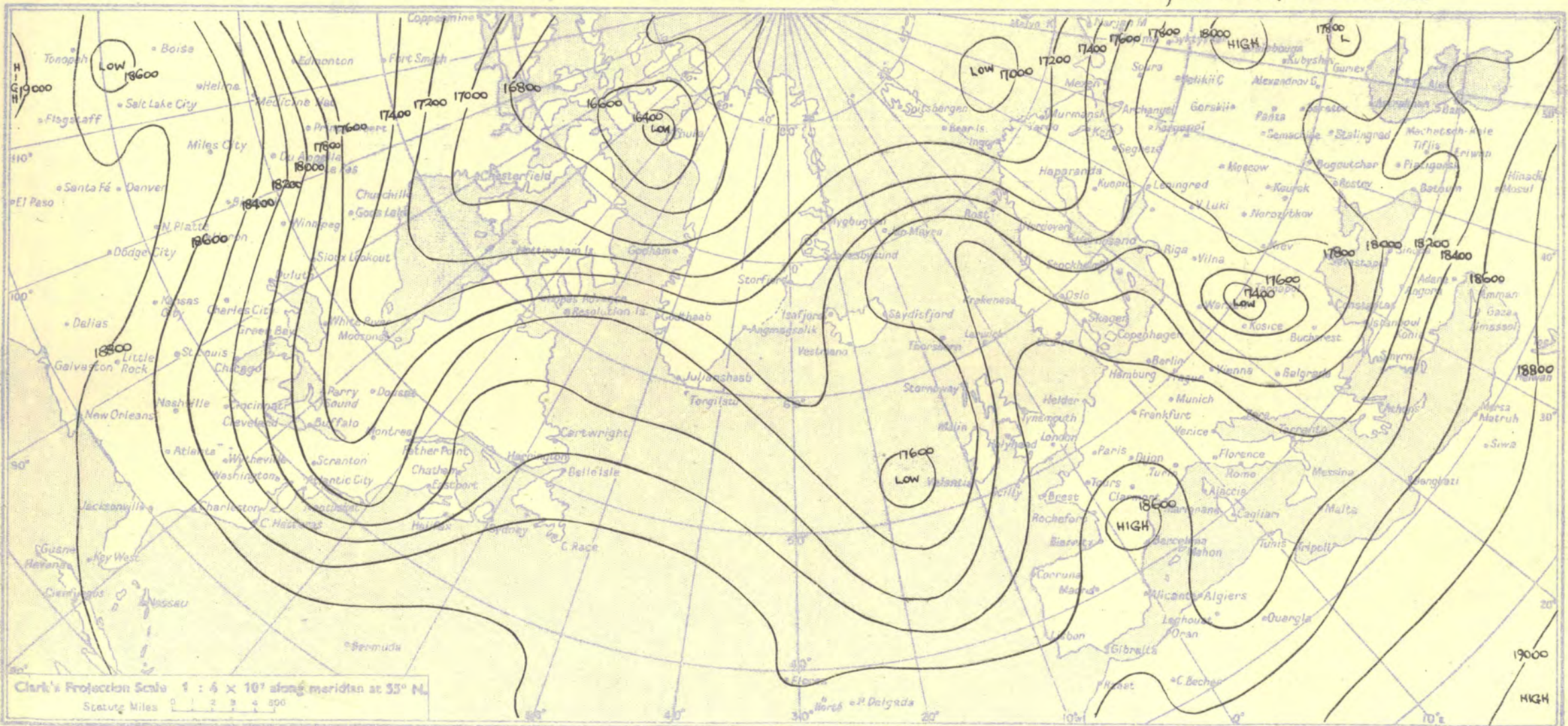
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Friday 13th October,

1950.



Clark's Projection Scale 1 : 4 x 10⁷ along meridian at 33° N.
Statute Miles 0 1 2 3 4 500

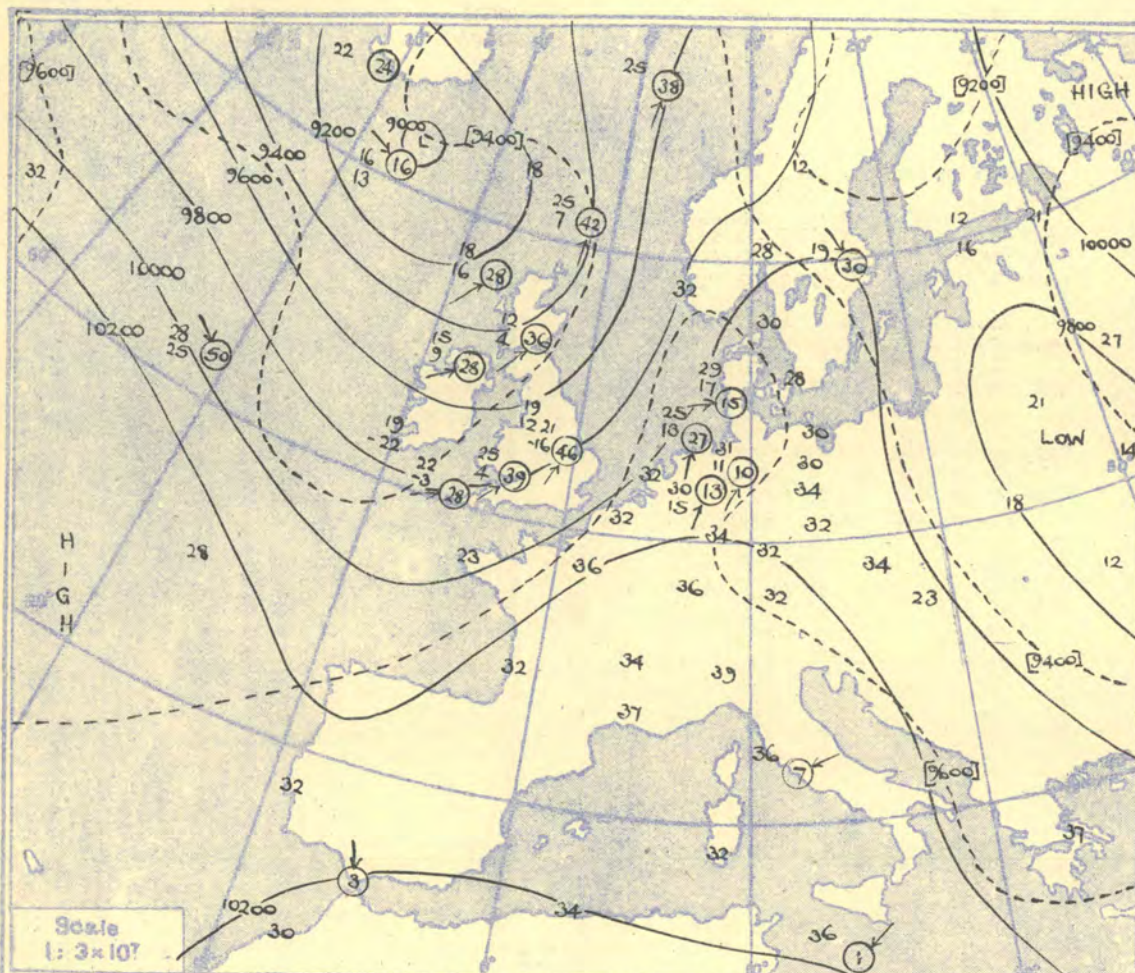
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION												
	Time M.S.L. Surf Pressure	15h. 1006.2 996.2 730	G.M.T. mb mb mb	15h. 1002.3 1000.4 800	G.M.T. mb mb mb	15h. 1008.6 1007.8 700	G.M.T. mb mb mb	15h. 1008.5 1000 775	G.M.T. mb mb mb	15h. 1011.5 1009.5 685	G.M.T. mb mb mb	15h. 1015.7 1011.3 670	G.M.T. mb mb mb	15h. 1000.1 1015.9 672	G.M.T. mb mb mb	15h. 1015.8 1005.1 730	G.M.T. mb mb mb	15h. 1008.5 1007 810	G.M.T. mb mb mb	Time M.S.L. Surf Pressure																													
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																
Surf	01.7	52	52	90	16	00.5	53	50	190	25	00.2	57	50	260	07	02.3	55	46	185	12	00.6	54	52	CALM	01.2	64	52	175	08	04.4	57	55	210	10	01.7	50	50	270	05	00.3	52	48	Surf						
1000	01.6	48	48	197	29	00.7	53	50	190	25	02.3	55	47	229	21	2.3	48	40	204	21	03.1	53	51	185	21	04.4	57	55	210	10	04.3	49	48	262	15	2.3	51	47	1000										
950	30.3	47	47	196	27	29.1	41	38	196	42	31.0	42	36	218	24	31.0	42	36	218	31	32.0	49	46	196	23	33.3	49	38	203	28	33.2	47	42	213	25	32.8	48	46	220	24	30.8	41	35	950					
900	43	43	43	185	27	36	30	211	45	43	38	228	29	38	30	214	33	45	42	216	24	45	42	216	24	45	42	216	28	48	38	218	28	48	40	216	35	44	41	216	35	36	32	900					
850	62.0	39	39	185	33	60.4	32	27	210	44	62.6	38	06	223	49	62.3	34	24	212	36	63.8	42	40	213	27	65.6	50	32	207	37	65.2	47	22	217	29	64.6	40	21	227	40	62.0	30	27	850					
800																																															800		
750		34	34	187	38	27	23	206	43	33	10	218	39	29	14	214	39	39	37	208	37	39	37	208	37	44	29	208	36	42	26	213	32	34	24	222	38	25	21	See Page 3 for Winds	750								
700	97.3	30	30	191	43	95.2	21	16	205	42	97.8	32	24	211	51	97.1	24	00	213	43	99.4	34	18	205	46	10.2	37	21	209	34	10.1	35	10	208	38	10.0	29	10	207	41	96.6	19	10	700					
650		24	23	195	49	16	11	211	46	29	24	208	62	17	12	208	45	29	25	207	47	28	15	211	33	28	15	211	33	28	15	211	33	28	15	211	33	28	15	211	33	12	1	650					
600	13.7	16	13	192	57	11	04	204	59	13.8	23	35	207	60	13.6	17	17	202	57	13.9	22	18	207	40	14.2	23	03	212	37	14.1	25	04	211	43	14.0	19	14	211	43	13.5	04	10	600						
550		12	12	203	60	04	13	199	59		14	29	206	58		07	23	200	71		15	05	208	46		18	03	214	40		17	11	210	45		12	1	209	56		2	16	550						
500	18.3	03	20	197	66	17.9	04	20	189	64	18.4	04	20	204	64	18.2	02	21	202	80	18.6	09	17	208	55	18.8	09	13	213	43	18.7	06	19	213	46	18.5	05	18	207	62	18.0	19	214	500					
450		7	29	200	62	11	29	194	63		03	11	202	71		10	22	202	85		01	17	211	61		02	23	212	43		03	29	210	47		4	16	215	63		18	31	450						
400	23.7	17	30	209	72	23.3	21	40	192	51	23.8	14	17	205	73	23.5	19	30	202	102	24.1	9	23	208	69	24.3	11	31	217	44	24.2	15	38	211	52	23.9	15	26	215	58	23.3	28	41	400					
350		28	37	207	79	31	55	198	110		24	29	210	72		28	37	195	106		22	23	207	69		28	44	208	50		28	46	209	61		27	39	202	67		38	350							
300	30.3	44	206	83	29.8	32	59	199	126	30.5	39	208	87	30.1	45	196	105	30.8	37	47	208	72	30.9	43	220	57	30.8	41	211	60	30.6	42	206	69	29.7	45									300				
250		58	207	93							54	205	84		60	202	121																													250			
200	38.9	68	204	78	38.6	62				39.2	64	212		75	38.5	62	206	88	39.5	70		207	71	39.5	74	219	56	39.5	71	213	63	39.2	68	209	77	38.6	54								200				
170		62	212	60	58						63				75		202	74																												170			
150		62	215	48	44.8	61				45.3	65					62	206	68																											150				
130		62	195	43		61					63					60	206	50																												130			
110		61				60					57					56	202	16																														110	
100	53.6	60			53.4	57					53					53																																100	
90		59				56					56					56																																	90
80		56				58					58					58																																	80
70		60				59					59					59																																	

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		03L		G.M.T.		Time					
M.S.L.		1001.1		mb		995.9		mb		1003.0		mb		1005.9		mb		1008.3		mb		1011.7		mb		1013.8		mb		1015.2		mb		M.S.L.					
Surf		991.2		mb		995.0		mb		1002.2		mb		997.3		mb		1006.3		mb		1007.4		mb		997.6		mb		1004.6		mb		Surf					
Freezing		842		mb		832		mb		831		mb		839		mb		818		mb		774		mb		799		mb		830		mb		Freezing					
Pressure		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		Pressure							
Height		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		Height					
Dir.		Vel.		knots		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.					
Wind		knots		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind					
Surf		2.7		48		0.5		50		0.2		49		0.2		48		0.6		1.2		50		4.4		2.9		4.4		2.9		0.3		Surf					
1000		0.3		48		-0.9		210		0.8		48		1.6		44		2.2		3.2		50		3.7		4.1		4.9		4.1		1000							
950		4.4		43		24		46		4.5		232		3.8		36		2.5		4.7		44		2.0		4.6		4.6		2.8		950							
900		28.7		40		27.6		39		4.0		39		3.0		33		3.0		31.7		42		3.8		2.9		4.2		3.9		900							
850		33		32		30		34		3.4		31		2.7		23		3.4		38		32		2.9		3.7		3.0		2.4		850							
800		59.8		30		58.7		30		60.3		28		61.1		21		2.6		63.1		34		2.4		3.2		3.2		2.5		800							
750		27		15		23		21		20		12		15		0.9		2.5		30		10		2.7		18		2.7		18		750							
700		94.5		25		93.2		18		94.6		12		0.8		0.1		2.7		98.0		27		0.2		2.8		98.3		25		700							
650		18		01		18.1		50		10		0.8		2.0		3.3		2.8		17		1.3		2.1		2.3		1.7		1.4		650							
600		13.4		11		04		02		01		02		0.7		1.8		3.0		1.5		0.2		2.0		1.6		2.4		2.3		600							
550		03.11		77		06		09		06		08		18.9		6.6		-1.5		0.5		1.2		2.0		0.7		0.7		2.2		550							
500		17.9		-06		-21		18.1		17.6		-16		-20		2.24		3.3		1.83		-02		1.83		-02		1.83		-01		500							
450		-14		-30		18.5		81		-27		-31		2.19		2.9		-2.3		-1.2		-2.8		2.08		6.8		-0.9		4.2		450							
400		23.2		-24		32		7.9		7.8		-3.9		4.3		2.10		3.2		2.29		-3.1		4.8		1.92		7.5		2.36		400							
350		-38		-4.5		1.78		9.0		-4.5		1.96		3.4		-4.1		2.54		4.3		-3.6		5.9		9.0		-2.9		5.7		350							
300		206		-5.1		1.80		9.9		2.91		-4.9		1.86		5.0		2.93		3.01		-4.																	
250		-66		180		102		-48		193		42		-50		236		42		-50																			
200		38.2		-6.3		189		72		38		0		-58		230		39		38.6		-57																	
170		-62		187		51		-53		201		30		-58		230		40		-61																			
150		-62		186		40								-60		229		32		-62																			
130		-63		190		33								-61		224		27		-66																			
110		-63		197		27								-62		230		24		-66																			
100		52.9		-64		201		25		(100mb)				533		-64		531		-70																			
90		-65												-65						-65																			
80		-66												-66						-66																			
70														-67						-67																			
60														-70						-70																			
		Isothermal.		829 mb-786mb 30°		731"-700" 25°				Inversion		700mb 12°-681mb 15°		Isothermal.		462-441mb -23°				Inversion		1006mb 48°-984mb 49°		286-48°-273° 46°		Inversion		657mb 20°-650mb 21°		Isothermal.		528-514mb 01°							
		Tropopause		I 225 mb -72°		35° 700'		I 3/5 mb -51°		28° 000'		NIR		I 326mb -51°		27° 500'		I 200mb -57°		38° 000'		I 208 mb -71°		38° 000'		I 196mb -70°		39° 300'		I 250 mb -65°		34° 000'		Tropopause					
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				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.		997.7		mb		998.0		mb		1007.9		mb		1010.1		mb		1013.5		mb		1015.5		mb		1016.5		mb		1016.5		M.S.L.							
Surf		987.9		mb		996.1		mb		999.3		mb		1008.1		mb		1009.0		mb		998.8		mb		1005.9		mb		1005.9		Surf							
Freezing		808		mb		852		mb		848		mb		745		mb		785		mb		821		mb		840		mb		840		Freezing							
Pressure		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		mb		Pressure							
Height		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		ft./100		Temp.		Height					
Dir.		Vel.		knots		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.					
Wind		knots		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind		knots		Wind					
Surf		2.7		49		0.5		47		2.3		46		10		0.6		49		1.2		18		46		0.6		4.4		46		0.5		Surf					
1000		-0.7		46		-0.5		42		2.2		42		26		2.8		48		16		3.6		47		23		4.0		4.5		1000							
950		4.6		43		205		24		4.5		42		26		4.5		42		26		4.5		42		19		4.5		43		950							
900		27.8		41		40		20.4		30.4		37		31		3.2		38		33		32		4.1		3.5		4.1		3.5		900							
850		36		34		20.0		28		3.2		26		30		3.3		29		3.5		3.7		3.1		2.9		3.6		3.0		850							
800		59.0		31		28		2.00		61.4		28		20		2.59		2.3		6.5		3.3		2.3		2.4		6.3		2.8		800							
750		27		24		20.3		26		2.4		10		2.57		2.6		2.3		13		2.58		31		2.7		1.5		2.48		750							
700		93.6		20		14		20.6		9.6		0.8		2.63		2.4		6.5		17		0.8		2.53		30		9.8		2.3		700							
650		14		08		20.2		30		1.1		-1.4		2.37		2.3		0.9		0.0		2.56		31		1.8		-0.5		2.31		650							
600		13.2		05		00		20.3		1.4		0.2		2.27		1.9		0.3		-1.3		2.43		3.7		1.7		-0.3		2.41		600							
550		-02		-06		19.0		37		-0.5		-3.5		2.55		2.9		-0.2		-1.8		2.36		4.2		1.1		-2.0		2.28		550							
500		17.7		-11		-16		18.2		1.9		-11		3.0		2.58		1.8		-0.7		3.6		5.0		1.8		-0.3		2.31		500							
450		-19		-29		16.6		5.7		-1.9		-3.6		2.54		3.2		-1.3		-4.4		2.38		6.2		-0.7		3.6		2.30		450							
400		22.9		-25		3.9		1.55		2.31		-30		4.6		2.52		3.6		2.3		-7.2		5.3		6.8		2.37		-2.0		400							
350		-3.7		-5.4		1.56		8.5		-4.3		2.61		3.2		-3.6		5.9		2.32		6.9		-3.5		-5.5		2.28		6.3		350							
300		29.4		-4.8		1.58		60		2.95		-5.3		2.61		3.6		2.98		7.0		3.02		-4.9		2.25		6.3		2.01		300							
250		-4.7		171		58		-4.3		-5.5		2.50		4.0		-6.0		2.33		5.7		-6.3		2.21		7.1		-6.6		2.24		250							
200		38.3		-4.9		1.85		50		38.3		-5.8		2.54		3.6		3.85		6.1		3.88		-6.4		2.23		6.1		3.86		200							
170		-5.0		192		37		-4.6		-6.0		2.54		3.5		-6.2		2.32		3.9		-6.5		2.36		4.9		-6.5		2.35		170							
150		-5.3		192		34		-4.8		-5.7		2.53		2.6		-6.2		2.36		4.2		-6.4		2.23		3.7		-6.7		2.29		150							
130		-5.3		192		27		-5.0		-5.7		2.55		1.8		-6.0		2.41		3.2		-6.6		2.25		3.1		-6.8		2.25		130							
110		-5.6		205		28		-5.1		-6.2		2.55		2.1		-6.0		2.21		3.2		-6.3		2.24		3.1		-6.9		2.24		110							
100		53.4		-5.6		205		15		5.31		-5.2		2.52		19		5.32																					

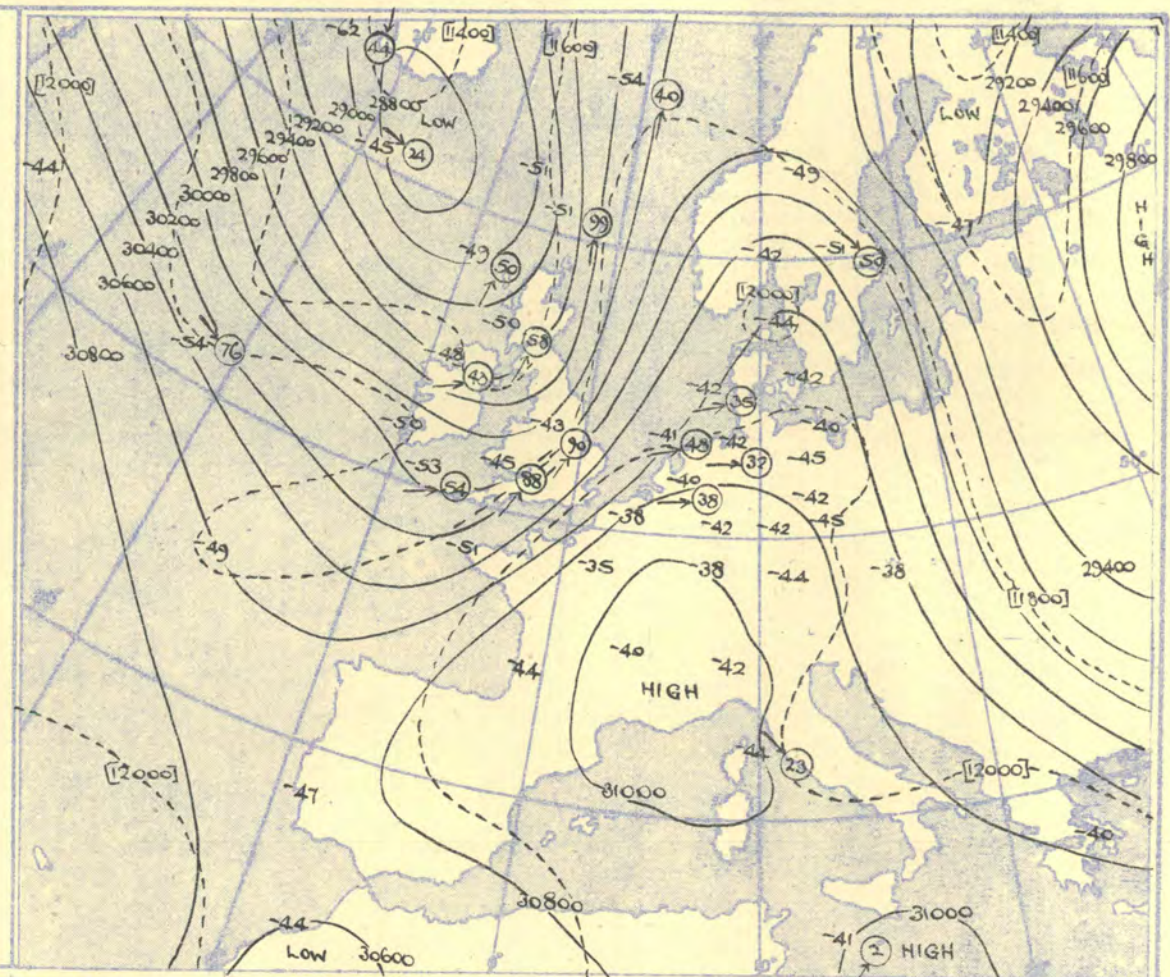
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb and 300 mb. levels at about 03 h. GMT.



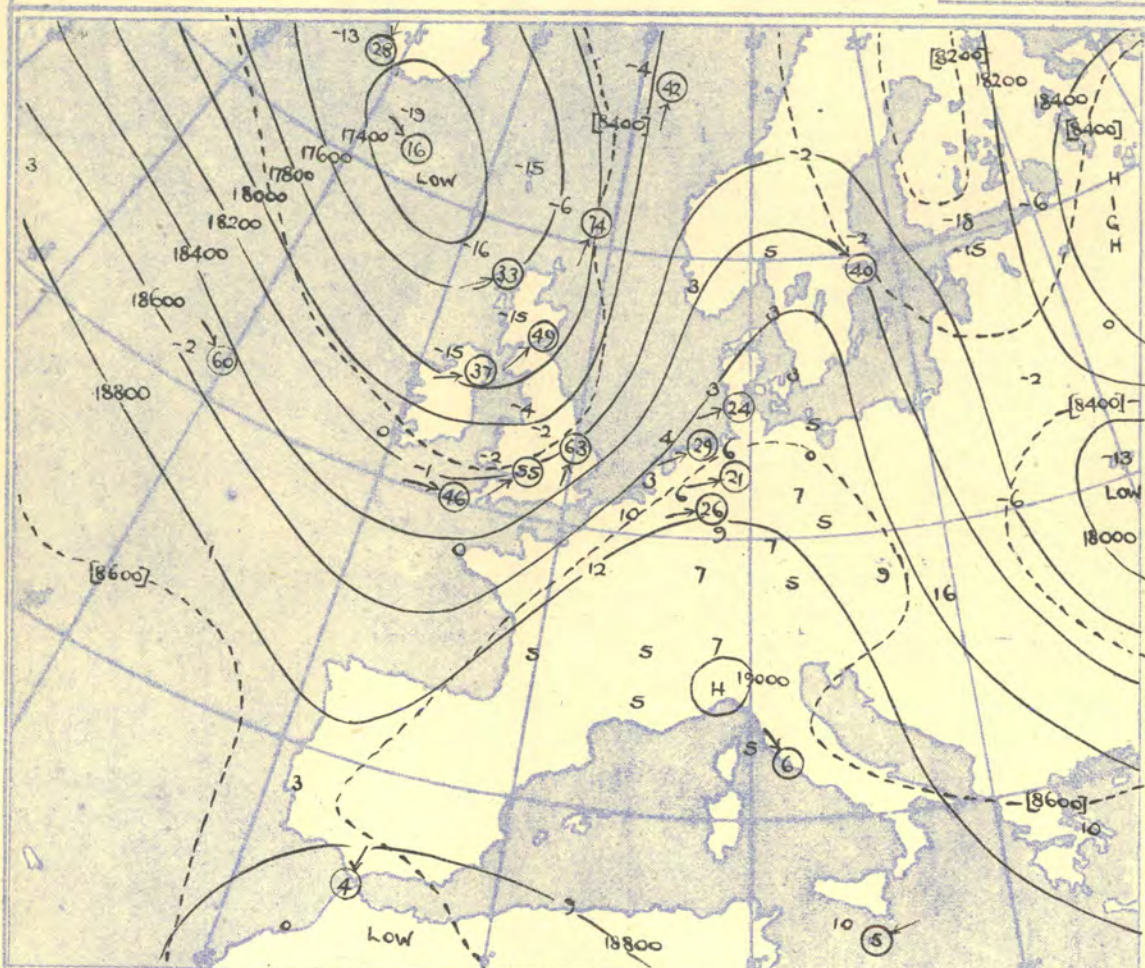
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

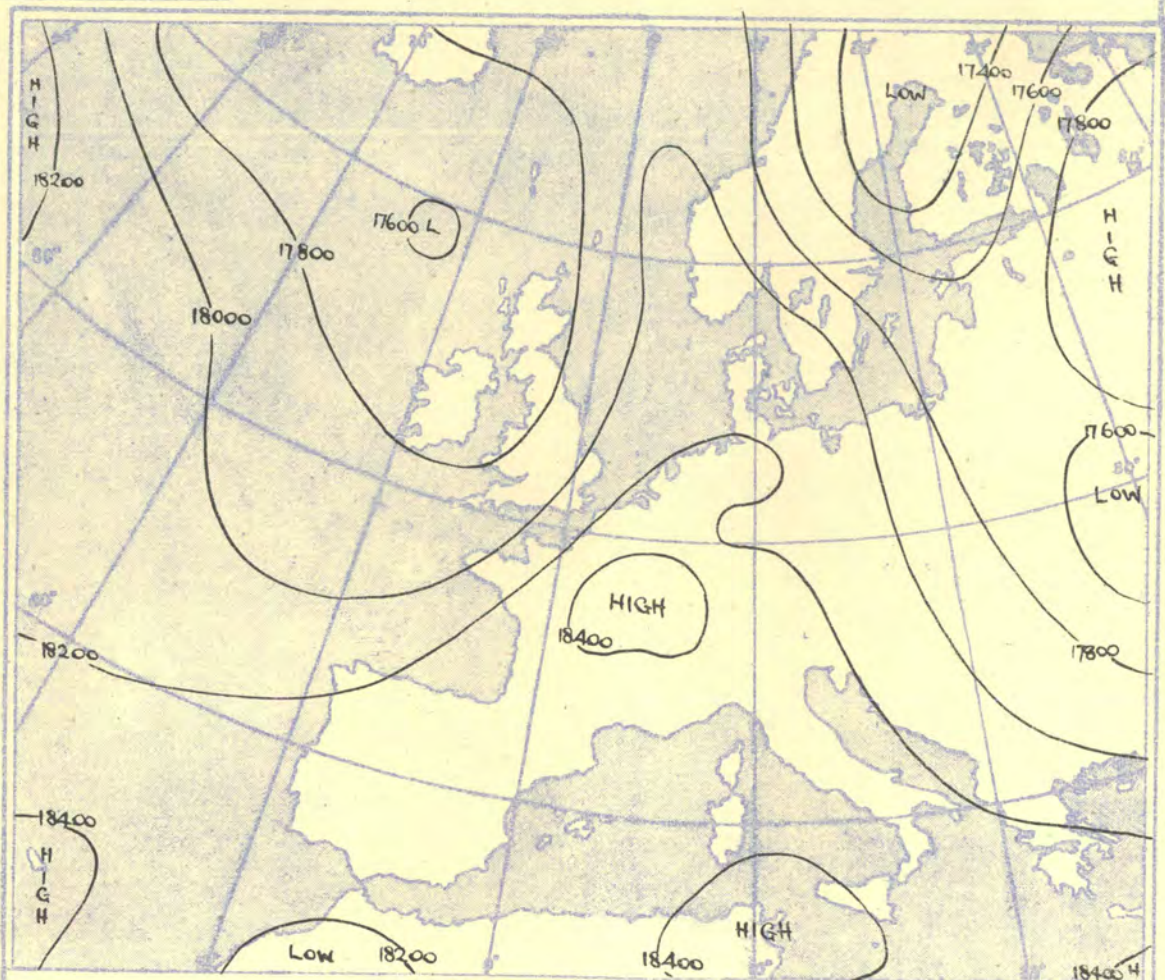
100 80 60 40 20 10 0 knots



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

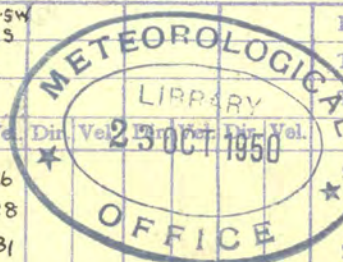
Time M.S.L.	48-2N 20-5W	49-5N 14-7W	43-2N 17-0W	39-5N 12-2W	Time M.S.L.	48-2N 20-5W	49-5N 14-7W	43-2N 17-0W	39-5N 12-2W
1023	mb	1016	mb	1029	mb	1023	mb	1016	mb
1019	mb	1012	mb	1025	mb	1019	mb	1012	mb
750	mb	810	mb	740	mb	750	mb	810	mb
Pressure mb	Height ft./100	Height ft./100	Height ft./100	Height ft./100	Pressure mb	Height ft./100	Height ft./100	Height ft./100	Height ft./100
Surf	52 52	48 48	59 51	62 52	Surf	52 52	48 48	59 51	62 52
1000	48 48	43 43	56 48	59 59	1000	48 48	43 43	56 48	59 59
950	44 44	45 44	47 47	59 59	950	44 44	45 44	47 47	59 59
900	42 42	39 39	41 41	42 42	900	42 42	39 39	41 41	42 42
850	36 36	35 35	41 24	39 39	850	36 36	35 35	41 24	39 39
800	33 33	31 31	39 28	40	800	33 33	31 31	39 28	40
750	32 31	28 27	33 23	38	750	32 31	28 27	33 23	38
700	29 29	23 23	28 22	37	700	29 29	23 23	28 22	37
650	24 24	18	23	30	650	24 24	18	23	30
600	18 18	11	16	23	600	18 18	11	16	23
550	10	00	08	13	550	10	00	08	13
500	186 01	183 07	188 00	189 02	500	186 01	183 07	188 00	189 02
450					450				
400					400				
350					350				
300					300				
250					250				
200					200				
170					170				
Cloud	Cloud.	Cloud.	Cloud.		Cloud	Cloud.	Cloud.	Cloud.	
4/8 Sc	8/8 Sc	7/8 Sc	4/8 Sc		4/8 Sc	8/8 Sc	7/8 Sc	4/8 Sc	
970-920mb	960-800mb	900-870mb	940-930mb		970-920mb	960-800mb	900-870mb	940-930mb	
8/8 NS	8/8 Ac	5/8 Ac	4/8 Cb		8/8 NS	8/8 Ac	5/8 Ac	4/8 Cb	
940-TNR.	610-560mb	580-550mb	920-790mb		940-TNR.	610-560mb	580-550mb	920-790mb	
Surf wind	3/8 CS NR.	6/8 AS	Surf wind.		Surf wind	3/8 CS NR.	6/8 AS	Surf wind.	
W. 17-21kts	Surf wind.	500-450mb	N. 11-16kts.		W. 17-21kts	Surf wind.	500-450mb	N. 11-16kts.	
light rime	NW 17-21kts	Surf wind.	light rime.		light rime	NW 17-21kts	Surf wind.	light rime.	
or frost in cloud	light rime.	N. 7-10kts	180 thermal		or frost in cloud	light rime.	N. 7-10kts	180 thermal	
680-600mb	610-560mb	900-850mb	800-40°		680-600mb	610-560mb	900-850mb	800-40°	

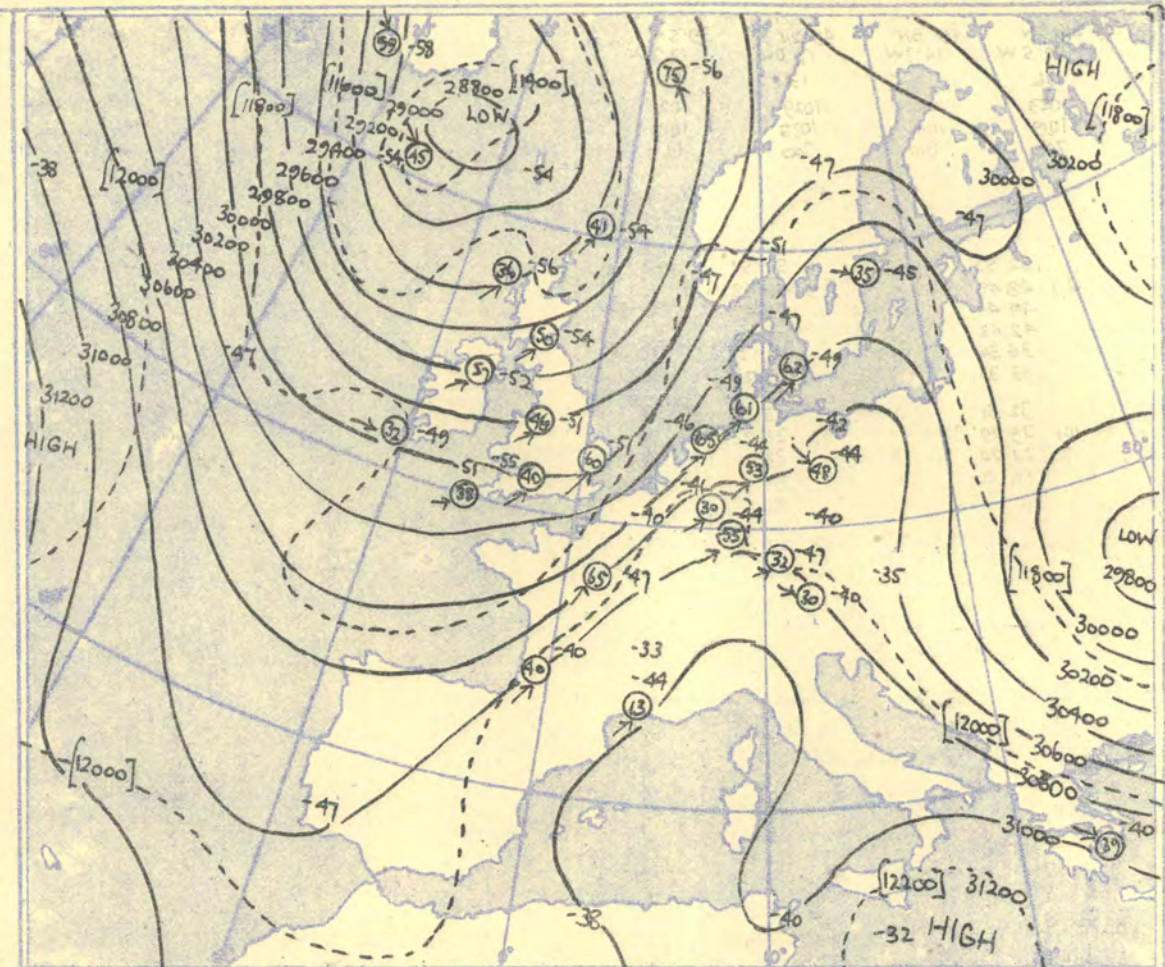
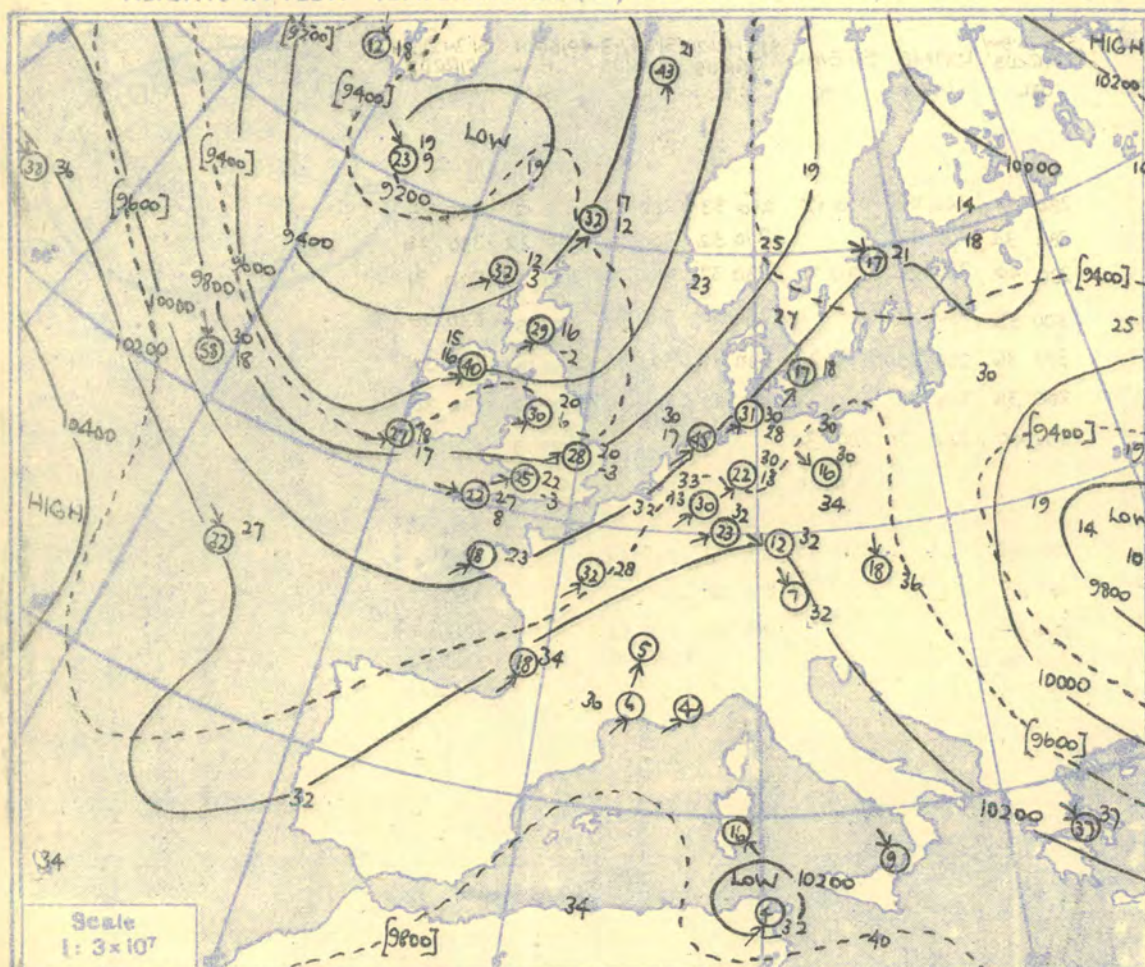
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

Place	51N 20-9W CIRRUS	LYMPHE	ST. EVAL	51-2N 21-2W CIRRUS	51-6N 21-3W CIRRUS	BIGGIN HILL	51-7N 21-5W CIRRUS	Place
Time	03h	09h	09h	09h	15h	15h	21h	Time
Type								Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	280 34	240 06	270 17	270 33	280 27	220 12	330 26	Surf.
1,000	280 34	260 20		270 32	300 26	250 22	330 28	1,000
2,000	280 40	260 19	280 21	280 37	320 28	250 28	320 31	2,000
3,000	300 33	250 22		280 40	310 32	250 15	330 28	3,000
4,000	310 36	250 23	280 23	290 48	320 28	260 19	330 32	4,000
5,000	300 38	240 25		280 49	310 40	250 22	330 30	5,000
6,000	290 40	240 27	280 30			250 19		6,000
8,000			270 28			240 22		8,000
10,000	300 50		250 25	300 56	320 58	230 27	330 45	10,000
14,000	300 53		270 30	290 51	330 54		340 49	14,000
18,000	300 60		(12-000)	320 56	320 57		330 45	18,000
24,000	320 68			300 60	320 62		330 68	24,000
30,000	290 76				(23-000)		330 91	30,000
40,000	(35-000)						(25-000)	40,000
50,000								50,000
NEPHOSCOPE OBSERVATIONS								
Place	Holyhead							Place
Time Type	09h Ac							Time Type
Dir. Vel.	260 30							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	CIRRUS	CIRRUS	CIRRUS	CIRRUS	Ship
Lat/Long	60.5N 15.8W	60.5N 15.7W	60.5N 15.6W	60.5N 15.6W	51.0N 20.9W	51.2N 21.2W	51.6N 21.3W	51.7N 21.5W	Lat/Long
Time M.S.L.	03h	G.M.T.	09h	G.M.T.	15h	G.M.T.	21h	G.M.T.	Time M.S.L.
Surf	987	mb	989	mb	992	mb	997	mb	Surf
Pressure	840	mb	840	mb	830	mb	800	mb	Pressure
Height ft./100	Temp. °F	Dew °F	Wind Dir. Vel.	Temp. °F	Dew °F	Wind Dir. Vel.	Temp. °F	Dew °F	Height ft./100
Surf	49 45	240 18	49 44	275 20	50 44	300 20	49 44	298 25	Surf
1000	45 40	281 20	46 37	287 24	45 39	314 25	46 40	308 33	1000
950	24 29	291 18	25 26	39 30	294 25	26 2	27 40	312 24	950
900	34 32	293 16	33 24	295 25	35 30	314 27	34 30	323 35	900
850	28 26	287 19	56 7	294 21	31 24	314 27	58 8	29 24	850
800	23 20	285 20	21 06	294 20	25 16	313 29	24 15	342 35	800
750	16 13	284 16	91 0	15 06	305 23	91 8	16 09	331 35	750
700	10 00	285 16	08 03	307 23	13 03	312 28	11 01	323 39	700
650	01 05	277 17	129 01	11 308	05 10	313 30	03 10	320 35	650
600	08 15	273 16	08 17	309 18	03 19	321 35	06 19	321 35	600
550	173 14	283 12	18 27	307 24	15 29	326 37	17 27	323 36	550
500	31 40	279 12	30 40	309 24	29 41	326 39	28 34	324 42	500
450	22 42	274 16	22 43	313 24	22 43	325 42	27 39	324 46	450
400	47	280 30	55	321 24	54	325 49	52	323 51	400
350	287 45	275 24	297 51	315 25	289 54	320 45	290 49	321 54	350
300	43	276 17	47	308 28	46	319 37	44	317 49	300
250	377 45	280 22	77 47	307 29	378 47	301 37	380 47	316 44	250
200	47	281 20	48	308 26	49	289 37	49	317 45	200
170	50	280 15	52	308 25	52	295 33	50	310 33	170
150	53	281 14	54	305 22	52	304 30	55	314 30	150
130	59	290 18	59	300 18	57	313 26	56	312 27	130
110	61	283 19	527 59	299 17	529 59	321 24	530 47	309 26	110
90	60	283 10	64	291 14	62	298 19	64	306 30	90
80			64	295 13	64	304 21			80
70			66	294 11	65	313 21			70
60						313 18			60
Isothermal 492 - 400 mb - 42°									
Isothermal 862 - 850 mb 35°									
Inversion 745 mb 29° - 735 mb 30°									
Isothermal 850 - 835 mb 36°									
577 - 555 mb 09°									
Inversion 805 mb 32° - 779 mb 36°									
Isothermal 1012 - 850 mb 52°									
757 - 748 mb 41°									
712 - 700 mb 36°									
657 - 620 mb 19°									
563 - 554 mb 09°									
300 - 297 mb 5°									
Tropopause II 353 mb - 47° 25,100'									
I 356 mb - 55° 24,900'									
I 332 mb - 58° 26,700'									
I 330 mb - 57° 26,900'									
II 260 mb - 65° 35,400'									
I 230 mb - 63° 36,000'									
II 276 mb - 51° 32,000'									
I 207 mb - 74° 38,300'									
Tropopause									



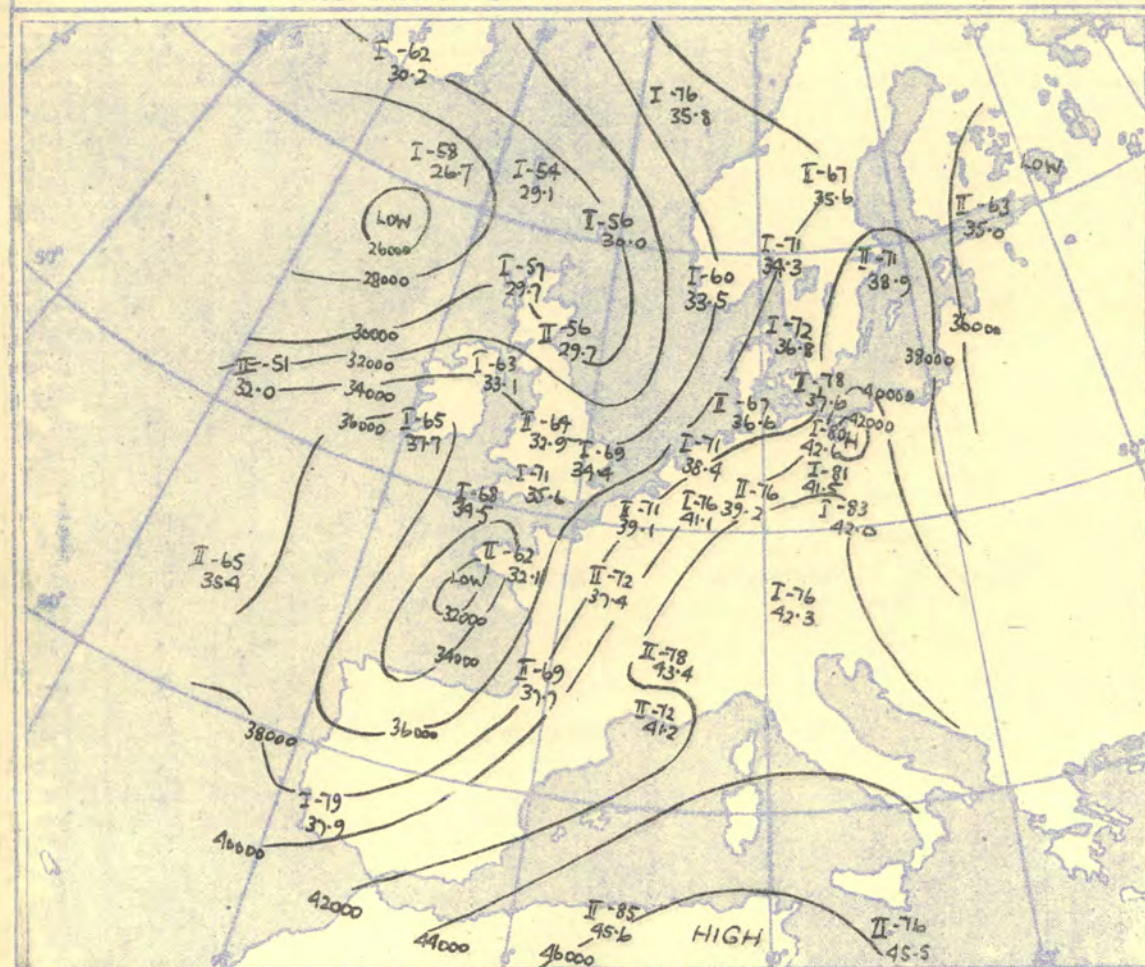


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

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.



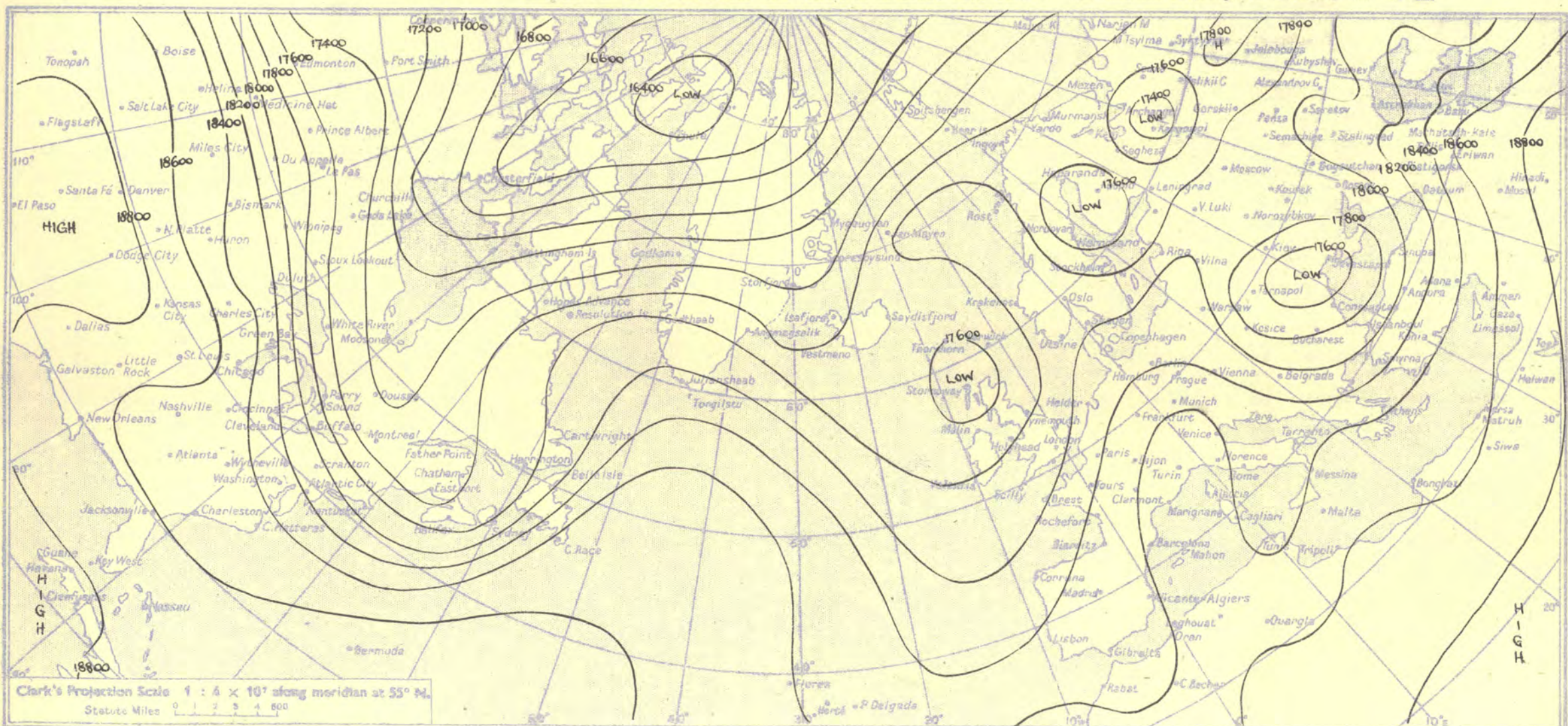
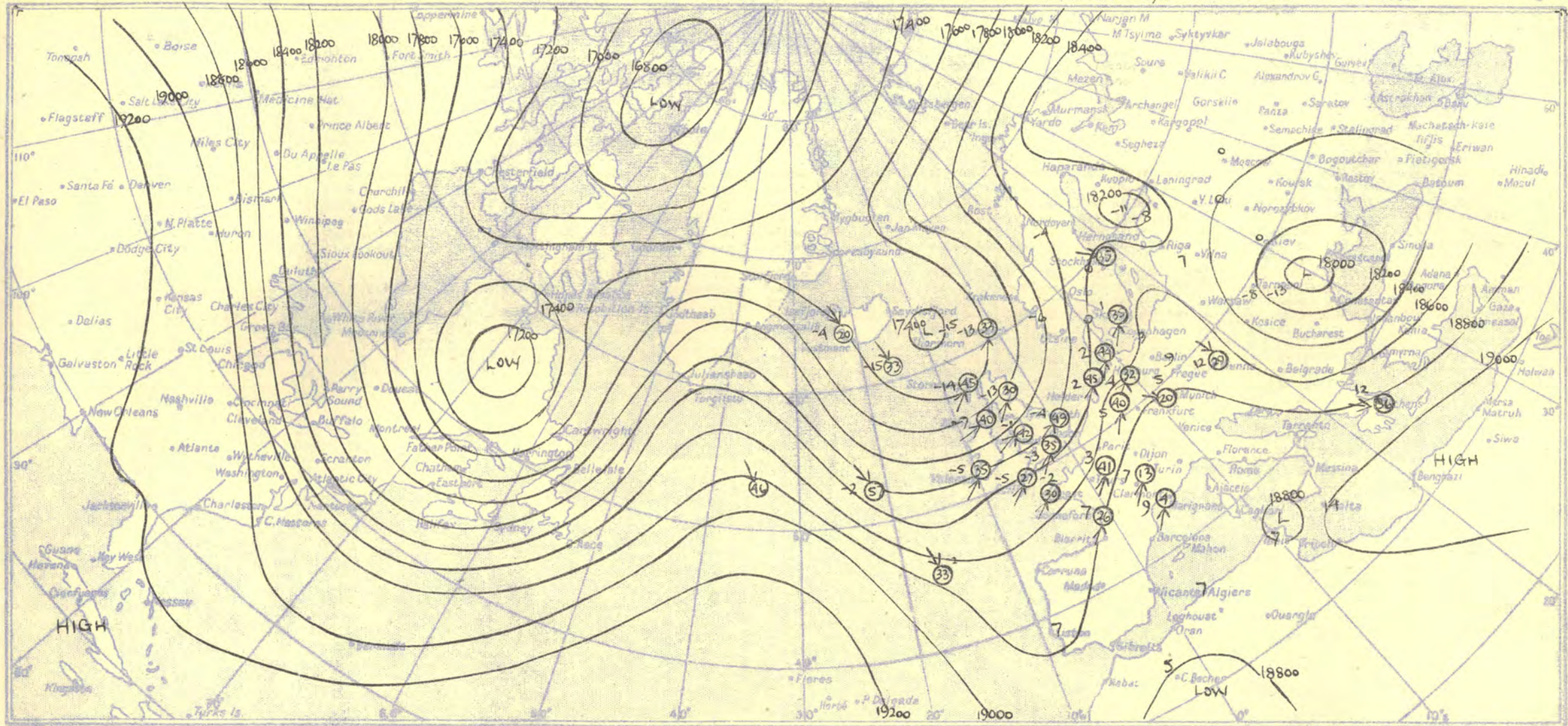
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough has become broader with indication of double structure and some slight increase in the extent of the 176° cold pool.

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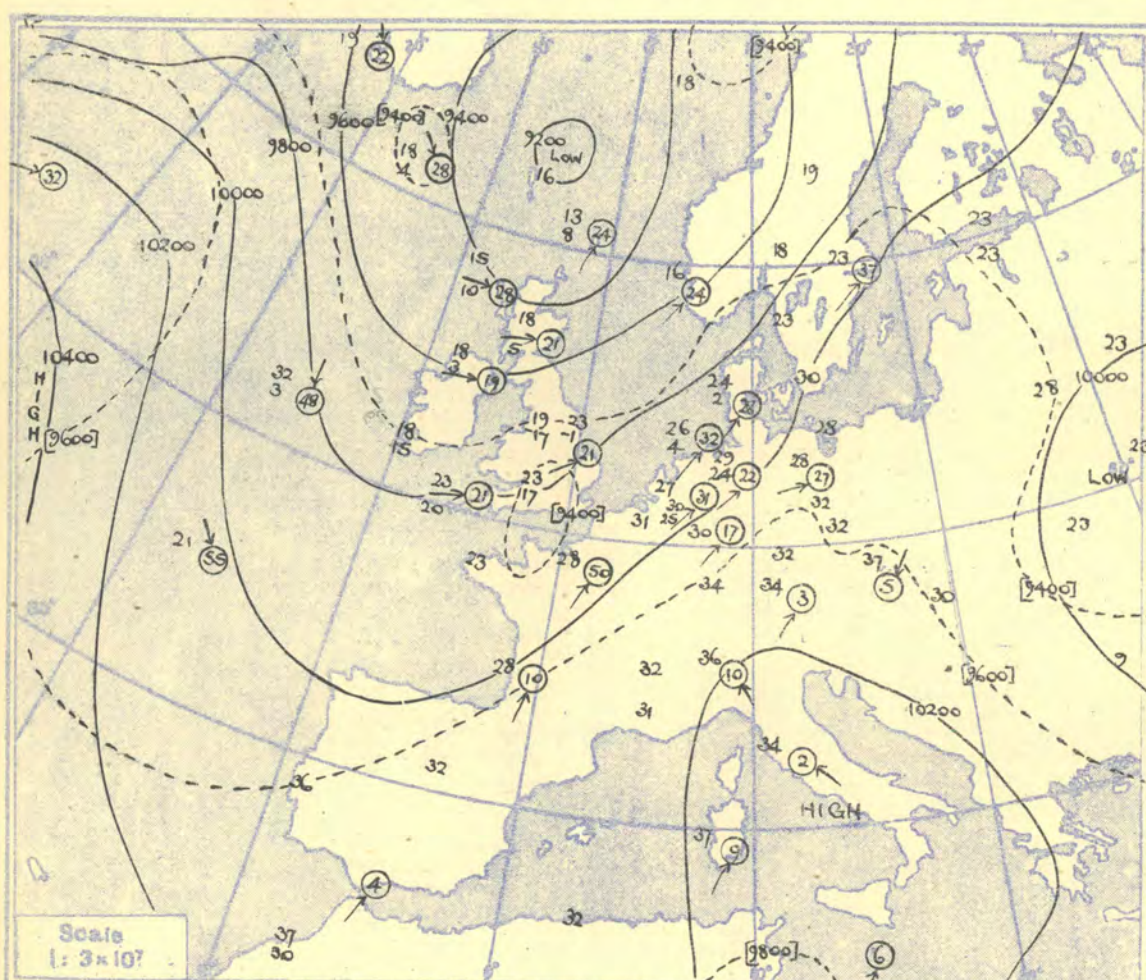
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION									
Time M.S.L.		15h. 999.6		G.M.T.		15h. 999.6		G.M.T.		15h. 1005.1		G.M.T.		15h. 1008.1		G.M.T.		15h. 1011.6		G.M.T.		15h. 1013.7		G.M.T.		15h. 1014.9		G.M.T.		15h. 1016.7		G.M.T.		15h. 1012.5		G.M.T.		Time M.S.L.									
Surf		989.8		mb		997.8		mb		1004.3		mb		999.5		mb		1009.6		mb		1009.2		mb		999.0		mb		1006.3		mb		1011		Surf											
Pressure		819		mb		865		mb		856		mb		840		mb		830		mb		837		mb		830		mb		832		mb		830		Pressure											
Height ft./100		02.7		52		46		220		16		00.5		48		42		230		12		00.2		53		43		270		14		02.3		52		42		225									
Temp. °F.		01.1		47		43		216		23		-01.0		43		37		234		26		01.4		52		43				25		02.2		46		38		230									
Dew °F.		41		35		213		21		28.2		36		33		229		27		29.1		38		32		242		29		30.7		39		33		234											
Wind Dir.		24		30		209		24		30		30		31		26		242		30		31		61.8		28		20		246		33		62.8		30		16		251							
Vel. knots		26		59.1		27		21		22.9		29		60.8		24		20		242		31		61.8		28		20		246		33		62.8		30		16		251							
Height ft./100		24		19		200		31		19		11		230		32		21		5		232		32		16		2		233		29		96.1		15		10		254							
Temp. °F.		17		12		197		32		93.3		12		03		228		32		95.0		16		2		233		27		96.1		15		10		257		40		263							
Dew °F.		11		02		194		31		04		07		228		32		9		-13		236		27		15		00		257		40		263		36		20		258							
Wind Dir.		33		13.2		-02		-14		233		34		13.4		2		-12		242		29		135		06		-21		253		40		13.6		11		-14		258							
Vel. knots		32		-07		-20		228		38		-7		-23		241		26		00		-29		258		44		07		-20		263		41		06		-35		239							
Height ft./100		10		00.6		54		40		220		10		00.6		54		40		220		10		00.6		54		40		220		10		00.6		54		40		220							
Temp. °F.		05.2		53		41		222		27		05.2		53		41		222		27		05.2		53		41		222		27		05.2		53		41		222									
Dew °F.		47		37		246		15		48		40		244		20		47		41		246		21		32.7		41		34		246		21		32.7		41		34		246					
Wind Dir.		22		34		28		246		24		35		27		240		25		63.9		28		17		239		20		64.3		29		24		273		19		62.7		29		27		252	
Vel. knots		25		63.9		28		17		239		25		63.9		28		17		239		20		64.3		29		24		273		19		62.7		29		27		252							
Height ft./100		22		17		239		24		28		22		17		239		24		28		22		17		239		24		28		22		17		239		24		28		22					
Temp. °F.		22		17		239		24		28		22		17		239		24		28		22		17		239		24		28		22		17		239		24		28		22					
Dew °F.		25		98.8		27		08		261		22		97.1		18		17		248		22		97.1		18		17		248		22		97.1		18		17		248							
Wind Dir.		35		20		-7		252		30		20		-7		252		30		20		20		-7		252		30		20		20		-7		252		30		20		20					
Vel. knots		35		20		-7		252		30		20		-7		252		30		20		20		-7		252		30		20		20		-7		252		30		20		20					
Height ft./100		43		13.8		15		24		254		43		13.8		15		24		254		43		13.8		15		24		254		43		13.8		15		24		254							
Temp. °F.		07		-34		247		34		06		-35		239		47		18.3		-03		34		243		35		18.4		-05		26		246		27		18.1		-05		27		252			
Dew °F.		17		47		44		259		18		47		44		259		18		47		44		259		18		47		44		259		18		47		44		259							
Wind Dir.		17		37		40		34		246		21		32.7		41		34		246		21		32.7		41		34		246		21		32.7		41		34		246							
Vel. knots		17		37		40		34		246		21		32.7		41		34		246		21		32.7		41		34		246		21		32.7		41		34		246							
Height ft./100		24		35		27		240		24		35		27		240		24		35		27		240		24		35		27		240		24		35		27		240							
Temp. °F.		22		34		28		246		22		34		28		246		22		34		28		246		22		34		28		246		22		34		28		246							
Dew °F.		22		34		28		246		22		34		28		246		22		34		28		246		22		34		28		246		22		34		28		246							
Wind Dir.		25		63.9		28		17		239		25		63.9		28		17		239		25		63.9		28		17		239		25		63.9		28		17		239							
Vel. knots		25		63.9		28		17		239		25		63.9		28		17		239		25		6																							

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

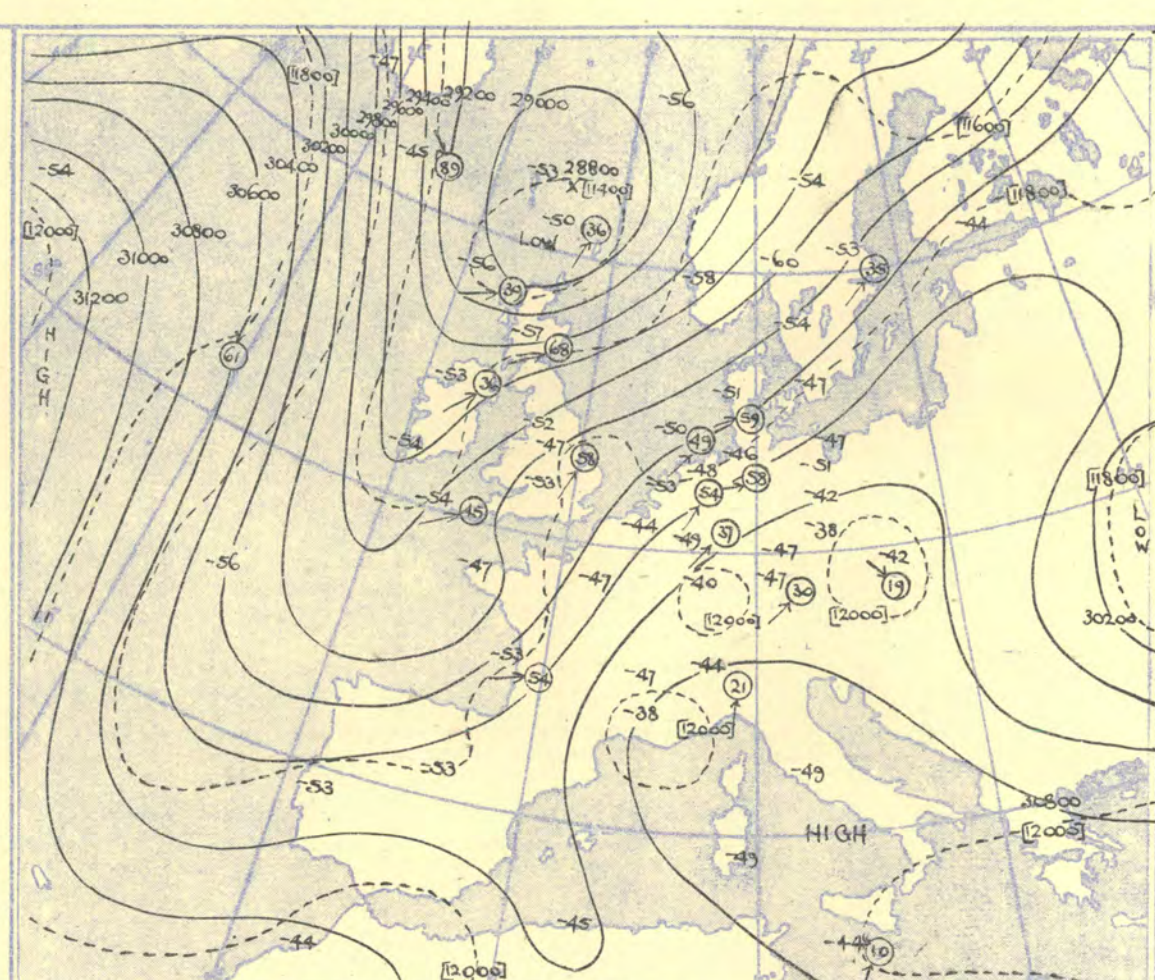


Scale
1: 3x10⁷

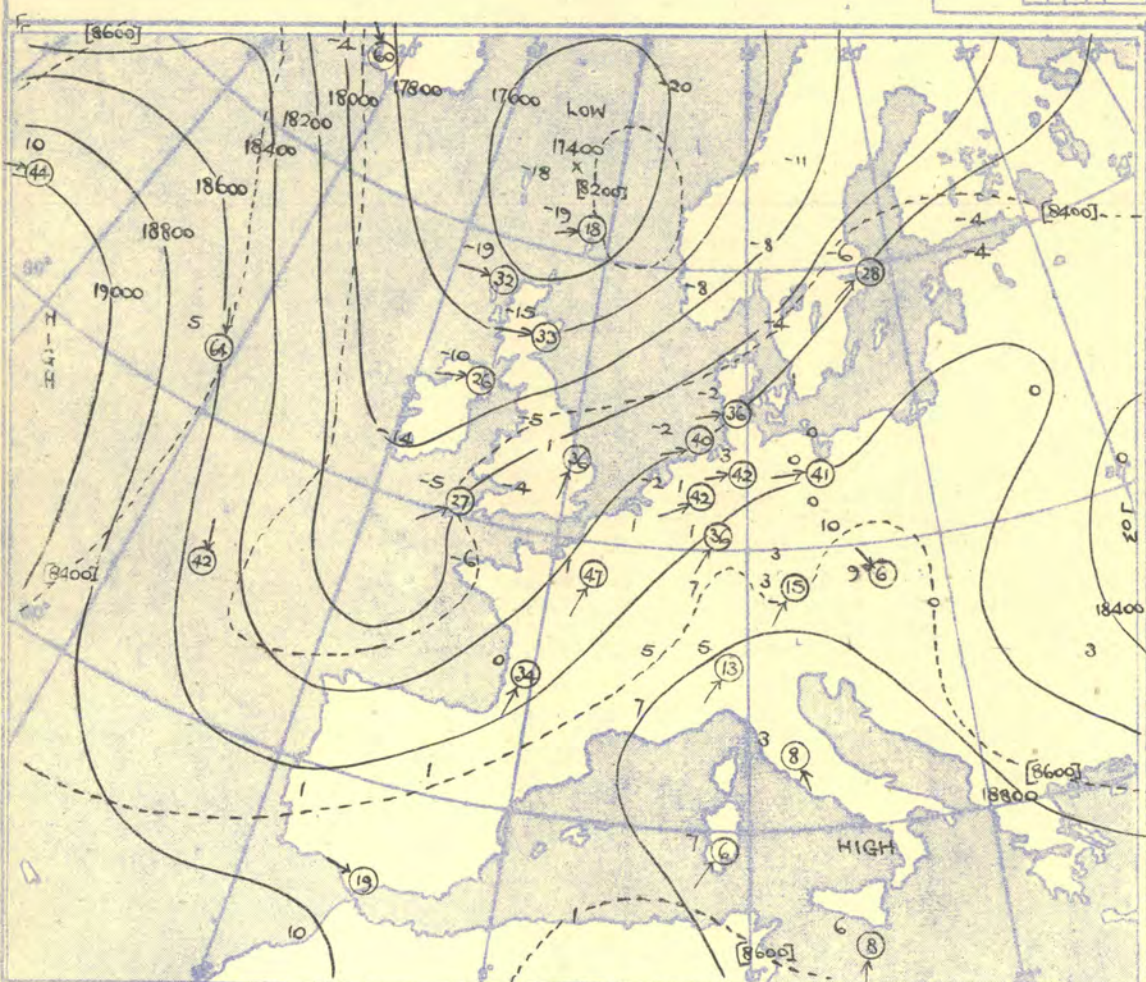
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

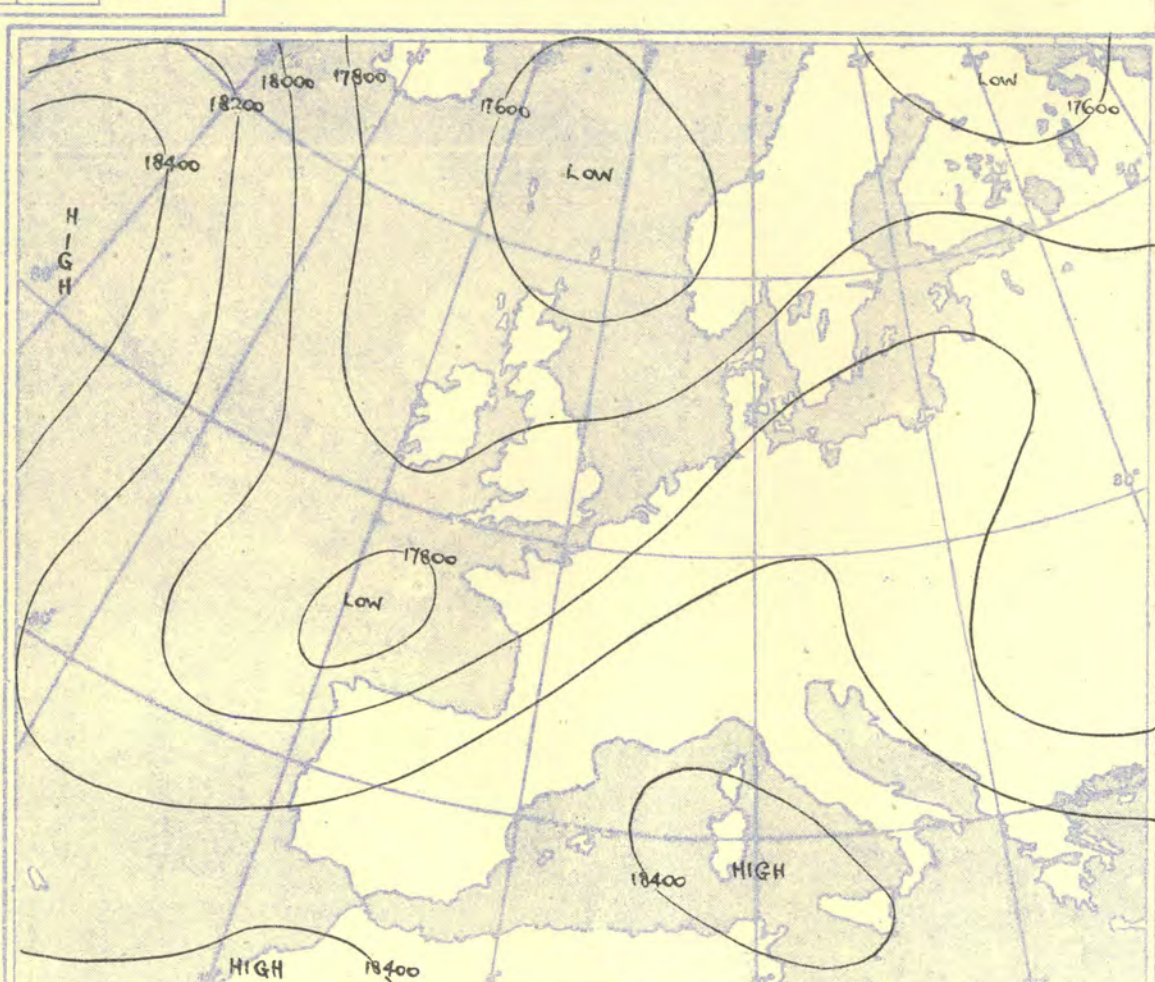
100 80 60 40 20 15 10 knots



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

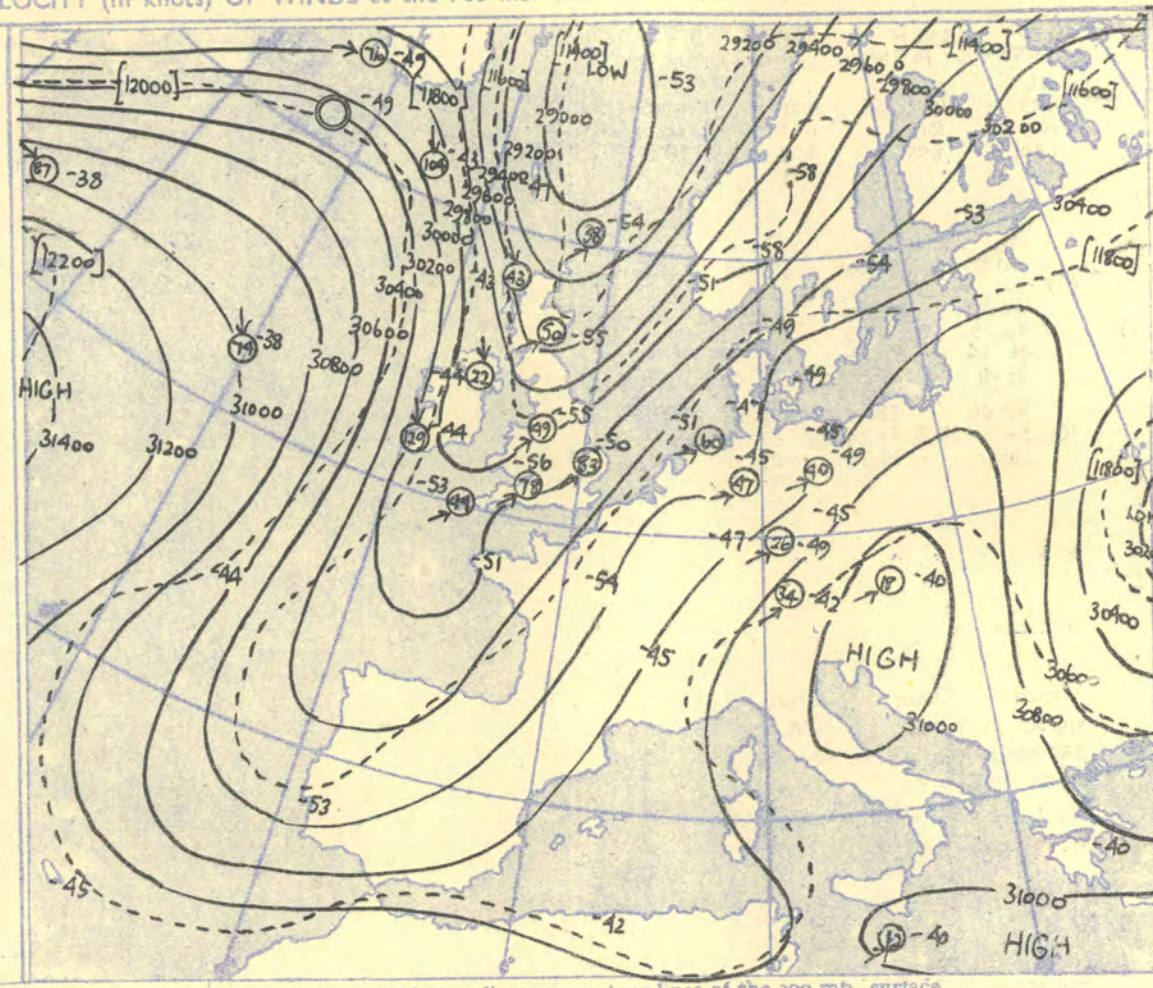
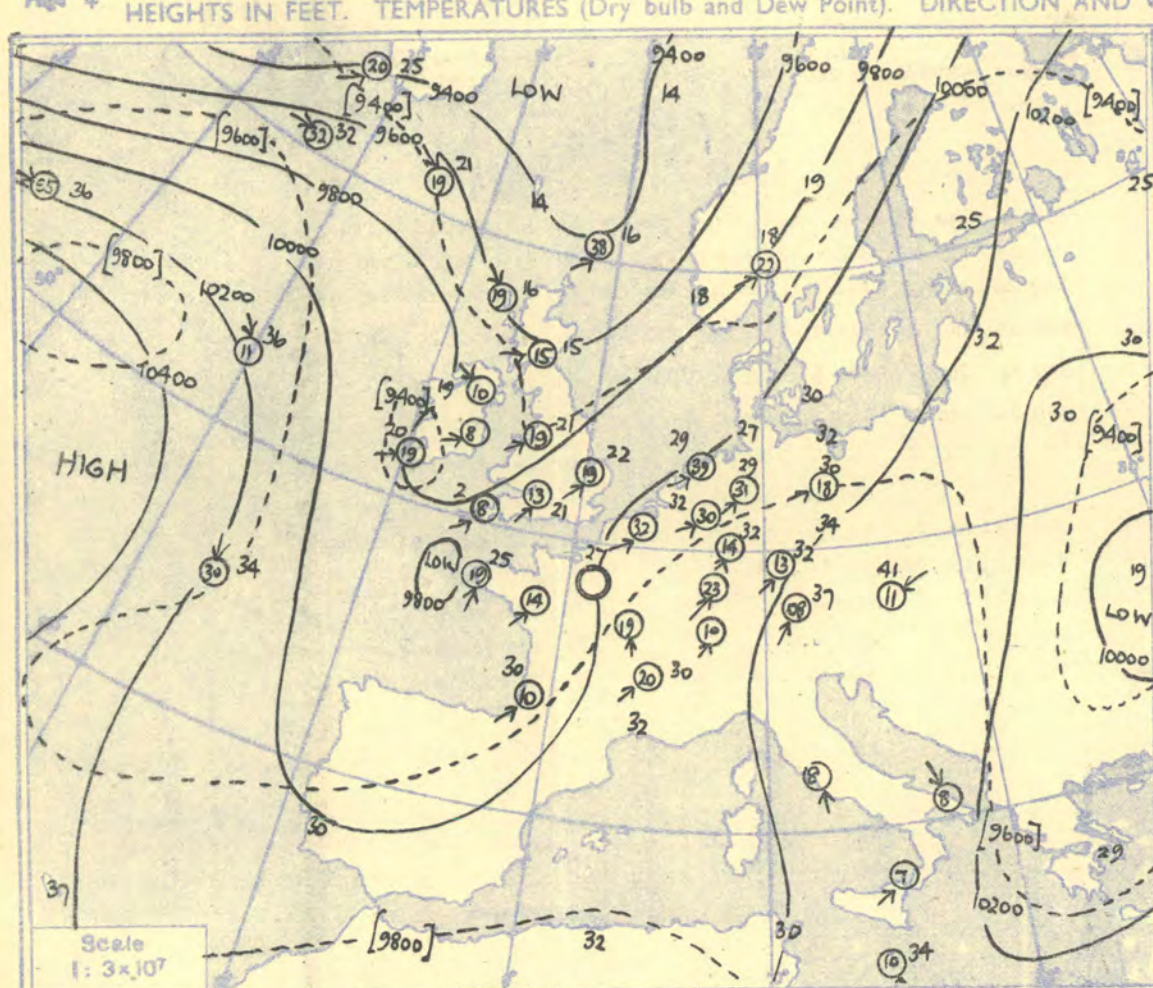


DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

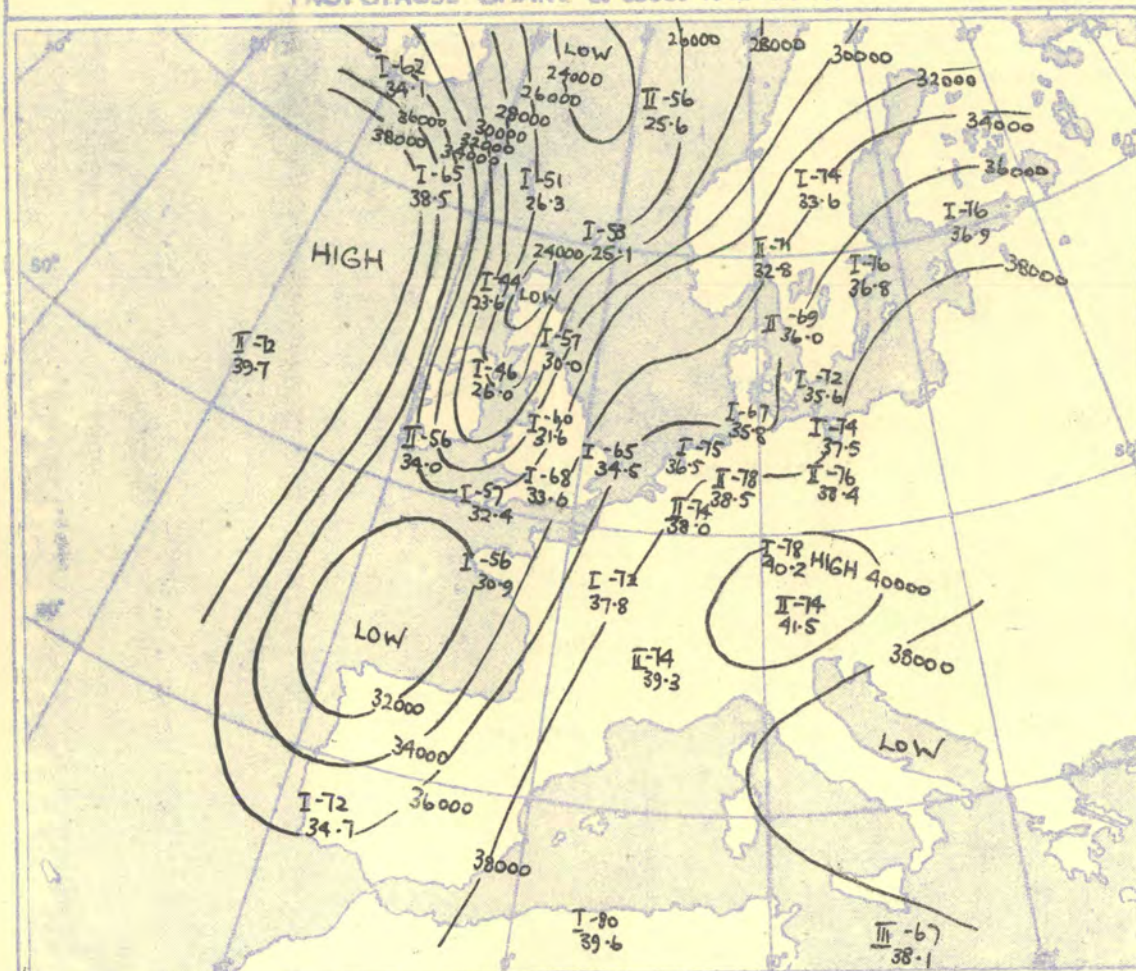
[illegible]



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

100 80 60 40 20 10 5 knots

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

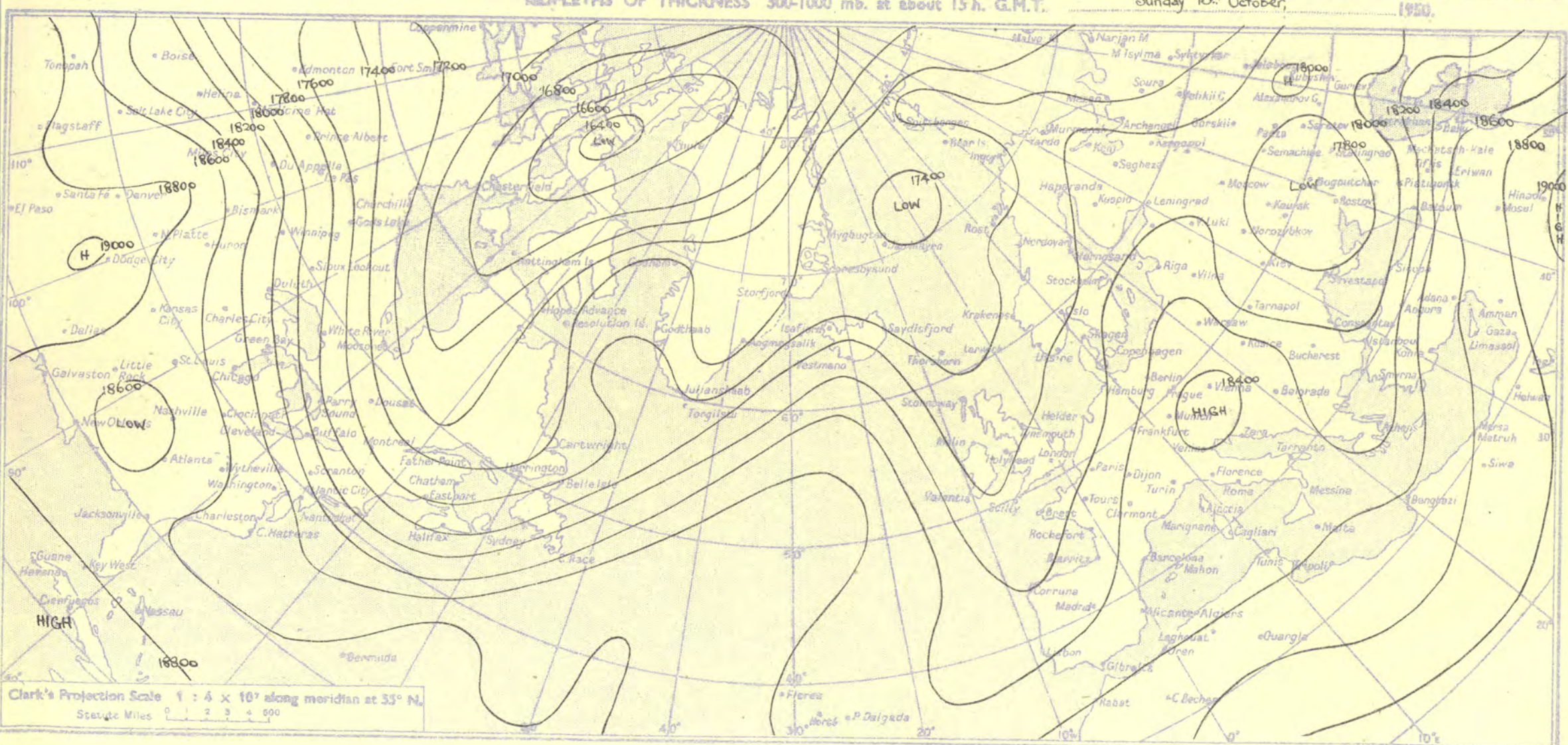
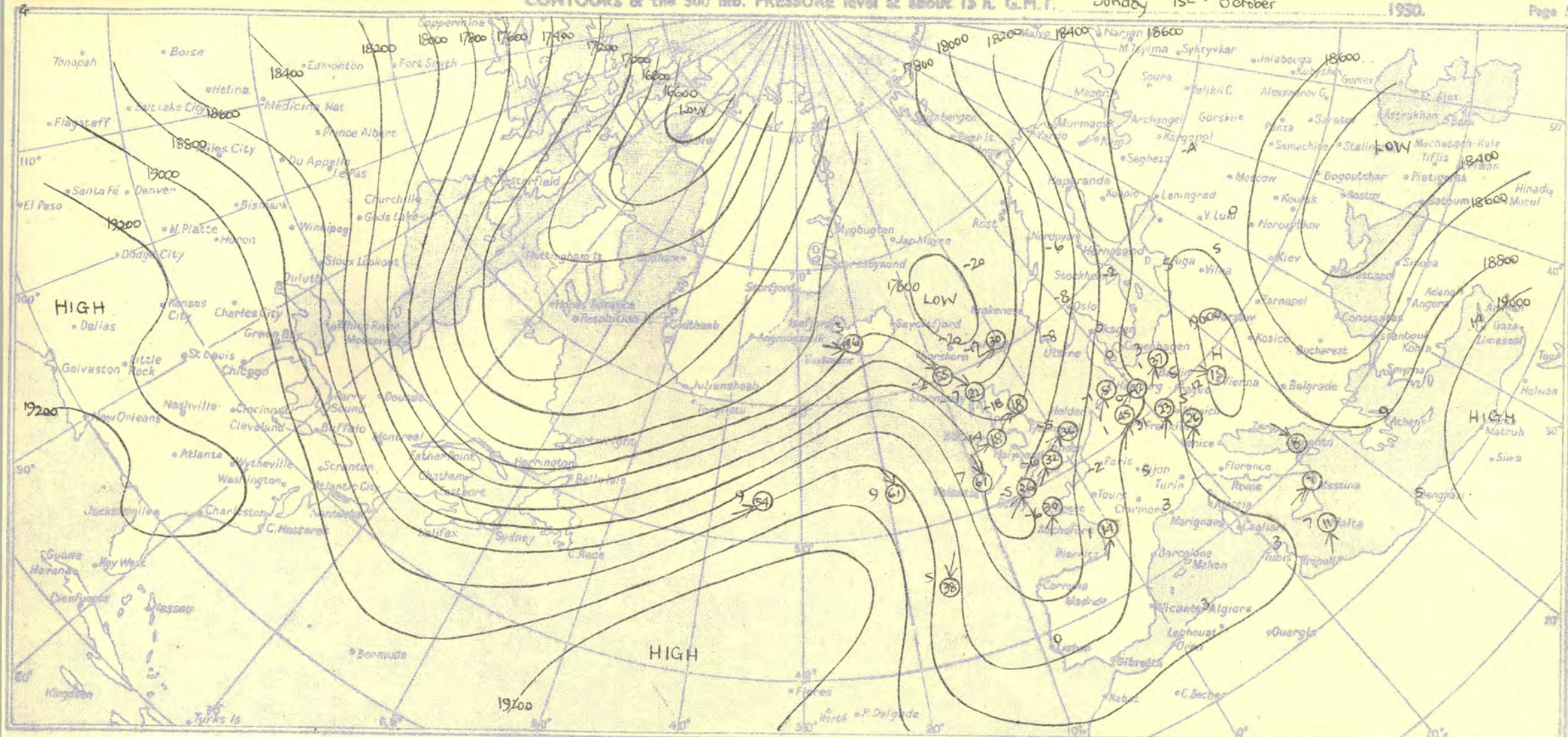


NOTES ON THE AEROLOGICAL SITUATION.

The cold trough has become exceedingly sharp due to the persistence of a warm tongue over Germany and the eastwards motion of a warm ridge across the Atlantic. There has been no subsidence at all in this trough since 13th October.

