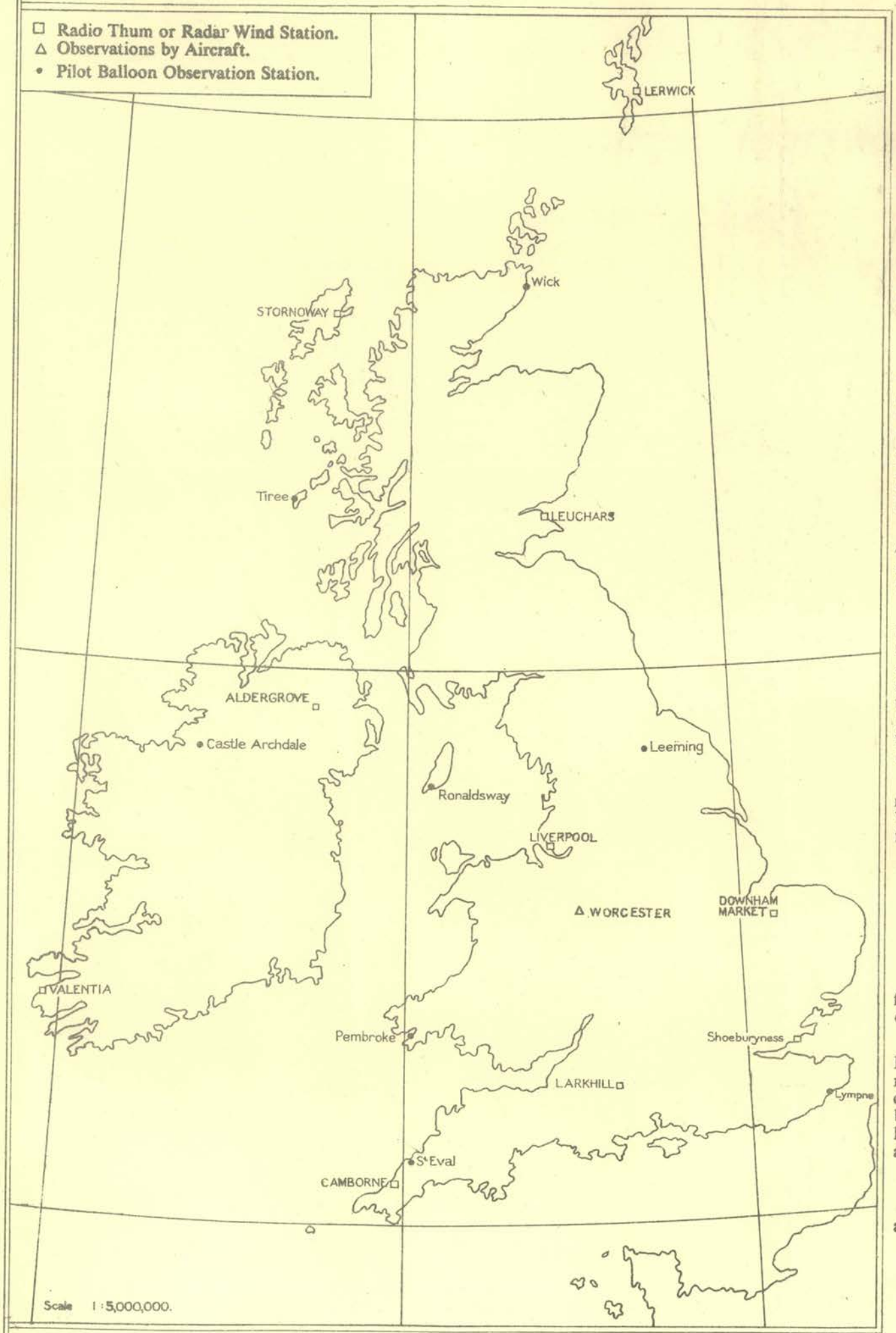
THE DAILY AEROLOGICAL RECORD

1st July to 30th September

1951

METEOROLOGICAL OFFICE
LONDON, W.C.2

INTRODUCTION



THE DAILY AEROLOGICAL RECORD.

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 Worcester

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 :—

$e' = e_w(t') - 0{\cdot}37\,(t-t')\,P/1000$ for t' above 32°F.

$e' = e_i(t') - 0{\cdot}33\,(t-t')\,P/1000$ for $t' = 32°$ 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 (°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 cm sec^{-2}, being that at latitude 45° at sea level : the gas-constant R is taken as $2{\cdot}8703 \times 10^6$ erg gm^{-1} deg. C^{-1} : the air density at 1,000 mb. and 0° C. is taken as ·0012762 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).

H.M.S.O. Press, M.O., Dunstable

No. 11781

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Sunday 1st July 1951. Page 1.

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

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Pressure: Time	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.
Pressure: M.S.L.	1018.6 mb	1021.0 mb	1023.9 mb	1026.6 mb	1027.1 mb	1026.8 mb	1027.3 mb	1029.2 mb	1029.8 mb
Pressure: Surf	1008.6 mb	1019.4 mb	1023.1 mb	1017.0 mb	1025.1 mb	1022.2 mb	1011.4 mb	1018.8 mb	1026 mb
Pressure: Freezing	675 mb	705 mb	645 mb	654 mb	680 mb	689 mb	672 mb	660 mb	640 mb

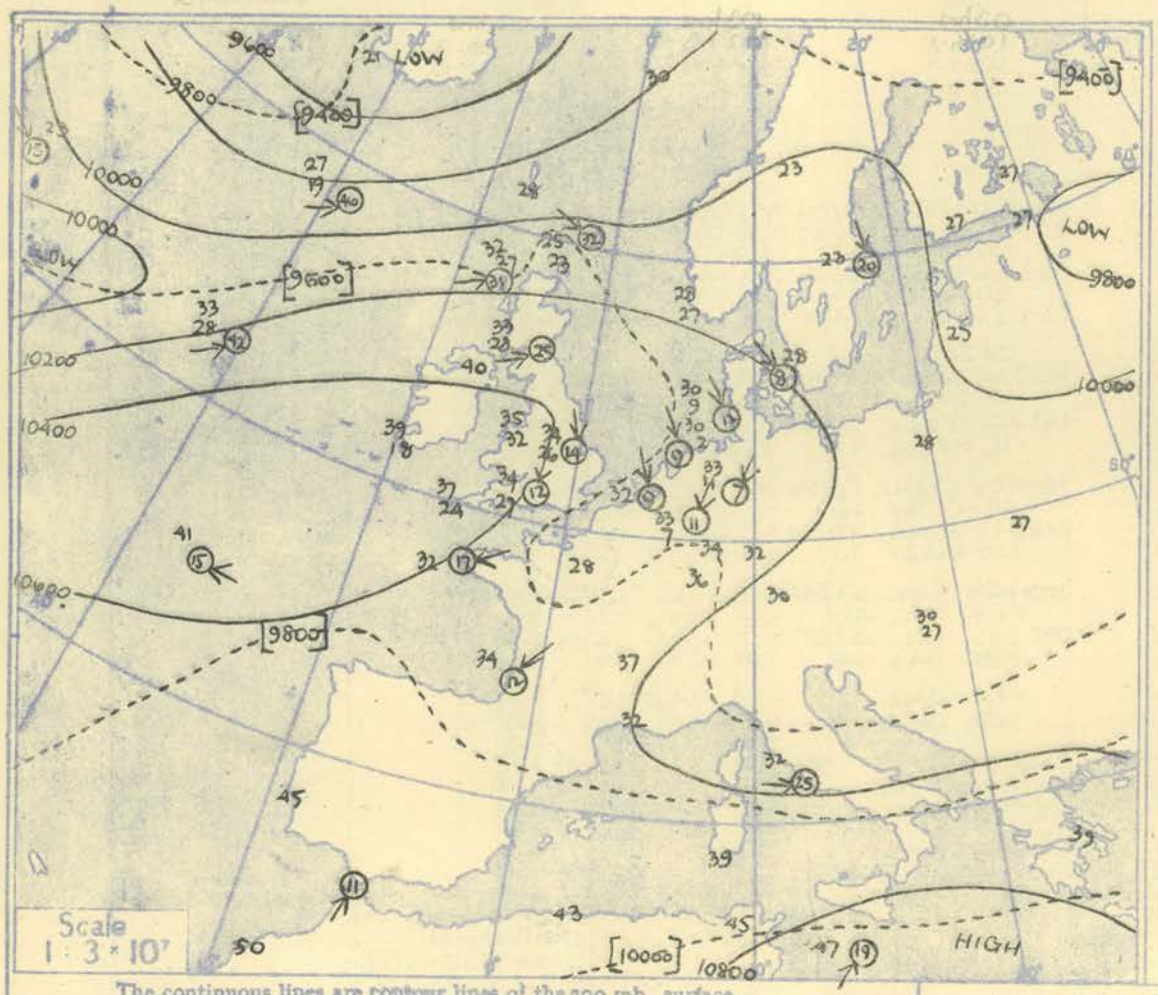
Pressure mb	Height ft./100	°C Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	Pressure mb
Surf	02·7	30	50	265		170·4	57	35		0·2	59	56	260	06	02·6	57	54	06	51	50		01·2	50	48	135	07	04·4	58	56	Calm		02·9	52	52	Calm					Surf
1000	05·0	50	50	255		210	56	35		06·9	60	52	271		18	01·4	59	54		01·4	56	55		07·2	53	51	165	08	07·5	59	53			07·9	57	54		00·3	58	55		1000
950		51	47	257		24		32	31		57	44	278		19		56	51		56	52			57	51	235	08		60	50	327	10		07·9	57	40		30	55	53		950
900	33·8	30	33	258		263	47	48	44	36·1	54	41	274		1336·5		50	46		53	44		36·3	52	46	245	05	36·7	52	46	328	103		51	47		308	45	42		900
850		45	33	255		28		45	38		50	41	255		11		44	38		51	30			47	38	225	06		47	43	339	10		47	26						850
800	65·6	41	27	264		2466	43	30		68·2	45	39	248		1168·2		35	19		46	43		66·2	41	36	350	10	66·6	41	37	324	106	68·9	42	24		687	49	27		800
750		37	31	274		27		35	33	See p3 for winds		40	34	255	17		43	08		44	38			34	25	353	08		35	34	011	10		39	07			44	22		750
700	101·2	35	23	283		32	101·9	32	27		103·8	33	28	263	25	103·9	40	00					103·7	34	26	358	14	104·4	34	27	016	12	104·5	37	24		1043	39	18		700
650		28	20	280		31		28	21			31	18	274	27		31	-6		29	22			28	24	010	18		30	23	016	21		31	22			33	12		650
600	141·2	26	12	272		31	141·5	22	15		144·0	25	37	285	23	144·3	24	-4					143·8	22	18	002	24	144·3	23	16	013	22	144·9	24	01		1453	26	03		600
550		11	01	268		33		14	08			16	43	284	21		17	-17							16	002	22		15	08	001	20		16	-9			18	-06		550
500	187·1	00	4·8	266		34	188·1	07	-2		190·2	08	49	249	21	190·7	08	-24		151·1	08	-8		189·9	06	-3	002	22	190·5	07	-1	358	20	191·1	07	+20		191·9	11	-19		500
450		-6	+3	275		42		-2	-20			-2	-57	288	24		-1	-26			00	-17			-4	-13	348	20		+3	+17	352	22		00	-18			02	-33		450
400	241·0	17	-29	280		45	242·5	-11	-53		244·6	-13	-34	292	25	245·3	-12	-25		145·1	-11	-30		244·0	-17	-26	344	19	244·8	-15	-26	358	19	245·3	-12	-38		246·8	-10	-51		400
350		-29	-40	276		42		-26	-40			-27	-35	298	33		-29	-37			-24	-40			-30	-42	351	25		-28	-38	337	23		-25	-45		(350)	-16			350
300	306·8	46	27·5	54	309·1	40	51			310·8	42	29·7	36	312·0	39	-51			312·5	38	-52		309·7	46	34·2	37	311·0	41	35·8	25	312·4	39	29		(306)				300
250		-65	28·4	57			-57					-60	30·1	40	-58						-57			-64	35·0	40		-59	35·6	38		-55							250
200	297·5	-70	28·7	59	298·6	-76				299·1	-73	-65	30·1	39	-76				299·3	-73	-69		298·2	-75	35·1	38	297·3	-78	00·4	34	299·4	-74							200
170		-62	28·7	57		-70						-65	29·7	37	-80						-74			-69	34·3	24		-70	34·3	26		-80							170
150		-64	27·8	29		-59						-64	30·1	20	-73						-74			-73	34·2	18		-73	34·7	25		-74							150
130		-64	27·3	21		-61						-63	30·1	18	-71						-70			-69	36·0	13		-72	00·2	19		-73							130
110		-64	29·0	21								-63	30·1	10	-72						-68							+10	35·7	11		-73							110
100	558·4	-63	29·5	18						542·9	-63	33·4	10	544·1	-72				542·7	-68							540·3	+69	34·3	13	541·7	-72							100
90											-62	32·4	05							-68								+67	34·4	11		-74							90
80											-60									(57)								+66	35·2	09		-70							80
70																													+65				-68							70
60		Inversion 896m 50°-914m 52° 728m 35°-716m 36° Isothermal 1009-996 m 50°			Inversion 1023m 55°-1000m 60° 672m 29°-645m 31°			Isothermal 845-828 m 45° 705-685 m 32° 520-510 m 8°	Isothermal 576-561 m 19°		Inversion 1017m 51°-994m 59° 798m 36°-776m 43° 780m 45°-765m 46° Isothermal 910-865 m 53° 644-624 m 20° 538-523 m 12°		Inversion 1025m 51°-990m 60° 767m 37°-732m 39°		Inversion 1012m 50°-970m 60°		Inversion 1011m 58°-970m 61° 731m 33°-716m 35°		Inversion 862m 46°-850m 47° Isothermal 1000-950 m 57° 742-710 m 39°		Inversion 900mb 45°-835mb 52°		60
Tropopause	I 228 ms -72° 36400'		I 195 ms -78° 40200'		I 186 ms -77° 41200'		I 179 ms -82° 42200'		I 180 ms -78° 42100'		I 207 ms -76° 38800'		II (37) ms -79° 40100'		II 188 ms -78° 41000'		N.R.		Tropopause

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Pressure: Time	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.
Pressure: M.S.L.	1016.7 mb	1019.4 mb	1022.8 mb	1025.9 mb	1026.5 mb	1026.0 mb	1026.9 mb	1028.8 mb
Pressure: Surf	1006.6 mb	1017.8 mb	1022.0 mb	1016.3 mb	1024.8 mb	1021.6 mb	1011.1 mb	1018.2 mb
Pressure: Freezing	700 mb	671 mb	658 mb	650 mb	630 mb	682 mb	642 mb	642 mb

Pressure mb	Height ft./100	°C Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	°F Temp.	Dew	Wind Dir.	Wind Vel. knots	Pressure mb
Surf	02·7	33	33			04·2	56	54	210	08	0·2	61	55	240	11	02·6	61	56	230	05	0·6	61	59			01·2	62	54	190	03	04·4	64	55	860	01	02·9	62	57	240	04					Surf
1000	04·5	51	51			05·3	55	54	227	33	06·8	63	55	252	240	07·1	58	54	248		100·4	61	54			07·2	59	52			07·4	63	50			07·9	58	53	285	06					1000
950		31	31				52	51	248	36		59	52	256	26		52	44	254	11		56	52				58	43	253	06		60	46	318	05		58	47	265	05					950
900	33·2	29	29			34·2	49	48	254	30	35·7	47	42	263	27	36·0	45	41	258	1636·5		51	50			36·4	55	31	258	07	36·6	54	41	270	07	37·0	55	42	270	04					900
850		46	46				46	44	251	27		46	39	277	24		42	27	263	23		46	38				50	32	298	05		49	37	305	09		48	25	337	03					850
800	65·1	42	42			66·1	41	39	254	2467·6	47	28	278	2467·9	30	14	266	1868·5	47	34			68·5	43	36	355	0868·7	44	32	338	0369	044	29	020	05					800
750		37	35	See p3 for winds			35	33	244	30		45	12	255	18		45	06	266	24		43	39	See p3 for winds			39	32	002	10		38	32	009	13		43	33	031	03					750
700	100·5	33	27			101·5	33	32	227	31	103·6	41	03	258	19	103·8	40	-6	266	24	104·4	36	32			104·1	35	27	016	15	104·3	36	29	025	18	104·5	39	31	030	08					700
650		27	24				31	30	226	28		33	08	266	22		32	07	262	21		32	22				29	26	355	17		33	22	025	17		33	21	022	12					650
600	140·6	21	16			141·8	25	23	235	42	144·0	23	19	266	29	144·4	26	02	262	25	144·8	25	17			144·2	22	13	344	20	144·8	25	15	012	17	145·4	25	11	017	12					600
550		13	07				15	17	239	76		17	06	262	28		18	-1	262	25		18	01				14	05	342	16		16	07	359	14		14	00	009	12					550
500	186·6	06	-2			188·4	12	08	242	56	190·3	08	-9	268	28	190·8	11	-2	262	26	151·3	11	-5			190·2	06	-11	324	14	191·1	09	-13	346	15	191·6	09	-9	356	14					500
450		-1	-9				03	-3	253	41		02	-7	288	23		03	-20	266	27		03	-7				-2	-19	338	16		00	-23	348	16		01	-23	360	16					450
400	241·0	13	-22			243·4	-7	-19	258	48	244·9	-12	-18	277	28	246·3	-7	-29	268	28	246·3	-7	16			244·6	-13	-26	342	24	245·8	-9	-32	352	18	246·3	-11	-35	002	13					400
350		-25	-33				-19	-28	255	63		-23	-31	278	30		-19	-41	264	34		-21	-28				-25	-36	349	25		-21	-41	004	29		-24	-46	004	17					350
300	301·4	95				310·9	-33	-42	251	74	311·8	-36	-45	281	40	313·7	-34	-51	262	33	313·6	-34	-42			311·0	-41		357	32	312·9	-37	-54	002	29	313·0	-39	-59	012	21					300
250		-56					-51		254	70		-55		285	42		-51		264	30		-52					-57		349	33		-55		357	30		-56		350	24					250
200	394·2	66				398·9	-71				399·1	-73		282	53	401·6	-74		271	37	401·5	-69				397·5	-75		348	30	399·9	-75		006	31	400·0	-73		346	27					200
170		-53					-58					-78		288	43		-80		274	38		-74						-71		342	24		-75		353	23		-80		345	21					170
150		-52					-57					-62		296	34		-68		278	34		-63						-71		346	24		-70		349	20		-70		352	18					150
130		-52					-55					-64		289	22		-66		287	23		-64						-70		346	20		-68		352	23		-70		346	16					130
110		-52										-63		303	18		-66		278	16		-65						-70		349	15		-68		358	16		-69		006	14					110
100	544·8	52									544·0	-60		311	17	546·0	-63		284	16	546·5	-63				540·8	-66		355	15	543·6	-66		004	13	543·2	-68		006	09					100
90		-50										-61		323	12		-60		304	16		-61						-63		357	09		-63		004	10		-67		007	10					90
80		-47										-62					-63		019	16		-59						-63		017	06		-63		023	07		-64		012	10					80
70		(84)															-56		328	07		-57						-61		025	06		-61		031	06		-62		024	14					70
60																	-58		346	07		-53						-55		039	04	(65)	-59				-62		034	07					60
		Isothermal 1000-950 ms 51°					Isothermal 732-700 ms 33°					Inversion 862 mb 45°-830 ms 47° Isothermal 830-790 ms 47°					Inversion 852 mb 40-835 ms 52°					Inversion 850 ms 46-822 ms 49° 692 ms 35°-672 ms 36° Isothermal 935-914 ms 58° 886-846 ms 18°					Inversion 1000 ms 59-975 ms 60° 660 ms 28-640 ms 30°					Inversion 682 ms 34-668 ms 35°					Inversion 541 ms -2°-530 mb -1° Isothermal 595-550 ms 58° 814-766 ms 44°				
Tropopause	I 210 ms -73° 38300'		II 203 ms -77° 39500'		I 182 ms -80° 41700'		II 180 ms -80° 42300'		I 177 ms -78° 42100'		I 185 ms -79° 41300'		I 188 ms -79° 41200'		I 173 ms -82° 43000'				Tropopause

Sunday 1st July 1951.

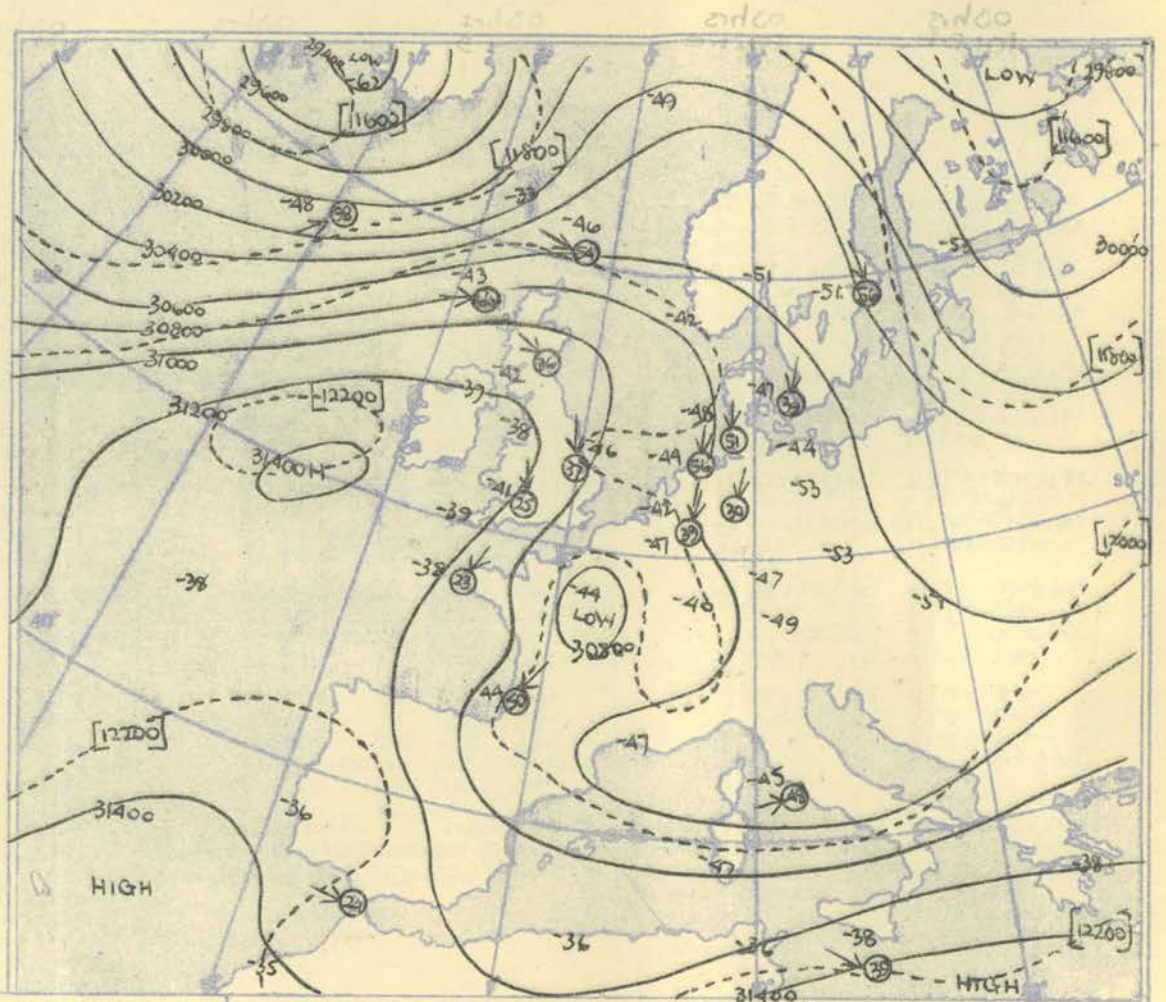
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



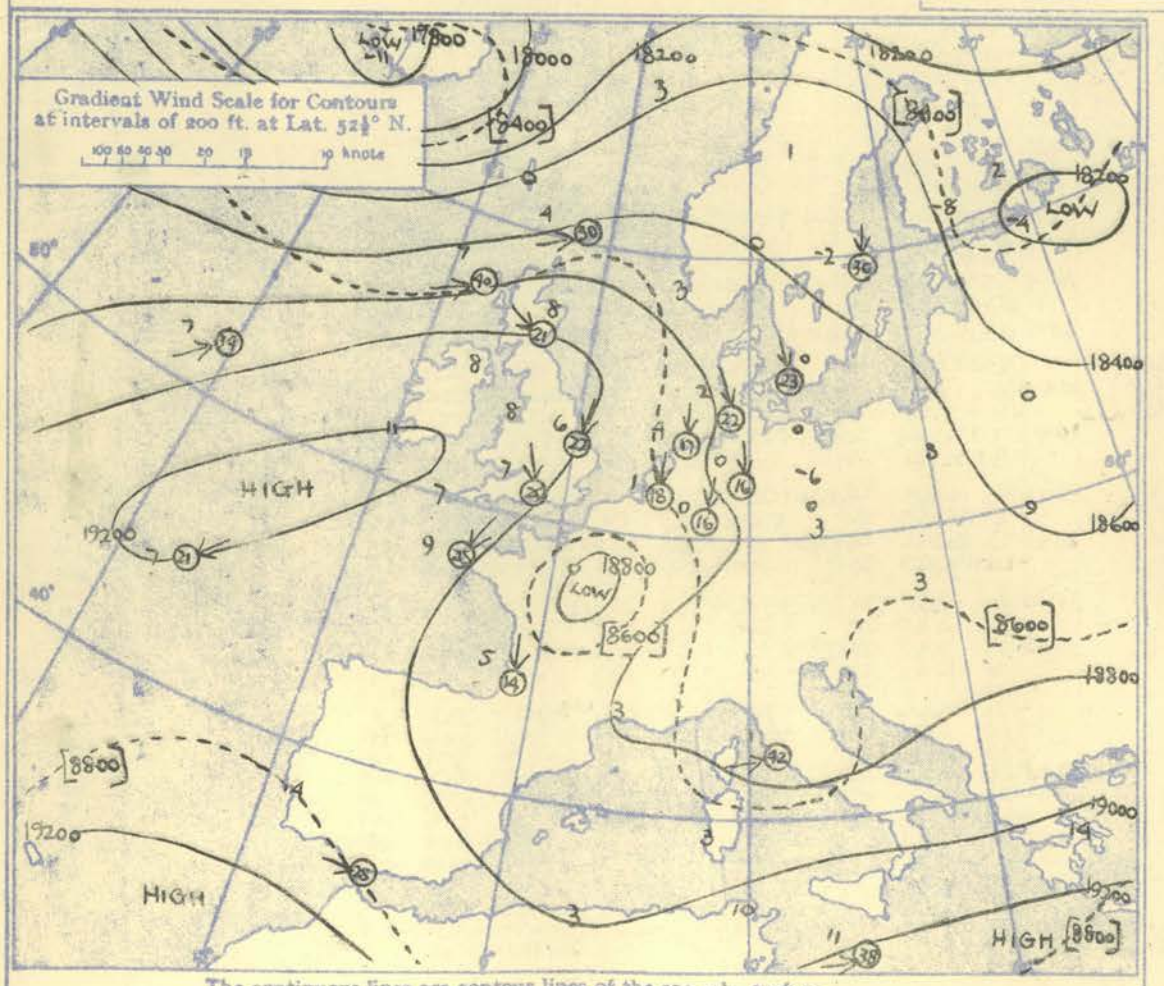
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

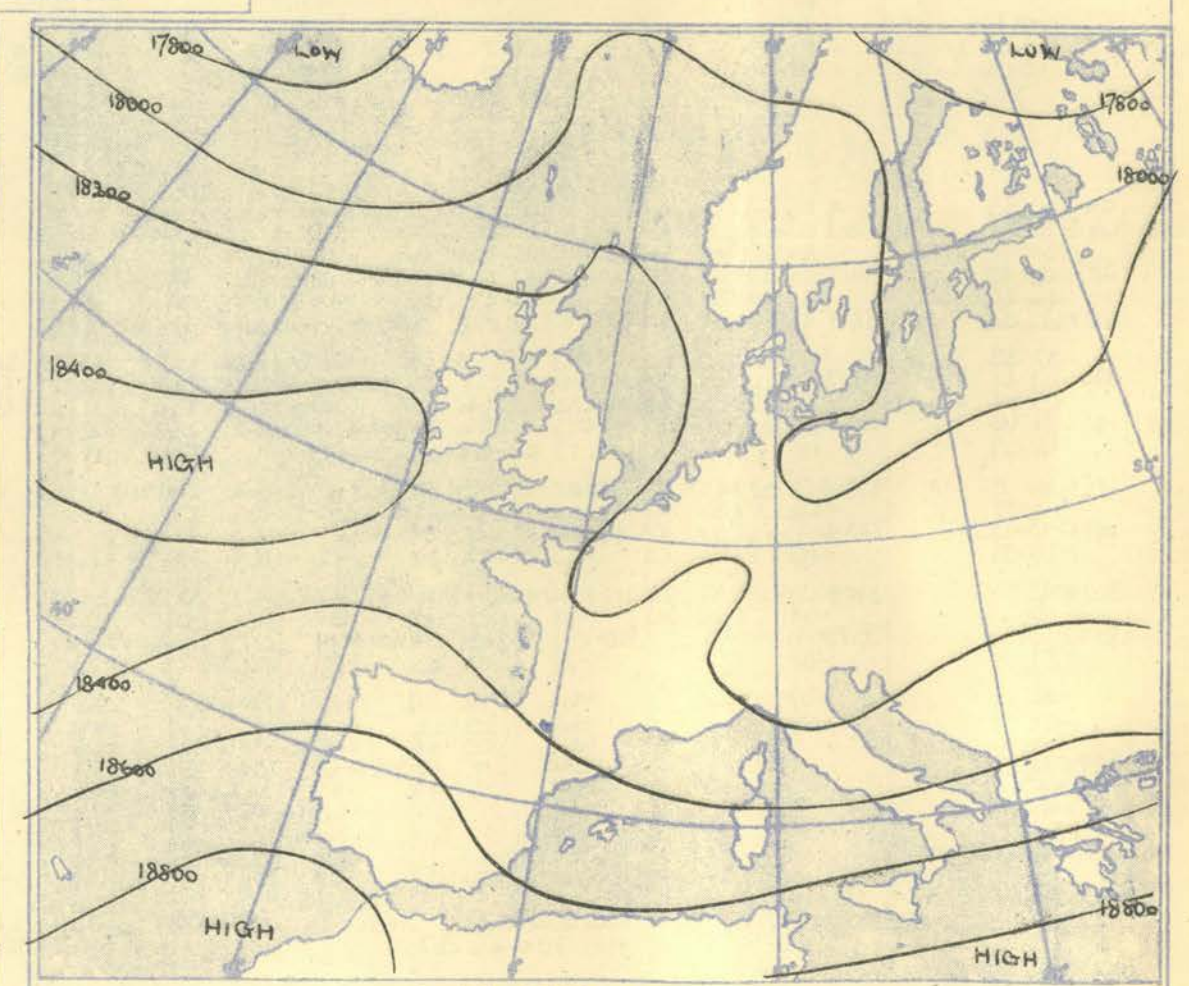
100 80 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

52° 12'N 02° 12'W

Time 14L; Pressure M.S.L. 1025.5 mb; Surf 1024 mb; Freezing 642 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.
Surf	0.4		
1000	7.1		
950			
900	36.9	57	53
850		50	49
800	69.2	51	39
750			
700	105.3	38	36
650			
600	145.9	26	
550			
500	192.5	07	
450			
400	247.3	-08	
350			
300	314.7	-37	
250			
200			
170			

Cloud:- 2/8-4/8 Cu and Sc 865-810 mb.

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

Place	Downham Market		Stornoway		Lerwick		Liverpool		Cirrus 52.5N 19.9W		Larkhill		Larkhill		Cirrus 52.6N 20.0W		Larkhill		Aldergrove	
Time	03L		03L		09L		09L		09L		11L		18L		21L		21L		21L	
Type			PILAR		RADAR		PILAR												PILAR	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.			180	10	270	28	CALM		240	18	CALM		300	08	210	12	310	05	240	12
1,000			220	30	249	18	187	02	250	21	290	06	300	09	220	17	310	12	252	20
2,000			227	28	254	23	274	06	280	29	290	05	310	10	230	20	310	05	260	28
3,000			240	31	259	24	289	09	280	31	290	09	320	09	240	24	290	06	270	24
4,000			246	32	261	24	288	13	270	29	280	06	330	06	230	24	230	06	272	27
5,000			250	33	257	24	276	12	260	33	280	06	340	05	230	26	230	05	272	28
6,000			254	32	254	24	260	12	260	31	300	07	310	06			260	05	274	30
8,000			258	32	248	28	241	12	(7,000')		010	11	310	06			290	09	266	30
10,000			260	31	244	26	265	13	260	60	040	12	310	07	260	36	320	12	264	31
14,000			252	34	247	39	301	15	260	35	360	13	330	11	240	27	310	14	268	39
18,000			252	40	250	38	313	14	270	45	360	15	340	12	250	24	310	14	267	33
24,000			259	44	262	56	316	15	(16,000')		(15,000')		(15,000')		260	32	(15,000')		262	36
30,000			272	66	266	69	326	23											265	45
40,000			269	56	267	68	324	32											272	54
50,000	353	15	267	30			322	29											276	36
60,000	342	11	(46,000')				335	14											282	32
	324	06					(56,000')												(55,000')	
	(63,000')																			

NEPHOSCOPE OBSERVATIONS

Place	Lympne
Time Type	09L Ci
Dir. Vel.	010 30

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

Ship: Weather Observer — Lat/Long 58°8'N 19°1'W — Time 03h G.M.T.; M.S.L. 1019 mb; Surf 1019 mb; Freezing 740 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		54	51	220	03
1000	03.7	53	50	231	27
950		47	47	232	32
900	32.3	41	40	232	35
850		34	33	232	37
800	63.5	35	29	232	37
750		33	24	232	38
700	98.5	27	19	231	46
650		23	09	231	46
600	138.2	17	02	233	44
550		07	-07	238	46
500	183.6	-03	-14	242	56
450		-14	-26	239	66
400	236.6	-26	-36	235	66
350		-38	-49	236	64
300	301.2	-48		235	98
250		-54		235	84
200	389.4	-51		235	52
170		-53		235	57
150	(160 mb)	-55			

Inversion 850 mb 39° - 835mb 37°; 687 25° - 678 26°

Tropopause: I 261 mb -57° 33,100'

Ship: Weather Observer — Lat/Long 58°8'N 19°0'W — Time 09h G.M.T.; M.S.L. 1014 mb; Surf 1014 mb; Freezing 715 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		51	49	270	22
1000	03.8	50	49	257	24
950		45	41	258	28
900	32.3	41	37	256	29
850		38	31	257	32
800	63.7	38	21	258	33
750		36	14	260	34
700	98.9	30	02	261	36
650		22	-08	262	39
600	138.6	17	-23	262	44
550		10	-36	262	45
500	189.2	01	-43	261	48
450		-10	-52	260	56
400	237.7	-21	-54	260	56
350		-32		261	70
300	303.3	-44		265	77
250		-56		267	75
200	391.5	-48		264	59
170		-51		262	46
150		-49		256	39
130		-51		244	39
110		-51		232	33
100	592.9	-52		228	30
90		-52		229	22
80		-52		229	20
70		-50		229	08
60	54	-51		230	08
	(50	-48		230	07
	(43	-46			
	mb)				

Inversion 850 mb 38° - 820mb 39°

Isothermal 865 - 850mb 38°

Tropopause: II 255mb 38° 39,000'

Ship: Weather Observer — Lat/Long 58°7'N 19°4'N — Time 15h G.M.T.; M.S.L. 1017 mb; Surf 1017 mb; Freezing 720 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		53	45	265	23
1000	04.6	50	43	260	24
950		42	41	261	24
900	33.0	39	36	258	28
850		42	26	257	30
800	64.5	38	20	257	32
750		35	02	255	32
700	99.7	29	03	355	34
650		23	-04	257	41
600	139.4	16	-16	258	44
550		08	-14	258	48
500	189.8	00	-24	258	51
450		-09	-37	258	54
400	238.5	-18	-43	256	57
350		-32	-54	251	53
300	304.0	-46		256	61
250		-58		252	72
200	391.4	-51		242	59
170		-49		244	48
150		-49		234	42
130		-50		253	36
110		-48		262	33
100	593.1	-49		252	33
90		-49		252	24
80		-49		252	13
70		-49		252	14
60		-46		252	12

Inversion 900 mb 39° - 843mb 43°

Isothermal 778 - 750 mb 38°

Tropopause: II 238mb -60° 35,500'

Ship: Weather Observer — Lat/Long 58°8'N 19°3'N — Time 21h G.M.T.; M.S.L. 1018 mb; Surf 1018 mb; Freezing 710 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		52	47	270	24
1000	04.8	50	46	269	24
950		44	40	264	24
900	33.3	40	36	261	25
850		39	26	258	30
800	64.8	38	19	257	34
750		35	07	156	39
700	100.0	31	-01	257	38
650		26	-06	258	36
600	140.0	19	-08	262	41
550		10	-16	263	43
500	185.8	03	-25	258	51
450		-05	-32	259	51
400	239.7	-18	-44	262	53
350		-31	-55	265	61
300	305.2	-46		267	69
250		-61		270	87
200	392.4	-56		280	51
170		-50		284	42
150		-52		266	37
130		-52		266	30
110		-53		266	29
100	543.3	-53		266	26
90		-53		266	15
80		-54		266	09
70		-52		266	04
60	(069 mb)	-51			

Inversion 905mb 39° - 876mb 42°

Isothermal 666 - 650mb 29°

Tropopause: I 237mb -69° 35,700'

Ship: Cirrus — Lat/Long 52°3'N 20°0'W — Time 03h G.M.T.; M.S.L. 1021 mb; Surf 1021 mb; Freezing 705 & 680 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		59	57	210	20
1000	05.9	56	56	219	21
950		56	56	221	24
900	35.1	53	53	224	29
850		49	49	222	43
800	67.2	44	44	223	42
750		38	37	227	42
700	102.8	33	28	223	42
650		28	21	219	39
600	143.0	22	12	211	38
550		16	03	222	36
500	189.2	07	-06	222	34
450		-01	-14		
400	243.9	-10			
350		-22			
300	311.0	-35			
250		-54			
200	398.5	-74			
170		-70			
150		-68			
130		-68			
110		-67			
100	592.6	-67			
90		-66			
80		-66			
70	(075 mb)	-66			

Inversion 1000 mb 56° - 974mb 57°; 707 32° - 700 33°

Tropopause: I 187mb -80° 41,300'

Ship: Cirrus — Time 09h G.M.T.

For Winds See Top of Page

Ship: Cirrus — Lat/Long 52°6'N 19°9'W — Time 15h G.M.T.; M.S.L. 1023 mb; Surf 1023 mb; Freezing 680 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		60	58	240	18
1000	06.5	58	58	240	18
950		55	55	251	23
900	35.7	52	52	250	27
850		48	48	250	29
800	67.8	43	43	255	32
750		39	37	255	33
700	103.4	34	33	253	39
650		30	29	253	44
600	143.8	25	23	253	34
550		19	14		
500	190.4	12	05		
450		02	-06		
400	245.4	-07			
350		-20			
300	312.9	-32			
250		-50			
200	301.2	-70			
170		-79			
150		-69			
130		-63			

Isothermal 956 - 950 mb 55°

Tropopause: II 170mb -79° 43,500'

Ship: Cirrus — Time 21h G.M.T.

For Winds See Top of Page

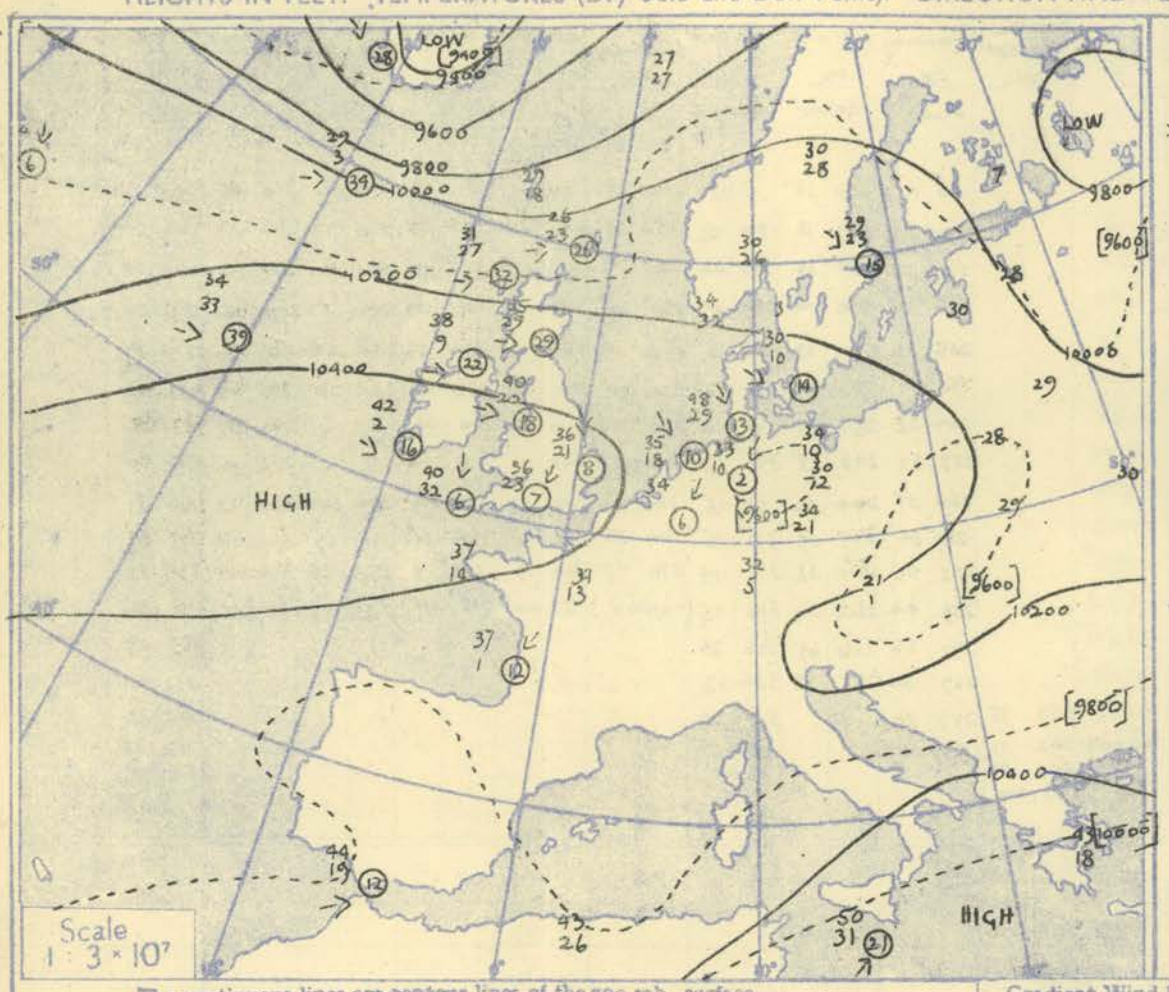
Ship: Weath. Recorder — Lat/Long 59°7'N 11°6'W — Time 21h G.M.T.; M.S.L. 1023 mb; Surf 1023 mb; Freezing 690 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		60	60		
1000	06.4	57	55	269	25
950		55	50	269	27
900	35.5	52	50	268	27
850		48	48	266	29
800	67.6	44	44	264	31
750		39	38	262	35
700	103.2	33	32	262	41
650		29	27	264	45
600	143.4	21	17	262	48
550		14	04	259	48
500	189.6	06	-05	257	41
450		-01	-10	253	51
400	244.1	-12	-19	250	51
350		-24	-33	251	51
300	310.7	-39	-53		
250	(292 mb)	-41			

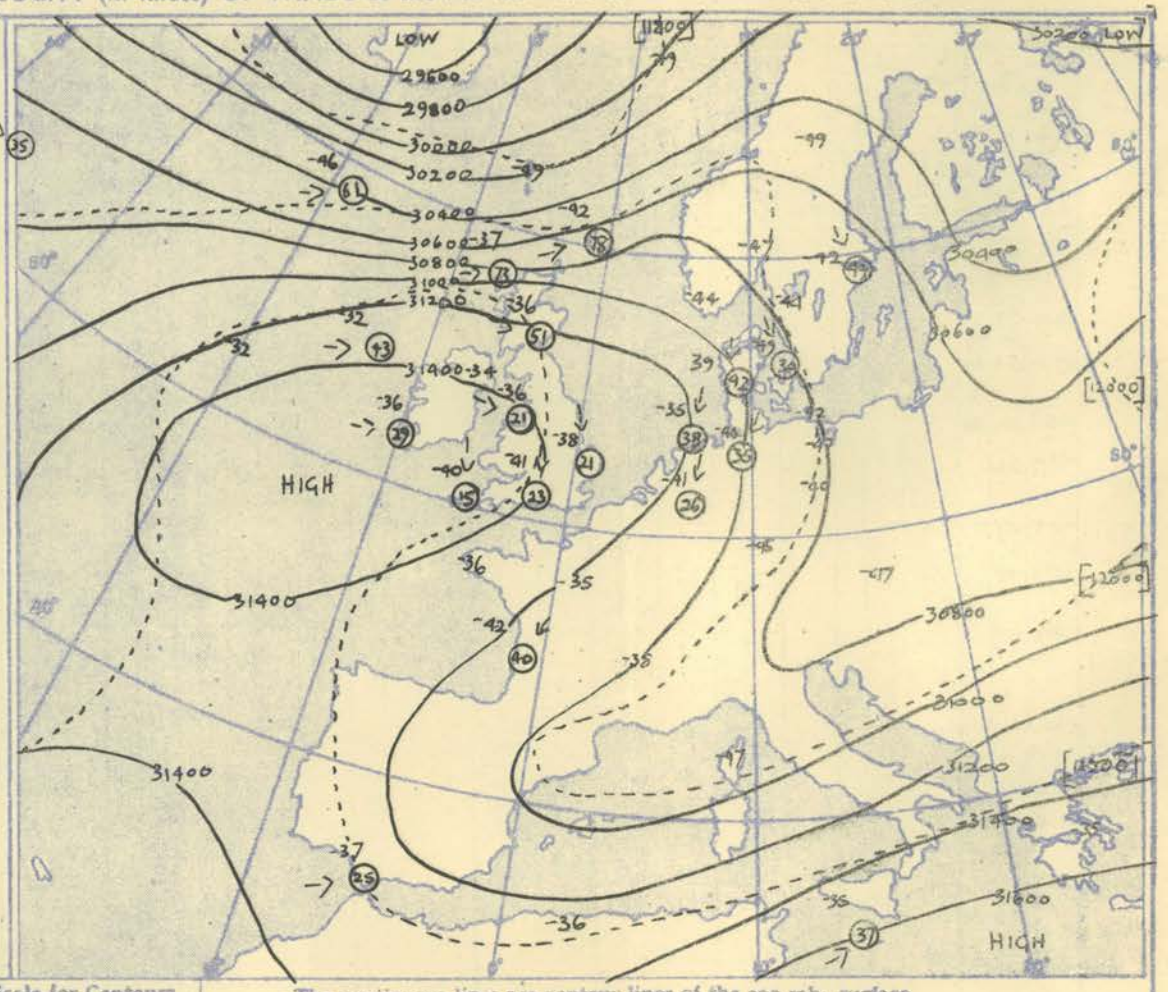
Tropopause: N.R.

Sunday 1st July 1951.

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



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

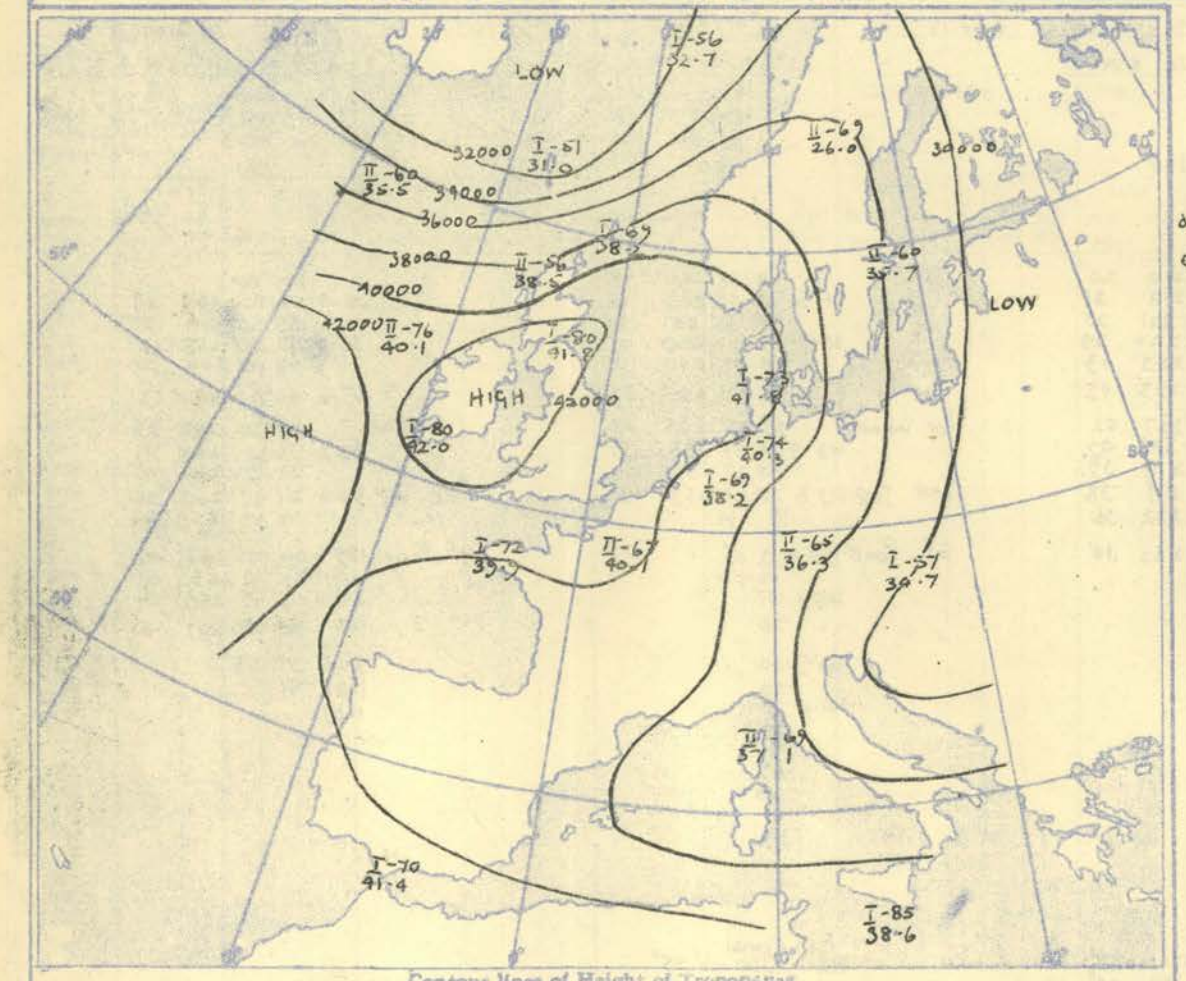


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The axis of the warm ridge travelled rather quickly south east across the British Isles and declined slightly in intensity. Little change elsewhere.

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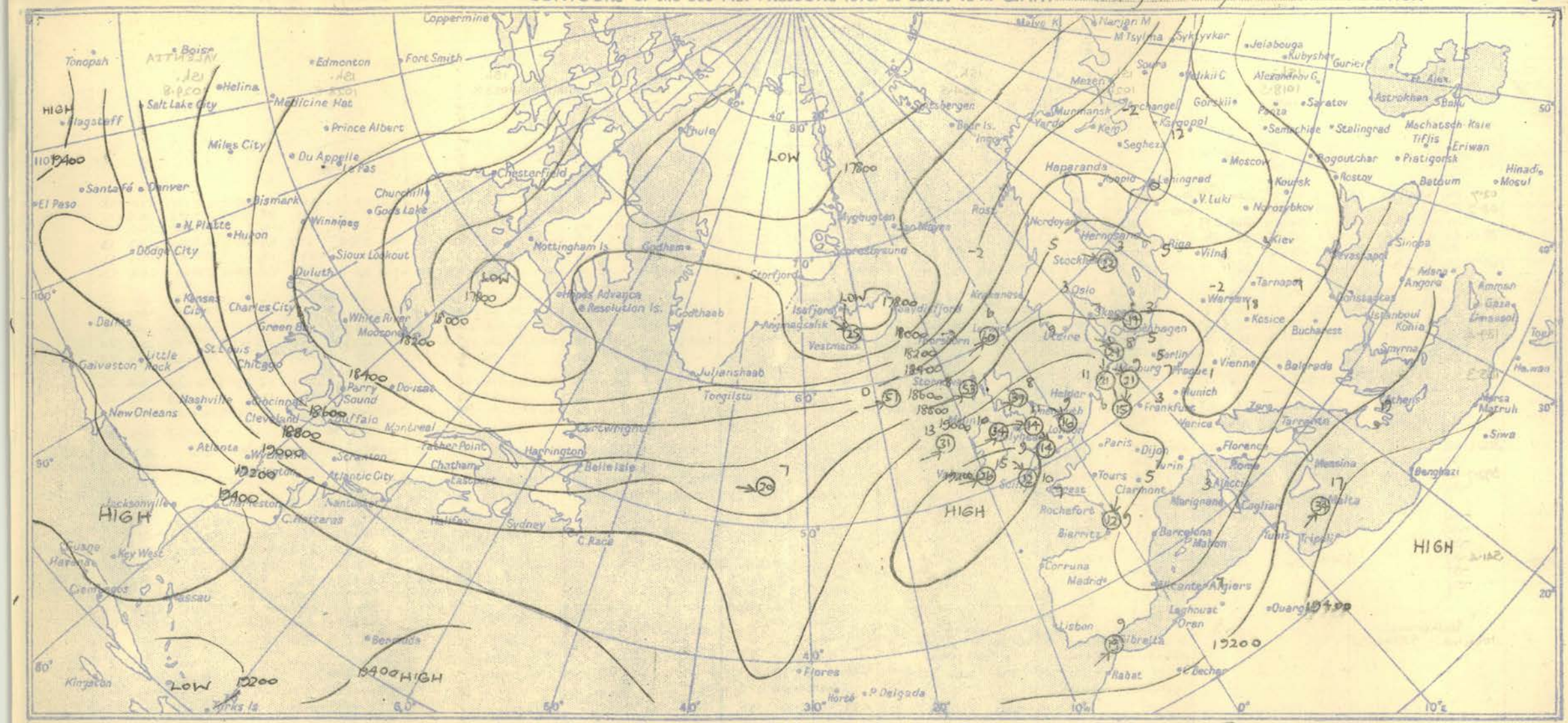
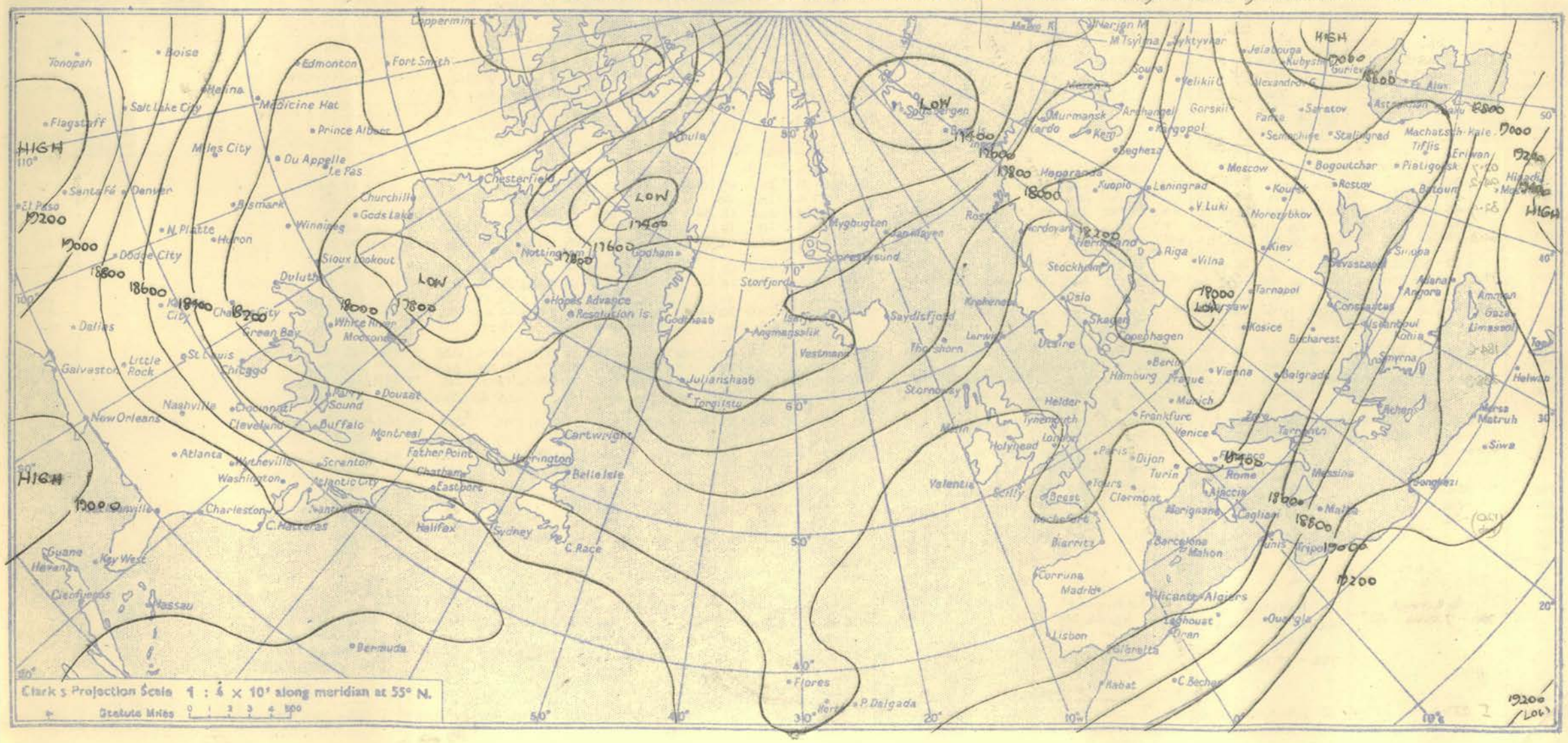
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Sunday 1st July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 1st July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Sunday 1st July, 1951.

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

LERWICK

Pressure — Time 15h. G.M.T.; M.S.L. 1015·8 mb; Surf 1005·8 mb; Freezing 762 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52	290	13
1000	04·2	52	52		
950		51	48	256	28
900	38·0	48	43	256	28
850		44	37	258	27
800	64·7	35	29	260	28
750		31	27	260	25
700	99·7	26	23	253	26
650		22	19	248	31
600	139·4	18	14	240	42
550		12	08	240	51
500	185·3	06	-02	243	60
450		-02	-09	244	66
400	239·7	-13	-21	245	65
350		-26	-35	238	73
300	306·1	-42		238	78
250		-59		244	82
200	392·7	-65		247	67
170		-59			
150		-56			
130		-55			
110		-56			
100	541·4	-57			
90		-57			
80		-57			
70					
60					

Isothermal 1006mb. - 973mb. 52°

Tropopause: I 210mb. -69° 38,200'

STORNOWAY

Pressure — Time 15h. G.M.T.; M.S.L. 1018·5 mb; Surf 1016·9 mb; Freezing 708 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	62	57	250	08
1000	03·1	60	55		
950		54	49	264	17
900	34·1	50	46	263	16
850		45	40	267	16
800	68·9	41	37	265	19
750		35	31	258	28
700	101·2	31	27	253	32
650		28	24	253	27
600	141·3	22	17	256	40
550		15	05	258	57
500	187·3	08	-17	253	53
450		00	-19	251	57
400	242·2	-10	-25	252	69
350		-23	-36	259	64
300	309·1	-37	-60	256	73
250		-54		255	90
200	396·6	-66		272	63
170		-59		271	34
150		-57		256	32
130		-56		252	30
110		-56		260	26
100	545·2	-56		268	20

Inversion 890mb. 47°-843mb. 51° 568mb. 16°-550mb. 17° Max wind:- 271° 72kts. 790-759mb. 45° 205mb. 49000'

Tropopause: I 210mb. -70° 38,600'

LEUCHARS

Pressure — Time 15h. G.M.T.; M.S.L. 1021·8 mb; Surf 1021·0 mb; Freezing 679 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	69	56	250	15
1000	05·9	63	51	247	27
950		56	48	259	28
900	35·0	49	44	273	23
850		56	43	277	30
800	67·0	46	37	275	31
750		41	34	270	30
700	102·7	35	29	265	29
650		28	23	264	27
600	142·8	21	16	264	30
550		17	06	266	42
500	189·0	08	-07	266	39
450		+01	-14	263	38
400	243·6	-10	-22	265	39
350		-22	-32	266	41
300	310·6	-36	-46	276	51
250		-54		276	58
200	398·1	-74		268	58
170		-66		286	45
150		-65		272	28
130		-62		278	21
110		-62		286	21
100	543·6	-61		286	22
90		-58		328	12
80		-56		281	12
70		-57		286	10
60		-54		263	09

Tropopause: I 181mb. -80° 41,800'

ALDERGROVE

Pressure — Time 15h. G.M.T.; M.S.L. 1024·5 mb; Surf 1016·0 mb; Freezing 685 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	65	61	230	08
1000	07·0	64	54	238	15
950		57	49	248	13
900	36·1	51	44	261	22
850		49	42	265	19
800	68·1	46	37	261	18
750		44	27	260	20
700	104·0	38	09	257	22
650		33	05	258	31
600	144·5	28	03	259	37
550		20	-06	263	39
500	191·1	10	-18	260	34
450		01	-27	255	39
400	245·9	-09	-37	257	38
350		-18	-48		

Inversion 869mb. 47°-833mb. 30° Isothermal

Tropopause: N.R.

LIVERPOOL

Pressure — Time 15h. G.M.T.; M.S.L. 1026·0 mb; Surf 1024·0 mb; Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	68	56	300	10
1000	07·2	61	49	292	17
950		58	47	274	13
900	36·4	53	43	255	15
850		48	39	256	18
800	68·4	48	22	276	18
750		46	22	277	18
700	104·5	40	20	265	18
650		32	14	271	16
600	145·1	26	02	285	16
550		20	-02	290	12
500	191·6	11	-13	281	14
450		03	-21	282	15
400	246·6	-08	-31	290	20
350		-19	-43	287	22
300	314·0	-36	-59	283	21
250		-55		291	24
200		-73		301	27
170		-70		310	28
150		-64		305	22
130		-62		309	18
110		-65		322	14
100	546·9	-60		326	09
90		-60		301	08
80		-58		285	05
70		-57		327	05
60		-54		055	05
(050) mb		-48			

Inversion 828mb. 46°-781mb. 49° Isothermal 497-484mb. 10°

Tropopause: I 180mb. -78° 42,400'

DOWNHAM MARKET

Pressure — Time 15h. G.M.T.; M.S.L. 1024·0 mb; Surf 1019·9 mb; Freezing 645 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	78	52	210	12
1000	06·9	70	47		
950		63	44	259	09
900	36·4	55	40	285	09
850		50	32	288	07
800	68·5	48	32	309	06
750		43	28	318	07
700	104·4	36	21	325	08
650		31	14	335	13
600	144·8	24	-01	339	13
550		17	-05	340	15
500	191·1	09	-13	340	16
450		01	-17	338	20
400	245·9	-10	-27	327	21
350		-23	-39	341	16
300	312·8	-38	-54	344	21
250		-58		350	30
200	399·5	-75		347	27
170		-65		331	25
150		-65		334	19
130		-63		334	15
110		-62		334	10
100	545·0	-61		334	09
90		-57		334	09
80		-56		334	07
70		-53		014	05
60		-51		063	04
(050) mb		-47		088	06

Inversion 863mb. 49°-831mb. 31° 664mb. 30°-645mb. 32°

Tropopause: I 187mb. -80° 41,200

LARKHILL

Pressure — Time 15h. G.M.T.; M.S.L. 1025·3 mb; Surf 1010·0 mb; Freezing 662 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	76	52	330	05
1000	07·2	74	49		
950		65	41	314	09
900	36·8	57	39	309	06
850		49	34	320	05
800	68·9	46	24	345	05
750		43	29	030	05
700	104·7	36	23	006	07
650		31	15	356	12
600	145·1	23	06	355	13
550		16	-05	002	13
500	191·3	09	-18	359	14
450		02	-27	351	15
400	246·0	-13	-37	347	15
350		-25	-47	351	15
300	312·6	-41		351	23
250		-59		354	30
200	398·9	-78		349	25
170		-75		340	27
150		-70		341	23
130		-69		343	15
110		-69		342	14
100	542·3	-69		343	10
90		-67		349	08
80		-63		351	08
70		-60		003	07
60		-58		012	05
(057) mb		-58			

Isothermal 750-741mb. 43°

Tropopause: I 183mb. -81° 41,700'

CAMBORNE

Pressure — Time 15h. G.M.T.; M.S.L. 1028·8 mb; Surf 1018·2 mb; Freezing 631 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	63	58	340	11
1000	08·0	57	55	299	08
950		57	50	291	10
900	37·1	54	43	287	09
850		51	31	277	06
800	69·3	48	30	332	04
750		44	35	354	06
700	105·2	40	32	359	06
650		35	22	004	05
600	146·0	27	14	345	08
550		18	05	339	14
500	192·5	10	-04	327	12
450		03	-13	343	17
400	247·5	-07	-23	355	16
350		-22	-38	340	15
300	314·5	-40	-53	342	15
250		-56		344	24
200	401·4	-75		338	22
170		-74		336	22
150		-70		344	21
130		-70		350	14
110		-71		334	11
100	544·6	-69		357	08
90		-68		355	07
80		-63		347	06
70		-59		001	09
60		-57		068	03
(050) mb		-56		072	12
(045) mb		-56			

Inversion 994mb. 58°-971mb. 59° Isothermal 713-688mb. 40°

Tropopause: I 184mb. -81° 42,200'

VALENTIA

Pressure — Time 15h. G.M.T.; M.S.L. 1029·8 mb; Surf 1027 mb; Freezing 620 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	63	57	270	08
1000	08·1	59	54	265	12
950		58	50	263	15
900	37·1	48	45	283	13
850		52	47	301	11
800	69·0	50	41	284	13
750		46	17	269	15
700	105·1	42	02	260	16
650		36	-06	250	16
600	145·8	29	-19	252	20
550		23	-20	259	24
500	192·7	15	-24	264	26
450		04	-33	268	28
400	247·8	-07	-44	266	30
350		-20	-57	259	30
300	315·1	-36		267	29
250		-55		272	33
200	402·3	-74		271	38
170		-75		281	30
150		-67		280	27
130		-68		287	10
110		-68		287	07
100	546·4	-68		287	10
90		-68		287	07
80		-68		274	06
70		-68		326	06
60		-68		010	08

Inversion 886mb. 47°-865mb. 53° Isothermal 750-735mb. 46°

Tropopause: I 184mb. -80° 42,000'

LERWICK

Pressure — Time 21h. G.M.T.; M.S.L. 1015·5 mb; Surf 1005·5 mb; Freezing 735 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	51	290	17
1000	04·2	50	50		
950		48	48	267	26
900	32·9	45	38	266	29
850		40	25	262	33
800	64·3	35	26	258	33
750		32	-18	265	33
700	99·4	29	-34	270	33
650		23		269	33
600	139·1	16		270	34
550		09		273	40
500	184·6	01		271	43
450		-08		268	51
400	238·3	-19		267	56
350		-32		262	57
300	303·8	-46		266	62
250		-61		265	66
200	390·6	-55			
170		-55			
150		-54			
130		-54			
110		-54			
100	(120 mb)				
90					
80					
70					
60					

Isothermal 780-735mb. 32°

Tropopause: I 237mb. -63° 35,700'

STORNOWAY

Pressure — Time 21h. G.M.T.; M.S.L. 1018·6 mb; Surf 1017·0 mb; Freezing 710 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	57	54	270	12
1000	03·1	54	51	270	17
950		51	47	264	18
900	33·8	47	43	256	18
850		43	39	259	20
800	65·3	38	31	264	29
750		36	18	264	38
700	101·0	31	10	263	30
650		26	-01	268	33
600	140·4	19	-16	269	35
550		12	-30	267	38
500	186·2	03	-37	264	39
450		-05	-44	263	45
400	240·3	-13	-48	260	59
350		-24	-49	262	72
300	307·0	-38	-53	263	78
250		-56		266	79
200	394·4	-71		260	76
170		-58		262	63
150		-55		263	45
130		-57		263	30
110		-56		268	32
100	542·8	-55		272	29
90		-55		266	25
80		-55		270	22
70		-54			
60					

Inversion 868mb. -42°-840mb. -43° Isothermal 786-750mb. 36°

Tropopause: I 198mb. -72° 42,100'

LEUCHARS

Pressure — Time 21h. G.M.T.; M.S.L. 1020·1 mb; Surf 1019·3 mb; Freezing 670 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	63	59	250	15
1000	05·5	61	57	230	33
950		55	53	256	34
900	34·6	51	50	268	39
850		49	47	267	39
800	66·7	46	43	268	39
750		40	37	268	39
700	102·4	35	33	262	36
650		30	29	263	37
600	142·7	24	23	264	43
550		16	15	268	41
500	189·0	05	04	268	43
450		00	-02	271	45
400	243·5	-11	-13	272	52
350		-25	-27	275	56
300	310·1	-40	-44	275	57
250		-59		274	66
200	396·4	-76		277	61
170		-66		279	46
150		-60		282	38
130		-61		278	29
110		-61		288	20
100	542·9	-61		304	14
90		-61			
80					
70					
60					

Isothermal 864-832mb. 49°

Tropopause: I 202mb. -77°

ALDERGROVE

Pressure — Time 21h. G.M.T.; M.S.L. 1023·8 mb; Surf 1014·2 mb; Freezing 661 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	63	57		
1000	06·5	61	56		
950		54	51		
900	35·7	51	50		
850		49	47		
800	67·8	44	41		
750		41	35		
700	103·5	35	30		
650		31	25		
600	143·8	23	19		
550		17	12		
500	190·2	08	03		
450		-03	-09		
400	244·5	-14	-18		
350		-24	-29		
300	311·1	-40	-45		
250		-61			
200	397·1	-79			
170		-75			
150					
130					
110					
100					
90					
80					
70					
60					

For winds see page 3.

Tropopause:

LIVERPOOL

Pressure — Time 21h. G.M.T.; M.S.L. 1024·9 mb; Surf 1022·9 mb; Freezing 648 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	64	54	Calm	
1000	06·9	61	51	289	09
950		57	45	285	20
900	36·0	50	42	266	18
850		47	34	257	18
800	68·0	50	27	260	18
750		45	17	265	21
700	104·1	40	09	272	24
650		32	04	276	21
600	144·5	24	-01	280	20
550		16	+10	291	21
500	190·7	09	+19	288	25
450		-02	-29	289	27
400	245·2	-12	-38	289	24
350		-23	-50	277	24
300	312·0	-39	-59	294	25
250		-58		303	26
200	398·6	-79		300	29
170		-84		293	28
150		-71		294	27
130		-69		298	25
110		-72		304	12
100	541·0	-71		312	14
90		-69		326	12
80		-68			
70					
60					
(083) mb					

Inversion 853mb. 46°-828mb. 52° Isothermal 521-504mb. 10°

Tropopause: II 178mb. -84° 42,200'

DOWNHAM MARKET

Pressure — Time 21h. G.M.T.; M.S.L. 1023·4 mb; Surf 1019·0 mb; Freezing 642 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	69	54	235	03
1000	06·8	70	56	273	12
950		66	51	270	20
900	36·3	59	50	284	12
850		51	42	281	08
800	68·7	48	26	276	08
750		44	34	277	12
700	104·6	38	27	295	12
650		33	16	307	13
600	145·2	27	09	305	15
550		21	-01	309	16
500	191·8	11	-11	311	17
450		02	-20	311	18
400	246·7	-09	-28	299	20
350		-20	-39	290	17
300	314·0	-35	-52	302	21
250		-54		330	18
200	401·4	-74		324	23
170		-76		327	20
150		-68		309	21
130		-66		320	18
110		-69		329	15
100	545·6	-67		323	15
90		-65		331	14
80		-65		346	09
70		-65		347	08
60		-64			

Inversion 1019mb. 69°-984mb. 71° Isothermal 811-790mb. 48°

Tropopause: I 182mb. -79° 42,100'

LARKHILL

Pressure — Time 21h. G.M.T.; M.S.L. 1025·0 mb; Surf 1009·2 mb; Freezing 657 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	65	54	Calm	
1000	06·9	64	53		
950		64	51	310	05
900	36·3	56	45	208	02
850		51	31	267	03
800	68·5	47	31	303	06
750		43	32	304	08
700	104·4	38	28	324	10
650		31	18	327	13
600	144·8	24	08	326	14
550		16	+03	331	10
500	191·1	10	+10	338	11
450		-01	-20	323	16
400	245·6	-12	-32	316	17
350		-25	-45	320	21
300	312·1	-41		314	15
250		-57		325	16
200	398·8	-76		335	17
170		-84		336	19
150		-71		324	19
130		-72		329	19
110		-71		350	17
100	540·9	-73			
90					
80					
70					
60					

Inversion 984mb. 63°-966mb. 66° Isothermal 865-835mb. 51°

Tropopause: II 181mb. -84° 41,900'

CAMBORNE

Pressure — Time 21h. G.M.T.; M.S.L. 1028·2 mb; Surf 1017·5 mb; Freezing 625 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	58	55		
1000	07·7	55	54		
950		57	47		
900	36·8	57	31		
850		54	19		
800	69·1	50	13		
750		46	31		
700	105·1	42	19		
650		36	11		
600	145·8	28	05		
550		19	+04		
500	192·4	13	-16		
450		05	-29		
400	247·6	-06	-40		
350		-21	-54		
300	314·9	-37	-60		
250		-54			
200	402·3	-71			
170		-80			
150		-72			
130		-71			
110		-73			
100	545·1	-74			
90		-73			
80		-71			
70		-71			
60		-69			
(065) mb					

Inversion 985mb. 53°-960mb. 57° Isothermal 960-900mb. 57° 713-695mb. 42°

Tropopause: II 176mb. -80° 42,800'

HMSO Press, MO Dunstable

No. 11182 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Monday 2nd July 1951. Page 1.

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

03hrs G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03hrs G.M.T.	1015·3 mb	1005·3 mb	745 mb
STORNOWAY	03hrs G.M.T.	1019·3 mb	1017·7 mb	745 mb
LEUCHARS	03hrs G.M.T.	1019·3 mb	1018·5 mb	700 mb
ALDERGROVE	03hrs G.M.T.	1023·4 mb	1013·8 mb	700 mb
LIVERPOOL	03hrs G.M.T.	1024·2 mb	1022·2 mb	660 mb
DOWNHAM MARKET	03hrs G.M.T.	1024·6 mb	1019·2 mb	635 mb
LARKHILL	03hrs G.M.T.	1026·0 mb	1009·7 mb	664 mb
CAMBORNE	03hrs G.M.T.	1027·6 mb	1016·8 mb	660 mb
Valentia	03hrs G.M.T.	1028·3 mb	1014·1 mb	640 mb

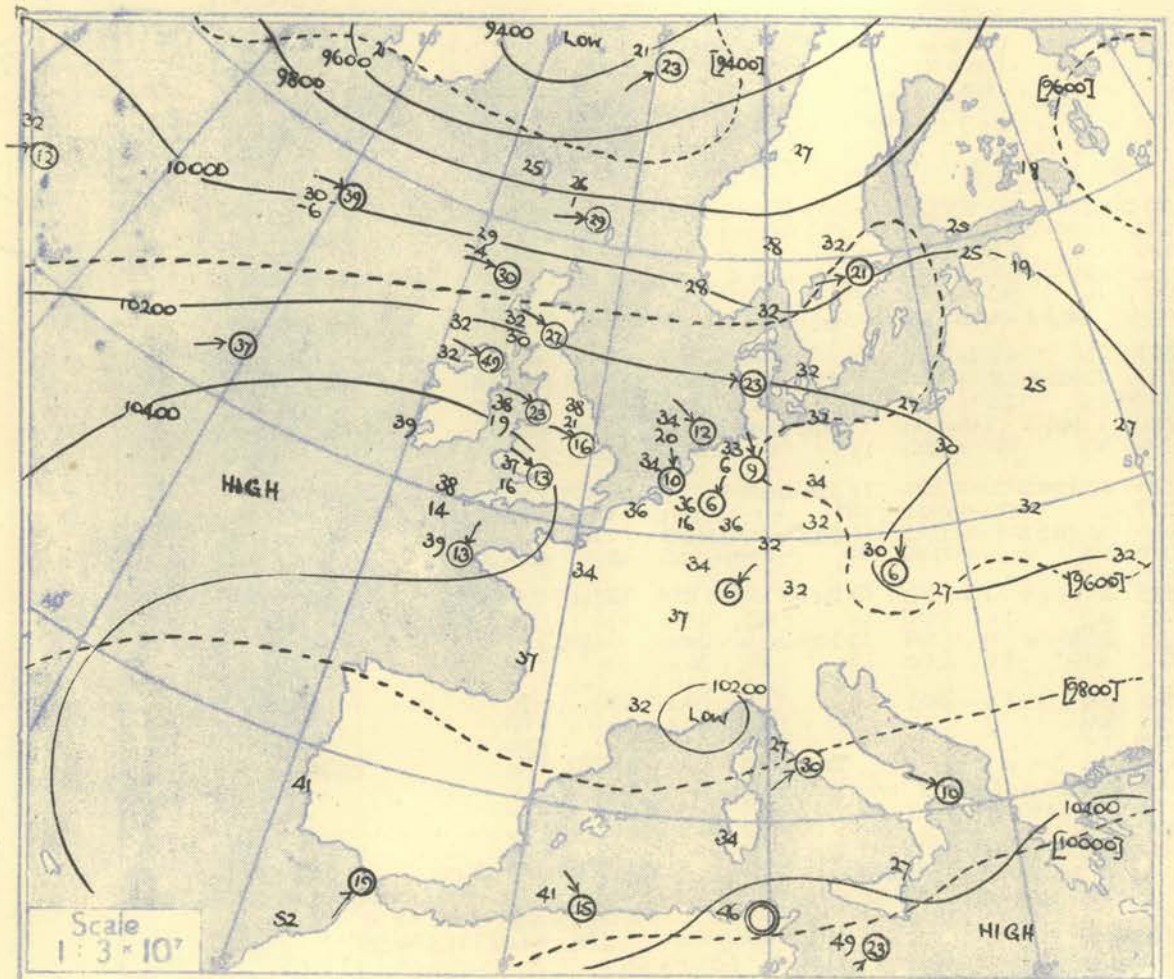
Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Valentia Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	49	49	290	11	0·4	53	51	240	06	0·2	59	57	260	05	02·6	60	57	270	05	0·6	62	56	270	08	01·2	57	55	330	05	04·4	50	48	Calm		02·9	54	54	Calm		0·3	59	56		Surf
1000	04·1	49	49			0·2	52	49	281	27	05·3	58	55	272	18	06·4	58	58	270	15	06·7	59	53	273	22	06·5	58	53	320	18	07·0	53	48			07·5	52	51			1·6	57	54		1000
950		45	44	270	24		46	43	263	23		54	50	286	18		53	53	273	18		54	50	285	22		55	53	300	13		39	50	308	07		52	48				52	51		950
900	31·6	39	33	263	26	33·8	41	39	255	23	34·3	51	45	295	18	35·4	48	48	276	22	35·8	49	44	294	19	35·7	54	51	247	13	36·2	54	46	242	09	36·5	52	41			31·6	50	45		900
850		34	33	260	31		39	34	258	25		50	41	293	19		45	45	277	30		42	37	307	16		50	46	244	14		51	36	220	07		55	31				50	43		850
800	63·9	37	32	260	31	65·2	37	25	261	26	66·2	42	36	291	22	67·2	41	41	280	40	69·6	45	37	293	21	67·8	46	39	265	15	68·4	47	24	273	08	68·8	48	22			68·7	46	40		800
750		33	05	259	28		32	10	263	30		37	31	283	25		37	37	278	45		43	29	287	23		46	21	277	15		44	13	289	09		43	18				42	10		750
700	98·9	26	01	258	29	100·2	25	-4	269	30	101·7	32	20	287	27	102·7	32	32	275	43	103·5	38	19	278	23	103·1	38	21	285	16	104·3	37	16	305	13	104·8	38	14			104·5	39	25		700
650		21	-3	260	32		25	-8	278	30		23	13	286	30		27	27	272	40		31	00	269	25		33	11	291	17		31	08	306	16		30	09				34	30		650
600	138·3	13	-28	261	37	139·9	16	-15	271	33	141·6	20	16	267	37	142·7	19	13	264	36	143·8	25	-6	272	27	144·3	27	06	252	17	144·7	24	-3	300	15	145·1	24	-1			145·5	27	-9		600
550		06	-39	262	46		09	-24	270	38		13	11	265	45		11	-8	270	58		17	-11	276	27		19	-1	293	18		16	-12	300	15		09	-16				20	-12		550
500	183·5	-2	-42	263	43	185·5	02	-30	277	42	187·0	06	01	268	51	186·7	06	-9	272	40	180·1	05	-24	281	30	180·9	13	-12	292	21	191·0	09	-20	316	15	191·5	11	-25			191·7	14	-		500
450		-12	-52	267	47		-8	-33	275	48		-3	-9	268	55		-7	-17	268	48		00	-25	277	32		+01	-8	292	25		-1	-27	302	21		00	-33				05	-16		450
400	236·7	-25	-58	265	51	239·2	-26	-43	280	52	241·9	-15	-22	267	57	242·7	-15	-26	282	60	244·8	-10	-30	278	30	245·8	-8	-28	290	26	245·6	-11	-31	299	22	246·1	-13	-45			246·9	-5	-14		400
350		-37	-60	261	64		-33	-58	285	60		-29	-36	258	63		-30	-42	271	54		-22	-33	290	34		-18	-40	293	25		-24	-51	305	26		-25	-58				-18	-25		350
300	301·4	-52		259	56	304·5	-48		290	69	306·9	-43		265	69	308·5	-46				311·8	-36	-54	278	32	313·4	-33	-51	293	23	312·3	-38	-60	298	19	312·7	-38	-58			314·5	-33	-40		300
250		-64		262	53		-64		291	69		-62		265	81		-66					-54		278	25		-51		292	21		-55		297	13		-58					-70			250
200	387·7	-69		266	54	390·8	-61		291	54	393·7	-76		264	75	395·7	-79				399·2	-74		276	39	401·6	-70		294	23	399·5	-76		300	16	399·5	-77				402·5	-71			200
170		-55		260	40		-62		272	42		-67		283	50		-69					-86		285	40		-81		300	29		-79		312	22		-78					-67			170
150		-56		276	36		-61		270	36		-65		294	37		-68					-74		290	36		-82		303	28		-71		320	25		-71					-65			150
130		-55					-60		269	31		-65		269	42		-67					-70		291	26							-69		321	21		-71					-65			130
110							-59					-64		290	20							-69		288	21							-70		332	16		-72					-63			110
100											532	66		293	20						541·7	-70		306	19	See p.5 for					542·5	-70		330	16	542·1	-73				547·7	-65			100
90												-65										-72		320	15	remainder of						-70		348	09		-73					-65			90
80												-64										-70		326	10	winds.						-69					-72					-63			80
70												-64										-68		301	09							(77)					-70								70
60												-63										-66		311	07																				60
	Inversion 854 mb 33°-822 mb 38°					Inversion 868 mb 37°-832 mb 40°					Inversion 871 mb 48°-860 mb 55 (550 mb 11°-532 mb 12° 635 mb 20°-616 mb 22° Isothermal 765-741 mb 37°					Inversion 850 mb 42°-833 mb 46° 822 mb 44°-774 mb 46°					Inversion 765 (54).					Inversion 1019 mb 53°-969 mb 61° 818 mb 44°-781 mb 49°					Inversion 1010 mb 50°-975 mb 62 975 mb 53°-945 mb 51° Isothermal 860-832 mb 51°					Inversion 1017 mb 54°-1006 mb 58° 885 mb 49°-867 mb 54° 800 mb 48°-785 mb 50°					Inversion				
Tropopause	II 259 mb -63° 33300'					I 241 mb -66° II 220 mb -68° 34000'					I 197 mb -77° 39700'					I 201 mb -81° 38700'					I 164 mb -87° 43300'					I 153 mb -85° 45600'					I 175 mb -83° 42600'					II 165 mb -81° 41500'					II 165 mb -76° 41900'					Tropopause

Station	Time	M.S.L.	Surf	Freezing
LERWICK	09hrs G.M.T.	1014·3 mb	1004·3 mb	758 mb
STORNOWAY	09hrs G.M.T.	1018·8 mb	1017·2 mb	710 mb
LEUCHARS	09hrs G.M.T.	1020·0 mb	1019·2 mb	687 mb
ALDERGROVE	09hrs G.M.T.	1022·3 mb	1013·3 mb	696 mb
LIVERPOOL	09hrs G.M.T.	1024·8 mb	1022·0 mb	680 mb
DOWNHAM MARKET	09hrs G.M.T.	1023·6 mb	1019·2 mb	650 mb
LARKHILL	09hrs G.M.T.	1025·0 mb	1009·2 mb	670 mb
CAMBORNE	09hrs G.M.T.	1027·1 mb	1016·5 mb	647 mb

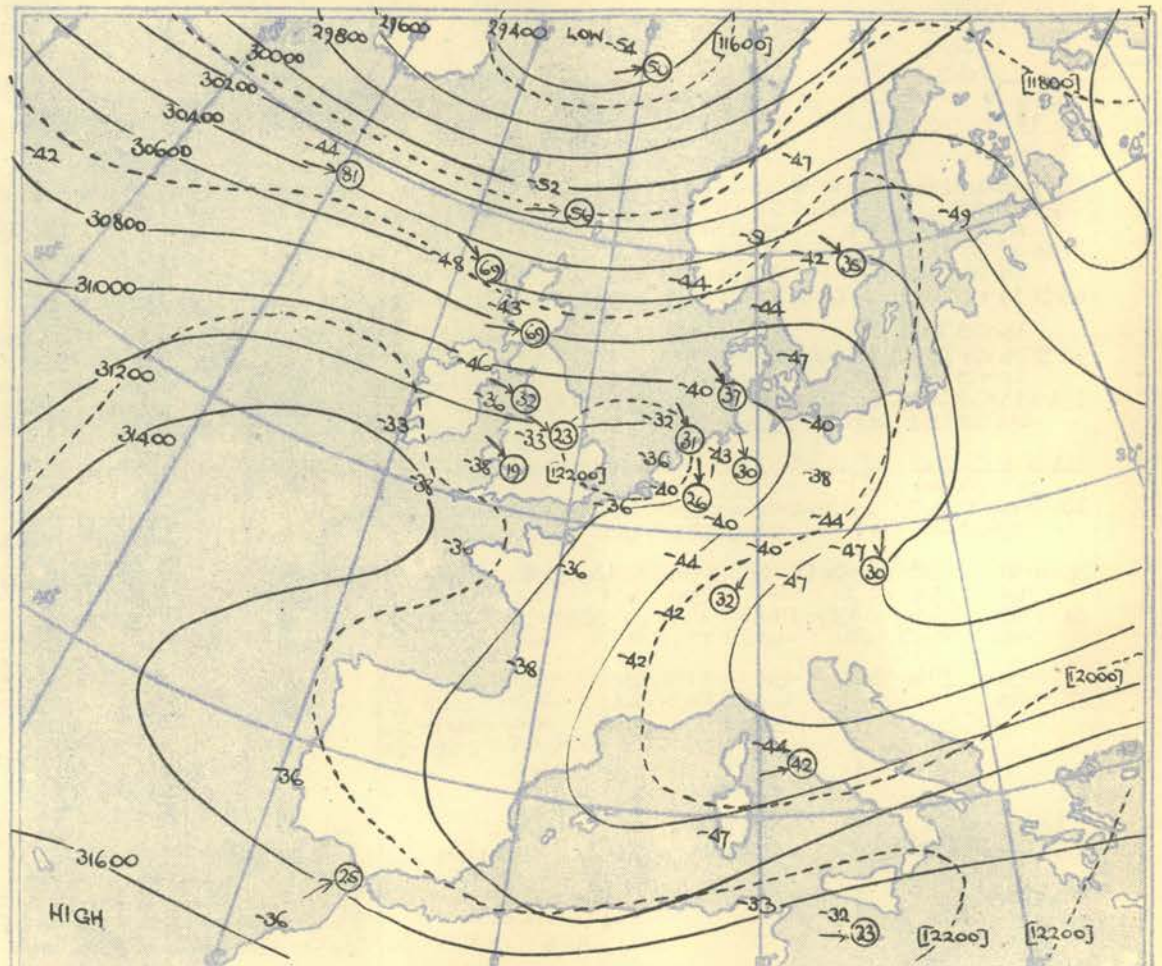
Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	53	50			0·4	56	47	260		100·2	67	55	300	03	02·6	60	58	300	10	0·6	61	57	270	18	01·2	68	56	265	11	4·4	62	56	calm		02·9	55	55	350	09					Surf
1000	03·9	51	48			05·1	52	45			05·6	65	52			06·3	58	57	295	16	06·7	58	52	268	27	06·6	63	52	258	27	06·8	61	54			07·4	57	56							1000
950		45	42				47	39	257	25		54	46	298	13		53	52	260	17		53	51	283	24		57	47	291	14		55	46	292	04		58	52								950
900	32·3	39	36			33·7	41	34	257	25	34·6	46	40	292	17	35·2	51	49	274	21	35·7	51	49	282	22	35·7	50	42	293	16	35·9	52	40	303	08	36·6	52	47							900
850		36	33				35	28	260	31		46	37	295	25		47	43	275	29		47	44	295	21		51	31	294	11		52	33	293	09		53	41								850
800	63·5	32	23			65·0	36	17	264	34	66·4	43	23	293	30	67·1	42	35	290	32	67·1	43	40	295	24	67·9	45	35	298	16	68·1	48	28	298	11	69·0	51	35							800
750		31	07				33	-1	268	35		37	28	290	34		37	28	280	40		42	35	291	27		43	28	293	15		44	24	296	14		46	30								750
700	98·4	25	01			100·1	30	-8	266	32	101·9	34	17	278	27	102·6	33	24	270	44	103·5	36	25	283	26	103·8	38	19	290	20	104·0	36	18	285	18	105·1	35	22							700
650		21	-3				25	-14	265	38		27	08	290	28		27	16	267	42		32	23	280	23		32	07	277	20		31	10	290	15		33	15								650
600	136·0	13	-13			140·0	18	-21	264	46	141·9	20	00	274	29	142·8	23	18	271	42	143·8	24	17	273	24	144·3	24	02	293	26	144·4	23	01	294	13	143·7	27	06							600
550		07	-18				11	-32	264	39		16	-13	273	32		15	10	266	44		18	06	276	26		16	-7	286	24		17	-7	298	16		22	-4								550
500	183·4	00	-20			185·8	04	-31	267	45	188·1	08	-25	278	39	188·9	09	00	268	43	190·2	10	04	284	34	190·6	08	-16	275	23	190·6	08	-12	259	20	192·4	13	-13							500
450		-8	-24				-7	-33	266	53		00	-31	274	39		09	-34	276	44		00	-4	284	41		00	-2	293	23		-2	-18	303	23		03	-21								450
400	231·1	-18	-36			234·7	-17	-44	262	63	236·2	-11	-41	284	44	236·0	-7	-28	272	47	240·9	-10	-36	282	32	240·2	-10	-36	302	25	240·2	-11	-28	312	20	241·9	-8	-31							400
350		-30	-52				-30	-53	265	63		-26	-34	280	50		-15	-35	283	43		-24	-33	286	38		-23	-35	302	32		-24	-43	309	21		-22	-45								350
300	302·7	-45				305·4	-46		268	72	309·0	-43		276	61	311·5	-34	-50	282	59	311·5	-41		295	48	312·0	-34	-53	298	33	311·8	-41		305	19	314·4	-36	-51							300
250		-55					-62		263	78		-60		279	61		-53		280	67		-58		290	46		-57		295	34		-57		298	16		-53								250
200	389·5	-57				391·5	-64		267	66	395·1	-72		277	57	399·1	-73		282	69	398·3	-74		291	53	398·7	-78		293	35	398·5	-78		307	21	402·0	-72								200
170		-49					-68		267	49		-63		282	47		-67		282	41		-71		291	35		-73		298	34		-78		308	16		-75								170
150		-48					-68		267	36		-60		278	39		-57		280	43		-63		285	32		-68		301	25		-70		308	22		-69								150
130		-50					-67		269	25		-57					-57		285	37		-67		290	25		-67		294	18		-68		311	21		-67								130
110		-48					-66		269	26		-57					-57		279	27		-63		285	21		-63		310	18		-69		311	16		(69)								110
100	241·4	-51				240·3	-55		267	17	242·7	-58									244·0	-62		295	15	242·7	-66		311	15	241·6	-70		311	12											100
90		-51					-54		267	16		-60										-61					-68		298	12		-67		308	09											90
80		-51					-52		267	13		-57									(88)	-61					-69		316	09		-64													80
70		-51					-50		266	10																	-63		353	06		(65)													70
60	(67)	-51					-50		266	08																																			60
	Inversion 893 mb 31°-773 mb 33° Isothermal 910-872 mb 39°					Inversion 832 mb 33°-801 mb 37° Isothermal 745-710 mb 32° 694-675 mb 29°					Inversion 863 mb 41°-843 mb 48° 720 mb 32°-705 mb 35°					Inversion 800 mb 39°-785 mb 46°					Inversion 850 mb 42°-787 mb 45° 665 mb 29°-660 mb 30°					Inversion 889 mb 49°-826 mb 52°					Inversion 935 mb 54°-918 mb 55° Isothermal 900-850 mb 52°					Inversion 985 mb 55°-960 mb 59° 900 mb 52°-860 mb 56°									
Tropopause	I 225 mb -63° 36700'					I 217 mb -76° 37500'					I 210 mb -75° 38600'					II 193 mb -77° 40800'					II 188 mb -74° 41100'					I 178 mb -85° 42500'					II 184 mb -81° 41600'					I 173 mb -80° 43200'										Tropopause

Monday 2nd July, 1951.

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



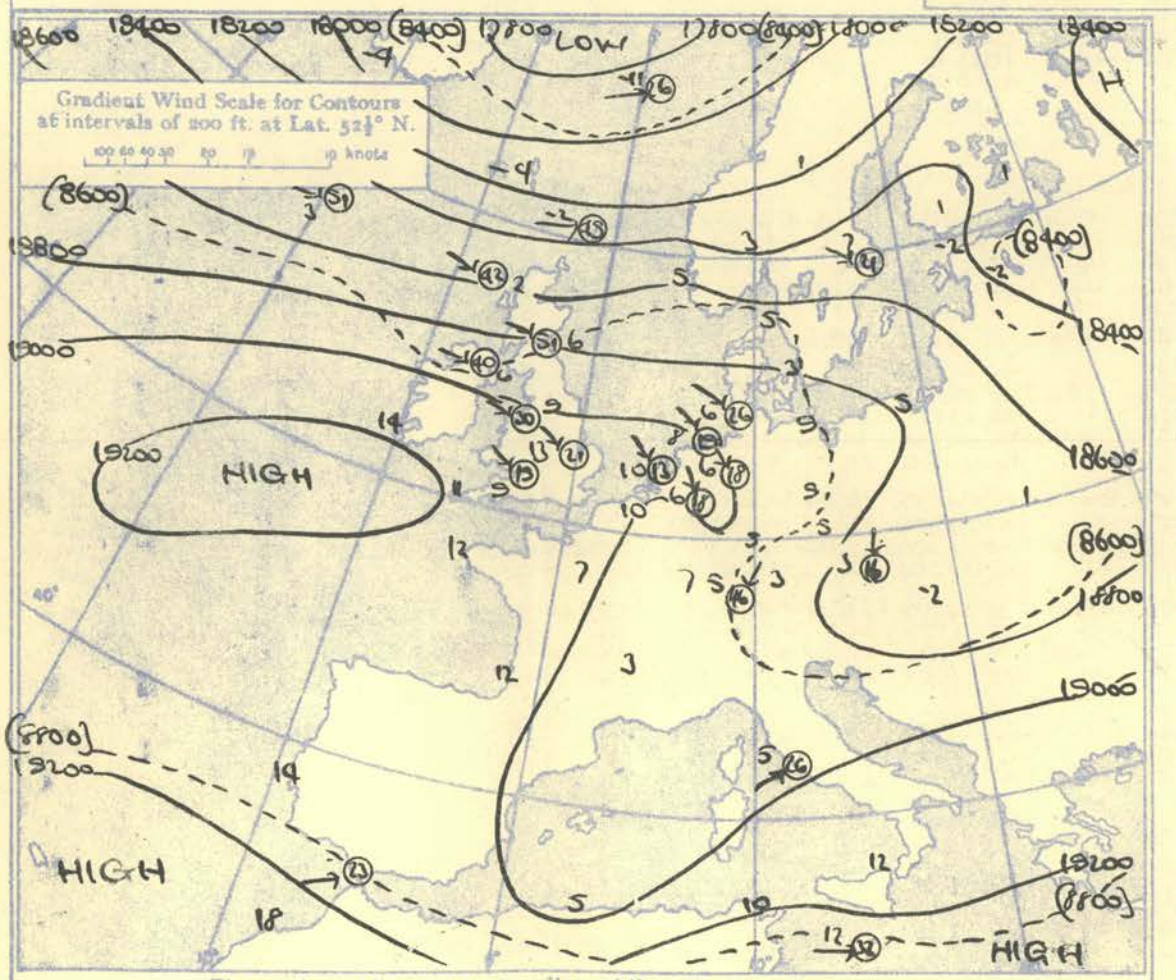
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



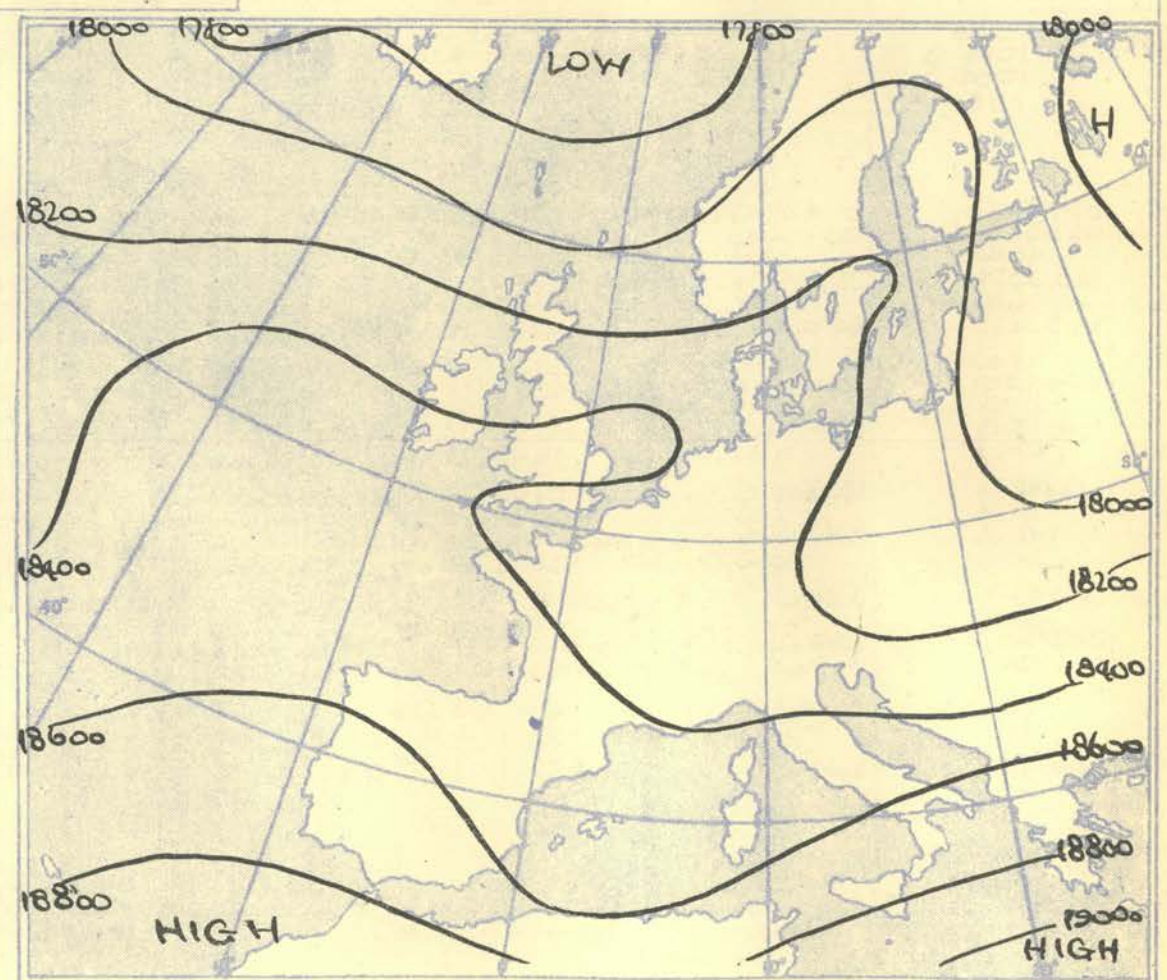
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

	52.12N. 02.12W.		
Pressure Time	1445		
Pressure M.S.L.	1024 mb		
Pressure Surf	1022.5 mb		
Pressure Freezing	645 mb		
Pressure mb	Height ft./100	°F. Temp.	Dew °F.
Surf	00.4		
1000	06.7		
950			
900	36.3	57	55
850		52	44
800	69.7	49	44
750			
700	104.6	36	34
650			
600	145.1	27	
550			
500	191.9	13	
450			
400	246.9	-07	
350			
300	314.3	-37	
250			
200			
170			

Cloud.
3-4/8 Cu 901-816 mb.
Patches 1/8 Cs 566-561 mb.

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

Place	Downham Market		Cirrus 52.6N. 20W.		Lerwick		Shoeburyness		Culdrose		Larkhill		St. Eval		Larkhill		Larkhill				Place
Time	03h.		09h.		09h.		09h.		09h.		1130h.		15h.		18h.		2330h.				Time
Type	Pilar				Pilar																Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.			190	24	290	18	Calm		350	07			330	09	220	05	300	06			Surf.
1,000			210	27	246	27	340	06	010	10	320	23	360	07	270	08	310	09			1,000
2,000			230	30	251	28	320	04	020	14	330	25	360	10	290	05	280	09			2,000
3,000			240	31	266	28	300	10	350	15	330	30	060	07	310	04	270	09			3,000
4,000			230	32	270	27	280	15	310	14	310	13	010	09	330	04	260	11			4,000
5,000			230	33	271	27	280	15	320	15	320	16	280	05	310	04	260	18			5,000
6,000			230	37	267	31	290	15	310	16	320	16	280	08	290	05	270	13			6,000
8,000					262	37	280	14	290	16	300	10	290	12	280	10	270	14			8,000
10,000			230	34	260	38	280	14	280	23	270	12	310	16	280	13	290	16			10,000
14,000			250	40	266	47	280	11			270	15	290	16	290	19	280	21			14,000
18,000			240	40	264	54	290	18	300	36			290	30			280	21 (15,000')			18,000
24,000			240	40	272	63	320	19					300	28 (29000')							24,000
30,000					273	69	330	22	300	22											30,000
40,000					284	78 (35,000')	310	26	310	15											40,000
50,000	314	16					310	16	300	20											50,000
	311	08 (60,000')					300	13 (55,000')													

NEPHOSCOPE OBSERVATIONS

Place	Elmdon										Place
Time Type	09h. Ac.										Time Type
Dir. Vel.	310 18										Dir. Vel.

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

Ship	WEATHER OBSERVER					WEATHER OBSERVER				
Lat/Long	59.0N 19.1W					58.8N 19.4W				
Time G.M.T.	03h					09h				
Pressure M.S.L.	1017 mb					1017 mb				
Pressure Surf	1017 mb					1017 mb				
Pressure Freezing	720 mb					710 mb				
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		51	45	270	23		51	45	270	23
1000	4.6	49	43	264	20	4.5	49	43	265	20
950		43	37	262	24		43	39	267	23
900	32.9	36	32	259	25	32.8	36	36	270	27
850		39	22	257	31		41	25	272	28
800	64.3	38	05	261	36	64.1	36	15	275	30
750		34	-08	264	36		36	14	284	30
700	99.5	30	-06	265	39	99.3	29	08	287	30
650		26	-10	262	42		23	02	287	33
600	139.4	18	-08	264	47	139.0	17	02	284	36
550		11	-11	267	50		09	-04	278	35
500	185.1	03	-14	263	51	184.5	-02	-10	271	41
450		-07	-17	257	66		-10	-17	267	44
400	238.9	-19	-29	252	61	237.9	-20	-28	275	42
350		-31	-59	254	69		-33	-41	264	49
300	304.7	-44		254	81	303.3	-48		261	44
250		-59		252	96		-61		260	45
200	391.4	-62		244	57	390.5	-53		262	45
170		-54		246	48		-51		266	39
150		-54		234	39		-52		261	30
130		-54		233	34		-52		262	28
110										
100										
90										
80										
70										
60										
Tropopause	I 222 mb -68° 32,000'					I 250 mb -61° 34,300'				

WEATHER OBSERVER 03h:
Inversion
881 mb 34° - 895 mb 40°
Isothermal
845 - 823 mb 40°
782 - 770 " 36°
742 - 722 " 33°

WEATHER OBSERVER 09h:
Inversion
900 mb 36° - 871 mb 42°
791 " 36° - 748 " 36°
Isothermal
491 - 477 mb -04°

Ship	WEATHER OBSERVER					WEATHER OBSERVER				
Lat/Long	58.9N 18.7W					59.0N 18.7W				
Time G.M.T.	15h					21h				
Pressure M.S.L.	1018 mb					1019 mb				
Pressure Surf	1018 mb					1019 mb				
Pressure Freezing	730 mb					750 mb				
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		53	45	300	22		51	45	310	25
1000	4.9	50	42	293	21	5.1	48	39	307	24
950		45	37	292	26		41	34	304	22
900	33.3	38	30	291	29	33.4	38	27	296	24
850		43	22	289	29		40	23	296	25
800	64.9	40	16	289	29	64.9	37	18	295	24
750		34	-17	290	30		22	10	294	27
700	100.1	29	-18	290	32	100.0	27	-15	295	29
650		23	-10	288	37		21	-19	295	28
600	139.8	17	-13	287	36	139.5	13	-13	295	30
550		09	-13	284	45		07	-08	296	35
500	185.4	02	-26	284	50	184.8	00	-21	293	40
450		-07	-39	284	52		-10	-36	288	40
400	239.2	-18	-58	281	58	238.3	-20	-48	281	54
350		-31	-47	278	63		-33	-60	278	61
300	304.8	-46		277	61	308.5	-49		276	64
250		-61		269	81		-65		270	75
200	391.9	-54		266	54	390.0	-53		249	54
170		-51		263	45		-53		267	46
150		-51		261	44		-53		267	33
130		-50		260	33		-54		265	33
110		-51		261	24		-52		267	20
100	543.1	-50		262	20	540.3	-53		270	10
90		-50		264	18		-53		275	16
80		-50		266	18		-53		276	19
70		-48		266	14		-50		272	10
60		-47		268	12		-51			
	(53 mb)	-47				(55 mb)	-49			
Tropopause	I 244 mb -63° 35,000'					I 240 mb -68° 35,200'				

WEATHER OBSERVER 15h:
Inversion
900 mb 38° - 870 mb 44°

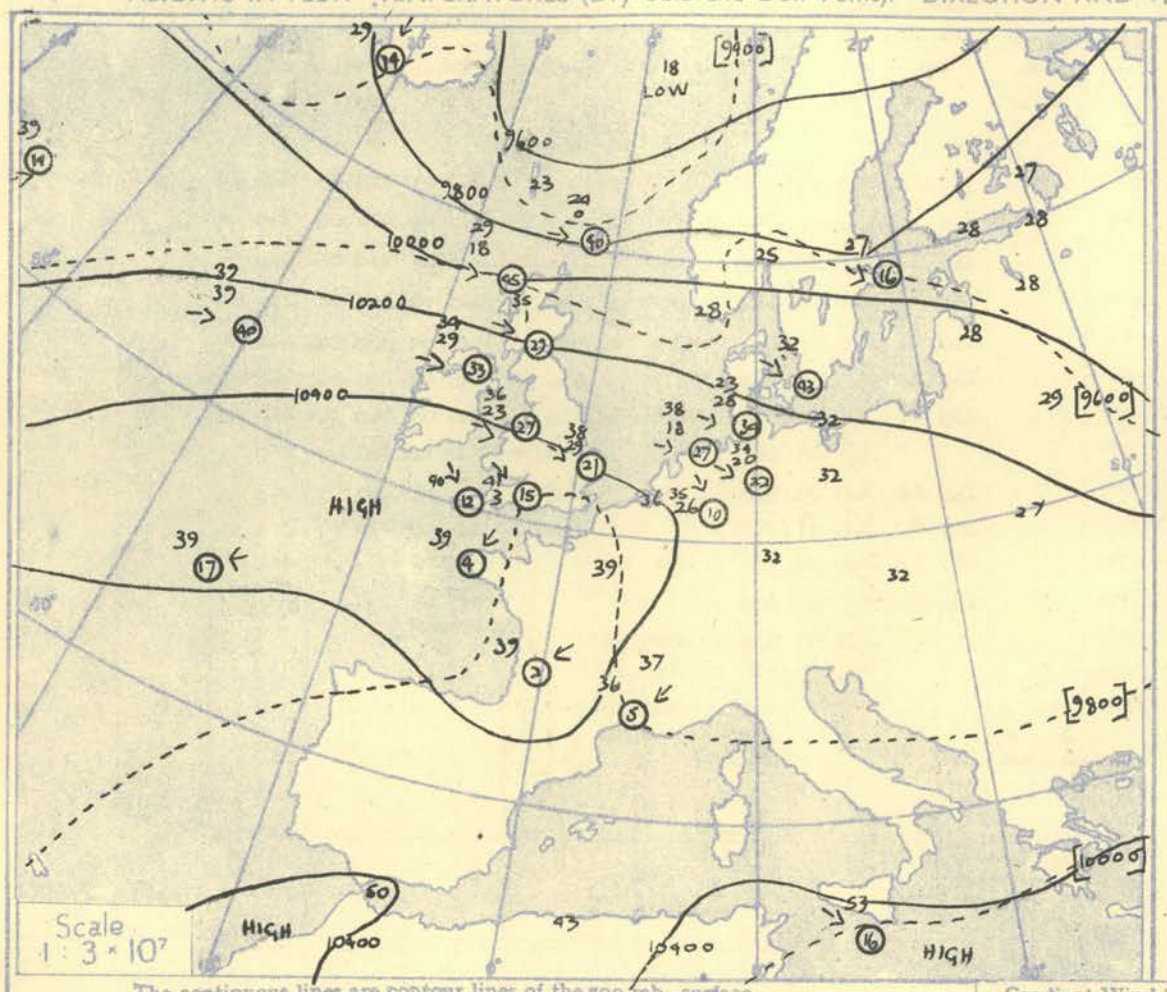
WEATHER OBSERVER 21h:
Inversion
908 mb 37° - 875 mb 42°

Ship	CIRRUS					CIRRUS	CIRRUS					CIRRUS
Lat/Long	52.4N 20.0W					52.6N 20.0W	52.5N 20.0W					52.5N 20.0W
Time G.M.T.	03h					09h	15h					21h
Pressure M.S.L.							1019 mb					
Pressure Surf							1019 mb					
Pressure Freezing							650 mb					
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots		Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	
Surf								59	58	210	20	
1000							5.4	58	58	230	21	
950								56	56	239	25	
900							34.6	54	54	238	38	
850								51	51	233	32	
800							66.8	49	49	233	33	
750								44	44	233	29	
700							102.9	39	39	238	46	
650								32	32	233	40	
600							143.5	27	27	258	36	
550								19	19	238	30	
500	Radio sonde corrupt.					For winds see top of page	190.2	11	11	238	30	
450								02	02	238	27	
400							245.2	-08	-08			
350								-21	-22			
300							312.4	-35				
250								-51				
200								-71				
170								-74				
150								-68				
130								-67				
110								-67				
100							594.4	-66				
90								-66				
80								-66				
70								-66				
60								-66				
							(50mb)	-65				
							(46-)	-65				
Tropopause							I 183 mb -78° 42,400'					

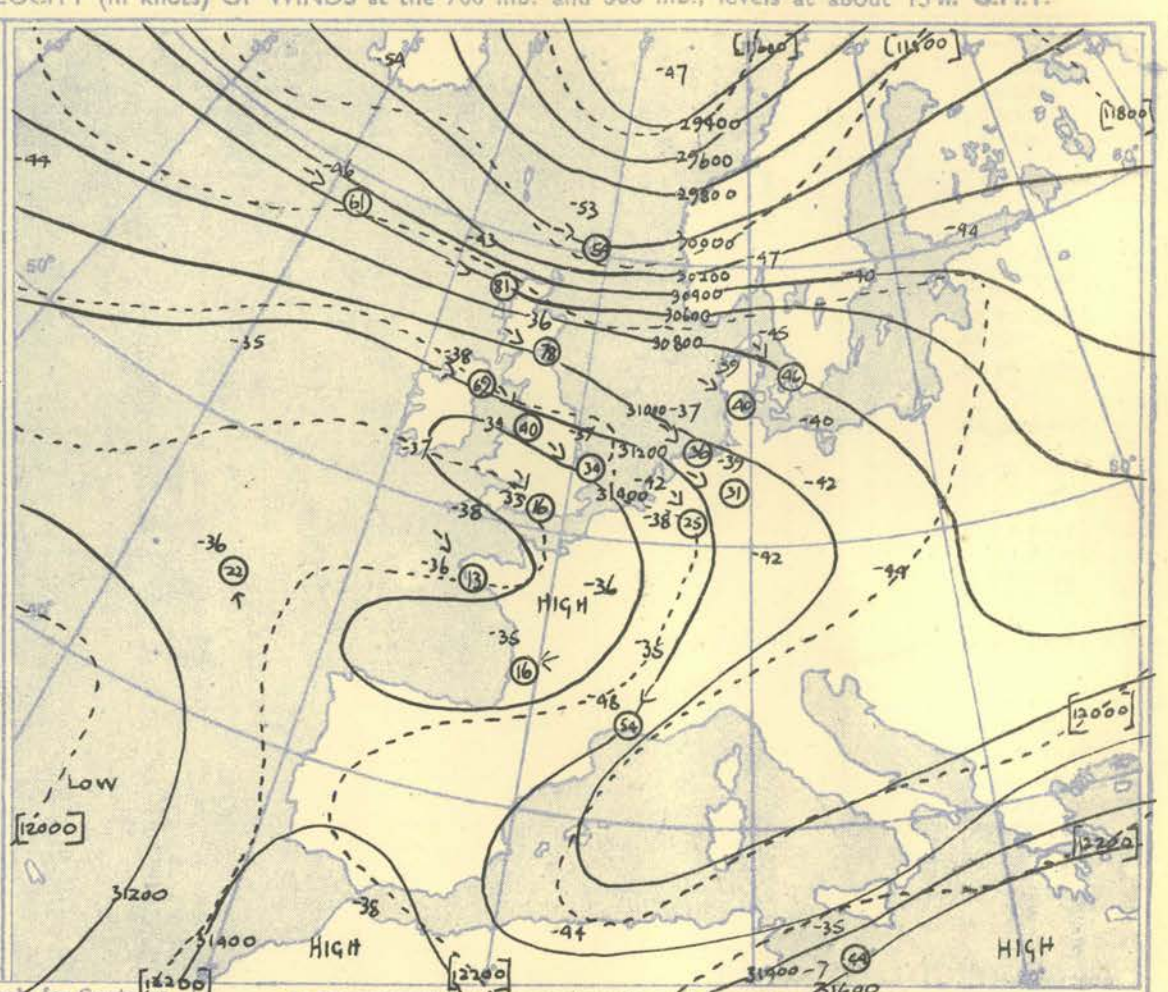
CIRRUS 15h:
Inversion
820 mb 47° - 800 mb 49°

Monday 2nd July 1951.