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



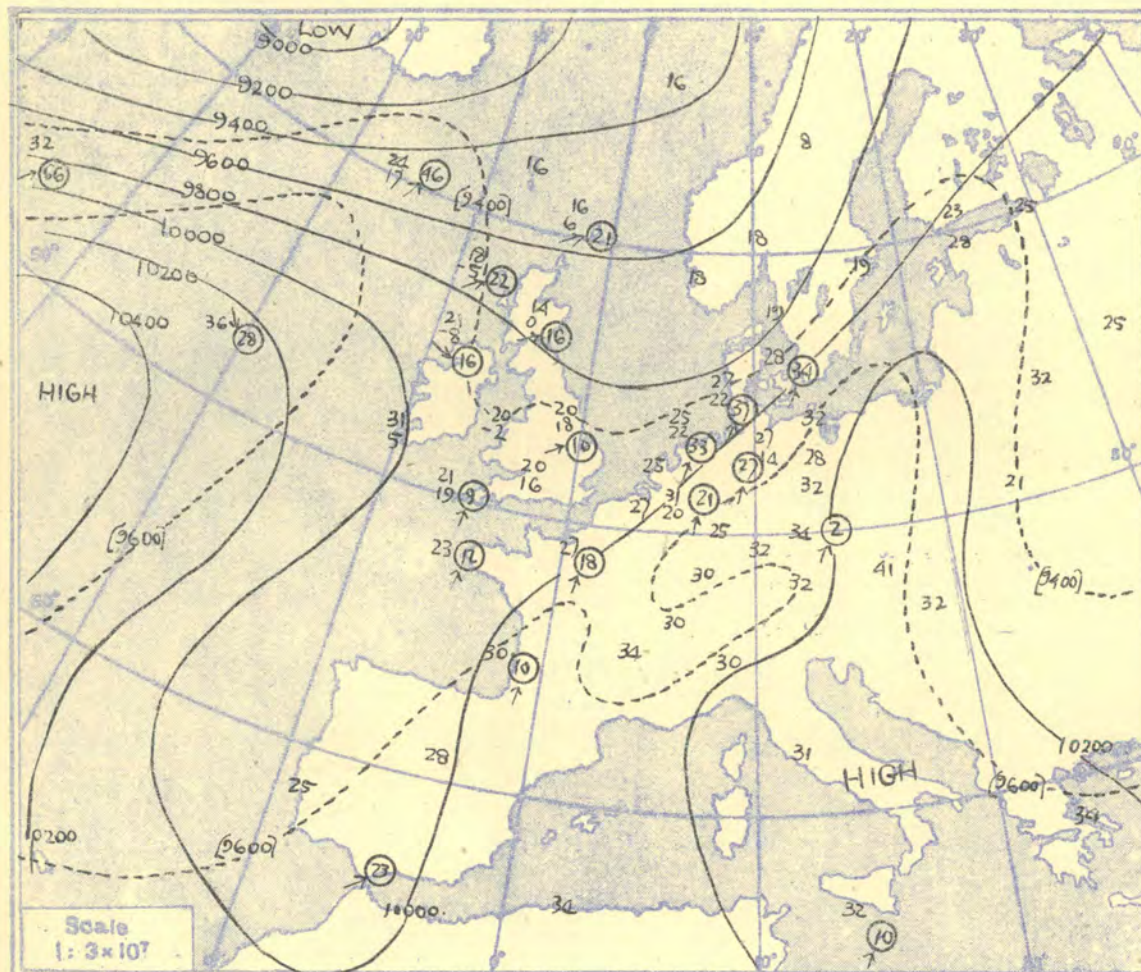
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION									
Time M.S.L. Surf Freezing	Pressure mb	5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		5h.		G.M.T.		Time M.S.L. Surf Freezing													
		1002.3	992.4	mb	mb	1006.2	1005.3	mb	mb	1009.3	1009	mb	mb	1012.6	1004.0	mb	mb	1012.5	1010	mb	mb	1015.0	1010.6	mb	mb	1014.1	998.1	mb	mb	1012.5	1002	mb	mb		1015	1013	mb	mb									
		850				828				850				813				820				800				812				790				835													
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb										
Surf	02.7	49	46	20.5	16	00.5	51	48	310	15	0.2	53	47	240	13	2.3	52	41	240	08	00.6	47	53	250	03	01.2	57	46	200	06	04.4	54	50	190	08	02.9	54	51	180	05	00.3	52	48	320	08	Surf	
1000	00.6					02.0	50	46	300	18		52	46	289	21	03.4	52	41	240	08	34	52	46	252	07	04.1	55	44		06	03.9	54	51		12	3.4	54	51		09	1000						
950		44	39	21.8	33		44	41	297	18		45	39	246	22		45	39	266	10		46	39	245	06		48	39	215	13		47	41	198	12		47	47	198	12	950						
900	29.0	38	35	22.0	32	30.5	39	34	290	18	31.0	39	32	262	22	32.1	41	35	279	11	31.9	40	36	240	08	32.7	40	33	218	14	32.5	42	35	211	10	32.0	42	42	206	10	900						
850		32	28	22.0	32		35	24	292	18		32	27	269	21		37	33	283	12		35	34	237	13		36	23	224	16		36	30	213	10		37	37	219	09	850						
800	60.0	27	22	22.1	35	61.6	29	18	295	19	62.0	27	26	271	20	63.4	30	26	280	12	63.0	30	26	236	16	63.9	32	22	225	16	63.7	30	26	211	09	63.4	33	33	222	07	63.5	30	20	350	18	800	
750		22	14	21.9	37		22	11	293	18		21	08	270	18		24	18	281	10		25	22	240	18		27	19	240	15		25	21	205	13		28	28	226	06	750						
700	24.3	16	06	21.9	38	95.9	16	06	292	19	96.3	15	02	269	15	09.8	19	05	290	10	97.7	21	14	239	19	98.7	22	14	242	19	98.4	21	16	206	13	98.2	24	20	224	08	98.0	20	02	347	17	700	
650		09	00	22.1	39		10	01	292	21		09	-01	270	14		12	-03	280	10		13	08	230	26		16	09	211	25		16	09	211	17		19	11	216	15		13	7	338	17	650	
600	13.3	01	-10	22.2	38	13.4	03	-08	290	20	13.5	02	-14	269	12	13.7	04	-13	277	09	13.7	07	02	227	27	13.8	12	03	221	27	13.7	10	03	218	24	13.8	12	-01	219	21	13.7	7	-20	325	20	600	
550		-07	-21	21.9	36	-7	-18	282	21		-07	-18	253	12		-04	-21	273	13		-01	-10	235	26		04	-04	220	30		02	-7	216	25		03	-05	215	26		0	-31	336	31	550		
500	17.7	-17	-37	21.6	30	17.9	-17	-28	284	22	17.9	-16	-36	234	18	18.1	-14	-32	256	18	18.1	-09	-21	236	32	18.3	-05	-12	221	36	18.2	-6	-17	222	32	18.3	-05	-14	211	26	18.2	-1	-41	353	61	500	
450		-29	-45	21.1	33		-29	-41	280	21		-25	-65	234	25		-23	-42	254	23		-19	-28	229	41		-15	-22	221	45		-16	-30	218	39		-16	-35	213	33		-8	-50	354	93	450	
400	22.8	-41	-20	20.4	32	23.0	-41		278	24	23.0	-39	-57	233	28	23.3	-34	-52	271	20	23.4	-31	-39	227	47	23.6	-24	-32	221	54	23.5	-26	-45	221	50	23.5	-27	-41	213	45	23.5	-17	-53	358	94	400	
350		-52		20.9	34		-43		319	33		-50		231	44		-45		299	29		-44		227	48		-36	-50	222	65		-41		218	60		-38	-52	215	47		-30		002	110	350	
300	29.1	-54		22.2	38	29.4	-43		324	43	29.3	-55		225	50	29.7	-44		335	42	29.7	-55		220	49	30.1	-50		220	83	29.9	-56		212	78	30.0	-53		216	44	30.1	-44		357	129	300	
250		-47		24.6	32		-45		330	46		-53		258	30		-48		336	43		-60		234	40		-66		226	87		-67		213	69		-65		236	23		-56		006	118	250	
200	38.0	-49		25.2	13	38.3	-48		325	37	38.1	-54		268	27	38.6	-52		321	43	38.5	-54		249	27	38.7	-55		228	45	38.5	-57		232	36	38.7	-54		281	17	38.9	-59		-58			200
170		-52		26.7	16		-50		318	30		-54		276	25		-53		313	31		-56		261	24		-55		236	38		-51		247	31		-57		285	16					170		
150		-51		25.6	15	41.6	-52		320	30		-55		282	30	44.8	-58		322	25		-55		279	21	44.9	-56		244	33	44.7	-63		256	27		-58		279	14		-63			150		
130		-54		25.0	12		-55		311	26		-56		293	20		-60		322	27		-59		276	18		-61		242	30		-67		264	17		-62		271	16		-64			130		
110		-56		26.4	10		-60		326	21		-61		272	21		-64		316	22		-66		272	15		-65		236	19		-67		275	11		-62			-63			110				
100	53.0	-59		26.3	10	53.3	-59		323	19	53.0	-62		276	21	53.4	-62		308	25		-64		301	16	53.5	-63		271	19	53.2	-65		281	13		-65			-66			100				
90		-60		26.3	10		-58		317	18		-63		303	18		-64		316	21		-64		280	16		-61		280	16		-62		284	17		-62			-65			90				
80		-60					-59		323	18		-63					-66			21		-64		283	12		-59		283	13		-58		272	10		-67			-67			80				
70	(76mb)	-60					-61		320	15		-61		320	15		-69					-65		295	07		-59		278	09														70			
60							-61		321	13												-65																						60			
Tropopause		I 360 mb - 53° 25,100'				I 388 mb - 44° 23,600'				I 290 mb - 57° 30,000'				I 355 mb - 46° 24,000'				I 275 mb - 60° 31,600'				I 243 mb - 65° 34,500'				I 260 mb - 68° 33,000'				I 268 mb - 57° 32,400'				II 250 mb - 56° 34,000'				Tropopause									
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION													
Time M.S.L. Surf Freezing	Pressure mb	21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		21h.		G.M.T.		Time M.S.L. Surf Freezing													
		1005.7	995.7	mb	mb	1011.5	1009.6	mb	mb	1012.2	1012	mb	mb	1015.0	1006.3	mb	mb	1015.2	1013	mb	mb	1016.2	1011.7	mb	mb	1015.9	999.8	mb	mb	1014.9	1004	mb	mb														
		850				853				840				883				820				818				800				793																	
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	46	46	29.0	18	00.5	43	43	220	04	0.2	45	44	260	08	2.3	45	43	CALN	00.6	53	47	250	03	01.2	51	47	160	05	4.4	49	47										Surf					
1000	01.5					03.1	41	44	279	13	3.3	46	45	257	17	4.1	45	44		4.1	48	47	144	03	04.4	52	46		05	4.3											1000						
950		42	41	27.1	23		41	39	279	15		44	40	262	17		41	40	298	08		44	43	158	03		47	40	211	12		48	42								950						
900	29.8	38	37	26.8	18	31.3	35	32	283	12	31.6	39	33	271	13	32.3	36	34	302	08	32.6	40	39	213	03	32.9	41	37	225	12	32.9	43	37								900						
850		32	29	26.5	15		32	28	285	09		33	28	282	13		32	29	300	06		35	34</																								

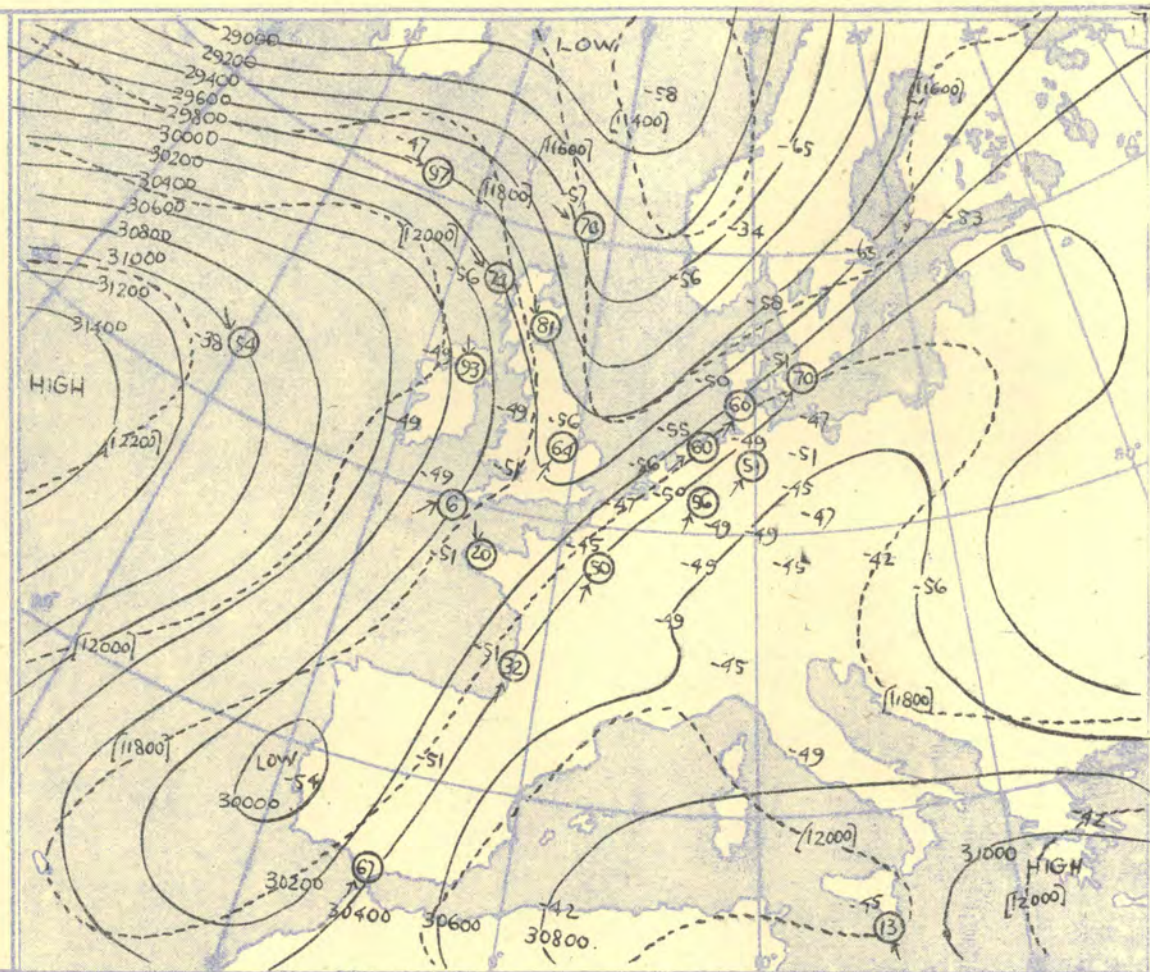
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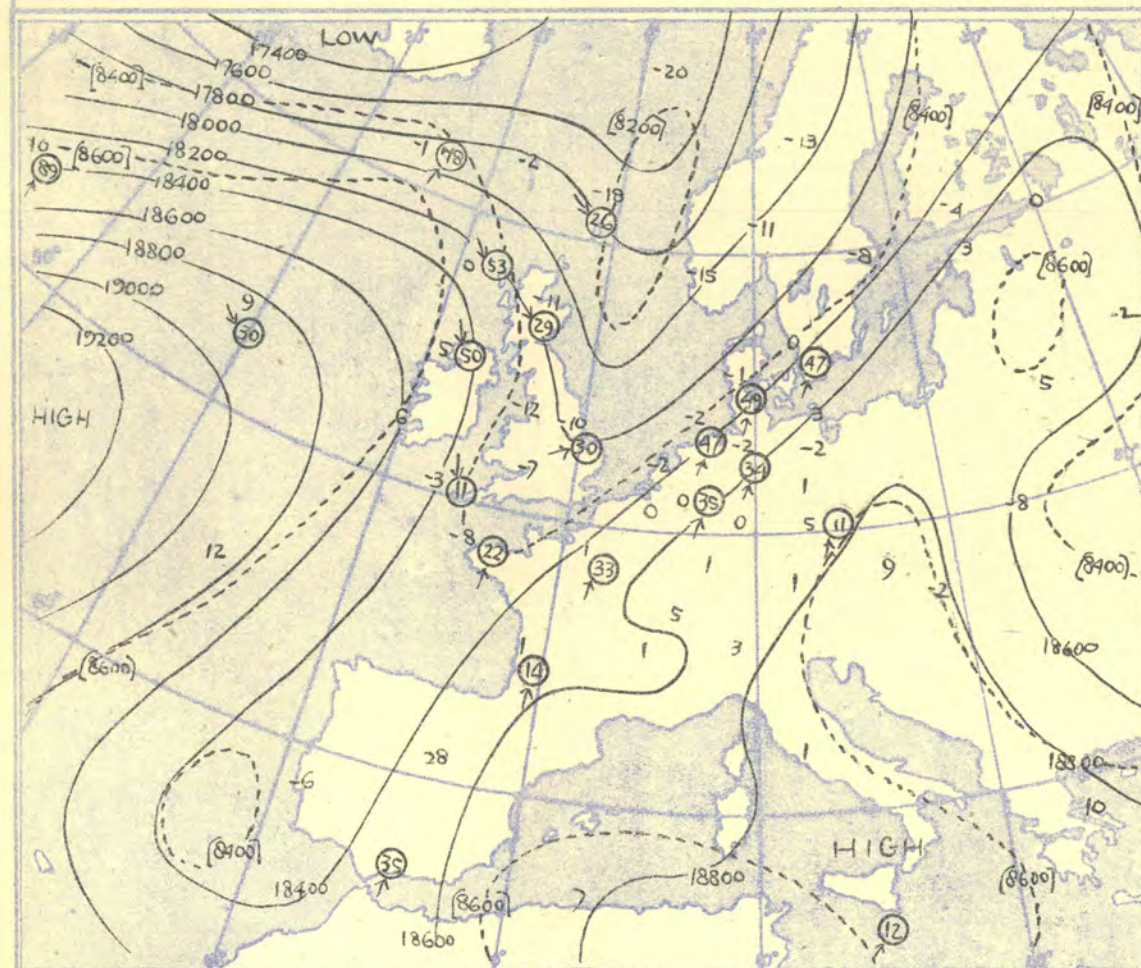
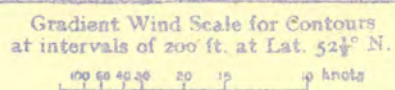
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



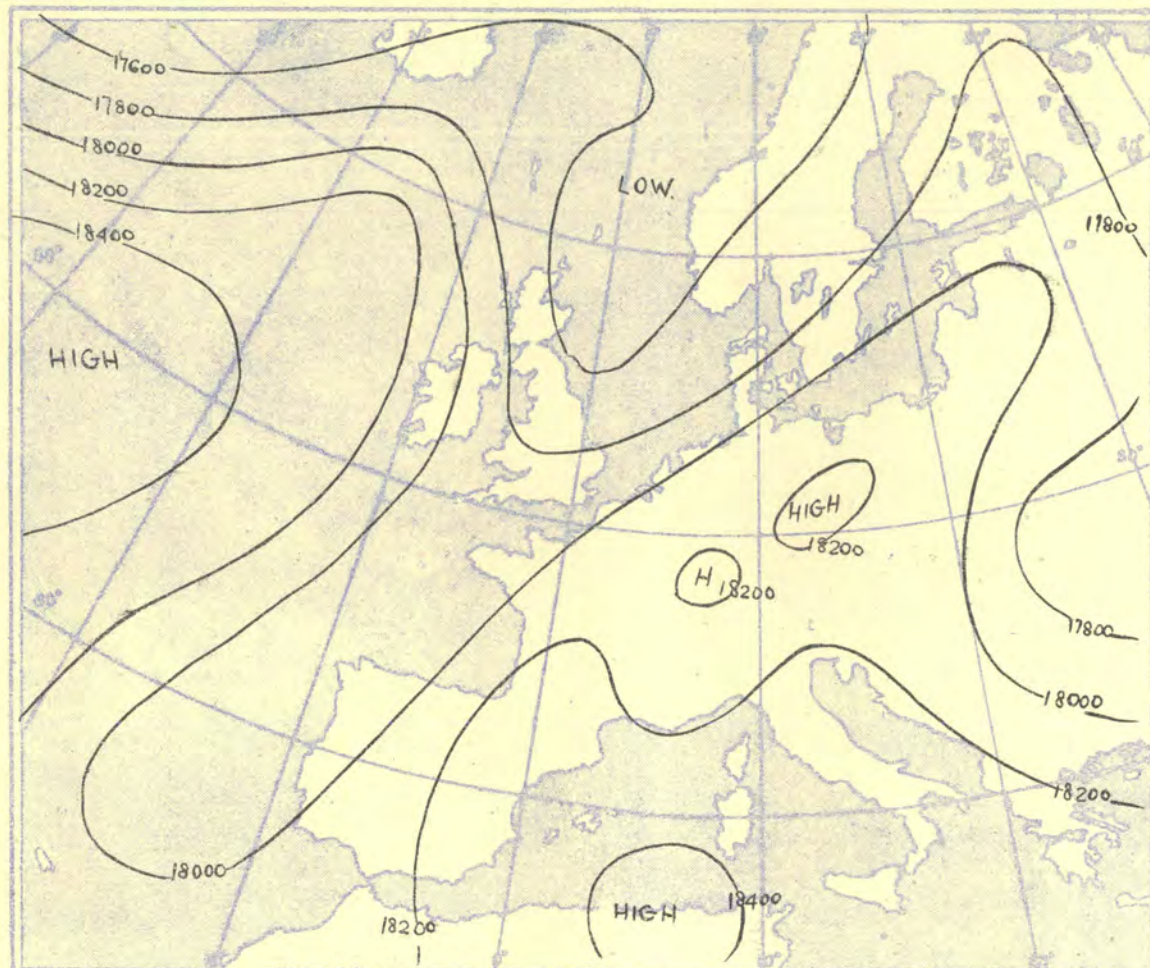
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb



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.

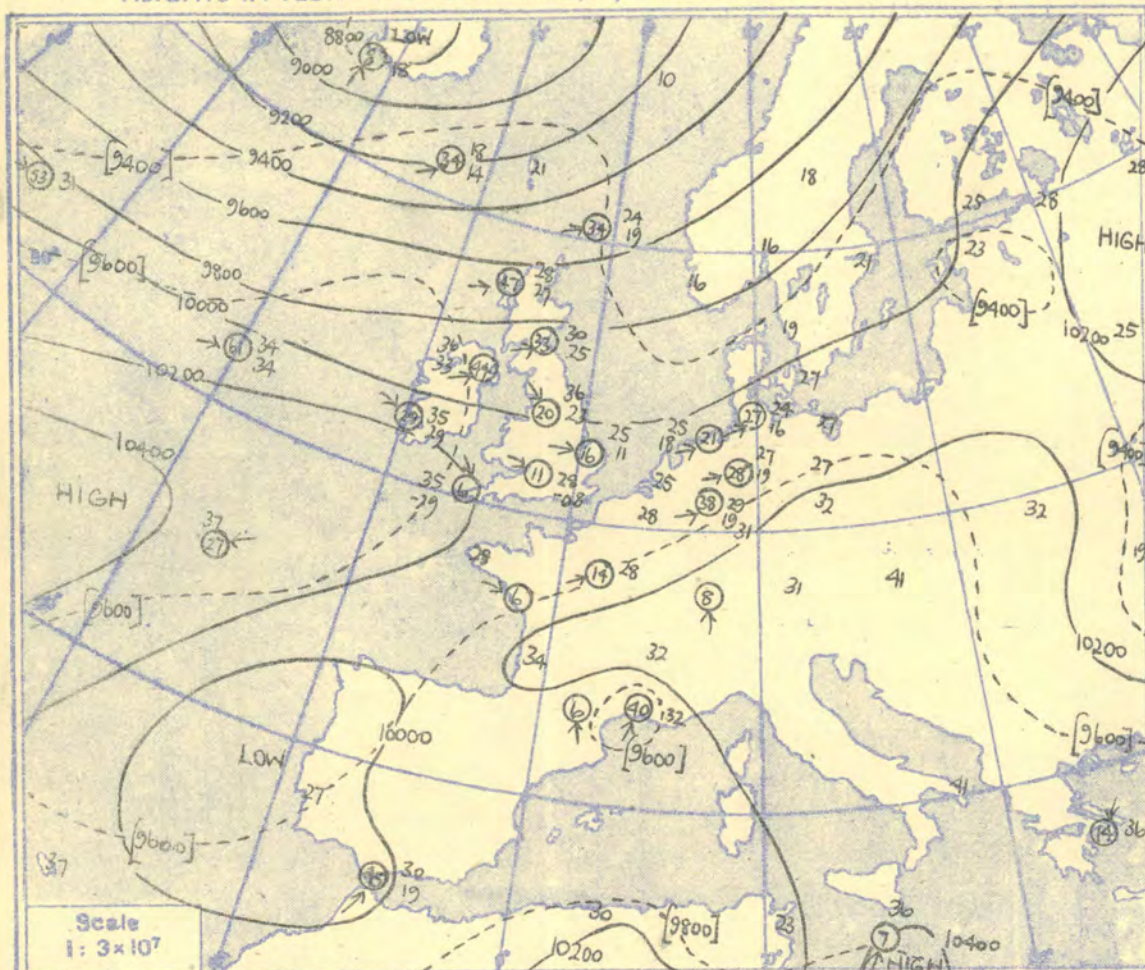


Isoplates of Thickness 500 - 1000mb.

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

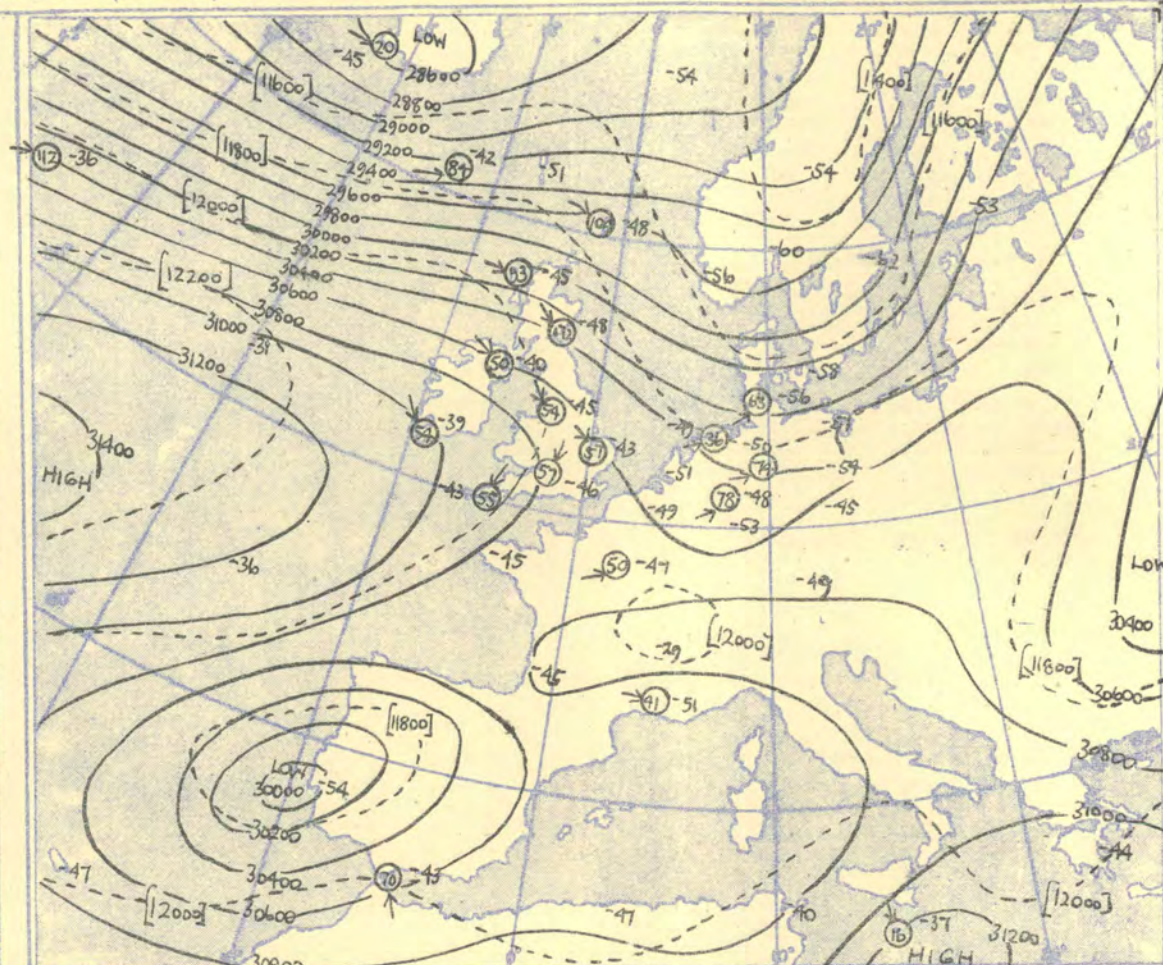
Ship	WEATHER EXPLORER								WEATHER EXPLORER								WEATHER EXPLORER								CIRRUS								CIRRUS								CIRRUS								CIRRUS								Ship																																																																																																																																																																			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

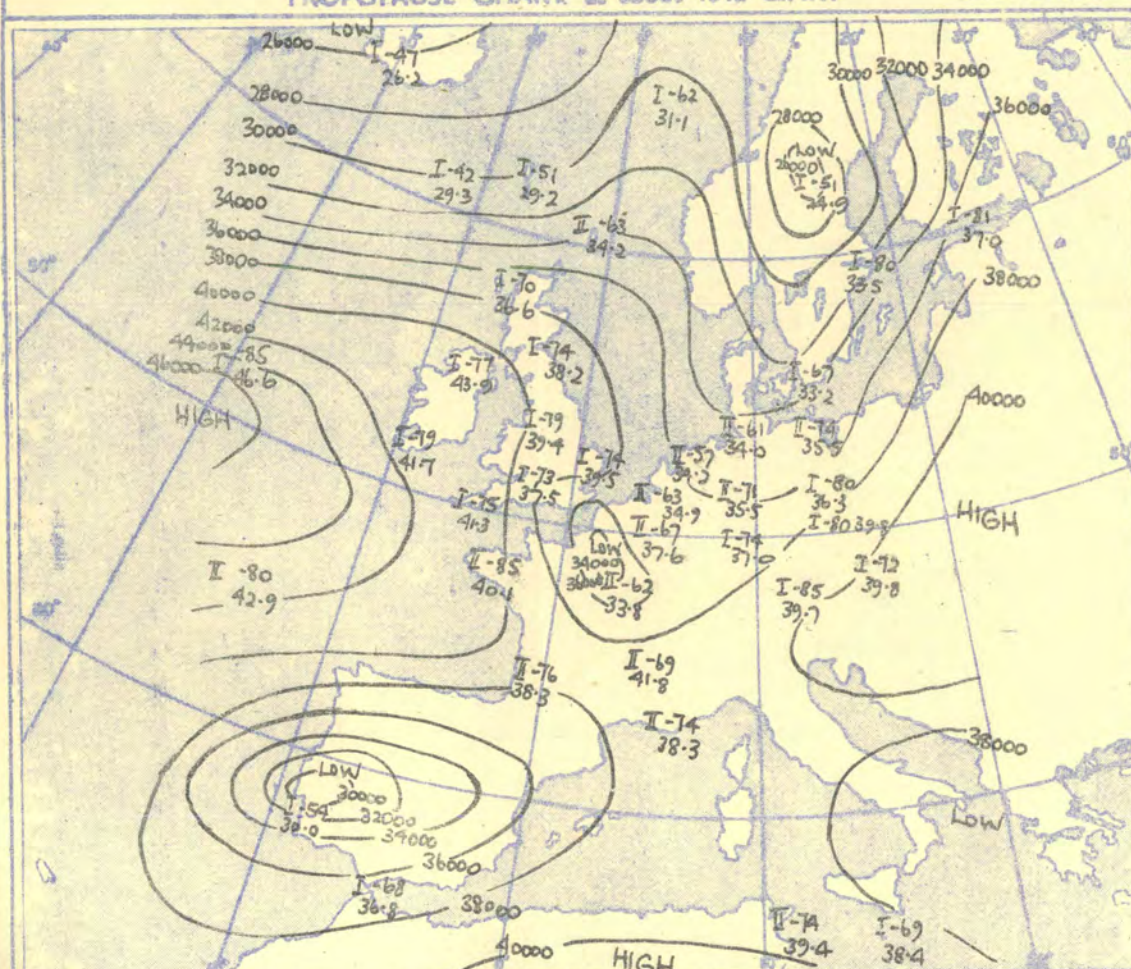
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 5 knots



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

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



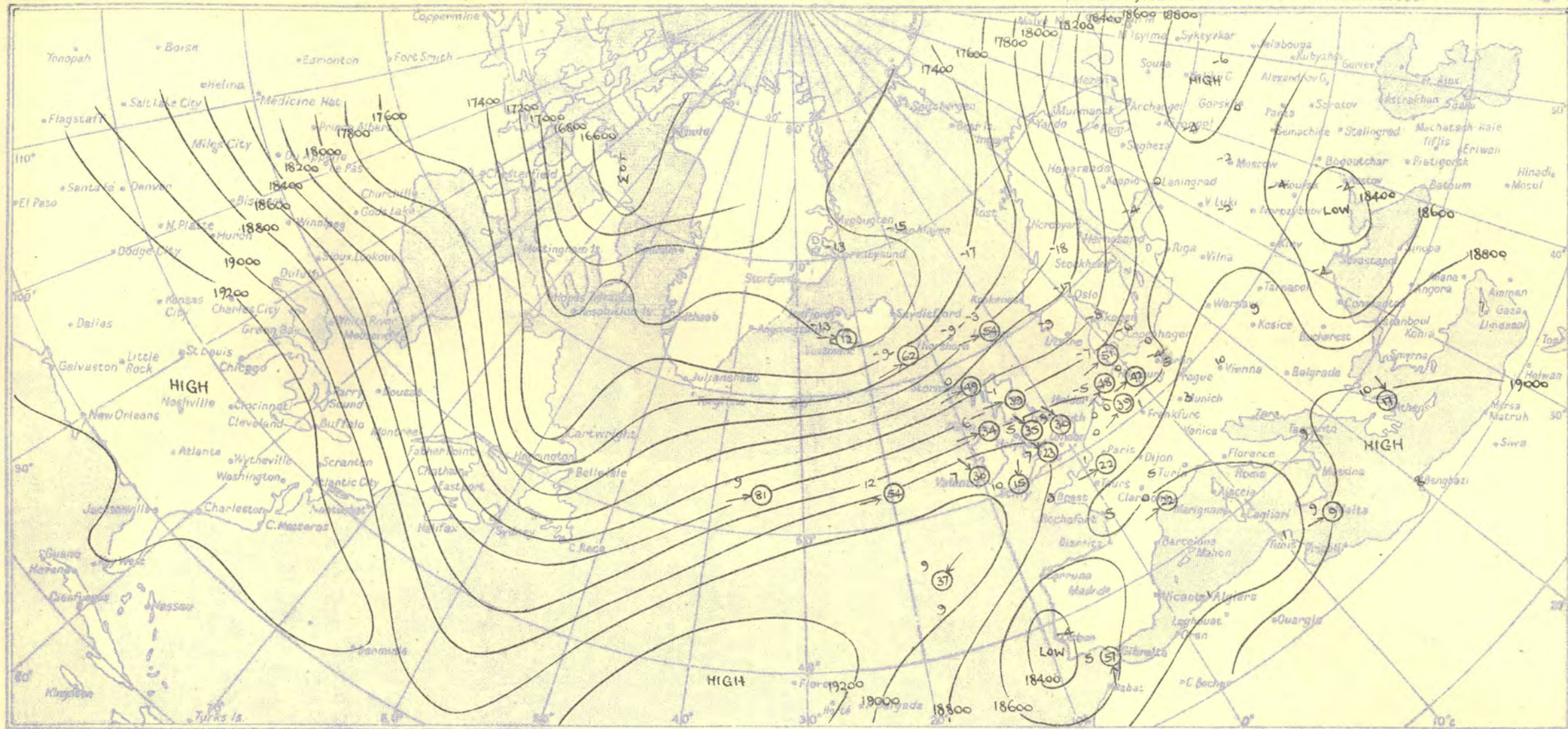
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge to the west of the British Isles declined and the northerly jet stream ahead of it was also destroyed. A cold pool was cut off west of Portugal and a strong west south west thermal became established from south of Newfoundland to Scotland.

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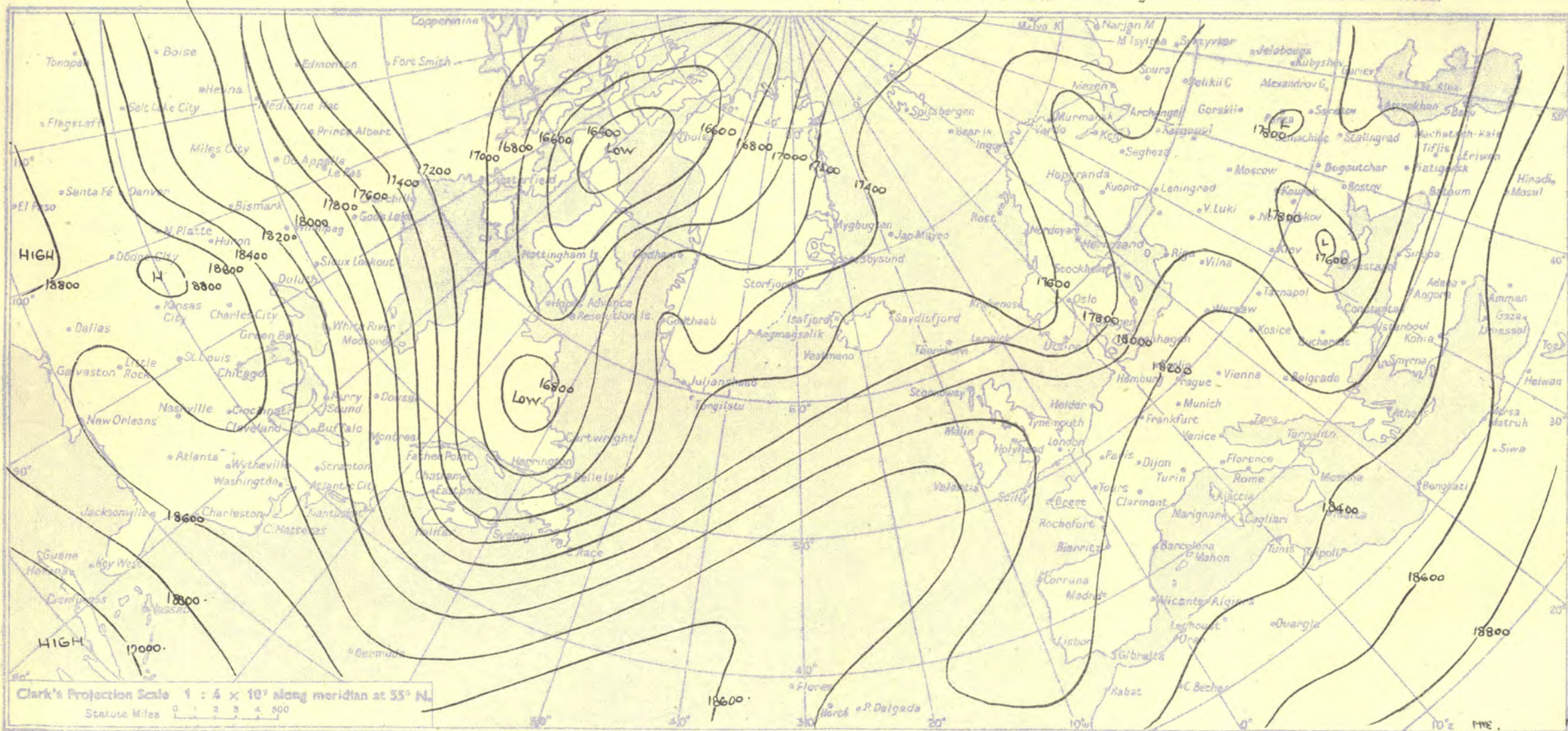
Meteorological Office, Air Ministry, Kingway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Monday 16th October, 1950.

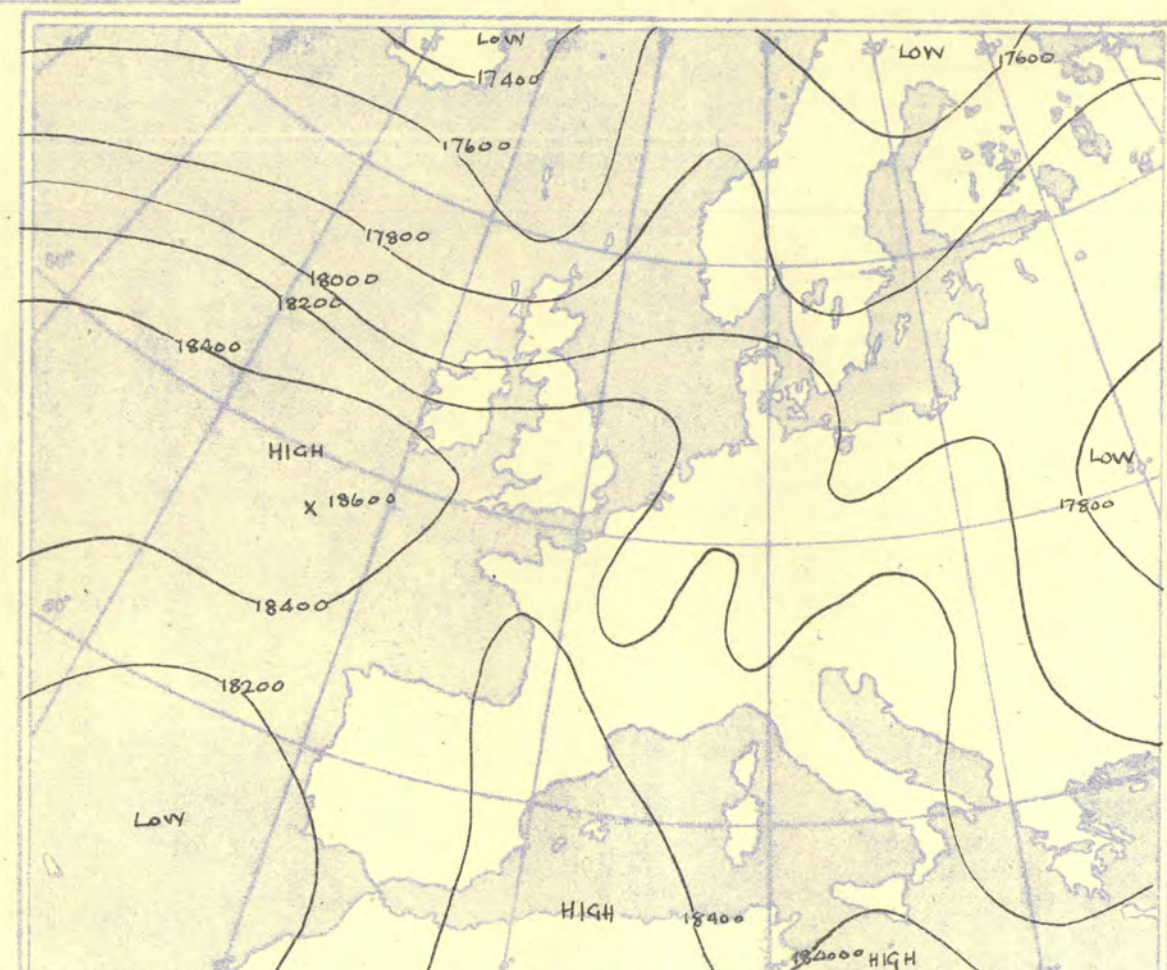
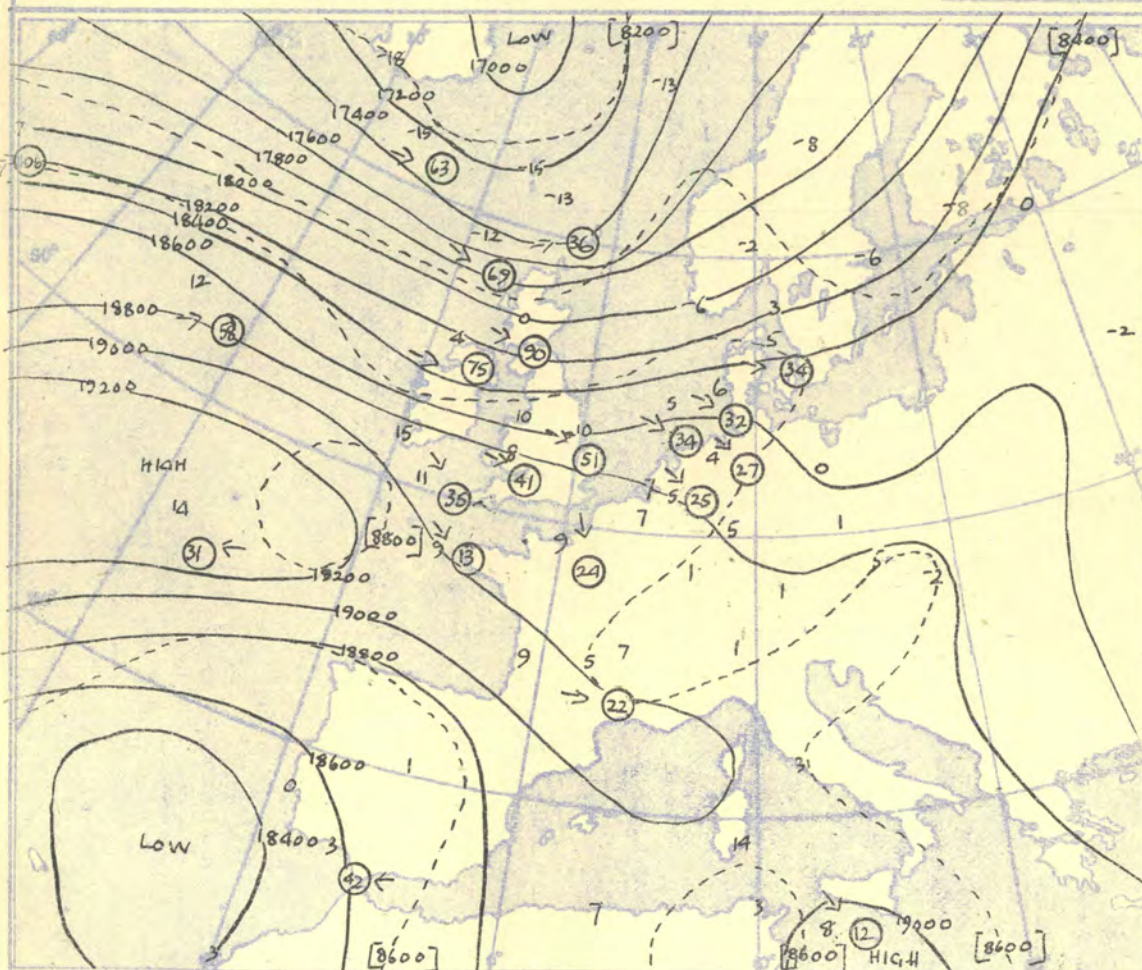
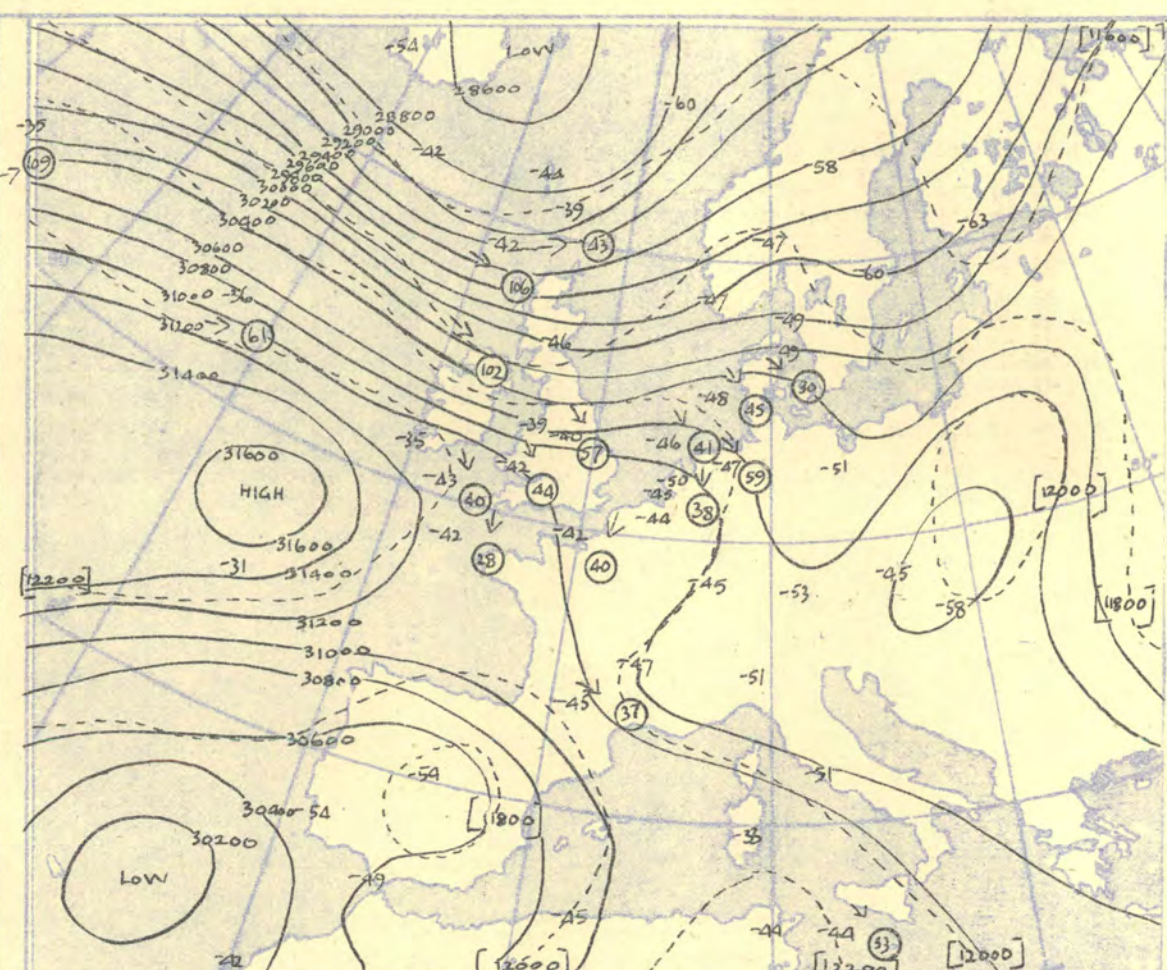
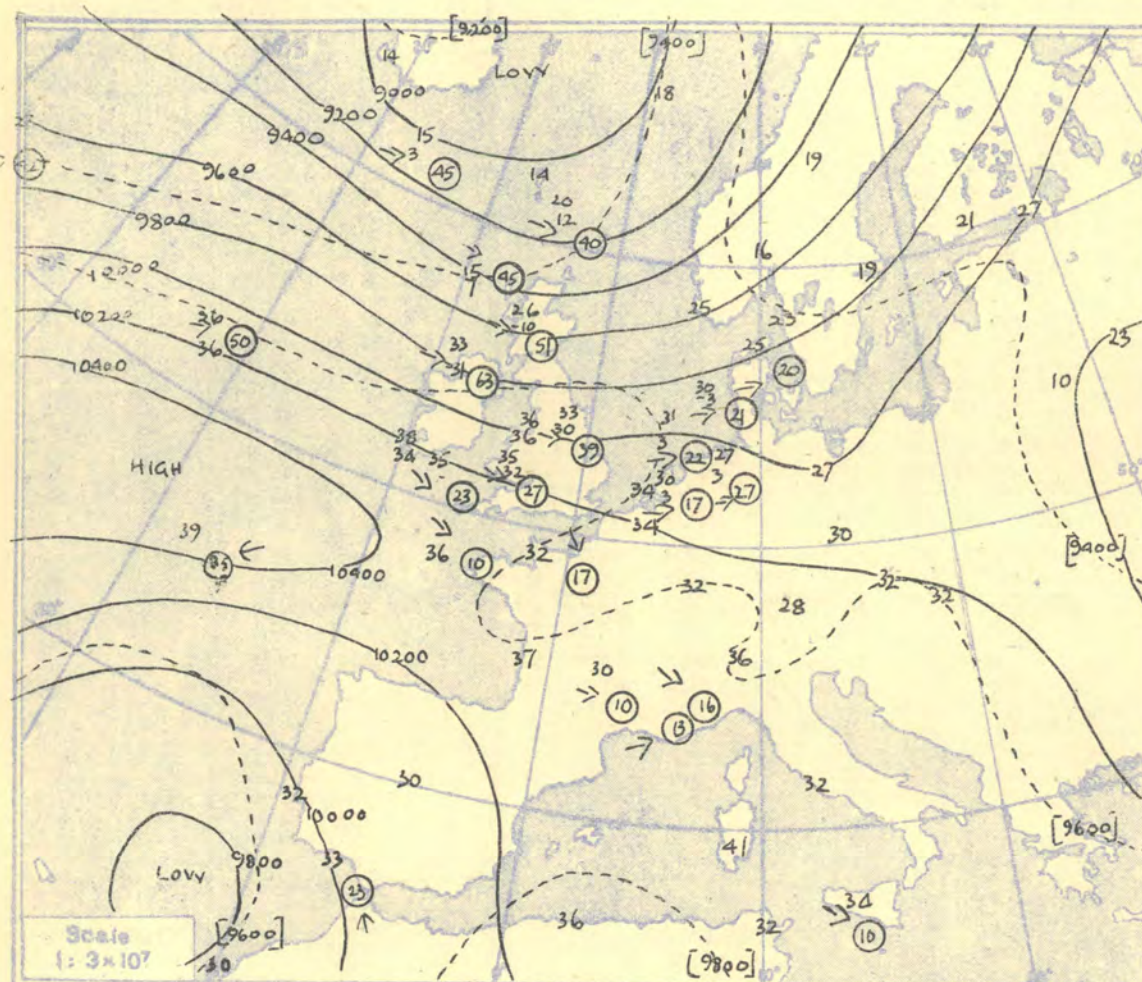
1950.



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

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				Station								
	Time M.S.L. Surf Freezing	15h. 1005.1 996 850	G.M.T. mb mb mb	15h. 1004.4 1002.3 745	G.M.T. mb mb mb	15h. 1012.9 1012 710	G.M.T. mb mb mb	15h. 1015.7 1007.1 694	G.M.T. mb mb mb	15h. 1019.3 1017.3 668	G.M.T. mb mb mb	15h. 1020.6 1016.1 758	G.M.T. mb mb mb	15h. 1021.7 1005.8 761	G.M.T. mb mb mb	15h. 1022.8 1012.3 625	G.M.T. mb mb mb	15h. 1020.0 1019 670	G.M.T. mb mb mb																										
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb												
Surf 1000 950 900 850 800	02.7 1.4 43 29.8 32 29 60.8	48 46 37 34 29 25	210 218 217 217 232 231	28 37 37 33 31	00.5 11 46 29.6 38 36 61.0	51 51 46 41 38 36	50 50 45 40 37 35	215 223 233 236 239 239	20 36 37 37 43	00.2 3.5 49 31.8 38 41 63.2	51 49 42 38 38 41	45 43 38 32 32 35	250 237 239 244 252 252	23 34 34 36 38 39	02.3 4.3 44 32.7 45 40 64.5	49 48 44 43 42 37	45 44 41 39 45 25 40	210 237 247 243 251 243 263	12 32 36 36 35 20 24	00.6 5.3 55 48 41 40 65.4	57 55 48 41 40 37	47 45 40 34 25 15	230 229 224 245 243 243 263	03 09 11 15 17 20 24	01.2 5.7 56 50 43 37 65.7	58 56 50 46 39 33 65.9	53 52 46 39 33 33 65.9	260 256 256 255 257 257 256	04 15 15 12 12 12 20	04.2 5.7 57 50 45 39 65.9	58 57 51 45 39 33 65.9	52 51 45 39 33 33 65.9	240 240 225 233 237 247 253	04 11 11 12 12 12 20	02.9 6.3 87 50 45 45 66.6	58 57 52 46 43 45 66.6	51 52 48 44 48 44 66.6	Calms 20.8 217 231 248 255	05 08 09 15 14	00.3 5.7 52 44 48 44 66.4	54 52 48 44 48 44 66.4	49 48 45 42 42	190 196 221 256 267	16 18 24 28 28	Surf 1000 950 900 850 800
750 700 650 600 550	95.4 135 04	24 18 04	20 13 05	244 243 256	31 39 48	96.1 135 07	32 27 04	253 244 244	44 47 45	98.6 138 09	30 25 03	256 261 263	33 36 39	250 250 275	43 44 36	99.9 140 16	33 30 11	281 288 298	24 21 22	00.6 1.0 1.4	57 56 50 43 37 36	47 45 40 34 25 15	230 229 224 245 243 243	03 09 11 15 17 20	01.2 5.7 56 50 43 37 65.7	58 56 50 46 39 33 65.9	53 51 45 39 33 33 65.9	260 256 256 255 257 257 256	04 15 15 12 12 12 20	04.2 5.7 57 50 45 39 65.9	58 57 51 45 39 33 65.9	52 51 45 39 33 33 65.9	240 240 225 233 237 247 253	04 11 11 12 12 12 20	02.9 6.3 87 50 45 45 66.6	58 57 52 46 43 45 66.6	51 52 48 44 48 44 66.6	Calms 20.8 217 231 248 255	05 08 09 15 14	00.3 5.7 52 44 48 44 66.4	54 52 48 44 48 44 66.4	49 48 45 42 42	190 196 221 256 267	16 18 24 28 28	750 700 650 600 550
500 450 400 350	180 233 233	03 13 35	13 60 50	270 275 287	54 66 96	181 235 31	00 17 31	259 267 262	49 63 94	184 237 32	01 20 32	06 14 38	270 283 293	39 40 68	186 241 241	06 11 24	00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00	500 450 400 350														
300 250 200 170	298 -62	48 -62	285 04	300 -62 387 -69 -61 -67 -68 -68 -66 -68 -68	210 93 102 273 303 -48 -64 313 96 303 54 290 46 -75 -70 296 45 -70 290 39 -71 -70 2																																								

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. GMT.



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 1/2° N.
10 20 30 40 50 knots

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

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

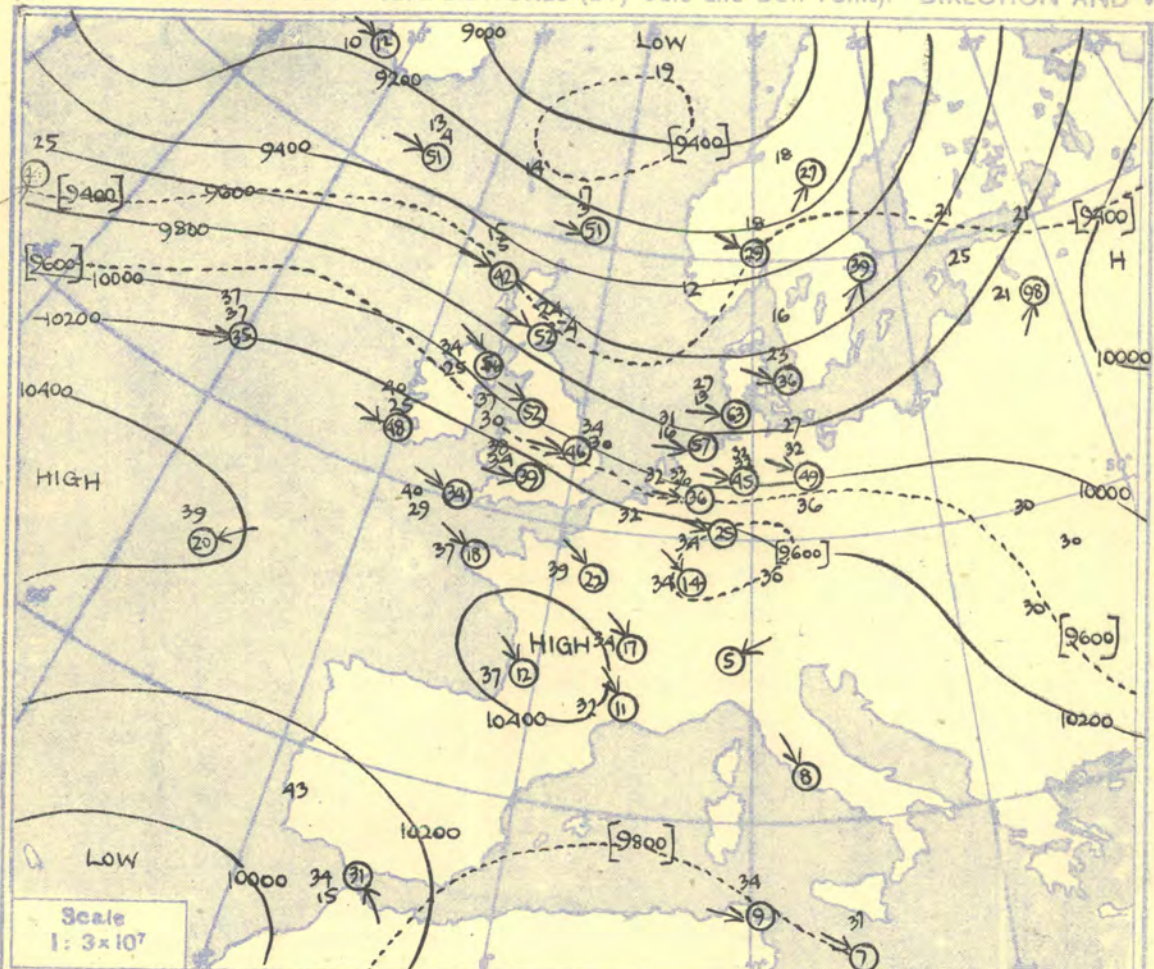
Isopleths of Thickness 500—1000mb.

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

NEPHOSCOPE OBSERVATIONS

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

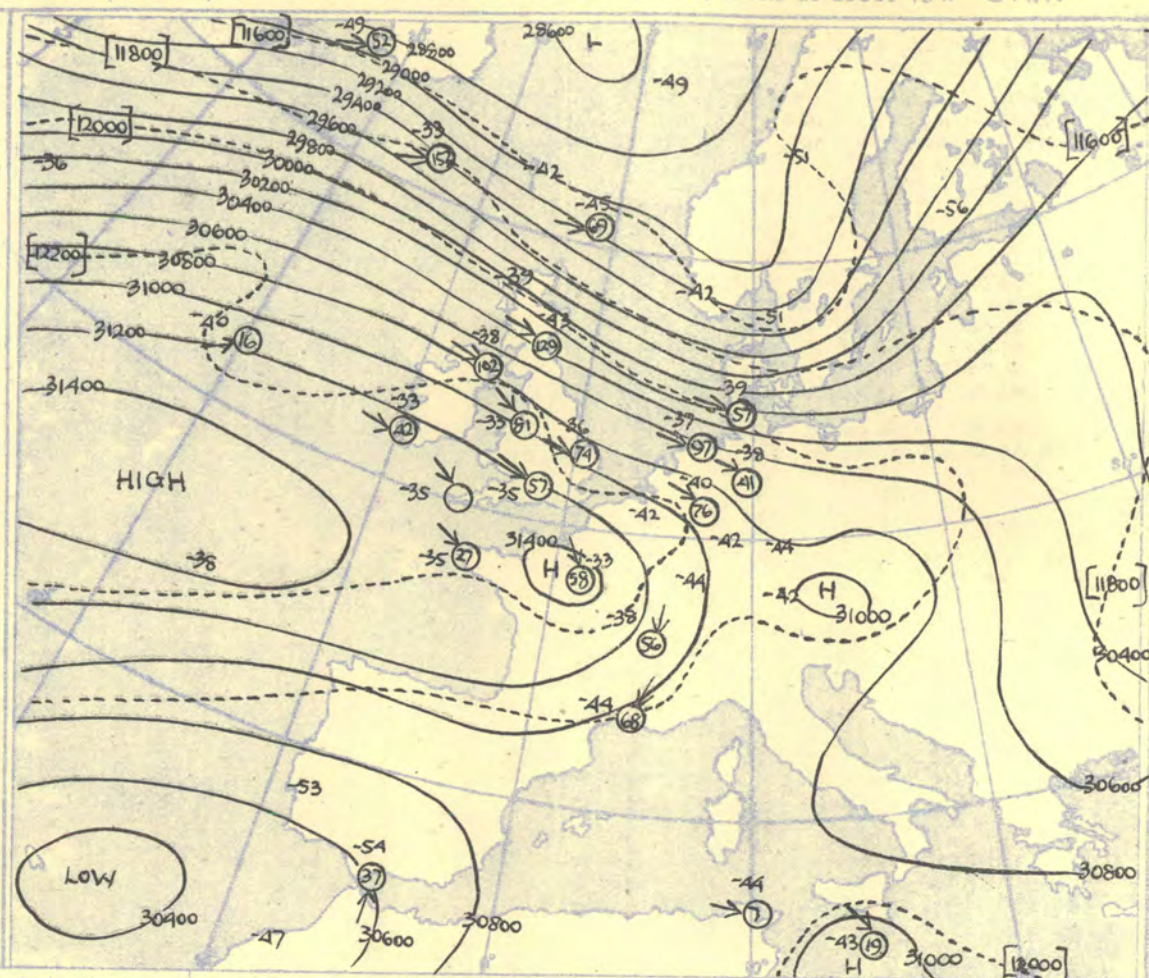
Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS								Ship
Lat/Long	61.0N. 13.8W.				61.0N. 14.0W.				60.9N. 14.2W.				60.9N. 14.0W.				52.4N. 20.3W.				52.4N. 20.3W.				52.4N. 19.9W.				52.4N. 19.4W.								Lat/Long
Pressure	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.	21h.			G.M.T.	Time			
	M.S.L.	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb	mb			mb		M.S.L.		
	Surf	991			mb	995			mb	999			mb	1003			mb	1017			mb	1016			mb	1017			mb	1017			mb		Surf		
	Forecast	865			mb	875			mb	880			mb	870			mb	650			mb	635			mb	650			mb	665			mb		Forecast		
Pressure	mb	Height	ft./100	Temp.	Dew	Wind	Dir.	Vel.	Height	ft./100	Temp.	Dew	Wind	Dir.	Vel.	Height	ft./100	Temp.	Dew	Wind	Dir.	Vel.	Height	ft./100	Temp.	Dew	Wind	Dir.	Vel.	Height	ft./100	Temp.	Dew	Wind	Dir.	Vel.	Pressure
Surf	1009	2.4	48	39	260	36	-1.5	46	36	260	36	-3	48	39	260	27	7	47	40	260	25	4.8	50	45	4.9	48	48	4.9	54	54	4.9	55	54	Surf			
950			43	32	268	43		41	32	275	39		42	31	270	37		42	25	270	31														1000		
900		25.9	36	27	271	44		35	27	273	55		34	25	270	41	29.0	35	18	270	32		43	43	For		46	46	For		43	43	For		950		
850			30	19	271	44		29	25	273	69		28	21	270	45		30	14	270	37														900		
800		56.8	25	15	271	41		24	20	274	53		26	10	270	46	59.3	26	06	270	42														850		
750			20	09	270	38		21	11	275	31		20	08	270	49		20	00	270	41														750		
700		91.0	15	03	270	45		15	04	276	35		13	04	270	51	94.0	15	04	270	43	101	36	36	winds										700		
650			10	05	270	46		10	01	274	49		09	01	270	49		11	06	270	51														650		
600		129	03	15	271	47		05	08	271	48		03	07	270	57	133	04	25	270	53														600		
550			05	25	271	48		01	14	268	63		04	14	270	62		05	44	270	58														550		
500		174	15	30	270	63		03	23	268	59		17	14	270	56	177	09	51	270	72	188	12	01	of		189	12	06	of		189	10	00	of		500
450			26	40	270	76		17	32	273	64		20	37	270	61		07	22	270	104														450		
400		225	35	52	-	-		22	7	274	63		22	53	270	78	231	16	24	270	156														400		
350			39	59	-	-		33	49	274	81		28	54	270	119		25	33	270	140														350		
300		289	42	-	-	-		29	35	270	97		29	4	270	153	297	35	47	260	156	310	36													300	
250			43	-	-	-		47	-	273	96		41	-	270	134		51	-	270	154														250		
200		380	45	-	-	-		27	41	280	89		46	-	270	107		55	-	270	138	398	69												200		
170			48	-	-	-		42	-	282	74		48	-	270	88		62	-	270	108														170		
150			50	-	-	-		45	-	275	59		51	-	270	70		61	-	270	90														150		
130			53	-	-	-		46	-	274	56		51	-	270	63		59	-	270	70														130		
110			57	-	-	-		49	-	274	39		54	-	270	52		62	-	270	56														110		
100		581	59	-	-	-		50	-	274	36		58	-	270	47	533	63	-	270	46														100		
90			62	-	-	-		51	-	273	22		61	-	270	34		65	-	270	34														90		
80			64	-	-	-		55	-	273	23		59	-	270	30		66	-	270	33														80		
70			64	-	-	-		57	-	282	24		59	-	270	25		67	-	270	33														70		
60			67	-	-	-		59	-	284	22		60	-	270	27		67	-	270	41														60		
			Inversion								Inversion																										
			357mb -40°-350mb -39°								792 -778mb. 23°																										
											(550)mb Isothermal																										
											830-794mb. 26°																										
											462-440mb. 22°																										
											341-325mb. 29°																										
											Inversion																										
											662mb. 07°-648mb. 10°																										
											Max wind:- 274mb. 270° 165kts.																										
											270° 177kts.																										
Tropopause			II 330mb. -42° 28,800'								I 333mb. -35° 26,900'																									Tropopause	
											II 246mb. -50° 24,200'																										
											I 208mb. -59° 37,700'																										



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

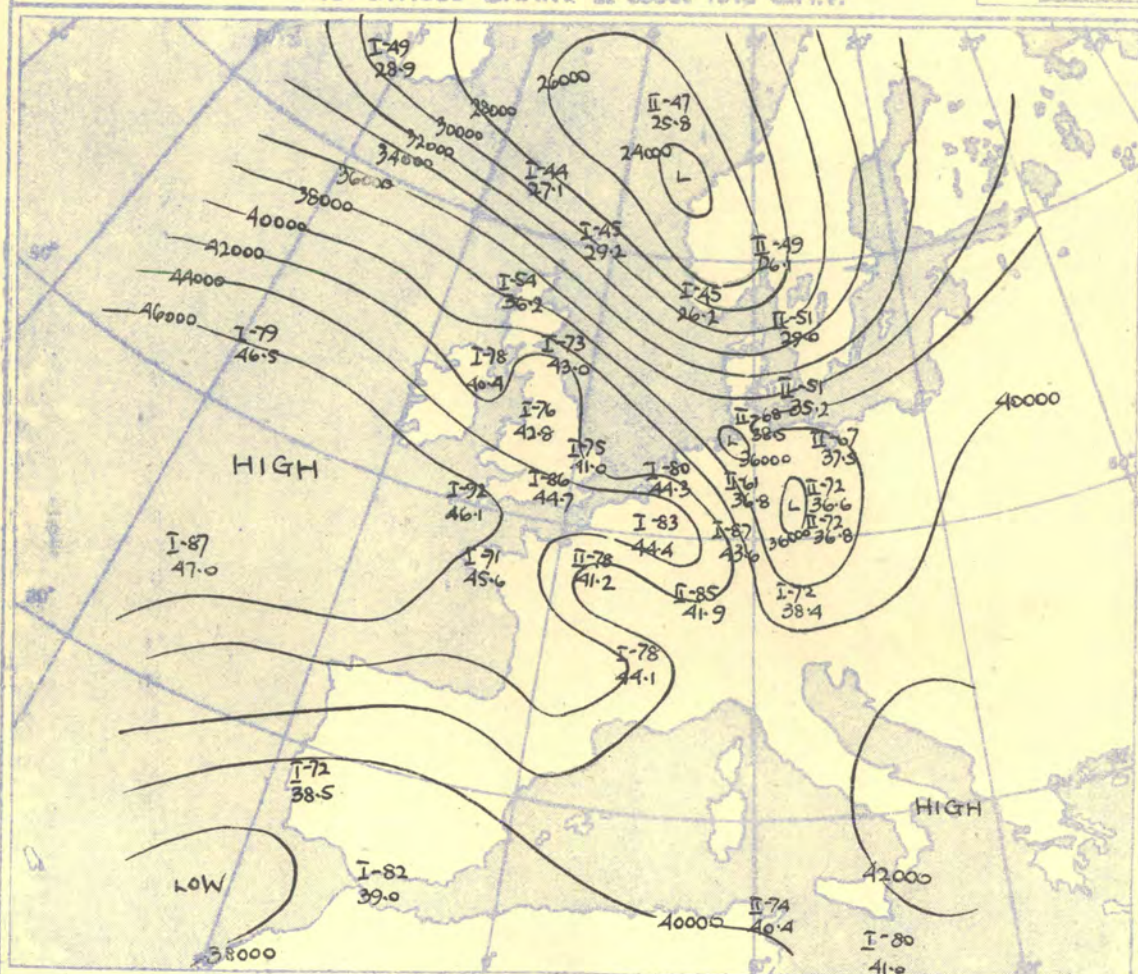
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N

100 80 60 40 20 10 knots



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

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



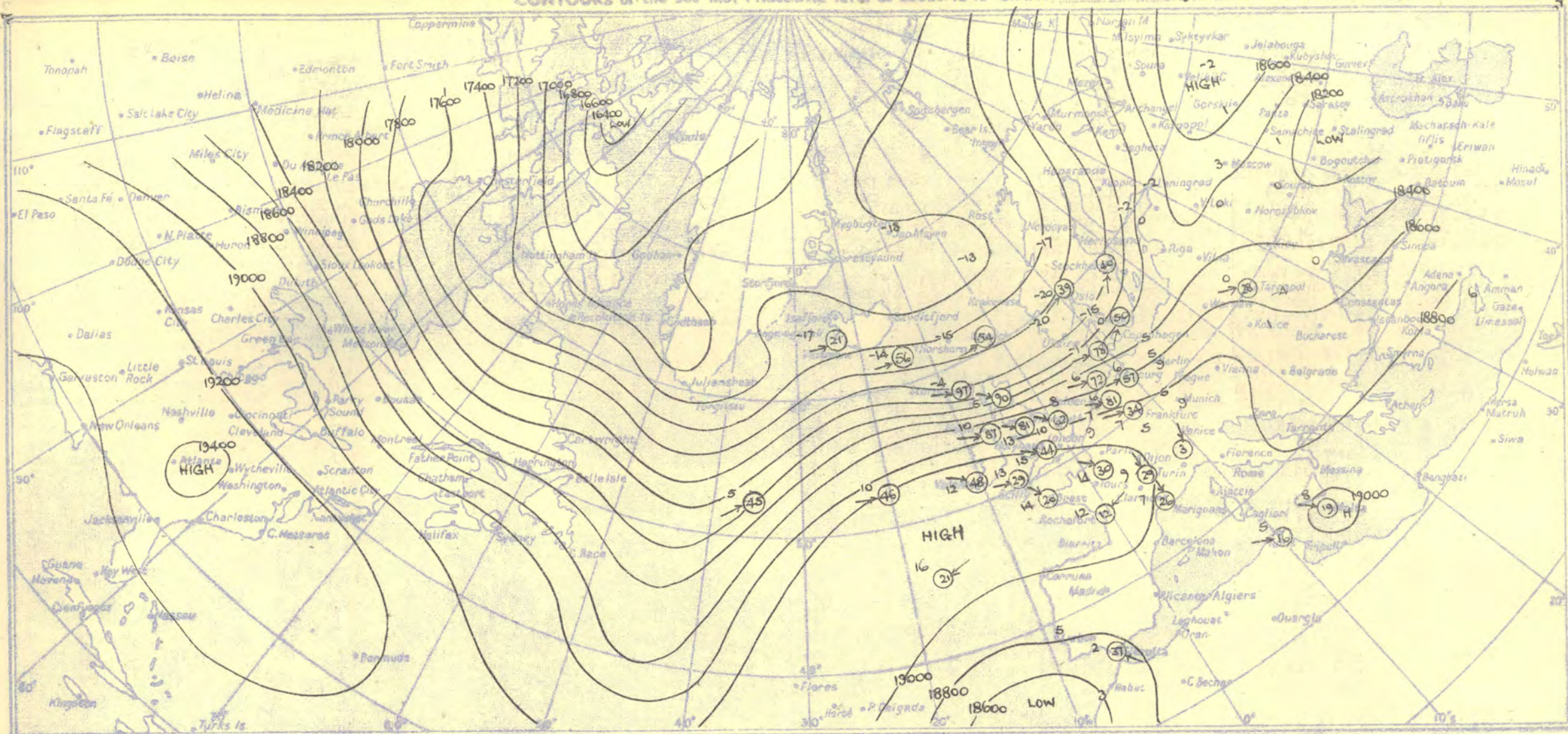
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The strong thermal persisted from south of Newfoundland to Scotland but tended to move a little northwards. Very warm air over the south of England. The cold pool persisted west of Portugal but weakened.

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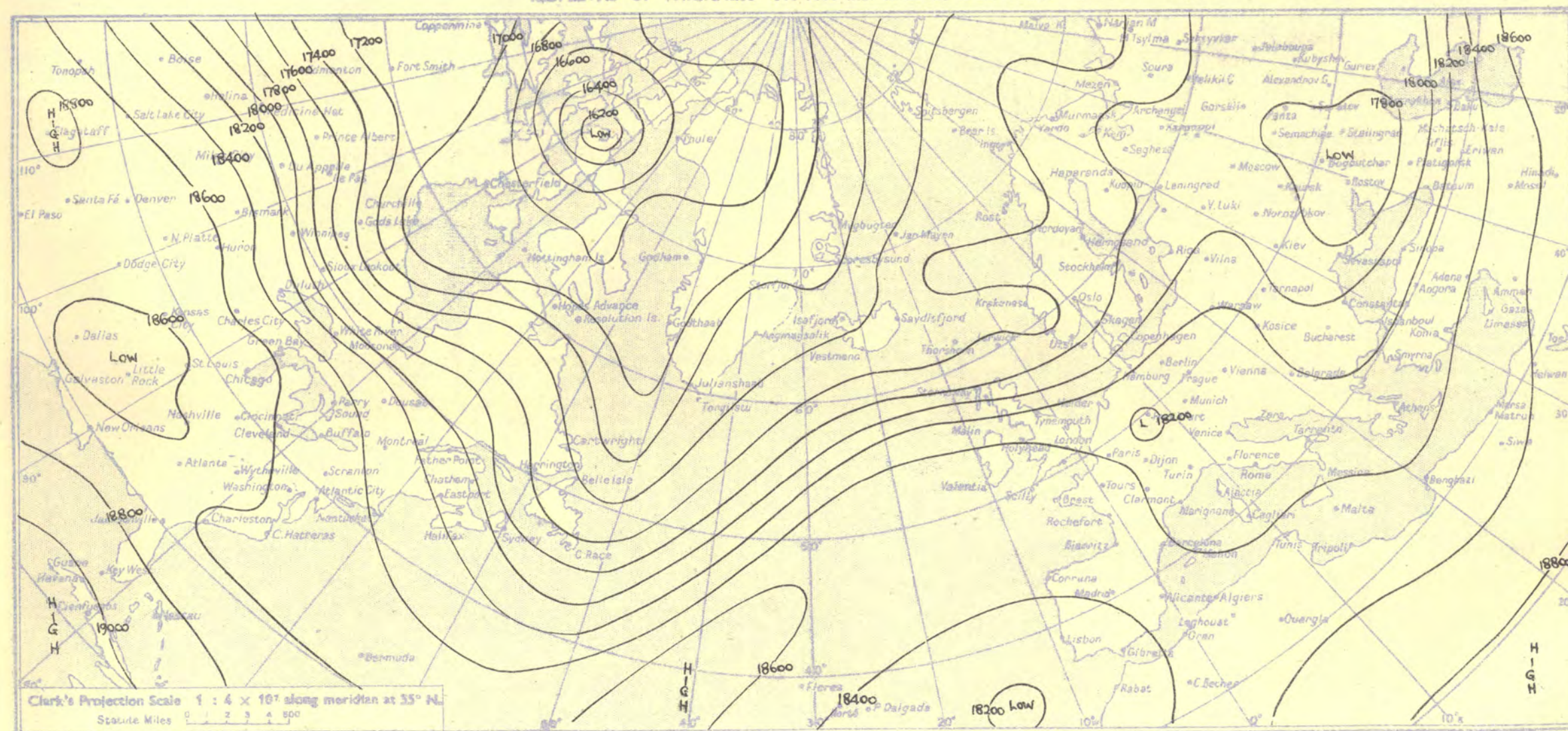
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Tuesday 17th October,

1950.



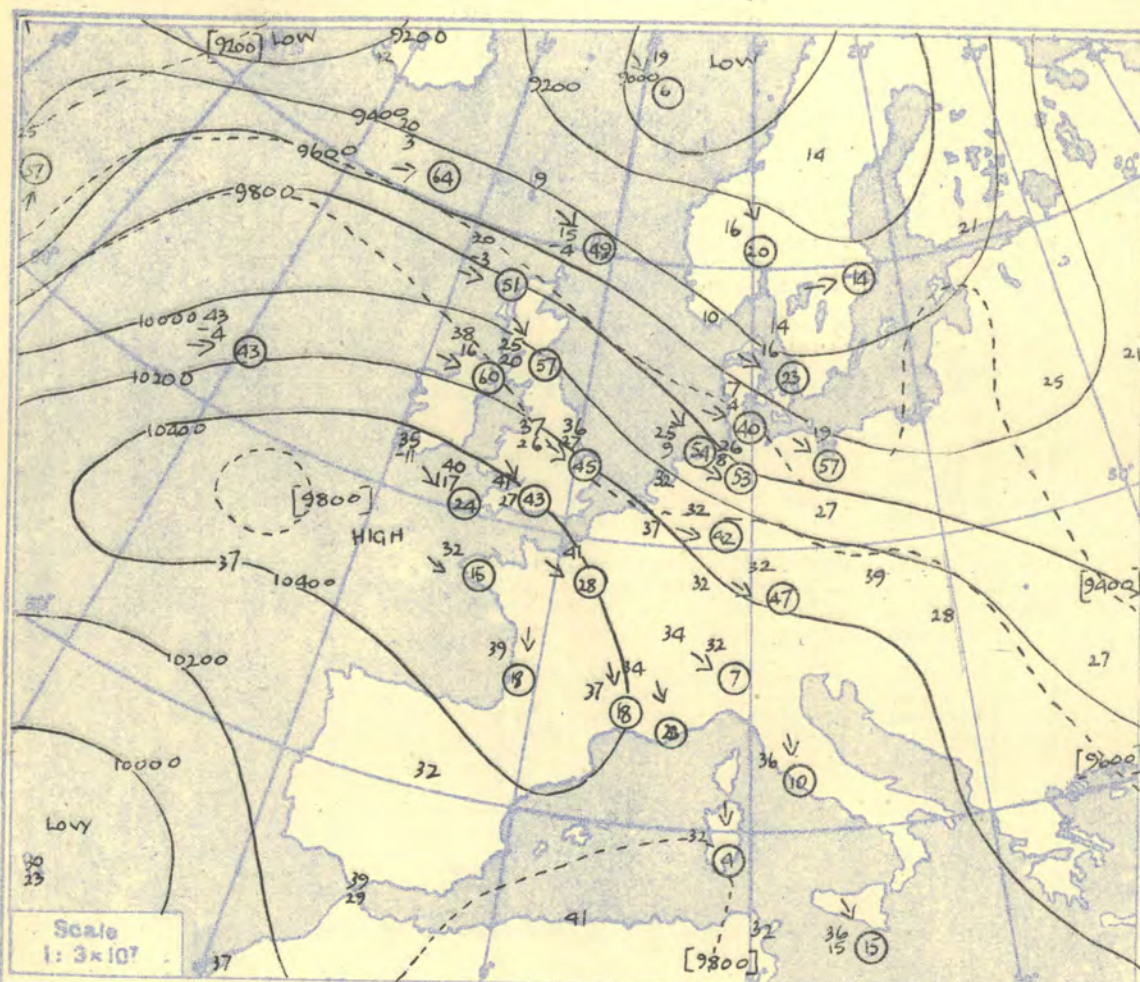
21

$$H^1(\mathbb{R}^n, \mathbb{R}) \cong \mathbb{R}^n \quad \text{if } n \geq 1$$

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

STATION	LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION																																																																																																																																																																																																																																																										
Time M.S.L. Surf Freezing	03h		G.M.T.			03h		G.M.T.			03h		G.M.T.			03h		G.M.T.			03h		G.M.T.			03h		G.M.T.			03h		G.M.T.			Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																				
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Pressure	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Pressure																																																																																																																																																																																																																																																																				
mb	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	mb																																																																																																																																																																																																																																																																				
Surf	02.7	46	42	290	24	00.5	48	46	260	05	00.2	47	43	250	15	02.3	49	47	255	12	00.6	53	49			1.2	47	45	220	03	4.4	51	50	270	05	2.9	54	54	270	05	0.3	55	54		Surf																																																																																																																																																																																																																																																											
1000	0.6	43	35	276	37	3.1	47	43	242	26	5.1	48	45	242	26	5.1	48	45	242	26	5.1	48	45			5.7	49	49	298	22	6.1	51	49	306	25	7.0	53	53	278	16	7.0	53	52		1000																																																																																																																																																																																																																																																											
950		43	35	276	37		47	43	242	26		48	45	242	26		48	45	242	26		48	45				49	49	298	22		51	49	306	25		53	53	278	16		53	52		950																																																																																																																																																																																																																																																											
900	28.9	36	30	278	39	31.4	37	34	267	31	32.0	37	32	284	29	33.7	45	40	275	30	34.1	41	37			34.2	42	32	300	29	34.9	47	34	311	85	36.0	55	52	300	20	35.5	50	49		900																																																																																																																																																																																																																																																											
850		30	26	283	41		31	28	276	37		31	26	294	37		45	42	288	42		40	37				46	33	305	37		51	47	309	83		52	43	303	20		50	47		850																																																																																																																																																																																																																																																											
800	59.8	26	16	285	47	62.4	27	23	277	39	63.0	32	22	298	47	65.5	44	35	287	51	65.6	42	40			66.0	41	32	306	38	66.9	46	33	310	43	68.2	48	33	294	24	67.6	46	30		800																																																																																																																																																																																																																																																											
750		21	05	289	50		25	14	281	42		28	08	300	48		40	22	284	57		40	37				39	31	302	39		45	35	311	44		45	19	293	24		41	11		750																																																																																																																																																																																																																																																											
700	94.1	15	04	288	49	96.9	20	03	280	51	98.0	25	20	293	57	101	38	16	287	60	101	37	26			102	36	27	298	45	03	41	27	307	43	104	40	17	298	24	103	35	11		700																																																																																																																																																																																																																																																											
650		09	07	289	51		16	07	279	61		20	14	301	69		32	23	294	57		32	23				30	22	303	53		34	18	301	39		33	03	288	24		28			650																																																																																																																																																																																																																																																											
600	13.2	01	13	290	54	13.6	13	04	286	78	13.7	16	10	309	78	14.2	26	21	295	57	14.2	27	22			14.2	24	17	307	57	14.4	28	11	302	39	14.5	26	12	286	26	14.3	26			600																																																																																																																																																																																																																																																											
550		05	21	292	56		08	03	292	94		13	07	306	89		18	11	289	60		20	12				18	10	308	66		20	01	299	37		18	12	284	30		20			550																																																																																																																																																																																																																																																											
500		12	35	293	72	18.2	04	02	294	99	18.3	06	01	303	89	18.8	10	02	285	60	18.8	15	05			18.8	09	01	302	65	19.0	10	10	298	39	19.1	10	27	283	27	19.0	03			500																																																																																																																																																																																																																																																											
450		11	31	296	110		03	11	293	99		06	13	299	88		12	12	284	62		11	03					02	09	298	52		00	18	298	40		00	38	274	27		04			450																																																																																																																																																																																																																																																										
400	23.0	14	30	300	144	23.6	13	24	290	113	23.7	14	32	300	103	24.3	19	20	288	60	24.5	21	12			24.3	14	22	305	64	24.5	12	26	294	39	24.6	13	50	267	27	24.4	18			400																																																																																																																																																																																																																																																											
350		21	39	301	147		23	35	287	119		27	44	298	109		25	34	272	60		20	30					25	34	295	61		23	36	286	38		26	58	268	33		29			350																																																																																																																																																																																																																																																										
300	29.7	36	52	297	145	30.3	40	52	287	113	30.4	41	55			30.9	43		26.8	62	31.2	36	47			30.9	41		293	69	31.2	37	46	283	38	31.2	41		26.5	38	31.0	41			300																																																																																																																																																																																																																																																											
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200	38.6	56				39.0	68				39.0	77				39.6	74		28.0	53	40.0	73				39.5	79		306	61	39.9	74		28.6	48	39.9	71		27.3	45			200																																																																																																																																																																																																																																																													
170		53					72					84					77		29.5	30		83						85		314	52		81		305	45		85				170																																																																																																																																																																																																																																																														
150		52					78					83					79		28.5	47		85						86		311	47		87		309	38		88				150																																																																																																																																																																																																																																																														
130		55					77					77					86		28.8	45		81						84		305	44		87		309	25		88				130																																																																																																																																																																																																																																																														
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100	53.5	62				53.2	80				53.1	82				53.6	74				54.0	80					53.4			302	30	53.7	91		322	25	53.7	88					100																																																																																																																																																																																																																																																													
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Inversion 490 mb - 12° - 473 mb - 11° Isothermal 473 - 487 mb - 11° 250 - 238 - - 47°																																	Inversion 778 mb - 26° - 767 mb - 27° Isothermal 767 - 778 mb - 27°																																	Inversion 829 mb - 28° - 790 mb - 34° Isothermal 829 - 832 mb - 34° 605 - 15° - 590 - 19° 553 - 13° - 537 - 14° 432 - 11° - 420 - 10° Isothermal 1013 - 990 mb - 47°																																	Inversion 925 mb - 44° - 910 mb - 45° Isothermal 910 - 814 mb - 45°																																	Inversion 868 mb - 37° - 800 mb - 42° Isothermal 800 - 771 - 41° 750 - 731 - 39°																																	Inversion 1017 mb - 47° - 991 mb - 51° Isothermal 900 - 42° - 870 - 46° 870 - 834 mb - 46° 800 - 771 - 41° 750 - 731 - 39°																																	Inversion 882 mb - 46° - 850 mb - 51° Isothermal 1007 - 953 mb - 51° 806 - 767 - 46°																																	Inversion 977 mb - 50° - 940 mb - 55° Isothermal 940 - 895 mb - 55°																																	Inversion 982 mb - 52° - 950 mb - 54° Isothermal 884 - 49° - 850 - 50° 650 - 28° - 639 - 30°																																
Tropopause 11 210 mb - 55° 37 500'																																	Tropopause 1 150 mb - 78° 44 900'																																	Tropopause 1 170 mb - 84° 42 300'																																	Tropopause 1 200 mb - 74° 39 600'																																	Tropopause 1 156 mb - 86° 45 200'																																	Tropopause 1 173 mb - 85° 42 400'																																	Tropopause 1 142 mb - 89° 46 800'																																	Tropopause 1 155 mb - 89° 45 100'																																	Tropopause NR																																
STATION	LERWICK					STORNOWAY					LEUCHARS					ALDERGROVE					LIVERPOOL					DOWNHAM MARKET					LARKHILL					CAMBORNE					VALENTIA					STATION																																																																																																																																																																																																																																																										
Time M.S.L. Surf Freezing	09h		G.M.T.			09h		G.M.T.			09h		G.M.T.			09h		G.M.T.			09h		G.M.T.			09h		G.M.T.			09h		G.M.T.			Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																				
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Pressure	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Height	Temp.	Dew	Wind	Vel.	Pressure																																																																																																																																																																																																																																																															
mb	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	ft./100	°F.	°F.	Dir.	knots	mb																																																																																																																																																																																																																																																															
Surf	02.7	47	40	290	22	00.5	49	47			02.3	54	52	250	18	00.6	55	53	210	09	1.2	51	48	210	03	4.4	55	54	285	07	2.9	55	55			7.4	54	54		Surf																																																																																																																																																																																																																																																																
1000	1.5	44	37	283	33	3.4	48	45			5.3	53	52	270	37	5.8	54	52	245	26	6.2	50	47	289	21	6.7	54	53	307	21	7.4	54	54							1000																																																																																																																																																																																																																																																																
950		44	37	283	33		48	45				51	48	270	37		51	49	265	26		47	42	300	24		50	49	307	21		54	54							950																																																																																																																																																																																																																																																																
900	29.9	39	33	288	39	31.8	39	35			34.0	50	47	282	40	34.7	49	46	286	32	34.8	47	42	305	29	35.6	54	51	312	36	36.4	54	54							900																																																																																																																																																																																																																																																																
850		34	25	288	43		35	32			46	42	287	39		47	43	290	37		47	43	307	35		49	46	307	29		52	43								850																																																																																																																																																																																																																																																																
800	61.0	29	17	286	45	63.0	31	28			66.0	47	43	282	37	66.6	43	30	297	44	66.7	41	35	312	39	67.8	49	43	307	27	68.7	50	32							800																																																																																																																																																																																																																																																																
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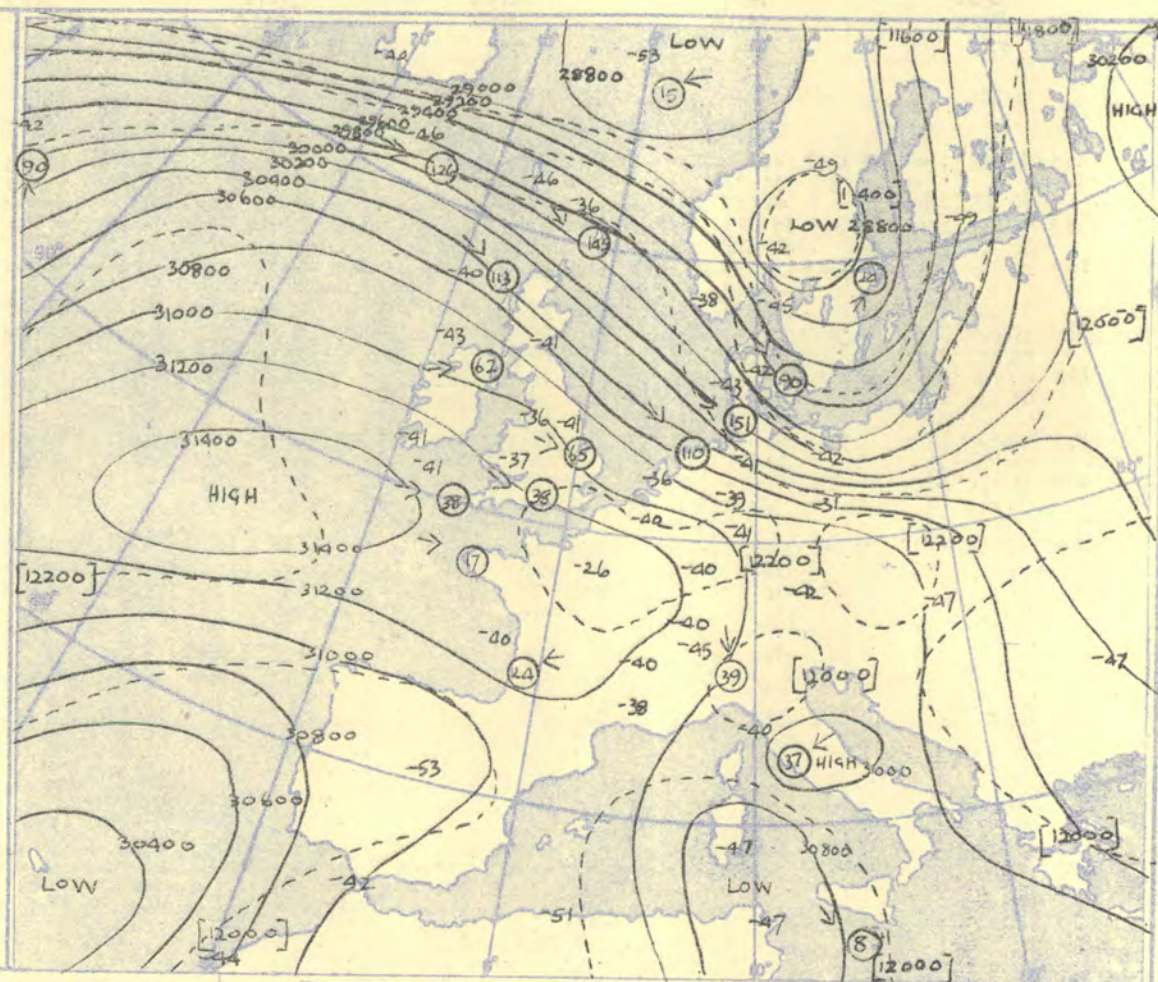
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



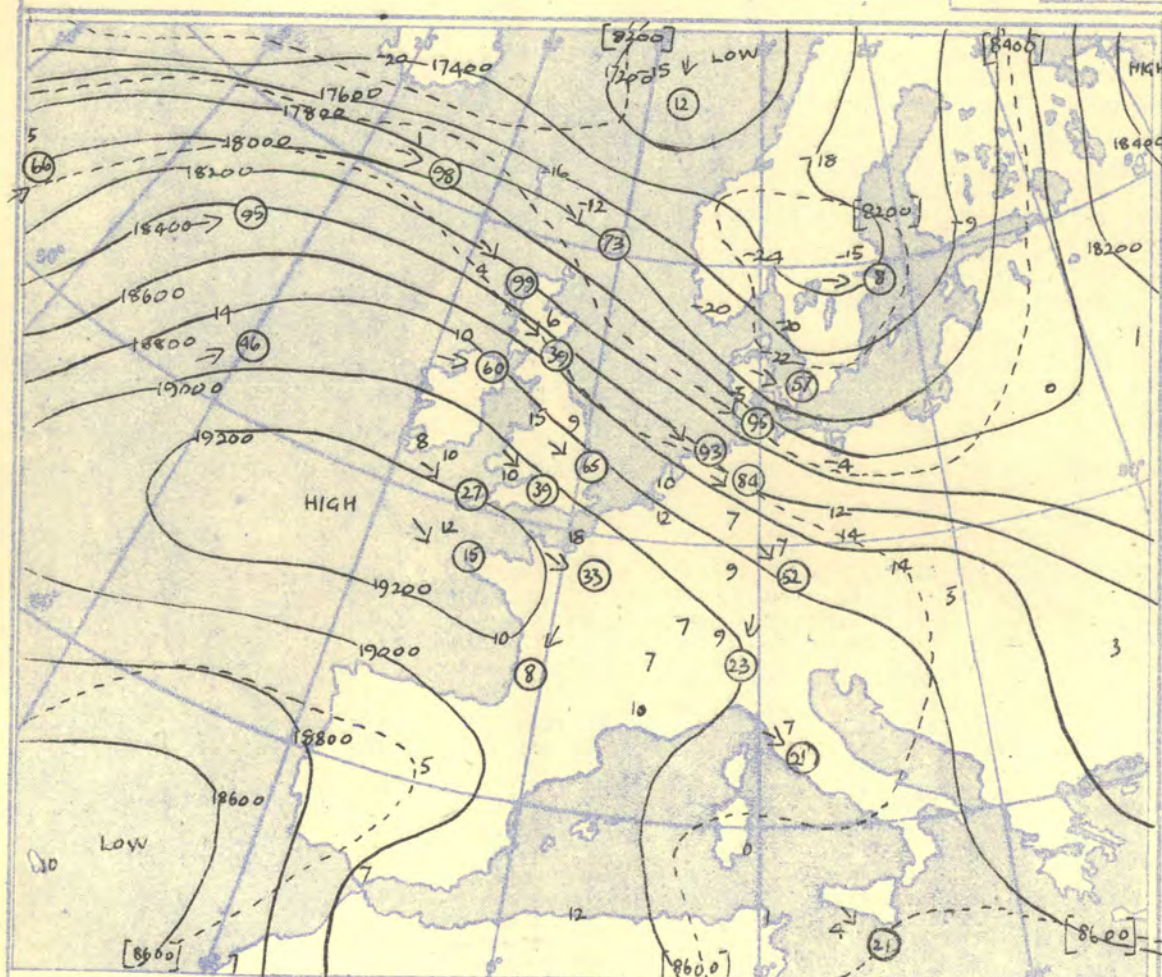
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

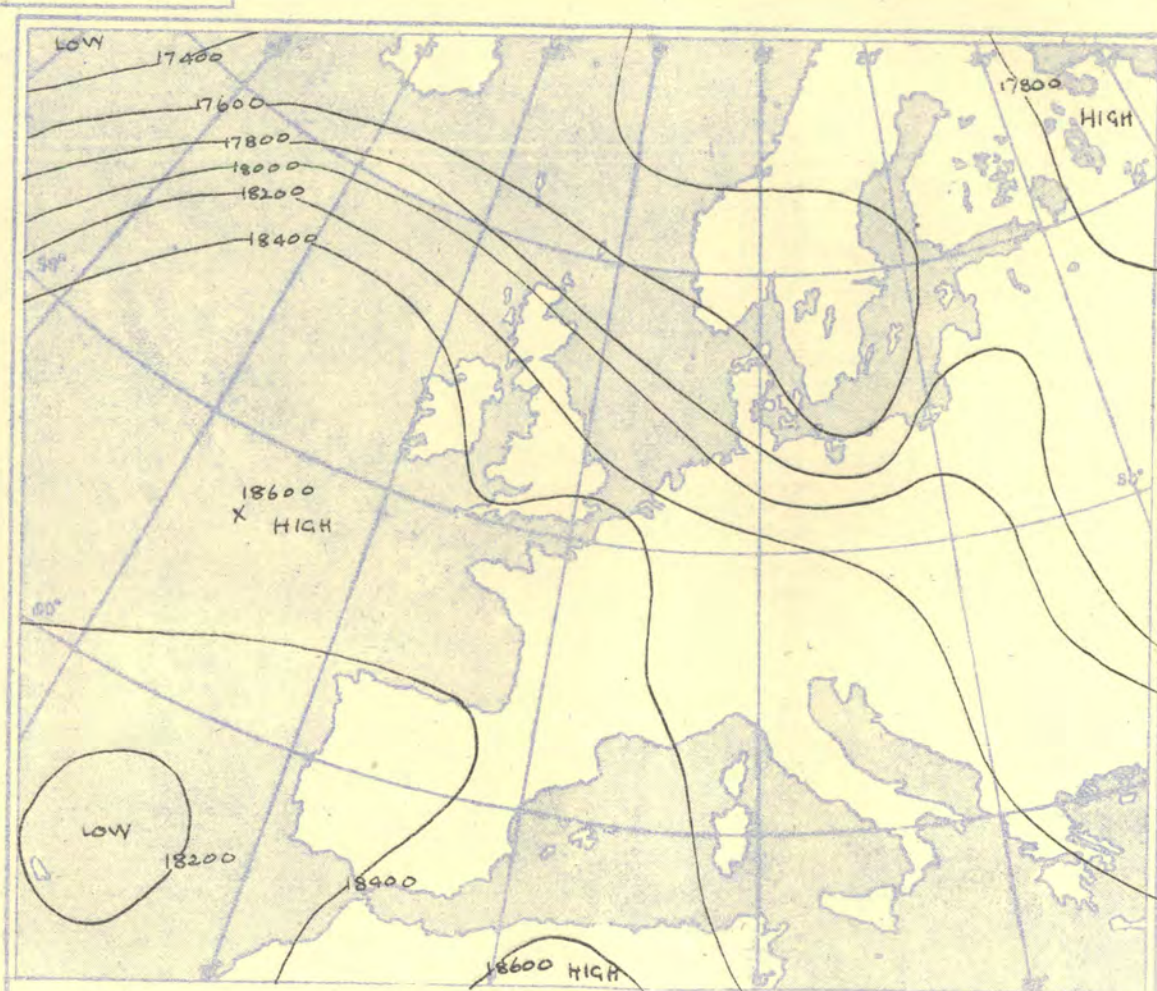
100 80 60 40 20 10 0 knots



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



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



Isopleths of Thickness 500—1000mb.

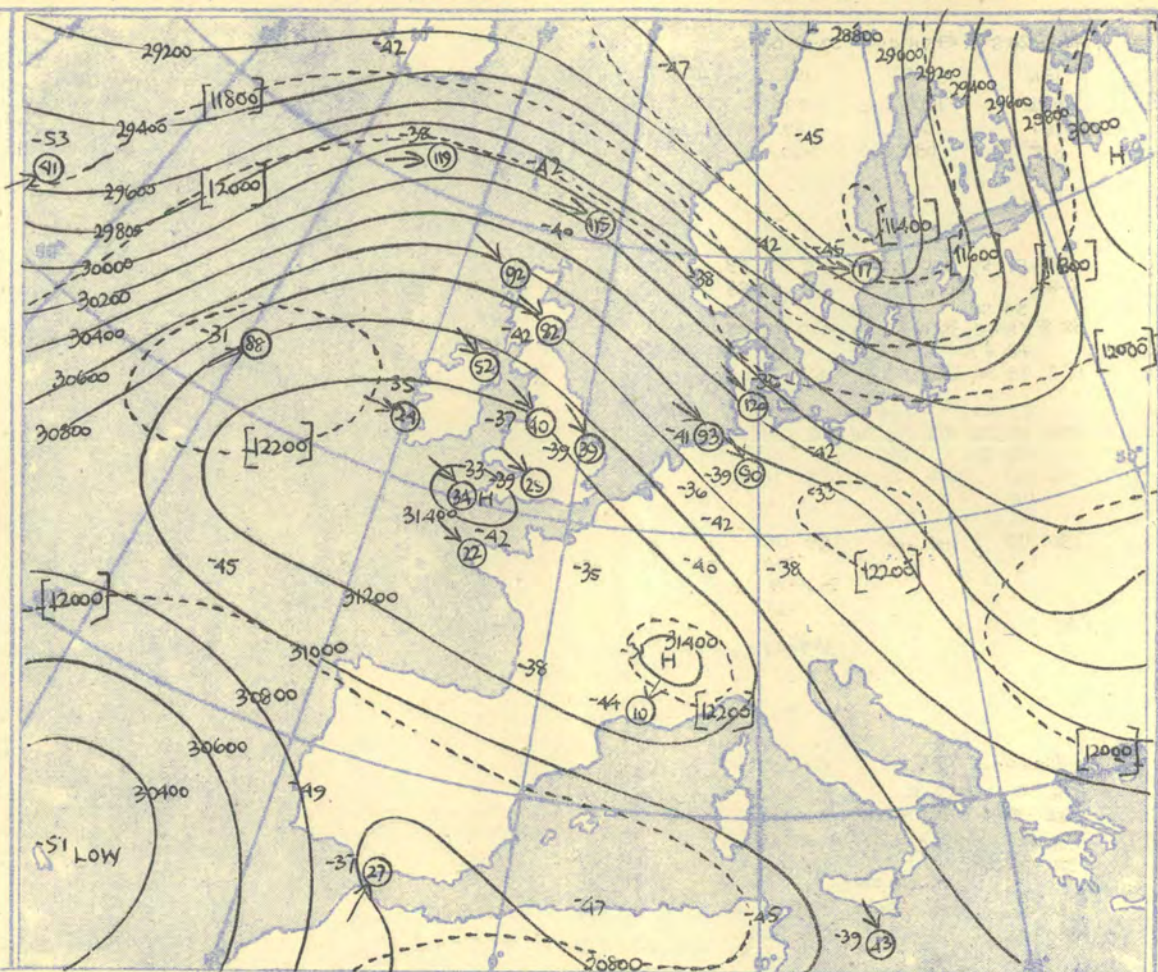
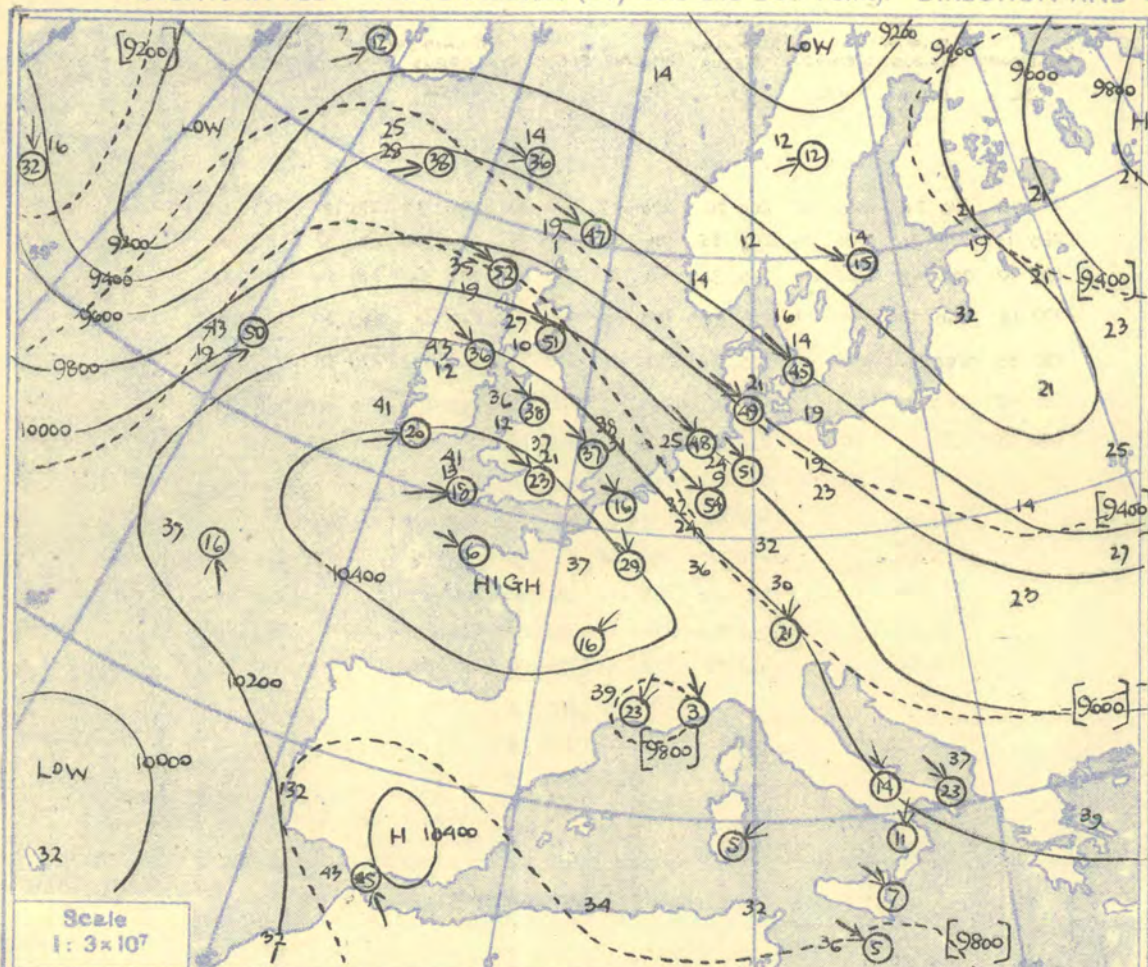
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

[illegible]

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

Ship	WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				WEATHER EXPLORER				CIRRUS				CIRRUS				CIRRUS				CIRRUS								Ship				
Lat/Long	60°N. 13°W.				61°N. 14°W.				61°N. 14°W.				61°N. 14°W.				52°N. 19°W.				52°N. 19°W.				52°N. 19°W.				51°N. 18°W.								Lat/Long				
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							
	1004		mb		1006		mb		1008		mb		1001		mb		1016		mb		1015		mb		1015		mb		1015		mb		mb	M.S.L.							
	1004		mb		1006		mb		1008		mb		1001		mb		1016		mb		1015		mb		1015		mb		1015		mb		mb	Surf							
	840		mb		866		mb		840		mb		740		mb		620		mb		625		mb		620		mb		640		mb		mb	Freezing							
Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb								
Surf	1000	49	41	280 16	1000	49	41	235 15	1000	49	41	235 09	1000	49	41	115 21	1000	49	41	54 54	1000	49	41	54 54	1000	49	41	54 54	1000	49	41	54 54	1000	49	41	54 54	Surf 1000				
950	950	45	37	255 23	950	45	37	241 21	950	45	37	232 10	950	45	37	140 28	950	45	37	54 54	950	45	37	54 54	950	45	37	54 54	950	45	37	54 54	950	45	37	54 54	950	45	37	54 54	950
900	900	38	29	258 31	900	38	29	245 22	900	38	29	233 15	900	38	29	152 28	900	38	29	For	900	38	29	For	900	38	29	For	900	38	29	For	900	38	29	For	900	38	29	For	900
850	850	33	23	265 33	850	33	23	248 25	850	33	23	234 18	850	33	23	188 35	850	33	23	46 34	850	33	23	45 37	850	33	23	48 45	850	33	23	43 41	850	33	23	For	850	33	23	For	850
800	800	26	17	271 33	800	26	13	250 27	800	26	13	235 22	800	26	13	207 43	800	26	13	For	800	26	13	For	800	26	13	48 45	800	26	13	43 41	800	26	13	For	800	26	13	For	800
750	750	20	12	268 37	750	20	10	247 34	750	20	10	242 27	750	20	10	218 36	750	20	10	For	750	20	10	For	750	20	10	48 45	750	20	10	43 41	750	20	10	For	750	20	10	For	750
700	700	20	03	265 44	700	19	09	243 46	700	19	09	246 38	700	19	09	209 40	700	19	09	For	700	19	09	For	700	19	09	48 45	700	19	09	43 41	700	19	09	For	700	19	09	For	700
650	650	12	02	263 44	650	15	05	246 50	650	12	02	244 60	650	12	02	224 59	650	12	02	For	650	12	02	For	650	12	02	48 45	650	12	02	43 41	650	12	02	For	650	12	02	For	650
600	600	11	02	263 61	600	12	03	254 57	600	13	06	245 72	600	13	06	230 66	600	13	06	For	600	13	06	For	600	13	06	48 45	600	13	06	43 41	600	13	06	For	600	13	06	For	600
550	550	09	01	263 63	550	10	03	257 76	550	12	07	248 75	550	13	09	249 75	550	13	09	For	550	13	09	For	550	13	09	48 45	550	13	09	43 41	550	13	09	For	550	13	09	For	550
500	500	01	09	263 98	500	01	32	257 87	500	05	06	252 80	500	04	02	228 72	500	04	02	For	500	05	06	For	500	04	02	48 45	500	05	06	43 41	500	05	06	For	500	05	06	For	500
450	450	06	14	266 96	450	02	42	260 102	450	04	05	252 93	450	05	10	231 79	450	05	10	For	450	06	14	For	450	05	10	48 45	450	06	14	43 41	450	06	14	For	450	06	14	For	450
400	400	13	22	274 117	400	13	--	262 114	400	13	18	249 100	400	17	24	228 88	400	17	24	For	400	13	22	For	400	13	22	48 45	400	13	22	43 41	400	13	22	For	400	13	22	For	400
350	350	23	38	265 123	350	25	48	260 26	350	25	33	253 109	350	29	35	207 43	350	29	35	For	350	23	38	For	350	23	38	48 45	350	23	38	43 41	350	23	38	For	350	23	38	For	350
300	300	29	46	264 126	300	39	56	256 123	300	38	48	254 119	300	39	56	207 43	300	39	56	For	300	29	46	For	300	29	46	48 45	300	29	46	43 41	300	29	46	For	300	29	46	For	300
250	250	53		262 121	250	56		256 120	250	56		251 120	250	56		207 43	250	56		For	250	53		For	250	53		48 45	250	53		43 41	250	53		For	250	53		For	250
200	200	38	68	261 95	200	62		259 97	200	64		260 108	200	64		207 43	200	64		For	200	38	68	For	200	38	68	48 45	200	38	68	43 41	200	38	68	For	200	38	68	For	200
170	170	65		263 71	170	84		261 96	170	70		255 90	170	70		207 43	170	70		For	170	65		For	170	65		48 45	170	65		43 41	170	65		For	170	65		For	170
150	150	65		267 62	150	64		260 96	150	70		251 68	150	70		207 43	150	70		For	150	65		For	150	65		48 45	150	65		43 41	150	65		For	150	65		For	150
130	130	66		270 36	130	66		256 60	130	67		252 28	130	67		207 43	130	67		For	130	66		For	130	66		48 45	130	66		43 41	130	66		For	130	66		For	130
110	110	69		270 26	110	66		257 52	110	72		252 51	110	72		207 43	110	72		For	110	69		For	110	69		48 45	110	69		43 41	110	69		For	110	69		For	110
100	100				100	68			100	71		252 45	100	71		207 43	100	71		For	100			For	100			48 45	100			43 41	100			For	100			For	100
90	90				90	67			90	66		252 33	90	66		207 43	90	66		For	90			For	90			48 45	90			43 41	90			For	90			For	90
80	80				80	65			80	65		252 28	80	65		207 43	80	65		For	80			For	80			48 45	80			43 41	80			For	80			For	80
70	70				70	66			70	67		252 24	70	67		207 43	70	67		For	70			For	70			48 45	70			43 41	70			For	70			For	70
60	60				60	67			60	67		252 19	60	67		207 43	60	67		For	60			For	60			48 45	60			43 41	60			For	60			For	60
Inversion	738mb. 19°-708mb. 21°				574mb. 9°-550mb. 10°				656mb. 68°				870mb. 40°-860mb. 42°				1016mb. 55°-957mb. 59°				853mb. 45°-845mb. 50°				865mb. 46°-825mb. 50°				850mb. 43°-816mb. 48°												
isothermal	635mb. 10°-605mb. 12°				isothermal				734mb. 22°-674mb. 26°				688mb. 27°-671mb. 28°				774mb. 37°-763mb. 50°				967-941mb. 52°				748-716mb. 45°				1000-956mb. 54°												
isothermal	300mb. 46°-290mb. 44°				713-685mb. 19°												913-900mb. 54°				879-853mb. 45°				202-200mb. -67°																
isothermal	462-450mb. -6°																																								
Tropopause	I 203mb. -69° 39,300'				II 238mb. -60° 35,100'				I 175mb. -71° 41,800'				N.R.				N.R.				I 168mb. -83° 43,300'				I 150mb. -80° 46,000'				N.R.								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 15h G.M.T.



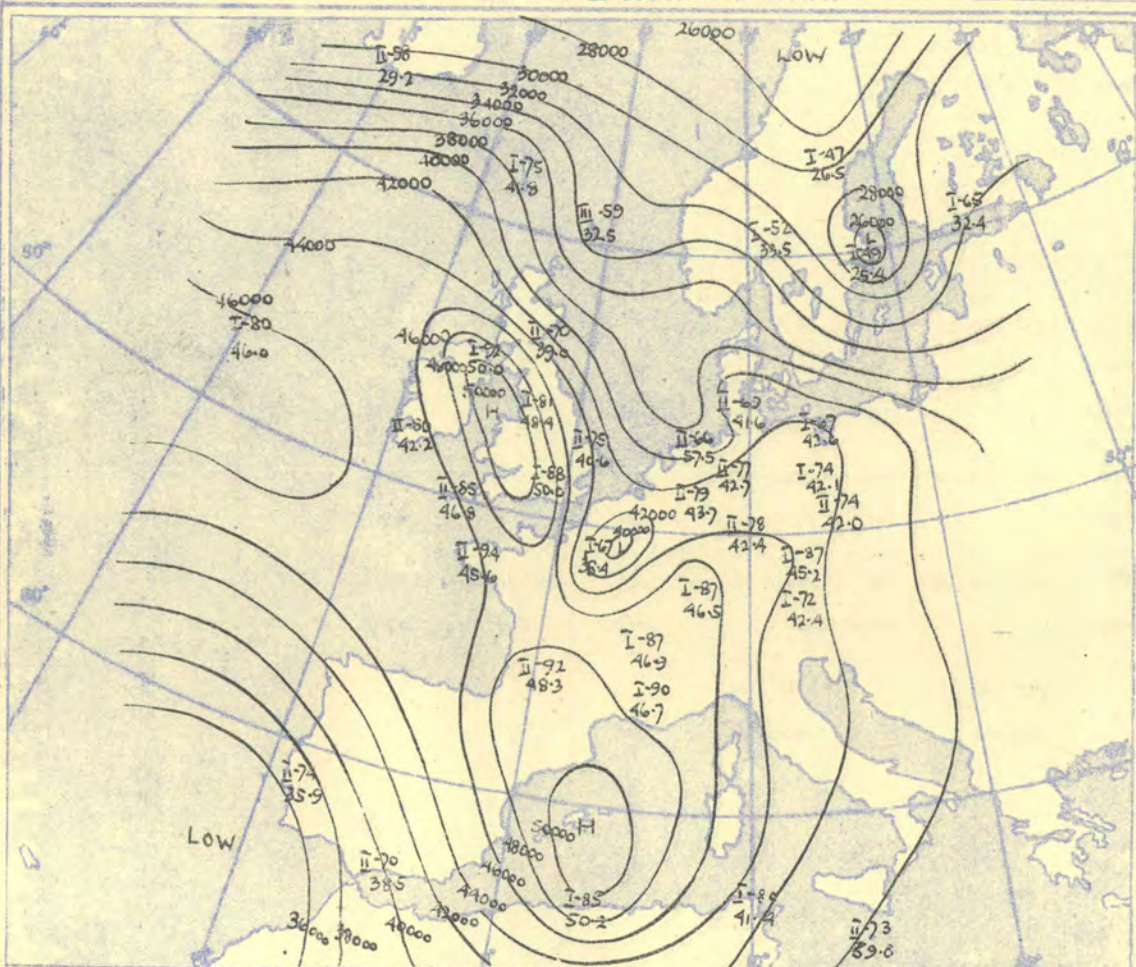
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

100 80 60 40 20 10 knots

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

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



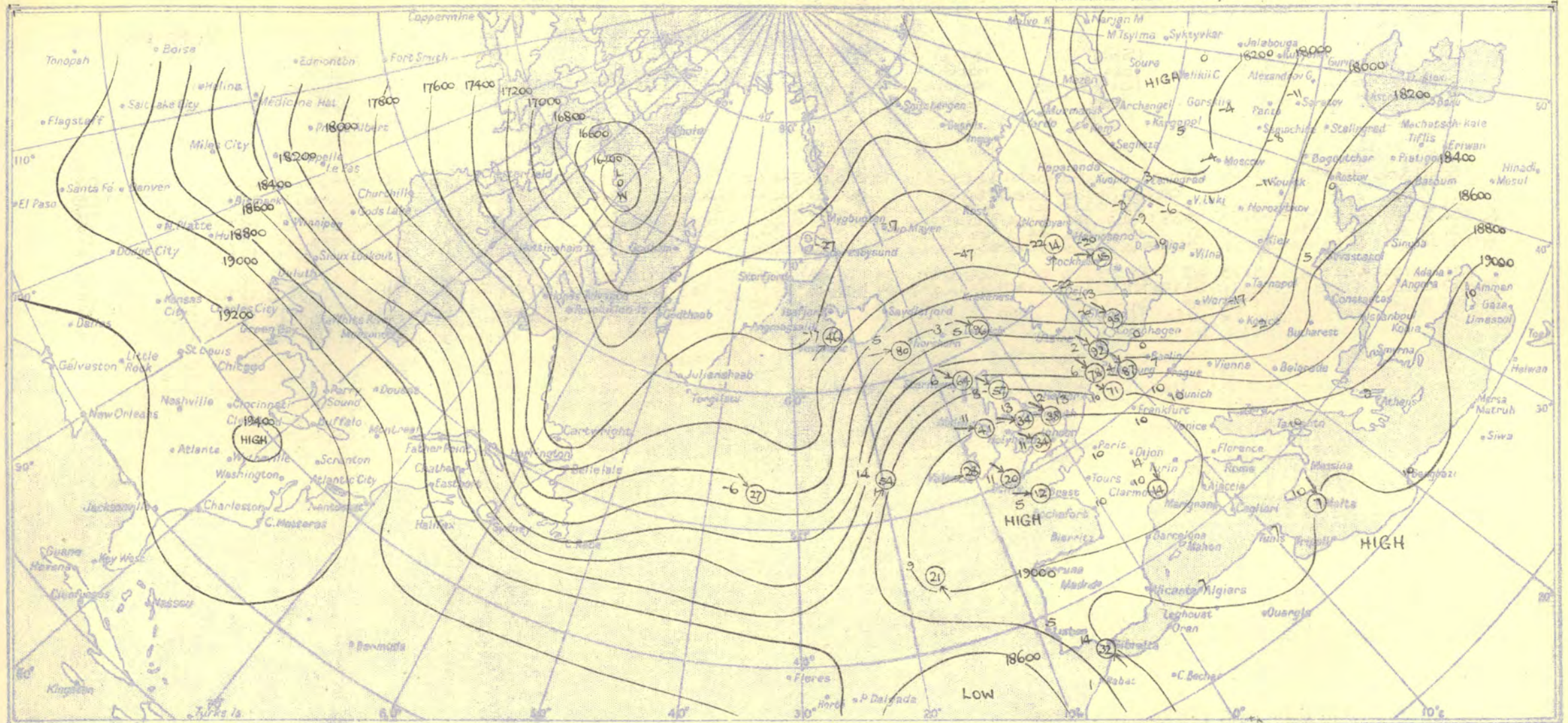
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The strong Thermal zone from Mid-Atlantic to Scotland and the North Sea become distorted as the old tropical depression moved northeastwards on the Atlantic. Very warm air over our Southwest approaches. The cold pool off Portugal moved a little westwards.

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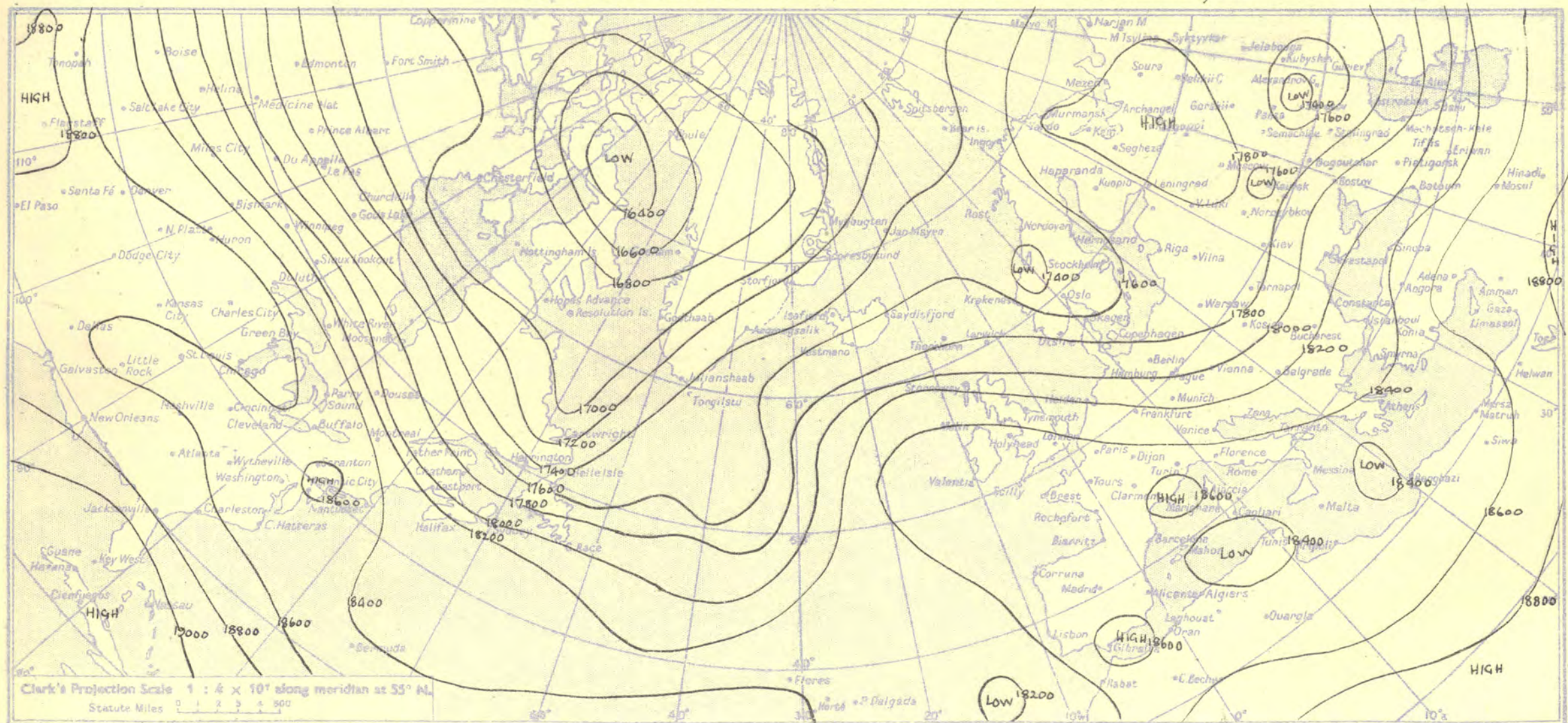
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Wednesday 18th October, 1950.

1950.

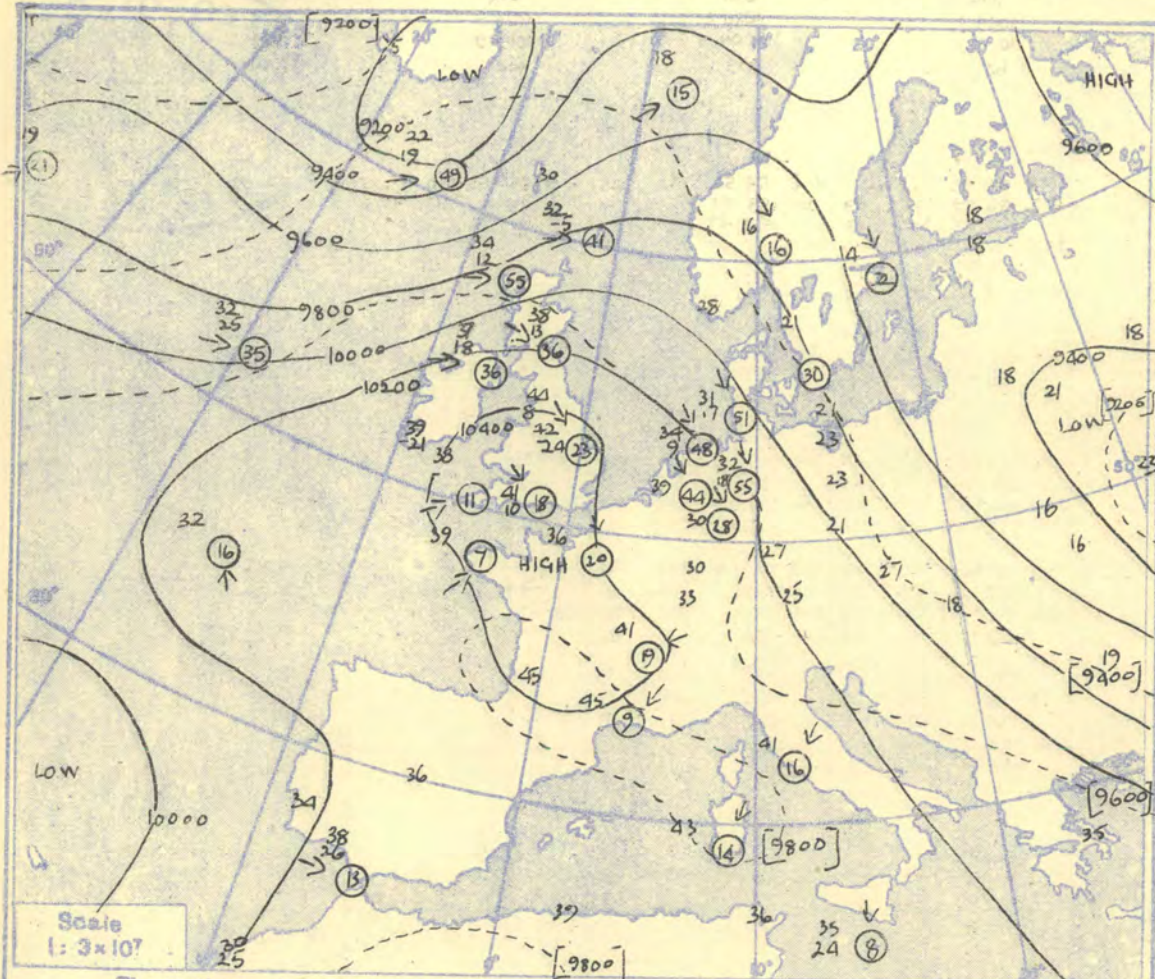


$$H^1(\mathbb{R}^n, \mathbb{R}) \cong \mathbb{R}^n$$

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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																		
Pressure Time M.S.L. Surf Freezing	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.		Pressure Time M.S.L. Surf Freezing																																																																																						
	1010.7		mb		1012.9		mb		1017.8		mb		1022.1		mb		1023.4		mb		1024.2		mb		1026.0		mb		1026.0		mb																																																																																								
	1000.7		mb		1011.0		mb		1017.0		mb		1013.4		mb		1021.4		mb		1019.9		mb		1009.9		mb		1015.9		mb																																																																																								
700.		mb		670		mb		670		mb		650		mb		625		mb		621		mb		639		mb		662		mb																																																																																									
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																						
Surf	2.7	49	49	200	15	0.5	55	53	210	12	0.2	54	51	250	12	2.3	52	50	220	12	0.6	53	49	Cal	4.4	54	52	330	03	2.9	54	53	180	05	0.3	62	61	Surf																																																																																	
1000	2.9	49	49			3.5	55	53			4.8	54	50	253	27	6.0	51	49	225	18	6.4	54	50		7.1	53	51			7.2	55		217	15	6.3	58	57	1000																																																																																	
950		47	46	229	30		50	48	224	32		52	48	267	31		48	45	228	22		53	49			49	47	272	10		56		216	13		51	35	950																																																																																	
900	31.4	44	43	244	32	32.2	45	43	230	46	33.7	46	42	271	36	34.6	47	41	232	25	35.3	49	46		35.8	55	40	276	13	26.3	52		222	13	35.1	53	30	900																																																																																	
850		38	37	250	36		42	39	234	49		36	27	270	36		50	42	240	28		57	35			55	41	280	15		50		224	12		51	25	850																																																																																	
800	62.7	33	32	250	36	63.9	40	37	249	52	65.0	35	10	270	36	66.6	47	37	250	28	67.6	50	35		68.2	52	27	285	15	68.4	49		224	13	67.2	47	17	800																																																																																	
750		30	29	255	31		35	25	250	55		45	19	272	32		42	27	252	40		47	24			45	24	294	15		45		219	12		42	05	750																																																																																	
700	57.7	32	05	269	41	59.3	34	12	248	55	101	38	13	272	36	102	37	18	250	36	104	44	08		104	41	10	295	18	104	38		220	11	103	39	21	700																																																																																	
650		27	04	272	47		31	12	249	60		30	09	269	41		32	14	247	35		36	01			33	03	295	24		31		242	11		33	31	650																																																																																	
600	138	19	01	276	57	140	24	08	253	64	141	25	04	269	44	143	26	12	248	37	145	28	03		145	28	06	295	23	145	25		247	14	144	27	35	600																																																																																	
550		12	12	276	65		17	02	256	69		17	04	269	44		17	07	250	41		19	07			18	12	301	23		20		250	19		19	41	550																																																																																	
500	184	03	25	275	69	186	07	02	256	71	187	06	13	276	47	189	08	01	254	41	191	18	13		191	07	21	295	22	191	09		254	18	190	11	47	500																																																																																	
450		08	29	274	70		02	13	256	69		04	22	285	49		01	12	263	40		01	21			00	44	286	28		00	44	286	28		02	54	450																																																																																	
400	237	18	35	276	73	240	12	26	258	81	241	13	20	282	54	244	11	27	259	40	246	08	34		246	12	40	245	14	245	21		256	13	245	12		02	400																																																																																
350		28	55	278	88		24	43	263	79		26	42	273	57		23	43	246	41		20	48			22	55	286	26		23	52	235	12	26		28	350																																																																																	
300	304	39	59	274	104	307	38	57	256	78	308	39	56	275	64				For		313	37	60			313	39	60	242	04	311	39		239	14	311	43	300																																																																																	
250		54		276	105		55		253	72		56		274	62				rest		401	69				53		323	25		59		246	06		56	250																																																																																		
200	391	72		280	54	395	72				395	74		273	59				of		81					71		318	29	399	78		307	06	398	79		75	200																																																																																
170		74		278	63		78					82		282	45				winds							83		317	30		86		273	12		81	170																																																																																		
150		78		277	75		83					83		278	33				See		88					81		307	27		87		260	11		88	150																																																																																		
130		78		276	78		83					82		273	28				page		83					85		300	25		88		288	11		90	130																																																																																		
110		78					82					83		271	26				3.		86					84		298	16		88		280	13		88	110																																																																																		
100	532	75				535	76				535	83		272	27					540	85					540	83		290	11		87				88	100																																																																																		
90		75					72													84						81		238	07	(105ms)					84	90																																																																																			
80		78																		85																84	80																																																																																		
70	(84mb)																			80																84	70																																																																																		
60																				82																	60																																																																																		
Inversion.				726 mb 30° - 706 mb 33°				Isothermal.				1011 - 996 mb 55°				Inversion.				800 mb 35° - 750 mb 45°				Isothermal.				1017 - 973 mb 51°				847 - 800° 35°				Inversion.				884 mb 46° - 835 mb 51°				Isothermal.				960 - 915 mb 48°				Inversion.				1021 mb 53° - 1010 mb 54°				893° 48° - 862° 59°				Isothermal.				774 - 715 mb 47°				Inversion.				835 mb 44° - 830 mb 46°				925 mb 47° - 895 mb 57°				Inversion.				1016 mb 54° - 960 mb 56°				839° 49° - 818° 51°				393° - 21° - 384° - 20°				Inversion.				974 mb 48° - 936 mb 53°				Isothermal.				718 - 681 mb 39°							
Tropopause				II 200 mb - 72° 39' 100°				II 177 mb - 78° 41' 800°				II 180 mb - 82° 41' 600°				NR.				II 153 mb - 88° 45' 600°				I 162 mb - 86° 44' 300°				I 165 mb - 88° 44' 400°				NR.				II 146 mb - 90° 46' 400°				Tropopause																																																																															
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																		
Pressure Time M.S.L. Surf Freezing	09h.		G.M.T.		09h.		G.M.T.				G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		09h.		G.M.T.		Pressure Time M.S.L. Surf Freezing																																																																																						
	1005.2		mb		1009.8		mb				mb		1021.8		mb		1023.2		mb		1024.9		mb		1026.0		mb		1026.0		mb																																																																																								
	995.3		mb		1007.7		mb				mb		1013.2		mb		1021.2		mb		1020.5		mb		1009.7		mb		1015.2		mb																																																																																								
728		mb		714		mb				mb		650		mb		636		mb		788		mb		642		mb		639		mb																																																																																									
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																						
Surf	2.7	51	52	220	34	0.5	54	53					2.3	52	49	238	06	0.6	45	44	Cal	1.2	50	50	220	03	4.4	53	51	270	05	2.9	53	53	160	02	Surf																																																																																		
1000	1.4					2.7	53	52					6.0	51	48	238	12	6.0	49	48	181	12	6.8	50	49		7.0	52	50			7.0	51	51	185	10	1000																																																																																		
950		50	50	230	51		51	49	48					47	44	252	21		51	48	201	10		52	46	257	08		55	54	281	13		55	54	199	10	950																																																																																	
900	30.1	46	46	236	54	31.4	45	43					34.6	47	44	258	29	34.8	51	40	261	18	35.6	50	34	282	12	35.9	56	38	283	13	36.1	53	50	222	10	900																																																																																	
850		42	42	241	57		40	38						50	39	264	29		54	25	269	24		56	21	293	20		52	33	272	10		50	41	237	15	850																																																																																	
800	61.7	39	39	241	60	62.9	37	29					66.6	47	23	252	30	67.1	49	37	259	28	68.0	50	12	296	21	68.1	48	25	265	15	68.2	48	30	227	16	800																																																																																	
750		34	33	245	65		37	30						42	13	250	33		44	30	256	28		43	05	290	23		45	15	265	16		45	25	213	21	750																																																																																	
700	97.0	28	27	247	70	98.5	31	27					102	38	05	251	34	103	41	27	253	29	104	39	01	277	21	104	38	14	273	16	104	39	17	210	21	700																																																																																	
650		23	16	250	74		29	03						32	05	246	38		34	25	247	30		35	09	274	17		32	18	270	12		34	17	212																																																																																			

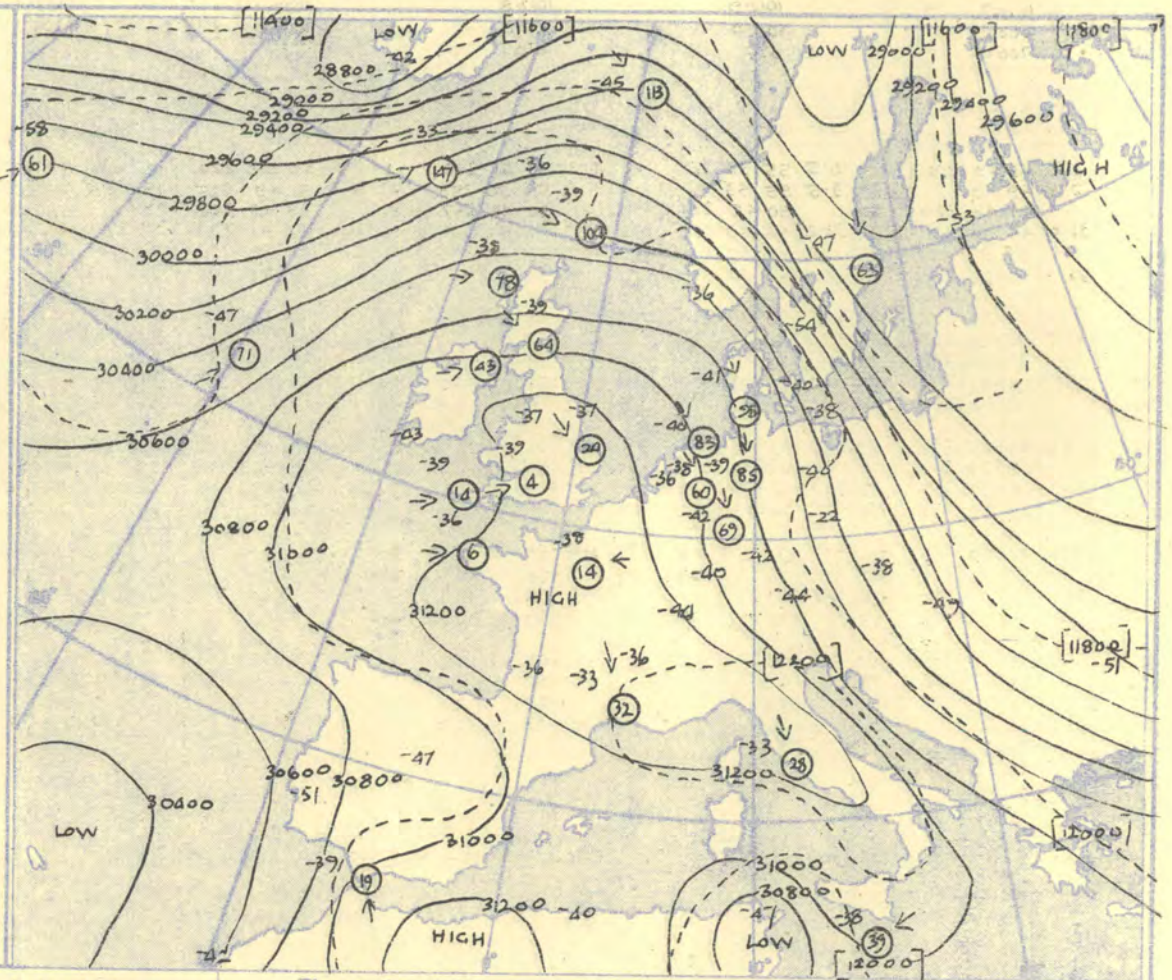
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



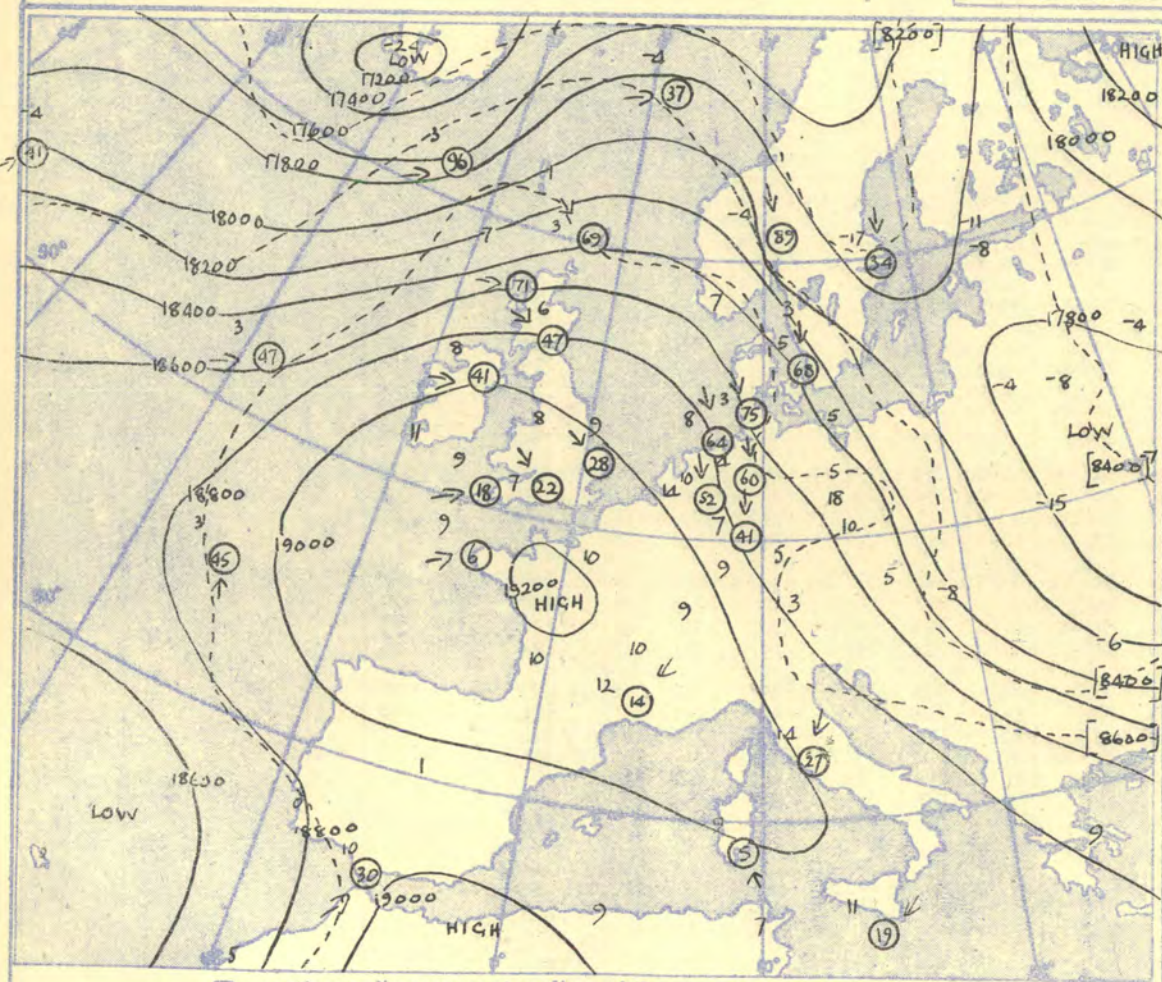
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

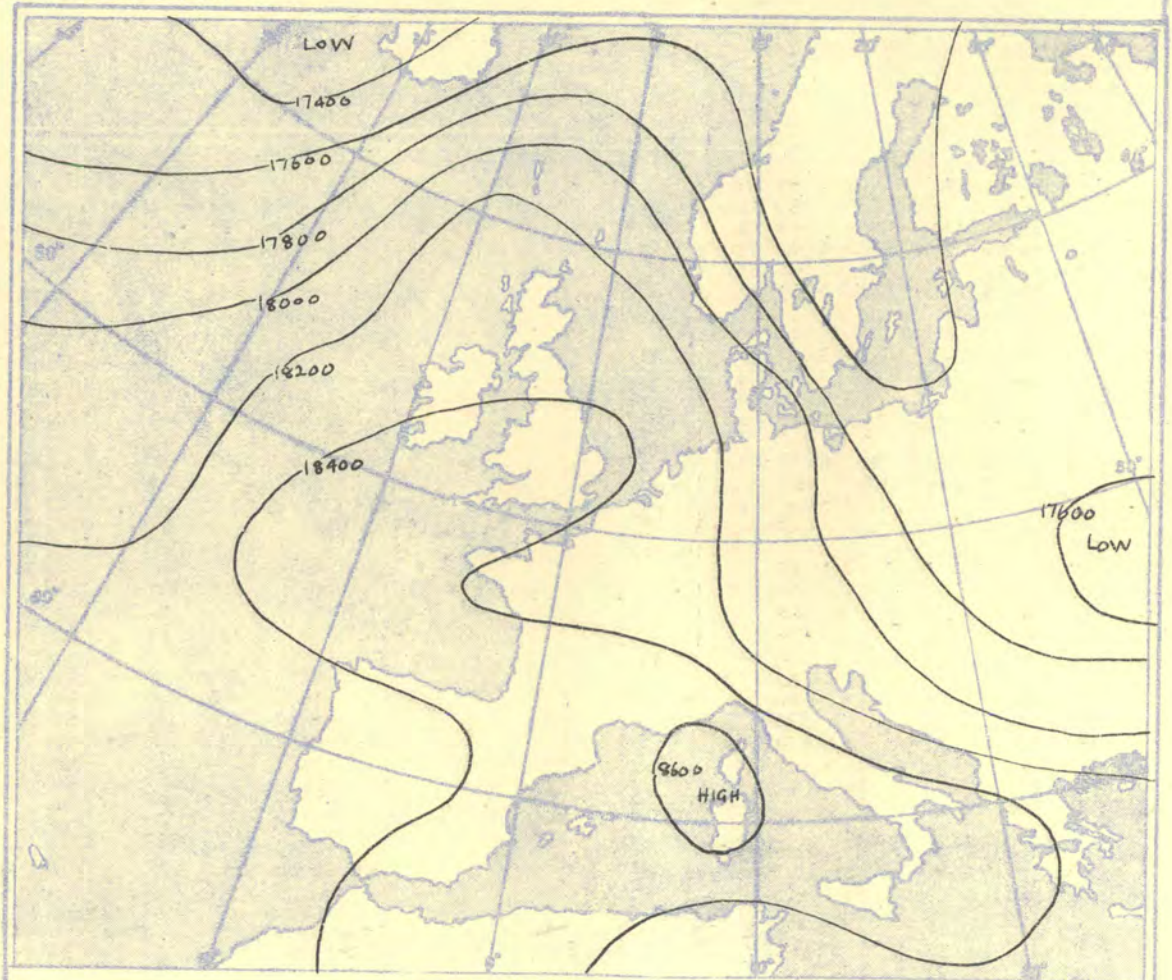
100 80 60 40 20 10 knots



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



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



Isopleths of Thickness 500—1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

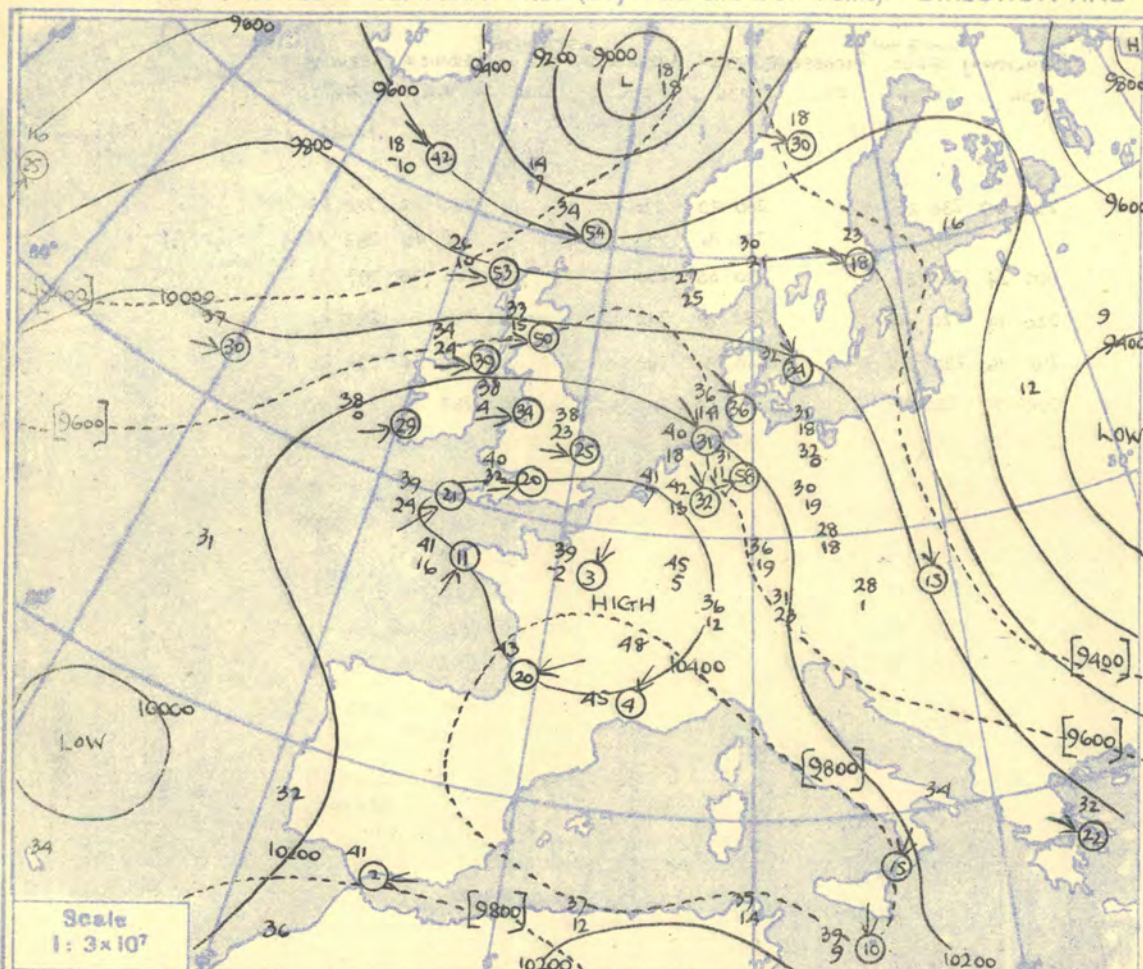
Time M.S.L.	Surf Pressure	53° 24' N 17° 04' W		53° 14' N 01° 32' E																Time M.S.L.	Surf Pressure
		Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew	Temp.	Dew		
124	1017	mb		1024	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	1017	mb
1016	1016	mb		1022	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	1016	mb
715	715	mb		638	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	715	mb
Surf		63	62	5	58	58														Surf	
1000	4.8	63	64	5	58	58														1000	
950		60	56	5	55	47														950	
900		57	47	35	5	33														900	
850		49	44		56	19														850	
800		42	39	67	9	27														800	
750		36	33		44	21														750	
700	101	30	21	104	39	19														700	
650		23	18		34	25														650	
600		16		145	27	23														600	
550		07		18																550	
500	186	02		191	08															500	
450				245	14															450	
400					26															400	
350																				350	
300				312	39															300	
250																				250	
200																				200	
170																				170	
		Cloud.		Cloud.																	
		618 St		818 St																	
		980-960mb		1006-993mb																	
		118 Ae		1006-993mb																	
		730-630mb		1006-993mb																	
		618 Csb HR		950-955																	
				900-950																	
				1/30th term.																	
				55°																	

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

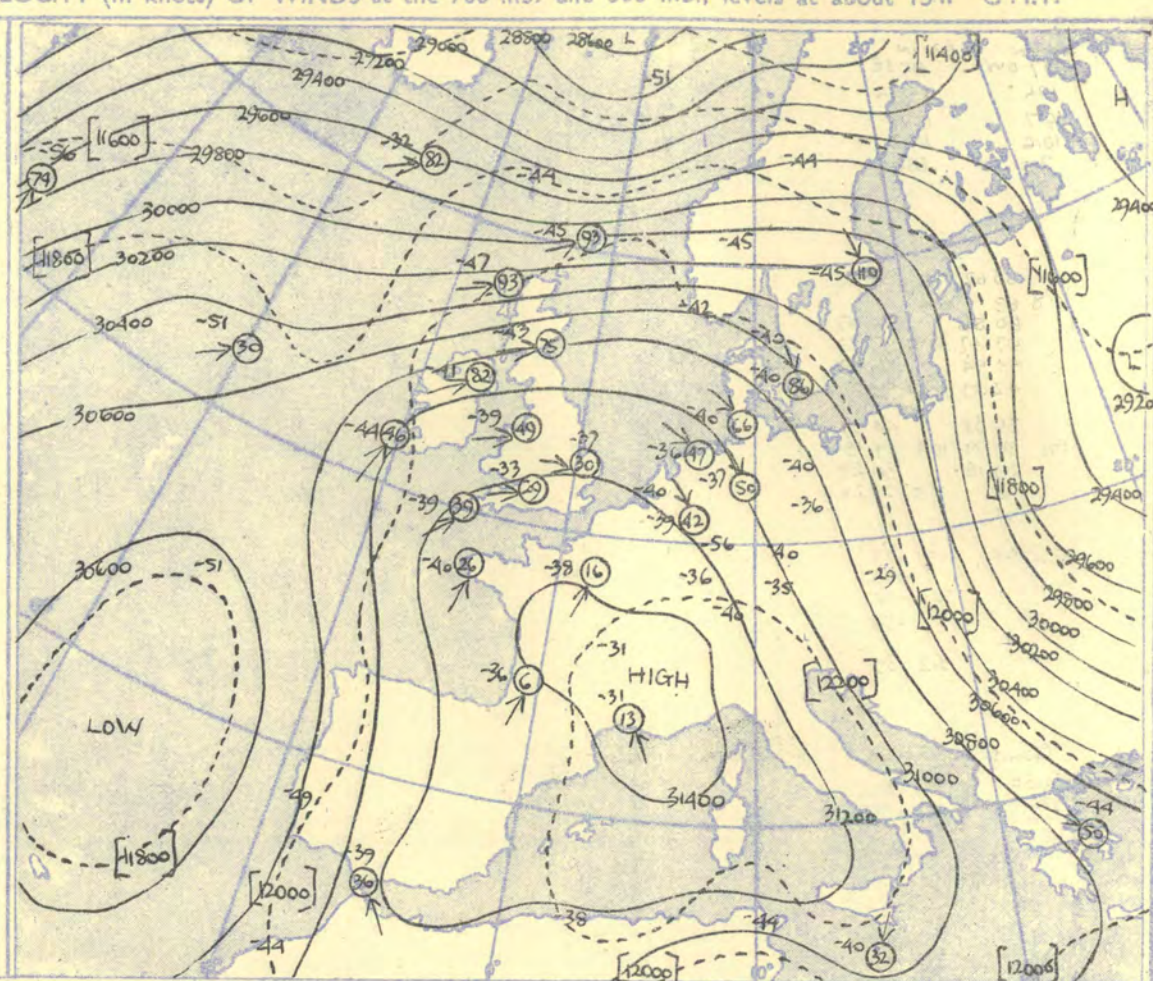
Place	RONALDSWAY		51° 18' 30" W CREUS.		ALDERGROVE		DUBLIN		LOSSIEMOUTH		51° 18' 30" W CREUS		LERNICK		LERNICK		METEOROLOGICAL OFFICE 26 OCT 1950		Place	
Time	03L		03L.		03L		03L.		03L.		03L.		15L		21L				Time	
Type					Pilot.										Radar.				Type	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet	
Surf.	270	05	230	20			240	09	230	17	250	14	280	32	280	33			Surf.	
1,000				240	36			230	16	220	39	260	22	266	49	283	30			1,000
2,000	250	24	230	36			180	05	230	48	270	24	266	49	283	33			2,000	
3,000	220	19	220	36			230	18	240	47	270	26	266	51	285	44			3,000	
4,000	210	16	230	34			240	19	260	51	270	22	266	54	286	48			4,000	
5,000	250	31	220	42			240	20	260	60	260	25	263	54	290	45			5,000	
6,000	260	25					240	26	260	70			262	59	289	45			6,000	
8,000							240	23	250	83			262	55	281	45			8,000	
10,000			230	35					250	58	240	39	263	54	279	55			10,000	
14,000			230	39							230	44	256	62	279	57			14,000	
18,000			230	47							230	45	256	76	270	62			18,000	
24,000			210	49							230	68	252	90	269	65			24,000	
30,000			200	71	243	43							250	93	255	85			30,000	
40,000			210	57	246	36							244	112	259	65			40,000	
50,000			(39° 00')		249	38	(46° 00')						(35° 00')		262	43			50,000	
															264	39				
															(53° 00')					

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

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.

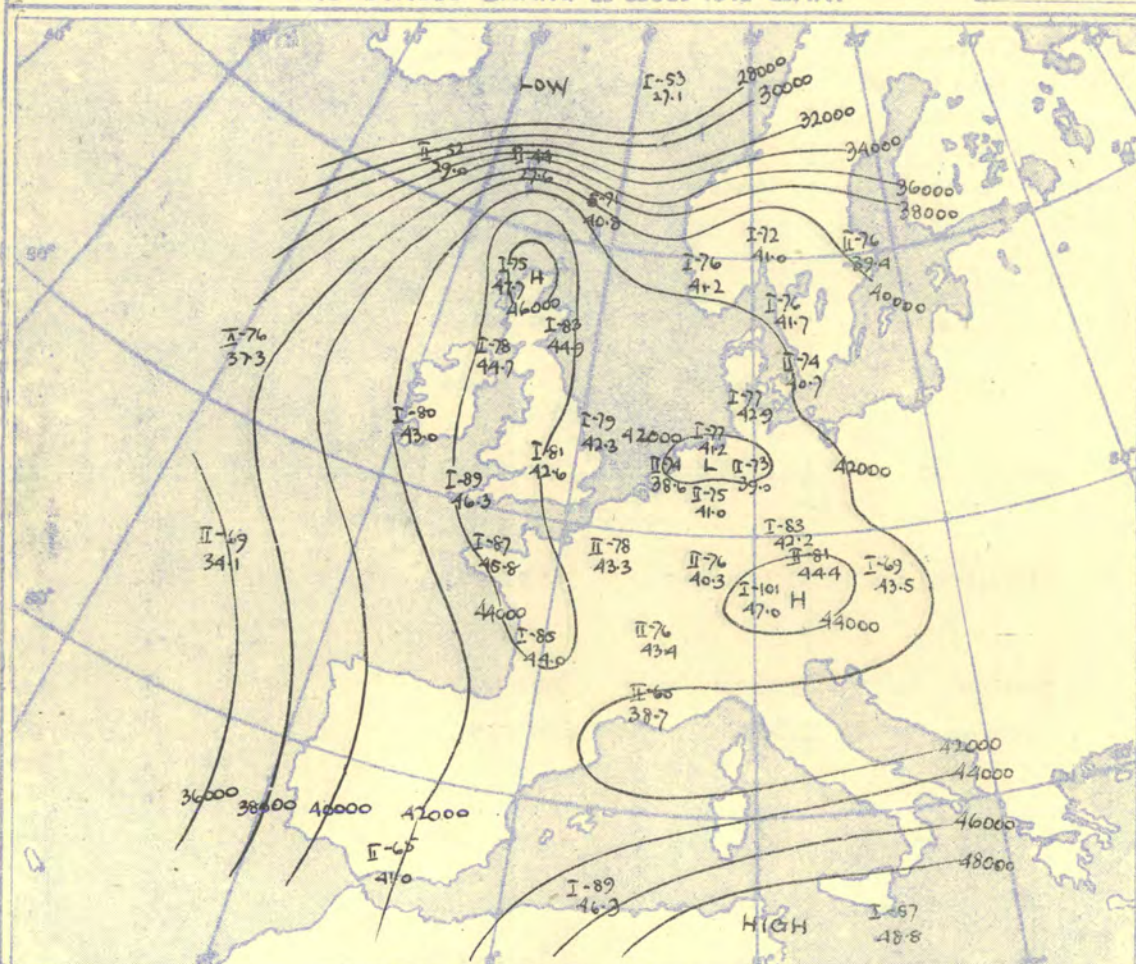


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



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 15 h G.M.T.



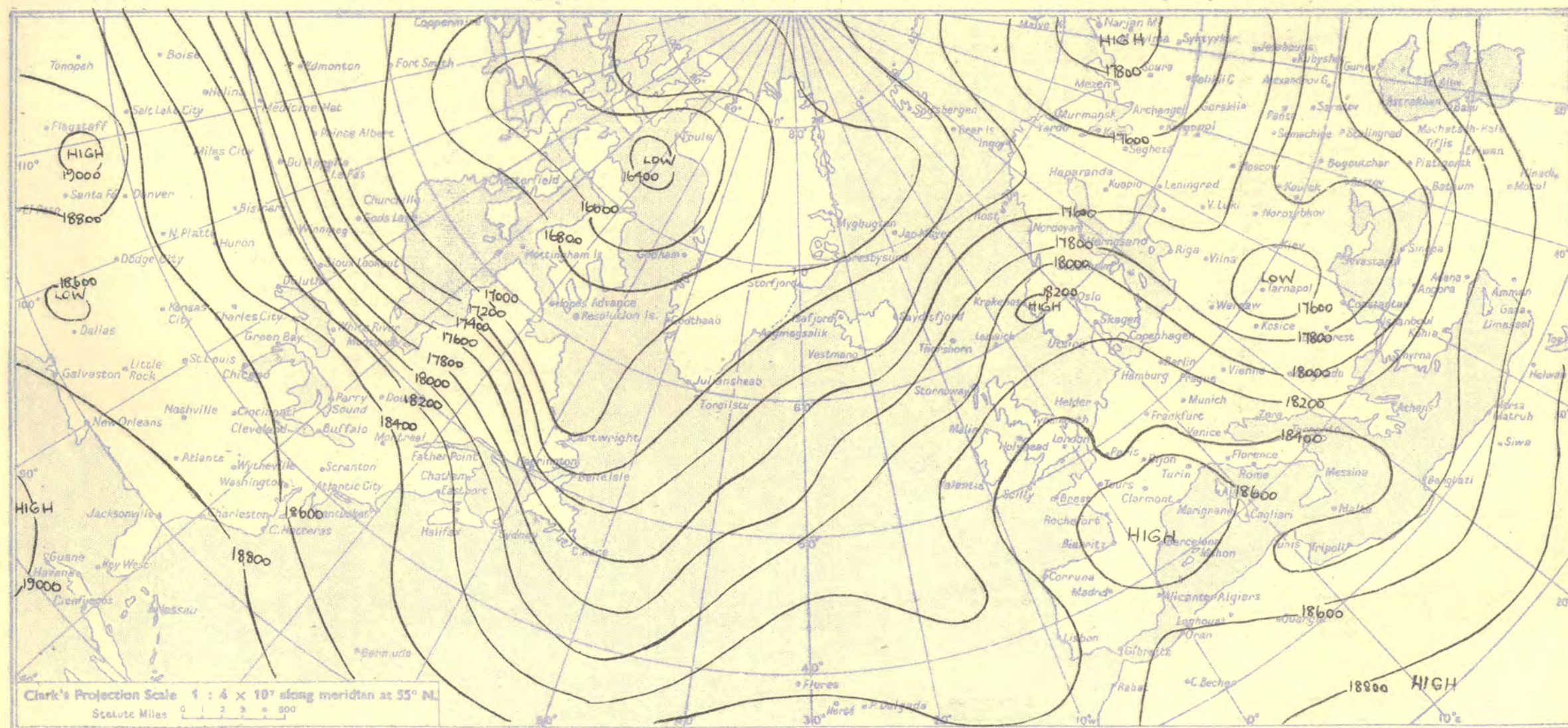
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Decreasing thermal gradients over the Northeast Atlantic, Scandinavia and Central Europe.

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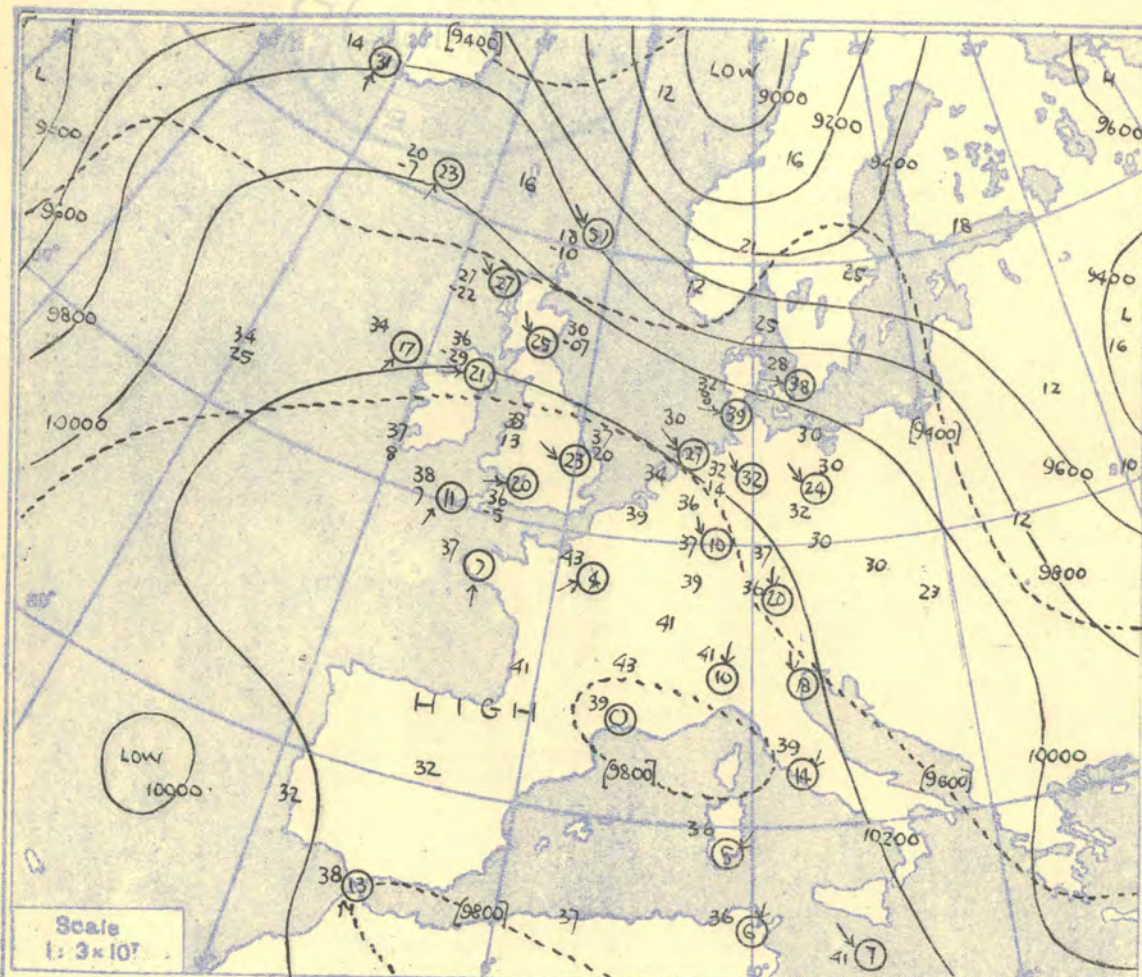
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time	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.	Time	Pressure						
M.S.L.		1004.6	mb	1014.6	mb	1016.3	mb	1021.3	mb	1022.8	mb	1023.4	mb	1024.9	mb	1024.2	mb	1023.0	mb	1021.0	mb	1023.4	mb	1024.9	mb	1024.2	mb	1023.0	mb	1021.0	mb	M.S.L.							
Surf		994.7	mb	1012.7	mb	1015.7	mb	1012.8	mb	1020.8	mb	1019.0	mb	1008.8	mb	1013.7	mb	1021.0	mb	1019.0	mb	1023.4	mb	1024.9	mb	1024.2	mb	1023.0	mb	1021.0	mb	Surf							
Freezing		672	mb	800	mb	694	mb	643	mb	644	mb	652	mb	639	mb	626	mb	640	mb	640	mb	652	mb	639	mb	626	mb	640	mb	640	mb	Freezing							
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Pressure						
mb	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb						
Surf	02.7	49	45		00.5	50	44	270 15	00.2	57	42	260 18	02.3	55	50	240 10	00.6	58	52	270 07	01.2	58	52	200 05	04.4	57	56	240 04	02.9	57	56	170 03	Surf						
1000	1.2	45	42		3.9	49	43	270 15	4.5	55	51	240 30	5.9	53	48	219 12	6.3	54	49	217 10	6.5	53	47	274 18	6.8	56	50	261 09	6.6	55	54	185 06	1000						
950	29.6	38	36		32.2	38	36	269 30	33.2	45	43	270 37	34.7	50	41	246 27	35.1	52	29	282 19	35.4	56	44	278 19	35.7	56	48	272 12	35.9	58	46	219 12	950						
900	38	13		For	35.3	34	258 38		47	42	279 42		49	38	248 30		49	31	276 27		53	35	268 20		52	45	272 12		53	42	225 12	900							
850	61.0	38	19		63.4	32	30	255 41	65.1	46	32	274 45	66.7	43	34	248 37	67.1	46	24	269 28	67.7	49	31	269 20	68.0	49	37	267 15	68.2	48	39	226 12	850						
800																																	800						
750	36	21		winds	28	21	257 45		39	20	265 47		38	28	248 41		42	14	257 31		45	25	271 22		46	33	258 20		43	34	228 11	750							
700	34	30		see	26	10	255 53		33	15	257 50		34	24	249 39		38	04	256 34		38	23	269 25		40	32	249 20		39	24	228 21	700							
650	27	35			25	02	253 62		28	15	259 50		33	15	255 41		30	05	256 34		32	21	268 25		33	27	251 21		34	05	222 25	650							
600	136	19	41		138	18	16	252 67	141	25	11	257 54	143	26	01	249 44	143	26	15	252 32	144	26	17	265 25	145	27	22	250 21	145	29	07	215 26	600						
550	11	47		page	10	23	249 75		17	02	254 54		18	06	242 44		19	25	247 43		20	08	268 24		20	12	260 20		20	02	211 24	550							
500	182	03	53		184	01	27	244 80	187	09	08	252 54	189	10	19	245 52	190	11	21	253 44	191	09	03	276 27	191	10	05	269 25	191	10	06	214 28	500						
450	07	48		3	07	25	241 86		02	20	252 65		00	35	245 60		01	20	252 46		03	09	283 32		01	08	266 21		02	20	215 27	450							
400	236	17	49		237	17	34	243 91	241	15	34	249 67	244	13	46	239 66	245	13	29	245 38	245	15	28	276 22	246	14	20	270 28	246	14	26	218 24	400						
350	31	58			32	49	244 96		29	46	248 66		28	56	238 64		25	41	250 38		25	42	280 23		25	33	260 20		26	39	225 27	350							
300	302	45			303	47		242 93	308	43		252 75	310	41		237 82	311	39	56	253 49	312	37	55	270 80	312	37	48	256 29	312	39	53	221 39	300						
250	55				50			242 108	58			243 86	57			228 85	55			248 57	54			265 36	53			239 29	56			212 46	250						
200	389	66			391	59		68	71			254 96	66			228 80	73			248 57	75			254 33	73			232 36	77			199 50	200						
170	70				73				77				74			235 61	78				78			245 36	78			227 32	79			211 39	170						
150	72				73				78				76			220 53	83				83			244 32	83			231 30	88			208 30	150						
130	68				75				73				78			204 45	80				86			240 24	84			214 29	84			194 32	130						
110	73				73				75				78			230 38	81				85			260 21	81			233 25	81			217 22	110						
100	73				73				73				74			231 26	83				82			272 16	82			241 17	84			225 12	100						
90	73				73				73				74				81				81			260 17	81			248 18	83			207 11	90						
80	73				73				73				74				81				81			266 07	83			266 07	80			225 10	80						
70	73				73				73				74				81				81			215 09	83			179 07	76			208 10	70						
60	(665) mb				73				73				74				81				81			179 07	83			179 07	76			208 10	60						
	Inversion				882 mb. 36°-840 mb. 39°				Inversion				830 mb. 43°-858 mb. 48°				Inversion				966 mb. 50°-934 mb. 58°																		

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

LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Lalentic			
Time	03hrs	G.M.T.		03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.						
M.S.L.	1016.2	mb		1024.7	mb			1022.9	mb			1024.7	mb			1023.9	mb			1023.8	mb			1024.4	mb			1023.8	mb						
Surf	1006.7	mb		1022.7	mb			1022.1	mb			1016.0	mb			1021.9	mb			1019.4	mb			1008.3	mb			1013.8	mb						
Freezing	208			730				720				666				661				660				658			646				650				
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.				
Wind	Dir.	Vel.		Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.		Dir.				
Surf	02.7	43.38	300	06.5	43.38	270	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0	43.38	080	03.0				
1000	04.3	45.38	300	06.6	45.38	324	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6	45.38	000	06.6				
950	39.33	30.1	39	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34	32.2	17	40.34				
900	32.43	27.30	39	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7	32.2	15	34.7				
850	26.22	31.2	39	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16	32.2	16	31.16				
800	63.02	50.310	42	65.7	32.2	31.3	66.0	38.1	30.4	22.66	8.42	21	21.6	17.67	1.41	30																			
750	15.03	30.8	48	32.17	25.7	23	32.10	31.1	28	40.11	27.6	21	41.27																						
700	18.1	10.310	57	10.1	22.25	27	10.1	30.7	31.1	28	10.1	30.7	31.1	28	10.1	30.7	31.1	28	10.1	30.7	31.1	28	10.1	30.7	31.1	28	10.1	30.7	31.1	28	10.1				
650	15.48	30.7	67	20.21	29.6	29	24.16	30.7	30	30.33	27.3	24	30.09																						
600	13.6	11.28	30.4	73	14.0	13.23	28.6	37	14.1	13.24	28.8	37	14.3	22.02																					
550	03.38	30.0	82	08.34	28.3	44	12.31	29.0	46	13.46	26.8	28	14.5																						
500	18.1	-7	42.294	84	18.6	-2	41.281	37	18.7	03.38	29.2	48	18.9	03.53	26.7	32	18.9	04.44																	
450	-18	-42.298	83	-11	-44.271	56	-8	-47.283	54	-8	-50.264	32	-6	-23																					
400	23.4	32.65	29.5	80	23.9	24.55	28.0	60	24.1	19.58	28.0	51	24.2	20.53	26.4	34	24.4	17.37																	
350	-43	29.5	80	-39	29.250	63	-34	57.283	39	-34	26.6	40	-31	49																					
300	29.7	59	300	101	30.3	55	27.9	67	30.6	49	27.8	57	30.8	50	25.4	52	31.0	46																	
250	-63	300	86	-72	27.6	73	-63	27.3	71	-70	25.3	54	-62																						
200	38.2	61	300	78	38.7	78	26.6	63				39.2	50	24.6	61	39.5	79																		
170	-68			-76	26.6	58						-81	23.0	52		-81																			
150	-67			-74	26.8	44						-78	24.9	48		-81																			
130	-70			-74	26.9	37						-75	25.0	37		-79																			
110	-74			-74	27.4	20						-80	28.0	22		-77																			
100	52.7	76		53.0	75	19						53.3	24.7	23	53.8	78																			
90	-78			-77	25.5	20						-79	24.9	24		-79																			
80	-80			-79								-78	26.2	16		-80																			
70	-84			-79								-78	26.5	09		-83																			
60																																			
Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion				Inversion							
734 mb 17-706 mb 19				1012 mb 43-1005 mb 47				860 mb 36-833 mb 41				855 mb 39-840 mb 42				1022 mb 50-979 mb 53				1013 mb 49-915 mb 55				930 mb 48-930 mb 55				987 mb 52-958 mb 57				953 mb 46-885 mb 52			
Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal				Isothermal			
1006-990 mb 45				880 mb 30-860 mb 32				742 mb 31-720 mb 42				732 mb 38-720 mb 39				1022 mb 50-979 mb 53				930 mb 48-930 mb 55				987 mb 52-958 mb 57				953 mb 46-885 mb 52							
835-785 mb 25				835 mb 30-791 mb 33								Isothermal				888 mb 42-880 mb 47				930-900 mb 55				958-900 mb 54				750-713 mb 40							
666-626 mb 15				600-575 mb 13								840-785 mb 42				810-730 mb 41				722-706 mb 37															
Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause				Tropopause							
II 270 mb -69°				I 227 mb -78°				I 217 mb -76°				II 243 mb -73°				I 180 mb -64°				I 185 mb -82°				I 170 mb -90°				I 187 mb -85°				I 195 mb -75°			
31300'				36100'				37300'				33000'				41300'				41100'				42800'				40700'				40000'			
STATION				STATION				STATION				STATION				STATION				STATION				STATION				STATION							
LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE							
Time	03hrs	G.M.T.		03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.			03hrs	G.M.T.						
M.S.L.	1022.3	mb		1028.3	mb			1026.6	mb			1025.9	mb			1025.8	mb			1025.9	mb			1025.9	mb			1025.8	mb						
Surf	1012.3	mb		1026.4	mb			1017.9	mb			1021.9	mb			1021.3	mb			1021.3	mb			1009.6	mb			1014.7	mb						
Freezing	900			750				675				661				653				652				652			670								
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.				
Wind	Dir.	Vel.		Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.			Dir.	Vel.		Dir.				
Surf	2.7	45.40	330	16.0	5.47	39		02.3	50.48	Calm		0.6	45.44	Calm		01.2	47.47	Calm		4.4	51.51	030	04.0	2.9	54.53	113	06								
1000	06.0	44.40		07.3	44.35			07.2	50.48	"		07.0	51.50	"		07.0	50.50			6.9	50.49	031	05	06.9	53.51	L.V									
950	38.34	32.5	23	38.31				45.43	"			47.46	008	03		47.47	350	05		52.46	037	06		52.47	57.51	"									
900	34.1	32.30	32.0	21	35.6	34.29		35.74	40.244	09	35.6	44.41	063	05	35.5	46.43	28.9	10	35.8	55.33	050	05	35.9	52.47	"										
850	28.2	20.327	23	34.02				40.33	25.6	08	42.31	31.4	03		47.42	29.5	17		51.38	030	08		50.44	"											
800	64.8	25.07	32.4	23	66.7	34.3		67.2	23.18	28.8	06	67.3	43.30	277	13	67.5	43.41	257	20	68.0	45.34	32.8	05	68.0	46.38	"									
750																																			
700	22.5	31.8	34	32.10				36.03	29.0	09		40.18	27.8	19		41.34	29.6	34		45.18	29.6	10		42.31	"										
650	22.1	19.318	36	102	30.24			33.3	27.4	09		36.03	27.9	25	103	38.28	29.5	23	104	38.18	29.0	12	104	37.23	21.4	05									
600	16.25	30.3	42	23.14				30.9	27.2	26		30.06	28.0	27		32.18	29.6	22		32.14	27.9	12		28.12	25.3	09									
550	13.8	09.27	29.7	43	14.1	17.13		43	22.21	27.2	27	143	22.00	28.4	31	144	23.1																		

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 02 h. GMT.