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



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

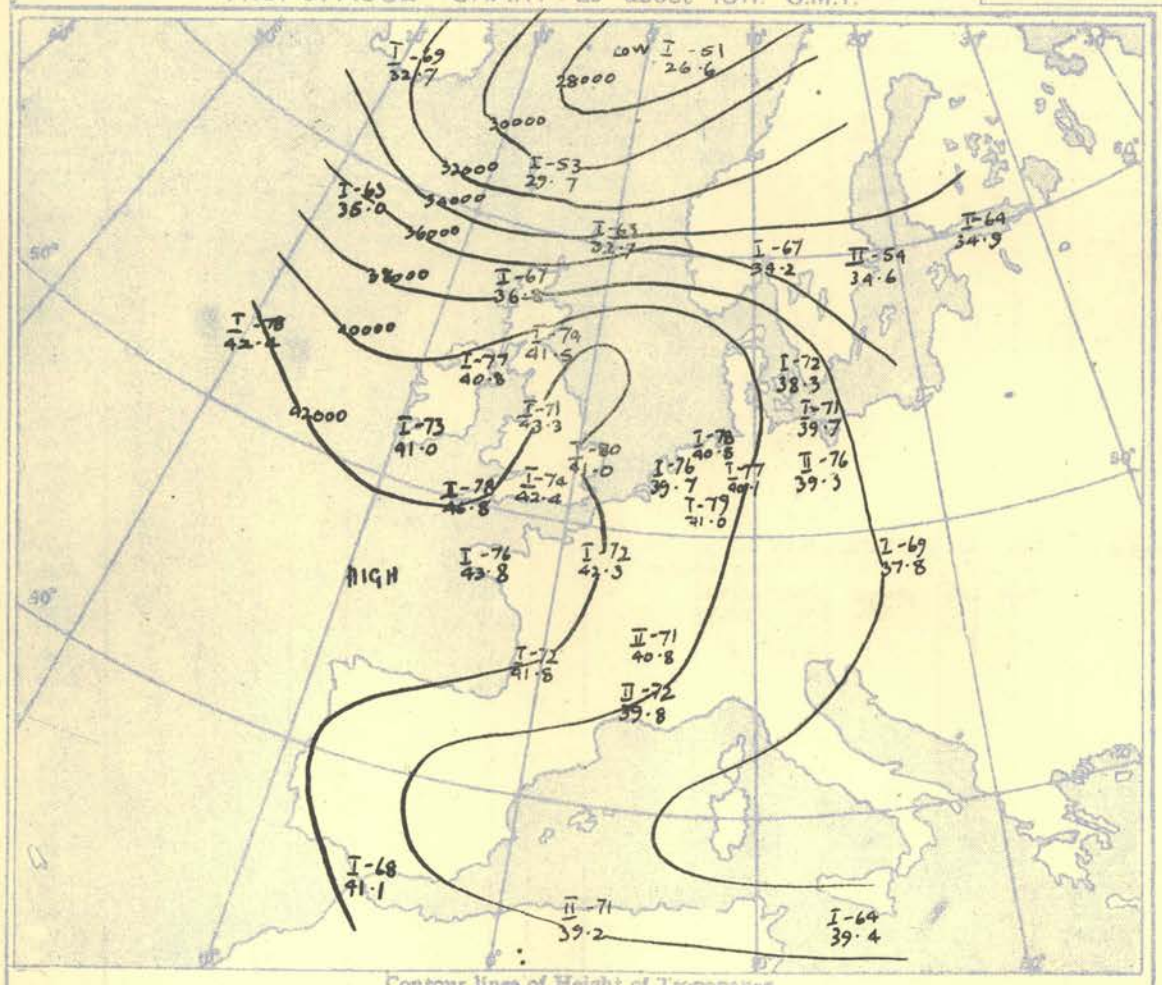


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 40 30 20 15 10 Knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Some cooling, probably mainly dynamical, occured over the Norwegian Sea, possibly in association with an unexpectedly large southward penetration of a cold front over the North Sea.

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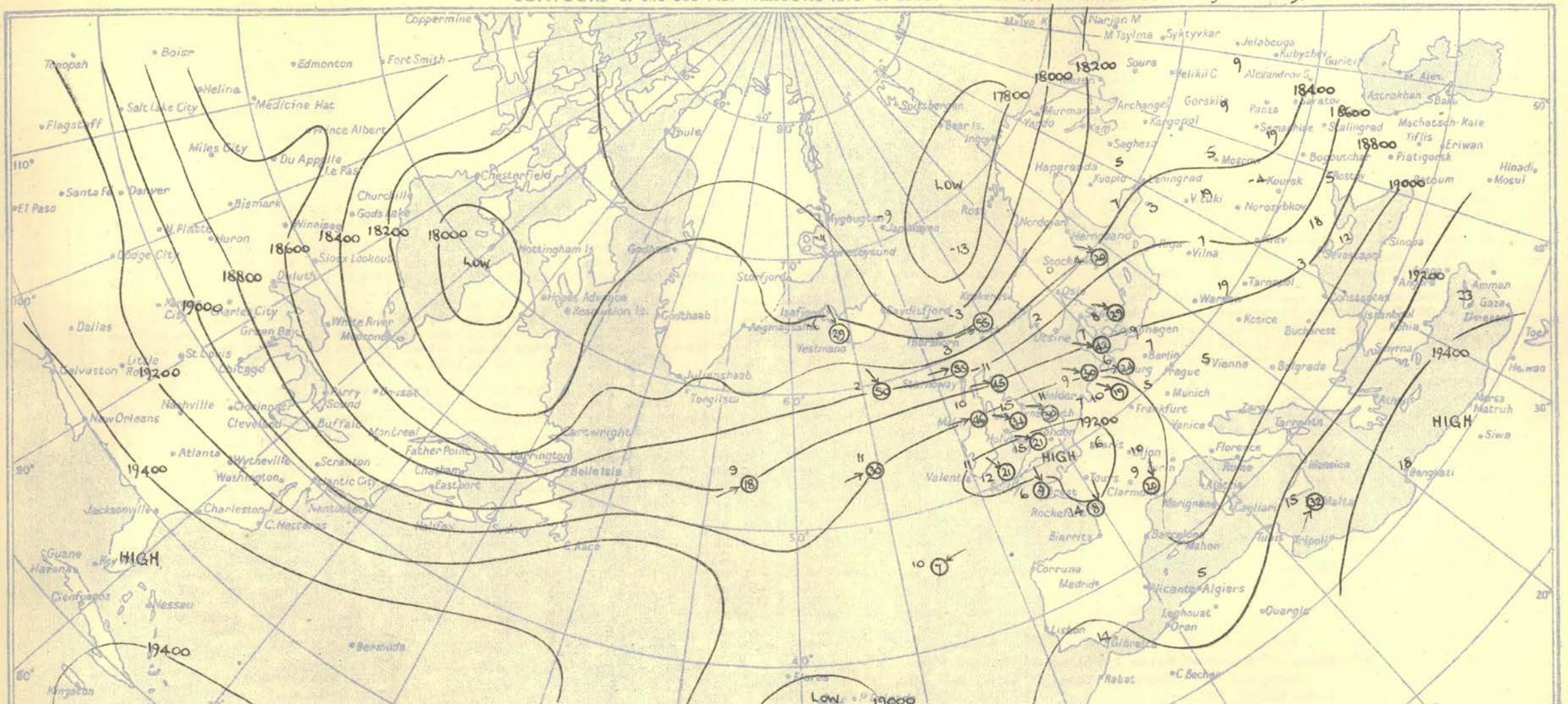
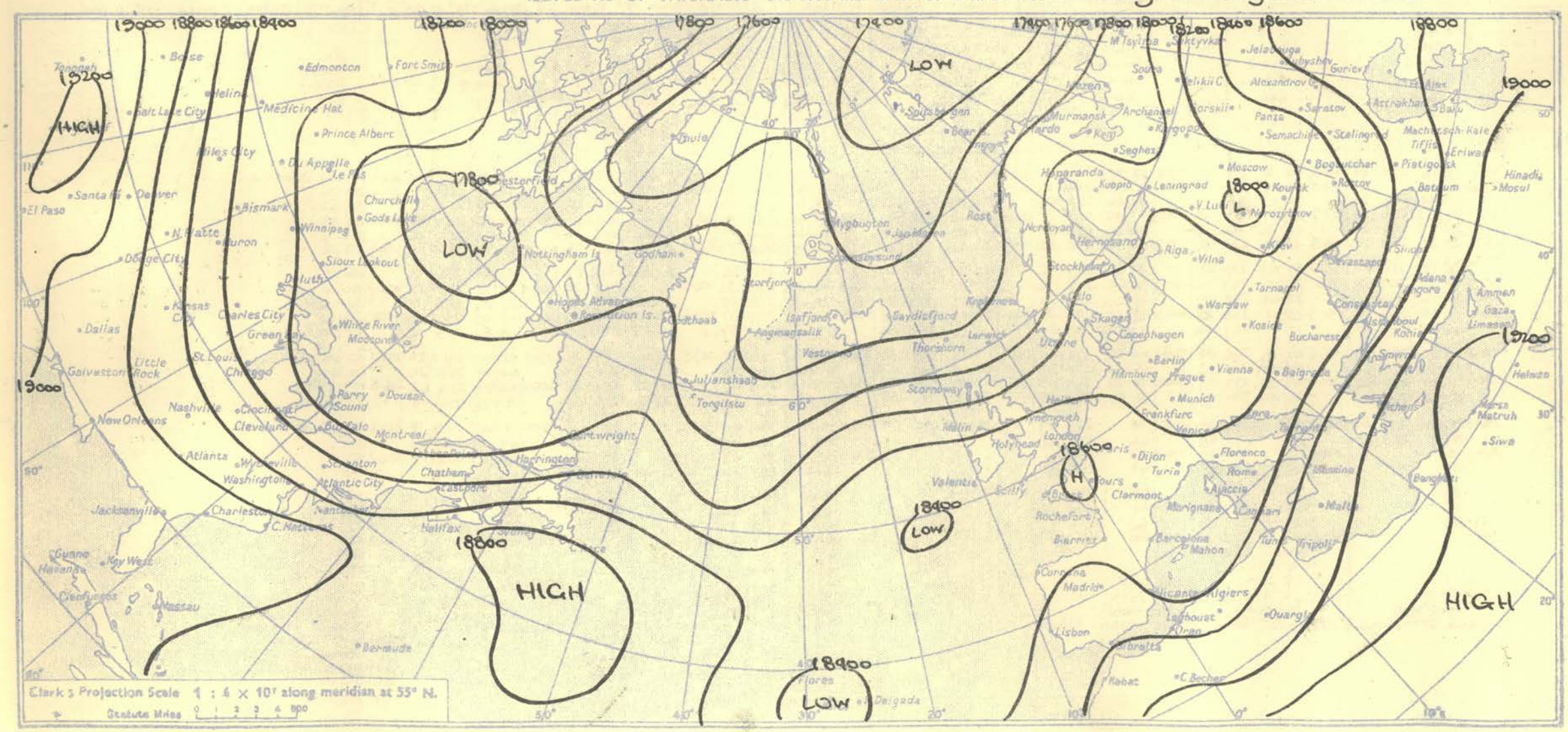
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Monday 2nd July, 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 2nd July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Monday 2nd July, 1951.

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

15h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h.	1013·8 mb	1003·9 mb	850 mb
STORNOWAY	15h.	1017·1 mb	1015·1 mb	722 mb
LEUCHARS	15h.	1018·8 mb	1018·0 mb	671 mb
ALDERGROVE	15h.	1022·7 mb	1013·1 mb	767 & 678 mb
LIVERPOOL	15h.	1024·0 mb	1022·0 mb	650 mb
DOWNHAM MARKET	15h.	1022·8 mb	1018·3 mb	650 mb
LARKHILL	15h.	1023·2 mb	1007·7 mb	622 mb
CAMBORNE	15h.	1026·5 mb	1016·0 mb	624 mb
VALENTIA	15h.		1025 mb	640 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	55	47	290	25	00·4	60	46	270	12	00·2	70	59	260	09	02·6	61	59	250	15	00·6	67	59	280	10	01·2	71	58	265	10	04·4	75	58	350	04	02·9	64	58	340	09	00·3	64	57	270	11	Surf
1000	03·7	53	45			04·7	57	44			05·3	65	55	244	24	06·2	59	58	254	18	06·7	62	56	278	17	04·4	68	57	299	09	06·5	73	56			07·3	61	55	336	06	07·4	61	55	267	13	1000
950		46	38	264	26		48	39	260	25		57	49	257	21		54	54	250	21		56	53	275	19		60	52	294	11		65	53	301	06		58	50	358	07		55	51	265	13	950
900	32·2	40	33	267	27	38·4	41	33	258	34	34·4	51	43	278	21	35·3	50	50	260	24	35·9	53	49	275	21	35·8	52	47	291	15	36·2	57	49	306	06	36·5	57	48	349	06	36·5	49	46	267	12	900
850		32	27	265	30		40	29	257	39		47	39	286	25		47	47	256	25		51	43	289	22		49	44	287	18		54	42	312	05		55	42	299	09		49	32	267	17	850
800	63·3	30	18	258	36	64·9	37	26	258	41	66·4	45	33	276	33	67·2	41	41	263	26	68·1	49	35	290	25	67·9	50	35	291	22	68·6	49	36	298	06	68·9	51	27	288	12	68·6	51	19	267	23	800
750																																														750
700		29	06	259	38		34	-01	263	43		41	20	276	33		32	32	266	28		48	34	269	27		46	31	288	21		45	17	298	11		46	17	286	12		46	15	267	25	700
650	98·0	24	00	260	40	100·1	29	-18	265	45	102·1	35	01	275	29	102·6	34	29	267	33	104·0	36	23	266	27	104·0	38	27	279	21	104·6	41	03	294	18	105·0	40	11	284	12	104·7	42	16	267	26	650
600		19	-02	261	42		25	-26	267	43		29	-12	274	33		29	26	271	39		32	13	281	30		32	21	282	22		36	-01	296	15		35	04	286	14		34	10	266	27	600
550	137·3	13	-08	267	45	139·9	18	-38	268	43	142·3	24	10	271	28	142·9	26	21	269	45	144·5	26	15	278	30	144·5	27	12	289	27	145·4	29	00	298	15	145·7	28	-05	291	17	145·4	26	01	269	27	550
		05	-12	270	47		11	-26	270	48		19	-02	269	40		18	13	269	46		18	08	278	34		18	06	293	20		21	-13	286	19		22	-13	290	21		18	-09	269	31	
500																																														500
450	182·5	-03	-14	263	55	185·6	03	-24	271	55	188·8	11	-29	273	45	189·3	10	04	270	46	191·2	15	-16	286	34	191·1	11	02	279	30	192·2	15	-09	287	21	192·5	12	-22	289	21	191·9	11	-18	263	34	450
400		-15	-26	263	54		-06	-33	273	64		03	-11	274	52		02	-07	266	48		06	-08	286	37		02	-10	279	33		04	-06	297	20		00	-32	295	21		02	-29	268	33	400
350	236·4	-27	-38	262	57	239·7	-13	-48	275	75	243·7	-07	-17	271	56	244·1	-10	-18	272	66	246·6	-05	-24	289	36	245·9	-08	-25	297	33	247·4	-04	-15	308	17	247·2	-10	-40	285	12	246·7	-10	-39	269	32	350
		-41		264	55		-26	-58	273	77		-21	-32	270	60		-28	-31	274	58		-18	-35	290	38		-20	-42	301	30		-17	-27	306	15		-23	-40	289	04		-22	-50	260	30	
300	299·6	-53		271	54	306·0	-43		270	81	310·9	-36	-49	278	78	310·9	-38	-51	272	69	314·2	-34	-32	290	40	313·2	-37	-59	302	34	315·1	-33	-43	307	16	314·0	-38	-55	L+V.		313·5	-37		259	31	300
250		-57		266	63		-59		270	87		-53		282	90		-57					-52		280	40		-57		299	35		-50		301	18		-56		277	03		-53		264	34	250
200	387·1	-51		270	42	393·2	-58		269	80	393·7	-68		270	81	397·8	-76				402·2	-69		279	45	400·1	-77		303	41	403·4	-69		301	19	401·0	-76		288	16	401·0	-75		270	35	200
170		-49		265	38		-53		277	61		-59		274	51		-65					-78		287	42		-69		306	33		-70		297	24		-71		300	22		-66		270	36	170
150																																														150
130		-50		264	33		-50		290	46		-61		270	45		-61					-65		287	40		-61		290	27		-62		301	24		-68		290	25		-64		271	37	130
110		-51		269	29		-49		305	36		-58		270	37		-59					-57		282	28							-59		298	27		-71		301	20		-64		275	21	110
100		-51		290	24		-50					-55		271	32		-59					-61		288	23							-60		304	18		-70		310	14		-63		281	28	100
90	538·3	-51				544·2	-50				546·5	-53		280	21	544·4	-57				548·3	-62		294	22							-60		304	16	544·6	-71		320	11	546·8	-61				90
80		-51					-48					-56					-60					-58		283	20							-66		321	11		-66		319	10		-58				80
70												-55					-58					-56		275	14							-63		316	05		-63		L+V.			-56				70
60												-52					-60					-56		286	11							-61		290	02		-61		"		(975) mb	-56				60
												-51										-55		300	06							-52					-59		"							
																						-49		313	04						(663) mb	-52					-58									
	Isothermal 840 - 760mb. 30°					Inversion 880mb. 38°-840mb. 40° Isothermal 840 - 815mb. 40° 755 - 738mb. 34°					Inversion 847mb. 47°-833mb. 48° 563 mb. 19°-544mb. 20°					Inversion 787 mb. 32°-700mb. 34° 621 mb. 26°-607mb. 27° 238mb. -62°-235mb. -61°					(645) mb -46 Isothermal 865 -828mb 51° 546 - 511 mb. 17°					Inversion 820mb. 47°-800mb. 30°					Inversion 879 mb. 53°-864mb. 55° Isothermal 750 - 735mb. 45°					(654) mb -58 Inversion 915 mb. 55°-890mb. 58° Isothermal 1000 - 772mb. 61°					Inversion 870mb. 45°-823mb. 58°					

Tropopause	I 263mb. -63° 32,700'					I 225mb. -63° 36,700'					I 185mb. -74° 41,500'					I 190mb. -77° 40,800'					I 172mb. -79° 43,300'					II 190mb. -80° 41,000'					I 180mb. -74° 42,500'					I 192mb. -78° 40,800'					I 192mb. -73° 41,000'					Tropopause

21h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h.	1011·3 mb	1001·3 mb	845 mb
STORNOWAY	21h.	1015·2 mb	1013·6 mb	641 mb
LEUCHARS	21h.	1016·4 mb	1015·6 mb	710 mb
ALDERGROVE	21h.	1020·8 mb	1011·2 mb	672 mb
LIVERPOOL	21h.	1022·0 mb	1020·0 mb	682 mb
DOWNHAM MARKET	21h.	1021·3 mb	1016·9 mb	658 mb
LARKHILL	21h.	1022·6 mb	1006·9 mb	617 mb
CAMBORNE	21h.	1025·5 mb	1014·9 mb	617 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	50	48	270	18	00·4	55	48	270	03	00·2	62	57	260	11	02·6	60	58	220	10	00·6	64	58	270	05	01·2	59	59	Calm		04·4	67	58	280	05	02·9	60	57	350	04						Surf
1000	03·0					04·2	53	47			04·5	60	55	251	22	05·6	59	56	236	20	06·1	61	55	250	15	06·0	68	58	300	09	06·3					07·6	59	56								1000
950		45	44	256	25		47	42	267	21		52	46	268	26		54	48	247	27		58	50	266	16		61	53	281	10		63	56	282	07		58	52							950
900	31·5	39	33	256	25	32·7	41	37	262	26	33·5	49	42	275	31	34·6	50	46	256	29	35·3	51	47	261	16	35·4	55	49	264	12	35·7	56	50	242	06	36·2	58	48							900
850		33	29	268	24		42	28	266	31		46	39	278	35		47	39	265	28		46	40	258	19		49	44	272	14		52	44	250	06		55	37							850
800	62·5	28	27	271	28	64·3	41	05	269	33	65·3	42	34	274	32	66·5	44	43	273	31	67·2	44	29	264	23	67·5	46	38	281	16	67·9	48	37	282	11	68·6	52	24							800
750																																														750
700		28	12	271	32		39	-03	270	37		37	30	269	26		40	37	275	39		40	16	270	28		40	33	280	23		45	15	286	15		46	15							700
650	97·3	24	-07	269	38	99·8	36	-02	269	40	100·7	31	24	278	30	102·2	35	32	279	36	102·8	34	27	275	32	103·2	36	21	282	22	103·9	39	13	283	17	104·7	40	10							650
600		18	-16	265	39		35	-03	268	39		25	20	282	31		29	25	275	49		28	24	275	38		31	18	287	24		35	07	288	18		34	-02							600
550	136·5	11	-18	265	46	140·2	25	-12	268	45	140·5	19	12	278	35	142·4	23	19	268	42	142·9	23	19	277	37	143·6	23	15	288	21	144·6	29	05	292	18	145·3	30	-12							550
		02	-16	268	51		17	-11	267	54		12	06	273	40		16	13	258	34		17	12	280	37		14	08	286	31		20	-02	293	23		20	-20							
500																																														500
450	181·4	-07	-24	269	51	186·6	07	-17	266	57	186·4	04	-04	278	48	188·6	07	04	259	38	189·2	09	03	280	37	189·8	10	01	277	30	191·2	13	-11	291	26	192·1	12	-28							450
400		-16	-32	270	60		-04	-32	269	63		-06	-14	284	57		-02	-05	267	50		00	-08	274	37		01	-13	284	33		04	-19	285	26		00	-40							400
350	234·2	-25	-41	270	67	240·8	-15	-35	272	67	240·3	-18	-28	269	55	243·6	-12	-16	270	58	243·8	-09	-18	269	41	244·5	-11	-22	284	34	246·4	-05	-19	274	24	246·8	-11	-49							350
		-40	-54	268	69		-28	-40	271	81		-32	-46	273	58		-26	-32	270	58		-24	-32	266	41		-26	-38	278	34		-18	-28	270	19		-24	-57							
300	298·5	-55		267	68	309·0	-41		272	86	305·7	-48		266	79		-38	-44	272	59	310·4	-41		261	47	311·0	-42		277	36	314·1	-31	-40	268	18	313·6	-38	-58							300
250		-60		263	63		-57		271	88		-66		276	74							-59		264	50		-62		276	38		-47		268	24		-55								250
200	385·7	-56				394·1	-65		270	79	390·9	-73		273	61						396·9	-75		272	52	396·7	-81		277	45	402·9	-64		278	24	400·8	-73							200
170		-51					-55		273	56		-63		283	42							-81		279	44		-71		292	34		-65		289	27		-73								170
150																																														150
130		-48					-55		279	42		-63		282	36							-70		286	37		-68		293	31		-59		298	32		-69								130
110		-52					-55		282	33		-61		274	30							-67		286	40		-69		296	24		-56		297	30		-69								110
100	(114) mb	-52					-55		271	43		-60										-69		292	27		-68		288	18		-56		285	18		-72								100
90						543·4	-56		275	30	537·7	-60									540·0	-69		277	22	540·2	-67		287	09	550·8	-57		277	13	544·3	-71							90
80							-53		283	23												-67		274	21		-67					-59		297	14		-71								80
70							-50															-68		282	17							-58		293	13									70
60																						-67		288	12						(074) mb	-56											60
																						-65		290	10																			
																						-69		318	07																			
																					(045) mb	-64																							
	Inversion 808mb. 27°-750mb. 28°					Inversion 860mb. 38°-847mb. 44°					Max wind:- 276° 99kts. 273mb. 32,700'					N.R.					Inversion 181mb. -81°-176mb. -79° Isothermal 992 - 966mb. 60° 862 - 828mb. 46°					Inversion 530mb. 09°-511mb. 11° Isothermal 820 - 800mb. 46° 718 - 689 mb. 36°					Inversion 860mb. 51°-844mb. 52° 771 mb. 47°-763mb. 46°					Inversion 969 mb. 55°-950mb. 58° 865mb. 53°-856mb. 55° Isothermal 950 - 900mb. 58° 856-828mb. 55° 657 - 629 mb. 34°										
Tropopause	I 266mb. -67° 32,500'					I 221mb. -68° 36,300'					I 212 mb. -71° 37,800'										I 181mb. -81° 41,700' I 168 mb. -82° 43,200'					I 192mb. -84° 40,500'					II 185mb. -68° 41,800'					II 191mb. -76° 41,100'										Tropopause

HMSO Press, MO Dunstable

No. 11783. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Tuesday 3rd July 1951. Page 1.

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

03h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03h G.M.T.	1008·4 mb	998·4 mb	850 mb
STORNOWAY	03h G.M.T.	1019·7 mb	1013·1 mb	740 mb
LEUCHARS	03h G.M.T.	1012·6 mb	1011·8 mb	727 mb
ALDERGROVE	03h G.M.T.	1017·8 mb	1008·1 mb	670 mb
LIVERPOOL	03h G.M.T.	1020·0 mb	1018·0 mb	675 mb
DOWNHAM MARKET	03h G.M.T.	1019·6 mb	1015·2 mb	660 mb
LARKHILL	03h G.M.T.	1022·2 mb	1006·2 mb	650 mb
CAMBORNE	03h G.M.T.	1029·4 mb	1013·7 mb	615 mb
VALENTIA	03h G.M.T.	1023·8 mb	1022 mb	670 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	48	47	280	18	00·4	50	47	270	03	00·2	60	56	260	07	02·6	58	56	220	12
1000	02·3					09·0	48	45			03·5	58	55			04·9	57	55		
950		42	41	273	30		44	39	298	22		52	51	268	26		53	50	258	35
900	30·6	37	35	276	31	32·4	39	36	296	24	32·9	49	45	276	26	33·8	50	46	273	39
850		32	27	272	30		38	31	292	24		45	41	278	27		48	43	272	42
800	61·5	25	22	272	30	63·7	36	25	286	26	69·2	41	40	278	28	65·7	49	38	269	43
750		23	19	273	34		33	16	278	30		36	34	283	28		39	33	268	43
700	95·8	17	09	275	39	98·8	27	08	281	34	99·5	28	28	283	30	101·3	34	28	271	42
650		15	03	278	46		20	00	285	36		23	-22	280	43		30	23	271	43
600	134·7	09	-09	275	51	138·3	14	-07	284	42	139·2	20	-24	280	46	141·6	24	16	270	41
550		00	-21	271	53		06	-16	281	47		12	-19	277	50		17	07	268	42
500	179·4	-11	-35	273	59	183·6	-02	-26	277	62	185·0	03	-19	269	53	187·9	08	-02	267	51
450		-20	-45	269	72		-13	-39	278	60		-07	-24	270	53		-02	-12	260	52
400	231·6	-30	-55	267	81	236·7	-25	-53	276	66	238·8	-18	-38	272	55	242·3	-13	-20	269	55
350		-41		267	93		-38	-58	272	72		-31	-49	272	55		-25	-37	265	61
300	295·8	-49		271	87	301·3	-50		270	88	304·5	-45		270	67	308·9	-40	-53	267	63
250		-50					-67		267	87		-63		275	76					
200	384·7	-47				386·9	-63		276	52	390·2	-71		272	65					
170		-48					-68		276	45		-63		279	51					
150		-52					-57					-61		283	49					
130		-52										-62		286	36					
110		-51										-61		283	28					
100	(105 mb)	-51									537·1	-61		288	25					
90												-60		298	24					
80												-61								
70												-60								
60												-59								
	Inversion 680mb 15°- 657 mb 16°					Inversion 880mb 36°- 850mb 38°					Inversion 660 mb .22°- 628mb 24° Max Wind 225 mb 276° 91 kts 36,600'					Isothermal 879-844 mb 48°				
Tropopause	II 294mb -50° 30,000'					I 238mb -71° 35,000'					I 205 mb -76° 38,500'					N.R.				

Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	56	Calm		01·2	61	58	Calm		04·4	54	53	205	03	02·9	58	54	315	08	00·3	59	54	235	09
1000	05·5	59	54	269	18	05·4	63	59			06·1	55	53			06·7	57	54			06·4	57	51	244	12
950		54	50	276	21		59	54	262	09		60	49	302	16		52	52				52	47	260	14
900	34·5	48	42	279	23	34·7	55	52	279	15	35·3	56	45	290	13	35·7	60	45			35·3	47	45		
850		44	41	279	26		50	47	251	20		51	43	270	16		55	37				55	39		
800	66·3	46	39	281	23	66·8	44	38	254	24	67·4	48	32	268	18	68·2	52	29			67·5	49	23		
750		39	34	281	23		43	26	269	29		46	17	276	18		46	20				44	15		
700	102·0	35	25	286	27	102·7	39	31	273	30	103·5	39	12	283	18	104·3	40	11			103·4	36	16		
650		29	23	282	33		30	25	278	31		32	08	288	21		35	03				30	03		
600	142·2	21	17	272	34	143·1	24	17	274	34	143·9	25	-02	289	23	144·9	30	-04			143·6	24	-13		
550		14	09	276	32		17	05	273	34		17	-10	286	27		22	-13				17	-18		
500	188·5	08	-02	289	39	189·5	10	-14	284	39	190·2	10	-21	294	29	191·7	12	-27			189·9	07	-21		
450		03	-10	287	40		01	-18	283	38		+01	-27	295	30		00	-31				-03	-29		
400	192·7	-10	-34	277	43	194·3	-10	-39	277	43	194·6	-14	-40	288	31	196·5	-10	-42			194·2	-14	-43		
350		-21	-49	279	47		-24	-46	273	43		-29	-53	278	29		-22	-53				-25	-52		
300	309·0	-32		279	49	311·1	-39	-59	273	48	310·8	-42		289	34	313·7	-33	-60			310·6	-20			
250		-59		276	52		-55		274	48		-60		285	31		-53					-58			
200	395·5	-74		279	52	398·1	-79		276	43	397·0	-77		288	32	301·3	-75				397·1	-75			
170		-73		279	45		-70		290	41		-71		291	33		-72					-68			
150		-68		279	92		-67		276	37		-69		294	35		-70					-67			
130		-67		285	37		-62		291	36		-69		297	33		-67					-67			
110		-65		285	39		-65		293	25		-69		285	21		-70					-69			
100	539·8	-68		285	26	543·3	-64		302	13	540·8	-69		302	18	544·9	-71				541·7	-68			
90		-70		284	23		-63		303	09		-66		311	08		-72								
80		-66		284	19							-65		288	05		-72								
70		-65		288	08							-65					-70								
60		-63		305	10												-68								
	(54 mb)	-62															-69								
	Inversion 836mb 93°- 820mb 48°					Inversion 1015 mb 61°- 1000 mb 63°					Inversion 1006 mb 59°- 957mb 61° 813 -47°. 795 - 49° Isothermal 766mb - 750mb 96°					Inversion 933 mb 50°- 910mb 61° Isothermal 838 -814 mb 53°					Inversion 905 mb 46°- 885mb 51°				
Tropopause	I 187 mb -77° 41,000'					I 190 mb -76° 40,800'					I 197 mb -78° 40,000					I 194 mb -77° 40,800'					I 207 mb -76° 39,000'				

09h G.M.T.

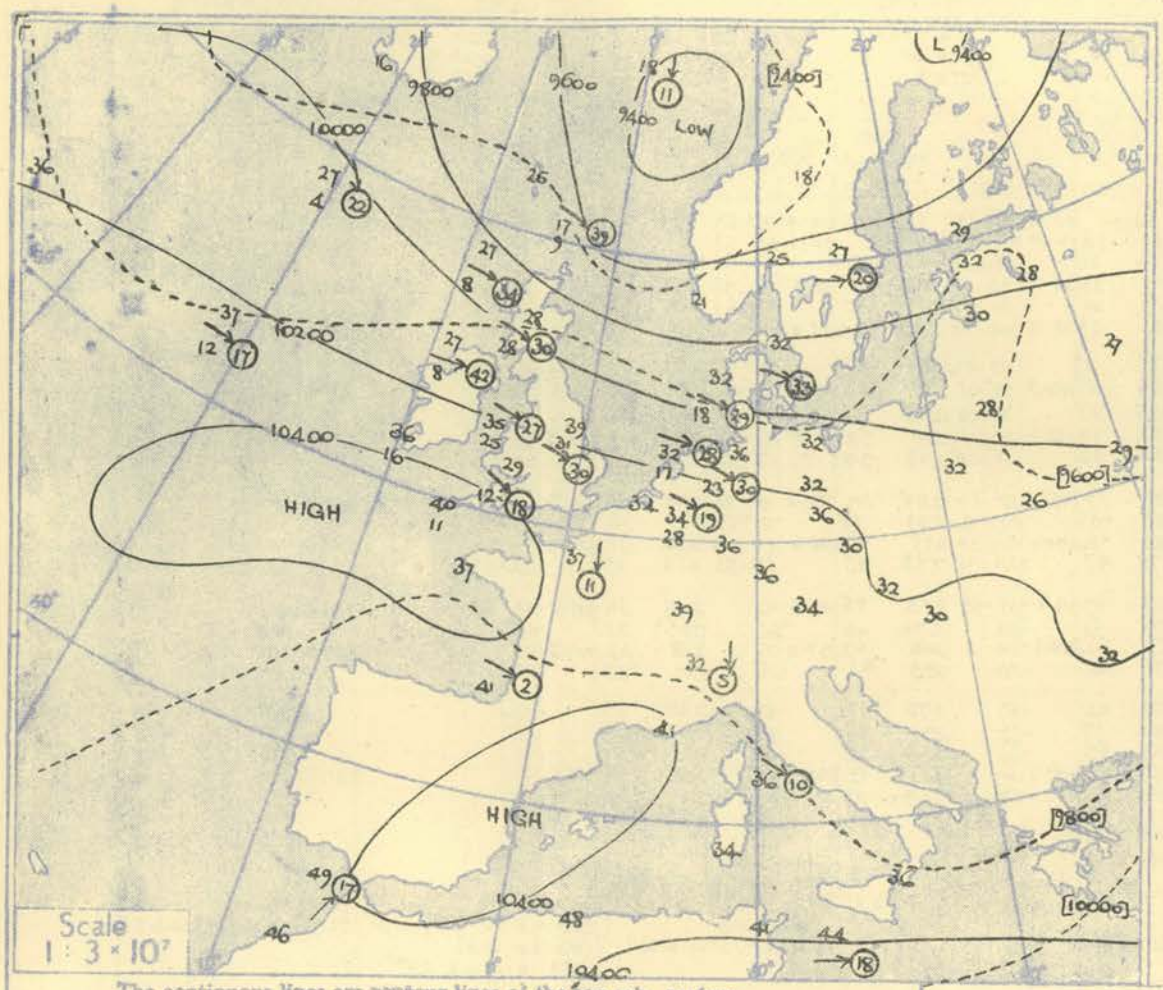
Station	Time	M.S.L.	Surf	Freezing
LERWICK	09h G.M.T.	1009·3 mb	999·3 mb	842 mb
STORNOWAY	09h G.M.T.	1015·9 mb	1019·3 mb	750 mb
LEUCHARS	09h G.M.T.	1014·2 mb	1013·5 mb	722 mb
ALDERGROVE	09h G.M.T.	1018·0 mb	1008·9 mb	671 mb
LIVERPOOL	09h G.M.T.	1018·1 mb	1016·1 mb	650 mb
DOWNHAM MARKET	09h G.M.T.	1018·4 mb	1014·1 mb	659 mb
LARKHILL	09h G.M.T.	1021·0 mb	1005·2 mb	650 mb
CAMBORNE	09h G.M.T.	1023·7 mb	1013·2 mb	637 mb
VALENTIA	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	46	345	20	00·4	53	46	300	08	00·2	68	52	110	05	02·6	55	51		
1000	02·5					04·3	51	45			03·9	55	49	054	09	04·9	54	50		
950		43	40	316	25		44	38	314	18		50	46	285	16		49	45		
900	30·9	39	36	315	22	32·7	37	31	307	16	32·6	46	39	289	17	33·7	50	46		
850		33	29	307	21		33	27	313	16		43	32	293	19		48	43		
800	62·0	31	27	304	23	63·8	24	21	320	17	64·2	39	23	297	24	65·7	45	38		
750		28	19	301	27		32	07	307	19		35	14	293	30		42	35	For Winds	
700	96·7	22	12	300	29	98·8	28	-08	299	25	99·4	30	10	289	33	101·9	37	29		
650		18	06	303	34		22	-19	302	29		29	06	287	33		28	23	See	
600	136·0	12	-09	303	38	138·4	16	-31	300	32	139·2	19	05	289	40	141·7	25	16		
550		02	-18	307	37		07	-21	297	36		11	02	281	44		17	02	Page 3.	
500	180·9	-07	-27	307	42	183·8	00	-35	293	93	185·0	02	-06	281	41	188·1	09	-16		
450		-16	-37	308	45		-08	-38	292	44		-06	-12	281	56		+04	-24		
400	233·5	-30	-50	305	47	237·3	-19	-48	290	57	238·9	-17	-23	278	55	242·3	-15	-31		
350		-43		304	45		-31	-56	288	65		-30	-36	276	62		-23	-43		
300	297·6	-51		305	47	303·0	-48		284	71	304·6	-45		272	68	309·1	-37	-56		
250		-49		289	48		-58		276	64		-60		272	75		-57			
200	386·5	-49		286	42	390·8	-49		276	95	391·6	-56		276	58	396·6	-60			
170		-47		289	38		-60		287	42										
150		-47		280	33		-49		284	38										
130		-49		283	24															
110		-48		286	19															
100	(108 mb)	-48																		
90																				
80																				
70																				
60																				
	Isothermal 830 -787mb 31°					Inversion 847 mb 32°- 833mb 34° Isothermal 833 -790 mb 34°					Isothermal 870 - 840 mb 43° 650 - 640 .. 29°					Inversion 955 mb 98°- 913mb 51° Isothermal 713 - 700mb 37° 650 - 635 .. 28° 385 -372 .. -18°				
Tropopause	I 288mb -52° 30,700'					I 285mb -60° 33,900'					I 230mb -69° 36,100'					II 231mb -64° 36,600'				

Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	60	56	250	14	01·2	66	56	240	14	04·4	64	57	285	08	02·9	60	55							
1000	06·0	58	55	260	27	05·1	63	55	273	18	05·8	63	56				57	53							
950		53	50	285	30		56	50	279	20		55	52	283	19		50	49							
900	34·1	51	49	289	28	34·3	53	43	283	20	34·9	51	43	285	16	35·4	56	50							
850		49	47	284	29		52	36	285	22		52	31	287	18		55	38							
800	66·2	46	44	280	34	66·5	50	32	290	23	67·1	51	25	291	21	67·8	52	29							
750		41	38	280	35		44	33	292	28		45	33	286	21		45	22							
700	102·1	36	31	281	40	102·4	37	29	287	34	103·2	39	23	280	21	103·9	40	18							
650		32	22	283	49		31	24	283	37		32	12	275	24		34	12							
600	142·6	27	08	279	49	142·9	27	12	280	42	143·7	25	62	278	25	144·6	26	03							
550		19	-07	273	53		18	-01	280	44		18	-04	282	29		19	-03							
500	189·1	09	-13	269	56	189·3	10	-17	281	44	190·1	10	-10	281	34	191·0	08	-15							
450		+01	-21	271	51		02	-35	275	45		00	-22	269	31		+02	-25							
400	293·6	-13	-36	272	47	294·2	-10	-38	279	45	294·6	-13	-35	266	06	295·5	-12	-35							
350		-24	-47	270	48		-23	-51	280	53		-24	-44	279	38		-22	-44							
300	310·3	-39	-59	279	67	311·2	-36	-59	281	58	311·2	-40	-58	285	44	312·3	-40	-60							
250		-57		274	70		-54		282	59		-57		281	45		-58								
200	327·4	-69		275	55	328·6	-68		280	50	327·9	-75		286	49	328·8	-76								
170		-63		277	49		-71		281	48		-69		281	45		-74								
150		-62		284	51		-68		281	47		-64		292	36		-71								
130		-57		282	42		-62		283	33		-66		281	29		-70								
110		-56		285	38		-62		288	24		-65		293	27		-71								
100	595·3	-53				599·0	-62		287	22	598·2	-62		281	22	592·1	-70								
90							61		288	18		-62		273	19		-68								
80							59		285	15		-61		292	09		-65								
70												-57					-63								
60											(065 mb)	-55				(58 mb)	-60								
	Isothermal 905 - 892mb 51°					Inversion 950 mb 56°-938mb 57° 883 .. 51° - 863 .. 54° 626 .. 28° - 616 .. 30° 314 .. 34° - 310 .. 35° Isothermal 243 - 214 mb 51°					Inversion 969 mb 59°-944mb 56° 891 .. 50° - 850 .. 52° 839 .. 51° - 812 .. 53°					Inversion 934 mb 98°- 910mb 57°				
Tropopause	I 198 mb -70° 40,000'					II 206mb -68° 39,300'					I 195mb -71° 40,300					I 189mb -79° 41,000'				

Tuesday 3rd July, 1951.

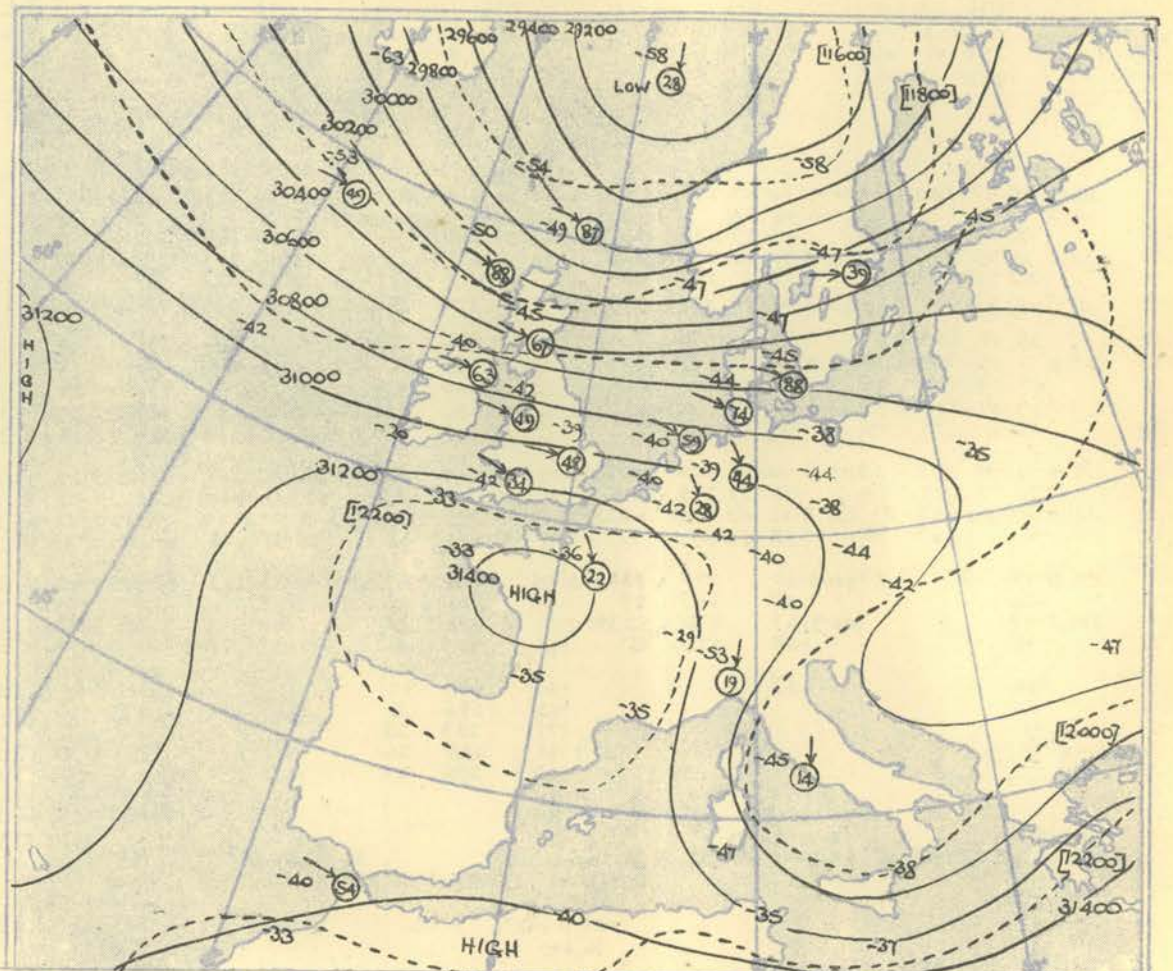
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



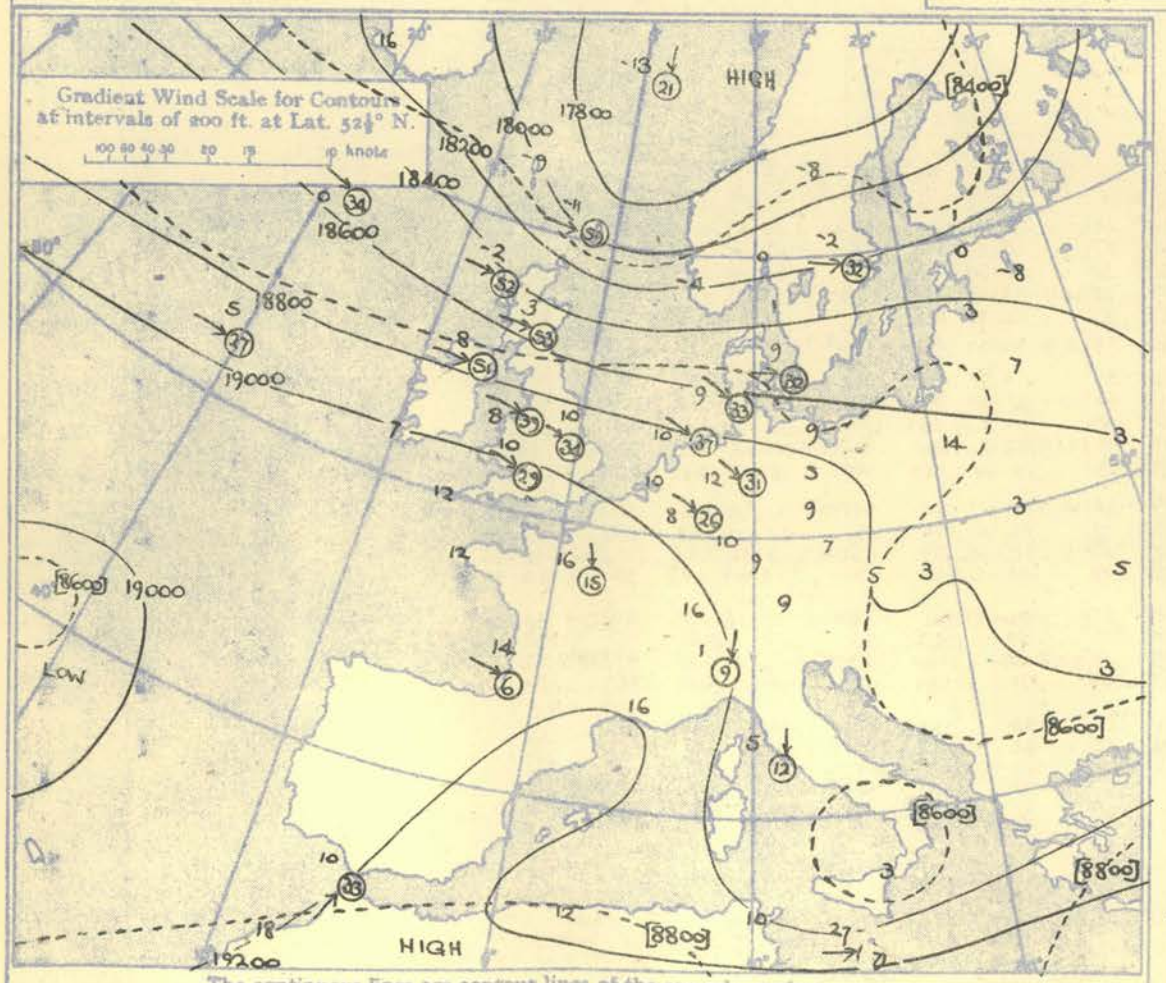
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

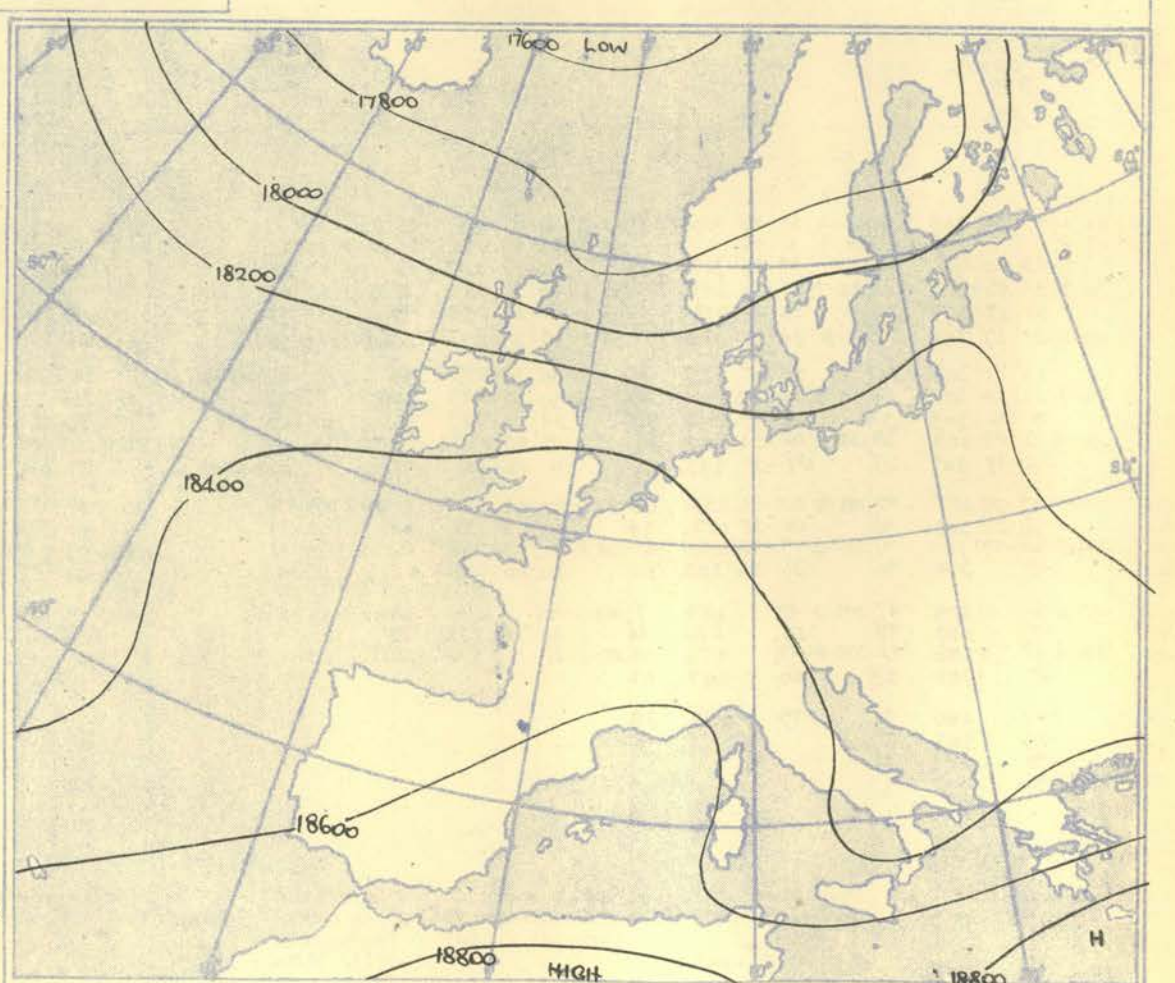
100 80 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500 - 1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure mb	Height ft./100	°C Temp.	°C Dew	°F.	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Time	52°12'N 02°12'W 1335h																						
M.S.L.	1018·0 mb				mb			mb			mb			mb			mb			mb			Time M.S.L.
Surf	1016·5 mb				mb			mb			mb			mb			mb			mb			Surf
Freezing	645				mb			mb			mb			mb			mb			mb			Freezing
Surf	00·4																						Surf
1000	05·1																						1000
950																							950
900	34·7	57	54																				900
850		51	50																				850
800	67·1	50	39																				800
750																							750
700	103·1	38	37																				700
650																							650
600																							600
550	143·7	26																					550
500																							500
450	190·2	09																					450
400																							400
350	244·8	-12																					350
300	311·5	-39																					300
250																							250
200																							200
170																							170

Cloud.
5-6/8 Sc.
895-835mb

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

Feet	Place: Cirrus 51·9N 20·2W 09h Dir.	Vel.	Aldergrove Pilot 09h Dir.	Vel.	Larkhill 11h Dir.	Vel.	Larkhill 15 50h Dir.	Vel.	Cirrus 52·6N 19·9W 21h Dir.	Vel.	Leuchars Pilot 21h Dir.	Vel.	Downham 22h Dir.	Vel.	Larkhill 23h Dir.	Vel.	Feet
Surf.	030	12	390	07	270	10	290	08	360	02			090	03	270	10	Surf.
1,000	030	12	316	12	270	14	270	09					290	13	280	18	1,000
2,000	030	13	299	17	280	11	280	11					280	14	290	12	2,000
3,000	020	11	290	20	290	10	290	15					260	16	280	11	3,000
4,000	360	09	290	19	290	08	290	16					260	18	280	14	4,000
5,000	330	09	287	24	290	14	270	17					260	19	280	18	5,000
6,000	300	14	288	24	290	16	270	17	300	22			260	18	280	23	6,000
8,000	280	18	286	32	290	17	270	21					260	21	280	25	8,000
10,000	280	17	284	34	280	18	280	23	270	27			270	29	270	23	10,000
14,000	360	09	277	38	280	27	270	30	280	19			270	37	270	32	14,000
18,000	260	35	275	42	280	27	270	36	280	40			270	45	260	32	18,000
24,000	290	17	273	57	(15,000')		(15,000')		280	19	289	38	270	55	(15,000')		24,000
30,000	(22,000')		271	66							261	48	270	53			30,000
40,000			264	83							269	92	270	78			40,000
50,000			267	91							289	27	280	33			50,000
60,000			274	20							305	24	300	09			60,000
			(63,000')								(59,000')		020	21			
													(95,000')				

NEPHOSCOPE OBSERVATIONS

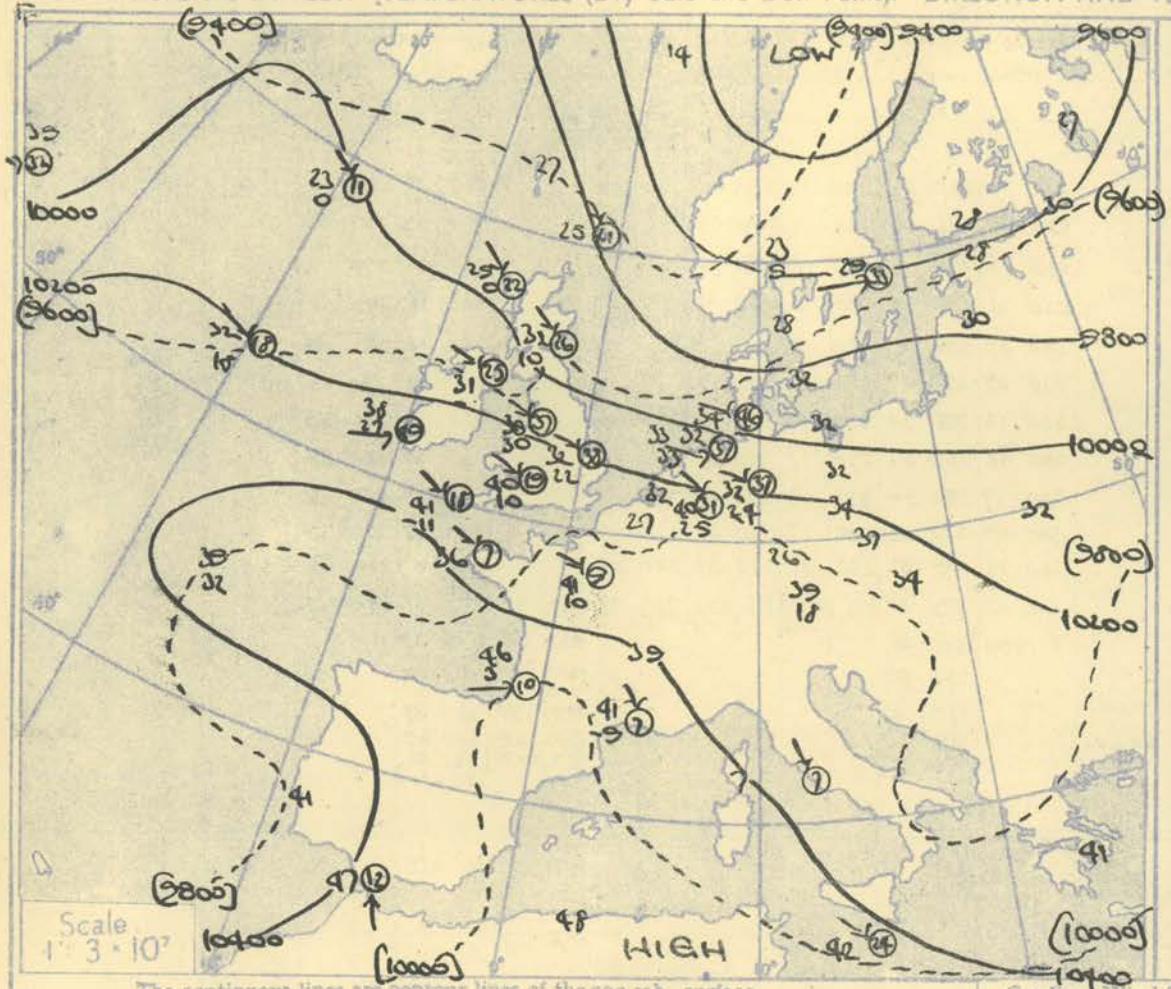
Place	
Time Type	NONE REPORTED.
Dir. Vel.	

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

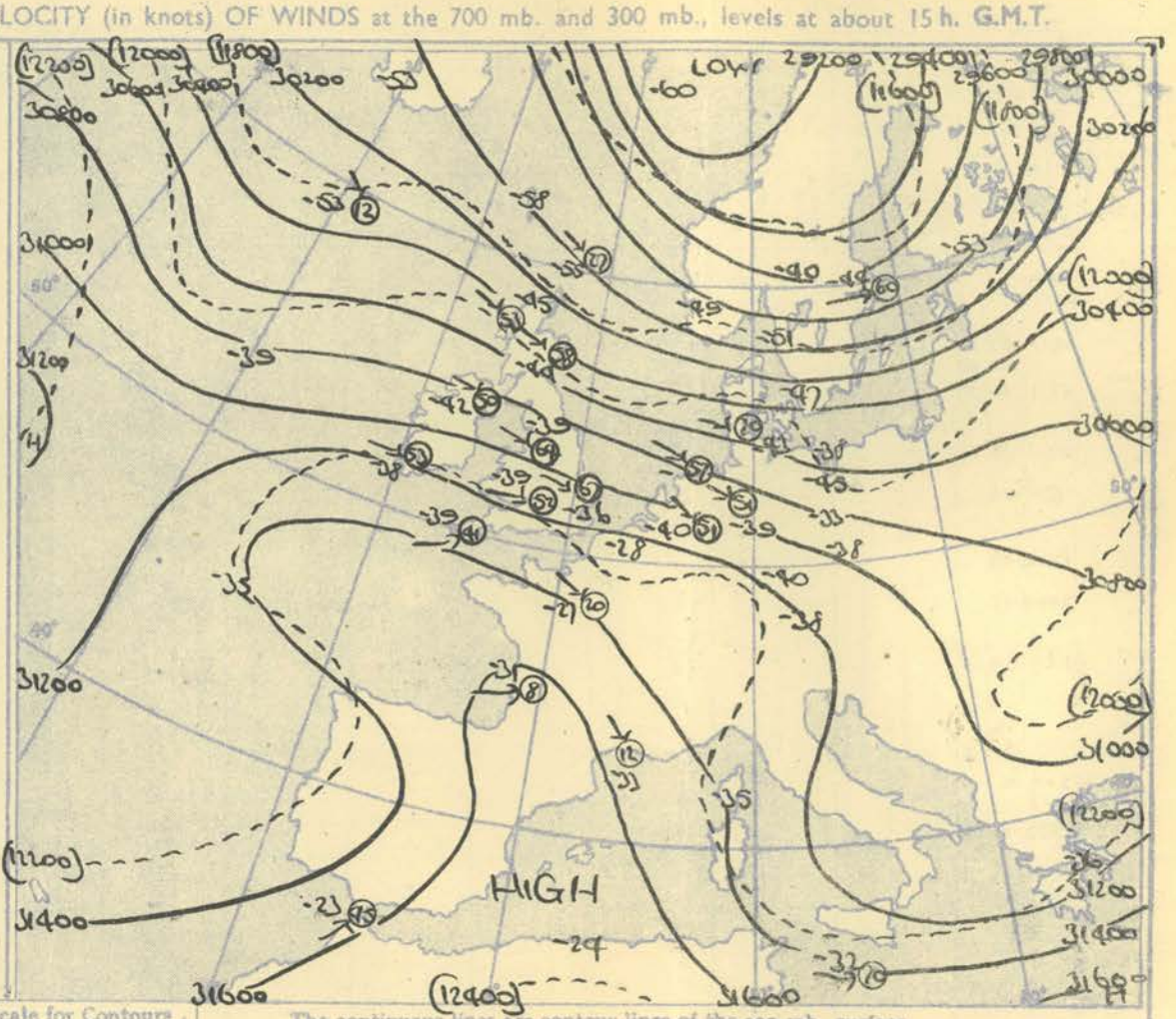
Pressure mb	Cirrus 52·4°N 20·0°W 03hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Cirrus 09hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Cirrus 52·5°N 19·5°W 15hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Cirrus 21hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Weather Observer 59·0°N 19·1°W 03hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Weather Observer 59·0°N 19·1°W 09hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Weather Observer 58·8°N 19·4°W 15hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Weather Observer 59·8°N 19·2°W 21hrs G.M.T. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Time M.S.L.	1019 mb										1022 mb										1026 mb					1026 mb					1021 mb					1021 mb					
Surf	1019 mb										1022 mb										1026 mb					1026 mb					1021 mb										
Freezing	660 mb										700 mb										750 mb					780 mb					800 mb					720 mb					
Surf	—	57	56	020	10						—	54	54	340	12						—	51	45	320	19	—	51	45	310	12	—	54	45	305	08	—	55	45	280	06	Surf
1000	5·4	55	55								6·1	52	51								5·5	48	44	316	21	5·6	48	42	304	12	5·7	50	43	305	11	5·8	51	42	306	08	1000
950		53	53									47	45									40	40	310	17		42	36	304	14		42	39	306	09		44	36	307	09	950
900	34·4	51	51								34·7	44	41								33·7	41	39	305	16	34·0	36	27	305	19	34·4	38	38	305	07	34·2	38	15	305	09	900
850		48	48	166	09							47	08									41	28	304	18		38	21	306	16		36	33	308	09		37	21	316	09	850
800	66·5	45	45	277	19						66·5	43	2	273	17						65·2	36	19	304	20	65·2	35	16	303	15	65·3	32	21	296	11	65·4	34	11	313	09	800
750		39	39	282	16							38	42	266	18							31	15	304	15		29	10	298	15		28	08	285	13		31	02	330	09	750
700	102·8	37	12	279	17						101·0	32	-1	283	18						100·1	27	04	301	22	100·0	25	-10	290	14	100·0	23	00	290	11	100·3	27	02	332	09	700
650		32	-2	277	16							28	-6	286	25							21	-9	299	23		17	-04	294	17		17	-7	322	06		20	-3	330	08	650
600	142·6	25	-10	265	21						142·0	13	-6	262	34						139·6	14	-4	296	23	139·2	11	-03	269	19	139·1	11	-02	312	07	139·8	19	-3	332	07	600
550		16	-15	267	28							14	-23	269	41							07	-10	292	27		07	-1	266	12		07	01	321	05		09	-15	326	10	550
500	188·4	08	-16	265	27						188·0	07	-37	258	43						185·0	00	-26	282	34	184·5	-2	-11	263	11	184·6	-1	-7	351	08	185·4	02	-13	312	15	500
450		-7	-20	266	29							-6	-42	278	49							-10	-28	277	38		-12	-31	269	24		-11	-18	321	10		-7	-27	302	26	450
400	242·8	-16		274	29						242·2	-12	34	294	60						238·4	-22	-27	270	42	237·7	-23	-31	252	30	237·9	-21	-31	289	14	239·2	-19	-38	295	36	400
350		-27		274	30							-25		291	64							-36	-42	265	45		-35	-43	240	31		-35	-48	285	15		-32	-51	290	31	350
300	309·0	-42									308·8	-39									302·2	-03		267	49	302·7	-5·1		238	28	302·9	-5·5		269	12	304·6	-4·8		300	39	300
250		-58										-58										-63		274	48		-69		251	27		-62		275	19		-58		297	55	250
200	285·6	-71									285·8	-63									289·0	-67		280	26	289·3	-69		254	27	290	-62		287	32		-55				200
170		-65										-60										-57		280	32		-50		261	24		-48		284	31		(222 mb)				170
150		-65										-60										-57		273	33		-50		262	20		-50		290	32						150
130		-66										-58										-56		273	26		-51		266	16		-51		291	25						130
110		-64										-58															-51		278	17		-51		286	22						110
100	241·3	-63									243·8	-58														240·5	-50		280	18	241·5	-51		291	19						100
90		-61										-58															-49		296	13		-54		287	17						90
80		-55										-60															-48		288	12		-48		282	13						80
70												-61																						274	13						70
60												-62																						275	07						60
	Inversion 725 mb 35°-715 mb 38°										(51) -63										Inversion 918 mb 37°-892 mb 43°					Inversion 900-872 mb 36°					Inversion 822 mb 12°-809 mb 13°					Inversion 818 mb 36°-868 mb 38°					Isothermal 900-860 mb 38°					
	Isothermal 938-929 mb -10°										Inversion 895 mb 44-866 mb 49°										Isothermal 704-689 mb 27°					Isothermal 872-842 mb 38°					Isothermal 831-824 mb -16°										
											Isothermal 910-885 mb 44°																																
											700-670 mb 32°																																
Tropopause	I 44 mb -72° 38100'					—					I 224 mb -70° 37200'					—					I 234 mb -73° 35600'					I 238 mb -61° 35300'					I 258 mb -61° 33500'					I 262 mb -58° 33300'					Tropopause

July 3rd 1951.

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



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

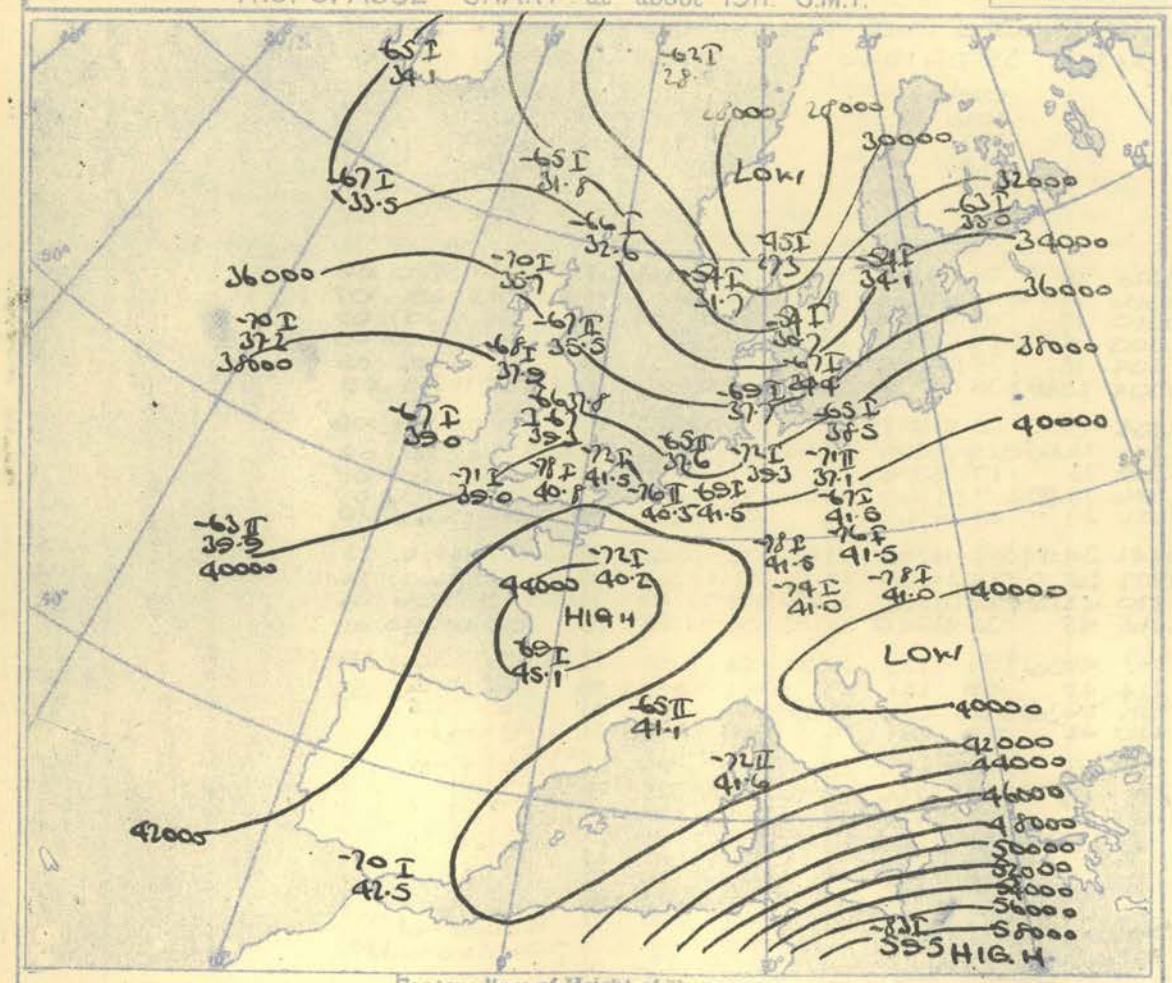


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A warm ridge in the Western Atlantic moved eastwards in association with a depression moving out from Newfoundland. The cold trough in the Norwegian Sea moved somewhat to the East.

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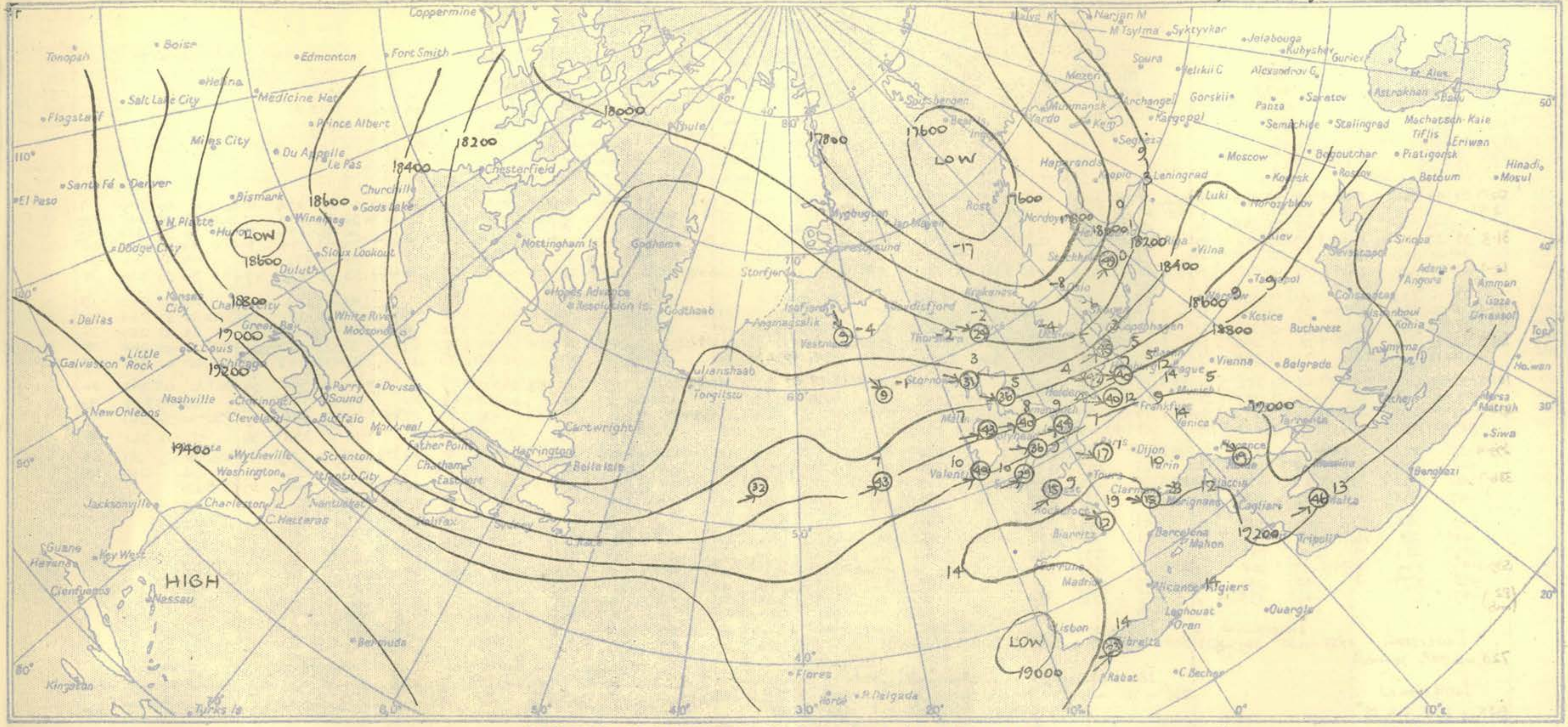
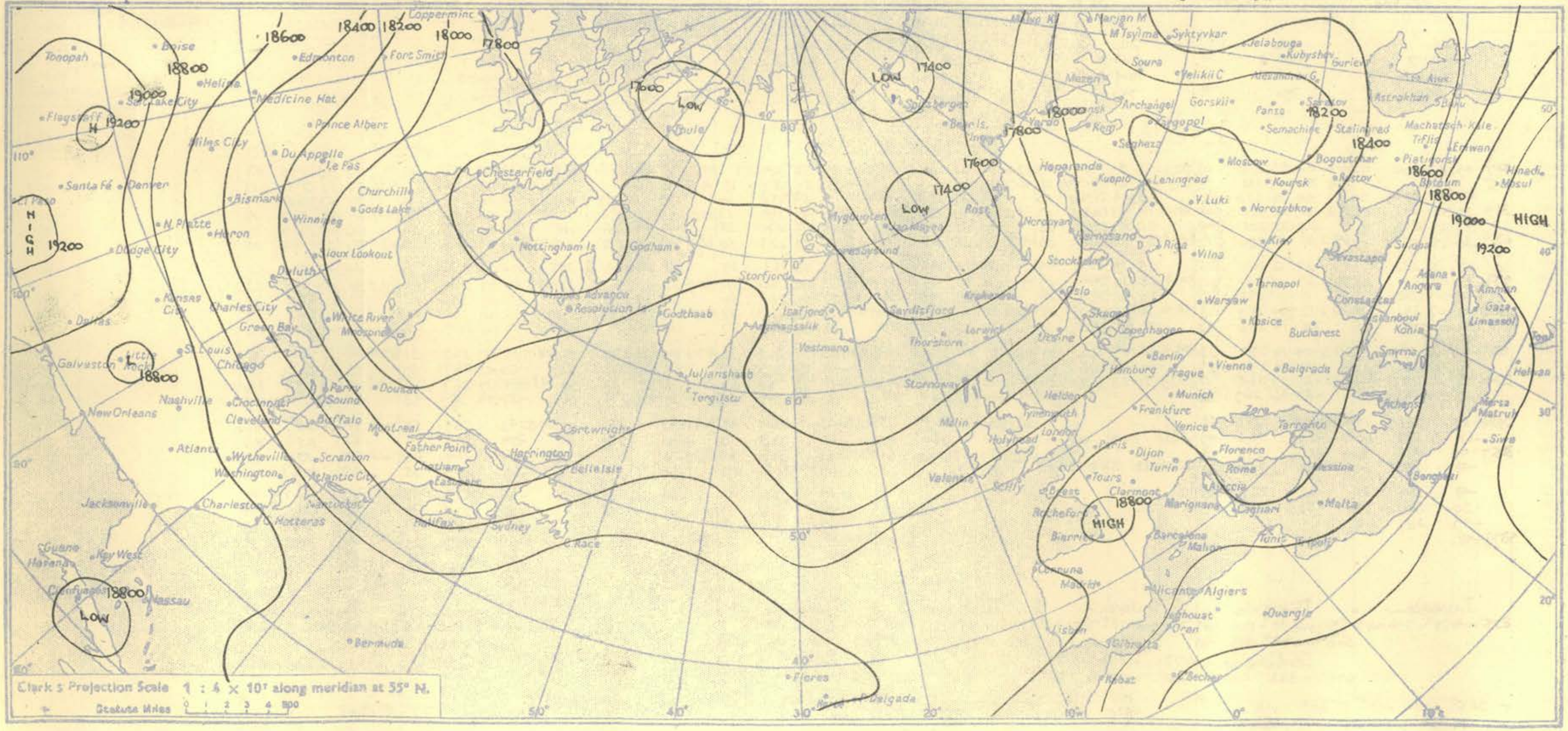
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Tuesday 3rd July. 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 3rd July, 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Tuesday 3rd July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h G.M.T.	1011·0 mb	1000·9 mb	816 mb
STORNOWAY	15h G.M.T.	1017·7 mb	1016·1 mb	765 mb
LEUCHARS	15h G.M.T.	1015·0 mb	1014·2 mb	711 mb
ALDERGROVE	15h G.M.T.	1018·1 mb	1008·4 mb	706 mb
LIVERPOOL	15h G.M.T.	1018·1 mb	1016· mb	669 mb
DOWNHAM MARKET	15h G.M.T.	1016·8 mb	1012·4 mb	665 mb
LARKHILL	15h G.M.T.	1018·7 mb	1003 mb	646 mb
CAMBORNE	15h G.M.T.	1022·8 mb	1012·3 mb	627 mb
VALENTIA	15h G.M.T.	1021·6 mb	1019 mb	650 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	43	360	18	00·4	54	42	360	08	00·2	71	46	300	06	02·6	60	50	280	05	00·6	61	58	280	15	01·2	71	57	270	10	14·4	72	56	310	14	02·9	61	54	290	10	00·3	61	60	240	11	Surf
1000	2·9					4·8	52	41			4·1	67	43	274	10	4·9	59	49			5·0	59	56	280	27	4·8	69	56	282	15	5·3	70	54			6·3	58	52	277	12	5·8	60	59	245	15	1000
950		44	40	320	18		45	37	345	12		56	38	285	12		51	44	285	08		53	51	278	21		61	50	286	15		50	46	276	12		56	55	253	22	950
900	31·3	38	37	327	19	33·3	39	33	345	09	33·2	49	35	288	12	33·7	47	42	280	12	34·1	51	49	277	18	34·3	53	44	283	19	34·7	53	45	284	14	35·2	59	43	274	14	35·0	52	51	256	24	900
850		34	30	340	18		35	25	330	10		42	32	288	13		46	41	280	13		47	45	282	21		49	40	284	21		52	43	282	12		58	10	272	15		49	48	260	28	850
800	62·4	31	24	338	20	64·6	35	16	315	14	64·8	34	20	288	18	65·5	41	39	275	18	66·2	44	42	281	26	66·3	43	36	286	27	66·9	50	38	277	16	67·7	53	08	278	17	67·1	50	39	266	31	800
750		28	16	332	21		31	11	308	18		34	12	290	24		37	36	270	22		40	34	278	33		40	27	285	33		44	31	282	17		47	-01	279	18		44	35	264	39	750
700	97·1	25	02	324	21	99·6	29	00	301	22	99·9	31	10	289	26	100·9	31	30	275	25	101·9	35	30	277	37	102·0	37	22	278	38	102·9	40	10	278	19	103·8	41	-11	281	18	103·0	38	27	261	40	700
650		18	-02	315	26		25	-05	300	23		26	-03	291	30		26	23	282	30		30	26	273	38		30	15	274	38		33	06	277	24		35	-15	268	18		32	13	257	36	650
600	136·5	13	-12	313	24	139·4	18	-12	294	24	139·8	20	-08	287	37	140·9	21	00	279	34	142·2	23	19	278	38	142·2	23	07	274	39	143·4	26	03	278	27	144·4	27	-22	262	21	143·5	26	-06	260	38	600
550		07	-18	316	25		11	-26	288	27		13	-08	286	39		16	-02	272	40		45	06	273	36		18	-14	274	40		18	00	271	31		20	-35	248	25		20	01	261	35	550
500	181·8	-02	-26	309	24	185·1	03	-32	285	31	185·8	05	-22	285	36	187·0	07	-08	270	43	188·5	08	02	276	40	188·5	09	-22	272	44	189·8	09	-15	269	36	190·9	10	-48	254	29	190·1	10	-05	257	36	500
450		-12	-36	298	22		-06	-33	283	38		-05	-29	286	43		-04	-17	267	44		-02	-14	275	42		-01	-28	273	53		-03	-27	267	36		02	-54	253	29		02	-09	254	40	450
400	235·0	-25	-49	295	25	239·1	-16	-35	282	40	239·8	-17	-34	289	47	241·2	-13	-26	270	44	243·0	-11	-34	276	55	243·1	-12	-42	273	54	244·2	-12	-35	271	39	245·8	-09	-51	266	32	245·0	-10	-20	261	48	400
350		-39	-59	291	27		-29	-48	277	49		-29	-47	298	54		-25	-40	272	51		-23	-50	274	56		-23	-54	273	59		-23	-46	264	45		-19	-59	253	36		-22	-33	261	48	350
300	299·4	-55		289	27	305·0	-45		278	53	305·8	-44		289	58	307·7	-42		270	55	309·8	-39	-59	275	64	310·0	-36	-60	272	67	310·9	-39	-58	265	52	313·2	-34	-57	252	41	312·0	-38	-52	261	53	300
250		-61		287	42		-63		275	58		-63		285	67		-59		266	73		-54		272	76		-54		273	78		-56		271	56		-53		253	44		-56		267	55	250
200	336·7	-46		292	37	339·9	-52		279	46	342·6	-55		282	54	344·5	-63		265	75	345·2	-65		268	78	345·6	-69		283	65	347·9	-74		274	60	349·9	-71		266	39	349·4	-65				200
170		-47		285	28		-48		283	36		-52		283	48		-56		279	49		-59		278	46		-66		278	57		+69		274	50		-64					-59				170
150		-49		283	27		-47		284	30		-53		279	42		-56		283	46		-58		276	66		-62		274	50		-66		276	44		-63					-57				150
130		-49		288	26		-46		281	27		-51		300	57		-56		270	38		-56		276	33		-60		280	39		-67		280	39		-62					-56				130
110		-45		287	19		-46		281	23		-51		297	23							-54		274	25		-60		289	33		-69		280	24		-61					-56				110
100	539·1	-45		279	18	544·3	-47		284	22	543·2	-50		273	23						546·0	-53		275	18	544·3	-60		292	28	544·3	-69		286	29	544·3	-61				548·1	-55				100
90		-48		274	18		-44		290	21		-49		269	12							-53		280	16		-58		282	20							-59					-56				90
80	(82 mb)	-47					-43		295	17		-53		273	10							-54		285	10		-59		278	15							-57					-57				80
70							-42					-50										-51		288	11		-56		287	10							-57					-52				70
60																						-47		290	09		-54		328	03						(68 mb)	-54									60
	Inversion 723 mb 24° - 700 mb 25° Isothermal 635 - 615 mb 19°					Inversion 858 mb 35° - 819 mb 34°					Inversion 800 mb 34° - 776 mb 39° Isothermal 735 - 711 mb 32°					Isothermal 795 - 782 mb 40°					(48 mb) Inversion 219 mb -66° - 213 mb -65° Max wind:- 269° 87 Kts 234 mb 36° 204 -67° 39,300'					Isothermal 780 - 750 mb 40° 612 - 600 -- 23°					Inversion 900 mb 53° - 878 mb 55° 830 -- 58° - 811 -- 51°					Inversion 921 mb 49° - 900 mb 59° Isothermal 900 - 862 mb 56°					Inversion 850 mb 49° - 800 mb 50° Isothermal 866 - 850 mb 49°					
Tropopause	I 265 mb - 66° 32,600'					I 235 mb - 70° 35,700'					II 289 mb - 67° 35,500'					I 215 mb - 68° 37,200'					I 219 mb -66° 37,800' I 204 -67° 39,300'					I 185 mb - 72° 41,500'					I 190 mb - 78° 40,800'					I 200 mb - 71° 40,100'					I 209 mb - 67° 39,000'					Tropopause

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h G.M.T.	1012·9 mb	1002·9 mb	850 mb
STORNOWAY	21h G.M.T.	1018·2 mb	1016·6 mb	790 mb
LEUCHARS	21h G.M.T.	1015·6 mb	1014·8 mb	792 mb
ALDERGROVE	21h G.M.T.	1017·5 mb	1007·5 mb	720 mb
LIVERPOOL	21h G.M.T.	1015·7 mb	1013·7 mb	694 mb
DOWNHAM MARKET	21h G.M.T.	1016·3 mb	1011·9 mb	692 mb
LARKHILL	21h G.M.T.	1018·1 mb	1002·5 mb	660 mb
CAMBORNE	21h G.M.T.	1021·1 mb	1010·4 mb	674 mb
VALENTIA.	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	49	46	360	16	00·4	52	45	330	05	00·2	56	51	110	07	02·6	51	48	010	05	00·6	60	58	CALM		01·2	65	58	345	05	04·4	62	55	290	06	02·9	58	53	295	07						Surf
1000	3·5					4·9	50	44	331	12	4·2	54	48	100	06	4·7	50	46			4·4	57	57	257	08	4·5	63	56			5·1	62	55			5·7	56	52	290	12						1000
950		44	41	336	21		44	36	333	10		50	44	096	10		46	43	353	14		56	54	253	14		59	53	297	11		58	52	292	13		51	47	288	14						950
900	31·9	39	33	002	19	33·2	38	32	326	08	33·0	44	43	096	09	33·2	43	40	330	17	33·5	51	49	264	22	33·9	54	50	259	15	34·3	55	50	296	15	34·7	57	45	292	15						900
850		32	29	003	21		32	25	325	09		40	39	142	02		40	31	334	23		45	43	270	25		48	44	261	20		51	40	289	20		56	39	289	20						850
800	62·9	30	25	351	19	64·2	34	15	320	12	64·4	33	32	280	03	64·7	37	35	308	15	65·5	42	37	273	30	65·9	43	40	278	21	66·5	51	27	282	20	67·1	50	27	286	23						800
750		27	15	333	21		27	12	309	15		29	24	284	09		34	24	264	15		35	26	263	29		38	35	276	25		44	24	278	22		44	17	280	23						750
700	97·6	23	06	321	21	98·9	23	05	301	17	99·3	28	12	294	29	99·9	30	30	248	19	100·9	33	02	260	30	101·4	33	31	267	32	102·5	36	09	274	24	103·1	38	07	274	23						700
650		17	-01	310	19		18	-01	288	17		22	-05	294	24		24	24	245	26		28	-10	263	36		25	24	272	36		31	05	270	30		27	-01	265	23						650
600	136·8	10	-07	301	24	138·2	12	-04	287	18	138·9	15	-08	300	28	139·8	18	16	243	31	140·9	20	-08	263	38	141·4	18	11	274	37	142·1	24	-02	271	32	143·3	21	-05	262	25						600
550		03	-11	293	25		04	-14	288	22		08	02	296	30		09	05	252	34		15	-21	269	37		10	-07	276	40		17	-08	269	32		14	-16	260	26						550
500	181·7	-06	-17	287	27	183·3	-04	-16	282	23	184·4	01	-04	282	34	185·4	01	-04	259	43	186·9	05	-29	264	36	187·1	04	-20	275	49	188·9	08	-17	268	31	189·4	06	-27	259	28						500
450		-16	-27	282	33		-10	-18	274	27		-10	-14	278	39		-12	-18	256	42		-07	-30	262	43		-06	-30	270	51		-03	-25	267	37		-02	-38	261	33						450
400	234·4	-29	-38	277	41	236·8	-20	-27	268	31	237·9	-21	-25	271	36	238·6	-25	-32	265	41	240·8	-19	-35	264	52	241·1	-16	-29	272	50	243·3	-14	-37	267	44	243·8	-12	-44	258	36						400
350		-39	-49	283	55		-33	-46	267	30							-40	-49	260	48		-30	-42	264	53		-29	-41	271	56		-27	-48	267	53		-27	-53	258	39						350
300	298·8	-51		281	64	302·0	-49		266	38						303·0	-52		259	78	306·5	-46		269	65	307·1	-43		271	61	309·5	-42		267	59	310·2	-41		257	42						300
250		-66		282	60		-67		262	49	For rest of						-61		260	60		-65		278	72		-60		271	81		-59		263	60		-62		256	43						250
200	385·7	-49		285	36		-52		279	38	winds see page					389·9	-57		272	51	392·2	-66		266	64	393·5	-71				396·0	-75		264	62	396·8	-74		257	43						200
170		-48		285	30		-49		285	32							-55					-63		266	49		-64					-67		269	55		-69		261	44						170
150		-48		289	27		-50		287	29												-61		266	41		-64					-66		274	46		-67		261	37						150
130		-50		300	24		-52				3.											-64		266	37		-63					-66		279	39		-70		269	33						130
110		-49		307	22																	-63		266	25		-69					-68		282	31		-68		290	18						110
100	537·1	-48																			538·6	61				539·7	-62				540·9	-68		288	22	540·7	-66		283	21						100
90																											-62					-64		295	12		-64									90
80																											-63					-63		297	10	(89 mb)	-64									80
70																											-63				(72 mb)	-63													70
60																																														60
	Inversion 825 mb 28° - 796 mb 30°					Inversion 889 mb 32° - 800 mb 34° 500 -- 09° - 480 -- 03° Isothermal 679 - 666 mb 20°					Inversion 762 mb 28° - 732 mb 31° Isothermal 878 - 866 mb 93° 706 - 696 -- 28°					Inversion 827 mb 37° - 818 mb 38° 765 -- 33° - 750 -- 34°					Inversion 750 mb 35° - 734 mb 37° 590 -- 18° - 585 -- 17° Isothermal 975 - 942 mb 56° 850 - 828 -- 45°					Inversion 850 mb 51° - 820 mb 52° Isothermal 1003 - 987 mb 62° 942 - 925 -- 57° 563 - 550 -- 17°					Inversion 959 mb 50° - 917 mb 58°										
Tropopause	I 248 mb - 67° 34,300'					I 239 mb - 71° 35,900'					NR					I 250 mb - 61° 34,200'					I 211 mb - 75° 38,100'					I 205 mb - 71° 38,800'					I 195 mb - 77° 40,200'					I 208 mb - 76° 39,100'										Tropopause

HMSO Press, MO Dunstable

No. 1184

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Wednesday 4th July 1951

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

LERWICK — 03hrs G.M.T.; Pressure M.S.L. 1014.9 mb; Surf 1004.8 mb; Freezing 888 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.7	45	40	360	09
1000	04.0	45	40		
950		40	34	342	20
900	32.3	33	28	332	18
850		27	23	323	16
800	63.0	27	12	328	17
750		25	09	337	18
700	97.4	20	01	338	20
650		13	-7	331	19
600	136.3	07	-15	320	21
550		-2	-17	321	22
500	180.7	-10	-20	323	24
450		-19		315	26
400	232.9	-32		313	30
350		-45		311	36
300	296.7	-56		307	39
250		-59		284	41
200	383.8	-53		293	36
170		-51		290	30
150		-50		292	26
130		-51		298	24
110		-53			
100		(117)			

Inversion 829 mb 26° - 813 mb 29°

Tropopause: I 259 mb -61° 32800'

STORNOWAY — 03hrs G.M.T.; M.S.L. 1018.5 mb; Surf 1016.9 mb; Freezing 862 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.4	48	44	360	03
1000	05.0	46	42		
950		41	38	360	11
900	33.3	36	33	359	13
850		31	28	350	11
800	64.3	30	13	336	12
750		26	08	328	12
700	98.9	21	03	320	11
650		16	02	326	17
600	135.0	12	-3	322	19
550		04	-14	326	17
500	183.1	-3	-22	326	19
450		-13	-35	311	18
400	236.3	-22	-46	290	22
350		-34	-56	298	39
300	304.5	-49		295	43
250		-63		300	33
200	388.3	-51		298	33
170		-51		299	35
150		-51		300	29
130		-53		295	30
110		-54		297	30
100	538.9	-54			

Inversion 842 mb 30° - 825 mb 31°

Tropopause: I 232 mb -67° 35700'

LEUCHARS — 03hrs G.M.T.; M.S.L. 1016.2 mb; Surf 1015.4 mb; Freezing 820 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.2	53	47	090	09
1000	04.5	51	43	055	18
950		45	35	057	13
900	32.9	38	33	054	10
850		35	32	330	03
800	64.1	29	28	265	10
750		23	22	282	11
700	98.6	20	01	316	13
650		14	01	316	17
600	137.6	10	04	303	21
550		05	01	288	25
500	182.7	-3	-8	275	31
450		-11	-18	266	31
400	235.9	-25	-36	267	36
350		-38	-52	259	46
300	300.3	-52		257	40
250		-61		264	35

Isothermal 900 - 880 mb 38°, 625 - 600 mb 10°

Tropopause: I 248 mb -62° 33800'

ALDERGROVE — 03hrs G.M.T.; M.S.L. 1017.3 mb; Surf 1007.3 mb; Freezing 734 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.6	49	47	340	05
1000	04.6				
950		44	40	333	18
900	33.0	38	34	322	21
850		43	20	313	18
800	64.5	39	19	304	14
750		34	04	300	15
700	99.6	27	11	304	23
650		18	10	300	30
600	136.5	12	04	293	34
550		05	-1	290	34
500	184.0	-5	-12	282	31
450		-17	-24	279	28
400	236.9	-27	-35	284	24
350		-40	-47	279	25
300	301.3	-48		272	26
250		-49		277	30
200	390.3	-48		280	43
170		-51		284	40
150		-54		292	42
130		-55		291	39
110		-56		290	30
100	540.5	-57		290	25

Inversion 900 mb 38° - 850 mb 43°

Tropopause: I 311 mb -50° 29300'

LIVERPOOL — 03hrs G.M.T.; M.S.L. 1013.6 mb; Surf 1011.6 mb; Freezing 720 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0.6	54	54	calm	
1000	03.7	53	52	287	12
950		51	51	284	12
900	31.6	49	49	260	20
850		45	45	255	25
800	64.5	41	41	262	29
750		35	35	267	29
700	99.8	30	30	272	24
650		24	13	268	28
600	136.6	15	13	264	32
550		03	06	264	33
500	185.1	02	-4	257	42
450		-9	-17	254	55
400	238.7	-20	-27	258	59
350		-31	-38	251	76
300	304.3	-45		250	84
250		-63		246	85
200	390.8	-59		257	60
170		-60		264	44
150		-58		268	22
130		-60			
110		-64			
100	538.3	-66			
90		-66			
80		-65			
70		-63			
60		-62			
		-64			
(44)		-65			

Isothermal 514 - 500 mb 2°

Tropopause: II 242 mb -66° 35200'

DOWNHAM MARKET — 03hrs G.M.T.; M.S.L. 1013.4 mb; Surf 1009.0 mb; Freezing 682 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01.2	61	60		
1000	03.7	61	60		
950		58	55		
900	33.0	53	49		
850		48	47		
800	64.9	42	41		
750		36	33	See p3 for winds.	
700	100.5	35	32		
650		27	24		
600	140.5	21	19		
550		13	08		
500	186.5	04	-5		
450		-5	-12		
400	240.7	-13	-20		
350		-25	-35		
300	307.3	-40	-48		
250		-57			
200	394.4	-73			
170		-60			
150		-60			
130		-62			
110		-59			
100	541.2	-61			
90		-61			
80		-62			

Inversion 730 mb 33° - 715 mb 37

Isothermal 1009 - 988 mb 61

Tropopause: I 200 mb -73° 39400'

LARKHILL — 03hrs G.M.T.; M.S.L. 1016.7 mb; Surf 1000.9 mb; Freezing 687 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04.4	57	55	280	11
1000	04.6	57	55		
950		58	53	286	12
900	33.7	53	45	280	16
850		50	45	278	20
800	65.8	47	40	274	27
750		40	34	262	27
700	101.4	34	20	260	29
650		27	04	266	36
600	141.4	22	-1	261	37
550		13	-4	258	42
500	187.4	06	-12	260	43
450		-5	-24	260	47
400	241.3	-14	-35	264	51
350		-27	-45	262	54
300	307.7	-43		266	53
250		-62		260	57
200	393.7	-74		262	60
170		-65		268	53
150		-64		269	44
130		-66		276	39
110		-65		284	28
100	538.2	-67		294	21
90		-67		297	16
80		-65		303	17
70		-65			

Inversion 965 mb 54° - 950 mb 58°

Isothermal 854 - 830 mb 50, 612 - 600 mb 22°

Tropopause: I 202 mb -75° 39200'

CAMBORNE — 03hrs G.M.T.; M.S.L. 1019.1 mb; Surf 1008.7 mb; Freezing 665 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.9	58	55	245	05
1000	05.3	57	53	257	14
950		53	49	271	12
900	34.4	51	45	283	17
850		53	37	278	25
800	66.6	48	33	273	27
750		43	23	264	28
700	102.5	36	01	265	30
650		30	11	267	34
600	141.7	23	-7	266	36
550		17	-4	265	39
500	189.0	09	-6	268	39
450		00	-19	272	36
400	243.8	-8	-28	268	43
350		-22	-31	273	42
300	309.3	-37	-51	274	42
250		-54		289	45
200	398.2	-70		268	45
170		-65		272	49
150		-62		270	39
130		-62		270	35
110		-65		273	26
100	544.1	-67		276	18
90		-66		281	19
80		-63		297	12
70		-61		308	11
60		-61		306	03
		-61			
(55)					

Inversion 910 mb 50° - 863 mb 54

Tropopause: I 184 mb -72° 41600'

(Station not named) — 03hrs G.M.T.; M.S.L. 1018.9 mb; Surf 101[illegible] mb; Freezing 69[illegible] mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0.3	55	52	005	08
1000	05.1	54	51	004	10
950		50	47	360	14
900	34.0	50	45		
850		49	24		
800	66.0	44	21		
750		40	06		
700	101.7	33	03		
650		27	11		
600	141.7	22	-8		
550		15	-14		
500	187.9	06	-30		
450		-2	-38		
400	242.3	-10	-40		
350		-23	-41		
300	309.1	-39	-52		
250		-58			
200	395.8	-68			
170		-62			
150		-63			
130		-63			
110		-63			
100	542.3	-63			
90		-62			

Inversion 932 mb 48° - 915 mb 50°, 900 mb 44° - 784 mb 45

Isothermal 916 - 864 mb 50°, 658 - 640 mb 27°, 461 - 450 mb -2°

Tropopause: I 210 mb -70° 38500'

LERWICK — 09hrs G.M.T.; M.S.L. 1015.9 mb; Surf 1005.8 mb; Freezing 900 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.7	48	35	020	16
1000	04.2	46	37		
950		39	33	001	24
900	32.4	32	28	360	15
850		26	20	358	18
800	63.1	25	08	351	20
750		23	07	334	21
700	97.9	18	01	325	24
650		13	-7	329	26
600	136.2	08	-16	328	31
550		-3	-26	324	33
500	180.6	-12	-28	322	36
450		-24	-41	319	35
400	232.5	-34	-46	323	49
350		-50		315	42
300	295.6	-60		317	44
250		-56		314	34
200	382.5	-49		297	31
170		-49		295	24
150		-50		304	26
130		-52			
110		-51			
100	534.3	-50			

Inversion 816 mb 24° - 790 mb 26°

Tropopause: I 290 mb -62° 30200'

STORNOWAY — 09hrs G.M.T.; M.S.L. 1019.2 mb; Surf 1017.6 mb; Freezing 870 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.4	51	46	080	05
1000	05.2	49	43	027	17
950		43	37	017	14
900	33.5	36	30	341	11
850		31	29	352	12
800	64.5	30	06	359	16
750		26	08	353	17
700	99.1	22	04	345	14
650		17	-3	329	14
600	138.3	12	-21	325	15
550		04	-33	323	23
500	183.3	-5	-41	323	28
450		-16	-44	320	28
400	236.1	-28	-56	310	31
350		-40	-60	313	37
300	300.4	-52		317	43
250		-59		310	52
200	387.8	-50		310	43
170		-49		310	43
150		-48		310	35
130		-48		303	36
110		-49		307	32

Inversion 855 mb 30° - 837 mb 31°

Isothermal 837 - 820 mb 31°, 801 - 790 mb 30°

Tropopause: I 265 mb -61° 31800'

LEUCHARS — 09hrs G.M.T.; M.S.L. 1017.0 mb; Surf 1016.2 mb; Freezing 845 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.2	55	45	360	05
1000	04.6	51	41	014	09
950		44	37	022	11
900	33.0	37	33	025	14
850		33	32	320	21
800	64.1	31	27	324	20
750		28	09	342	16
700	98.7	23	05	338	14
650		17	02	324	13
600	137.9	13	-5	336	16
550		07	-12	340	20
500	185.3	-2	-28	332	24
450		-12	-38	307	28
400	236.5	-23	-47	314	32
350		-34	-56	313	36
300	301.5	-50		310	35
250		-56		305	36
200	389.4	-47		305	39
170		-47		302	29
150		-50		301	30
130		-51		302	29
110		-50		298	27
100	541.1	-50		307	25
90		-50		314	22
80		-47			

Isothermal 833 - 775 mb 31°

Tropopause: I 265 mb -60° 32700'

ALDERGROVE — 09hrs G.M.T.; M.S.L. 1017.7 mb; Surf 1008.2 mb; Freezing 750 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.6	55	46	335	15
1000	04.8	53	45		
950		46	40	343	17
900	33.4	43	35	345	14
850		41	26	345	14
800	64.9	35	23	320	16
750		32	20	312	20
700	99.9	24	14	312	22
650		19	09	320	23
600	139.3	19	07	321	29
550		13	-1	314	34
500	185.2	03	-11	309	38
450		-6	-23	309	40
400	239.1	-18	-34	304	41
350		-34	-49	307	48
300	304.3	-48		310	59
250		-60		320	81
200	391.1	-59		317	56
170		-58		302	43
150		-57		302	39
130		-60		312	32
110		-60		313	25

Isothermal 928 - 900 mb 43°, 600 - 582 mb 19°

Tropopause: I 232 mb -64° 35800'

LIVERPOOL — 09hrs G.M.T.; M.S.L. 1015.4 mb; Surf 1013.4 mb; Freezing 739 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0.6	56	50	335	08
1000	04.2	54	49	333	14
950		49	45	335	12
900	32.9	46	40	338	11
850		41	35	340	13
800	64.5	37	25	330	17
750		33	13	326	18
700	99.6	27	10	313	23
650		20	11	300	27
600	139.1	16	06	299	29
550		07	-7	296	37
500	184.5	-1	-15	305	41
450		-10	-25	310	46
400	238.0	-21	-38	322	52
350		-33	-47	322	56
300	303.3	-51		319	60
250		-51		305	52
200	391.6	-50		296	45
170		-45		288	37
150		-55		285	42
130		-53		297	37
110		-54		293	24
100	542.2	-54		284	25
90		-54		283	26
80		-52		293	18
70		-52		322	14
(65)		-49			

Isothermal 813 - 800 mb 37°, 633 - 617 mb 18°

Tropopause: I 264 mb -58° 33100'

DOWNHAM MARKET — 09hrs G.M.T.; M.S.L. 1011.4 mb; Surf 1007.1 mb; Freezing 700 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01.2	60	58	250	16
1000	03.2	58	57		
950		55	53	273	23
900	31.3	50	47	282	23
850		46	43	291	27
800	64.1	42	37	290	29
750		37	33	261	29
700	99.6	32	28	264	33
650		26	22	271	32
600	139.7	19	19	265	40
550		13	-5	261	39
500	185.6	05	-16	259	39
450		-6	-22	263	45
400	239.5	-14	-28	256	54
350		-31	-40	248	61
300	303.3	-43		250	68
250		-43		258	62
200	392.2	-47		263	57
170		-47		272	43
150		-47		292	39
130		-50		282	36
110		-52		269	27

Tropopause: II 300 mb -43° 30530'

LARKHILL — 09hrs G.M.T.; M.S.L. 1013.0 mb; Surf 999.3 mb; Freezing 686 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	4.4	61	57	280	15
1000	4.1				
950		54	51	288	25
900	33.3	49	47	290	27
850		47	41	295	27
800	65.1	42	32	255	25
750		33	00	281	36
700	100.6	34	-24	275	39
650		29	-17	275	37
600	140.8	19	06	275	42
550		13	-16	280	50
500	186.6	04	-28	282	56
450		-5	-37	272	60
400	240.6	-17	-45	285	63
350		-25	-60	282	74
300	306.6	-42		275	94
250		-56		276	89
200	394.2	-55		276	58
170		-55		280	35
150		-56		286	35
130		-60		283	31
110		-54		300	23
100	543.2	-56		301	16
90		-57		303	09
80		-55		288	10
70		-53		326	10
(64)		-51			

Inversion 960 mb 28° - 937 mb 27

Isothermal 572 - 545 mb 13°

Tropopause: I 223 mb -61° 36100'

CAMBORNE — 09hrs G.M.T.; M.S.L. 1017.7 mb; Surf 1007.2 mb; Freezing 655 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.9	59	55	270	12
1000	04.9	58	58	281	21
950		54	54	291	21
900	35.8	50	50	298	20
850		45	45	286	22
800	65.7	49	44	277	27
750		35	19	273	36
700	101.4	36	-1	275	35
650		31	03	285	30
600	141.7	23	15	283	35
550		18	-7	285	34
500	188.0	09	-20	289	37
450		01	-20	291	46
400	242.8	-9	-36	295	42
350		-22	-38	296	48
300	309.8	-38	-49	288	54
250		-54		289	48
200	396.9	-67		290	46
170		-64		294	42
150		-62		286	36
130		-61		293	30
110		-62		308	27
100	543.2	-59		304	19
90		-61		290	13
80		-64			

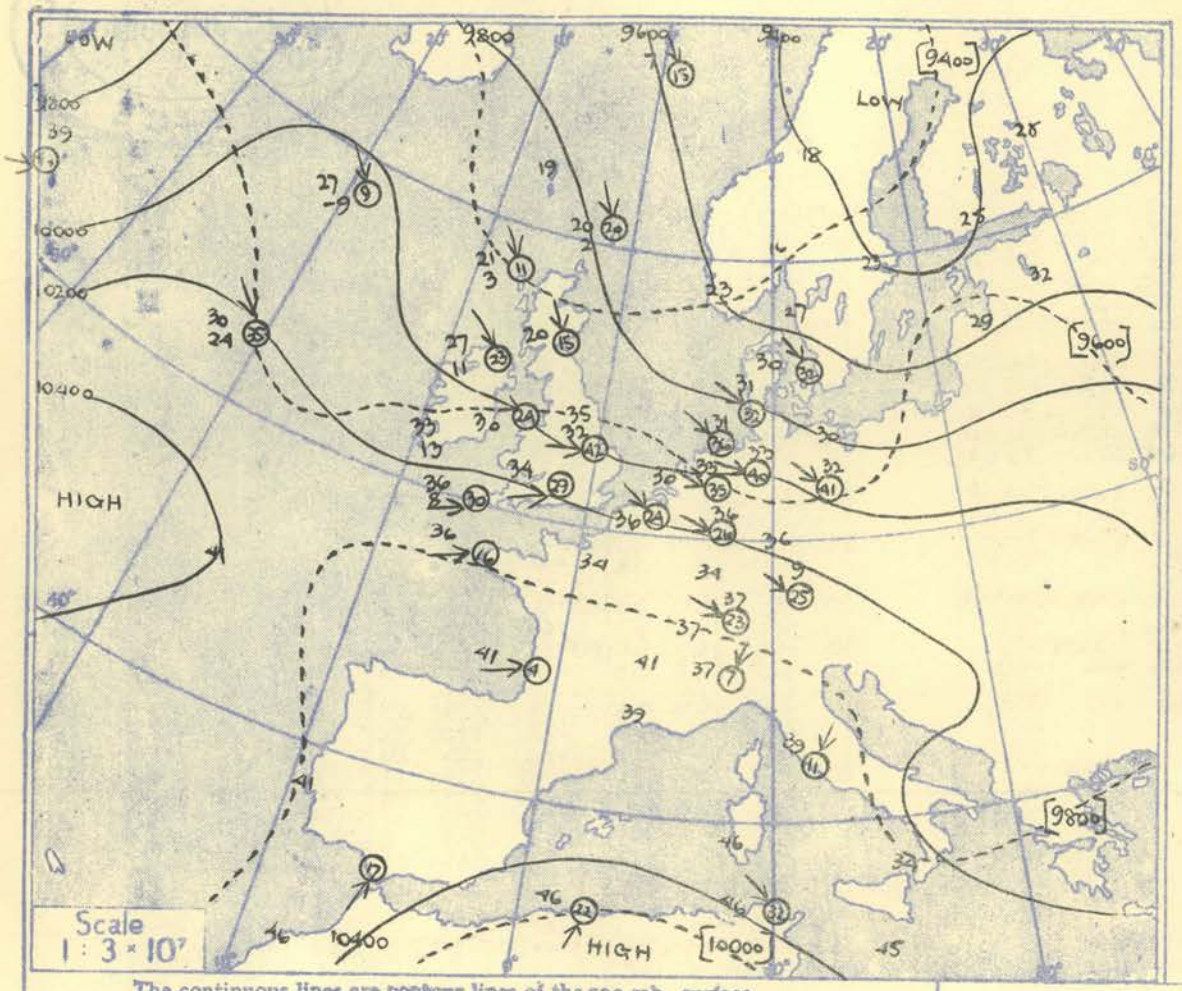
Inversion 827 mb 45° - 807 mb 45°, 719 mb 36° - 705 mb 37

Isothermal 575 - 555 mb 15°

Tropopause: II 219 mb -69° 37700'

Wednesday 4th July 1951.