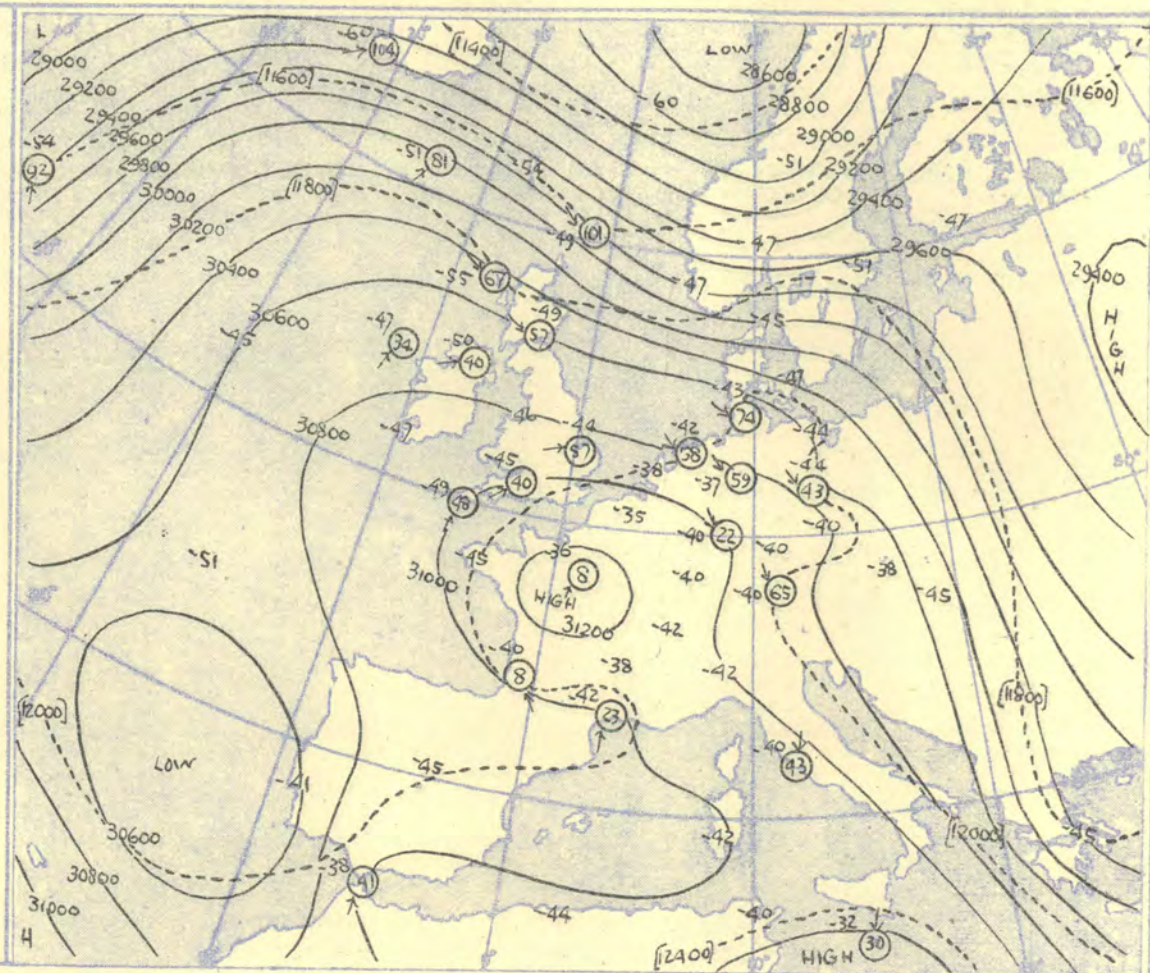


Scale
1: 3x10⁷

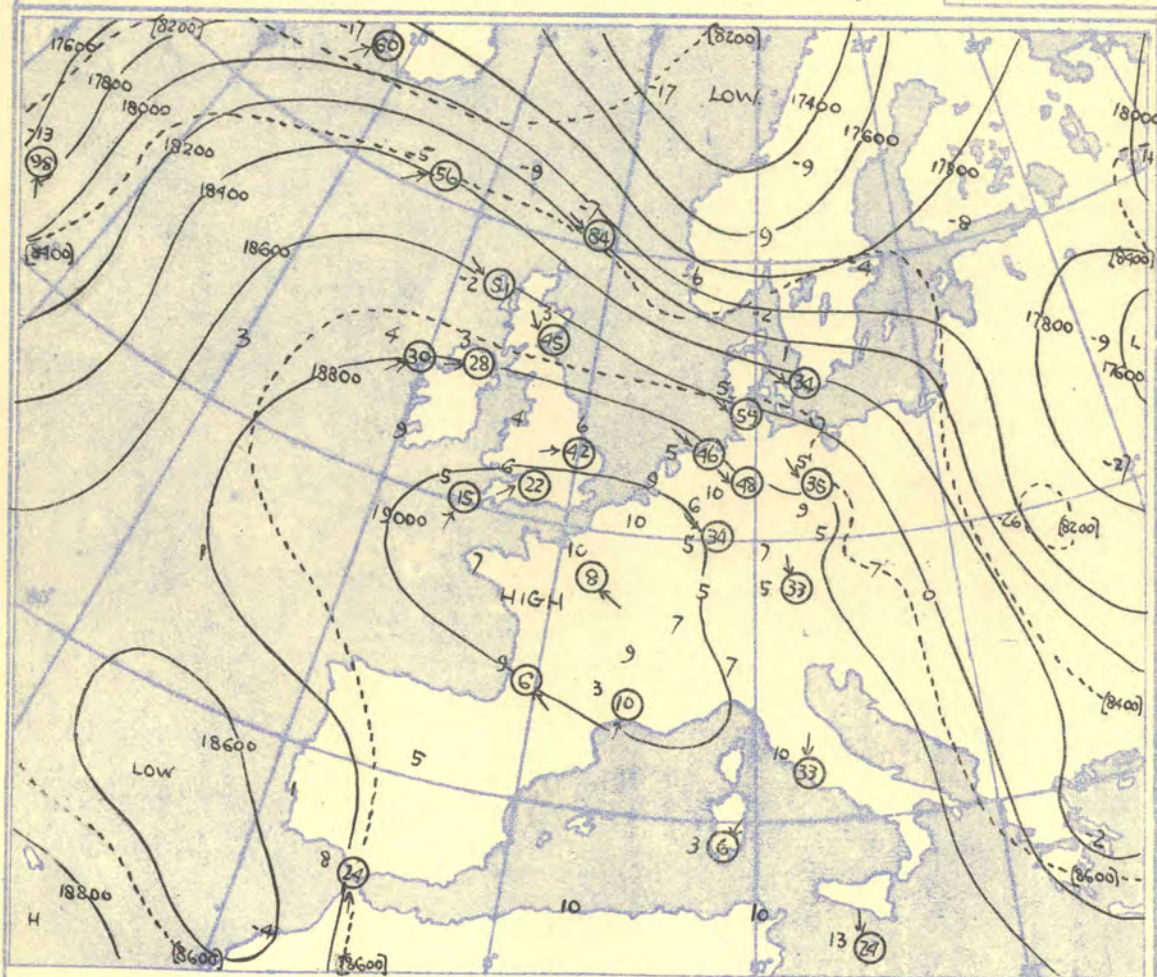
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

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

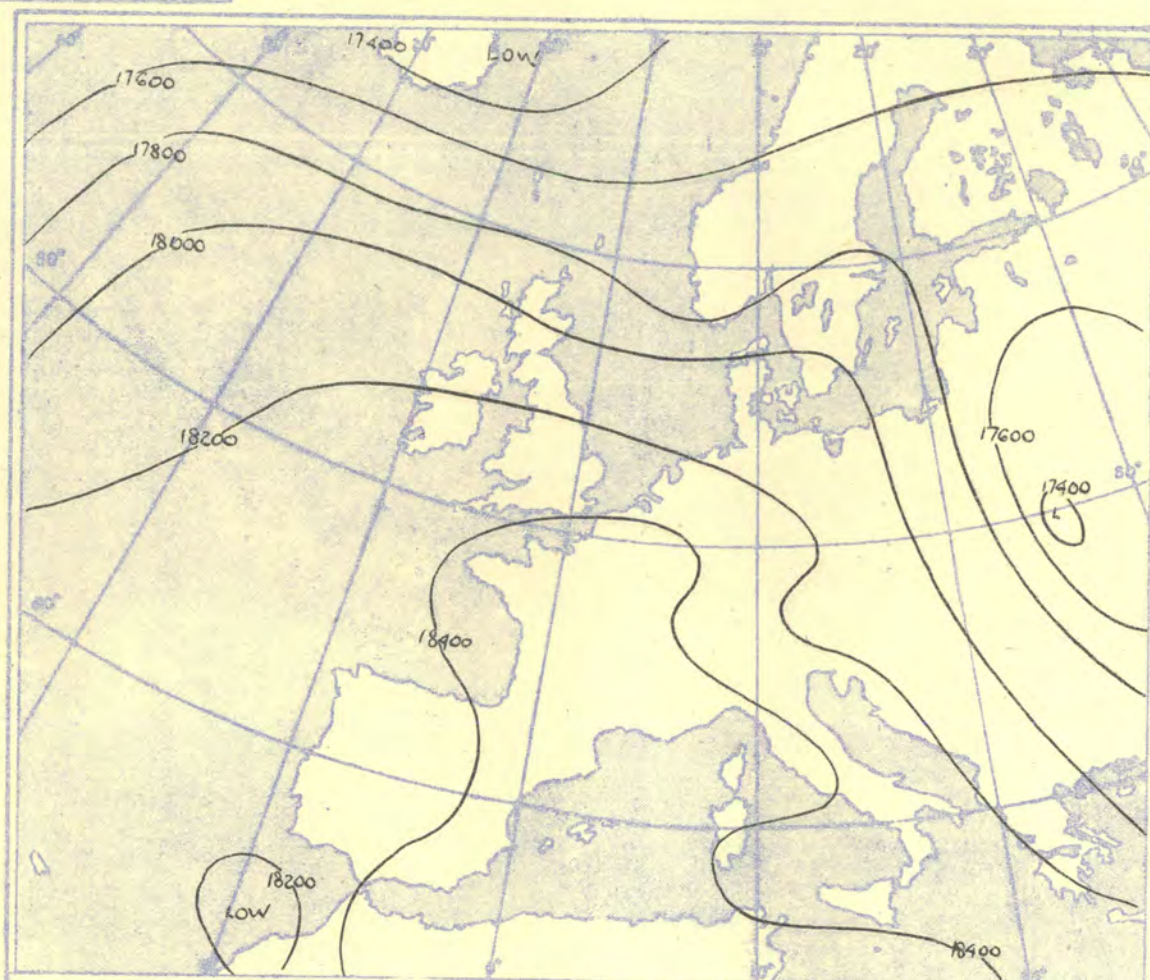
100 80 60 40 20 10 knots



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.

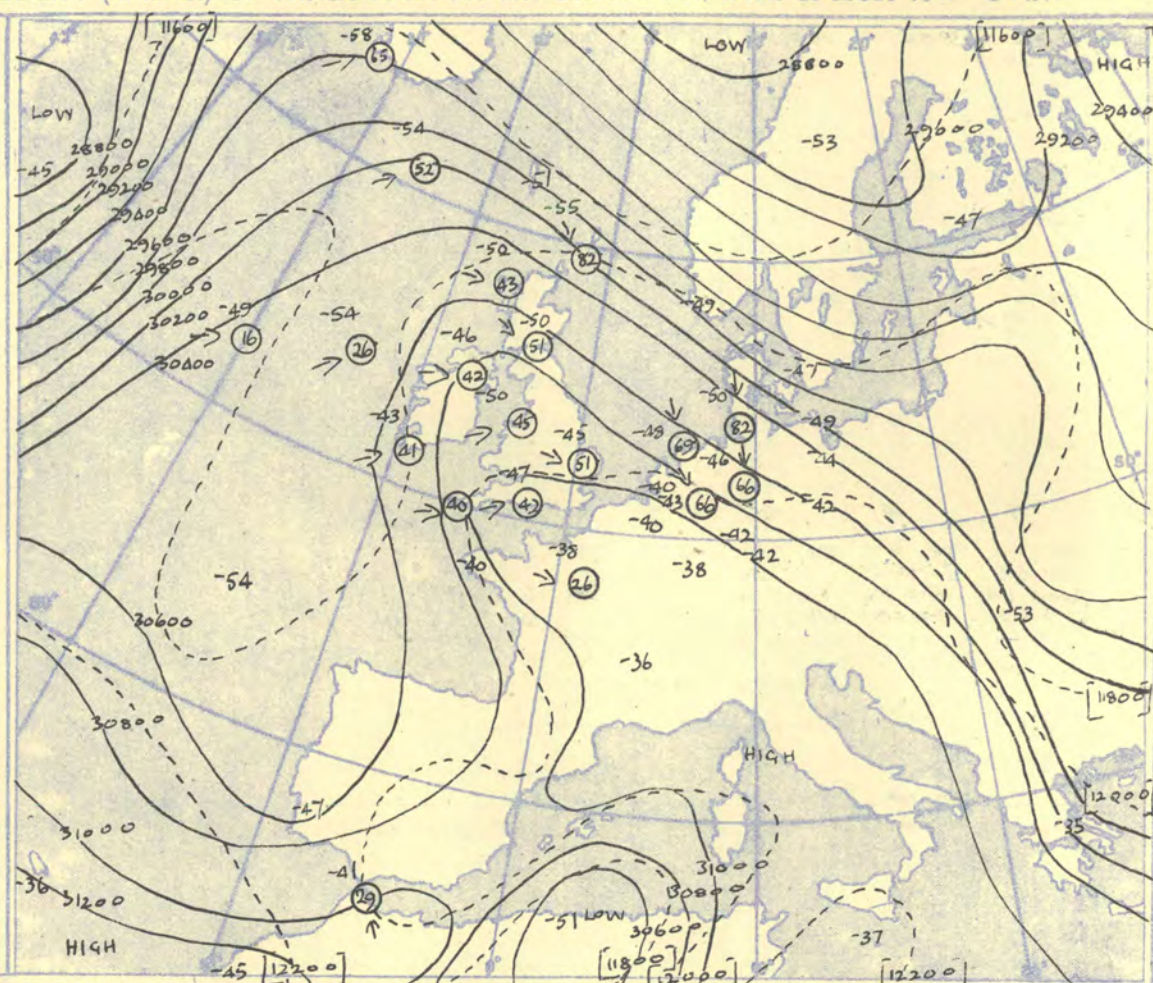
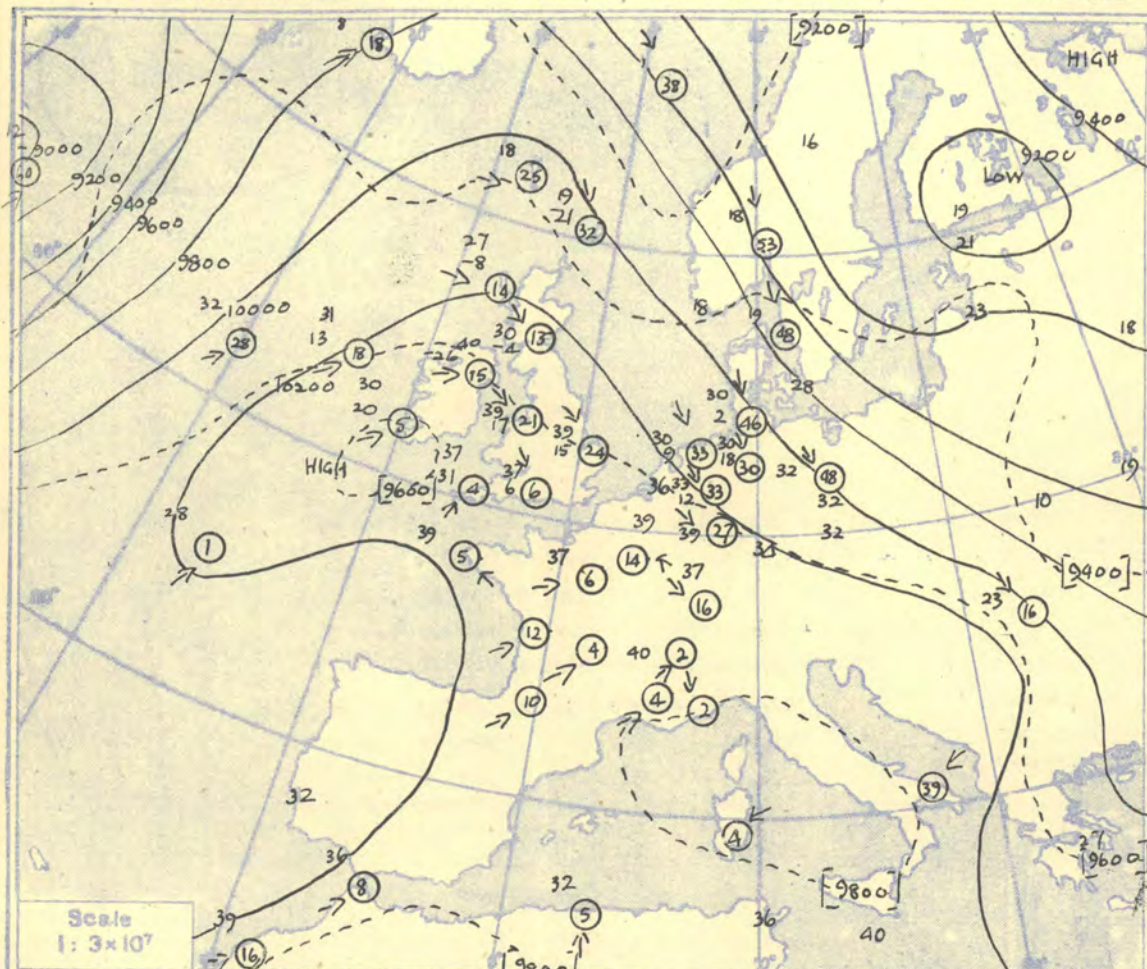
DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

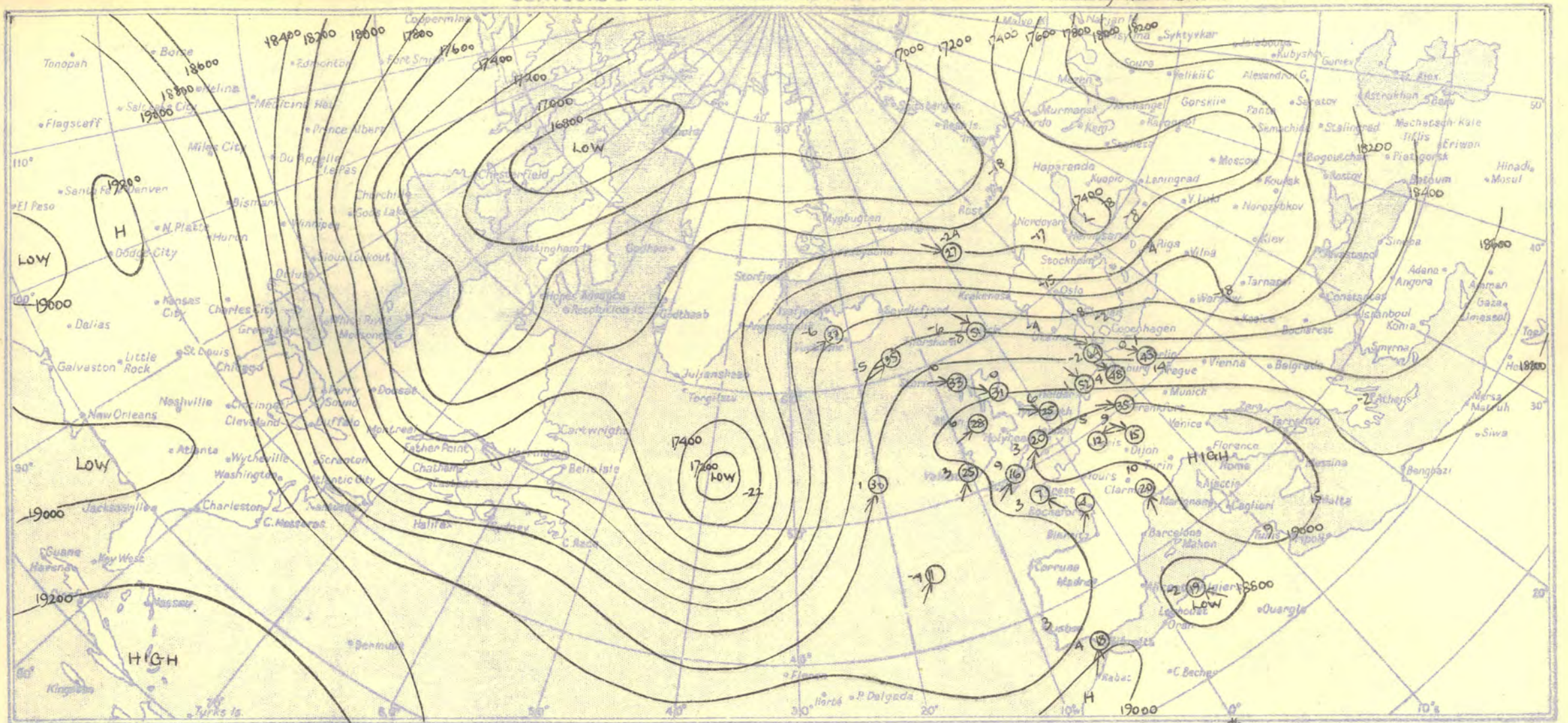
NEPHOSCOPE OBSERVATIONS

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

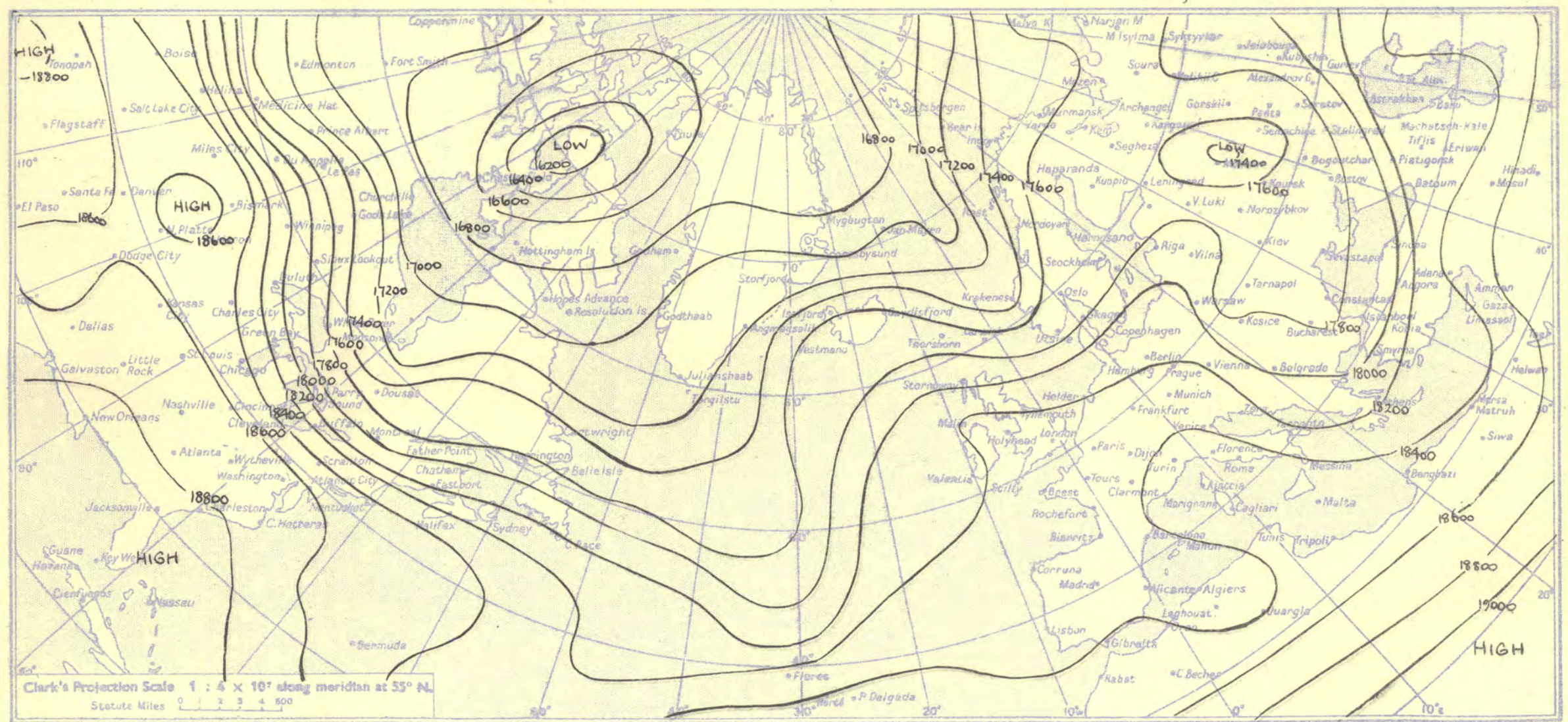
[illegible]

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 15h G.M.T.





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 20th October 1950.

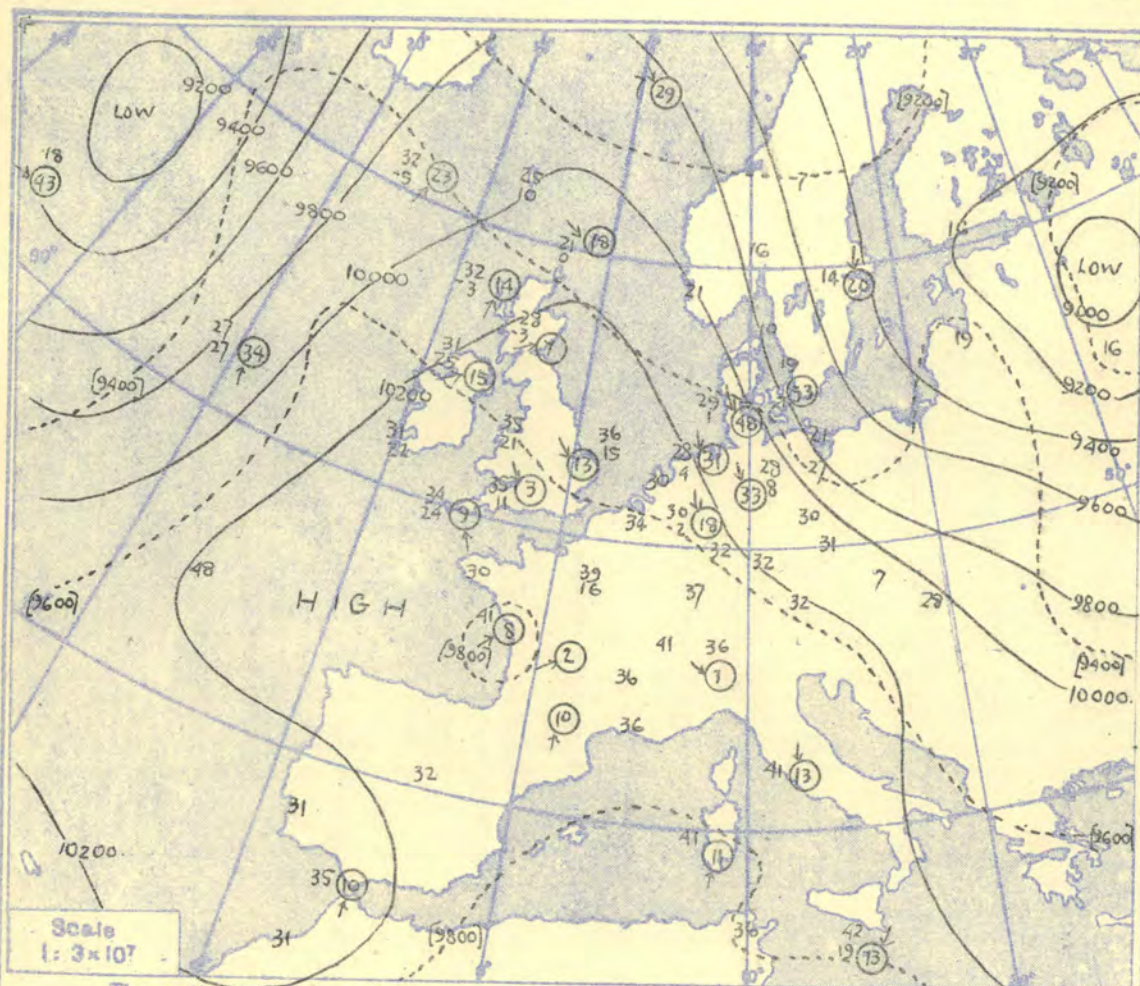


How do you find $\frac{dy}{dx}$?

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia		Station							
Pressure	Time M.S.L. Surf Freezing	03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		Time M.S.L. Surf Freezing	Pressure								
		mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb	mb										
		1029.9	1019.3	860		1028.7	1028.8	700		1029.1	1028.3	732		1025.9	1017.2	712		1027.1	1025.1	670		1028.3	1023.8	671		1026.1	1008.8	679		1023.6	1012.1	680											
		07.74	35	Calm		07.50	44	270		08.02	47	44	Calm	07.52	51	140		08.06	49	45		07.45	42	Calm		07.44	40	080		08.02	54	51	080		Surf								
1000		07.44	34	L.V		07.48	43	178		07.51	50	143		07.54	48	147		08.07	48	44		07.47	41	052		07.46	39	097		08.05	54	51	134		1000								
950		07.43	34	L.V		07.48	43	152		07.51	48	137		07.54	47	147		08.07	48	46		07.47	41	052		07.46	39	097		08.05	54	51	134		950								
900		07.43	26	L.V		07.47	37	212		07.50	43	151		07.53	36	144		08.06	44	43		07.46	40	054		07.45	38	100		08.04	53	50	134		900								
850		07.41	10	L.V		07.45	29	212		07.48	31	251		07.51	41	179		08.04	40	38		07.45	39	054		07.44	37	103		08.03	51	48	119		850								
800		06.6	25	07		06.4	35	212		06.7	136	21	236		06.7	243	239		06.7	343	37		06.7	44	143	24	176		06.7	46	39	095	06.66	64	28	800							
750		27	06	25	13	30	13	204		34	09	240	06	37	21	252	13		38	21			41	21	299	14	37	31	285	02	40	30	127	08	39	25	750						
700		101	21	00	21	101	32	3219		140	28	3265	07	103	31	2523	15		103	25	21		103	36	1525	13	103	35	11305	03	103	34	24	146	09	102	31	22	700				
650		15	8	25	26	25	12	232		13	24	17	278	10	25	18	258	13		25	18	258		25	07	258	12	28	18	283	06	28	14	151	09	22	17	650					
600		140	05	18	25	141	17	2324		142	17	3021	16	142	20	10235	18		143	24	06		143	21	00290	10	143	23	11255	10	144	21	06	179	09	142	17	1	600				
550		0146	302	33		08	19	250		09	29	282	18	13	02	230	20		13	06	258		13	06	258	10	13	06	258	12	1302	196	12	08	6		550						
500		185	40	23	302	36	187	2	6262	21	188	2	49283	23	188	00	8230	19		189	02	3255		16	189	02	3255	16	189	02	3255	16	189	02	3255	20	188	00	20	500			
450		23	31	304	40	240	12	25263		23	46	26275	24	24	10	17237	22		24	10	17237		23	46	26275	24	24	10	17237	22	24	10	17237	22	24	10	17237	20	188	00	20	450	
400		23	34	304	40	240	12	25263		23	46	26275	24	24	10	17237	22		24	10	17237		23	46	26275	24	24	10	17237	22	24	10	17237	22	24	10	17237	20	188	00	20	400	
350		42	304	40		57	46	255		25	40	52	281	35	36	42	243	33		36	42	243		33	41	271	34	32	38	224	17	33	41	223	22	24	10	17237	20	188	00	20	350
300		301	57	300	51	306	54	261	21	305	56	276	43	307	47	242	34		309	48			308	48	273	33	308	47	243	22	308	48	189	24	306	52		300					
250		74	300	59		70	271	21		73	279	42		76	284	42			284	42			75	276	50	50	74	241	35		77	36		71		250							
200		384	78	257	54	388	83	266	26	388	81	273	52	391	86	244	34		384	87			373	82	273	57	394	80	245	43	394	75	219	35	390	83		200					
170		72	257	42		78	262	29		74	277	28		76	280	25			280	25			76	270	48	54	74	253	40	80	226	27	73		170								
150		70	259	37		72	266	27		73	287	27		78					78				80	271	36	87	252	34	77	226	26	73		150									
130		71	287	31		75	268	26		75	288	26		78					78				78	271	29	76	261	23	73	249	26	73		130									
110		73	285	25		74	273	18		74				78					78				78	271	29	76	261	23	73	249	26	73		110									
100		527	71	285	27	531	78	272	16					534	79				534	79			534	79		534	79	280	20	536	76	255	14	532	78		100						
90		70				76	258	14						78					78				78			78	311	12	80	267	12	77		90									
80						74	268	16						78					78				78			78	311	12	80	267	12	77		80									
70														78					78				78			78	311	12	80	267	12	77		70									
60														78					78				78			78	311	12	80	267	12	77		60									
Inversion		869 mb 24-84 mb		Isothermal 700-680 mb 23°		Inversion 700 mb 28-760 mb 24°		Isothermal 850-815 mb 40°		Inversion 850 mb 34-800 mb 39°		Isothermal 800-782 mb 41°		Inversion 820-774 mb 36°		Inversion 850 mb 38-810 mb 44°		Inversion 822-789 mb 44°		Isothermal 1024-1000 mb 47°		Inversion 850 mb 38-810 mb 44°		Inversion 822-789 mb 44°		Isothermal 1024-1000 mb 47°		Inversion 850 mb 38-810 mb 44°		Inversion 822-789 mb 44°		Isothermal 1024-1000 mb 47°		Inversion 850 mb 38-810 mb 44°									
Tropopause		I 269 mb -84°		36500'		I 208 mb -83°		38000'		I 210 mb -85°		37800'		I 200 mb -86°		39100'		I 190 mb -90°		40400'		I 171 mb -86°		40800'		I 185 mb -84°		40800'		I 212 mb -79°		38100'		I 209 mb -84°		38600'							
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION									
Pressure	Time M.S.L. Surf Freezing	03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		Time M.S.L. Surf Freezing	Pressure								

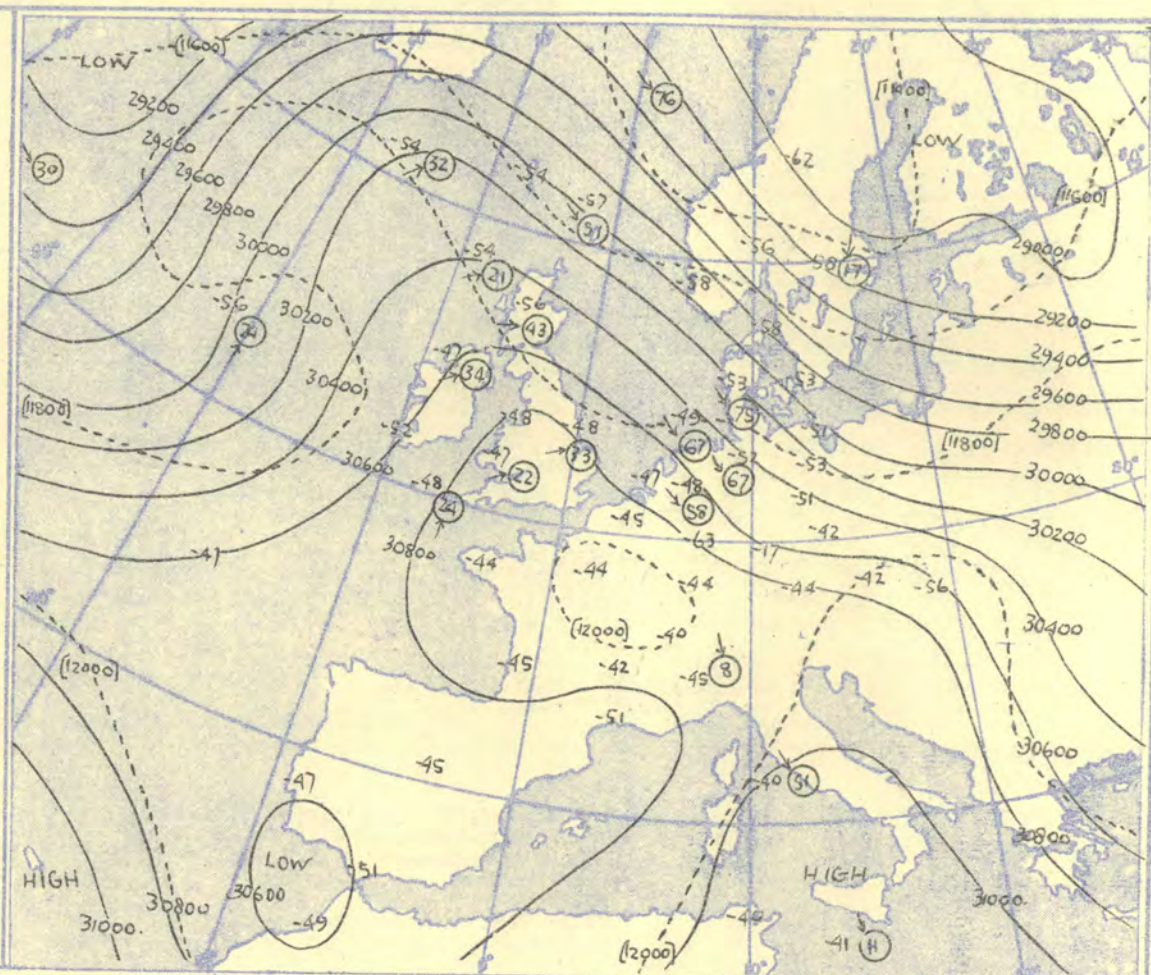
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb., levels at about 03 h. GMT.



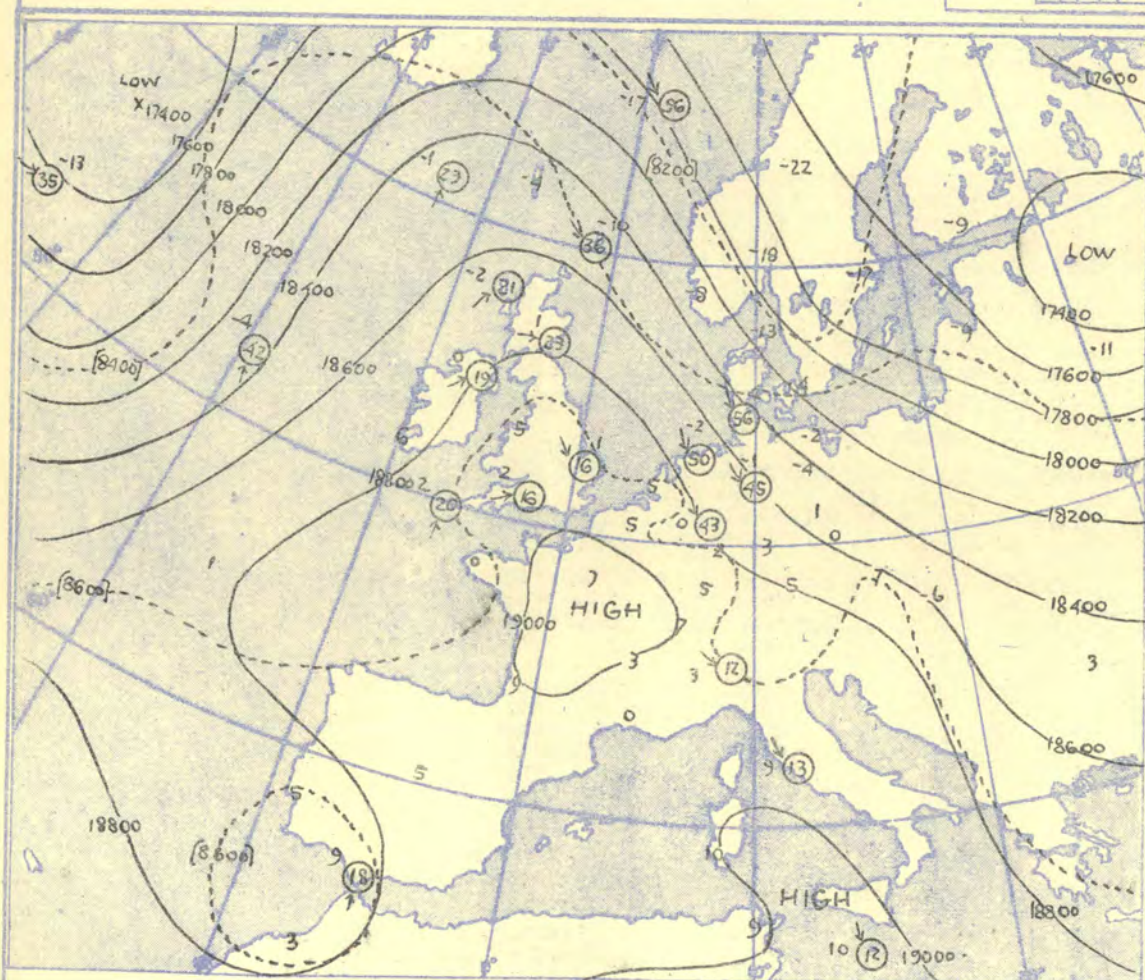
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

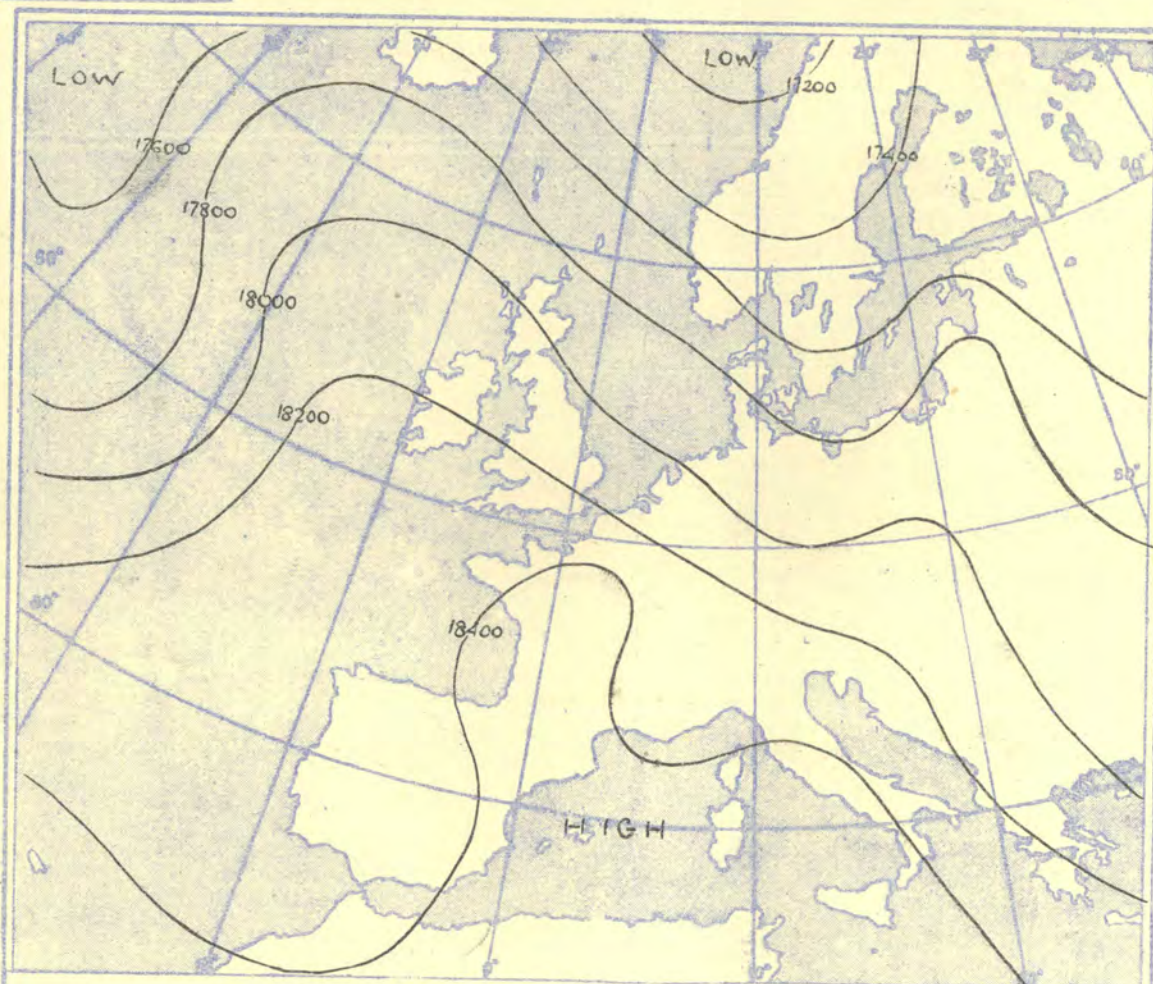
100 50 30 20 10 5 knots



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



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

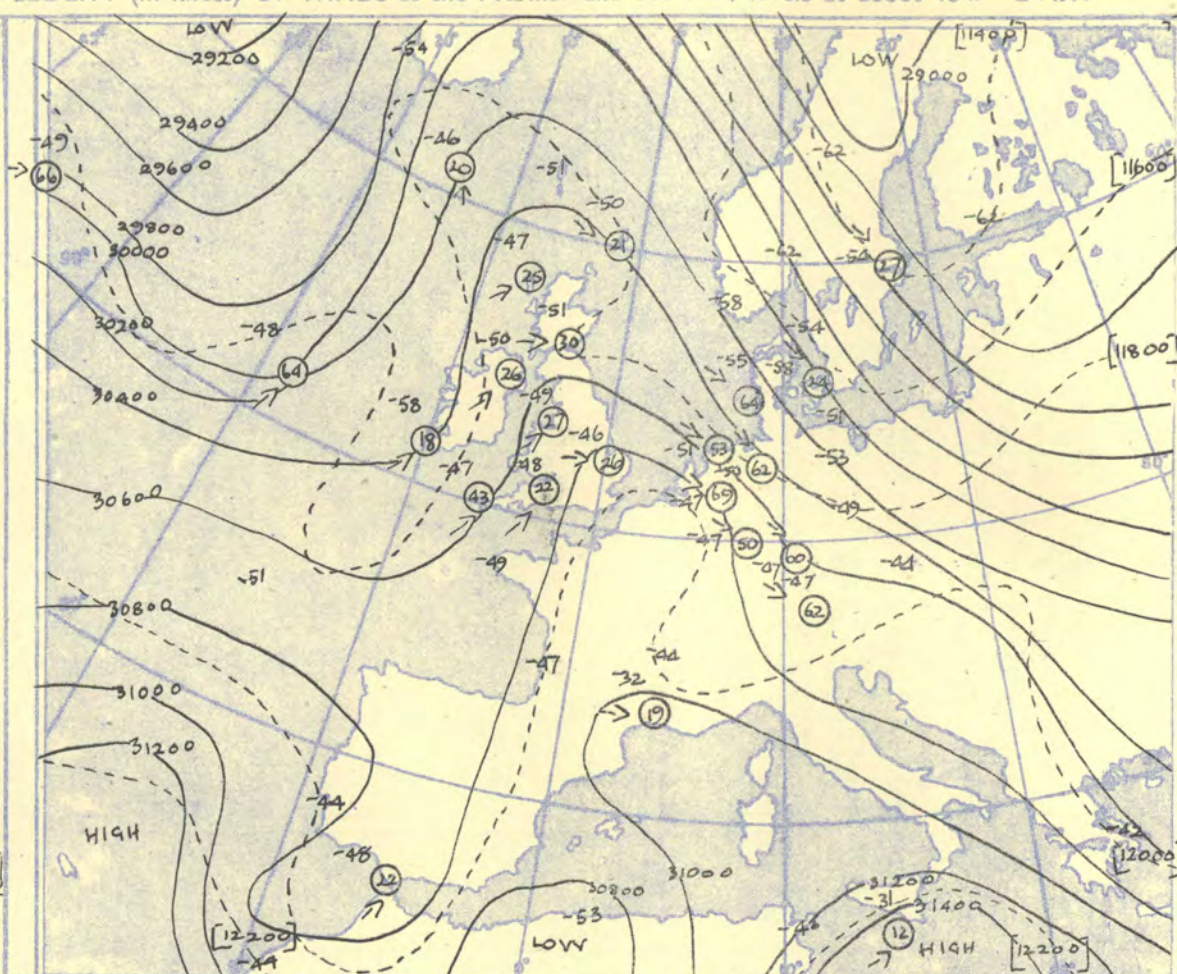
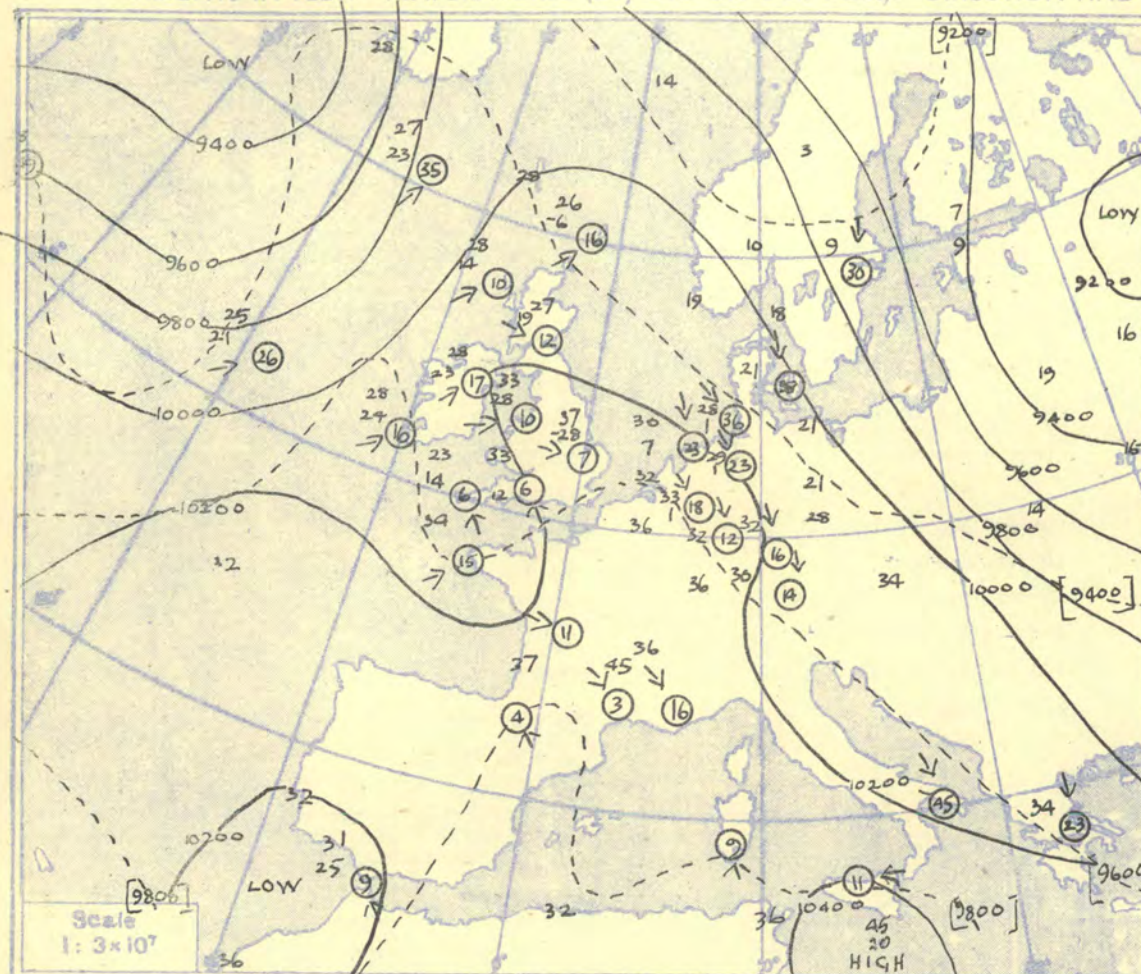


Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS

48.2N. 20.5W.		49.5N. 14.7W.		53.1N. 01.5E.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</	
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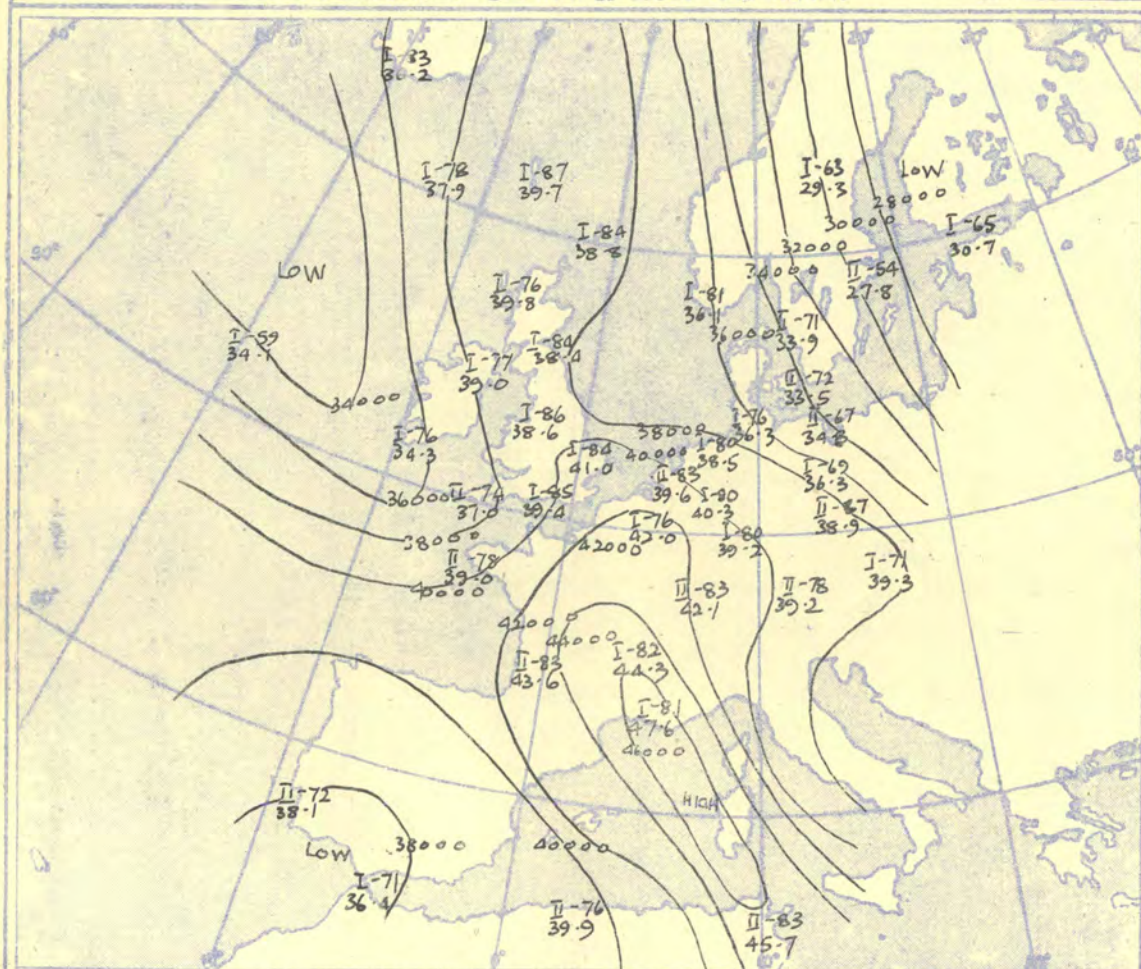
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

100 80 60 40 20 10 5 knots

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

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



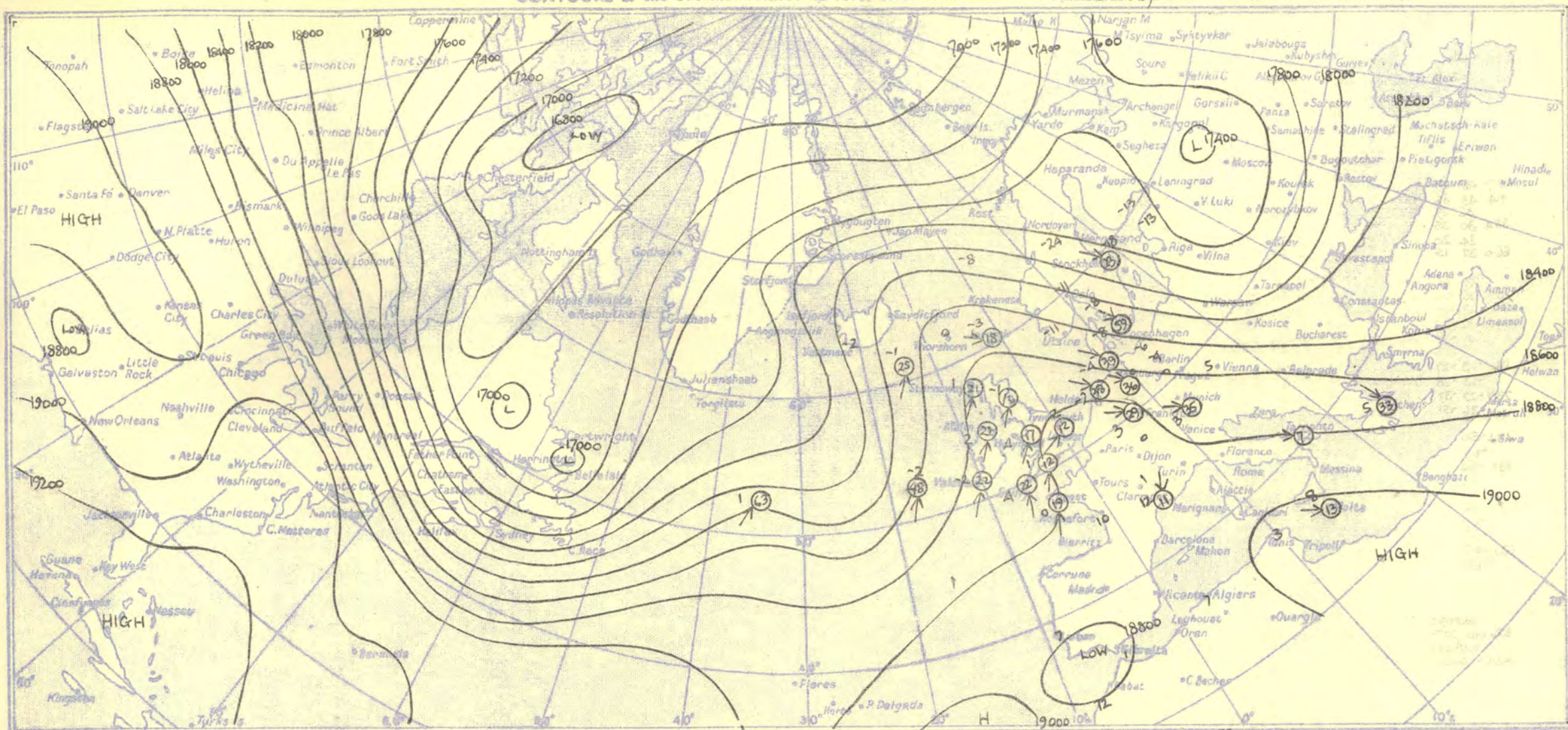
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Nothing of note.

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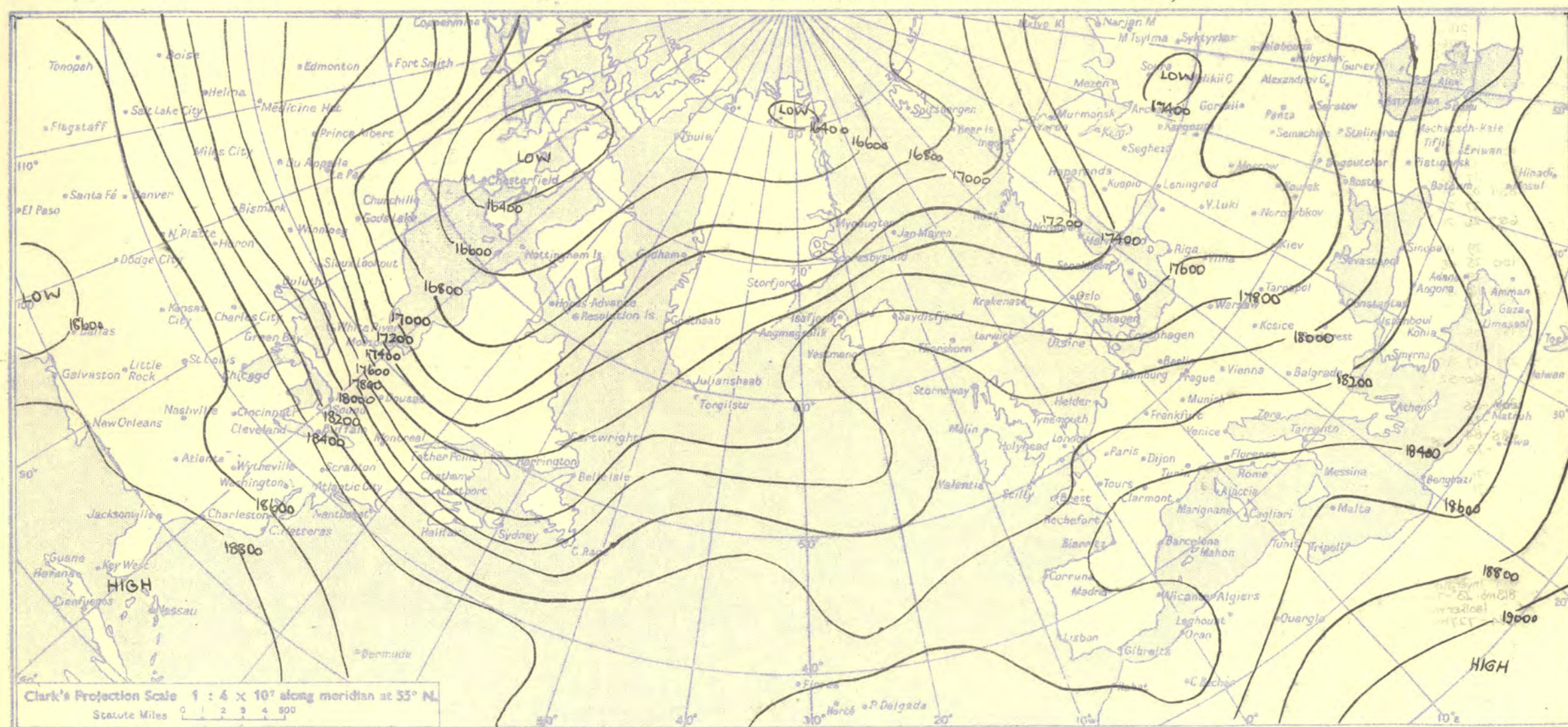
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Saturday 21st October

1950.



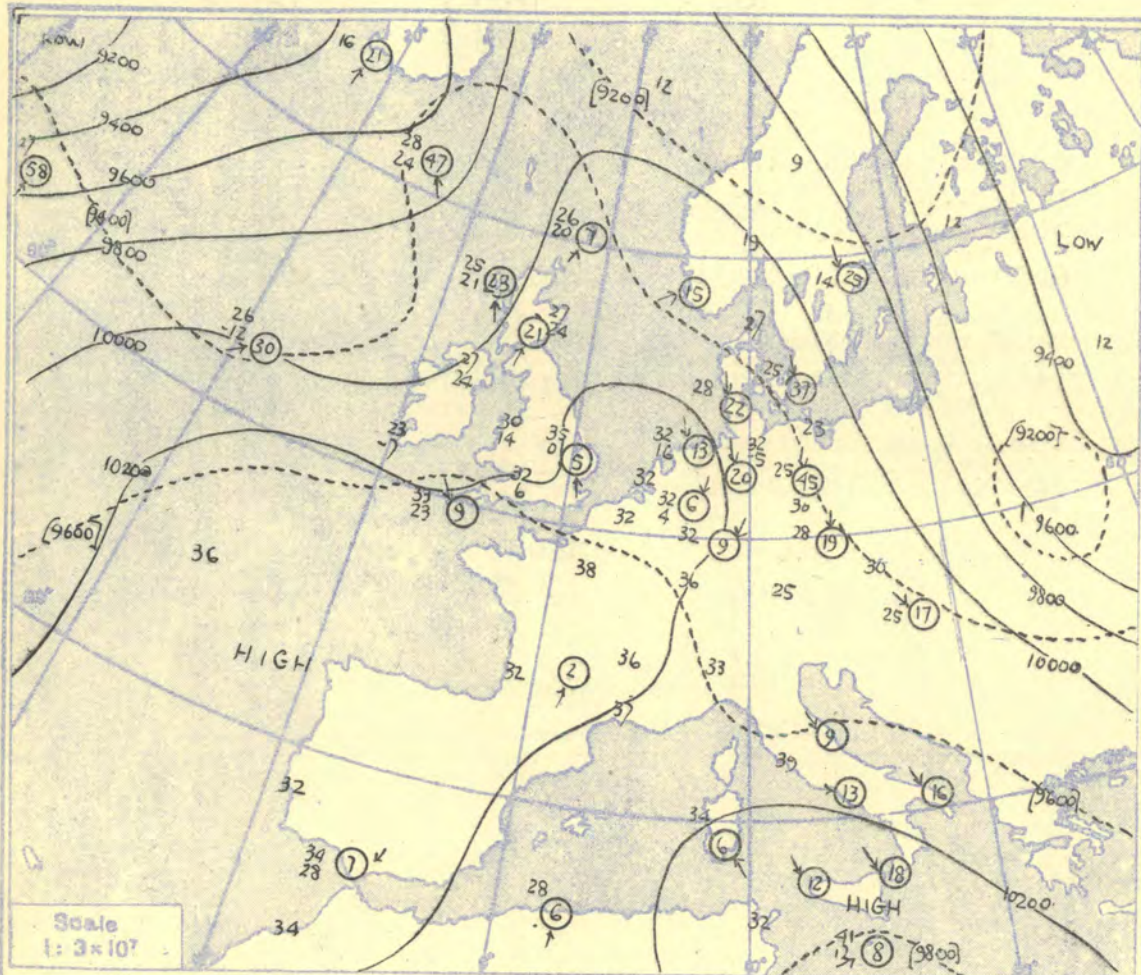
1950.

[illegible]

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

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				Station
Pressure	Time	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	Time			
	M.S.L.	1024.3			mb	1020.6			mb	1024.0			mb	1020.9			mb	1024.3			mb	1025.4			mb	1023.4			mb	1022.3			mb	M.S.L.			
	Surf	1014.1			mb	1018.7			mb	1023.2			mb	1012.3			mb	1022.3			mb	1021.1			mb	1020.7			mb	1011.3			mb	Surf			
Pressure	Preceding	760				761				757				773				705				680				698				695				Preceding			
Pressure	Height	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	Pressure			
	mb	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	mb			
Wind	Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	Wind			
	°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	°			
Surf	02747	44180			180-532	48170			100234543190	030235049		0.6 4843				0124843060			030444642		07252500500			03035351		07252500500			03035351		Surf						
	1000	06540			46173			230375046	0644339180			100575049		0664743				069			4439129			170614641		0695250100			12595150		1000						
950	4040175	22			4443180			273453632178	094746		3503833				3533734136			263453837		5048130			104643		3474442141			083444141		950							
	900	34734			34177			193414039192	273453632178			093434240		3503833				4500147			214121		4435126			073938		6634321067			066593330		900				
850	2929193	10			3536187			243630177	103937		6644233				6684123146			136604227		6634321067			066593330		6634321067			066593330		850							
	800	65528			28247			066583633178	226583733178			166573431		6684123146			136604227		6634321067			066593330		6634321067			066593330		800								
750	3128248	06			3130173			18101252173	231012724		3733				3827139			083821		4027334			072723		4027334			072723		750							
	700	10025			20243			07101252173	1012724			211012724		1023014				1023500166			051013206		1023500166			051013206		700									
650	2019232	08			1810183			19211913	211913		2518				2810193			072616		2517313			111827		2517313			111827		650							
	600	14012			09232			121401103196	211401513191	141401409		1421705				1422013197			111411914		1421907275			091401333		1421907275			091401333		600						
550	054233	13			03-6205			190804206	130600		0004				1108197			1310-2		1001234			160650		1001234			160650		550							
	500	185-3			-6238			13185-6-11211	14186-2-8215	20186-3-10		18700-7				19000-6205			1818701-25		188-1-8234			20188-3-5		188-1-8234			20188-3-5		500						
450	-15-7	251			13185-6-11211			14186-2-8215	20186-3-10		-515				-11-19212			2040-19		-10-13223			18-14		-10-13223			18-14		450							
	400	238-27			30246			20237-184125	27239-232223	22239-27-36		241-20-25				243-23-32230			18240-22-27		241-22-27226			27238-26		241-22-27226			27238-26		400						
350	-40-48	241			22			-42			-42				-33-42				-35-43				-35-43			26		-35-43			26		350				
	300	302-56			253			22301-59	1552830454	20721303-55		30647				See p3 30649				30649			21328303-51		30649			21328303-51		300							
250	-68	261			24			17			20121				392-72				remains 392-76				391-76			21730389-64		391-76			21730389-64		250				
	200	386-80			261			20387-74	21511388-76	22716387-69		-67				of winds -67				-71			22527		-71			22527		200							
170	-70	278			20			-72			24418				-65				-68				(146)-72			(162)-65		(146)-72			(162)-65		170				
	150	-70			284			20			-70			24618				-65				-70				-70				-70				150			
130	-70	284			18			-71			24127				-67				-70				-70				-70				-70				130		
	110	-70			278			20			-72			25013				-70				-72				-72				-72				110			
100	530-70	288			19529-71			26214				531-71				537-71				535-73				535-73				535-73				100					
	90	-70			281			12			-72			27513				-71				-73				-73				-73				90			
80	-71	268			12			-74			27513				-71				-70				-73				-73				-73				80		
	70	-73			278			11			-74			-73				-70				-73				-73				-73				70			
60	Inversion	816ms 25-72ms 33			Isothermal			921-885ms 43			Inversion			906ms 35-884ms 38			Isothermal			1012-985ms 50			Inversion			866ms 35-817ms 44			Isothermal			711-725ms 36				60	
	Tropopause	I209ms -82° 38100'			I226ms -78° 36000'			I210ms -78° 37800'			I248ms -72° 34600'			I200ms -72° 39200'			NR.			I210ms -71° 38000'			I200ms -76° 39100'			I215ms -68° 37300'			Tropopause								
Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Station				
Pressure	Time	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	03hrs			G.M.T.	Time			
	M.S.L.	1023.2			mb	1019.3			mb	1023.1			mb	1023.1			mb	1024.7			mb	1022.7			mb	1021.9			mb	1021.4			mb	M.S.L.			
	Surf	1013.0			mb	1017.6			mb	1013.3			mb	1021.1			mb	1019.8			mb	1006.3			mb	1011.4			mb	1006.8			mb	Surf			
Pressure	Preceding	750				745				750				738				697				724				698				698				Preceding			
Pressure	Height	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	ft/100			Temp.	Pressure			
	mb	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	°F			Dew	mb			
Wind	Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	°			Vel.	knots			Dir.	Wind			
	°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	knots			°	°			
Surf	02747	45185			180-532	52493				0235049			calm	0.6 4843			180	020124943				0444644			calm	0295351			calm		Surf						
	1000	06246			44179			270535047	0604548			calm	0614642			146	180664842				0614543			calm	0605351			L.V		1000							
950	4140180	24			4441				4544353			10	4137152			17	4338				4140300			03	4547			L.V		950							
	900	34435			34176			183384239	3454140344			103433625	156	143453837				3433737245			093474547		3474547			L.V		900									
850	3231107	08			4036				3634322			"	3931155			05	43-2				4734223			05	3936309			06		850							
	800	65433			30326			086533733	6583330312			046574033	182	056644010				660412419			056634331320	10	6634331320			10		800									
750	3224751	12			3330				2828358			02	3430190			07	3700				3526189			05	3731306			10		750							
	700	10028			20247			161002823	1012326			17	1012326			17	3203				1012926195			13	1023326271			09		700							
650	1910276	12			2316				1714180			08	2221180			19	2312				2508204			13	2415253			14		650							
	600	14013			01267			101401506	1401006206			08141	1509180			19	1421501				14118-8207			18	1421603250			18		600							
550	054217	14			0801				03-3176			16	08-3188			21	05-6				05-14210			26	08-11268			19		550							
	500	185-4			-13216			12186-1-9	185-7-14157			2318600-12	186	18701-9				186-446212			2118701281	18	186-446212			2118701281	18		500								
450	-14-22	241			-11-21				-17-26130			24	-17-26130			25	-8-17				-45-2210			23	-9-41273			17		450							
	400	238-25			33240			16239-2433	2372539134			37239-25-28	194	27241-17-28				239-2635214			25241-21-54263	21	239-2635214			25241-21-54263	21		400								
350	-4048262	24			-3649				-42132			43	-37-41202			28	-3748219			29	-34-37244			27	-34-37244			27		350							
	300	302-53			248			1630450	304-50			19331	304-51			2163020648	22334	304-51			2163020648	22334	304-51			2163020648	22334		300								
250	-70	252			14			-66				-65			20035	-65				-65			22633	-62			23036		250								
	200	387-75			261			16389-72	387-71			21229	387-71			23816	-71				387-75			22833	-66			24024		200							
170	-69	271			13				-67			23816	-67			25319	-69				-69			25218	-69			26120		170							
	150	-69			273			17				-67			25319	-69				-69			25218	-69			26120		150								
130	-66	290			13				-67			26313	-67			26313	-73				-68			27514	-68			27514		130							
	110	-66			290			13				-67			27211	(115)-74				-68			28111	-68			28111		110								
100	534-68	298			13				-69			27509	-69			27509	-69				537-69			28311	537-69			28311		100							
	90	-70			298			13				-69			27509	-69				-69			28311	-69			28311		90								
80	-70	298			13				-69			27509	-69			27509	-69				-69			28311													

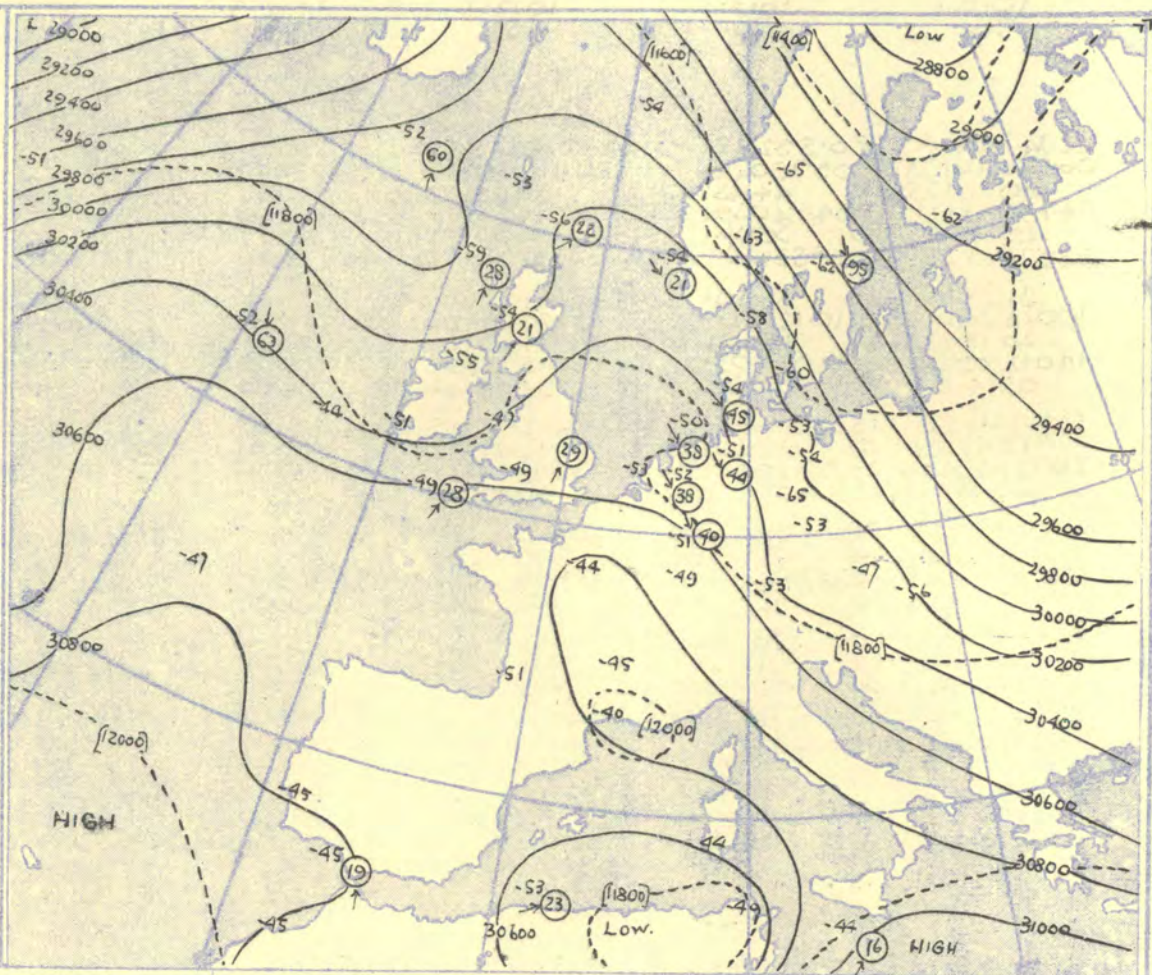
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb and 300 mb. levels at about 03 h. GMT.



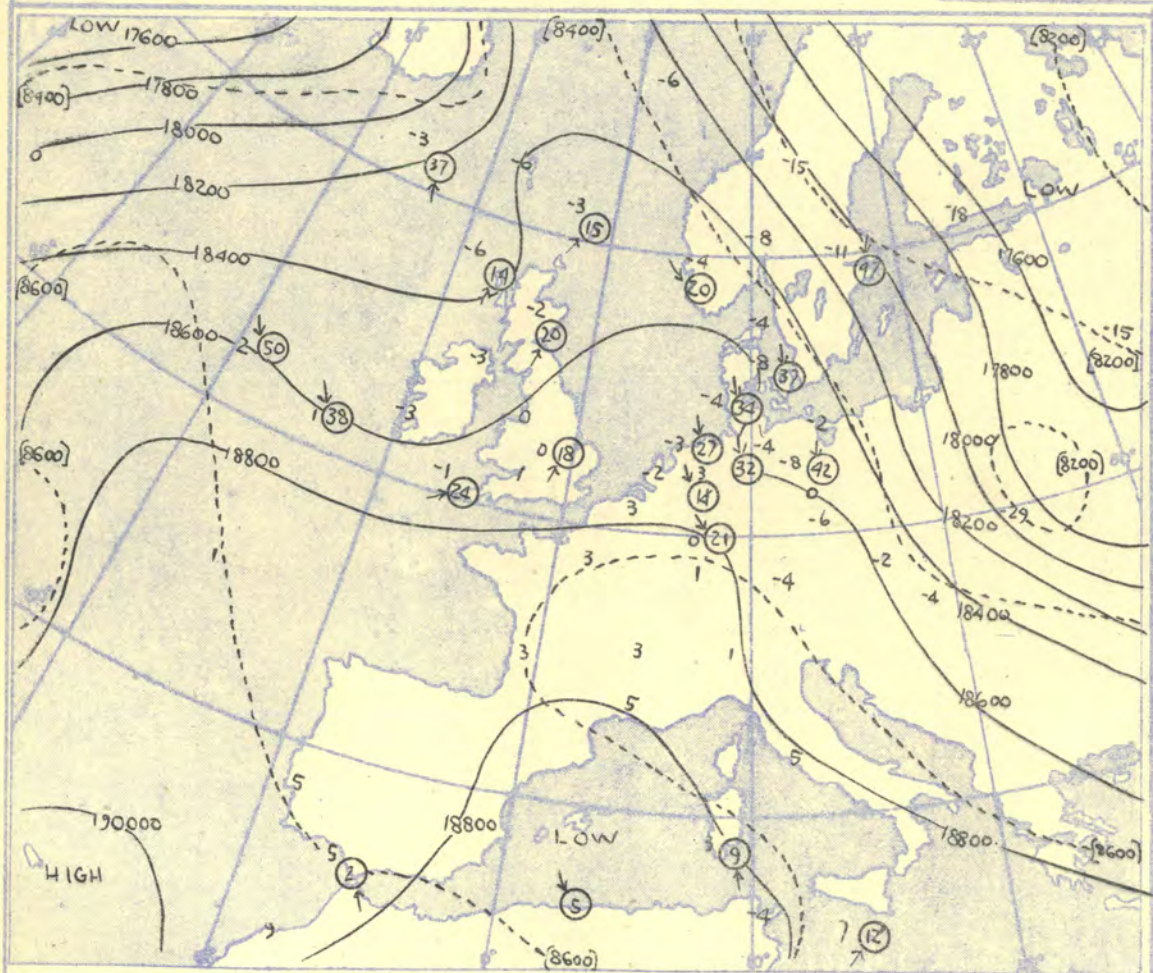
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

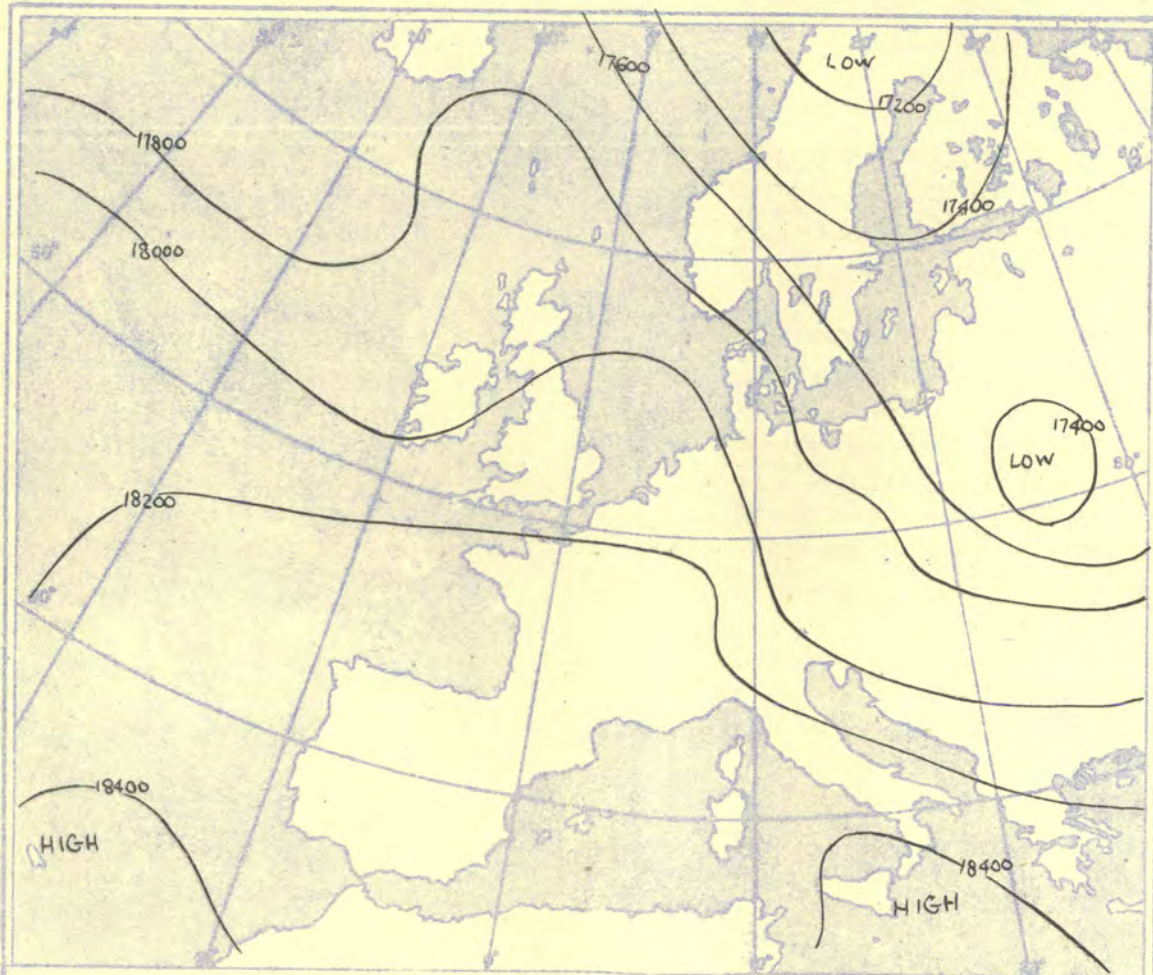
100 80 60 40 20 10 0 knots



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



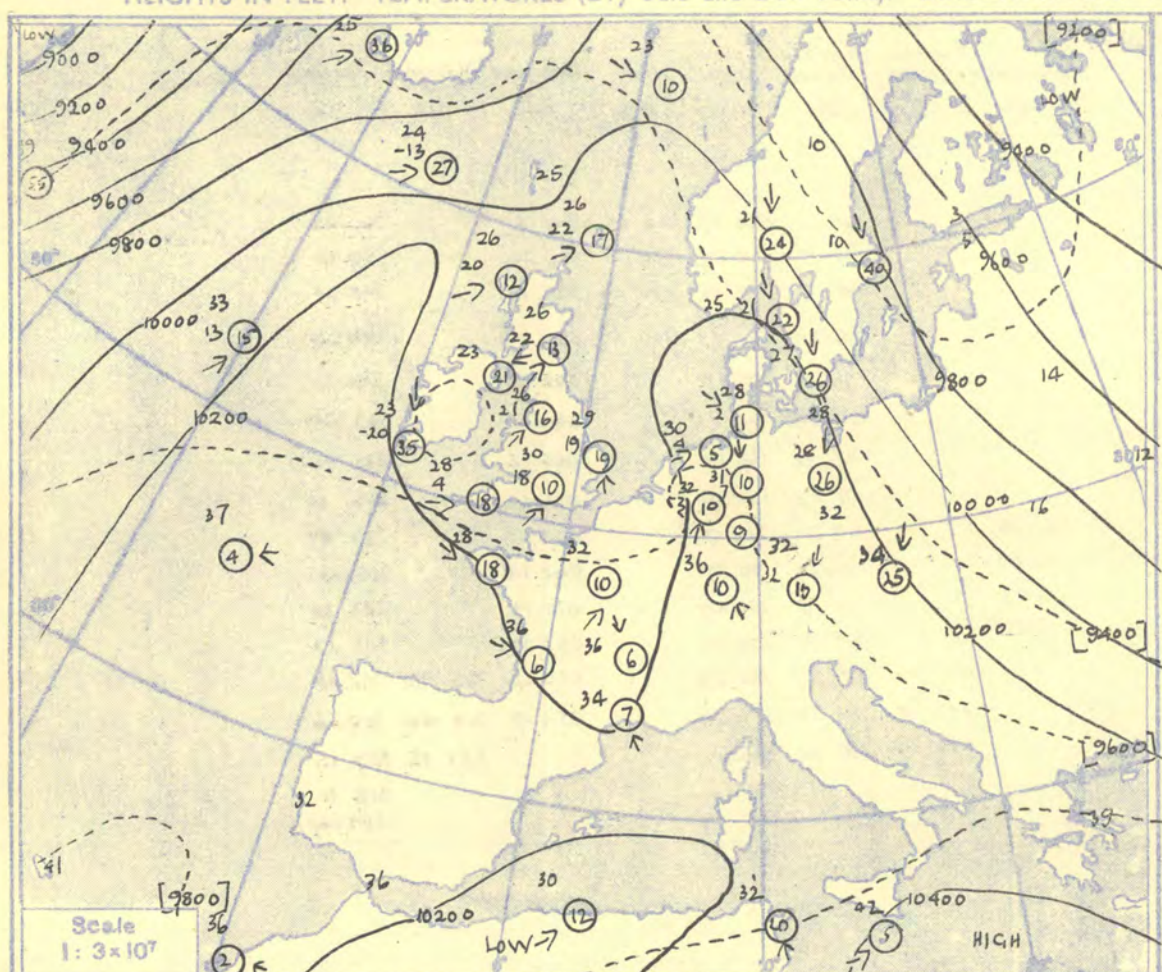
The continuous lines are contour lines of the 500 mb. surface.
The dotted lines are isopleths of the thickness of the layer 700—500 mb.



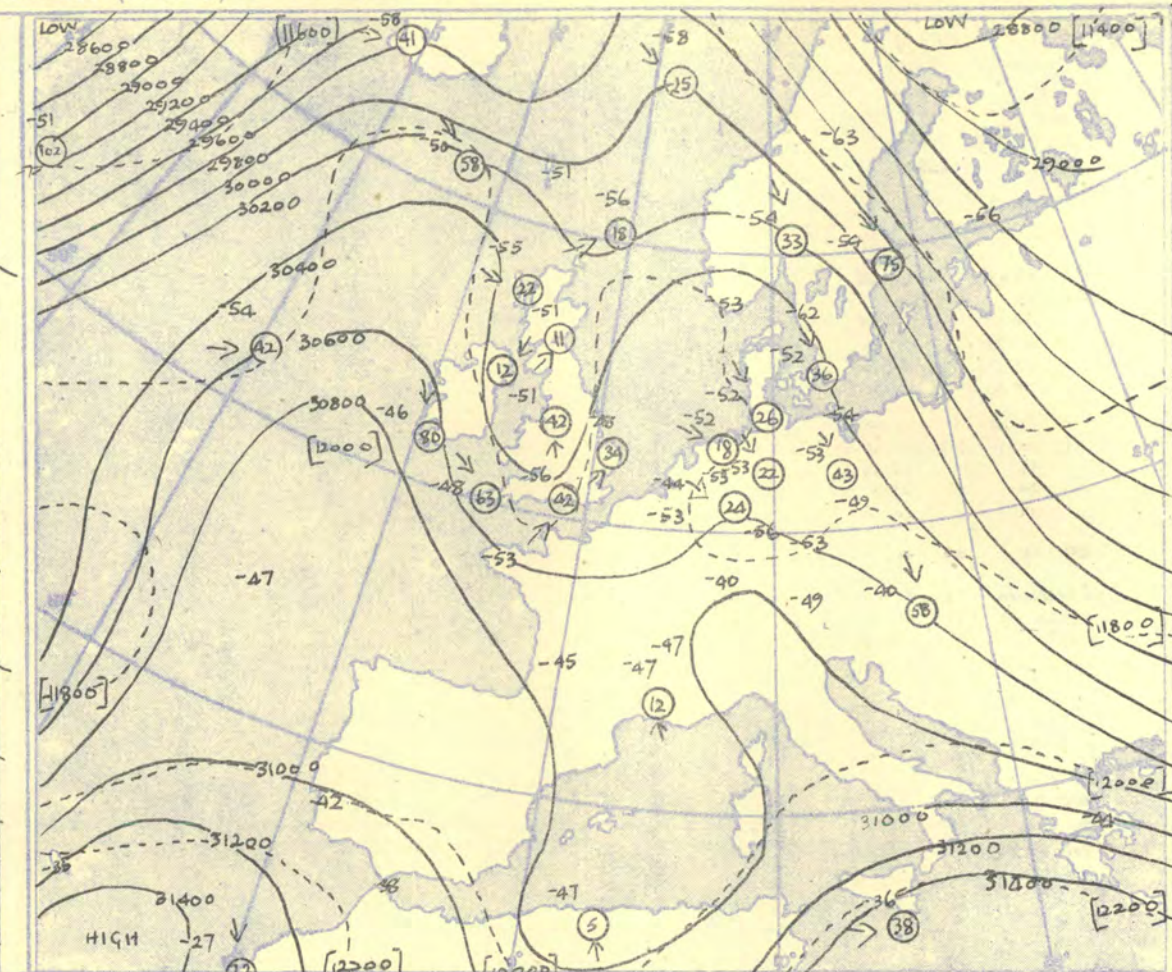
Isopleths of Thickness 500-1000mb.

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

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



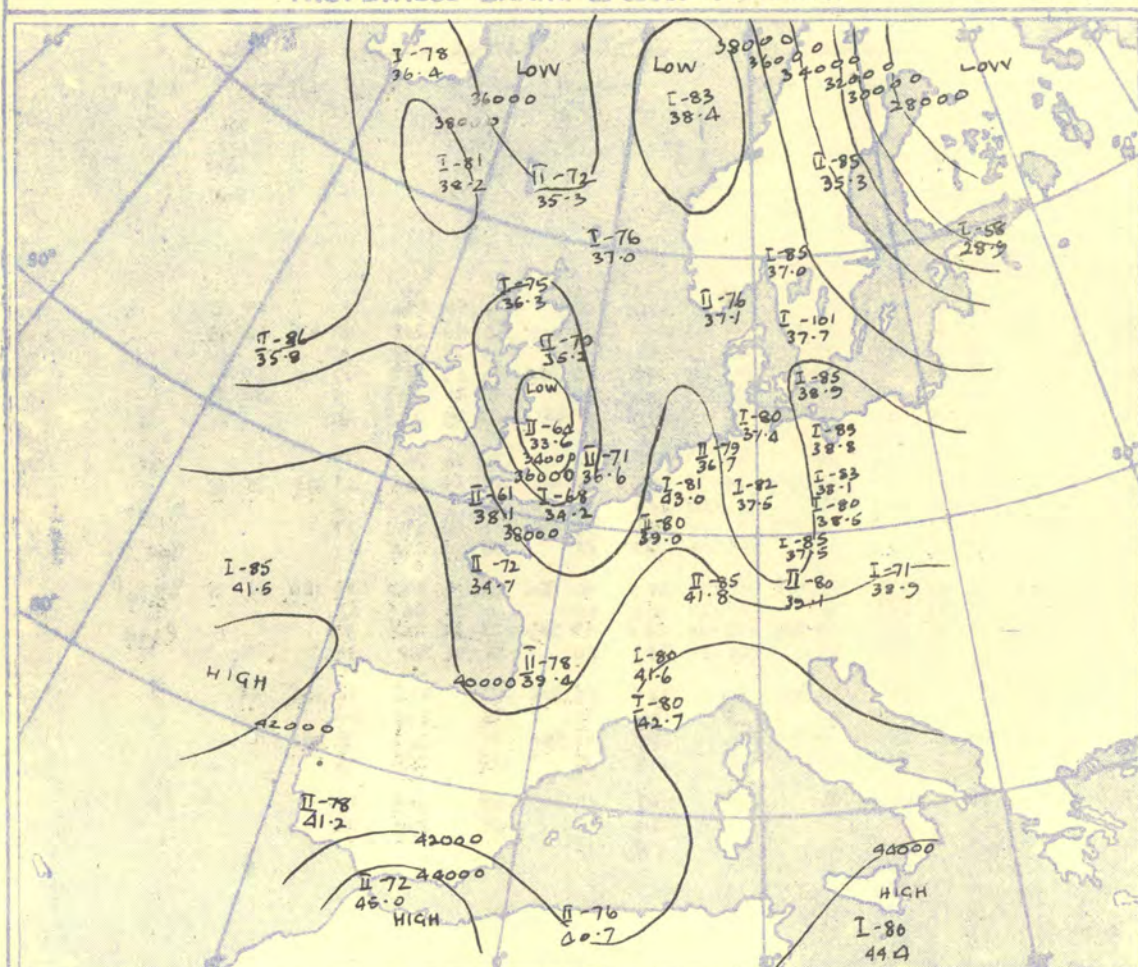
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



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

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

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



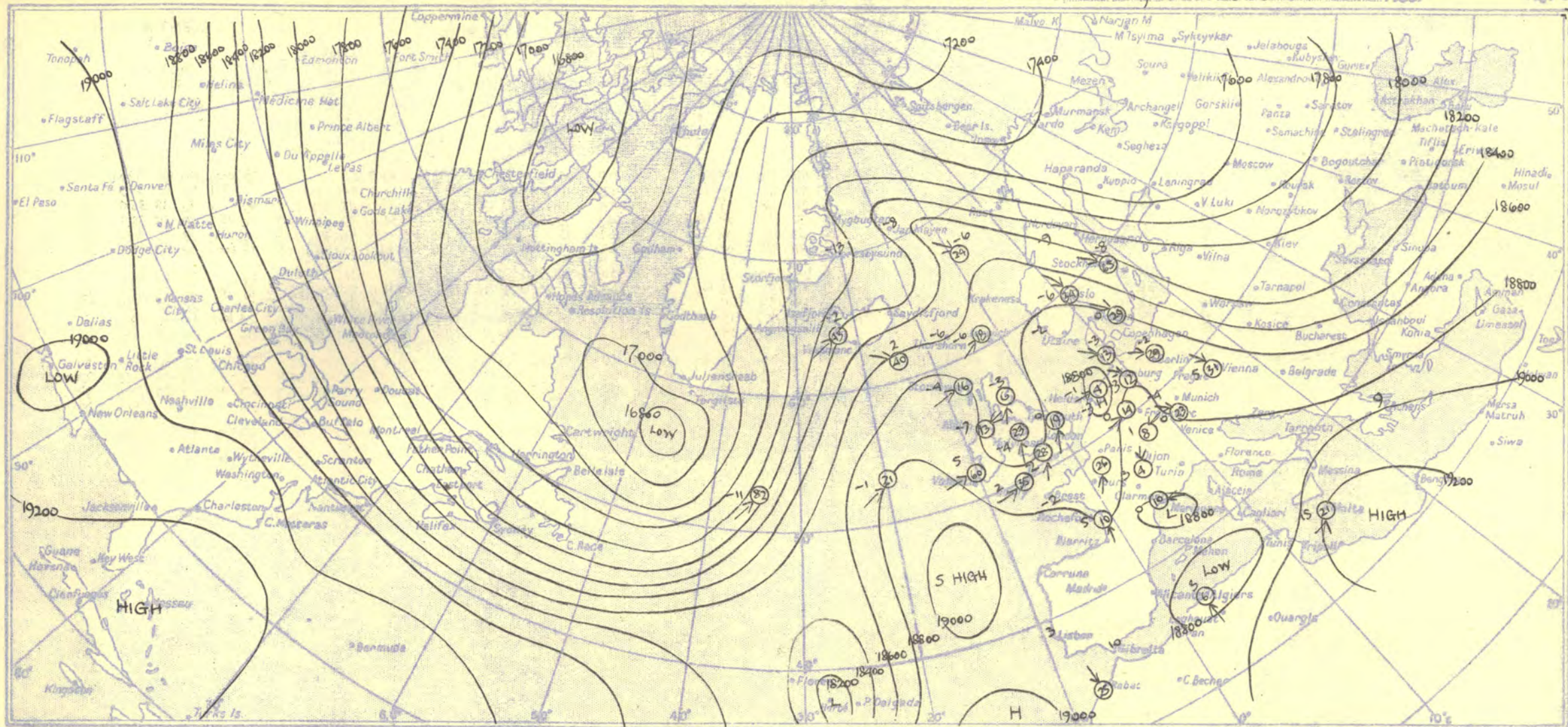
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Thermal gradients over the Western Atlantic continued weak though a small cold pool appeared near the Azores in association with a depression there. The depression southwest of Greenland continued to move northeast with the cold trough to the rear of it extending further southeastwards.