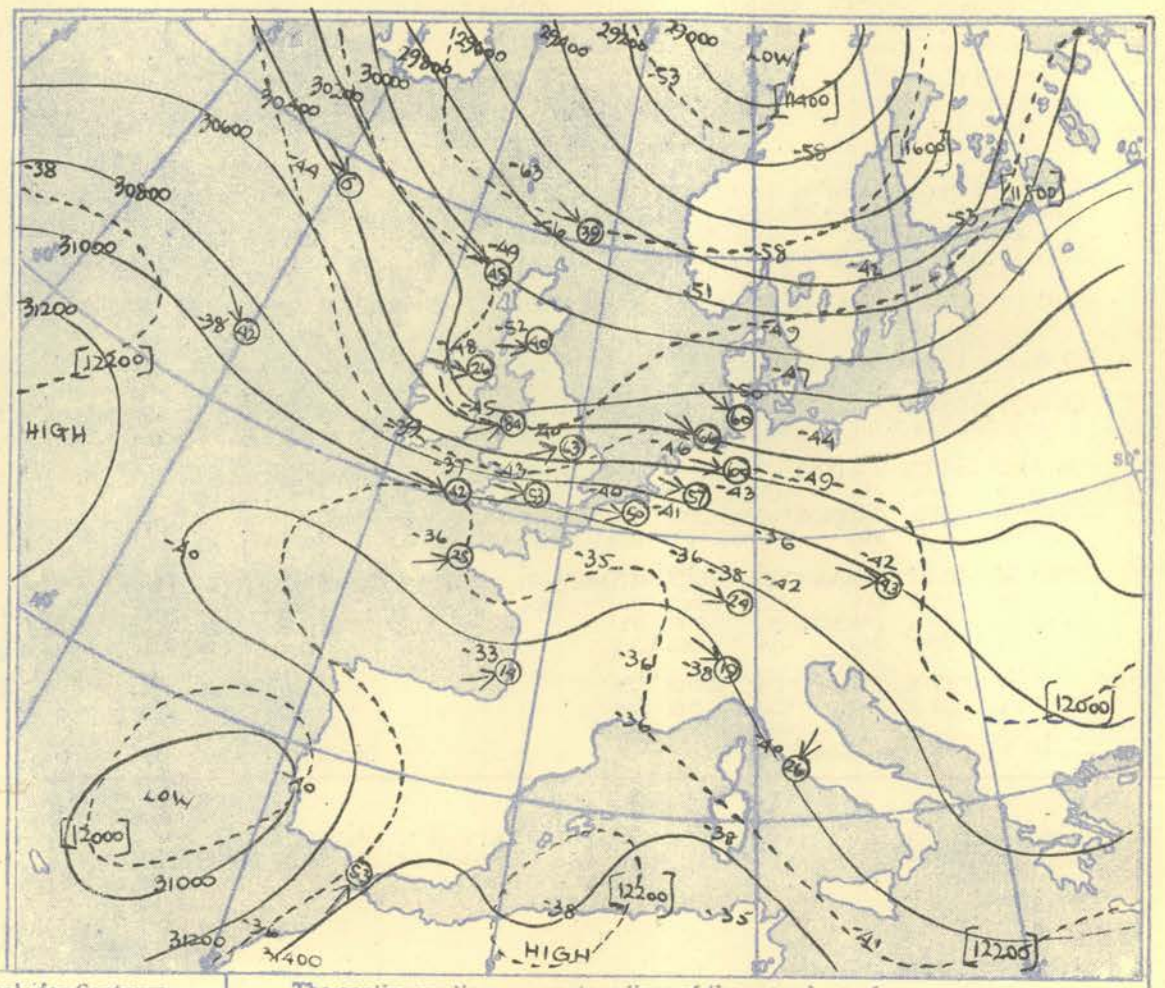
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



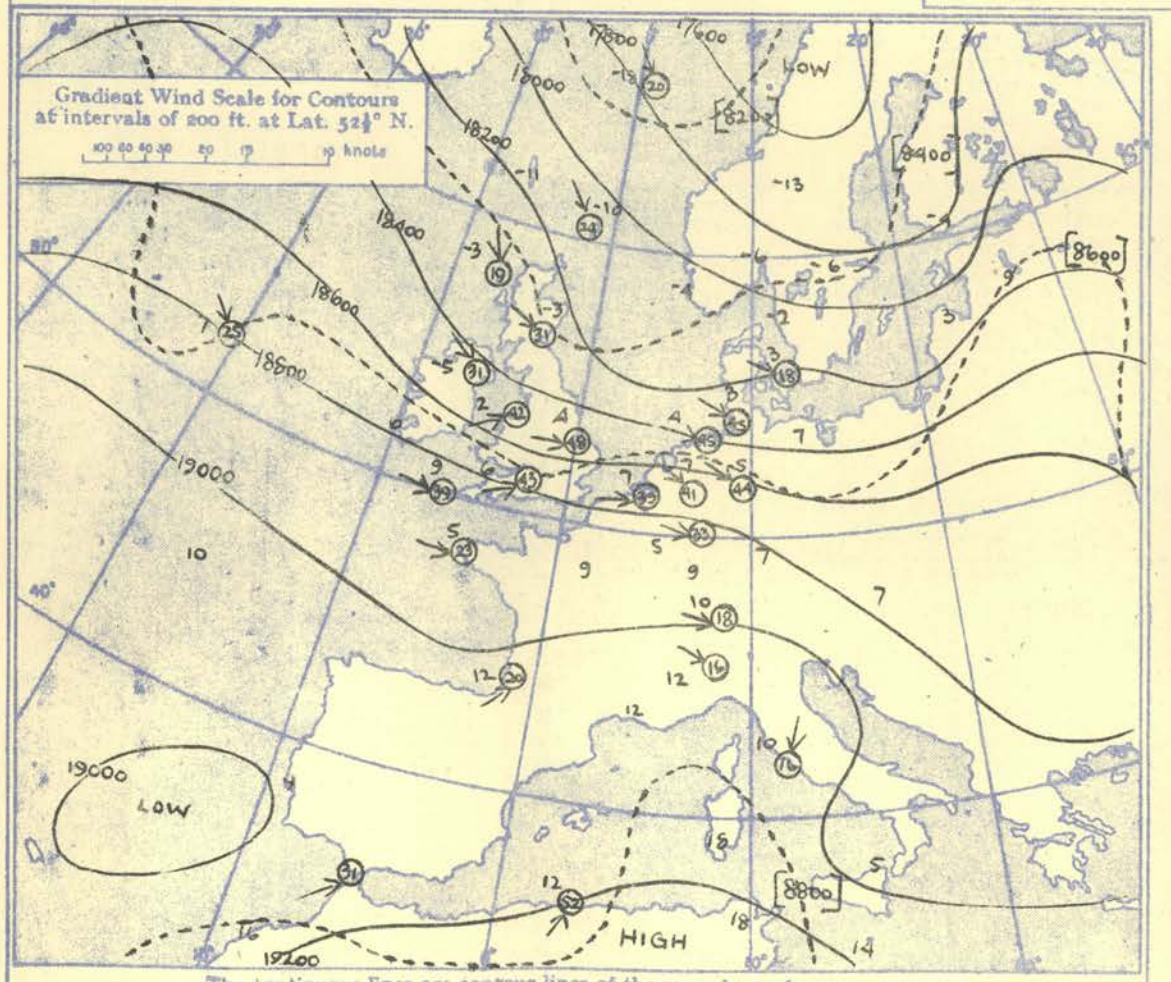
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

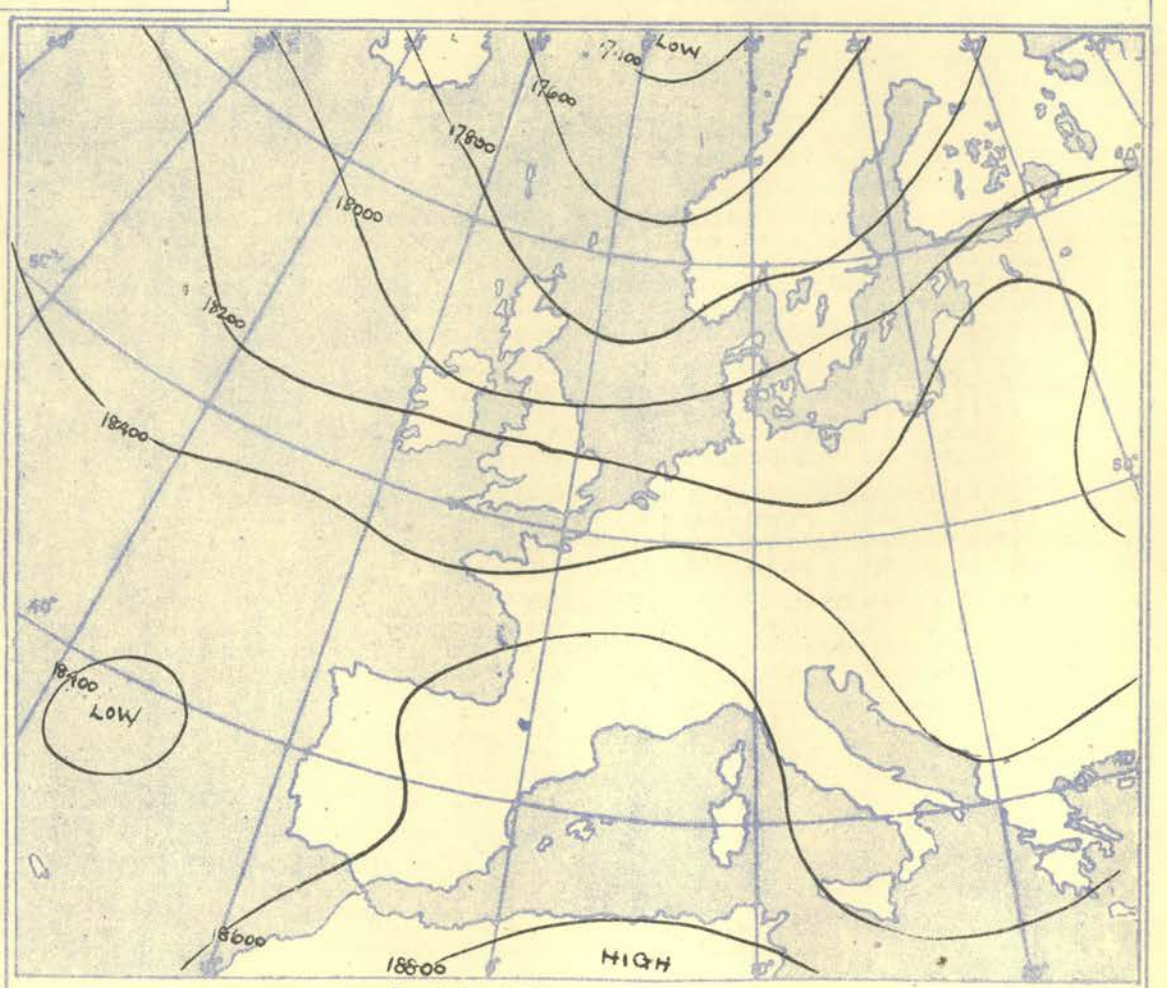
100 60 40 30 20 15 10 knots



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



The continuous lines are contour lines of the 500 mb. surface.
The dotted lines are isopleths of the thickness of the layer : 700—590 mb.



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	Position II	Position III	52° 12' N 2° 12' W					
Pressure: Time	12 hrs	15 hrs	1425 hrs					Time
M.S.L.	1022·0 mb	1019·0 mb	1017·5 mb	mb	mb	mb	mb	M.S.L.
Surf	1019·0 mb	1016·0 mb	1016·0 mb	mb	mb	mb	mb	Surf
Freezing	660 mb	660 mb	738 mb	mb	mb	mb	mb	Freezing

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Surf	–	59	57	–	61	60	00·4	–	–										Surf
1000	6·2	–	–	5·3	–	–	4·9	–	–										1000
950		52	52		52	48		–	–										950
900		51	48		53	51	54·1	51	47										900
850		49	43		52	50		43	–										850
800		48	39		49	48	65·7	36	–										800
750		42	37		49	44		–	–										750
700	103·3	38	34	102·5	31	31	100·3	27	–										700
650		31	27		31	26		–	–										650
600		24	–		24	21	140·7	22	–										600
550		17	–		16	–		–	–										550
500	190·0	07	–	189·1	05	–	186·8	05	–										500
450								–	–										450
400							240·8	46	–										400
350								–	–										350
300							307·1	44	–										300
250																			250
200																			200
170																			170

Cloud 818 sc 980 940; 418 Ci 300 mb

Surf wind N. 3-6 kts.

Cloud 418 sc 990 960; 818 sc 340 910; 218 Ci 300 mb

Surf wind W.C-2 kts

Cloud 418 sc 910 720; 218 Ci 310 TNR.

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

Place	Downham Market	Cirrus 52·5°N 2°W	Shaeburyness	Larkhill	Larkhill	Larkhill	Cirrus 52·6°N 1·9°W	Larkhill				Height above M.S.L.	Place
Time	03hrs	09hrs	09hrs	11hrs	17 hrs	17 hrs	20hrs	23hrs					Time
Type	Pilot	-											Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	220 05	160 15	240 12	360 12	050 05	240 15	240 15	120 04					Surf.
1,000	261 16	210 15	280 23	360 18	040 10	240 21	240 21	130 12					1,000
2,000	266 16	220 19	280 27	340 17	040 08	270 29	270 29	130 13					2,000
3,000	264 19	230 20	280 30	320 16	040 08	260 33	260 33	130 11					3,000
4,000	262 20	250 20	290 29	310 15	030 04	260 36	260 36	140 07					4,000
5,000	262 22	250 20	280 30		360 05	250 42	250 42	280 04					5,000
6,000	259 24	230 27	280 68	300 18	320 10	270 34	270 34	290 07					6,000
8,000	262 28		270 30	290 19	310 19			290 13					8,000
10,000	267 42	250 25	270 40	290 30	310 22	260 29	260 29	320 15					10,000
14,000	262 38	240 21	270 45	280 38	310 30	270 29	270 29	310 23					14,000
18,000	265 48	250 22	260 54		300 30	270 35	270 35	310 27					18,000
24,000	258 52	250 19			(13000')	260 25	(13000')	(13000')					24,000
30,000	259 62		250 92			(23000')							30,000
40,000	255 71												40,000
50,000	260 47 (42000')												50,000

NEPHOSCOPE OBSERVATIONS

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

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

Ship	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	CIRRUS	CIRRUS	CIRRUS	CIRRUS		Ship
Lat/Long	58·8N. 19·2W.	58·7N. 19·2W.	59·0N. 19·1W.	59·0N. 19·0W.	52·6N. 19·8W.	52·6N. 19·8W.	52·6N. 19·7W.	52·6N. 19·8W.		Lat/Long
Pressure: Time	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	G.M.T.	Time
M.S.L.	1021 mb	1019 mb	1018 mb	1016 mb	1022 mb	mb	1017 mb	mb	mb	M.S.L.
Surf	1021 mb	1019 mb	1018 mb	1016 mb	1022 mb	mb	1017 mb	mb	mb	Surf
Freezing	740 mb	750 mb	810 mb	760 mb	715 mb	mb	700 mb	mb	mb	Freezing

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		52	43	250	03		53	43	145	03		52	44	160	10		52	50	125	19		56	51	170	02		59	58	250	18							Surf
1000	05·7	50	39	230	06	05·2	51	42	161	04	04·8	50	42	178	09	04·2	50	46	128	18	06·1	53	49	236	06	04·9	58	56	251	18							1000
950		43	34	270	06		44	41	169	04		43	34	185	11		43	38	140	21		48	45	250	08		55	53	251	24							950
900	34·1	37	30	328	06	33·6	38	37	182	04	33·1	39	26	197	12	32·6	38	34	154	24	34·8	47	41	266	10	34·0	51	49	251	27							900
850		37	25	348	06		39	30	218	03		37	22	210	12		36	32	163	21		44	37	281	16		47	45	251	30							850
800	65·4	33	16	336	08	65·0	37	19	287	06	64·3	31	17	210	09	63·9	35	22	189	15	66·6	40	33	288	21	69·5	42	39	250	30							800
750		32	07	317	08		32	10	297	07		24	14	205	06		31	28	218	17		36	29	286	33		38	05	250	35							750
700	100·3	27	03	305	09	100·6	26	09	279	06	98·9	26	19	197	07	99·0	27	24	233	18	101·9	30	24	289	35	101·4	32	15	250	29							700
650		19	01	298	10		21	11	262	06		24	17	198	14		21	18	232	18		24	18	293	43		28	27	255	28							650
600	139·7	13	01	277	14	139·6	16	03	262	13	138·6	18	11	220	18	138·7	18	14	227	17	141·8	18	13	283	39	141·7	24	22	272	35							600
550		09	07	259	24		11	02	270	24		11	05	242	22		11	05	252	25		14	09	279	30		20	15	272	34							550
500	185·2	02	22	281	30	185·3	04	02	274	34	184·3	04	04	261	25	185·4	04	12	261	36	187·8	07	01	279	25	188·4	13	04	276	31							500
450		09	32	283	33		05	10	285	45		03	12	254	32		07	22	258	43		01	08	279	34		02	08	289	38							450
400	238·8	19	44	283	61	239·3	13	21	295	48	238·6	12	19	251	38	238·3	19	30	249	46	242·3	11	•	279	31	243·5	07		289	41							400
350		27	53	286	62							25	33	254	36		29	45	248	49		23		280	40		20		283	43							350
300	304·7	44		294	66						305·2	39	48	248	50	304·2	43		243	46	309·1	38		280	42	310·8	36									300
250		61		294	75							38		248	51		57		256	54		54		280	47		56									250
200	391·3	63		300	69						392·2	60		252	45	391·7	54		267	47	396·5	70		280	48	397·7	78									200
170		61		308	40							54		264	50		54		271	46		76					73									170
150		58		303	25							54		276	33		57		268	36		77					81									150
130		61		303	30							57		285	31		61		268	33		78					80									130
110		62		303	20							54		280	28		59		273	25		80					79									110
100	538·9	61		303	17						541·7	54		267	21	540·4	57		276	23						537·8	79									100
90		60		304	12							52		255	15	(095 mb)	54										77									90
80												50		252	12												75									80
70												48		252	10												73									70
60												46		252	07												70									60
											(050)	42		252	05											(050)	67								
											(043 mb)	39														(040)	64								
																										(039) mb.	63								

Inversion 886 mb. 36° – 870 mb. 39°
Isothermal 772 – 744 mb. 32°
577 – 558 mb. 10°

Inversion 888 mb. 38° – 866 mb. 41°
Isothermal 900 – 888 mb. 38°

Inversion 913 mb. 38° – 895 mb. 40°
725 mb. 23° – 710 mb. 27°

Inversion 522 mb. 5° – 513 mb. 6°
Isothermal 834 – 800 mb. 35°

Isothermal 936 mb. – 913 mb. 48°
408 mb. – 400 mb. –11°

For winds see top of page.

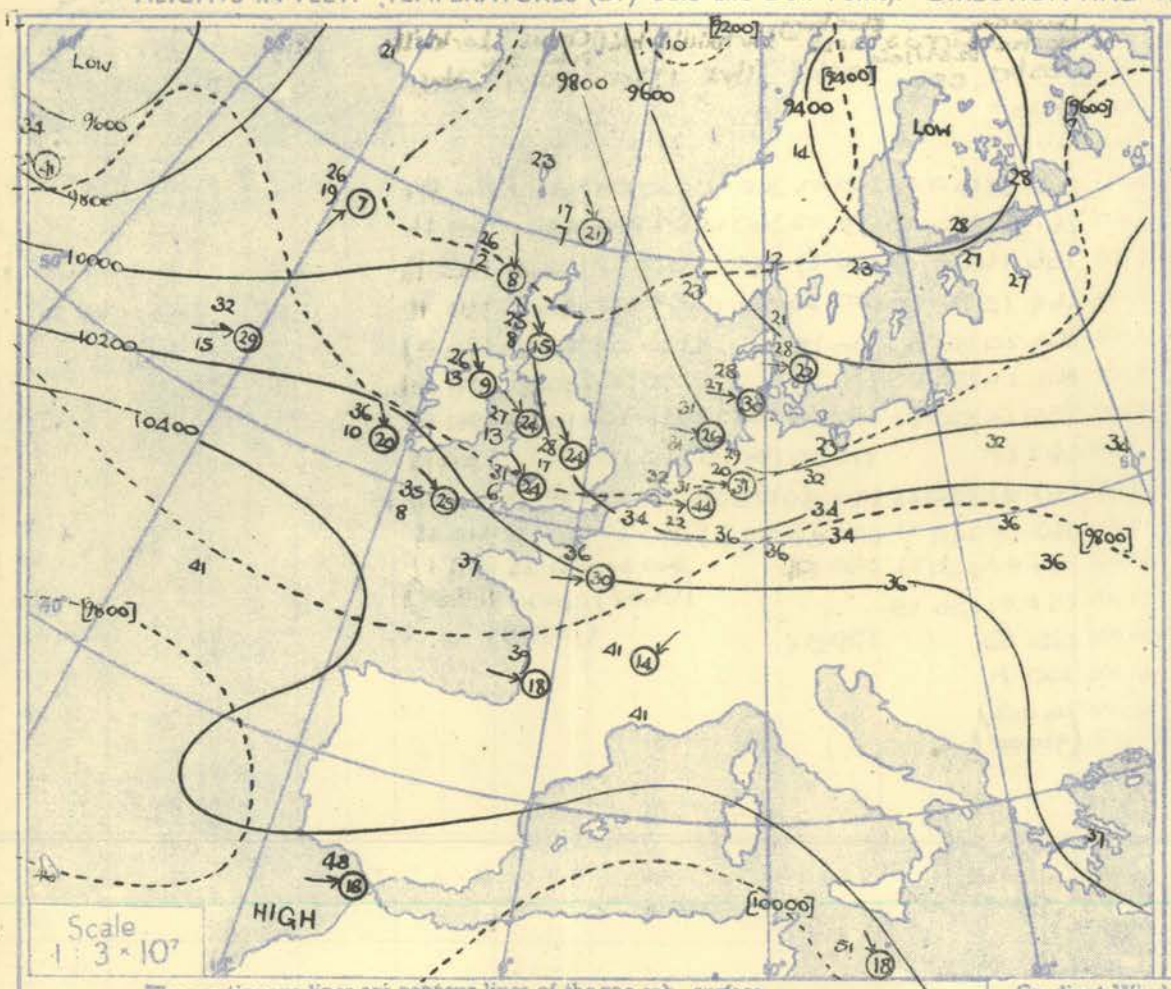
For winds see top of page.

Isothermal 763 – 750 mb. 38°
650 – 630 mb. 28°
585 – 571 mb. 23°

Tropopause	I 225 mb. –68° 36,600'	N.R.	I 223 mb. –70° 37,000'	I 224 mb. –66° 36,800'	II 183 mb. –76° 41,400'		II 188 mb. –82° 41,100'			Tropopause

Wednesday 4th July, 1951

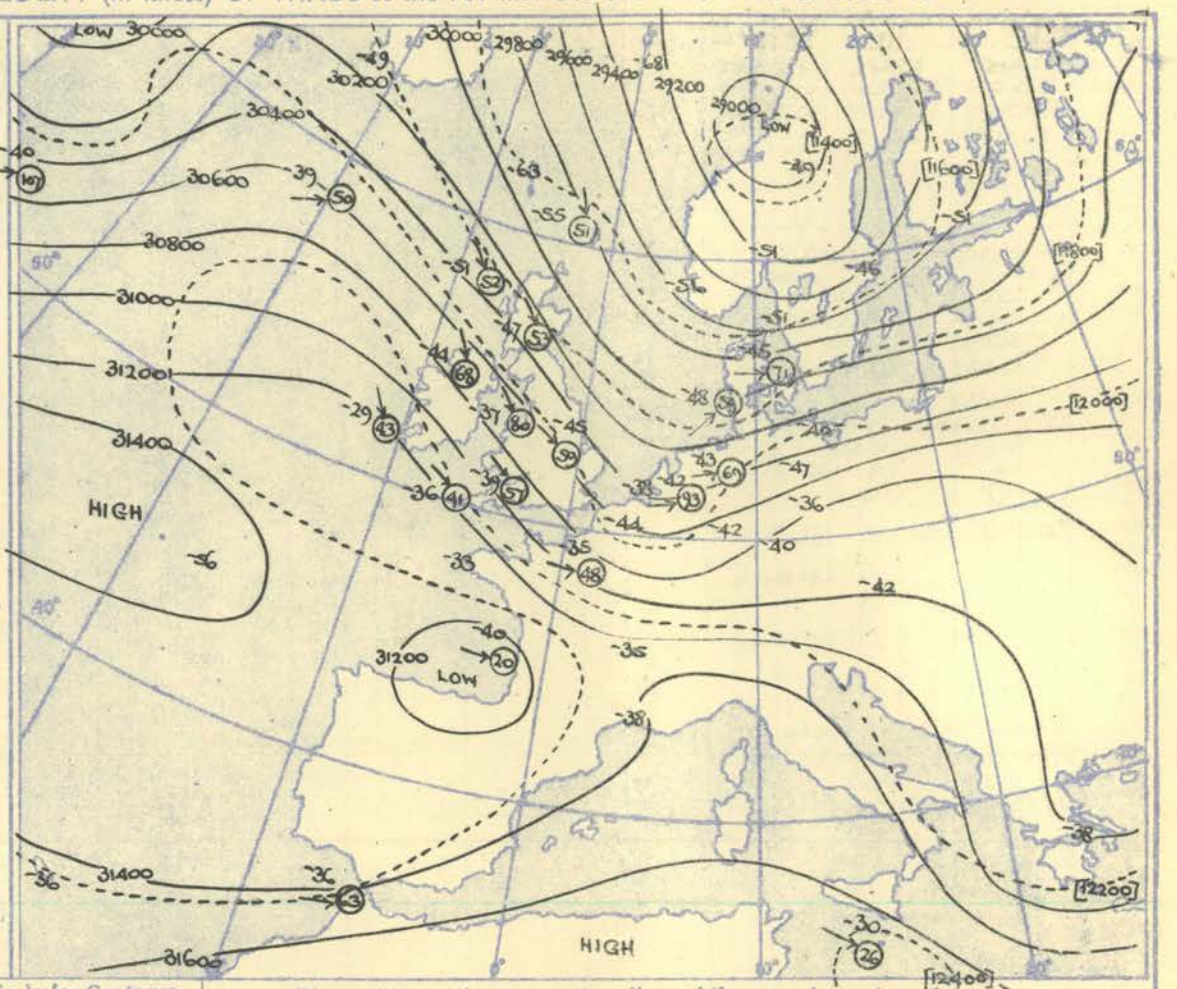
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

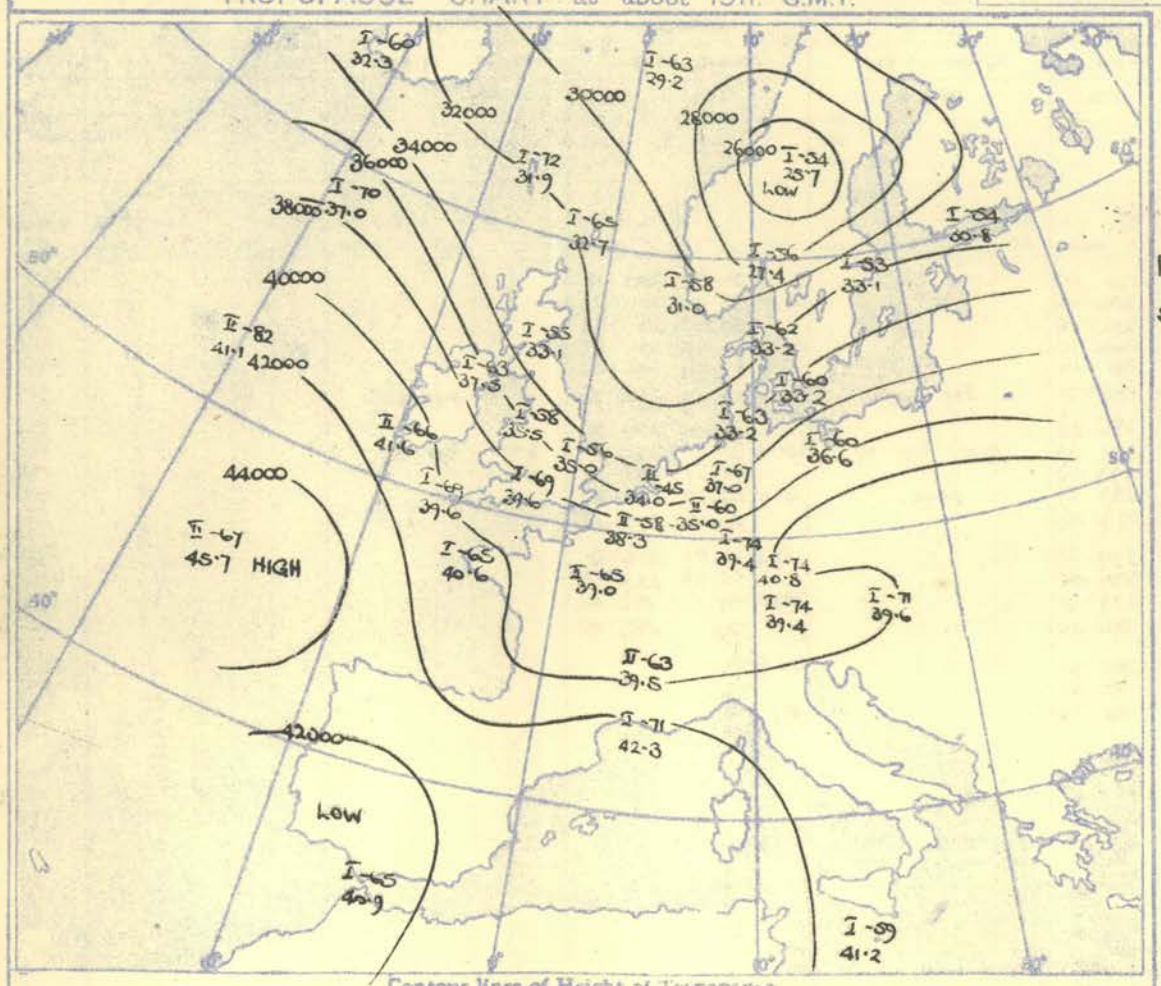
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 50 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The Atlantic warm ridge moved steadily eastwards to reach the vicinity of longitude 20°West. The cold trough from the Norwegian sea moved east to extend southwards across Scandinavia.

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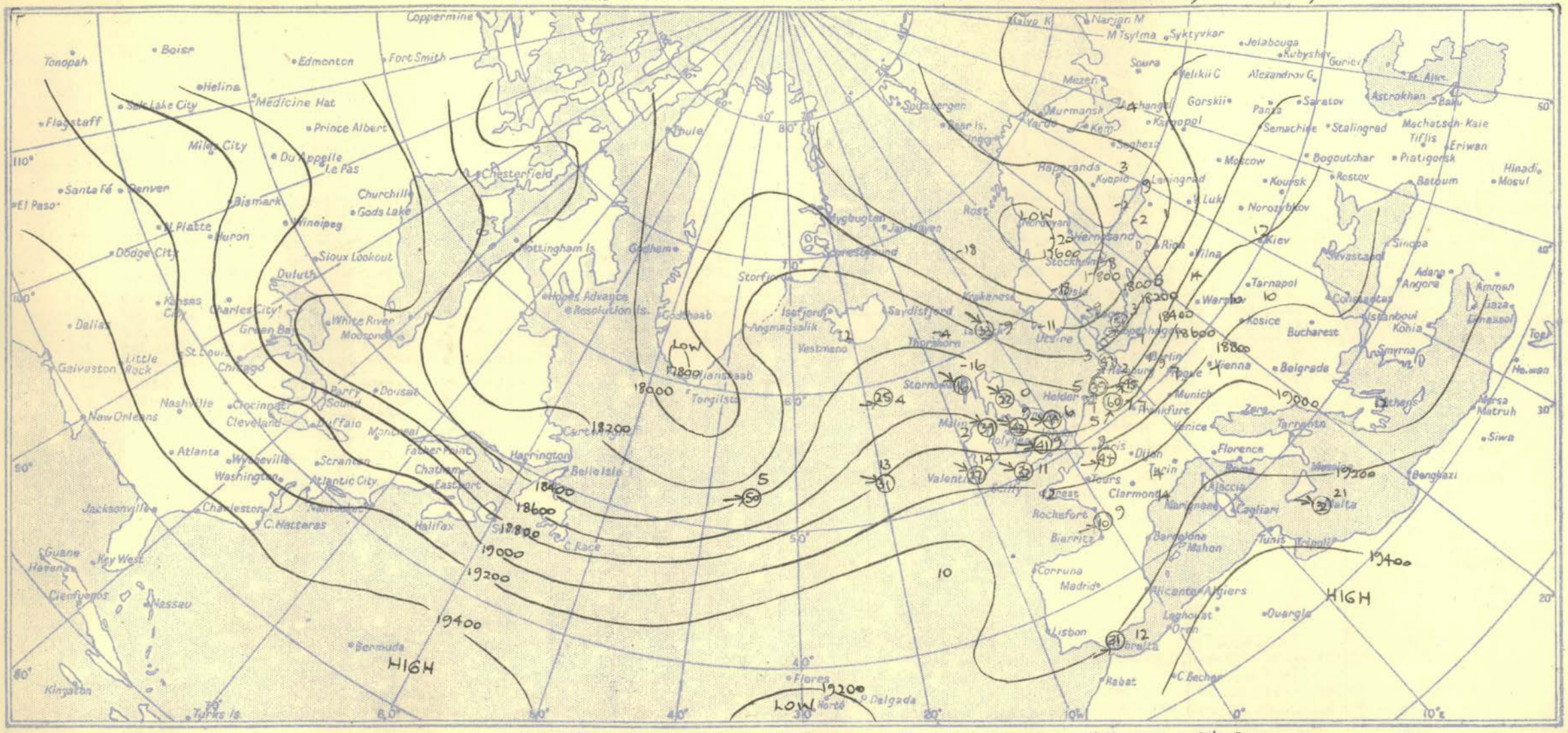
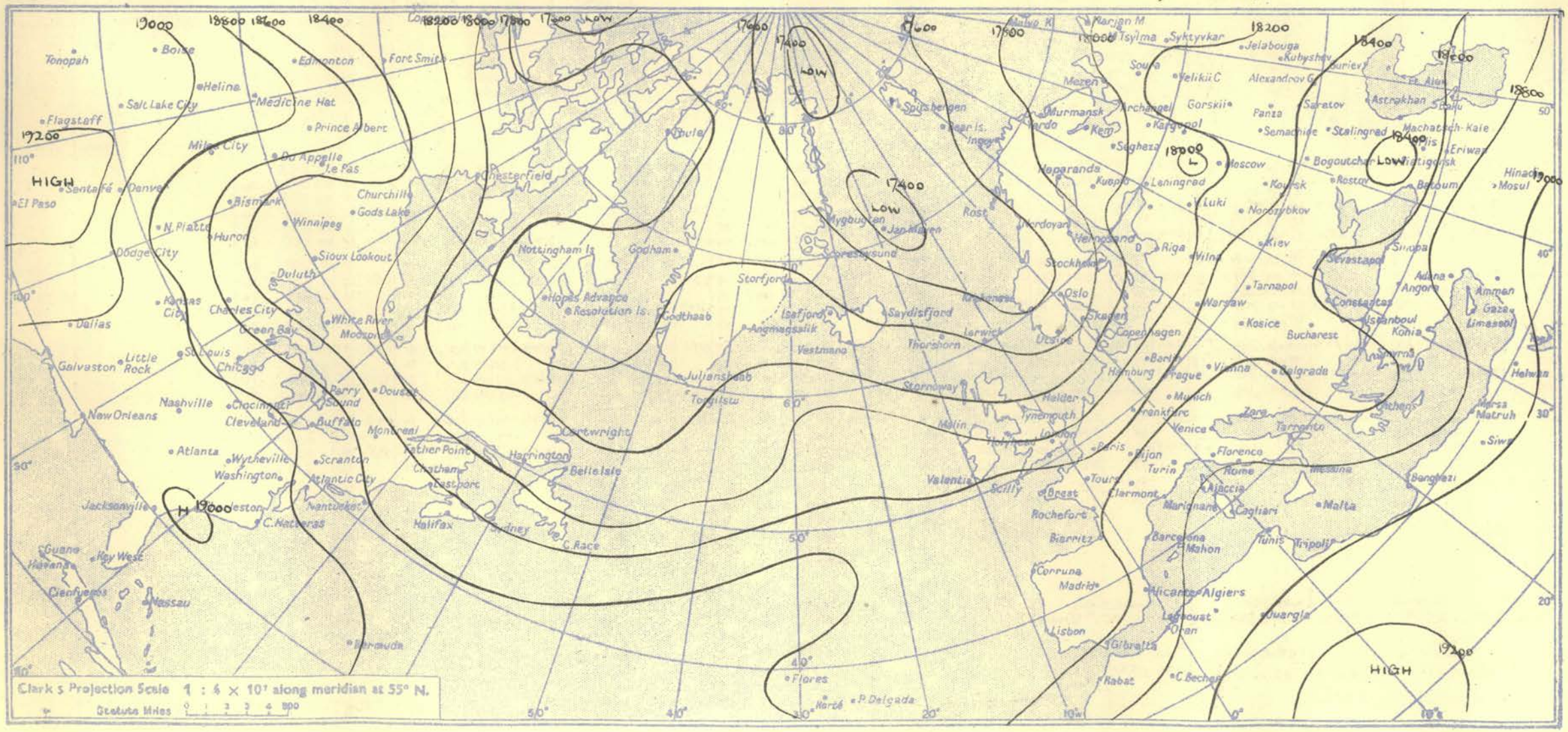
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Wednesday 4th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 4th. July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Wednesday 4th July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h	1017·9 mb	1007·8 mb	890 mb
STORNOWAY	15h	1025·0 mb	1019·4 mb	845 mb
LEUCHARS	15h	1019·4 mb	1018·6 mb	830 mb
ALDERGROVE	15h	1019·8 mb	1010·2 mb	785 mb
LIVERPOOL	15h	1017·8 mb	1015·8 mb	747 mb
DOWNHAM MARKET	15h	1016·7 mb	1012·3 mb	729 mb
LARKHILL	15h	1016·0 mb	1000·4 mb	705 mb
CAMBORNE	15h	1018·8 mb	1008·3 mb	657 mb
VALENTIA.	15h	1021·9 mb	1020 mb	650 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA. Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	37	010	14	00·4	50	44	020	09	00·2	59	48	090	06	02·6	58	43	320	15	00·6	59	50	CALM		01·2	60	48	005	15	04·4	68	47	360	14	02·9	60	55	360	10	00·3	62	50	340	11	Surf
1000	4·8	49	39	353	17	5·7	48	42	030	12	5·3	54	45	126	05	5·4	56	41	322	18	4·9	56	47	321	04	4·6	56	44	003	15	4·5	60	44	004	11	6·2	59	54	003	15	5·9	59	48	339	11	1000
950		41	34	353	17		42	36	018	10		48	43	066	04		47	36	323	16		49	41	341	03		47	39	359	19		52	42	359	09		54	50	342	12		51	43	347	09	950
900	330	34	32	353	17	34·0	36	30	356	09	33·8	40	39	350	06	34·0	39	31	320	09	33·6	43	37	014	06	33·2	42	36	356	20	33·8	52	42	359	09	34·2	50	39	325	14	34·8	46	38	255	07	900
850		31	26	354	18		31	17	351	11		34	30	329	11		37	22	348	05		40	31	301	04		39	32	355	20		44	35	338	11		51	14	319	18		50	28	329	09	850
800	63·9	27	19	356	18	65·0	35	18	349	10	64·9	29	24	326	18	65·3	33	20	326	07	65·1	37	22	302	13	64·6	35	28	341	20	65·7	42	18	317	14	66·2	46	11	308	19	66·8	46	26	306	14	800
750		23	13	347	17		29	06	342	09		29	15	329	18		30	17	320	08		32	14	299	20		30	23	327	21		38	21	299	20		40	09	295	21		39	18	299	18	750
700	98·2	17	07	332	21	99·9	26	02	335	08	99·6	25	08	337	15	100·2	26	13	312	09	100·2	27	13	299	24	99·7	28	17	311	24	101·1	31	06	295	24	101·8	35	08	294	25	102·5	36	10	301	20	700
650		14	00	333	25		22	-01	318	08		20	02	340	15		22	05	316	15		24	08	303	27		26	06	293	30		31	-03	293	25		32	26	305	21	650
600	137·1	08	-05	331	28	139·5	16	-09	324	13	139·0	14	-02	332	17	139·8	17	-08	308	22	140·0	22	05	310	28	139·2	16	04	291	33	141·1	23	03	288	34	142·2	25	-08	294	26	142·9	27	13	305	21	600
550		01	-12	330	32		08	-25	318	14		09	-14	327	22		09	-14	308	31		16	-08	304	25		13	00	298	36		19	-09	290	36		17	-18	295	27		21	03	303	23	550
500	181·9	-09	-20	331	33	184·9	-01	-33	322	16	184·5	00	-23	327	22	185·4	02	-19	308	39	186·2	07	-20	306	42	185·1	06	-14	293	44	187·5	09	-21	293	41	188·8	11	-27	297	32	189·7	14	04	303	27	500
450		-18	-30	332	33		-12	-44	323	22		-11	-34	325	32		-10	-30	307	49		-05	-26	304	44		-04	-25	293	46		-02	-44	296	46		02	-21	296	33		08	-19	308	31	450
400	234·3	-13	-43	330	37	238·1	-24	-52	323	22	237·8	-22	-44	322	31	239·0	-17	-38	305	60	240·3	-17	-41	305	51	239·2	-18	-36	292	47	242·0	-11	-44	301	52	243·6	-09	-20	293	37	245·2	-01	-32	309	31	400
350		-41		333	41		-37	-60	321	34		-35	-55	319	42		-31	-46	312	66		-26	-50	308	75		-32	-49	292	53		-22	-39	299	58		-21	-32	299	40		-13	-31	304	40	350
300	298·3	-55		337	51	302·9	-51		315	52	302·9	-47		318	53	304·8	-44		320	68	306·7	-37	-60	312	80	304·8	-43		297	59	308·9	-39	-54	296	57	310·7	-36	-47	304	41	313·5	-29	-46	317	43	300
250		-64		328	45		-54		316	52		-55		317	59		-57		320	90		-56		313	78		-55		297	72		-54		293	57		-54		301	42		-45		328	54	250
200	385·5	-47		315	34	391·1	-52		315	56	391·0	-50		319	56	392·2	-58		328	60	394·7	-54		312	59	392·8	-54		297	55	396·3	-68		296	58	398·4	-69		312	48	402·8	-63		324	67	200
170		-46		312	31		-50		312	47		-47		312	43		-55					-54		309	45		-52		295	45		-63		303	51		-64		307	33		-62		311	43	170
150		-47		309	30		-49		310	43		-50		317	41		-54					-53		309	38		-50		293	38		-60		295	42		-64		306	35		-63		313	36	150
130		-49		309	25		-49		313	38		-51		315	35		-54					-51		310	33		-54		296	33		-61		296			-64		306	21	(139 mb)	-60				130
110		-50		314	27		-50		297	34							-55					-53		286	29		-55		298	27		-64		298			-63		302	24						110
100	537·6	-51		310	25	542·5	-51		312	31							-55				545·2	-54		298	29	543·1	-55		294	26	543·0	-65		299		544·8	-62		304	21						100
90		-49		310	18		-60		317	26							-52					-53		313	15		-55		291	27		-62		297			-61		310	19						90
80	(83 mb)	-47					-48		315	20												-55		306	14		-55		292	24		-56		299			-60		290	16						80
70							-46		320	16												-48		304	12		-55		295	18		-61		299			-59		306	15						70
60							-45															-48		337	07		-53		305	10		-61		290			-57		325	08						60
	Inversion 705 mb 16°–692 mb 19° Isothermal 877 – 836 mb 31°					Inversion 854 mb 30°–820 mb 37° Isothermal 741 – 727 mb 28° Max wind:- 319° 093kts 33,200' 257 mb					Inversion 766 mb 25°–753 mb 30° Isothermal 681 – 664 mb 23°					Isothermal 892 – 866 mb 38° 420 – 403 " –16°					(52 mb) Isothermal 677 – 619 mb 24° 553 – 543 " 16°					Inversion 750 mb 30°–729 mb 32°					Inversion 831 mb 41°–818 mb 43° 621 " 23°–609 " 24°					(44 mb) Inversion 907 mb 48°–897 mb 53° Isothermal 897 – 868 mb 53°					Inversion 900 mb 46°–850 mb 50° Isothermal 477 – 462 mb 10°					
Tropopause	I 258 mb – 65° 30,700'					I 281 mb – 54° 31,200'					I 262 mb – 55° 33,100'					I 217 mb – 63° 37,500'					I 240 mb – 58°					I 243 mb – 56° 35,000'					I 202 mb – 69° 39,600'					I 203 mb – 69° 39,600'					II 188 mb – 66° 41,600'					Tropopause

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h	1018·4 mb	1008·3 mb	853 mb
STORNOWAY	21h	1020·9 mb	1019·3 mb	792 mb
LEUCHARS	21h	1020·1 mb	1019·3 mb	847 mb
ALDERGROVE	21h	1020·7 mb	1011·4 mb	800 mb
LIVERPOOL	21h	1019·3 mb	1017·3 mb	750 mb
DOWNHAM MARKET	21h	1019·1 mb	1014·4 mb	784 mb
LARKHILL	21h	1017·6 mb	1001·8 mb	750 mb
CAMBORNE	21h	1019·2 mb	1009·1 mb	679 mb
VALENTIA.		mb	mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA. Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	45	37	010	08	00·4	49	40	CALM		00·2	51	45	125	10	02·6	53	48	260	05	00·6	55	50	110	10	01·2	51	46	007	07	04·4	57	49	100	04	02·9	55	47	355	11						Surf
1000	4·9	44	37			5·6	49	41			5·5	49	44	135	06	5·6	52	43			5·3	52	44	110	17	5·1	50	44			4·9	58	50			5·4	55	47	340	20						1000
950		37	34	321	14		41	35	022	08		43	39	092	04		47	39	282	09		49	41	075	08		46	40	359	19		54	45	090	08		48	41	358	24						950
900	32·9	35	26	330	15	33·9	34	28	005	06	33·9	39	36	328	06	34·2	42	29	302	09	34·0	44	40	002	05	33·6	42	37	336	20	33·8	47	41	025	02	34·1	52	24	359	14						900
850		31	17	334	15		37	15	356	06		33	32	318	07		37	13	328	09		38	34	339	05		40	34	327	22		42	36	310	10		50	20	352	10						850
800	63·9	26	15	322	17	65·1	33	14	336	06	64·9	28	24	301	18	65·4	32	14	324	09	65·4	33	28	304	06	65·0	33	28	315	22	65·4	37	31	319	14	66·0	43	20	331	12						800
750		19	07	318	16		28	09	313	08		27	17	300	18		29	03	318	11		32	10	312	11		27	21	319	21		32	24	324	19		39	21	318	24						750
700	98·1	18	00	325	18	99·8	24	02	307	09	99·6	25	03	332	12	100·2	25	04	318	11	100·4	27	01	313	14	99·9	27	17	331	18	100·5	25	20	325	17	101·5	35	11	312	26						700
650		14	-03	325	26		21	-07	304	15		20	-06	335	11		22	-04	308	13		21	-02	324	15		22	05	331	21		27	11	317	20		29	06	307	24						650
600	137·1	08	-11	327	27	139·2	13	-12	299	15	139·0	13	-13	326	14	139·7	17	-16	308	16	140·0	18	-12	314	19	139·5	18	-07	321	26	140·4	22	02	305	30	141·7	22	01	306	27						600
550		02	-22	331	29		05	-20	293	16		05	-22	328	18		11	-13	307	29		11	-18	308	27		09	-19	313	34		15	-11	301	36		16	04	303	29						550
500	181·8	-09	-32	331	32	184·3	-04	-31	300	19	184·1	-06	-31	322	22	185·4	03	-13	308	39	185·7	02	-20	308	37	185·1	01	-27	307	39	186·5	07	-29	301	41	187·9	09	-01	297	32						500
450		-19	-43	329	37		-15	-41	307	22		-17	-39	337	27		-05	-16	313	40		-05	-31	314	50		-08	-31	308	43		-02	-17	307	46		01	-18	309	29						450
400	234·1	-33		325	39	237·3	-23	-47	310	35	236·7	-28	-49	320	29	237·4	-12	-24	316	46	239·7	-13	-39	319	60	238·7	-21	-44	302	60	240·9	-11	-29	317	51	242·6	-11	-32	308	33						400
350		-46		325	46		-31	-52	318	61		-40	-60	324	29		-26	-36	308	54		-27	-46	317	72		-30	-53	311	74		-27	-41	319	62		-25	-33	320	41						350
300	297·5	-61		326	53	302·7	-44		312	84	301·2	-48		325	87	305·9	-42		304	72	306·1	-41		321	82	304·5	-44		317	78	307·3	-40	-53	324	66	309·1	-42		329	42						300
250		-63		325	57		-59		309	81		-65		324	72		-58		306	75		-58		322	86		-59		321	87		-59		331	66		-59		336	51						250
200	383·9	-52		314	42	389·7	-56		310	58	387·5	-61		317	60	392·8	-68		308	74	392·9	-57		313	71	391·7	-60		311	60	393·9	-70		320	57	395·5	-78		328	48						200
170		-51		314	36		-56					-57		318	49		-62		308	60		-61		316	52		-59		307	48		-64		313	46		-72		317	36						170
150		-53		315	33							-59		312	42		-62		312	49		-61		310	48		-58		305	44		-64		311	39		-70		320	32						150
130		-53		312	29							-59		311	33		-63		321	39		-60		320	38		-60		306	42		-65		305	28		-71		319	29						130
110		-53															-61		306	30		-62		313	32		-61		307	33		-66		307	25		-71		331	25						110
100	(107 mb)	-53																			540·0	-63		296	32	539·1	-61		297	21	539·5	-67		304	23	539·3	-68		326	16						100
90																						-62		305	24		-61		294	20		-68		318	24		-69		322	15						90
80																						-62					-61		315	18		-61		323	16		-70										80
70																																-65				(75 mb)	-71										70
60																																														60
	Inversion 925 mb 32°–892 mb 36° Isothermal 743 – 681 mb 18°					Inversion 900 mb 34°–882 mb 39° Isothermal 1019 – 1000 mb 48° 710 – 700 " 24°					Inversion 770 mb 26°–748 mb 27° Max wind:- 323° 105kts 264 mb 32,900'					Max wind:- 303° 86 kts 216 mb 37,600'					Inversion 770 mb 30°–750 mb 32° Isothermal 100 – 978 mb 52°					Inversion 750 mb 27°–707 mb 28°					Inversion 1002 mb 57°–985 mb 59° 693 " 24°–669 " 27° Isothermal 665 – 630 mb 27°					Inversion 922 mb 49°–900 mb 52° 480 " 03°–405 " 03°										
Tropopause	I 268 mb – 69° 32,000					I 274 mb – 68° 36,500'					I 241 mb – 69° 34,800'					I 218 mb – 70° 37,900'					I 212 mb – 69° 38,200'					I 240 mb – 62° 35,300'					II 219 mb – 70° 31,400'					I 200 mb – 70° 39,600'										Tropopause

HMSO Press, MO Dunstable

No. 11785

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Thursday 5th July 1951.

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

03h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.
Pressure: M.S.L.	1017·7 mb	1019·9 mb	1019·8 mb	1020·2 mb	1019·9 mb	1020·2 mb	1019·9 mb	1020·3 mb	1021·2 mb
Pressure: Surf	1007·5 mb	1017·8 mb	1019·0 mb	1010·9 mb	1017·9 mb	1015·6 mb	1003·9 mb	1009·7 mb	1019 mb
Pressure: Freezing	866 mb	810 mb	825 mb	770 mb	795 mb	798 mb	765 mb	700, 659 mb	705 mb

Pressure mb	LERWICK Height ft./100	LERWICK °F. Temp.	LERWICK °F. Dew	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F. Temp.	STORNOWAY °F. Dew	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F. Temp.	LEUCHARS °F. Dew	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F. Temp.	ALDERGROVE °F. Dew	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F. Temp.	LIVERPOOL °F. Dew	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F. Temp.	DOWNHAM MARKET °F. Dew	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F. Temp.	LARKHILL °F. Dew	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F. Temp.	CAMBORNE °F. Dew	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA Height ft./100	VALENTIA °F. Temp.	VALENTIA °F. Dew	VALENTIA Wind Dir. °	VALENTIA Wind Vel. knots	Pressure mb
Surf	02·7	45	38	305	15	00·4	42	36	Calm		00·2	50	44		00	02·6	45	42	260	05	00·6	52	46	Calm		01·2	48	46	Calm		04·4	53	51	100	06	02·9	55	48	360	07	00·3	54	50	170	05	Surf
1000	04·7	45	38			05·2	46	40			05·3	48	44	131	09	05·4	46	42	263	08	05·4	52	45	153	15	05·4	49	47			05·4					05·5	55	48	342	12	05·7	52	49	177	09	1000
950		42	37	309	17		40	33	350	05		42	39	161	06		46	40	265	08		48	40	160	11		44	41	350	10		50	49	134	07		48	45	346	14		49	48			950
900	32·9	37	34	307	15	33·4	40	22	323	05	33·6	37	37	241	05	33·9	41	35	262	08	34·0	43	38	167	08	33·8	39	35	345	13	34·1	43	43	153	07	34·2	48	37	339	12	34·5	51	49			900
850		30	30	308	13		37	25	308	05		34	34	272	10		38	23	258	08		38	33	184	04		37	26	332	20		90	40	252	07		47	21	328	10		47	44			850
800	63·8	26	24	308	15	64·6	31	22	289	08	64·7	29	27	277	02	65·2	35	35	255	12	66·3	32	24	266	05	65·1	33	27	317	19	65·5	35	35	289	15	66·1	41	22	318	10	66·4	42	39			800
750		21	16	309	19		28	19	285	11		26	20	272	12		30	19	260	14		30	17	283	10		30	15	306	12		30·50	306	12		36	18	318	10		37	22			750
700	98·1	19	08	313	21	99·3	25	11	272	12	99·4	24	09	279	12	100·1	26	14	272	19	100·3	27	07	295	14	100·1	27	11	315	16	100·5	23	23	319	14	101·5	32	13	322	21	101·7	31	21			700
650		16	06	315	24		20	01	266	19		18	-01	284	12		22	08	306	16		24	-01	301	13		21	-04	327	21		21-01	317	20		31	13	322	21		27	23			650
600	137·1	08	00	313	30	138·7	13	-05	265	20	138·7	13	-08	286	15	139·6	15	10	307	24	139·9	16	-18	302	14	139·7	17	-08	325	21	140·0	18	-57	310	24	141·7	24	14	320	21	142·0	22	14			600
550		02	-09	311	32		06	-10	270	17		06	-17	294	18		11	07	307	28		08	-17	314	28		09	-17	322	25		12	-27	315	29		14	08	307	27		19	-09			550
500	181·9	-08	-19	310	35	184·0	00	-10	286	16	183·8	-05	-28	299	22	186·3	03	-01	302	30	185·4	03	-17	316	38	185·2	00	-28	319	31	185·8	02	-15	308	33	187·9	09	-01	307	32	188·4	09	-02			500
450		-18	-25	309	39		-07	-14	294	34		-12	-32	306	33		-06	-12	297	22		-07	-16	315	38		-08	-33	315	40		-06	-26	309	40		01	-03	310	40		00	-11			450
400	234·5	-27	-35	309	38	237·8	-17	-29	298	90	237·0	-21	-36	314	47	239·2	-17	-23	304	34	239·2	-17	-25	318	40	238·9	-17	-43	315	54	239·8	-15	-28	305	37	292·6	-10	-15	307	36	243·1	-09	-36			400
350		-90	-48	310	43		-30	-36	297	37		-33	-43	314	52		-29	-34	298	93		-30	-37	310	42		-27	-49	319	55		-27	-39	309	44		-23	-26	305	46		-23	-42			350
300	298·7	-54		310	99	303·6	-45		309	50	302·4	-48		312	56	305·1	-45		297	95	304·9	-47		313	99	305·0	-46		305	63	306·0	-43		306	51	309·6	-36	-41	310	53	310·0	-38	-52			300
250		-69		311	62		-61		304	57		-66		314	60		-60		310	58		-69		305	57		-63		310	68		-63		297	61		-55		325	68		-56				250
200	384·7	-55		317	94	390·4	-57		305	55	388·4	-60		315	57	391·6	-65		314	64	390·9	-63		310	53	390·9	-64		310	57						396·9	-72		318	75	396·9	-76				200
170		-53		317	43		-57		307	53		-55		315	48		-63		308	54		-64		310	53		-60		310	51							-66		321	72		-70				170
150		-54		311	39		-57		307	91		-57		319	47		-61		311	49		-63		311	97		-64		312	44		For Rest					-70		321	38		-71				150
130		-53		315	33		-57		309	36		-59		318	38		-65		307	42		-66		313	43		-62		313	39		of Winds					-71		319	36		-74				130
110		-53		315	24							-59		310	29		-65					-66		316	39		-63		309	23		(123 mb)										-74				110
100	334·7	-53		316	20																	-66		317	26	538·2	-64														-71				100
90		-53		317	19						536·8	-59		316	24	537·9	-65				536·9	-64		317																	500·9	-71				90
80		-52		320	14							-58										-62		318	23							See										-71				80
70	(75 mb)	-50																				-62		317	23							Page 3.										-71				70
60	Inversion 765 mb 41°-750mb 42° Isothermal 734 - 691mb 19°					Inversion 1018 mb 42°-1000mb 46° 930 .. 37°- 900 .. 40° Isothermal 705 - 695mb 25° 505 - 995 .. 00°					Inversion 760 mb 29°- 739mb 28°					Inversion 1010mb 45°- 978mb 47° 600 .. 15°- 586 .. 16° Isothermal 610 - 600 mb 15°					(30-63 mb) Isothermal 1018 - 991mb 52° 766 - 730 . 30° 665 - 643 .. 29°					Inversion 1016 mb 48°- 1000mb 99° Isothermal 891 .. 38°- 878 - 39° 780 .. 30° 768 - 31° 644 .. 20°- 631 .. 21°					Isothermal 1003·9-973mb 53° 882 - 859 .. 41° 691 - 650 .. 21°					Inversion 926mb 45°-858mb 51° Isothermal 1010 - 1000mb 55° 700 - 659 .. 32° 550 - 521 .. 14°					Inversion 964 mb 48°-900mb 51° Isothermal 600 - 578 mb 22°					60
Tropopause	I 256mb - 69° 33,200'					I 228mb - 69° 36,200'					I 232mb - 70° 35,700'					I 216mb - 67° 37,500'					II 227mb - 72° 36,500'					I 229mb - 72° 36,200'					N.R.					I 202mb - 73° 39,500'					I 196mb - 77° 40,100'					Tropopause

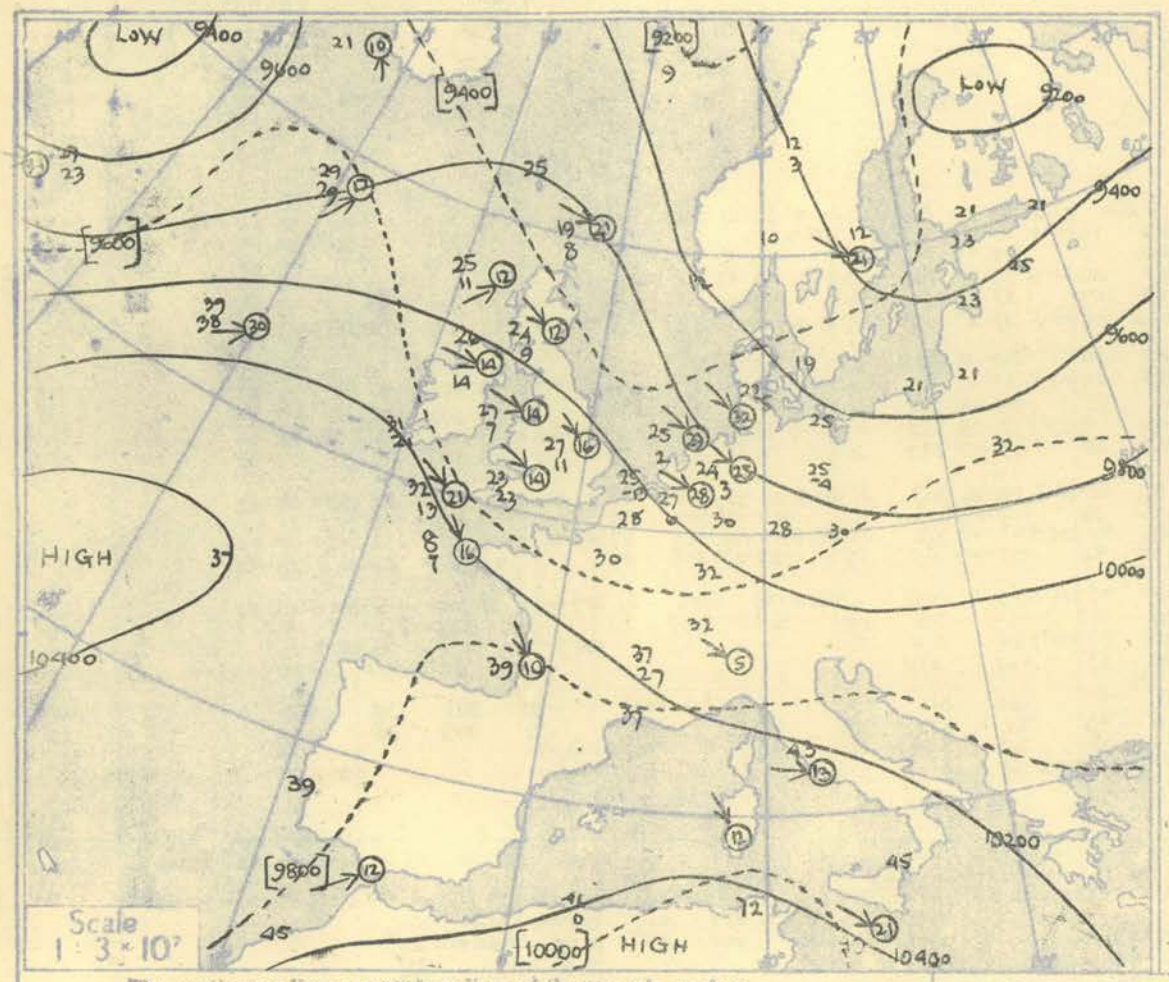
09h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	G.M.T.
Pressure: M.S.L.	1016·3 mb	1017·4 mb	1018·0 mb	1018·6 mb	1020·0 mb	1020·5 mb	1021·5 mb	1021·5 mb	mb
Pressure: Surf	1006·3 mb	1015·8 mb	1017·2 mb	1009·0 mb	1018·0 mb	1016·6 mb	1005·3 mb	1011·0 mb	mb
Pressure: Freezing	861 mb	800 mb	802 mb	737 mb	738 mb	730 mb	776 mb	704 mb	mb

Pressure mb	LERWICK Height ft./100	LERWICK °F. Temp.	LERWICK °F. Dew	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F. Temp.	STORNOWAY °F. Dew	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F. Temp.	LEUCHARS °F. Dew	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F. Temp.	ALDERGROVE °F. Dew	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F. Temp.	LIVERPOOL °F. Dew	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F. Temp.	DOWNHAM MARKET °F. Dew	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F. Temp.	LARKHILL °F. Dew	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F. Temp.	CAMBORNE °F. Dew	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA Height ft./100	VALENTIA °F. Temp.	VALENTIA °F. Dew	VALENTIA Wind Dir. °	VALENTIA Wind Vel. knots	Pressure mb
Surf	02·7	50	43	270	14	00·4	50	41	Calm		00·2	58	51	Calm		02·6	66	50	210	08	00·6	55	48	160	12	01·2	57	47	Calm		04·9	64	52	170	08	02·9	60	53	340	09						Surf
1000	04·4	48	41	271	18	04·7	48	39			05·0	55	49	223	09	05·1	55	48	210	12	05·5	52	46	159	19	05·7	53	44	345	03	06·8	53	51			05·9	58	51	328	12						1000
950		42	39	290	17		42	33	222	03		44	41	224	12		50	44	210	14		49	45	190	11		45	37	358	08		47	47	179	09		51	45	337	12						950
900	32·7	37	33	305	13	33·6	41	26	268	03	33·5	39	38	225	13	33·8	43	39	220	13	34·1	44	39	228	11	34·2	42	33	360	10	34·5	44	43	217	08	34·7	47	39	342	12						900
850		30	27	310	09		37	22	256	04		33	32	248	12		37	31	235	15		39	32	205	11		38	26	336	16		41	40	287	09		49	29	326	13						850
800	63·7	28	22	296	09	64·2	32	20	249	08	64·6	32	23	262	17	65·2	35	26	270	17	65·5	34	27	202	09	66·6	33	24	321	20	66·9	35	33	292	10	66·6	44	24	318	15						800
750		22	17	297	10		28	18	261	12		27	12	289	17		34	31	295	21		33	16	288	12		32	18	313	20		28	27	291	13		39	32	320	17						750
700	98·2	29	09	308	16	99·0	23	15	269	13	99·5	24	06	289	15	100·4	28	26	290	22	100·6	28	15	295	18	100·6	29	12	307	15	100·8	26	17	304	20	102·0	31	27	318	19						700
650		18	05	310	19		19	12	279	14		18	05	292	18		23	19	285	22		24	18	303	28		26	01	303	15		28	10	317	22		27	23	322	20						650
600	137·4	11	-02	308	21	138·2	16	08	298	19	138·7	10	03	292	21	140·2	17	13	295	24	140·5	20	16	309	33	140·4	17	-09	296	18	140·7	20	12	329	24	142·0	22	17	325	27						600
550		03	-10	304	26		11	-02	310	37		06	01	309	28		13	07	304	31		13	08	308	32		11	+13	303	22		13	08	319	24		21	-08	330	34						550
500	182·3	-07	-22	307	29	189·2	03	-08	298	42	189·0	00	-07	318	36	186·1	03	-06	299	37	186·6	05	00	307	29	186·2	06	-12	317	30	186·7	04	00	315	21	188·6	11	-11	326	41						500
450		-18	-33	309	34		-08	-20	293	46		-08	-24	317	99		-06	-21	305	43		-05	-12	307	33		-05	-26	318	36		-05	-09	316	24		04	-52	332	41						450
400	234·9	-28	-42	304	27	238·0	-20	-33	289	99	237·6	-22	-33	312	51	240·1	-16	-33	319	60	240·6	-15	-26	317	42	240·3	-17	-26	312	93	240·8	-13	-23	316	34	243·6	-08	-50	328	56						400
350		-39	-52	306	38		-30	-46	301	64		-33	-41	306	51		-27	-38	311	67		-26	-42	318	54		-31	-40	305	39		-26	-46	322	41		-20	-42	329	59						350
300	299·3	-53		306	98	303·7	-41		304	75	302·9	-48		313	67	306·3	-40	-49	313	70	307·0	-42		325	57	306·1	-45		312	44	307·2	-39	-60	329	44	311·0	-39	-51	329	-60						300
250		-65		301	72		-57		305	114		-61		316	74		-55		320	95		-57		339	90		-62		323	48		-57		332	98		-51		338	76						250
200	386·1	-52				391·0	-58		304	65	389·3	-60		314	56	393·5	-68		305	76	394·0	-66		330	67	392·6	-61		320	48	394·5	-68		339	63	393·0	-71		341	65						200
170		-50					-50		298	52		-57		313	58		-60		302	49		-58		316	52		-56		322	46		-65		322	49		-64		340	55						170
150		-52					-54		301	54		-59		314	51		-61		308	39		-58		325	46		-60		316	42		-61		322	53		-64										150
130		-52					-65		304	35		-60		319	40		-64		297	33		-63		314	37		-62		315	33		-66		320	44		-68										130
110		-51					-51		323	23		-60		319	32		-62		292	33		-61		314	32		-62		312	30		-65		317	25		-67										110
100	537·3	-52				541·9	-50		326	21	537·3	-61				540·2	-60		300	18	541·5	-59		312	31	540·2	-62		315	31	540·2	-64		304	29	544·6	-65										100
90		-52					-50		307	29							-58		305	12		-58		321	22		-62		322	26		-64		310	25		-63										90
80		-49					-50										-56					-58		326	20		-58		321	17		-64		328	29 (683 mb)		-62										80
70											Max wind 223mb 36,500' 279° 95 kts											-58		326	16							-61		331	18 mb)														70
60	Inversion 750mb 22°- 720mb 25° Isothermal 850 - 816mb 30°					Inversion 937mb 90°- 920mb 92° Isothermal 675 - 658mb 20° 628 - 606 .. 17° 580 - 560 .. 13°					Inversion 838 mb 31°- 822mb 34° 715 .. 23°- 706 .. 25° 590 .. 09°- 575 .. 10° Isothermal 555 - 541mb 06°					Inversion 845mb 36°- 829mb 38° 794 .. 34°- 779 .. 36° 566 .. 11°- 555 .. 14° Isothermal 980 - 960mb 52°					Inversion 793mb 33°- 789mb 34° Isothermal 995 - 963mb 51° 652 - 642 .. 29°					Inversion 787mb 31°- 730mb 32° 679 .. 27°- 662 .. 28° Isothermal 924 - 900mb 92°					Inversion 700mb 25°- 667mb 31°					Inversion 910mb 46°- 877mb 51° 582 - 558 .. 23°					60
Tropopause	II 252mb - 65° 33,700'					I 227mb - 64° 36,200'					I 210 mb - 67° 37,800'					II 215mb - 68° 37,800'					II 219mb - 67° 37,600'					I 228mb - 67° 36,500'					I 193mb - 70° 40,200'					I 200 mb - 71° 39,900'					Tropopause

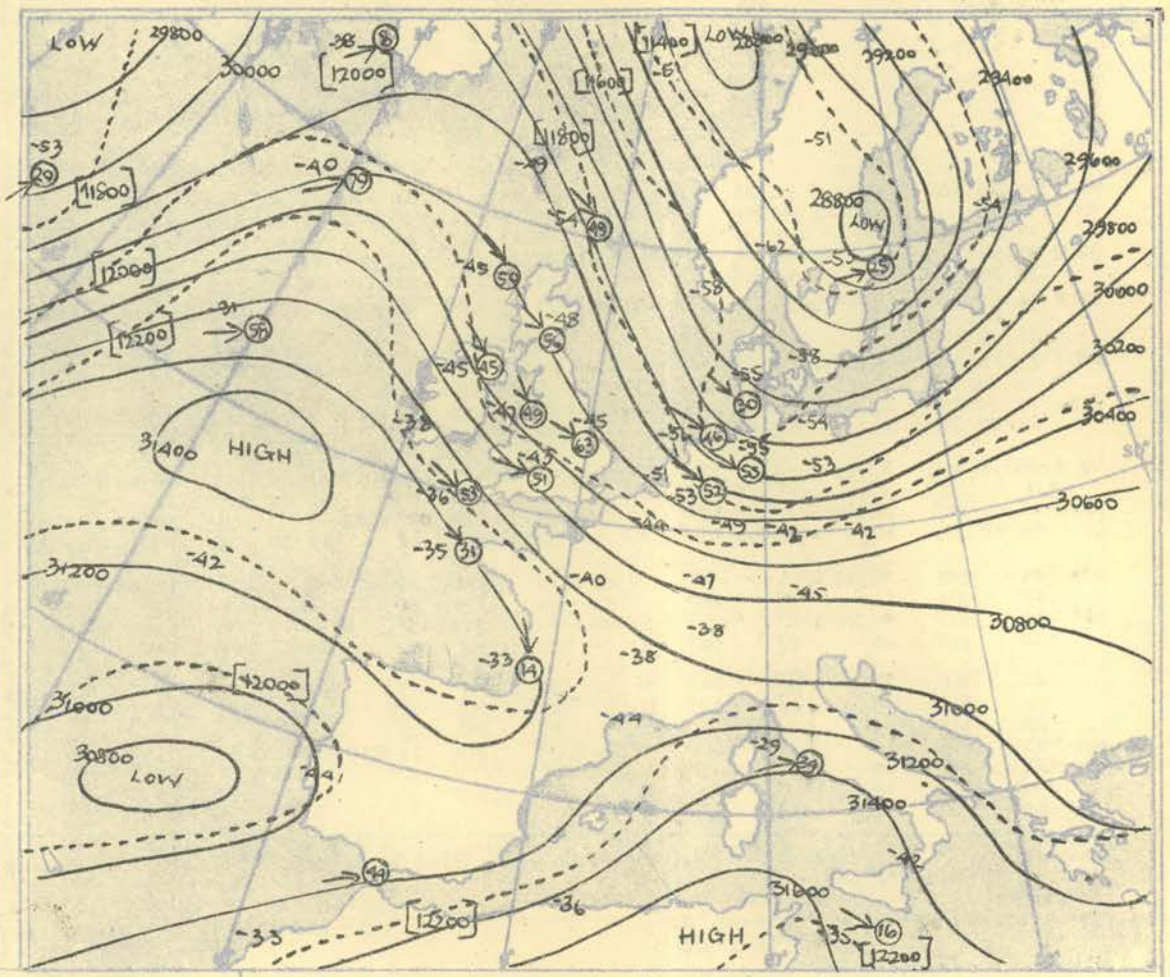
Thursday 5th. July 1951.

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

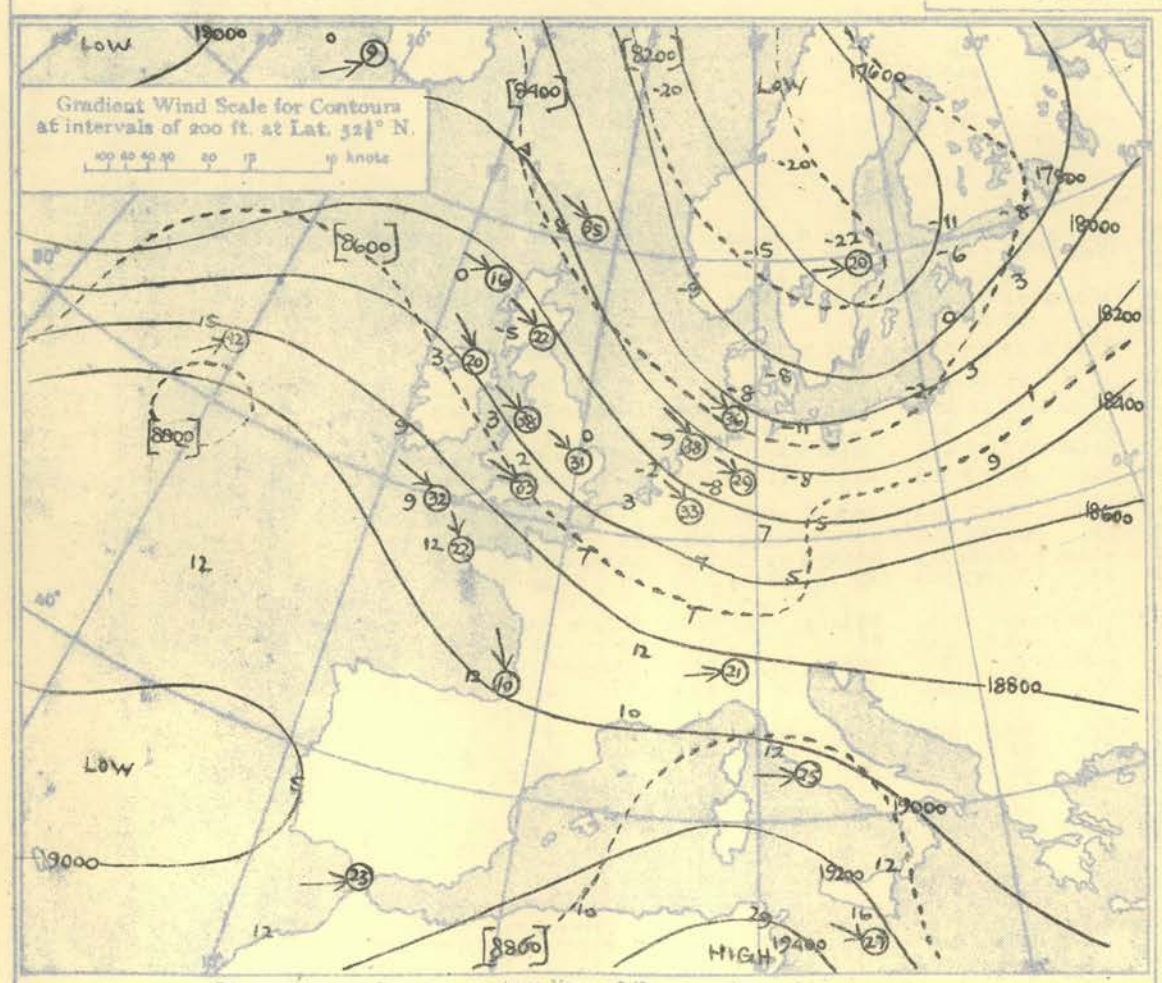


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

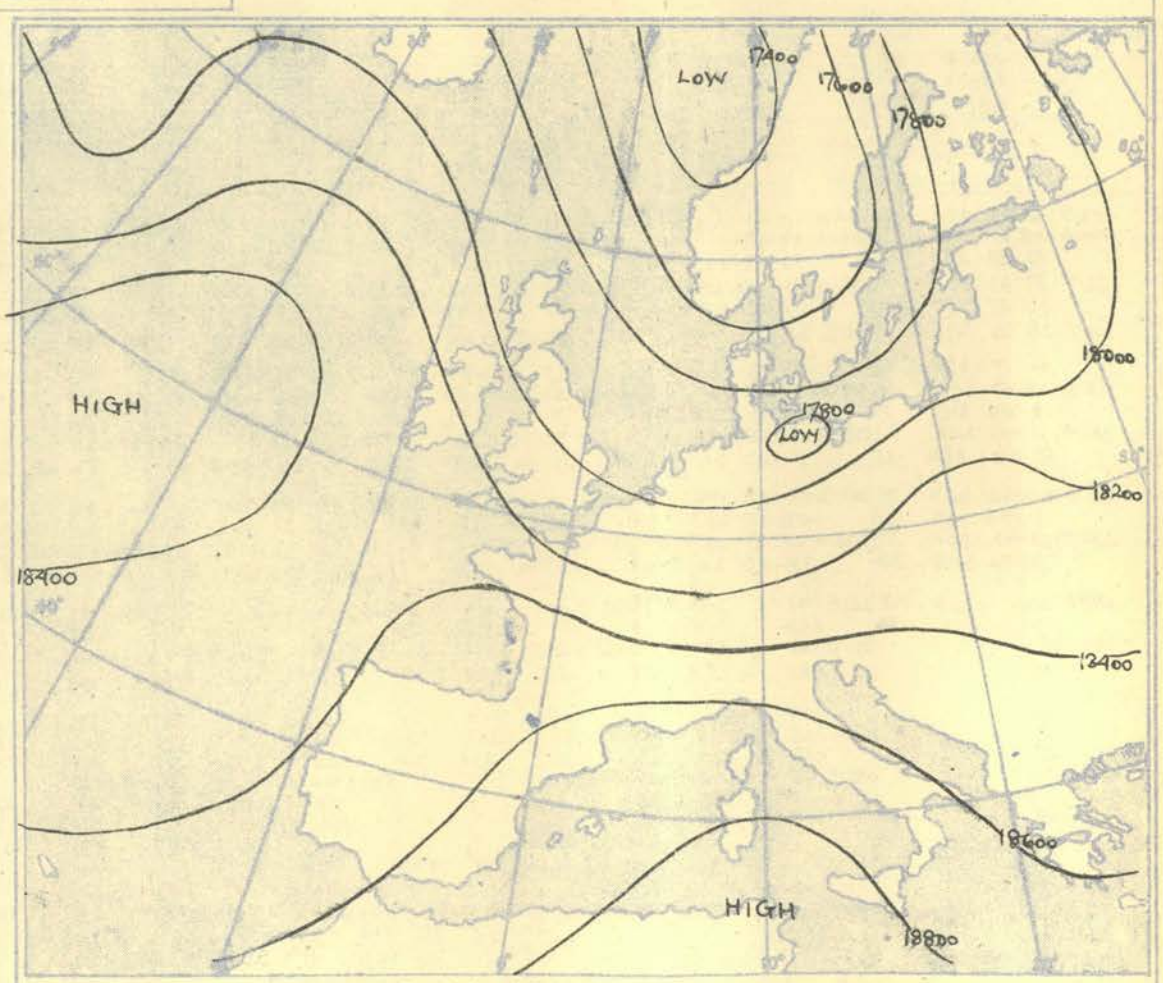
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.



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.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure	52°12'N 02°12'W																						Pressure
Time	1410h																						Time
M.S.L.	1019·5 mb			mb			mb			mb			mb			mb			mb			M.S.L.
Surf	1018·0 mb			mb			mb			mb			mb			mb			mb			Surf
Freezing	705 mb			mb			mb			mb			mb			mb			mb			Freezing
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Pressure mb
Surf	00·9																					Surf
1000	05·4	64	53																			1000
950																						950
900	34·6	50	48																			900
850		43	40																			850
800	66·3	37																				800
750																						750
700	101·7	32																				700
650																						650
600	141·8	22																				600
550																						550
500	188·2	10	06																			500
450																						450
400	242·9	-10																				400
350																						350
300	309·9	-39																				300
250																						250
200																						200
170	cloud																					170

3/8 Sc 870-840mb
1/8 Cu. 870-740 ..
8/8 AS 750-700 ..
1/8 Ci N.R
Isothermal 750-740mb 35°

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

Place	Lympne		Ronaldsway		Larkhill		Larkhill		Liverpool		Camborne		Downham		Larkhill		Cirrus 52·9N 20·2W		Larkhill		Place
Time	01h		01h		03h		11h		15h		19h		15h		17h		20h		21h		Time
Type									Pilot				Pilot								Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	020	06					180	06	270	05			240	08	200	09	240	12	220	06	Surf.
1,000	020	07	130	04			180	09	270	09			222	07	200	14	240	19	240	09	1,000
2,000	010	13	130	04			190	11	241	08			222	09	210	14	240	25	270	15	2,000
3,000	360	13	150	02			210	10	236	10			222	10	230	15	240	28	280	14	3,000
4,000	350	14	210	04			230	09	219	12			220	10	250	16	240	29	290	21	4,000
5,000	350	15	230	07			250	08	228	14			220	10	260	17	240	31	296	16	5,000
6,000							260	11	254	14			247	16	280	19			290	16	6,000
8,000							270	13	275	16			267	20	300	21			290	20	8,000
10,000							310	21	291	23			287	21	300	20	250	49	280	23	10,000
14,000							330	27	296	29			313	30	320	29	250	39	280	33	14,000
18,000							330	24	316	36			340	29	320	30	250	63	280	36	18,000
24,000							(15,000')		323	60			318	44	(15,000')				(15,000')		24,000
30,000									323	74			334	70							30,000
40,000					320	61			327	87	328	20	341	76							40,000
50,000					310	29			(33,000')		327	25	327	38							50,000
					310	09					(51,000')		(47,000')								
					(60,000')																

NEPHOSCOPE OBSERVATIONS

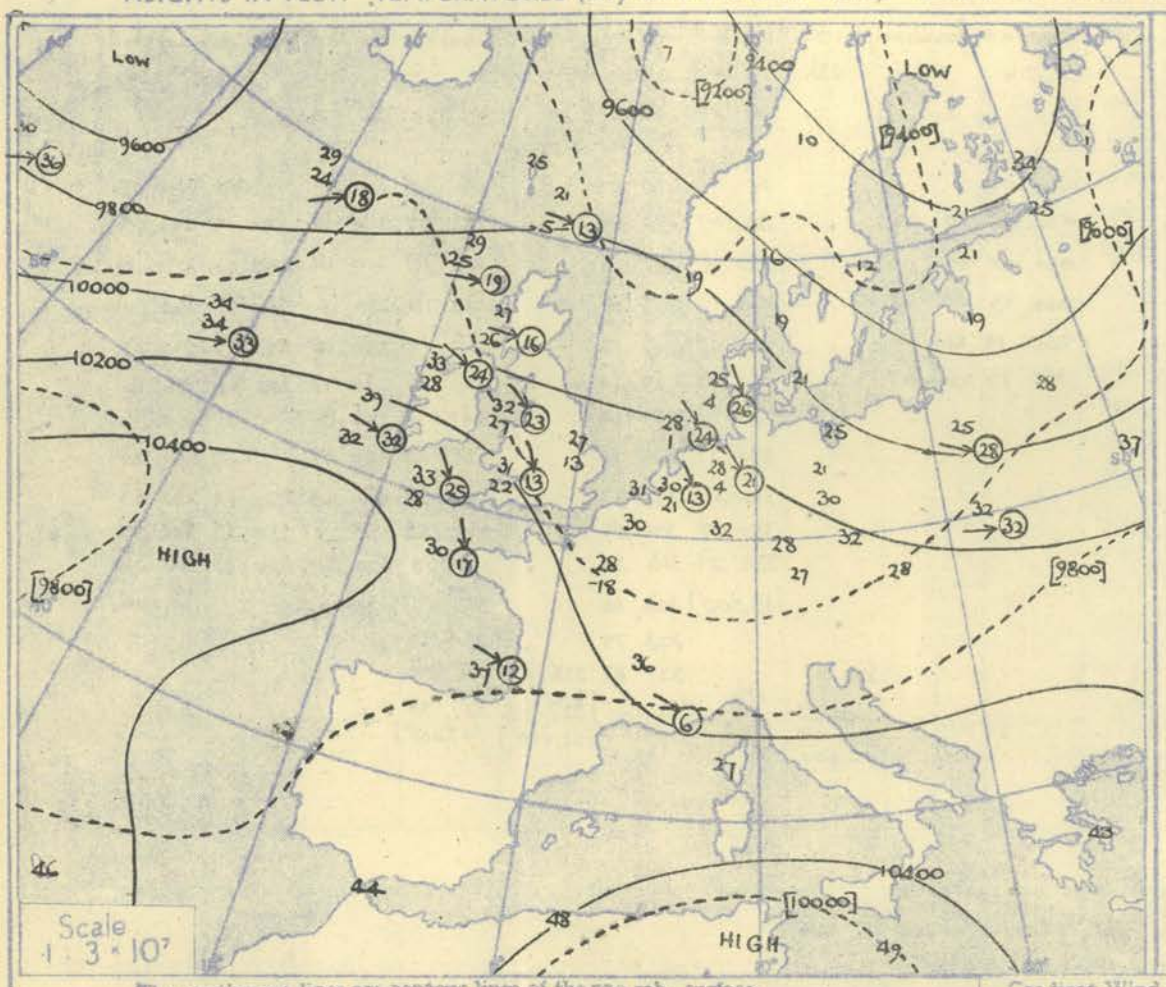
Place	Lindholme	Hemswell	St. Eval										Place
Time Type	09h Ac	09h Ac	15h Ci										Time Type
Dir. Vel.	310 36	310 36	270 200										Dir. Vel.

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

Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				CIRRUS				CIRRUS				CIRRUS								Ship
Lat/Long	59·1N. 19·0W.				59·2N. 19·0W.				59·1N. 18·8W.				59·3N. 18·8W.				52·7N. 20·0W.								52·4N. 20·1W.				21h.				Lat/Long
Time	08h. G.M.T.				09h. G.M.T.				15h. G.M.T.				21h. G.M.T.				02h. G.M.T.				09h. G.M.T.				15h. G.M.T.				G.M.T.				Time
M.S.L.	1008 mb				1005 mb				1003 mb				1003 mb				1015 mb								1014 mb				mb				M.S.L.
Surf	1008 mb				1005 mb				1003 mb				1003 mb				1015 mb								1014 mb				mb				Surf
Freezing	720 mb				740 mb				720 mb				740 mb				630 mb								685 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	Pressure mb
Surf		54	52	120	29		54	54	175	10		55	53	280	18		53	50	265	21		60	58	230	20											Surf
1000	02·1	53	53	122	36	01·3	53	53			00·8					00·9					04·4	59	57	233	22		61	58	240	22					1000
950		48	48	131	27		51	51	209	11		49	49	249	15		46	46	260	19		56	55	244	27	03·9	60	57	240	22					950
900	30·8	46	46	162	18	30·0	49	49	210	21	29·5	47	47	246	14	29·3	45	39	258	30	33·5	54	53	243	43		55	54	241	25					900
850		43	43	208	13		46	45	216	12		45	41	242	14		44	38	257	21		50	49	247	43	33·0	52	52	242	29					850
800	62·4	40	40	228	14	61·8	39	38	223	13	61·3	42	33	236	16	61·0	39	30	262	21	65·8	46	41	243	42		52	44	240	34					800
750		36	36	219	16		33	29	235	16		36	32	233	18		34	27	264	18		43	35	250	36	65·2	47	41	244	37					750
700	97·8	29	29	219	17	97·0	27	26	243	16	96·7	29	24	236	18	96·2	25	23	263	16	101·7	39	38	249	30	Not	41	36	244	36	Not				700
650		23	02	223	20		25	17	250	16		21	15	240	15		18	16	269	16		34	33	226	30		30	26	254	46					650
600	137·5	18	-13	235	28	126·8	16	06	254	17	126·2	15	-03	240	17	135·6	11	03	256	19	142·4	29	27	238	27		34	34	244	33					600
550		13	-39	243	24		09	-09	250	12		05	-11	244	27		05	-21	250	18	Available.	22	19	242	30	141·3	22	18	246	49	Available.				550
																											16	-10	246	59					
500	183·3	04	-33	245	23	182·2	-01	-21	240	28	181·4	-05	-15	252	23	180·8	-04	-30	249	19	189·4	15	11	242	42										500
450		-07	-38	245	33		-09	-28	237	31		-18	-24	257	23		-03	-41	250	26		07	02	242	37	187·6	11	-22	246	49					450
400	237·2	-14	-55	246	48	235·8	-13	-25	242	45	234·3	-28	-31	252	30	234·0	-23	-53	247	30	244·9	-04	-11	242	47		00								400
350		-25	-58	256	61		-27		245	73		-36	-45	249	25		-38	-58	242	29		-16	-23	261	52	242·3	-11								350
																											-25								
300	303·6	-40	-60	263	79	301·8	-45		249	72	299·3	-51		246	22	298·4	-53		242	30	312·8	-31		263	58	308·9	-40								300
250		-52		261	110		-55		246	82		-59		246	20		-53		241	35		-51		270	66		-56								250
200	392·0	-52		280	84	389·3	-57		242	75	386·7	-60		246	43	386·8	-47		244	34	400·7	-76		267	57	396·1	-69								200
170		-51		270	37		-57		243	31		-49		246	33		-49		244	32		-77					-68								170
150		-53		267	33		-59		244	25		-54		246	24		-52		249	21		-80					-65								150
130		-55		263	25							-57		246	22		-54		249	15		-78					-65								130
110		-52		258	16							-53		245	18							-75					-63								110
100	542·5	-53		255	12						536·9	-55		245	13						541·9	-74				541·8	-60								100
90		-54		255	11							-54		245	15							-72					-58								90
80												-53		245	18							-70					-56								80
70												-55		245	15							-69					-54								70
60												-54		245	06												-52								60
												-51														(851 mb)	-49							
	Isothermal 925-900mb 46° 775-760mb. 37° 671-665mb. 25°					Inversion 684 mb. 24°-665mb. 28° Isothermal 870-853mb. 47°								Isothermal 988-914mb. 48°			Inversion 925mb. 43°-891mb. 46°											Inversion 876mb. 51°-850mb. 52° Isothermal 523-500mb. 11°								
Tropopause	I 225mb. -53° 36,800'					I 235mb. -66° 35,600'					I 268mb. -62° 32,300'					II 300mb. -53° 29,800'					I 185mb. -81° 41,700'					I 191mb. -72° 40,600'								Tropopause

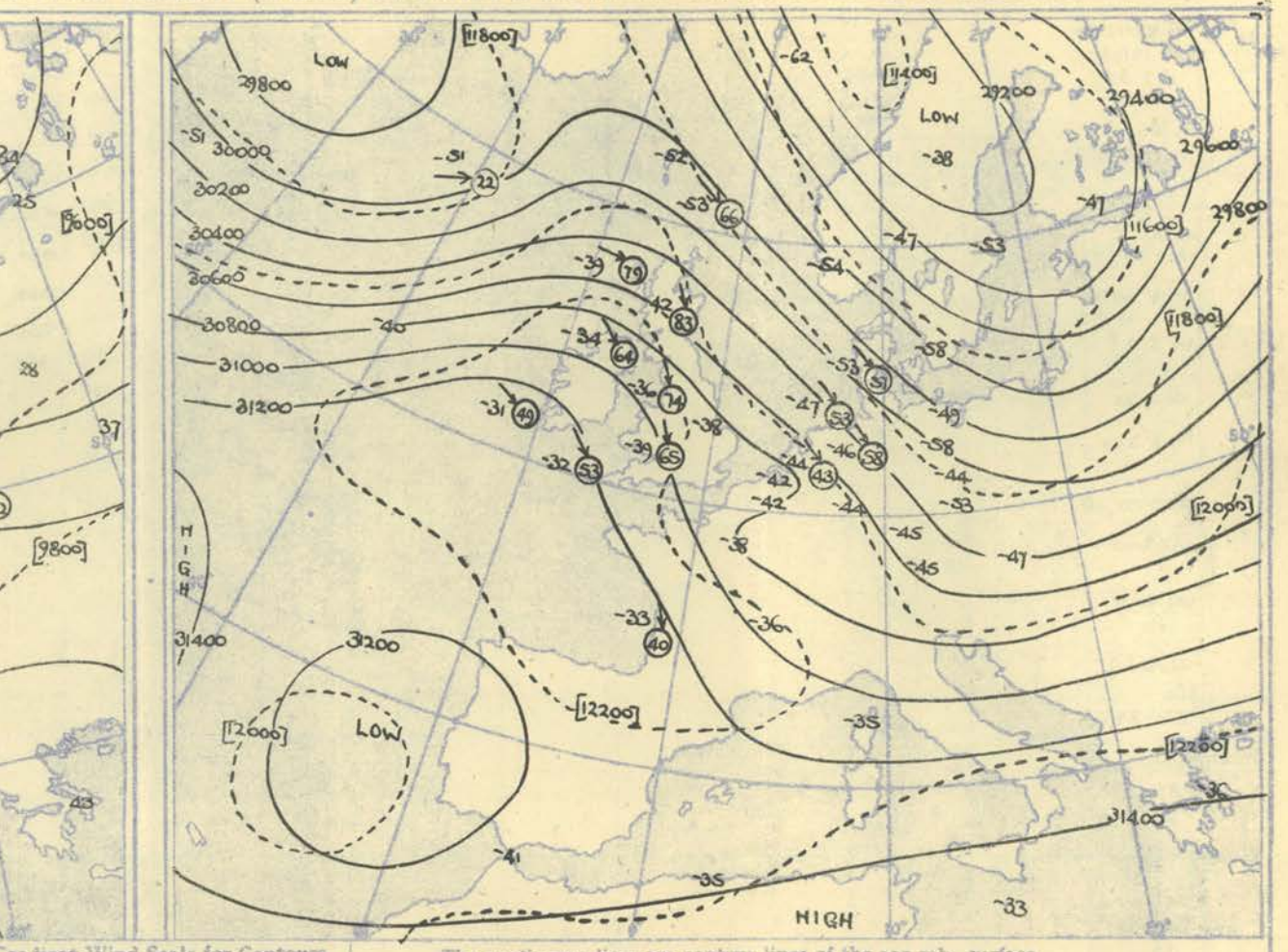
Thursday 5th July, 1951.

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.



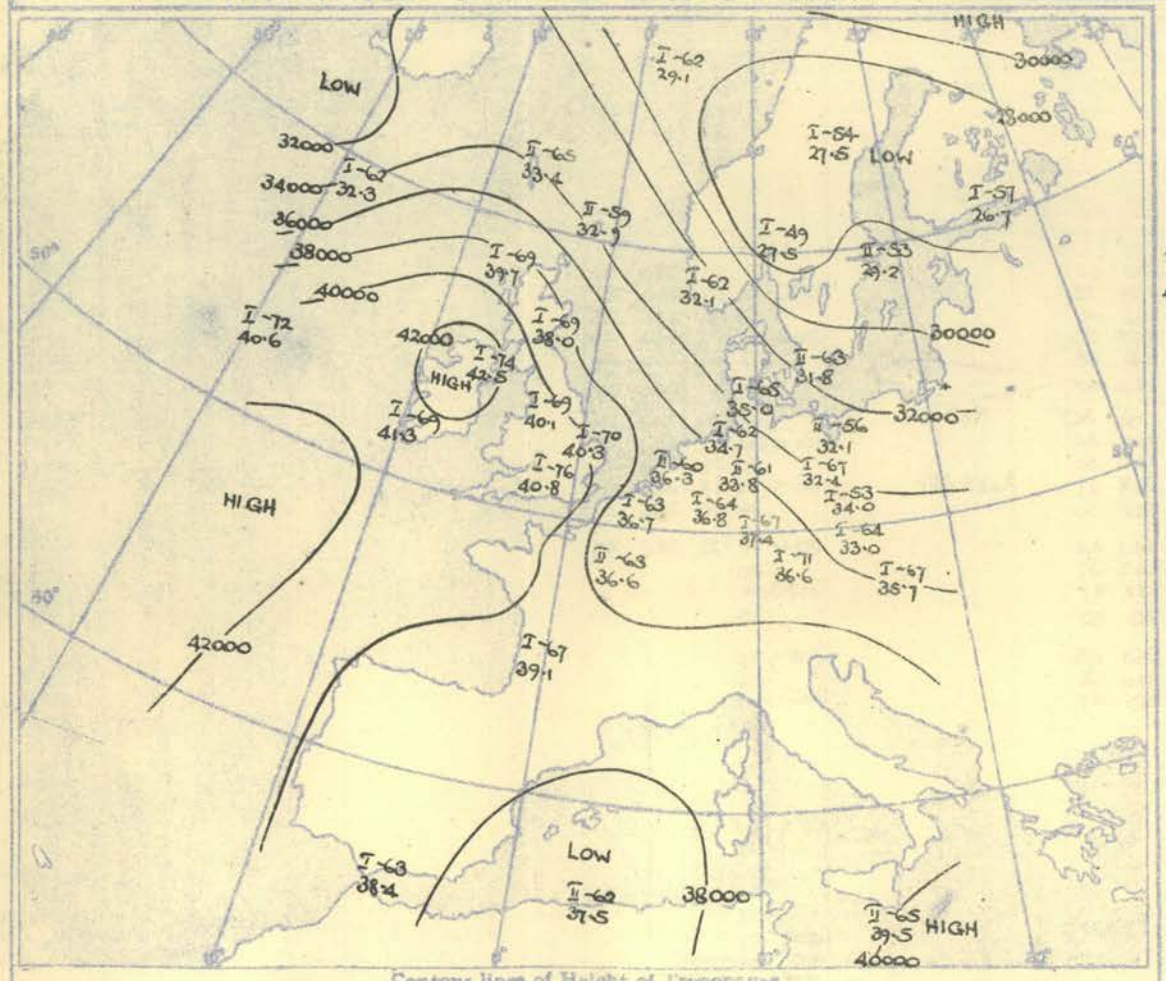
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

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 became very slow-moving west of the British Isles and the movement of the cold trough over Scandinavia and North Germany was also slower than during the previous 24 hours.

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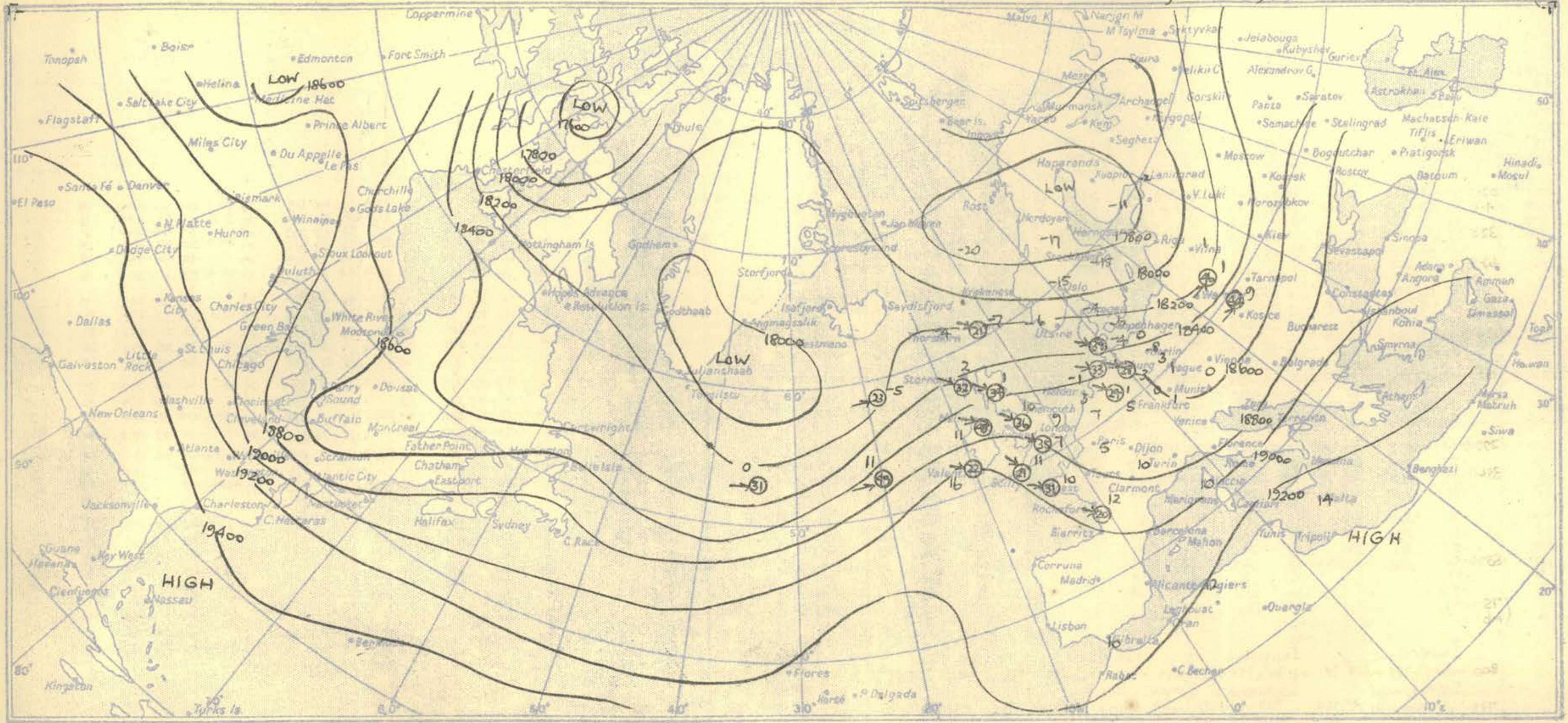
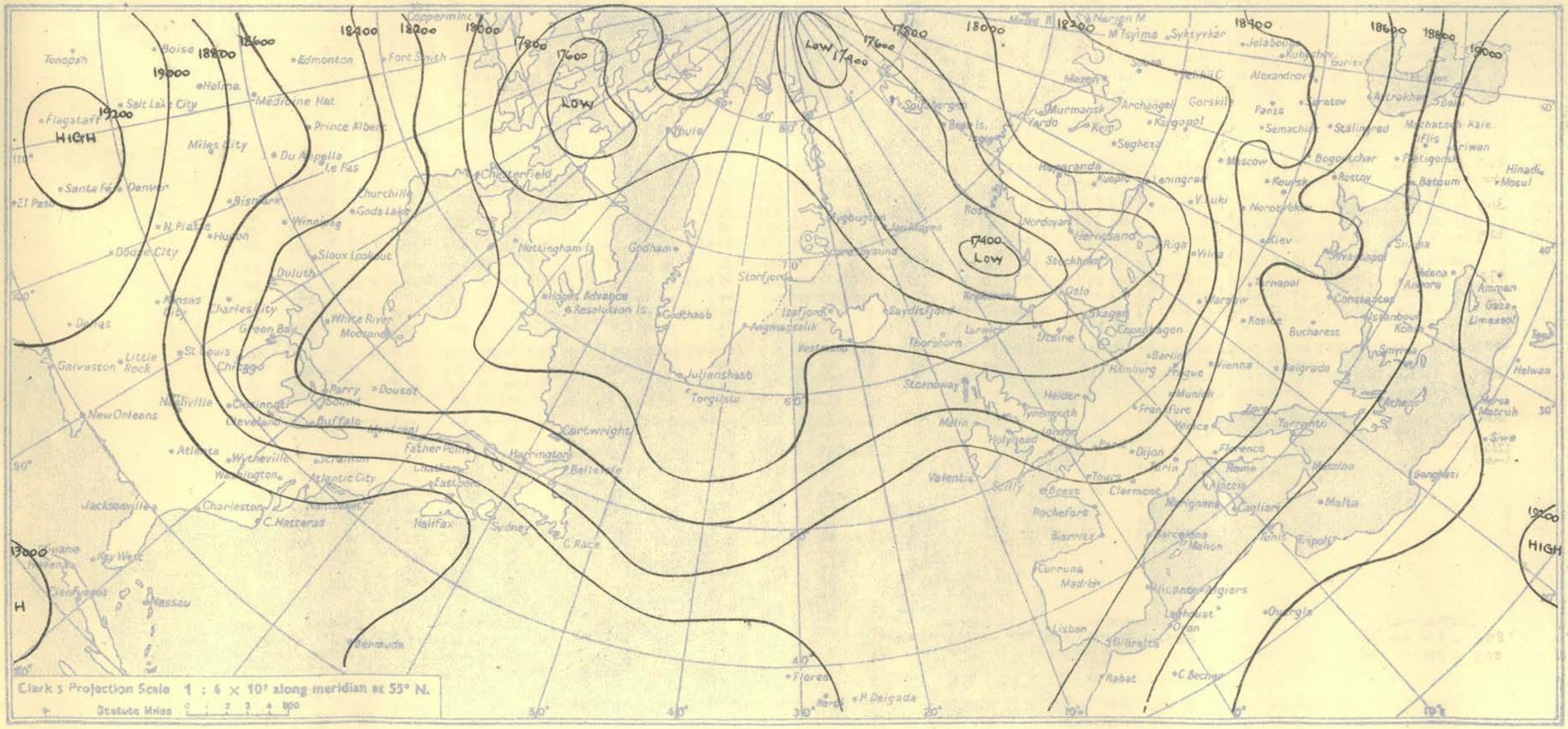
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Thursday 5th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Thursday 5th. July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Thursday 5th July 1951.

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

15h G.M.T.

Station	Time	Pressure M.S.L.	Surf	Freezing
LERWICK	15h G.M.T.	1015·4 mb	1005·4 mb	860 mb
STORNOWAY	15h G.M.T.	1014·3 mb	1012·7 mb	727 mb
LEUCHARS	15h G.M.T.	1015·6 mb	1014·8 mb	780 mb
ALDERGROVE	15h G.M.T.	1015·9 mb	1006·5 mb	698 mb
LIVERPOOL	15h G.M.T.	1018·6 mb	1016·6 mb	700 mb
DOWNHAM MARKET	15h G.M.T.	1020·2 mb	1015·9 mb	780 mb
LARKHILL	15h G.M.T.	1020·7 mb	1004·9 mb	702 mb
CAMBORNE	15h G.M.T.	1021·7 mb	1011·2 mb	682 mb
VALENTIA.	15h G.M.T.	1020·0 mb	1018 mb	640 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA. Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	54	43	285	12	00·4	55	46	130	08	00·2	63	53	280	08	02·6	57	53	200	12	006	63	48	270	05	01·2	60	45			04·4	62	49	190	09	02·9	64	55	315	08	00·3	64	60	240	09	Surf
1000	4·1	52	42			3·9	53	43	197	14	4·3	59	51	253	21	9·4						5·2	59	45				5·6	58	44			5·7	61	48			6·0	60	52	289	10	5·4	60	53	248	13	1000
950		45	35	272	08		46	37	200	13		50	48	210	20								53	42					51	41				52	45	201	12		53	45	297	08		54	54	264	21	950
900	32·5	38	31	279	03	32·5	44	30	195	14	33·0	43	43	241	15	33·2	46	43	235	22	34·1	46	37			34·4	43	37			34·6	43	39	225	14	35·0	52	40	311	07	34·4	50	47	272	24	900
850		31	21	277	04		39	25	186	18		39	39	247	18		45	42	263	21		40	28				37	32				41	40	244	15		48	43	324	09		45	46	268	28	850
800	63·5	27	16	278	08	63·8	33	23	202	16	64·4	34	27	248	17	66·0	41	37	272	28	65·7	37	25			65·7	34	29			66·1	36	27	256	17	66·9	44	37	321	18	66·4	45	31	265	30	800
750		27	06	278	12		32	25	235	12		30	25	251	19		37	33	275	29							29	23				34	15	292	16		40	33	324	19		44	25	265	29	750
700	98·1	21	-05	275	13	98·7	29	25	252	19	99·4	27	26	273	16	100·4	33	28	277	24	101·0	32	27	For		100·6	27	13	For		101·3	31	22	322	22	102·5	33	28	323	25	102·3	39	32	274	32	700
650		18	-10	281	15		24	20	259	23		23	23	290	25		27	18	289	18		26	20	winds			25	14	winds			23	09	314	24		29	21	336	23		33	21	290	37	650
600	137·3	11	-14	284	16	138·5	18	12	268	22	139·2	18	18	297	33	140·4	20	09	292	15	141·0	22	13			140·5	20	06			141·3	20	07	309	23	142·7	27	06	326	21	142·9	29	25	292	35	600
550		02	-32	290	16		10	05	268	27		10	05	300	23		16	08	274	36		18	02	see			16	00	see			14	-07	318	26		18	02	315	30		24	19	268	26	550
500	182·1	-07	-40	296	21	184·2	02	-03	290	32	184·9	01	01	301	34	186·6	11	03	277	48	187·4	10	-19			186·6	09	-12			187·3	07	-26	326	35	189·1	11	-06	339	27	190·0	16	10	270	29	500
450		-16	-49	306	28		-07	+19	288	42		-10	+13	309	42		03	-06	280	54		02	-17	page			-04	-31	page			-01	-49	330	38		04	-15	324	33		07	00	274	32	450
400	234·9	-27	-59	306	35	238·1	-13	-21	286	64	238·6	-16	-18	307	72	241·6	08	-19	295	54	242·3	-01	-18			240·9	-13	-42			241·9	-11	-36	335	52	244·2	-07	-17	324	39	245·6	-04	-12	280	37	400
350		-38	-58	305	49		-25	-33	280	72		-27	-29	311	75		-19	-31	293	55		-20	-30	3.			-24	-37	3.			-24	-44	341	55		-18	-28	324	34		-18	-27	282	41	350
300	299·4	-53		305	66	304·7	-39	-51	284	79	304·7	-42		309	83	309·1	-34	-48	299	64	309·7	-34	-43			307·5	-38	-52			308·5	-39	-59	339	66	311·8	-32	-43	328	53	313·4	-31	-42	289	49	300
250		-59		309	85		-56		290	100		-57		309	118		-49		300	78		-50					-53				-55		337	76		-50		326	48		-45		285	48	250
200	336·7	-52		308	52	339·0	-68		286	91	339·5	-64		309	64	339·7	-66		301	78	339·8	-68				339·5	-69				339·9	-73		342	76	340·1	-71		333	57	340·6	-65		289	44	200
170		-51		315	45		-64		298	64		-58		315	41		-70		303	66		-61					-62				-74		333	54							-70		297	38	170
150		-51		302	37		-57		292	50		-61		297	43		-63		300	37		-60					-60				-65		330	31							-68		293	35	150
130		-51		299	29		-58		290	36		-59					+64		297	30		-62					-63				-69		310	31							-64		287	28	130
110		-53		312	24		+53		292	30		-56					-63		300	24		-59					-62				-67		310	20							-66		283	18	110
100	537·6	-50		305	22	540·0	-59		297	22	539·7	-56				543·2	-61		305	19	541·0	-59				541·9	-61				539·7	-66		313	15						538·0	-63		283	16	100
90		-47					-50		290	18		-54					-57		297	15		-57					-61				-65		333	10							-60		279	15	90
80		-47					-50		290	15	(82 mb)	-52					-56		282	12		-53					-60														-60		280	13	80
70	(75 mb)	-47					-49		320	13												-53					-58				(85 mb)	-64										-60		280	16	70
60							-60															-51																							60
							-45															-50																							
	Inversion 800 mb 29°–788 mb 28° Isothermal 788 – 755 mb 28°					Inversion 781 mb 30°–754 mb 32° Isothermal 754 – 727 mb 32° 457 – 439 " –0°F					Isothermal 865 – 838 mb 39° Max wind:- 310° 129 kts 240 mb 35,200'					Isothermal 896 – 842 mb 45°					(55 mb) Inversion 770 mb 34°–760 mb 37° Isothermal 850 – 824 mb 40° 650 – 627 " 27° 600 – 573 " 22°					Inversion 718 mb 26°–682 mb 28° Isothermal 862 – 850 mb 37° 666 – 640 " 26° 570 – 550 " 16°					Inversion 780 mb 33°–753 mb 35° 742 " 33°–717 " 31° 650 " 28°–642 " 26° 576 " 16°–568 " 17° Isothermal 872 – 850 mb 41° 532 – 522 " 11°									Isothermal 943 – 900 mb 52° 808 – 777 " 44°					Inversion 822 mb 43°–787 mb 47°					
Tropopause	I 259 mb –59° 32,900'					I 195 mb –69° 39,700'					I 212 mb –69° 38,000'					I 175 mb –74° 42,500'					I 197 mb –69° 40,100'					I 193 mb –70° 40,300'					I 187 mb –76° 40,800'					NR					I 190 mb –69° 41,300'					Tropopause

21h G.M.T.