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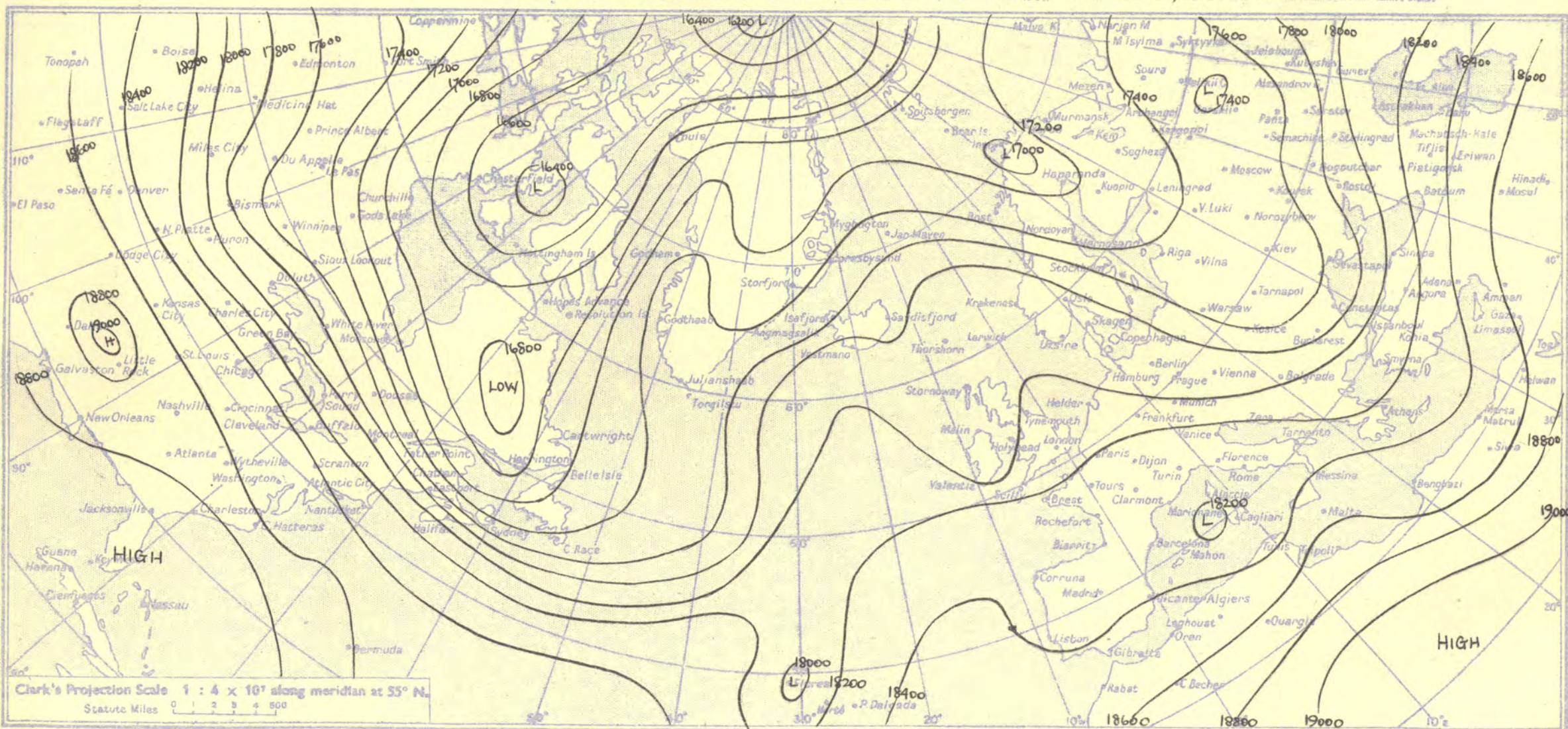
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Sunday 22nd October

1950



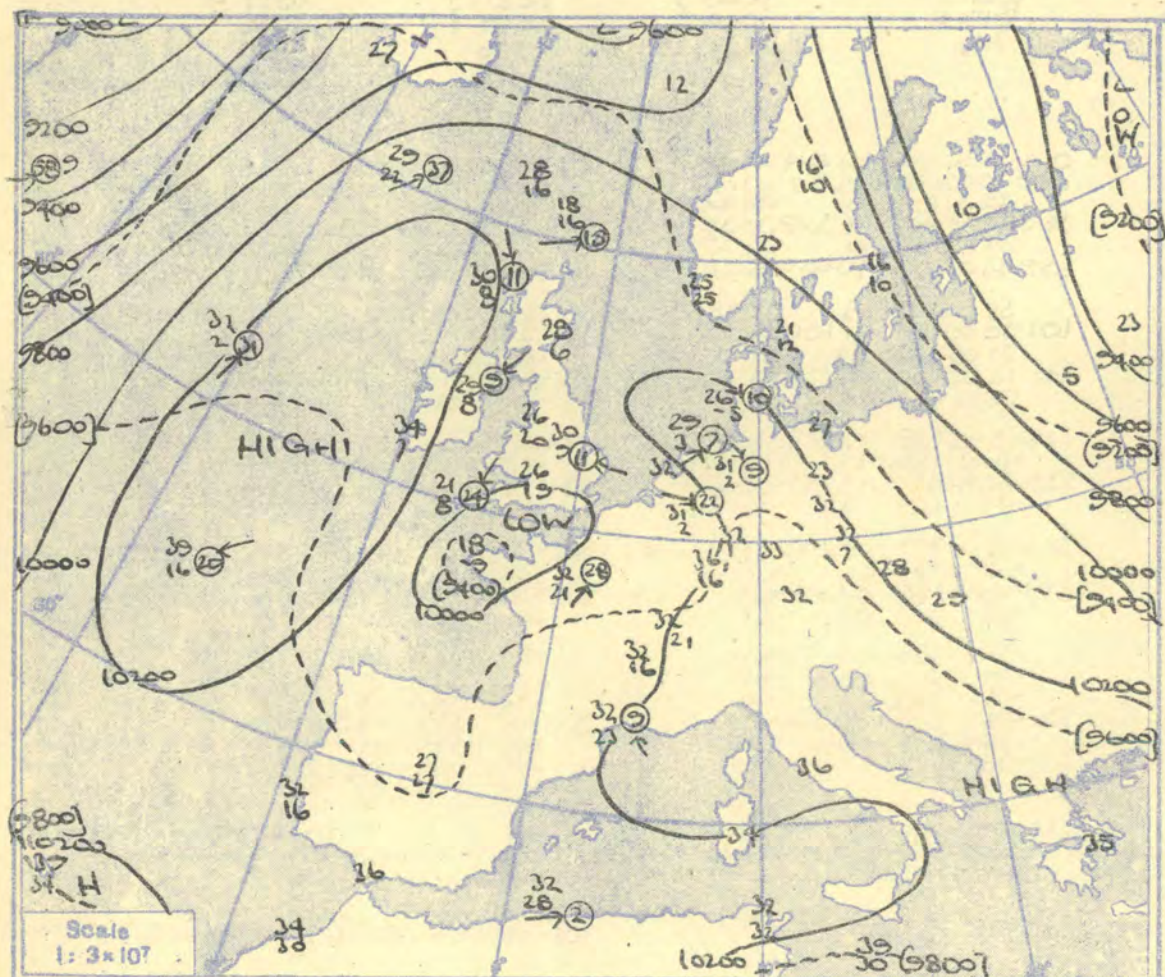
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Time M.S.L. Surf Pressure	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											
		1022.8	1012.7	mb	mb	1020.8	1018.9	mb	mb	1023.9	1023.1	mb	mb	1022.2	1020.2	mb	mb	1022.4	1018.2	mb	mb	1021.4	1005.2	mb	mb	1021.8	1011.3	mb	mb	1026.4	1025	mb	mb												
750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750												
Surf	1000	02.7	49	47	190	15	00.5	53	51	170	10	00.2	50	46	14V	00.6	50	46	110	08	01.2	53	44	100	04	04.4	51	45	CALM	02.7	55	54	203	05	00.3	54	46	320	14	Surf					
1000	1000	6.1	47	45	180	20	5.6	51	49	203	09	6.4	46	42	"	6.1	47	43	112	09	6.2	51	43	112	11	5.8	50	43	CALM	6.0	54	53	203	05	7.1	51	43	343	18	1000					
950	950	34.4	37	33	181	17	34.1	40	36	203	09	34.7	38	37	"	34.3	40	36	130	09	34.6	45	27	124	19	43	38	36	CALM	34.6	48	47	250	09	46	38	354	16	950						
900	900	31	31	189	09	38	34	215	08	32	32	"	32	32	"	36	32	019	03	42	24	161	13	44	35	"	"	"	40	39	309	16	35.5	39	35	353	17	900							
850	850	65.5	37	27	194	06	65.4	35	26	233	12	68.8	35	34	"	65.5	35	31	198	08	66.1	41	03	162	14	65.8	42	25	290	05	66.1	37	36	306	18	66.5	33	03	344	23	850				
800	800	32	27	206	10	80	25	221	12	101	30	27	179	13	101	26	27	167	13	102	36	20	170	19	35	22	247	06	31	28	277	17	29	07	339	30	750								
750	750	101	24	22	208	17	100	26	20	238	12	101	26	22	198	13	101	26	185	15	102	29	19	182	19	101	30	18	213	10	101	28	04	262	18	101	23	20	338	35	700				
700	700	19	11	211	16	16	02	249	14	140	15	05	189	13	140	13	07	187	19	141	15	11	202	16	141	16	02	227	18	141	16	21	271	24	141	14	38	331	60	650					
650	650	140	13	03	227	13	140	16	02	238	14	140	15	05	189	13	07	187	19	141	15	11	202	16	141	16	02	227	18	141	16	21	271	24	141	14	38	331	60	600					
600	600	04	05	242	16	08	09	236	15	06	05	188	07	06	05	188	07	05	180	24	08	04	206	18	08	01	210	24	12	14	261	36	14	38	330	62	550								
500	500	185	06	16	244	18	185	04	24	243	16	186	03	10	188	06	NOT	AVAILABLE	185	04	14	174	23	187	00	08	201	19	186	02	09	215	48	187	02	17	253	35	187	05	44	336	60	500	
450	450	15	25	242	20	16	36	248	15	15	24	13	20	181	05	238	13	24	172	24	23	240	23	240	10	17	196	24	23	210	29	240	10	26	254	38	240	05	50	338	72	450			
400	400	238	28	40	243	18	238	28	49	247	19	244	25	32	184	08	238	25	36	162	23	240	23	240	28	237	29	43	210	30	240	23	27	257	27	241	17	57	340	76	400				
350	350	41	41	243	18	42	42	241	20	37	44	192	11	37	44	192	11	38	53	162	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	350		
300	300	302	56	238	18	302	55	268	22	309	51	203	11	For	winds see	303	51	168	42	305	48	209	34	303	56	208	42	305	48	305	48	305	48	305	48	305	48	305	48	305	48	305	48	300	
250	250	386	72	277	15	387	70	303	18	394	71	238	09	389	59	240	06	391	70	216	22	389	64	237	18	392	66	250	16	392	66	250	16	392	66	250	16	392	66	250	16	250			
200	200	67	283	21	72	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	200			
170	170	67	283	21	72	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	295	17	170					
150	150	66	285	21	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	68	291	15	150				
130	130	67	285	15	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	130				
110	110	67	289	15	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	110				
100	100	531	67	301	15	538	71	283	16	538	71	283	16	538	71	283	16	538	71	283	16	538	71	283	16	538	71	283	16	538	71	283	16	538	71	283	16	538	71	100					
90	90	67	301	15	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	90				
80	80	68	297	09	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	80				
70	70	69	297	09	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	70				
60	60	69	297	09	70	293	16	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	69	288	17	60				
Inversion		828 mb 29° - 755 mb 39°		878 mb 28° - 860 mb 39°		817 mb 29° - 798 mb 37°		Isothermal 950 - 937 mb 42°								Inversion		872 mb 34° - 835 mb 37°		Inversion		904 mb 39° - 890 mb 46°		Inversion		882 mb 38° - 842 mb 46°		Inversion		710 mb 27° - 700 mb 28°		Inversion		831 mb 30° - 818 mb 34°		Inversion		592 mb 29° - 733 mb 36°		Isothermal 240 - 590 - 235 - 580 - 673		763 - 750 mb 29° - 600 - 550 mb 14°			
Tropopause		I 217 mb - 76°		I 223 mb - 75°		II 239 mb - 70°								I 257 mb - 64°		II 233 mb - 71°		I 250 mb - 68°		I 209 mb - 61°																						Tropopause			
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Time M.S.L. Surf Pressure	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											
		1022.8	1012.6	mb	mb	1026.0	1024.1	mb	mb	1026.2	1025.3	mb	mb	1025.8	1017.1	mb	mb	1023.0	1021.0	mb	mb	1022.5	1018.0	mb	mb	1021.0	1004.8	mb	mb	1022.2	1011.5	mb	mb												
789	789	789	789	789	789	794	794	794	794	742	742	742	742	826	826	741	741	707	707	752	752	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864	864			
Surf	1000	02.7	47	47	200	02	00.5	48	44	310	05	00.1	42	42	L.V.	02.3	50	49	070	05	00.6	48	45	070	05	01.2	47	43	CALM	04.4	47	46	02.7	59	47	02.7	59	47	02.7	59	47	Surf			
1000	1000	6.1	47	46	227	12	7.0	47	43	312	18	6.9	46	40	"	7.0	49	48	048	12	6.6	47	43	074	09	6.0	48	44	108	09	5.6	47	46	6.0	54	46	6.0	54	46	6.0	54	46	1000		
950	950	45	42	236	14	42	38	332	18	41	37	332	18	41	37	"	44	41	030	12	43	40	076	09	43	41	108	10	43	41	108	10	41	40	45	42	43	45	42	43	950				
900	900	34.5	42	38	252	13	35.3	38	32	330	12	35.3	40	37	"	35.4	39	35	009	12	34.5	38	35	072	05	34.5	41	29	110	10	33.9	36	36	34.4	38	34	34.4	38	34	34.4	38	34	900		
850	850	37	36	263	13	36	32	331	09	36	32	331	09	36	32	"	34	28	002	15	32	29	094	04	43	37	103	15	40	35	40	35	30	27	30	27	30	27	30	27	850				
800	800	65.9	34	32</																																									

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

Station	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				Valentia				Station																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Time M.S.L. Surf Freezing	03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	1023.6	mb			1027.9	mb			1026.9	mb			1026.9	mb			1023.8	mb			1021.8	mb			1021.4	mb			1020.3	mb			1021.5	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb			1026	mb			1027.9	mb		

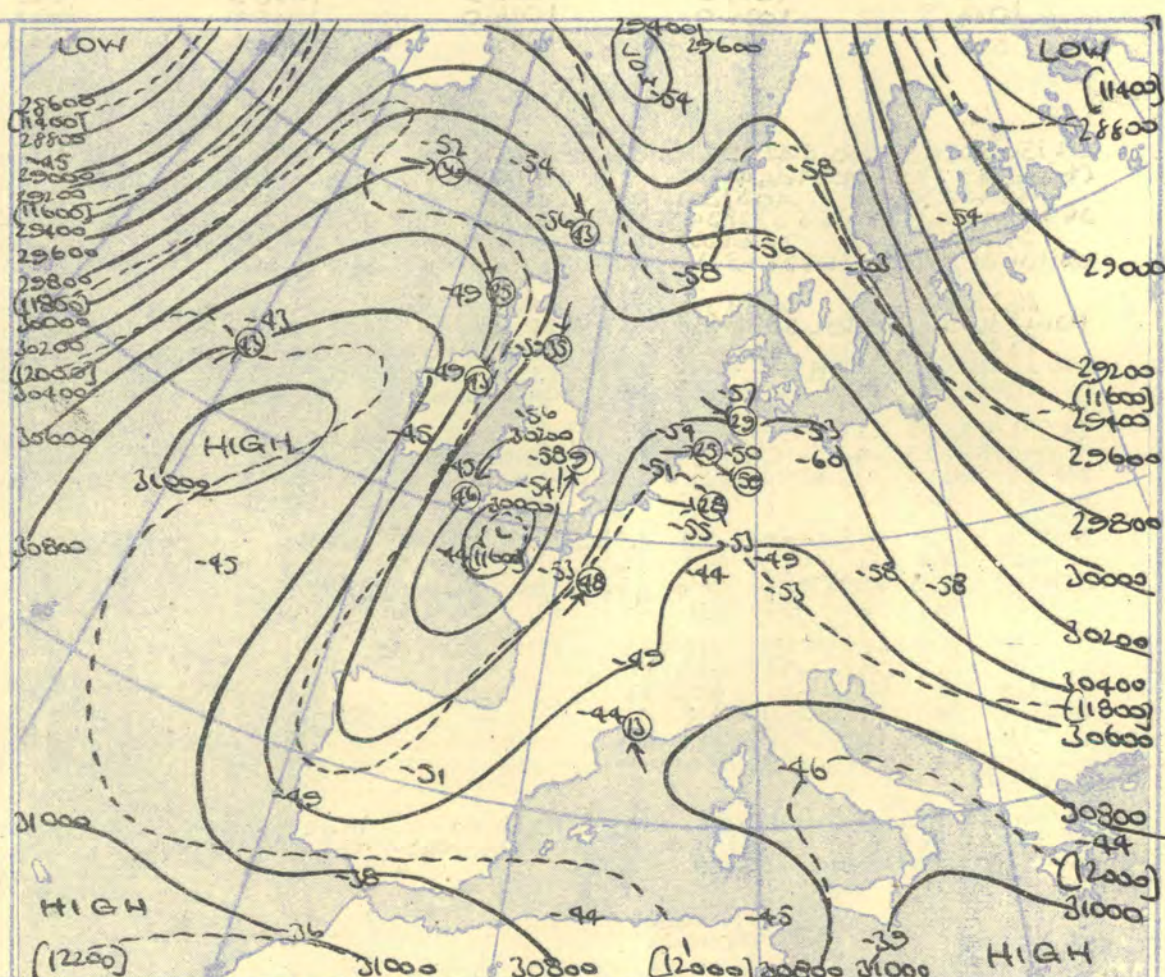
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb, 500 mb and 300 mb, levels at about 03 h. GMT.



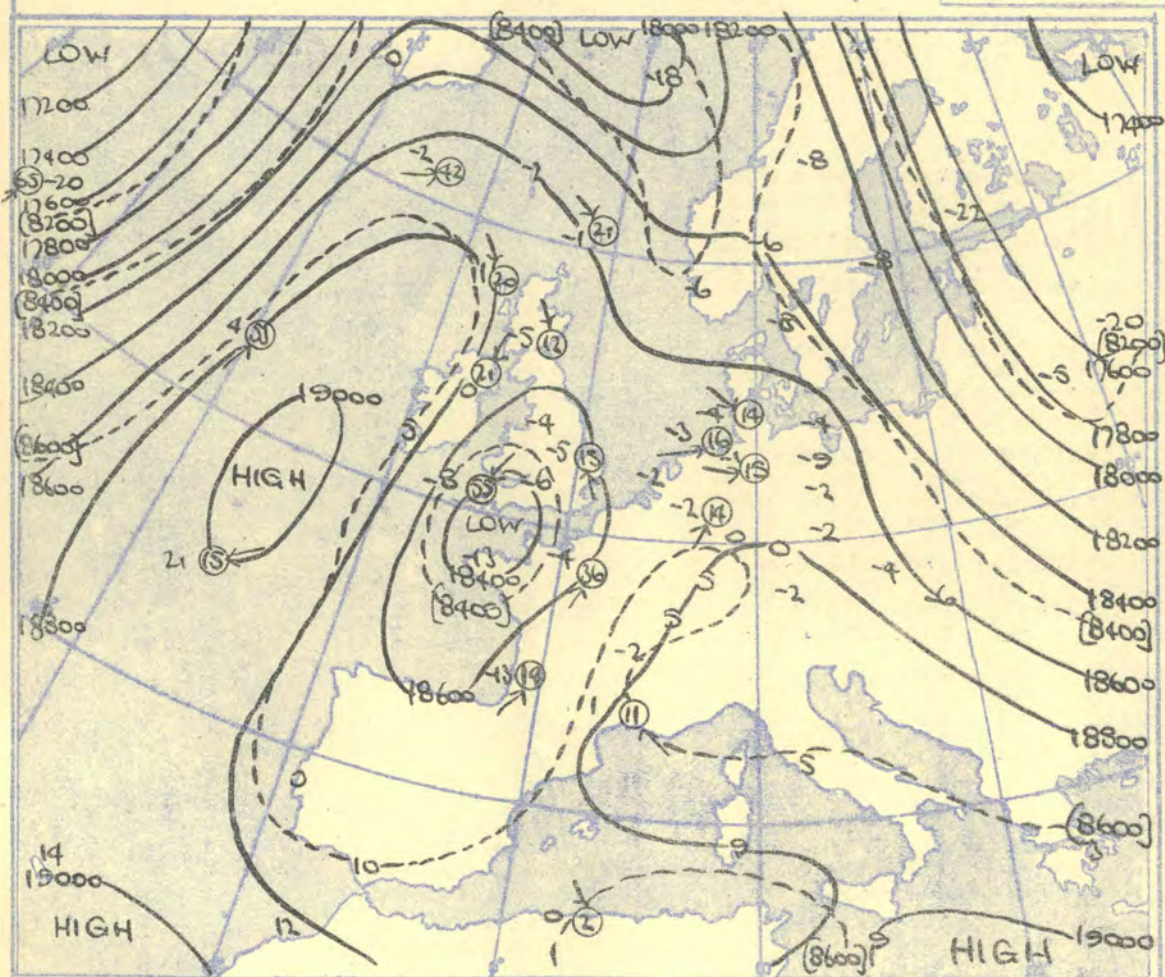
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

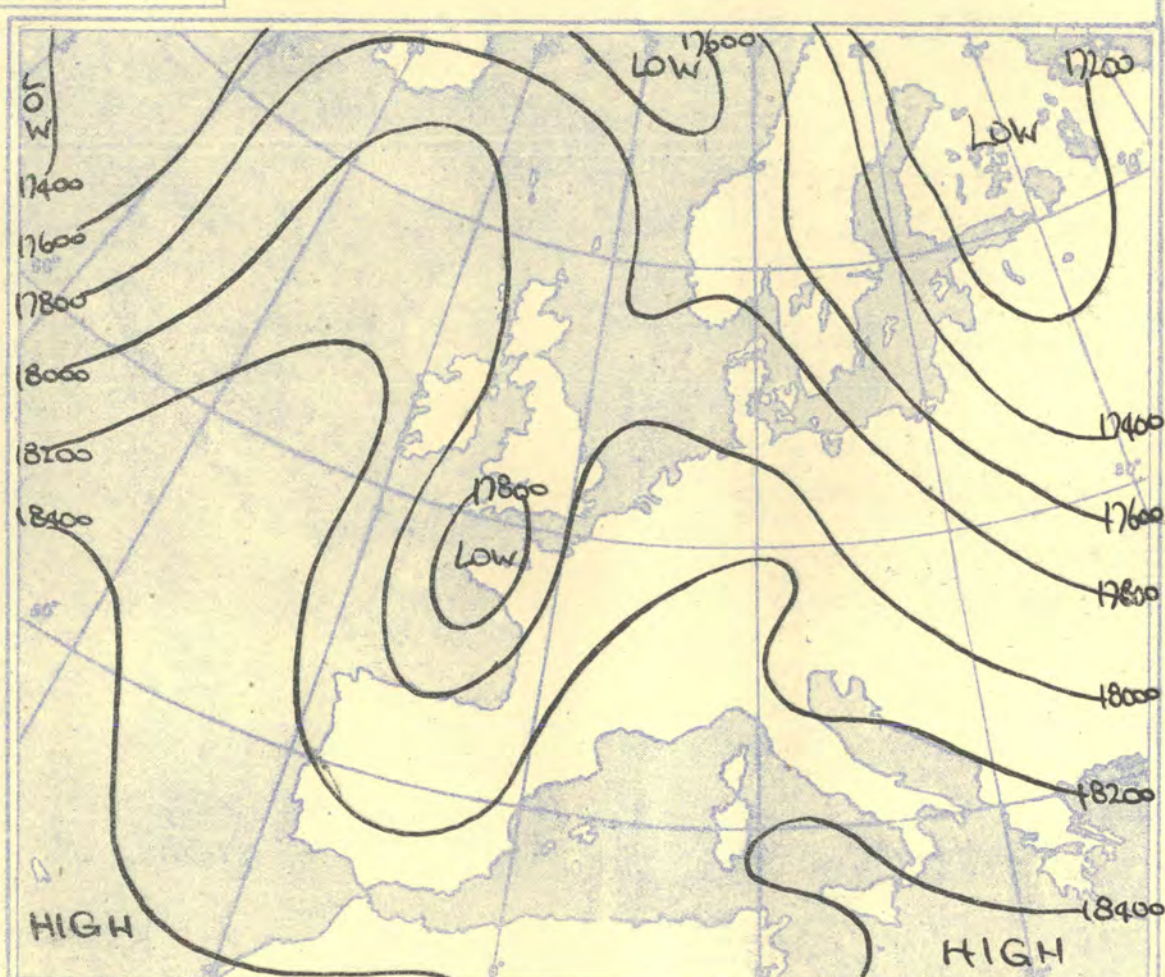
100 80 60 40 20 10 0 knots



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



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



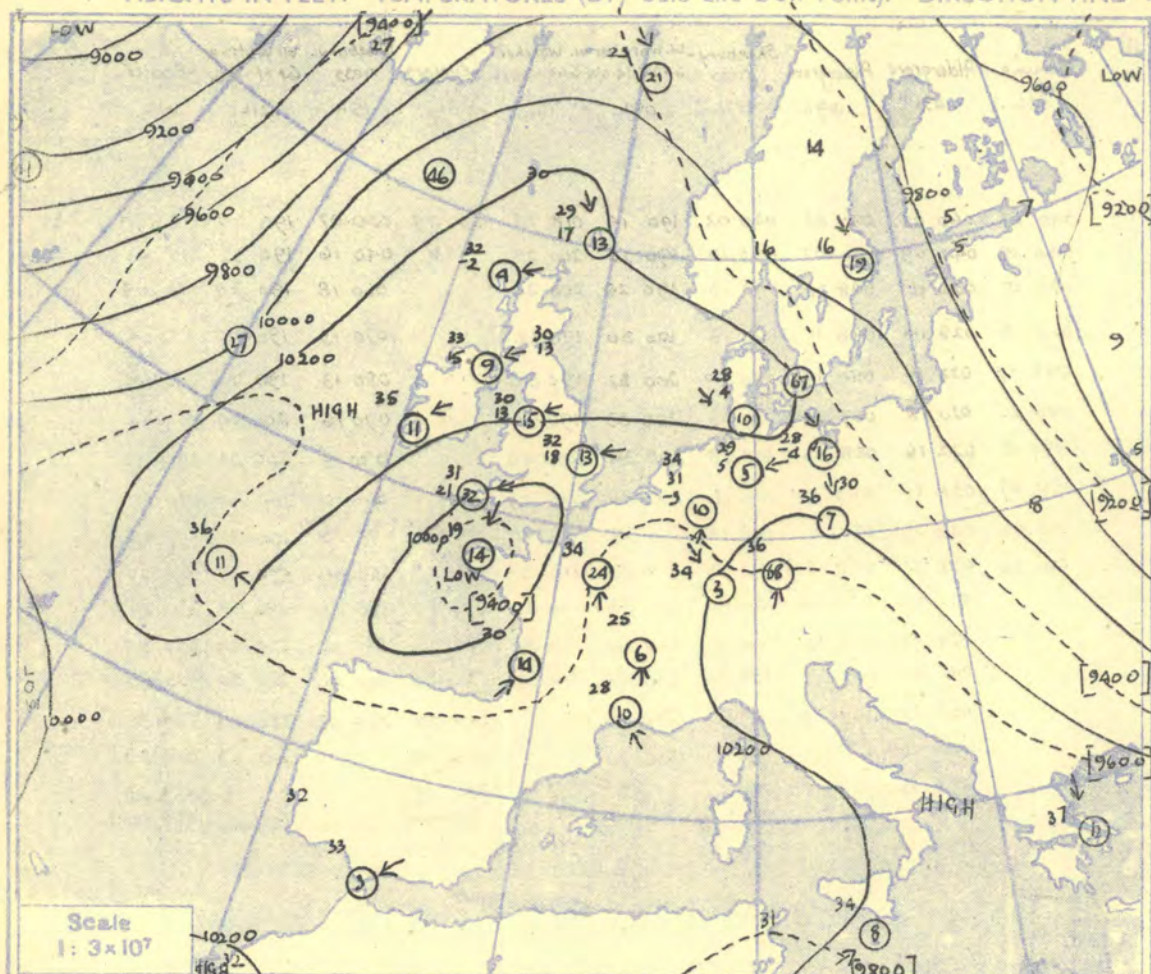
Isopleths of Thickness 500-1000mb.

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

NEPHOSCOPE OBSERVATIONS

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

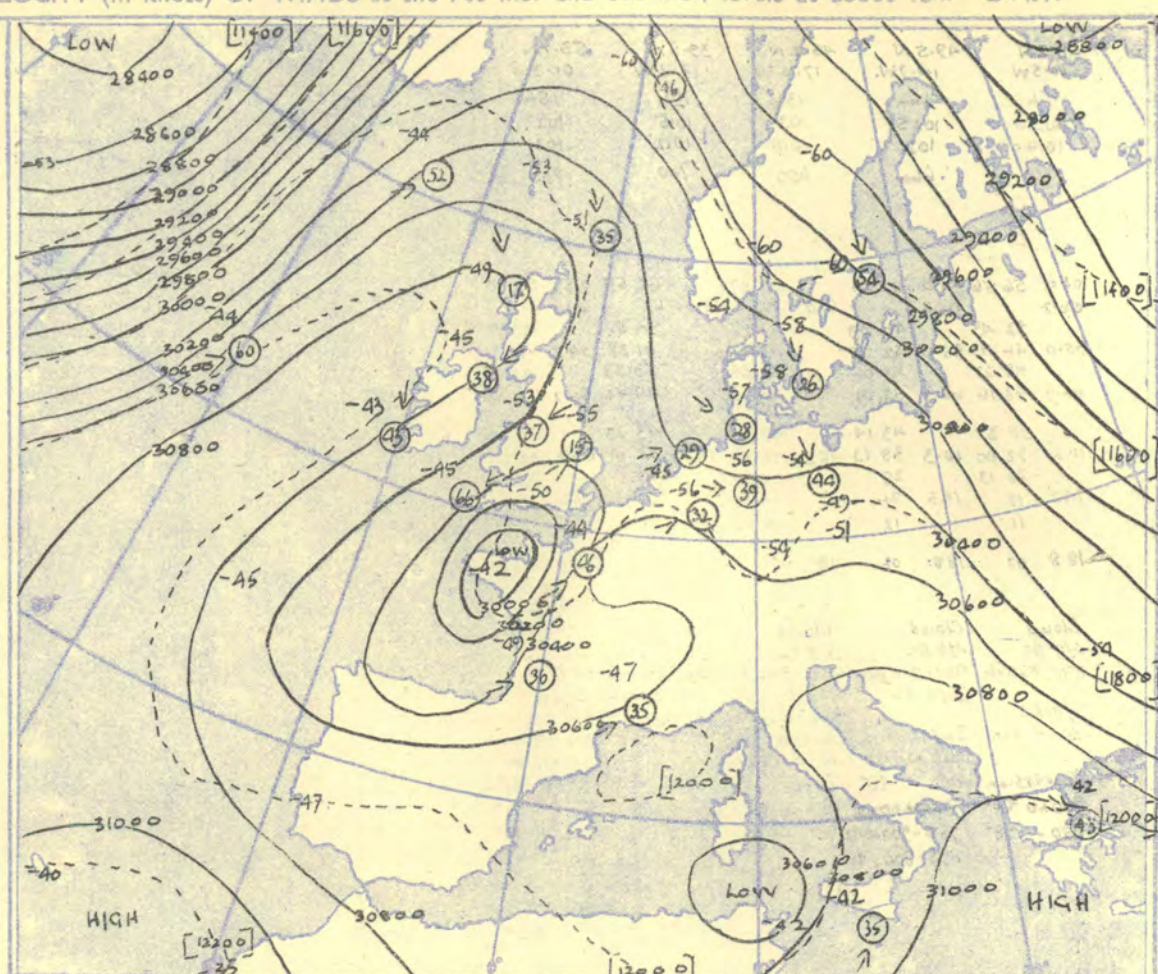
Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				Ship				
Lat/Long	61-0 N 14-0 W				61-0 N 14-0 W				61-0 N 14-1 W				61-0 N 14-0 W				52-3 N 20-2 W				52-5 N 20-0 W				52-6 N 18-6 W				52-7 N 19-7 W				Lat/Long				
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.																																M.S.L.	Pressure			
	Surf																																Surf				
	Pressure																																	Pressure			
	720				720				705				740				700				700				725				740								
Pressure	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	ft./100	Temp.	Dew	Wind	Pressure
	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	Dir.	Vel.	°F.	°F.	
	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100	Temp.	Dew	Dir.	ft./100
Surf	49 47 200	15	49 47		49 47				50 47				50 47				53 49	155	17	54 50	175	22	54 52	185	22	54 52	180	29							Surf		
1000	6-1 47 45 214	19	6-1 47 46		6-1 47 46				5-4 48 45				4-5 48 45				6-5 49 44	174	20	5-7 51 46	172	30	5-2 52 52	178	27	4-3 53 51	175	30							1000		
950	42 38 215	19	41 38		41 38				41 40				42 40				46 39	173	21	45 38	188	27	50 49	185	33	51 51	185	35							950		
900	34-4 42 33 217	17	34-3 38 32		38 32				36 36				35-2 36 36				41 28	176	21	34-2 43 37	207	21	33-9 47 45	189	33	33-1 47 47	189	39							900		
850	42 33 218	18	42 31		42 31				45 05				41 12				44 07	177	21	44 25	215	21	43 40	197	26	45 44	187	33							850		
800	66-1 40 29 216	24	63-9 39 28		39 28				43 -1				64-1 39 -1				44 -12	181	23	65-9 40 17	218	24	65-6 43 37	204	24	64-9 41 38	195	33							800		
750	36 25 218	33	35 24		35 24				37 02				33 -17				39 -11	182	29	39 08	212	21	34 33	213	24	33 31	205	32							750		
700	101 29 22 227	37	101 29 15		29 15				31 02				27 -15				32 02	188	31	101 32 2	205	33	101 29 28	216	27	100 28 26	211	32							700		
650	24 11 234	34	23 4		23 4				24 02				18 -8				37 -02	191	28	24 06	200	30	24 23	215	30	24 22	213	37							650		
600	141 20 -11 228	27	141 17 -3		17 -3				18 -03				10 1				23 -10	184	29	141 14 03	198	42	141 19 18	210	27	140 18 14	214	25							600		
550	9 -23 225	30	10 -10		10 -10				09 -05				4 -4				15 -14	186	44	09 02	196	45	12 10	202	28	11 07	214	27							550		
500	187 -2 -28 244	42	187 -1 -18		-1 -18				-01 -07				-4 -18				-04 -20	187	53	187 01 -06	205	30	186 05 -06	202	22	186 02 -04	205	29							500		
450	-13 -36 258	36	-11 -23		-11 -23				-09 -12				-15 -35				-08 -27	190	53	-05 -15	215	30	-08 -17	205	26	-06 -27	205	33							450		
400	-25 -28 257	36	240 -24 -34		-24 -34				-20 -33				-27 -46				-19 -32	185	39	240 -20 -28	216	38	221 -16 -23	210	37	240 -19 -34	213	39							400		
350	-38 46 251	31	-38 -48		-38 -48				-31 -35				-41				-28 -38	198	41	-32 -40	213	49	-29 -35	212	50	-29 -39	216	54							350		
300	304 -52	250	36 304 -52		-52				-44				-56				-43	201	43	305 -49	210	64	306 -44	206	60	305 -46	211	66							300		
250	-68 262	41	-65		-65				-60				-74				-63	213	57	-67	213	60	-63	217	68	-62	207	74							250		
200	389 -83	263	45 389 -80		-80				-76				-86				-64	245	57	390 -64	215	57	392 -77	238	66	(240nb) 66		200							200		
170	-74 270	36	-85		-85				-83								-93	256	69	-87	217	44	-88	226	52			170							170		
150	70 265	33	79		79				-72								-93	249	56	-86	214	40	-79	236	39			150							150		
130	-69 253	24	-75		-75				-75								-90	242	45	-83	210	36	-80	236	57			130							130		
110	-68 238	17	-76		-76				-68								-88	236	40	(118nb) -83			-77	232	42			110							110		
100	S32 -69	237	14		14				-67								-83	240	27				-75	221	33			100							100		
90	-72 235	14	-74		-74				-79								-87	245	24				-73	214	30			90							90		
80	-72 248	14	-72		-72				-70								-85	228	20				-73	213	26			80							80		
70	-70 260	14	-74		-74				-69								-83	215	17				-68					70							70		
60	(63nb) -70		-70		-70				-69																				60							60	
	Inversion 935nb 40°- 875nb 43°																																				
	(52nb) 67																																				
	Inversion 914nb 36°- 867nb 43°																																				



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

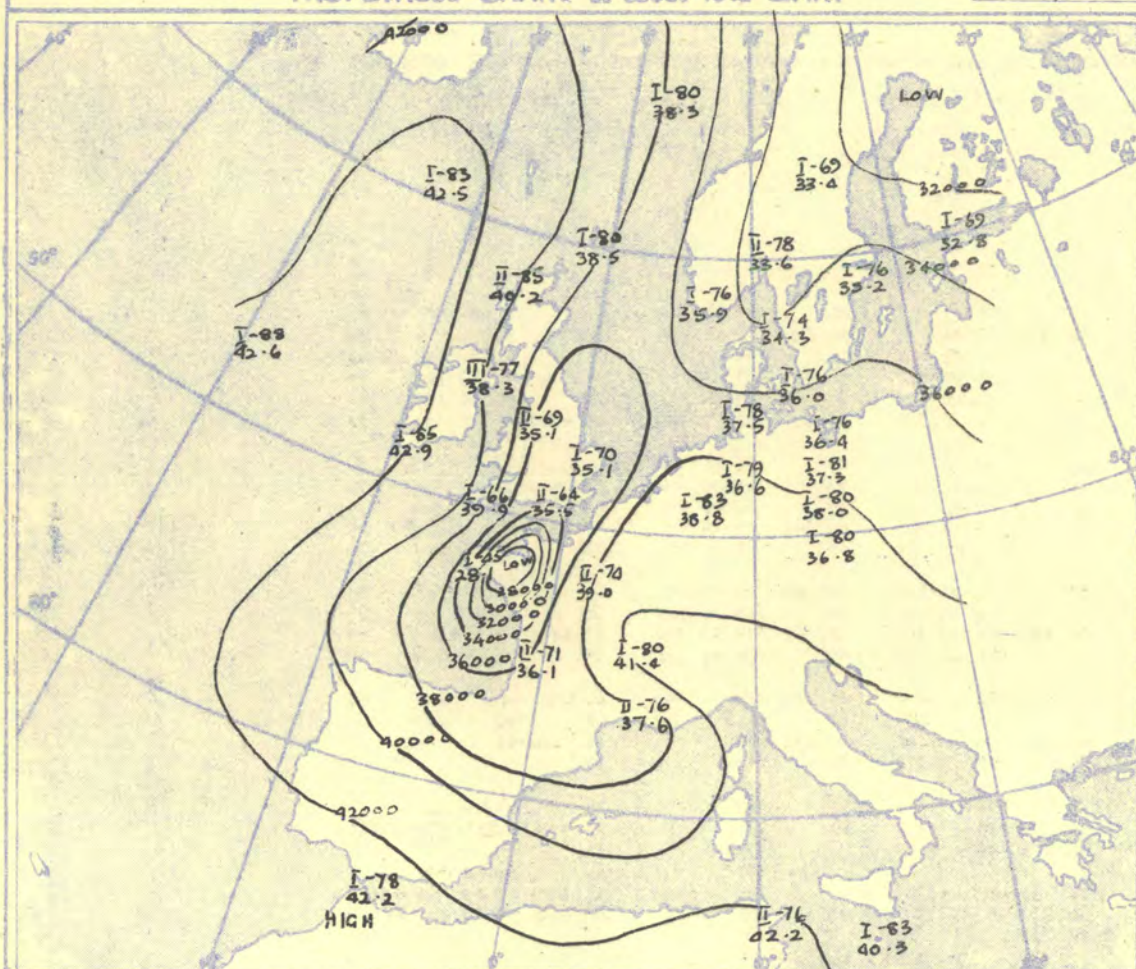
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 knots



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

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



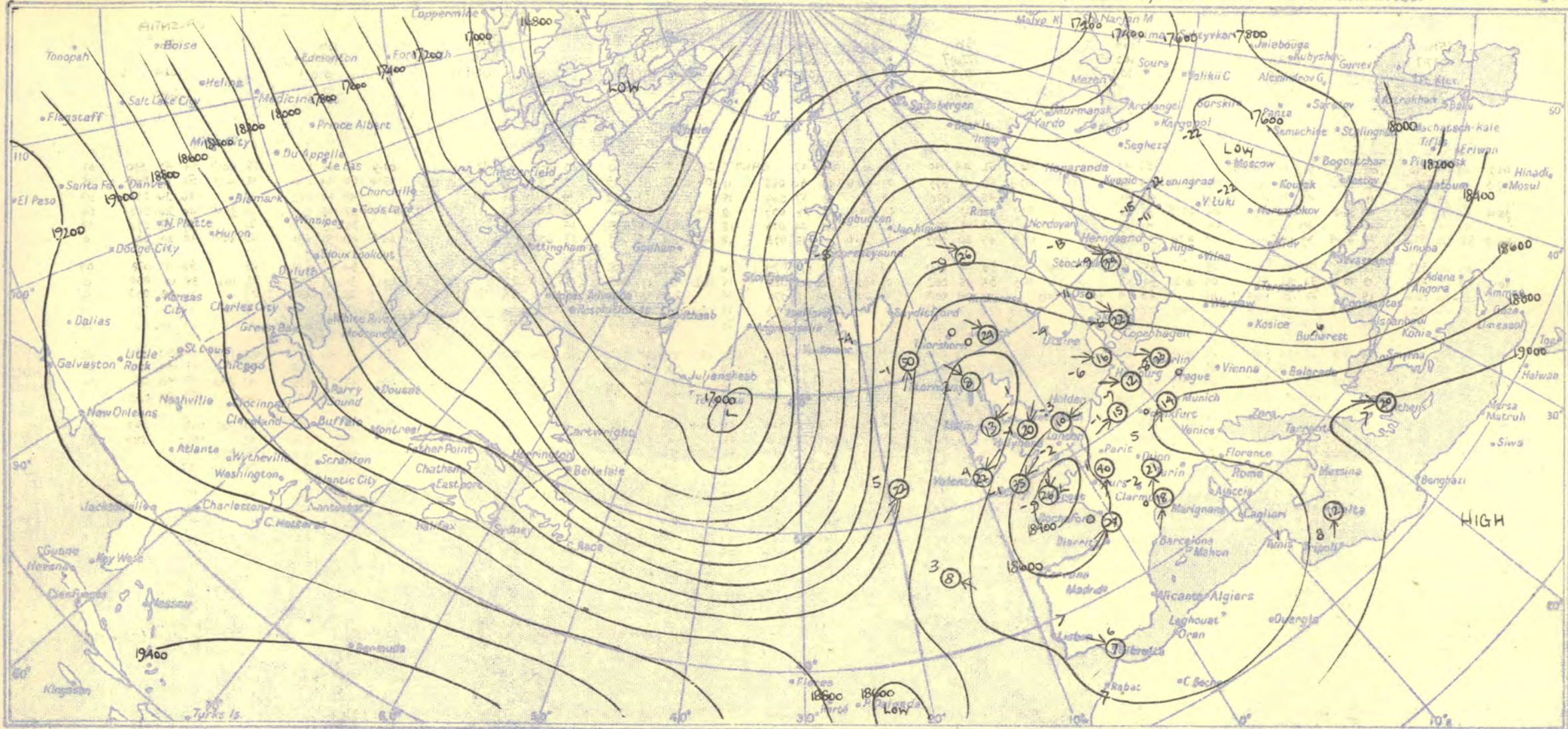
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

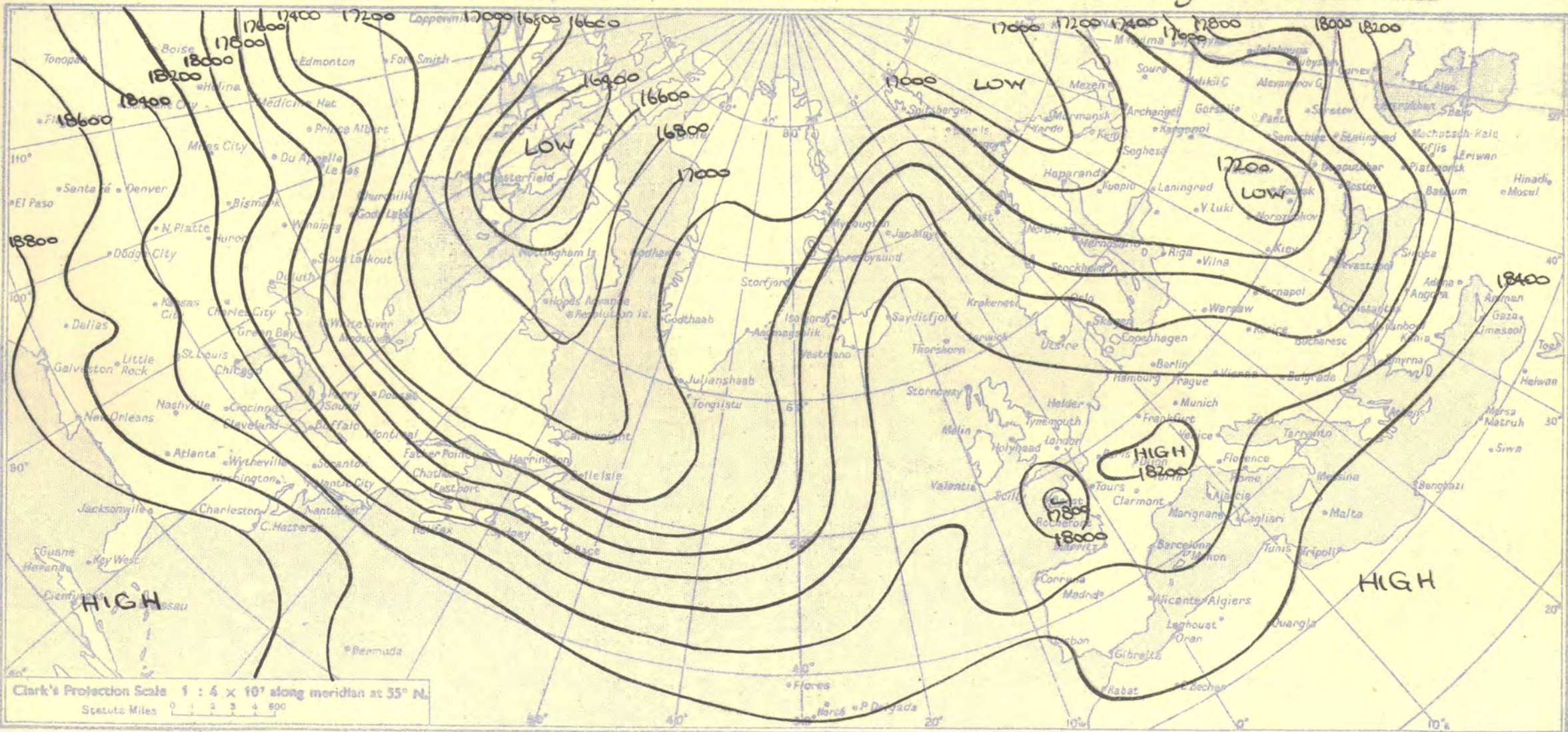
Cooling over Southwest England and Northwest France resulted in the formation of a small cold pool whilst over the remainder of the British Isles subsidence in the high resulted in the building up of a weak warm ridge. Warming occurred in the neighbourhood of the Azores and the cold pool there disappeared.

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



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



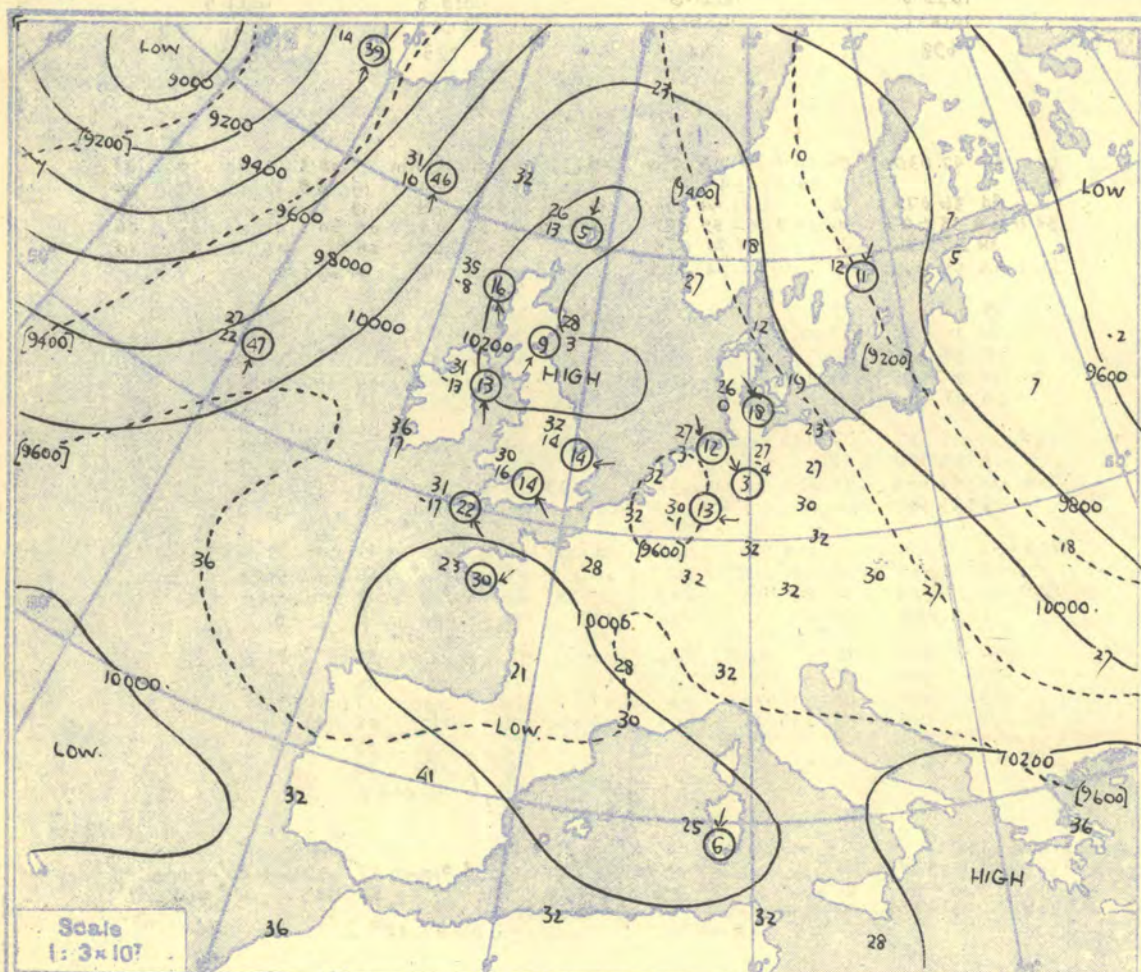
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		15h.		G.M.T.		Time					
M.S.L.		1017.7		mb		1028.4		mb		1027.5		mb		1026.7		mb		1024.4		mb		1022.1		mb		1020.6		mb		1021.0		M.S.L.							
Surf		1017.5		mb		1026.5		mb		1026.7		mb		1018.0		mb		1022.4		mb		1017.8		mb		1004.4		mb		1010.3		Surf							
Freezing		726		mb		700		mb		717		mb		688		mb		716		mb		697		mb		690		mb		708		Freezing							
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Pressure							
mb		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		mb							
Dir.		Vel.		knots		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.					
Vel.		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		Vel.							
Surf		01.7		48		01.5		51		02.3		52		02.3		52		00.6		01.2		55		01.2		55		01.2		55		Surf							
1000		07.3		46		07.6		49		07.4		49		07.3		50		06.6		06.1		52		42		04.3		15		5.6		05.6		1000					
950		39		33		30		31		43		35		43		37		43		37		43		37		43		37		43		37		950					
900		35.4		40		27		29.6		09		36.0		40		30		35.8		34.9		41		28		07.7		18		34.6		42		900					
850		42		11		30.0		mb		10		67.4		39		04		104		04		67.1		37		15		06.6		42		15		850					
800		66.8		38		00		32.6		10		67.4		39		04		102		04		67.1		37		15		06.6		42		15		800					
750		35		16		35.3		12		35		04		08.2		03		35		09		38		19		07.9		16		39		24		750					
700		10.2		29		17		33.8		13		10.3		32		02		07.2		04		10.2		30		13		03		10.1		33		700					
650		21		09		32.6		18		27		01		06.9		04		04		04		04		23		04		14.2		15		03		09.2		650			
600		14.1		17		04		32.2		27		14.3		20		08		05.2		03		14.2		17		26		14		14.0		16		600					
550		10		17		32.1		29		12		12		16		32.0		04		11		29		12		26		14		26		14		550					
500		18.7		00		19		32.2		24		18.8		02		25		30.5		06		18.9		01		36		18		04		28		500					
450		11		25		32.1		22		09		35		33.5		08		08		08		24.1		11		46		23		35		08		450					
400		24.0		23		36		32.1		31		24.2		21		44		33.1		09		24.1		15		48		01.1		26		40		400					
350		37		49		33.3		29		35		55		30.9		10		37		60		29		54		00.5		33		29		54		350					
300		30.5		51		32.9		35		30.7		49		30.7		17		30.6		53		30.9		45		01.6		38		30.5		53		300					
250		69		32.6		45		65		31.7		24		68		39		60		36.0		39		66		03.0		42		67		29.5		250					
200		39.0		78		32.5		38		39.2		81		31.2		33		39.4		79		39.1		70		02.1		34		39.0		70		200					
170		67		31.3		26		83		31.8		24		83		35.3		27		83		35.3		27		83		35.3		27		83		170					
150		67		30.3		21		83		29.4		18		80		34.0		18		71		35.6		19		45.0		71		01.2		21		150					
130		68		30.7		17		45.0		74		18		76		34.5		16		70		35.7		15		69		35.7		07		18		130					
110		66												72		33.2		09		70		35.6		12		69		32.7		10		110							
100														53.6		71		08		53.4		69		00.3		07		53.4		70		05		100					
90														71		31.0		06		70		30.6		05		70		30.6		05		70		90					
80														69		32.6		05		70		30.6		05		70		30.6		05		70		80					
70														(75.6) 68																				70					
60														Inversion		89.5 mb 39° - 82.2 mb 45°																		60					

VALENTIA
03h
1021-9
1021
660

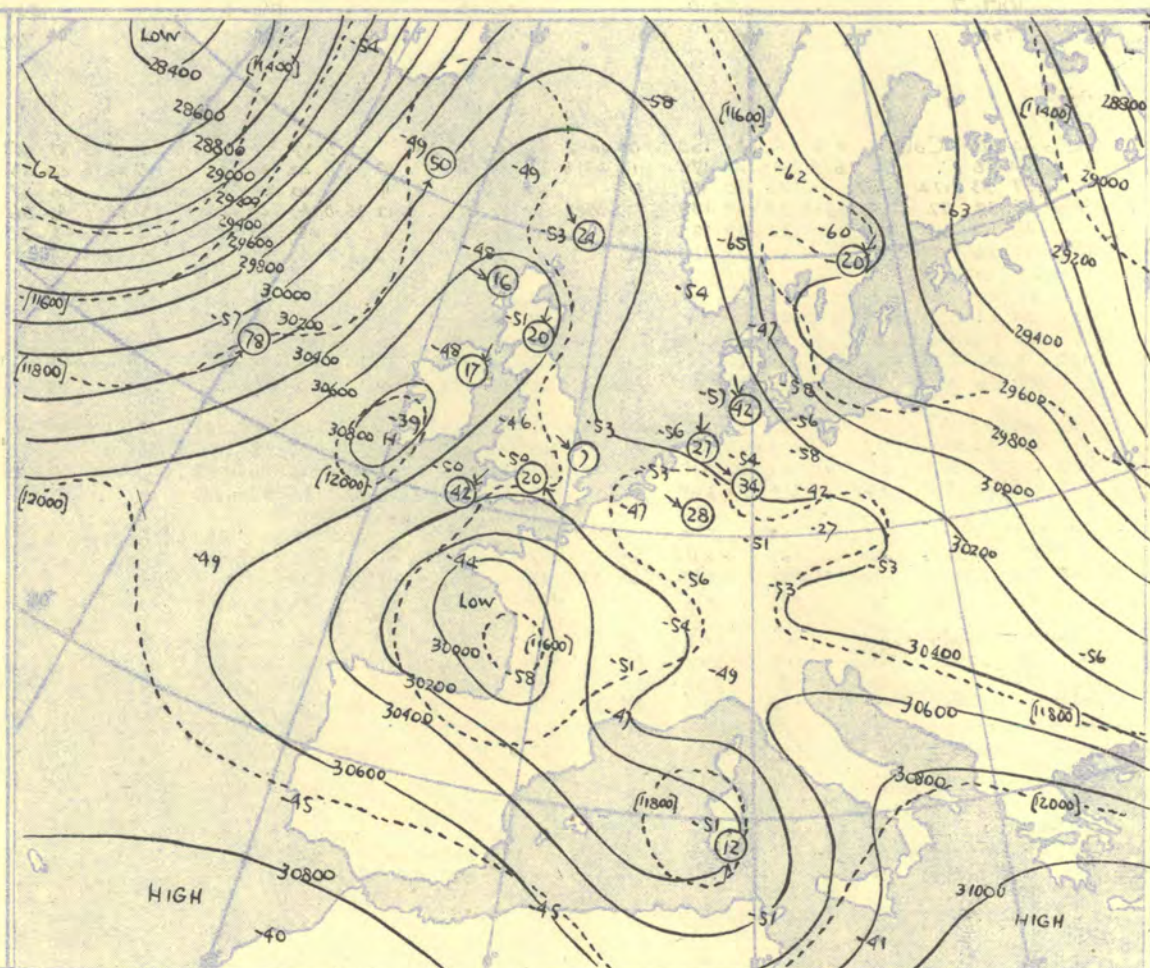
Thyroglobulin

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 02h. GMT.

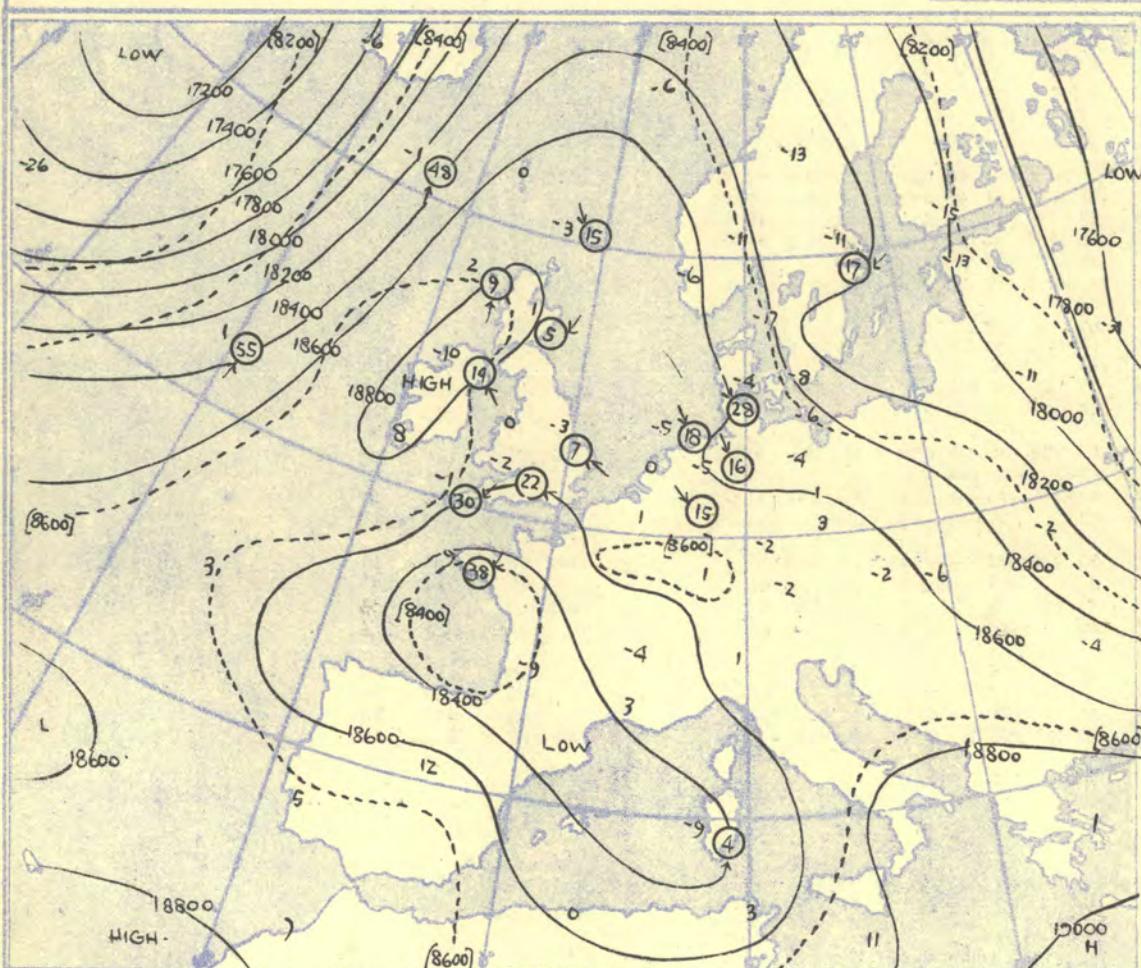


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

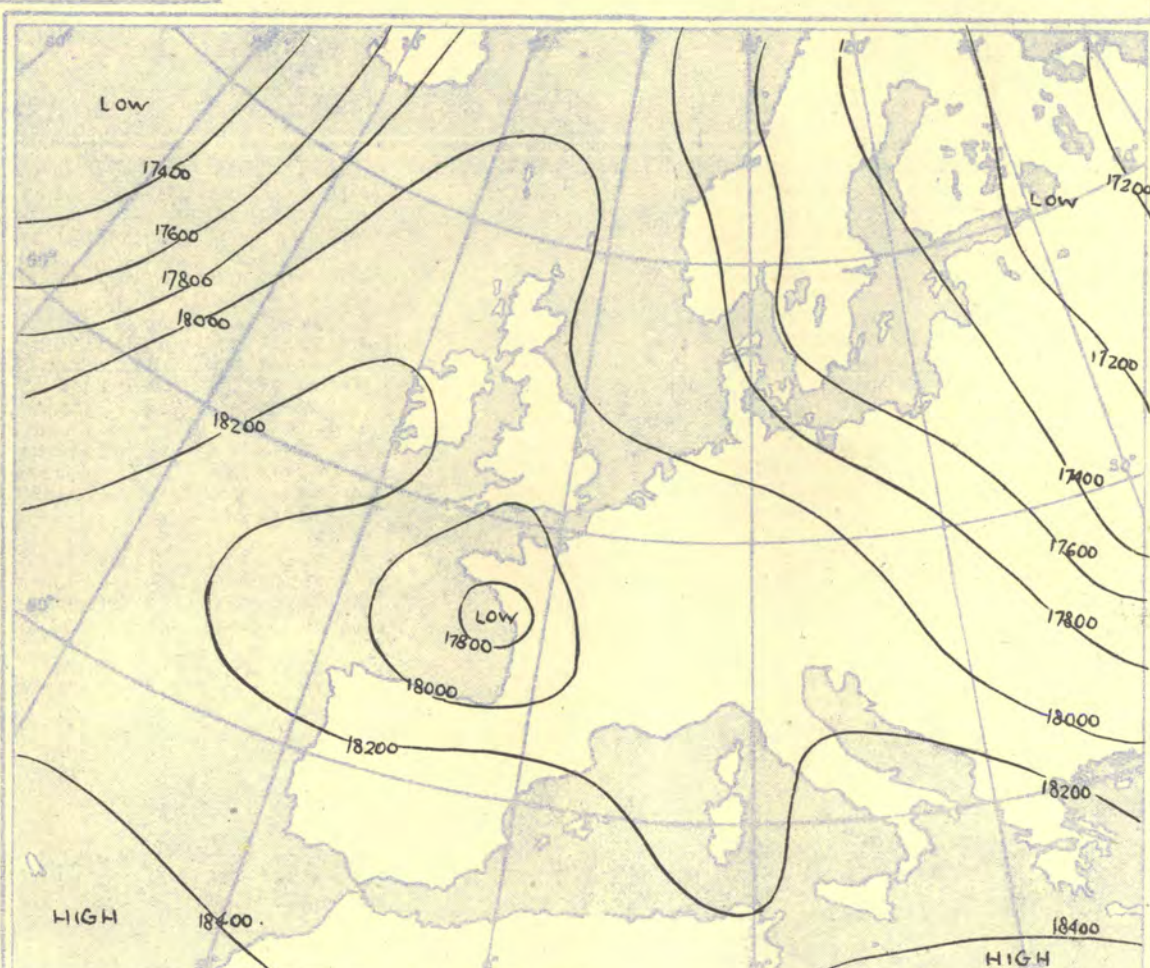
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.



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.



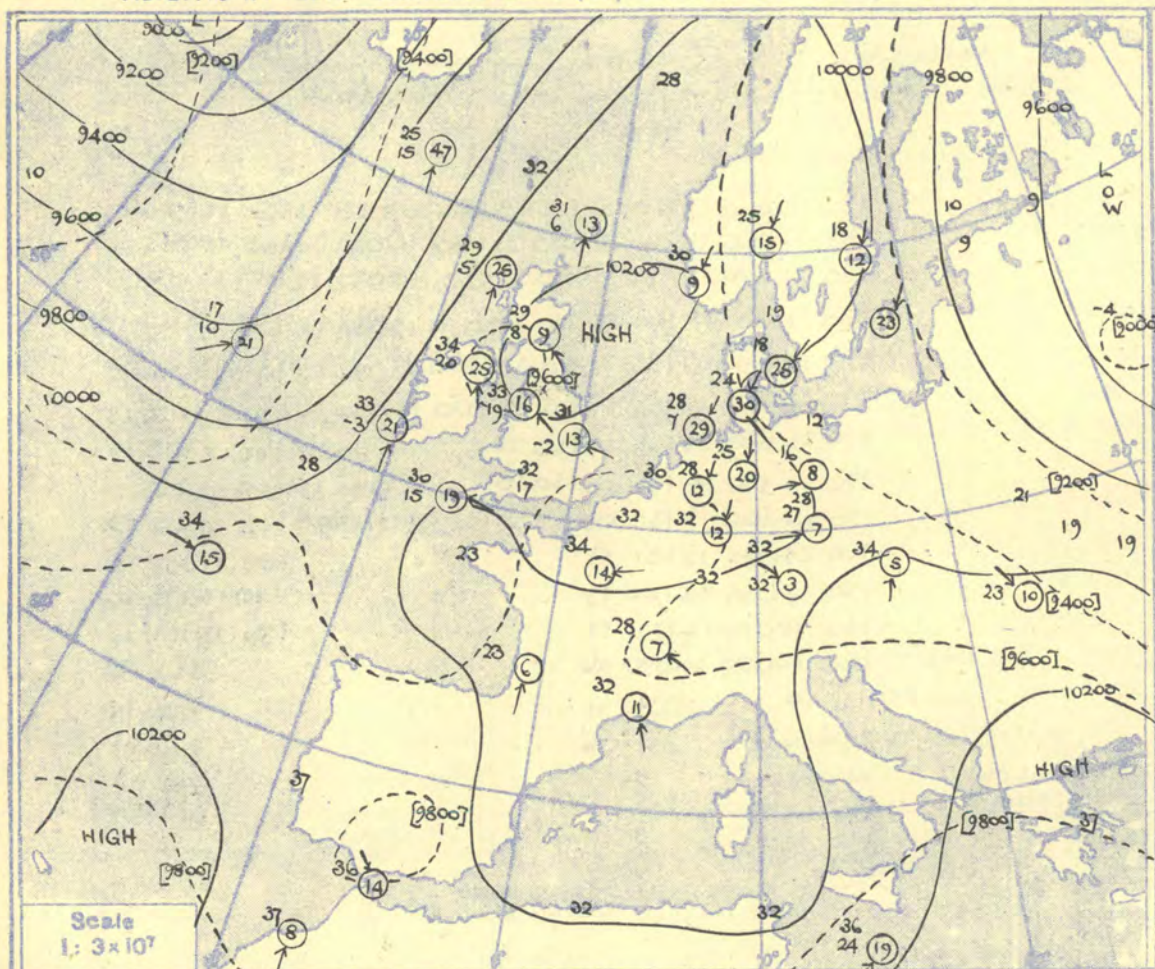
Isopleths of Thickness 500—1000mb.

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

STATION DATA												NEPHOSCOPE OBSERVATIONS															
48.2°N 20.5°W				49.5°N 14.7°W				51.1°N 1.3°E				36.1°N 03.3°W															
13hrs 1017 1013 860				15hrs 1013 1010 720				1515hrs 1022 1020 717				20hrs 1019 1010 660															
Time M.S.L. Surf Pressure				Time M.S.L. Surf Pressure				Time M.S.L. Surf Pressure				Time M.S.L. Surf Pressure															
Place				Place				Place				Place															
Time				Time				Time				Time															
Type				Type				Type				Type															
Feet				Feet				Feet				Feet															
Surf												Surf															
1,000												1,000															
2,000												2,000															
3,000												3,000															
4,000												4,000															
5,000												5,000															
6,000												6,000															
8,000												8,000															
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70,000												70,000															
80,000												80,000															
(20,000)												(20,000)															
NEPHOSCOPE OBSERVATIONS												NEPHOSCOPE OBSERVATIONS															
Place												Place															
Time Type												Time Type															
Dir. Vel.												Dir. Vel.															

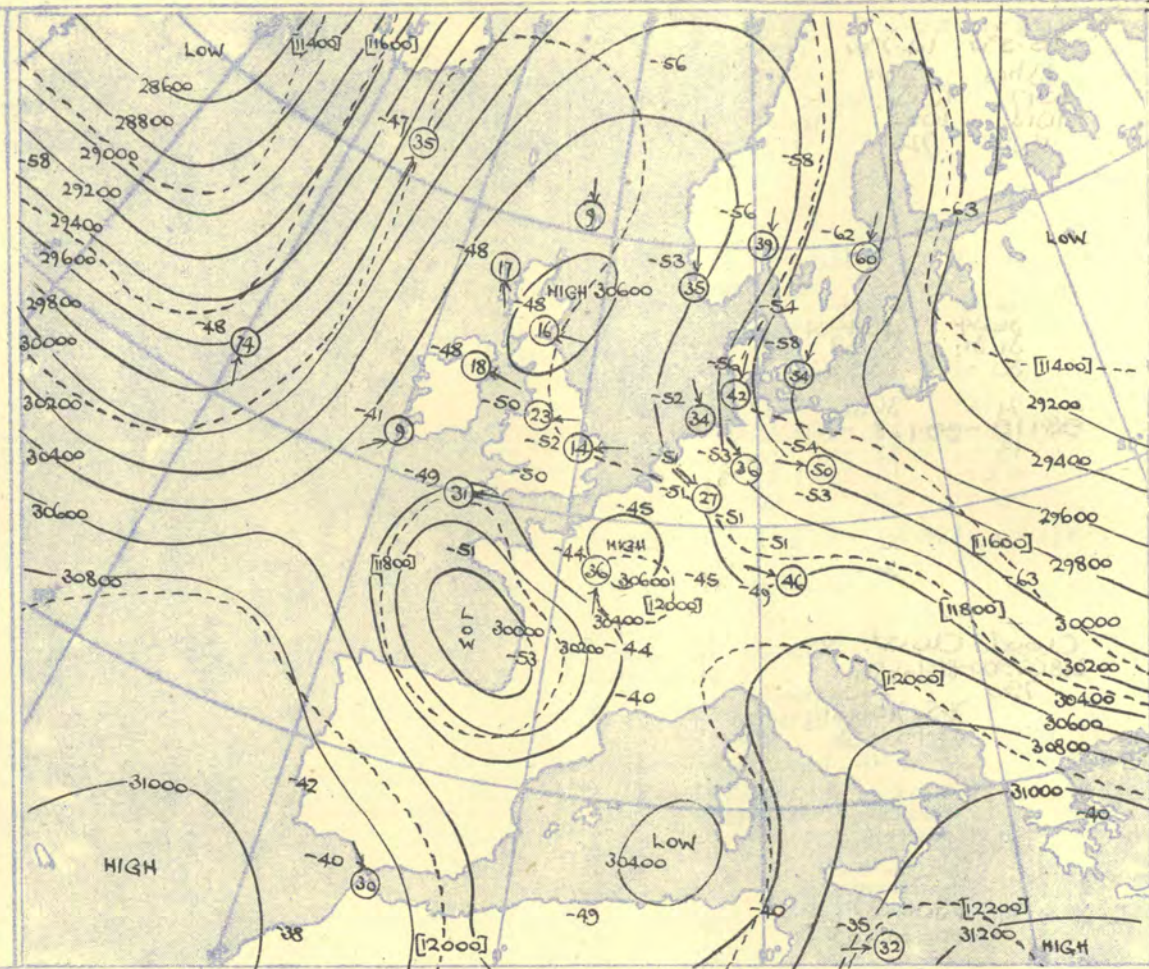
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS

Ship	Weather Watcher				Weather Watcher				Weather Watcher				Weather Observer				Weather Observer				Weather Observer				Ship																																																																																																																																																																																																																																														
Lat/Long	61°N 14°W				61°N 14.1°W				61°N 14.1°W				61°N 14.1°W				52.5°N 19.7°W				52.3°N 19.7°W				52.2°N 20.0°W				52.4°N 19.8°W				Lat/Long																																																																																																																																																																																																																																						
Time M.S.L. Surf Freezing	03hrs 1013 1013 700				03hrs 1010 1010 720				15hrs 1008 1008 760				21hrs 1005 1005 805				03hrs 1010 1010 740				03hrs 1009 1009 786				15h. 1012 1012 840				21h. 1016 1016 880				Time M.S.L. Surf Freezing																																																																																																																																																																																																																																						
	G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb				G.M.T. mb mb mb																																																																																																																																																																																																																																						
	mb				mb				mb				mb				mb				mb				mb				mb				mb																																																																																																																																																																																																																																						
	mb				mb				mb				mb				mb				mb				mb				mb				mb																																																																																																																																																																																																																																						
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. 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	1	51	46	180	28	1	50	46	165	26	1	51	44	173	28	1	50	45	160	25	1	55	53	180	32	1	51	49	250	18	1	52	46	290	21	Surf																																																																																																																																																																																																																																			
1000	3.6	50	43	181	30	2.7	49	45	167	33	2.1	50	43	179	36	1.5	50	49	170	36	1.5	54	52	180	42	2.5	50	47	248	17	3.2	50	44	293	12	4.3	49	39	288	18	1000																																																																																																																																																																																																																														
950		44	38	181	38		46	41	170	40		44	38	180	37		45	42	177	40		51	47	182	43		43	42	243	16		43	37	292	17		42	31	288	20	950																																																																																																																																																																																																																														
900	32.0	39	28	182	41	31.2	41	37	179	42	30.5	39	33	180	31	29.9	43	33	181	31	41	36	47	41	196	44	30.9	39	33	242	17	34.6	38	32	286	18	32.6	35	26	289	24	900																																																																																																																																																																																																																													
850		40	33	183	36		42	32	184	43		39	23	181	31		36	33	184	39		43	39	192	48		35	29	244	18		33	28	276	18		28	19	296	22	850																																																																																																																																																																																																																														
800	62.3	39	28	183	35	62.8	41	1	187	46	61.8	37	04	180	33	61.1	31	27	185	40	63.2	38	28	190	42	61.9	38	19	243	22	62.6	28	21	268	21	63.3	24	14	290	19	800																																																																																																																																																																																																																														
750		37	6	184	43		36	04	184	44		31	20	179	40		27	20	188	40		33	24	192	46		29	12	238	27		22	14	259	18		19	01	290	25	750																																																																																																																																																																																																																														
700	98.8	31	10	185	46	98.0	29	19	188	46	96.7	25	15	177	47	95.9	22	1	191	48	98.4	27	22	194	47	96.7	23	11	225	44	98.1	17	10	237	21	97.3	13	08	289	28	700																																																																																																																																																																																																																														
650		22	3	186	48		21	09	188	53		19	08	173	53		15	06	192	60		23	18	196	42		19	11	217	56		10	9	224	27		05	16	285	25	650																																																																																																																																																																																																																														
600	138	16	8	189	54	138	12	00	183	63	136	12	4	177	59	135	07	3	183	63	138	16	11	188	59	136	11	04	204	73	137	02	06	218	34	135	03	23	282	27	600																																																																																																																																																																																																																														
550		06	4	200	57		07	00	183	61		04	9	179	64		03	4	184	64		05	2	201	51		05	3	193	76		05	26	209	42		08	30	278	30	550																																																																																																																																																																																																																														
500	184	1	6	193	49	183	00	5	185	52	181	4	12	180	63	180	6	12	180	69	184	01	14	205	55	181	3	15	192	72	181	10	36	202	87	179	15	39	276	36	500																																																																																																																																																																																																																														
450		10	16	190	41		9	06	188	37		12	21	181	53		15	21	180	68		12	23	202	58		14	24	191	70		20	49	194	69		24	43	274	39	450																																																																																																																																																																																																																														
400	237	20	26	180	48	237	21	29	183	37	234	22	32	187	53	233	23	30	181	73	237	23	34	201	57	234	27	33	187	87	233	32	59	187	75	231	34	57	271	32	400																																																																																																																																																																																																																														
350		34	44	183	50		31	41	191	50		35	45	184	62		35	43	178	75		37	48	200	66		41		183	87		41		181	93		41		266	39	350																																																																																																																																																																																																																														
300	302	48		185	50	302	46		200	74	299	47		181	85	298	48		168	100	302	51		198	78	298	58		191	93	297	48		172	74	295	50		266	42	300																																																																																																																																																																																																																														
250		68		191	54		64		197	80		64		180	84		63		179	102		63		200	96		73		196	104		54		171	58		57		270	48	250																																																																																																																																																																																																																														
200	387	85		202	64	387	73		197	80	385	82		180	87	383	78		178	104	387	77		201	88	383	66		198	69	385	55		180	51	383	60		277	40	200																																																																																																																																																																																																																														
170		84		210	69		79		197	76		76		180	87		78		178	75		76		199	78		69		198	51		57		187	39		66		276	34	170																																																																																																																																																																																																																														
150		87		214	66		80		200	66		80		180	85		75		178	54		76		198	70		68		198	38		60		200	28		67		274	32	150																																																																																																																																																																																																																														
130		78		224	53		77		206	52		77		180	85		69		176	48		78		199	54		66		195	35		60		211	28		65		272	22	130																																																																																																																																																																																																																														
110		74		224	51		73		207	43		73		180	85		69		176	33		71		200	36		68		198	27		62		222	27		71		270	24	110																																																																																																																																																																																																																														
100	52	87		215	40	52	71		207	40		71		180	85		69		177	32	52	71		202	35	52	71		198	33	533	64		226	24	528	71		70		267	22	100																																																																																																																																																																																																																												
90		73		200	34		70		205	31		71		178	37		71		177	27		70		204	29		70		198	27		62		236	18		70		263	18	90																																																																																																																																																																																																																														
80		73		198	38		69		200	25		71		178	37		71		177	19		70		211	20		69		198	21		62		233	21		68		260	20	80																																																																																																																																																																																																																														
70		72		197	33									177	19		70																							258	15	70																																																																																																																																																																																																																													
60		73		196	21												72																									80																																																																																																																																																																																																																													
Inversion 900mb 39.875mb 41.250mb 48.0mb 38.850mb 39.572mb 1.2550mb 3																																	Isothermal 538-920 mb 50.700-668 mb 27.290-278 mb 54																																	Isothermal 835-800mb 33.786-771 mb 32.259 mb 194° 116kts																																																																																																																																																																																																					
Tropopause 1186 mb -86° 40100'																																	Tropopause 1176 mb -84° 41200'																																	Tropopause 1189 mb -80° 39500'																																	Tropopause 1216 mb -76° 31100'																																	Tropopause 1232 mb -75° 33300'																																	Tropopause 1223mb -57° 36,300'																																	Tropopause 1243mb -58° 34,200'																																	Tropopause																																



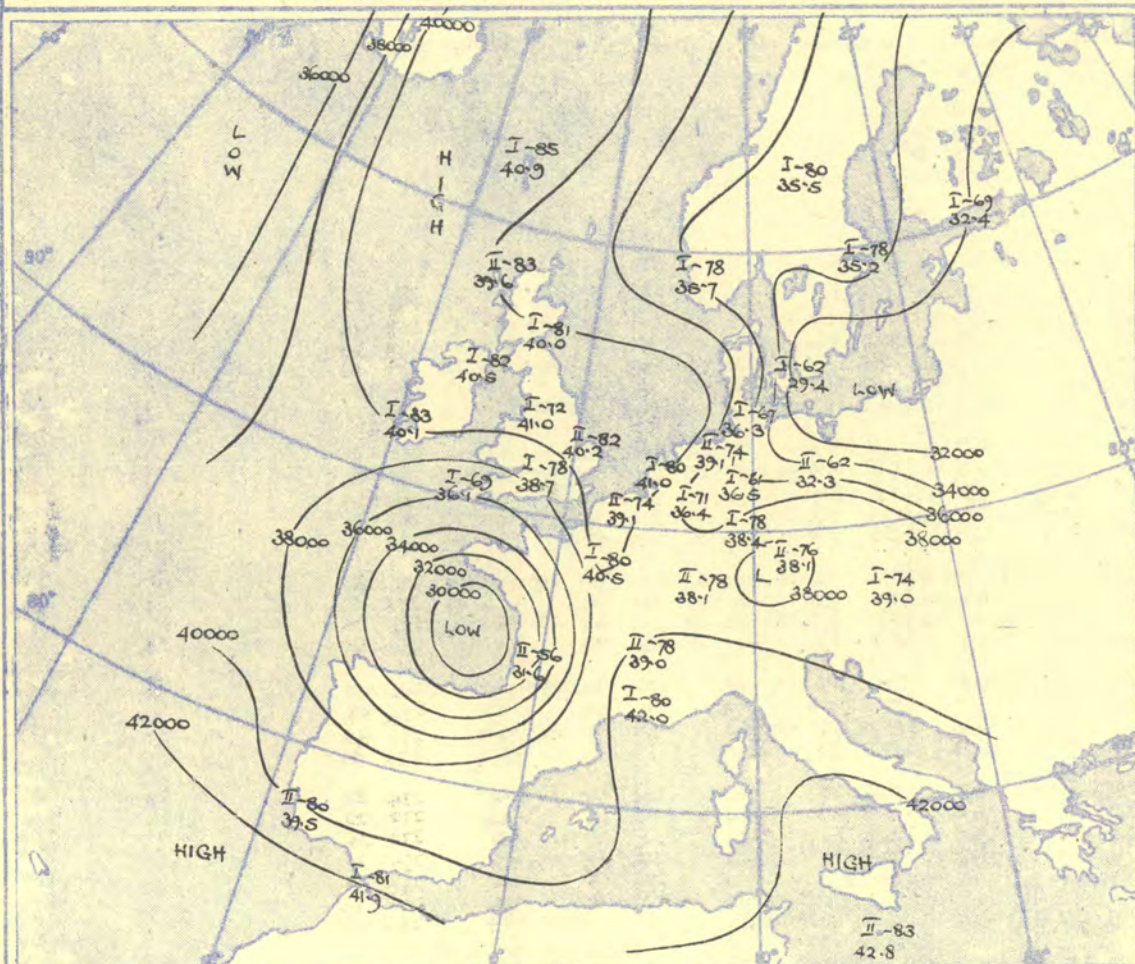
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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



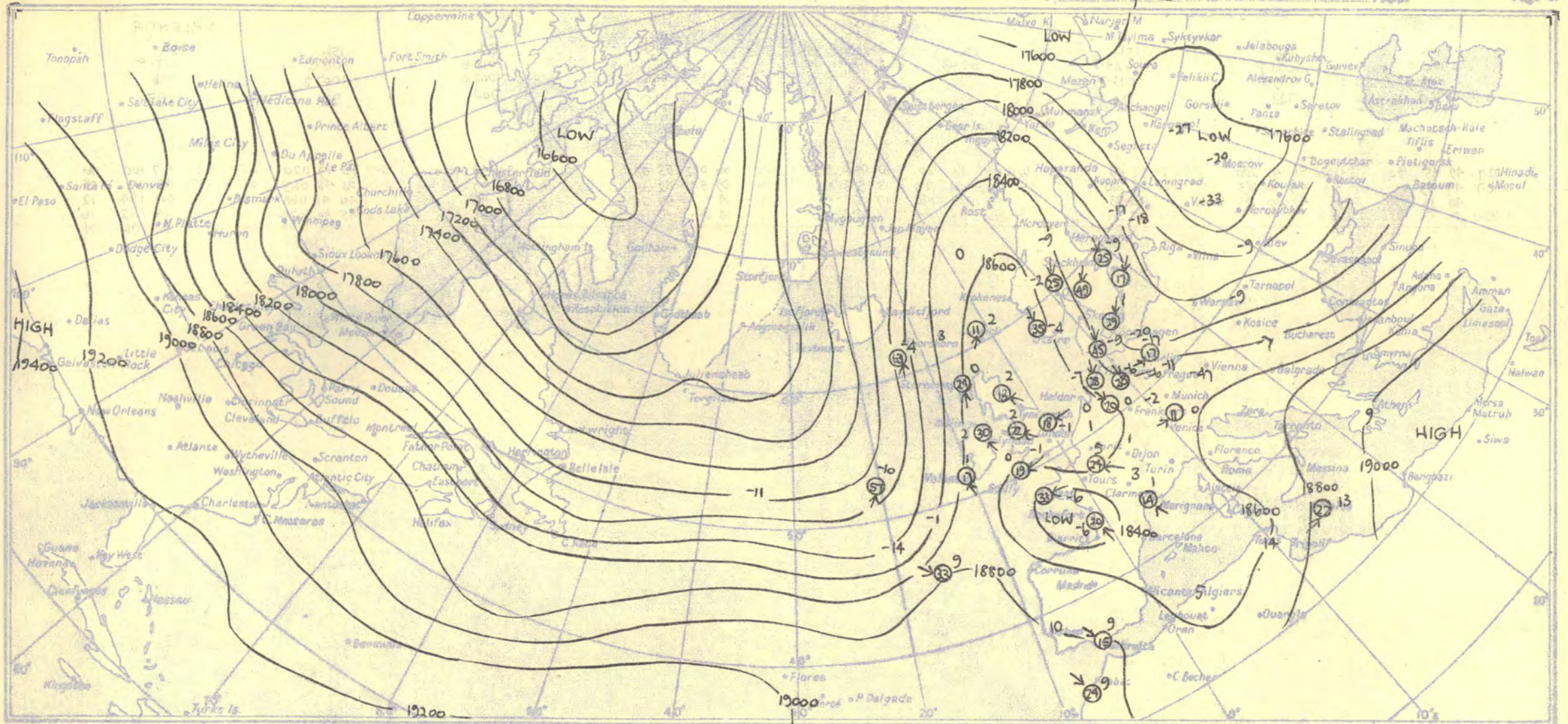
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

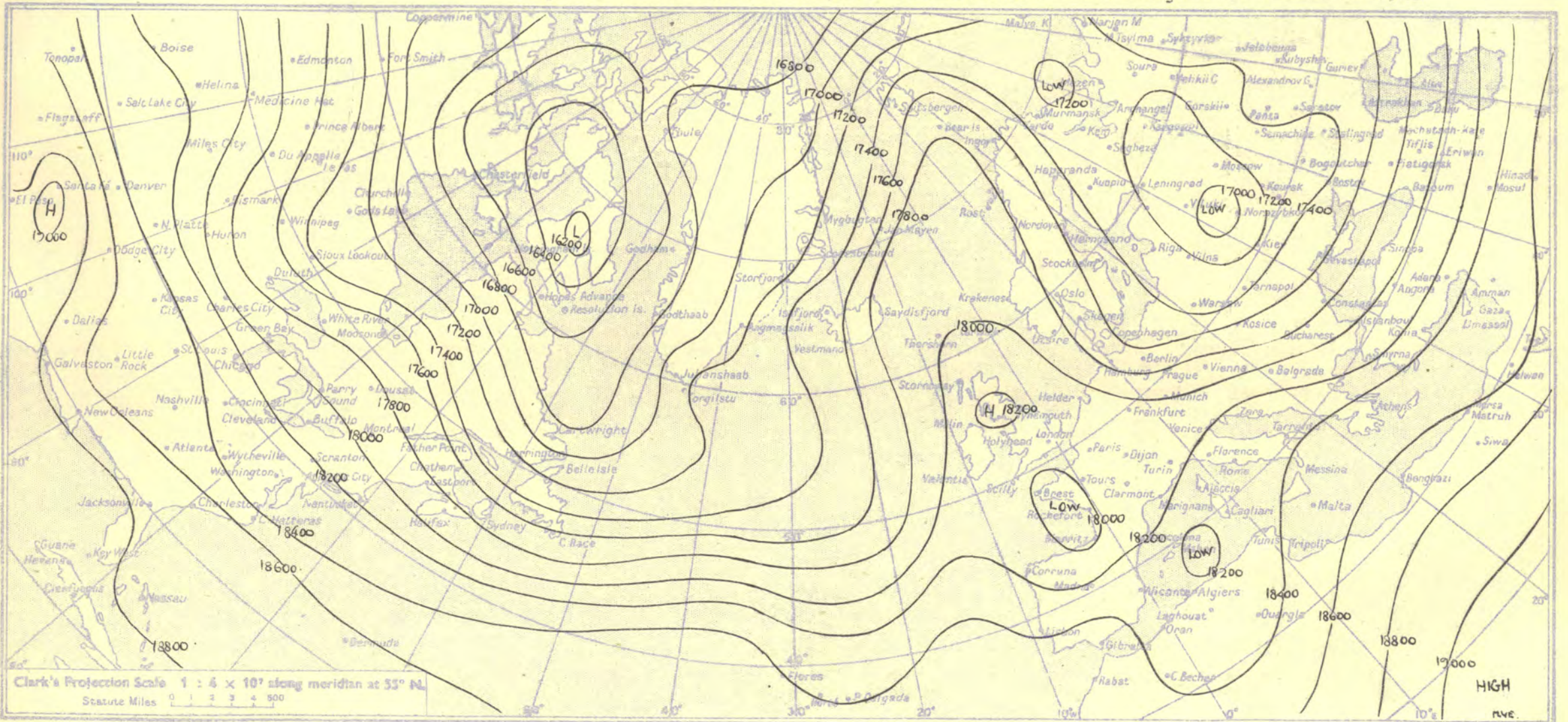
Nothing of note.

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



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 24th October 1950.



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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION	
Time	M.S.L.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	15h	G.M.T.	Time	M.S.L.								
Surf	Freezing	1025.0	mb	1021.7	mb	1024.5	mb	1021.8	mb	1021.2	mb	1020.7	mb	1018.6	mb	1018.5	mb	1017.4	mb	1017.3	mb	1016.5	mb	1016.6	mb	1016.5	mb	1016.6	mb	1016.5	mb	1016.6	mb						
Pressure		750		722		720		690		691		707		700		732		685		685		685		685		685		685		685		685							
Surf	02.7	49	45	180	15	00.5	51	41	200	08	00.2	52	43																				Surf						
1000	6.7	47	43	177	27	5.9	49	40	183	17	6.6	48	40																				1000						
950		40	37	175	20		42	40	186	18		40	33																					950					
900	35.0	46	33	171	19	24.4	47	24	189	24	35.1	44	24																					900					
850		44	21	168	18		45	08	187	27		43	23																					850					
800	66.7	36	25	173	17	66.1	41	17	189	28	66.9	40	31																					800					
750		32	15	179	16		36	07	187	27		36	11																					750					
700	102	31	06	180	13	101	29	05	181	25	102	29	08																					700					
650		27	07	193	10		25	06	182	26		27	02																					650					
600	142	18	13	201	12	141	21	15	190	25	142	20	06																					600					
550		06	23	197	13		11	32	190	23		12	14																					550					
500	187	02	27	200	11	187	00	40	184	24	188	02	22																					500					
450		14	37	214	08		11	47	181	31		10	33																					450					
400	240	24	46	253	08	240	22	58	178	29	241	22	44	</																									

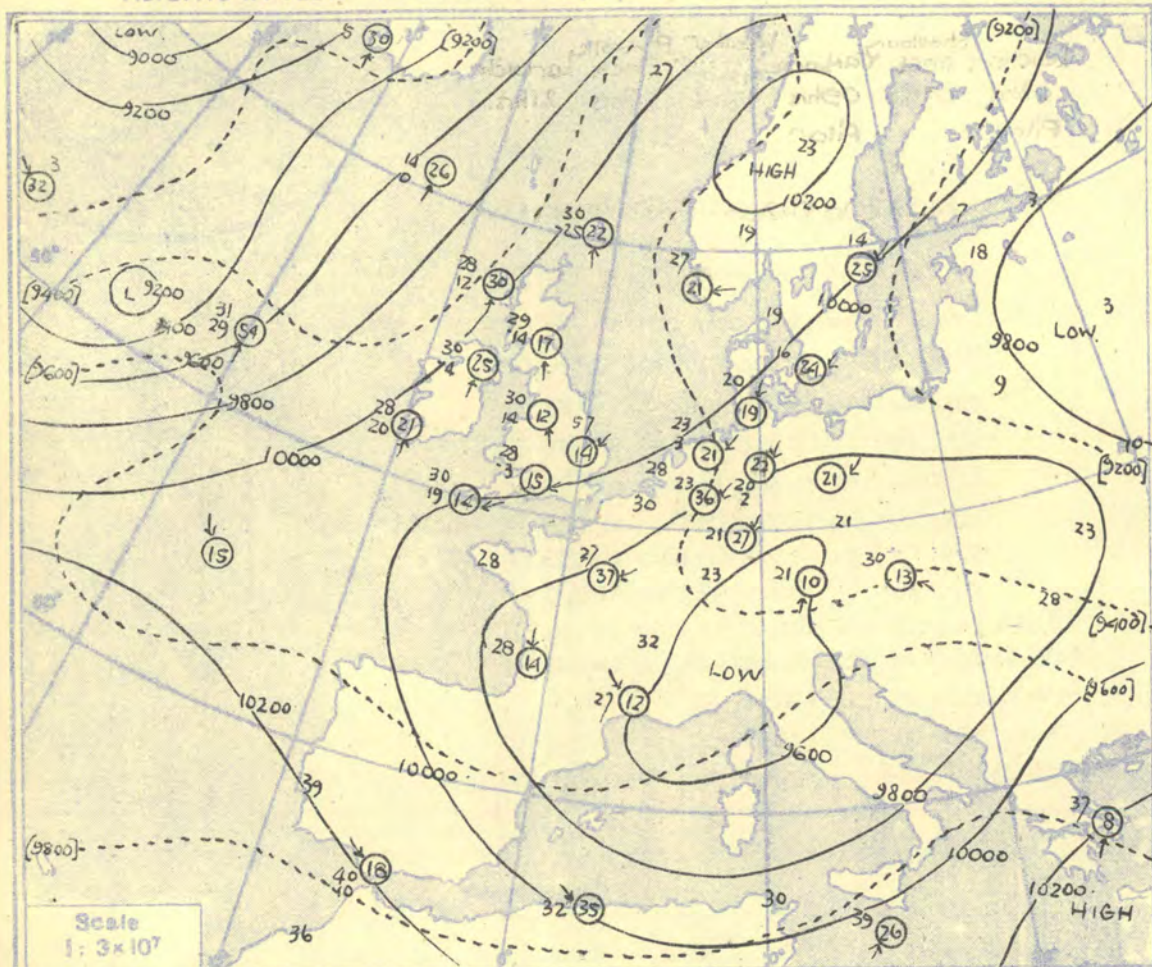
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				METEOROLOGICAL OFFICE						
Time M.S.L.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.								
Surf		1013.3		mb		1020.4		mb		1022.0		mb		1019.5		mb		1020.6		mb		1019.7		mb		1018.1		mb		1016.6		mb								
Pressure		750		mb		717		mb		760		mb		700		mb		731		mb		714		mb		662		mb		760		mb								
Height ft./100		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind								
Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.								
knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots								
Surf	02.74545	180	20	0.55	040	170	130	2.45	43	Calm	2.94	45	Calm	0.63	33	01.2	45	44	030	03	04.43	35	040	030	02.95	50	49	Calm	0.35	33	49	Surf								
1000	06.34744			05.648	39	172	120	6.14	64	L.Y.	05.348	46	174	06	05.439	39	03.3	46	43	073	24	04.836	35	04	55	48	"	4.25	27	48	1000	1000								
950	41.38178	24		46.371	53	24		43.42		"	45.42	172	09		41.40			43.37	078	22		46.32	082	21		49.46	"	4.25	27	48	950	950								
900	34.32422	178	22	34.138	31	187	27	34.43	63	"	33.740	36	165	12	33.637	30	33.6	43	080	13	33.3	47	108	16	33.2	44	41	"	32.84	30	40	900	900							
850	40.24179	16		37.138	31	187	31		37	"	35.82	164	18		40.02			43.11	090	13		44.23	086	15		40.37	"	32.84	30	40	850	850								
800	65.83621	179	17	65.643	23	187	31	65.6	36	166	14	64.9	34	21	62	4	65.0	42	09	17	65.0	42	240	91	20	64.7	36	35	089	07	64.3	34	31	800	800					
750	32.13177	19		37.16	188	28		31		168	11	37	28	163	24	35	09		36.22	091	15		36.70	096	18		31.28	117	09	32	27	750	750							
700	101.2805177	20	101.29	07	189	29	101.23		164	12	100	32	20	165	25	100	27	08	101.30	33	096	18	100	30	209	17	99	724	120	14	99	329	13	700	700					
650	23.3177	22		20.2	194	33		21		161	12	23	10	164	20	19	08		24.37	107	18		22.90	098	15		22.10	133	20	23	03	650	650							
600	141.18-11	176	24	140	14	153	36	140	15	165	12	140	14	02	170	18	140	12	40	140	16	43	107	21	140	14	12	103	13	139	14	03	142	18	139	16	00	600	600	
550	09.24170	24		07.7	183	38		06		169	22	05.7	165	21		06.17			07.50	105	27		07.24	107	19		03.00	133	18	04	2	550	550							
500	186.1-33	160	20	186.4	17	179	37	185.3		168	27	185	6	13	168	24	185	2	19		186.3	57	104	27	185	2	33	114	20	184	3	10	129	15	185	2	16	500	500	
450	-11-21	153	19	-14	26	177	39	-13		157	23	-16	23	160	29	-13	30		-14.32	101	20		-12.42	119	18		-11	-20	154	18	-11	-20	154	18	-12	24	450	450		
400	240.24	41	152	18	239	26	47	169	40	238	23	238	26	38	162	20	238	25	41		239	25	38	090	13	238	23	48	118	15	238	23	32	151	22	238	24	33	400	400
350	-36-32	147	17	-40	60	164	43	-45		149	15	-40	49	164	22	-37	54		-40.60	119	08		-37	60	133	11		-38	47	151	21	-37	45	350	350					
300	303.49	145	12	303.52		167	41			303.3	302.55	161	29	303.31		66			303.53	113	08	303.52	152	16	302.54	145	30	302.51		62		250	300	300	300					
250	-63	117	26	-66		158	41			303.7	302.78	155	26	303.79		66			-68	067	03	-68	144	16	-65	141	24	-62		250	250	250	250							
200	390.78	119	20	388.80		167	33			387.7	387.78	160	25	387.79		71			387.80	076	12	388.79	124	16	387.72	145	06	388.71		70		200	200	200	200					
170	-82	153	05	-74		186	22			-74	188	12		-71					-76			-75		-70	298	05	-70		170	170	170	170								
150	-78	217	08	-74		197	21			-74	200	09		-73					-76			-75		-70		-71	280	06	-72		150	150	150	150						
130	-74	202	08	-73						-73	216	13		-72					-74			-73		-70		-71	252	09	-70		130	130	130	130						
110	-72	216	10							-73	217	12		-73					-73			-73		-70		-71	203	07	-73		110	110	110	110						
100	532	72	218	11						529	73	227	10	530	73				-73			-73		-70		-71	207	08	-73		100	100	100	100						
90	-72	219	09							-73	220	10		-74					-73			-73		-70		-71	207	08	-73		90	90	90	90						
80	-72	219	09							-73	217	06		-73					-73			-73		-70		-71	213	08	-73		80	80	80	80						
70	-71	211	08							-73	237	04		-73					-73			-73		-70		-71	213	08	-73		70	70	70	70						
60	-71	247	09							-73				-73					-73			-73		-70		-71	213	08	-73		60	60	60	60						
Inversion		885 mb 33-856 mb 40		278 mb 45-762 mb		1021 mb 45-986 mb 46		1011 mb 47-1000 mb 48		Inversion		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		1015 mb 33-987 mb 45		Inversion						
Isothermal		670-600 mb 18		857 mb 34-833 mb 46		875 mb 33-835 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		855 mb 35-784 mb 39		Isothermal						
Tropopause		1174 mb -84°		200 mb -50°		NR.		1200 mb -78°		1185 mb -51°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		1212 mb -75°		Tropopause						
STATION		LERWICK		STORNOWAY		LEUCHARS		ALDERGROVE		LIVERPOOL		DOWNHAM MARKET		LARKHILL		CAMBORNE		STATION		LERWICK																				
Time M.S.L.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		03hrs		G.M.T.		Time M.S.L.						
Surf		1013.3		mb		1020.4		mb		1022.0		mb		1019.5		mb		1020.6		mb		1019.7		mb		1018.1		mb		1016.6		mb		Surf						
Pressure		750		mb		717		mb		760		mb		700		mb		731		mb		714		mb		662		mb		760		mb		Pressure						
Height ft./100		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Temp.		Wind		Height ft./100						
Dir.		Vel.		Dir																																				

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

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

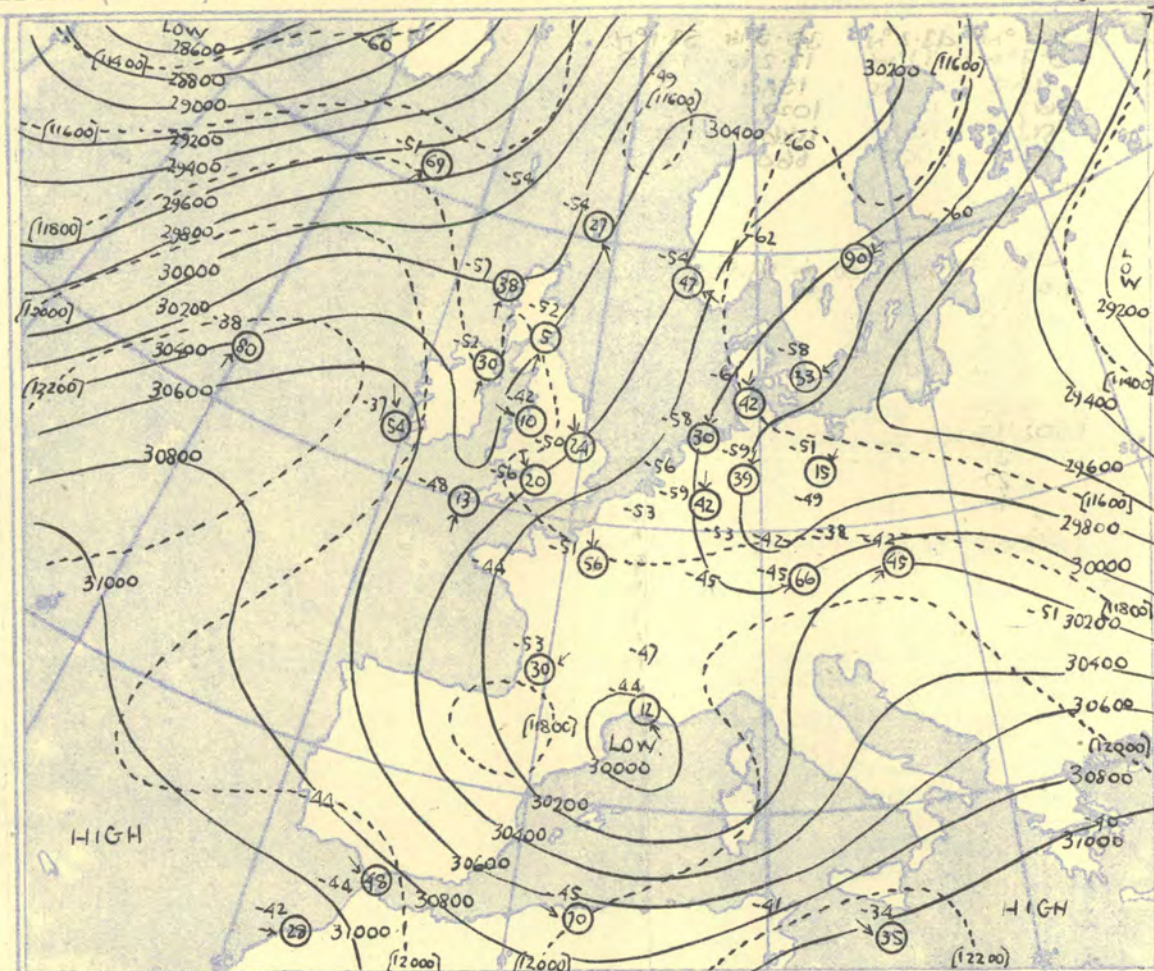
Ship	WEATHER WATCHER.				WEATHER WATCHER.				WEATHER WATCHER.				WEATHER WATCHER.				WEATHER OBSERVER.				WEATHER OBSERVER.				WEATHER OBSERVER.				WEATHER OBSERVER.				Ship									
Lat/Long	G1.0N 14.0W.				G1.0N 14.0W.				G1.0N 14.0W.				G1.0N 14.0W.				52.4N 19.9W.				52.5N 20.3W.				52.2N 20.6W.				52.5N 20.0W.				Lat/Long									
Time M.S.L. Surf Pressure	03L G.M.T. 1008 mb 1008 mb 835 mb				09L G.M.T. 1010 mb 1010 mb 880 mb				15L G.M.T. 1013 mb 1013 mb 860 mb				21L G.M.T. 1012 mb 1012 mb 870 mb				03L G.M.T. 1018 mb 1018 mb 860 mb				09L G.M.T. 1016 mb 1016 mb 860 mb				15L G.M.T. 1006 mb 1006 mb 730 mb				21L G.M.T. 989 mb 989 mb 750 mb				Time M.S.L. Surf Pressure									
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb									
Surf		49	46	190	10	49	45	220	10	50	44	140	20	48	44	140	20	50	41	285	15	50	40	185	12	51	47	170	41	54	52	170	58	Surf								
1000	2.1	48	45	210	10	47	43	221	10	3.4	48	42	151	24	47	42	151	24	4.8	49	40	270	15	4.3	48	39	190	09	50	46			1000									
950		44	39	210	11	41	37	218	12		42	37	154	20	41	35	154	20	43	37	273	16	41	32	190	11	43	43	161	49	-31	49	49	171	71	950						
900	30.5	39	35	222	19	31.1	35	28	213	16	31.7	36	31	24	35	29	157	24	33.2	37	32	271	18	32.5	35	25	191	13	39	39	162	54	25.5	44	44	175	89	900				
850		34	30	225	20		30	19	207	18		31	26	31	24	160	30		31	24	271	18		31	14	194	18	37	37	168	57		41	41	185	84	850					
800	61.6	28	23	228	21	62.0	25	09	206	19	62.6	25	17	For	62.4	27	14	157	29	64.1	25	13	259	23	63.4	26	16	206	21	61.2	37	36	179	49	57.1	37	37	200	80	800		
750		24	20	205	24		19	02	208	22		20	10		23	02	157	28		23	05	247	27		22	04	221	25		33	31	186	57		32	31	210	67	750			
700	96.0	20	16	194	31	96.1	12	19	212	23	96.8	14	00	Winds	96.7	19	07	157	30	98.4	20	03	252	27	97.7	21	11	233	28	96.4	31	29	208	54	92.2	28	27	214	71	700		
650		14	10	181	50		05	18	210	30		09	09		14	17	160	30		16	10	267	31		21	06	242	27		28	26	209	47		25	23	215	68	650			
600	135	07	02	176	54	135	01	23	203	37	135	05	17	Sec	136	12	35	163	34	138	13	16	278	36	137	14	03	249	31	137	23	21	212	50	132	18	16	211	64	600		
550		00	05	179	57		-08	36	195	50		01	26	top		05	19	171	39		11	18	283	41		06	03	250	45		17	13	203	45		07	05	196	64	550		
500	180	-07	-16	182	63	178	-17	-44	183	73	180	-07	-29		181	00	-12	177	41	183	01	-23	289	49	182	-03	-12	286	43	183	10	05	222	49	178	00	-04	196	72	500		
450		-18	-26	178	66		-26	-39	174	87		-16	-29		-10	-18	191	46		-11	-30	285	47		-13	-22	248	30		62	-03	221	36		-07		195	72	450			
400	232	-26	-34	184	78	230	-35	-45	175	95	233	-27	-41		235	-21	-28	205	48	236	-24	-39	287	63	236	-24	-33	238	40	238	-07	-14	220	42	231	-16		198	71	400		
350		-39	-48	187	82		-45		185	92		-36	-50	page.		-32	-39	208	46		-29	-41	290	89		-34	-44	245	66		-18	-25	222	61	(390 mb)				350			
300	297	-51		181	86	293	-56		182	93	297	-51			300	-45		195	39	302	-43		290	119	301	-48		252	90	306	-35	-43	226	80					300			
250		-68		168	96		-67		173	102		-62			-59			213	45		-59		295	121		-63		266	108		-56		210	79					250			
200	382	-68		178	87	379	-67		172	64	(259 mb)				386	-74		228	54	389	-72		311	68	386	-73		281	76	393	-76		224	76					200			
170							-65		173	62					-77			231	63		-72		312	65		-80		297	63		-64		237	40					170			
150							-64		177	57					-75			238	72		-69		308	31		-81					-70		242	44					150			
130							-66		188	42					-68			242	60		-69			312	30	(162 mb)					-71								130			
110							-67		214	44					-71			230	46		-70			297	20														110			
90							-65		221	42					-71			227	41	532	-69		293	18															90			
80							-66		227	30					-71			228	39		-70			292	21															80		
70							-67		228	27					-71			232	35		-72			290	18															70		
60							-62		220	28					-71						-73			290	26																60	
							-63		212	22																																
							-64				(56 mb)																															



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.

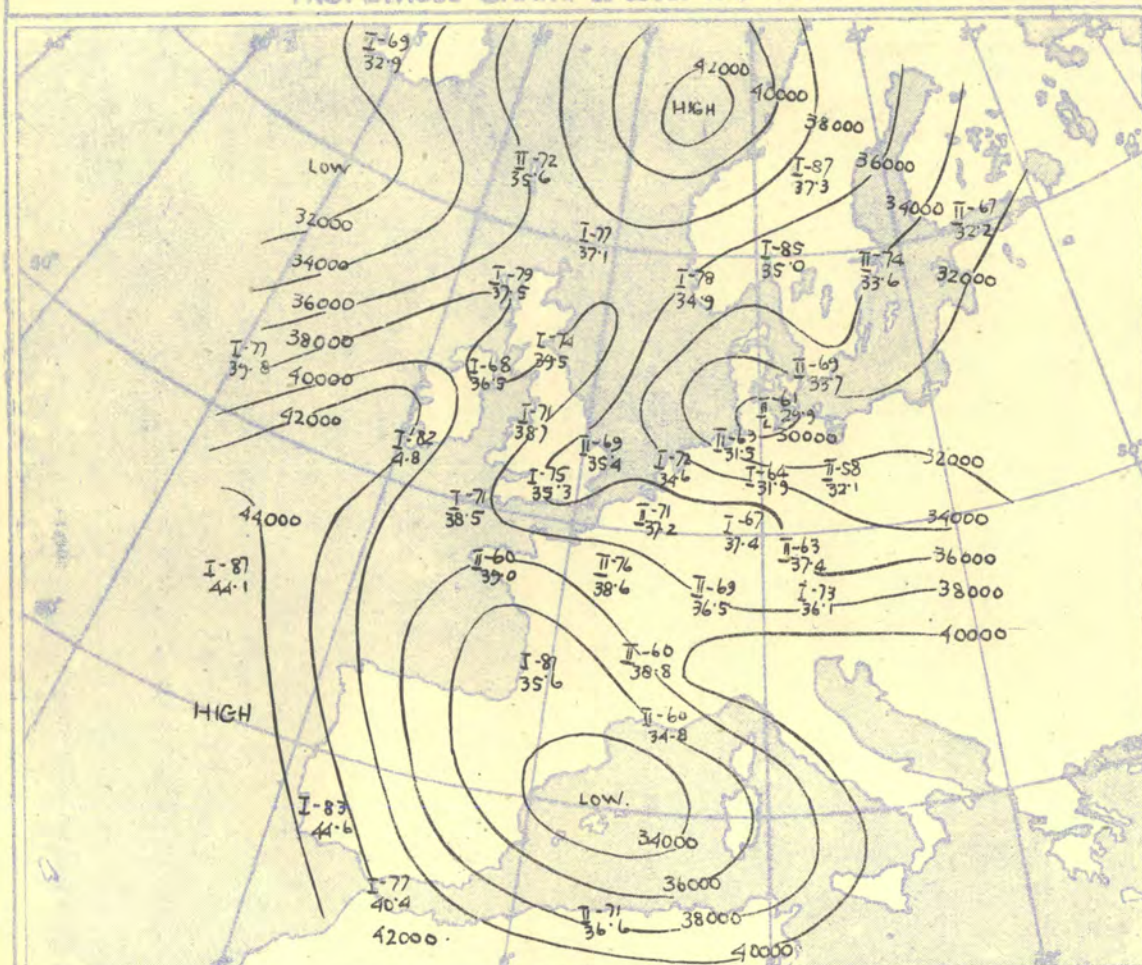
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 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.



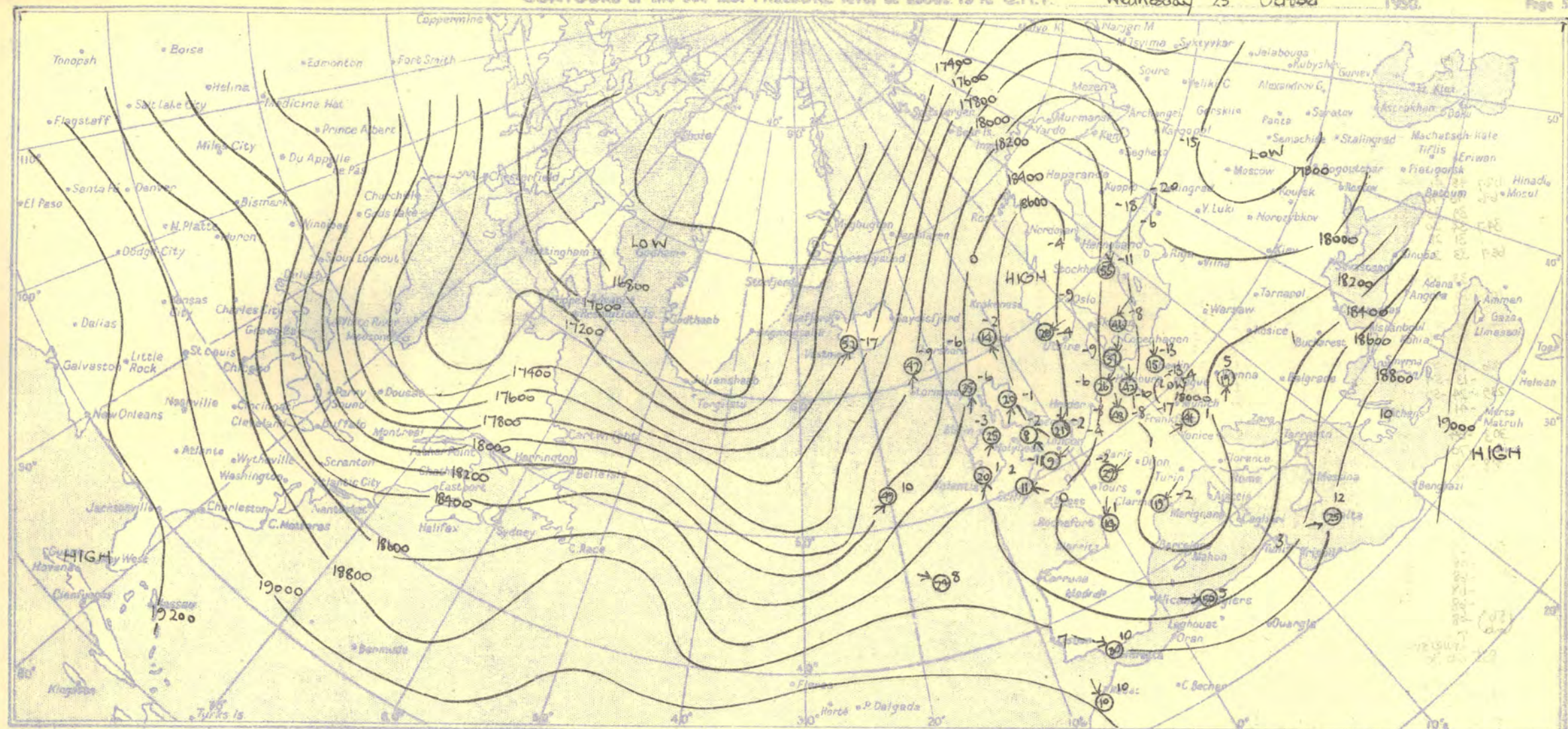
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The intrusion of a tongue of cold air along the Baltic and N. Germany.
is probably associated with the development eastwards of the surface
anticyclone over Scandinavia. The short wave length pattern in mid-Atlantic
is associated with a fast moving low.

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



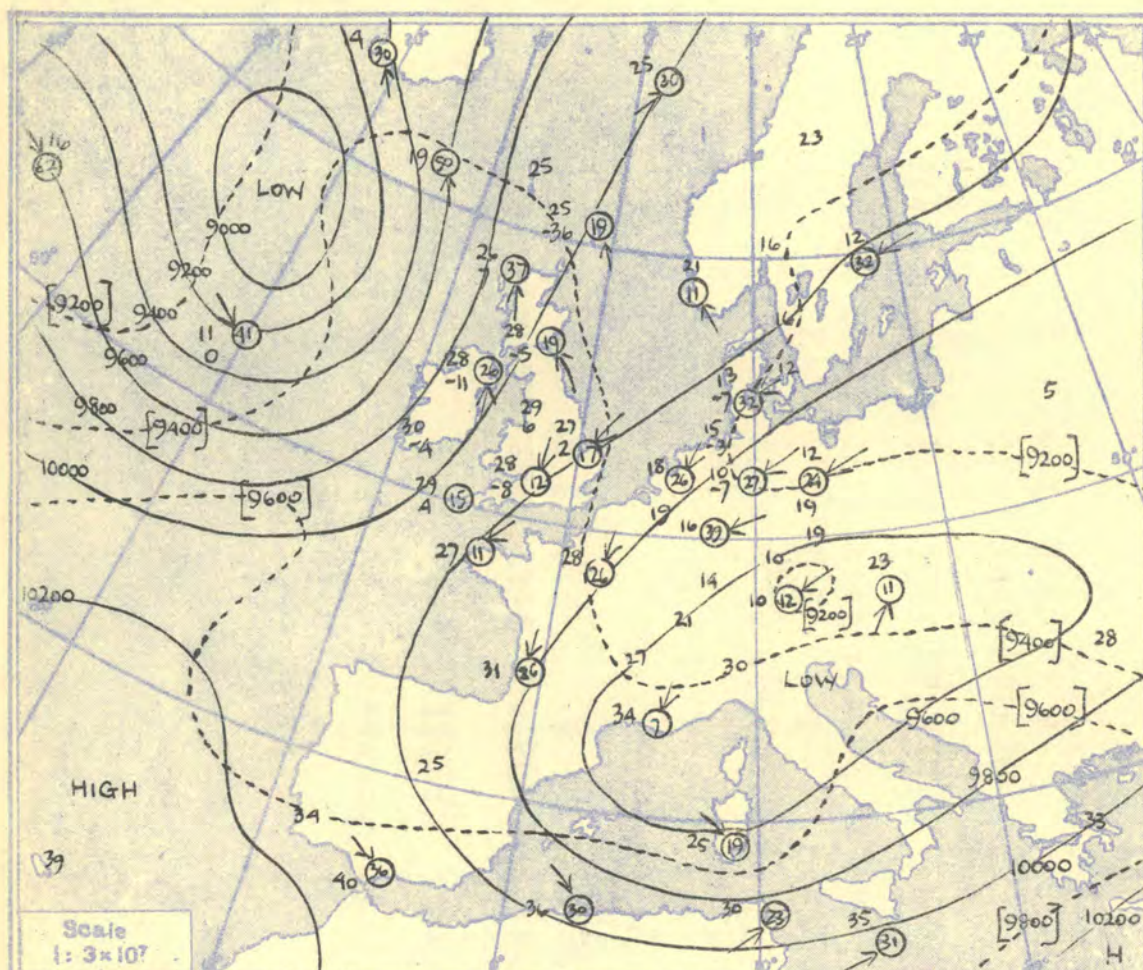
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA.				STATION	
Time M.S.L.	Surf	15h		G.M.T.		15h		G.M.T.		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				
		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			
Pressure		712		848		727		720		716		730		760		720		795		720		795		720		795		720		795		720		795					
Temp.		48		41		190		19		00.5		51		42		170		15		00.2		49		43		150		05		02.3		51		45		130			
Dew		46		40		181		29		5.7		49		40		188		20		6.5		47		41		166		16		5.8		50		43		144			
Wind		39		33		182		25				42		33		183		20				41		36		165		14		45		39		145					
Dir.		34.7		34		30		183		23		34.0		37		31		179		19		34.7		34		30		163		12		34.3		40					
Vel.		26		25		183		26				33		28		183		17				29		25		164		16		35		30		147					
knots		65.7		33		23		179		17		65.1		28		23		195		20		65.7		36		24		174		12		65.5		34		28			
Temp.		33		05		174		18				33		24		188		28				32		10		174		15				34		12		184			
Dew		30		25		174		22		100		28		12		186		36		101		29		14		168		17		101		30		04		186			
Wind		22		31		175		22				20		06		191		29				22		03		189		19		24		28		128					
Dir.		14		37		183		19		139		11		01		195		28		140		15		32		193		17		140		14		03		188			
Vel.		09		45		187		17				04		11		193		29				06		09		190		24				07		50		141			
knots		186		02		57		170		14		184		06		23		196		35		186		01		45		197		20		186		03		19		195	
Temp.		13		54		178		13				17		37		201		39				12		53		188		17		13		57		198		25			
Dew		23		57		165		17		257		30		52		208		38				239		12		57		12		239		19		59		296			
Wind		41				134		27				44				205		38				06		38		68		204		29		33		60		289			
Dir.		303		54		139		27		301		57		187		37		304		52		205		05		304		52		205		30		304		49			
Vel.		70				151		11				69		202		35		67		232		06		62		261		19		62		298		08		65			
knots		388		76		173		13		385		77		213		30		389		75		268		09		390		68		260		23		390		70			
Temp.		72				243		16		77		222		24		73		287		13		70		283		15		70		288		09		69		338			
Dew		70				224		12		73		232		18		70		272		10		70		288		09		70		288		09		69		327			
Wind		67				224		12		73		233		16		70		269		11		70		283		15		70		288		09		69		307			
Dir.		531		67		218		11		527		72		233		20		532		72				536		67		304		09		534		66		304			
Vel.		68				215		12		72		227		21		72		21		72				66		66		312		08		65		312		08			
knots		68				232		13		71		250		15		70		250		13		70		250		13		70		250		13		70		250			
Temp.		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
Dew		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
Wind		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
Dir.		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
Vel.		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
knots		68				246		14		70		232		13		70		232		13		70		232		13		70		232		13		70		232			
Pressure		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Temp.		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Dew		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Wind		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Dir.		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Vel.		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
knots		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Pressure		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°					
Temp.		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°		Isothermal 820 - 726 mb 33°		855 mb 30° - 820 mb 33°																													

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA			
Time		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.	
M.S.L.		1024.5		mb		1019.1		mb		1023.2		mb		1018.8		mb		1021.7		G.M.T.		1022.6		mb		1020.4		G.M.T.		1018.8		G.M.T.		1018.8		G.M.T.	
Surf		1014.7		mb		1017.2		mb		1024.4		mb		1010.2		mb		1019.7		mb		1018.2		mb		1003.7		mb		1008.1		mb		mb		mb	
Freezing		761		mb		865		mb		740		mb		850, 826 and 750		mb		729		mb		759		mb		775		mb		728		mb		mb		mb	
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.	
mb		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.		ft/100		°F.	
Surf		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.	
1000		47 41		170		00.5 49 43		170		00.2 49 46		140		06 02.3 48 41		150		10 0.60 34 31		01.2 41 39		040		02 04.4 37 36		02.9 46 43		030		02 00.3 52 47		138		17		Surf	
950		06.6 45 39		162		05.3 47 38		165		06.2 46 43		142		05.1 47 39		142		05.7 42 38		06.1 42 38		056		05.3 38 36		05.1 47 44		142		15 3.3 51 47		148		21		1000	
900		34.7 33 26		163		26 33.4 36 30		162		19 34.4 35 33		146		19 33.4 38 33		164		27 33.9 38 36		34.3 35 31		084		21 42 27		45 43 143		15 47 43		170		29		950			
850		27 23		168		24 30 25		165		18 22 27		149		19 32 25		170		24 37 18		29 26		054		13 57 13		33.3 44 30		143		12 51.9 42 38		43 35		900			
800		65.4 37 03		170		24 34.4 32 26		174		31 65.2 31 17		148		18 64.5 38 21		168		22 65.1 37 10		65.2 35 21		050		13 64.8 34 07		64.9 40 12		155		06 63.5 38 24		850		800			
750		31 31		167		20 99.3 26 13		177		39 33 04		153		18 32 07		170		24 34 04		31 11		049		15 36 00		35 08		172		02 34 13		750					
700		10.0 25 36		163		19 99.3 26 13		177		39 33 04		153		18 32 07		170		24 34 04		10.0 27 02		044		17 99.7 28 08		10.0 29 04		Land V		98.6 30 04		700					
650		17 22		174		20 139 12 02		177		31 140 15 39		198		16 139 14 09		180		27 140 13 16		140 11 04		035		21 139 12 19		140 23 03		138		18 04		650					
600		10 22		181		19 03 11		179		31 05 54		195		15 06 17		184		23 05 25		02 12		044		19 03 29		08 16 12		11 05		600							
550		03 29		171		17 03 11		179		31 05 54		195		15 06 17		184		23 05 25		02 12		044		19 03 29		08 16 12		11 05		550							
500		184 08 40		178		16 14 07 21		180		29 185 05 50		171		14 184 02 26		189		19 185 06 31		184 08 23		036		24 184 08 38		185 00 27		269		04 184 05 07		500					
450		20 50		174		13 16 32		182		24 17 57		158		03 23 39		188		18 17 38		20 36		021		27 18 46		11 31		261		12 01 11		450					
400		237 32 59		174		14 237 21 39		241		05 238 17 51		312		21 238 28 43		43		237 32 08		10 34		237 30 54		239 23 43		309		16 239 13 21		400							
350		45 179		13		35 53		290		10 42		270		01 28 56		318		17 43		44		251		42		239 23 43		309		16 239 13 21		350					
300		300 57		064		03 302 50		211		19 302 53		332		10 304 42		320		27 302 54		300 56		355		49 300 57		304 42		342		61 305 44		300					
250		71 220		03		76 317		28		65 349		27		61 314																							

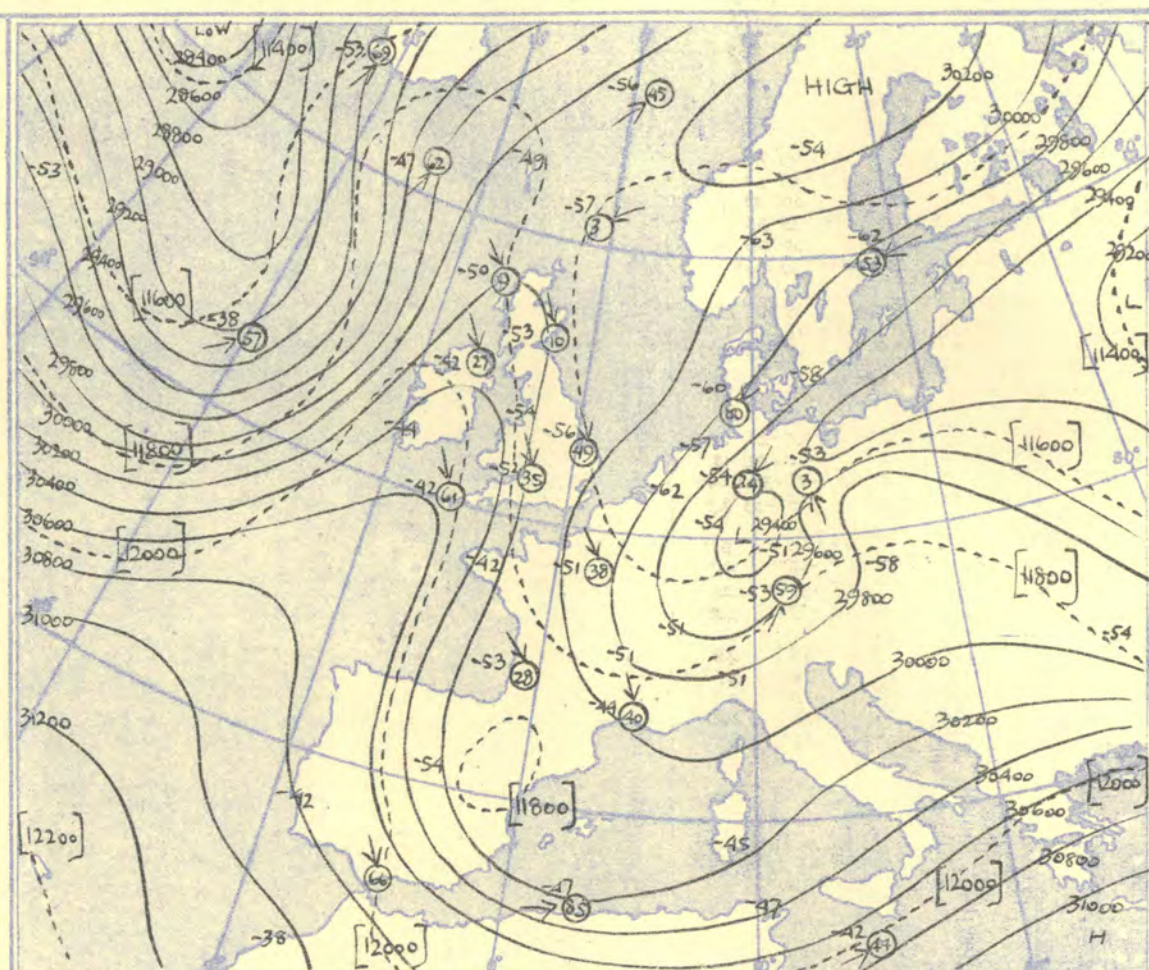
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. 500 mb and 300 mb., levels at about 02 h. GMT.



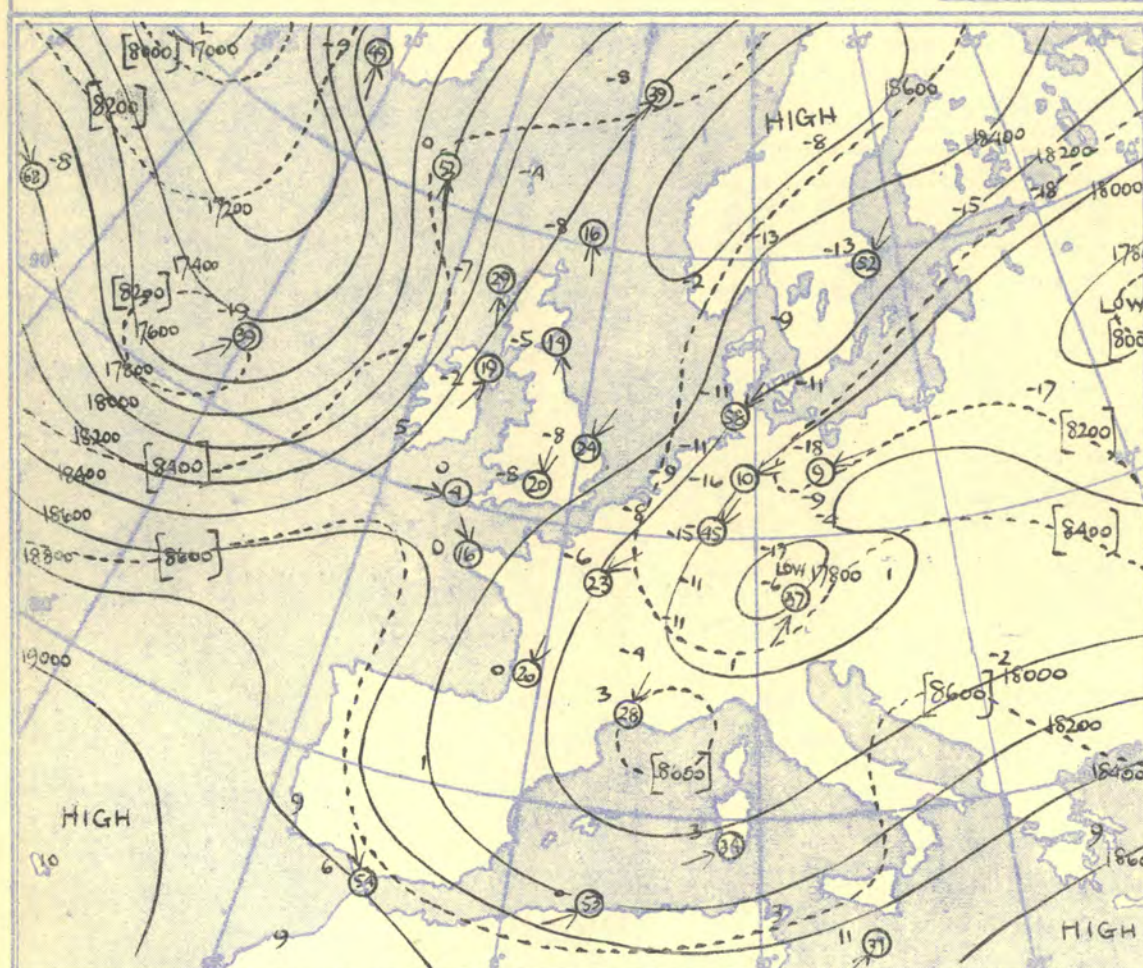
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb

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

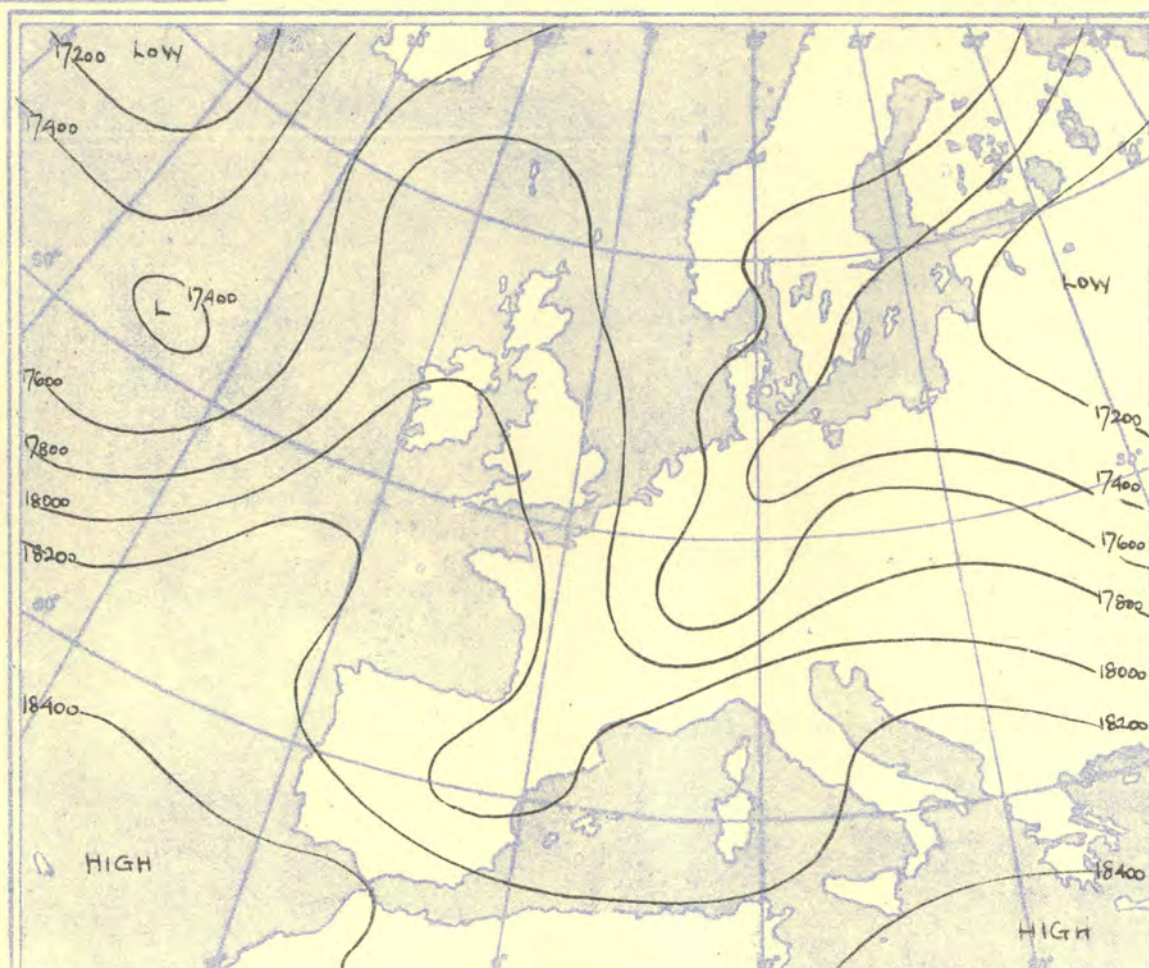
100 60 40 20 10 5 knots



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.



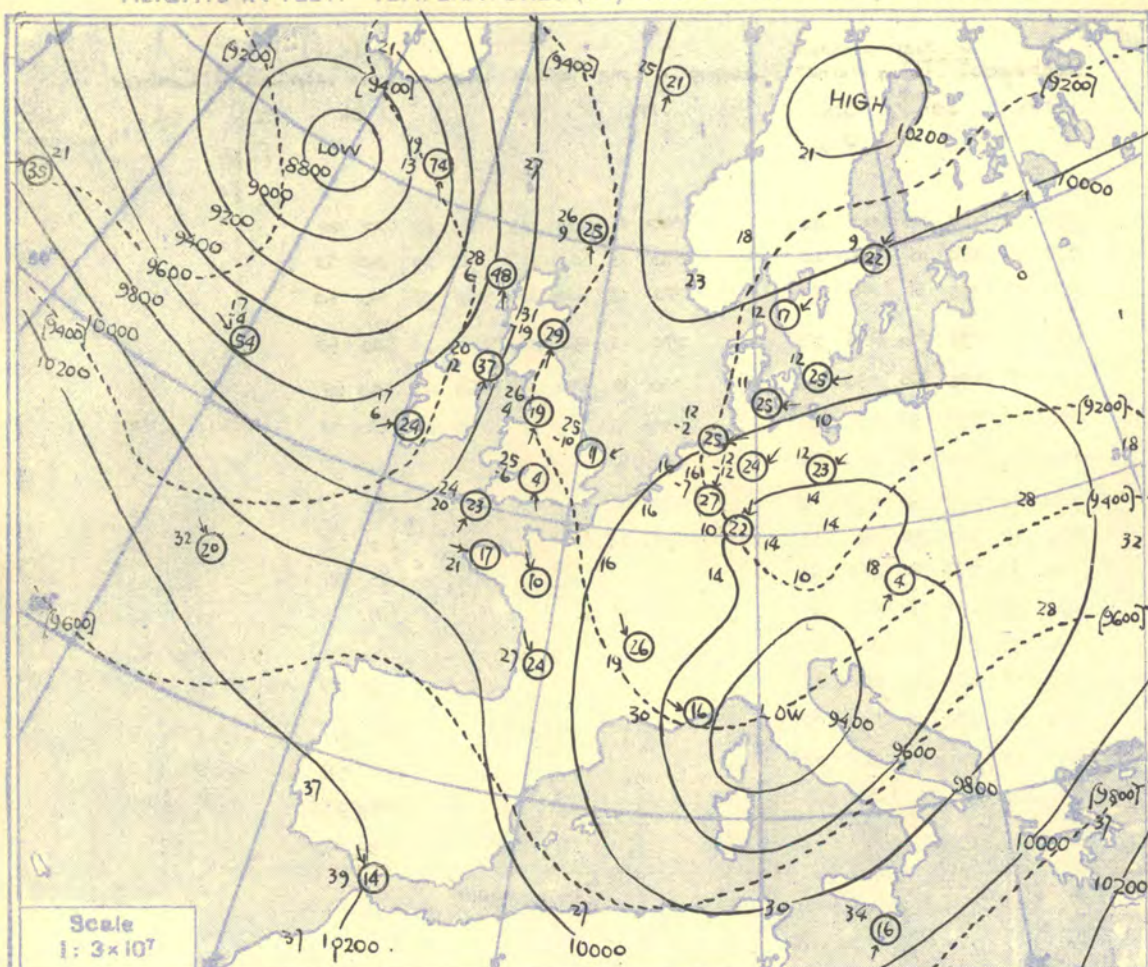
Isopleths of Thickness 500-1000mb.

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

NEPHOSCOPE OBSERVATIONS

NONE REPORTED

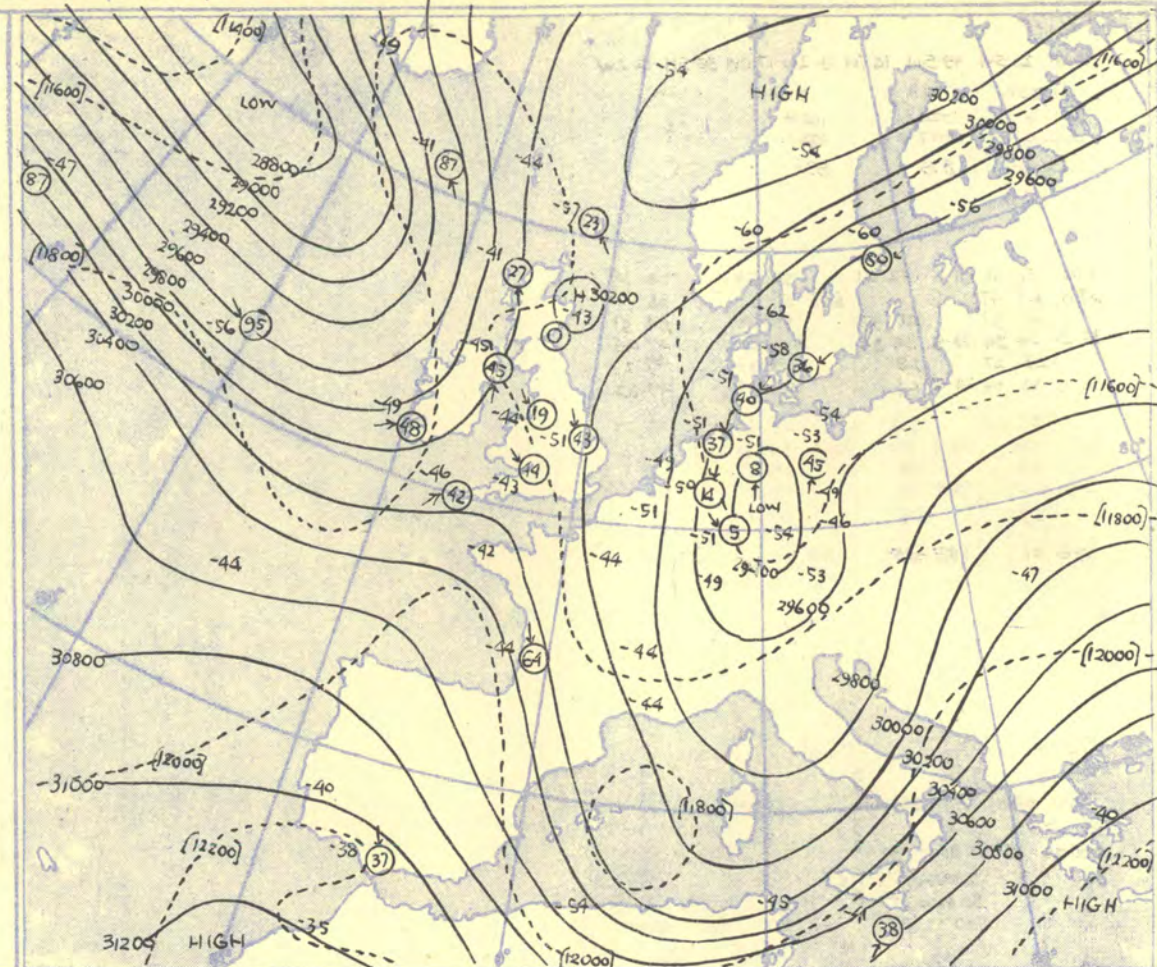
Ship	WEATHER WATCHER.					WEATHER WATCHER.					WEATHER WATCHER.					WEATHER WATCHER.					WEATHER OBSERVER.					WEATHER OBSERVER.					WEATHER OBSERVER.					WEATHER OBSERVER.					Ship					
Lat/Long	61°N 14°W.					61°N 14°W.					61°N 14°W.					60°N 14°W.					52°N 20°W.					52°N 20°W.					52°N 19°W.					52°N 19°W.					Lat/Long					
Time M.S.L. Surf Freezing	03L	G.M.T.				09L	G.M.T.				15L	G.M.T.				21L	G.M.T.				03L	G.M.T.				09L	G.M.T.				15L	G.M.T.				21L	G.M.T.				G.M.T.	Time				
	1005	mb				997	mb				989	mb				992	mb				999	mb				1007	mb				1012	mb				1017	mb				mb	M.S.L.				
	1005	mb				997	mb				989	mb				992	mb				999	mb				1007	mb				1012	mb				1017	mb				mb	Surf				
	820	mb				805	mb				820	mb				870	mb				890	mb				890	mb				890	mb				905	mb				mb	Freezing				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots		Pressure mb					
1000	1'4	51	48	140	23	-8	51	46	140	35	-29	51	44			-22	49	40	158	39	-2	50	39	280	43	1'9	46	37		3'2	47	43	290	32	4'5	48	39	290	30				Surf			
950		46	43	143	40		47	43	134	52		46	40				43	36	159	47		42	33	267	50		41	36			3'8	45	38	284	36	4'5	46	35	285	32				1000		
900	29'9	41	39	148	47	-7'7	42	38	140	56	25'6	39	34			26'1	36	30	159	53	28'1	33	25	181	52	30'1	34	28		31'3	33	19	285	51	32'6	31	27	285	42				950			
850		36	35	155	48		37	33	145	58		35	30				29	25	159	56		26	19	273	52		27	16	283	49		31'3	27	16	283	49	32'6	25	18	286	45				900	
800	61'1	30	29	164	54	59'0	31	27	147	61	56'8	30	25			56'8	26	16	161	59	58'6	21	13	277	54	60'6	21	15		62'0	21	11	279	45	63'0	20	14	283	45				850			
750		23	15	170	53		25	20	148	62		23	17	For			21	04	162	65		16	06	275	48		1																			
700	35'5	19	04	171	50	33'5	23	17	147	57	31'2	19	13	Winds		91'1	15	09	158	68	92'5	11	00	273	41	94'5	15	00		95'9	17	04	277	54	97'3	18	08	287	60				750			
650		16	02	168	50		20	17	146	51		13	06				09	10	156	66		04	05	266	44		17	10			16	16	283	67	13	21	290	58				700				
600	135	11	04	165	50	133	16	11	146	60	130	11	03			130	02	24	157	66	131	02	14	264	48	134	12	17		135	10	15	288	73	136	09	26	290	69				650			
550		05	05	160	55		08	02	145	66		02	07	See			05	48	153	78		10	24	258	39		06	19			03	21	289	73	03	34	288	76				600				
500																																										550				
450	180	00	06	162	52	179	02	06	149	66	175	05	12	top		174	12	53	143	90	175	19	30	258	39	179	00	24		180	03	27	286	72	181	05	43	290	78				500			
400		09	16	164	50		05	14	150	57		12	21				19	39	142	97		28	44	259	33		12	35			15	37	289	81		15	46	291	78				450			
350	233	20	28	166	52	233	15	23	147	54	228	19	28	of		226	16	58	146	94	226	34	57	258	42	232	25	46		234	28	49	291	81	234	26	52	290	80				400			
		33	41	182	58		27		152	54		32	40	page.			34	57	152	93		37	60	251	45		37	57			39	59	292	89		39	59	290	84				350			
300	299	47		198	62	299	42		152	54	294	41				291	46		147	87	291	38	58	249	57		45			297	56		297	95	399	51		292	90				300			
250		65		185	60		62		162	63		61					61		145	96		45		250	45	(315mb)					59		296	80		66		293	99				250			
200	384	75		203	49	385	74		160	59	381	66				378	60		152	68	380	51		247	59					384	53		293	57	384	66		291	85				200			
170		76		216	47		68		148	59		62					61		151	57		55		245	55						58		293	49		67		293	72				170			
150		72		233	46		70		148	42		59					62		135	42		64		243	51						60											150				
130		70		213	45		66		148	30		62					64		126	32		74		241	45						(165mb)											130				
110		72		228	39		66		148	26		65					66		133	16		72		237	30																		110			
100		70		226	35	529	69		147	23	(117mb)						66		144	12	526	75		235	28																		100			
90		69		206	25		71										66		149	06		78		235	25																		90			
80		70		186	24		69										69		150	05		71		235	25																		80			
70	(72mb)	70					68										73																											70		
60							66										72				(72mb)																							60		
	Inversion. 681mb 14°-650mb 16°					Inversion. 721mb 22°-700mb 23°					Inversion. 640mb 12°-628mb 15°					(54mb) Inversion 827mb 26°-809mb 27°					Isothermal. 611-600mb -2° 362-350° -37°.										Inversion. 730mb 14°-682mb 19°					(38mb) Inversion. 800mb 20°-770mb 26°										
						Isothermal. 670-633mb 20°																																			Isothermal. 700-675mb 18°					
Tropopause	I 200mb -75° 38.400°					I 219mb -76° 37.100°					I 220mb -70° 36.100°					I 231mb -67° 34.800°					II 265mb -45° 31.700°					NR.					I 265mb -60° 32.400°					II 237mb -63° 34.000°					Tropopause					


Scale
1: 3x10⁷

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.

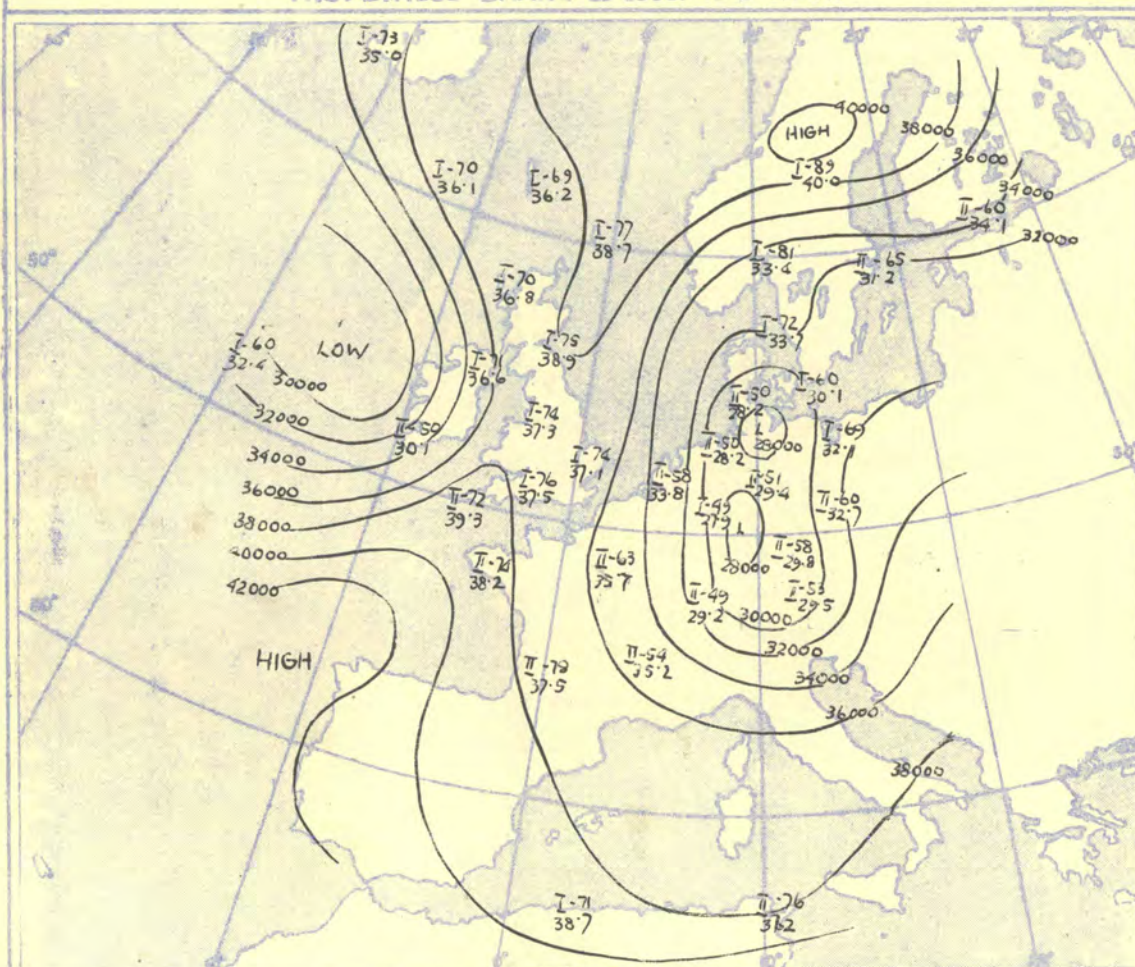
Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.

100 80 60 40 20 15 10 knots



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

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



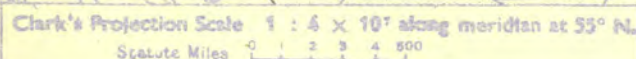
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The intrusion of cold air has continued southwestwards. Associated with the slowing of the surface low in a position South of Iceland a strong cold trough has appeared lying northwestwards from Ireland. There has been persistent non-advective cooling of the subsided air over the British Isles.

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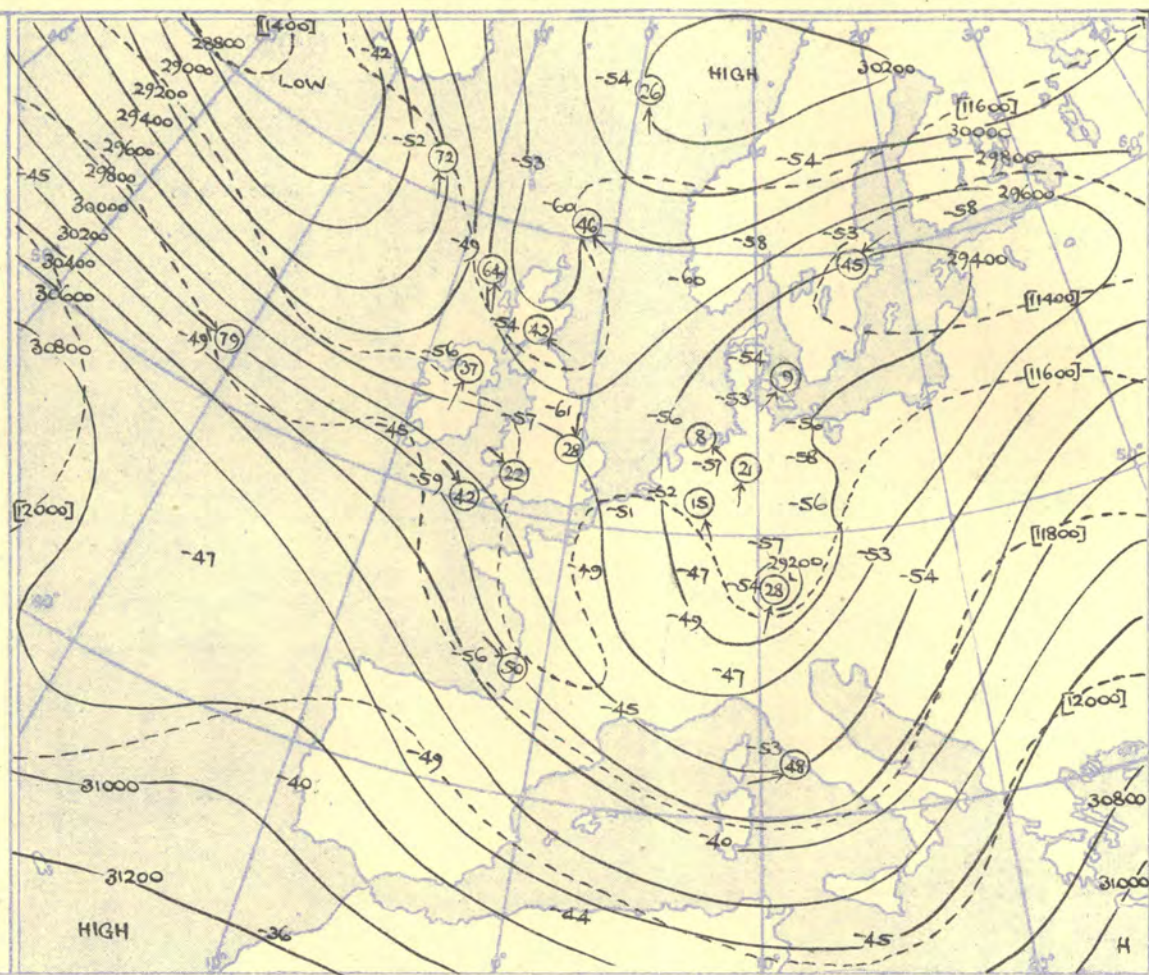
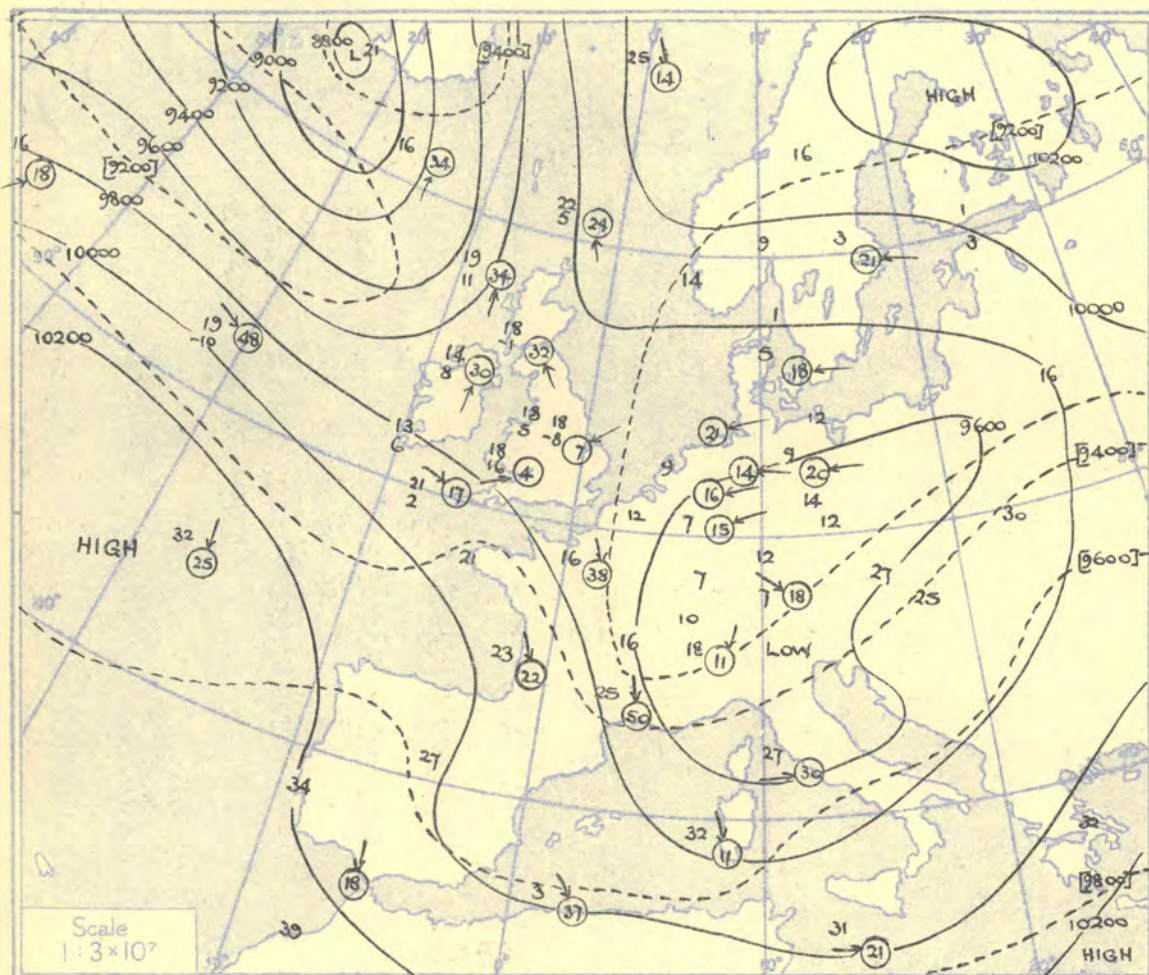
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

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4 NOV 1950
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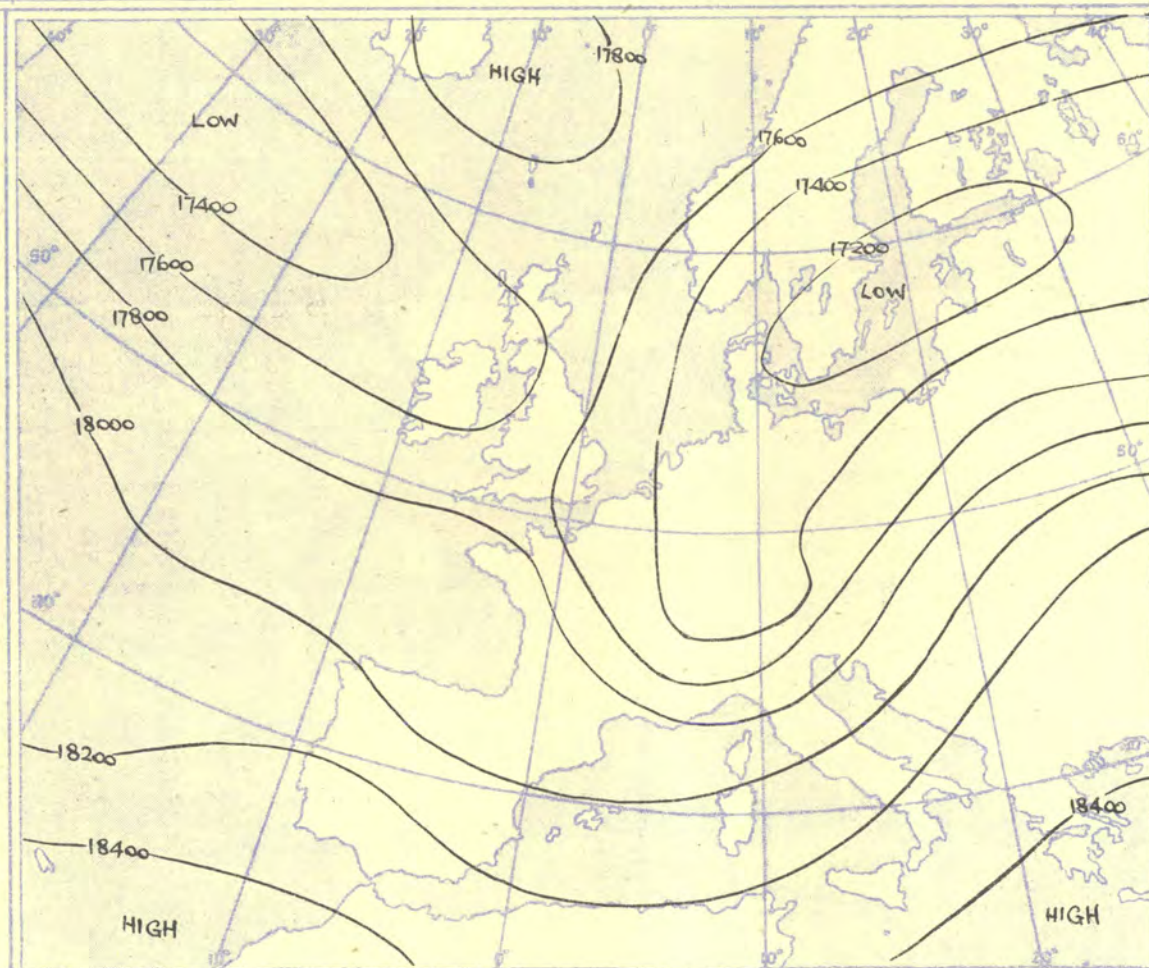
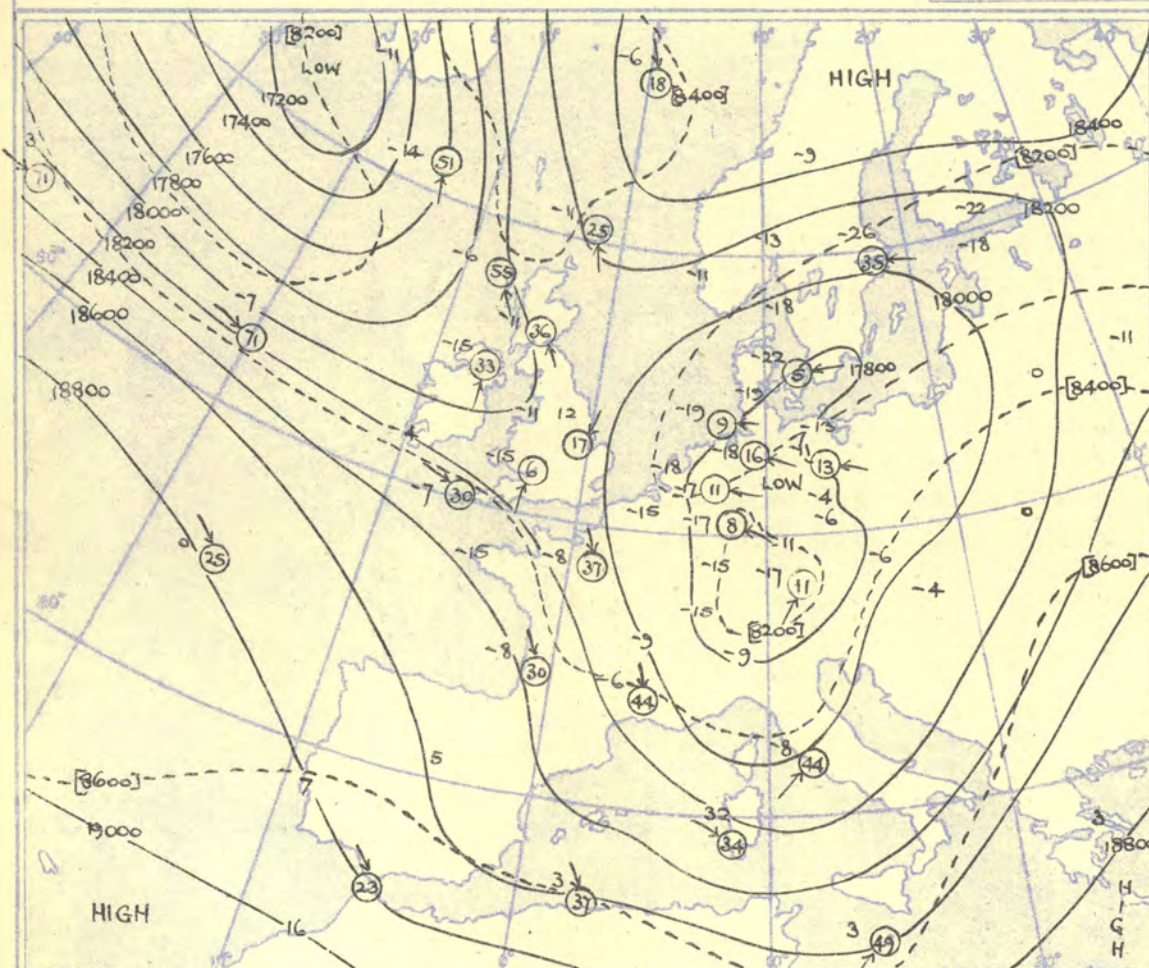
[illegible]

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



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

100 80 60 40 20 10 0-knots

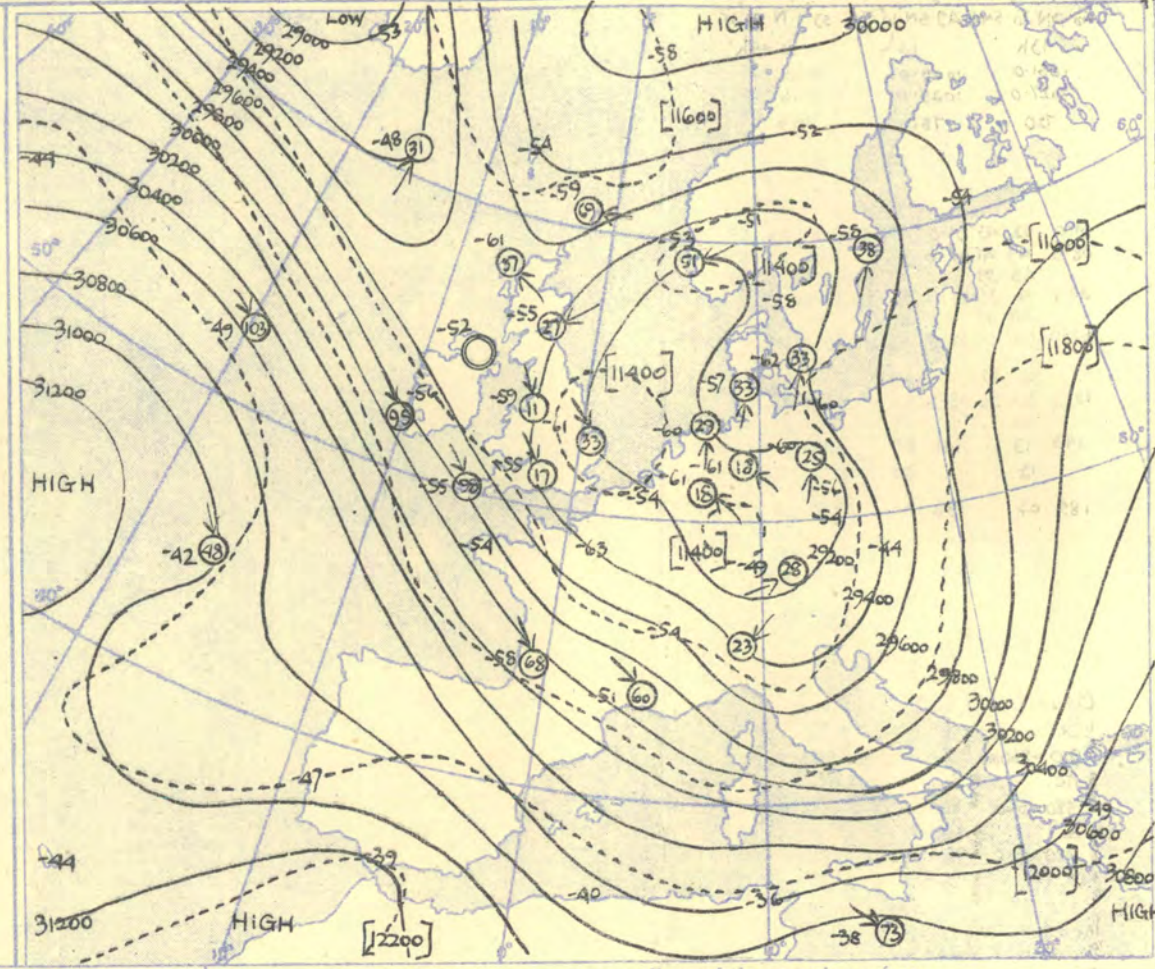
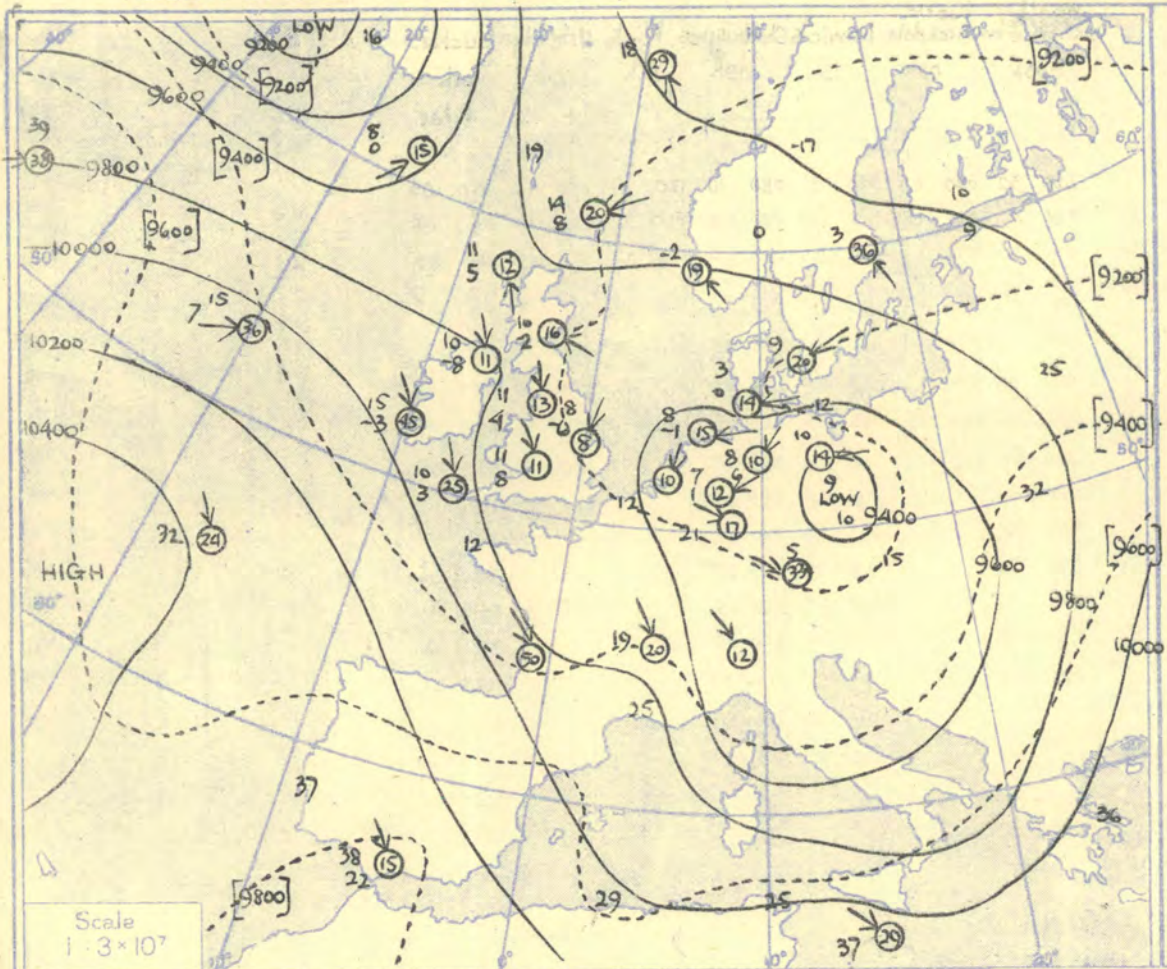


DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.

NEPHOSCOPE OBSERVATIONS

Place	Swinerby Swinderby								Place
Time Type	1h Ci 15h Cs								Time Type
Dir. Vel.	360 Jo 340 AS								Dir. Vel.

[illegible][illegible]

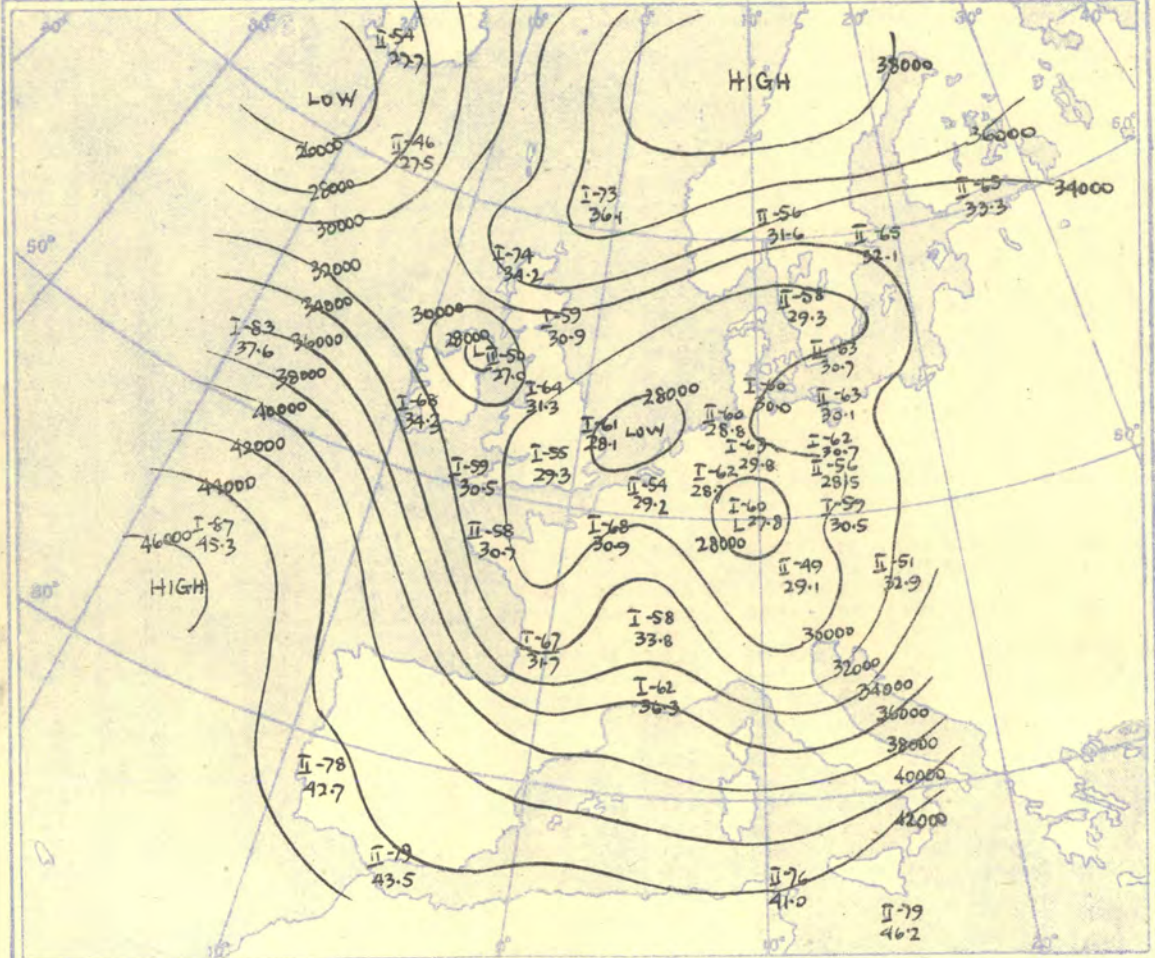


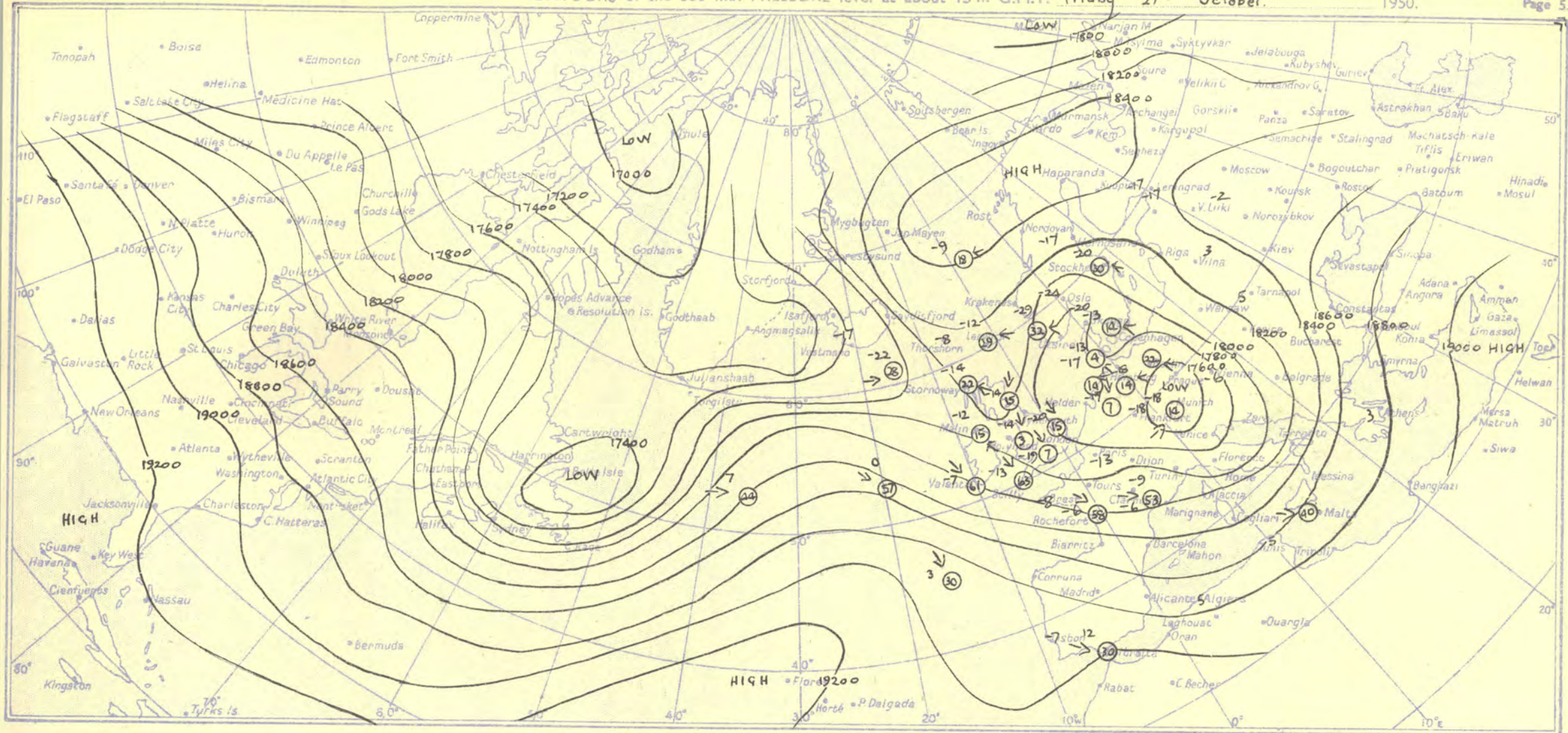
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

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

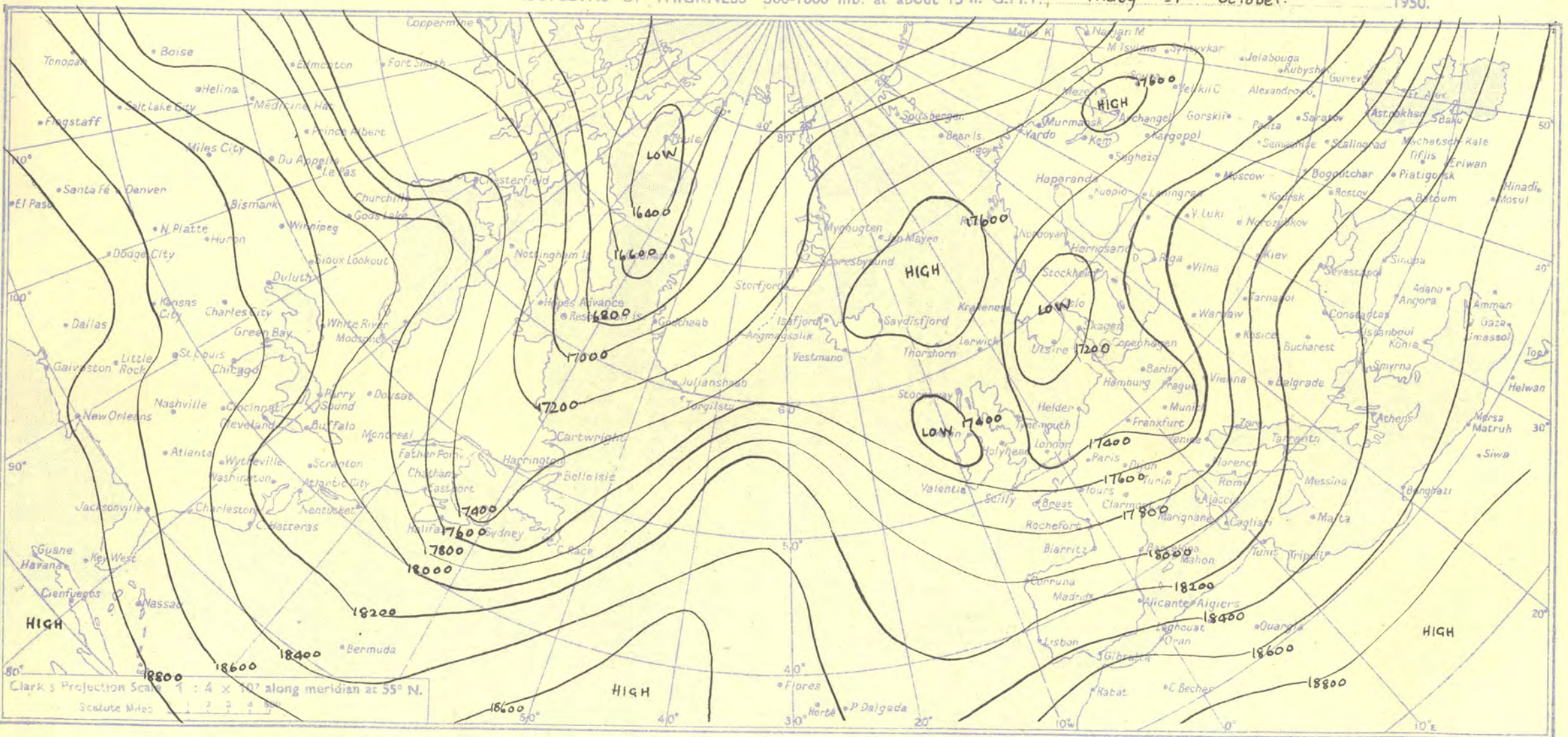
The continuous lines are contour lines of the 300mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

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





ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 27th October. 1950.