Station	Time	Pressure M.S.L.	Surf	Freezing
LERWICK	21h G.M.T.	1013·3 mb	1003·3 mb	845 mb
STORNOWAY	21h G.M.T.	1009·2 mb	1007·6 mb	723 mb
LEUCHARS	21h G.M.T.	1012·1 mb	1011·3 mb	744 mb
ALDERGROVE	21h G.M.T.	1012·4 mb	1002·9 mb	700 mb
LIVERPOOL	21h G.M.T.	1015·7 mb	1013·7 mb	690 mb
DOWNHAM MARKET	21h G.M.T.	1017·9 mb	1013·6 mb	725 mb
LARKHILL	21h G.M.T.	1019·5 mb	1003·7 mb	672 mb
CAMBORNE	21h G.M.T.	1021·5 mb	1011·0 mb	670 mb
VALENTIA.	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA. Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	48	39	200	05	00·4	51	47	150	05	00·2	55	53	220	04	02·6	60	59			00·6	57	52	180	05	01·2	60	51	170	03	04·4	58	51	220	07	02·9	60	57	270	08						Surf
1000	3·6	48	39			2·5	51	49			3·2	54	53	210	12						4·3	56	55	177	15	5·0	58	50			5·4					5·9	59	56	258	15						1000
950		42	38	158	10		47	44	172	21		48	47	219	16		56	51				52	51	284	20		53	47	228	18		52	47	245	14		54	50	274	16						950
900	31·9	36	33	146	08	31·1	45	42	131	21	32·0	44	43	231	18	32·4	52	49			33·3	51	49	271	26	33·9	47	45	238	20	34·3	50	47	260	17	34·9	51	48	287	18						900
850		33	26	156	06		43	40	214	21		40	39	252	18		48	47				48	46	272	24		41	38	250	23		45	42	276	20		47	38	295	24						850
800	62·9	30	18	146	07	62·7	40	36	243	21	63·6	38	37	259	20	64·4	41	41			65·4	43	40	279	24	65·5	57	34	264	23	66·1	42	42	288	20	66·8	48	31	303	24						800
750		26	12	269	12		35	31	261	19		33	33	268	27		39	39				38	34	290	30		34	30	285	23		39	38	294	22		42	39	300	24						750
700	97·5	23	07	292	15	98·0	29	25	261	21	98·8	28	27	259	21	99·7	32	32			100·9	33	29	298	35	100·1	30	26	298	23	101·7	35	34	291	24	102·5	35	33	297	25						700
650		19	01	285	12		24	20	261	23		23	22	248	22		26	23				28	24	302	39		24	20	302	28		30	29	298	26		30	23	277	24						650
600	136·8	11	-03	276	15	137·9	18	14	258	24	138·6	17	15	266	26	139·9	21	14			141·1	22	17	302	40	140·7	18	09	297	28	142·0	23	21	301	29	142·8	24	18	279	23						600
550		04	-03	282	12		11	06	257	36		11	10	270	26		14	02				17	06	297	42		14	08	290	29		16	13	301	32		19	11	278	24						550
500	181·8	-05	-12	295	18	183·8	06	00	260	49	184·4	04	03	289	40	185·9	07	-24			187·4	10	02	289	50	186·7	08	03	292	54	188·4	10	02	293	37	189·2	12	06	288	30						500
450		-12	-22	295	39		-04	-11	254	42		+05	-07	295	42		00	-37				03	-11	292	52		00	-05	303	58		02	-03	304	31		03	-06	309	29						450
400	234·9	-22	-33	294	42	237·9	-18	-27	261	50	238·5	+15	-21	289	57	240·5	-10	-45			242·4	-01	-18	302	47	241·3	-11	-19	309	53	243·2	-10	-18	305	33	244·2	-09	-18	307	28						400
350		-33	-40	292	51		-29	-40	263	69		-27	-36	290	70		-20	-53				-19	-30	301	51		-24	-33	318	51		-22	-27	311	40		-20	-28	314	32						350
300	300·2	-45		285	60	303·9	-41		262	88	304·7	-41		287	70	307·9	-30	-57			310·0	-34	-42	305	59	308·0	-40	-56	314	58	310·2	-37	-42	318	44	311·5	-35	-47	314	37						300
250		-61		284	70		-58		263	90		-55		293	96		-40	-60				-49		305	72		-56		313	75		-53		321	56		-53		319	40						250
200	(232 mb)	-65				391·9	-54		267	63	392·1	-67		292	99	398·0	-51				398·5	-67		303	73	395·1	-72		315	87	397·7	-72		324	62	399·1	-72		312	40						200
170							-51					-61		294	63		-56					-71		307	62		-73		317	60		-79		330	52		-78		321	33						170
150												-62		289	48		-60					-67		304	48		-69		325	37		-74		327	37		-75		325	25						150
130												-64					-65					-69		301	35		-69		336	35		-74		313	36		-75		315	23						130
110												-60					-71					-69		302	28		-71		308	27		-75		314	21		-75		304	17						110
100											539·0	-59									542·9	-66		299	26	538·6	-70				539·8	-71		310	21	541·3	-74		304	11						100
90																						-64		299	21							-71		312	20		-72									90
80																						-64		299	12							-70		310	16										80
70																						-59		299	13							-70		304	15										70
60																						-60										-68														60
	Isothermal 890 – 870 mb 35° 832 – 796 " 30°										Inversion 835 mb 39°–815 mb 40°					Inversion 785 mb 39°–775 mb 41°										Inversion 573 mb 15°–565 mb 16° Isothermal 760 – 742 mb 34°					Inversion 546 mb 18°–535 mb 17° Isothermal 938 – 900 mb 50° 812 – 787 " 42°					Inversion 615 mb 11°–500 mb 12° Isothermal 950 – 925 mb 54° 779 – 750 " 42°										
Tropopause	NR					I 240 mb –60° 35,200'					I 190 mb –69° 40,200'					NR.					I 178 mb –78° 42,300'					I 189 mb –75° 40,600'					I 180 mb –81° 41,800'					II 190 mb –76° 40,900'										Tropopause

No. 11786

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.

Friday 6th July 1951. Page 1.

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

LERWICK

03h G.M.T.
Pressure: Time 1009·4 mb; M.S.L. 999·4 mb; Surf 823 mb; Freezing 716 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·7	48	43	160	10
1000	2·3				
950		42	39	154	15
900	306	37	31	171	11
850		32	28	186	10
800	616	30	22	199	06
750		25	18	205	07
700	961	23	13	215	06
650		17	12	256	10
600	1353	12	10	265	15
550		05	04	271	17
500	1805	-04	-04	270	18
450		-14	-15	274	25
400	2336	-24	-26	276	33
350		-38	-41	286	35
300	2981	-52		296	20
250		-63		280	23
200	3885	-50		285	38
170		-51		287	39
150		-54		288	32
130		-54		294	27
110		-53		296	21
100	5361	-55		293	19
90		-53		285	15
80		-52		280	12
70	(73 mb)	-51			
60					

Inversion 845 mb 32°–832 mb 33°
Isothermal 723 – 700 mb 23°

Tropopause: II 258 mb – 63° 33,200'

STORNOWAY

03h G.M.T.
Pressure: Time 1005·4 mb; M.S.L. 1003·8 mb; Surf 716 mb; Freezing 684 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·4	53	51	CALM	
1000	1·4	53	51		
950		53	52	253	20
900	302	49	48	249	20
850		46	45	247	21
800	621	42	39	253	21
750		35	31	260	25
700	981	29	25	265	27
650		27	11	271	27
600	1375	20	08	276	32
550		10	-02	274	33
500	1832	00	-10	275	30
450		-08	-19	274	37
400	2368	-17	-39	273	47
350		-28	-44	273	66
300	3029	-41		271	85
250		-56		272	87
200	3908	-53		276	65
170		-52		276	50
150		-52		274	38
130		-53		268	39
110		-55		215	32
100	5412	-55		276	31
90		-55		275	26
80		-53		277	19

Inversion 685 mb 27°–655 mb 28°
Isothermal 1004 – 950 mb 53°
916 – 900 " 49°

Tropopause: I 236 mb – 59° 35,600'

LEUCHARS

03h G.M.T.
Pressure: Time 1007·6 mb; M.S.L. 1006·8 mb; Surf 684 mb; Freezing 721 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·2	55	54	CALM	
1000	2·0	55	54		
950		52	51	273	18
900	309	49	48	281	25
850		46	45	288	33
800	627	41	39	293	36
750		36	32	303	28
700	981	34	18	310	30
650		28	14	306	38
600	1381	20	07	298	40
550		11	03	296	39
500	1839	04	-13	282	51
450		00	-19	292	67
400	2383	-13	-24	288	76
350		-25	-32	282	72
300	3049	-40	-51	282	78
250		-58		284	90
200	3921	-64		281	87
170		-59		281	72
150		-60		283	60
130		-60			
110		-61			
100	5398	-62			
90		-59		Max wind:	
80		-57		247 mb 39,700'	
70				285° 104 Kts	
60					

Inversion 750 mb 36°–732 mb 38°
Isothermal 525 – 510 mb 06°
492 – 476 " 02°

Tropopause: I 236 mb – 63° 35,600'

ALDERGROVE

03h G.M.T.
Pressure: Time 1011·9 mb; M.S.L. 1002·4 mb; Surf 721 mb; Freezing 718 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	58	250	12
1000	3·3				
950		55	54	264	30
900	323	50	50	273	31
850		45	45	276	33
800	641	40	40	279	32
750		35	30	278	33
700	994	29	25	279	31
650		25	13	280	40
600	1393	18	00	276	43
550		09	-08	277	44
500	1850	05	-22	278	46
450		-03	-39	272	55
400	2394	-16	-50	269	59
350		-29	-56	273	62
300	3045	-45		274	73
250		-61		272	89
200	3910	-74		267	71
170		-73		275	59
150		-69		271	39
130		-70		273	36
110		-73			
100	5345	-72			
90		-68			
80		-68			
70		-62			
60		-64			

Isothermal 758 – 743 mb 35°

Tropopause: I 197 mb – 75° 39,400'

LIVERPOOL

03h G.M.T.
Pressure: Time 1013·6 mb; M.S.L. 1011·6 mb; Surf 718 mb; Freezing 700 mb

Pressure mb	Height (ft./100)	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	56	255	12
1000	3·8	60	55	260	24
950		53	50	267	29
900	328	49	47	276	29
850		46	44	286	30
800	647	43	39	283	32
750		37	32	286	32
700	1001	30	28	289	31
650		24	22	288	32
600	1394	18	13	282	40
550		13	00	287	45
500	1859	08	-22	296	43
450		01	-36	285	42
400	2404	-10	-47	283	50
350		-23	-50	269	51
300	(322 mb)	-31	-53		

Inversion 608 mb 18°–600 mb 19°
550 " 13°–545 " 14°

NR.

DOWNHAM MARKET

03h G.M.T.
Pressure: Time 1015·7 mb; M.S.L. 1011·6 mb; Surf 700 mb; Freezing 680 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	01·2	56	53	200	10
1000	4·3	55	52		
950		54	52	258	24
900	333	50	47	274	22
850		47	44	279	24
800	653	44	40	282	27
750		37	34	287	30
700	1008	32	29	289	34
650		26	23	291	34
600	1408	21	10	292	32
550		15	-02	295	35
500	1869	06	-02	294	40
450		-01	-15	295	45
400	2410	-10	-33	296	44
350		-23	-43	296	51
300	3084	-37	-54	298	59
250		-52		301	77
200	3964	-68		297	74
150		-71		298	63
130		-69		296	44
110		-70		293	32
100		-71		293	28
90	5404	-70		294	25
80		-68		294	18
70		-66		294	11
60		-63			

Inversion 969 mb 53°–950 mb 54°
461 " -020–445 " 00°

LARKHILL

03h G.M.T.
Pressure: Time 1018·5 mb; M.S.L. 1002·6 mb; Surf 680 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	04·4	57	54	240	06
1000	5·1	57	54		
950		54	52	286	20
900	341	51	47	291	21
850		48	37	288	19
800	661	46	39	285	17
750		41	31	298	20
700	1018	35	17	300	21
650		27	22	297	25
600	1421	24	01	298	32
550		18	02	298	33
500	1885	10	-03	294	36
450		01	-10	291	37
400	2433	-09	-20	295	39
350		-21	-31	298	48
300	3103	-38	-52	300	54
250		-55		300	60
200	3914	-72		298	55
150		-74		288	40
130		-76		295	27
110		-74		297	25
100		-69		286	20
90	5402	-68		290	16
80		-68		296	15
70		-67		273	12
60		-66			

(75 mb) Isothermal
1003 – 930 mb 57°
915 – 895 " 51°
868 – 828 " 48°
635 – 612 " 26°
459 – 449 " 01°
203 – 198 " -72°

Tropopause: I 180 mb – 80° 41,800'

CAMBORNE

03h G.M.T.
Pressure: Time 1020·7 mb; M.S.L. 1010·1 mb; Surf 640 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·7	57	56	210	03
1000	5·7	57	55	258	18
950		57	50	284	18
900	348	52	45	292	18
850		44	42	281	19
800	666	48	26	276	22
750		43	05	283	24
700	1024	39	-08	286	23
650		33	-09	292	24
600	1429	27	-15	291	26
550		18	-06	295	27
500	1894	10	-11	297	30
450		02	-26	295	33
400	2443	-07	-29	293	36
350		-18	-50	291	36
300	3113	-36	-59	288	38
250		-53		291	38
200	3993	-71		289	33
150		-78		292	33
130		-73		285	36
110		-74		272	30
100		-76		302	21
90	5416	-73		305	16
80		-70		291	15
70		-69		289	05
60		-68			

(75 mb) Inversion
1010 mb 57°–970 mb 59°
827 " 40°–807 " 48°

VALENTIA

03h G.M.T.
Pressure: Time 1018·2 mb; M.S.L. 1006 mb; Surf 670 mb; Freezing 661 mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·3	60	58	230	16
1000					
950	4·9	58	56	227	18
900		53	50		
850	339	49	46		
800		50	37		
750		41	13		
700	1017	34	21		
650		29	17		
600	1420	26	09		
550		18	01		
500	1886	10	-10		
450		02	-21		
400	2433	-11	-32		
350		-22	-41		
300	3102	-38	-50		
250		-55			
200	3973	-75			
150		-73			
130		-72			
110		-69			
100		-69			
90	5408	-69			
80		-69			
70		-66			
60		-64			
		-64			

Inversion 894 mb 48°–863 mb 52°
Isothermal
830 – 800 mb 48°
641 – 608 " 27°

Tropopause: I 200 mb – 75° 39,700'

Time 09h G.M.T.

LERWICK

09h G.M.T.
Pressure: Time 1007·0 mb; M.S.L. 997·0 mb; Surf 820 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	50	150	07
1000					
950		46	46	154	10
900	304	40	35	160	10
850		36	35	197	09
800	615	31	31	212	08
750		27	26	249	07
700	963	26	22	273	14
650		21	16	279	22
600	1359	16	09	284	23
550		08	01	277	25
500	1813	00	-08	272	24
450		-11	-16	272	26
400	2347	-23	-30	271	20
350		-33	-42	273	28
300	2998	-48		276	26
250		-57		285	28
200	3871	-48		283	36
170		-47		294	34
150		-49		285	28
130		-50		296	23
110					
100					
90					
80					
70					
60					

Isothermal 750 – 715 mb 27°

Tropopause: I 259 mb –57° 33,000'

STORNOWAY

09h G.M.T.
Pressure: Time 1005·6 mb; M.S.L. 1004·0 mb; Surf 731 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·4	57	53		
1000	1·5	56	53		
950		51	48		
900	303	47	44		
850		45	41		
800	621	38	33		
750		34	29		
700	973	28	17		
650		22	01		
600	1370	17	-06		
550		07	-15		
500	1824	-02	-26		
450		-10	-33		
400	2359	-20	-37		
350		-30	-47		
300	3017	-44			
250		-59			
200	3891	-53			
170		-55			
150		-53			
130		-55			
110		-52			
100	5391	-51			
90		-51			
80		-51			
70		-48			
60					

Isothermal
779 – 750 mb 37°
650 – 634 " 22°

Tropopause: II 239 mb – 62° 35,400'

LEUCHARS

09h G.M.T.
Pressure: Time 1007·9 mb; M.S.L. 1007·1 mb; Surf 728 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·2	65	57	260	10
1000	2·2	63	55		
950		54	50	269	22
900	312	49	42	278	32
850		45	36	281	31
800	630	44	34	271	32
750		36	29	262	33
700	984	29	17	266	34
650		25	-02	278	33
600	1382	17	-09	281	37
550		08	-16	277	43
500	1838	02	-20	278	50
450		-07	-20	281	66
400	2312	-13	-19	278	73
350		-25	-30	280	78
300	3043	-40	-46	280	81
250		-56		283	91
200	3916	-66		278	85
150		-60		272	49
130		-59		291	49
110		-62			
100		-59			
90	5391	-59			
80		-63			
70					
60					

Isothermal 710 – 673 mb 29°

Tropopause: I 214 mb – 66° 37,700'

ALDERGROVE

09h G.M.T.
Pressure: Time 1012·3 mb; M.S.L. 1002·3 mb; Surf 712 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·6	60	57	256	12
1000	3·4				
950		53	52	260	22
900	323	49	48	266	32
850		47	46	266	34
800	642	43	42	267	31
750		37	35	272	35
700	999	31	29	261	42
650		27	24	267	51
600	1398	22	17	268	51
550		14	06	268	50
500	1859	04	-01	266	54
450		-03	-12	269	56
400	2402	-14	-25	269	64
350		-26	-37	274	62
300	3067	-42			
250		-55			
200	3939	-68			
150		-62			
130		-62			
110					
100					
90					
80					
70					
60					

Inversion 497 mb 03°–489 mb 04°

Tropopause: I 210 mb – 70° 38,400'

LIVERPOOL

09h G.M.T.
Pressure: Time 1014·6 mb; M.S.L. 1012·6 mb; Surf 675 mb; Freezing 657 mb

Pressure mb	Height (ft./100)	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	00·6	62	58	260	12
1000	4·1	60	56	265	22
950		55	52	281	28
900	332	50	46	288	25
850		46	42	284	25
800	651	43	38	276	28
750		39	32	273	31
700	1007	35	18	282	36
650		28	18	288	38
600	1410	25	09	289	45
550		19	-07	291	41
500	1875	11	-07	283	39
450		00	-22	278	46
400	2424	-09	-27	279	44
350		-22	-44	283	45
300	3094	-37	-60	285	55
250		-52		282	67
200	3974	-69		285	71
150		-72		280	66
130		-69		282	51
110		-64		284	41
100		-64		282	25
90	5421	-60		281	20
80		-61		279	16
70		-61		271	12
60		-56			
	(68 mb)	-55			

Inversion
825 mb 43°–815 mb 44°
647 " 27°–634 " 28°
517 " 11°–505 " 12°
190 " -73°–177 " -72°

Tropopause: I 190 mb -73° 40,800'
I 173 " -73° 42,700'

DOWNHAM MARKET

09h G.M.T.
Pressure: Time 1011·9 mb; M.S.L. 1010·8 mb; Surf 657 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	01·2	66	56	237	14
1000	4·3	64	56	268	18
950		56	53	279	21
900	334	52	48	286	23
850		50	43	284	27
800	655	46	38	278	30
750		39	33	277	30
700	1011	34	23	282	29
650		31	17	291	30
600	1415	23	03	302	37
550		19	-23	302	39
500	1879	13	-31	303	40
450		02	-29	299	42
400	2424	-08	-27	291	47
350		-20	-40	294	54
300	3103	-34	-58	291	65
250		-53		292	70
200	3987	-70		293	69
150		-68		288	58
130		-68		290	49
110		-65		290	42
100		-61		282	23
90					
80					
70					
60					

Isothermal 925 – 893 mb 52°

Tropopause: I 200 mb –70° 39,800'

LARKHILL

09h G.M.T.
Pressure: Time 1018·3 mb; M.S.L. 1002·5 mb; Surf 647 mb; Freezing mb

Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	04·4	61	56	270	14
1000	5·1	61	56		
950		54	50	280	21
900	342	49	46	291	26
850		47	42	297	20
800	661	45	37	293	15
750		40	29	292	17
700	1019	36	26	298	22
650		31	17	296	23
600	1423	26	10	297	26
550		20	02	301	34
500	1890	12	-05	302	36
450		01	-15	297	39
400	2439	-06	-28	293	46
350		-19	-38	292	49
300	3110	-36	-52	287	56
250		-52		284	57
200	3989	-71		291	55
150		-72		285	49
130		-69		288	42
110		-70		292	28
100		-67		295	18
90	5431	-64		295	19
80		-59		294	14
70		-57		275	06
60		-56			
	(66 mb)	-56			

Inversion
875 mb 46°–859 mb 49°
750 " 40°–737 " 42°
663 " 30°–647 " 32°

Isothermal 925 – 873 mb 52°

Tropopause: I 194 mb – 73° 40,500'

CAMBORNE

09h G.M.T.
Pressure: Time 1020·8 mb; M.S.L. 1010·4 mb; Surf 621 mb; Freezing mb

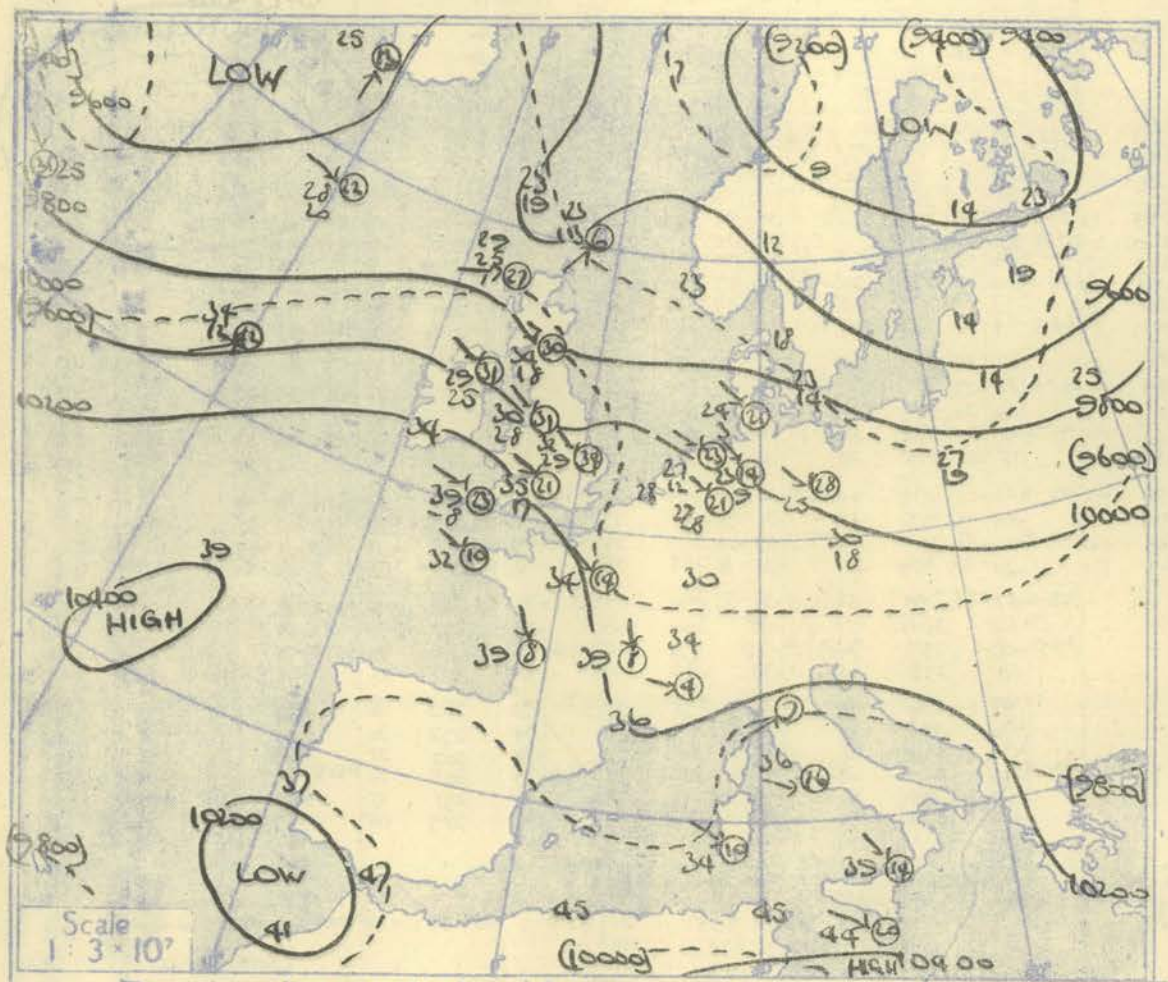
Pressure mb	Height ft./100	°C Temp.	°F Dew	Wind Dir. °	Wind Vel. knots
Surf	02·9	64	59	260	10
1000	5·8	62	57	258	21
950		56	50	266	20
900	349	50	48	272	20
850		53	43	278	18
800	670	47	39	283	19
750		44	29	290	22
700	1019	38	18	286	22
650		34	13	284	20
600	1436	30	13	284	21
550		21	08	291	24
500	1905	12	-04	288	27
450		04	-13	278	27
400	2457	-04	-25	284	33
350		-17	-28	281	37
300	3135	-32	-28	272	45
250		-51		270	44
200	4015	-71		271	37
150		-68		269	34
130		-69		278	25
110		-69		272	20
100		-66		260	14
90	5461	-64		258	14
80		-61		274	09
70		-58			
60					

Inversion
874 mb 46°–862 mb 54°
Isothermal
794 – 765 mb 46°
660 – 644 " 34°

Tropopause: I 195 mb – 73° 40,700'

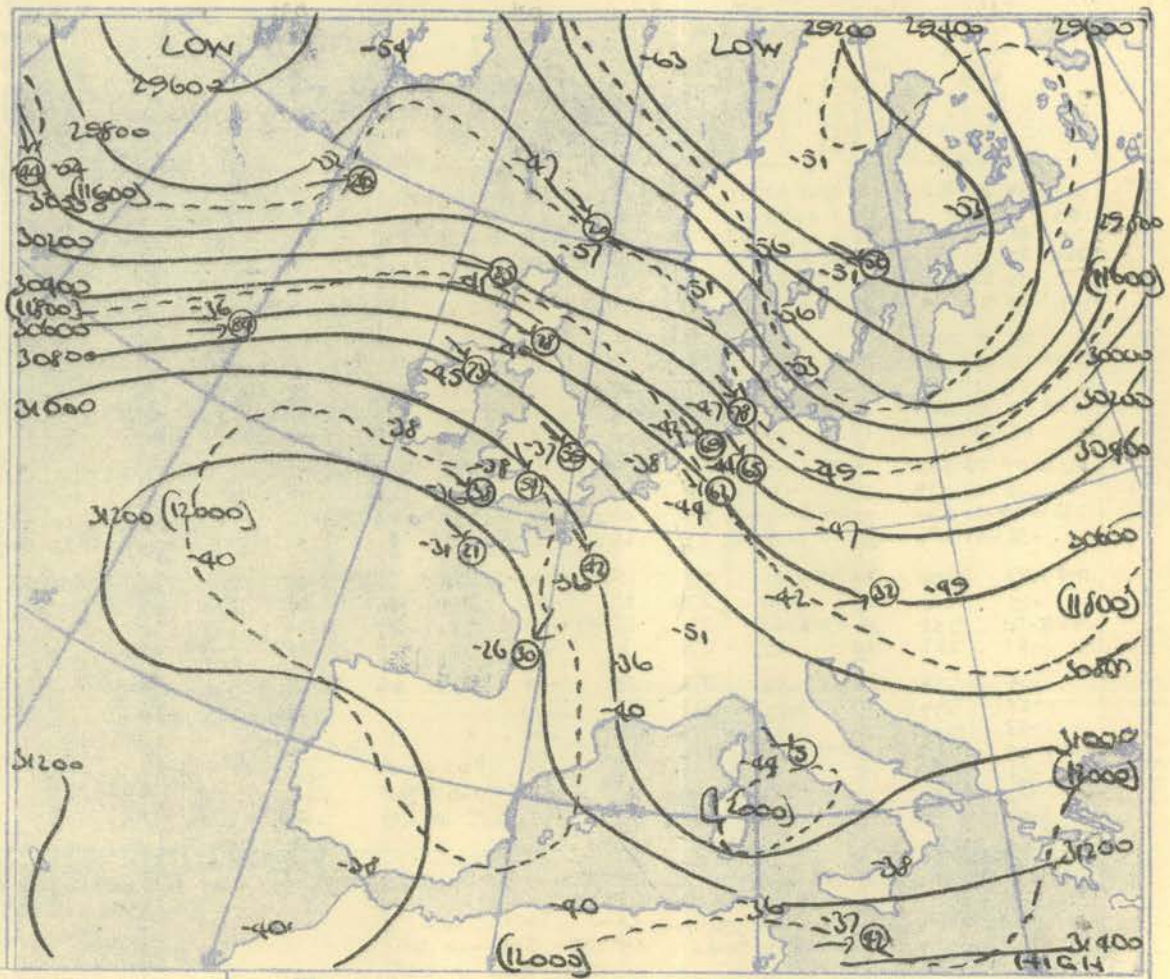
July 6th 1951.

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

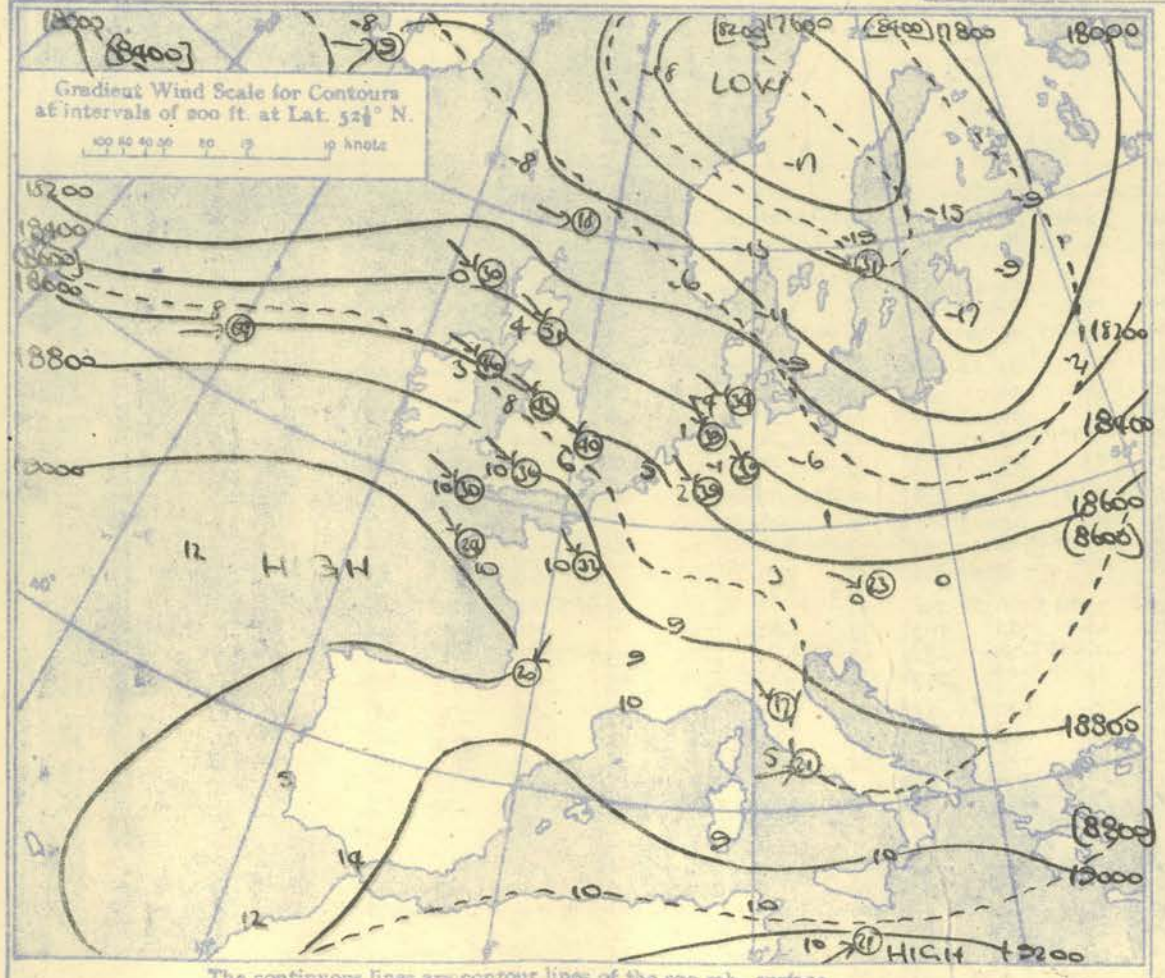


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

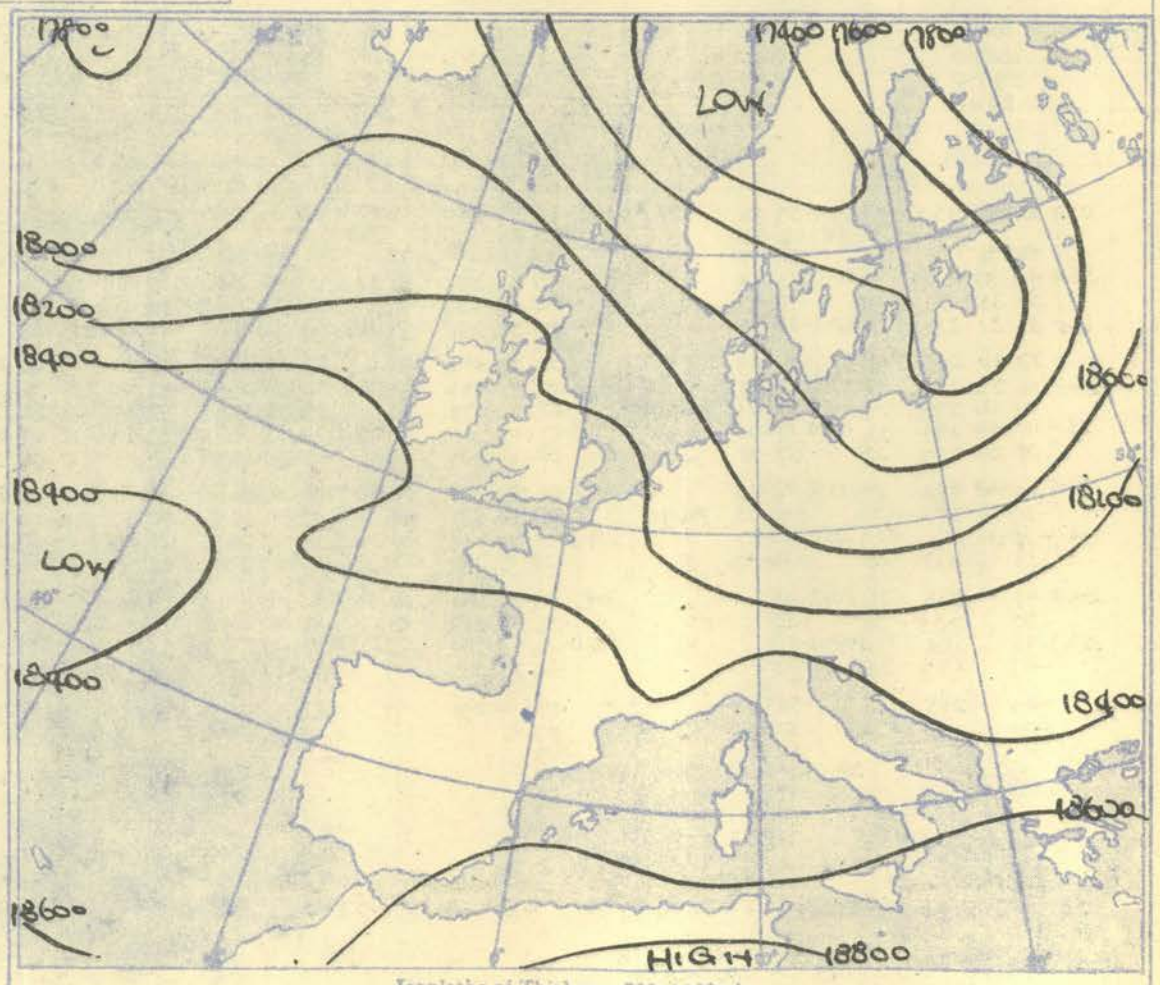
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.



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.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	48·1N 17·0W			47·6N 12·3W			52° 12'N 02° 12'W		
Pressure Time	1315L			15L			1430L		
M.S.L.	1018·1 mb			1018·9 mb			1017·0 mb		
Surf	1014·5 mb			1015·3 mb			1015·5 mb		
Freezing	670 mb			660 mb			645 mb		
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.
Surf	01·0	59	59	01·0	61	39	0·4		
1000	5·0			5·2			4·8		
950		56	54		53	51			
900	34·1	51	49	34·1	47	47	34·3	55	52
850		45	45		52	30		55	27
800	66·9	41	38	66·2	49	28	66·7	50	27
750		42	.16		43	26			
700	102	36	32	102	35	22	102·9	39	38
650		28			30				
600	142	22		142	25		143·5	27	
550		15			17				
500	188	06		189	10		190·1	11	
450									
400							245·1	-10	
350									
300							312·3	-37	
250									
200									
170									
	Cloud:- 2/8 St 960-950 mb 3/8 Sc 880-860 mb 8/8 Sc 860-800 mb Inversion 800 mb 41° 750 .. 42°			Cloud:- 2/8 St 960 mb 6/8 Sc 890-860 mb 6/8 Ac 480-4xx mb 2/8 Ci NR. Inversion 900 mb 47° 850 .. 52°			Cloud:- 3/8 Cu 870-845 mb 3/8 As 650-640 mb Isothermal 900-850 mb 55°		

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

Place	Cirrus 52·6N 20·0W		Stornoway		Larkhill		Shoeburyness		Stornoway		Leuchars		Larkhill		Cirrus 52·0N [illegible]		Larkhill	
Time	09L		09L		11L		09L		15L		15L		17L		21L		23L	
Type			PILAR						PILAR		PILAR							
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	220	07	260	10	280	16	250	12	260	12	270	23	280	10	290	20	230	05
1,000	230	15	269	27	270	18	260	17	270	21	264	21	280	12	290	23	260	18
2,000	230	17	268	26	270	22	270	18	258	20	268	21	270	14	280	20	260	20
3,000	240	17	266	23	270	22	280	19	263	21	279	22	260	18	250	24	260	21
4,000	240	16	266	21	270	20	280	21	262	24	287	22	250	19	250	30	270	21
5,000	240	18	261	19	270	17	290	19	264	24	290	24	260	24	260	30	260	20
6,000	246	26	251	18	276	16			261	24	287	25	260	24	260	27	260	18
8,000	(7,000')		251	19	290	19	290	18	267	24	284	34	270	24			270	17
10,000	270	46	256	23	300	21	280	21	276	28	279	36	270	23	260	37	270	14
14,000	196	62	267	37	290	21	290	35	271	34	281	48	270	25	260	32	260	15
18,000	220	64	265	33	290	22	310	36	263	40	280	67	270	24	260	36	260	28
24,000			269	52	(15,000')		290	45	266	81	281	71	(15,000')		260	34	(17,000')	
30,000			270	78			290	62	269	81	278	87			260	37		
40,000			274	91			300	56			274	66			(26,000')			
50,000			277	78			290	17			253	38						
60,000			283	54			250	10										
			290	48			(58,000')				Max wind 31,900' 276° 114kts							
			(63,000')															

NEPHOSCOPE OBSERVATIONS

Place										
Time Type										
Dir. Vel.										

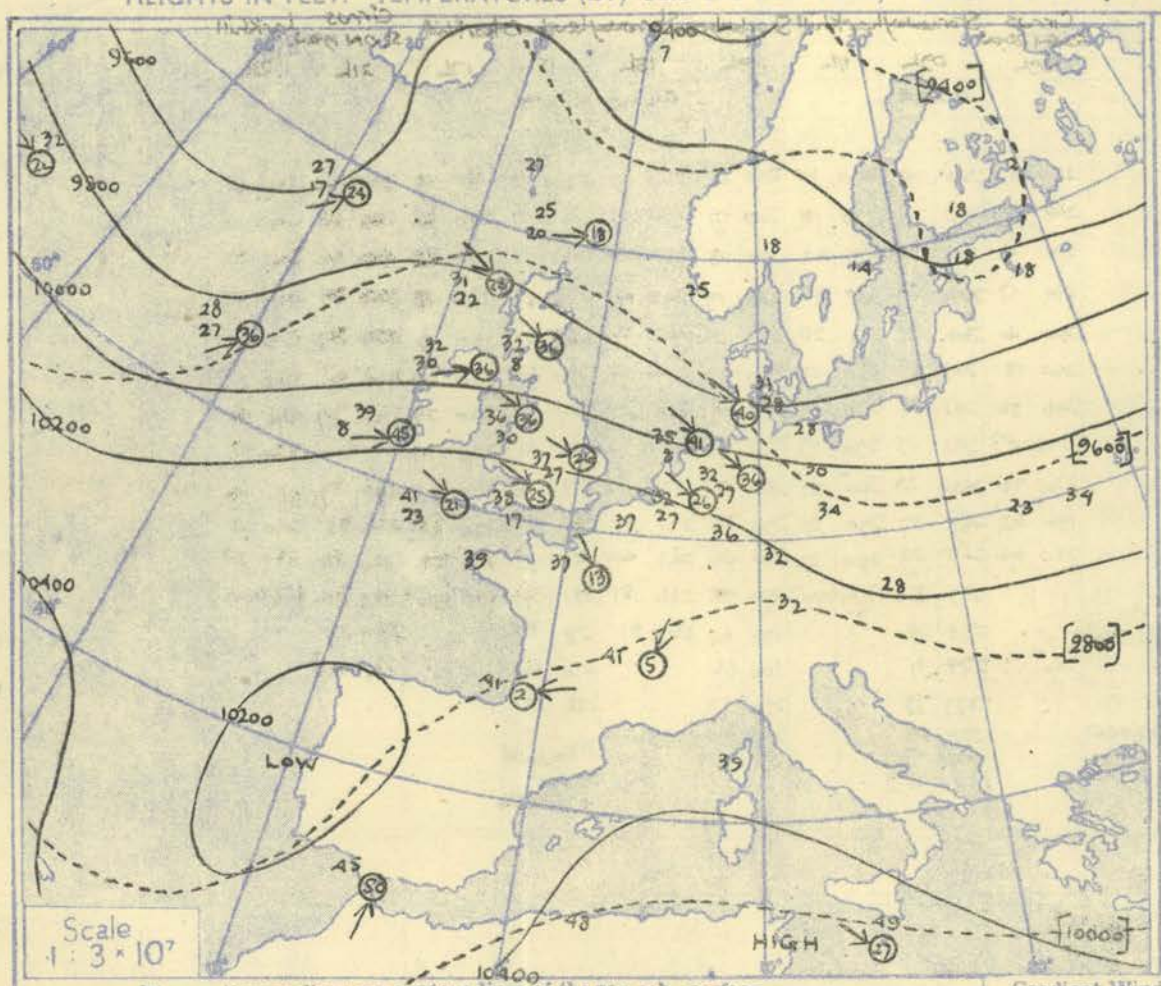
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER OBSERVER					WEATHER OBSERVER					WEATHER OBSERVER				
Lat/Long	59·2N 19·0W					59·1N 19·0W.					59·1 N 19·1W				
Pressure Time	03h. G.M.T.					09h. G.M.T.					15h. G.M.T.				
M.S.L.	1004 mb					1004 mb					1003 mb				
Surf	1004 mb					1004 mb					1003 mb				
Freezing	740 mb					750 mb					750 mb				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		53	49	260	18		54	54	225	14		56	52	227	15
1000	01·0					01·1					00·7				
950		47	41	240	20		51	51	230	18		49	43	226	15
900	29·6	47	39	248	21	29·9	47	47	235	19	29·4	45	38	228	14
850		44	35	254	22		43	36	236	21		38	32	229	16
800	61·3	39	30	266	21	61·6	38	31	233	21	60·9	39	30	230	21
750		33	26	270	21		33	29	230	21		32	23	227	22
700	96·5	28	20	271	22	96·8	29	20	228	21	96·1	27	17	229	24
650		21	13	268	20		22	05	226	19		20	12	229	22
600	136·0	12	04	261	20	136·5	15	-03	226	20	135·5	13	07	229	21
550		05	-06	259	21		06	-16	226	21		05	-10	219	16
500	181·2	-02	-20	259	19	181·7	-03	-15	227	19	180·7	-03	-19	214	7
450		-13	-30	252	20		-13	-21	228	20		-13	-33	210	15
400	234·3	-22	-41	239	23	234·8	-23	-36	231	18	233·8	-26	-50	210	12
350		-35	-55	236	21		-36	-51	239	13		-40	-50	210	12
300	299·3	-52		236	26	299·6	-51		238	10	298·1	-52		212	12
250		-57		250	34		-50		229	25		-50		223	18
200	387·1	-47		251	29	388·6	-46		230	30	387·1	-43		235	24
170		-51		250	25		-46		230	23		-45		240	24
150		-52		248	26		-47		230	18		-44		240	20
130		-53		246	20		-50		230	20		-45		244	18
110		-56		246	15		-46		230	10		-44		247	12
100	557·5	-55		247	12	540·8	-45		230	13	540·6	-43		247	14
90		-54		247	12		-46		230	10		-44		251	12
80		-54					-45		230	09		-41		251	09
70	(75mb)	-54										-41		257	08
60												-41		257	07
											(55mb)	-39			
	Inversion 930mb 45° - 918 mb 48° 570mb 5° - 560 mb 6° Isothermal 415 - 400 mb -22°					Inversion 734mb 30° - 723mb 32°					Inversion 850mb 38° - 825 mb 40°				
Tropopause	II 275 mb -57° 31,800'					II 286mb -55° 31,000'					II 302 mb - 52° 29,600'				

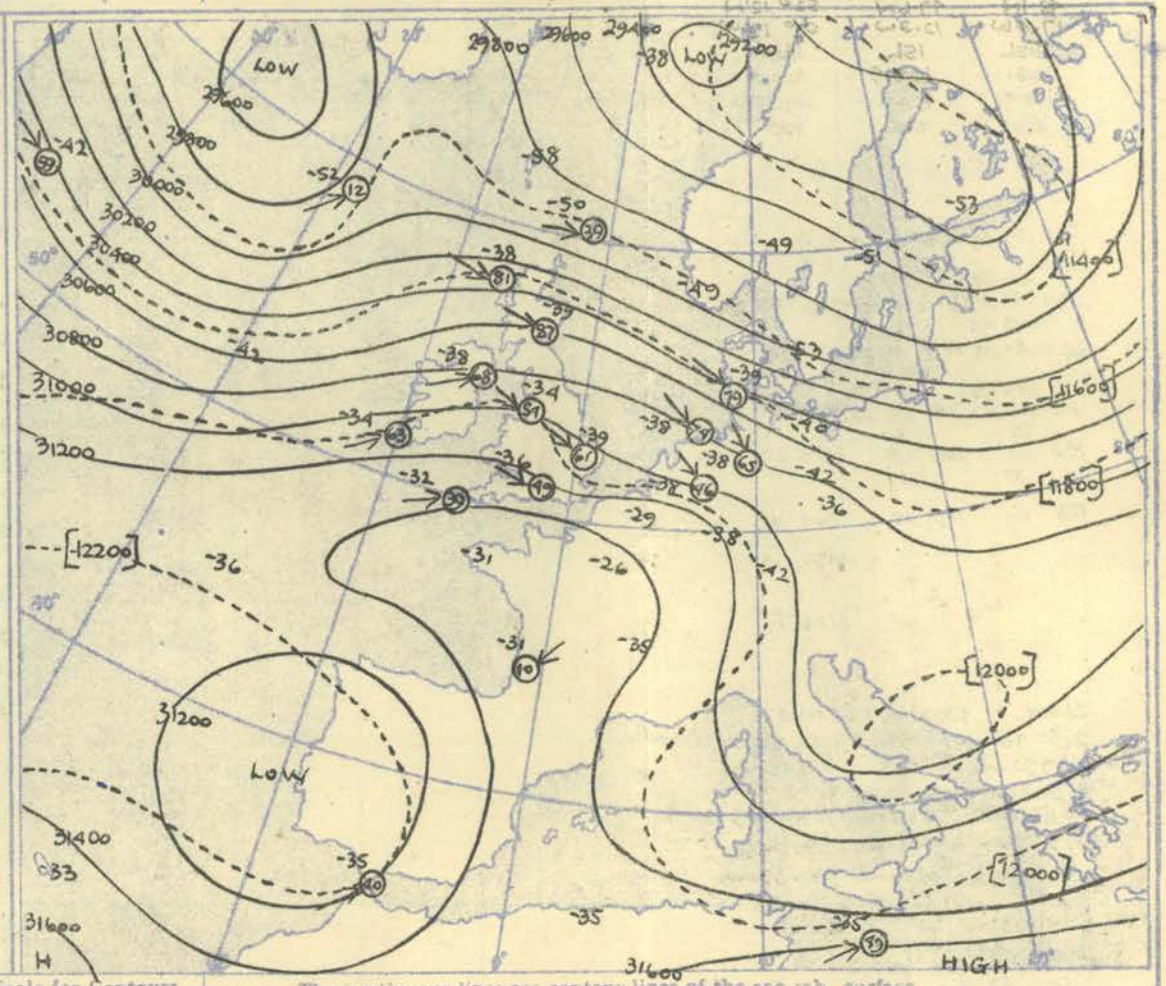
Ship	WEATHER OBSERVER					CIRRUS					CIRRUS				
Lat/Long	59·0 N 19·0W.					52·4 N 20·1W					52·3N 19·5W				
Pressure Time	21h. G.M.T.					03h. G.M.T.					15h. G.M.T.				
M.S.L.	1002 mb					1011 mb					1011 mb				
Surf	1002 mb					1011 mb					1011 mb				
Freezing	760 mb					mb					740 mb				
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		55	51	210	08		59	58	250	15		59	57	220	09
1000	00·5					03·1	58	57	248	17	03·1	58	56	220	11
950		47	43	212	14		56	55	250	18		52	51	230	14
900	29·1	42	38	212	15	32·2	52	51	250	22	32·0	47	46	248	16
850		37	32	213	15		48	45	248	25		41	41	269	19
800	60·4	36	30	210	16	64·3	43	37	249	28	63·6	38	38	280	26
750		31	21	208	18		38	26	242	29		33	33	262	24
700	95·5	26	18	207	21	99·9	34	12	236	42	98·7	28	27	216	36
650		18	10	205	22		28	02	246	51		21	17	233	34
600	134·8	09	-01	202	25	140·1	22	-04	245	51	138·6	14	07	240	34
550		05	-17	197	20		16	-12	245	49		07	-03	240	40
500	180·0	-01	-28	196	14	186·4	08	-20	246	64	184·0	00	-13	243	47
450		-13	-35	203	11		00		245	70		-06	-23	244	62
400	233·1	-25	-41	205	12	241·0	-10		245	79	237·8	-15	-33		
350		-38	-52	208	12		-22		250	83		-29			
300	297·6	-54		227	11	308·0	-36		245	84	303·8	-42			
250		-50		217	15		-53					-58			
200	386·0	-43		232	25	395·8	-69				391·2	-60			
170		-45		244	21		-70					-58			
150		-47		268	21		-48					-57			
130		-48		253	20		-67				(143mb)	-57			
110		-48		246	13		-66								
100	538·8	-45		238	10	540·6	-65								
90		-46		228	09	(91mb)	-64								
80		-45													
70															
60															
	Isothermal 842 - 800 mb 36° 600 - 578 mb 9°					Isothermal 850 - 848 mb 48°									
Tropopause	I 290 mb -56° 30,500'					II 210 mb -68° 38,400'					I 217 mb -61° 37,900'				

Friday 6th July 1951

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



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

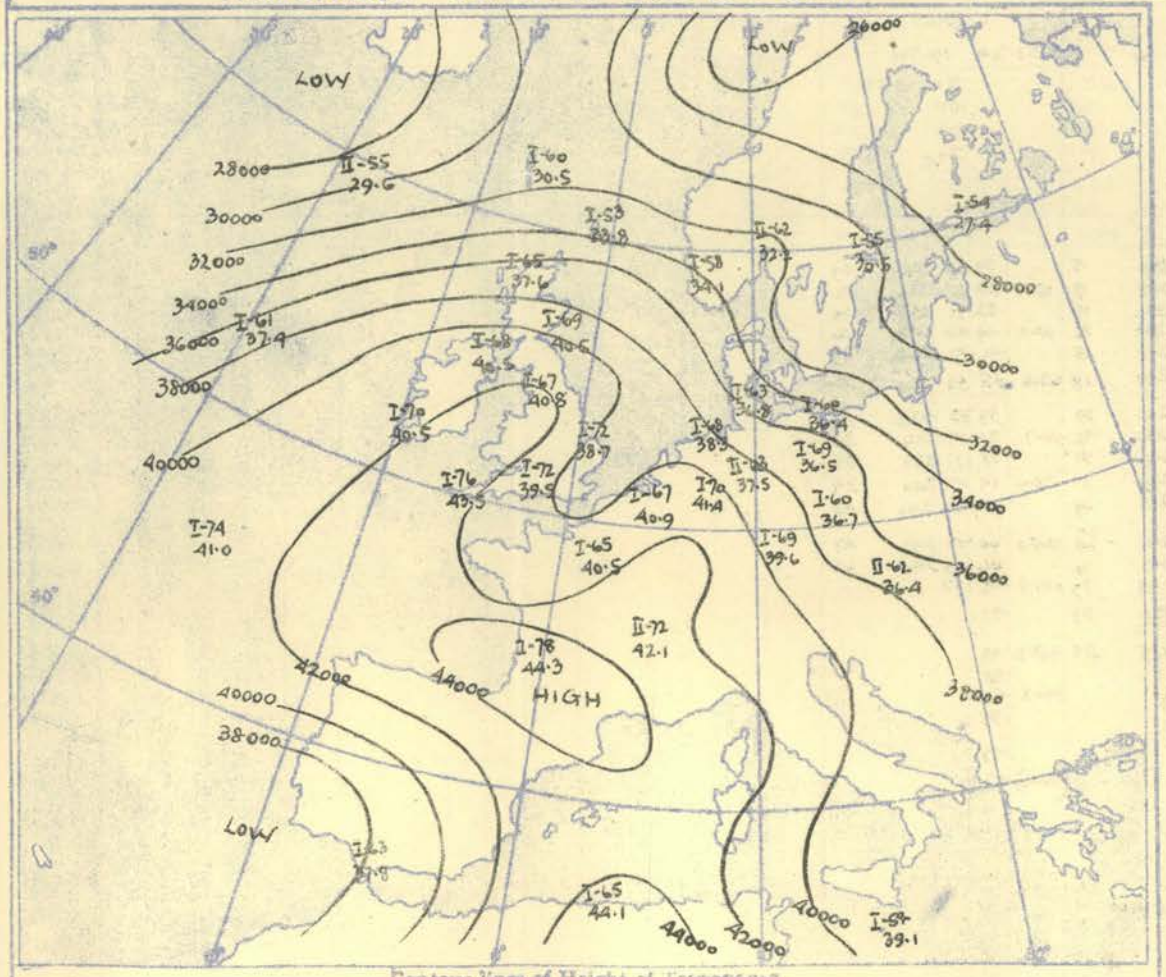


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 40 30 20 10 5 knots

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



Contour lines of Height of Tropopause
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little of importance apart from persistence of cold pool to west of Portugal.

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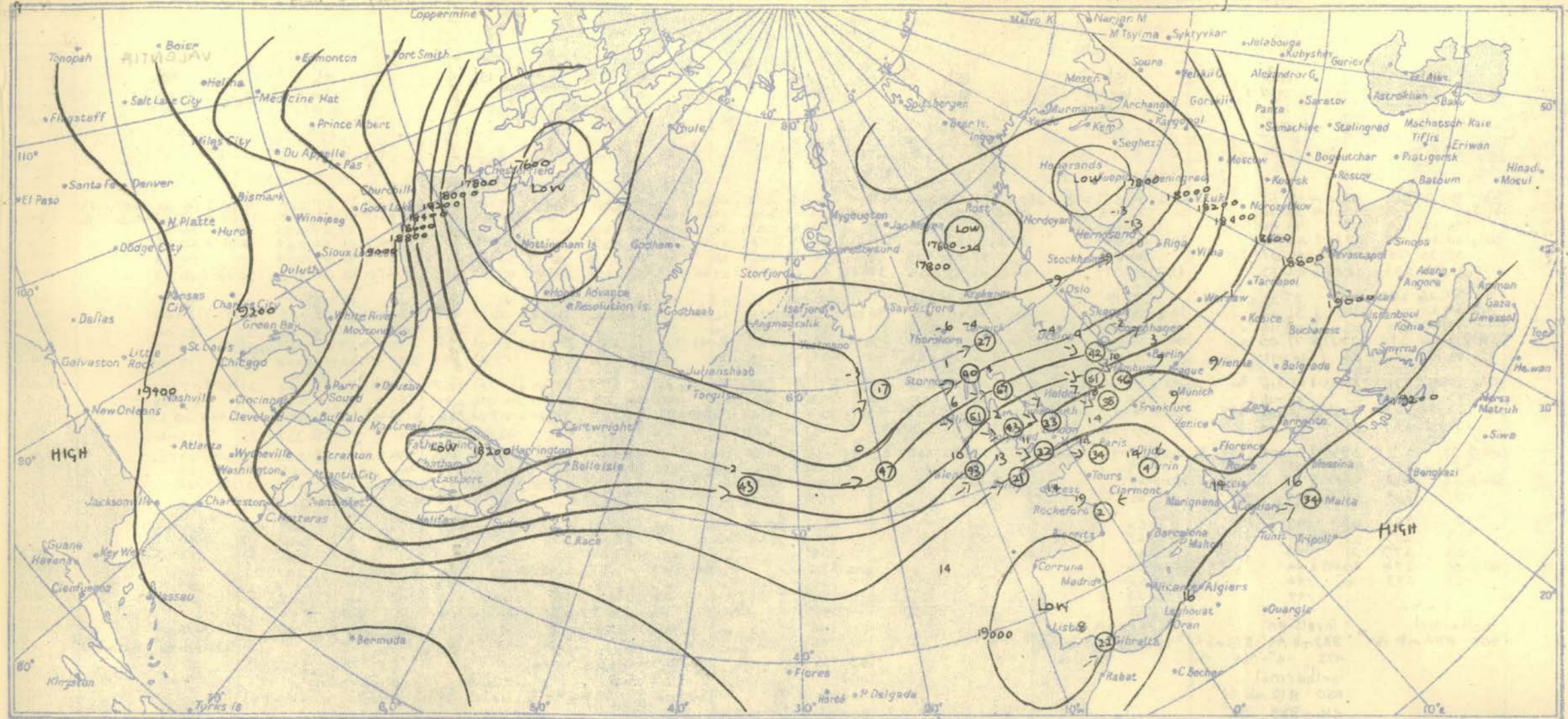
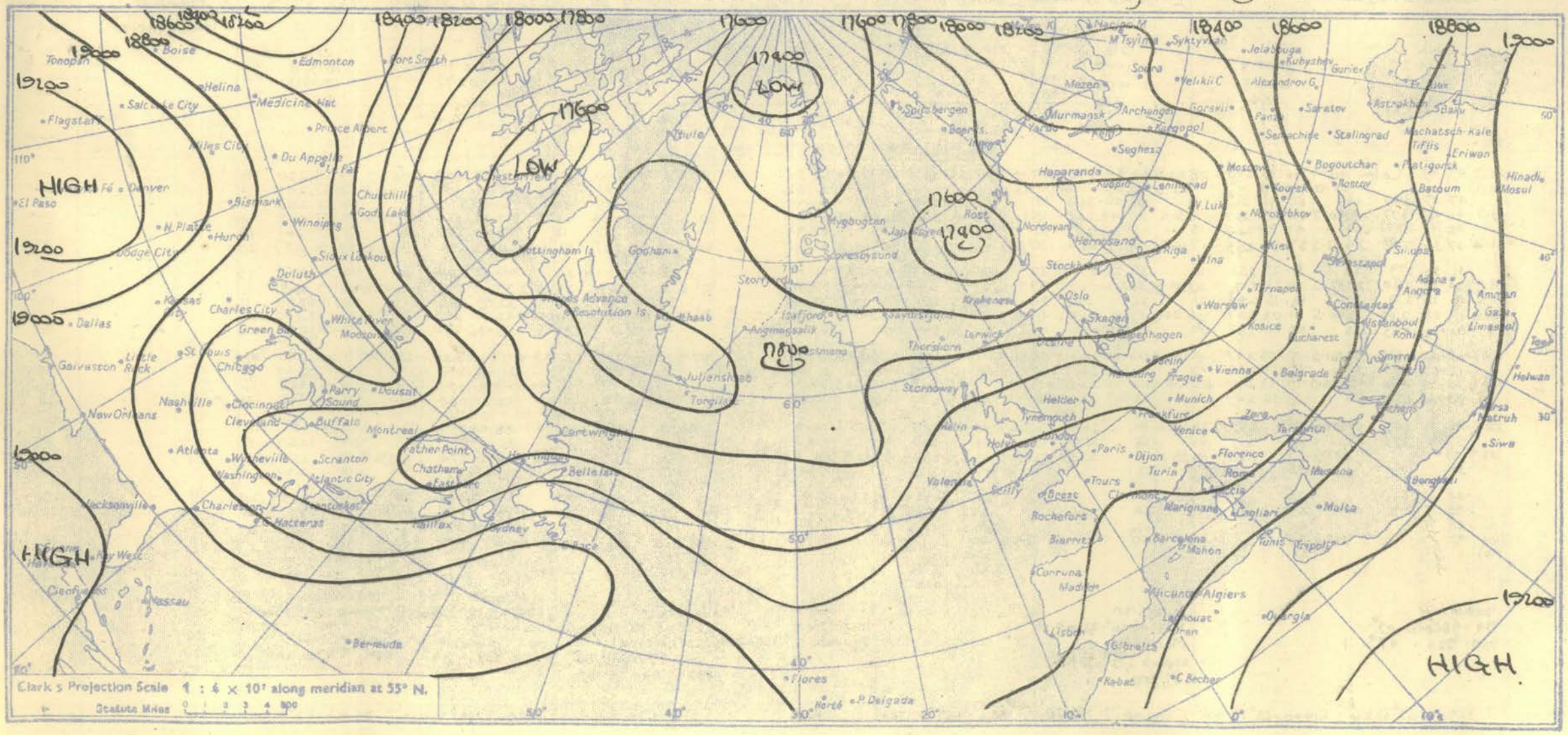
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Friday 6th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 6TH July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Friday 6th July 1951.

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

15h G.M.T.

Station	Time	M.S.L. mb	Surf mb	Freezing mb	Tropopause
LERWICK	15h	1006·2	996·3	772	I 250mb -57° 33,800'
STORNOWAY	15h	1007·1	1006·5	712	
LEUCHARS	15h	1008·4	1007·6	700	I 190 mb -69° 40,500
ALDERGROVE	15h	1012·5	1003·0	696	I 190mb -67° 40,500
LIVERPOOL	15h	1014·7	1012·7	650	I 191mb -67° 40, 800 I 165 .. -70° 43,800
DOWNHAM MARKET	15h	1015·3	1010·9	691	II 209mb -72° 38,700
LARKHILL	15h	1017·8	1002·3	630	I 203 mb -72° 39,500
CAMBORNE	15h	1020·5	1010·1	628	I 170 mb -76° 43,500'
VALENTIA	15h	1017	1015	640	I 194 mb -70°

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	50	155	08	00·4	59	51			00·2	71	55	270	23
1000	01·7					01·9	58	50				70	58		
950		45	42	154	08		51	46				61	51		
900	30·1	40	36	155	09	30·7	44	40			31·5	52	44		
850		38	35	175	10		44	37				44	38		
800	61·5	34	30	233	13	62·5	42	33			63·2	37	21		
750		30	26	254	15		37	28				39	19		
700	96·4	25	20	268	18	97·9	31	22			98·6	32	08		
650		19	09	273	23		24	14				24	00		
600	135·8	12	06	279	23	137·8	17	05			138·4	18	-04		
550		05	-07	280	24		10	-11				11	-08		
500	181·0	-04	-17	275	27	183·4	01	-16	For Winds		184·2	04	-06	For Winds	
450		-13	-26	274	30		-05	-16				-04	-11		
400	234·1	-24	-45	273	34	237·4	-14	-25	See		238·4	14	-22	See	
350		-37	-56	267	29		-26	-34				-25	-34		
300	298·9	-50		272	39	303·9	-38	-48	Page 3.		305·0	-39	-49	Page 3.	
250		-57		271	45		-53					-54			
200	386·5	-52		273	46	391·8	-57				392·5	-67			
170		-51		269	33		-47					-61			
150		-51		281	27		-49					-56			
130		-53		287	23		-49					-57			
110		-54		279	21		-47					-60			
100	587·2	-53		276	20	593·2	-44				590·5	-56			
90		-53		273	16		-44					-55			
80							-44					-55			
70												-54			
60															
	Isothermal 900-884mb 40°					Inversion 889mb 49°-875mb 46° 472 .. -4°-465 .. -3° Isothermal 850-812mb 44° 916-889 .. 44°					Inversion 785mb 35°-760mb 41°				

Pressure mb	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F	Wind Dir. °	Wind Vel. knots
Surf	02·6	63	57	240	06	00·6	66	58	250	08	01·2	70	58	240	13
1000	03·5	62	56			04·1	64	57	246	14	04·2	68	57		
950		56	42	250	19		57	53	247	18		61	54	260	20
900	32·6	51	51	258	21	33·2	52	48	257	25	33·7	53	48	269	22
850		47	47	258	25		48	44	266	28		48	44	273	26
800	64·5	42	42	255	31	65·1	42	33	272	31	65·7	43	38	280	28
750		37	37	255	31		41	35	276	37		42	31	282	28
700	100·0	32	30	260	34	100·8	36	30	275	36	101·5	37	27	283	26
650		27	18	255	35		32	17	274	36		30	23	283	39
600	140·1	22	14	253	39	141·2	27	15	274	36	141·9	29	14	281	34
550		16	09	258	46		21	07	275	39		16	08	276	36
500	186	06	-03	264	51	187·8	12	-01	278	43	188·2	07	-02	279	33
450		-02	-11	260	46		04	-19	273	46		-02	-13	288	33
400	240·7	-12	-22	262	61	242·9	07	-31	272	46	242·6	-11	-25	289	39
350		-22	-36	256	62		-18	-40	268	43		-25	-39	288	47
300	307·5	-38	-52	261	68	310·5	-34	-54	272	54	309·2	-39	-52	289	61
250		-54		263	76		-48		276	69		-56		289	66
200	395·1	-66				399·1	-65		280	65	396·2	-72		285	67
170		-63					-69		272	61		-69		282	92
150		-60					-65		270	58		-69		279	90
130		-59					-61		276	95		-67		278	33
110							-58					-63		262	23
100						545·7	-58				541·9	-63		261	20
90							-60					-61		268	16
80							-57					-57		269	12
70							-49					-54		287	09
60							-48					-51		295	05
							-46								
						(43 mb)	-47								
						Inversion 800mb 42°-792mb 44° 191 .. -67°-187 .. -66° Isothermal 660-635mb 30°					Max Wind 286° 90kts 223mb 37,300 mb) Inversion 800 mb 43°-781mb 49°				

Pressure mb	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·9	67	54	280	16	02·9	66	57	280	14	00·3	66	60	222*	13
1000	05·0	66	54			05·7	69	58	258	16	04·6	63	57	226	16
950		58	50	275	18		57	57	255	18		56	51		
900	34·2	51	46	273	18	34·9	51	51	254	18	33·7	50	46		
850		52	35	272	21		49	45	254	19		46	43		
800	66·3	49	32	272	19	67·0	52	31	265	20	65·7	50	22		
750		42	05	272	20		48	33	277	20		45	15		
700	102·2	38	17	272	25	103·1	41	23	282	21	107·7	39	08		
650		34	11	280	27		35	14	280	21		33	06		
600	142·9	27	03	284	27	143·9	29	07	277	18	142·2	26	-01		
550		19	01	284	28		22	-01	268	21		18	-07		
500	189·4	11	-10	287	32	190·7	13	-13	262	21	188·9	07	-10		
450		01	-16	286	35		03	-15	262	24		02	-28		
400	244·2	-09	-33	285	40	246·8	-05	-26	264	30	243·5	-09	-37		
350		-22	-38	285	45		-17	-28	256	35		-21	-40		
300	311·4	-36	-48	280	49	313·5	-32	-39	262	39	310·7	-29	-52		
250		-64		278	56		-49		265	44		-50			
200	398·9	-71		281	55	402·0	-67		265	51	398·9	-68			
170		-73		279	44		-76		264	49		-64			
150		-72		262	39		-72		239	26		-66			
130		-65		272	27		-71		246	19		-63			
110		-68		265	27		-71		260	19		-62			
100	593·3	-61		271	23	546·5	-70		257	21		-60			
90		-63		287	12		-68		248	22		-59			
80		-60		255	14		-65		237	20		-59			
70		-55		246	12		-64		240	14					
60		-50		345	08		-62		255	11					
	(52	-52					-59								
							-55								
	Inversion 862 mb 96° 847mb 53°					Inversion 865mb 46°-835 mb 53° Isothermal 835-810mb 53° 768-745mb (46°					Inversion 830mb 43°-825mb 53°				

21h G.M.T.

Station	Time	M.S.L. mb	Surf mb	Freezing mb	Tropopause
LERWICK	21h	1004·2	994·3	759	II 268mb -57° 32,200
STORNOWAY	21h	1007·4	1005·8	755	I 214 mb -63° 37,400'
LEUCHARS	21h	1009·1	1008·3	720	I 200 mb -71° 39,120'
ALDERGROVE	21h				I 188 mb -69° 40,700
LIVERPOOL	21h	1014·0	1012·0	650	N.R.
DOWNHAM MARKET	21h	1015·0	1010·6	631	I 208 mb -72° 38,700'
LARKHILL	21h	1018·1	1002·3	650	I 190 mb -80° 40,800
CAMBORNE	21h	1019·8	1009·3	663	I 185 mb -82° 41,500
VALENTIA					

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	49	Calm		00·4	56	50	240	08	00·2	61	54	290	09
1000	01·1					02·0	55	48			02·5	60	53		
950		47	47	277	14		50	46	263	14		55	48	260	17
900	29·7	46	45	277	20	30·7	44	43	257	18	31·5	50	43	267	18
850		42	41	277	24		41	40	255	19		46	39	269	21
800	61·4	37	36	277	24	62·2	37	36	253	17	63·4	44	32	274	30
750		31	30	279	26		31	27	251	16		37	28	277	29
700	96·3	24	17	280	24	97·2	25	23	246	20	98·8	30	25	263	33
650		18	16	271	20		18	16	248	21		25	19	254	38
600	136·5	11	08	260	18	136·5	11	08	247	26	136·6	19	12	264	45
550		03	-21	253	22		03	00	257	29		12	06	250	46
500	180·5	-05	-48	260	24	181·5	-03	-08	247	44	184·4	04	-04	263	68
450		-12	-53	263	31		-09	-14	244	63		-05	-13	269	60
400	233·6	-23	-56	266	45	235·0	-19	-23	244	82	238·4	-16	-26	266	65
350		-33	-60	270	74		-31	-36	249	90		-28	-39	264	68
300	298·9	-46		269	98	300·7	-45		249	98	304·6	-41		261	76
250		-57		275	83		-58		249	86		-58		259	78
200	386·9	-49				387·9	-59		253	62	391·2	-71		275	72
170		-56					-55					-58			
150		-52					-65					-51			
130		-52					-59					-50			
110		-50					-66					-52			
100	(109 mb)	-99				587·6	-55				590·8	-50			
90							-52								
80															
70															
60															
	Isothermal 994-980mb 49° 950-920 .. 47°										Inversion 855 mb 46°-835mb 48° Max Wind 220mb 272° 90 kts 37,200				

Pressure mb	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	56	235	16	00·6	63	55			01·2	65	56	240	06
1000	03·0					03·9	61	53			04·2	65	56	241	15
950		56	51	240	29		56	50				62	54	249	18
900	32·1	52	48	247	28	32·9	51	47			33·6	54	49	253	18
850		48	44	251	23		47	43				47	44	258	18
800	64·1	43	39	255	25	64·8	41	35			65·7	50	26	267	21
750		38	30	247	27		42	19				43	36	274	25
700	99·6	34	18	247	34	100·7	37	06			101·6	37	19	275	26
650		29	08	251	45		32	-03				34	09	269	25
600	139·8	24	01	250	55	141·1	25	-02			142·2	27	07	266	30
550		15	-05	249	69		18	-12				17	-13	270	37
500	185·9	06	-11	248	50	187·5	10	-19			188·5	07	-09	280	37
450		-04	-10	248	60		-02	-25				-02	-10	277	39
400	290·1	-14	-21	250	59	292·3	-07	-30			293·0	-12	-25	274	45
350		-24	-31	250	68		-20	-37				-25	-36	277	54
300	306·7	-40	-50	249	72	309·7	-55	-50			309·6	-41		278	57
250		-54		250	80		-50					-57		279	68
200	394·1	-68		259	78	(213 mb)	-58				396·4	-71		274	60
170		-64		248	67							-73		276	51
150		-62		290	64							-71		275	43
130		-63										-72		270	38
110		-60										-67		271	21
100											540·1	-66		269	15
90	540·6	-60										-65			
80		-60													
70		-59													
60															
						Inversion 800mb 41°-780mb 45°					Inversion 838mb 45°-800mb 50° Isothermal 1011-970mb 65° 672-644 .. 39°				

Pressure mb	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	61	52	280	05	02·9	59	58	230	08					
1000	05·0					05·4	58	57	247	15					
950		56	49	270	18		56	52	252	17					
900	34·1	50	46	266	21	34·5	49	47	268	16					
850		54	34	270	23		51	39	261	19					
800	66·3	50	32	275	21	66·6	50	18	257	20					
750		45	23	288	22		45	25	258	13					
700	102·3	39	17	291	23	102·6	38	19	263	11					
650		32	09	293	21		30	11	239	16					
600	142·9	26	02	285	21	143·0	25	07	240	21					
550		18	-06	270	25		19	-02	240	28					
500	189·9	11	-10	259	25	189·5	11	09	240	28					
450		01	-18	256	29		02	-17	249	30					
400	244·2	-08	-27	261	34	244·5	-09	-13	250	36					
350		-22	-39	258	41		-22	-30	246	38					
300	311·1	-38	-48	273	42	311·6	-38	-47	251	40					
250		-55		272	50		-54		254	50					
200	398·0	-77		274	53	395·8	-75		254	63					
170		-72		264	44		-74		240	45					
150		-74		265	35		-71		253	26					
130		-73		259	28		-72		249	28					
110		-69		273	18		-68		248	29					
100	590·9	-68		298	18	592·1	-68								
90	(92 mb)	-67				(096 mb)	-68								
80															
70															
60															
	Inversion 882 mb 98°-868mb 58° Isothermal 1002-991mb 61° 868-839 .. 54°					Inversion 993mb 58°-975mb 59° 870 .. 46°-848 .. 52° Isothermal 884-870mb 46°									

HMSO Press, MO, Dunstable

No. 11787 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Saturday 7th July 1951. Page 1.

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

03Z

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03Z G.M.T.	1003·8 mb	993·9 mb	750 mb
STORNOWAY	03Z G.M.T.	1006·3 mb	1004·9 mb	771 mb
LEUCHARS	03Z G.M.T.	1007·2 mb	1006·4 mb	709 mb
ALDERGROVE	03Z G.M.T.	1010·4 mb	1000·9 mb	730 mb
LIVERPOOL	03Z G.M.T.	1013·2 mb	1011·2 mb	663 mb
DOWNHAM MARKET	03Z G.M.T.	1015·2 mb	1010·8 mb	647 mb
LARKHILL	03Z G.M.T.	1018·5 mb	1001·9 mb	659 mb
CAMBORNE	03Z G.M.T.	1018·5 mb	1008·0 mb	680 mb
VALENTIA	03Z G.M.T.	1013·3 mb	1012 mb	

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots
Surf	02·7	50	50	290	19	00·4	53	51	CALM		00·2	57	56	CALM		02·6	57	56	250	07	00·6	60	55		
1000	1·0					1·8	53	52			1·9	56	55			2·8					3·6	59	53		
950		48	48	277	21		50	49	248	10		52	51	300	16		53	49	278	14		54	48		
900	29·6	44	44	273	22	30·5	45	44	239	11	30·7	47	44	320	25	31·7	48	41	295	14	32·6	50	45		
850		40	39	268	24		41	38	254	13		42	39	289	16		42	38	280	24		45	42		
800	61·1	38	29	266	24	62·0	36	32	263	16	62·4	41	39	247	18	63·3	37	32	271	30	64·5	39	30		
750		32	26	267	28		29	26	260	20		36	32	237	33		34	33	241	32		45	09		
700	96·2	25	23	269	23	96·9	24	21	262	18	97·8	31	27	240	39	98·6	29	28	238	36	100·4	37	08		
650		17	16	274	28		17	12	266	15		26	22	245	42		23	20	241	42		30	08		
600	135·4	10	06	282	26	136·1	12	06	258	16	137·7	20	16	255	47	138·4	16	13	243	45	140·6	23	-10		
550		01	-08	274	23		05	-03	261	16		13	08	254	52		10	08	241	51		15	-18		
500	1803	-07	-18	267	23	181·3	-07	-13	266	24	183·4	05	-02	256	58	184·0	02	-01	241	55	186·7	06	-27		
450		-17	-25	263	27		-15	-25	267	34		-04	-11	247	60		-07	-16	240	65		-03	-26		
400	232·9	-28	-37	262	34	234·2	-24	-40	251	49	233·9	-15	-23	297	61	237·8	-19	-27	239	70	241·1	-14	-26		
350		-38	-49	257	53		-37	-50	248	61		-28	-36	250	75		-31	-38	238	82		-27	-39		
300	2973	-50		259	69	298·9	-47		244	85	304·0	-43		254	85	303·4	-45		239	91	307·3	-42			
250		-55		255	63		-60		242	82		-58		254	89		-60		238	107		-58			
200	3850	-51		261	50	386·3	-53		245	52	391·0	-63				389·7	-73		243	85	393·7	-73			
170		-51		268	36		-53		256	82		-60					-67		244	59		-69			
150		-54		265	31		-53		254	31		-60					-63		241	51		-72			
130		-53		259	29		-53		252	20		-60					-66		242	36		-64			
110		-56		265	20		-53		253	18		-59										-64			
100	5352	-59		264	18	536·7	-53		252	18	538·9	-58									538·7	-66			
90	(92 mb)	-58										-56										-61			
80																						-59			
70																						-59			
60																						-56			
																					(54 mb)	-55			
	Isothermal ° 990 - 975 mb 49° 855 - 825 " 40°					Isothermal ° 1005 - 989 mb 53° 850 - 837 " 17°					Isothermal ° 850 - 810 mb 42					Inversion ° 796 mb 38° - 782 mb 46°					Inversion ° 782 - 756 mb 46°				
Tropopause	II 273 mb - 56° 31,700'					I 257 mb - 61° 33,200'					I 218 mb - 67° 37,300'					I 200 mb - 73° 38,970'					I 194 mb - 74° 40,100'				

Pressure mb	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots
Surf	01·2	54	52	250	06	04·4	62	50	240	03	02·9	58	57	220	05	00·3	60	60		
1000	4·1	55	53	256	18	4·9					5·1	58	56	248	15	3·6	59	59		
950		55	48	261	22		53	49	267	20		56	50	233	15		56	54		
900	(33·1)	49	45	261	24	33·9	50	43	263	22	34·1	50	47	227	17	32·7	50	47		
850		56	31	261	28		54	30	255	26		51	35	226	19		46	44		
800	654	53	06	263	30	66·0	52	27	247	26	66·2	50	27	224	19	64·6	41	38		
750		47	-01	269	28		46	22	248	18		46	23	214	19		36	32		
700	101·5	39	-01	268	28	102·0	39	17	245	15	102·3	40	17	214	23	99·9	31	26		
650		32	-05	261	27		31	09	238	7		32	07	219	24		25	18		
600	141·9	25	-10	257	28	142·4	23	01	231	21	142·7	27	-06	234	26	139·8	19	11		
550		17	-17	256	31		17	01	244	35		19	-07	235	36		12	03		
500	1883	09	-26	256	39	188·7	10	06	249	35	189·2	11	07	226	38	185·9	05	-07		
450		01	-34	256	45		01	-04	251	37		01	-02	236	38		-04	-18		
400	243·0	-10	-38	256	48	243·5	-11	-15	247	39	243·9	-11	-14	237	39	240·0	-13	-28		
350		-22	-41	259	52		-23	-29	244	44		-21	-31	234	48		-25	-43		
300	310·2	-34	-52	260	53	310·4	-37	-45	251	48	311·1	-34	-47	231	50	306·6	-38	-55		
250		-50		265	63		-55		250	57		-53		231	58		-53			
200	398·7	-68		267	66	397·5	-76		255	61		-70				394·4	-61			
170		-73		268	61		-73		257	40							-57			
150		-75		265	51		-74		251	37							-59			
130		-71		271	43		-73		250	27							-57			
110		-73		270	36		-72		245	28							-57			
100	542·0	-72		259	30	540·2	-69		245	21										
90		-69		248	29		-67		261	17										
80		-65		238	30		-66		272	17										
70		-65		245	24		-66													
60		-63		269	14															
		-60		311	09															
		-58		CALM																
	Inversion ° 1011 mb 54° - 970 mb 57° 882 " 47° - 855 " 57°					Inversion ° 1002 mb 52° - 976 mb 56° 885 " 49° - 868 " 55°					Inversion ° 885 mb 48° - 860 mb 51°									
	Isothermal 921 - 900 mb 50°										Isothermal 1008 - 968 mb 58° 860 - 823 " 51°									
Tropopause	I 180 mb - 79° 42,000'					I 188 mb - 81° 41,000'					NR.					I 209 mb - 66° 38,500'				

For rest of winds see page 3.

09Z

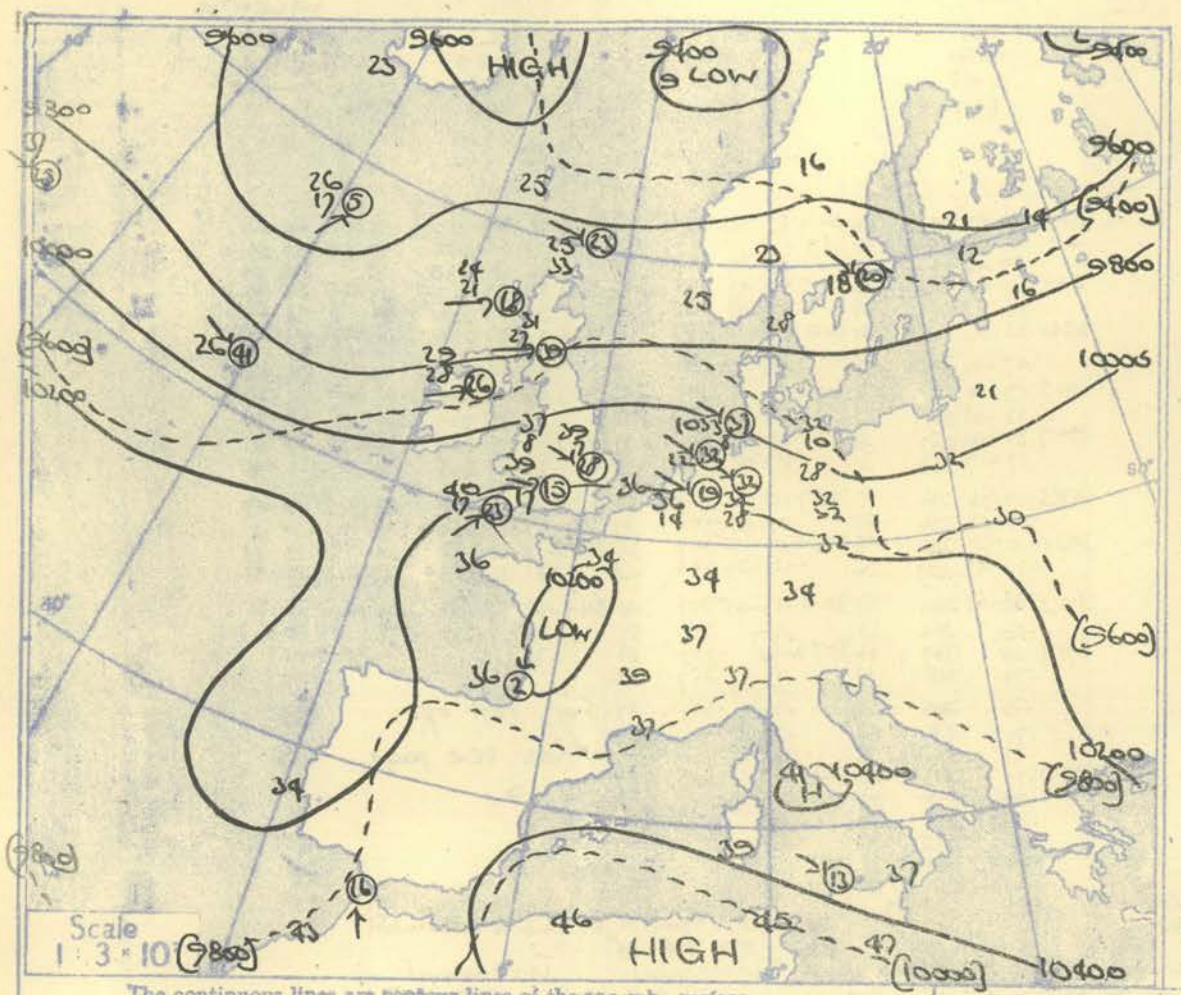
Station	Time	M.S.L.	Surf	Freezing
LERWICK	09Z G.M.T.	1003·3 mb	993·4 mb	771 mb
STORNOWAY	09Z G.M.T.	1005·4 mb	1003·8 mb	767 mb
LEUCHARS	09Z G.M.T.	1007·5 mb	1006·7 mb	730 mb
ALDERGROVE	09Z G.M.T.	1009·7 mb	1000·2 mb	738 mb
LIVERPOOL	09Z G.M.T.	1012·1 mb	1010·1 mb	689 mb
DOWNHAM MARKET	09Z G.M.T.	1015·3 mb	1010·9 mb	665 mb
LARKHILL	09Z G.M.T.	1017·2 mb	1001·5 mb	669 mb
CAMBORNE	09Z G.M.T.	1017·5 mb	1007·1 mb	680 mb
VALENTIA	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots
Surf	02·7	52	52	290	10	00·4	56	54	230	05	00·2	63	57	300	07	02·6	59	57			00·6	63	55	240	15
1000	0·9					1·7	55	52			2·1	61	55	256	12	2·7	59	57			3·4	61	54	240	24
950		49	49	285	22		51	49	233	15		53	52	268	11		53	49				58	48	248	30
900	29·5	46	45	285	24	30·5	46	43	248	16	31·0	47	44	291	14	31·6	47	45			32·5	52	44	253	33
850		41	35	279	22		42	38	248	18		42	40	298	16		44	43				47	38	261	28
800	61·1	36	26	275	18	62·1	36	31	237	18	62·6	39	35	286	17	633	38	31			64·4	41	35	258	32
750		28	22	276	22		30	25	234	16		34	30	279	23		33	26				41	34	249	42
700	96·0	25	11	276	23	97·1	24	18	247	20	97·8	28	21	277	25	98·5	28	24			100·0	34	16	241	50
650		19	04	280	22		18	11	248	23		20	15	271	29		21	18				26	08	235	98
600	135·3	11	-03	281	24	136·5	11	01	246	20	137·3	12	-02	264	34	138·1	17	13			139·9	19	-05	235	49
550		04	-12	282	26		02	-06	233	21		08	03	256	35		09	-04				14	-13	238	53
500	180·2	-06	-23	278	28	181·5	-08	-15	246	23	182·7	02	-01	253	45	183·6	-02	-32			185·9	06	-19	238	60
450		-16	-34	270	30		-18	-29	250	29		-06	-08	240	60		-12	-42				-05	-26	238	68
400	232·9	-29	-47	265	33	234·2	-26	-38	246	31	236·6	-18	-23	244	88	236·8	-23	-51			240·1	-12	-22	234	73
350		-41		265	33		-90	-51	246	36		-30	-36	242	78		-35	-58				-23	-39	237	84
300	297·0	-53		258	43	298·6	-55		248	45	302·3	-43		232	107	301·7					306·8	-37	-49	235	92
250		-52		261	50		-56		241	45		-53		236	114							-56		236	101
200	3854	-44		245	36	386·3	-47		243	44	390·3	-56		239	60	390·3					394·1	-71		235	80
170		-46		254	30		-47		248	34		-52		240	58							-64		239	61
150		-49		259	26		-49		246	27		-50		261	39							-61		241	49
130		-51		256	25		-48		253	24		-50										-61		244	50
110		-47		257	19		-48		254	17		-52										-57		251	16
100	537·7	-48		271	14	538·5	-48		255	17	541·4	-53									541·3	-60		250	14
90		-48					-46		263	15		-51										-55		251	18
80							-44		261	09												-53			
70																									
60																									
																					Max wind:- 252° 27 Kts 247 mb 35,000'				
	Isothermal ° 772 - 796 mb 34° Max wind:- 263 mb 32,600' 264° 150 Kts !					Inversion ° 893 mb 46° - 879 mb 47°					Inversion ° 940 mb 54° - 925 mb 55° 785 " 38° - 768 " 42° 423 " -11° - 417 " 09° 389 " -24° - 383 " -22°															
Tropopause	I 292 mb - 55°					I 268 mb - 62° 32,200'					II 234 mb - 57° 36,200'					II 308 mb - 50° 30,000'					I 200 mb - 71° 39,400'				

Pressure mb	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots
Surf	01·2	62	56	240	12	04·4	60	55	250	07	02·9	62	55	220	08					
1000	4·2	60	55			4·8					4·9	61	55							
950		54	52	261	21		55	50	255	16		54	50	230	16					
900	33·4	51	48	271	21	33·8	49	44	252	22	34·0	49	46	236	14					
850		50	39	269	23		48	41	252	28		50	42	239	18					
800	65·4	49	32	258	29	65·8	46	32	240	28	66·0	46	38	238	25					
750		43	29	248	31		42	24	230	28		42	21	240	26					
700	101·4	38	24	242	32	101·5	36	17	232	28	101·7	38	18	236	27					
650		29	16	235	34		30	09	235	28		32	08	236	29					
600	141·7	22	08	240	42	141·9	24	08	238	30	142·1	24	08	235	32					
550		14	04	244	46		17	11	239	39		18	12	233	38					
500	187·9	11	09	241	52	188·2	07	03	236	42	188·5	10	06	232	40					
450		01	-01	237	53		-01	-05	233	44		01	-03	239	47					
400	242·7	-10	-17	240	55	242·6	-13	-17	234	45	243·3	-08	-18	236	55					
350		-21	-27	245	60		-27	-32	240	53		-22	-29	287	52					
300	309·7	-35	-43	244	65	309·1	-39	-45	238	61	310·4	-36	-42	228	60					
250		-55		243	70		-56		235	66		-52		223	65					
200	309·9	-69		247	62	306·1	-73		236	64	308·2	-71		228	65					
170		-72		244	59		-65		233	48		-68		229	46					
150		-67		244	49		-63		235	38	(53 mb)	-63								
130		-62		247	37		-66		244	35										
120		-60		256	28		-57		256	26										
100	543·9	-59		254	23	542·0	-59		268	20										
90		-59		252	18		-56		259	15										
80		-56		264	13		-53		258	11										
70						(76 mb)	-52													
60																				
	Inversion ° 871 mb 49° - 818 mb 51° 540 " 12° - 524 " 15°					Inversion ° 888 mb 48° - 860 mb 49° 562 " 16° - 550 " 17°					Inversion ° 873 mb 45° - 850 mb 50° 516 " 16° - 500 " 18°									
						Isothermal 968 - 950 mb 55°					Isothermal 808 - 790 mb 46° 708 - 700 " 38°									
Tropopause	I 176 mb - 79° 42,500'					I 190 mb - 76° 40,600'					I 180 mb - 74° 41,980'									

July 7TH 1951.

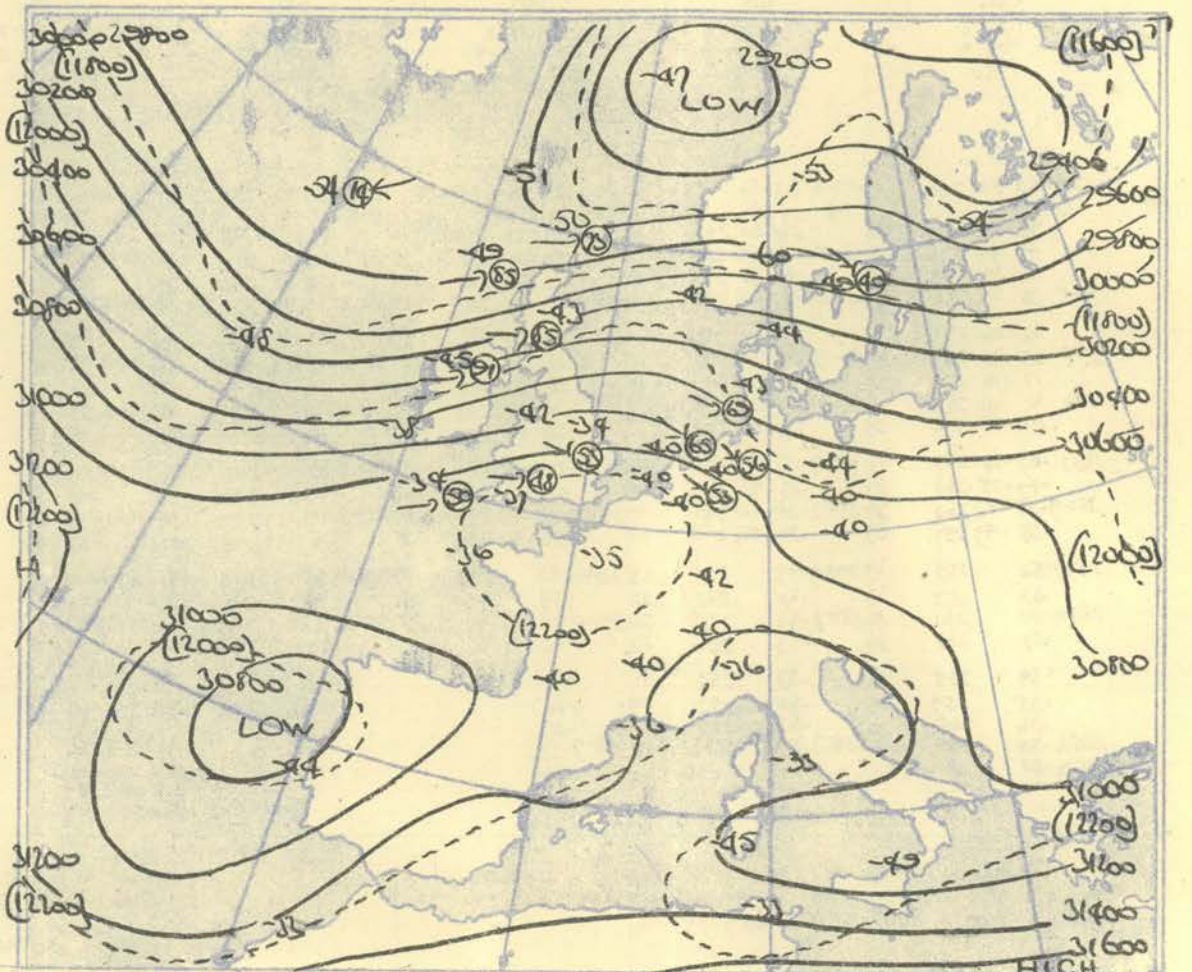
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



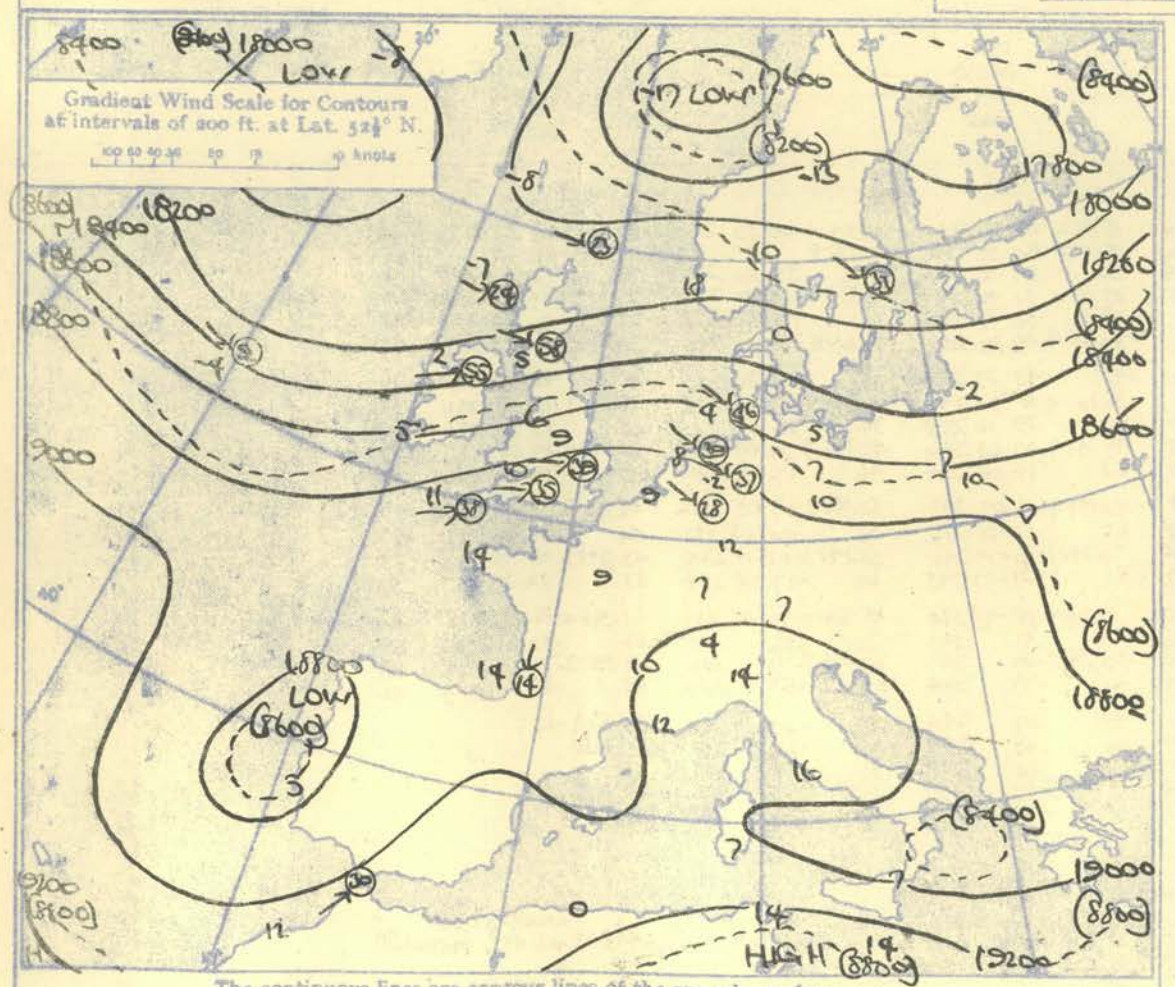
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

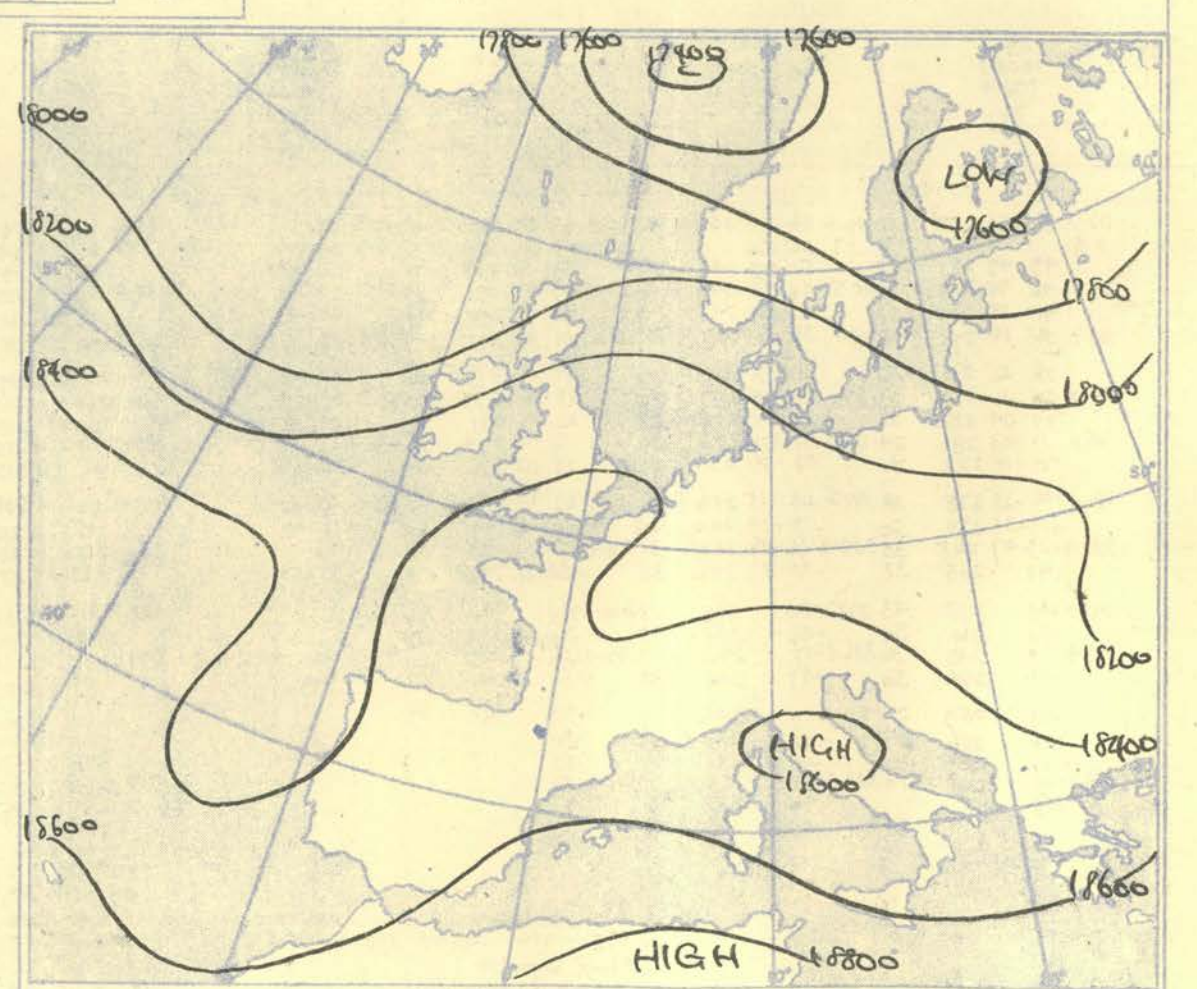
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

		52.12N. 02.12W.																																	
Pressure	Time	1345	mb			mb			mb			mb			mb			mb			mb			mb			Time	Pressure
	M.S.L.	1014.0	mb			mb			mb			mb			mb			mb			mb			mb			M.S.L.	
	Surf	1012.5	mb			mb			mb			mb			mb			mb			mb			mb			Surf	
	Freezing	661	mb			mb			mb			mb			mb			mb			mb			mb			Freezing	

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Surf	0·4																					Surf
1000	03·9																					1000
950																						950
900	33·3	54	53																			900
850		47																				850
800	65·3	41																				800
750																						750
700	101·1	37	21																			700
650																						650
600	141·5	23																				600
550																						550
500	187·9	09																				500
450																						450
400	242·7	-10																				400
350																						350
300	309·7	-38																				300
250																						250
200																						200
170																						170

Cloud.
8/8 Sc 880-750mb.
Inversion
800 mb. 41°
750 mb. 43°

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

Place	Camborne		Larkhill		Lympne		Cirrus		Larkhill												Place
Time	03h.		17h.		17h.		21h.		20h.												Time
Type	Pilot																				Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.			240	10	230	07	300	22	310	04											Surf.
1,000			240	11	230	13	280	25	280	10											1,000
2,000			250	10	250	17	280	30	280	09											2,000
3,000			260	10	270	19	280	22	270	13											3,000
4,000			260	11	250	23	280	18	260	15											4,000
5,000			260	14	240	28	280	31	240	13											5,000
6,000			260	16	250	35			240	11											6,000
8,000			250	26					250	15											8,000
10,000			250	27			280	37	260	20											10,000
14,000			250	30			270	31	240	22											14,000
18,000							280	36													18,000
24,000							290	35													24,000
30,000							(20,000')														30,000
40,000	231	56																			40,000
50,000	250	27																			50,000

NEPHOSCOPE OBSERVATIONS

Place	Valentia	Valentia	St. Eval								Place
Time Type	12h. Ci	15h. Ci	15h. Ac.								Time Type
Dir. Vel.	220 40	200 190	270 33								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	CIRRUS	CIRRUS	CIRRUS	CIRRUS		Ship
Lat/Long	58·9N. 19·0W.	58·7N. 19·0W.	59·0N. 18·9W.	59·0N. 18·9W.	52·3N. 19·6W.	52·3N. 19·9W.	52·3N. 19·9W.	52·3N. 19·9W.		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.	1007 mb	1001 mb	1004 mb	1005 mb	1013 mb	mb	1014 mb	mb	mb	M.S.L.
Surf	1007 mb	1001 mb	1004 mb	1005 mb	1013 mb	mb	1014 mb	mb	mb	Surf
Freezing	780 mb	780 mb	810 mb	790 mb	760 mb	mb	730 mb	mb	mb	Freezing

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		53	51	160	06		54	50	090	04		56	49	Calm			57	49	290	10		57	51	270	23		58	52	260	21		Surf
1000	03·0					04·0					01·1	55	49			01·5					03·8	55	48	270	22	03·9	56	51	260	22		1000
950		48	48	150	08		52	44	068	06		47	46	035	03		49	43	299	09		47	36	270	26		48	48	251	24		950
900	28·9	43	43	150	06	29·2	48	40	059	06	29·7	41	40	020	04	30·1	43	35	293	08	32·3	42	32	255	29	32·6	43	43	269	28		900
850		38	37	153	06		41	32	049	07		37	35	358	04		38	30	283	07		36	25	255	30		38	38	272	25	No	850
800	60·5	33	30	163	08	60·8	34	27	037	06	60·9	31	27	322	03	61·4	33	26	274	07	63·6	34	16	265	32	64·1	38	28	268	27		800
750		29	26	176	08		28	21	002	05		25	24	310	04		26	19	281	09		31	10	278	38		32	19	260	27	Radio Sonde	750
700	95·4	26	21	190	07	95·7	24	16			95·6	21	17	324	05	96·1	23	16	285	08	98·6	26	01	276	41	99·3	28	10	248	33		700
650		18	11	189	08		18	06				15	09	Calm			17	05	289	06		22	-09	274	43		23	-01	248	33	Ascent Available.	650
600	134·6	11	05	192	09	134·7	12	03			134·6	09	04	"		135·2	10	-03	293	05	138·2	14	-23	294	53	139·0	13	-09	232	37		600
550		05	-04	199	08		06	-07				03	-10	"			05	-13	302	03		04	-26	279	51		13	-03	249	47	For winds see	550
500	179·8	-04	-18	188	07	180·1	-03	-19			179·6	-06	-28	"		180·4	-02	-29	299	06	183·4	-04	-28	274	52	184·7	-04	-05	246	61		500
450		-14	-37	163	07		-12	-35				-17	-43	"			-12	-37	275	09		-14	-37				-05	-09	254	57	top of page.	450
400	232·8	-25	-58	095	12	233·3	-25	-46	354	07	232·8	-29	-51	"		233·5	-24	-49	264	11	236·4	-22				238·8	-16		254	46		400
350		-39	-59	082	18		-39	-59	341	10		-40	-57	"			-35	-57	262	11		-34					-28		254	45		350
300	297·0	-54		071	14	297·7	-54		338	14	296·4	-56		"		298·4	-48		261	11	301·6	-48				304·8	-41					300
250		-49		309	11		-56		315	17		-63		310	15		-64		258	15		-66					-55					250
200	385·8	-43				385·8	-46		289	16	382·9	-51		288	15	385·6	-48		270	20	387·8	-58				392·6	-56					200
170		-46					-45		285	15		-50		262	20		-46		275	24		-59					-52					170
150		-46					-45		285	14		-52		269	24		-46		275	28		-59					-53					150
130		-46					-45		271	22		-50		266	18		-48		280	22		-60					-55					130
110		-48					-45		245	20	(124 mb)	-50					-49		296	17		-61					-57					110
100	538·7	-48				539·1	-46		274	15						536·9	-49		292	17	538·8	-61				542·4	-58					100
90		-49					-45		278	14							-49		294	17		-62										90
80		-50					-44		277	13							-48		293	17		-63					-58					80
70		-51					-42		276	10							-48		288	17		-63										70
60	(068 mb)	-51					-41															-64					-54					60
																										(050)	-52					
																										(044 mb)	-52					

Isothermal 735 - 716mb. 27°; 780 - 762 mb. 31°

Isothermal 623 - 610mb. 13°

Isothermal 867 - 850mb. 37°; 616 - 608 mb. 10°

Isothermal 595 - 583 mb. 9°

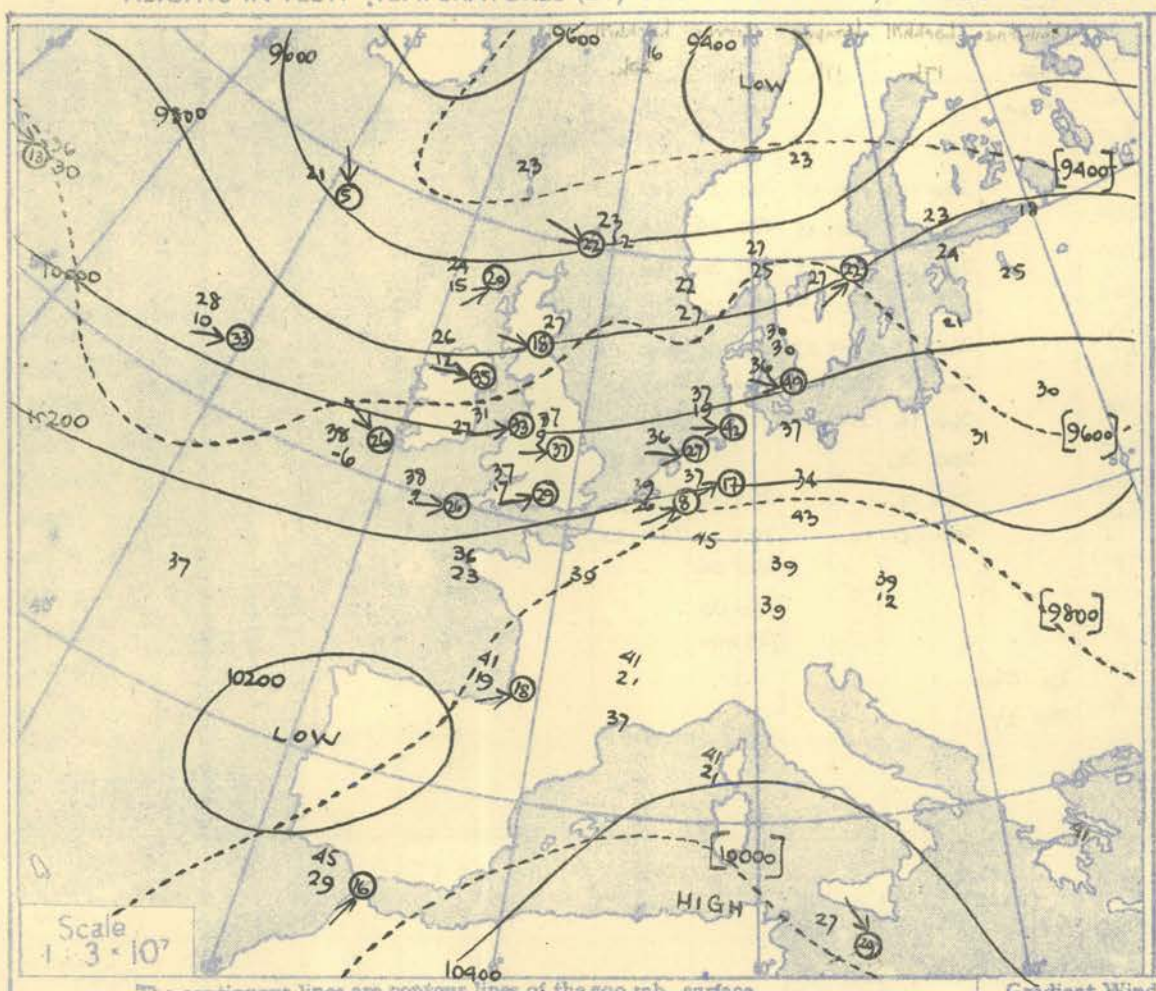
Isothermal 953 - 950mb. 47°; 825 - 787mb. 34°; 708 - 700mb. 26°

Inversion 827 mb. 36° - 820mb. 40°; 567 mb. 6° - 550mb. 13°
Isothermal 689 - 673mb. 27°

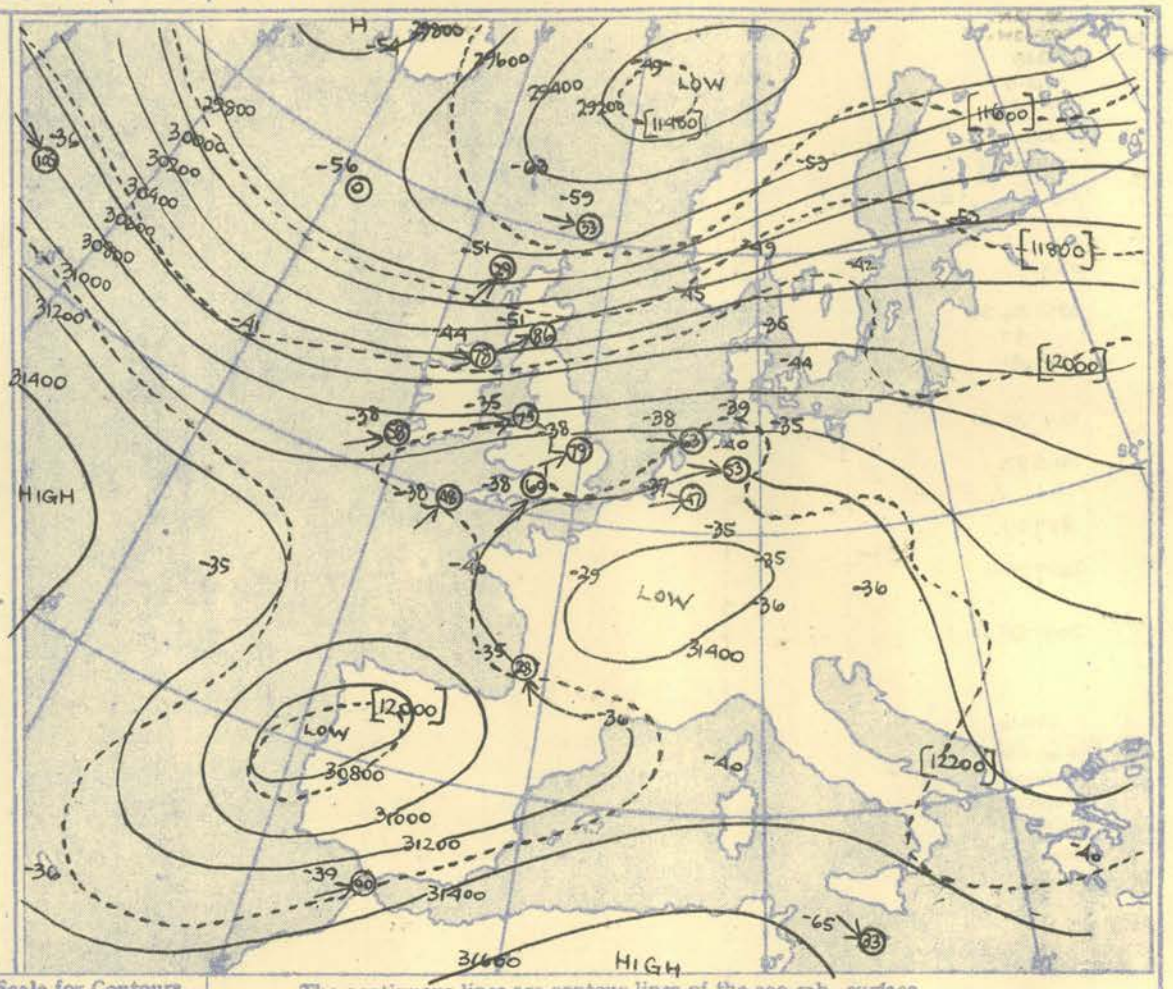
Tropopause	I 283mb. -58° 31,200'	I 295mb. -56° 30,100'	I 265 mb. -65° 32,400'	II 246mb. -65° 34,200'	I 241mb. -70° 34,700'		I 231mb. -61° 36,200'			Tropopause

Saturday 7th July 1951.