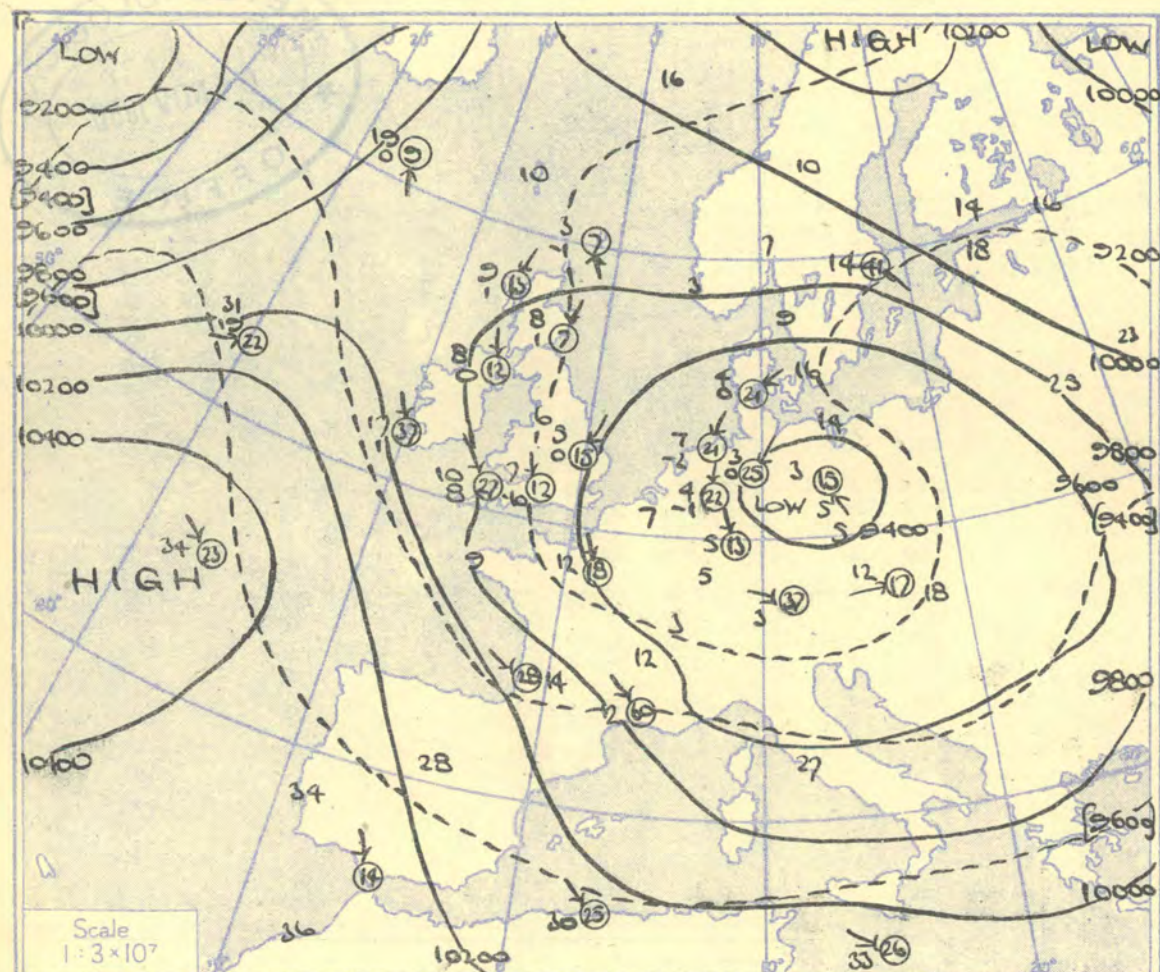
Clark's Projection Scale 1 : 4 x 10⁷ along meridian at 55° N.
Scale in Miles 1 2 3 4 5

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

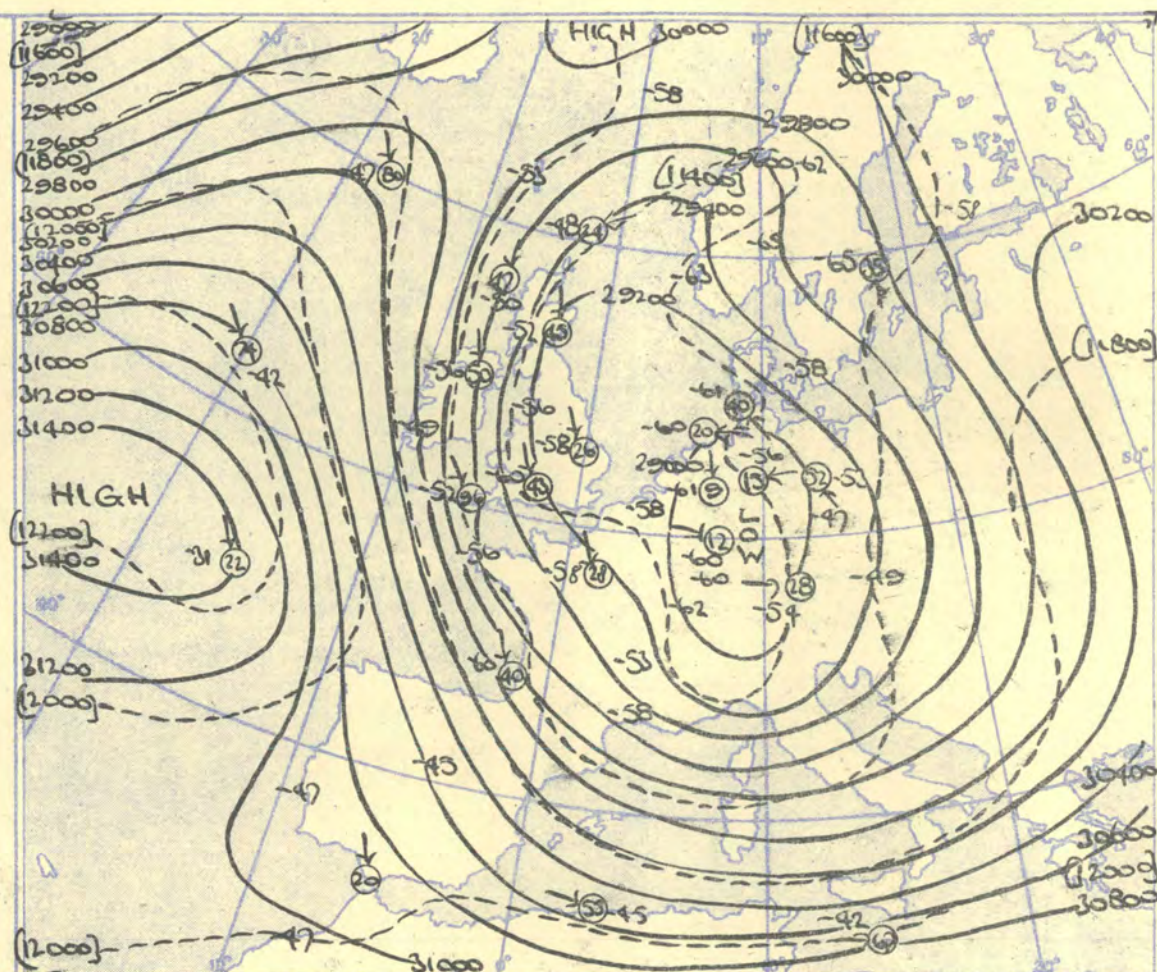
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION																																																																																																																																																																																																																																																																							
Pressure	Time M.S.L. Surf Freezing	15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		15h		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																											
		1023.5	mb	1013.3	mb	1019.0	mb	1017.1	mb	1018.9	mb	1018.0	mb	1019.0	mb	1017.3	mb	1015.3	mb	1016.6	mb	1016.8	mb	1016.8	mb	1018.5	mb	1017.9	mb	1023	mb	1021	mb																																																																																																																																																																																																																																																																												
		924	mb	888	mb	910	mb	878	mb	902	mb	932	mb	958	mb	874	mb	915	mb																																																																																																																																																																																																																																																																																										
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																												
Surf	2.7	43	41	160	16	0.5	48	40	Calm	0.2	47	35	Calm	2.3	49	39	Calm	0.6	41	36	Calm	1.2	46	29	110	05	4.4	38	36	Calm	2.9	49	48	340	06	0.3	51	42	310	08	Surf																																																																																																																																																																																																																																																																				
1000	6.3	42	39			5.2	46	39	171	03	5.0	45	34	108	04	5.1	48	39			4.7	40	34	180	07	4.4	44	28			5.0	50	46	321	21	6.2	47	39	322	13	1000																																																																																																																																																																																																																																																																				
950		35	34	142	20		33	33	179	03		39	28	118	04		31	32	330	11			35	28	158	15		35	23	107	15		43	40	327	26		38	34	332	17	950																																																																																																																																																																																																																																																																			
900	34.1	30	30	138	20	33.3	33	28	160	04	33.1	31	21	148	04	33.4	35	27	330	11	32.6	32	19	143	15	32.3	28	20	097	10	33.3	36	32	330	27	34.2	29	25	329	21	900																																																																																																																																																																																																																																																																				
850		25	25	137	18		28	23	143	07		24	16	168	05		28	21	328	11			26	13	116	12		21	14	083	15		29	27	328	26		26	23	321	28	850																																																																																																																																																																																																																																																																			
800	64.5	20	19	133	15	64.0	22	17	152	06	63.6	19	12	136	06	64.2	25	18	324	13	63.2	20	09	072	09	62.6	15	06	074	15	62.7	21	18	327	14	64.0	24	18	328	28	64.7	21	13	319	32	800																																																																																																																																																																																																																																																															
750		14	11	109	14		18	10	158	09		13	08	113	12		17	01	330	10			16	09	018	12		10	02	054	15		17	14	319	12		18	08	320	37	750																																																																																																																																																																																																																																																																			
700	98.3	14	08	078	23	97.9	11	05	153	12	97.3	10	02	101	14	98.2	10	08	335	11	97.2	11	04	355	13	96.1	07	07	029	08	96.6	11	08	318	11	98.0	10	03	329	35	98.7	15	03	316	45	700																																																																																																																																																																																																																																																															
650		07	01	073	30		08	18	146	15		05	06	086	13		02	17	335	12			06	00	331	13		05	18	004	10		04	02	325	11		10	04	329	41		10	12	316	53	650																																																																																																																																																																																																																																																														
600	137	02	07	075	33	136	03	20	138	18	135	01	09	049	13	136	04	23	Calm	135	00	05	336	12	134	01	21	348	11	135	02	04	331	15	136	04	12	325	50	137	05	25	318	62	600																																																																																																																																																																																																																																																																
550		03	13	078	33		05	25	130	21		07	13	027	15		06	35	144	11			08	14	348	08		09	21	330	12		10	13	320	13		05	18	323	50		01	31	320	65	550																																																																																																																																																																																																																																																														
500	181	12	23	079	29	181	14	28	126	22	179	14	26	031	15	180	12	42	140	15	179	14	20	347	03	178	19	25	319	15	178	19	25	319	07	181	13	27	324	63	182	07	37	314	61	500																																																																																																																																																																																																																																																															
450		24	33	085	36		22	44	118	27		24	39	029	20		21	50	139	10			23	31	318	04		31	39	342	22		27	36	337	05		18	34	325	91		19	39	311	67	450																																																																																																																																																																																																																																																														
400	233	35	44	086	55	233	34	51	113	30	231	36	51	036	28	232	32	59	145	21	231	33	42	346	02	229	45	31	329	30	230	37	45	053	05	233	36	41	326	100	235	37	41	319	70	400																																																																																																																																																																																																																																																															
350		46		087	72		48		110	40		47		042	28		46		141	18			46		009	06		55		325	34		46		042	05		40	54	325	102		43		321	86	350																																																																																																																																																																																																																																																														
300	296	59		087	69	296	61		107	57	295	55		058	27	296	52		Calm	295	55		340	11	291	60		326	33	293	55		333	17	299	55		322	98	298	56		317		95	300																																																																																																																																																																																																																																																															
250		70		087	66		72		116	39		57		039	15		50		325	27			61		330	20		59		327	25		54		324	26		58		322	79		66		320	89	250																																																																																																																																																																																																																																																														
200	381	66		079	16	381	64		339	09	382	53		001	16	384	52		320	30	381	58		332	24	378	56		327	22	381	55		321	32	385	54		323	60	384	60		314	77	200																																																																																																																																																																																																																																																															
170		59		068	10		61		295	07		53		351	16		53		325	26			57		324	25		56		325	14		54		316	29		55				318	62	170																																																																																																																																																																																																																																																																	
150		62		107	04		61		298	08		56		340	17		57		312	27			57		318	23		60		326	21		56		313	26		58				321	53	150																																																																																																																																																																																																																																																																	
130		62		L.V.			64		299	15		60		335	13		54		321	29			57		319	20		62		337	21		58		318	22		62				321	45	130																																																																																																																																																																																																																																																																	
110		62		329	04		66		297	15		60		335	15		60		335	24			60		326	17		64		321	20		61		322	25		62				321	29	110																																																																																																																																																																																																																																																																	
100	528	62		283	06	527	66		297	15	531	61				530	62		325	21	530	62		317	20	526	64		319	21	530	63		326	25	533	62				531	67		321	29	100																																																																																																																																																																																																																																																															
90		66		242	06		66		302	16		61					61		321	15			64		312	24		64		312	24		64		319	21	530	63		62			321	23	90																																																																																																																																																																																																																																																																
80	(86mb)	69					69		300	17		62					62		312	15			65		328	22		66		337	20		65		333	14		66				321	12	80																																																																																																																																																																																																																																																																	
70																																												70																																																																																																																																																																																																																																																																	
60																																												60																																																																																																																																																																																																																																																																	
		Inversion 732mb 13°-711mb 16° 684°-04°-570°-01°				Inversion 683mb 08°-660mb 10°				Inversion 725mb 10°-705mb 11° Isothermal. 322-308mb -54°				Isothermal 823-860mb 25°				Isothermal. 553-540mb -08°				Inversion. 713mb 06°-683mb 09°				Inversion 893mb 26°-879mb 27° Isothermal. 495°-485mb -20°				Inversion 1008mb 47°-1000mb 50° 660°-10°-654°-11° Isothermal. 700-660mb 10° 531°-520°-08°				Isothermal. 900-881mb 29° 800-783°-21° 550-532°-1°																																																																																																																																																																																																																																																																											
Tropopause		I 220mb -73° 36.100°				I 240mb -74° 34.200°				I 281mb -59° 30.900°				I 335mb -50° 27.000°				I 275mb -64° 31.300°				I 320mb -61° 28.100°				I 300mb -55° 29.300°				I 288mb -59° 30.500°				I 243mb -68° 34.300°				Tropopause																																																																																																																																																																																																																																																																							
STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION																																																																																																																																																																																																																																																																											
Pressure	Time M.S.L. Surf Freezing	21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		21h		G.M.T.		Time M.S.L. Surf Freezing																																																																																																																																																																																																																																																																											
		1023.8	mb	1013.6	mb	1020.2	mb	1018.3	mb	1020.4	mb	1019.5	mb	1019.6	mb	1010.7	mb	1018.7	mb	1016.6	mb	1018.5	mb	1018.4	mb	1018.8	mb	1019.7	mb	1009.1	mb																																																																																																																																																																																																																																																																														
		933	mb	896	mb	912	mb	883	mb	939	mb	930	mb	928	mb	888	mb																																																																																																																																																																																																																																																																																												
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Pressure mb																																																																																																																																																																																																																																																																												
Surf	2.7	43	38	146	13	0.5	45	43	270	05	0.2	41	40																																																																																																																																																																																																																																																																																																</

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Time		03h		G.M.T.		03h		G.M.T.		03h		G.M.T.		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.		1025.3		mb		1021.0		mb		1020.9		mb		1020.8		mb		1019.3		mb		1018.6		mb		1019.2		mb		1019.2		mb		1020.0		mb		M.S.L.				
Surf		1015.0		mb		1019.0		mb		1020.0		mb		1019.2		mb		1017.2		mb		1014.0		mb		1002.3		mb		1009.1		mb		1009.2		mb		Surf				
Freezing		932		mb		897		mb		911		mb		910		mb		910		mb		928		mb		935		mb		881		mb		mb		Freezing						
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Pressure				
mb		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		ft./100		mb				
Dir.		Vel.		°F.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Dir.		Wind				
knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots				
Surf	02.7	39	36	18.0	11	00.5	44	40	12.0	03	5.5	39	38	04.1	05	02.3	40	38	00.6	32	29	01.2	33	30	28.0	03	04.4	31	31	CALM	02.9	46	37	30.0	18	00.3	47	41	Surf			
1000	6.6	39	36	14.6	15	5.6	44	40	12.0	03	5.5	39	38	04.1	05	02.3	40	38	00.6	32	29	01.2	33	30	28.0	03	04.4	31	31	CALM	02.9	46	37	30.0	18	00.3	47	41	1000			
950	34.5	27	23	13.9	20	33.7	33	25	08.0	06	33.5	31	30	07.3	10	11.3	34	31	28	35.9	12	33.0	31	21	32.8	19	5.0	32	32	01.5	09	5.3	45	38	30.8	25	6.3	47	41	950		
900	64.7	16	13	12.5	18	54.4	22	17	06.2	09	64.0	20	15	09.2	12	64.0	20	15	09.2	12	63.4	19	11	63.1	19	13	00.2	13	63.0	16	02	35.5	09	64.3	24	20	32.6	27	65.3	28	16	900
850	10	06	12.9	11	16	11	04.7	10	14	06	08.5	10	15	10	35.2	14	13	08	12	07.1	06	01	12	07	00.9	12	11	04	35.2	12	17	12	32.6	26	00	00	33.2	30	750			
800	98.2	03	01	13.1	07	98.2	09	01	03.0	13	98.0	08	01	02.2	07	97.8	08	00	34.8	12	07.1	06	01	96.7	05	00	01.2	15	96.5	07	08	35.0	12	98.2	10	08	32.2	27	99.4	17	01	800
750	36	-11	-27	08.1	15	13.6	-04	-12	02.5	27	13.6	-09	-13	35.6	11	13.6	-05	-12	34.9	13	13.5	-05	-14	134	-11	-29	01.3	19	34	-08	-16	34.3	23	13.6	01	-20	32.2	45	13.8	11	750	
700	-18	-31	07.8	17	-14	-20	01.9	31	-19	-23	00.3	15	-09	-19	34.6	22	-13	-21	34.6	22	-13	-21	177	-22	-36	34.2	27	17.8	-19	-28	33.7	21	18.0	-16	-38	32.2	48	18.3	-08	700		
650	22.9	-44	06.7	21	-24	-35	34.7	42	-34	-40	35.3	23	-26	-43	34.2	32	-29	-35	34.2	32	-29	-35	228	-41	-46	33.8	27	-30	-39	33.7	24	-22	-44	32.0	72	-15	-32	650				
600	300	292	-48	07.0	24	295	-50	35.8	47	292	-52	34.7	45	295	-56	34.2	50	292	-56	34.2	50	292	-56	291	-58	32.6	26	291	-60	33.4	43	296	-52	32.1	96	291	-49	600				
550	200	380	-55	04.7	20	362	-59	35.4	30	380	-57	35.1	34	380	-61	34.4	50	380	-53	34.4	50	380	-53	379	-54	33.1	27	-56	33.5	35	-57	32.7	84	-65	550							
500	150	-62	01.3	10	-62	34.1	25	-59	34.8	25	-63	33.8	23	-64	33.7	30	-60	33.7	30	-60	33.7	30	-60	56	33.7	24	-62	34.0	30	-62	34.0	30	-62	34.0	30	-62	34.0	30	500			
450	130	-61	00.6	07	-66	33.8	23	-62	34.9	23	-64	33.8	21	-68	34.8	30	-60	33.8	30	-60	33.8	30	-60	56	33.7	24	-62	34.0	30	-62	34.0	30	-62	34.0	30	-62	34.0	30	450			
400	110	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	400			
350	100	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	350			
300	90	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	300			
250	80	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	250			
200	70	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	200			
170	60	-66	52.9	-67	33.6	23	52.9	-68	35.6	18	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	52.9	-69	35.6	15	170			
Inversion		1015 mb 39° - 988 mb 40°		Isothermal		1019 mb 44° - 1006 mb 45°		Isothermal		1017 mb 32° - 1008 mb 38°		Isothermal		1014 mb 33° - 988 mb 40°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		1002 mb 31° - 981 mb 36°		Isothermal		
Tropopause		III 286 mb - 51°		I 259 mb - 60°		III 334 mb - 52°		I 280 mb - 60°		II 341 mb - 56°		I 340 mb - 56°		II 322 mb - 61°		II 303 mb - 52°		II 207 mb - 73°		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause		Tropopause				
STATION		LERWICK		STORNOWAY		LEUCHARS		ALDERGROVE		LIVERPOOL		DOWNHAM MARKET		LARKHILL		CAMBORNE		VALENTIA																								



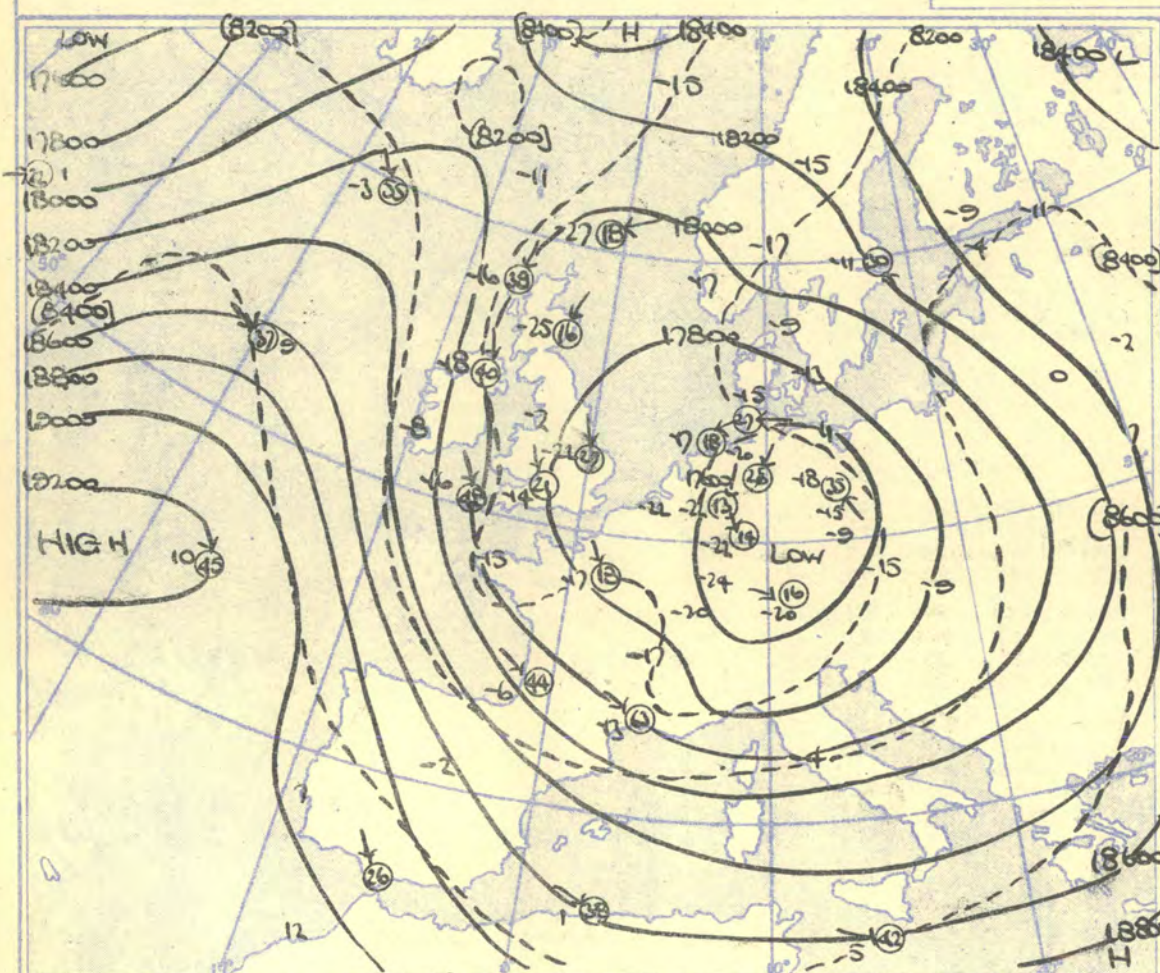
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.



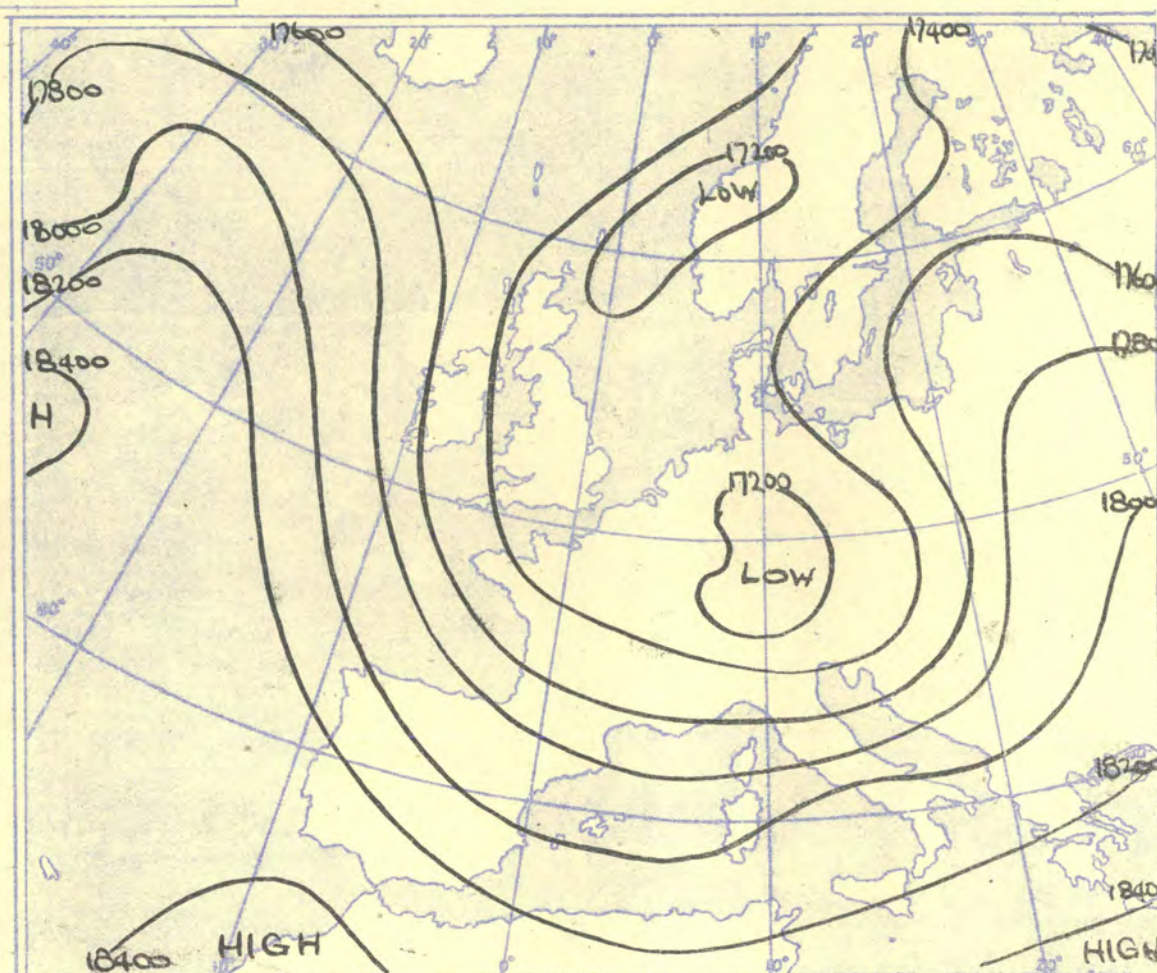
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500-300 mb.

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

100 60 40 30 20 15 10 knots



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 M.S.L. Surf Freezing	43-2N- 17-0W.			39-5N. 12-2W.			53-1N- 01-3E.												Time M.S.L. Surf Freezing
	13h.	mb		1430h.	mb		15h.	mb		mb	mb	mb	mb	mb	mb	mb	mb	mb	
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Pressure mb
Surf		58.53			58.56	0.5	47	42											Surf
1000	8.1	54.50	7.1	55.54	4.0														1000
950		48.44		49.48		38	32												950
900		41.41		43.43	32.1	31													900
850		49.16		48.11		24													850
800		47.19		44.18	62.5	20													800
750		40.38		40.25		13													750
700	104	36.35	103	35.29	96.1	06													700
650		29.29		31.31		0													650
600		25.25		23.23		134	06												600
550		21.21		17.17		-11													550
500	191	08	190	09		178	-20												500
450						-27													450
400						-27													400
350						-52													350
300						-52													300
250						-52													250
200						-52													200
170						-52													170

Cloud. 8/8 Sc 900-860mb
2/8 Ci N.R.
Surf. wind: N. 11-16kts.
Inversion 900mb. 41°-850mb. 49°

Cloud. 4/8 Sc 940-860mb.
860mb.
1/8 Ci N.R.
Surf. wind: dense short N. 11-16kts.
Inversion 900mb. 43°-850mb. 48°

Cloud. 5/8 Cu 930-830mb.
830mb.
Contrails.
dense short 340-320mb.

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

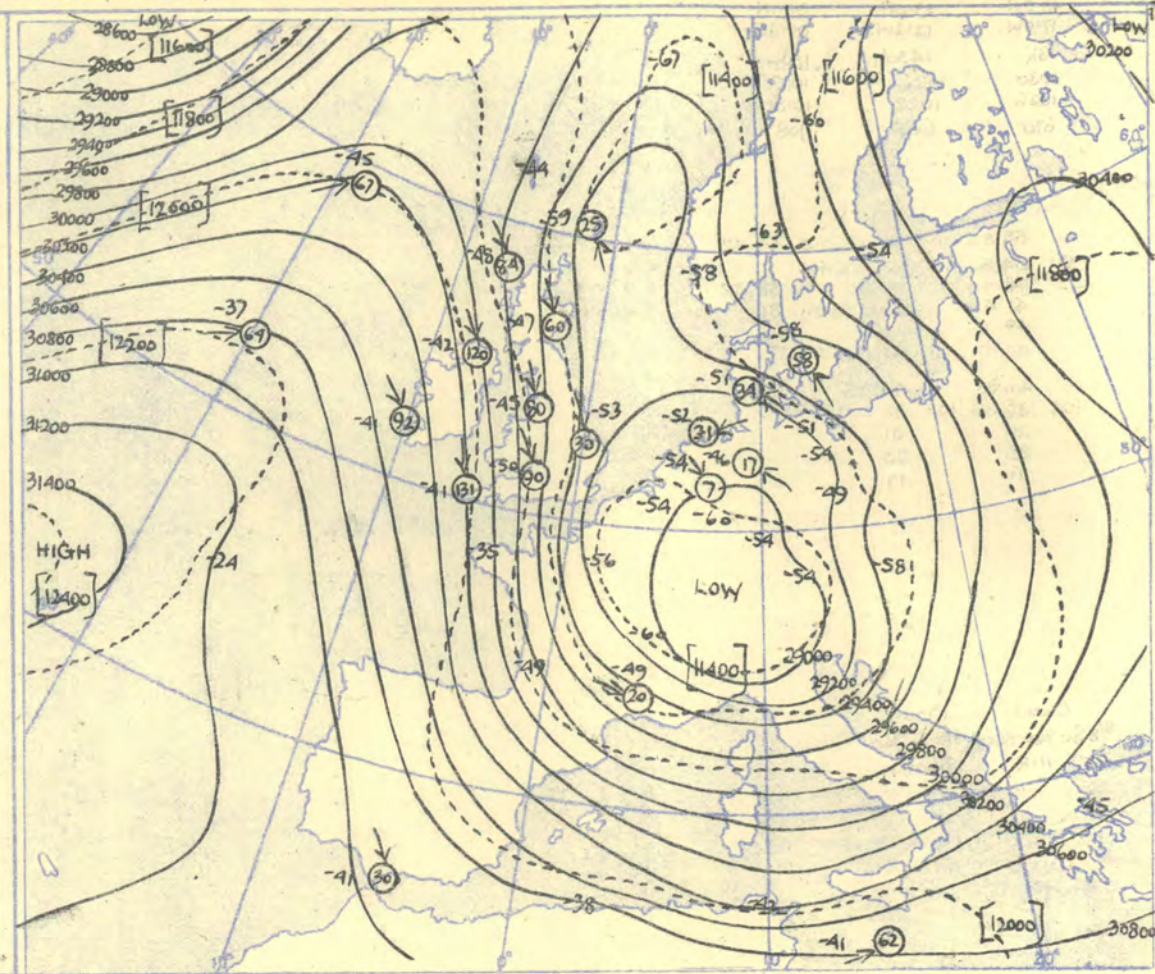
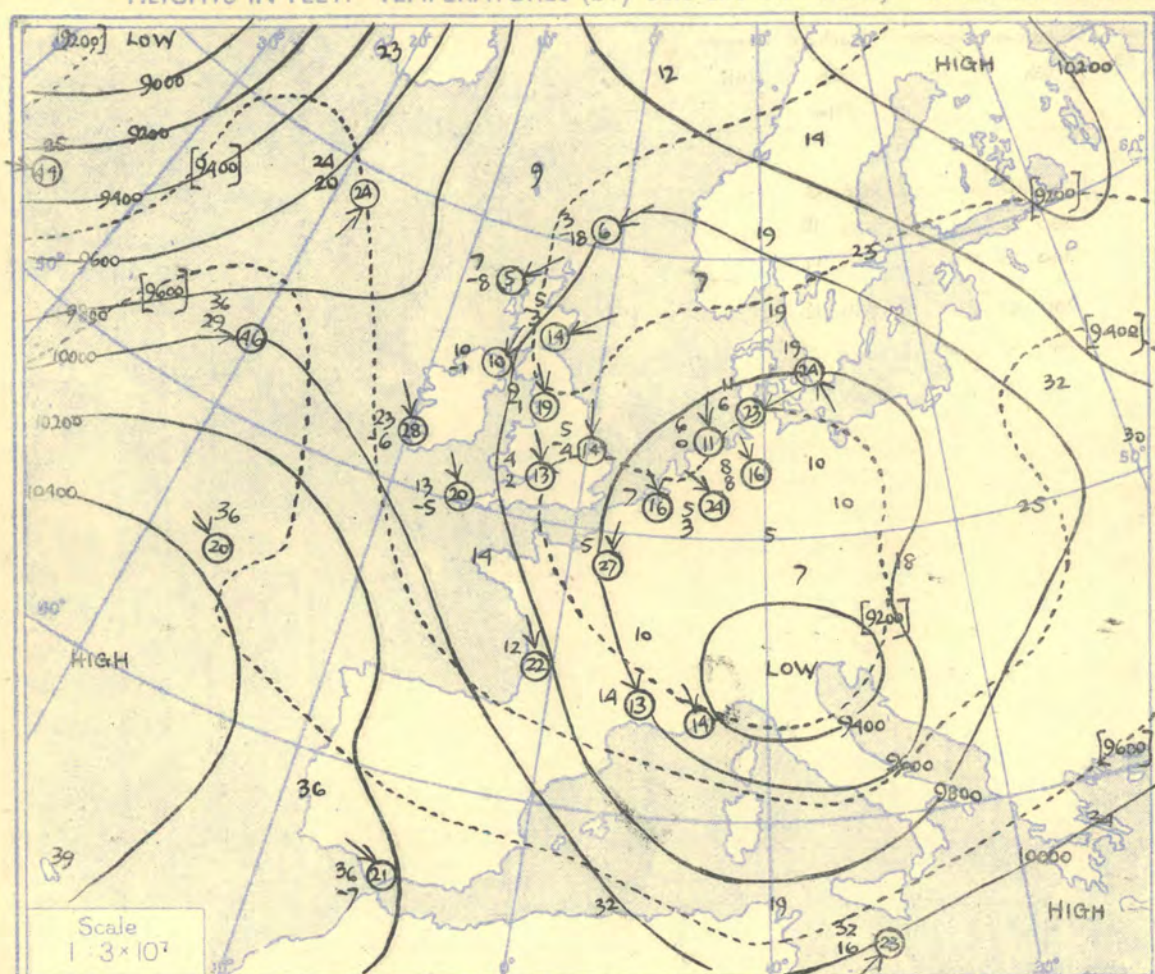
Place	Collinstown		Lymington		Leuchars		Lerwick												Place
	03h.		10h.		15h.		15h.												
Time	03h.		10h.		15h.		15h.												Time
Type																			Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	290	10	320	06	070	13													Surf.
1,000	250	25	340	19	028	18													1,000
2,000	240	22	350	18	036	17													2,000
3,000	250	22	350	16	053	13													3,000
4,000	250	18	350	19	063	12													4,000
5,000	240	16	340	26	069	11													5,000
6,000	240	12	350	23	070	12													6,000
8,000					070	16													8,000
10,000					077	14													10,000
14,000					050	09													14,000
18,000					111	06													18,000
24,000					047	16													24,000
30,000					345	60													30,000
40,000					354	42													40,000
50,000					354	16	343	10											50,000
					338	12	277	12	(6000')										
					(58,000')		290	10	(62,000')										

NEPHOSCOPE OBSERVATIONS

Place	Plymouth	Valencia																	Place
Time Type	12h. Ac.	15h. Ac.																	Time Type
Dir. Vel.	350 24	340 54																	Dir. Vel.

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

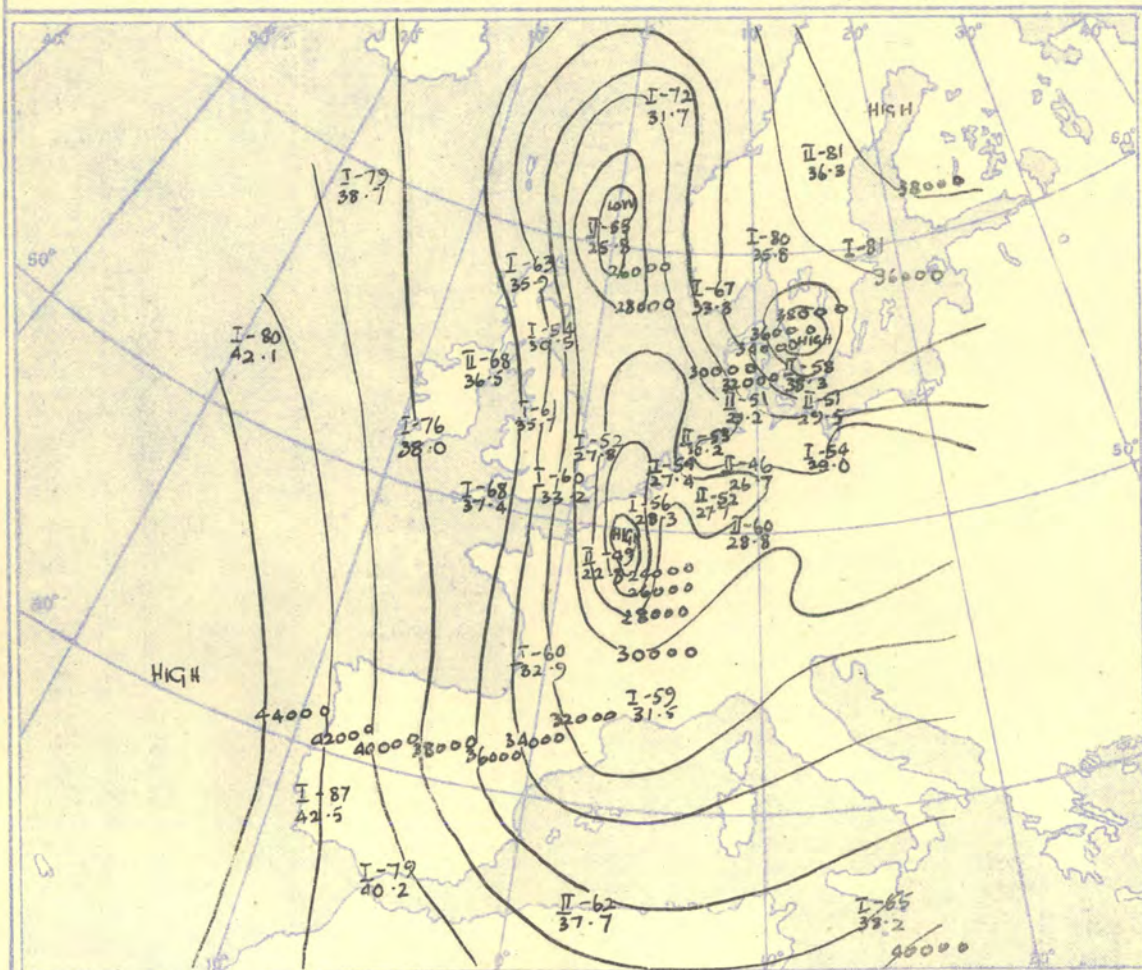
Ship		WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER 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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.

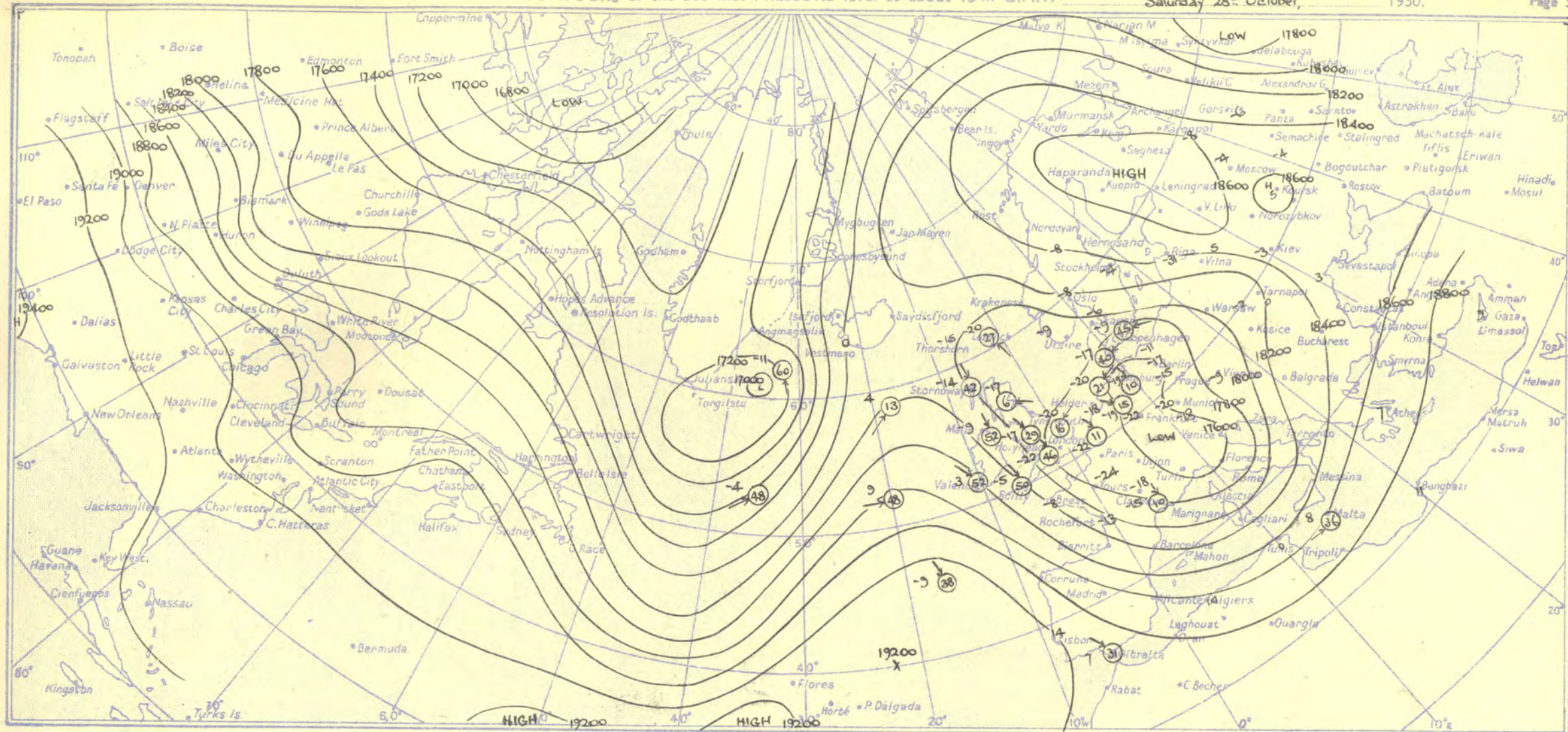


NOTES ON THE AEROLOGICAL SITUATION.

Warming continued to the west of the British Isles and the upper ridge extended northwards across Iceland. Further west in the Atlantic a cold trough moved east from Newfoundland but weakened due to the warming over the sea surface. A cold pool persisted over south Germany while a second cold pool moved west from south Norway to the Shetlands warming out slowly over the sea.

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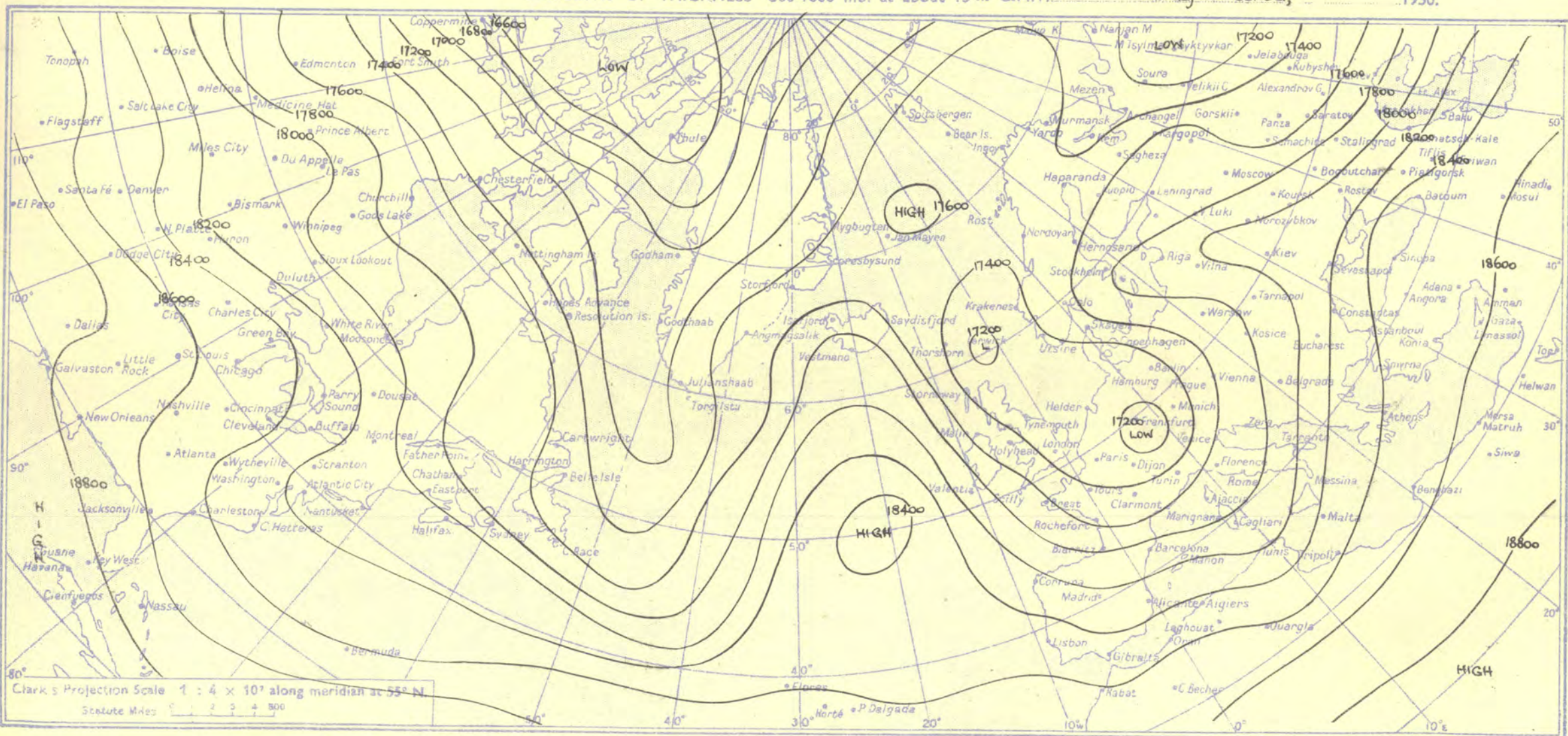
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Saturday 28th October, 1950.

1950.

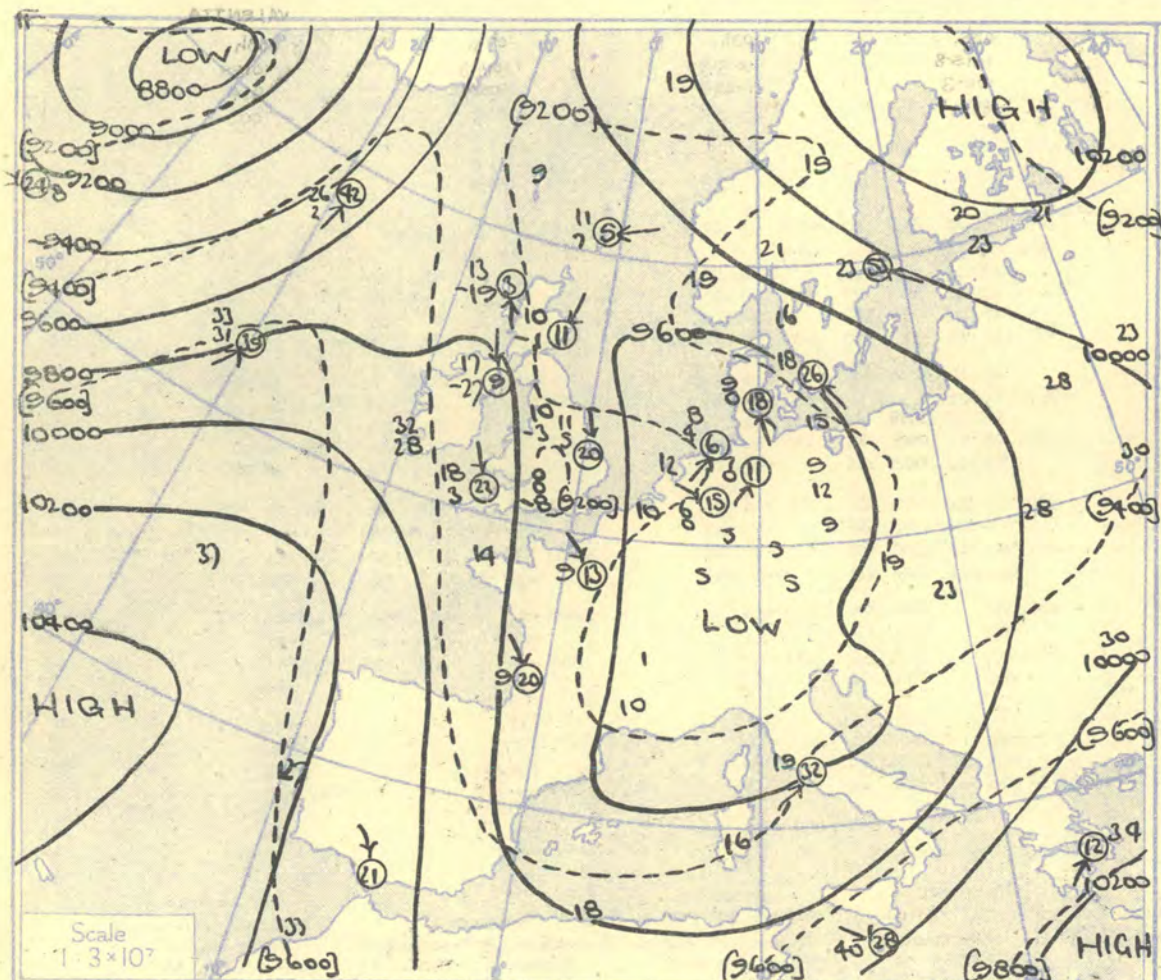


RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION							
Time	15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		15L		G.M.T.		Time							
M.S.L.	1025.6		mb		1022.8		mb		1022.3		mb		1021.5		mb		1019.2		mb		1017.3		mb		1018.3		mb		1019.4		mb		1020.5		mb		M.S.L.							
Surf	1015.4		mb		1020.9		mb		1021.4		mb		1012.8		mb		1017.2		mb		1012.9		mb		1002.0		mb		1008.7		mb		1019		mb		Surf							
Freezing	950		mb		915		mb		930		mb		908		mb		900		mb		917		mb		904		mb		879		mb		875		mb		Freezing							
Pressure	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		Height							
Temp.	°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.		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.		Dir. Vel.		Dir. Vel.		Wind							
Dir.	knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		Dir.							
Vel.	knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		Vel.							
Surf	2.7	45	32	100	03	0.5	47	34	150	04	0.2	43	35	2.3	45	38	Colm	0.6	47	43	020	05	1.2	43	36	330	09	4.4	42	33	340	04	2.9	51	40	360	12	6.3	51	40	240	03	Surf	
1000	6.8	40	27			6.1	44	32	155	06	5.9	40	36	5.8	44	37	060	06	5.2	44	32	018	10	4.7	41	33		4.9					5.0	50	39		5.5	48	38	Colm		1000		
950		32	20	082	09		36	27	148	11		34	30		38	31	062	07		39	28	017	12		36	27	355	16		36	27	343	10		43	34	332	18		41	33		950	
900	34.5	24	16	075	10	34.1	31	18	127	09	33.7	28	24	33.8	31	25	070	08	33.3	32	23	014	12	32.6	30	22	357	16	32.8	31	18	339	10	33.3	35	27	336	18	33.7	34	27		900	
850		16	05	064	10		26	12	125	09		22	17		25	19	070	07		25	18	011	11		24	17	357	20		24	14	350	14		28	21	338	17		29	21		850	
800	64.4	10	03	060	08	64.6	20	06	131	08	64.0	16	08	64.4	21	14	074	08	63.9	21	09	003	16	63.1	18	11	357	19	63.2	17	10	351	14	64.1	23	12	338	17	64.6	29	09	322	19	800
750		07	11	065	05		13	01	116	05		10	04		16	06	050	08		15	05	353	19		12	03	350	17		14	07	346	14		18	03	335	16		27	07	324	26	750
700	97.6	03	18	076	06	98.3	07	08	058	05	97.0	05	03	98.3	10	01	013	10	97.7	09	01	349	19	96.7	05	04	354	14	96.7	04	02	344	13	98.0	13	05	336	20	99.2	23	06	325	28	700
650		02	25	116	06		00	18	033	05		01	13		03	11	359	17		01	11	356	23		05	08	346	14		05	08	346	14		11	20	338	27		20	10	324	33	650
600	135	07	32	150	13	136	03	26	018	13	135	04	27	136	01	20	050	27	136	05	18	005	22	134	11	19	001	14	134	11	14	342	20	137	07	31	337	33	139	16	01	323	38	600
550		14	40	146	22		11	37	358	19		12	35		02	33	348	40		11	31	357	23		13	28	024	14		16	26	339	33		62	39	339	43		09	06	329	46	550
500	179	20	38	140	27	180	14	40	348	42	179	17	39	181	69	39	349	52	179	17	38	358	29	178	20	38	048	16	177	22	37	339	46	182	05	48	342	50	184	03	16	331	52	500
450		28	42	140	34		16	42	342	58		26	47		16	46	346	70		24	45	354	44		28	47	048	17		29	45	337	60		11	53	346	84		05	13	332	62	450
400	230	40	52	144	37	233	28	53	336	59	231	32	56	234	20	51	342	101	231	26	49	349	76	229	38	57	065	16	229	34	52	340	76	235	15	56	347	113	238	14	20	336	83	400
350		55		151	36		37	60	337	61		38	58		30	57	335	116		34	57	347	86		48		032	14		41		342	95		26	58	344	117		26	32	327	90	350
300	292	59		143	25	297	48		330	84	295	47		300	42		334	120	296	45		343	85	291	53		358	30	293	50		342	90	301	41		342	131	305	41		324	92	300
250		58		111	08		58		329	83		53			57		335	130		55		347	90		52		352	43		60		348	93		57		346	138		59		328	112	250
200	379	63		008	10	384	63		334	48	383	60		387	70		341	101	384	57		352	60	380	55		355	44	380	57		349	55	388	64		74		336	97	200			
170		65		346	10		63		334	35					67		347	68		60		349	48		58		356	39		61		342	48		63			76		339	95	170		
150		66		320	12		65		345	26					66		347	47		59		350	40		59		352	35		60					63			77		334	92	150		
130		68		340	11		67		341	18					69					64		350	32		61		355	29						62				81		337	80	130		
110		68					65		323	29					68	</																												

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)																																																																																																																																																																																																																																																																																																																											
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Pressure mb	Time M.S.L.	Surf Freezing	03h.		G.M.T.		Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.	Wind Dir. Vel. knots	Temp. °F.	Dew °F.

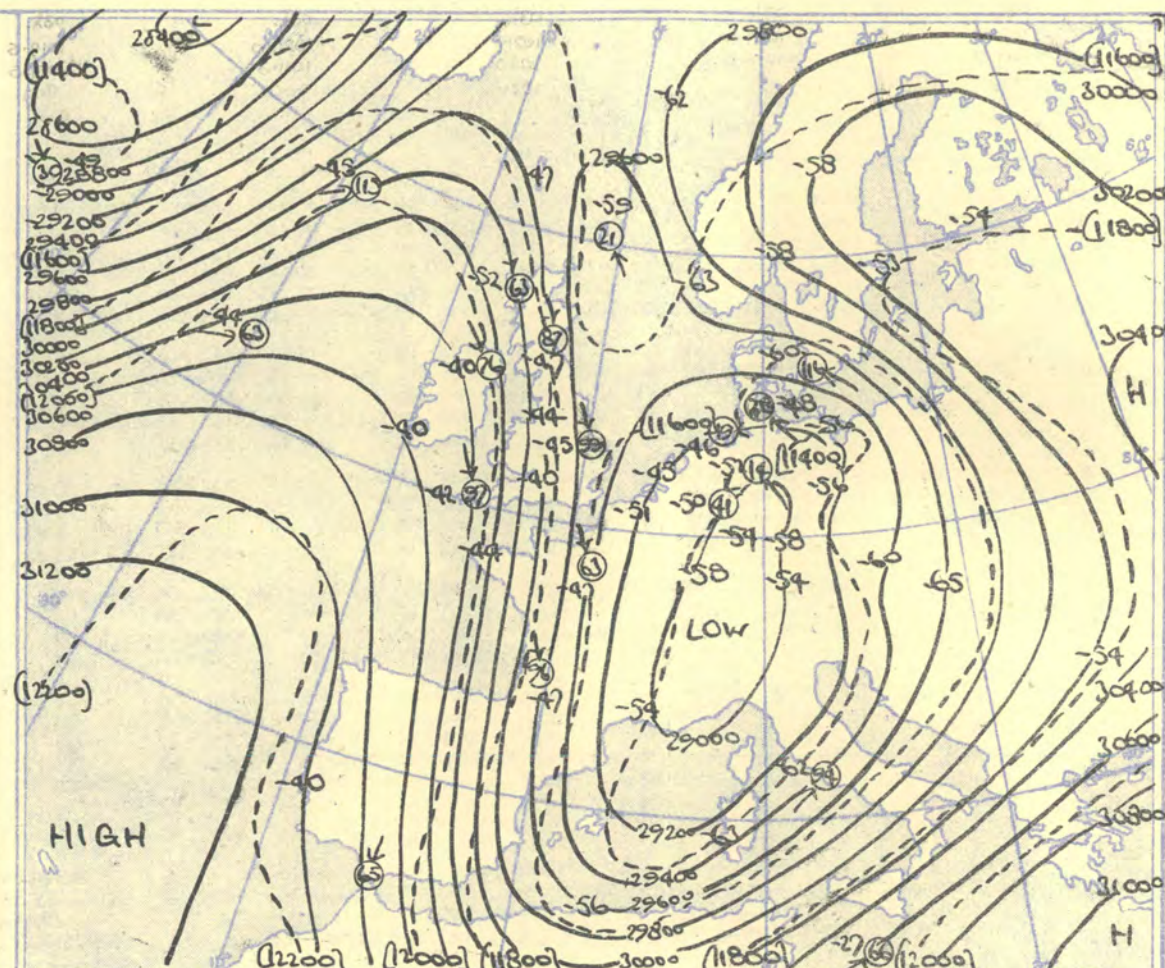
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



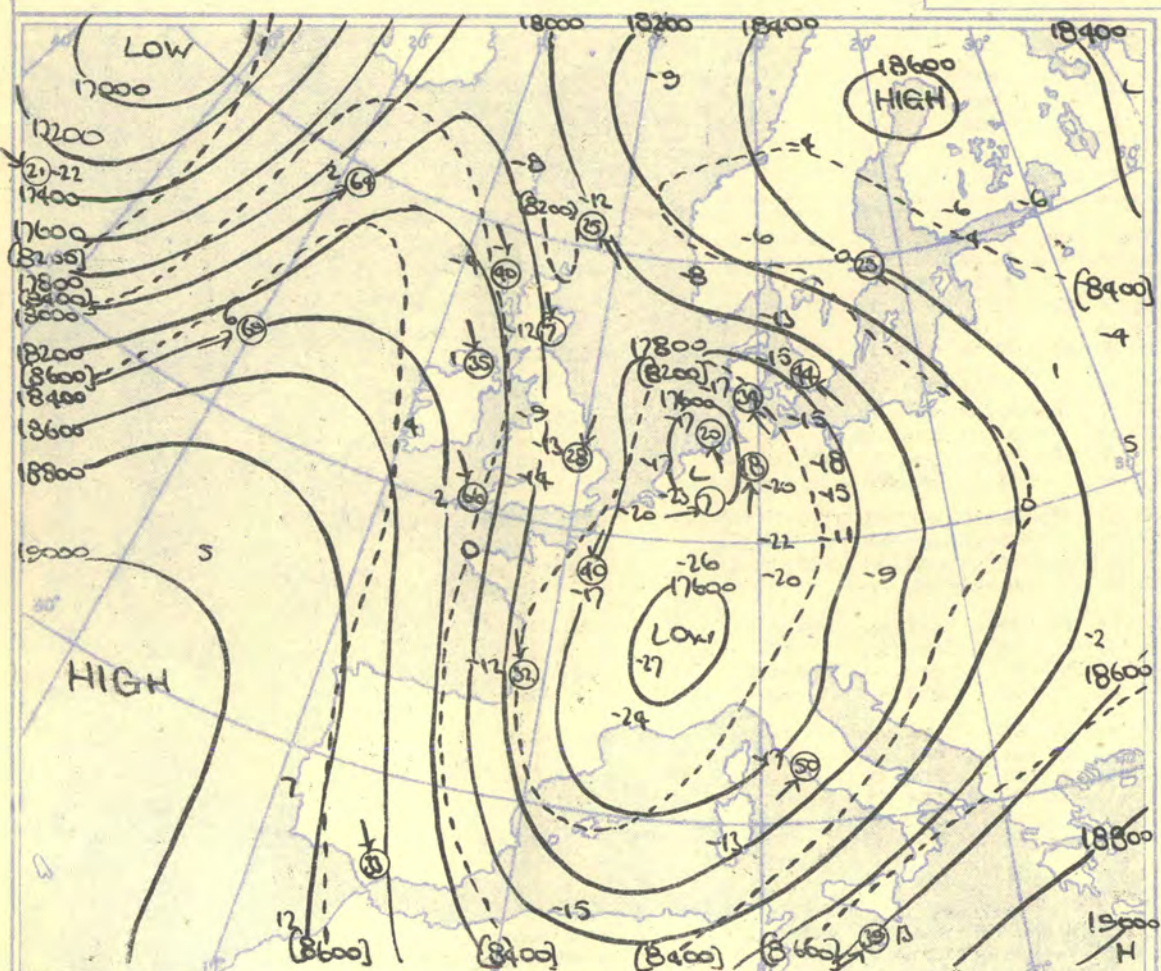
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

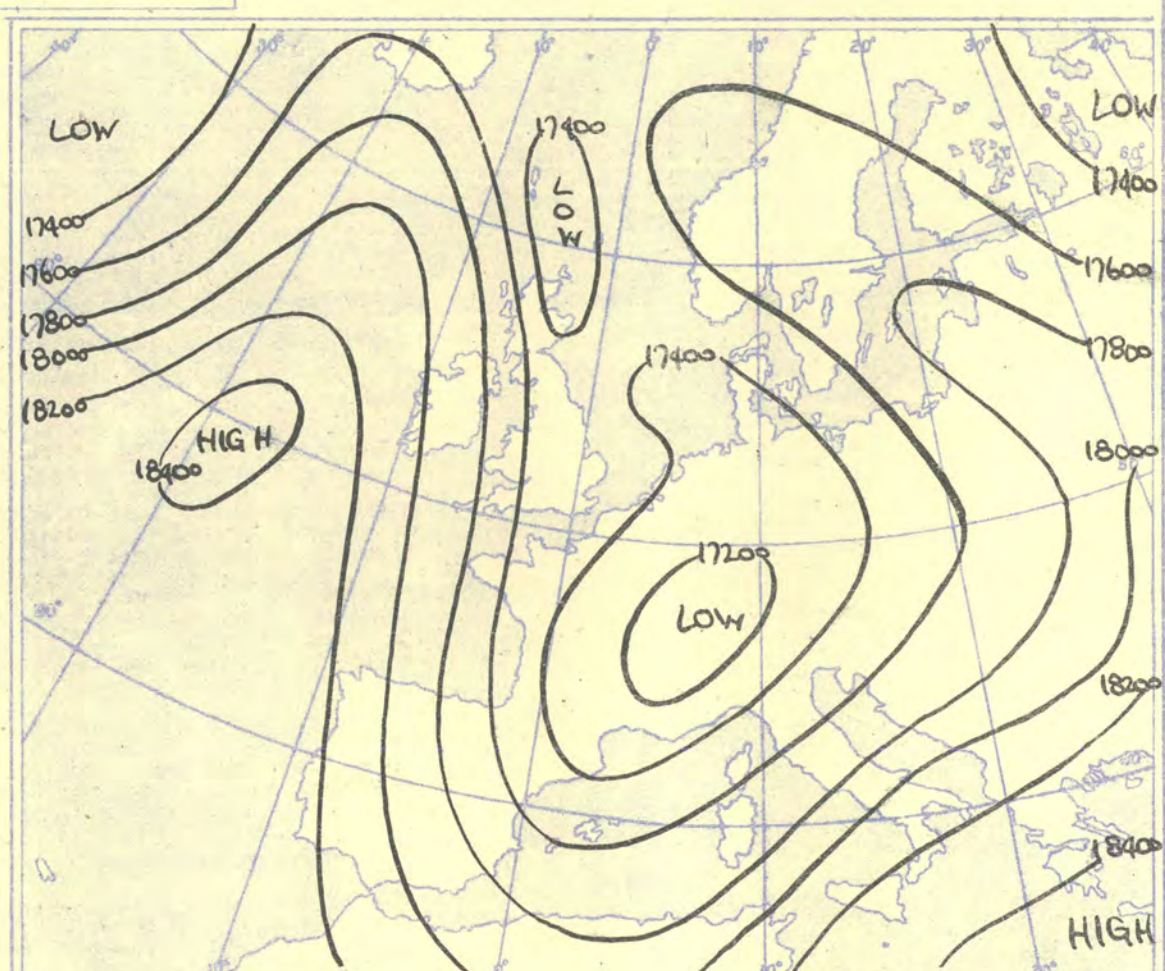
100 80 60 40 20 10 knots



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



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

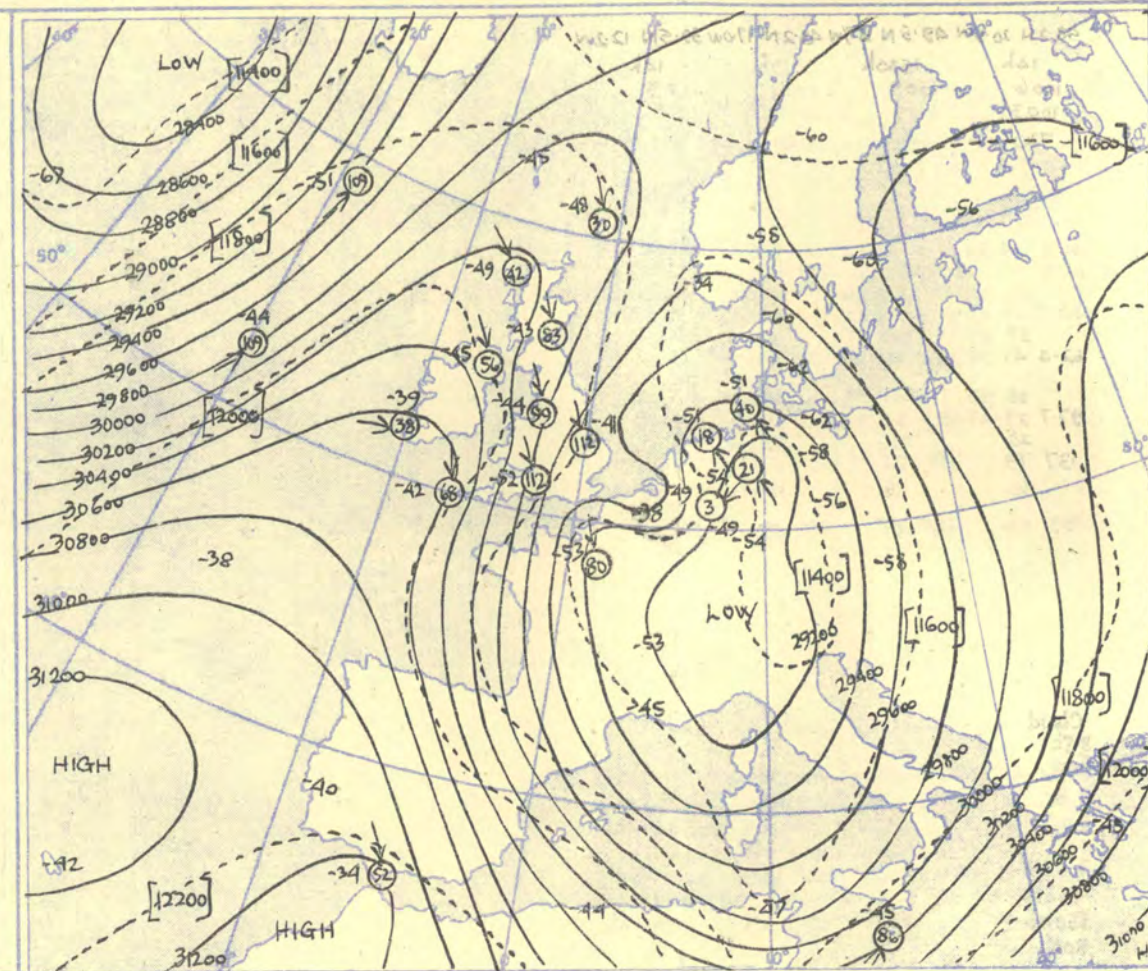
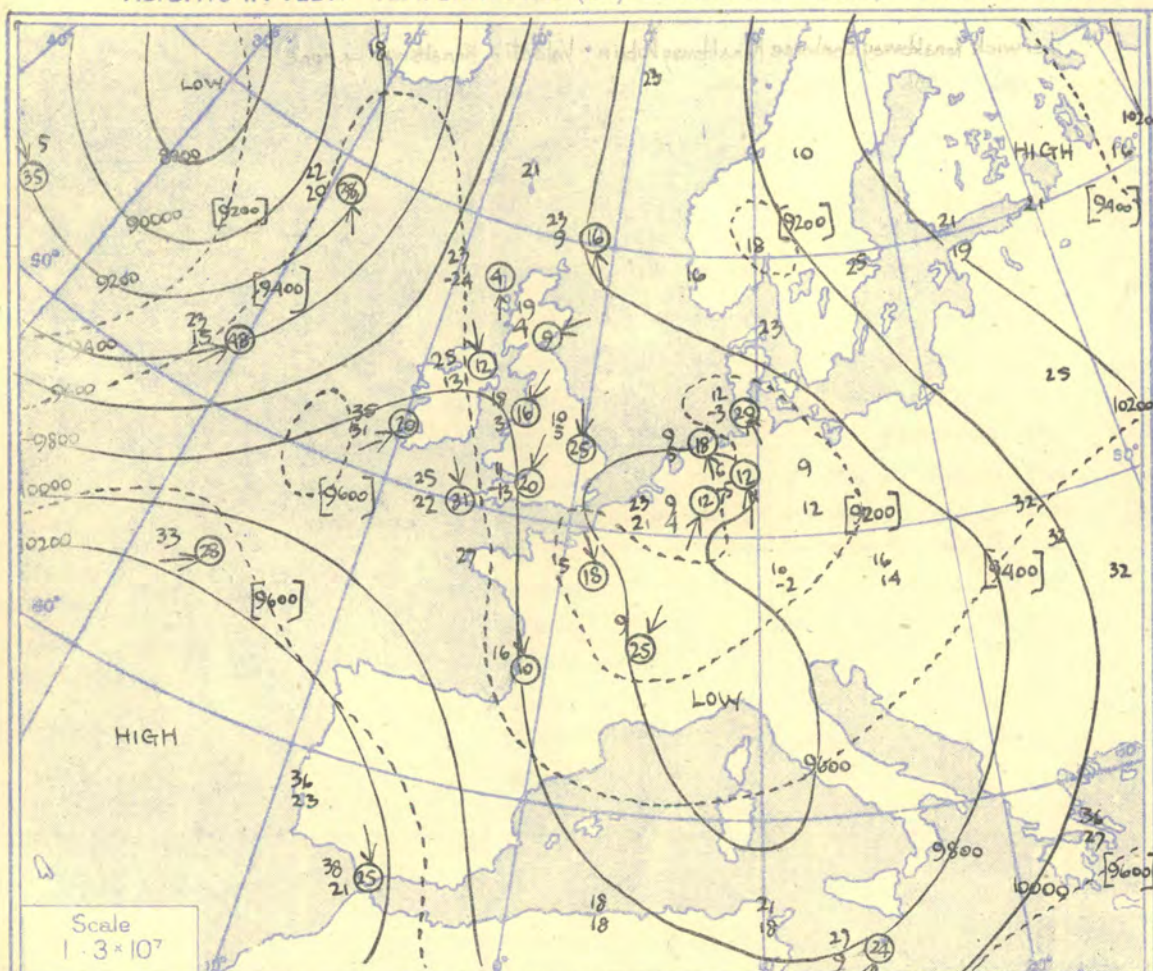


Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY																				DIRECTION (degrees from N) and VELOCITY (knots) of UPPER WINDS at heights above M.S.L.																			
48-2N-20-5W					49-2N-14-7W					43-2N-17-0W					39-5N-12-2W																								
Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing					
	mb	mb	mb	mb		mb	mb	mb	mb		mb	mb	mb	mb		mb	mb	mb	mb		mb	mb	mb	mb		mb	mb	mb	mb		mb	mb	mb	mb	mb	mb	mb	mb	
Surf	14h	1006	1003	720	Surf	1530h	1009	1006	670	Surf	13h	1021	1018	640	Surf	14h	1023	1019	645	Surf					Surf					Surf									
1000	01.0	54	54	01.0	57	52	5-9	59	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55	60	55						
950	01.8	52	52	02.7	51	47	5-9	51	47	50	48	51	47	50	48	51	47	50	48	51	47	50	48	51	47	50	48	51	47	50	48	51	47						
900	30.7	49	49	31.7	48	42	47	47	47	44	41	44	41	44	41	44	41	44	41	44	41	44	41	44	41	44	41	44	41	44	41	44	41						
850	39	39	39	41	37	41	37	44	41	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42						
800	62.4	41	38	63.4	40	40	49	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42	49	42						
750	97.7	27	27	99.1	35	23	10.3	40	03	10.3	39	33	14	27	25	33	14	27	25	33	14	27	25	33	14	27	25	33	14	27	25	33	14						
700	137	19	139	21	16	18	18	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10						
650	183	02	185	05	189	09	190	10																															
600																																							
550																																							
500																																							
450																																							
400																																							
350																																							
300																																							
250																																							
200																																							
170																																							
Cloud 8 St. 960-890mb 8 As. 740-660 4 Ci. H.N.G. Inversion 850mb 39° 800-41°					Cloud 4 Sc. 910-870mb 6 Cs. H.N.G. Inversion 800mb 40° 750-41° S'wly.					Cloud 3 Sc. 960-740mb Inversion 850mb 44° 800-49° Surf Wind N'wly 17-21 kts					Cloud 4 Sc. 960-890mb Inversion 850-51° Surf Wind N'wly 17-21 kts																								
NEPHOSCOPE OBSERVATIONS																				NEPHOSCOPE OBSERVATIONS																			
Place	Mount				Place	Mount				Place	Mount				Place	Mount				Place	Mount				Place	Mount				Place	Mount								
Time	5h				Time	5h				Time	5h				Time	5h				Time	5h				Time	5h				Time	5h								
Dir. Vel.	350 75				Dir. Vel.	350 75				Dir. Vel.	350 75				Dir. Vel.	350 75				Dir. Vel.	350 75				Dir. Vel.	350 75				Dir. Vel.	350 75								

RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.																																								
Ship					Weather Watcher					Weather Watcher					Weather Watcher					Weather Watcher					Weather Observer															
59-2N 18-8W					59 N 19 W					59-1N 19-1W					59-1N 19-1W					52-5N 19-9W					52-6N 19-7W															
Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure	Time	M.S.L.	Surf	Freezing	Pressure											
03h	mb	1000	mb	mb	09h	mb	997	mb	mb	15h	mb	989	mb	mb	21h	mb	987	mb	mb	03h	mb	1007	mb	mb	09h	mb	999	mb	mb											
1000	mb	1000	mb	mb	997	mb	997	mb	mb	989	mb	989	mb	mb	987	mb	987	mb	mb	1007	mb	1007	mb	mb	999	mb	999	mb	mb											
790		790			840		840			810		810			850		850			690		690			700		700													
Height	Temp	Dew	Wind	Vel	Height	Temp	Dew	Wind	Vel	Height	Temp	Dew	Wind	Vel	Height	Temp	Dew	Wind	Vel	Height	Temp	Dew	Wind	Vel	Height	Temp	Dew	Wind	Vel											
Surf	49	44	220	15	50	45	160	17	1.9	49	46	100	15	3.7	48	41	240	19	1.8	54	54	150	09	53	52	255	19	52	50	245	23									
1000	01	42	38	219	14	43	42	165	25	44	43	133	23	24.7	44	38	235	19	00	54	54	180	13	48	41	256	27	47	47	233	33									
950	28.4	37	31	218	16	40	31	166	25	40	39	138	23	24.7	44	38	235	19	28.4	55	52	200	16	46	39	236	33	42	42	229	34									
900	37	31	218	24	33	29	173	27	25.5	35	33	142	36	32	28	235	26	30.9	52	48	207	26	28.4	46	37	226	45	37	37	228	35									
850	59.7	33	11	210	30	58.9	26	24	183	28	56.7	31	29	159	43	55.7	26	19	235	24	62.9	42	39	224	30	60.1	40	55	223	51	59.9	32	32	226	36					
800	59.7	33	11	210	30	58.9	26	24	183	28	56.7	31	29	159	43	55.7	26	19	235	24	62.9	42	39	224	30	60.1	40	55	223	51	59.9	32	32	226	36					
750	28	06	134	37	27	19	187	35	27	24	168	40	22	10	230	27	37	34	220	33	39	30	221	54	27	26	224	43	20	13	259	30								
700	34.5	26	02	185	42	23.5	16	190	39	31.4	22	20	168	38	30.0	16	08	226	30	38.4	33	31	226	39	35.6	32	23	227	48	34.7	23	16	222	48						
650	20	05	190	46	17	14	187	47	17	14	167	37	09	01	213	30	27	06	232	42	25	14	225	60	25	14	225	60	16	08	221	53								
600	134	15	-16	201	51	133	12	10	187	57	131	12	08	167	48	129	04	-04	196	35	139	19	06	222	41	135	19	06	215	57	134	08	217	60						
550	10	-24	211	59	09	06	193	52	07	02	164	56	-05	-11	184	39	14	08	220	50	14	08	220	50	11	03	210	62	03	-07	216	93	-12	19	231	34				
500	180	02	-31	225	64	178	01	-03	195	58	176	00	-05	165	60	173	-15	-21	178	53	185	06	01	221	69	181	04	-04	208	72	180	01	-25	204	95	175	-20	-29	226	42
450	-08	-40	232	73	-09	-13	200	60	-13	-20	162	77	-26	-33	173	62	-03	-07	227	69	-03	-07	227	69	-06	-14	209	72	-06	-33	188	117	-26	-35	225	57				
400	233	-18	-50	237	81	232	-20	-25	202	70	229	-24	-33	172	84	225	-26	-37	169	89	239	-10	-20	235	63	235	-17	-27	212	57	233	-17	-44	191	129	227	-25	-39	218	76
350	30	-57	239	90	-31	-37	207	81	-35	-49	187	103	-34	-52	161	112	-27	-36	237	63	-30	-39	212	80	-30	-39	212	80	-30	-56	202	117	-34	-48	207	112				
300	239	-45	243	115	297	-48	208	86	294	-51	186	109	290	-48	154	120	305	-44	239	63	301	-45	212	83	297	-44	212	83	297	-44	207	109	292	-48	205	108				
250	-66	250	126	-63	211	93	-65	174	90	-65	174	90	-65	174	90	-65	174	90	-65	2																				

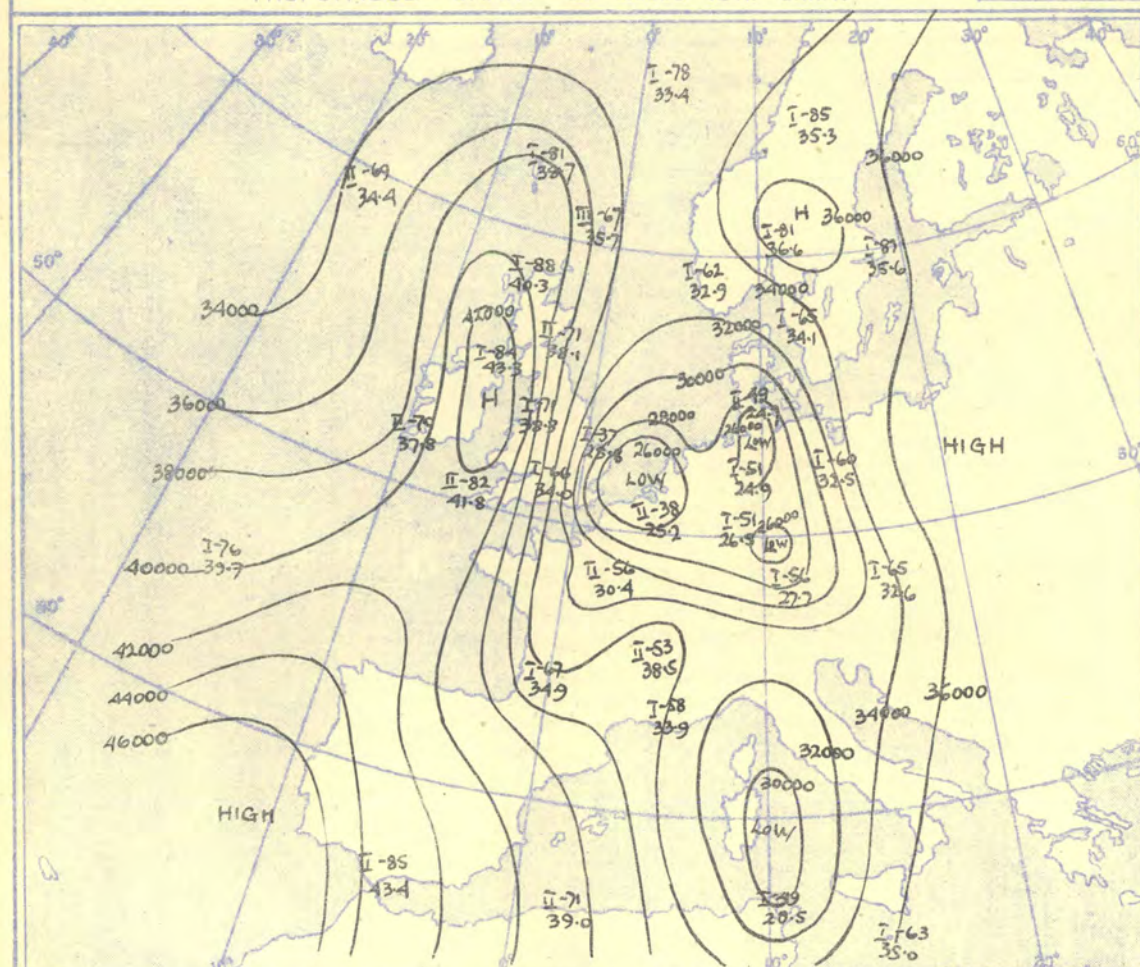
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h G.M.T.



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

100 80 60 40 30 20 10 knots

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

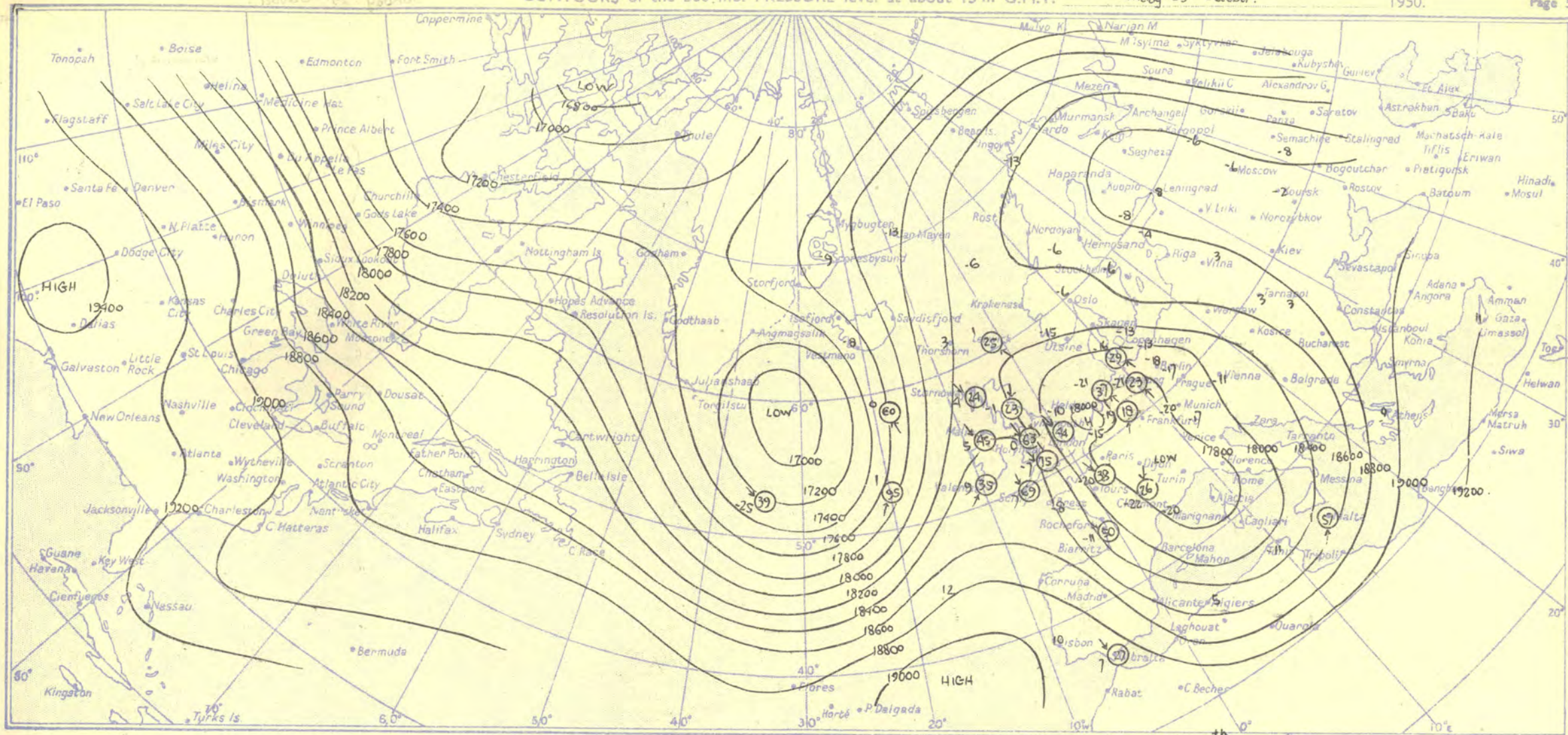


NOTES ON THE AEROLOGICAL SITUATION.

The cold pool persisted over Southwest Germany but warmed out slowly. The warm ridge west of the British Isles moved very slowly eastwards and under the influence of this warming the cold pool near the Shetlands gradually disappeared. A cold pool formed in the northwesterly air stream in western Atlantic and the pool was transferred eastwards in this stream.

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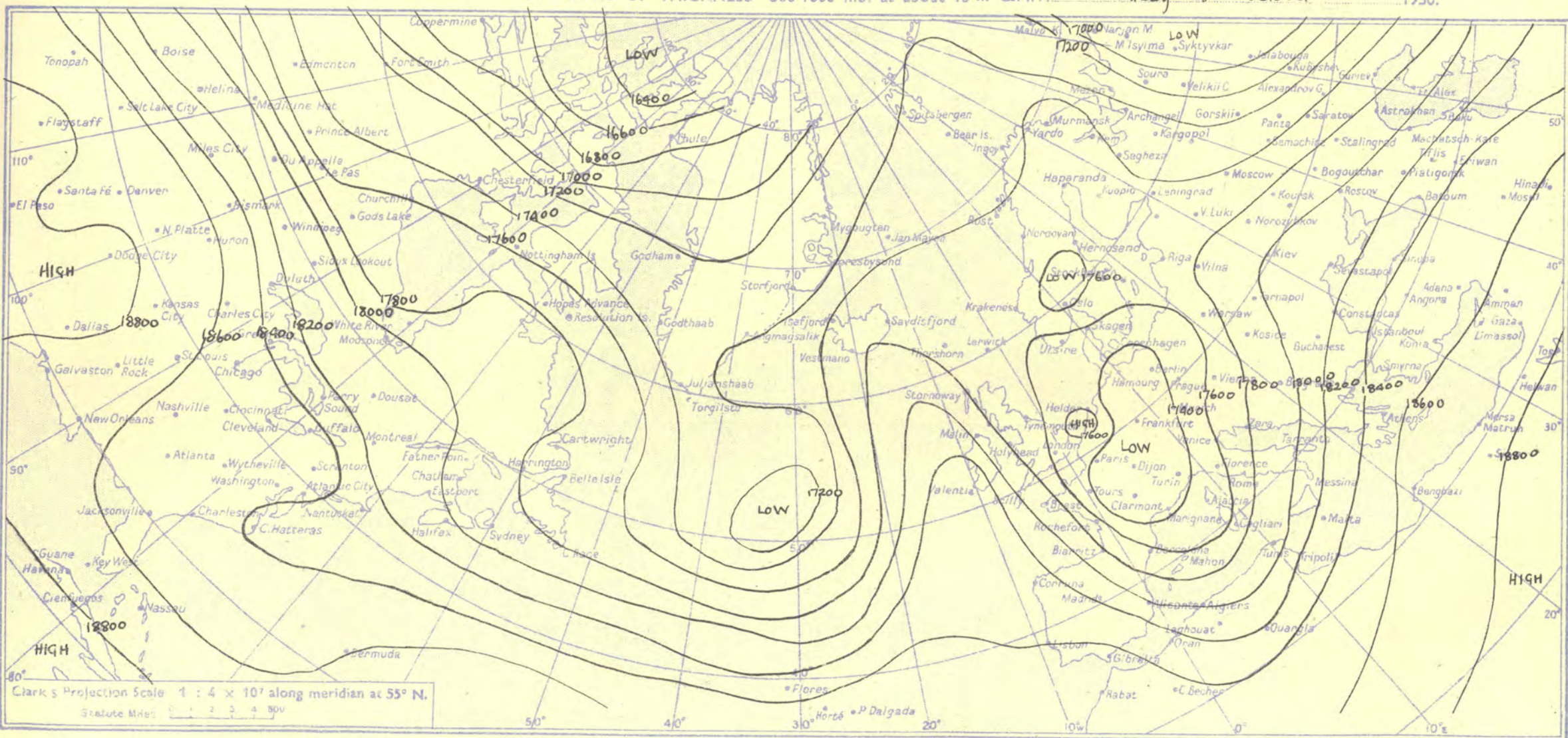
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.



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

Sunday 29th October

1950.



Clark's Projection Scale 1 : 4 x 10⁷ along meridian at 55° N.