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



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

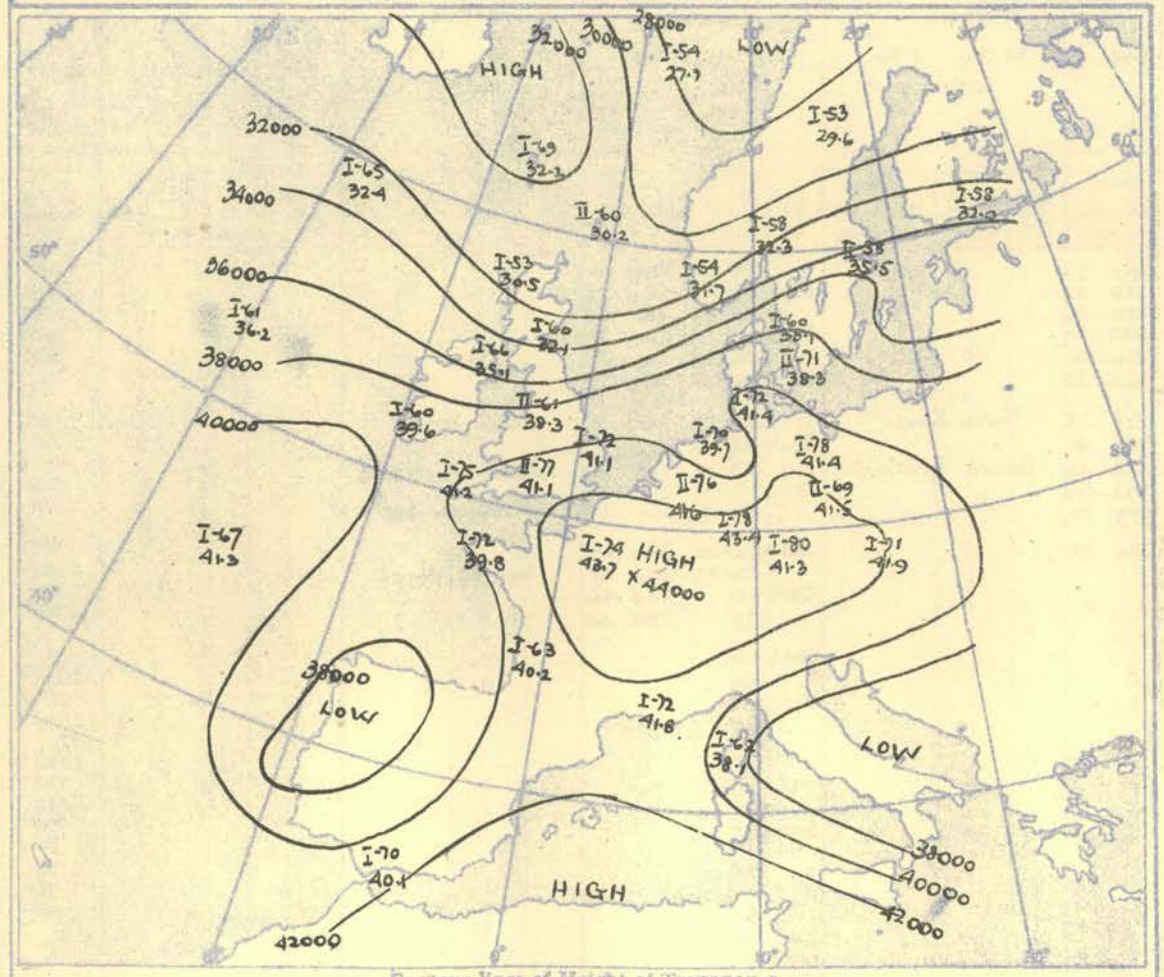


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 30 50 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

A warm ridge over Britain moved to the Baltic and a moderate southwesterly thermal gradient passed southeastward across Ireland to England. A further warm ridge from America advanced to the central Atlantic.

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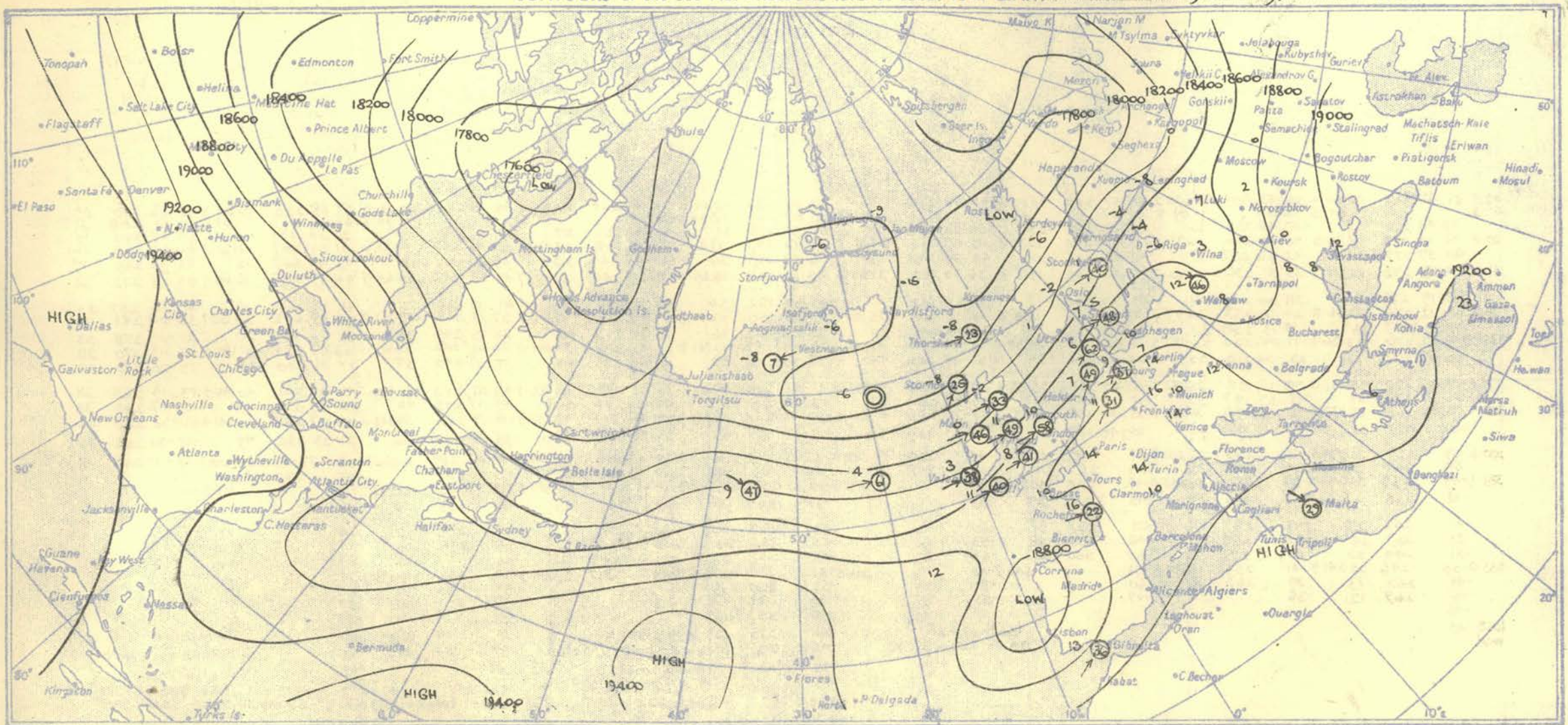
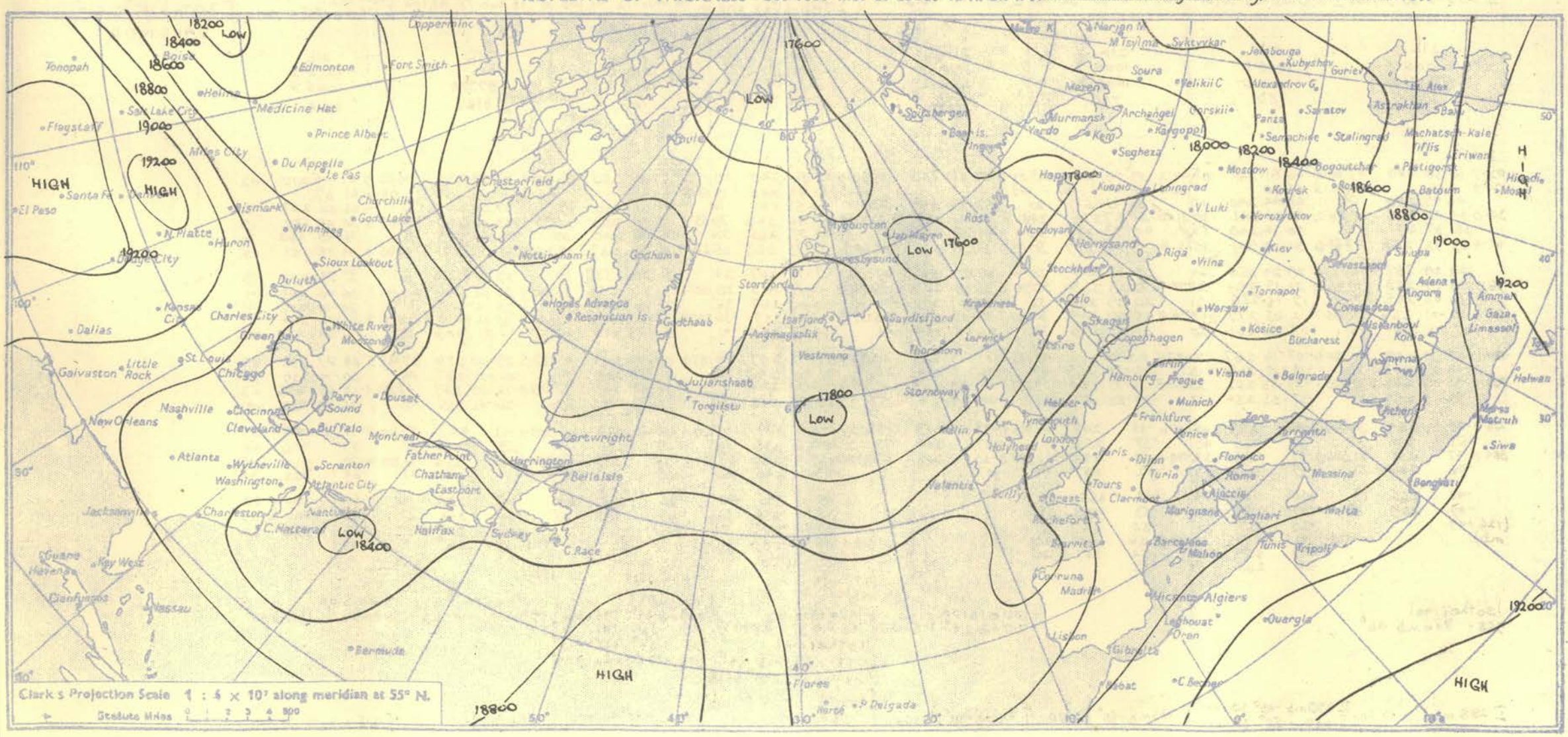
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Saturday 7th July, 1951.



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



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Saturday 7th July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h	1004·6 mb	994·6 mb	778 mb
STORNOWAY	15h	1005·4 mb	1003·8 mb	784 mb
LEUCHARS	15h	1007·1 mb	1006·3 mb	762 mb
ALDERGROVE	15h	1010·0 mb	1000·5 mb	760 mb
LIVERPOOL	15h	1012·3 mb	1010·3 mb	713 mb
DOWNHAM MARKET	15h	1014·2 mb	1009·8 mb	647 mb
LARKHILL	15h	1016·2 mb	1000·6 mb	650 mb
CAMBORNE	15h	1016·8 mb	1006·5 mb	650 mb
VALENTIA	15h	1015·9 mb	1014 mb	660 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	51	010	02	00·4	55	53	190	05	00·2	65	57	260	16	02·6	64	54	270	15	00·6	62	60	260	10	01·2	71	54	250	16	09·4	68	58	240	04	02·9	67	58	220	12	00·3	63	56	270	09	Surf
1000	01·2					01·5	56	53			01·8	64	57			02·7					03·4	61	59	261	18	04·0	70	54			09·5					04·7	66	58			04·3	61	59	268	11	1000
950		48	48	276	12		52	46	238	15		65	51	290	23		56	46	278	21		57	54	253	21		62	52	230	20		59	51	240	14		57	54	231	12		54	49	264	15	950
900	29·8	44	44	273	18	30·3	48	41	236	16	31·0	49	47	244	22	31·8	49	40	260	24	32·7	52	48	251	23	33·4	65	49	238	22	33·8	62	46	250	14	34·0	51	51	257	11	33·3	46	42	266	16	900
850		40	37	273	21		42	36	237	17		43	40	246	21		42	34	248	28		46	43	258	24		48	45	247	23		45	40	249	18		45	44	267	12		44	33	268	19	850
800	61·2	34	26	275	22	61·9	35	31	236	20	62·7	37	34	245	19	63·4	36	30	243	32	64·6	43	30	256	28	65·4	46	38	246	27	65·7	44	35	245	24	65·9	44	39	267	16	65·1	44	19	272	24	800
750		29	19	276	24		28	24	240	18		31	30	251	17		31	21	242	29		37	32	252	34		44	21	236	33		41	18	246	25		43	14	263	19		40	14	277	29	750
700	96·0	23	12	276	22	96·8	24	16	233	20	97·7	27	26	257	18	98·5	26	12	244	35	109·0	31	27	250	33	101·3	37	09	238	37	101·4	37	17	249	29	101·7	38	09	252	26	100·7	38	-06	281	26	700
650		17	00	277	23		19	13	228	28		22	20	236	18		20	05	245	35		28	-08	252	36		33	02	293	40		32	15	249	32		32	20	243	30		30	-09	278	33	650
600	136·2	09	-02	276	23	136·1	11	04	222	25	137·3	16	12	232	21	138·0	14	-01	246	41	140·1	23	-18	248	42	141·8	29	01	246	93	141·0	23	06	242	36	142·1	25	07	234	31	140·9	22	-13	270	38	600
550		00	-09	270	23		02	-04	210	25		08	00	236	34		08	-07	248	44		17	-30	246	99		16	-03	295	48		18	07	290	37		17	01	240	34		13	-20	270	43	550
500	179·8	-08	-15	270	23	181·0	-08	-15	198	25	182·7	-02	-10	243	33	183·4	00	-17	255	46	186·5	11	-35	248	49	188·1	10	05	243	58	188·3	08	02	243	41	188·6	11	-08	241	40	186·9	03	-19	263	38	500
450		-21	-27	270	23		-19	-27	187	25		-10	-22	249	41		-09	-33	262	57		03	-35	249	59		00	-11	246	56		01	-17	295	46		02	-09	242	42		00	-17	240	38	450
400	232·1	-31	-43	266	27	233·5	-30	-36	195	22	236·1	-21	-36	253	49	237·1	-17	-32	255	61	241·5	-06	-40	248	66	242·9	-06	-26	247	63	242·9	-10	-19	242	59	243·4	-08	-17	237	45	241·4	-11	-25	240	48	400
350		-45		267	31		-42		213	28		-35	-48	263	67		-28	-39	254	68		-19	-47	250	68		-23	-36	246	69		-23	-33	242	56		-21	-33	232	49		-18	-34	242	50	350
300	295·6	-59		269	33	297·5	-51		230	29	301·1	-51		257	86	303·1	-44		250	78	308·8	-35	-58	249	74	309·8	-38	-47	245	79	309·7	-38	-47	239	60	310·6	-38	-47	228	48	308·3	-38	-48	241	58	300
250		-54		264	30		-44		248	36		-53		253	74		-62		248	73		-49		240	98		-54		245	79		-55		235	71		-55		232	62		-55				250
200	383·3	-49		257	34	387·2	-39		250	33	389·0	-49		248	68	390·1	-54				397·3	-62		237	99	397·2	-69		241	84	397·0	-73		233	71	397·9	-72			395·8	-60				200
170		-48		258	27		-42		246	28		-48		255	39		-53					-57		245	75		-63		237	65		-74		233	56		-66					-56				170
150		-49		252	27		-43		267	26		-48		257	37		-54					-54		247	50		-61		242	52		-69		242	42		-64					-56				150
130		-50		253	24		-42		258	21		-48		250	28		-53					-55		245	45		-55		245	33		-66		246	36		-63				(114	-65				130
110		-51		244	22		-40		271	12		-50		260	21		-53					-51		258	32		-60		249	26		-65		256	25		-61				mb)					110
100	535·0	-50		246	20	541·9	-41		253	14	539·8	-51										-51		259	27	549·7	-58		250	25	541·3	-63		236	16	543·9	-61								100
90		-48		262	13		-39		263	16		-50										-51		230	16							-59		235	16		-61									90
80		-48		269	12		-38					-49										-53		249	17							-57		251	20		-59									80
70		-48																				-48		251	16							-53		251	16		-57									70
60	1068 mb)	-48														Isothermal 735-723mb 30°						-46		233	12	Inversion						-51		308	08		-54				Inversion					60
																						-46		232	10	820 mb 44°-784mb 48°						-49		180	09		-52				500mb 3°-476mb 5°					
																						-40		300	03	Isothermal					(95	-47					-49				Isothermal					
																					(35	-46				700-675 mb 37°					mb)	Inversion								883-800mb 48°					
																					mb)	Inversion				545-524 " 14°					833 mb 43°-800mb 49°					(37mb)	48	Inversion			730-708 " 39°					
																					693mb 30°-680mb 31°																519 mb 13°-513mb 19°										
																					Isothermal																Isothermal										
																					665-640mb 28°																517-758 mb 49°										
Tropopause	II 293mb-60° 30,200'					I 290mb-53° 30,500'					I 274mb-60° 32,100'					I 240 mb -66° 35,100'					II 213mb-61° 38,300'					I 187mb-72° 41,100'					II 187mb-77° 41,100'					552-642 " 17° I 186 mb-75° 41,200'					I 200mb-60° 32,600'					Tropopause

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h	1005·4 mb	995·4 mb	790 mb
STORNOWAY	21h	1005·6 mb	1004·0 mb	780 mb
LEUCHARS	21h	1007·7 mb	1006·9 mb	791 mb
ALDERGROVE	21h	1010·6 mb	1001·1 mb	776 mb
LIVERPOOL	21h	1011·9 mb	1009·9 mb	720 mb
DOWNHAM MARKET	21h	1013·6 mb	1009·2 mb	706 mb
LARKHILL	21h	1016·1 mb	999·4 mb	688 mb
CAMBORNE	21h	1016·2 mb	1005·8 mb	664 mb
VALENTIA	21h G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	50	50	080	07	00·4	66	51	240	05	00·2	59	48	280	13	02·6	58	51	240	15	00·6	62	56	240	10	01·2	63	55	250	06	04·4	63	58	270	04	02·9	61	59	270	02						Surf
1000	01·4					01·5	55	50			02·1	58	47			02·9					03·3	61	55	245	15	03·8	69	55			04·2					04·5	61	57								1000
950		46	45	246	04		60	44	240	10		52	43	261	20		63	46	253	23		56	51	261	16		61	51	255	19		59	54	261	10		56	55	263	12							950
900	30·0	44	42	265	10	30·2	45	40	241	10	31·0	46	37	270	24	31·8	47	41	254	23	32·4	50	46	246	20	33·1	53	45	258	20	33·4	53	50	269	14	33·5	50	49	270	15						900
850		38	37	271	19		40	36	240	12		40	33	277	29		41	38	259	21		43	39	265	24		45	40	260	20		46	45	273	18		46	43	262	16							850
800	61·4	33	32	268	17	61·6	34	28	241	15	62·5	33	28	277	30	63·3	35	33	255	24	64·1	39	33	263	25	64·9	40	36	267	18	65·3	43	32	271	14	65·4	44	38	251	15						800
750		28	24	257	18		29	24	254	20		29	23	270	28		29	27	254	27		37	19	267	24		36	30	255	19		39	20	258	16		37	33	249	13							750
700	96·2	23	19	258	19	96·4	24	19	254	21	97·4	23	18	263	30	98·2	26	18	264	36	99·5	31	17	273	28	100·4	31	26	246	25	100·9	34	25	246	21	101·1	36	-06	253	11						700
650		16	02	265	19		17	14	255	21		20	09	260	32		22	-07	272	44		24	00	267	35		27	15	248	32		28	12	248	31		30	-14	256	11							650
600	135·3	10	-01	266	18	135·7	12	05	277	18	136·8	14	00	249	30	137·7	13	-13	270	45	139·3	17	-11	259	36	140·9	23	-21	248	37	141·2	22	12	248	36	141·3	22	-23	254	19						600
550		01	-12	261	16		03	-06	266	20		06	-13	253	33		06	-11	259	41		14	09	250	41		15	-44	245	40		17	01	243	38		15	-34	241	28							550
500	180·1	-07	-22	258	20	180·6	-07	-16	267	20	182·1	00	-28	256	45	183·1	02	-13	253	40	185·2	07	-12	247	48	187·1	09	-19	244	45	187·5	09	-20	236	39	187·5	08	-27	233	34						500
450		-18	-29	263	23		-18	-28	268	18		-08	-35	253	51		-06	-17	247	36		-02	-15	247	48		01	-14	248	51		-01	-11	237	44		00	-14	230	39							450
400	232·5	-32	-43	262	29	233·1	-29	-43	262	30	235·8	-18	-39	250	59	237·1	-15	-28	245	49	239·6	-14	-24	244	49	241·8	-11	-49	247	57	242·0	-12	-25	237	48	242·1	-12	-29	226	43						400
350		-45		259	33		-37	-55	254	32		-30	-52	254	61		-28	-39	247	57		-28	-38	242	56		-25	-46	295	60		-26	-42	235	48		-25	-39	225	48							350
300	296·0	-59		259	30	297·9	-47		259	45	301·6	-45		249	60	303·1	-43		243	68	305·7	-44		241	60	308·4	-40	-56	239	65	308·4	-42		227	49	308·7	-41		224	59							300
250		-52		258	31		-50		260	40		-59		252	91		-57		244	73		-60		238	76		-59		239	77		-59		226	59		-59		216	46							250
200	389·0	-47		258	31	386·9	-49		253	33	388·6	-54		248	56	390·0	-65		248	57	392·0	-69		240	67	394·8	-75		239	73	394·8	-76		224	61	395·4	-70		214	48							200
170		-46		260	22		-49		254	33		-52		257	44		-57					-63		245	45		-69		243	51		-71		232	47		-64		235	34							170
150		-48		265	19		-46		254	29		-53		258	32							-60		245	40		-65		248	33		-67		234	35		-64		240	32							150
130		-49		259	19		-49		254	22		-53		258	28							-58		252	36		-63		249	32		-66		244	29		-62		240	27							130
110	(126 mb)	-49					-50		257	31		-54		257	21							-57		265	21		-65					-64		209	27		-63		248	22							110
100						538·9	-49		259	20	538·9	-56		237	20							-58		280	16							-63		259	17	541·6	-62									100
90							-49		259	20		-54		257	25							-56		265	17							-63														90
80							-50		260	13		-52										-54																									80
70																						(77 mb) -53																									70
60	Isothermal 958-944mb 46°															Inversion 717 mb 29°-705 mb 26°					Inversion 786 mb 37° 768 mb 39° Isothermal 578-550mb 19° Max Wind 290° 89kts 226 mb 36,700'					Inversion 1009 mb 63°-990mb 66° 759-35°-743-36° 633-24°-622-25° 208-79°-206-73°					Isothermal 999-987 mb 63° 571-561 " 19°					Inversion 750 mb 37°-730 mb 40°					60
Tropopause	I 288 mb-60° 30,500'					II 290mb -49° 30,500' I 250 " -50° 33,800'					II 233mb-65° 35,500'					I 215mb-70° 37,500'					I 208 mb-72° 38,900'					I 195 mb-77° 40,000'					I 186mb-77° 41,000'					II 215 mb-70° 38,000'					Tropopause

No. 11788 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Sunday 8th July 1951 Page 1.

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

03L G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.	03L G.M.T.
Pressure: M.S.L.	1004·8 mb	1005·2 mb	1008·0 mb	1010·0 mb	1011·5 mb	1013·4 mb	1014·7 mb	1014·3 mb	1012·2 mb
Pressure: Surf	994·9 mb	1003·6 mb	1007·2 mb	1000·5 mb	1009·5 mb	1009·2 mb	998·8 mb	1003·8 mb	1011 mb
Pressure: Freezing	780 mb	790 mb	770 mb	740 mb	695 mb	684 mb	668 mb	671 mb	750 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	50	CALM		004	52	50	240	05	00·2	53	50	250	08
1000	1·2					1·4	52	50			2·2	53	50		
950		47	47	291	05		49	43	240	09		49	46	248	26
900	29·8	44	44	267	06	301	45	42	237	12	30·9	45	42	249	25
850		38	38	255	07		40	35	238	12		40	36	255	24
800	61·2	34	34	257	09	61·6	34	27	238	10	62·4	35	31	253	21
750		28	27	266	09		26	23	237	10		30	26	252	20
700	96·1	23	20	254	12	96·2	22	15	235	09	97·4	25	17	243	29
650		17	13	256	13		17	04	246	10		19	09	268	42
600	135·4	10	05	254	12	135·4	10	-06	261	10	136·8	12	06	269	43
550		02	-05	237	12		03	-16	269	12		04	-01	262	40
500	180·2	-07	-14	225	12	180·4	-05	-28	276	14	181·9	-02	-06	254	37
450		-18	-27	197	13		-14	-41	277	23		-09	-12	246	46
400	232·7	-29	-39	186	10	238·3	-24	-50	263	38	235·4	-20	-24	247	47
350		-43		261	06		-35	-51	251	48		-33	-38	244	54
300	296·7	-52		259	17	298·2	-51		251	52	300·9	-45		239	63
250		-49		254	32		-65		250	47		-61		241	69
200	385·4	-46		264	28	385·1	-62		255	32	387·5	-69		244	51
170		-46		253	24		-52		255	25		-50		248	36
150		-48		256	25		-52		256	20					
130		-47		264	19		-54		255	18					
110		-49		253	16										
100	587·7	-50		255	14										
90		-49		259	10										
80		-48		268	12										
70		-48		293	09										
60	(65 mb)	-47													

For rest of winds see page 3.

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	55	52	230	08	00·6	59	54	CALM		01·2	56	52	250	08
1000	2·8					3·2	58	53	269	15	3·6	57	53		
950		51	47	254	18		53	46	267	10		57	54	268	14
900	31·6	45	42	257	18	32·1	48	39	258	11	32·7	53	47	266	13
850		41	37	261	18		43	39	246	20		47	35	264	13
800	63·1	35	30	259	20	63·7	37	31	244	23	64·6	41	36	257	16
750		33	21	249	24		37	14	241	24		38	15	257	20
700	98·3	28	11	240	24	99·2	33	00	235	27	100·1	34	03	266	23
650		20	00	233	28		25	-05	247	31		27	-02	268	25
600	131·7	12	-10	233	35	139·0	16	-14	250	33	140·1	19	-06	262	36
550		02	-10	228	40		07	-18	248	36		13	-13	244	40
500	182·6	-07	-13	232	47	184·4	-03	-17	253	40	186·1	06	-19	240	47
450		-09	-12	231	45		-09	-19	241	46		-04	-14	240	48
400	235·8	-21	-24	226	45	238·0	-16	-25	236	48	240·3	-13	-26	232	54
350		-35	-39	222	51		-29	-38	235	59		-26	-35	230	58
300	300·9	-50		225	60	304·0	-43		226	64	306·7	-42		227	60
250		-65		220	60		-61		223	67		-59		221	64
200	387·5	-67		229	38	390·2	-68		231	60	393·4	-69		224	66
170		-58		250	35		-60		243	47		-64		232	51
150		-56		239	30		-60		238	33		-62		236	40
130		-59		260	22		-58		243	26		-61		247	32
110		-58		266	17		-61		238	22		-63		267	24
100	536·5	-57		266	14	537·9	-63		245	21	540·0	-64		253	18
90		-58		262	14		-60		243	22		-59		250	15
80		-57		263			-59		254	13		-58		260	14
70							-60		273	10		-59		274	15
60						(67 mb)	-60								

Max wind:- 222° 78 Kts. 244 mb 34,800'

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	55	54	CALM		02·9	56	55	CALM		00·3	56	55	240	04
1000	4·0					3·9	56	55			3·3	55	54	240	09
950		56	54	260	10		54	48	272	09		49	47	241	14
900	33·2	53	50	252	10	32·9	49	48	256	12	32·1	45	43		
850		48	43	250	13		44	42	242	16		40	38		
800	65·1	42	36	280	15	64·6	41	38	235	20	63·6	35	33		
750		38	33	238	18		37	20	234	19		32	11		
700	100·7	36	08	233	15	100·1	35	-29	234	15	99·5	24	06		
650		29	-02	246	12		29	-34	236	13		16	03		
700	140·1	21	-07	240	18	140·3	20	-40	235	16	138·7	11	04		
550		13	-19	282	29		10	-48	235	21		05	-01		
500	186·9	06	-02	234	35	186·0	02	-54	234	30	183·9	-03	-08		
450	48	-04	-10	231	40		-08	-40	230	88		+12	-15		
400	241·1	-14	-22	224	45	239·8	-16	-26	226	43	237·1	-23			
450	58	-28	-32	219	48		-30	-35	221	41		-35			
300	307·3	-42		221	46	305·7	-48		226	43	302·0	-50			
250	64	-60		211	52		-64		226	39		-52			
200	393·7	-68		219	51	391·5	-67		225	41					
170	63	-65		234	44		-65		241	42					
150		-68		236	37		-64		249	36					
130		-65		247	33		-64		255	30					
110		-62		250	20		-64		257	21					
100	539·9	-64		243	19	537·9	-63		256	21					
90		-65		258	16		-64		255	17					
80		-62					-64		269	12					
70							-67		301	15					
60						(65 mb)	-61								

	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Inversion	325 - 312 mb -4.9°			791 mb 37°-779 mb 35° 480 " -10°-459 " -0°	802 mb 36°-789 mb 30°	1009 mb 56°-980 mb 60°	999 mb 55°-982 mb 58° 737 " 37°-722 " 38°	1004 mb 56°-987 mb 57°	789 -766 mb 34°
Isothermal					727 - 712 mb 8.5° 462 - 432 " -0.9°		854 - 842 mb 9.8°	774 - 718 mb 3.7°	
Tropopause	II 297 mb -5.8° 29,900'	I 246 mb -6.6° 34,000'	I 189 mb -7.1° 40,000'	I 248 mb -6.6° 34,200'	I 218 mb -7.1° 37,200'	I 210 mb -7.0° 38,300'	I 211 mb -7.3° 38,200'	I 219 mb -7.3° 37,200'	I 265 mb -5.8° 32,900'

09L G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09L G.M.T.	09L G.M.T.	09L G.M.T.	09L G.M.T.	09L G.M.T.	09L G.M.T.	09L G.M.T.	09L G.M.T.	G.M.T.
Pressure: M.S.L.	1005·1 mb	1004·8 mb	1007·3 mb	1008·5 mb	1010·1 mb	1011·3 mb	1012·5 mb	1013·0 mb	mb
Pressure: Surf	995·2 mb	1003·2 mb	1006·5 mb	999·0 mb	1008·1 mb	1006·9 mb	996·8 mb	1002·6 mb	mb
Pressure: Freezing	783 mb	780 mb	743 mb	795 mb	725 mb	679 mb	750 mb	669 mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	49	050	15	00·4	56	53	200	05	00·2	60	51	250	
1000	1·4					1·3	56	53			2·0	59	51		
950		45	45	038	03		50	42	195	07		52	46	255	15
900	29·9	43	43	351	04	30·1	45	38	196	08	30·9	44	41	266	15
850		39	39	299	06		40	34	198	08		39	35	263	17
800	61·3	34	33	284	07	61·5	34	28	203	07	62·3	36	29	254	15
750		28	27	264	06		29	25	211	06		33	19	244	12
700	90·2	23	20	273	07	96·4	24	19	219	07	97·5	25	11	231	16
650		17	13	298	03		19	12	224	08		18	02	234	20
600	135·4	10	05	292	04	135·1	12	-01	214	09	136·7	10	08	226	30
550		03	-05	276	06		05	-10	184	08		03	-03	235	40
500	180·3	-06	-16	290	08	180·9	-03	-17	175	09	181·7	-05	-10	227	48
450		-17	-29	268	10		-11	-22	175	09		-11	-17	227	36
400	233·0	-27	-41	265	12	234·2	-20	-28	191	10	234·9	-21	-29	223	48
350		-41		262	34		-32	-42	198	15		-35	-43	219	43
300	297·2	-52		260	55	299·6	-47		189	22	299·9	-51		218	60
250		-63		254	45		-61		196	24		-60		221	61
200	384·4	-51		254	25	387·2	-47		236	15	387·7	-48		232	27
170		-49		257	20		-44		250	19		-51		227	25
150		-48		257	15		-42		253	18		-50		241	31
130		-50		247	16		-41		253	15		-48		238	16
110		-50		254	14		-41		253	15		-49		247	19
100	536·2	-49		279	12	541·6	-42		263	19					
90		-47		277	11		-42		270	12					
80		-45					-42		258	11					
70							-43		240	09					
60							-43		227	09					
							-40								

Max wind:- 213° 72 Kts 232 mb 32,100'

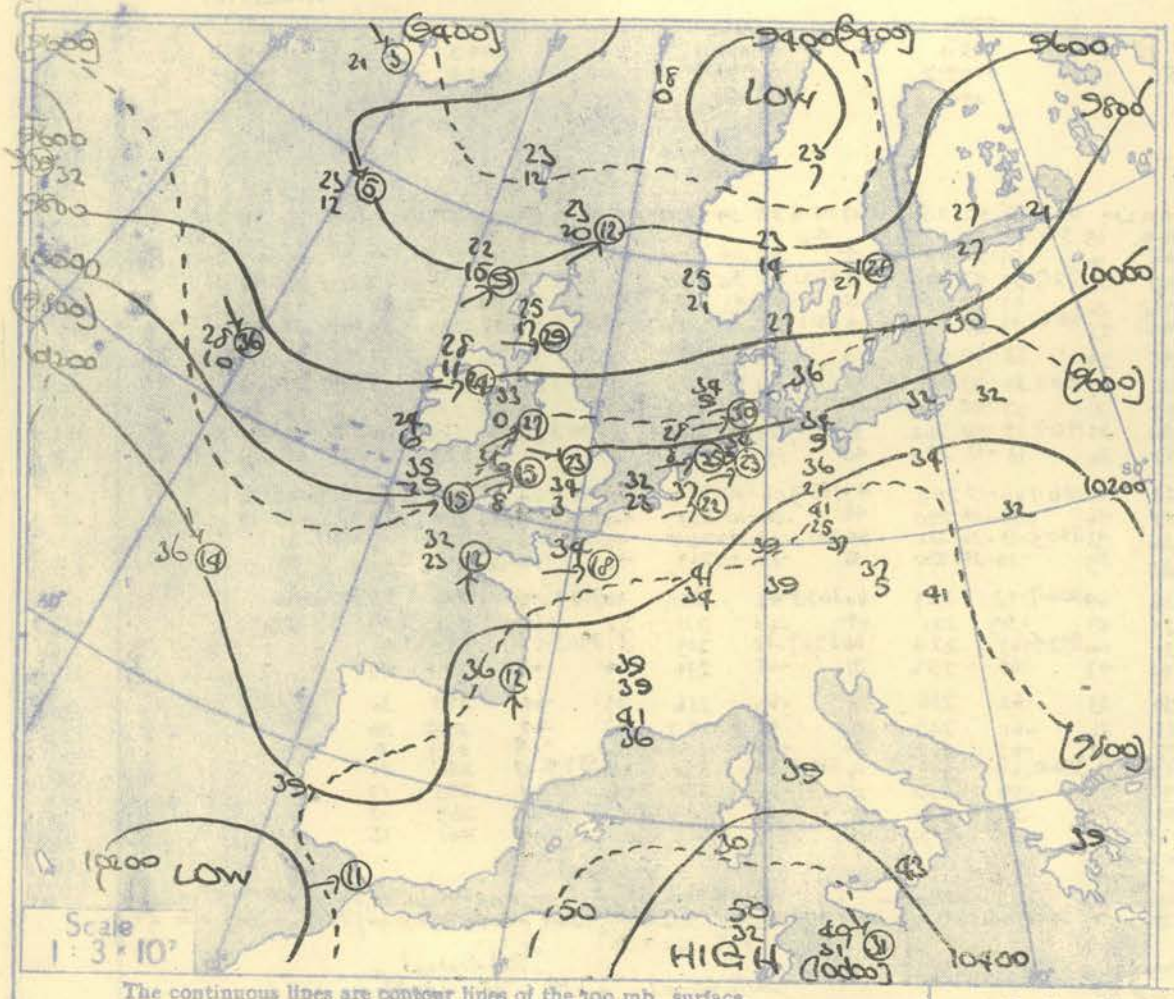
Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	56	52	220	08	00·6	59	54	255	03	01·2	63	56	200	05
1000	2·3					2·8	58	52			3·1	62	55		
950		49	45	229	13		52	45	240	10		55	50	219	13
900	31·0	44	38	220	13	31·6	46	41	228	09	32·3	50	46	217	17
850		39	33	220	13		43	37	224	12		47	41	228	22
800	62·4	33	27	219	16	63·2	36	30	221	16	64·2	40	34	228	21
750		26	21	223	15		32	22	220	18		38	13	227	20
700	97·1	21	15	226	19	98·2	30	-10	220	21	99·7	35	01	222	19
650		14	07	222	27		25	-22	213	38		29	02	207	19
600	136·1	05	-02	223	28	138·1	20	-15	213	40	139·8	19	-07	192	17
550		-02	-09	228	27		08	-15	213	39		10	-10	209	23
500	180·6	-10	-17	231	29	183·7	02	-11	220	42	185·5	01	-08	221	38
450		-19	-28	224	30		-11	-24	225	48		-06	-12	224	47
400	233·0	-27	-38	210	36	237·1	-20	-31	218	47	259·5	-16	-25	223	50
350		-39	-48	210	45		-33	-50	220	55		-31	-40	223	49
300	297·4	-50		215	46	302·5	-46		216	65	305·3	-45		218	46
250		-50		222	39		-59		213	79		-61		219	51
200	386·3	-44		241	28	389·8	-54		229	93	392·0	-61		223	45
170		-46		242	26		-49		234	34		-58		230	39
150		-48		257	22		-51		237	32		-58		234	37
130		-50		262	20		-51		239	22		-57		218	30
110		-52		255	19		-54		240	24		-58		255	23
100	538·2	-54				540·7	-52		247	24	540·4	-58			
90							-51		260	15					
80							-51		283	10					
70							-52								
60						(65 mb)	-50								

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	61	57	250	03	02·9	62	55	220	03					
1000	3·5					3·6	61	54							
950		53	50	252	12		54	50	242	11					
900	32·5	48	46	242	13	32·6	49	42	257	13					
850		44	43	241	15		44	37	263	16					
800	64·2	39	38	233	19	64·3	38	33	242	17					
750		32	29	221	22		36	19	226	23					
700	99·4	30	02	221	28	99·8	35	10	238	29					
650		26	13	220	31		30	-04	231	30					
600	139·3	20	04	230	34	140·0	23	-06	234	34					
550		10	-05	232	34		14	-05	237	36					
500	185·1	02	-16	233	37	186·1	05	-04	248	37					
450		-05	-14	221	41		-02	-17	257	43					
400	239·0	-17	-25	225	42	240·4	-13	-35	261	47					
350		-31	-38	226	48		-27	-47	253	43					
300	304·7	-44		230	47	306·7	-42								
250		-60		225	54		-56								
200	391·7	-57		228	48	394·3	-57								
150		-54		229	38		-54								
130		-53		251	37		-54								
110		-54		238	28		-56								
100		-55		224	29	(119 mb)	-58								
90		-55		243	21										
80		-55		272	15										
70		-50		281	11										
60		-50		232	10										
	(61 mb)	-47													

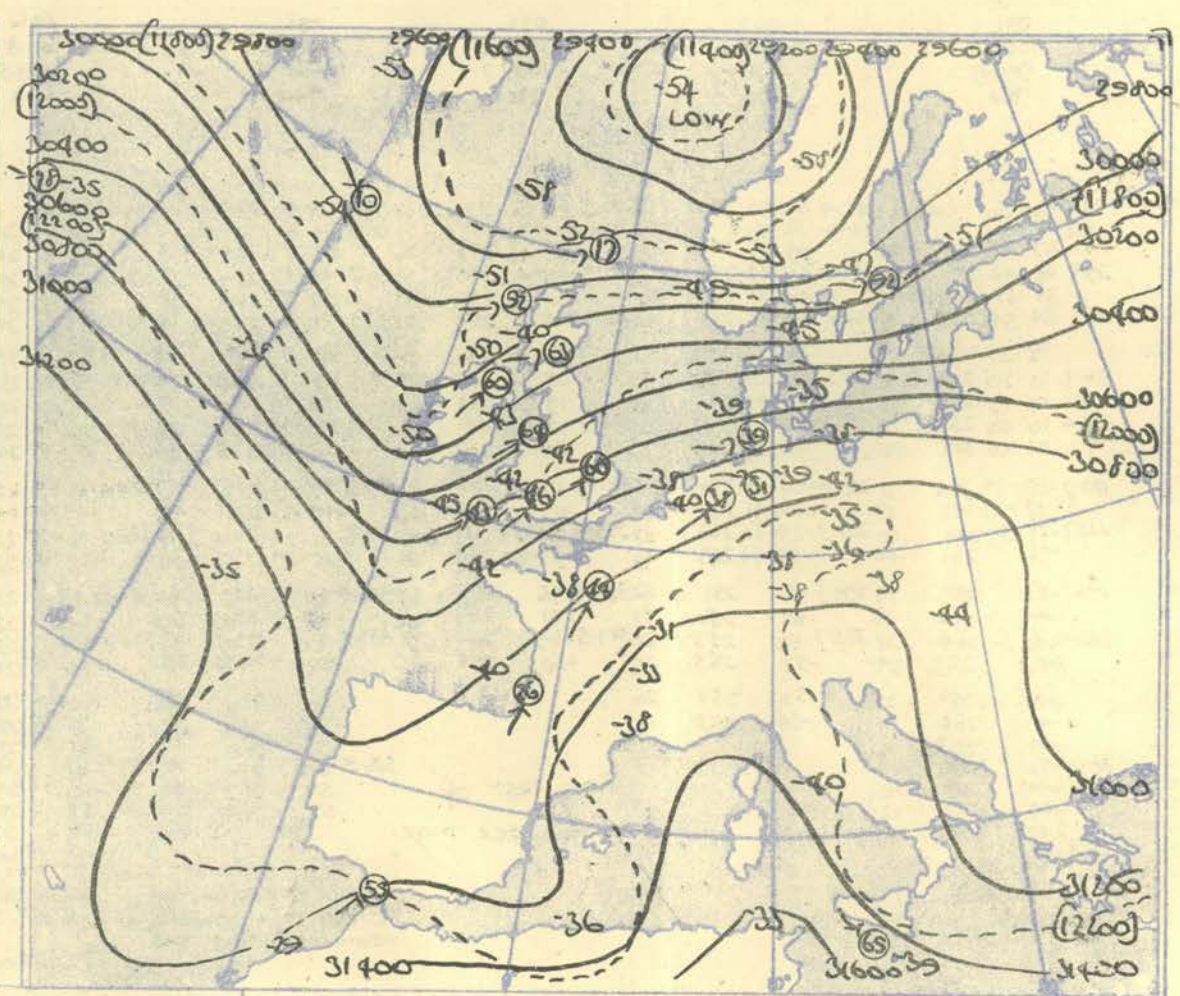
	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Inversion				760 mb 30°-745 mb 33°	765 mb 36°-750 mb 38°		740 - 680 mb 3.0°	780 mb 36°-724 mb 63°	
Isothermal				458 - 447 mb -1.1°	900 - 887 mb 5.0° 750 - 722 " 3.8° 439 - 428 " -0.9°			485 - 475 mb 0.2°	
Tropopause	I 250 mb -6.3° 33,600'	II 257 mb -6.1° 33,300'	I 252 mb -6.1° 33,800'	I 289 mb -5.2° 30,500'	I 235 mb -6.8° 35,500'	I 215 mb -6.8° 37,600'	II 236 mb -6.4° 35,700'	II 232 mb -6.2° 36,200'	

July 8th 1954.

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

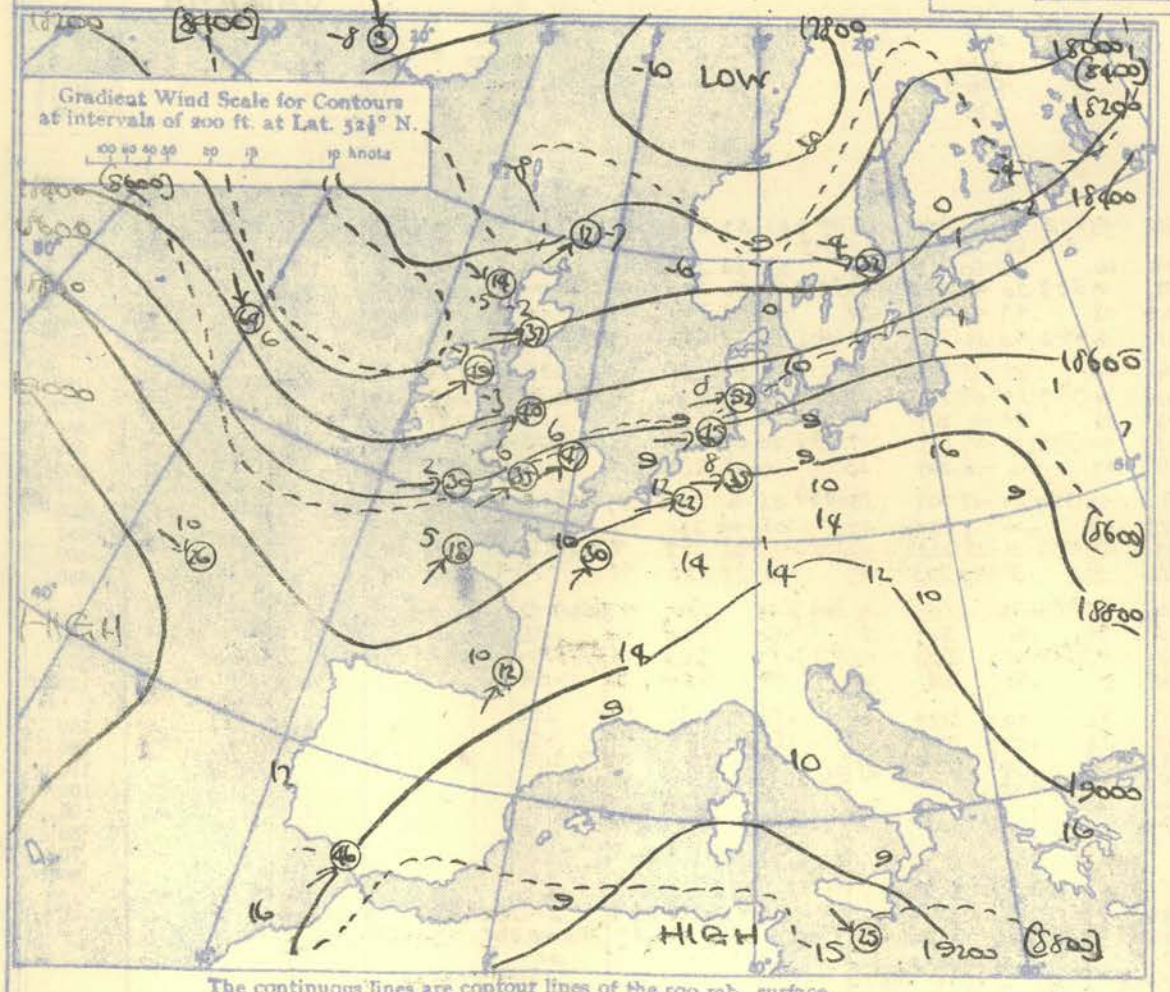


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

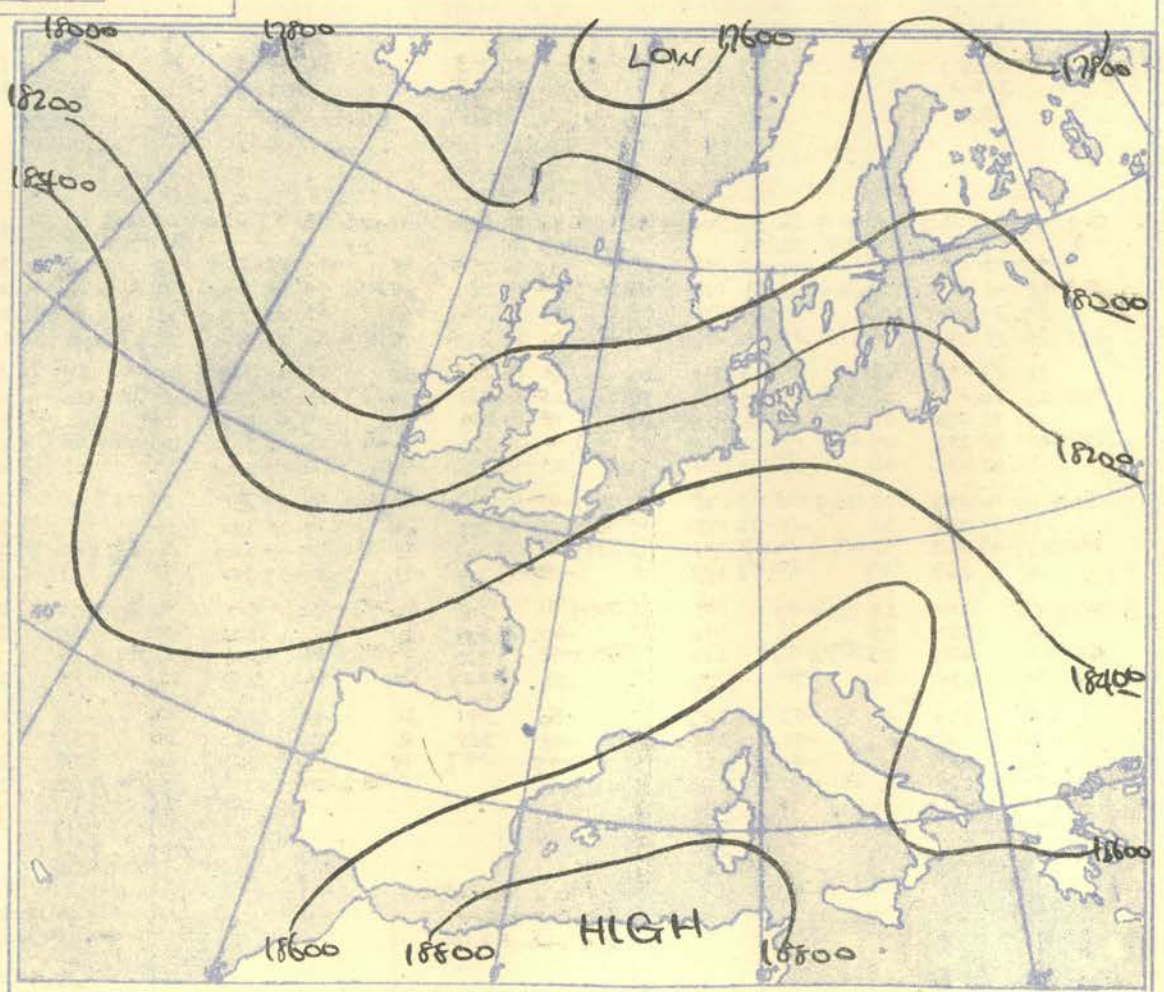


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

Gradient Wind Scale for Contours
at intervals of 200 ft. at Lat. 52½° N.
100 80 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

	52·12N. 02·12W.		
Time	1400h.		
Pressure M.S.L.	1008·5 mb		
Pressure Surf	1007·0 mb		
Pressure Freezing	742 mb		
Pressure mb	**Height ft./100**	**Temp. °F.**	**Dew °F.**
Surf	0·4		
1000	02·4		
950			
900	31·8	52	50
850		45	
800	63·7	38	
750			
700	98·8	27	
650			
600	138·3	16	
550			
500	183·8	00	
450			
400	237·3	-25	
350			
300	302·5	-45	
250			
200			
170			

Cloud
4/8 Cu Sc 850-680mb.
7/8 Ac Cast. 550-420mb. occ.
tops 385mb.

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

Place	Leuchars		Cirrus 52·2N. 20·0W.		Larkhill		Lerwick		Larkhill		Cirrus 52·4N. 20·2W.	
Time	03h.		09h.		11h.		15h.		17h.		21h.	
Type	Pilar											
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.			180	07	300	05	070	10	210	06	250	13
1,000			190	12	290	10	L.V.		230	09	250	16
2,000			190	14	280	12	L.V.		250	10	250	10
3,000			220	15	260	13	L.V.		260	12	260	19
4,000			260	17	230	15	L.V.		270	16	260	17
5,000			270	18	230	17	L.V.		260	18	250	17
6,000					220	20	L.V.		250	18		
8,000					220	26	220	06	260	21	230	14
10,000			280	26	210	31	237	04	260	27	250	20
14,000			280	50	230	35	248	04	250	41	260	27
18,000			290	62	230	34	229	05	250	40	260	34
24,000			280	54	(15,000')		225	14	(15,000')		260	40
30,000			(19,000')				234	34			260	38
40,000	246	42					242	21			(28,000')	
50,000	258	26					246	18				
	261	12										
	(56,000')											

NEPHOSCOPE OBSERVATIONS

Place	Valentia
Time Type	15h. Ci
Dir. Vel.	290 45

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

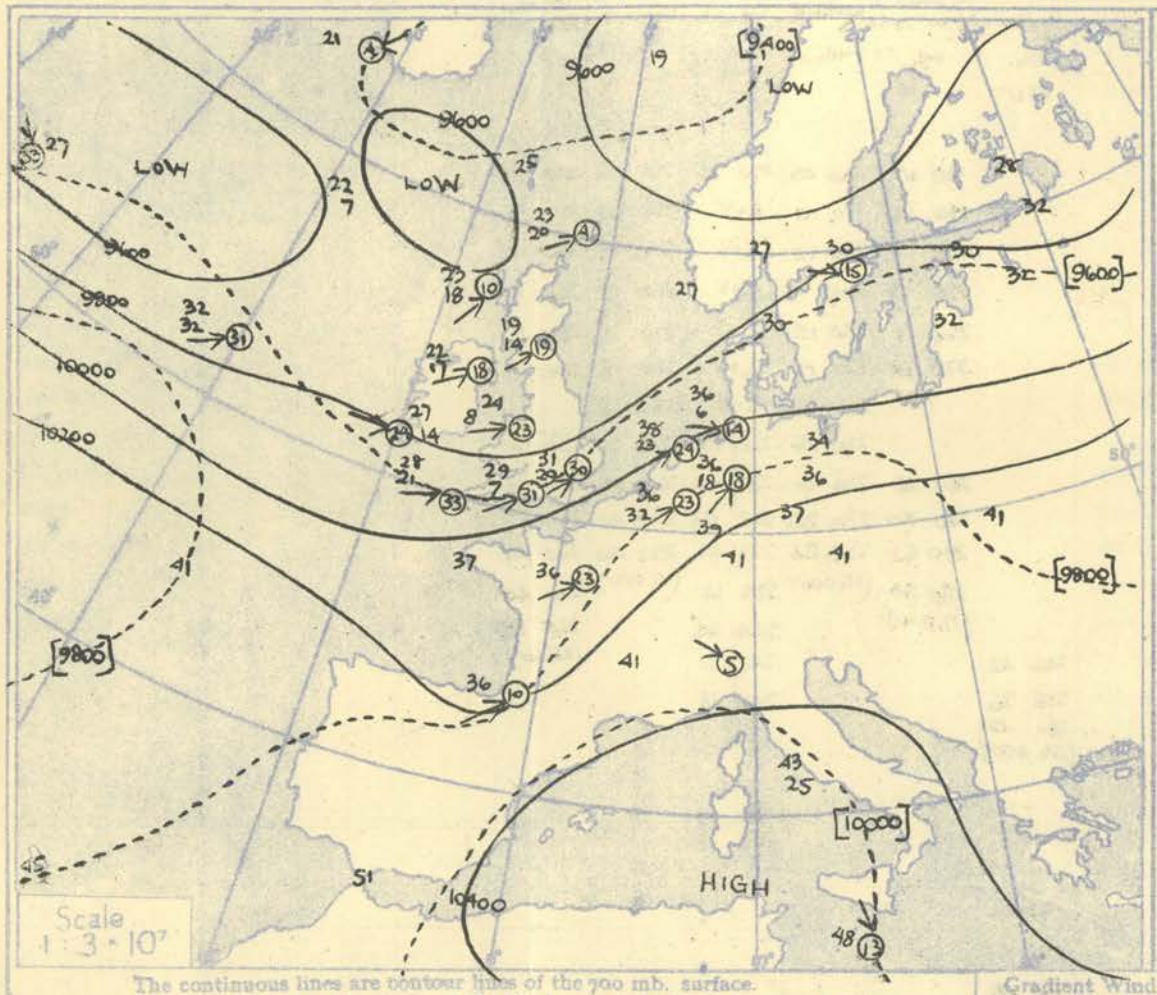
Ship	WEATHER OBSERVER					WEATHER OBSERVER				
Lat/Long	58·9N. 19·3W.					58·9N. 19·1W.				
Time	03h. G.M.T.					09h. G.M.T.				
Pressure M.S.L.	1006 mb					1006 mb				
Pressure Surf	1006 mb					1006 mb				
Pressure Freezing	810 mb					810 mb				
Pressure mb	**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**	**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**
Surf		55	51	320	06		57	51	045	05
1000	01·8	54	49			01·6	58	48	Calm	
950		48	41	025	04		48	45	"	
900	30·4	43	33	033	05	30·2	43	39	"	
850		37	29	017	05		37	31	"	
800	61·7	30	23	353	04	61·5	30	25	"	
750		27	20	332	05		26	22	"	
700	96·3	23	12	331	05	96·0	23	15	"	
650		15	10	333	05		16	09	"	
600	135·4	09	-02	333	04	135·1	07	-03	048	08
550		02	-18	338	04		04	-12	027	08
500	180·3	-05	-24	340	04	180·1	-07	-18	346	08
450		-18	-38	344	06		-18	-31	323	10
400	233·0	-27	-49	345	09	232·7	-28	-44	314	13
350		-39	-59	340	16		-45		316	13
300	297·5	-54		328	10	396·2	-63		307	12
250		-59		322	16		-69		296	14
200	384·9	-49		303	32	381·5	-58		300	41
170		-49		284	31		-58		290	33
150		-50		289	24		-58		257	25
130		-52		294	20		-59		285	21
110		-52		301	21		-58		304	16
100	536·1	-53				529·8	-59		305	16
90							-58		305	12
80							-58		305	08
70							-58		305	11
60							-56		295	11
							-53		304	05
	Inversion 764mb. 24° - 741mb. 28°					Inversion 769mb. 25° - 750mb. 26° Isothermal 712 - 698mb. 23°				
Tropopause	T 270mb. -64° 32,000'					T 268mb. -74° 32,100'				

Ship	WEATHER OBSERVER					WEATHER OBSERVER				
Lat/Long	58·9N. 19·1W.					58·9N. 19·1W.				
Time	15h. G.M.T.					21h. G.M.T.				
Pressure M.S.L.	1006 mb					1004 mb				
Pressure Surf	1006 mb					1004 mb				
Pressure Freezing	800 mb					780 mb				
Pressure mb	**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**	**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**
Surf		57	51	350	02		56	52	020	04
1000	01·5	56	48			01·1	55	51		
950		47	38	343	05		50	42	029	07
900	30·2	43	29	353	04	29·8	44	38	035	08
850		35	24	030	03		38	32	043	07
800	61·4	32	22			61·2	34	27	062	07
750		25	15				29	19	076	11
700	96·1	22	17			96·1	21	13	078	12
650		15	00				18	00	075	10
600	135·2	06	-07			135·3	08	-09	071	08
550		02	-18	094	03		02	-22	056	06
500	180·0	-09	-30	026	05	180·2	-05	-29	013	03
450		-07	-39	366	05		-15	-41	295	05
400	232·5	-28	-50			233·0	-28	-52	268	10
350		-42					-04		255	15
300	296·4	-60				297·2	-52		271	37
250		-52					-60		278	30
200	384·7	-45		281	33	384·7	-47		276	26
170		-47		278	20		-47		274	22
150		-47		292	17		-49		278	26
130		-47		289	15		-47		276	21
110		-47		286	13		-48		276	13
100	537·3	-46		286	13	536·9	-50		274	10
90		-47		286	12		-49		271	12
80	(081 mb)	-47					-49		271	10
70							-44		271	10
60							-46		269	07
						(050 mb)	-45			
	Isothermal 719 - 695mb. 22° 600 - 581 mb. 6°					Inversion 700mb. 21° - 690mb. 23° Isothermal 855 - 841mb. 38°				
Tropopause	T 300mb. -60° 29,600'					T 265mb. -62° 32,400'				

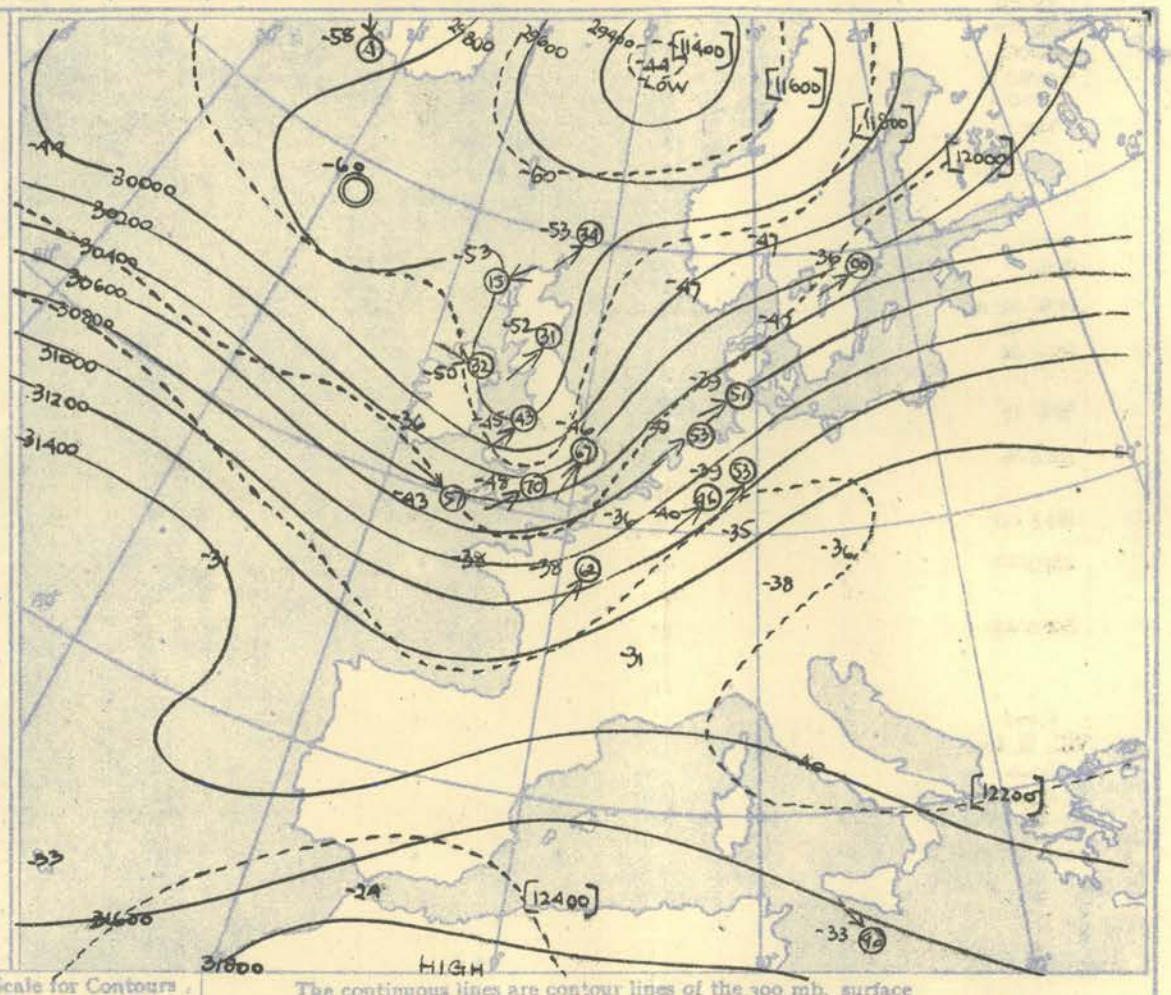
Ship	CIRRUS					CIRRUS	CIRRUS					CIRRUS
Lat/Long	52·3N. 20·2W.						52·3N. 20·0W.					
Time	03h. G.M.T.					09h. G.M.T.	15h. G.M.T.					21h. G.M.T.
Pressure M.S.L.	1013 mb						1003 mb					
Pressure Surf	1013 mb						1003 mb					
Pressure Freezing	800 mb						700 mb					
Pressure mb	**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**		**Height ft./100**	**Temp. °F.**	**Dew °F.**	**Wind Dir. °**	**Wind Vel. knots**	
Surf		55	49	280	12			55	55	120	19	
1000	03·6	54	48	280	13		01·0	55	55	120	19	
950		48	44	280	14			49	49	135	27	
900	32·3	42	40	280	18		29·8	46	46	173	31	
850		37	35	279	20	No		43	43	200	40	No
800	63·6	32	24	278	28		61·6	41	41	263	31	
750		27	16	280	33	Radio-Sonde		39	39	264	35	Radio-Sonde
700	98·4	28	10	290	36		97·2	32	32	263	31	
650		23	-04	297	41	Ascent Available.		26	26	279	41	Ascent Available.
600	138·1	18	-16	295	49		137·2	20	16	259	38	
550		13	-22	294	58	For winds see		13	05	288	38	For winds see
500	184·0	06	-24	297	64	top of page.	183·2	04	-02	287	43	top of page.
450		-04	-26	298	64			-07	-17	281	50	
400	238·2	-17	-28	298	67		237·1	-19	-32	288	48	
350		-24		298	80			-30				
300	304·8	-38										
250		-51										
200	393·1	-63										
170		-69										
150		-64										
130		-64										
110		-64										
100	538·7	-64										
	Inversion 735mb. 25° - 700mb. 28° Isothermal 850 - 847mb. 37°						Inversion 800mb. 41° - 790mb. 44° Isothermal 1003 - 1000mb. 55° 866 - 850mb. 43°					
Tropopause	T 179mb. -72° 41,600'						N.R.					

Sunday 8th. July 1951.

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



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

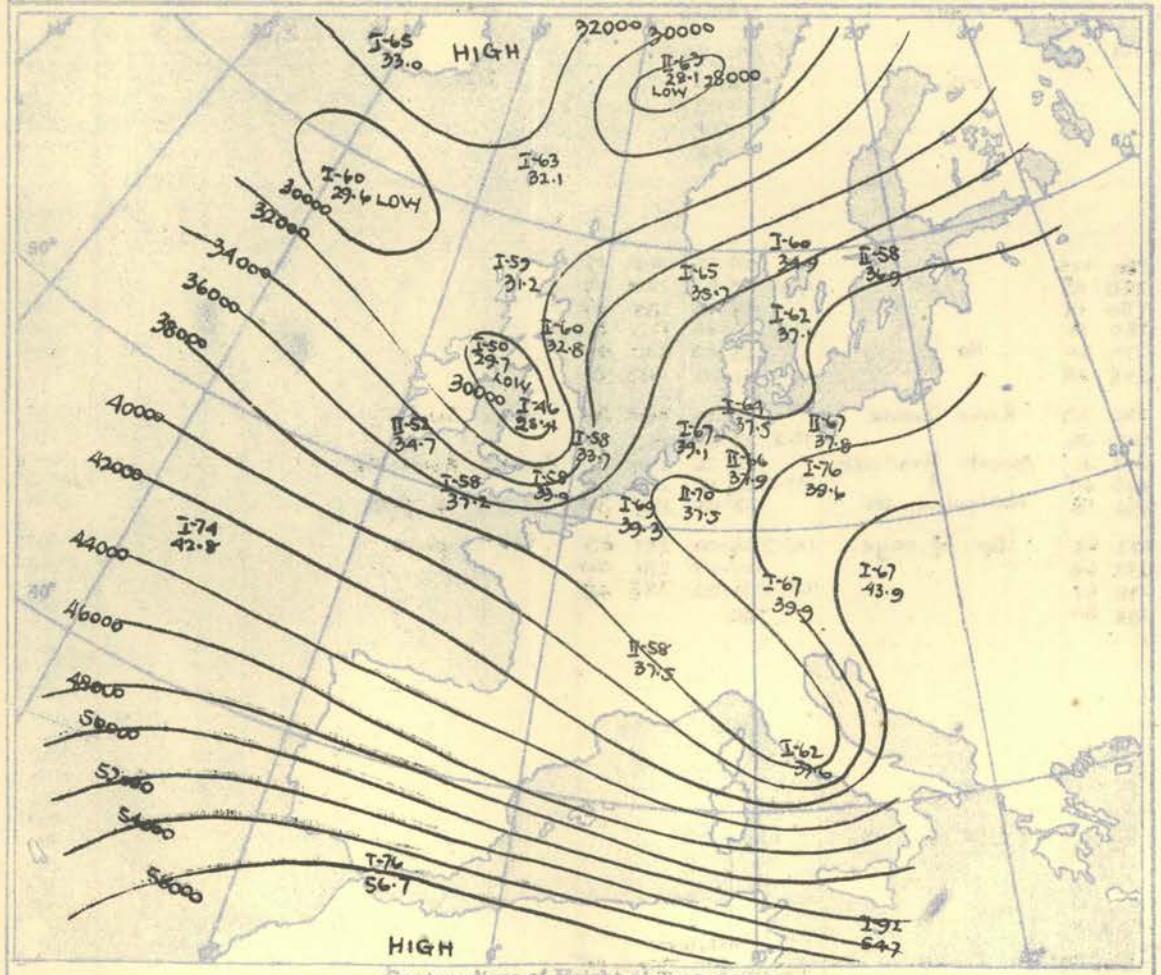


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

90 50 40 30 20 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The warm ridge on the central Atlantic moved some 700 miles east and a strong northwesterly thermal gradient formed on its forward side leading to the cold trough which crossed Britain during the day. Late in the period the cold trough began to degenerate and the strong northwesterly thermal slackened to about half its earlier value.

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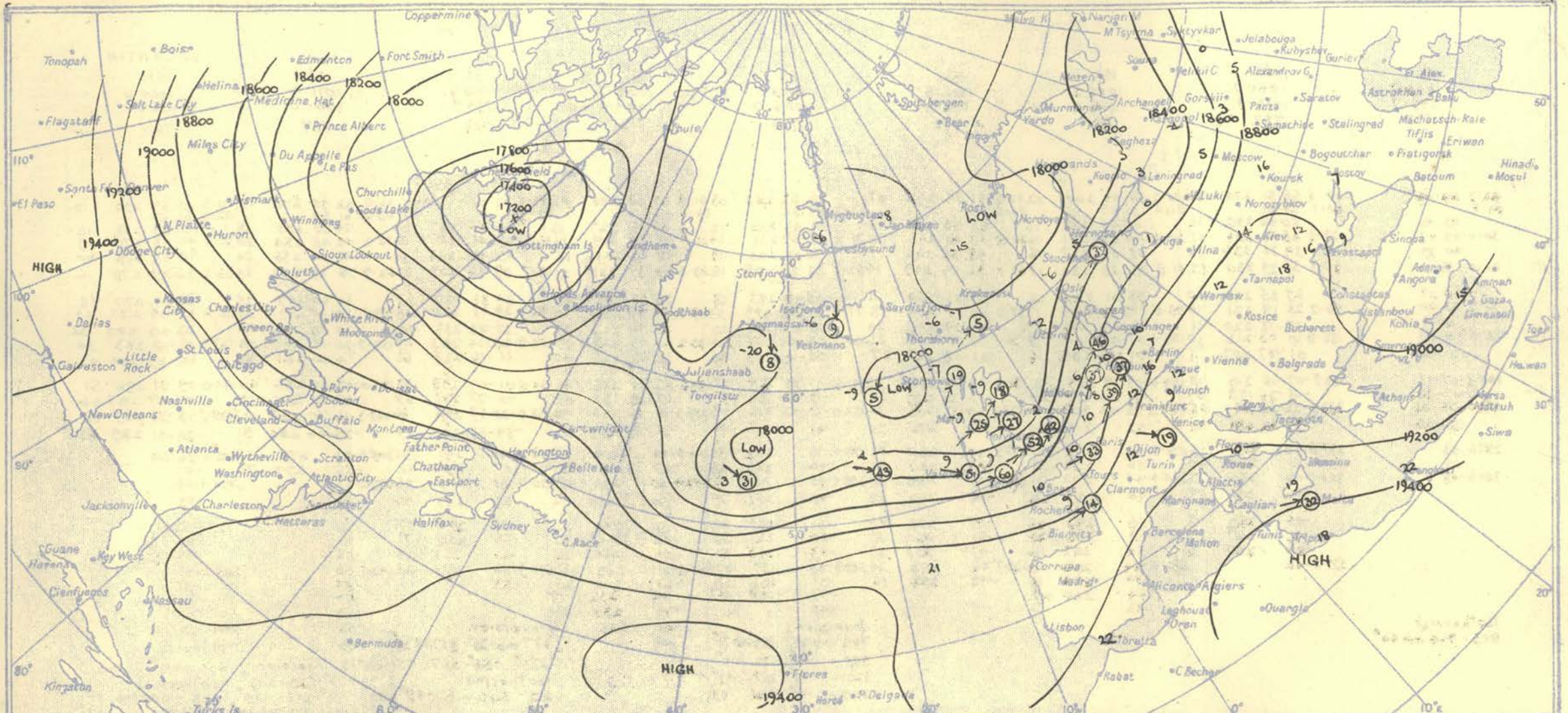
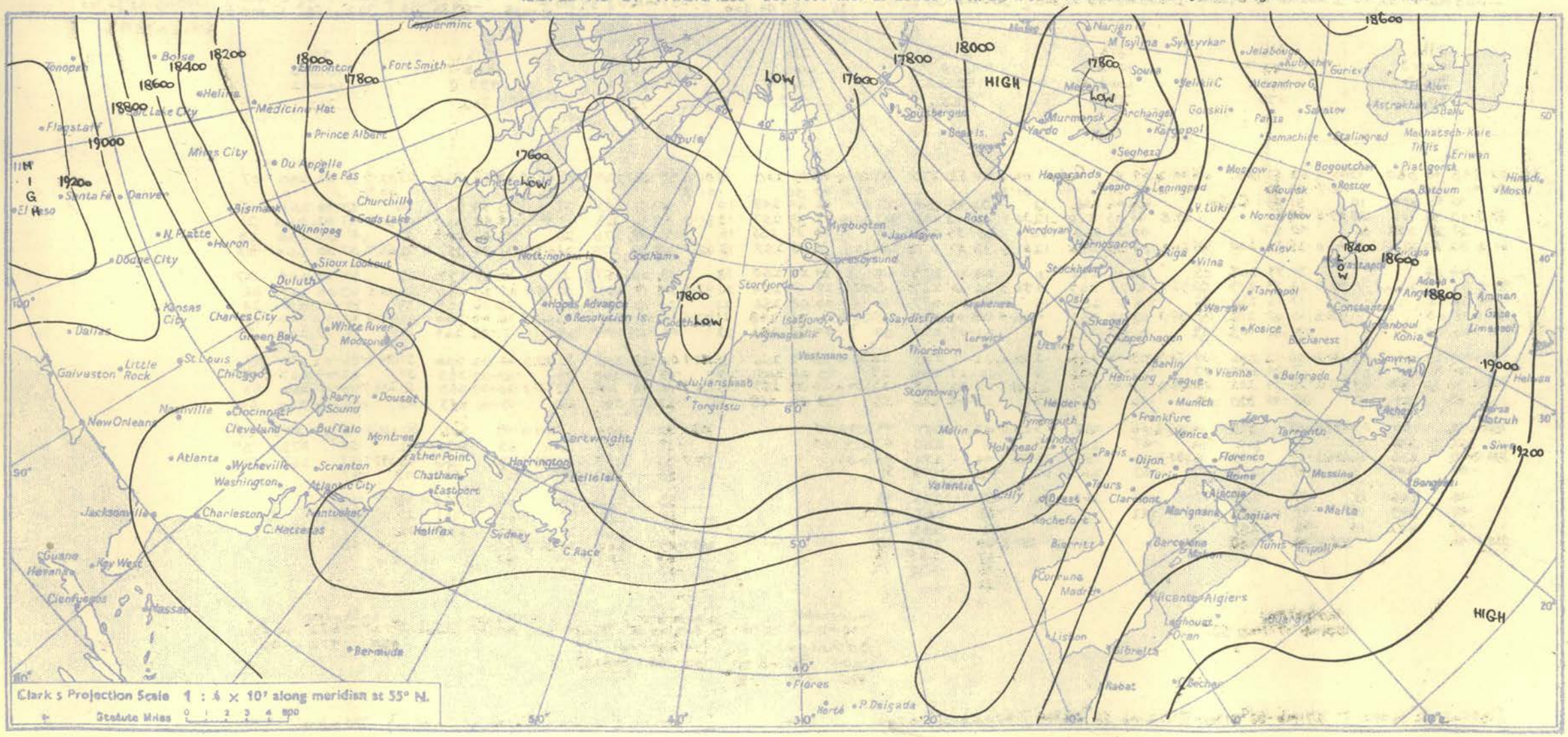
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Sunday 8th July, 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 8th July, 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Sunday 8th July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h	1005·7 mb	995·7 mb	793
STORNOWAY	15h	1004·0 mb	1002·6 mb	782
LEUCHARS	15h	1005·2 mb	1004·4 mb	791
ALDERGROVE	15h	1006·8 mb	996·3 mb	772
LIVERPOOL	15h	1008·0 mb	1006·0 mb	790
DOWNHAM MARKET	15h	1008·7 mb	1004·4 mb	712
LARKHILL	15h	1010·6 mb	994·9 mb	728
CAMBORNE	15h	1011·4 mb	1001·0 mb	737
VALENTIA	15h	1009·6 mb	1008 mb	760

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	50	49			00·4	56	51	220	06	00·2	64	54	260	12	02·6	61	54	295	07	00·6	65	53	280	03	01·2	69	53	250	08	09·4	62	52	Calm		02·9	62	55	270	12	00·3	61	53	290	10	Surf
1000	01·5					01·1	56	61			01·4	63	63			01·6					02·1	64	52			02·6					02·9					03·2	61	54			02·6	61	53			1000
950			45	45			60	46	230	11		53	46	235	16		63	48	246	16		54	43	230	12		59	51	227	16		55	45	297	06		54	50	251	18		59	50	278	16	950
900	30·0	43	43			29·8	45	41	234	11	30·4	46	39	241	16	30·5	47	40	246	15	31·2	47	39	231	14	31·9	53	49	229	18	31·9	49	41	268	10	32·2	48	46	254	20	31·7	46	43	278	19	900
850			40	39			39	34	236	12		39	35	237	16		42	35	245	17		40	29	225	19		48	40	231	18		45	40	264	24		43	34	256	24		40	35	278	20	850
800	61·4	33	30			61·3	38	29	230	12	61·8	33	28	234	17	62·1	36	29	249	14	62·7	34	25	228	18	63·8	42	39	231	21	63·7	39	36	239	27	63·9	38	29	252	25	63·2	36	29	278	16	800
750			28	27			29	25	220	10		26	21	230	18		29	25	254	14		30	18	247	18		36	35	233	24		34	31	227	27		34	30	247	25		31	29	277	18	750
700	96·3	23	20			96·2	23	18	221	10	96·5	19	19	234	19	97·0	22	17	259	18	97·6	29	08	249	23	98·2	31	27	236	30	98·9	29	17	232	31	99·1	28	21	259	33	98·2	27	19	277	24	700
650			16	13			18	12	220	11		13	06	243	19		16	09	246	24		25	16	223	22		27	03	233	37		27	03	233	40		24	08	263	40		23	00	280	32	650
600	135·5	10	05			135·8	10	03	213	10	135·4	07	-01	256	15	136·1	09	01	290	26	136·7	08	-01	260	24	139·2	22	-19	223	39	138·8	20	-14	233	47	138·9	20	-19	261	48	137·9	19	-10	283	34	600
550		02	-06				01	-07	207	11		-01	-08	235	16		01	-08	237	27		02	-10	253	26		12	-12	226	40		11	-16	233	61		14	-20	261	55		12	-69	284	42	550
500	180·3	-07	-17			180·3	-07	-16	210	10	184·0	-09	-19	229	18	180·9	-09	-19	238	25	181·5	-07	-29	257	27	186·1	02	-14	226	42	184·5	01	-09	233	52	185·0	09	-24	256	60	184·0	09	-31	286	51	500
450		-17	-30				-16	-26	198	07		-21	-30	217	20		-19	-25	239	24		-19	-48	232	39		-07	-28	225	54		-10	-27	237	63		-03	-31	254	59		-01	-27	287	46	450
400	233·0	-27	-41			233·1	-26	-36	188	05	236·2	-32	-43	209	25	233·3	-30	-37	256	24	234·0	-29	-53	218	93	238·9	-18	-43	226	58	238·0	-20	-37	244	66	239·3	-16	-40	257	57	238·7	-13	-30	287	58	400
350		-36	-46				-39	-52	081	10		-92		211	30		-42		276	24		-91		217	44		-31	-55	222	61		-34	-51	231	73		-28	-44	284	51		-24	-41	289	62	350
300	297·6	-53				297·6	-53		961	15	296·3	-52		213	31	297·5	-50		280	32	298·4	-48		233	43	304·5	-46		219	67	303·2	-48		241	70	305·3	-93		279	57	305·4	-36	-54			300
250		-65					-51		229	03		-56		224	33		-47		280	32		-44		246	38		-57		216	80		-57		248	62		-56		297	76		-61				250
200	384·8	-48				386·1	-45		260	17	384·4	-47		242	31	387·0	-41		268	38	388·4	-45		261	38	392·4	-60		230	49	390·9	-51		243	48	393·2	-57				394·4	-49				200
170							-45		251	17		-48		299	26		-44		262	28		-48		252	29		-50		236	42		-53		247	40		-56					-52				170
150							-45		250	18		-56		246	25		-47		258	30		-51		251	28		-51		240	36		-54		240	37		-56					-52				150
130							-45		267	17		-53		246	20		-51		260	29		-50		261	25		-62		243	33		-55		265	31		-56					-52				130
110							-44		257	15		-54		267	16		-47		258	28		-53		253	21		-51		248	28		-55		261	23		-56					-49				110
100						539·5	-46				535·5	-54		256	18	539·7	-46		258	29	539·3	-55		239	07	543·6	-51		243	25	540·9	-56		271	23	542·5	-56				545·6	-51				100
90												-54		254	16		-98		258	16		-51		256	20		-61		240	20		-53					-55					-51				90
80												-54		260	09							-47		288	07		-50		236	17							-54					-51				80
70												-53										-49					-49		235	18							-53					-51				70
60		Isothermal																			Inversion						-48		235	12	Inversion						-53				(069	-51				60
		945 - 920 mb 44°																			765 mb 29° - 754mb 31°										677 mb 26° - 659mb 28°										mb) Inversion				
																					586 - 04° - 574 .. 05°										273 .. -56° - 267 .. -55° (48mb) 553 Inversion										550 mb 12° - 523mb 13°				
																					320 .. -46° - 267 .. -42°										533mb 12° - 520mb 13°										Isothermal				
																					250 .. -99° - 220 .. -93°										310 - 300 mb -98°										1008 - 1000 mb 61°				
																																	250 .. -55° - 245 .. -54°										714 - 677 .. 27°				
																																	Isothermal 773 - 750mb 34°														
																																	700 - 683 mb 28°														
Tropopause	I 258 mb - 67° 32,700'					I 282 mb - 59° 31,200'					I 259 mb - 60° 32,800'					I 300 mb - 50° 29,752'					II 320 mb - 46° 28,900' / I 156 .. - 51° 49,300'					I 257 mb - 58° 33,700'					II 310 mb - 48° 29,800' / I 258 .. - 58° 33,700'					I 250 mb - 55° 34,600' / I 222 .. - 58° 37,200'					II 250 mb - 52° 34,700'					Tropopause

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h	1005·3 mb	995·3 mb	800
STORNOWAY	21h	1002·7 mb	1001·1 mb	770
LEUCHARS	21h	1003·8 mb	1003·0 mb	787
ALDERGROVE	21h	1004·7 mb	995·2 mb	788
LIVERPOOL	21h	1005·7 mb	1003·7 mb	779
DOWNHAM MARKET	21h	1007·1 mb	1002·6 mb	739
LARKHILL	21h	1008·7 mb	993·0 mb	762
CAMBORNE	21h	1010·6 mb	1000·2 mb	762
VALENTIA				

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	48	48	080	13	00·4	53	51	160	05	00·2	54	51	Calm		02·6	66	52	270	03	00·6	60	51	230	10	01·2	59	55	220	08	04·4	58	56	260	03	02·9	59	54	290	07						Surf
1000	01·4					00·7	53	52			01·0	50	51			01·3					01·6	60	50			01·9					02·4					02·9										1000
950		45	45	072	10		51	49	Calm			52	46	265	12		52	46	285	07		54	49	248	14		57	51	243	17		55	54	267	16		53	48	251	15						950
900	29·9	42	42	108	03	29·5	48	45	"		29·8	46	43	270	12	30·1	45	42	283	09	30·5	47	39	257	13	31·0	50	46	263	19	31·5	48	48	266	19	31·8	47	42	265	21						900
850		37	28	222	05		40	37	"			40	37	265	12		39	35	281	13		43	35	255	15		43	40	276	20		42	42	263	21		41	35	268	23						850
800	61·2	32	29	216	09	61·0	35	34	200	05	61·3	34	30	265	12	61·5	33	29	278	16	62·1	35	28	257	18	62·7	38	32	275	21	63·1	37	36	252	22	63·4	37	30	264	27						800
750		26	22				30	29	203	05		28	25	272	12		28	21	273	18		29	22	250	18		33	20	257	22		30	29	299	22		30	23	264	27						750
700	95·8	21	19	h and V		95·9	24	23	219	05	96·1	22	18	269	11	96·3	24	12	267	15	97·1	28	17	254	21	97·9	28	19	242	22	98·1	25	23	250	26	98·5	29	05	269	32						700
650		16	12	"			17	15	220	06		15	11	263	15		16	06	279	16		20	08	252	21		21	10	244	23		23	16	258	33		29	-19	270	34						650
600	134·8	08	03	"		135·2	10	05	253	14	135·4	08	-01	270	19	136·5	11	01	298	21	137·6	15	-11	248	26	137·7	16	-05	260	40	138·3	21	-40	266	38											600
550		00	-09	"			03	-01	213	09		01	-05	253	12		02	-09	270	22		04	-05	291	23		08	-20	248	29		12	-02	264	52		13	-19	260	37							550
500	179·4	-09	-23	141	03	180·2	-06	-12	230	09	179·9	-09	-15	236	13	180·2	-05	-17	280	26	181·5	-06	-19	256	25	183·1	02	-28	246	38	183·5	02	-12	256	51	184·3	06	-02	270	42						500
450		-20	-31	174	04		-17	-24	277	07		-20	-27	238	16		-14	-27	285	29		-13	-26	265	33		-07	-39	249	55		-10	-22	255	54		-02	-09	267	47							450
400	231·8	-30	-38	188	09	233·0	-26	-39	302	06	232·2	-33	-40	251	20	232·2	-25	-40	283	33	234·6	-24	-38	259	35	236·9	-17	-48	246	73	237·0	-20	-29	258	50	238·7	-13	-20	252	53						400
350		-43		184	10		-38	-45	330	08		-96		260	19		-39	-58	286	38		-38	-62	269	37		-27	-57	291	66		-39	-41	253	98		-25	-32	260	54							350
300	295·6	-58		180	09	297·6	-52		338	14	295·6	-56		262	23	297·7	-53		287	43	299·4	-99				303·1	-92		241	67	302·4	-99		266	50	305·2	-40	-47	263	66						300
250		-58		218	10		-57		319	14		-97		262	25		-51		285	47	(294 -50						-89		249	51		-63		276	72		-58		273	78						250
200	383·0	-98		236	16	386·3	-97		273	16	384·3	-96		259	28	386·3	-96		274	41	mb)					390·7	-53		263	51	288·9	-59		266	48	392·7	-57		263	64						200
170		-98		295	15		-97		275	17		-97		267	22		-99		279	31							-53		256	37		-59		277	43		-61										170
150		-98		246	16		-99		279	17		-99		263	22		-51		283	33							-53		252	30		-60		266	33		-64										150
130		-98		249	13		-99		278	14		-62					-53		267	31							-56		250	29		-61		261	29		-63										130
110		-97		252	14		-98		259	10							-52		263	21							-59		264	27		-60		266	22		-61										110
100	535·1	-98				538·5	-98		268	11							-55		269	18						590·3	-59		260	24	586·8	-61				590·1	-58										100
90																	-57		265	18							-58		267	22		-62															90
80																	-56		270	17							-57		259	18																80
70																	-52																													70
60		Isothermal																			Inversion					Inversion					Inversion					Isothermal											60
		1001mb - 977mb 55°																			736mb 28° - 727mb 29°					1003 mb 59° - 987mb 61°					600 mb 16° - 585mb 17°					727 - 672 mb 29°										
																					Isothermal					Isothermal										480 - 470 .. 02°										
																					1004 - 990 mb 60°					700 - 687 mb 28°																					
																					485 - 471 .. -8°																										
Tropopause	I 275mb - 62° 31,400'					I 271mb - 62° 31,900'					II 312mb - 56° 28,800'					I 294mb - 55° 30,200'					N.R.					I 235mb - 63° 35,600'					I 233mb - 67° 35,600'					I 225mb - 65° 36,700'										Tropopause

No. 11789. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Monday 9th July 1951. Page 1.

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

03h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.
Pressure: M.S.L.	1004·4 mb	1002·9 mb	1003·0 mb	1005·4 mb	1005·8 mb	1007·7 mb	1009·2 mb	1009·5 mb	1003·3 mb
Pressure: Surf	994·5 mb	1001·3 mb	1002·4 mb	996·0 mb	1003·8 mb	1003·1 mb	mb	999·0 mb	1002 mb
Pressure: Freezing	813 mb	784 mb	794 mb	760 mb	778 mb	773 mb	760 mb	700 mb	700 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	48	48	060	10	00·4	53	51	CALM		00·2	50	49	280	08	02·6	49	47	220	05	00·6	55	51	260	08	01·2	50	48	230	06	04·4	52	51	CALM		02·9	55	53	210	04	00·3	57	54						Surf
1000	1·2					0·8	53	51			0·9	50	47			1·5					1·6	56	52			2·0	51	49			2·5					2·6					0·9	57	54						1000
950		45	45	082	06		50	44	203	05		50	41	278	10		50	46	265	10		51	47	266	14		53	45	274	16		52	47	253	17		53	50	243	15		50	50						950
900	29·7	42	42	080	05	27·5	45	39	209	05	29·6	44	37	264	10	30·2	44	38	265	13	30·4	45	42	263	14	30·9	48	41	267	17	31·3	48	41	257	16	31·6	48	45	242	18	29·8	47	47						900
850		36	35	081	06		40	36	206	06		38	29	258	09		39	31	263	15		40	37	263	15		42	39	247	16		43	36	262	17		42	39	239	20		44	44						850
800	60·9	31	28	LAV		61·0	34	30	189	05	61·0	33	26	259	12	61·6	35	23	263	17	61·9	34	31	268	18	62·5	36	33	237	17	63·0	37	32	262	26	63·3	38	34	244	21	61·6	41	41						800
750		25	23	"			27	24	195	05		27	20	259	10		31	13	255	14		31	27	273	20		30	20	244	22		31	25	255	22		34	28	257	18		37	37						750
700	95·5	20	18	"		95·8	24	17	213	06	95·6	21	15	263	10	96·6	25	08	245	17	96·9	29	20	273	16	97·5	25	17	246	21	98·1	29	09	255	28	98·6	32	15	276	17	97·1	32	32						700
650		15	11	010	03		19	07	214	05		18	08	267	17		20	01	257	19		22	12	270	16		20	01	247	30		26	02	256	31		26	18	290	22		24	20						650
600	134·7	07	02	005	04	135·1	12	01	220	06	134·6	09	00	275	18	136·0	15	-08	273	23	136·0	14	03	269	22	136·9	15	-06	257	35	138·0	19	-25	263	32	138·6	20	16	287	29	137·0	20	00						600
550		-01	05	008	04		04	-09	249	07		01	-10	274	16		08	-22	275	25		09	-07	270	24		10	-16	260	41		14	-17	273	33		14	08	279	30		13	-06						550
500	179·2	-10	-16	040	03	180·3	-03	-19	300	07	179·3	-08	-20	276	17	181·5	00	-28	274	29	182·1	01	-15	273	29	182·6	06	-29	261	54	183·9	04	-10	280	33	184·7	05	-08	282	33	183·0	04	-14						500
450		-19	-24	033	04		-12	-31	299	09		-18	-31	287	20		-09	-36	273	33		-01	-28	273	43		-03	-34	267	56		-04	-18	283	36		-05	-17	282	33		-06	-39						450
400	231·6	-30	-36	285	03	233·5	-24	-43	286	12	231·9	-29	-44	296	21	235·1	-18	-45	283	45	236·6	-14	-31	277	57	236·9	-13	-36	267	54	238·1	-16	-29	279	31	238·7	-16	-30	288	33	237·0	-17	-50						400
350		-42		021	04		-37	-55	279	17		-39	-54	293	48		-31	-56	282	51		-28	-40	277	58		-27	-45	259	51		-30		262	45		-28	-44	290	46		-25	-59						350
300	295·5	-58		028	12	298·2	-52		282	24	296·3	-54		291	43	300·7	-47		282	49	302·1	-45		279	57	302·9	-44		256	55	303·9	-45		246	54	304·8	-42		290	51										300
250		-58		258	06		-52		281	24		-52		281	36		-62		280	52		-62		273	56		-63		253	54		-60		261	45		-57		283	52										250
200	382·7	-49		254	12	386·5	-47		279	23	384·6	-46		274	30	387·9	-53		280	45	389·5	-51		277	45	390·2	-51		258	45	390·9	-57		262	45	392·2	-59		286	51										200
170		-48		242	13		-46		275	19		-48		269	28		-51		277	31		-51		276	31		-55		262	40		-58		269	40		-58											170
150		-48		236	15		-46		266	18		-51		269	24		-55		277	34		-53		271	37		-55		260	34		-60		272	34		-61											150
130		-48		240	16		-49		268	17		-50		266	27		-55		273	29		-55		268	30		-57		257	24		-60		271	29	(143 mb)	-62											130
110		-51		241	15		-49		272	16		-52		266	21							-57		270	22		-59		262	25		-6 2		258	24												110
100	534·5	-53		244	15	539·0	-48		272	15	536·2	-53		262	15						539·5	-57		259	21	539·5	-59		257	26	539·1	-6 1		252	19												100
90		-53		247	14		-47					-54		262	14							-56		248	18		-59		252	18		-61		255	21												90
80		-53										-54		259	11							-58					-59		257	17		-61		263	13												80
70												-55		266	11						(77 mb)	58					-59		277	12		-61		257	14												70
60												-55																				-61		272	09												60
	Isothermal 1001 - 978 mb 5d°					Inversion 1002 mb 50° - 980 mb 53°					Inversion 996 mb 49° - 972 mb 52° Isothermal 800 - 785 mb 35°					Inversion 561 mb 09° - 556 mb 10°					Inversion 1003 mb 50° - 969 mb 54° 250 - 63° - 243 - 62° Isothermal 760 - 743 mb 30°										Inversion 999 mb 55° - 990 mb 56°					Isothermal 637 - 620 mb 22° 476 - 462 " -02°					
Tropopause	II 286 mb - 62° 30,500'	I 268 mb - 57° 32,200'	II 300 mb - 54° 29,630'	I 257 mb - 63° 33,400'	II 253 mb - 62° 33,800'	I 235 mb - 64° 35,600'	II 242 mb - 62° 35,000'	I 228 mb - 63° 36,300'	NIL.	Tropopause

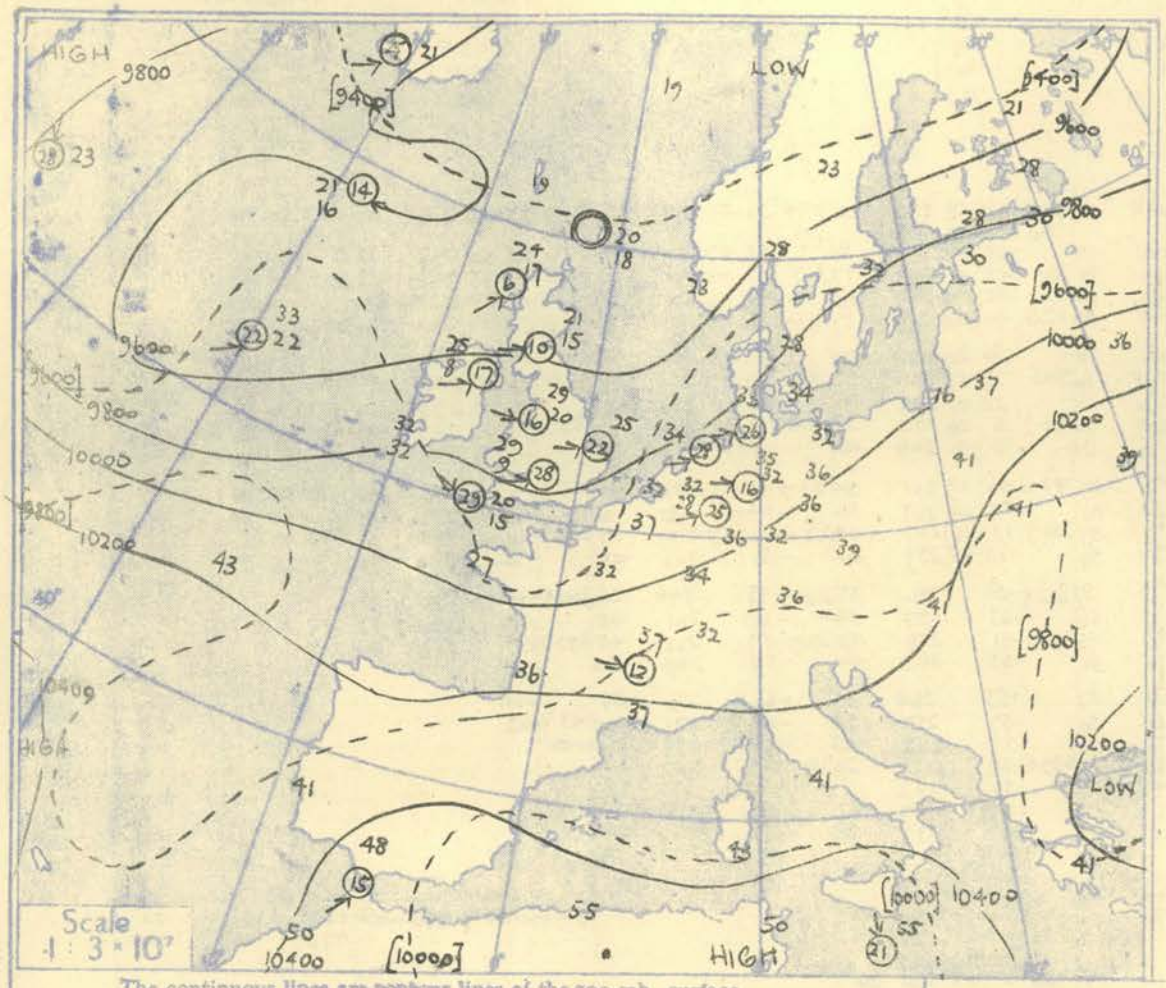
09h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	G.M.T.
Pressure: M.S.L.	1004·6 mb	1003·3 mb	1003·8 mb	1004·3 mb	1005·9 mb	1008·3 mb	1009·0 mb	1007·2 mb	mb
Pressure: Surf	994·7 mb	1001·7 mb	1003·0 mb	994·8 mb	1003·9 mb	1003·9 mb	mb	996·8 mb	mb
Pressure: Freezing	806 mb	787 mb	785 mb	770 mb	745 mb	720 mb	700 mb	684 mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	48	47	060	10	00·4	55	50	CALM		00·2	60	50	270	08	02·6	59	53	160	05	00·6	61	52	250	05	01·2	61	52	250	09	04·4	60	51	210	07	02·9	59	58	180	12										Surf
1000	1·2					0·9	55	50			1·0	59	50			1·2					1·6					2·3	60	52			2·5					2·0														1000
950		43	43	072	11		50	45	155	05		51	44	282	11		51	47	169	09		52	48	255	10		52	48	250	12		52	42	223	13		54	53	203	33										950
900	29·6	41	41	049	09	29·6	45	40	153	06	29·8	45	39	282	12	30·0	44	41	185	10	30·5	47	39	255	12	31·2	47	43	242	15	31·4	47	36	245	16	31·0	49	45	219	32										900
850		36	36	024	07		40	34	152	06		41	34	285	10		38	32	194	10		41	34	250	12		44	35	238	17		42	32	255	9		46	44	224	80										850
800	60·9	31	24	021	05	81·1	34	28	148	07	61·3	34	28	278	08	61·4	35	24	200	10	62·1	35	25	245	13	62·8	38	32	254	18	63·0	37	30	258	24	62·9	43	41	228	29										800
750		25	20	LAV			27	23	147	07		30	23	266	09		30	17	221	10		32	22	241	16		35	23	263	19		37	17	256	24		38	34	242	31										750
700	95·5	22	17	"		95·9	25	18	152	05	96·3	25	17	251	10	96·4	25	10	236	15	97·2	28	15	242	19	98·0	30	10	268	24	98·3	32	20	262	23	98·5	34	28	251	24										700
650		17	08	"			19	07	200	02		19	10	254	10		21	-02	247	19		25	07	258	21		26	00	267	27		26	17	270	29		27	23	266	20										650
600	134·7	10	02	337	03	135·2	13	-03	280	04	135·7	13	02	258	10	136·0	15	04	256	27	137·0	17	01	269	30	138·0	23	-08	268	31	138·3	19	11	265	29	138·6	22	18	244	29										600
550		-01	-07	334	09		07	-12	269	09		07	-05	278	16		07	05	260	28		10	04	272	36		15	04	270	34		13	-03	261	31		16	11	244	44										550
500	179·5	-08	-17	343	05	180·5	-03	-22	268	11	181·1	01	-12	283	23	181·2	-01	-05	264	29	182·9	05	-02	271	39	184·2	07	-02	263	35	184·3	05	-10	266	34	184·9	08	03	255	39										500
450		-18	-29	354	08		-13	-36	272	15		-10	-26	281	29		-10	-20	269	33		-06	-14	270	39		-03	-13	265	43		-07	-22	270	34		-01	-07	250	49										450
400	232·0	-28	-39	290	06	233·6	-24	-46	280	18	234·6	-20	-35	279	33	234·7	-19	-32	276	37	237·0	-15	-26	276	46	238·5	-14	-23	260	47	238·1	-18	-35	257	35	239·4	-12	-19	251	49										400
350		-40	-51	268	09		-36	-39	219	26		-32		283	43		-31	-45	270	46		-26	-38	281	53		-27	-38	267	47		-29	-47	281	33		-22	-33	281	70										350
300	296·2	-54		293	13	298·5	-50		283	45	300·2	-43		285	52	300·3	-48		263	54	303·2	-43		277	66	304·8	-41		282	58	304·0	-43		280	48	306·4	-35	-47	284	72										300
250		-51		281	15		-50		278	37		-58		281	52		-63					-59		278	57		-58		275	51		+59		286	60		-49											250
200	394·8	-44		260	12	386·8	-45		268	28	388·4	-47		277	36	387·2	-53				390·6	-55		281	52	392·6	-55		267	41	391·4	-56		288	53	395·0	-62											200
170		-44		257	15		-44		269	22		-46		271	34		-53					-51		272	40		-53		265	40		-55		273	40		-56											170
150		-44		252	16		-44		269	20		-45		272	33		-51					-51		271	40		-56		270	34		-61														150
130		-43		251	13		-44		263	20		-47		263	26		-55				(142 mb)	-54		269	31		-60		269	31		-60														130
110		-43		235	09		-44		266	14		-48		268	21		-56							258	23		-61		267	23		-57														110
100	538·6	-43		222	10	390·3	-45		263	10	541·3	-48		271	23									261	21	542·8	-54		261	25		-59		264	25	542·9	-56											100
90		-43		222	13		-44		251	11		-48		262	19									261	19		-53		262	12		-53					-55											90
80		-44					-43		250	09		-48		252	14									244	14		-55		240	08		-55					-53											80
70							-43		245	07		-47															-52					-55															70
60							-42																							(66 mb)	-55															60
	Inversion 720 mb 21° - 700 mb 22°					Isothermal 744 - 715 mb 26°					Isothermal 866 - 850 mb 41° 778 - 755 " 31°					Inversion 600 mb 17° - 595 mb 18° 242 " -61° - 236 " -59° Isothermal 671 - 650 mb 25°					Inversion 888 mb 46° - 875 mb 47° Isothermal 780 - 750 mb 35° 629 - 600 " 23°																																
Tropopause	I 278 mb - 60° 31,500'	I 255 mb - 58° 33,800'	I 250 mb - 58° 34,000'	II 250 mb - 63° 33,955'	I 242 mb -61° 35,000' I 219 " -62° 37,100'	I 235 mb - 61° 35,700'	I 239 mb - 62° 35,300'	I 192 mb - 64° 40,200'		Tropopause

Monday 9th July 1951.

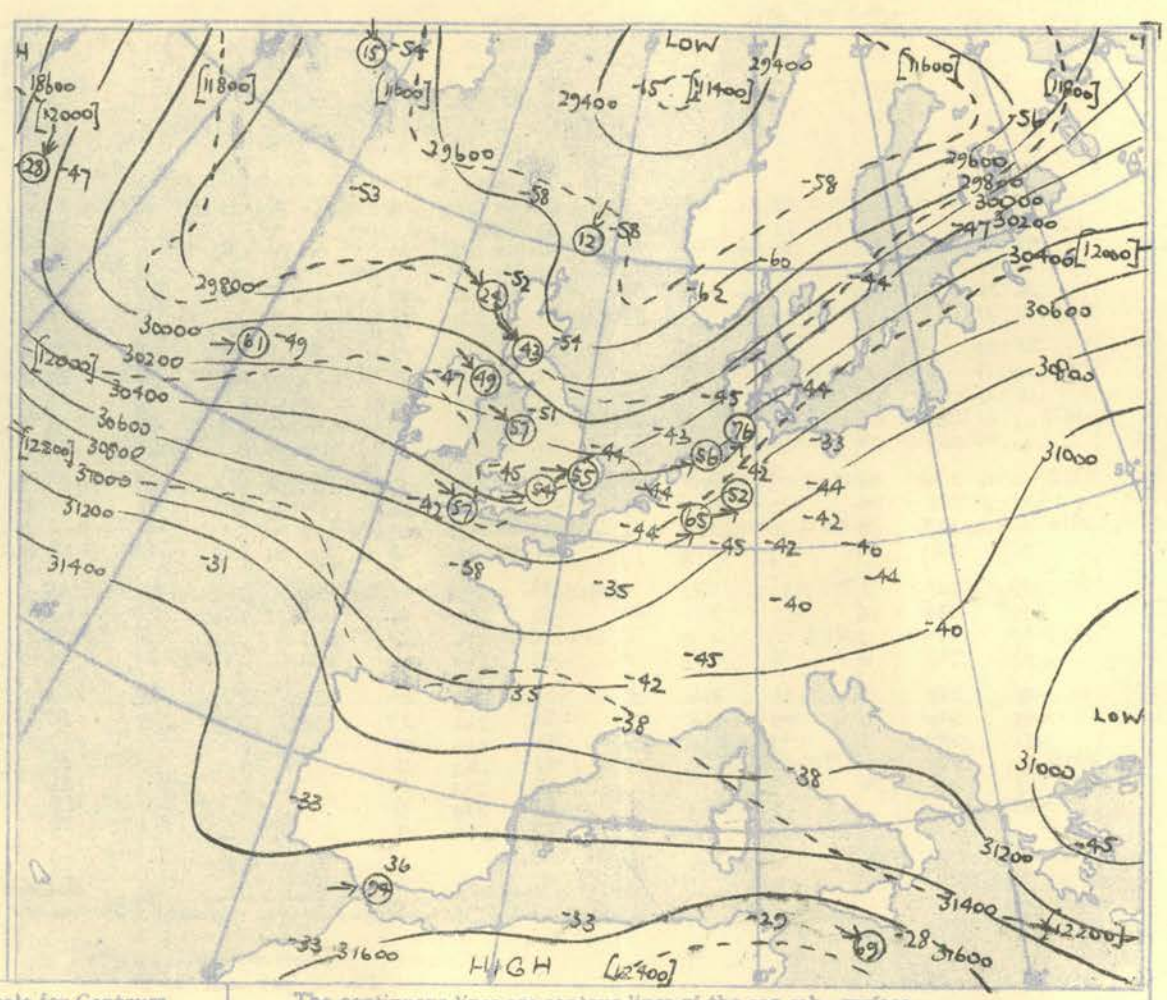
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). **DIRECTION AND VELOCITY** (In knots) **OF WINDS** at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



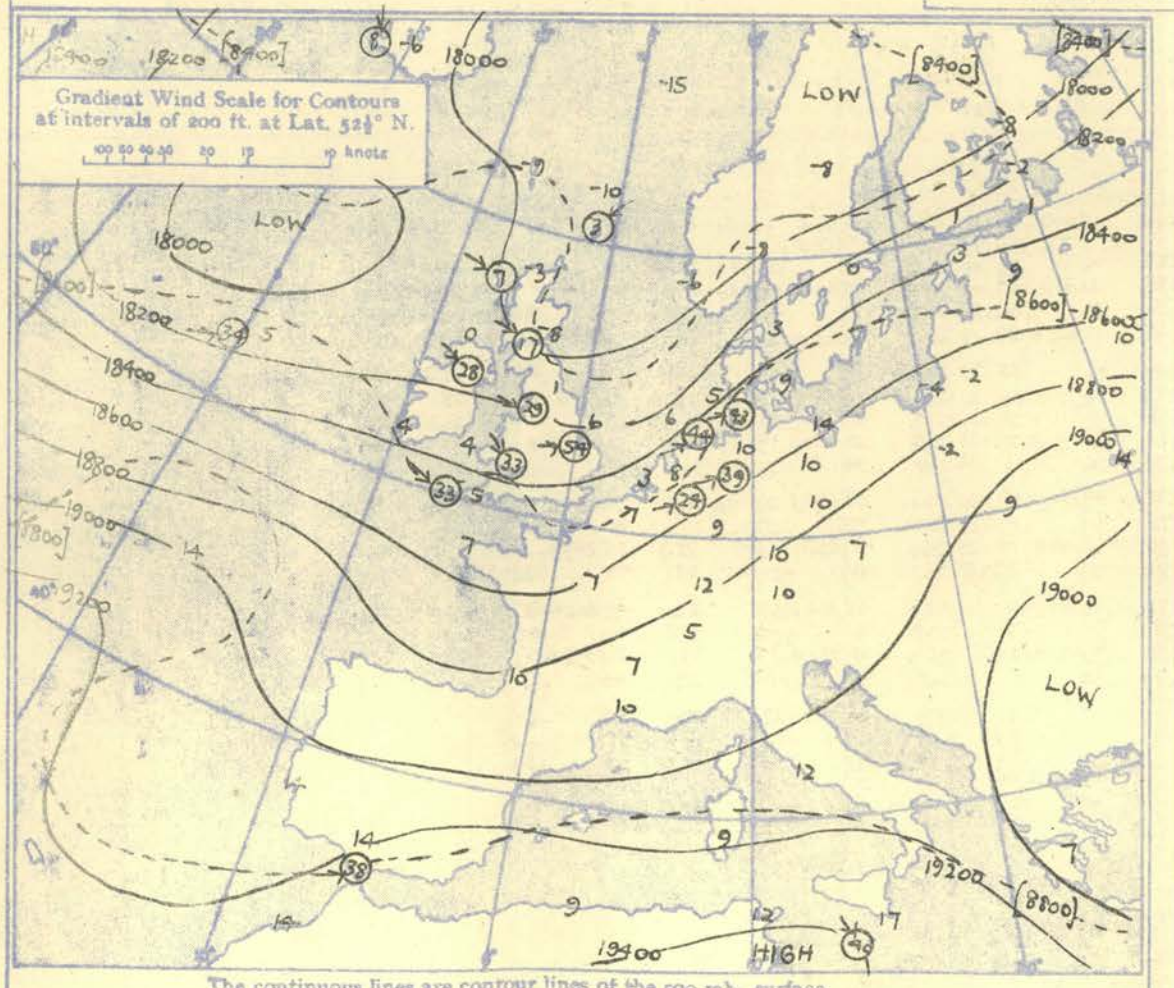
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

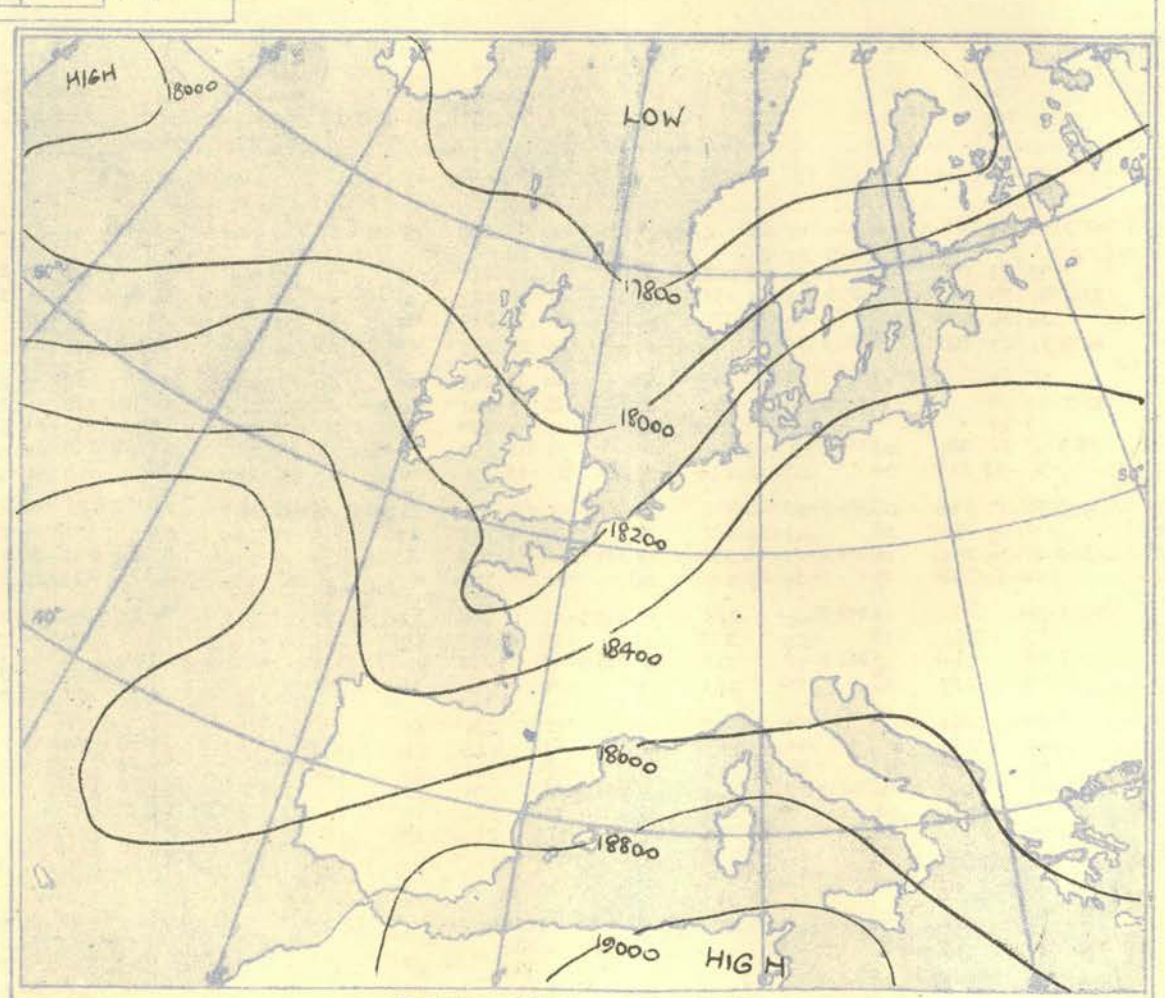
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

Monday 9th July 1951.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	48·1°N 17° W			47·7°N 12·3°W			52° 12'N 2° 12'W		
Pressure Time	1215 hrs			1345 hrs			1450 hrs		
Pressure M.S.L.	1002·0 mb			1003 mb			1006 mb		
Pressure Surf	999 mb			999 mb			1004·5 mb		
Pressure Freezing	650 mb			660 mb			680 mb		
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.
Surf	—	63	—	—	62	—	0·4	—	—
1000	0·8			0·7			1·7	—	—
950		54	—		56	56		—	—
900		49	—		54	—	30·7	51	51
850		43	—		46	—		48	—
800		37	—		40	40	62·7	43	—
750		35	—		43	—			
700	96·8	38	—	97·6	39	—	98·5	35	35
650		32	—		31	—			
600		25	—		26	—	138·7	21	—
550		16	—		17	—		—	—
500	183·3	04	—	184·6	11	—	184·8	07	—
450								—	—
400							239·2	-42	—
350								—	—
300							305·9	-38	—
250									
200									
170									

48·1°N 17° W	47·7°N 12·3°W	52° 12'N 2° 12'W
Cloud.	Cloud.	Cloud.
1/8 Cu 930-750	4/8 Cu 950-890	7/8 St 940-905
2/8 Sc 880-860	5/8 Sc 940-910	8/8 Ns 870-770
4/8 Sc 790	4/8 Ac 810-760	4/8 Ac As 620-510
Surf wind W. 17-21 kts	Surf wind —	Oc tops 445 mb.
Inversion 800 mb 37} 750 mb 39}	Inversion 800 mb 40} 750 mb 43}	

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

Place	Leeming		Cirrus		Ronaldsway		Larkhill		Shoeburyness		Stornoway		Larkhill		Cirrus		Larkhill				Place
Time	07hrs		08hrs		08hrs		15hrs		09hrs		15hrs		1830hrs		20hrs		23hrs				Time
Type																					Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	290	10	230	16	170	05	210	10	250	09			170	12	020	22	210	08			Surf.
1,000	270	14	230	18	170	06	210	13	240	14			150	21	020	24	220	18			1,000
2,000	280	17	230	20	190	09	210	17	240	14			200	33	020	27	220	24			2,000
3,000	290	10	240	17	200	12	210	16	240	21			210	39	020	21	230	27			3,000
4,000	280	10	240	16	210	16	220	16	250	16			220	44	010	21	230	30			4,000
5,000	270	13			220	11	240	16	250	28			220	40	010	22	240	33			5,000
6,000	270	18	230	10			250	18	260	30			220	35	010	23	230	39			6,000
8,000	260	10	230	16	220	22	250	24	260	25			240	36	350	26	230	48			8,000
10,000	270	13			220	22	240	27	260	25			250	45	350	26	230	46			10,000
14,000	270	16	230	20			250	30	270	28					360	26	230	42			14,000
18,000	270	40	280	19			250	29	260	35					340	34	240	41			18,000
24,000	(16000')		230	09			(16000')								360	34	(16000')				24,000
30,000			(28000')						280	44	260	40			360	33					30,000
40,000									270	41	250	27			(28000')						40,000
50,000											250	18									50,000

NEPHOSCOPE OBSERVATIONS

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

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

Ship	WEATHER OBSERVER				
Lat/Long	58·7 N 18·9W.				
Pressure Time	03h. G.M.T.				
Pressure M.S.L.	1005 mb				
Pressure Surf	1005 mb				
Pressure Freezing	790 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		55	53	045	09
1000	01·5				
950		49	48	070	12
900	30·2	44	43	071	13
850		39	38	072	13
800	61·5	34	31	074	13
750		26	23	076	14
700	96·3	21	16	077	14
650		15	08	078	13
600	135·3	09	03	077	13
550		01	-11	077	09
500	180·1	-07	-17	074	05
450		-17	-28	299	03
400	232·8	-28	-37	257	05
350		-44		243	09
300	296·8	-53			
250		-63			
200	383·8	-52			
170		-50			
150		-50			
130	(144mb)	-50			
Tropopause	I 247 mb -64° 34,000'				

Ship	WEATHER OBSERVER				
Lat/Long	58·7 N. 18·9 W.				
Pressure Time	09h. G.M.T.				
Pressure M.S.L.	1005 mb				
Pressure Surf	1005 mb				
Pressure Freezing	790 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	53	060	22
1000	01·5	55	51		
950		48	40	066	20
900	30·1	43	36	080	20
850		39	31	074	18
800	61·5	33	25	078	17
750		26	18	078	18
700	96·1	22	09	073	18
650		18	03	074	18
600	135·3	10	-03	074	16
550		02	-12	072	12
500	180·2	-05	-26	063	09
450		-15	-32	342	06
400	233·1	-27	-44	274	12
350		-39	-55	248	09
300	297·6	-51		243	18
250		-61		267	18
200	385·4	-45			
170		-45			
150		-46			
130		-46			
110		-44			
100	538·6	-45			
90		-45			
80		-44			
70	(72mb)	-44			
Tropopause	I 255 mb -62° 33,200'				

Isothermal 717 - 700 mb 22°

Ship	WEATHER OBSERVER				
Lat/Long	58·8N 19·0W.				
Pressure Time	15h. G.M.T.				
Pressure M.S.L.	1006 mb				
Pressure Surf	1006 mb				
Pressure Freezing	790 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		54	47	060	22
1000	01·7				
950		47	42	055	24
900	30·3	41	36	054	24
850		39	32	052	23
800	61·7	33	26	051	20
750		28	20	049	15
700	96·5	23	13	044	18
650		14	09	042	21
600	135·6	08	-02	042	18
550		01	-12	036	13
500	180·4	-07	-22	019	09
450		-15	-28	353	37
400	233·2	-26	-39	322	27
350		-38	-50	263	38
300	297·6	-51		247	27
250		-59		266	20
200	385·0	-46		283	10
170		-45		284	09
150		-46		266	11
130		-45		275	11
110		-45		290	10
100	538·1	-46		287	07
90		-46		281	05
80		-45		293	04
70		-44		305	03
60		-43		320	03
	(58mb)	-43			
Tropopause	I 261 mb -60° 32,700'				

Ship	WEATHER OBSERVER				
Lat/Long	58·9 N 19·0W.				
Pressure Time	21h. G.M.T.				
Pressure M.S.L.	1008 mb				
Pressure Surf	1008 mb				
Pressure Freezing	765 + 855 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		54	48	050	23
1000	02·2	53	48		
950		46	45	043	29
900	30·7	39	37	043	28
850		31	31	042	25
800	61·7	30	15	042	26
750		31	07	039	23
700	96·6	26	14	036	23
650		19	12	035	21
600	136·0	09	04	025	19
550		01	-09	013	11
500	180·8	-07	-21	028	10
450		-17	-31	006	13
400	233·5	-28	-44	335	11
350		-43		277	10
300	297·3	-55		275	20
250		-53		283	23
200	385·4	-44		320	12
170		-46		323	18
150		-45		294	08
130		-46		297	08
110		-46		297	09
100	538·7	-45			
Tropopause	I 278 mb -60° 31,400'				

Inversion 821 mb 26° - 786 mb 33°

Isothermal 596 - 591 mb 8°

Ship	CIRRUS				
Lat/Long	52·4 N 20·0W.				
Pressure Time	03h. G.M.T.				
Pressure M.S.L.	995 mb				
Pressure Surf	995 mb				
Pressure Freezing	690 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		58	56	250	14
1000	-1·2				
950		53	48	252	16
900	27·8	49	45	255	16
850		42	41	259	20
800	59·6	42	40	234	19
750		39	30	223	19
700	95·1	33	23	214	22
650		28	16	220	23
600	135·3	23	-02	247	28
550		14	-07	241	29
500	181·4	05	-15	236	34
450		-06	-24	227	44
400	235·3	-18	-35	226	43
350		-33		226	52
300	300·7	-49		232	61
250		-58			
200	388·1	-56			
170		-58			
150		-58			
130		-59			
110		-59			
100	536·3	-59			
90		-59			
80		-59			
70		-59			
60	(63mb)	-58			
Tropopause	I 250 mb -58° 33,900'				

Inversion 816 mb 39° - 800 mb 42°

Isothermal 770 - 748 mb 39°

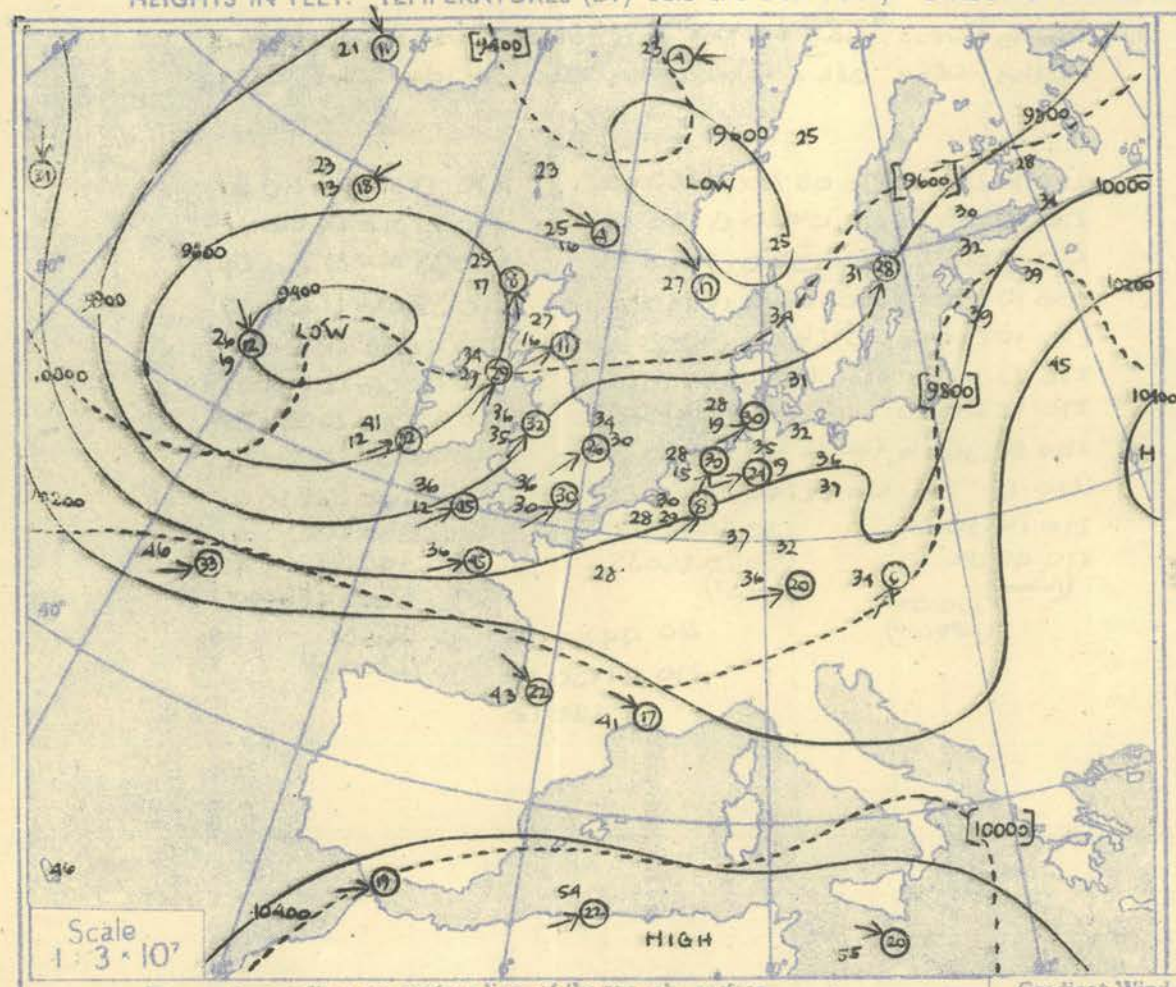
Ship	CIRRUS
Lat/Long	52·4 N 19·8W
Pressure Time	09h. G.M.T.
	No Radio - Sonde Ascent
	See Page 3 for Winds.

Ship	CIRRUS				
Lat/Long	52·4 N 19·8W.				
Pressure Time	15h. G.M.T.				
Pressure M.S.L.	992 mb				
Pressure Surf	992 mb				
Pressure Freezing	765 mb				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		61	54	280	12
1000	-02·2				
950		53	50	281	08
900	26·8	48	46	276	10
850		44	40	276	10
800	58·6	37	32	284	10
750		30	24	292	10
700	93·6	26	19	287	12
650		18	06	290	11
600	132·9	12	-09	290	09
550		05	-12	301	08
500	178·1	-04	-19	309	04
450		-15	-28	336	15
400	231·0	-27			
350		-42			
300	295·4	-46			
250	(253mb)	-43			
Tropopause	I 314 mb -47° 28,400'				

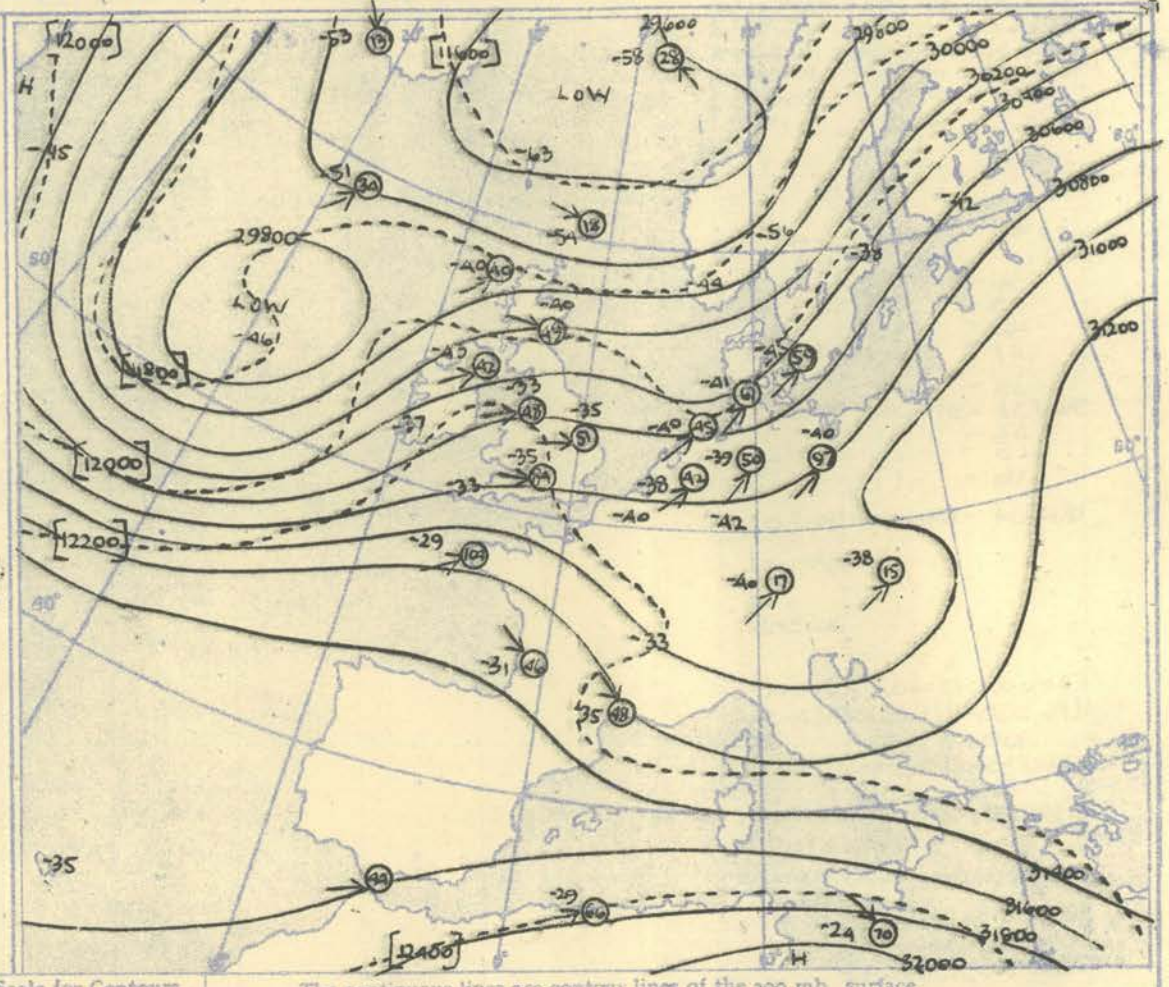
Ship	CIRRUS
Lat/Long	52·4 N 19·8W
Pressure Time	21h. G.M.T.
	No Radio - Sonde Ascent.
	See Page 3 for Winds

Monday 9th. July 1951.

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



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

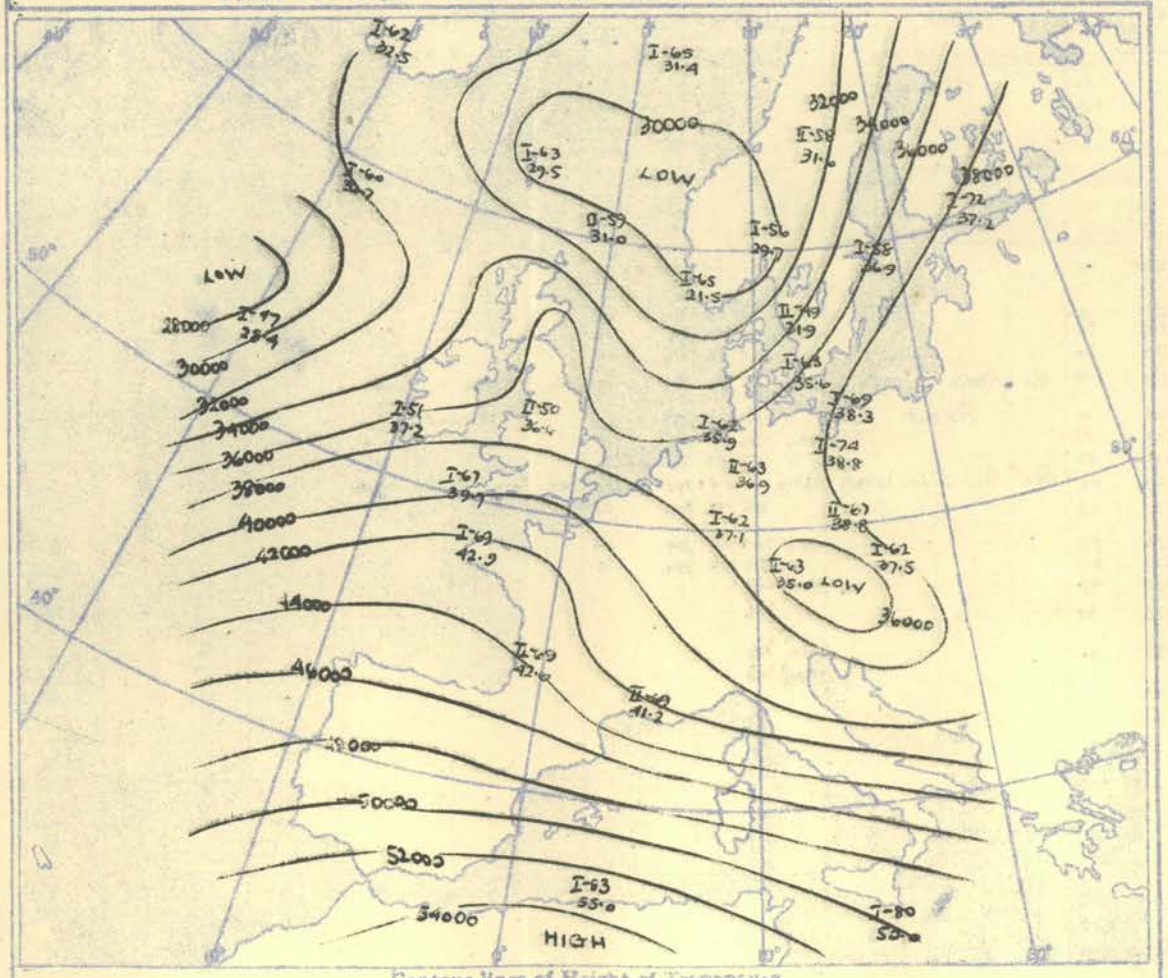


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 30 20 10 5 0 Knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over the British Isles relaxed by subsidence as a depression approached Ireland from the Atlantic.

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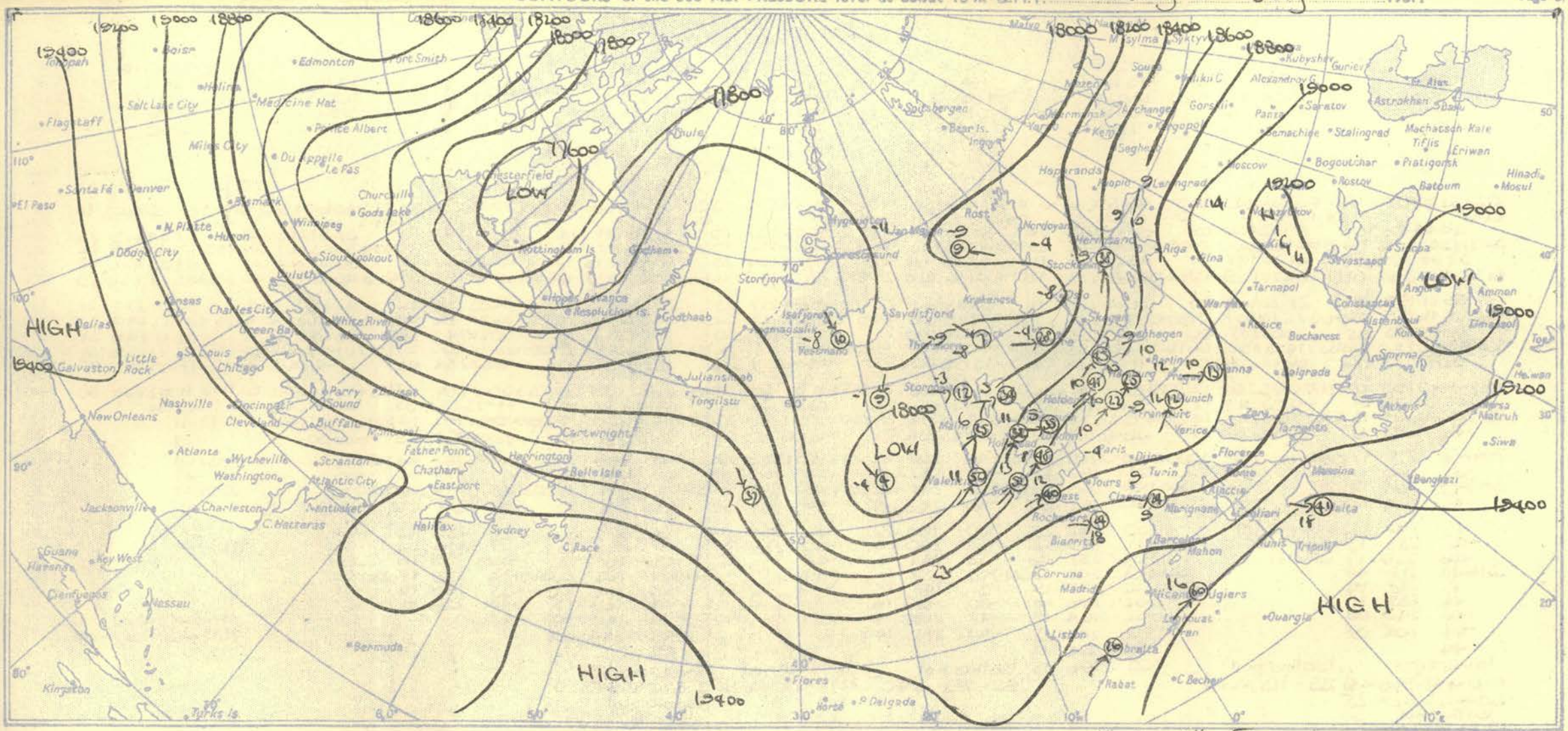
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Monday 5TH July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 9th July. 1951.

Clark 5 Projection Scale 1 : 4 × 10⁷ along meridian at 55° N.

Statute Miles 0 1 2 3 4 800

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Monday 9th July 1951.

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

15 hrs G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Time	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.
Pressure M.S.L.	1006·1 mb	1004·0 mb	1003·9 mb	1001·7 mb	1004·6 mb	1007·5 mb	1008·5 mb	1004·6 mb	997·7 mb
Pressure Surf	996·1 mb	1002·4 mb	1003·1 mb	992·6 mb	1002·6 mb	1003·2 mb	mb	994·2 mb	996 mb
Pressure Freezing	784 mb	783 mb	760 mb	690 mb	664 mb	688 mb	670 mb	646 mb	650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	46	080	10
1000	0·6				
950		46	44	090	07
900	30·2	43	42	053	06
850		38	38	350	09
800	61·6	34	30	308	09
750		26	21	299	06
700	96·3	25	16	289	04
650		18	09	283	05
600	135·5	10	02	280	06
550		02	-7	285	06
500	188·3	-8	-19	295	07
450		-16	-31	302	08
400	232·7	-30	-42	291	13
350		-43		280	18
300	296·7	-54		278	18
250		-55		260	21
200	384·7	-47		266	19
170		-47		244	18
150		-45		241	21
130		-48		235	15
110		-46		239	12
100	527·6	-44		228	16
90		-47		228	14
80		-44		239	11
70		-46		243	06
60		-44		202	07
		-44			

Inversion 920 mb 42°–900 mb 40°; 730 mb 22°–712 mb 25°; Isothermal 712–697 mb 25°

Steps for remainder of winds.

Isothermal 755–713 mb 26°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·2	66	53	Calm	
1000	01·1	65	52		
950		58	44	216	06
900	29·3	47	42	143	22
850		43	35	229	11
800	1261·1	41	36	140	27
750		38	33	185	25
700	196·5	34	29	190	24
650		28	21	200	23
600	136·6	22	12	208	21
550		15	05	223	21
500	182·8	06	-8	236	23
450		-5	-21	237	21
400	231·0	-14	-29	234	28
350		-28	-43	236	31
300	1·43			236	42
250	-58			235	43
200	350·1·56			248	45
170	-50			245	39
150	-50			250	30
130	-51			250	23
110	-54			234	22
100	541·0·53			238	21
90	-52			238	15
80	-52			246	16
70	-52			246	16
60	-52			243	13
	-51			224	12
	-50			196	13

Isothermal 755–703 mb 40°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	58	54	130	10
1000	05				
950		52	48	135	23
900	30·3	51	41	222	05
850		45	40	160	22
800	62·3	43	41	205	26
750		38	33	217	23
700	197·5	36	35	223	32
650		31	30	228	30
600	138·7	26	23	224	26
550		19	16	227	27
500	188·1	11	06	230	32
450		03	-2	233	36
400	240·1	-8	-22	245	32
350		-20	-35	253	36
300	1·43	-33	-48	265	48
250	-47			262	58
200	351·1	-45		262	66
170		-46		261	52
150	-46			251	40
130	-50			278	37
110	-48				
100	(117)				

Isothermal 727–700 mb 36°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	70	43	250	09
1000	01·3				
950	02·1				
900		61	46	211	14
850	31·4	53	44	218	16
800		47	44	194	23
750		46	41	227	17
700	63·2	43	41	205	22
650		38	34	248	20
600	98·7	32	16	251	25
550		13	07	254	33
500	185·1	11	06	230	32
450		03	-2	233	36
400	240·1	-8	-22	245	32
350		-20	-35	253	36
300	1·43	-33	-48	265	48
250	-47			262	58
200	351·1	-45		262	66
170		-46		261	52
150	-46			251	40
130	-50			278	37
110	-48				
100	(117)				

Isothermal 795–783 mb 40°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	61	54	130	15
1000	01·3				
950		55	50	157	20
900	30·3	49	46	172	23
850		47	44	218	30
800	62·3	45	41	205	22
750		39	33	243	23
700	197·5	36	35	223	32
650		31	30	228	30
600	138·7	26	23	224	26
550		19	16	227	27
500	188·1	11	06	230	32
450		03	-2	233	36
400	240·1	-8	-22	245	32
350		-20	-35	253	36
300	1·43	-33	-48	265	48
250	-47			262	58
200	351·1	-45		262	66
170		-46		261	52
150	-46			251	40
130	-50			278	37
110	-48				
100	(117)				

Isothermal 727–700 mb 36°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	70	43	250	09
1000	02·1				
950		61	46	211	14
900	31·5	53	44	219	30
850		46	41	217	31
800	62·2	38	33	243	17
750		32	30	234	26
700	198·3	26	30	236	30
650		22	16	245	36
600	138·7	21	16	253	31
550		16	08	254	33
500	185·3	08	-7	254	48
450		-1	-23	257	53
400	239·9	-9	-31	262	62
350		-20	-33	267	63
300	1·2·35	-45		268	84
250	-49			275	92
200	355·7	-63		274	84
170	-59			284	56
150	-60			256	43
130	-57			270	33
110	-59			259	26
100	544·1·54			275	18
90	-53			260	16
80	-40			226	11
70	-47				

Inversion 455 mb 9°–445 mb 5°; Isothermal 800–768 mb 39°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	60	60	150	15
1000	01·3				
950		57	57	213	33
900	31·5	50	50	228	31
850		45	39	217	31
800	62·5	40	40	221	27
750		34	33	234	26
700	198·3	27	22	246	34
650		21	-4	245	53
600	138·8	08	-11	240	52
550		-04	-22	240	54
500	189·3	-11	-25	252	50
450		-19	-34	254	48
400	239·7	-30	-42	254	35
350		-43	-52	250	36
300	1·43	-54		247	39
250	-54			245	45
200	359·2	-63		245	45
170	-63			245	39
150	-62			243	30
130	-63			243	22
110	-61			242	21
100	548·2·60			242	18
90	-58			240	16
80	-61			240	13
70	-67			240	10
60	-67			240	10
	-66			240	10

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	61	59	220	12
1000	01·1				
950		56	56	228	33
900	30·3	52	52	237	33
850		45	43	242	34
800	62·2	38	38	245	36
750		32	30	239	38
700	197·5	25	25	235	41
650		21	10	238	43
600	138·4	25	-2	241	47
550		18	-4	239	47
500	189·9	11	-12	239	51
450		00	-26	244	68
400	239·7	-9	-20	243	69
350		-21	-24	243	87
300	1·43	-40	-60	250	80
250	-54			245	91
200	353·5	-65		248	92
170	-65			244	78
150	-69			244	57
130	-67			243	42
110	-67			243	42
100	540·5·66				
90					
80					
70					
60					

Inversion 850 mb 45°–828 mb 46°; 750 mb 39°–725 mb 42°

Tropopause	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
	II 281 mb –59° 31000′	NR.	I 226 mb –66° 36400′	I 247 mb –62° 34500′	II 231 mb –50° 36600′	II 224 mb –59° 31000′	I 204 mb –63° 33200′	I 200 mb –67° 33700′	I 221 mb –54° 32200′

21 hrs G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	
Time	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	G.M.T.
Pressure M.S.L.	1006·7 mb	1002·3 mb	1002·8 mb	996·2 mb	1000·9 mb	1002·5 mb	1005·7 mb	1003·9 mb	mb
Pressure Surf	996·1 mb	1000·7 mb	1002·0 mb	987·0 mb	998·9 mb	1006·9 mb	mb	993·6 mb	mb
Pressure Freezing	788 mb	774 mb	750 mb	694 mb	680 mb	691 mb	665 mb	650 mb	mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	44	090	08
1000	01·8				
950		45	41	064	11
900	30·3	39	33	066	08
850		38	35	Calm	
800	61·6	35	27	"	
750		24	20	"	
700	96·3	25	13	261	03
650		19	05	257	06
600	135·5	08	-3	257	07
550		03	-11	274	07
500	188·3	-8	-25	275	05
450		-16	-34	278	12
400	234·8	-31	-46	268	18
350		-41			
		(252)			

Inversion 880 mb 36°–875 mb 39°; 744 mb 23°–729 mb 27°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·4	55	52	060	12
1000	0·6	55	52		
950		51	48	077	17
900	29·4	46	41	088	14
850		42	36	087	13
800	61·0	35	28	109	09
750		29	24	147	11
700	196·0	26	19	150	12
650		21	07	156	11
600	135·5	14	-3	155	06
550		07	-5	213	08
500	181·0	-3	-25	240	12
450		-12	-33	247	18
400	234·6	-21	-43	250	25
350		-33	-49	258	37
300	1·48			251	40
250	-66			249	41
200	386·3	-58		248	29
170	-48			245	23
150	-49			247	24
130	-50			238	24
110	-50			247	16
100	559·1	-50		240	13
90	-49			245	12
80	-49			233	10
70	-45			210	03
60					

Isothermal 1002–975 mb 55°; 745–725 mb 28°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·2	56	54	130	06
1000	0·7	56	54		
950		52	48	138	19
900	29·6	48	43	132	17
850		42	39	118	19
800	61·2	35	33	126	15
750		32	31	168	21
700	196·3	29	28	183	19
650		24	23	196	15
600	136·2	18	17	224	17
550		12	07	212	17
500	182·0	03	-1	207	17
450		-9	-16	243	22
400	233·1	-18	-29	251	30
350		-31	-36	227	35
300	1·46	-47		217	32
250	-66			230	46
200	387·8	-57		235	46
170	-54			230	42
150	-54			238	36
130	-55				
110	-56				
100	559·1	-56		234	19
90	-55			246	18
80	-55				
70					
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	61	57	180	15
1000	0·2				
950		57	53	157	21
900	29·5	52	49	203	26
850		46	42	230	29
800	61·5	43	38	231	32
750		38	34	248	40
700	198·9	34	27	227	27
650		28	24	235	33
600	138·5	23	16	235	34
550		15	05	242	36
500	188·1	08	-6	252	34
450		-1	-25	257	41
400	239·7	-9	-32	262	50
350		-20	-33	267	63
300	1·2·41	-49		260	51
250	-55			271	69
200	363·5	-63		274	84
170	-59			284	56
150	-60			256	43
130	-57			270	33
110	-59			259	26
100	544·1·54			275	18
90	-53			260	16
80	-40			226	11
70	-47				

Isothermal 900–868 mb 51°; 665–650 mb 28°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	59	56	240	12
1000	01·9				
950	01·6				
900		56	53	200	29
850	31·1	51	49	214	30
800		50	48	225	30
750		40	38	235	28
700	198·5	33	31	254	30
650		28	24	235	33
600	138·5	23	16	238	41
550		20	13	244	43
500	188·5	12	-11	244	43
450		00	-18	250	46
400	239·7	-9	-17	254	61
350		-22	-26	259	70
300	1·43	-36	-41	257	81
250	-52			257	85
200	353·5	-61		258	81
170	-67			260	36
150	-68			253	43
130	-65			249	43
110	-62			242	29
100	540·2·65				
90					
80					
70					
60					

Inversion 650 mb 33°–625 mb 35°; 600 mb 27°–575 mb 29°; Isothermal 550–541 mb 16°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	57	56	200	10
1000	01·1				
950		55	54	212	15
900	30·3	51	50	240	18
850		47	42	243	22
800	62·3	43	42	236	15
750		39	33	229	31
700	197·9	34	27	227	27
650		30	20	207	16
600	138·5	24	05	210	24
550		12	-5	212	25
500	183·3	02	-15	206	25
450		-7	-25	215	28
400	232·8	-17	-33	217	31
350		-33	-48	215	28
300	1·43	-49		217	32
250	-62			230	46
200	382·2	-55		232	46
170	-53			230	42
150	-52			238	36
130	-55				
110					
100	541·8	-52		243	25
90	-52				
80	(95)				
70					
60					

Inversion 850 mb 46°–830 mb 48°; Isothermal 830–787 mb 34°; 741–700 mb 34°; 550–541 mb 16°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	58	57	230	19
1000	01·6				
950		55	55	226	29
900	30·3	51	51	232	36
850		45	42	232	38
800	62·7	40	38	235	43
750		35	30	239	38
700	197·5	27	19	242	45
650		21	10	238	48
600	138·4	25	-2	241	47
550		18	-4	239	47
500	189·9	11	-12	239	51
450		00	-26	244	68
400	239·7	-9	-20	243	69
350		-21	-24	243	87
300	1·43	-40	-60	250	80
250	-54			245	91
200	353·5	-65		248	92
170	-65			244	78
150	-69			244	57
130	-67			243	42
110	-67			243	42
100	540·5·66				
90					
80					
70					
60					

Inversion 850 mb 45°–828 mb 46°; 750 mb 39°–725 mb 42°

Tropopause	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	
	NR.	I 231 mb –65° 36500′	I 231 mb –71° 35000′	I 255 mb –65° 34500′	II 221 mb –57° 36400′	I 213 mb –65° 35000′	II 191 mb –70° 39500′	I 183 mb –68° 41200′	

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No. 11790. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Tuesday 10th July 1951. Page 1.

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

03h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03h G.M.T.	1006·8 mb	996·8 mb	792 mb
STORNOWAY	03h G.M.T.	1000·6 mb	999·0 mb	768 mb
LEUCHARS	03h G.M.T.	999·1 mb	998·3 mb	720 mb
ALDERGROVE	03h G.M.T.	996·1 mb	986·7 mb	733 mb
LIVERPOOL	03h G.M.T.	1000·3 mb	998·3 mb	698 mb
DOWNHAM MARKET	03h G.M.T.	1004·8 mb	1000·5 mb	658 mb
LARKHILL	03h G.M.T.	1005·2 mb	989·6 mb	650 mb
CAMBORNE	03h G.M.T.	1003·3 mb	992·9 mb	662 mb
VALENTIA	03h G.M.T.	925·2 mb	924 mb	725 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	47	43	080	09	00·4	54	51	070	20	00·2	55	54	150	11
1000	1·8					0·2					−0·2				
950		42	40	074	11		49	44	074	23		53	53	152	14
900	30·1	39	32	076	11	28·9	48	41	104	24	28·7	50	49	157	14
850		38	35	083	08		42	36	105	21		45	43	183	15
800	61·4	33	28	095	07	60·5	36	31	092	18	60·4	40	39	201	16
750		21	22	134	04		30	24	096	18		35	33	210	19
700	96·2	25	15	185	05	95·5	24	15	108	18	95·7	30	26	194	20
650		20	09	191	07		22	−02	113	09		23	15	185	21
600	135·6	12	00	199	08	135·1	15	07	150	04	135·4	19	12	194	23
550		04	−10	197	07		09	03	193	13		11	05	205	28
500	180·6	−05	−21	215	09	180·7	01	−07	202	16	181·2	04	−10	212	23
450		−14	−29	241	13		−09	−18	210	16		−05	−44	217	24
400	233·6	−24	−40	255	21	234·3	−20	−30	209	21	235·1	−19	−46	210	24
350		−35	−49	260	33		−34	−46	209	23		−34	−56	216	25
300	298·4	−50		255	46	299·4	−52		209	23	300·3	−48		213	28
250		−65		259	42		−69		212	24		−65		217	30
200	385·2	−52		250	30	386·0	−51		229	21	387·4	−53		235	42
170		−50		242	24		−49		228	21		−51		237	34
150		−49		241	24		−50		225	20		−51		235	31
130		−50		242	24		−51					−52		232	30
110		−51		241	15							−55		237	24
100	536·5	−52		235	15						538·1	−56		234	21
90		−52		231	16							−56		229	15
80		−51		227	08							−56		229	16
70		−50										−55		236	12
60												−55			

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	57	55	220	05	00·6	59	56	190	08	01·2	58	57	230	14
1000	+1·2					0·1					1·4	58	57		
950		55	51	224	15		56	51	218	22		58	54	222	22
900	27·9	52	46	233	17	29·2	51	47	229	25	30·6	53	48	227	29
850		48	40	226	20		46	41	234	23		48	43	232	29
800	59·9	40	35	217	24	61·0	40	34	230	22	62·6	42	40	236	30
750		34	28	204	24		32	28	229	24		37	33	236	34
700	95·2	28	24	195	24	96·2	32	23	224	30	98·3	39	27	234	38
650		24	08	201	20		24	09	220	37		31	17	232	42
600	134·9	18	−08	208	22	136·2	19	−05	221	43	138·7	24	09	231	45
550		10	−15	220	24		10	−13	221	43		17	01	229	48
500	180·6	02	−18	212	27	181·8	01	−21	222	48	185·0	08	−05	233	49
450		−08	−29	215	30		+10	−36	223	54		−05	−12	243	51
400	234·3	−19	−41	217	35	235·3	−23	−46	224	57	289·1	−15	−21	246	66
350		−33	−54	223	42		−35	−55	224	67		−27	−31	244	81
300	299·6	−49		223	38	300·5	−44		241	90	305·4	−39	−44	244	102
250		−53		225	40		−54		236	87		−56		248	99
200	387·5	−49		222	45	388·5	−55		236	80	392·6	−64		242	84
170		−51		217	40		−54		242	65		−64		241	63
150		−51		233	35		−57		248	58		−65			
130		−54		244	28		−60					−66			
110		−57		233	22		−61					−62			
100	537·9	−57		231	23	537·2	−58				538·8	−62			
90		−57		228	19		−57								
80		−57		226	16		−59								
70		−57		220	14		−57								
60		−57		211	12	(52 mb)	−58								

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	59	58	230	14	02·9	60	59	220	13	00·3	57	56		
1000	1·4					0·9					−1·3				
950		56	55	225	21		56	55	225	23		52	50		
900	30·6	51	51	232	29	30·0	52	48	227	27	27·7	47	45		
850		46	44	233	30		48	43	230	31		44	41		
800	62·6	43	37	232	30	61·9	42	38	234	43	59·4	40	37		
750		38	31	234	31		36	25	232	43		35	30		
700	98·1	39	20	234	42	97·4	36	15	230	43	94·7	28	21		
650		32	08	232	46		30	02	229	52		21	13		
600	138·7	24	−02	234	49	137·7	24	−07	230	60	134·2	14	03		
550		17	−35	236	51		16	−14	234	64		05	−11		
500	185·0	09	−26	240	52	183·9	07	−21	233	70	179·4	−04	−22		
450		−02	−37	238	67		−02	−29	235	77		−13	−26		
400	239·5	−12	−25	240	79	238·3	−12	−38	232	94	232·5	−24	−37		
350		−23	−36	239	91		−23	−46	235	96		−34	−50		
300	306·3	−35	−47	242	94	305·2	−35	−54	233	110	297·7	−43			
250		−54		243	99		−53		233	109		−44			
200	394·1	−68		244	99	393·6	−58				387·5	−45			
170		−70		248	99	(185 mb)	−61					−47			
150		−68		250	63							−52			
130		−68		239	45							−54			
110		−68		233	25							−54			
100	538·9	−65		224	20						538·8	−53			
90		−65		218	18						(92 mb)	−52			
80		−64		246	14										
70		−64		244	15										
60	(66 mb)	−64													

Max wind:- 243° 114 kts 31,200' 290 mb

Inversion 755 mb 36° – 725 mb 42°

Isothermal 1001 – 950 mb 58°

Inversion 743 mb 34° – 730 mb 39°

Isothermal 730 – 700 mb 39°

Inversion 750 mb 36° – 737 mb 37°

Max wind:- 320 mb 29,000' 233° 128 kts

Inversion 875 mb 37° – 842 mb 39°; 760 mb 26° – 734 mb 29°

Inversion 925 mb 46° – 900 mb 48°; 705 mb 29° – 676 mb 26°

Isothermal 965 – 930 mb 53°; 815 – 790 mb 40°

Inversion 998 mb 59° – 990 mb 60°; 728 mb 29° – 703 mb 33°; 242 mb −56° – 233 mb −55°

	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Tropopause	I 242 mb −66° 34,500'	I 250 mb −69° 33,800'	I 245 mb −66° 34,300'	I 259 mb −58° 33,100'	I 242 mb −56° 34,900; I 214 mb −57° 37,500	II 222 mb −66° 37,200'	I 202 mb −69° 39,100'	I 222 mb −59° 37,200'; II 300 mb −43° 29,800'	

09h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	09h G.M.T.	1005·7 mb	995·8 mb	786 mb
STORNOWAY	09h G.M.T.	999·2 mb	997·6 mb	780 mb
LEUCHARS	09h G.M.T.	997·9 mb	997·1 mb	725 mb
ALDERGROVE	09h G.M.T.	995·7 mb	986·4 mb	737 mb
LIVERPOOL	09h G.M.T.	999·6 mb	997·6 mb	709 mb
DOWNHAM MARKET	09h G.M.T.	1004·6 mb	1000·3 mb	668 mb
LARKHILL	09h G.M.T.	1005·1 mb	989·6 mb	680 mb
CAMBORNE	09h G.M.T.	1003·2 mb	992·9 mb	655 mb
VALENTIA	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	46	090	13	00·4	53	51	065	17	00·2	61	58	240	05
1000	1·5					0·2					−0·6				
950		44	44	076	18		49	47	070	27		55	53	227	18
900	29·9	40	39	086	18	28·4	43	40	077	29	28·4	48	47	222	19
850		36	33	121	14		39	36	081	24		46	42	217	18
800	61·1	34	27	144	12	59·8	34	30	095	22	60·3	41	33	222	18
750		29	20	130	10		30	26	117	29		35	23	214	18
700	96·0	25	11	138	10	94·7	27	22	125	20	95·5	29	21	176	21
650		19	02	141	09		21	16	137	15		23	07	190	21
600	136·3	11	−04	172	07	134·2	16	11	175	12	135·2	18	−08	205	21
550		06	−21	218	15		09	02	194	09		09	−14	204	24
500	180·5	−03	−17	238	19	179·8	01	−09	185	08	180·8	02	−21	211	24
450		−11	−20	240	24		−10	−23	156	10		−10	−37	216	26
400	233·7	−24	−34	243	29	233·3	−22	−35	151	16	234·3	−22	−47	216	25
350		−36	−43	246	27		−35	−49	131	21		−36	−59	202	22
300	298·5	−52		246	26	298·3	−50		130	17	299·5	−51		208	27
250		−71		236	26		−63		196	16		−55		223	37
200	385·4	−47		234	22	385·2	−48		221	15	387·6	−46		226	33
170		−47		231	22		−49		209	16		−46		228	86
150		−47		227	22		−47					−49		232	23
130		−47		229	16							−48		226	17
110		−47		230	13							−50		224	18
100	(105 mb)	−47									539·7	−49			
90															
80															
70															
60															

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	60	56	CALM		00·6	66	57	200	12	01·2	65	58	250	16
1000	−1·2					−0·1					1·3				
950		54	51	181	14		59	52	211	19		58	54	219	24
900	27·8	50	48	187	14	29·1	52	47	217	24	30·6	54	50	214	25
850		44	42	194	15		48	41	220	34		50	45	224	28
800	59·5	39	37	200	15	61·1	43	35	221	29	62·7	45	39	227	30
750		34	31	206	15		37	30	225	27		38	30	231	36
700	94·8	27	24	210	15	96·6	31	26	234	31	98·3	34	17	228	45
650		22	19	207	19		26	20	236	31		30	−13	228	50
600	134·5	15	10	203	24	136·5	22	05	225	36	138·5	25	−22	230	54
550		07	00	196	24		13	−04	227	37		16	−22	230	58
500	179·8	−02	−10	197	25	182·6	05	−18	231	37	184·7	05	−33	230	63
450		−14	−21	200	21		−05	−28	230	42		−06	−42	234	72
400	327	−27	−32	203	28	236·6	−17	−40	238	52	238·7	−15	−50	231	88
350		−38	−44	210	35		−29	−52	231	66		−26	−58	234	102
300	297·4	−48		214	46	302·5	−44		234	75	305·1	−39	−59	238	110
250		−48		214	40		−47		235	85		−52		238	115
200	386·4	−44		224	39	391·9	−45		231	69	393·6	−58		240	90
170		−45		225	34		−47		233	57		−60		242	66
150		−48		226	35		−50		241	57		−58		262	45
130		−49		225	29		−53		229	34		−58			
110		−50		205	19		−51		212	23		−54			
100	538·9	−51		203	19	543·9	−50		220	23	542·1	−54			
90		−51		197	18		−48		230	19		−53			
80		−51		196	14		−50		222	17					
70		−50					−49		197	15					
60						(63 mb)	−48								

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	63	57	220	15	02·9	61	58	190	18					
1000	1·4					0·9									
950		56	53	219	22		57	52	219	35					
900	30·7	51	51	224	31	30·9	51	48	223	33					
850		46	46	225	37		47	45	231	37					
800	62·5	39	39	228	40	62·8	43	41	250	39					
750		33	29	229	45		38	32	230	44					
700	97·8	35	13	235	44	98·4	35	20	231	44					
650		28	−05	234	52		31	12	232	51					
600	138·0	24	−19	233	62	138·6	23	02	232	52					
550		15	−26	233	64		17	−06	233	58					
500	184·2	06	−34	234	69	184·8	06	−20	233	60					
450		−04	−43	235	75		−03	−32	236	65					
400	238·5	−13	−50	234	88	239·1	−13	−43	234	78					
350		−25	−59	232	95		−22	−51	237	105					
300	305·3	−35	−59	237	108	306·1	−34	−57	233	117					
250		−52		243	115		−49		234	118					
200	393·5	−61		240	104	395·2	−56								
170		−64					−52								
150		−66					−56								
130		−64					−57								
110		−59					−59								
100	540·3	−59				544·5	−54								
90		−57					−50								
80		−56					−53								
70		−53					−51								
60		−52				(68 mb)	−51								
		−48													

Inversion 906 mb 39° – 900 mb 40°; 820 mb 38° – 800 mb 34°

Isothermal 867 – 852 mb 46°

Inversion 830 mb 23° – 812 mb 24°; 284 mb −49° – 274 mb −48°

Isothermal 873 – 850 mb 48°; 704 – 689 mb 31°

Inversion 915 mb 53° – 891 mb 54°; 721 mb 38° – 693 mb 35°

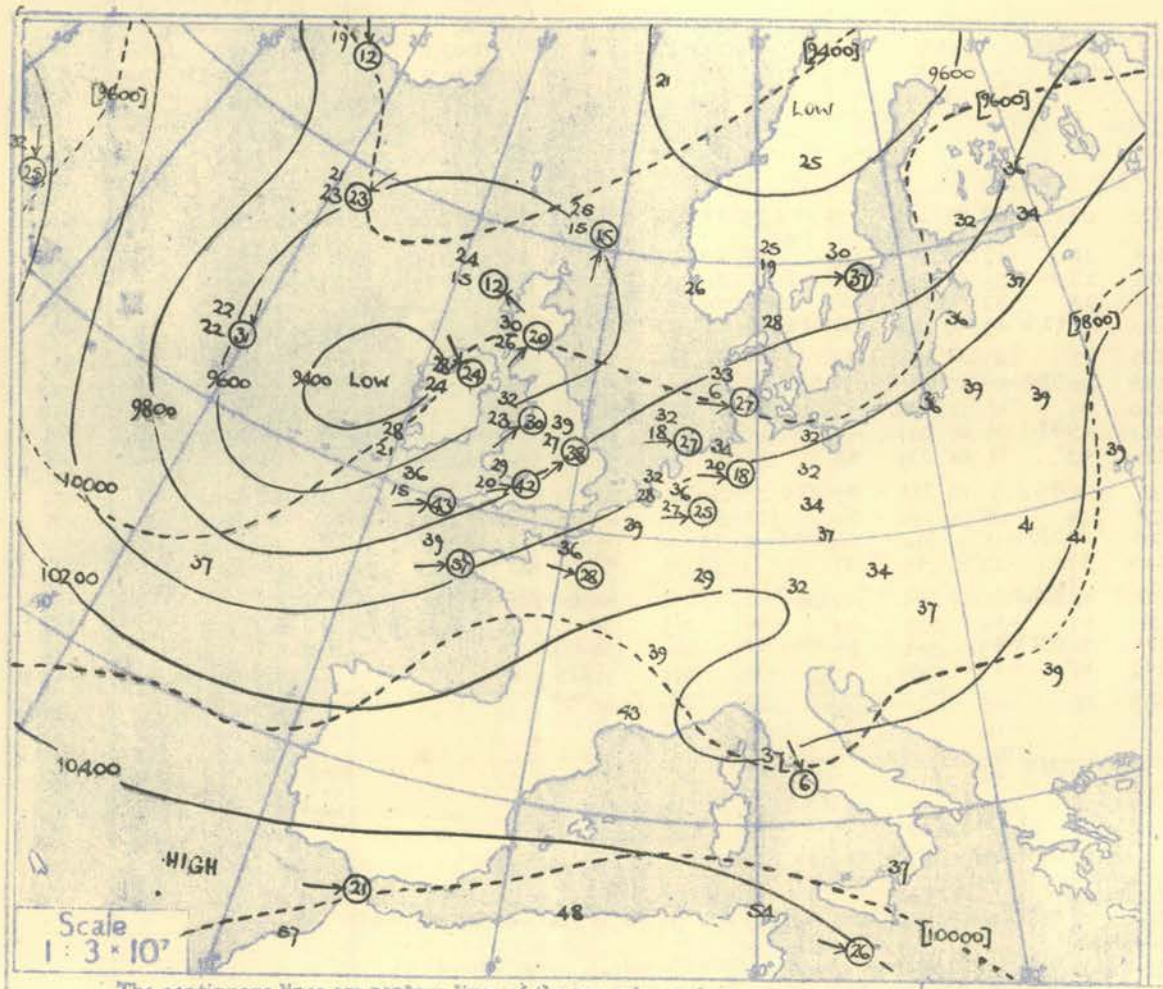
Inversion 785 mb 31° – 706 mb 35°; 650 mb 28° – 632 mb 29°

Isothermal 706 – 700 mb 35°

	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Tropopause	I 250 mb −71° 33,700'	I 235 mb −66° 35,100'	I 263 mb −58° 32,700'	I 265 mb −53° 32,400'	I 284 mb −49° 31,500; I 266 mb −49° 32,300	I 231 mb −55° 36,300'	I 218 mb −63° 37,400'	I 245 mb −51° 35,000; I 190 mb −43° 40,500'	

Tuesday 10th July, 1951.

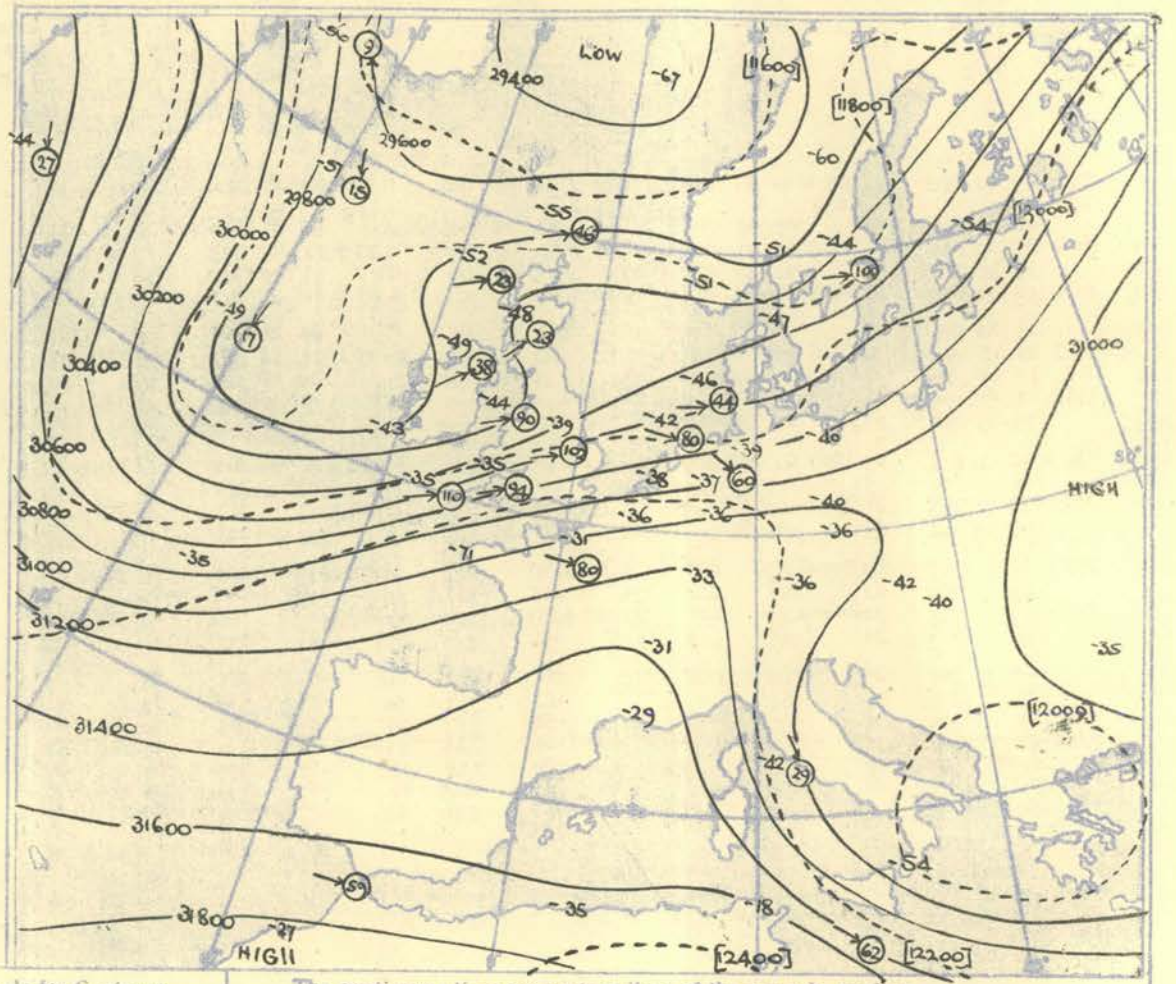
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



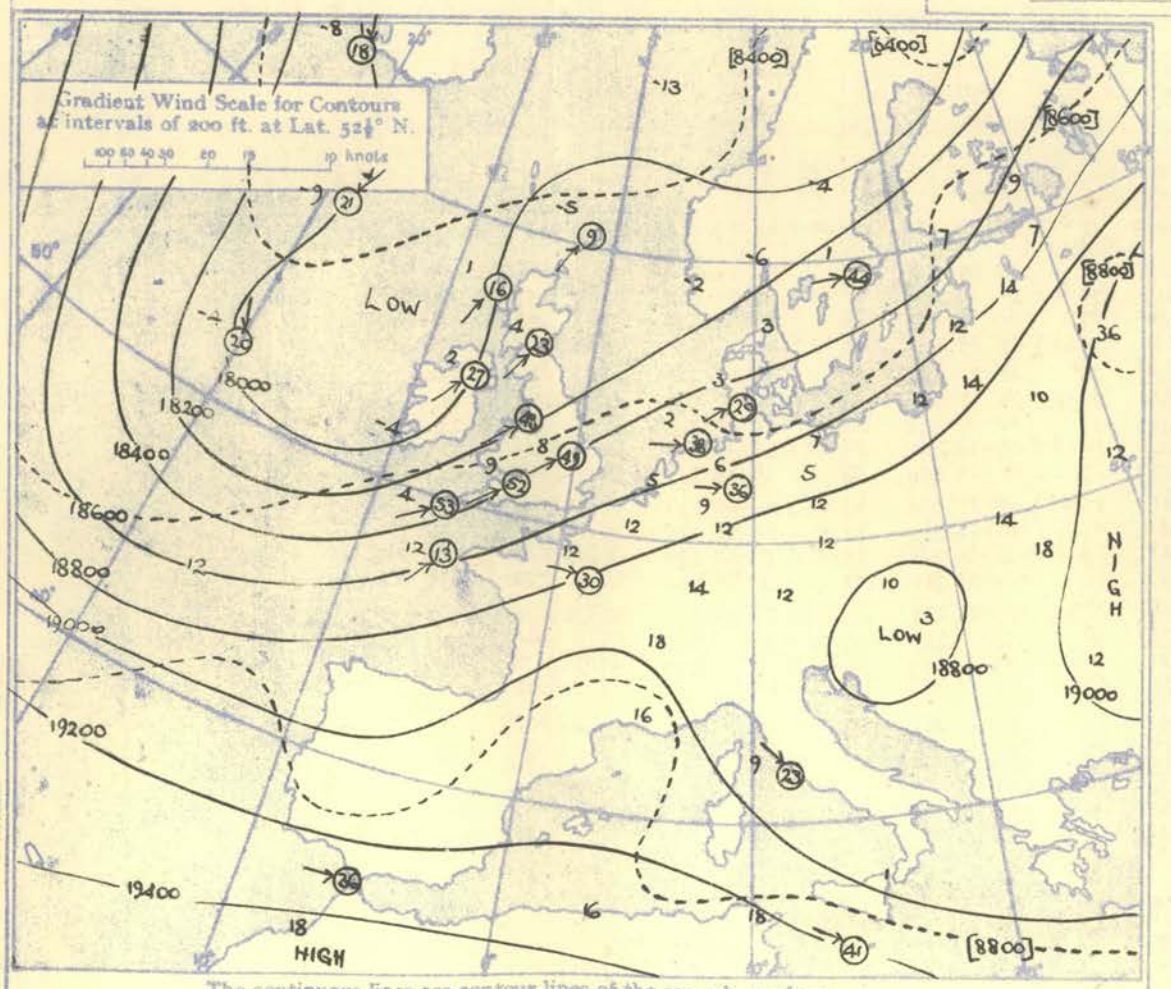
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

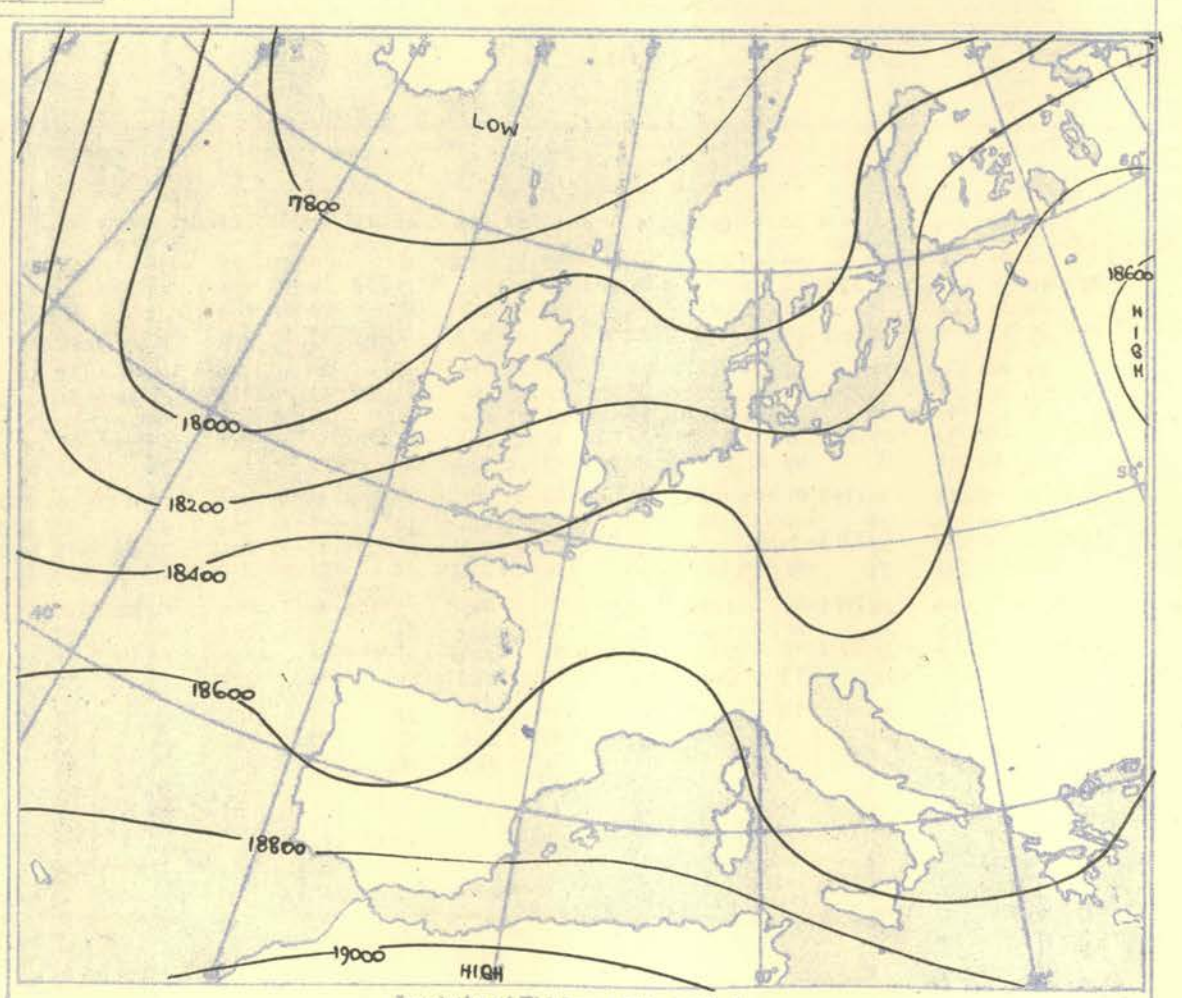
100 50 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Position: 53°12'N 2°12'W — Time 1448 hrs; Pressure M.S.L. 1003 mb; Surf 1001.5 mb; Freezing 700 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew
Surf	0.4	–	–
1000	0.9	–	–
950		–	–
900	30.3	55	51
850		48	48
800	62.5	43	–
750		–	–
700	97.9	32	–
650		–	–
600	138.2	23	17
550		–	–
500	184.4	07	–
450		–	–
400	238.8	-15	–
350		–	–
300	305.7	-35	–
250			
200			
170			

Cloud
218 Few 900-880
818 Sccu 780-665
6-7/8 C 345-310 mb

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

Place	Larkhill		Shoeburyness		Downham Market		Shoeburyness		Squires Gate		Cirrus 52.7°N 20.1°W		Leuchars		Larkhill	
Time	11hrs		08hrs		14hrs		15hrs		14hrs		21hrs		21hrs		23hrs	
Type					Pilar								Pilar			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	220	20			210	26	210	18	280	15	330	18			230	16
1,000	220	30	210	30	212	30	220	28	240	23	330	20			220	18
2,000	220	31	230	39	210	30	220	34	230	24	330	22			220	29
3,000	230	25			216	32	230	38	230	34	330	17			220	35
4,000	230	42	250	41	224	31	230	42	230	30	340	18			220	35
5,000	230	28	250	43	228	31	230	49	230	30	340	21			220	36
6,000	230	40	250	48	232	30	230	53			350	16			220	35
8,000	280	42	240	52	236	35	220	52							230	39
10,000	230	46	230	45	233	45	230	52			330	22			220	49
14,000	230	57	230	51	234	52	230	52			330	21			220	49
18,000	230 (15000')	57	230	64	233	58	230	63			320	15			220 (15000')	48
24,000			240	88	232	78	230	82			330	24				
30,000			240	100	236	106	230	95					228	43		
40,000			240	74	237	105	240	81					229 (38000')	48		
50,000					239 (42000')	92	240; 220 (54000')	15; 11								

NEPHOSCOPE OBSERVATIONS

Place										
Time Type										
Dir. Vel.										

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

Weather Observer — 59.1°N 18.6°W — 03hrs G.M.T.; M.S.L. 1010 mb; Surf 1010 mb; Freezing 860 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	53	47	045	20
1000	2.7	52	46	038	24
950		44	40	037	21
900	31.1	36	34	037	22
850		30	28	037	29
800	62.0	32	24	037	24
750		27	17	036	25
700	96.7	21	13	032	23
650		13	08	025	22
600	135.6	07	-1	013	21
550		-1	-8	001	19
500	180.2	-9	-19	008	21
450		-21	-31	009	18
400	232.5	-29	-40	338	11
350		-43		323	17
300	296.9	-57		340	15
250		-55		335	19
200	384.0	-48		310	12
170		-49		324	15
150		-49		330	09
130		-48		332	07
110		-48		330	07
100	536.0	-51		329	07
90		-53		322	07
80		-53		318	05
70		-51		316	05
60	(62)	-51			

Inversion 838 mb 28° - 814 mb 32°
Isothermal 814-781 mb 32°, 768-756 mb 28°, 730-708 mb 23°

Tropopause: T 285 mb -60° 30700'

Weather Observer — 59.1°N 18.7°W — 09hrs G.M.T.; M.S.L. 1011 mb; Surf 1011 mb; Freezing 865 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	52	43	035	25
1000	3.1	50	43	029	21
950		42	39	026	21
900	31.3	36	34	020	20
850		30	30	015	20
800	62.3	31	21	011	19
750		25	17	016	23
700	97.0	19	10	013	21
650		11	04	002	16
600	135.7	05	-7	355	14
550		-1	-15	351	14
500	180.2	-9	-22	335	15
450		-21	-37	326	18
400	232.3	-36	-49	320	18
350		-47		332	26
300	295.6	-57		313	27
250		-50		325	24
200	383.9	-46		330	16
170		-47		337	14
150		-47		332	09
130		-45		334	10
110		-45		346	04
100	536.5	-46		346	03

Inversion 834 mb 28° - 812 mb 32°

Tropopause: T 287 mb -59° 30500'

Weather Observer — 59.1°N 18.5°W — 15hrs G.M.T.; M.S.L. 1012 mb; Surf 1012 mb; Freezing 850 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	53	44	020	13
1000	3.4	51	40	011	21
950		43	32	014	20
900	31.8	37	28	018	20
850		32	22	018	21
800	62.8	28	20	017	19
750		22	12	018	20
700	97.1	17	07	011	22
650		12	-1	359	20
600	135.8	04	-11	354	24
550		-3	-19	352	13
500	180.2	-10	-30	350	15
450		-20	-42	348	17
400	232.4	-31	-52	348	27
350		-44		346	32
300	296.2	-56		344	29
250		-49		335	25
200	384.9	-44		340	17
170		-45		345	15
150		-45		344	10
130		-44		343	09
110		-45		348	07
100	538.4	-45		347	06
90		-45		342	04
80		-44		346	03
70		-44		344	01
60		-44		Calm	
	(55)	-44			

Isothermal 830-815 mb 30°

Tropopause: T 285 mb -58° 30800'

Weather Observer — 59.0°N 18.6°W — 21hrs G.M.T.; M.S.L. 1013 mb; Surf 1013 mb; Freezing 850 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	53	45	320	14
1000	3.5	51	45	330	10
950		45	41	332	10
900	32.0	38	35	335	10
850		32	29	323	10
800	63.0	27	16	321	11
750		24	14	319	19
700	97.4	19	14	316	16
650		11	03	323	22
600	136.2	05	-3	329	29
550		-3	-9	327	29
500	180.5	-11	-26	325	25
450		-19	-32	327	30
400	233.0	-29	-43	325	37
350		-43		330	43
300	296.9	-54		331	41
250		-48		332	30
200	385.9	-44		336	24
170		-44		330	20
150		-45		330	16
130		-46		329	09
110		-46		329	14
100	539.2	-46		329	15
90		-47		329	10
80		-47		329	05
70		-46		Calm	
60		-46		"	
		-46		"	
	(48)	-43			

Isothermal 788-778 mb 26°

Tropopause: T 300 mb -54° 29700'

Cirrus — 52.7°N 20.1°W — 03hrs G.M.T.; M.S.L. 1001 mb; Surf 1001 mb; Freezing 800 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	57	53	350	33
1000	0.5	57	53	351	33
950		49	45	008	37
900	29.2	43	37	009	43
850		36	29	011	50
800	60.4	32	28	010	46
750		28	28	005	37
700	95.1	22	22	359	31
650		17	17	350	28
600	134.2	12	12	338	23
550		04	04	333	23
500	179.6	-9	-5	326	20
450		-15	-17	352	27
400	232.6	-25		357	29
350		-36		357	18
300	297.5	-49		357	17
250		-61		357	17
200	385.1	-49			
170		-49			
150		-52			
130		-53			
110		-54			
100	535.9	-54			
90		-54			
80		-55			
70		-55			
60		-56			
		-56			

Isothermal 1001-1000 mb 57°, 750-746 mb 28°

Tropopause: T 288 mb -61° 32800'

Cirrus — 09hrs G.M.T.

Not Available.

Tropopause: –

Cirrus — 52.6°N 20.1°W — 15hrs G.M.T.; M.S.L. 1011 mb; Surf 1011 mb; Freezing 760 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	58	49	340	26
1000	3.1	55	46	340	27
950		47	40	340	26
900	31.7	40	33	341	29
850		35	24	347	32
800	63.0	39	14	348	30
750		30	11	344	32
700	98.0	24	04	344	29
650		17	-9	344	24
600	137.2	11	-13	330	23
550		03	-22	310	32
500	182.2	-7	-31	306	32
450		-14		310	43
400	235.2	-24		312	53
350		-37		321	82
300	300.1	-48			
250		-60			
200	387.7	-49			
170		-50			
150		-51			
130		-52			
110		-51			
100	538.8	-51			
90		-51			
80		-50			
70	(76)	-50			

Isothermal 900-850 mb 40°
Inversion 824 mb 32° - 806 mb 40°

Tropopause: T 250 mb -60° 34100'

Cirrus — 21hrs G.M.T.

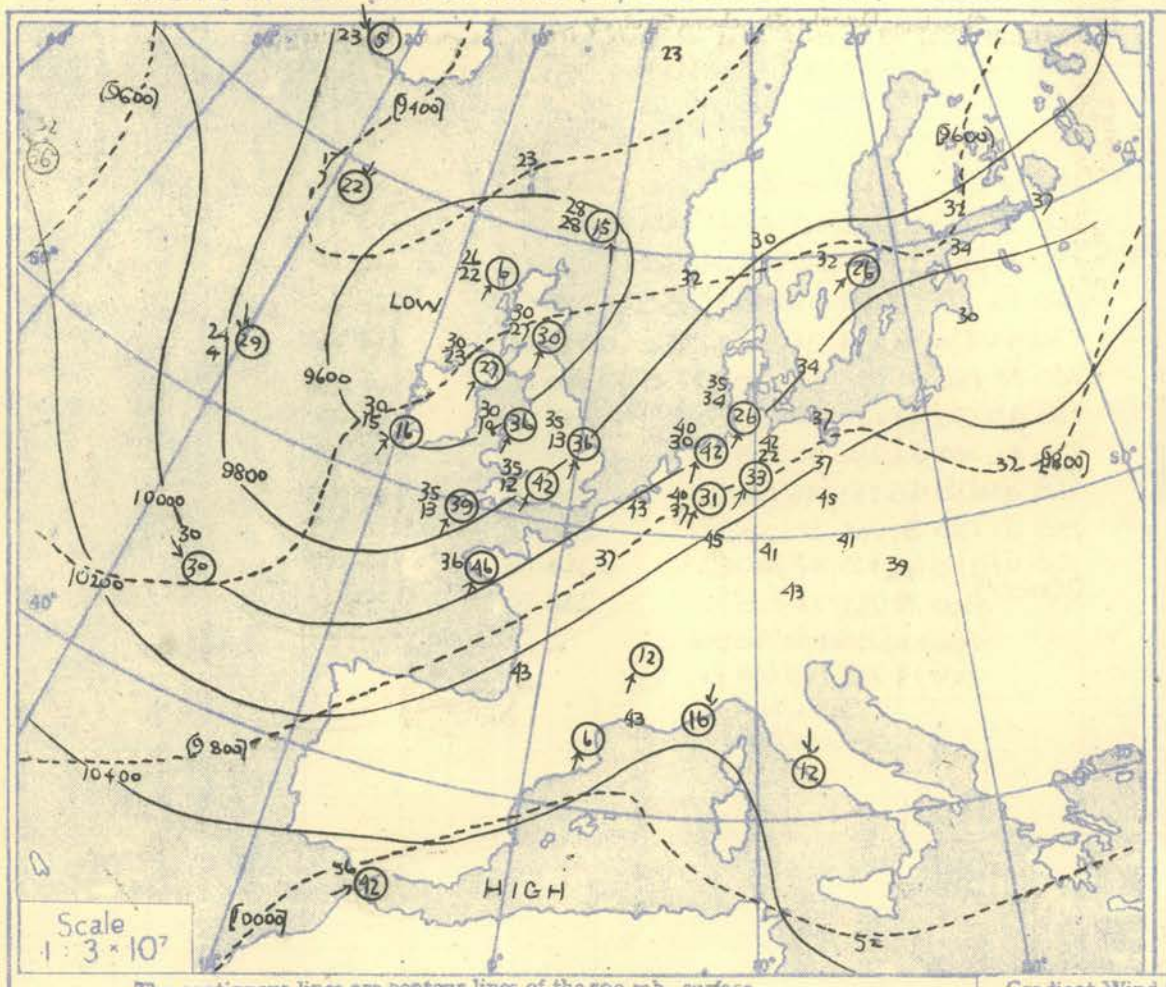
Not Available.

Tropopause: –

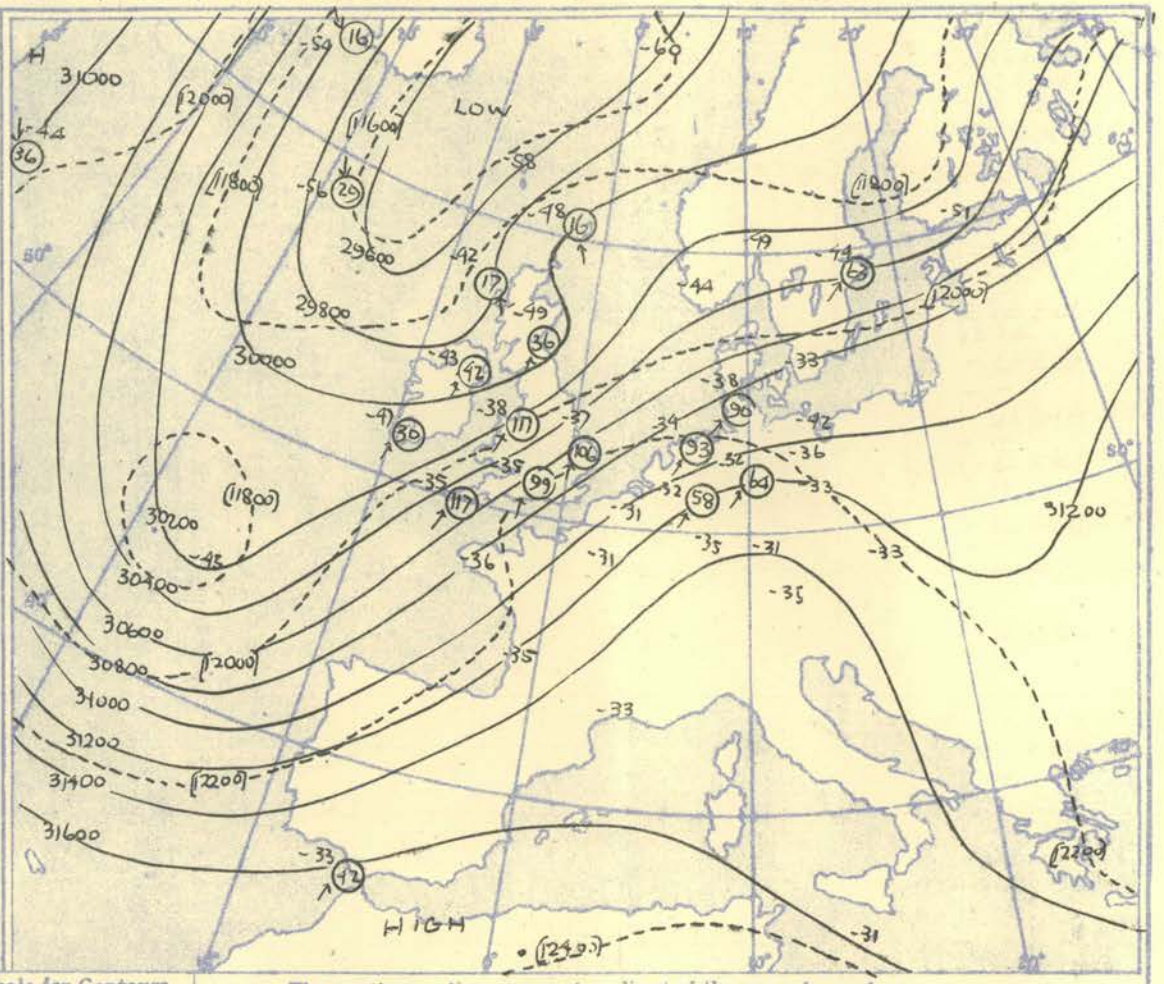
Page 4

Tuesday 10th July 1951

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



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

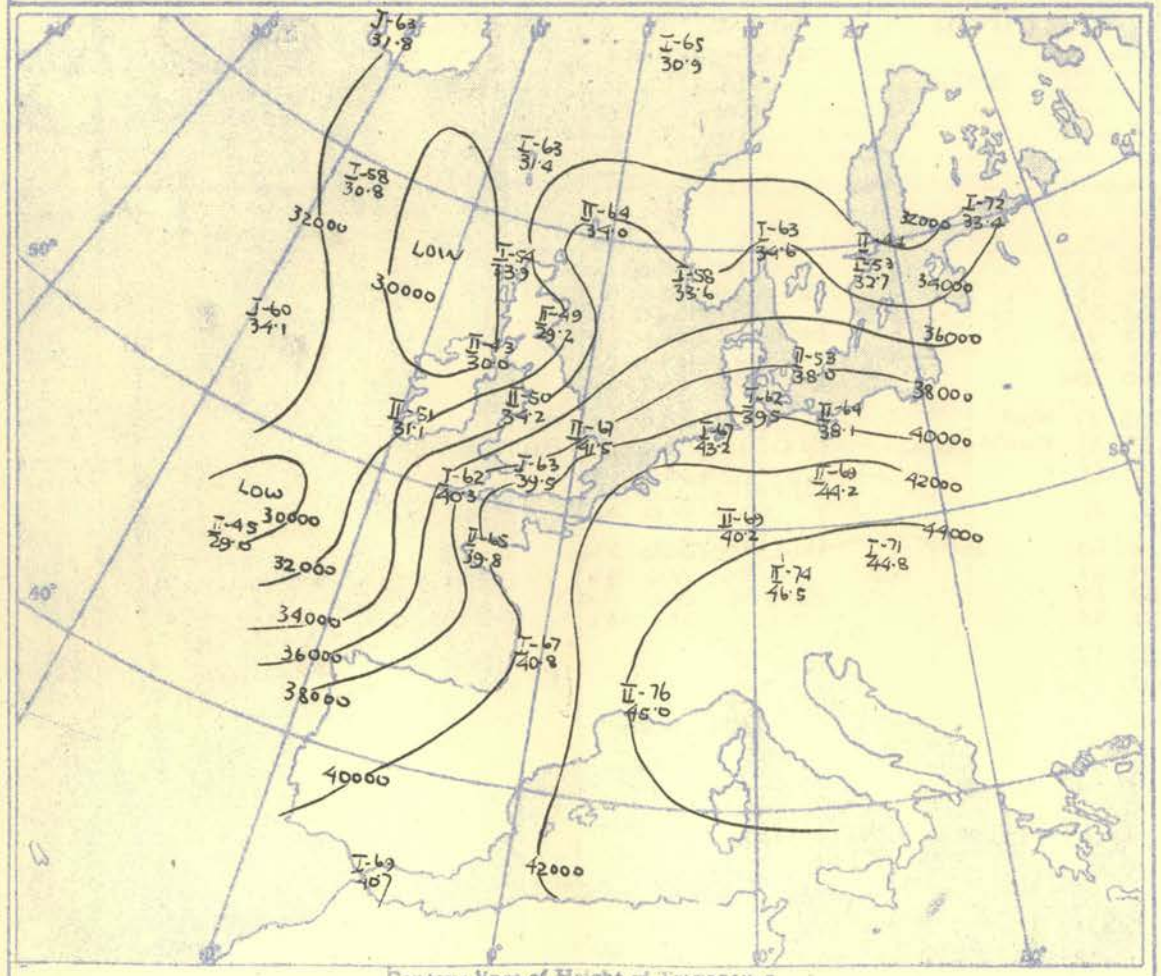


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 60 40 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little of note.

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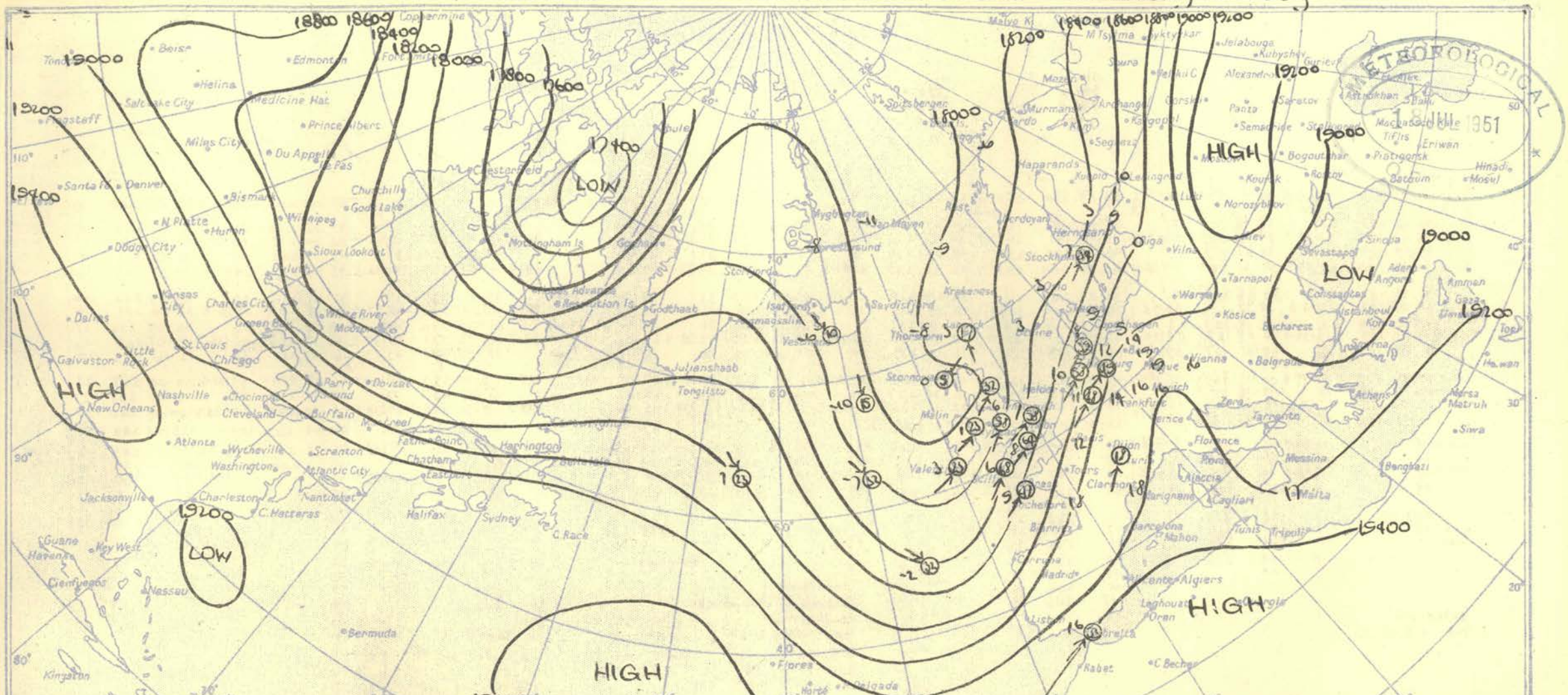
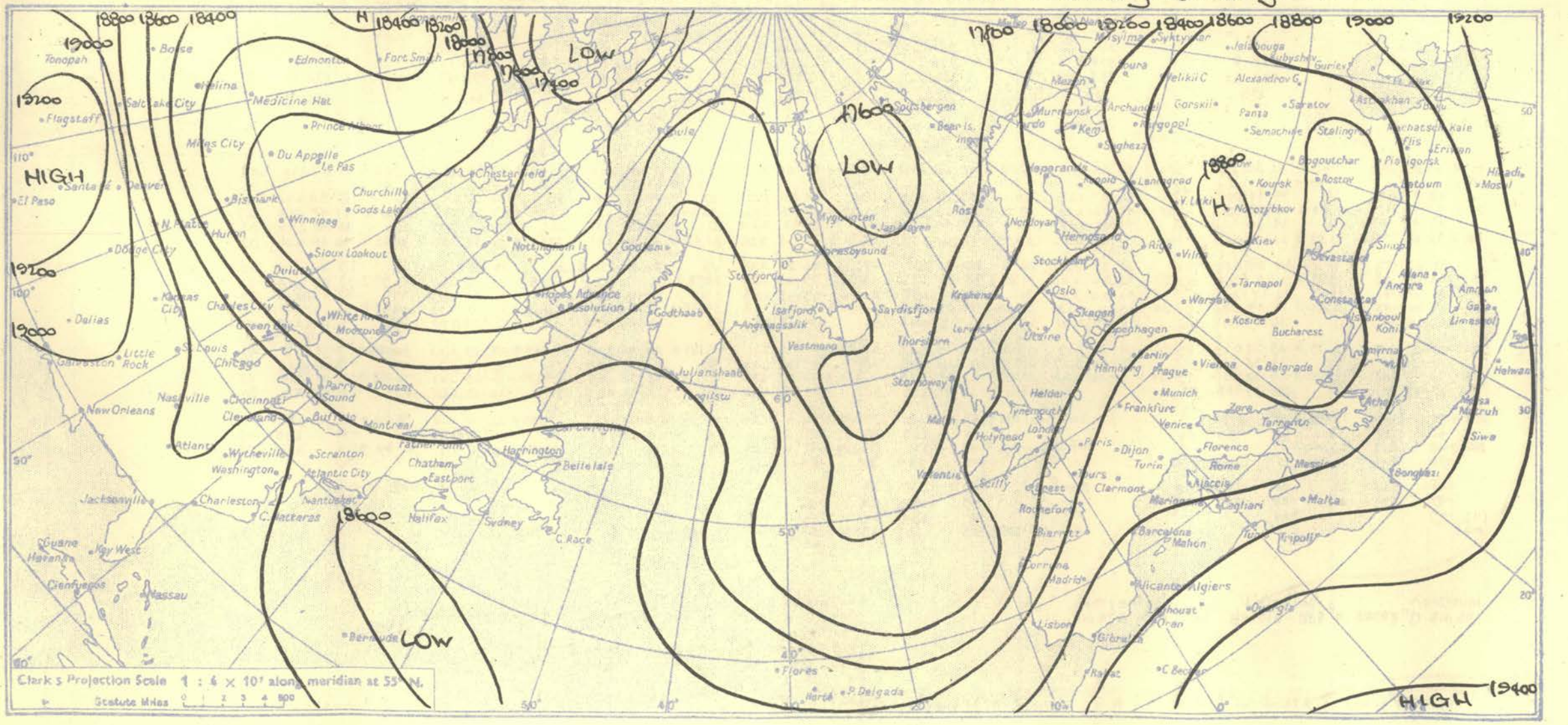
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Tuesday 10TH July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 10TH July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Tuesday 10th July 1951.

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

15h G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.
Pressure: M.S.L.	1003·7 mb	999·1 mb	997·6 mb	995·6 mb	999·9 mb	1004·1 mb	1005·1 mb	1004·0 mb	998·2 mb
Pressure: Surf	993·8 mb	997·5 mb	996·8 mb	986·5 mb	997·9 mb	999·8 mb	989·8 mb	993·7 mb	997 mb
Pressure: Freezing	775 mb	780 mb	738 mb	719 mb	718 mb	677 mb	665 mb	680 mb	720 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Lerwick					
Surf	02·7	49	49	090	21
1000	01·0				
950		46	46	097	23
900	29·6	45	45	098	24
850		39	39	099	22
800	60·9	34	33	100	21
750		31	31	121	16
700	95·8	28	28	143	15
650		23	22	154	12
600	135·4	17	15	157	13
550		11	08	167	15
500	181·2	03	-01	179	17
450		-06	-12	178	18
400	235·1	-17	-21	178	17
350		-32	-38	174	14
300	300·5	-48		166	16
250		-64		182	17
200	387·7	-48			
170		-44			
150		-46			
130	(190 mb)	-46			
110					
100					
90					
80					
70					
60					

Isothermal 956 - 912mb 46°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Stornoway					
Surf	00·4	53	51	040	20
1000	-00·3				
950		49	48	053	27
900	28·4	44	42	069	29
850		40	37	073	19
800	59·9	34	31	087	09
750		30	26	226	07
700	94·8	26	22	218	06
650		22	16	209	07
600	134·9	16	08	188	08
550		08	-01	167	09
500	179·8	00	-11	063	05
450		-08	-18	119	03
400	233·6	-18	-29	120	14
350		-28	-42	112	17
300	299·7	-42		105	17
250		-54		117	15
200	388·5	-44		211	18
170		-40		219	18
150		-42		212	18
130		-44		216	18
110		-44		223	15
100	542·7	-44		236	18
90		-44			
80					
70					
60					

Isothermal 592mb 13° 580mb 19° 850 - 817mb 35°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Leuchars					
Surf	00·2	63	59	230	05
1000	-01·2				
950		57	53	189	12
900	28·0	52	48	191	15
850		46	43	195	22
800	59·8	40	38	209	25
750		34	33	206	26
700	95·1	30	27	204	30
650		24	17	205	30
600	134·8	16	08	201	30
550		08	02	195	29
500	180·2	-01	-07	193	32
450		-09	-15	192	34
400	233·7	-20	-26	190	28
350		-35	-41	191	27
300	298·7	-49		205	36
250		-48		219	46
200	388·1	-42		227	27
170		-44		230	32
150		-45		225	27
130		-46		230	24
110		-49		228	22
100	541·2	-49		238	18
90		-46		227	16
80		-49		206	15
70		-47		206	09
60		-44			

Isothermal 956 - 912mb 46°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Aldergrove					
Surf	02·6	66	58	220	03
1000	-01·6				
950		59	47	217	08
900	27·7	54	42	220	13
850		48	39	229	18
800	59·7	42	35	227	20
750		36	29	228	23
700	95·1	30	23	225	27
650		23	16	231	29
600	134·9	20	12	235	28
550		11	02	239	24
500	180·7	01	-08	232	23
450		-10	-20	227	24
400	234·2	-22	-32	236	24
350		-34	-45	235	27
300	299·6	-43		226	42
250		-43		228	42
200	389·8	-43		228	43
170		-43		219	33
150		-46		221	32
130		-44			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Liverpool					
Surf	00·6	66	57	200	18
1000	-00·1				
950		59	47	226	25
900	29·2	53	45	234	31
850		47	41	227	31
800	61·1	41	35	222	29
750		36	31	223	32
700	96·5	30	18	216	36
650		24	14	214	36
600	136·4	19	06	228	42
550		11	-04	232	46
500	182·3	06	-21	233	58
450		-06	-29	228	63
400	236·3	-16	-38	227	66
350		-31	-52	223	76
300	302·1	-38	-58	230	117
250		-50		233	127
200	391·3	-48		232	75
170		-53		240	56
150		-50			
130	(148 mb)	-51			

Inversion 213mb -51° - 200mb -98°
Isothermal 650 - 628mb 29°
528 - 504 .. 07°
328 - 297 .. -38°
200 - 187 .. -98°
II 328mb -38° 28,200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Downham Market					
Surf	01·2	73	51	210	22
1000	01·2				
950		64	50		
900	30·7	56	45		
850		48	40		
800	62·7	42	28		
750		38	29	For Rest	
700	98·3	35	13		
650		29	10	of Winds	
600	138·4	22	-04		
550		15	-17	See Page	
500	184·5	07	-29	3.	
450		-02	-37		
400	238·9	-12	-46		
350		-23	-47		
300	305·7	-37	-53		
250		-53			
200	393·9	-69			
170		-67			
150		-67			
130		-65			
110		-65			
100	539·6	-64			
90					
80					
70					
60	(64 mb)	-54			

Isothermal 738 - 719mb 37°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Larkhill					
Surf	09·4	67	56	220	20
1000	01·5				
950		61	52	222	27
900	30·8	53	49	227	27
850		49	42	224	37
800	62·8	43	34	223	40
750		39	25	227	39
700	98·4	35	12	228	42
650		31	-14	231	49
600	138·7	25	-52	231	55
550		18	-59	231	62
500	185·1	08	-59	230	64
450		-01	-59	230	72
400	239·7	-10	-31	228	89
350		-22	-28	228	93
300	306·8	-35	-93	230	99
250		-50		228	104
200	395·2	-63		236	101
170		-61		234	69
150		-60		233	54
130		-60		231	50
110		-57		231	35
100	543·1	-56		298	33
90		-54		213	18
80		-54		235	16
70	(64 mb)	-54			

Isothermal 783 - 762 mb 41°
Max 225 mb 226° 114 kts 37,000'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Camborne					
Surf	02·9	64	60	200	22
1000	01·9				
950		57	57	213	32
900	30·4	52	52	219	32
850		47	47	222	30
800	62·3	43	37	222	34
750		37	34	226	36
700	97·8	33	13	226	39
650		29	07	227	42
600	137·9	23	-12	226	45
550		16	-23	221	57
500	184·1	06	-35	219	65
450		-04	-44	219	77
400	238·3	-14	-50	223	80
350		-21	-54	222	105
300	305·3	-35	-55	219	117
250		-50		224	105
200	393·9	-61			
170		-57			
150		-58			
130		-59			
110		-58			
100	542·1	-56			
90		-56			
80		-55			
70		-54			
60	(58 mb)	-53			

Isothermal 750 - 715 mb 37°
660 - 640 .. 29°
374 - 361 .. -19°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Valentia					
Surf	00·3	62	57	250	10
1000	-05				
950		55	52	243	15
900	28·7	49	46	247	17
850		45	42	241	19
800	60·5	40	37	243	16
750		35	29	252	14
700	95·8	30	15	251	16
650		25	-03	256	17
600	135·7	19	-07	263	16
550		12	-10	252	19
500	181·6	03	-20	237	23
450		-08	-27	237	27
400	235·3	-20	-38	240	27
350		-33	-55	242	29
300	300·6	-47		245	30
250		-45		226	40
200	389·9	-43		230	42
170		-44		221	53
150		-45		228	32
130	(144 mb)	-46			

21h G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	G.M.T.
Pressure: M.S.L.	1000·6 mb	998·8 mb	998·2 mb	996·1 mb	1000·9 mb	1005·1 mb	1006·1 mb	1004·2 mb	mb
Pressure: Surf	990·6 mb	997·2 mb	997·4 mb	986·9 mb	998·9 mb	1000·8 mb	990·5 mb	993·8 mb	mb
Pressure: Freezing	738 mb	770 mb	759 mb	732 mb	721 mb	674 mb	663 mb	690 mb	mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Lerwick					
Surf	02·7	50	50	090	19
1000	00·1				
950		48	47	079	30
900	28·7	47	46	110	21
850		43	42	143	16
800	60·9	39	38	173	15
750		33	32	172	15
700	95·7	28	26	168	18
650		21	19	162	16
600	136·3	19	09	145	12
550		06	-18	146	12
500	180·7	-01	-21	165	12
450		-10	-36	161	15
400	239·1	-22	-47	153	14
350		-37	-59	141	15
300	298·8	-54		138	17
250		-60		150	13
200	386·0	-48		212	23
170		-46		216	22
150		-49		225	22
130		-49		231	21
110	(112 mb)	-49			
100					
90					
80					
70					
60					

Inversion 592mb 13° 580mb 19°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Stornoway					
Surf	00·4	52	50	360	15
1000	-00·4				
950		48	44	027	23
900	28·2	43	38	030	21
850		35	30	026	22
800	59·4	34	29	020	14
750		30	24	001	06
700	94·4	27	21	246	04
650		21	17	266	04
600	134·0	14	09	284	04
550		06	-13	008	02
500	179·2	-03	-21	023	05
450		-13	-24	012	07
400	232·3	-24	-32	006	03
350		-38	-47	088	07
300	296·9	-54		073	10
250		-56		195	09
200	384·7	-47		219	18
170		-45		226	18
150		-46		226	18
130		-48		222	16
110		-49			
100					
90					
80					
70					
60					

Isothermal 850 - 817mb 35°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Leuchars					
Surf	00·2	57	55	270	10
1000	-00·6				
950		53	47	238	26
900	28·4	49	45	228	23
850		44	42	217	23
800	60·2	37	35	222	26
750		31	29	225	26
700	96·3	28	26	236	31
650		22	20	230	31
600	134·9	13	11	222	29
550		08	03	220	27
500	180·4	-11	-04	219	25
450		-08	-14	227	30
400	234·1	-16	-29	226	31
350					
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

For Rest of Winds See Page 3.

Isothermal 595 - 579mb 11°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Aldergrove					
Surf	02·6	60	56	200	07
1000	-01·1				
950		57	52	205	14
900	28·0	52	45	210	19
850		47	40	220	14
800	59·9	41	36	228	16
750		34	31	231	19
700	95·1	28	23	226	16
650		22	18	234	20
600	134·8	14	09	245	21
550		06	02	246	26
500	180·1	-02	-10	245	27
450		-11	-26	239	28
400	233·3	-25	-38	230	27
350		-37	-47	220	30
300	298·0	-51		236	30
250		-50		229	39
200	386·7	-48		227	39
170		-48		224	32
150		-49		217	29
130		-49		230	24
110		-51		208	20
100	538·5	-53		207	23

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Liverpool					
Surf	00·6	63	56	200	07
1000	-00·2				
950		58	52	221	17
900	29·4	51	45	226	26
850		46	42	224	31
800	61·3	42	36	228	31
750		36	32	228	33
700	96·7	29	25	224	33
650		23	13	223	33
600	136·4	14	01	228	34
550		10	-19	228	42
500	181·9	01	-22	231	48
450		-09	-32	234	52
400	235·4	-22	-47	230	53
350		-34	-57	230	60
300	300·8	-44		226	103
250		-51		221	102
200	389·4	-51		220	71
170		-53			
150		-53			
130		-56			
110		-52			
100	539·5	-53			
90		-55			

Inversion 291mb -52° - 229mb -50°
Isothermal 815 - 800mb 42°
671 - 658 .. 29°
Max Wind 229mb 30,100'
I 227° 116 kts 39,900'
I 210 .. -52° 37,700'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Downham Market					
Surf	01·2	65	53	200	15
1000	01·4	64	52		
950		59	49	210	30
900	30·6	53	46	225	32
850		48	39	231	32
800	62·6	43	28	231	32
750		38	20	230	34
700	98·2	35	-04	229	42
650		29	-18	226	51
600	138·4	23	-26	224	56
550		14	-40	224	61
500	184·4	04	-45	224	63
450		-04	-42	225	76
400	238·5	-15	-30	225	84
350		-27	-38	226	86
300	304·9	-38	-55	226	99
250		-54		224	103
200	392·6	-65		221	98
170		-65		210	72
150		-67		210	52
130		-68		210	44
110		-64		215	33
100	538·3	-62		219	28
90		-62		223	25
80		-62		227	12
70					
60					

Isothermal 878 - 867mb 50°
Max. Wind 225° 117 kts.