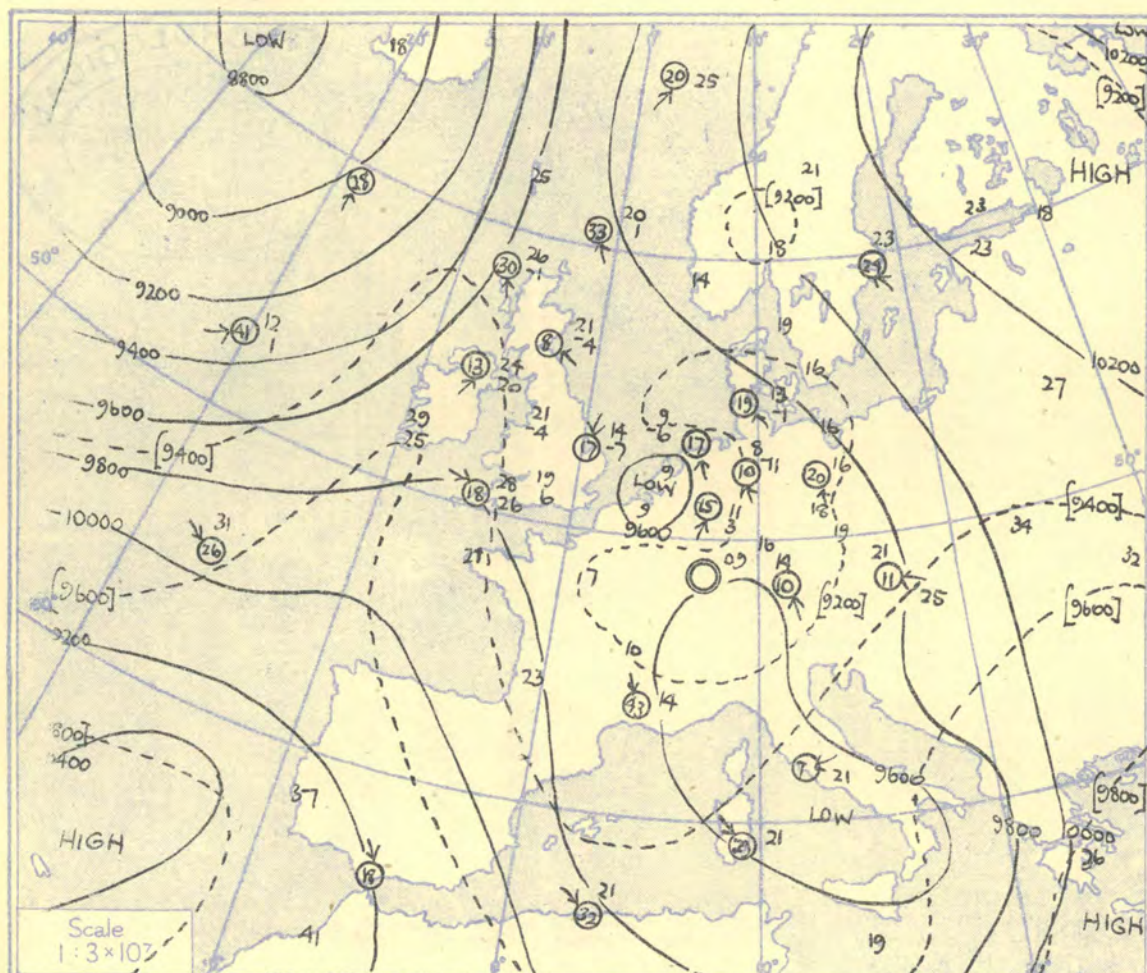
Statute Miles 0 1 2 3 4 500

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

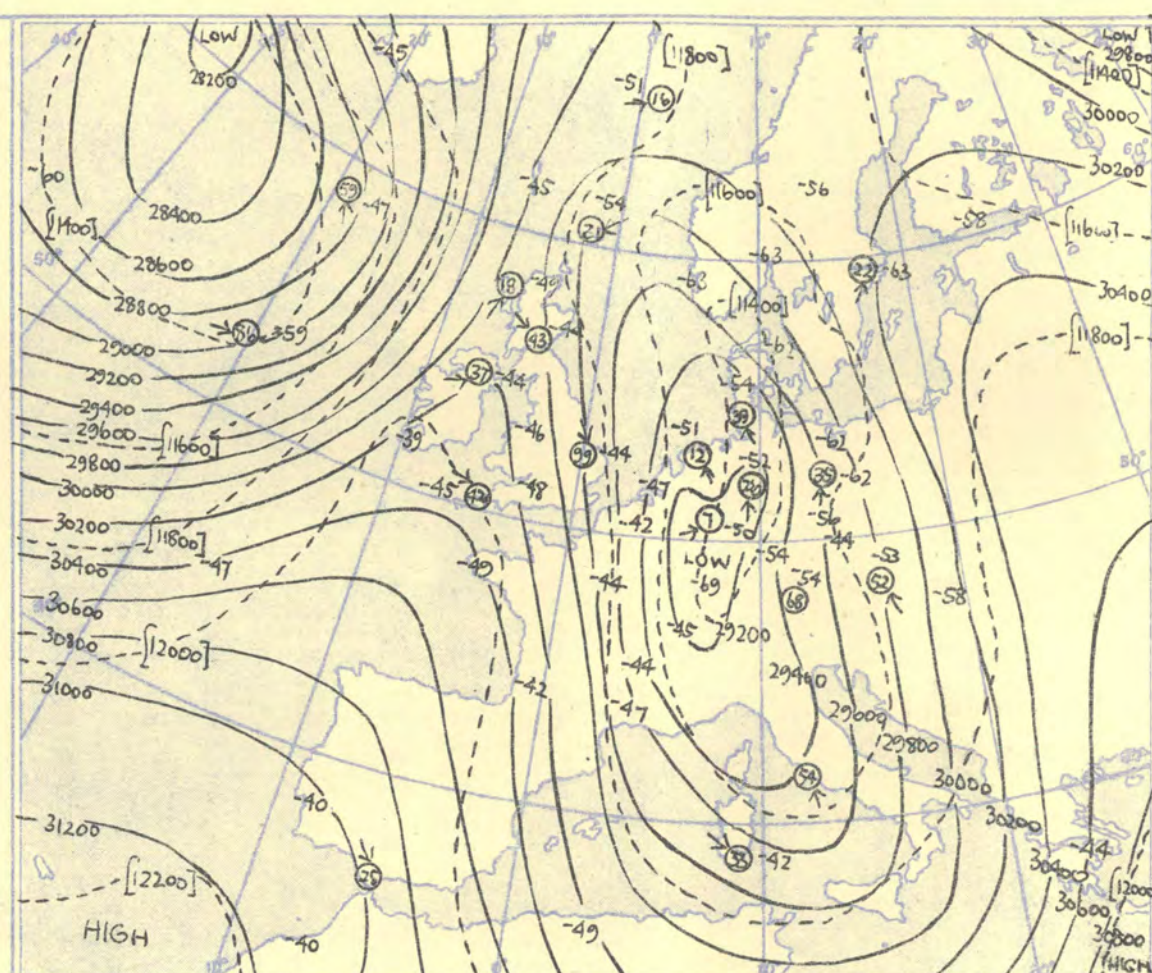
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION														
Time	ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		ISL		G.M.T.		Time														
M.S.L.	1020.2		mb		1016.6		mb		1018.2		mb		1017.2		mb		1017.3		mb		1014.0		mb		1016.9		mb		1017.4		mb		1009.7		mb		M.S.L.														
Surf	1010.0		mb		1014.7		mb		1017.4		mb		1008.3		mb		1015.3		mb		1009.7		mb		1000.8		mb		1006.7		mb		1009		Surf																
Freezing	200		mb		923		mb		912		mb		900		mb		920		mb		875		mb		932		mb		850		mb		685		Freezing																
Pressure	Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Pressure														
mb	Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind		Temp.	Dew	Wind	mb															
Surf	2.7	45	36	150	10	0.5	46	34	160	10	0.2	45	38	070	10	2.3	46	35	170	12	0.6	46	34	360	03	1.2	45	41	340	10	4.4	45	35	350	08	2.9	49	41	157	10	0.3	51	48	Surf							
1000	5.4	44	37		4.5	44	33		4.9	43	37	056	12	4.6	45	34		4.7	44	33	341	06	3.8	44	40		4.5	43	35		4.7	48	40		4.7	48	40		2.9	51	48	1000									
950		38	31	140	16		37	28	165	16		37	32	079	11		39	31	155	19		37	27	360	10		39	35	356	29		35	25	334	13		41	37	173	15		46	44	950							
900	33.3	32	25	141	16	32.4	29	30	161	18	32.9	30	26	091	10	32.7	32	27	162	20	32.7	30	21	014	09	32.0	34	30	357	28	32.4	27	17	348	14	32.9	36	34	182	10	31.5	42	37	900							
850		26	20	143	15		27	06	155	19		26	18	098	13		27	18	168	12		27	16	021	10		30	25	351	25		22	13	355	15		32	23	257	08		45	39	850							
800	63.8	22	14	153	16	63.1	26	10	160	15	63.5	23	13	102	12	63.4	25	07	175	08	63.2	22	07	029	13	62.9	24	19	356	24	62.8	19	01	348	18	63.9	28	17	339	09	63.2	43	37	800							
750		23	14	160	16		26	17	166	11		21	06	069	09		27	04	045	03		18	02	021	12		17	12	359	22		15	06	353	16		26	15	345	21		39	33	750							
700	98.1	23	09	158	16	97.6	23	33	175	04	98.0	19	04	053	09	97.9	25	13	326	12	97.3	18	03	023	16	97.0	10	05	358	28	96.6	11	13	357	20	98.7	25	22	330	31	98.8	35	31	700							
650		20	06	146	17		20	35	L.V.			16	03	051	11		23	07	320	24		15	01	020	22		08	02	352	29		08	18	354	25		24	13	331	42		27	22	650							
600	138	16	04	136	21	137	18	37	326	07	137	11	04	048	11	138	20	10	326	35	136	09	06	005	22	136	03	05	345	39	135	02	22	347	31	139	20	03	336	51	139	21	11	600							
550		10	07	135	21		15	37	328	18		04	17	033	11		14	15	332	34		02	13	348	37		05	17	347	43		05	32	341	49		15	03	337	56		16	06	550							
500	183	01	19	138	25	183	04	33	322	24	182	01	28	019	23	184	05	13	325	45	181	00	16	338	63	180	10	20	349	44	179	07	39	340	75	185	07	12	330	69	185	09	20	500							
450		10	30	146	24		04	47	348	18		09	41	357	39		04	19	329	38		07	23	345	71		18	42	347	57		16	44	340	90		00	07	329	65		02	24	450							
400	237	22	44	146	21	237	17	49	339	21	235	16	50	351	64	238	15	29	346	36	235	17	32	346	86	232	31	55	343	65	232	26	53	346	162	239	11	20	337	63	240	14	33	400							
350		36	59	125	10		32	59	309	30		29	56	351	77		29	43	336	38		29	43	345	93		35	59	345	100		38	60	346	113		26	35	338	54		25	46	350							
300	302	48		355	30	302	49		309	42	301	43		344	83	304	45		330	56	301	44		339	99	297	41		352	112	297	52		344	112	306	42		338	68	306	39	55	300							
250		61		345	38		65		309	58		60		346	85		59		326	78		58		340	99		53		346	92		65		340	110		55		330	89		57	250								
200	388	72		343	31	387	81		308	40	388	71		335	76	390	77		328	59	388	67		335	83	385	59		348	67	383	68		344	79	393	71		331	89	393	73		77	200						
170		72		346	27		78		293	39		71		343	51		84		328	46		71		340	64		60		349	46		70		366	60		82		334	75		77	170								
150		67		333	17		75		298	28		68		348	39		74		326	46		71		349	45		64		349	45		72		342	63		78		334	71		79	150								
130		70		320	19		73		306	19		71		340	28		75					71		340	28		65		351	35		72					74			81	130										
110		70		337	12		78		268	08		71		344	20		75					71		344	20		63		358	23		74					79			80	110										
100	532	67		332	15	529	75		280	09	532	72		342	18		74				532	74				532	67		360	21	(113mb)				(126mb)				82	100											
90		67		308	15		72					71		333	18		70					69		333	17		70												76	90											
80		68		290	09							72		335	13		72					69		335	13		70												76	80											
70		69		279	07							79		324	09		72					70		324	09		72												72	70											
60																																											60								
Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.				Inversion.			
780mb 19°-162mb 23°				850mb 27°-831mb 29°				765mb 20°-735mb 21°				826mb 24°-753mb 28°				678mb 07°-670mb 09°				550mb 5°-537mb 4°				808mb 27°-780mb 31°				900mb 42°-850mb 45°				1009-1000mb 51°																			
Isothermal.				785°-25°-764°-27°				724°-23°-710°-24°				677°-21°-667°-22°				610																																			

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

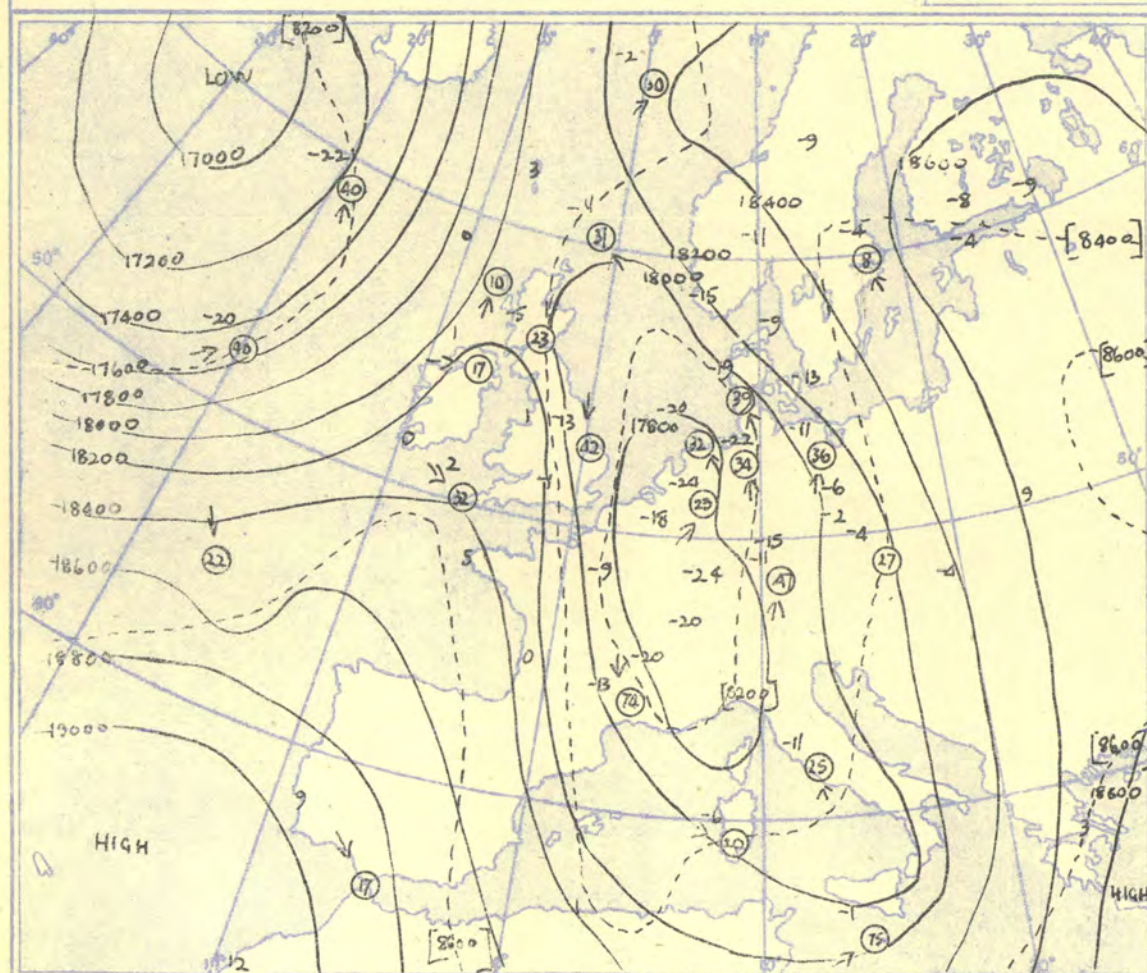
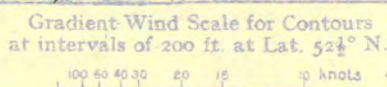
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Time M.S.L. Surf (Freezing)	03h 1017.4 1007.2 908				03h 1009.3 1007.3 800				03h 1014.9 1014.1 918				03h 1012.0 1003.1 805				03h 1014.5 1012.5 893				03h 1014.6 1010.3 893				03h 1015.7 999.1 900				03h 1012.1 1001.4 740				03h 1002.9 1001.9 730				Time M.S.L. Surf (Freezing)				
Pressure mb	Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Height ft./100				Pressure mb				
Temp. °F.	Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				Temp. °F.				
Dew °F.	Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				Dew °F.				
Wind Dir. Vel. knots	Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				Wind Dir. Vel. knots				
Surf	02.7	46	38	160	22	00.5	45	42	150	25	00.2	32	32	CA LM	02.3	45	39	140	12	00.6	34	33	CA LM	01.2	37	36	295	05	04.4	33	29		02.9	46	46	180	15	00.3	54	53	Surf
1000	4.6	45	36		2.5	45	41			3.9	33	32			3.2	41	35	158	32	3.9	37	35		4.0	41	38		1.2	39	30		3.3	46	46		8	50	53	1000		
950		38	27	154	34	39	36	161	30		37	33	156	20		37	31	166	34	31.9	33	26			38	33	038	07		39	30		41	41	172	29	50	48	950		
900	32.7	31	22	159	34	30.6	32	29	175	33	31.7	29	22	156	23	31.5	37	21	192	24	31.9	33	26	32.1	33	28	041	09	32.1	32	22		31.6	39	39	192	30	29.6	46	48	900
850		24	16	160	34	34	22	184	35		26	21	153	27		33	21	192	24		28	21			26	18	043	11		28	16		40	40	242	22	43	39	850		
800	63.1	27	12	156	34	61.6	32	10	180	29	62.4	27	19	141	28	62.6	32	29	203	21	62.6	24	18	62.6	20	15	041	12	62.7	24	03		63.0	37	37	270	22	61.3	39	35	800
750		24	06	150	33	28	01	169	27		26	05	118	21		30	26	184	15		25	05			15	07	025	12		20	03			33	32	279	15	35	31	750	
700	97.7	20	01	149	33	96.3	26	01	164	30	97.0	21	09	111	08	97.5	24	20	197	13	97.0	21	04	96.5	14	07	015	17	96.9	19	06		98.2	28	26	275	19	96.6	29	25	700
650		14	07	144	26	19	03	162	24		14	20	L.V			21	17	237	16		16	14			08	16	008	19		14	01		21	19	274	19	22	14	650		
600	137	09	17	136	36	136	13	09	168	15	136	06	29			137	14	09	244	15	136	11	25	135	08	27	003	22	136	09	08		138	14	03	280	28	136	15	10	600
550		01	28	134	33	07	09	155	12		02	31	020	10		08	25	251	16		07	21			01	41	359	32		06	04		08	16	288	27	08	19	550		
500	181	11	41	128	31	181	00	04	177	10	180	05	35	358	23	183	01	54	241	17	181	01	11	179	13	49	350	42	181	01	02		183	02	38	293	32	182	00	28	500
450		20	50	110	30		08	12	180	09		10	41	343	37		08	26	272	19		06	09		10	49	331	72		08	13			05	45	286	48	06	27	450	
400	234	27	56	079	33	235	19	23	158	09	234	15	45	341	39	236	19	30	262	29	235	18	24	232	17	56	330	90	235	20	27		237	16	43	285	49	236	14	30	400
350		33	59	061	34		32	37	188	10		29	55	336	48		29	38	253	35		31	36		30	57	339	93		34	42		30	47	285	44	26	39	350		
300	298	54	040	31	300	49			221	18	300	44		321	48	302	44		257	37	301	46		298	44		330	99	300	48		303	45		292	42	302	39	50	300	
250		66	04	31		66			241	27		59		307	62		63		263	57		63			57		335	93		65			61		289	48		54	250		
200	383	78	012	16	385	85			245	34	386	76		315	47	388	81		263	45	387	69		385	69		333	69	386	68		389	74		291	51	390	71		200	
170		78	356	08		79			243	32		87		325	30		73		264	29		72			70			336	47		75			75		286	48		73	170	
150		74	345	04		78			230	21		73		305	24		73		256	27		76			70			336	45		75			75		283	45		73		
130		76				77			219	14		69		310	11		78		235	25		74			72			328	30		79			77		284	30		72	130	
110		76				80						70		270	09		77		250	21		77			74			322	19		77			82		289	28		73	110	
100	52.5	76	227	06							528	71		265	09	529	77		244	8	529	77			75				322	18	528	76		79		293	16	533	75		100
90		78	227	10								73		265	09		76					78			75								80			75		75		90	
80																																								80	
70																																								70	
60																																								60	
Inversion 829 mb 20° - 795 mb 28°																																					(72 mb)				
Isothermal 750 - 718 mb 28°																																					(75 mb)				
Tropopause I 186 mb - 81° 39,600'																																					(75 mb)				
STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION				
Time M.S.L. Surf (Freezing)	09h 1016.2 1006.1 903				09h 1006.9 1005.0 841				G.M.T. mb mb mb				09h 1005.8 997.0 815				09h 1011.2 1009.2 888				09h 1014.3 1009.7 892				09h 1014.3 997.7 900				09h 1007.6 997.5 750				G.M.T. mb mb mb				Time M.S.L. Surf (Freezing)				
Pressure mb	Height ft./100				Height ft./100				Height ft./100				Height ft./100																												



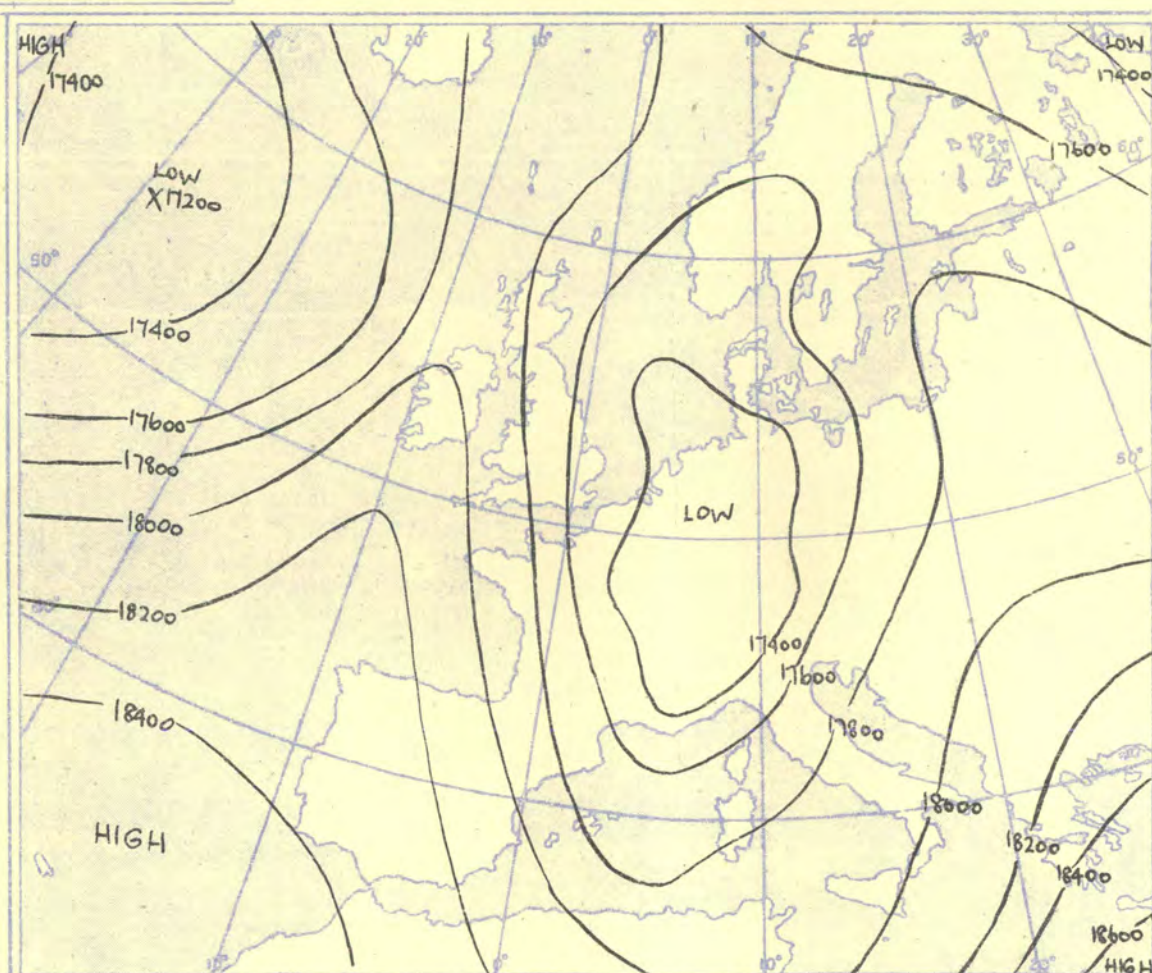
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



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



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



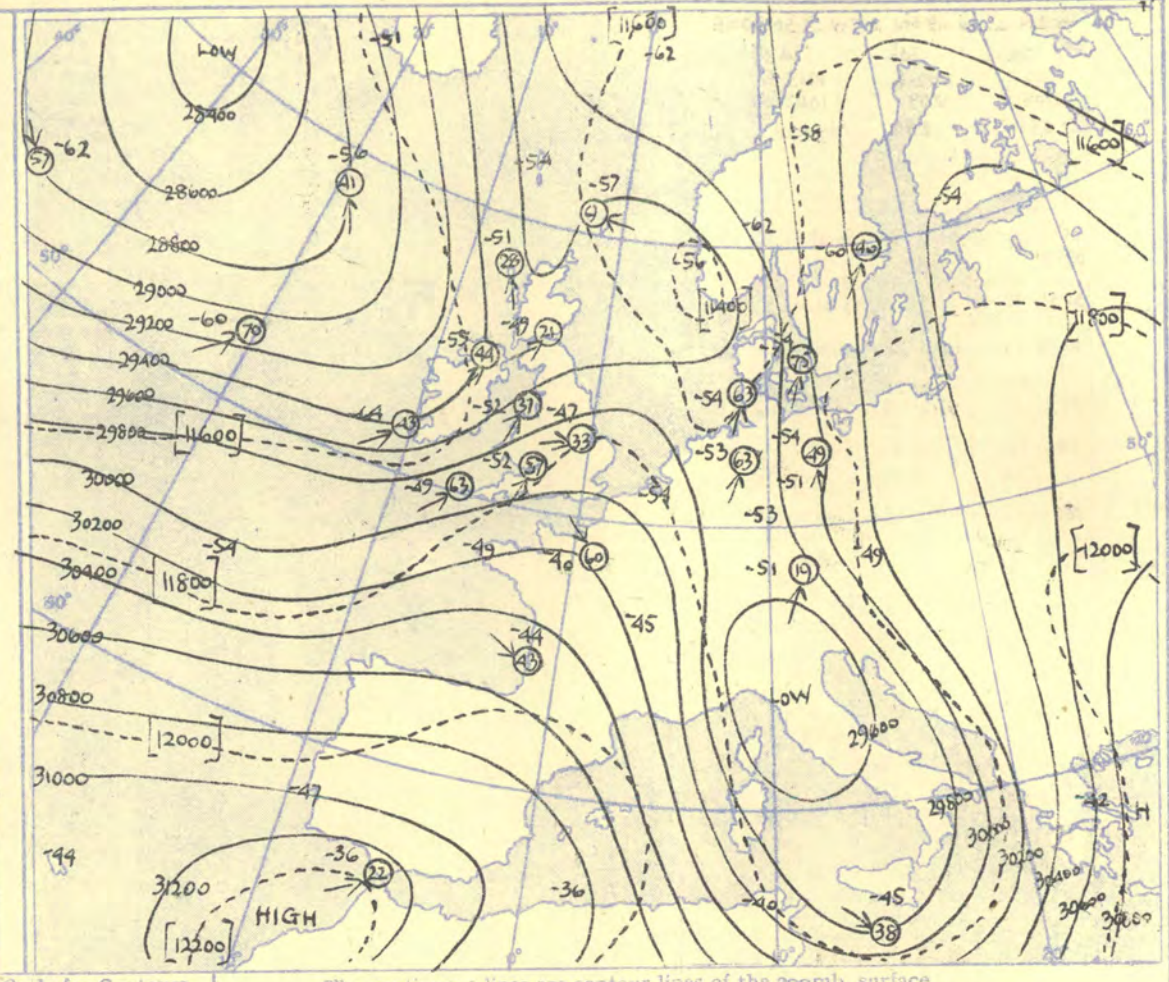
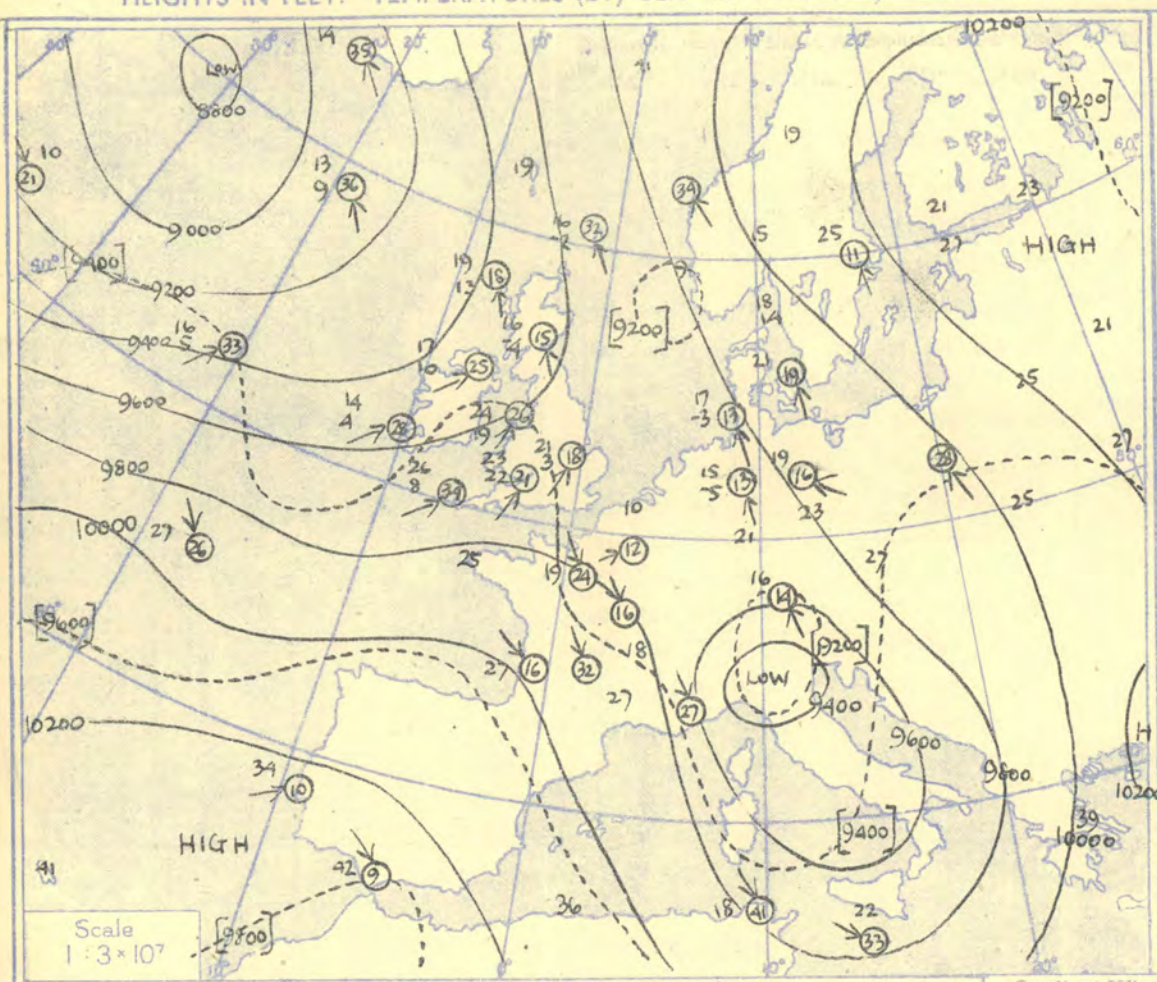
Isopleths of Thickness 500-1000mb.

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

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

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				Ship								
Lat/Long	59-1 N 18-9 W				59-2 N 18-9 W				59-2 N 18-9 W				59-2 N 18-8 W				52-3 N 19-8 W				52-2 N 20-1 W				52-2 N 20-3 W				52-2 N 20-0 W				Lat/Long								
Pressure Time M.S.L. Surf Freezing	03h. 989 989 850		G.M.T. mb mb mb		09h. 991 991 870		G.M.T. mb mb mb		15h. 993 993 860		G.M.T. mb mb mb		21h. 994 994 890		G.M.T. mb mb mb		03 1002 1002 890		G.M.T. mb mb mb		09h. 1001 1001 900		G.M.T. mb mb mb		15h. 999 999 840		G.M.T. mb mb mb		21h. 997 997 810		G.M.T. mb mb mb		Pressure Time M.S.L. Surf Freezing								
Pressure Height Temp. Dew Wind Dir. Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir.	Vel. knots	Pressure mb					
Surf	47	40	190	18	47	34	190	18	47	39	180	20	48	39	140	17	49	43	270	25	49	45	250	30	52	50	225	34	52	46	235	25	52	46	235	25	Surf				
1000	2-9	42	37	194	24	42	36	181	24	42	38	178	21	41	35	142	19	42	31	260	31	42	31	260	30	44	42	208	43	47	38	232	28	47	38	232	28	1000			
950	25-4	37	34	196	23	36	30	181	24	36	33	173	24	33	29	148	24	33	29	148	24	33	29	148	30	39	33	211	48	41	32	232	34	41	32	232	34	950			
900	32	26	199	23	29	26	180	27	30	26	172	28	32	27	157	23	32	27	157	23	32	27	157	30	33	26	214	43	36	27	232	33	36	27	232	33	900				
850	56-3	26	19	200	24	23	21	177	27	25	20	171	26	21	13	162	22	21	13	162	22	21	13	162	34	58-7	18	10	246	35	59-2	28	19	219	36	59-1	31	21	232	36	850
800	56-3	26	19	200	24	23	21	177	27	25	20	171	26	21	13	162	22	21	13	162	22	21	13	162	34	58-7	18	10	246	35	59-2	28	19	219	36	59-1	31	21	232	36	800
750	90-4	19	12	200	27	17	10	170	26	19	15	167	30	17	08	166	26	17	08	166	26	17	08	166	39	14	02	252	38	22	11	225	37	25	15	233	33	750			
700	7	01	183	32	90-6	11	2	161	28	91-4	13	09	164	29	10	03	166	27	93-6	12	01	243	41	92-4	09	02	257	42	93-6	16	05	236	33	93-7	19	10	232	33	700		
650	129	-1	-11	175	36	129	-1	-19	160	31	130	-02	-09	158	30	129	-08	-14	164	24	132	-03	-17	238	35	130	-05	-15	262	44	132	02	-09	243	51	133	07	-03	232	44	650
600	-11	-23	172	42	-9	-21	168	37	-10	-15	167	36	-15	-26	163	22	-11	-26	163	22	-11	-26	163	39	-11	-24	261	45	-08												

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

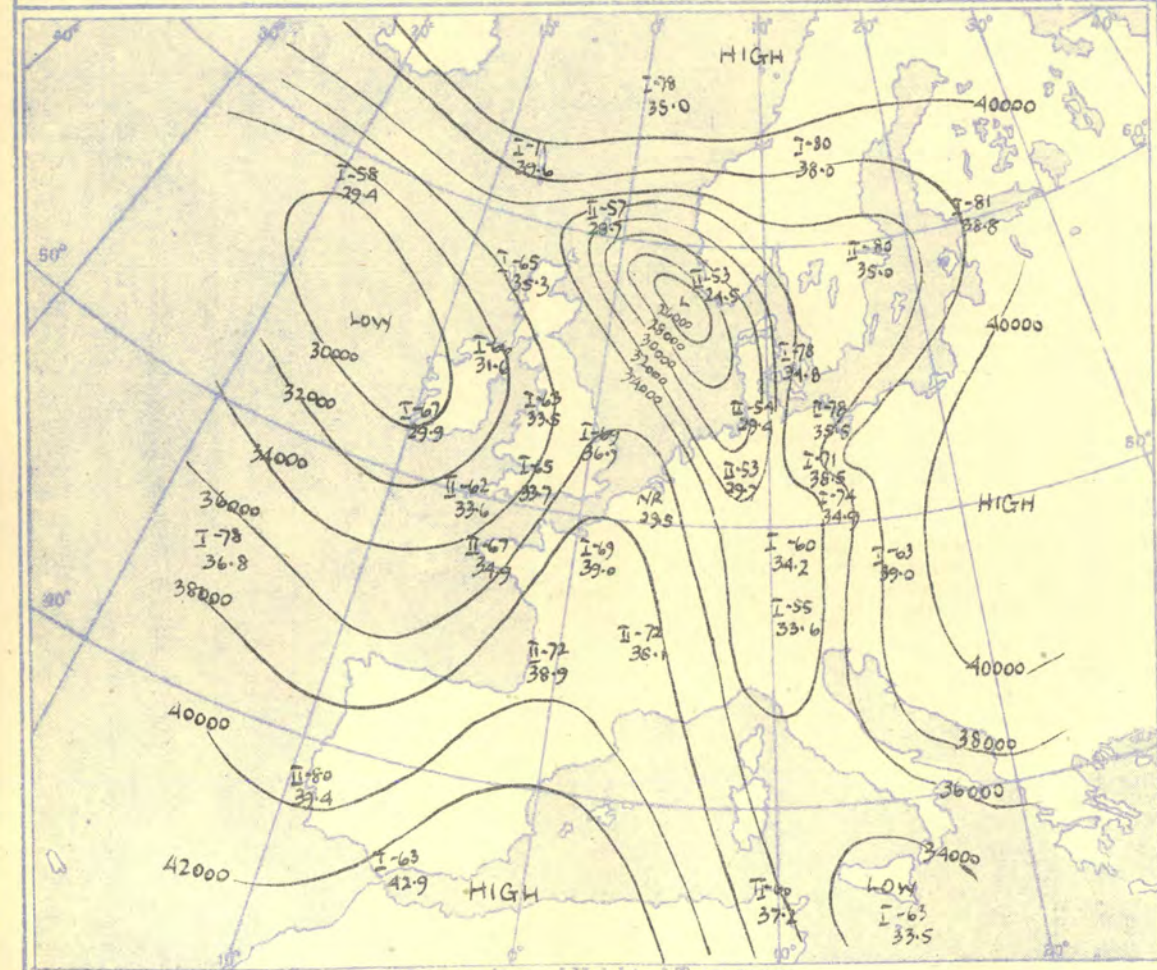


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000-700 mb

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

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.



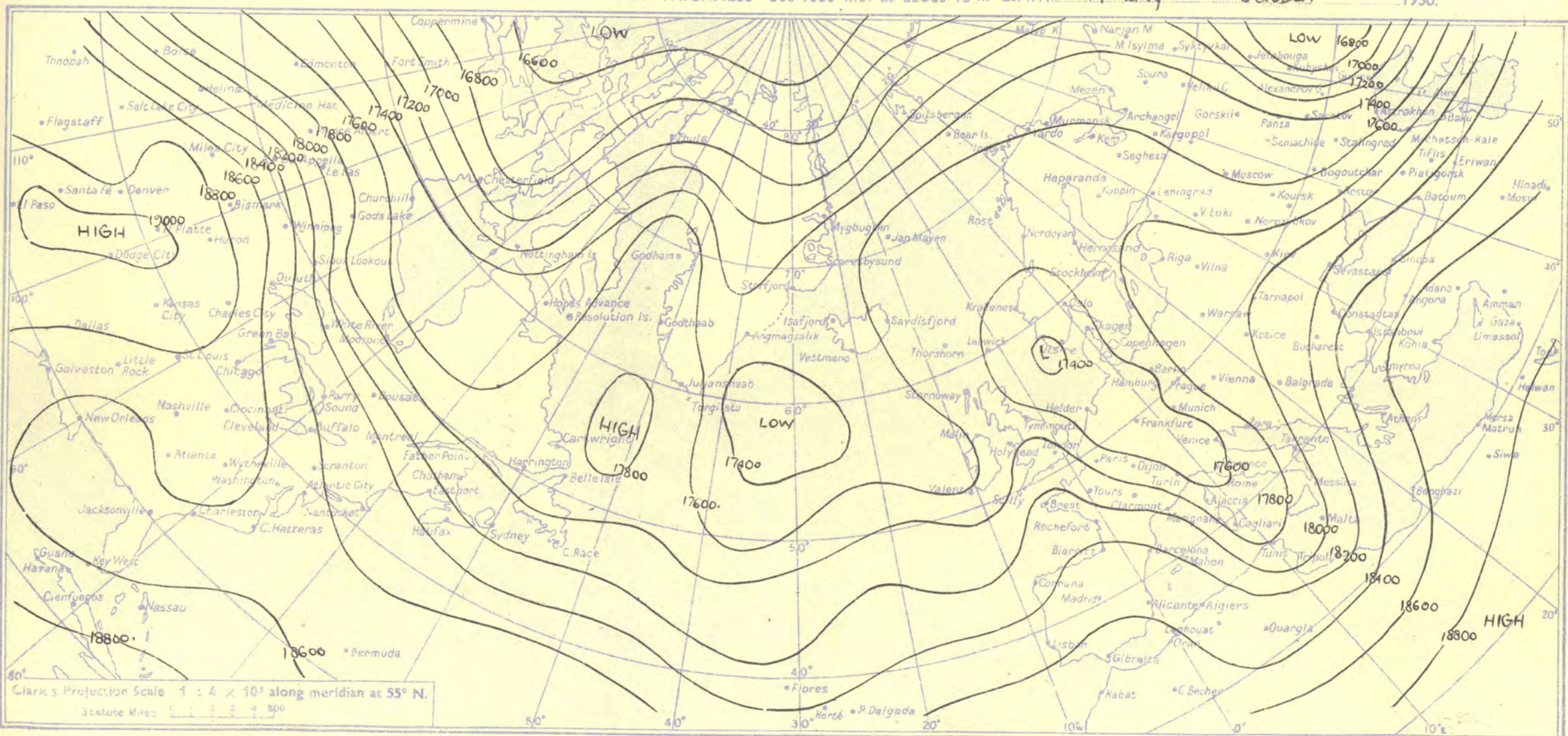
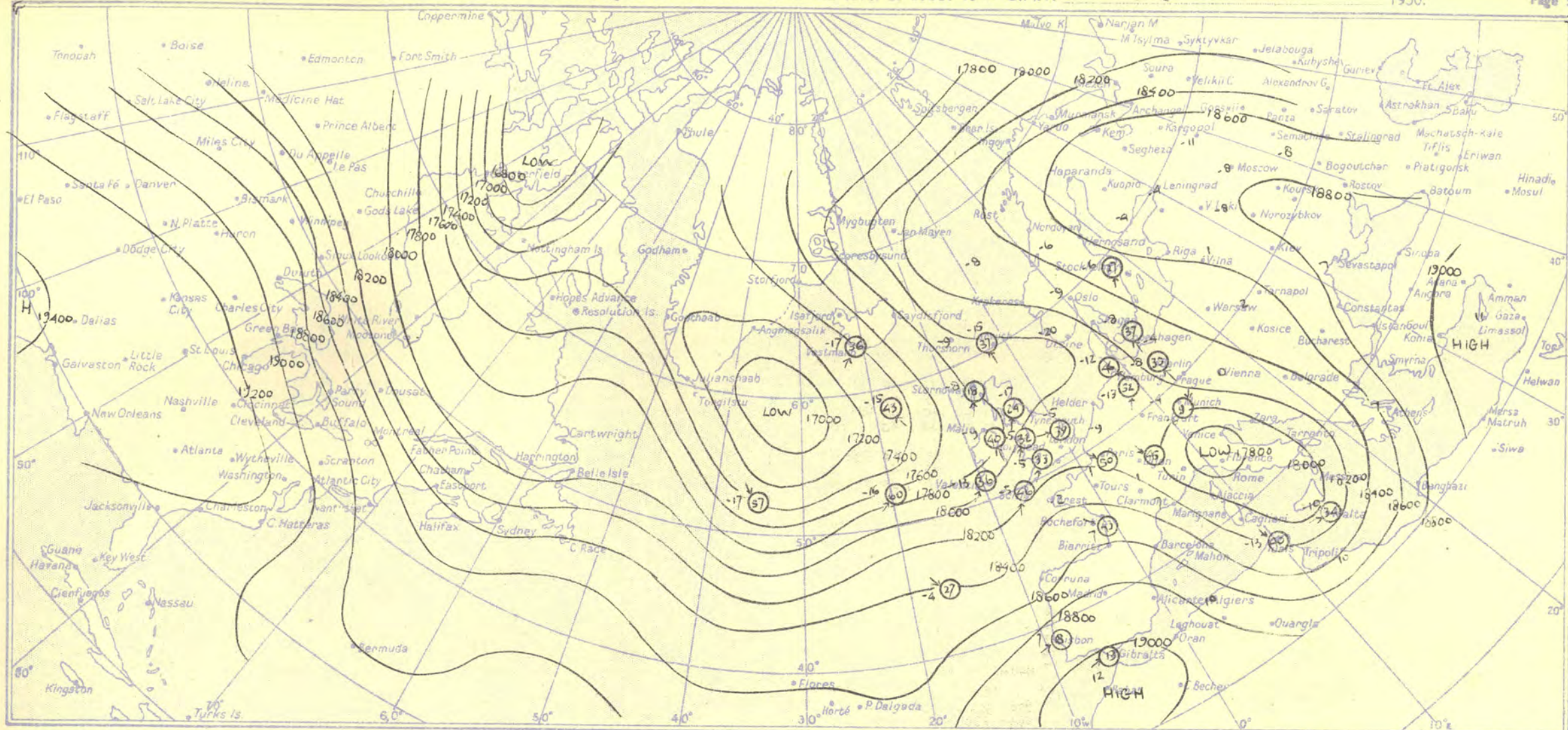
Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold pool over South Germany continued to warm out slowly but a second pool developed over the North Sea. The warm ridge over Ireland moved to central England but weakened. The Atlantic cold pool moved slowly northeast and warmed whilst marked warming, partly non-advective, occurred in the extreme northwest Atlantic ahead of the surface depression over Eastern Canada.

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



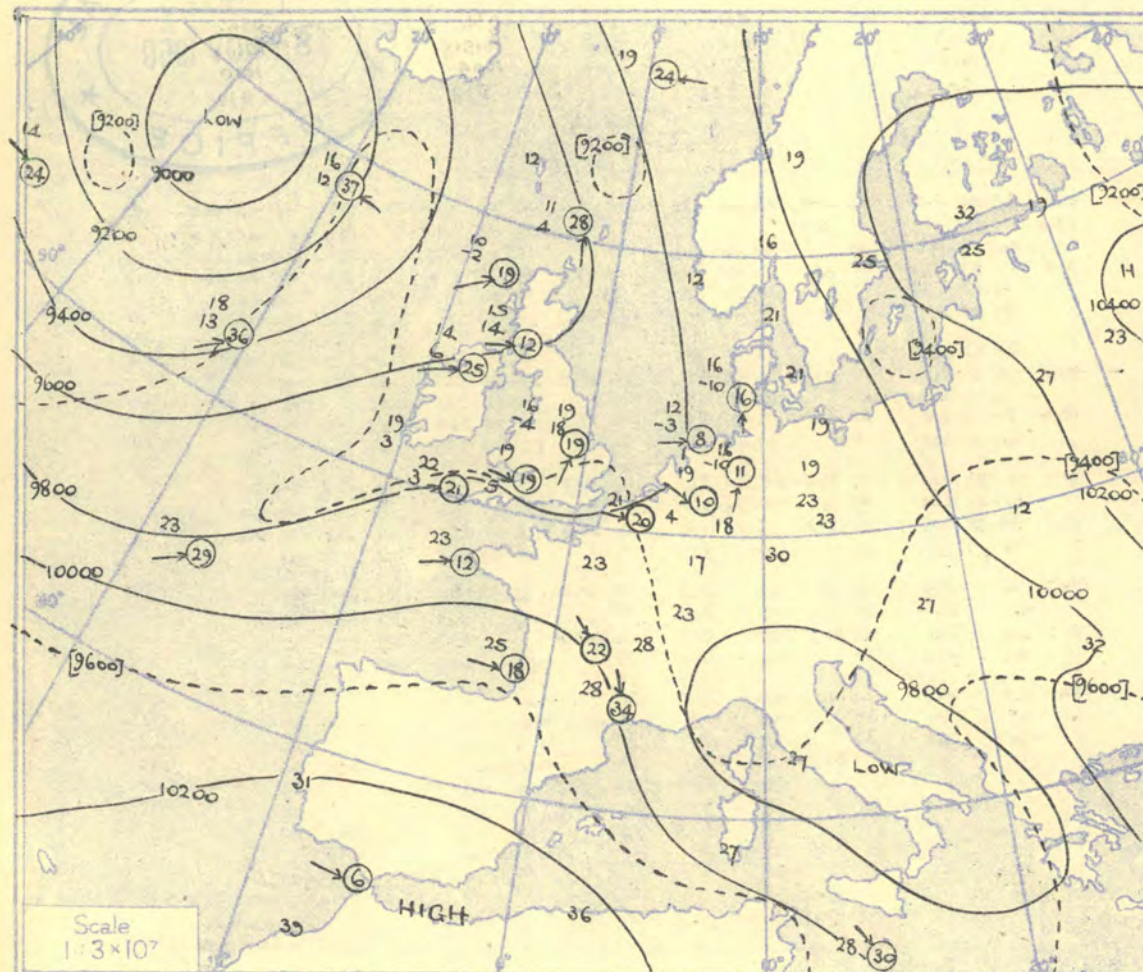
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.)

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION						
Pressure	Time	15h		G.M.T.	M.S.L.	Surf	1004.9		mb	Freezing	1005.4	1003.5		mb	1009.7	1008.8		mb	1003.5	994.8		mb	1008.1	1006.1		mb	1013.6	1009.3		mb	1011.0	994.8		mb	1008.0	997.5		mb	1008.4	1007		mb	Time
	Surf	894		mb		872	878		mb		860	815		mb	878	800		mb	805	855		mb	855	855		mb	855	855		mb	855	855		mb	855	855		mb	Pressure				
	Freezing	894		mb		872	878		mb		860	815		mb	878	800		mb	805	855		mb	855	855		mb	855	855		mb	855	855		mb	855	855		mb	Freezing				
Pressure	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	Height	Temp.	Dew	Wind	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	ft./100	°F.	°F.	Dir. Vel. knots	ft./100	°F.	°F.	Dir. Vel. knots	mb		
Surf	2.7	47	41	150 21	1.5	48	33	160 20	0.2	46	38	150 15	2.3	45	43	130 20	0.6	42	40	130 8	1.2	46	42	150 06	4.4	45	41	170 12	2.9	55	51	285 08	0.3	53	43	250 11	Surf						
1000	4.0	46	40		1.5	48	33		2.6	45	35		0.9				2.3	41	38	132 25	3.7	45	41		2.9	45	41		2.2	55	51	285 08	2.3	52	43	252 11	1000						
950		40	34	150 31		42	29	145 21		41	31	154 26		39	37	156 26		38	35	162 31		40	36	180 42		39	37	171 27		49	45	285 22		45	38	270 17	950						
900	32.1	33	27	152 33	29.8	36	24	155 22	30.8	35	24	159 27	29.1	36	33	158 21	30.5	37	34	180 34	31.9	34	27	191 16	31.1	35	35	187 31	30.9	42	38	285 24	30.7	37	30	273 19	900						
850		27	21	152 33		29	20	169 27		29	22	159 32		31	28	234 16		34	30	200 28		29	22	203 18		33	33	214 28		37	34	273 22		31	25	271 22	850						
800	62.7	22	17	153 36	60.7	27	22	176 26	61.5	22	17	153 27	60.1	29	26	247 18	61.6	31	27	217 18	62.7	24	16	210 15	62.2	32	32	228 22	62.2	31	28	260 22	61.6	25	17	270 33	800						
750		16	09	155 36		25	20	171 20		16	08	157 22		24	20	235 18		27	22	218 20		24	08	221 16		29	29	230 25		26	24	244 24		20	10	261 29	750						
700	96.7	16	02	148 32	95.2	19	13	154 18	96.0	16	04	174 15	94.5	17	10	224 25	96.4	24	19	221 26	97.1	21	03	229 18	97.1	23	22	231 21	97.0	26	08	230 34	95.7	14	04	251 28	700						
650		10	16	146 30		12	05	146 20		09	06	179 18		11	05	208 32		18	12	240 36		14	03	248 09		18	16	252 20		22	06	226 36		08	17	253 31	650						
600	135	02	29	136 33	134	06	02	144 15	134	03	04	220 15	133	04	01	179 34	136	11	05	241 33	136	10	06	217 18	136	11	07	267 23	137	15	18	230 36	134	02	18	252 33	600						
550		-67	39	121 31		01	07	192 14		01	04	267 17		-03	10	170 39		04	04	242 30		03	04	291 28		04	01	257 25		05	27	233 39		-04	20	252 36	550						
500		179	-15	27 108 37		179	-08	16 195 18		178	-07	13 259 24		178	-09	25 175 40		181	-05	19 242 32		181	-05	10 287 39		181	-05	10 255 33		182	-05	36 237 46		178	-13	33 254 36	500						
450		-25	-37	107 39		-16	-26	200 17		-17	-24	264 13		-16	-38	178 40		-16	-27	234 22		-17	-18	279 37		-15	-20	242 38		-16	-45	238 45		-23	-42	255 37	450						
400	231	-37	-49	103 44	231	-27	-37	188 17	231	-28	-36	256 26	230	-25	-46	180 42	233	-27	-38	238 33	234	-23	-31	276 44	234	-25	-30	236 45	235	-28	-55	235 57	230	-36	-52	264 41	400						
350		-50		103 42		-37	-48	180 22		-39	-48	241 31		-38	-58	188 45		-40	-51	229 39		-34	-43	273 37		-40	-47	233 52		-42		227 60		-49		270 41	350						
300		294	-57	096 09	296	-51		168 28	296	-49		227 21	295	-55		192 44	298	-52		217 38	299	-47		267 33	299	-52		241 57	299	-49		233 63	293	-64		267 43	300						
250		-60		087 07		-63		175 30		-63		219 27		-65		198 44		-62		220 46		-61		257 42		-65		244 51		-62		237 69		-63		248 39	250						
200	380	-62		166 07	382	-60		162 26	381	-74		219 23	381	-58		264 35	385	-56		228 32	386	-62		252 32	385	-69		240 45	385	-62		234 52	379	-57		240 39	200						
170		-62		170 07		-60		188 36		-65		210 24		-60		200 26		-57		226 33		-67		249 26		-68		223 30		-60		232 50		-59		227 38	170						
150		-63		177 08		-55		208 33		-67		229 22		-67		204 27		-65		230 33		-67		253 26		-71		236 33		-63		242 45		-59		224 38	150						
130		-66		181 10		-61		175 20		-68		230 22		-65		214 33		-65		237 33		-67		258 26		-72		247 40		-66		240 37		-62		226 37	130						
110		-70		193 09		-63		207 25		-67		230 20		-71		212 30		-67		231 18		-70		254 21		-74		236 20		-69		233 34		-67		234 32	110						
100	526	-70		210 16	530	-63		209 27	526	-69		218 18		-70		213 15		-66		233 18	532	-66		233 18	531	-73		252 17	529	-74		249 16	531	-75		232 31	526	-68		240 31	100		
90		-69		220 15		-60		215 18		-70		215 15		-70		214 15		-66		233 18		-72		256 19		-70		247 16		-77		235 26		-70		231 25	90						
80		-69		224 14		-62		200 16		-70		214 15		-70		214 15		-66		233 18		-71		248 18		-67		247 16		-76		236 25		-70		231 22	80						
70		-68				-60		217 20		-71		220 18		-71		220 18		-65		230 33		-70		250 15		-66				-74		236 25		-72		234 21	70						
60	(75 mb)					-62		217 12		-73		231 21		-74		234 17		-71		250 15	(18 mb)																	60					
Inversion 734mb 15°-709mb 17°				Inversion 826mb 26°-800mb 27°-605° 05°-578° 07°				Inversion 30mb 70°-758mb 15°-729mb 18°				Inversion 840mb 30°-825mb 31°				Inversion 950mb 38°-928mb 39°				Isothermal 800-729mb 24°				Isothermal 830-800mb 32°				Inversion 729mb 24°-700mb 26°															
Tropopause 11309mb -57° 28.700°				I 230mb -65° 35.300°				I 202mb -75° 35.400°				I 270mb -66° 31.600°				I 253mb -63° 33.500°				I 219mb -69° 36.700°				I 250mb -6mb -																			

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

STATION		LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				STATION		
Time		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		03h.		G.M.T.		Time		
M.S.L.		1013.0		mb		1006.9		mb		1010.1		mb		1002.7		mb		1011.8		mb		1013.3		mb		1014.1		mb		1015.5		mb		M.S.L.		
Surf		1002.9		mb		1004.9		mb		1009.2		mb		1011.3		mb		1009.8		mb		1008.5		mb		1014.1		mb		1004.7		mb		Surf		
Freezing		882		mb		876		mb		853		mb		835		mb		839		mb		841		mb		833		mb		828		mb		Freezing		
Pressure		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Height		Temp.		Pressure		
mb		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		ft./100		°F.		mb		
Dir.		Vel.		knots		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		Vel.		Dir.		
knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		knots		
Surf		02.7		44		42		150		24		00.5		44		42		200		03		00.2		34		34		CALM		02.3		39		37		Surf
1000		03.5		38		32		135		30		01.9		45		43		200		02.7		36		36		CALM		03.0		42		34		255		1000
950		31.5		33		29		140		31		30.1		35		32		241		14		30.7		34		34		12		45		44		256		950
850		29.2		29		24		151		30		29.2		29		25		236		19		31		31		15		34		34		15		34		850
800		62.2		22		16		155		21		60.9		23		19		237		20		61.6		26		25		20		62.7		24		17		800
750		15.09		153		23		16		06		233		18		21		20		21		20		20		20		20		20		20		20		750
700		96.0		11		04		158		28		94.8		10		02		232		19		95.7		15		14		20		20		20		20		700
650		02		13		167		24		28		03		14		228		18		08		08		08		08		08		08		08		08		650
600		13.4		06		20		179		21		13.3		05		27		230		22		13.4		02		14		05		20		22		22		600
550		13		22		197		22		22		11		23		236		22		22		11		23		236		22		22		22		22		550
500		17.7		10		31		224		24		17.6		19		36		248		21		17.8		14		34		18.0		13		28		272		500
450		25		35		239		27		21		30		48		237		21		21		24		43		23		23		23		23		23		450
400		29		36		146		234		30		22.7		44		216		22		23.0		37		55		23		23		23		23		23		400
350		49		212		31		58		205		26		49		205		26		49		205		26		49		205		26		49		205		350
300		29.2		57		190		30		28.9		70		203		22		29.3		71		29.4		61		243		26		295		70		300		
250		65		186		33		65		195		26		65		26		65		26		65		26		65		26		65		26		65		250
200		37.8		59		178		24		37.4		64		179		24		37.9		61		37.9		61		37.9		61		37.9		61		37.9		200
170		62		183		24		65		179		24		65		179																				

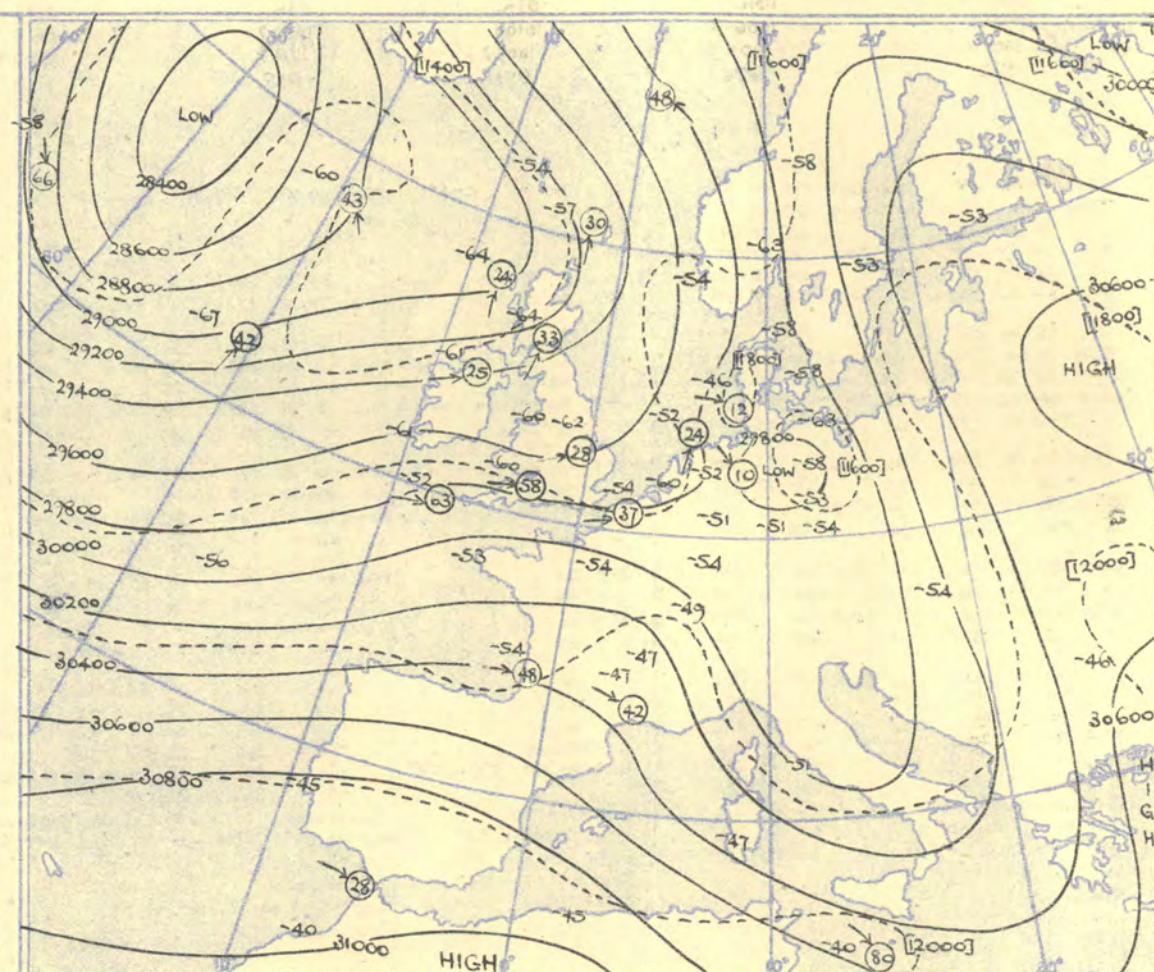
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb., and 300 mb., levels at about 03 h G.M.T.



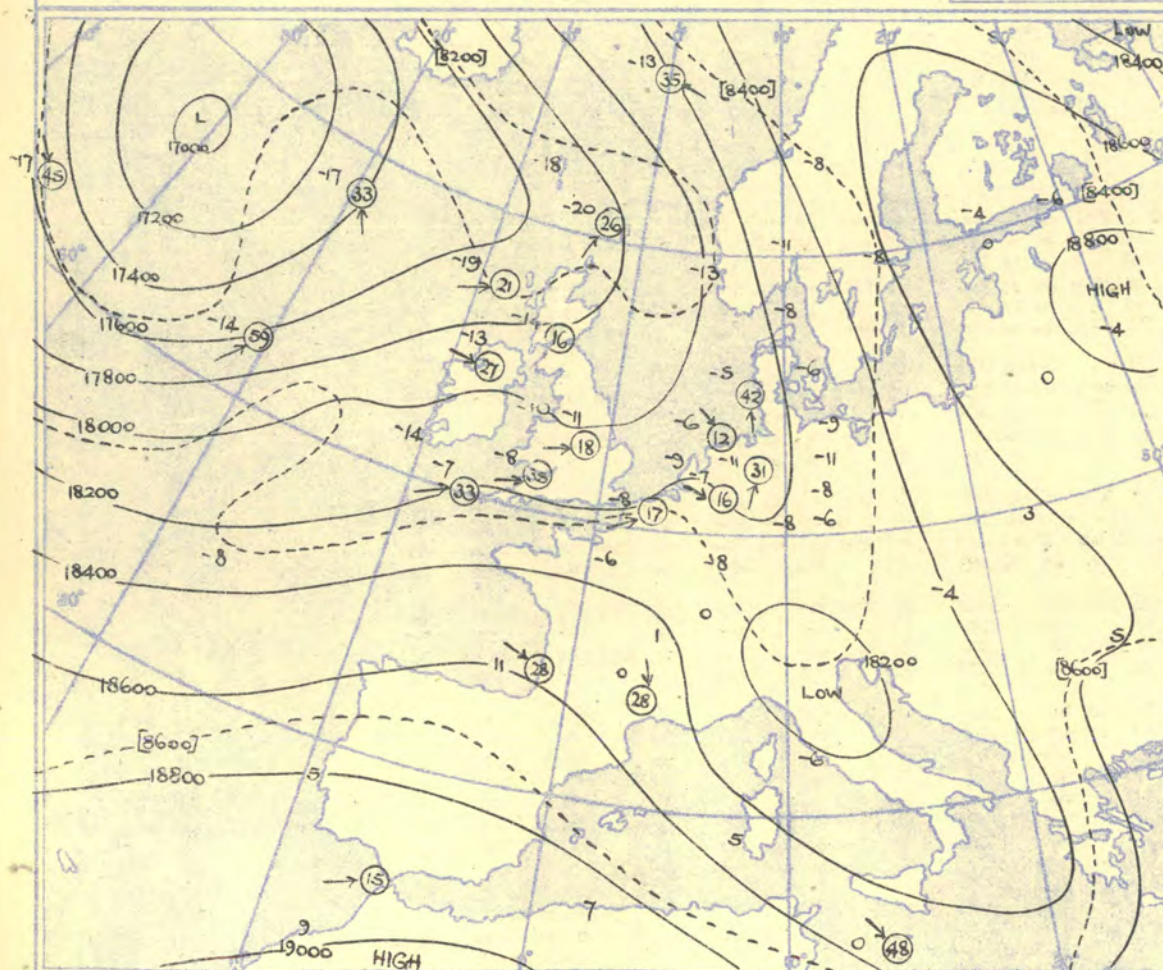
The continuous lines are contour lines of the 700 mb. surface
The dotted lines are isopleths of the thickness of the layer 1000-700 mb.

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

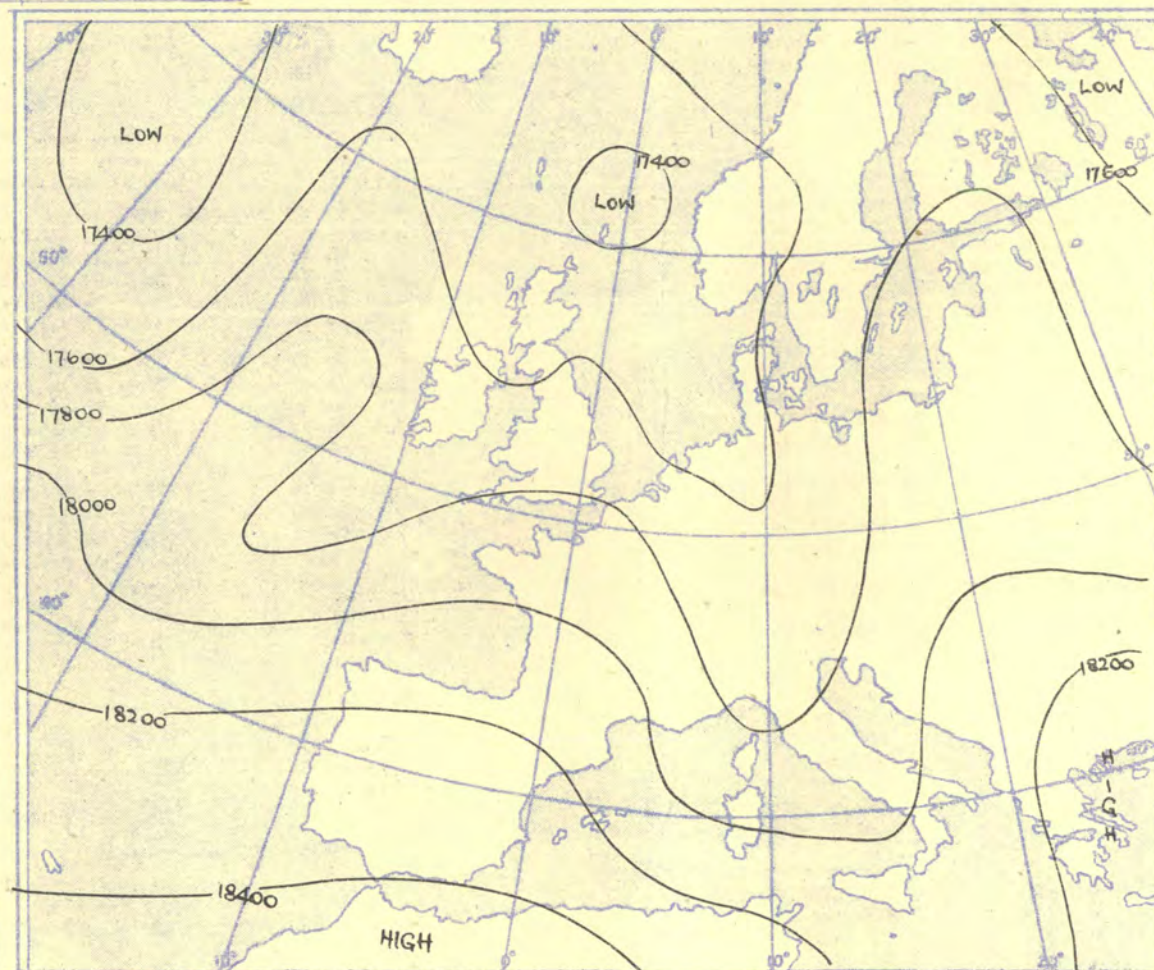
100 80 60 40 20 10 0 knots.



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



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



Isopleths of Thickness 500-1000mb

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

[illegible]

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

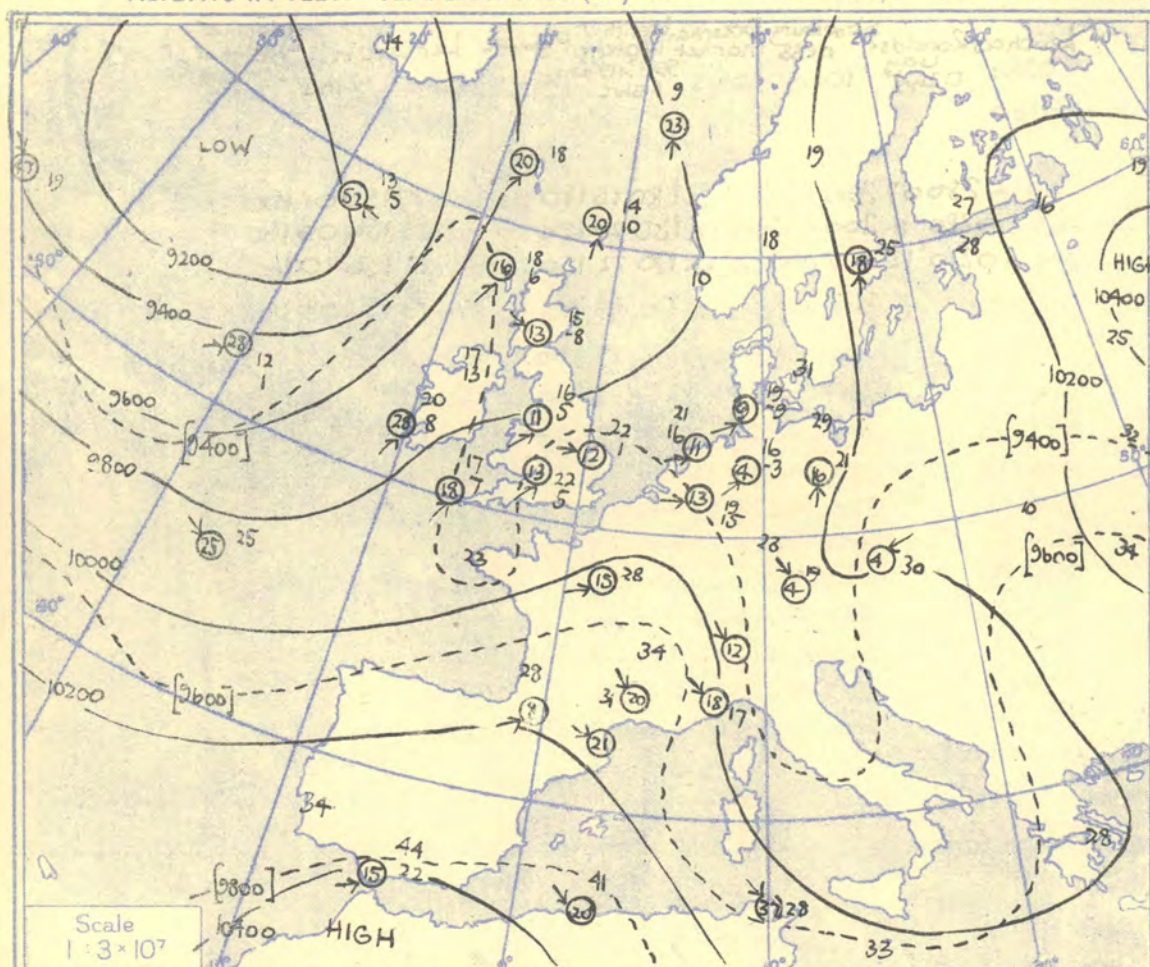
[illegible]

NEPHOSCOPE OBSERVATIONS

[illegible]

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

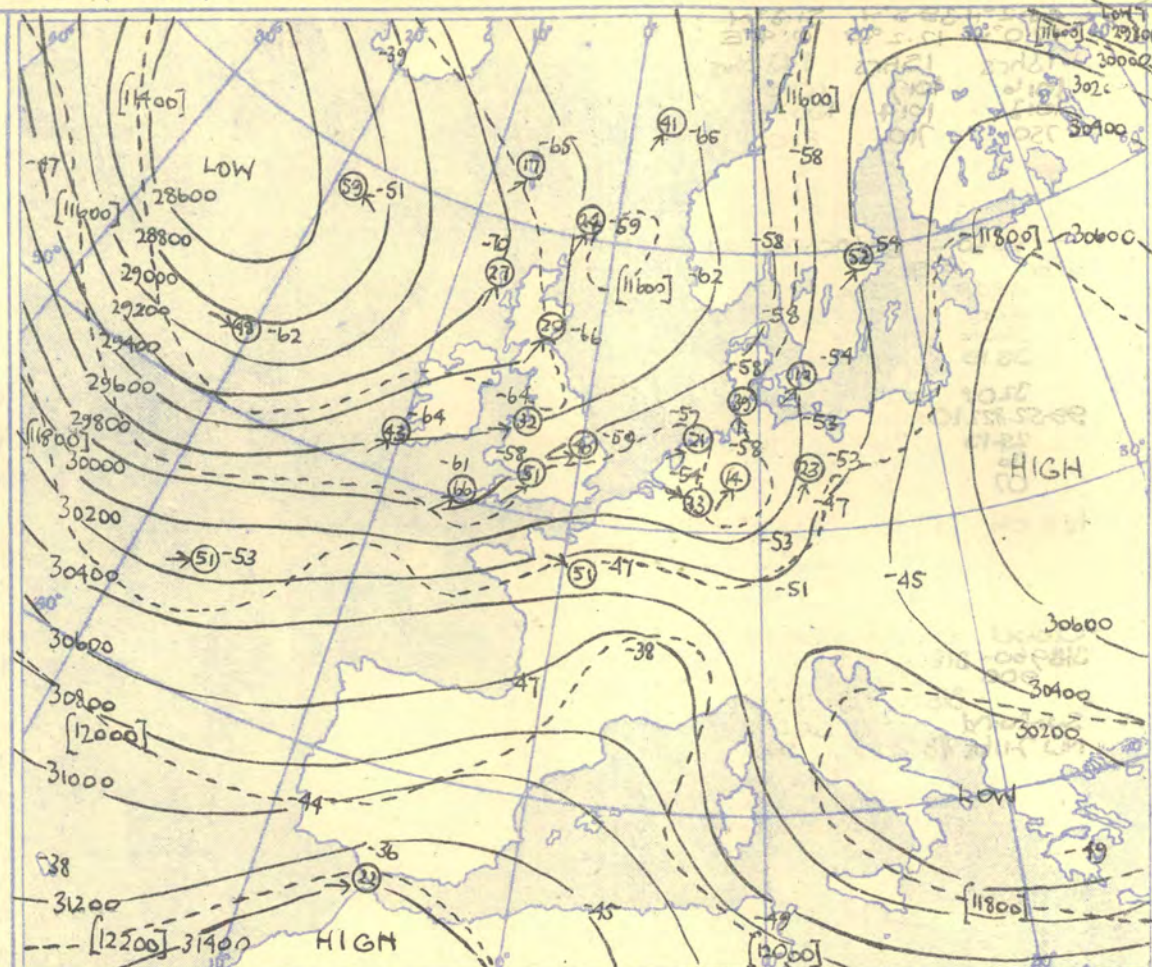
[illegible]



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

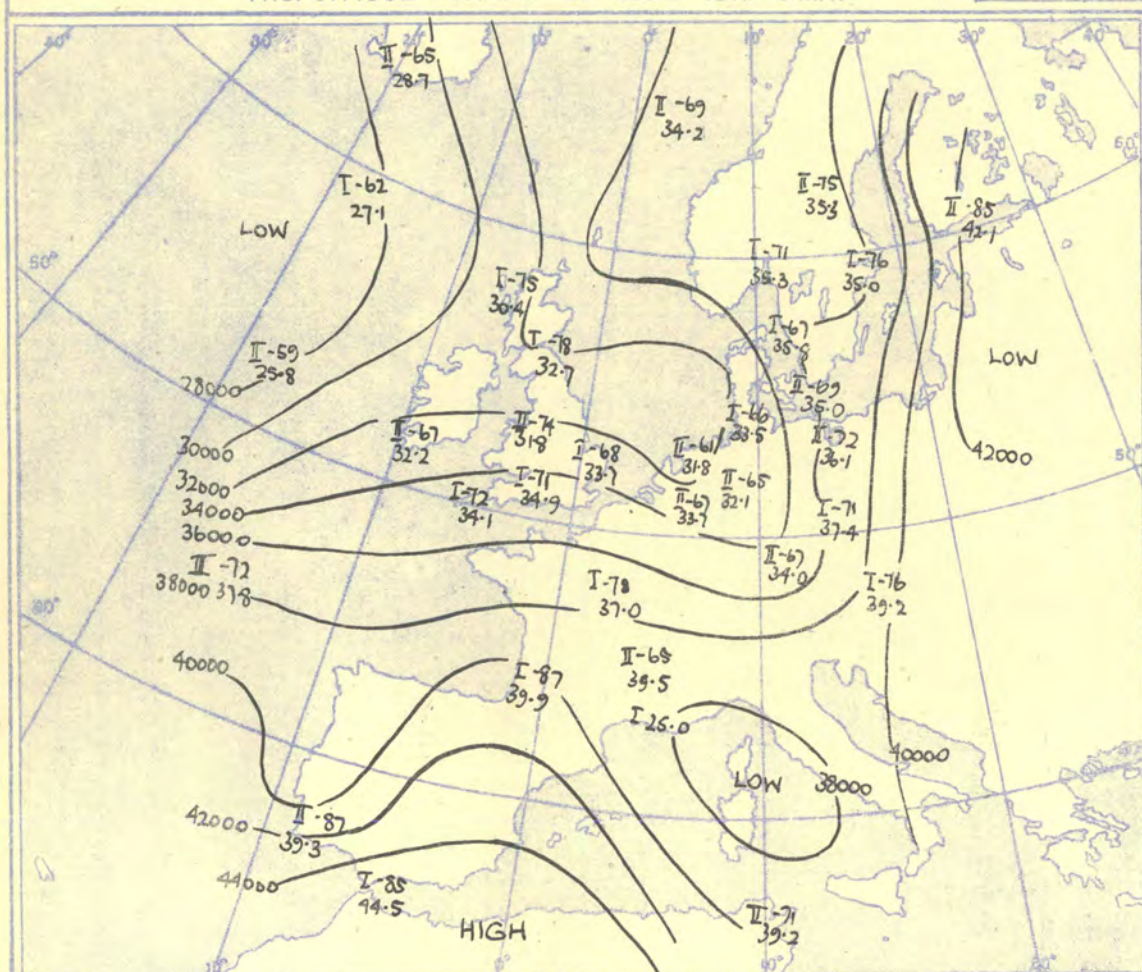
Gradient-Wind Scale for Contours
at intervals of 200 ft. at Lat. 52° N.

100 80 60 40 20 10 0 knots



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

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



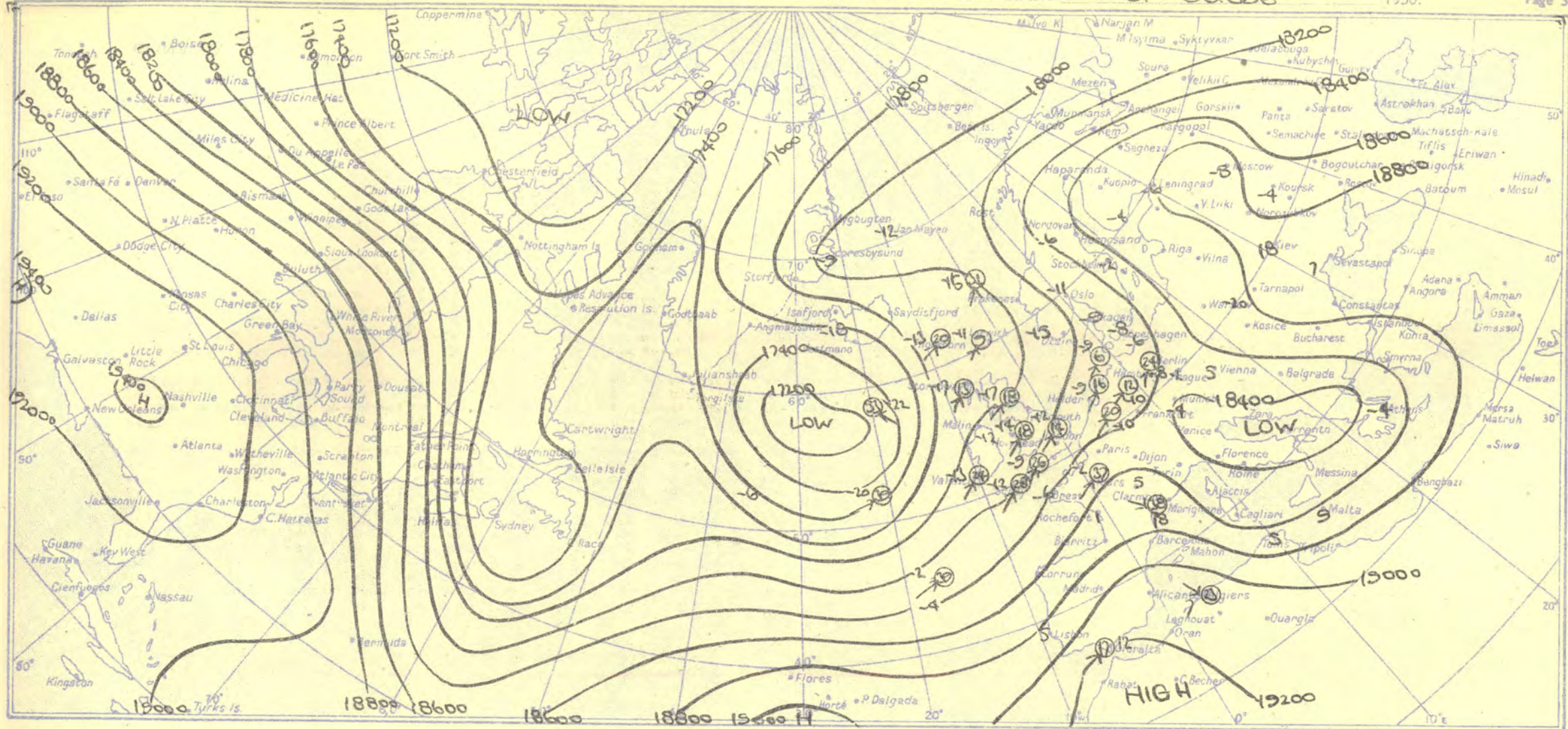
Contour lines of Height of Tropopause
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough down the eastern North Sea to Italy weakened considerably, and with the weakening of the irregular warm ridge near the British Isles, the thermal gradient became more zonal. The old tropical storm south of Newfoundland began to deepen as it got into a position to engage the cold trough over Eastern Canada. The Atlantic cold trough weakened.

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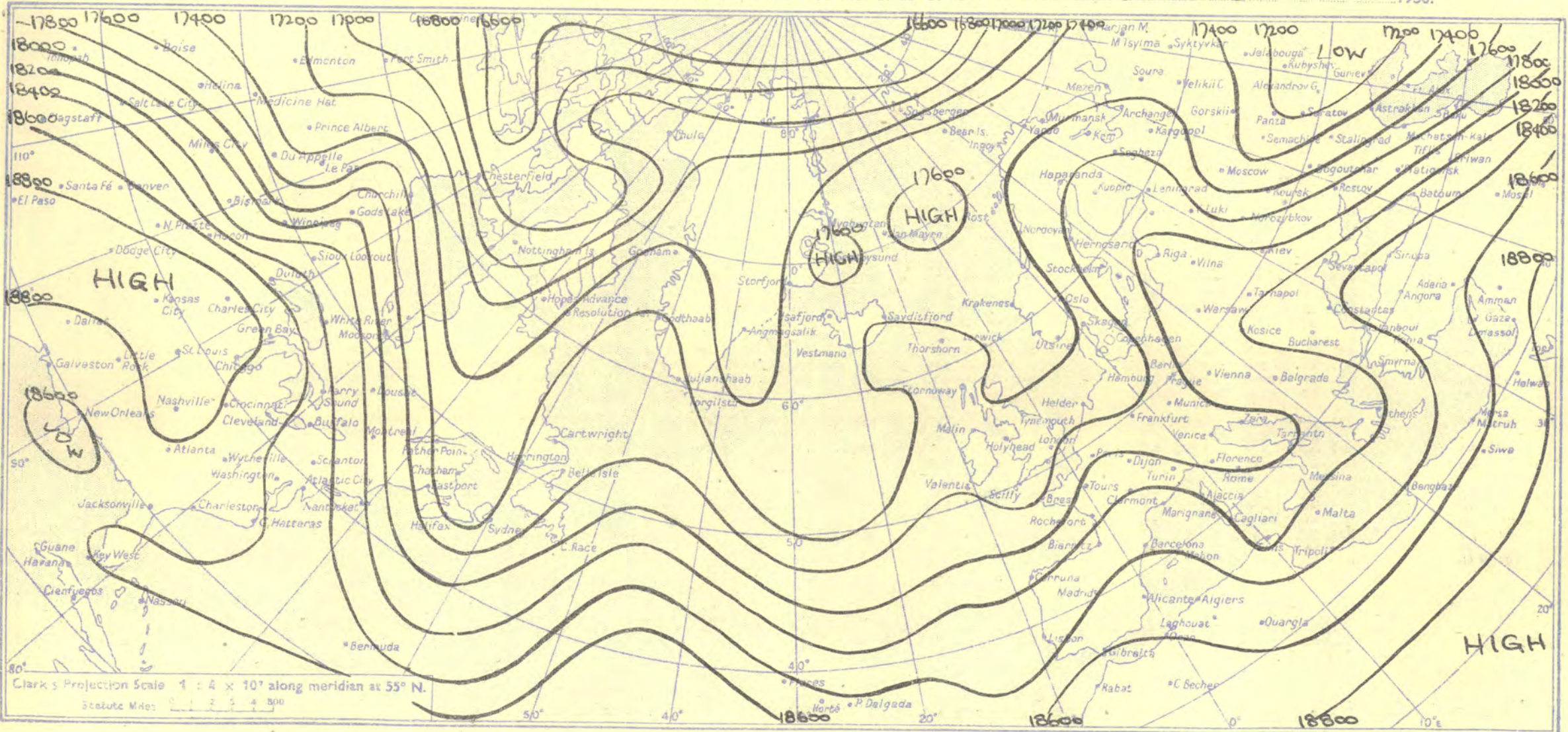
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director



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

31st October

1950.



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

STATION	LERWICK				STORNOWAY				LEUCHARS				ALDERGROVE				LIVERPOOL				DOWNHAM MARKET				LARKHILL				CAMBORNE				VALENTIA				STATION								
Time M.S.L.	15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				15h G.M.T.				Time M.S.L.								
Surf	1013-1 mb				1011-3 mb				1014-6 mb				1013-2 mb				1016-1 mb				1016-3 mb				1017-7 mb				1017-2 mb				1009 mb				Surf								
Freezing	1003-0 mb				1009-4 mb				1015-8 mb				1004-6 mb				1014-1 mb				1013-9 mb				1001-6 mb				1006-5 mb				1009 mb				Freezing								
Pressure mb	863				812				891				808, 835 mb				850				811				839				855				810				Pressure mb								
Height ft./100																																					Height ft./100								
Temp.																																					Temp.								
Dew																																					Dew								
Wind																																					Wind								
Dir.																																					Dir.								
Vel.																																					Vel.								
knots																																					knots								
Surf	02-7	47	45		00-5	51	43	180	15	00-2	50	43	275	05	01-3	52	43		00-6	51	43	Calm	01-2	47	45	235	05	4-4	51	47	170	06	02-9	51	44	203	08	00-5	54	49	170	17	Surf		
1000	03-5	47	46		03-1	50	42		03-9	47	41	259	18	03-6					04-4	49	41	024	02	04-9	45	43	302	09	4-8	51	47		04-6	50	42		2-8	53	48	172	17	1000			
950		41	40			43	37	184	23		36	32	257	16		46	43			44	36	206	02		43	40	297	09		46	39	205	06		45	40	194	20		48	44	196	18	950	
900	31-7	35	32	For Winds	31-4	36	29	199	24	32-1	33	28	250	16	32-1	40	37		32-8	37	28	247	06	32-2	39	31	286	10	33-3	39	32	227	08	32-0	38	34	190	14	31-5	42	37	200	19	900	
850		31	27			33	25	207	24		29	19	242	15		34	31			32	22	241	11		34	24	289	12		34	28	226	08		31	30	193	14		36	29	208	25	850	
800	62-6	26	22	See	62-5	30	16	197	21	63-0	25	11	235	13	63-2	31	28		63-8	30	16	240	09	64-4	30	18	283	11	64-4	30	22	222	06	64-0	26	26	195	14	62-7	31	24	204	32	800	
750		21	17	Page 3		23	07	192	19		20	00	252	13		24	20			23	08	226	11		25	11	250	11		27	08	224	07		20	20	193	15		24	18	206	29	750	
700	96-9	14	10		97-0	18	05	204	16	97-2	15	08	277	13	97-6	17	13		98-3	16	05	233	11	99-0	22	01	282	12	99-0	22	05	231	13	98-3	17	07	199	18	97-3	20	08	209	28	700	
650		11	01			11	04	207	18		08	11	307	15		11	07			09	03	242	14		14	02	281	17		16	01	237	18		14	18	200	18		13	01	216	25	650	
600	136	02	09		136	04	13	204	18	136	00	16	300	17	136	04	01		137	02	07	251	18	138	07	06	272	23	138	07	06	248	19	137	07	27	228	20	136	04	05	223	27	600	
550		07	14			05	22	207	15		09	27	289	16		04	07			05	15	255	19		01	13	262	25		00	12	251	21		03	26	233	23		04	13	230	29	550	
500		180	11	26		180	17	33	208	13	179	17	34	262	18	181	12	15		181	14	26	252	18	183	12	24	256	24	183	09	21	248	26	182	12	31	235	28	181	13	23	230	24	500
450		22	42			22	44	205	08		26	39	258	17		23	27			26	39	252	21		20	35	258	24		19	30	253	32		22	30	240	34		23	32	223	27	450	
400		232	34	52		231	41	216	14	231	38	50	228	15	233	32	40		233	36	49	258	27	235	30	44	258	33	235	30	39	255	39	234	34	40	237	38	232	34	44	224	34	400	
350		43				43		214	21		52		220	18		46				52		257	29		45		263	35		44		256	43		49		242	51		48		224	37	350	
300		295	59			293	70	210	27	293	66	209	20						295	64		259	32	298	59		260	40	299	58		254	51	297	61		235	66	295	64		224	43	300	
250		69				70		210	24		77		219	23					74			248	38		68		257	40		69		253	56		71		240	52		76		230	45	250	
200	381	64				378	62	208	31	377	65	219	25					379	67		240	30	384	62		242	35	383	67		253	39	381	65		245	36	380	61		237	37	200		
170		61				61		205	32		65		213	27					67			229	33		61		238	31		67		235	32		67		247	35		59		245	30	170	
150		60				57		196	20	438	64	205	23					64			233	31		63		236	30		64		236	30		66		246	33		60		246	27	150		
130		59				60		201	17		63		204	24				65			224	21		63		229	25		63		242	30		67		248	34		63		244	30	130		
110		65				65		191	19		65		203	19				66			216	29		63		226	22		64		226	24		64		240	26		62		241	29	110		
100	528	66				525	65	219	20		68		211	19				525	66		224	24	531	64		219	21	530	63		226	16	527	65		249	21	527	60		240	24	100		
90		66				66					70		212	19					68			224	19		68		205	21		67		224	16		67		244	18		62		240	18	90	
80		69									71		221	23					73			232	29		68		247	16		68		218	20		69		255	18					80		
70		68									71								70			235	22								228	24		68									70		