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Larkhill					
Surf	04·4	60	56	225	19
1000	01·7				
950		56	52	240	26
900	30·8	50	96	218	33
850		49	40	225	36
800	62·8	43	34	234	34
750		38	28	230	36
700	98·3	33	10	227	42
650		31	-03	228	48
600	138·5	25	-19	223	52
550		17	-26	223	60
500	189·8	08	-25	225	60
450		-03	-15	221	74
400	239·1	-15	-26	222	76
350		-22	-39	228	87
300	305·9	-35	-57	218	98
250		-50		219	100
200	394·6	-60		216	90
170		-62		216	71
150		-61		218	59
130		-63			
110		-60			
100	541·8	-56			

Inversion 897mb 49° - 867mb 51°
675 .. 31° - 663 .. 32°
Isothermal 745 - 722 mb 35°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Camborne					
Surf	02·9	59	57	220	09
1000	01·1				
950		55	54	220	21
900	30·2	51	47	218	27
850		46	40	223	31
800	62·1	43	36	226	33
750		39	30	225	35
700	97·7	33	24	224	31
650		27	17	216	29
600	137·8	22	10	209	36
550		14	00	213	42
500	184·0	07	-14	218	51
450		-05	-31	216	61
400	238·0	-19	-37	214	79
350		-30	-43	210	90
300	303·8	-42		219	99
250		-59		208	103
200	391·9	-64		212	78
170		-55			
150		-56			
130		-58			

Tropopause	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
15h G.M.T.	II 250mb -64° 34,000'	I 250mb -54° 33,900'	II 308mb -49° 29,200'	II 300mb -43° 30,000'	II 250 .. -50° 34,200' I 168 .. -54° 43,000'	II 180mb -67° 41,500'	I 200mb -63° 39,523'	I 191mb -62° 40,300'	II 287mb -51° 31,100'
21h G.M.T.	I 266mb -53° 32,900'	I 272mb -61° 31,800'	N.R.	I 277mb -55° 31,600'	I 227° 116 kts 39,900' I 210 .. -52° 37,700'	III 217mb -64° 37,600'	I 218mb -57° 37,500'	I 213mb -63° 37,700'	

HMSO Pr 233 MO Dunstable

No. 11791. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Wednesday 11th Jul., 1951. Page 1.

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

LERWICK

Pressure — Time 03L G.M.T.; M.S.L. 999.8 mb; Surf 989.9 mb; Freezing 738 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52		
1000	-0·1				
950		52	52		
900	28·7	48	48		
850		44	44		
800	60·4	39	38		
750		34	33		
700	95·6	28	28		
650		22	21		
600	135·3	15	14		
550		09	05		
500	180·8	00	-03		
450		-12	-17		
400	234·0	-23	-29		
350		-35	-40		
300	299·0	-48			
250		-60			
200	386·8	-49			
170		-48			
150		-47			
130		-47			
110		-47			
100	539·2	-49			
90					
80					
70					
60					

For winds see page 3.

Isothermal 990 - 950 mb 52°; 577 - 560 " 11°

Tropopause: I 250 mb -60° 33,800'

STORNOWAY

Pressure — Time 03L G.M.T.; M.S.L. 999.5 mb; Surf 997.9 mb; Freezing 750 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	51	48	340	
1000	0·2				
950		47	46	009	
900	28·5	43	42	021	
850		40	39	022	
800	59·9	36	34	358	
750		32	30	334	
700	94·9	27	23	287	
650		21	17	265	
600	134·4	14	10	257	
550		07	02	276	
500	179·8	-01	-07	275	
450		-13	-20	259	
400	232·9	-25	-33	274	
350		-38	-45	271	
300	291·5	-53		277	
250		-56		243	
200	385·6	-45		215	
170		-46		216	
150		-47		216	
130		-50		218	
110		-52		218	
100	537·7	-52		217	
90					
80					
70					
60					

Tropopause: I 277 mb - 60° 31,400'

LEUCHARS

Pressure — Time 03L G.M.T.; M.S.L. 999.2 mb; Surf 998.4 mb; Freezing 739 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	53	51	290	
1000	-0·2				
950		55	51	288	
900	28·8	51	45	233	
850		46	39	293	
800	60·6	39	35	233	
750		33	29	226	
700	95·8	27	23	226	
650		20	18	223	
600	135·3	12	08	221	
550		05	-01	220	
500	180·5	-05	-15	222	
450		-14	-26	225	
400	233·5	-26	-40	228	
350		-40	-51	227	
300	297·9	-53		221	
250		-51		219	
200	386·2	-49		223	
170		-53		219	
150		-51		216	
130		-54		221	
110		-53		223	
100	536·9	-54		219	
90		-56			
80					
70					
60					

Inversion 998 mb 53° - 968 mb 56°

Tropopause: I 295 mb -55° 30,200'

ALDERGROVE

Pressure — Time 03L G.M.T.; M.S.L. 998·4 mb; Surf 988·8 mb; Freezing 720 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	54	52	220	
1000	-0·6				
950		52	49	222	
900	28·2	48	45	227	
850		45	37	231	
800	60·0	41	35	234	
750		35	26	227	
700	95·4	30	20	219	
650		23	04	223	
600	135·1	16	-06	229	
550		09	-16	235	
500	180·7	01	-15	240	
450		-09	-23	250	
400	234·3	-22	-36	236	
350		-35	-50	194	
300	299·3	-52			
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Inversion 766 mb 35° - 755 mb 36°

Isothermal 900 - 875 mb 48°; 818 - 800 " 41°

Tropopause: NR.

LIVERPOOL

Pressure — Time 03L G.M.T.; M.S.L. 1001·0 mb; Surf 999·0 mb; Freezing 708 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	58	54	180	
1000	0·3				
950		56	50	205	
900	29·4	50	46	223	
850		45	39	219	
800	61·2	40	33	216	
750		37	29	216	
700	96·6	31	16	215	
650		25	12	213	
600	136·5	19	04	214	
550		13	-04	216	
500	182·3	03	-16	210	
450		-07	-28	212	
400	236·1	-16	-34	215	
350		-30	-42	208	
300	302·1	-42		208	
250		-53		207	
200	390·1	-55		209	
170		-54		216	
150		-53		220	
130		-52		210	
110		-53		211	
100	540·3	-53		211	
90		-54		210	
80	(82 mb)	-57			
70					
60					

Inversion 999 mb 58° - 988 mb 66°

Isothermal 785 - 755 mb 38°

Tropopause: II 232 mb - 58° 35,800'

DOWNHAM MARKET

Pressure — Time 03L G.M.T.; M.S.L. 1006·0 mb; Surf 1001·7 mb; Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	57	54	200	
1000	1·7				
950		54	51	219	
900	30·8	51	43	225	
850		48	42	223	
800	62·7	42	33	220	
750		38	13	222	
700	98·2	32	22	223	
650		27	18	208	
600	138·3	18	13	208	
550		12	-01	213	
500	184·2	04	-04	213	
450		-06	-13	215	
400	238·2	-17	-27	216	
350		-29	-41	213	
300	304·2	-42		206	
250		-57		211	
200	391·7	-61		211	
170		-62		213	
150		-62		221	
130		-60		216	
110		-59		209	
100	539·0	-61		218	
90		-59		232	
80					
70					
60					

Tropopause: III 243 mb - 59° 35,000'

LARKHILL

Pressure — Time 03L G.M.T.; M.S.L. 1005·7 mb; Surf 990·1 mb; Freezing 716 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	58	57	230	10
1000	1·6				
950		56	53	223	21
900	30·8	51	48	223	29
850		46	43	218	33
800	62·8	41	37	215	34
750		36	31	216	37
700	98·2	30	26	213	41
650		25	20	205	46
600	138·1	21	12	206	52
550		14	-12	213	65
500	184·2	05	-13	212	76
450		-05	-10	205	81
400	238·3	-16	-29	201	87
350		-29	-41	204	85
300	304·4	-41		202	94
250		-55		202	97
200	392·2	-55		207	87
170		-55		211	69
150		-58		217	45
130		-60		198	45
110		-56		213	27
100	540·9	-56		236	20
90		-55		232	16
80		-57		233	12
70	(43 mb)	-58		224	16
60					

Inversion 677 mb 26° - 664 mb 27°

Isothermal 990 - 975 mb 58°; 252 - 241 " -55°

Tropopause: I 215 mb -64° 37,600'

CAMBORNE

Pressure — Time 03L G.M.T.; M.S.L. 1002·8 mb; Surf 992·5 mb; Freezing 738 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	58	57	210	18
1000	0·8				
950		54	53	212	31
900	29·7	49	46	213	27
850		44	41	217	28
800	61·4	40	32	218	29
750		34	28	218	29
700	96·6	28	22	222	29
650		22	01	217	30
600	136·7	16	-16	211	33
550		07	-08	209	33
500	181·6	-02	-16	210	25
450		-12	-28	210	16
400	234·8	-23	-42	209	28
350		-33	-51	212	54
300	300·4	-41		207	72
250		-49		200	63
200	389·8	-47		207	51
170		-49		210	39
150		-52		211	40
130		-54		212	37
110		-55		211	20
100	540·6	-57			
90					
80					
70					
60					

Tropopause: I 245 mb - 50° 34,500'

VALENTIA.

Pressure — Time 03L G.M.T.; M.S.L. mb; Surf mb; Freezing mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	57	46	360	10
1000	1·3	57	46	359	11
950		50	45	353	25
900	29·8	44	40	354	27
850		38	35	349	22
800	61·2	34	31		
750		29	20		
700	96·1	27	04		
650		19	00		
600	135·5	12	03		
550		05	-04		
500	183·0	-04	-17		
450		-15	-22		
400	233·6	-28	-36		
350		-42			
300	297·4	-60			
250		-64			
200	383·9	-51			
170		-53			
150		-54			
130		-57			
110		-58			
100	533·6	-58			
90		-58			
80		-60			
70		-62			
60		-61			

Inversion 762 mb 28° - 729 mb 30°

Tropopause:

LERWICK

Pressure — Time 09L G.M.T.; M.S.L. 999·7 mb; Surf 989·9 mb; Freezing 737 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	54	CALM	
1000	-0·1				
950		53	53	142	09
900	28·8	50	49	149	08
850		46	41	151	10
800	60·7	41	37	156	11
750		34	33	160	11
700	96·0	27	23	149	10
650		28	16	140	08
600	135·7	17	09	143	08
550		09	02	148	08
500	181·2	01	-14	156	07
450		-11	-26	138	09
400	234·6	-23	-38	148	03
350		-39	-50	192	03
300	299·1	-53		218	14
250		-47		211	30
200	388·6	-41		213	21
170		-42		215	25
150		-42		211	22
130		-44		218	21
110		-44		211	19
100		-44			
90	(95 mb)	-44			
80					
70					
60					

Inversion 690 mb 26° - 679 mb 27°

Tropopause: I 302 mb - 52° 29,800'

STORNOWAY

Pressure — Time 09L G.M.T.; M.S.L. 1001·2 mb; Surf 999·6 mb; Freezing 760 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	52	49		
1000	0·4	52	49		
950		45	42		
900	28·9	41	36		
850		38	32		
800	60·2	35	29		
750		31	25		
700	95·1	26	20		
650		20	12		
600	134·5	14	03		
550		06	-04		
500	178·8	-03	-20		
450		-13	-29		
400	232·8	-24	-45		
350		-36	-56		
300	297·6	-52			
250		-54			
200	385·9	-43			
170		-43			
150		-44			
130		-45			
110		-45			
100	539·5	-45			
90		-42			
80					
70					
60					

Isothermal 715 - 700 mb 26°

Tropopause: I 265 mb - 62° 32,400'

LEUCHARS

Pressure — Time 09L G.M.T.; M.S.L. 999·7 mb; Surf 998·9 mb; Freezing 735 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	61	57	CALM	
1000	-0·3				
950		55	52	220	06
900	28·9	50	47	210	08
850		45	42	212	10
800	60·7	40	35	216	12
750		34	27	209	13
700	96·0	27	22	192	13
650		22	12	205	16
600	135·6	16	04	217	20
550		09	-06	212	16
500	181·2	01	-22	209	15
450		-09	-36	222	15
400	234·7	-21	-46	217	15
350		-35	-51	217	18
300	299·7	-51		205	25
250		-51		203	31
200	387·9	-48		212	43
170		-46		208	28
150		-48		198	31
130		-48		197	32
110		-47		205	20
100	540·6	-48		214	21
90		-48		206	17
80		-50		206	15
70					
60					

Inversion 935 mb 48° - 920 mb 49°; 762 " 31° - 738 " 37°

Isothermal 843 - 830 mb 41°

Tropopause: I 285 mb - 56° 31,000'

ALDERGROVE

Pressure — Time 09L G.M.T.; M.S.L. 999·8 mb; Surf 990·8 mb; Freezing 768, 760, 705 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	56	52	CALM	
1000	-0·1				
950		50	47	LAV	
900	28·8	47	41	"	
850		42	38	"	
800	60·4	37	32	"	
750		34	27	"	
700	95·7	31	13	"	
650		23	14	"	
600	135·5	16	07	"	
550		09	01	"	
500	181·0	-01	-11	"	
450		-11	-20	"	
400	234·3	-22	-33	LAV	
350		-36	-48	142	05
300	299·2	-50		185	05
250		-50		196	27
200	387·8	-44		200	29
170		-44		210	21
150		-44		208	20
130		-43		182	17
110		-42		192	14
100	541·6	-46		183	17
90		-46		190	13
80		-46		194	16
70		-48			
60					

Isothermal 735 - 700 mb 31°

Tropopause: NR.

DOWNHAM MARKET

Pressure — Time 09L G.M.T.; M.S.L. 1005·5 mb; Surf 1001·2 mb; Freezing 709 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	62	57	170	07
1000	0·5				
950		55	52	191	11
900	29·5	51	44	229	14
850		44	38	228	16
800	61·3	40	33	212	16
750		33	28	211	19
700	96·6	31	18	217	24
650		24	15	223	27
600	136·5	17	05	229	29
550		11	-02	232	29
500	182·3	04	-14	232	19
450		-06	-31	232	22
400	236·1	-20	-39	228	25
350		-33	-50	210	41
300	304·9	-37	-53		
250		-56		188	100
200	392·9	-51		203	69
170		-54		209	51
150		-54		199	52
130		-56		221	32
110		-51		204	21
100	542·9	-52		196	26
90		-52		200	19
80		-51			
70					
60					

Inversion 908 mb 51° - 882 mb 52°

Isothermal 653 - 640 mb 27°

Tropopause: I 235 mb - 61° 35,800'

LARKHILL

Pressure — Time 09L G.M.T.; M.S.L. 1004·9 mb; Surf 989·3 mb; Freezing 710 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	63	56	190	15
1000	1·5	63	56		
950		56	52	204	24
900	30·7	52	48	217	27
850		47	41	215	25
800	62·7	42	38	210	27
750		37	32	212	28
700	98·2	31	20	215	37
650		27	03	208	46
600	138·2	22	-15	203	48
550		15	-18	206	58
500	184·3	07	-17	204	75
450		-03	-24	202	78
400	238·5	-15	-36	201	81
350		-25	-96	196	70
300	304·9	-39	-56	188	100
250		-56		188	103
200	392·9	-51		203	69
170		-54		209	51
150		-54		199	52
130		-56		221	32
110		-51		204	21
100	542·9	-52		196	26
90		-52		200	19
80		-51			
70					
60					

Inversion 820 mb 41° - 801 mb 43°

Isothermal 653 - 640 mb 27°

Tropopause: I 238 mb - 57° 33,900'

CAMBORNE

Pressure — Time 09L G.M.T.; M.S.L. 1004·1 mb; Surf 993·7 mb; Freezing 728 mb

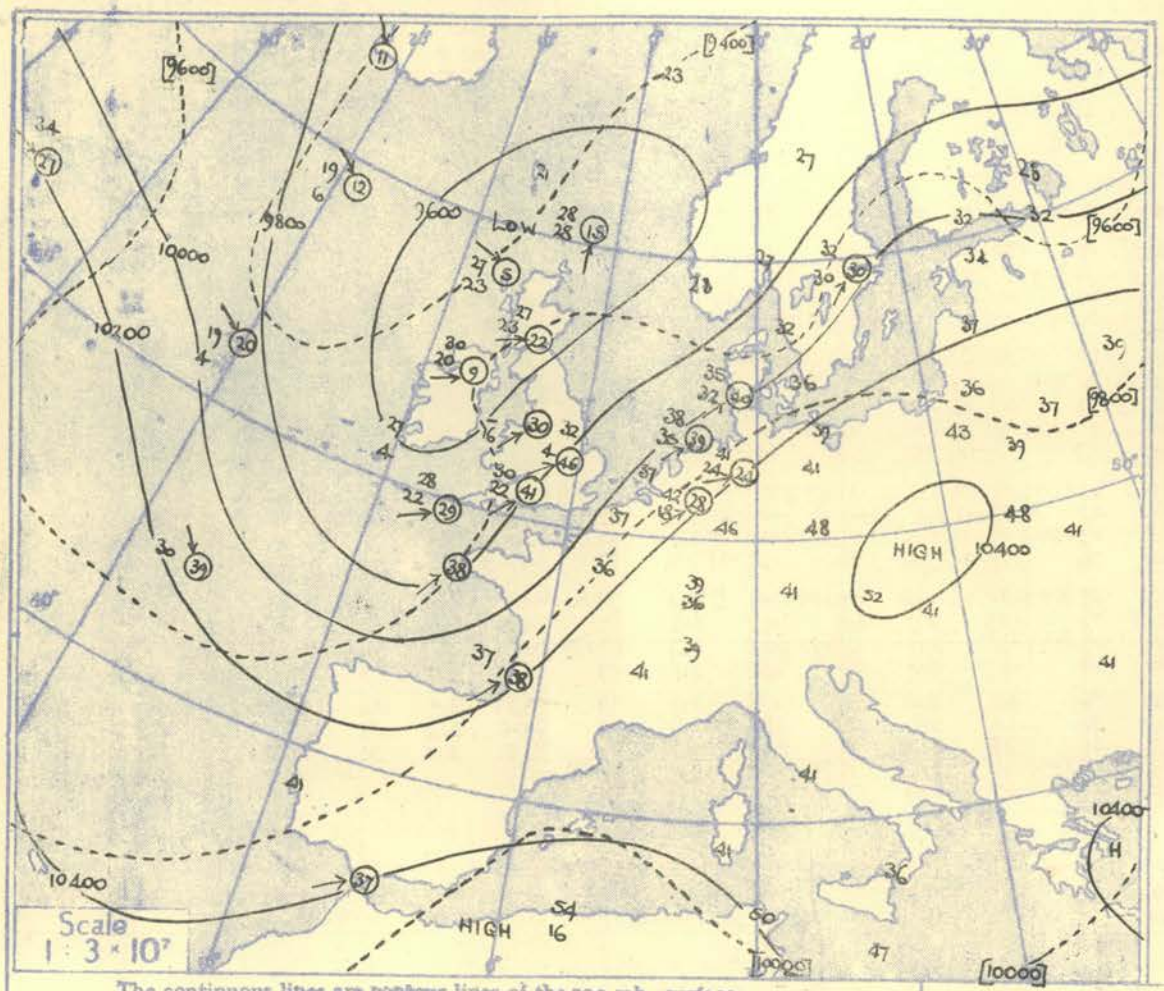
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	60	57	220	07
1000	1·1				
950		55	54	229	13
900	30·1	50	47	244	09
850		45	44	258	11
800	61·9	40	39	267	10
750		35	34	277	09
700	97·2	27	26	262	12
650		21	20	241	16
600	136·9	16	13	234	17
550		09	04	240	20
500	182·6	02	-07	234	22
450		-08	-19	220	26
400	236·3	-20	-31	218	24
350		-34	-43	211	24
300	301·5	-47		207	27
250		-47		203	42
200	391·0	-42		201	36
170		-44		217	36
150		-45		221	30
130		-46		218	20
110	(112 mb)	-47			
100					
90					
80					
70					
60					

Tropopause:

For rest of winds see page 3.

Wednesday 11th July, 1951.

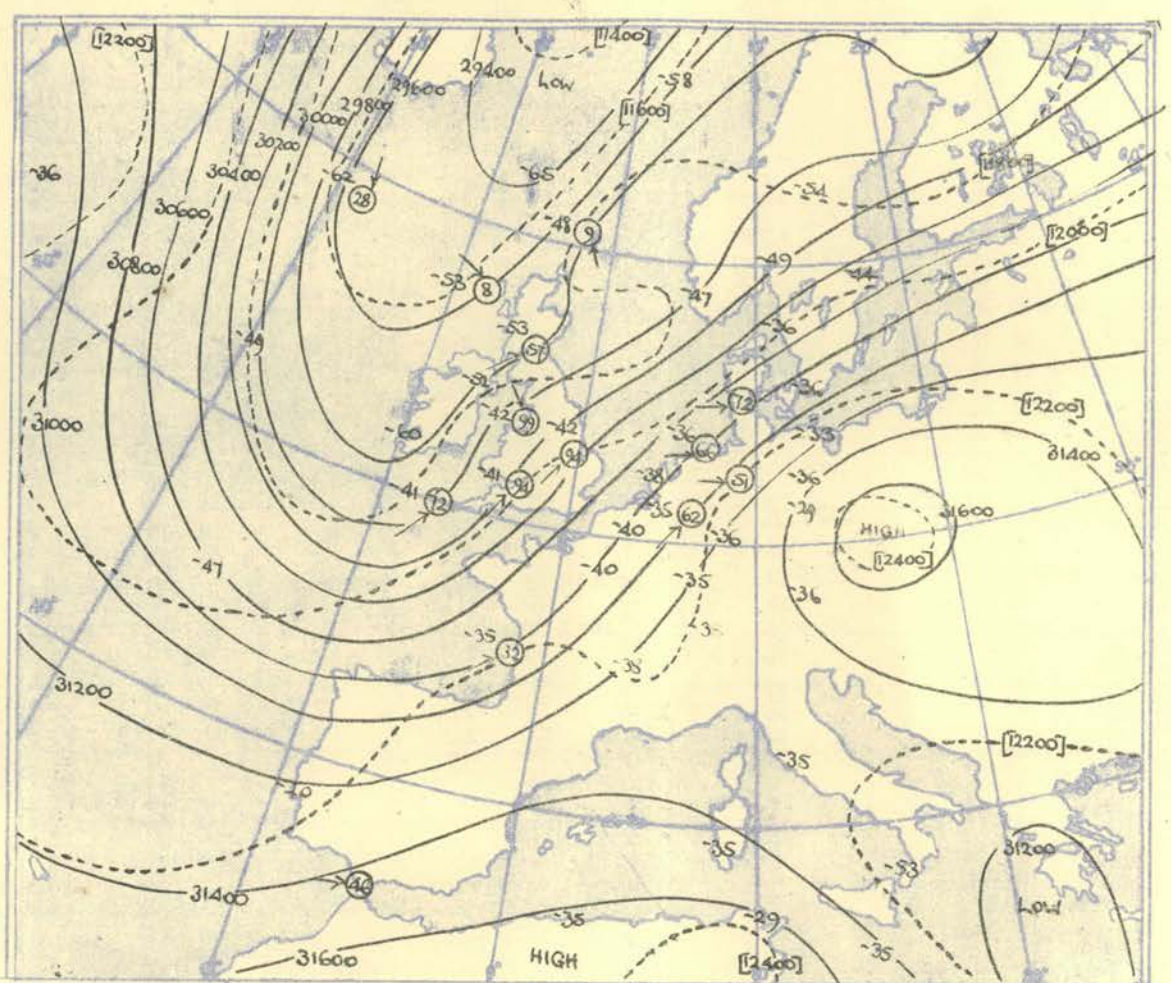
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb.; levels at about 03 h. G.M.T.



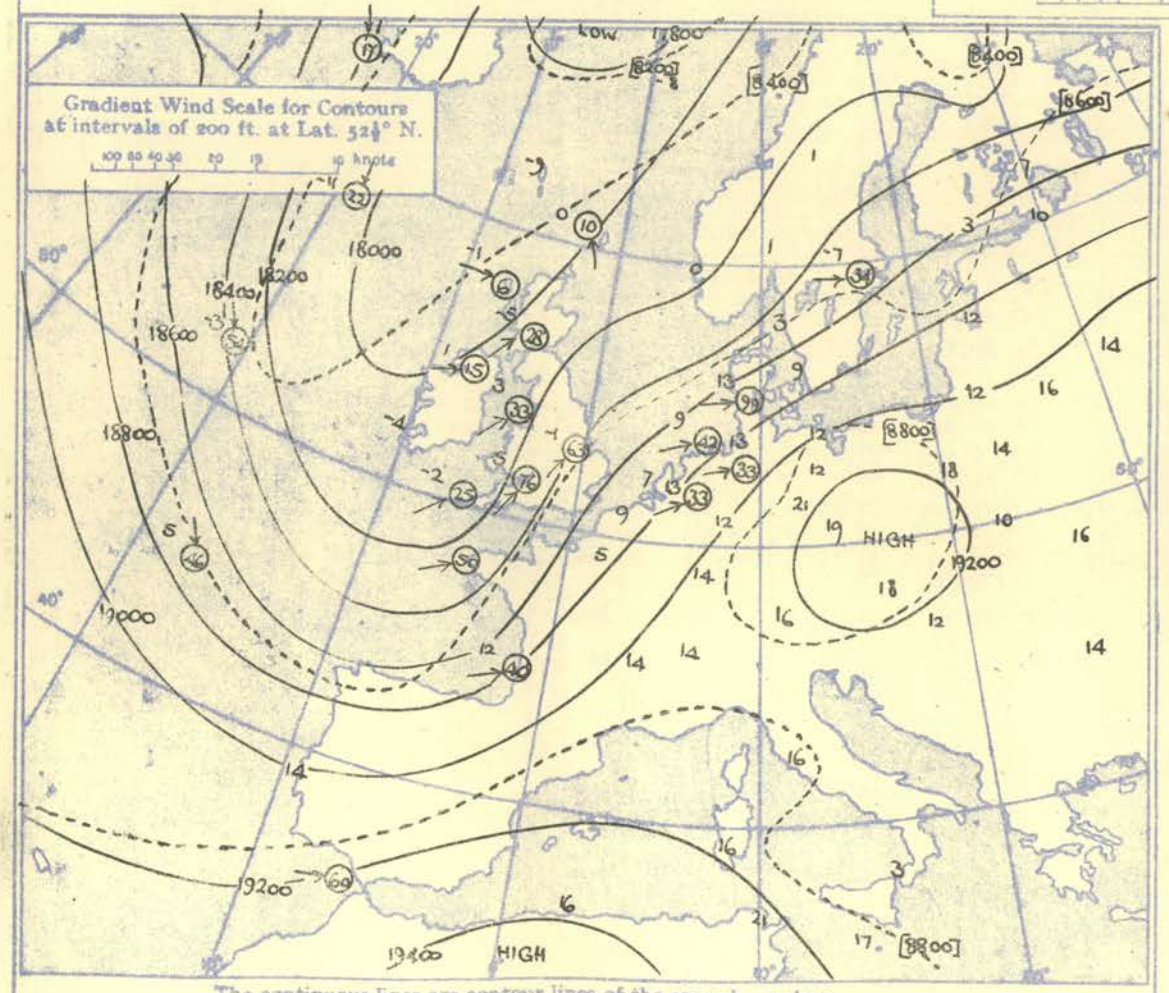
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

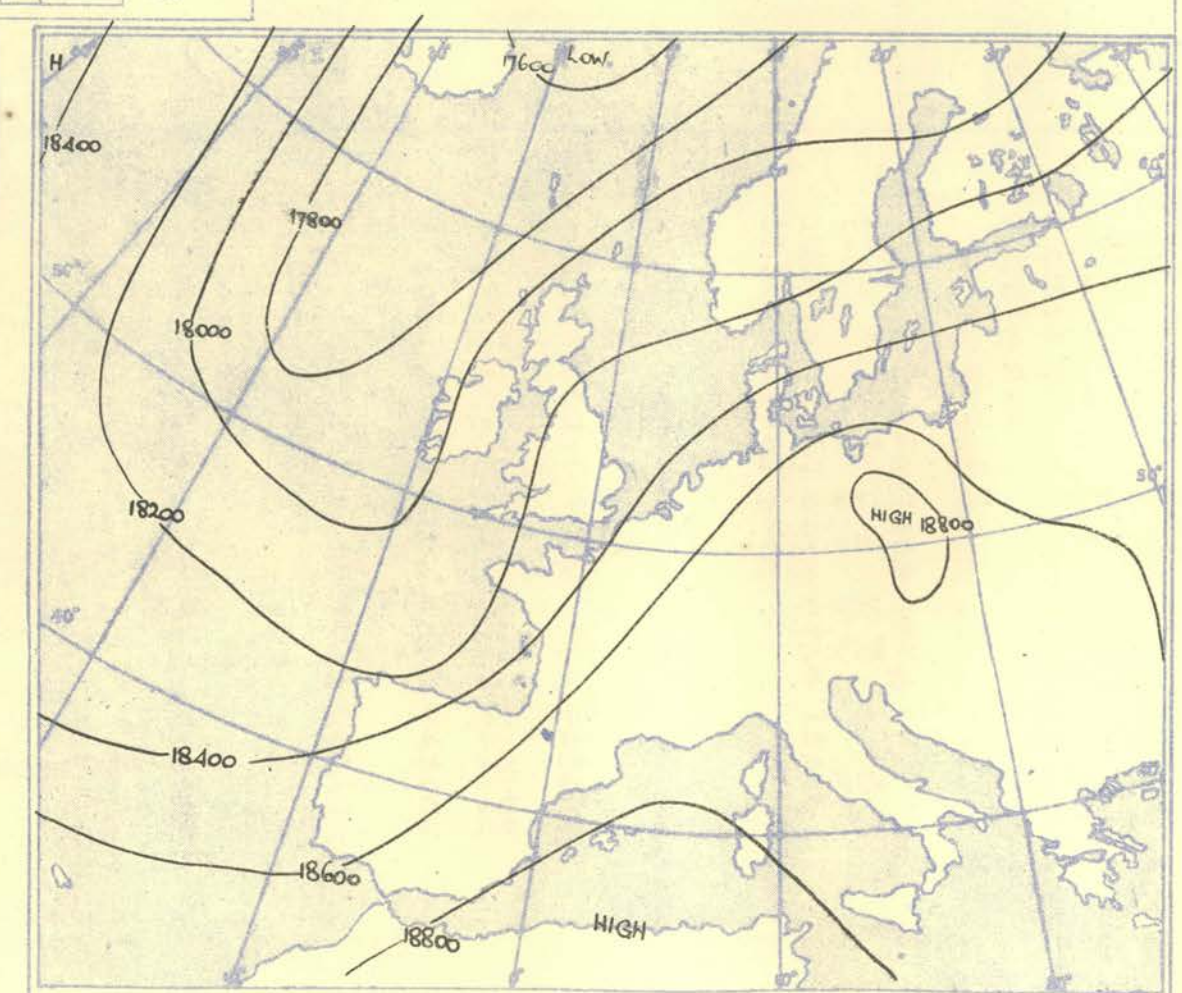
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure mb	48·1N 17·0W				47·9 N 11·6W				52°12' N 02°12W																							
Time	1230				1415				1400																							
Pressure M.S.L.	1014·8 mb				1015·6 mb				1002·5 mb				mb			mb			mb			mb			mb			mb			
Surf	1011·2 mb				1012·0 mb				1001·0 mb				mb			mb			mb			mb			mb			mb			
Freezing	790 mb				760 mb				685 mb				mb			mb			mb			mb			mb			mb			
Pressure mb	Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew		Height ft./100	°F. Temp.	°F. Dew	
Surf	01·0	57	54		01·0	54	52		00·4																							
1000	04·0				04·2				00·7																							
950		49	49			46	46																									
900	32·9	45	45		32·6	39	39		30·1	52	50																					
850		41	41			36	36			47	46																					
800	64·9	36	36		63·8	32			62·1	41																						
750		31	31			26																										
700	99·5	30	30		98·4	21			97·5	35																						
650		21				16																										
600	13·9	15			13·7	05			137·4	17																						
550		09				01																										
500	18·5	02			18·2	03			183·0	01																						
450																																
400	Cloud				Cloud				236·5	-25																						
350	8/8 Sc				3/8 Sc																											
	980-7xx mb				930-870 mb																											
300	3/8 Cu				1/8 Cb				300·9	-54																						
250																																
200	980-650 mb				880-4xx mb.				Cloud																							
170	3/8 AC				5/8 Cu				3/8 Cu																							
	580-570 mb				880-5xx mb				925-840 mb																							
					5/8 AC				9/8 Ag																							
					640-4xx mb				710-685 mb																							
					Inversion				Inversion																							
					550 mb 01°				720 mb. 33·2°																							
					500 mb 03°				700 mb 34·8°																							

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

Place	Lerwick		52·3N 20·8W. Cirrus		Liverpool		Shoeburyness		Larkhill		Downham		Larkhill								
Time	03h.		09h.		09h.		09h.		12h.		15h.		21h.								
Type																					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	090	03					160	10	210	12	180	13									Surf.
1,000	114	15					210	18	210	12	193	21									1,000
2,000	117	13					210	22	210	13	198	23									2,000
3,000	133	12					210	23	220	22	201	21									3,000
4,000	147	12					220	26	220	22	204	21									4,000
5,000	167	16					210	30	220	27	209	23									5,000
6,000	174	18	340	09			210	32	220	25	211	24									6,000
8,000	174	21	310	17			210	33	230	27	218	27									8,000
10,000	174	15	310	11			210	38	230	28	217	28									10,000
14,000	140	14	310	32			220	46	220	24	202	30									14,000
18,000	140	10	320	40			200	71	220 (16,000')	23	194	33									18,000
24,000	171	12	330	80			190	73			174	85									24,000
30,000	141	09			197	99	180	91			172	102									30,000
40,000	214	15			203	40	200	41			197	58	204	37							40,000
50,000					199 (54,000')	27	180 (49,000')	30			201 (65,000')	32	214 (58,000')	27							50,000
					210	20					202	21	194	19							

NEPHOSCOPE OBSERVATIONS

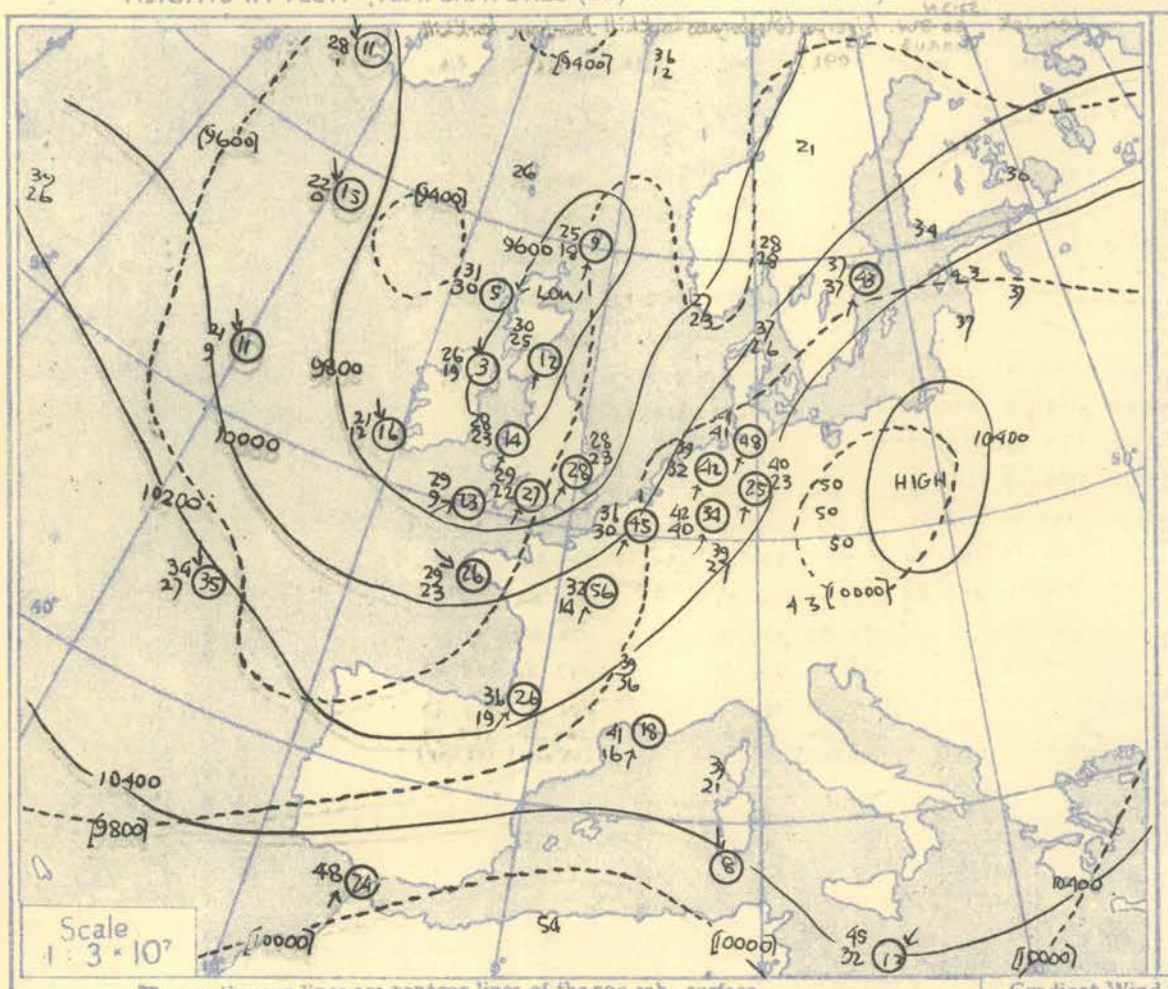
Place													
Time Type													
Dir. Vel.													

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

Ship	WEATHER OBSERVER					WEATHER OBSERVER					WEATHER OBSERVER					WEATHER OBSERVER					CIRRUS					CIRRUS					CIRRUS				
Lat/Long	58·9 N. 19·1W.					58·8 N 19·2W					58·9 N 19·3W.					58·9 N 19·3W					52·3 N 19·9W.					52·3 N 19·9W.					52·6 N 20·0W.				
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.				
Pressure M.S.L.	1013 mb					1014 mb					1015 mb					1016 mb					1015 mb					mb					1015 mb				
Surf	1013 mb					1014 mb					1015 mb					1016 mb					1015 mb					mb					1015 mb				
Freezing	850 mb					845 +790 mb					850 +790 mb					885 mb					830 mb					mb					850 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Pressure mb
Surf		52	48	335	12		52	44	325	17		54	42	335	17		54	45	325	14		56	47	320	10							37	16	080	05			Surf
1000	03·6	51	48	333	10	03·8	50	43	342	12	04·0	51	41	325	14	04·3	51	43	314	06	04·2	53	44	320	10						04·3	54	45	019	04			1000
950		44	41	332	11		44	40	337	12		42	38	320	12		41	35	328	06		46	36	320	12							46	41	021	08			950
900	32·0	37	36	330	13	32·2	38	33	332	12	32·4	37	31	320	11	32·5	34	30	339	06	32·7	39	30	330	15						32·8	39	38	032	04			900
850		32	29	328	13		33	29	325	11		32	28	320	11		27	26	343	08		33	26	320	19							32	28	020	04			850
800		27	25	325	14	63·3	33	18	329	14	63·0	33	12	325	11	63·1	25	14	344	07	63·8	30	20	310	22						63·9	30	23	016	06			800
750		22	19	321	13		26	18	333	17		27	13	325	13		23	03	344	11		24	12	310	24	No Radio - Sonde						26	15	350	09			750
700	97·2	19	06	323	14	98·0	21	09	339	15	98·1	22	00	325	15	97·5	17	01	348	12	98·3	19	04	300	20						98·6	21	09	334	11			700
650		13	01	331	13		16	04	345	13		16	03	325	17		12	-07	349	16		13	-04	287	26	Ascent.						15	03	329	13			650
600	136·0	04	-07	338	13	137·1	10	-06	348	14	137·2	09	-14	327	17	136·3	07	-15	349	23	137·2	09	-11	300	33						137·7	09	-02	321	29			600
550		-02	-15	348	15		05	-10	348	18		02	-21	326	21		01	-23	351	28		06	-09	320	46							08	-19	328	34			550
500	180·2	-11	-27	359	22	182·1	-05	-21	349	24	182·0	-05	-30	326	29	180·9	-10	-27	351	36	182·4	-03	-15	330	54	For Winds See Top					183·1	01	-28	303	58			500
450		-22	-39	002	29		-14	-25	351	25		-15	-41	328	48		-16	-44	351	55		-12	-26	320	46							-07	-35	332	61			450
400	232·3	-34	-52	003	31	235·1	-26	-35	350	25	235·1	-21	-48	337	60	233·6	-26	-49	349	57	235·6	-23		320	50	of Page.					236·8	-16		303	68			400
350		-49		005	29		-40	-49	343	18		-33	-55	346	70		-41		347	63		-34		320	64							-30		334	64			350
300	296·0	-62		352	28	299·5	-52		343	41	(329 mb)	-40	-60			297·7	-58		347	77	300·8	-49									302·6	-47		332	71			300
250		-51		347	32		-47		349	50									347	69		-64										-67		342	73			250
200	382·3	-57		338	27	388·3	-43		353	33		Inversion				381·3	-69		347	53	387·0	-61									389·2	-59						200
170		-53		348	22		-45		350	30	834 mb 30° - 800 mb 33°						-65		347	41		-58										-58						170
150		-52		348	17		-47		348	21		Isothermal										-57										-57						150
130		-52		348	11		-47		346	16	727 - 716 mb 24°						-67		347	37		-56										-56						130
110		-54		348	09		-46		345	18						Inversion						-56										-56						110
100	542·6	-55		348	07	541·4	-47		345	15						814 mb 21° - 788 mb 28°						-55										538·1	-55						100
90		-55		348	07		-47		346	09												-54											-54						90
80		-55		348	07		-47		349	07												-54	Inversion															80
70	Inversion						-46		349	07												-53	600 mb 9° -															70
60	810 mb 26° - 794 mb 28°						-45		349	03												-52	567 mb 10°															60
							-43		CALM													-51																
						Inversion																(35 mb) -46																
						845 mb 32° - 835 mb 34°																Isothermal																
						740 mb 24° - 730 mb 25°																900 - 893 mb 39° 860 - 841 mb 32°																
						Isothermal																800 - 781 mb 30° - 603 - 600 mb 9°																
						510 - 491 mb -05°																477 - 470 mb -3°																
	I 304 mb -63°					I 271 mb -57°					N.R.					I 247 mb -81°					I 220 mb -67°										I 250 mb -67°						
Tropopause	29,100'					32,200'										33,700'					36,700'										34,200'						Tropopause

Wednesday 11th July 1951

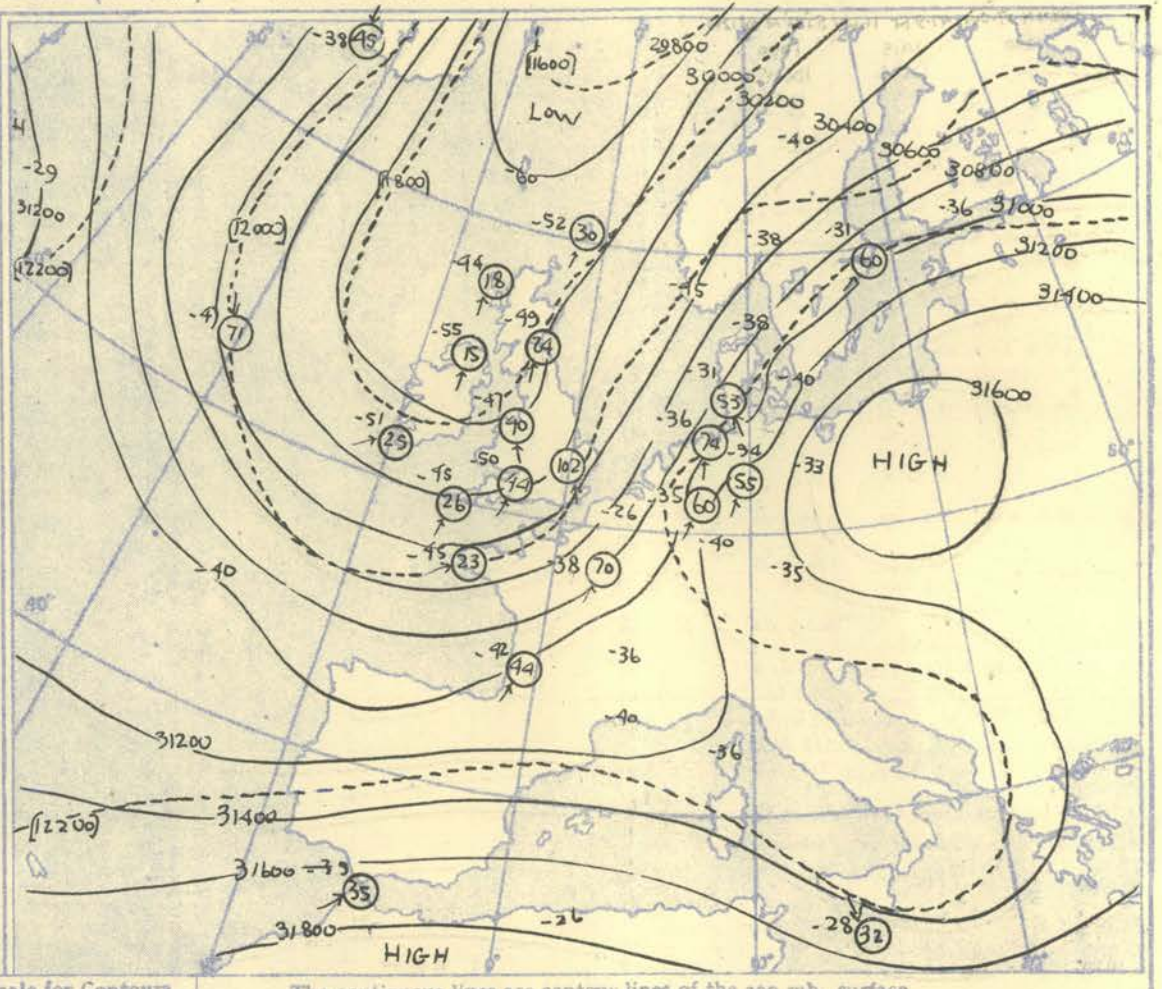
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

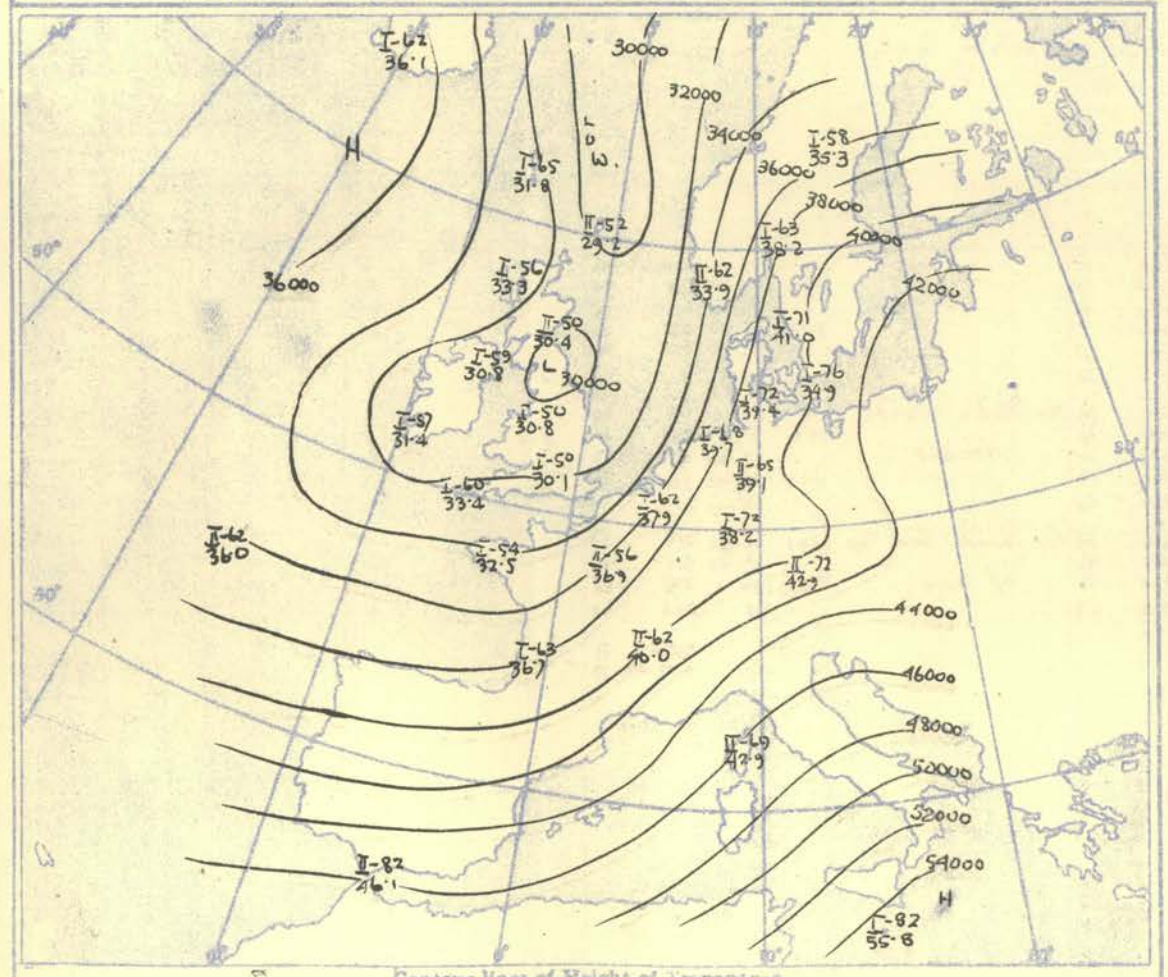
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 80 60 50 40 30 20 15 10 knots



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

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 west of the British Isles moved slowly east to reach Ireland late in the day. A very pronounced warm ridge in the Western Atlantic also moved eastwards slowly.

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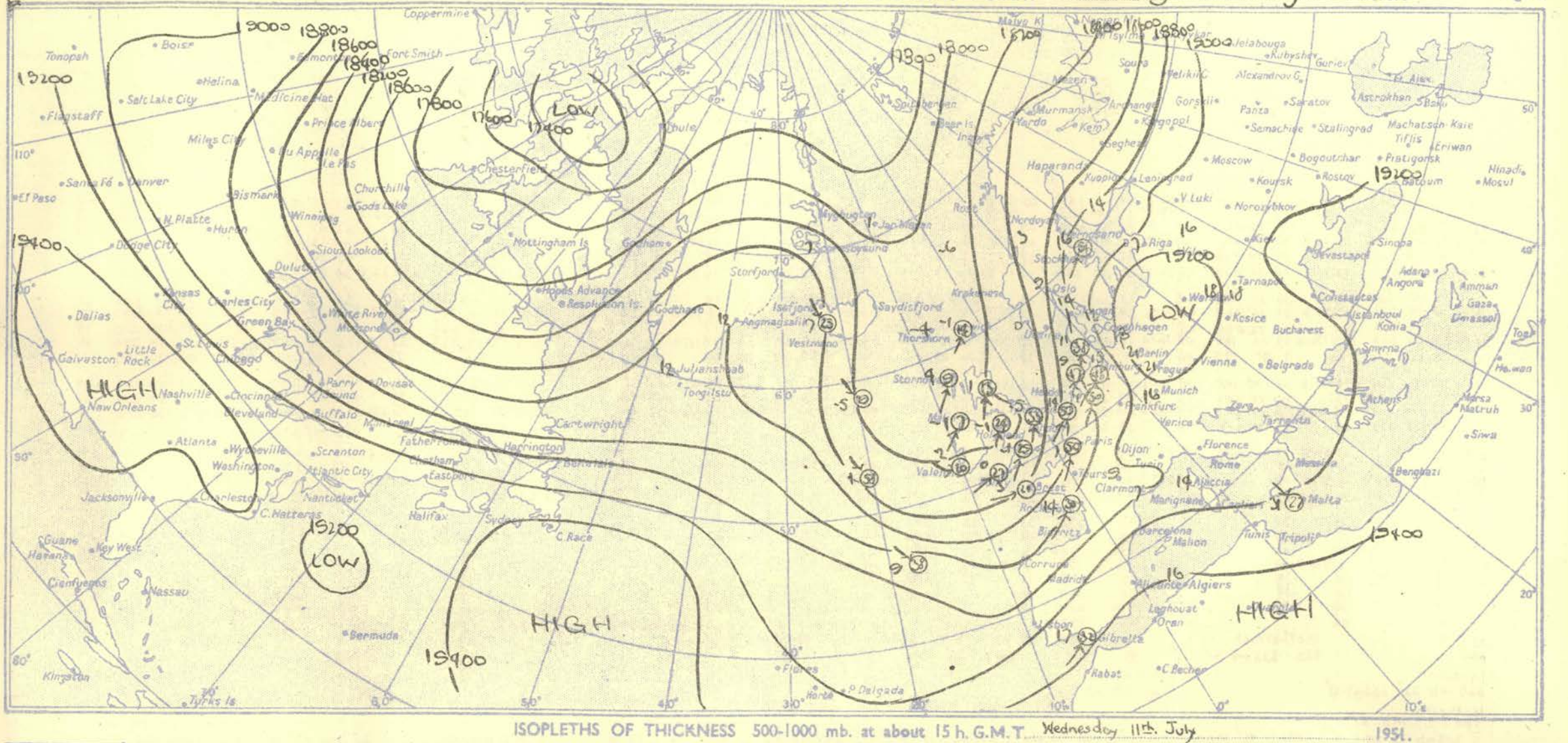
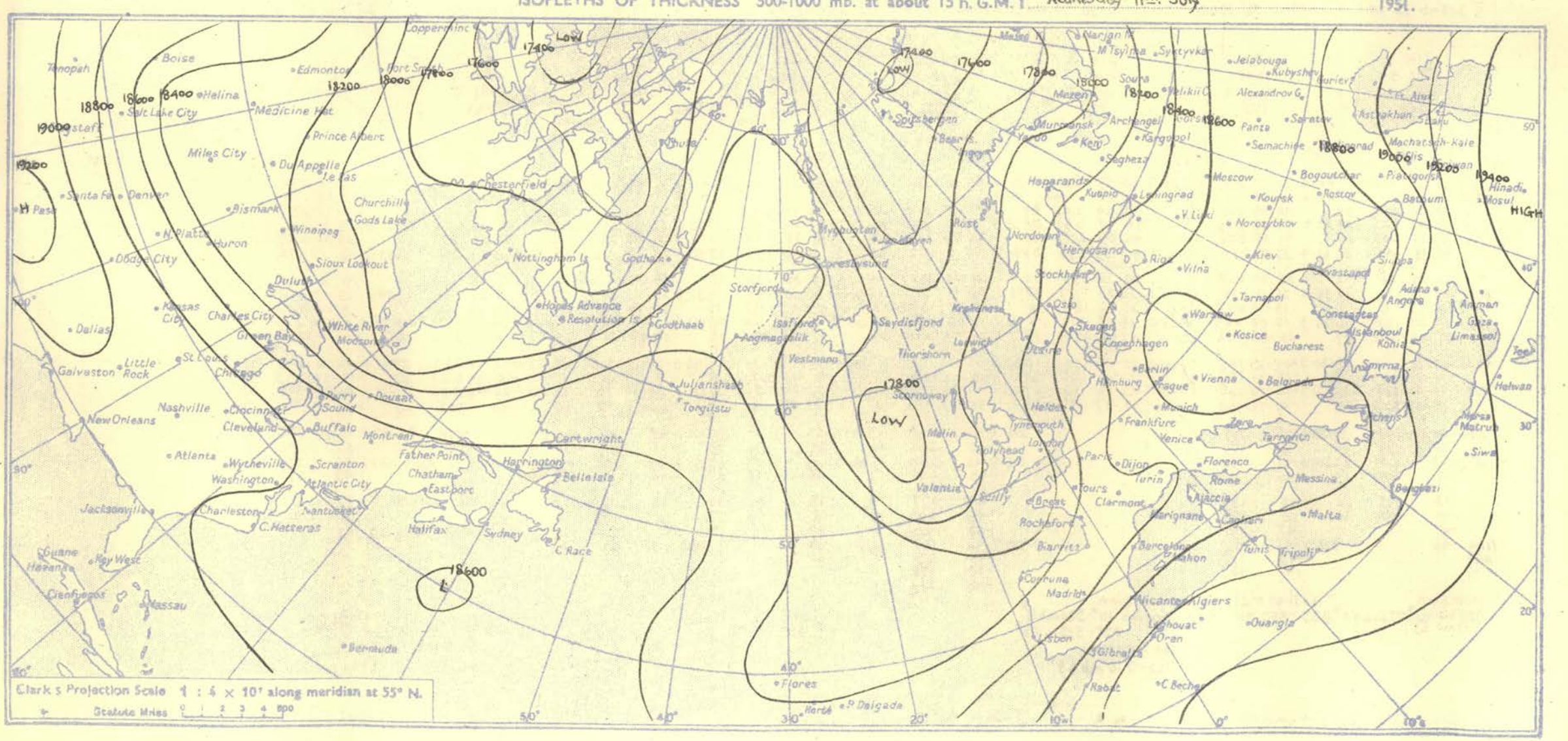
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Wednesday 11th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 11th. July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Wednesday 11th July 1951.

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

15h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.
Pressure: M.S.L.	1001·0 mb	1002·6 mb	1000·3 mb	1002·5 mb	1001·6 mb	1003·6 mb	1004·5 mb	1008·1 mb	1010·3 mb
Pressure: Surf	991·2 mb	1001·0 mb	999·5 mb	993·1 mb	999·6 mb	999·3 mb	989·0 mb	997·7 mb	1009 mb
Pressure: Freezing	748	710	720	752	738	733	720	750	800

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	54	54	Calm		00·4	52	50	010	1	00·2	67	60			02·6	59	50	350	15	00·6	61	57	310	03	01·2	70	48			09·4	63	59	220	13	02·9	61	52	290	20	00·3	61	52	330	12	Surf
1000	00·2					00·7	52	50			00·8	67	60			00·7					00·5					01·0					01·2					02·2					02·8	60	52	329	13	1000
950		51	50	212	09		47	46	012	29		58	55	224	09		48	45	350	22		54	49	314	09		62	98				58	62	217	20		52	47	292	27		53	49	321	19	950
900	29·2	50	41	206	10	29·3	43	43	015	27	29·3	52	46	230	10	29·3	42	40	347	23	29·5	50	45	266	11	30·4	54	45			30·4	51	46	22	21	31·1	44	43	297	27	31·8	45	43	315	21	900
850		45	36	206	11		41	40	026	17		47	38	226	09		42	40	345	10		46	41	240	13		46	39				46	41	229	20		40	36	296	27		37	36	318	24	850
800	61·9	40	29	199	12	60·9	39	36	029	12	61·2	41	34	226	10	60·8	36	32	344	07	61·3	39	34	221	16	62·3	04	37			62·2	40	36	231	22	62·6	34	30	287	24	63·2	32	30	313	21	800
750		33	23	201	10		36	33	097	08		35	30	225	13		32	28	346	07		33	28	213	14		34	26	For Winds			36	30	235	26		32	20	278	21		27	24	309	21	750
700	96·1	25	18	201	09	96·2	31	30	067	05	96·5	30	25	227	12	95·9	26	19	353	05	96·5	28	23	211	14	97·6	28	23	See		97·6	29	22	232	27	97·7	29	09	263	33	97·9	21	12	300	16	700
650		22	13	201	10		25	22	090	09		25	17	227	10		19	07	Calm			23	18	209	17		25	11				23	15	226	27		24	06	249	21		19	-03	245	13	650
600	135·6	13	09	215	15	136·0	19	14	168	06	136·4	18	06	204	10	125·3	13	02	206	03	136·2	17	12	214	18	137·4	18	-10			137·3	17	05	223	27	137·4	16	-01	251	21	137·2	13	-14	294	11	600
550		08	-06	210	14		11	01	172	06		11	01	185	13		06	-08	215	06		09	04	200	21		11	-26	Page 3.			11	-05	219	27		07	-07	255	22		05	-26	291	11	550
500	181·0	-01	-16	206	14	181·8	04	-09	188	09	182·1	01	-10	192	13	180·6	-01	-25	228	07	181·7	-01	-06	207	29	183·1	02	-36			182·9	00	-14	249	27	182·9	00	-14	249	27	182	-02	-36	285	20	500
450		-13	-28	226	13		-05	-15	206	13		-09	-28	200	15		-13	-29	228	06		-13	-17	204	29		-09	-48				+12	-29	219	29		-12	-22	248	25		-09	-44	277	18	450
400	234·1	-26	-40	212	10	235·9	-16	-27	206	16	236·6	-20	-36	197	16	233·7	-26	-40	207	08	234·8	-25	-29	207	24	236·8	-17	-61			236·2	-24	-39	225	26	236·2	-23	-34	241	22	236·0	-22	-50	273	18	400
350		-40	-53	202	11		-29	-41	213	16		-33	-46	188	15		-40	-53	221	10		-36	-40	173	27		-27	-69				-37	-51	228	25		-36	-47	236	21		-36		274	21	350
300	298·3	-52		198	30	301·9	-44		204	18	301·0	-49		189	24	298·1	-55		194	15	299·8	-47		182	40																					300
250		-56		205	43		-53					-63		195	49		-46		193	23		-45		190	44																					250
200	387·0	-45		207	35	391·2	-39				389·1	-50		196	43	387·4	-40		197	21	389·5	-43		198	36																					200
170		-46		211	32		-39					-47		196	35		-42		195	21		-44		198	35																					170
150		-46		218	24		-39					-47		198	33		-42		202	21		-44		195	32																					150
130		-47		218	19		-39					-48		203	28		-40		206	12		-46		194	32																					130
110		-46		213	20		-40					-45		206	15		-41		194	10	(122	-48																									110
100	540·0	-44		217	17	546·7	-40				541·6	-46		198	15	543·2	-42		171	10	mb)																									100
90		-46		199	15		-38					-48		198	16		-42		178	10																									90
80		-47		192	12		-38					-48		202	16																															80
70		-48		177	10		-39					-47		200	16																															70
60		-45		167	08							-46		198	16	Inversion					Inversion					Isothermal																					60
	(53 mb)	-46				Isothermal						-46		198	09	889 mb 41° - 864 mb 43°					1000 mb 61° - 993 mb 62°					675 - 650 mb 25°					770 - 750 mb 36°					800 - 778 mb 34°					(062 mb)	-48				
	Inversion 669 mb 22° - 655 mb 23°					850 - 832 mb 41°					Isothermal 920 - 896 mb 52°					708 - 26° - 694 - 27°																												Inversion 700 mb 21° - 683 mb 23°					
	Isothermal 950 - 919 mb 51°																																											500, -2° - 486 - -1°					
																																											Isothermal 562 - 535 mb 5°					
Tropopause	II 308 mb -52° 29,200'					I 260 mb -56° 33,300'					II 295 mb -50° 30,400'					I 285 mb -59° 30,750'					I 288 mb -60° 30,800'					N.R.					I 300 mb -50°					I 257 mb -60° 33,400'					I 283 mb -57° 31,400'					Tropopause

21h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	G.M.T.
Pressure: M.S.L.	992·9 mb	1005·1 mb	1001·0 mb	1005·0 mb	1002·9 mb	1005·4 mb	1006·7 mb	1010·8 mb	mb
Pressure: Surf	1002·8 mb	1003·5 mb	1000·2 mb	995·5 mb	1000·9 mb	1001·0 mb	991·0 mb	1000·9 mb	mb
Pressure: Freezing	740	750	741	780	713	731	744	800	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	53	53	Calm		00·4	51	49	010	15	00·2	60	57	Calm		02·6	53	50	330	15	00·6	58	56	Calm		01·2	62	55	205	08	09·4	57	51	270	15	02·9	59	55	270	15						Surf
1000	00·7					01·4	50	48			00·3	60	57			01·3					00·8					01·5					01·8					03·0	59	55								1000
950		53	50	257	09		45	42	024	30		57	54	266	09		48	47	324	25		52	46	260	14		57	52	231	22		63	47	272	25		52	48	271	26							950
900	29·7	50	46	236	09	29·9	42	38	028	25	29·5	50	47	261	06	29·9	43	42	326	25	29·7	47	44	252	19	30·6	52	48	234	21	30·7	48	42	278	25	31·8	45	39	280	22						900
850		45	38	203	05		41	37	028	20		45	39	263	05		38	36	328	23		41	39	242	14		46	42	233	19		41	34	271	27		39	34	277	22							850
800	61·5	40	32	178	07	61·4	37	32	025	15	61·3	40	33	256	04	61·3	34	31	332	20	61·3	36	36	236	10	62·6	40	37	228	19	62·3	35	29	260	24	63·2	32	27	272	21						800
750		34	29	174	12		32	27	027	11		33	28	193	09		29	25	332	15		38	38	228	10		34	31	216	19		33	29	242	20		28	16	269	20							750
700	96·7	25	22	172	12	96·4	25	18	038	08	96·5	28	25	167	07	96·3	26	19	319	12	96·7	30	30	231	15	97·8	28	25	215	22	97·4	26	21	238	23	98·1	25	07	260	21						700
650		20	13	170	10		19	08	037	03		21	16	185	08		19	09	308	09		20	19	232	15		21	18	210	23		20	13	240	27		18	00	256	21							650
600	136·1	15	07	185	06	135·9	12	09	049	02	136·0	14	08	191	16	135·7	12	06	297	08	136·3	15	13	224	20	137·6	16	06	208	24	136·9	14	04	237	25	137·7	11	-06	256	24						600
550		07	-05	206	09		03	-05	125	02		07	-11	192	17		04	-03	276	07		07	05	225	18		08	02	206	25		06	-05	236	28		01	-14	247	24							550
500	181·5	-02	-15	211	14	180·9	-04	-25	148	05	181·5	00	-11	190	18	180·8	-05	-21	191	07	181·6	-01	-03	234	17	183·0	-01	-13	205	28	182·1	-03	-15	232	29	182·5	-08	-29	243	29						500
450		-12	-33	222	18		-13	-31	157	07		-11	-25	188	21		-12	-22	187	09		-11	-13	227	22		-11	-29	202	31		-15	-28	224	30		-17	-24	243	30							450
400	234·7	-24	-43	238	22	233·9	-26	-40	162	08	234·9	-23	-36	182	21	234·0	-24	-33	186	12	234·9	-22	-24	226	24	236·3	-24	-41	198	33	235·1	-26	-40	225	31	235·2	-28	-38	240	30						400
350		-36	-57	224	26		-40	-52	163	11		-37	-47	181	21		-38	-47	183	16		-37	-39	231	23		-36	-53	199	40		-40		222	29		-33		234	48							350
300	299·5	-50		206	32	298·2	-55		165	10						298·7	-51		183	13	299·7	-53		224	30	301·3	-48		185	68	299·6	-52		218	31	299·1	-58		236	38							300
250		-51		200	43		-63		170	11							-60		201	12		-52		202	28		-51		183	66	286	-55				-52		253	32							250
200	387·9	-49		204	32	385·5	-45		182	09						386·6	-45		200	15	388·2	-45		197	31	390·2	-44		192	47	mb)					387·1	-46		234	25							200
170		-47		200	24		-45		193	07							-03		200	15		-45		195	27		-46		192	43				For Rest			-49		232	24							170
150		-48		193	22		-48		193	06							-44		197	14		-48		200	30		-48		194	42				of Winds			-49		220	20							150
130		-49		200	21		-50		191	09							-46		209	12		-48		205	27		-50		198	35							-51		215	19							130
110		-47					-47		191	11							-47		206	11		-49		192	19		-50		204	27				See Page			-52										110
100	(109 mb)	-46				538·0	-47		192	09						589·7	-46		197	12	590·6	-50				542·7	-55		204	26				3.		(122 mb)										100
90							-47		193	07							-48		195	11	(94 mb)	-51																									90
80							-47		193	06							-50		196	12																											80
70																	-48		217	11																											70
60																																																		60
	Inversion 993 mb 53° - 973 mb 54°					Isothermal 885 - 850 mb 41°					Inversion 1000 mb 60° - 980 mb 61°										Inversion 800 mb 36° - 772 mb 41°										Inversion 780 mb 32° - 763 mb 34°					Isothermal 750 - 718 mb 28°										
											523 .. 02° - 513 .. 03°																																						
											Isothermal 722 - 710 mb 29°																																						
Tropopause	I 280 mb -63° 31,400'					I 262 mb -69° 32,700'					N.A.					I 258 mb -63° 33,100'					I 267 mb -58° 32,400'					I 284 mb -50° 31,400'					N.R.					I 289 mb -65° 31,100'										Tropopause
																					I 243 .. -53° 34,700'																								

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

LERWICK — 03h. G.M.T.
Pressure: M.S.L. 1003.5 mb; Surf 993.6 mb; Freezing 739 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.7	51	51	CALM	
1000	00.9				
950		50	50	020	09
900	29.7	47	47	328	03
850		43	42	223	05
800	61.3	38	37	188	07
750		34	27	173	07
700	96.5	26	23	181	07
650		22	17	201	07
600	136.1	16	00	207	05
550		17	-04	193	06
500	181.6	00	-17	174	09
450		-11	-28	179	07
400	235.0	-22	-39	134	03
350		-35	-51	351	05
300	300.0	-51		285	02
250		-52		191	19
200	388.2	-43		193	27
170		-43		194	23
150	452.0	-46		193	21
130		-46		193	17
110		-46		193	14
100	541.5	-46		193	13
90		-49		193	12
80		-48			

Inversion 679 mb 22° - 665 mb 23°
Isothermal 950 - 930 mb 50°
Tropopause: I 272 mb -61° 32,100'

STORNOWAY — 03h. G.M.T.
Pressure: M.S.L. 1007.2 mb; Surf 1005.6 mb; Freezing 769 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.4	50	46	360	15
1000	02.0	49	46		
950		45	42	015	30
900	30.4	40	37	023	26
850		39	36	024	21
800	61.8	35	32	022	14
750		30	26	023	14
700	96.8	25	21	021	11
650		19	15	012	08
600	136.3	12	07	347	05
550		05	-03	029	02
500	181.5	-02	-19	101	03
450		-11	-30	090	07
400	234.8	-24	-36	088	17
350		-38	-47	092	16
300	299.4	-54		102	11
250		-54		122	07
200	387.6	-42		156	03
170		-43		192	04
150	451.6	-42		185	05
130		-43		174	07

Inversion 558 mb 4° - 548 mb 6°
Isothermal 885 - 834 mb 39°
Tropopause: I 273 mb -64° 31850'

LEUCHARS — 03h. G.M.T.
Pressure: M.S.L. 1002.4 mb; Surf 1001.6 mb; Freezing 749 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.2	57	55	CALM	
1000	00.6	57	55		
950		53	50	348	03
900	29.6	48	45	304	03
850		43	40	240	08
800	61.3	38	33	225	07
750		31	27	197	04
700	96.4	25	21	185	09
650		22	14	184	09
600	135.8	13	03	186	09
550		06	-03	175	07
500	181.0	-03	-13	165	13
450		-14	-23	174	13
400	234.0	-27	-37	150	15
350		-41		148	15
300	298.1	-56		148	10
250		-53		185	17
200	386.3	-43		193	18
170		-45		191	19
150	450.0	-46		183	21
130		-46		186	19
110		-50		196	14
100	539.1	-49		196	13
90		-49		198	15
80		-55		163	11
70		-52		167	03
60	650	-55		172	08
(52mb)		-52			

Inversion 674 mb 21° - 650 mb 22°
Tropopause: I 279 mb -63° 31,400'

ALDERGROVE — 03h. G.M.T.
Pressure: M.S.L. 1006.9 mb; Surf 997.1 mb; Freezing 800 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.6	51	50	310	15
1000	01.8				
950		46	46	313	17
900	30.3	41	41	316	24
850		36	36	316	25
800	61.6	32	32	314	19
750		27	26	305	16
700	96.2	22	20	295	09
650		17	16	303	07
600	135.3	10	08	330	08
550		00	-02	328	07
500	180.0	-10	-14		
450		-21	-28		
400	232.2	-31	-40		
350		-44			
300	295.8	-60			
250		-57			
200	383.3	-48			
170		-46			
150		-47			
130		-49			
110		-52			
100	535.1	-52			
90		-55			
80		-56			

Tropopause: I 271 mb -66° 31,700'

LIVERPOOL — 03h. G.M.T.
Pressure: M.S.L. 1006.0 mb; Surf 1004.0 mb; Freezing 783 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.6	54	52	270	15
1000	01.6				
950		50	49	282	23
900	30.5	45	45	284	22
850		39	39	280	21
800	61.9	34	34	274	22
750		29	28	264	20
700	96.8	24	21	268	16
650		19	13	268	17
600	136.2	10	07	254	17
550		06	-03	229	17
500	181.3	-02	-23	220	14
450		-13	-37	224	20
400	234.5	-24	-45	224	23
350		-37	-57	213	25
300	299.1	-53		200	24
250		-47		194	22
200	387.8	-43		206	21
170		-43		196	20
150		-43		196	21
130		-47		189	21
110		-46		203	23
100	541.3	-45		194	14
90		-48		193	09
80		-51		203	09
70		-50			
60		-58			

Inversion 671 mb 21° - 665 mb 22°
Isothermal 1004 - 987 mb 54°; 576 - 550 mb 06°
Tropopause: I 276 mb -60° 31,700'

DOWNHAM MARKET — 03h. G.M.T.
Pressure: M.S.L. 1006.6 mb; Surf 1002.4 mb; Freezing 770 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01.2	56	52	210	10
1000	01.9				
950		51	48	248	21
900	30.7	46	41	250	23
850		40	36	236	22
800	62.1	35	28	232	22
750		30	23	227	24
700	97.1	27	-03	229	27
650		20	-20	227	28
600	136.5	13	-25	220	30
550		06	-37	211	30
500	181.7	-01	-43	208	32
450		-12	-35	205	33
400	235.1	-24	-37	210	38
350		-38	-49	207	43
300	299.5	-56		205	44
250		-52		204	45
200	387.9	-44		203	40
170		-49		195	34
150	451.1	-48		193	30
130		-49		184	31
110		-49		184	25
100	539.9	-54		187	23
90		-54		195	18
80		-56		198	12

Isothermal 950 - 930 mb 51°; 750 - 725 mb 30°
Tropopause: I 282 mb -62° 31,200'

LARKHILL — 03h. G.M.T.
Pressure: M.S.L. 1009.9 mb; Surf 994.0 mb; Freezing 780 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04.4	53	51	250	08
1000	02.7				
950		51	48	258	18
900	31.5	46	42	270	22
850		40	36	268	21
800	63.0	35	32	297	22
750		29	25	247	21
700	97.9	25	00	244	22
650		16	-09	241	21
600	137.0	09	-16	229	22
550		00	-19	224	31
500	181.8	-05	-16	220	35
450		-17	-24	223	31
400	234.4	-30	-38	211	27
350		-45		204	26
300	298.0	-53		215	36
250		-44		222	37
200	387.7	-45		212	33
170		-47		209	26
150	451.1	-47		190	16
130		-49		188	21
(116mb)		-51			

Inversion 513 mb -08° 500 mb -05°
Isothermal 994 - 983 mb 53°; 756 - 740 mb 29°
Tropopause: I 309 mb -57° 29,100'

CAMBORNE — 03h. G.M.T.
Pressure: M.S.L. 1012.5 mb; Surf 1001.9 mb; Freezing 810 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.9	54	51	240	03
1000	03.3	54	51		
950		50	48	271	17
900	32.0	43	43	274	18
850		37	28	269	21
800	63.3	30	26	266	21
750		25	18	265	22
700	97.9	20	05	260	22
650		15	-05	256	23
600	136.9	07	-07	257	23
550		-02	-10	265	22
500	181.4	-09	-14	264	27
450		-19	-24	269	27
400	233.8	-30	-36	278	33
350		-43		269	32
300	297.6	-57		263	33
250		-50		246	33
200	386.0	-46		247	26
170		-47		234	20
150		-49		232	22
130		-52		232	18
110		-52		219	14
100	537.5	-52		218	12
90		-53		216	10
80		-54		217	13
70		-55		170	05
60		-56			
(54mb)		-57			

Isothermal 520 - 496 mb -9°
Tropopause: I 292 mb -60° 30,300'

VALENTIA — 03h. G.M.T.
Pressure: M.S.L. 1012.9 mb; Surf 101[illegible] mb; Freezing 810 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.3	53	49		
1000	03.5	52	48		
950		46	39		
900	32.1	40	34		
850		35	31		
800	63.2	31	29		
750		26	21		
700	97.7	22	08		
650		15	02		
600	136.6	06	-07		
550		-03	-14		
500	181.1	-11	-23		
450		-21	-31		
400	233.3	-32	-44		
350		-43			
300	297.1	-52			
250		-45			
200	386.7	-44			
170		-46			
150		-46			
130		-48			
110		-49			
100	539.3	-50			
90		-51			
80		-52			

Tropopause: II 315 mb -52° 28,700'

LERWICK — 09h. G.M.T.
Pressure: M.S.L. 1003.9 mb; Surf 994.0 mb; Freezing 741 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.7	52	52	020	13
1000	01.0				
950		48	48	010	10
900	29.6	46	45	007	06
850		41	37	356	03
800	61.2	39	29	356	03
750		33	21	338	02
700	96.4	24	16	291	03
650		20	05	197	03
600	135.3	14	-03	213	04
550		06	-13	236	06
500	181.0	-04	-35	219	06
450		-14	-44	235	06
400	234.0	-25	-55	334	06
350		-40	-60	349	06
300	298.3	-57		352	07
250		-53		196	09
200	386.4	-43		187	18
170		-45		184	21
150		-45		185	18
130		-46		191	16
110		-46		201	10
100	539.8	-46			

Inversion 668 mb 19° - 650 mb 20°
Isothermal 913 - 887 mb 46°
Tropopause: I 273 mb -66° 31,800'

STORNOWAY — 09h. G.M.T.
Pressure: M.S.L. 1009.1 mb; Surf 1007.5 mb; Freezing 754 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.4	51	47	360	15
1000	02.5	50	47		
950		44	41	017	28
900	30.9	39	31	018	26
850		39	37	011	12
800	62.1	36	33	004	09
750		32	29	001	14
700	99.1	27	24	013	11
650		21	17	024	06
600	136.6	12	07	023	05
550		08	-03	021	04
500	182.0	00	-15	026	05
450		-11	-23	041	06
400	235.3	-23	-36	067	05
350		-37	-49	083	15
300	299.8	-55		080	13
250		-52		064	10
200	388.3	-38		097	05
170		-38		132	04
150	453.1	-40		139	04
130		-40		161	07
110		-40			

Inversion 882 mb 38° - 845 mb 39°; 588 mb 10° - 574 mb 12°
Tropopause: I 269 mb -64° 31,200'

LEUCHARS — 09h. G.M.T.
Pressure: M.S.L. 1004.4 mb; Surf 1003.3 mb; Freezing 760 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.2	56	55	CALM	
1000	01.1	56	55		
950		49	48	032	07
900	29.8	44	44	002	08
850		41	41	330	07
800	61.3	37	37	306	07
750		30	28	247	06
700	96.4	26	22	L.V	
650		20	15	L.V	
600	135.8	13	08	161	06
550		07	-07	135	09
500	181.1	-01	-13	094	15
450		-11	-20	104	12
400	234.4	-22	-38	117	10
350		-37	-51	131	06
300	299.1	-52		151	05
250		-52		157	09
200	387.7	-41		175	21
170		-41		181	19
150		-41		180	15
130		-38		183	14
110		-42		177	18
100	542.7	-44		182	16
90		-41			
(84mb)		-42			

Isothermal 650 - 637 mb 20°
Tropopause: II 275 mb -59° 31,800'

ALDERGROVE — 09h. G.M.T.
Pressure: M.S.L. 1008.2 mb; Surf 998.7 mb; Freezing 786 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.6	52	49	310	15
1000	02.3				
950		45	44		
900	30.8	40	40		
850		35	35		
800	62.0	33	22		
750		29	28		
700	96.8	22	21		
650		17	17		
600	136.0	11	09		
550		02	-03		
500	180.9	-04	-08		
450		-13	-21		
400	234.0	-24	-37		
350		-35	-44		
300	298.2	-49			
250		-60			
200	387.0	-42			
170		-41			
150		-41			
130		-43			
110		-43			
100	541.4	-43			
90		-45			
80		-42			

For Winds See Page 3
Inversion 515 mb -5° - 500 mb -4°
Isothermal 827 - 800 mb 33°
Tropopause: I 255 mb -61° 33,300'

LIVERPOOL — 09h. G.M.T.
Pressure: M.S.L. 1009.0 mb; Surf 1007.0 mb; Freezing 810 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00.6	54	52	260	12
1000	02.5	53	52	261	27
950		47	46	267	23
900	31.1	41	40	272	21
850		36	35	273	20
800	62.8	31	29	272	17
750		26	23	259	17
700	97.5	22	14	253	20
650		19	05	246	21
600	136.7	11	-11	244	18
550		03	-23	233	13
500	181.7	-06	-36	221	09
450		-15	-44	202	08
400	234.6	-27	-51	190	09
350		-41		204	16
300	298.7	-57		197	16
250		-47		206	18
200	387.7	-42		201	21
170		-41		187	15
150		-43		187	19
130		-43		187	22
110		-44		217	17
100	541.9	-45		195	14
90		-48		177	16
80		-46		181	10
70		-45		166	06
60		-45		162	05
		-45			

Inversion 664 mb 18° - 650 mb 19°
Isothermal 750 - 738 mb 26°
Tropopause: I 288 mb -59° 30,800'

DOWNHAM MARKET — 09h. G.M.T.
Pressure: M.S.L. 1010.8 mb; Surf 1006.4 mb; Freezing 757 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01.2	59	50	220	12
1000	03.0				
950		51	45	244	19
900	31.8	45	43	249	21
850		40	35	247	26
800	63.3	37	31	240	27
750		31	26	234	26
700	98.4	25	17	237	24
650		19	09	237	23
600	137.7	09	-02	215	23
550		01	-05	226	25
500	182.5	-05	-10	223	25
450		-13	-19	216	28
400	235.5	-27	-34	218	29
350		-41		223	23
300	299.7	-45		213	39
250		-42		209	41
200	390.1	-41		202	36
170		-40		200	32
150	454.5	-41		185	30

For continuation of Winds See Page 3
Tropopause: I 318 mb -49° 28,600'

LARKHILL — 09h. G.M.T.
Pressure: M.S.L. 1012.4 mb; Surf 996.7 mb; Freezing 790 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04.4	59	51	230	07
1000	03.4				
950		51	46	250	11
900	32.2	46	42	250	11
850		40	39	250	15
800	63.8	33	33	248	20
750		27	17	242	23
700	98.6	22	07	238	27
650		16	02	237	27
600	137.7	09	-04	235	26
550		05	-15	234	30
500	182.7	-05	-30	237	33
450		-13	-39	239	40
400	235.7	-27	-49	237	44
350		-39	-58	240	61
300	300.1	-53		240	55
250		-47		223	39
200	389.4	-41		227	33
170		-43		212	26
150	453.4	-45		200	24
130		-43		207	25
110		-47		217	15
100	543.1	-48		189	12
90		-48		177	15
80		-48			

Max. Wind. 240° 73 Kts. 332 mb 27,900'
Tropopause: I 288 mb -55° 30800'

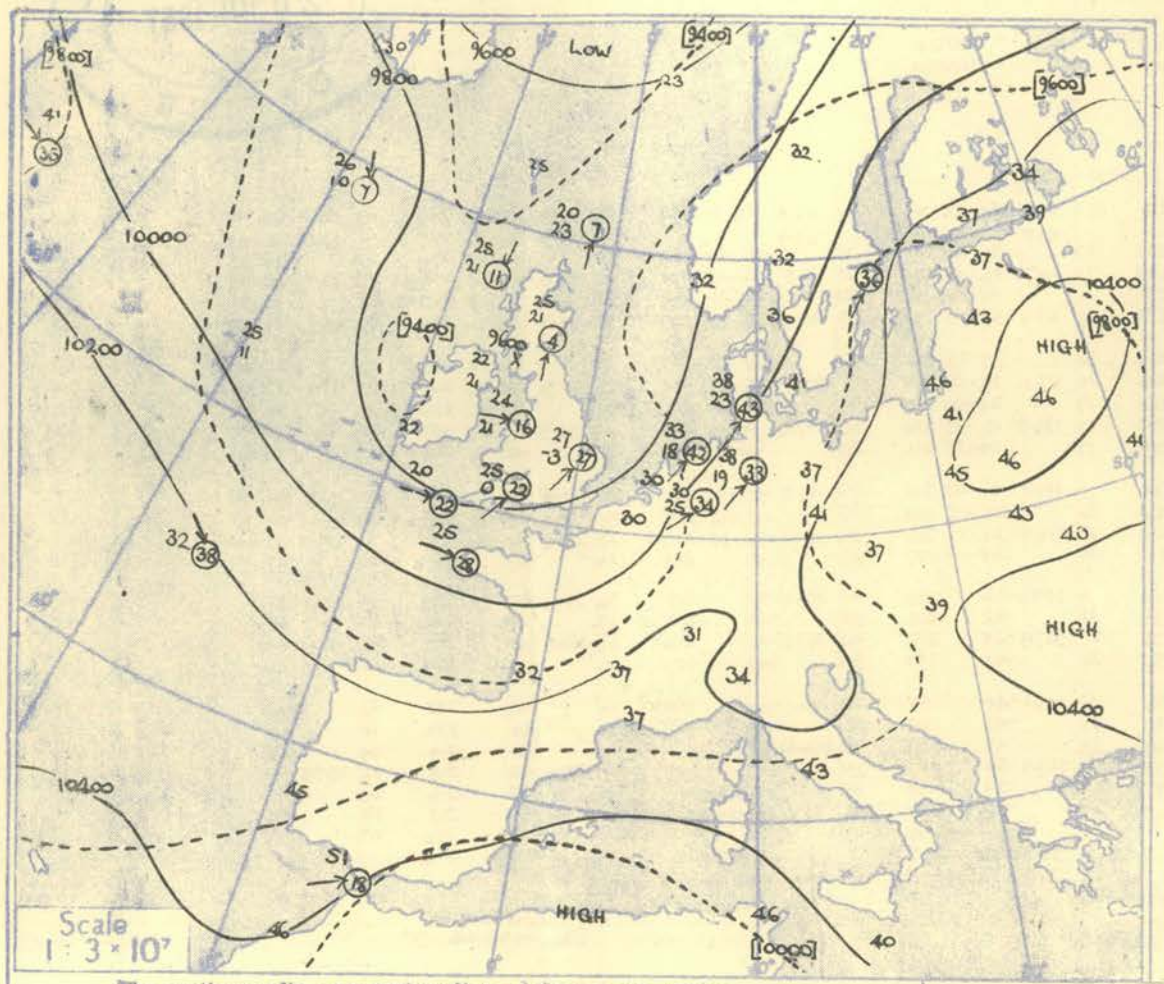
CAMBORNE — 09h. G.M.T.
Pressure: M.S.L. 1013.1 mb; Surf 1002.7 mb; Freezing 810 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02.9	59	61	270	05
1000	03.4	55	47		
950		49	43	278	08
900	32.3	43	37	287	10
850		37	31	283	09
800	63.6	31	22	269	13
750		27	15	257	16
700	98.4	21	08	238	22
650		15	01	238	20
600	137.4	09	-10	236	20
550		01	-16	240	23
500	182.2	-07	-24	245	31
450		-16	-33	242	35
400	234.9	-28	-44	243	35
350		-40	-55	241	33
300	299.2	-51		239	35
250		-44		256	30
200	388.9	-41		247	23
170		-43		255	17
150		-44		236	12
130		-45		226	12
110		-45		221	15
100	542.5	-46		220	11
90		-46		180	05
80		-47		171	05
(76mb)		-47			

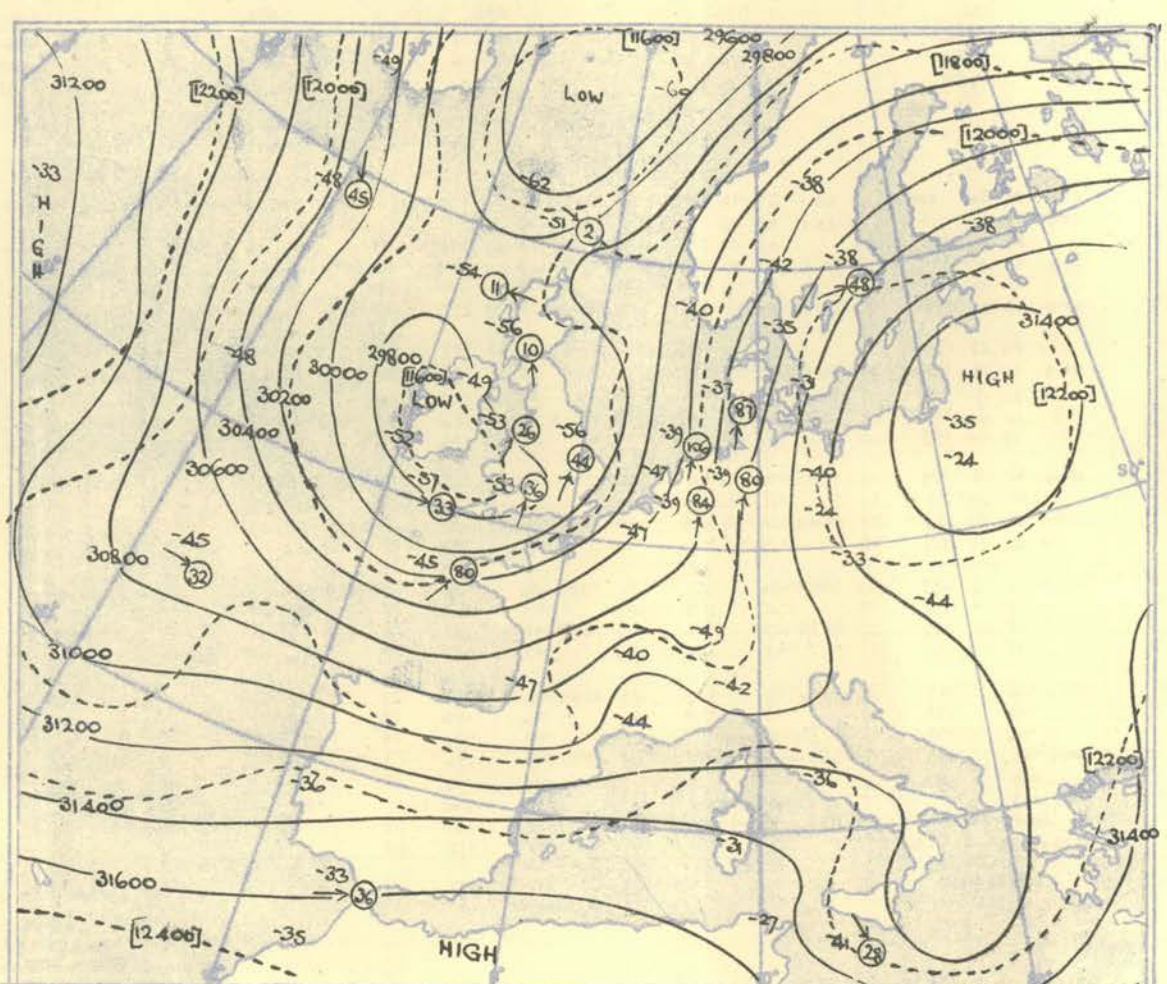
Tropopause: I 288 mb -63° 30,700'

Thursday 12th July, 1951.

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



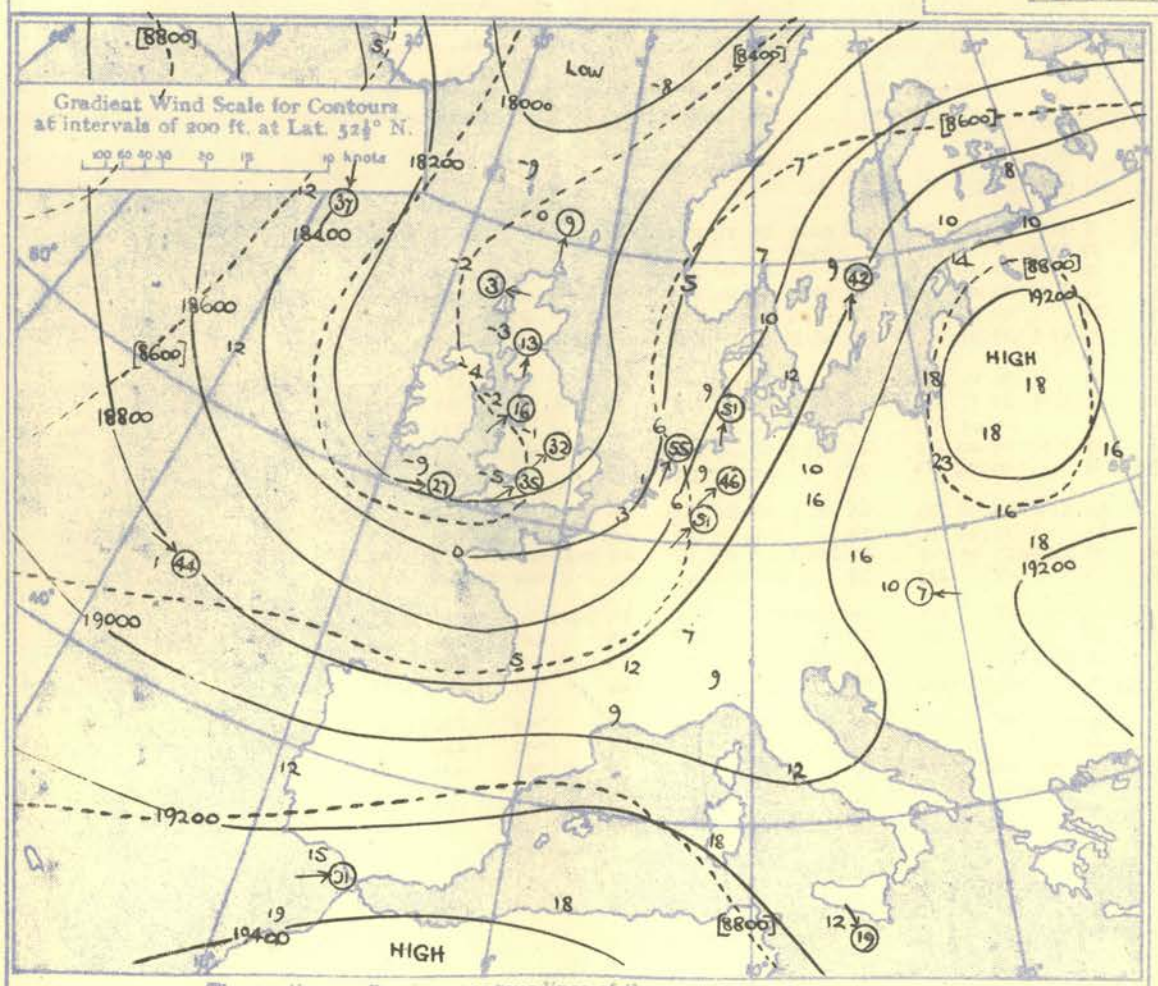
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



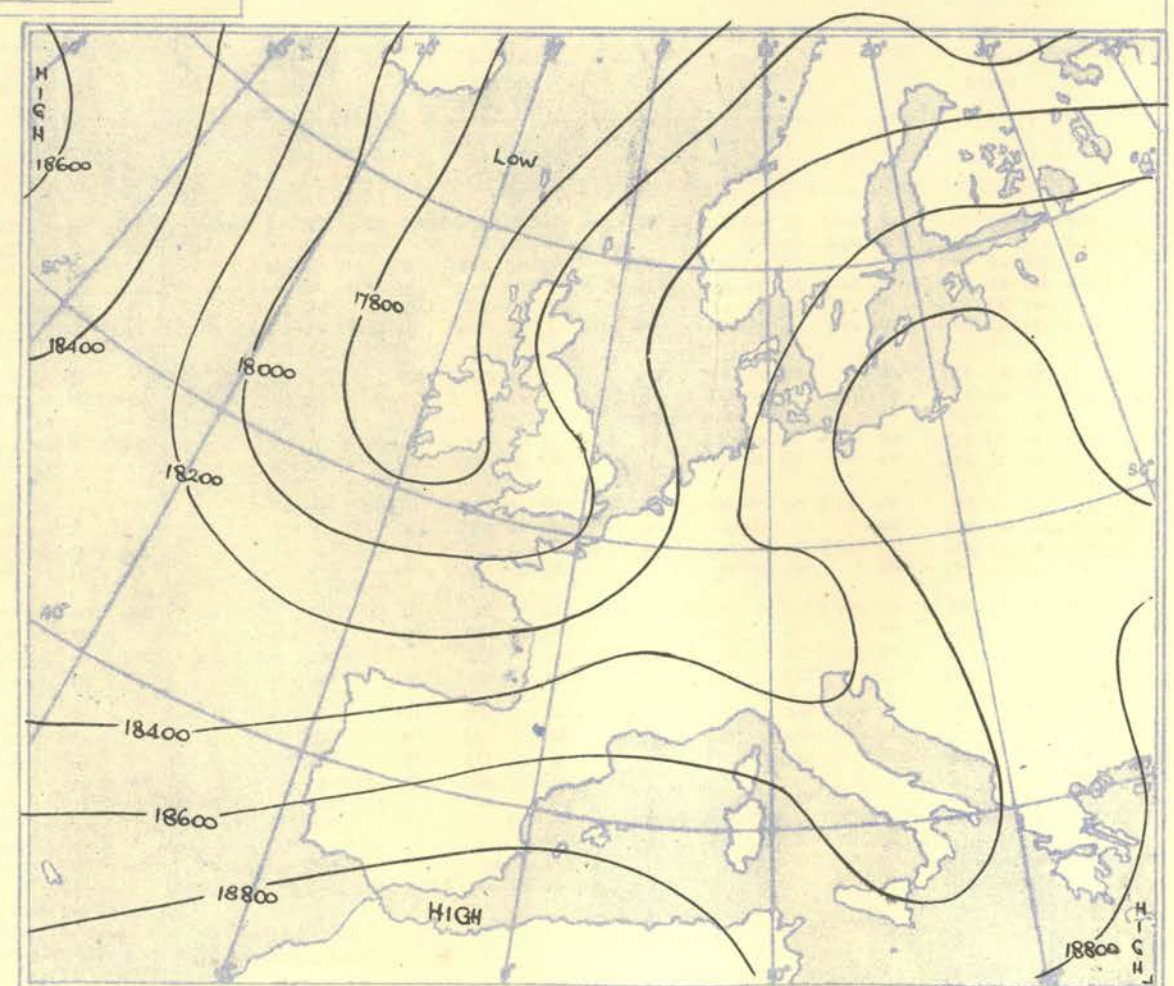
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

	52° 12'N 02° 12' W																								
Pressure Time	1352																								Time
Pressure M.S.L.	1012 mb			mb			mb			mb			mb			mb			mb			mb			M.S.L.
Pressure Surf	1010·5 mb			mb			mb			mb			mb			mb			mb			mb			Surf
Pressure Freezing	784 mb			mb			mb			mb			mb			mb			mb			mb			Freezing
Pressure mb	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Pressure mb
Surf	0·4																								Surf
1000	3·3																								1000
950																									950
900	32·4	49	43																						900
850		41																							850
800	63·9	33																							800
750																									750
700	98·7	21																							700
650																									650
600	131·7	07																							600
550																									550
500	182·5	-08																							500
450																									450
400	235·3	-28																							400
350																									350
300	299·4	-53																							300
250																									250
200																									200
170																									170

cloud:- b/ Sc Cu 1883D-815 mb

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

Place	Aldergrove		Shoeburyness		Downham Market		Cirrus 52·3N 19·9W		Larkhill		Camborne		Larkhill		Lerwick		Cirrus 52·4N 20·0W		Leuchars		Place
Time	09L		09L		09L		09L		11L		15L		18L		21L		21L		21L		Time
Type	PILAR				PILAR						PILAR								PILAR		Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	310	15	220	15			160	06	220	09	330	10	270	10			160	12	CALM		Surf.
1,000	305	22	240	19			150	13	210	12	307	11	270	14			160	12	014	11	1,000
2,000	301	24	240	19			150	14	210	13	309	11	270	16			160	12	006	11	2,000
3,000	301	22	230	18			200	15	210	13	309	11	260	17			170	12	018	11	3,000
4,000	307	21	230	21			250	16	220	14	308	10	250	18			180	10	018	11	4,000
5,000	310	21	230	22			260	19	230	14	306	10					200	06	025	08	5,000
6,000	315	20					280	28	240	16	298	07	240	20			210	06	007	09	6,000
8,000	321	13					300	36	240	22	294	10	230	21			270	09	346	10	8,000
10,000	325	10	240	30			320	30	240	25	290	11	230	22			340	15	019	04	10,000
14,000	005	05	230	38			350	30	240	40	262	16	240	23					331	04	14,000
18,000	018	04	230	51			330	34	230	40	251	28	230	24					357	08	18,000
24,000	069	07	240	57			230	38	(15,000')		248	29	(15,000')				350	26	061	16	24,000
30,000	075	12	220	73			340	46			254	38			247	10	340	33	088	12	30,000
40,000	LV		200	38			(28,000')				256	31			312	04	360	39	107	06	40,000
50,000	190	05	200	25	209	21					255	12			(34,000')		(35,000')		(35,000')		50,000
	188	06	210	13	160	18															
	(52,000')		(52,000')																		

NEPHOSCOPE OBSERVATIONS

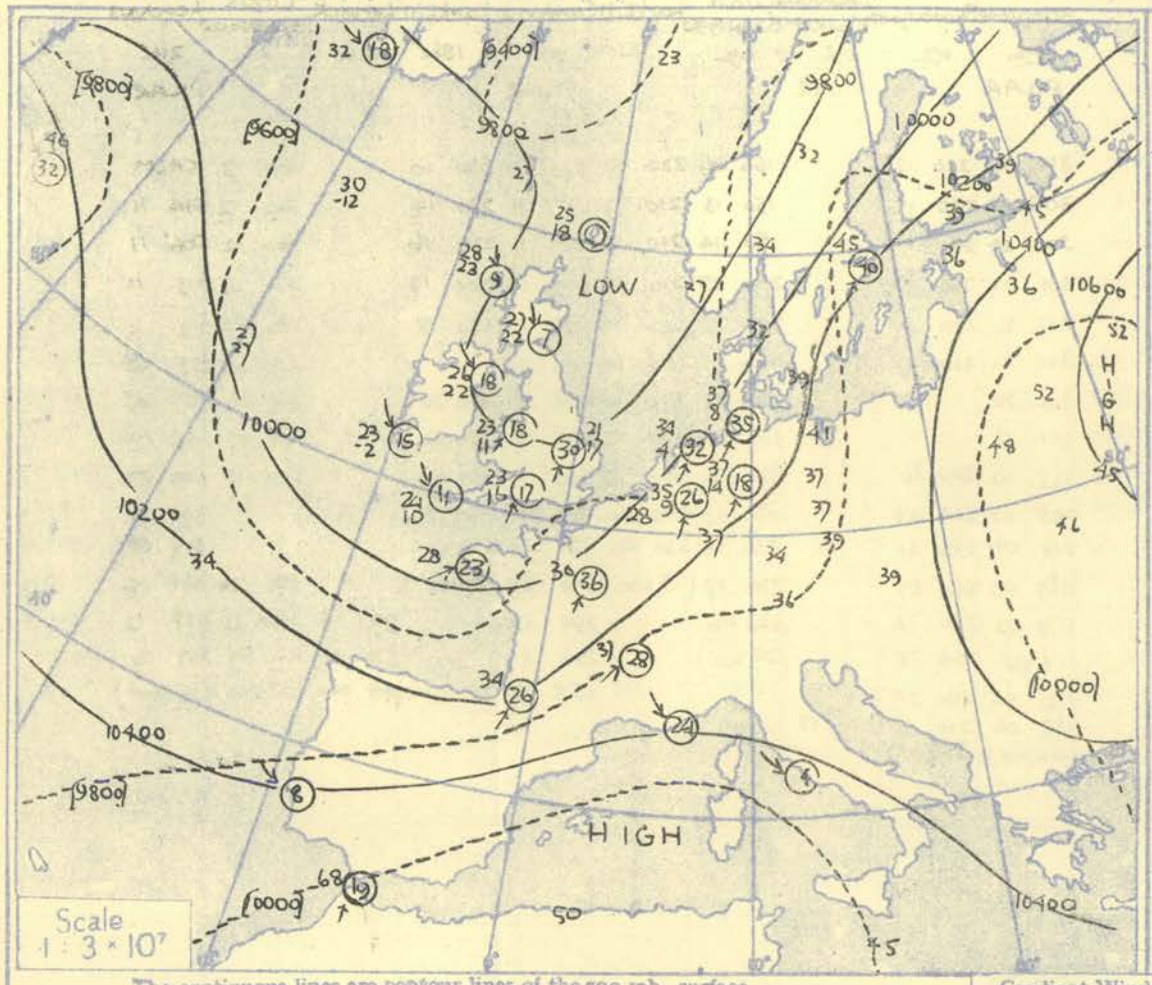
Place	Stradishall												Place
Time Type	09h Ac												Time Type
Dir. Vel.	320	72											Dir. Vel.

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

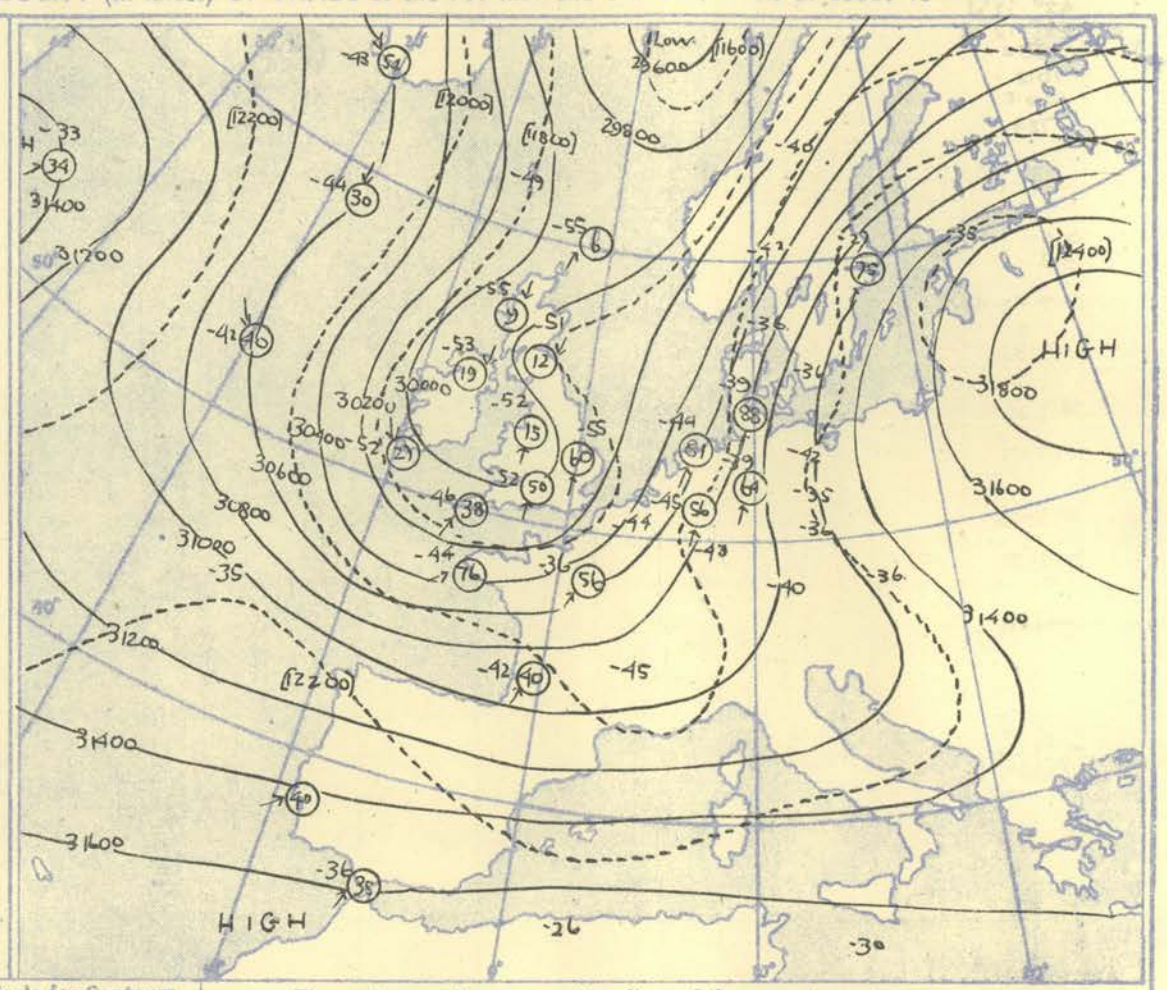
Ship	WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				CIRRUS				CIRRUS				CIRRUS				Ship
Lat/Long	59·0N		18·5W		59·1N		19·6W		59·0N		19·7W		59·0N		19·7W		52·3N		19·9W		52·3N		19·9W		52·4N		20·0W		52·6N		20·0W		Lat/Long
Pressure Time	03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				03L G.M.T.				09L G.M.T.				15L G.M.T.				21L G.M.T.				Time
Pressure M.S.L.	1016 mb				1016 mb				1017 mb				1018 mb				1016 mb				mb				1015 mb				mb				M.S.L.
Pressure Surf	1016 mb				1016 mb				1017 mb				1018 mb				1016 mb				mb				1015 mb				mb				Surf
Pressure Freezing	780 mb				780 mb				740 mb				758 mb				800 mb				mb				770 mb				mb				Freezing
Pressure mb	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Vel. knots	Pressure mb
Surf		51	42	CALM			52	43	186	06		55	42	210	07		56	41	190	12		56	48	190	06											Surf
1000	4·3	50	42	"		4·3	50	41	242	04	4·7	53	40	210	04	4·9	53	42	160	12	4·5	54	46			4·4	55	50	157	14							1000
950		45	39	"			44	31	255	03		44	33	195	04		45	37	220	16		46	41				47	46	169	17							950
900	32·7	39	34	331	03	32·7	37	32	270	03	33·2	38	29	176	05	33·4	39	29	231	13	33·1	41	33			33·0	42	42	188	12							900
850		34	27	331	03		36	20	300	03		40	20				39	14	240	13		36	28				39	39	207	09							850
800	63·9	34	20	331	03	63·9	34	19	315	03	64·5	37	08			64·6	35	05	246	10	64·3	32	21			64·4	35	35	234	09							800
750		30	16	335	06		30	09	320	06		33	01				32	-05	261	05		26	18				31	31	274	15							750
700	98·9	26	10	338	07	98·8	27	04	327	06	99·5	30	-12			99·7	31	-10	281	07	99·0	25	12			99·5	27	27									700
650		21	-01	340	14		24	-22	339	12		28	-34				26	-25	314	18		20	03				28	22									650
600	138·4	16	-10	346	21	138·5	18	-30	355	19	139·6	23	-38			139·7	22	-15	330	21	138·6	15	-10			139·2	16	15									600
550		09	-21	347	28		11	-18	017	27		15	-15				13	-19	333	22		07	-17	335	44		09	06									550
500	184·0	02	-30	353	37	184·2	02	-10	010	31	185·7	08	-14	004	24	185·8	07	-31	330	25	184·0	-02	-25	335	40	NOT AVAILABLE					184·8	02	-02	NOT AVAILABLE				500
450		-08	-29	359	46		-05	-27	010	29		00	-31	004	22		-04	-47	341	27		-11	-34	325	40								-06	-11	348	33				450
400	237·9	-16	-34	002	42	238·2	-17	-34	002	26	240·3	-33	-43	004	24	239·9	-18	-57	359	37	237·3	-22		320	47						238·8	-16	-23	343	31				400
350		-30	-46	358	45		-31	-44	359	37		-28	-49	004	36		-32	-59	352	36		-34		323	52	For winds see						-27		330	33	For winds see			350
300	303·6	-48		357	45	303·7	-48		357	42	306·5	-44		006	30	305·4	-49		340	36	302·6	-48									305·0	42		330	40				300
250		-64		354	51		-64		358	38		-62		017	32		-69		344	41		-63				top of page.						-60				top of page.			250
200	290·4	-53		352	51	290·8	-51		357	40	293·3	-53		014	33	291·3	-57		340	39	289·0	-61									292·2	-52							200
170		-54					-53		355	37		-50		003	30		-57		339	30		-61										-56							170
150	(165 mb)	-55					-53		353	35		-53		348	30		-59		339	33		-62										-59							150
130							-54		350	29		-54		347	26		-60		338	24		-63										-57							130
110							-50		341	15		-53		336	22		-57		337	15	(118 mb)	-61										-56							110
100						541·6	50		342	13	543·9	-52		326	18	539·9	-53		337	14											541·4	-55							100
90							-51		343	10		-51		322	15		-55		337	12												-54							90
80							-50		340	04		-52		325	15		-53		337	08												-54							80
70							-47		CALM			-48				(74 mb)	-50		Inversion °					Inversion °								-53							70
60												-47				878 mb	37°	865 mb	40	730 mb	23°	709 mb	26									-52							60
	Inversion °				Inversion °				Inversion °			-46		Isothermal °			Isothermal °																				
	852 mb	33°	830 mb	37	868 mb	38°	840 mb	38	(41) mb	-43	887 mb	36°		922 - 912 mb	41°																						
											850 "	40°		758 - 750 "	32°																						
											Isothermal °			706 - 672 mb	30																						
											528 - 524 "	12°		616 - 600 "	22°																						
														538 - 518 "	10°																						
Tropopause	I 245 mb - 67°			34,800'	I 240 mb - 67°			35,200'	II 230 mb - 68°			36,400'	II 235 mb - 72			35,800'	I 236 mb - 68°			35,500'					I 235 mb - 65°			35,900'									Tropopause

Thursday 12th July 1951.

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



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

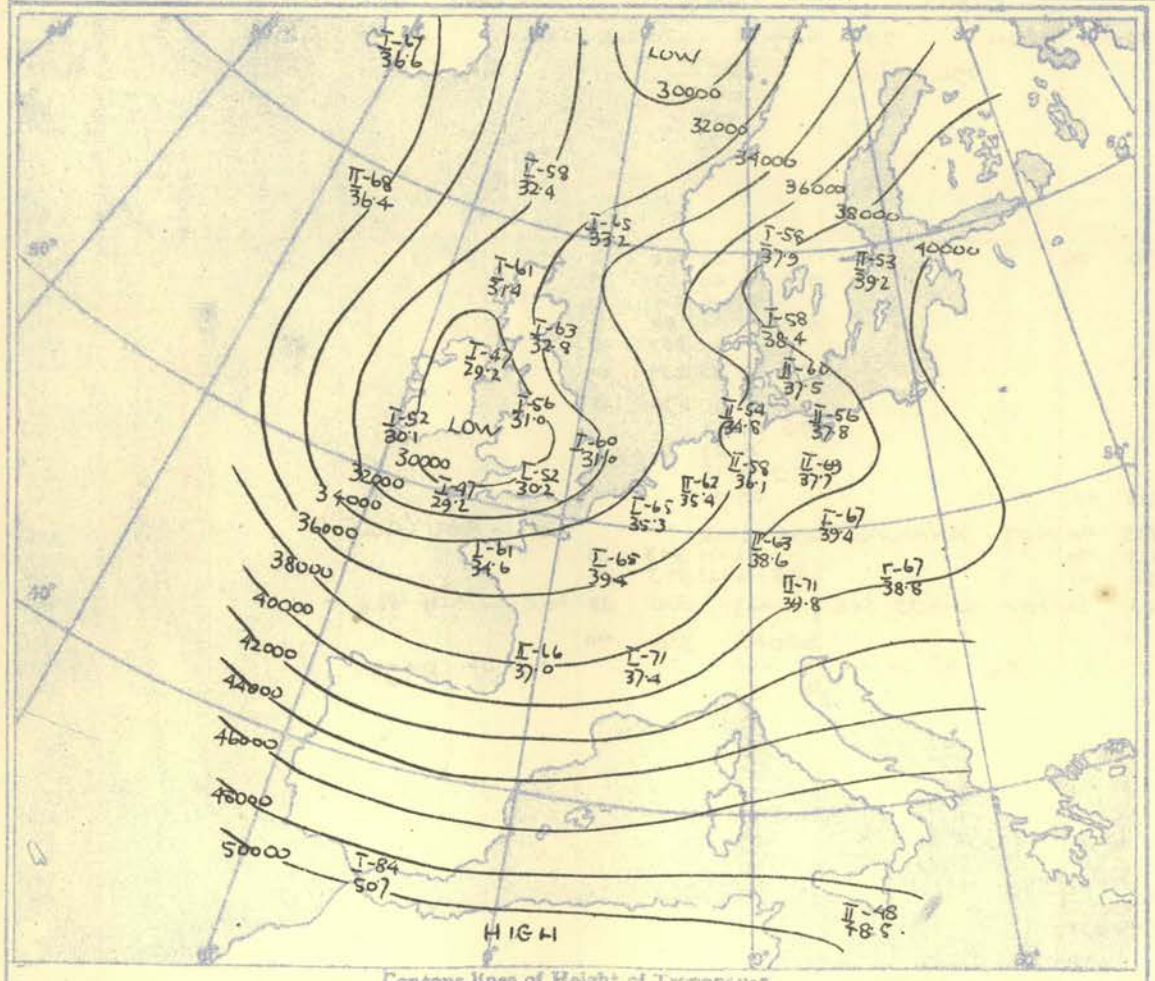


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The sharp cold trough extending southwards across the British Isles moved slowly eastwards with a separate cold pool developing later over Wales and South England. The Atlantic warm ridge continued to move east and a further trough developed behind it near Greenland.

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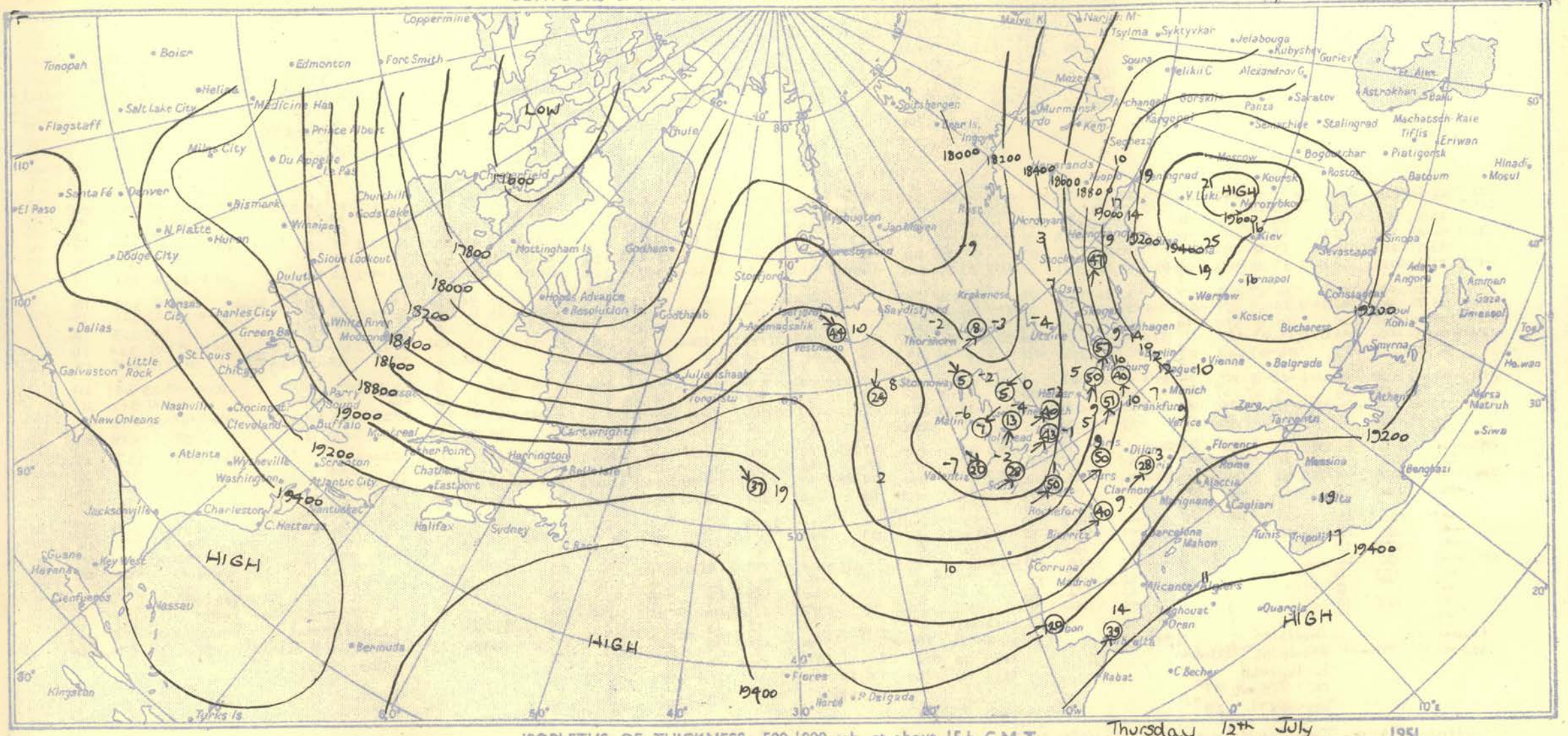
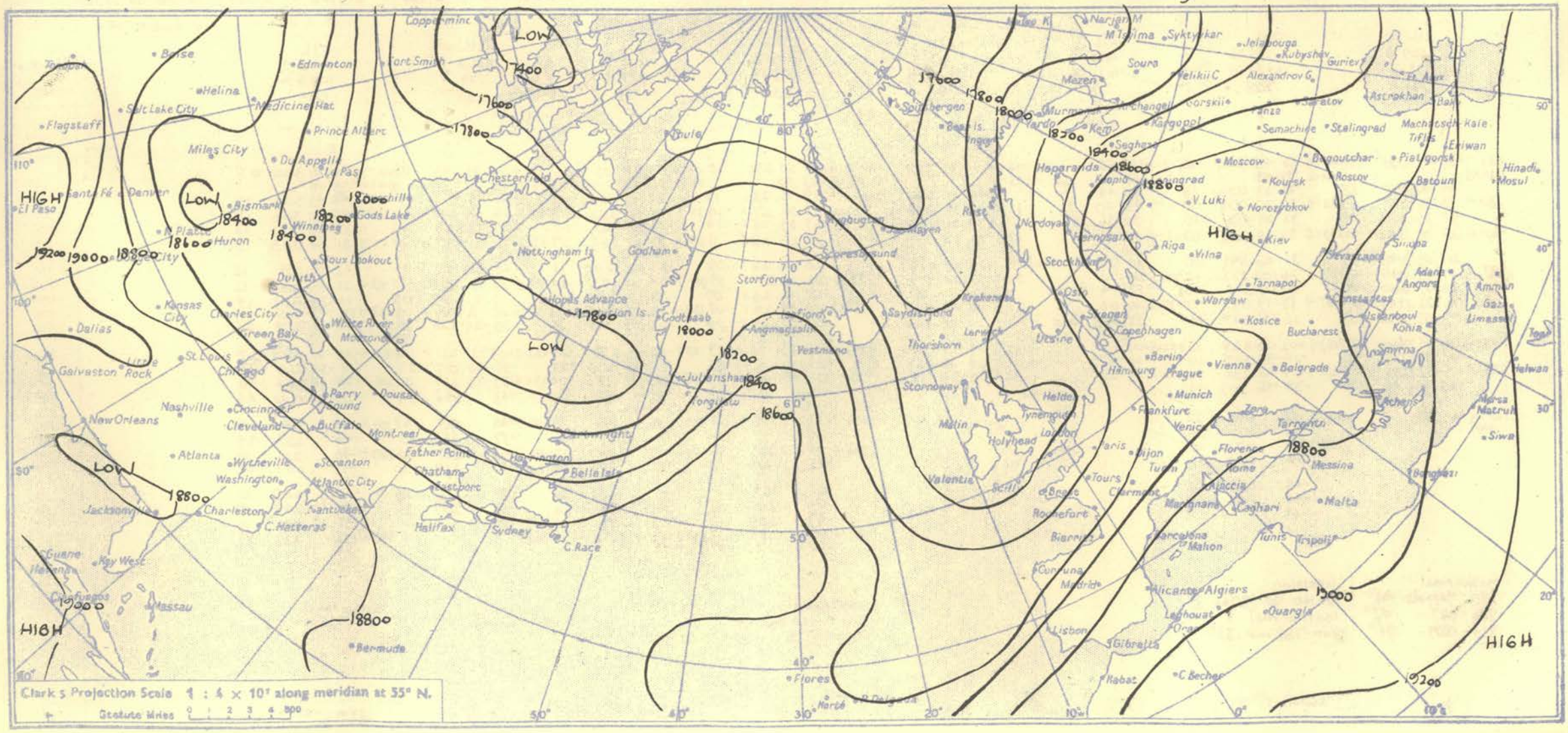
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Thursday 12th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Thursday 12th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Thursday 12th July 1951.

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

LERWICK

15h G.M.T.
Time 1006·4 mb
M.S.L. 996·6 mb
Surf Freezing 756

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	51	020	21
1000	01·7				
950		46	46	006	21
900	30·3	46	46	012	10
850		42	41	012	05
800	61·9	37	36	012	03
750		31	26	000	00
700	96·9	25	18	000	00
650		19	14	000	00
600	136·2	14	-02	205	04
550		06	-20	210	07
500	181·3	-03	-25	229	08
450		-15	-36	263	06
400	234·2	-24	-45	278	06
350		-39	-59	280	06
300	298·6	-55		292	06
250		-53		210	11
200	386·9	-42		200	14
170		-42		200	15
150		-44		188	15
130		-44		185	15
110		-44		178	14
100	590·9	-44		190	20
90		-96		182	13
80		-47		177	12
70		-45		180	10
60		-43			

Inversion 950 mb 46° - 919 mb 97°

Tropopause: I 268mb -65° 32,300'

STORNOWAY

15h G.M.T.
Time 1012·1 mb
M.S.L. 1010·5 mb
Surf Freezing 740

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	51	46	360	12
1000	03·3	50	46		
950		43	40	006	20
900	31·5	37	35	018	14
850		32	28	012	10
800	62·7	37	28	006	08
750		34	27	003	07
700	97·8	28	23	354	09
650		22	15	334	10
600	137·4	13	03	339	11
550		06	-07	342	07
500	182·6	-02	-18	355	05
450		-14	-27	027	05
400	235·6	-27	-38	050	06
350		-41		050	10
300	299·6	-56		032	09
250		-51		034	08
200	388·2	-52		040	04
170		-43		109	05
150		-39		139	05
130		-38			
110					
100					
90					
80					
70					
60					

Inversion 853mb 52° - 823mb 40°
Isothermal 800 - 775 mb 37° 700 - 687 .. 28°

Tropopause: I 280 mb -61° 31,400'

LEUCHARS

15h G.M.T.
Time 1007·4 mb
M.S.L. 1006·6 mb
Surf Freezing 750

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	60	53	Calm	
1000	02·0	58	52		
950		51	45	012	06
900	30·8	43	37	028	09
850		40	33	016	09
800	62·3	37	30	321	07
750		32	26	308	08
700	97·4	27	22	320	09
650		22	17	303	06
600	137·0	15	10	297	06
550		07	03	315	05
500	182·4	00	-05	063	05
450		-10	-17	070	06
400	235·8	-22	-32	080	09
350		-36	-49	070	15
300	300·8	-51		071	12
250		-55		149	08
200	389·2	-41		188	12
170		-41		185	09
150		-41		177	10
130		-41		164	12
110		-41		188	10
100	546·3	-41		169	09
90		-43		153	12
80		-45		172	13
70		-45		180	07
60	(168 mb)	-43			

Tropopause: I 263mb -63° 32,800'

ALDERGROVE

15h G.M.T.
Time 1010·8 mb
M.S.L. 1001·3 mb
Surf Freezing 815 & 785

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·1	52	50	300	15
1000	02·9				
950		46	45	307	18
900	31·4	41	40	311	21
850		36	35	318	22
800	63·3	33	32	328	16
750		30	28	318	11
700	97·7	26	22	296	08
650	98·1	23	11	250	18
600		19	15	300	06
550	137·2	11	06	337	06
500		06	-01	052	05
450	182·3	-06	-13	050	07
400		-13	-19	044	14
350	235·2	-26	-33	052	17
300		-41		050	18
250	299·6	-53		044	19
200		-98		091	08
170	388·7	-92		246	04
150		-43		280	05
130		-43		Calm	
110		-44		135	03
100		-45		136	03
90	542·4	-45		Calm	
80					
70					
60					

Inversion 815 mb 32° - 800mb 33°
565 .. -05° - 550 - 06°
465 .. -13° - 456 .. -12°

Tropopause: I 272mb -57° 32,100'

LIVERPOOL

15h G.M.T.
Time 1011·5 mb
M.S.L. 1009·5 mb
Surf Freezing 790

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	52	285	13
1000	03·2	59	46	280	18
950		50	41	262	25
900	31·9	44	34	264	21
850		38	31	257	16
800	63·3	33	27	231	11
750		28	18	292	14
700	98·1	23	11	250	18
650		17	03	244	14
600	137·3	10	-07	233	11
550		03	-17	220	10
500	182·3	-04	-30	200	13
450		-14	-39	184	15
400	236·2	-27	-50	183	15
350		-41		186	17
300	299·6	-52		190	15
250		-49		198	21
200	388·7	-40		223	10
150		-93		209	15
130		-93		203	16
110		-94		206	11
100		-93		186	14
90	543·0	-44		171	14
80		-95		177	12
70		-96		186	12
60		-97		176	06
50		-47		132	10
40		-46		136	12
30		-99		156	12
20	(32 mb)	-92			

Tropopause: I 285mb -66° 31,000'

DOWNHAM MARKET

15h G.M.T.
Time 1012·0 mb
M.S.L. 1007·6 mb
Surf Freezing 776

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	65	46	170	12
1000	03·3				
950		56	42	183	12
900	32·4	48	38	210	12
850		41	34	220	13
800	64·0	35	30	223	18
750		28	25	233	23
700	98·9	21	17	228	30
650		18	13	210	30
600	138·0	10	-19	217	32
550		07	-58	225	38
500	183·2	-02	-57	218	40
450		-14	-54	214	39
400	236·3	-25	-58	213	46
350		-40	-60	208	53
300	300·6	-55		212	60
250		-50		210	48
200	389·3	-44		205	31
170		-45		204	29
150		-44		200	28
130		-46		197	27
110		-45		170	21
100	593·6	-46		175	22
90		-46		185	13
80		-46		155	13
70		-46		130	10
60					

Tropopause: I 286mb -60° 31,000'

LARKHILL

15h G.M.T.
Time 1012·6 mb
M.S.L. 996·9 mb
Surf Freezing 778

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	60	60	260	06
1000	03·5				
950		53	46	230	07
900	32·4	47	44	212	10
850		43	40	216	11
800	64·0	35	31	224	11
750		30	24	236	14
700	99·0	25	16	232	17
650		21	17	214	22
600	138·5	19	09	225	31
550		07	00	221	39
500	183·8	-01	-11	218	43
450		-13	-31	222	46
400	237·0	-25	-44	217	50
350		-38	-54	203	61
300	301·6	-52		213	50
250		-93		222	40
200	391·6	-39		218	26
170		-39		222	25
150	(155 mb)	-43			

Isothermal 700 - 664 mb 23°

Tropopause: I 300 mb -52° 30,200'

CAMBORNE

15h G.M.T.
Time 1014·0 mb
M.S.L. 1003·6 mb
Surf Freezing 800 and 788

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	61	52	330	10
1000	03·9	60	51		
950		51	43		
900	32·8	46	38		
850		39	33		
800	64·2	32	25		
750		28	15	For Winds	
700	99·0	24	00	See	
650		17	04		
600	138·2	10	-04	Page 3.	
550		03	-13		
500	183·2	-02	-18		
450		-14	-27		
400	236·1	-28	-40		
350		-40	-52		
300	300·6	-46			
250		-44			
200	390·6	-43			
170		-43			
150		-46			
130		-47			
110		-47			

Isothermal 800 - 788 mb 32° 520 - 500 .. -2°

Tropopause: I 313mb -47° 29,200'

VALENTIA

15h G.M.T.
Time 1015·9 mb
M.S.L. 1014 mb
Surf Freezing 800

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	60	48	330	08
1000	04·3	58	47	310	09
950		52	44	329	12
900	33·2	46	40	331	14
850		39	35	331	15
800	64·6	32	28	326	17
750		29	17	321	18
700	99·4	23	-02	321	15
650		17	-05	323	14
600	138·5	10	-18	324	16
550		02	-17	328	18
500	183·4	-07	-25	341	20
450		-16	-41	342	21
400	236·1	-27	-52	346	22
350		-39		348	23
300	300·5	-52		337	27
250		-43		321	31
200	390·4	-41		322	21
170		-93		318	17
150		-44		307	15
130		-44		313	12
110		-45		318	09
100	594·4	-45		320	08
90		-96		320	07
80	(084 mb)	-49			
70					
60					

Inversion 794mb 31° - 774mb 32°

Tropopause: I 300mb -52° 30,100'

LERWICK

21h G.M.T.
Time 1009·3 mb
M.S.L. 999·3 mb
Surf Freezing 774

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	49	010	
1000	02·5				
950		44	40	010	
900	30·9	43	39	010	
850		41	35	352	
800	62·4	35	28	350	
750		31	23	348	07
700	97·5	27	19	398	09
650		18	09	360	08
600	136·9	12	02	014	09
550		07	-07	232	07
500	182·4	00	-15	260	07
450		-07	-23	270	11
400	236·3	-15	-32	253	10
350		-25	-43	260	10
300	346 mb	-26	-44		
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Isothermal 950 - 929 mb 44° 886 - 857 .. 42° 819 - 809 - 36°

Tropopause: N.R.

STORNOWAY

21h G.M.T.
Time 1015·6 mb
M.S.L. 1014·0 mb
Surf Freezing 758

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	50	45	360	10
1000	04·2	48	43		
950		42	38	006	18
900	32·6	36	32	008	13
850		32	28	012	10
800	63·6	32	23	358	10
750		31	06	345	10
700	98·5	26	-05	337	12
650		20	-13	346	13
600	137·9	13	-19	347	11
550		06	-26	347	13
500	183·1	-02	-23	328	13
450		-11	-34	308	10
400	236·3	-29	-45	298	11
350		-38	-56	303	12
300	301·0	-52		003	22
250		-56		014	34
200	388·8	-47		021	15
170		-46		022	07
150		-45		023	05
130		-44		026	05
110		-43			
100					
90					
80					
70					
60					

Inversion 832mb 30° - 817mb 33°
Isothermal 800 - 758 mb 32°

Tropopause: I 260mb -59° 33,200'

LEUCHARS

21h G.M.T.
Time 1012·1 mb
M.S.L. 1011·3 mb
Surf Freezing 771

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	54	52		
1000	03·3	53	50		
950		48	44		
900	31·9	43	40		
850		39	36		
800	63·4	35	32		
750		30	27	For Winds	
700	98·3	24	21		
650		17	14	See	
600	137·5	10	06		
550		03	00	Page 3.	
500	182·5	-05	-11		
450		-16	-27		
400	235·3	-27	-28		
350					
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

N.R.

ALDERGROVE

21h G.M.T.
Time 1013·3 mb
M.S.L. 1003·6 mb
Surf Freezing 787

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	50	47	350	
1000	03·6				
950		44	41	342	
900	32·0	39	37	338	
850		37	36	343	
800	63·3	33	32	353	
750		29	28	012	
700	98·2	23	22	016	
650		17	15	018	
600	137·5	10	07	024	
550		01	-02	026	
500	182·3	-09	-13	026	
450		-20	-25	028	
400	234·5	-32	-39	032	
350					
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

N.R.

LIVERPOOL

21h G.M.T.
Time 1012·8 mb
M.S.L. 1010·8 mb
Surf Freezing 800

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	56	50	290	10
1000	03·5	55	50		
950		49	45	283	13
900	32·2	42	38	270	14
850		37	33	255	14
800	63·5	32	26	258	11
750		26	22	263	09
700	98·2	22	12	271	09
650		18	02	268	09
600	137·3	08	-09	249	07
550		-02	-21	237	06
500	181·8	-10	-30	190	03
450		-20	-39	163	05
400	234·1	-31	-49	169	09
350		-95		167	13
300	297·7	-56		175	07
250		-47		197	09
200	386·4	-93		209	16
170		-95		236	12
150		-50		184	11
130		-47		206	11
110		-97		209	11
100	539·4	-97		189	07
90		-50		076	07
80					
70					
60					

Isothermal 1011 - 1000mb 55° 750 - 728 - 26°

Tropopause: I 287mb -58° 30,700'

DOWNHAM MARKET

21h G.M.T.
Time 1012·8 mb
M.S.L. 1008·3 mb
Surf Freezing 788

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	56	52	105	05
1000	03·5	56	52		
950		52	46	208	12
900	32·3	46	40	202	07
850		40	36	183	07
800	63·8	33	30	165	07
750		28	24	168	11
700	98·7	24	20	192	14
650		18	14	204	14
600	138·1	12	07	214	13
550		04	-03	215	20
500	183·1	-06	-13	218	25
450		-16	-23	203	24
400	235·9	-25	-33	186	34
350		-39	-47	190	50
300	300·2	-55		196	69
250		-51		217	46
200	388·6	-47		207	31
150		-47		208	26
130		-49		205	20
110		-51		198	20
100	540·3	-51		198	20
90		-52			
80					
70					
60					

Tropopause: I 287 mb -57° 31,000'

LARKHILL

21h G.M.T.
Time 1012·7 mb
M.S.L. 996·7 mb
Surf Freezing 800

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·9	54	53	280	03
1000	03·5				
950		52	45	291	13
900	32·3	46	40	309	13
850		39	36	325	12
800	63·7	32	31	337	09
750		28	23	300	06
700	99·5	21	18	258	07
650		15	11	259	07
600	137·5	08	-13	246	14
550		00	-24	228	25
500	182·2	-09	-31	221	21
450		-21	-40	217	23
400	234·4	-33	-53	227	30
350		-43		236	34
300	298·3	-98		229	47
250		-97		233	40
200	387·6	-96		227	26
170		-99		218	20
150		-50		216	18
130		-51		209	21
110	(112 mb)	-51			
100					
90					
80					
70					
60					

Isothermal 997 - 965mb 54°

Tropopause: I 315mb -48° 28,700'

CAMBORNE

21h G.M.T.
Time 1015·9 mb
M.S.L. 1005·6 mb
Surf Freezing 809

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	59	48	300	03
1000	04·4	53	48		
950		48	43	300	13
900	33·0	42	38	306	13
850		37	26	312	13
800	64·3	31	24	303	13
750		27	13	291	12
700	99·0	21	05	282	12
650		14	00	281	19
600	137·9	01	-07	285	15
550		-02	-17	278	21
500	182·4	-09	-22	277	27
450		-18	-34	269	33
400	235·0	-28	-45	264	40
350		-39	-55	260	44
300	299·5	-48		259	64
250		-46		257	35
200	389·0	-46		261	30
170		-47		257	22
150		-50		257	20
130		-50		249	09
110		-51		246	10
100	590·7	-52		232	07
90		-54			
80					
70					
60					

Isothermal 773 - 755mb 28°

Tropopause: I 288mb -49° 30,700'

No. 11793

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.

Friday 13th July. 1951. Page 1.

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

03h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.
Pressure: M.S.L.	1012·0 mb	1017·2 mb	1013·5 mb	1015·1 mb	1013·4 mb	1012·6 mb	1014·6 mb	1016·7 mb	1019·7 mb
Pressure: Surf	1002·0 mb	1015·6 mb	1012·7 mb	1005·4 mb	1011·4 mb	1008·2 mb	998·4 mb	1006·0 mb	1017 mb
Pressure: Freezing	761 mb	768 mb	788 mb	780 mb	789 mb	780 mb	810 mb	800 mb	840, 750 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	48	47	015	17	00·4	50	39	360	08	00·2	51	47	080	09	02·6	50	48	350	15	00·6	53	49	270	05	01·2	64	52	330	11	04·4	47	44	320	08	02·9	49	47	000	00	00·3	55	47	360	06	Surf
1000	03·2					04·6	48	39			03·7	51	47	029	10	04·1					03·6	52	49								03·4	53	51			03·9				04·5	50	48	297	09	05·3	53	46	350	08	1000
950		45	43	013	25		42	35	007	16		46	42	008	09		45	43	348	21		46	45	274	15		49	46	332	11		49	41	311	16		50	46	291	09		47	42	330	14	950
900	31·7	40	40	016	18	32·9	36	30	004	13	32·1	40	37	336	09	32·6	42	40	356	16	32·1	39	39	265	12	32·1	45	44	337	12	32·6	45	35	291	13	33·2	44	41	293	12	33·9	40	36			900
850		39	39	360	11		29	24	003	13		37	34	331	08		39	37	357	09		35	33	274	11		40	39	341	14		38	34	273	10		38	34	297	13		33	00			850
800	61·3	35	35	351	08	63·9	33	15	354	11	63·5	33	30	302	08	64·0	34	30	358	08	63·3	30	27	280	11	63·6	34	33	344	13	63·9	31	23	249	10	64·6	32	27	299	15	65·0	26	22			800
750		31	30	360	06		30	-17	347	11		28	24	310	06		30	24	004	09		26	19	282	11		30	29	350	10		27	06	275	15		26	20	298	15		32	-08			750
700	98·1	24	22	343	02	98·8	25	-10	346	10	98·3	22	18	347	07	98·8	23	18	003	11	98·0	19	12	280	10	98·5	24	23	339	06	98·6	20	03	280	15	99·5	23	14	295	14	99·9	23	-03			700
650		17	12	300	02		19	-19	350	14		17	12	312	06		19	14	005	12		13	03	280	07		17	16	223	05		13	-03	273	15		16	03	281	14		17	-04			650
600	137·3	11	09	278	05	138·1	12	-31	349	14	137·5	11	06	329	05	138·0	11	06	014	13	136·9	07	-08	302	05	137·8	10	05	216	13	137·5	06	11	261	14	138·5	08	-07	283	19	139·1	11	-07			600
550		05	-01	274	05		05	-40	341	13		02	-01	031	05		04	-02	018	12		-03	-18	Land V			03	-21	203	21		-03	-23	244	18		00	-14	297	21		02	-12			550
500	182·4	-04	-14	266	08	183·2	-03	-45	344	13	182·3	-06	-09	041	09	183·1	-05	-14	019	15	181·4	-11	-25	..		182·7	-06	-41	195	24	181·9	-11	-29	234	26	183·2	-07	-29	296	27	184·1	-07	-25			500
450		-14	-27	249	11		-12	-51	350	19		-17	-21	047	12		-15	-26	022	21		-21	-36	093	07		-17	-56	180	29		-20	-42	228	35		-16	-32	295	30		-18	-39			450
400	235·4	-25	-40	230	18	236·4	-23	-54	344	18	234·9	-29	-37	030	19	236·0	-29	-37	026	26	233·5	-32	-46	045	09	235·3	-28	-56	194	28	234·1	-30	-51	228	47	235·9	-29	-44	287	33	236·6	-30	-48			400
350		-39	-53	224	20		-36	-56	344	19		-43		024	20		-42		026	29		-45		045	11		-40	-60	207	36		-41		228	53		-43		280	33		-44				350
300	299·8	-54		239	19	301·3	-51		347	28	298·5	-62		031	20	299·9	-57		022	30	297·1	-56		044	08	299·7	-50		210	46	298·5	-45		233	55	299·9	-50		265	37	300·1	-61				300
250		-53		316	08		-66		351	39		-55		031	09		-54		023	27		-46		253	08		-50		213	52		-45		231	39		-46		264	38		-61				250
200	388·1	-44		298	03	388·3	-50		003	17											386·3	-45		236	07	388·5	-47		212	33	388·1	-47		232	27	389·1	-46		269	24	386·3	-61				200
170		-45		184	03		-49		017	16												-48		222	09		-49		212	22		-47		230	19		-48		253	13						170
150		-46		195	03		-48		020	09				For Rest								-48		222	08		-50		214	21		-50		231	15		-49		259	15						150
130		-48		188	05		-49		030	07				of Winds								-47		217	05		-51		214	19		-48		231	10		-51		277	10						130
110		-48		161	08		-50		050	03												-49		187	05		-51		205	11		-51		204	05		-51		Land V							110
100	540·9	-50		157	09	540·3	-50		052	03				See							538·6	-50		164	06	539·9	-53		197	09	540·0	-54		171	05	540·9	-51		"							100
90		-49		169	08																	-52		164	06		-57		186	08		-53		165	06		-54									90
80		-48		186	06									Page 3.								-54										-53				(83	-52										80
70		-48																			(77 mb)	-54									(77 mb)	-52				mb)										70
60																																														60
	Inversion 840 mb 28° 814 mb 36°						Isothermal 1013 - 1000 mb 61°				Isothermal 915 - 887 mb 92°					Inversion 800 mb 30° - 789 mb 32° Isothermal 657 - 642 mb 13°										Inversion 998·4 mb 47° - 978 mb 51° 776 " 27° - 768 - 28°					Inversion 1006 mb 49° - 989 mb 54°				Inversion 800 mb 26° - 792 mb 33° Isothermal 617 - 606 mb 13°					
Tropopause	II 290 mb -58° 30,700'					I 248 mb -66° 34,000'					I 283 mb -68° 31,000'					I 275 mb -66° 31,700'					I 292 mb -68° 30,300'					I 270 mb -53° 32,300'					II 329 mb -49° 27,700'					II 328 mb -49° 27,900'					I 298 mb -62° 30,300'					Tropopause

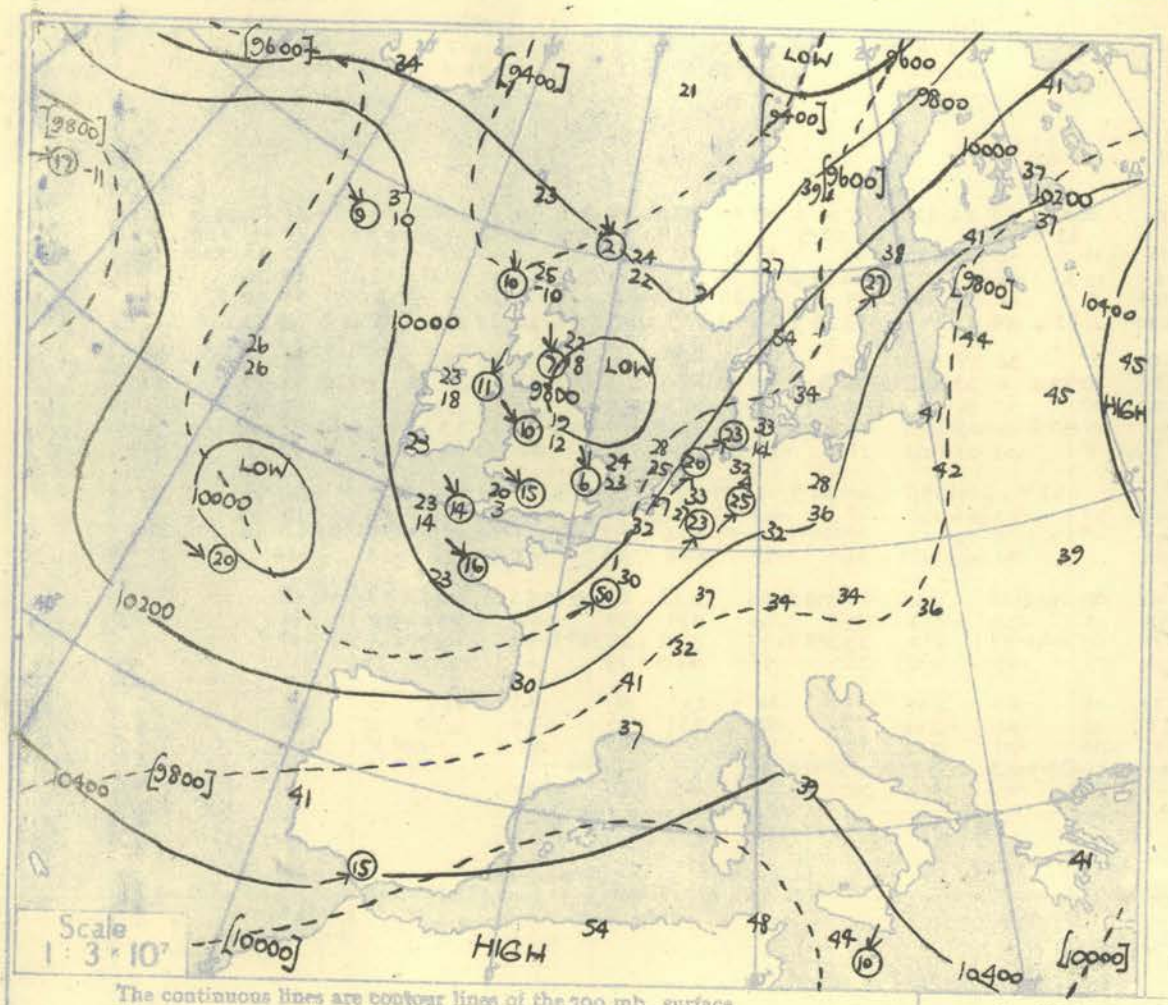
09h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	G.M.T.
Pressure: M.S.L.	1019·7 mb	1018·6 mb	1015·6 mb	1017·0 mb	1014·6 mb	1014·6 mb	1016·3 mb	1018·3 mb	mb
Pressure: Surf	1004·7 mb	1017·0 mb	1014·8 mb	1007·3 mb	1012·6 mb	1010·2 mb	1000·4 mb	1007·8 mb	mb
Pressure: Freezing	760 mb	764 mb	762 mb	756 mb	789 mb	794 mb	800 mb	812 mb	mb

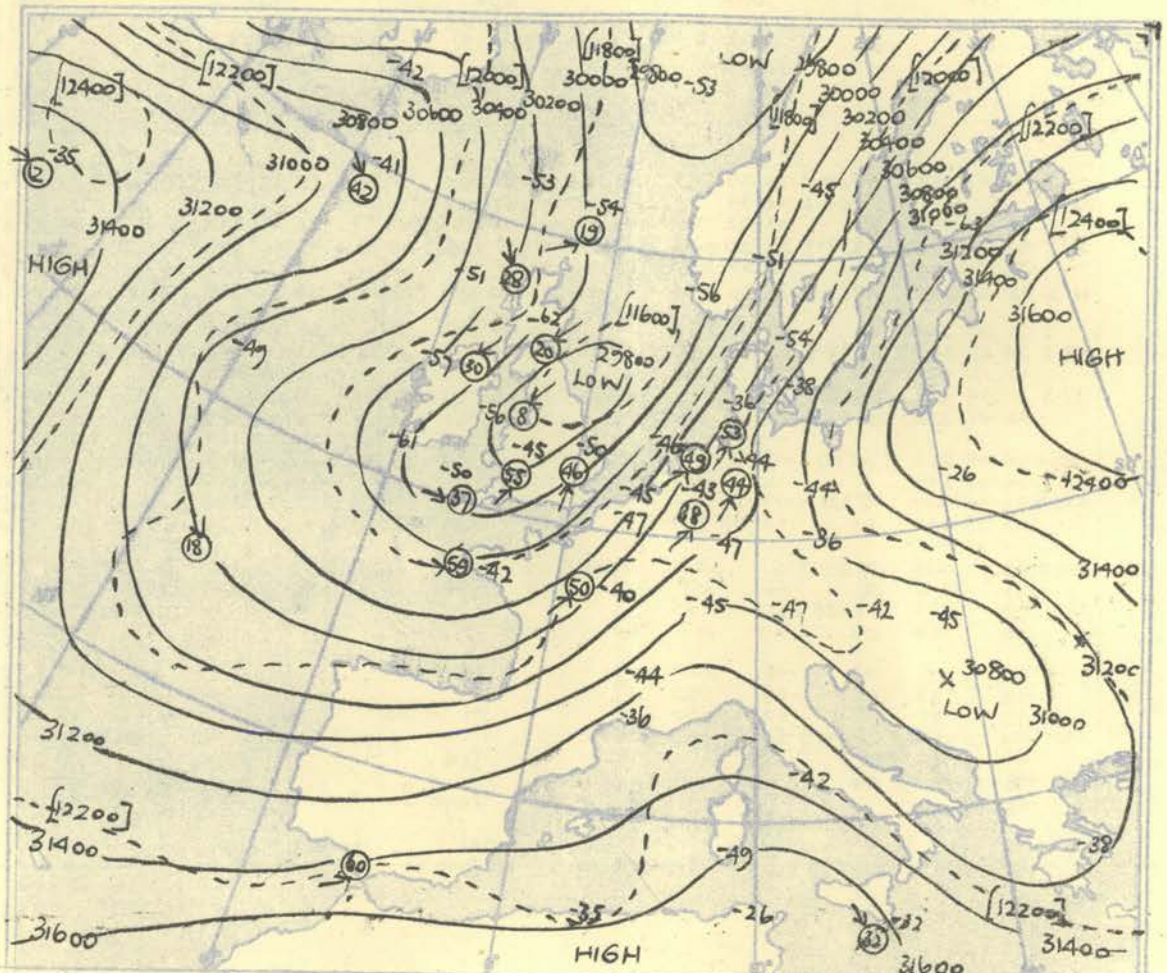
Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	40	010	17	00·4	52	37	020	05	00·2	54	45	003	05	02·6	51	43	340	15	00·6	53	51	280	05	01·2	57	49	270	08	04·4	57	49	270	07	02·9	60	50	330	08						Surf
1000	03·9	50	39			05·4	49	38	012	16	04·1	52	44	358	07	04·6	50	43			04·0	51	50	281	19	03·9	55	47			09·5					05·0	58	49								1000
950		43	35	353	17		41	33	354	14		45	38	360	08		44	38	348	24		46	49	280	14		48	42	285	15		49	44	286	10		49	45	297	10						950
900	32·3	37	33	343	11	33·3	34	28	354	12	32·6	40	33	258	10	33·1	41	38	350	16	32·5	41	38	284	13	32·7	44	37	276	17	33·2	44	39	293	11	33·8	43	37	303	10						900
850		35	32	297	05		30	23	247	14		35	29	329	11		38	37	348	04		38	35	300	09		40	33	284	16		39	35	299	14		37	29	299	12						850
800	63·5	35	24	251	05	64·2	33	07	350	15	63·8	32	28	317	11	64·4	33	33	339	09	63·8	34	30	335	09	64·1	53	28	272	17	64·6	32	28	291	15	66·1	31	24	293	10						800
750		31	24	237	03		31	-02	358	12		30	24	342	10		31	28	330	05		27	23	342	08		28	20	259	16		24	22	282	18		30	16	292	10						750
700	98·5	25	15	234	03	99·1	25	-14	360	12	98·7	22	16	344	10	99·4	26	22	338	10	98·6	20	14	006	10	98·7	25	09	247	15	99·3	23	08	276	19	100·0	25	05	302	10						700
650		16	05	253	03		19	-18	008	12		17	10	331	05		19	13	340	14		14	06	016	13		18	-10	250	16		18	-06	273	17		19	06	309	12						650
600	137·6	10	-08	288	04	138·9	12	-24	356	15	137·9	11	05	347	05	138·9	12	06	354	13	137·5	08	-11	016	16	138·1	10	-14	257	15	138·4	07	-05	269	18	139·3	12	01	312	18						600
550		03	-06	285	03		04	-21	347	11		03	-09	013	07		05	-02	348	15		01	-29	019	20		01	-21	248	16		-01	-16	269	21		05	-05	311	23						550
500	182·6	-07	-50	255	05	183·6	-02	-16	356	14	182·9	-09	-12	004	09	184·1	-09	-13	341	19	182·2	-07	-36	014	24	182·7	-08	-30	243	16	182·9	-10	-26	266	21	184·5	-03	-20	307	20						500
450		-16	-48	249	11		-12	-21	007	23		-14	-24	018	13		-12	-24	334	19		-19	-47	016	27		-18	-38	236	22		-18	-35	269	30		-11	-31	291	24						450
400	235·4	-26	-58	270	12	236·8	-23	-32	015	21	235·9	-26	-39	022	19	237·2	-29	-34	336	19	234·6	-31	-57	013	28	235·3	-30	-50	232	26	235·4	-29	-46	261	33	237·7	-24	-43	286	26						400
350		-40	-66	293	09		-36	-45	026	24		-38	-52	025	18		-35	-45	360	31		-44		009	33		-40	-57	224	33		-42		255	35		-38	-54	271	36						350
300	299·8	-54		296	12	301·6	-51		018	32	300·5	-52		023	27	302·2	-47		003	37	298·3	-54		007	26	300·1	-42		215	39	299·5	-51		253	44	302·2	-52		265	28						300
250		-98		008	12		-56		018	43		-99		030	19		-63		008	38		-45		335	09		-40		220	34		-65		250	37		-46		267	36						250
200	388·7	-45		023	03	389·8	-46		013	25	389·6	-41		031	04	390·3	-45		005	16	387·6	-44		276	07	390·7	-41		213	24	388·9	-45		241	26	391·0	-46		269	21						200
170		-44		Calm			-47		017	18		-43		041	04		-45		356	12		-44		284	06		-44		212	19		-46		236	16		-47		270	17						170
150		-46		Calm			-47		021	15		-43		140	04		-44		023	07		-47		274	05		-43		206	18		-47		230	15		-47		280	11						150
130		-42					-47		011	07		-43		150	04		-42		036	09	(144 mb)	-49					-44		198	11		-50		217	09		-48		270	10						130
110							-46		010	09		-44		150	05		-44		Calm								-43		184	11		-50					-48		241	05						110
100						562·7	-45		044	09	563·6	-45		160	04	564·0	-42		028	06						544·7	-46		180	10						543·3	-48		203	05						100
90							-46		097	05		-42					-42		085	07							-49		168	10							-48		188	04						90
80							-45		107	03							-41										-46										-48		208	04						80
70							-45																														-48		258	09						70
60	Inversion 875 mb 34° - 835 mb 36° 610 " 09° - 595 " 11°					Inversion 853 mb 27° - 842 mb 39° 510 " -3° - 497 " -2° Isothermal 842 - 805 mb 39°					Isothermal 827 - 765 mb 33°					Inversion 800 mb 33° - 776 mb 34°										Inversion 713 mb 24° - 693 mb 25°					Inversion 741 mb 23° - 725 mb 25°					(68 mb)					60
Tropopause	I 292 mb -57° 30,500'					I 259 mb -57° 33,700'					I 281 mb -57° 31,400'					I 250 mb -63° 34,200'					I 296 mb -55° 30,000'					I 350 mb -40° 26,500'					II 315 mb -50° 28,800'					I 308 mb -53° 29,600'					Tropopause

Friday 13th July 1951.

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



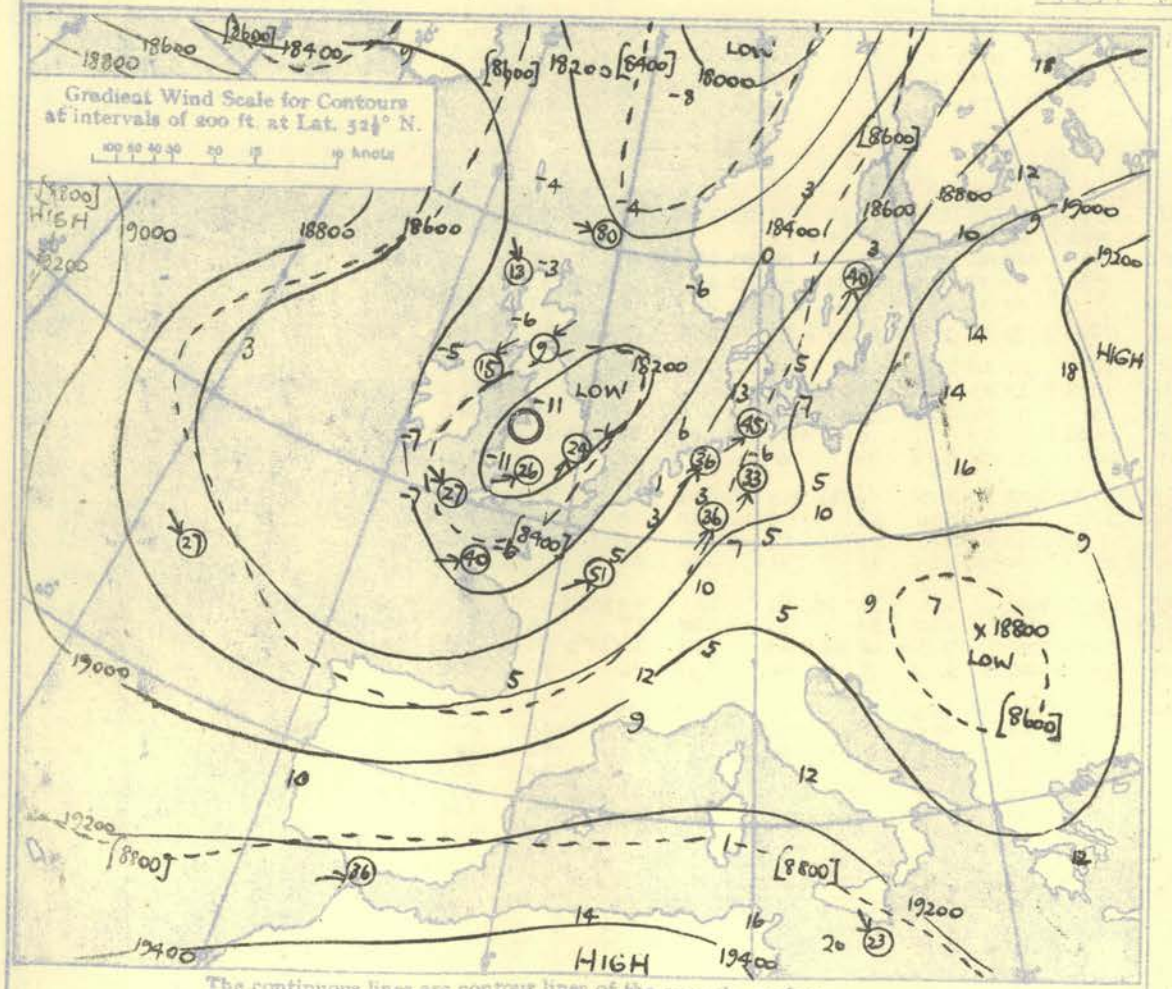
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



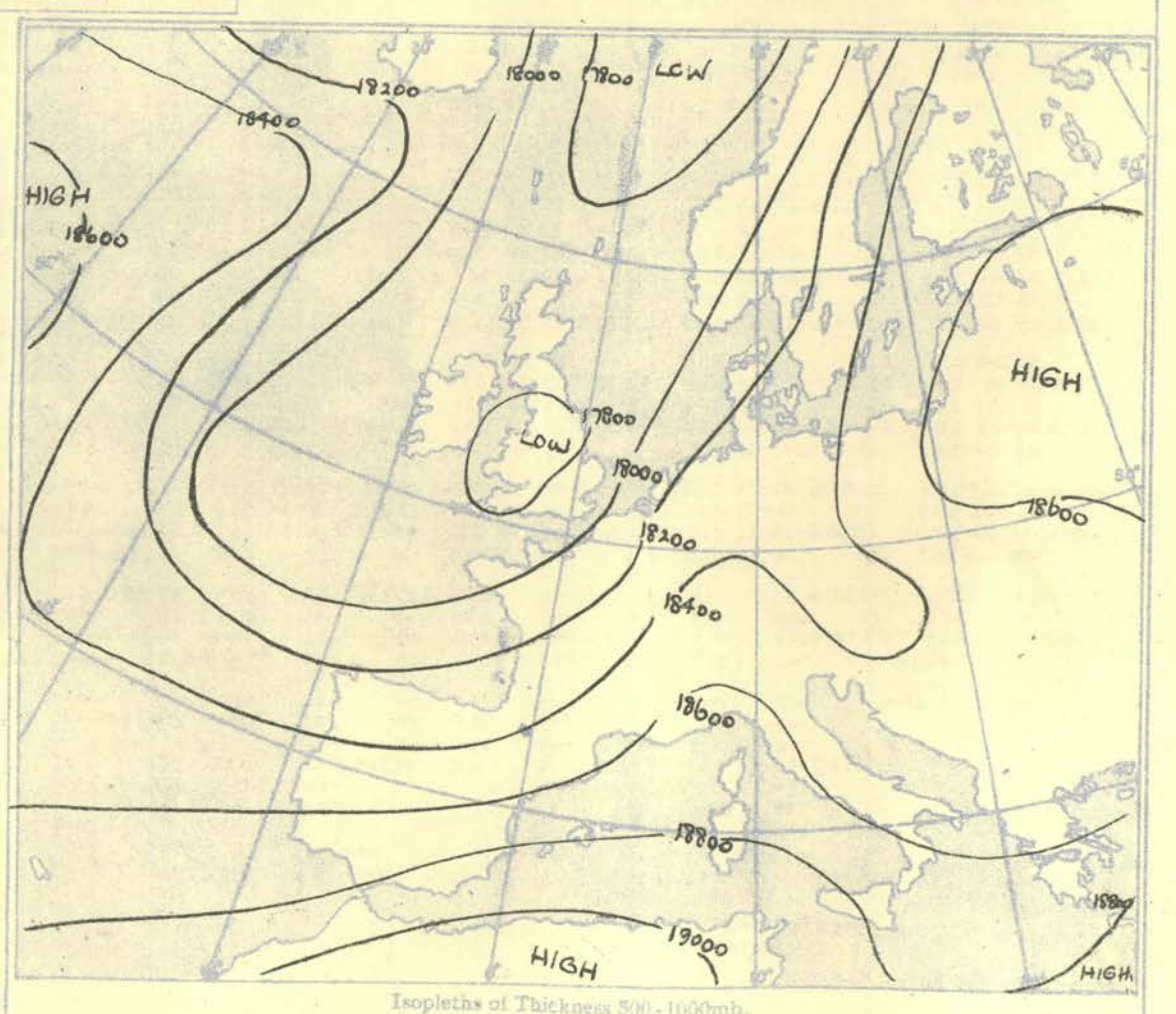
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 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

	48·1 N 17·0W			47·7 N 12·3W			52°12' N 02°12' W															
Pressure Time	12h.			15h			0830															Time
M.S.L.	1020 mb			1019 mb			1016 mb			mb			mb			mb			mb			M.S.L.
Surf	1016 mb			1016 mb			1014·5 mb			mb			mb			mb			mb			Surf
Freezing	720 mb			830-740 mb			790 mb			mb			mb			mb			mb			Freezing Pressure
Pressure mb	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Height ft./100	°F.	Dew °F.	Pressure mb
Surf		60	57		59	50	00·4															Surf
1000	05·4	57	51	05·4	56	48	04·3															1000
950		50	47		-	-																950
900		46	38		42	42	33·1	44	44													900
850		40	40		37	35		38														850
800		86	32		26	7	64·5	33	33													800
750		33	21		33																	750
700	100·9	31	23	100·6	27		99·3	24														700
650		27			23																	650
600		19			18		138·5	08														600
550		16			11																	550
500	187·0	06		186·0	0		183·3	-09														500
450																						450
400	Cloud.			Cloud			235·9	-30														400
350	1/8 Cu			3/8																		350
	940-930mb			930-790mb			300·1	-49														
300	2/8 Cu																					300
250	940-800mb			2/8 CuNR.																		250
200	3/8 Sc						Cloud															200
170	820-810mb			Surface			6/8 Cu															170
	3/8 Ci NR			Wind SE.			Sc															
	Surface			11-16kts.			930-830mb															
	Wind.						occ tops															
	S.E 11-16kts						760mb.															

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

Place	Leuchars		52·5N 20·4W Cirrus		Shoeburyness		52·7N 20·1W Cirrus		Larkhill		Larkhill										Place
Time	03h.		09h.		10h.		21h.		2315		17h.										Time
Type																					Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.			170	10	210	06	180	14	340	03	290	05									Surf.
1,000			170	13	260	07	190	12	360	10	290	10									1,000
2,000			190	17	250	08	190	14	330	06	290	12									2,000
3,000			270	16	250	10	210	17	310	05	290	12									3,000
4,000	L HV		250	15	240	15	210	20	260	08	280	12									4,000
5,000	176	09	250	11	230	20	200	22	250	12	270	12									5,000
6,000	124	11			240	19	200	17	240	11	270	12									6,000
8,000	147	09			240	18			250	11	270	13									8,000
10,000	(66,000')		340	18	240	30	280	15	230	06	280	13									10,000
14,000					250	25	280	17	240	13	320	11									14,000
18,000					230	30	320	21	240	14											18,000
24,000			360	31	230	60	340	15	(15,000')												24,000
30,000			010	37	230	61															30,000
40,000			360	35	220	30															40,000
50,000			(33,000')		180	28															50,000
					280	17															
					(53,000')																

NEPHOSCOPE OBSERVATIONS

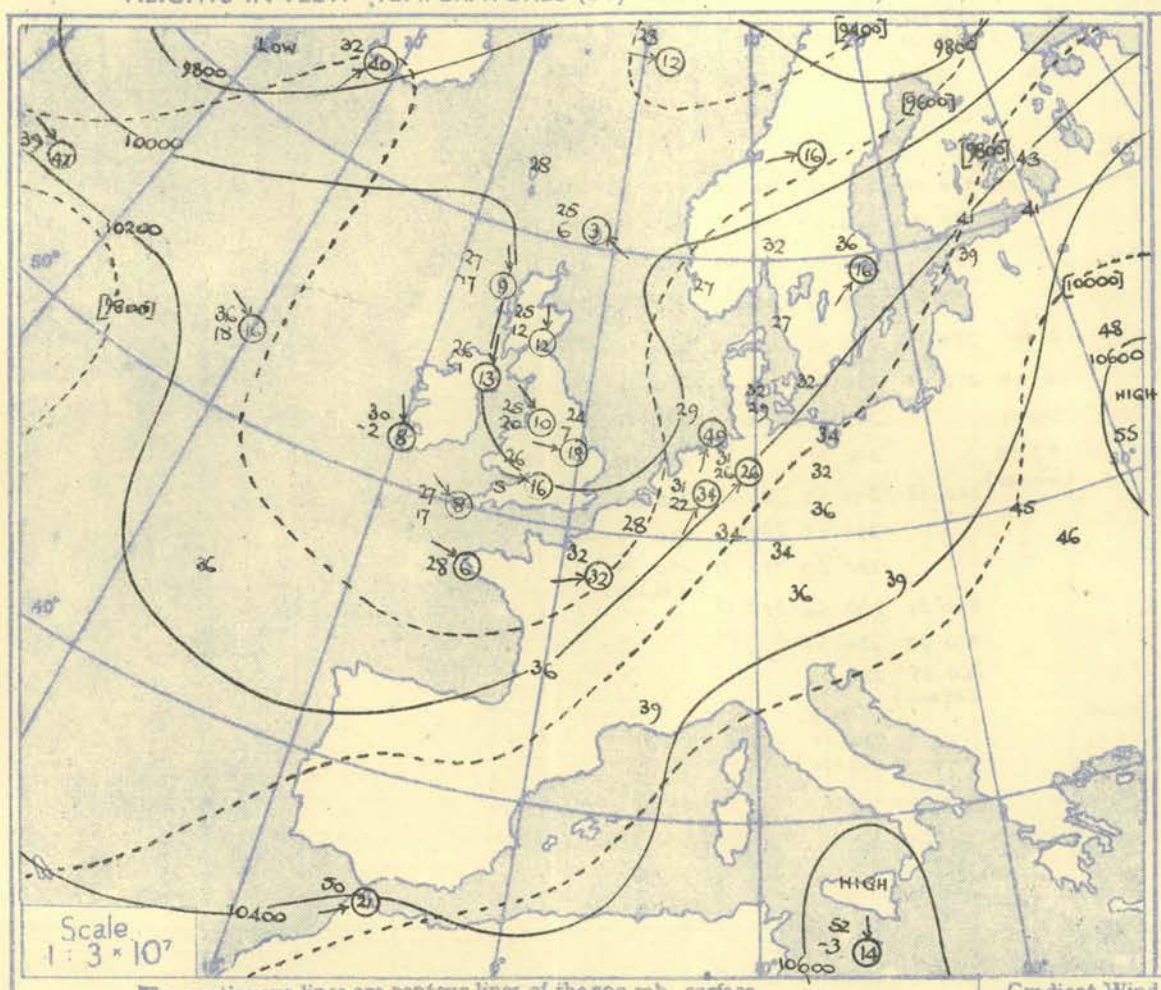
Place															Place
Time Type															Time Type
Dir. Vel.															Dir. Vel.

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

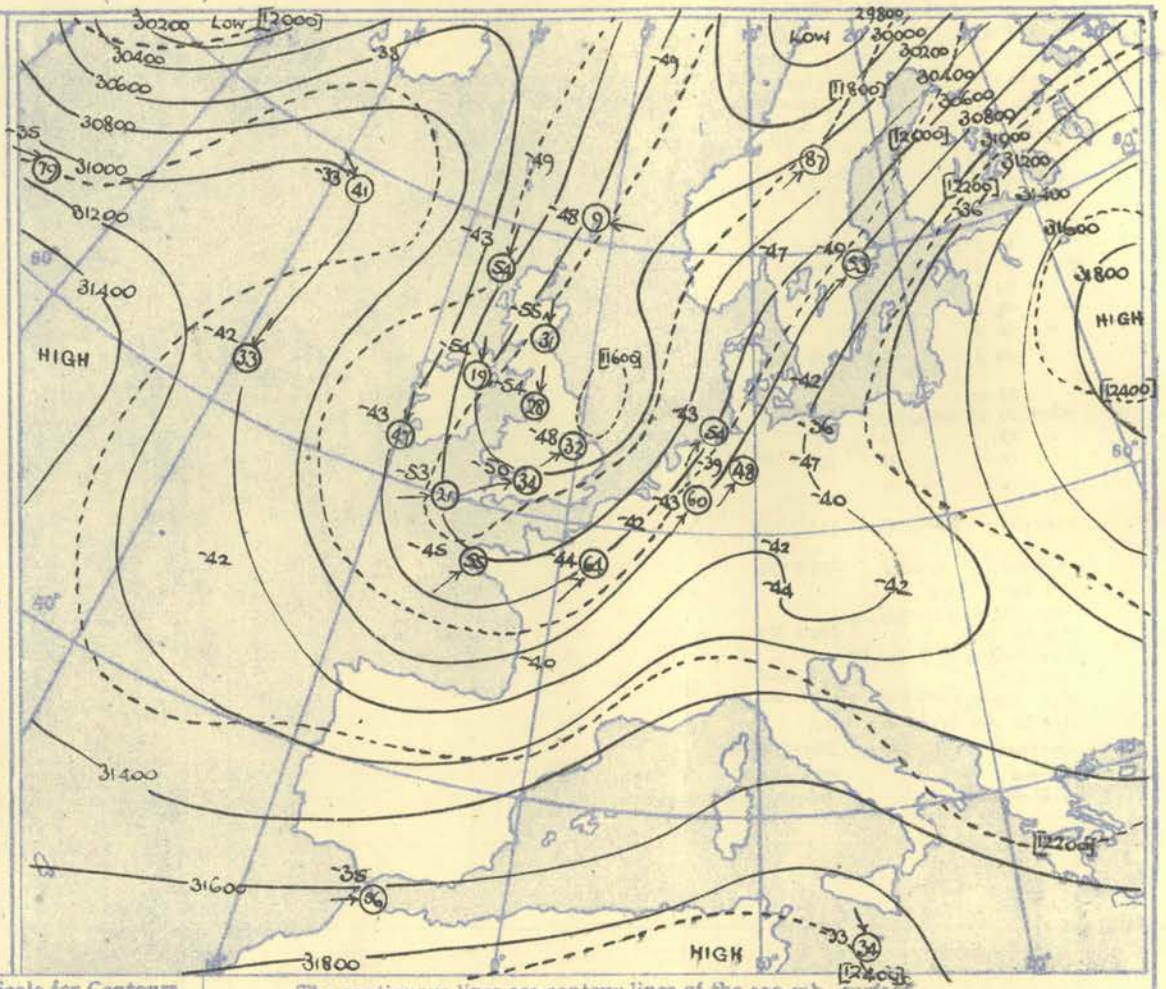
Ship	WEATHER OBSERVER				WEATHER OBSERVER.				WEATHER OBSERVER				WEATHER OBSERVER				CIRRUS				CIRRUS				CIRRUS								Ship
Lat/Long	59·0N 19·6W				59·0N 19·6W				59·1N 19·4W				59·1 N 19·4W.				52·5N 20·1W								52·7N 20·1W.								Lat/Long
Pressure Time	03h			G.M.T.	09h			G.M.T.	15h			G.M.T.	21h			G.M.T.	03h			G.M.T.	09h			G.M.T.	15h			G.M.T.	21h			G.M.T.	Time
M.S.L.	1018			mb	1017			mb	1014			mb	1012			mb	1018			mb				mb	1020			mb				mb	M.S.L.
Surf	1018			mb	1017			mb	1014			mb	1012			mb	1018			mb				mb	1020			mb				mb	Surf
Freezing	640			mb	650			mb	690			mb	690			mb	770			mb				mb	635			mb				mb	Freezing Pressure
Pressure mb	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		55	51	185	18		56	53	180	20		56	55	205	25		55	50	210	22		57	54	150	12										Surf
1000	04·9	53	49	183	18	04·6	54	51	195	21	03·9	54	54	200	24	03·3	55	55	210	24	05·2	54	52	150	12										1000
950		49	45	194	15		49	48	206	22		50	49	215	24		51	51	213	27		49	48	170	12										950
900	33·6	45	38	207	13	33·3	46	45	217	22	32·7	47	47	227	21	32·1	48	48	217	25	33·9	44	44	198	11										900
850		40	34	215	14		42	39	223	18		46	46	228	21		45	45	219	24		40	40	198	05										850
800	65·2	40	26	252	12	64·9	40	37	249	14	64·5	41	40	229	19	63·9	40	40	223	24	65·4	34	34	235	08	NO TEMP.					66·3	40	35	261	13	NO TEMP.								800
750		39	15	277	12		33	32	247	14		37	36	236	96		36	35	229	21		30	30	296	10										750
700	100·7	37	10	297	09	100·3	37	15	285	13	100·0	35	32	251	16	99·3	33	26	232	19	100·5	26	26			For winds see						36	31	295	12	For winds see								700
650		33	12	298	12		32	13	290	11		32	22	263	12		30	20	238	16		18	11									36	18	303	16								650
600	141·2	27	12	318	18	140·8	26	05	287	14	140·5	27	00	275	16	139·7	27	13	239	19	140·0	20	-22									34	-03	314	20								600
550		23	06	322	24		22	-13	304	21		21	01	294	22		18	10	237	22		10	-25			top of page.					142·3	29	-12			top of page.								550
																																24	-18								
500	188·1	15	-09	327	30	187·5	14	-25	306	33	187·3	13	-02	294	18	186·3	09	01	235	26	185·7	03	-35																				500
450		03	-22	343	32		03	-31	306	26		04	-04	291	24		-01	-11	233	26		-67		051	41								1892	15	-29								450
400	243·1	-12	-35	340	28	242·6	-08	-50	309	34	242·4	-06	16	293	33	241·0	-09	-21	231	30	239·5	-26		350	31									03	-40								400
350		-27	-58	331	42		-21	-44	325	43		-19	-33	299	42		-21	-36	245	36		-34		623	27								244·2	-11		018	41								350
																																	-25		355	26							
300	309·3	-41		331	42	309·8	-35	-53	331	41	310·0	-33	-43	313	41	308·2	-35	-50	253	46	304·7	-49		010	31								310·3	-42		010	38								300
250		-59		337	65		-45		339	47		-50		311	45		-53		258	44		-65											-61		002	52								250
200	395·9	-66		020	78	397·8	-67		339	53	398·2	-69		289	47	395·7	-71		264	36	390·4	-66											397·4	-60								200
170		-59		012	48		-60		348	44		-58		294	30							-64												-60								170
																						-66												-61								
150		-59		341	39		-55		350	21		-50		314	18							-67											(152mb)								150
130		-61		338	18		-54		351	25		-56		287	12							-69																				130
110		-62		338	25		-54		350	22		-53		287	06																										110
100	543·5	-62		336	24	546·6	-56		347	16	547·0	-51		287	06						535·7	-70																				100
90		-60		338	19		-52		342	09		-49		287	06																										90
80		-59		338	07		-51		339	07		-46		287	05																										80
70		-56		338	05		-48		333	06		-45																														70
60							-45				(78mb)																																60
	Inversion					Inversion					Isothermal					Inversion					Inversion											Isothermal.										
	750mb 38°-745mb 40°					755mb - 715mb 38°					892 - 850 mb 46°					1012 mb 50° - 1000mb 55°					650 mb 18° - 630mb 21°											867 - 835 mb 44°										
	840 - 39° - 827 · · 41°					Isothermal.					Inversion.										Isothermal											703 - 700 · · 36°										
	Isothermal.					828 - 800 mb 40°					691 mb 32° - 663 mb 33°										532 - 517 mb 6°											618 - 606 · · 30°										
	608 - 600 mb 27°																																574 - 550 · · 24°										
																																	Inversion										
																																	718 mb 35° - 703mb 36°										
Tropopause	I 208 mb -74° 38·700					I 25 mb - 69° · 39·300					I 192 mb -72° 40·665					II 200 mb -71° 39·600					II 233 mb -71° 38·900											II 240 mb - 65° 38·900										Tropopause

Friday 13th July, 1951.

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



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

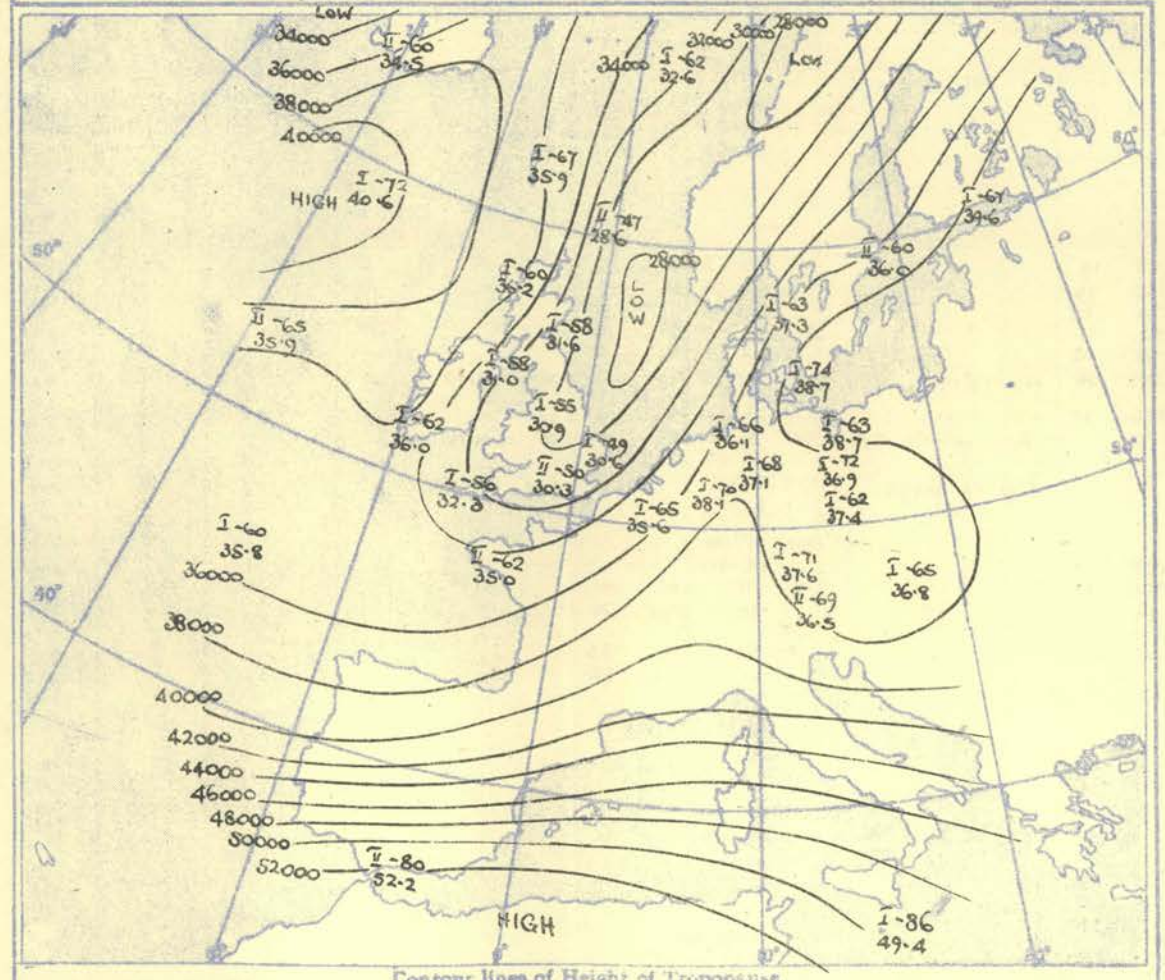


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The important feature of the upper air charts was the persistent and almost stationary trough which was lying across the British Isles most of the day.

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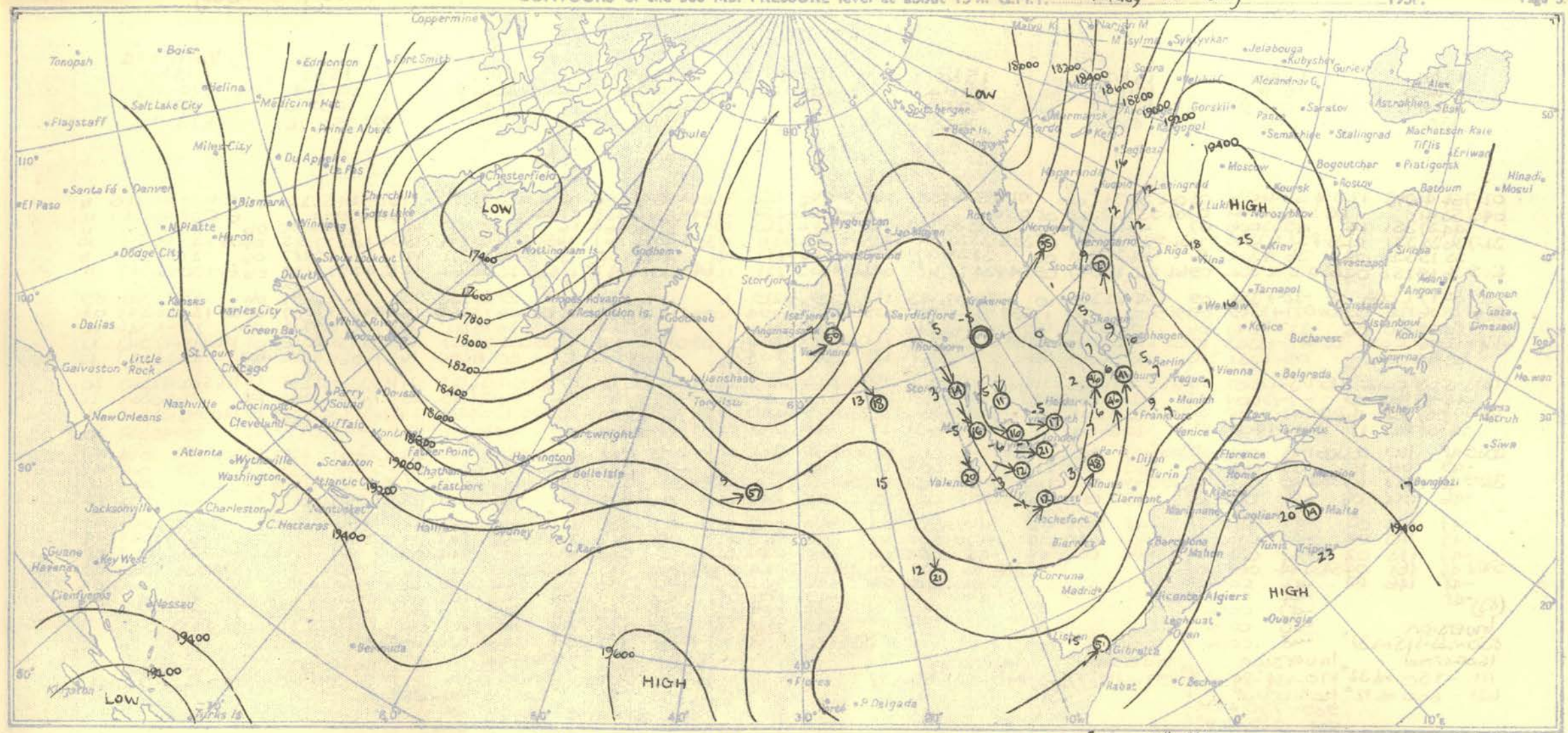
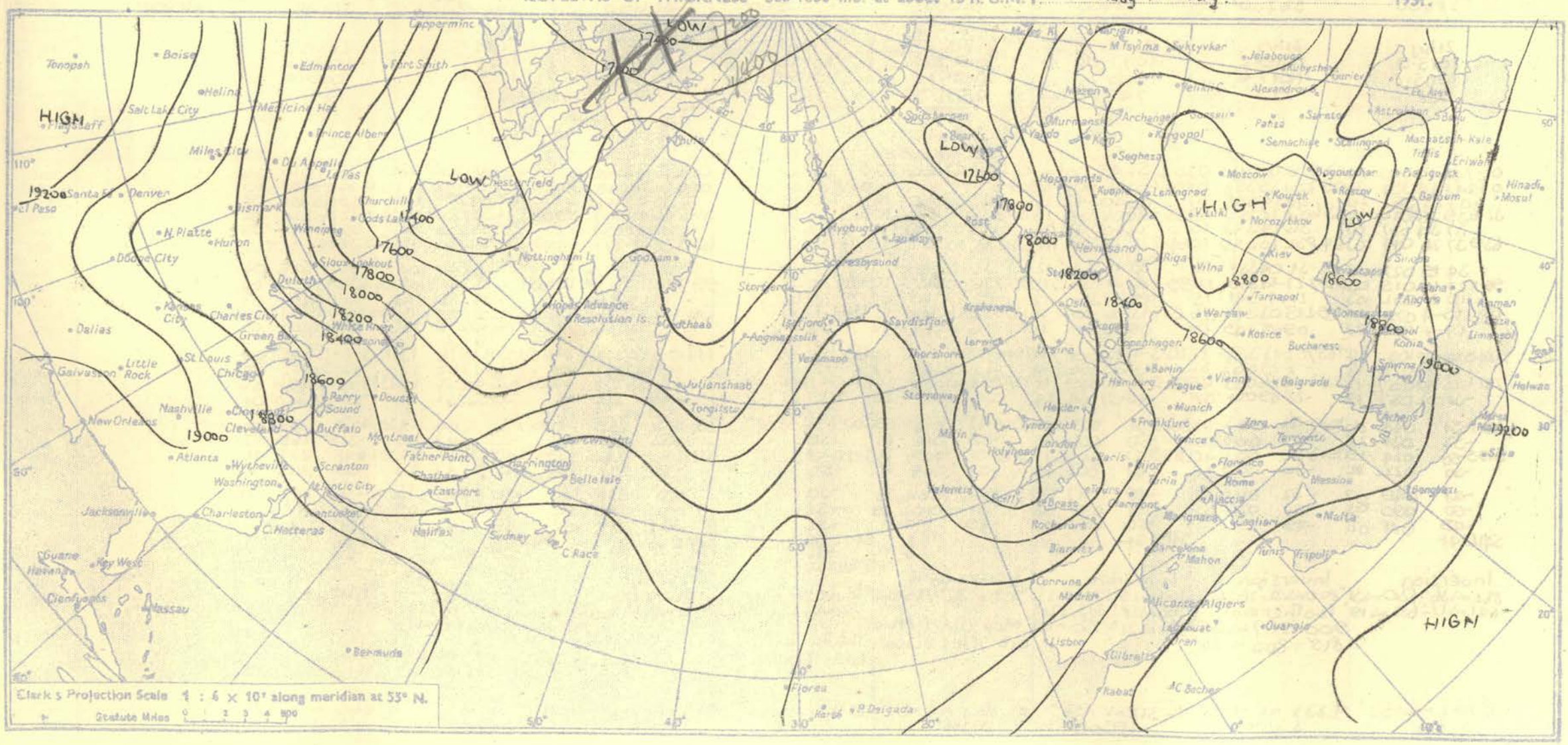
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Friday 13th. July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 13th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Friday 13th July 1951.

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

15 hrs G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.	15 hrs G.M.T.
Pressure: M.S.L.	1016·0 mb	1019·5 mb	1016·8 mb	1018·4 mb	1016·1 mb	1015·6 mb	1016·9 mb	1019·4 mb	1022·3 mb
Pressure: Surf	1006·0 mb	1017·9 mb	1015·7 mb	1008·8 mb	1014·1 mb	1011·2 mb	1001·3 mb	1009·0 mb	1020 mb
Pressure: Freezing	750 mb	816 mb	830 mb	762 mb	786 mb	780 mb	776 mb	807, 750, 767 mb	815, 720 mb

Pressure mb	Lerwick Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Stornoway Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Leuchars Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	41	015	12	04·4	55	41	030	03	00·2	56	51	Calm	
1000	04·3	53	41			05·3	52	38	341	07	04·3	53	48	325	08
950		44·3		351	14		45	33	006	07		44·1		326	08
900	32·7	36	33	337	14	33·8	38	30	345	11	32·9	35	35	332	08
850		33	25	308	09		36	11	352	16		34	30	341	09
800	63·9	36	19	252	04	65·0	33	-2	352	09	64·1	30	26	347	09
750		32	17	Calm			32	-8	351	09		29	23	350	10
700	98·9	25	06	126	03	100·0	27	-1	349	09	99·9	25	12	357	12
650		16	04	150	05		22	-8	347	06		19	09	360	09
600	138·1	12	-15	Calm		139·6	15	-13	345	10	139·2	12	03	360	09
550		05	-49	Calm			09	-23	351	16		05	-40	019	09
500	183·3	-5	-59	Calm		185·2	-3	-12	007	14	183·3	-5	-12	023	11
450		-14	-55	169	08		-7	-23	008	17		-14	-26	015	15
400	236·3	-24	-57	169	16	239·0	-17	-31	010	33	236·2	-25	-37	011	18
350		-38	-58	163	18		-27	-44	001	46		-40	-53	010	22
300	300	548		110	09	305	1	-43	006	04	300	6	-53	013	31
250		-49		026	15		-57		011	54		-50		016	21
200	389	545		018	10	390	0	-49	016	42	389	546		022	12
170		-46		014	06		-46		005	23		-45		018	06
150		-47		033	03		-45		358	17		-48		048	06
130		-45		110	02		-47		015	15		-45		040	04
110		-47		183	02		-47		033	07		-46		033	02
100	542·8	45		161	04	545·4	-44		068	07					
90		-48		146	10		-42		Calm						
80							-44		Calm						
70		(83)	-48				-47		Calm						
60		Inversion 850 mb 33°-815 mb 38° Isothermal 711 - 750 mb 32° 631 - 600 mb 12°					-50		Calm			Inversion 791 mb 29°-773 mb 31°			
							-48		Calm						
							Inversion 870 mb 34°-843 mb 36° Isothermal 989 - 750 mb 32° 561 - 539 mb 9°								
Tropopause	II 320 mb -47° 28600'			I 231 mb -60° 36200'		I 280 mb -58° 31400'					I 288 mb -58° 31000'				

Pressure mb	Aldergrove Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Liverpool Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Downham Market Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	55	44	330	15	00·6	54	53	250	12	01·2	66	46	250	14
1000	05·0					04·4	53	52	254	21	04·4	62	44	259	27
950		49	39	334	16		48	48	263	19		64	40	264	16
900	33·5	38	35	310	08	33·1	45	43	271	17	33·3	47	36	267	16
850		38	34	247	09		38	37	277	14		41	31	258	18
800	64·8	34	28	318	04	64·4	33	31	277	12	64·9	35	26	247	21
750		31	0	343	12		29	26	219	11		27	20	251	18
700	99·4	26	-1	340	13	99·4	25	20	294	10	99·8	24	07	262	18
650		19	-12	342	10		18	15	305	15		18	-3	263	16
600	138·7	11	-23	343	13	138·7	11	07	300	15	139·0	10	+0	258	18
550		05	-23	338	15		05	-23	04	15		04	-24	265	19
500	183·8	-6	-33	315	16	184·0	-8	-29	338	16	184·0	-5	-28	278	17
450		-14	-26	352	22		-15	-25	331	18		-17	-27	280	16
400	236·7	-27	-43	340	17	236·7	-28	-45	270	20	238·3	-23	-54	286	24
350		-39	-46	001	21		-40	-53	341	22		-39	-59	254	26
300	300	8	-54	346	28	300·2	-48		337	32	303	1	-50	252	24
250		-47		350	15		-43		243	31		-47		251	43
200	390	1	-42	280	15	391·3	-42		228	25	392·5	44		280	26
170		-43		244	05		-42		229	21		-45		251	21
150		-46		275	05		-43		225	13		-44		250	18
130		-46		260	02		-45		243	15		-45		242	12
110		-45		146	02		-43		203	10		-43		214	09
100	546	-46		122	04	545	-45		187	06	545	-44		222	08
90		-46		152	05		-45		130	06		-46		253	05
80		-46		182	04		-45		170	09		-48		193	04
70		-48		084	03		-45		182	10		-45		170	06
60		-43		128	06	(61)	-50		145	07		-47		118	04
									173	08		-46		080	04
		Inversion 880 mb 37°-859 mb 39°									Inversion 740 mb 26°-721 mb 27° Isothermal 560 - 541 mb 4°				
Tropopause	I 288 mb -58° 31000'					I 289 mb -55° 30900'					I 294 mb -49° 30600'				

Pressure mb	Larkhill Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Camborne Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Valentia Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	63	47	280	12	02·9	61	53	320	09	0·6	61	48	345	11
1000	04·7					05·4	55	51			6·0	58	46	347	11
950		56	47	277	12		50	46	290	06		52	43	352	11
900	33·8	48	43	272	13	34·1	42	37	285	04	34·8	45	39	358	10
850		40	38	272	12		37	30	287	06		37	33	355	11
800	65·3	35	32	262	14	65·4	31	27	295	06	66·1	30	23	347	11
750		29	27	256	15		32	22	297	06		35	13	346	09
700	100·2	26	15	269	16	100·4	27	17	307	08	101·1	30	-2	345	08
650		20	10	282	17		22	08	318	09		24	-2	346	12
600	139·6	13	02	287	18	140·1	15	-5	312	08	140·8	-7	-17	343	13
550		08	-21	294	16		06	-14	315	09		10	-33	341	15
500	185·0	-1	-32	285	21	185·3	-3	-25	296	12	186·5	02	-42	350	20
450		-11	-44	283	25		-13	-36	296	08		-7	-30	353	22
400	238·3	-23	-54	286	24	238·3	-26	-47	294	07	240·3	-18	-33	353	26
350		-37	-60	281	23		-40	-60	271	13		-25	-43	334	30
300	303	-50		252	24	302·7	-53		250	21	306·2	-43		014	47
250		-47		251	43		-54		255	24		-53		015	45
200	392·5	-44		280	26	390·9	-45		266	20	393·7	-52		002	28
170		-45		251	21		-49		285	12		-51		355	25
150		-44		250	18		-50					-51		005	21
130		-45		242	12		-51					-51		021	14
110		-43		214	09		-48					-51		005	08
100	542·1	-42		187	06						544·8	-51		353	07
90		-46		253	05		-50					-51		063	04
80		-48		193	04		-51					-51		118	04
70		-45		170	06		-53					-51			
60		-47		118	04							(75)			
		(40) -44													
		Inversion 724 mb 25°-700 mb 26° Isothermal 592 - 570 mb 11°					Inversion 785 mb 29°-760 mb 33°					Inversion 788 mb 28°-750 mb 35°			
Tropopause	II 300 mb -50° 30300'					I 273 mb -56° 32300'					I 235 mb -62° 36000'				

21 hrs G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne		
Pressure: Time	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	21 hrs G.M.T.	G.M.T.	
Pressure: M.S.L.	1015·9 mb	1019·2 mb	1017·0 mb	1019·5 mb	1017·3 mb	1016·9 mb	1017·3 mb	1019·6 mb	mb	
Pressure: Surf	1005·8 mb	1017·6 mb	1016·2 mb	1009·7 mb	1015·3 mb	1012·4 mb	1001·6 mb	1009·0 mb	mb	
Pressure: Freezing	738 mb	759 mb	742 mb	750 mb	782 mb	780 mb	780 mb	750 mb	mb	

Pressure mb	Lerwick Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Stornoway Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Leuchars Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	44	005	20	0·4	53	40	340	03	0·2	51	45	Calm	
1000	04·2	48	44	351	23	05·2	51	39	353	08	04·6	52	46	008	05
950		46	41	353	20		49	34	353	07		46	40	342	13
900	32·6	39	35	014	16	33·6	38	28	355	08	33·1	40	36	340	15
850		37	34	003	09		36	24	348	10		34	30	309	14
800	63·9	37	26	017	03	64·8	32	10	340	10	64·3	28	25	324	12
750		34	19	022	05		31	04	331	10		33	11	337	12
700	99·1	27	14	015	03	99·7	27	-6	339	12	99·2	26	-1	332	13
650		19	11	032	03		21	-7	341	13		19	-7	320	12
600	138·6	13	-4	079	05	139·2	15	01	347	16	138·6	13	-6	319	12
550		07	-8	109	08		09	-5	345	16		06	-23	331	11
500	184·0	00	-16	105	14	183·7	02	-13	354	21	183·5	-4	-25	001	10
450		-11	-26	086	13		-7	-25	002	32		-14	-30	356	14
400	237·2	-25	-40	057	12	239·6	-16	-36	003	43	236·9	-26	-43	359	18
350		-38	-52	057	13		-28	-49	001	58		-40	-57	004	24
300	304	-51		044	26	303	-42		003	77	301·3	-51		009	58
250		-53		031	28		-59		002	89		-50		006	39
200	389	50		024	19	391	-52		002	40	389	47		006	16
170		-50		022	12		-52		003	25		-48		001	09
150		-48		049	07		-52		017	17		-49		017	09
130		-50		080	05		-51		026	08		-48		039	05
110		-49		088	02		-49					-50		071	03
100	541	48									541	-51			
90															
80															
70															
60		Inversion 862 mb 36°-830 mb 38° 641 mb 18°-602 mb 19°					Inversion 800 mb 32°-765 mb 33° Isothermal 900 - 867 mb 36° 815 - 800 mb 32°					Inversion 1016 mb 51°-1000 mb 38° 800 mb 28°-783 mb 31° 783 mb 31°-780 mb 33°			
Tropopause	II 292 mb -52° 30800'			I 233 mb -65° 35700'		II 312 mb -51° 29300'									

Pressure mb	Aldergrove Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Liverpool Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Downham Market Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	51	42	360	10	0·6	54	53			01·2	57	53	360	02
1000						04·8	53	51			04·6	56	52	313	06
950		43	33	360	14		49	45				53	48	317	06
900	33·5	36	30	357	10	33·4	44	40			33·5	46	43	267	09
850		33	08	348	14		39	34				40	37	257	12
800	64·8	35	30	338	12	64·6	34	33			65·0	35	28	277	14
750		32	-5	326	10		28	24				27	23	297	11
700	99·5	26	-10	313	10	99·5	24	20			99·8	24	15	317	10
650		15	-19	310	04		18	02				19	04	286	15
600	136·7	12	-16	340	13	136·7	11	-8			139·1	12	-5	276	15
550		06	-11	358	16		04	-18				03	-15	276	17
500	183·7	-5	-24			183·7	-5	-24			184·0	-7	-30	272	21
450		-15	-33	357	23		-15	-35				-19	-37	277	25
400	236·5	-31	-50	273	27	236·5	-32	-44			236·5	-31	-50	273	27
350		-45		274	28		-39	-55				-45		274	28
300	300	-57		259	30	300	-55				300	-57		259	30
250		-53		250	33		-50					-53		250	33
200	388	49		240	29	389	0	-48			388	49		240	29
170		-50		238	17		-50					-50		238	17
150		-51		236	13		-50					-50		280	13
130		-52		240	12		-51					-50		252	09
110		-55		185	05		-52					-49		267	03
100	539	55				540	-52				542	-50			
90							-52					-50			
80						(85)	-52					(57)			
70															
60		Inversion 900 mb 36°-866 mb 41° Max wind 272 mb 010° 78 kts 32300'					Inversion 710 mb 22°-697 mb 25° Isothermal 612 - 600 mb 11°					Inversion 720 mb 23°-700 mb 24°			
Tropopause	II 262 mb -58° 33300'					I 277 mb -66° 31700'					I 300 mb -58° 29700'				

Pressure mb	Larkhill Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Camborne Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	59	49	300	05	02·9	55	51	020	06					
1000	04·6	56	52	313	06	05·4	54	49	008	10					
950		53	48	317	06		49	43	351	08					
900	33·5	46	43	267	09	33·7	43	37	281	10					
850		40	37	257	12		39	35	270	11					
800	65·0	35	28	277	14	65·2	35	26	251	12	65·5	38	25	L.V	
750		27	23	297	11		31	25	247	08		32	21	326	03
700	99·8	24	15	317	10	100·2	26	13	251	06	100·6	36	13	295	07
650		19	04	286	15		22	06	294	06		21	05	298	08
600	139·1	12	-5	276	15	139·8	15	-2	280	12	140·2	15	00	258	06
550		03	-15	276	17		06	-10	276	13		06	-11	298	03
500	184·0	-7	-30	272	21	185·1	-3	-11	276	13	185·5	-2	-23	300	06
450		-19	-37	277	25		-13	-27	268	15		-13	-36	289	07
400	236·5	-31	-50	273	27	238·2	-25	-41	284	19	238·7	-25	-46	296	06
350		-45		274	28		-39	-56	252	22		-38	-58	340	08
300	303	-51		244	24	303	-50		335	06					
250		-55		243	43		-51		269	15					
200	391	-49		247	22	391	-48		277	12					
170		-49		247	17		-50		275	V					
150		-50		280	13		-51		287	10					
130		-50		252	09		-51		318	08					
110		-49		267	03		-51		L.V						
100	542	-50				542	-52		L.V						
90		-50					-52								
80		(57)													
70															
60		Inversion 763 mb 27°-750 mb 31° 700 mb 26°-688 mb 27° Isothermal 632 - 619 mb 38° 750 - 741 mb 31°					Inversion 836 mb 31°-800 mb 38°								
Tropopause	II 271 mb -57° 32800'					I 260 mb -58° 33400'									

(M.S.I.) Press.MO, Dunstable

No. 11794 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Saturday 14th July **1951.**

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

STATION	Time G.M.T.	Pressure M.S.L. mb	Pressure Surf mb	Freezing mb	Tropopause
LERWICK	03h	1015·4	1005·4	734	II 280mb -54° 31,700'
STORNOWAY	03h	1019·2	1017·6	846	I 226mb -66° 36,500
LEUCHARS	03h	1018·3	1017·5	768	II 315mb -51° 28,800
ALDERGROVE	03h	1020·2	1010·2	734	I 240mb -59° 36,500
LIVERPOOL	03h	1018·1	1016·1	804	I 270mb -57° 32,500
DOWNHAM MARKET	03h	1018·1	1013·5	779	II 267mb -59° 32,700
LARKHILL	03h	1019·1	1002·8	809	I 258mb -62° 33,100'
CAMBORNE	03h	1020·1	1009·3	727	I 263mb -67° 33,000'
VALENTIA	03h		~~1020~~	825 and 716	I 211mb -71° 38,200

	LERWICK					STORNOWAY					LEUCHARS				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	48	46	360	11	00·4	48	44	Calm		00·2	46	44	Calm	
1000	09·1	47	45			05·2	49	40			04·9	50	46	339	09
950		43	40	012	18		44	29	281	04		42	37	334	10
900	32·5	39	36	025	16	33·6	39	27	321	06	33·2	36	32	318	11
850		35	34	029	10		33	29	353	10		30	28	313	13
800	63·7	37	24	024	09	64·6	27	20	344	10	64·0	21	12	314	13
750		34	-03	013	07		29	05	346	09		30	00	332	11
700	98·8	26	06	037	06	99·4	27	-15	363	08	98·6	23	-08	342	09
650		20	06	056	07		20	01	002	11		17	-13	336	12
600	138·3	16	-09	042	12	138·8	14	-05	010	12	137·7	09	-21	241	14
550		08	-13	046	12		04	-17	012	16		01	-30	348	14
500	183·8	00	-26	056	12	184·2	00	-27	015	27	182·5	-08	-37	349	15
450		-12	-30	064	14		-09	-36	013	31		-19	-42	358	14
400	237·0	-23	-41	060	20	237·8	-20	-50	013	33	235·0	-31	-49	023	15
350		-38	-56	041	26		-30	-57	003	55		-49		017	16
300	301·7	-50		027	54	303·6	-43		009	70	298·6	-52		008	18
250		-56		029	44		-61		006	76		-51		007	31
200	390·1	-48		028	21	390·6	-55		002	36	386·8	-49		008	18
170		-48		033	12		-54		005	24		-50		354	13
150		-48		033	09							-52		349	16
130		-48		023	07							-59		032	06
110		-48		070	04							-55		098	06
100	542·8	-48		117	03						537·7	-55		116	06
90		-49		132	05							-55			
80		-49		150	05										
70		-50													
60															

LERWICK:
Inversion
830 mb 33° - 800mb 37°
Isothermal
662 - 622mb 20°

STORNOWAY:
Inversion
1018 mb 48° - 1000mb 49°
800 - 27° - 766 .. 30°

LEUCHARS:
Inversion
1018mb 46° - 1000mb 50°
795 .. 20° - 768 .. 32°

	ALDERGROVE					LIVERPOOL					DOWNHAM MARKET				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	44	43	Calm		00·6	53	51			01·2	53	52	085	05
1000	05·3	47	46			05·0	51	49			04·9	52	51		
950		48	42	360	14		47	46				50	47	180	07
900	33·9	43	36	345	16	33·5	43	42			33·6	45	42	203	07
850		38	29	350	18		39	35				40	36	220	07
800	65·3	37	13	332	12	64·9	31	28			65·1	34	30	251	07
750		34	-03	327	09		28	24				29	25	288	09
700	100·5	30	-06	321	09	99·7	25	01			99·9	23	19	273	09
650		23	-12	333	12		19	-12				18	02	255	21
600	140·2	16	-19	335	15	139·1	12	-22			139·3	13	-03	253	24
550		10	-15	336	16		04	-28				05	-13	249	26
500	185·8	02	-22	392	18	184·1	-05	-37			184·5	-03	-26	247	28
450		-08	-31	346	28		-15	-47				-12	-36	243	32
400	239·6	-19	-41	348	39	237·0	-26	-50			237·5	-24	-42	246	34
350		-30	-53	360	55		-40	-58				-37	-55	241	33
300	305·5	-42		357	81	301·4	-52				302·3	-52		233	41
250		-55		006	84		-66					-58		233	35
200	393·6	-64		004	39	389·4	-49				389·5	-54		242	30
170		-53		351	27		-50					-51		252	20
150		-52		349	22		-52					-50		252	18
130		-53		350	09		-53								
110		-53		034	05		-52								
100						540·3	-55								
90							-56								
80							-58								
70							-57								
60						(65 mb)	-58								

ALDERGROVE:
Inversion
1010 mb 44° - 985mb 51°
835 .. 36° - 800 .. 37°
Isothermal
800 - 783mb 37°
726 - 710 .. 31°

LIVERPOOL:
Inversion
759 mb 27° - 737mb 29°
Isothermal
792 - 773 mb 30°

	LARKHILL					CAMBORNE					VALENTIA				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	48	45	350	03	02·9	48	44	Calm		00·3	53	49	180	01
1000	05·1	49	46			05·4	50	46	021	05	05·8	54	47	106	02
950		49	43	340	02		48	44	012	05		48	42	012	03
900	33·7	44	36	259	07	34·0	42	39	324	04	34·6	41	34	304	02
850		38	27	243	12		37	33	274	04		35	29	161	01
800	65·1	31	25	243	12	65·5	40	27	241	05	66·5	27	23	088	02
750		29	21	241	09		35	27	287	05		35	06		
700	99·9	24	08	255	08	100·8	29	20	318	09	100·6	30	-03		
650		20	00	255	10		22	12	326	06		25	-15		
600	138·3	12	-06	261	15	140·5	14	03	292	08	140·4	17	-03		
550		03	-15	259	14		06	-06	277	11		13	-08		
500	183·2	-07	-25	243	16	185·7	-04	-16	288	08	186·3	05	-01		
450		-17	-37	231	18		-14	-27	289	07		-03	-29		
400	235·8	-29	-49	231	22	238·7	-27	-36	293	07	240·6	-15	-42		
350		-40	-60	230	44		-41		294	08		-28	-58		
300	299·9	-58		229	47	302·8	-55		303	08	306·6	-43			
250		-60		227	36		-54		304	10		-60			
200	386·7	-56		241	23	390·6	-52		293	12	393·1	-65			
170		-56		253	18		-53		281	06		-59			
150		-59		252	13		-55		283	06		-69			
130		-58					-54		282	05		-69			
110	(126 mb)	-57					-54		293	09					
100						540·8	-56		314	07					
90							-54		106	06					
80							-53		110	06					
70						(75 mb)	-53								
60															

LARKHILL:
Inversion
1002·8 mb 48° - 982mb 53°
700 - 29° - 684 .. 25°
Isothermal
780 - 750mb 29°

CAMBORNE:
Inversion
1009 mb 48° - 985mb 53°
850 - 37° - 820 - 41°
300 - -55° - 278 - -54°

VALENTIA:
Inversion
Surf 53° - 1000mb 54°
800 .. 27° - 774 .. 37°
Isothermal
600 - 581mb 17°

STATION	Time G.M.T.	Pressure M.S.L. mb	Pressure Surf mb	Freezing mb	Tropopause
LERWICK	09h	1015·4	1005·4	736	I 254mb -62° 33,700
STORNOWAY	09h	1018·6	1017·0	714	I 217mb -65° 37,700
LEUCHARS	09h	1019·1	1018·3	758	~~I 280mb -54° 31,700'~~ I 254 .. -56° 33,700'
ALDERGROVE	09h	1020·1	1010·5	826, 785, 741	N.A
LIVERPOOL	09h	1018·8	1016·8	815	I 291mb -53° 30,800
DOWNHAM MARKET	09h	1018·5	1014·0	771	I 267mb -57° 32,800
LARKHILL	09h	1018·8	1003·0	750	II 275mb -52° 32,300
CAMBORNE	09h	1019·5	1009·0	804, 720	I 271mb -52° 32,800
VALENTIA					

	LERWICK					STORNOWAY					LEUCHARS				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	47	020	11	00·4	55	47	Calm		00·2	54	42	360	04
1000	09·2	50	45			05·0	53	43	254	10	05·2	50	39	330	06
950		44	43	335	13		45	37	262	08		43	33	319	08
900	32·5	37	37	333	11	33·6	41	33	263	09	33·6	36	26	302	11
850		35	34	357	05		35	28	276	08		31	21	299	16
800	63·7	37	14	354	06	64·8	30	23	327	06	69·6	33	13	309	11
750		35	01	316	06		34	09	343	06		31	-04	320	05
700	98·8	26	04	330	05	99·9	30	14	357	05	99·5	25	-10	330	05
650		23	01	020	07		23	08	016	04		19	-17	342	09
600	138·4	16	-11	030	09	136·9	20	-03	016	05	138·9	15	-23	008	07
550		08	-22	025	15		14	-13	011	11		07	-32	033	09
500	183·9	-01	-39	018	13	185·6	06	-27	013	15	184·3	-02	-24	005	18
450		-12	-48	018	15		-03	-34	019	20		-10	-30	007	21
400	237·0	-25	-58	020	21	239·8	-15	-42	013	36	237·6	-23	-40	018	26
350		-37	-60	026	37		-25	-47	008	45		-38	-53	026	31
300	301·7	-52		027	48	306·2	-39	-55	010	50	302·2	-50		025	42
250		-60		023	45		-56		359	60		-54		008	43
200	389·1	-60				393·6	-55		005	38	390·6	-48		020	24
170		-50					-50		002	21		-45		015	13
150		-49					-50		005	19		-49		012	10
130		-48					-49		357	10		-48		038	04
110		-51					-47		069	05		-48		055	04
100	(105 mb)	-52				545·2	-49		290	03	542·7	-50		L and V	
90							-45		286	04		-52			
80							-45		075	06		-53		075	06
70							-46		091	08		-52		099	07
60												-51			

LERWICK:
Inversion
818mb 32° - 781mb 38°
Isothermal
884 - 868 mb 36°
679 - 650 .. 23°

STORNOWAY:
Inversion
805 mb 29° - 783mb 35°
260 .. -55° - 256 .. -54°
Isothermal
950 - 935mb 45°
783 - 760 .. 35°
635 - 612 .. 22°

LEUCHARS:
Inversion
838 mb 29° - 780mb 29°
490 .. -4° - 482 .. -3°
280 - -54° - 270 - -53°

	ALDERGROVE					LIVERPOOL					DOWNHAM MARKET				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·6	52	49	Calm		00·6	57	52	300	05	01·2	57	53	140	08
1000	05·5	51	48	"		06·2	54	50	303	10	05·1	54	50		
950		45	42	340	11		47	44	302	07		51	47	207	04
900	34·0	41	35	040	19	33·8	41	38	280	03	33·9	47	41	219	06
850		36	30	350	12		36	33	185	06		39	36	221	10
800	65·2	28	21	323	10	65·1	30	28	193	06	65·3	35	26	220	07
750		33	-02	296	08		28	17	229	04		29	23	222	07
700	100·1	29	-17	320	10	99·9	25	-02	294	10	100·3	26	20	223	09
650		22	08	346	09		18	-10	304	10		21	07	214	13
600	139·7	15	03	356	11	139·1	11	-20	292	09	139·9	14	02	218	17
550		09	-09	010	17		03	-25	292	09		06	-07	235	19
500	185·3	04	-24	013	24	184·1	-06	-29	303	08	185·1	-01	-14	239	21
450		-06	-37	003	41		-16	-33	301	07		-12	-27	236	22
400	239·3	-14	-42	005	49	236·8	-29	-42	312	13	238·3	-23	-40	223	27
350		-28	-51	008	59		-40	-51	307	14		-35	-51	221	26
300						301·0	-52		331	18	303·3	-50		218	24
250							-48		347	25		-56		228	27
200						389·9	-48		338	14	391·3	-49		237	19
170							-47		345	12		-49		233	18
150							-50		004	03		-50		230	18
130							-51		260	02		-51		230	13
110							-50		300	03		-50		199	06
100						541·6	-52		066	03	542·9	-50		191	05
90							-52		273	03		-51		175	06
80							-51		048	04		-51		175	06
70							-51								
60															

ALDERGROVE:
Inversion
800mb 28° - 750mb 33°

LIVERPOOL:
Inversion
765 mb 26° - 739mb 30°

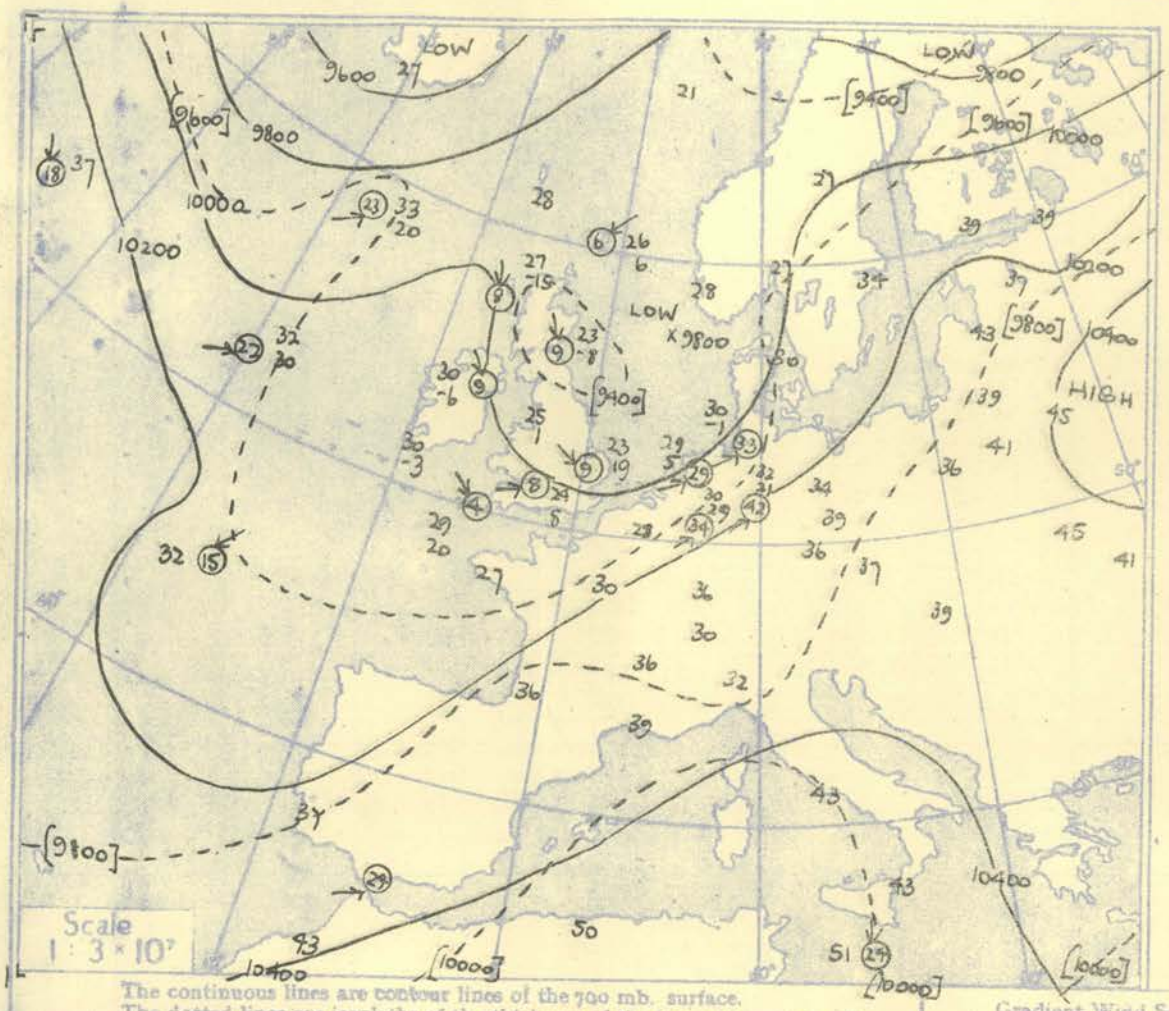
	LARKHILL					CAMBORNE					VALENTIA				
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	57	50	330	07	02·9	58	49							
1000	05·2					05·4	57	48							
950		49	38	368	04		49	42							
900	33·9	44	40	246	07	34·1	42	37							
850		39	37	230	09		37	34							
800	65·3	35	30	228	08	65·4	33	21							
750		32	27	261	06		35	22	For Winds						
700	100·2	25	16	259	07	100·7	30	14							
650		22	10	243	12		25	07	See						
600	139·8	17	01	243	16	140·6	17	-01							
550		08	-08	246	16		11	-05							
500	186·2	-02	-18	243	15	186·1	02	-11	Page 3.						
450		-10	-28	249	17		-09	-25							
400	238·8	-21	-35	255	16	239·7	-19	-36							
350		-34	-48	247	17		-31	-47							
300	304·8	-47		246	21	306·3	-47								
250		-53		253	16		-48								
200	392·5	-46		257	18	394·1	-47								
170		-48		247	11		-48								
150		-49		236	14		-49								
130		-52		290	10		-49								
110		-49		222	05		-49								
100	544·3	-49		172	03	546·1	-48								
90		-51		206	05		-48								
80		-50		285	04										
70		-51		037	03										
60		-50													

LARKHILL:
Inversion
765 mb 31° - 750 mb 32°

CAMBORNE:
Inversion
804mb 32° - 790mb 39°

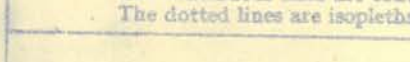
Saturday 14th July 1951.

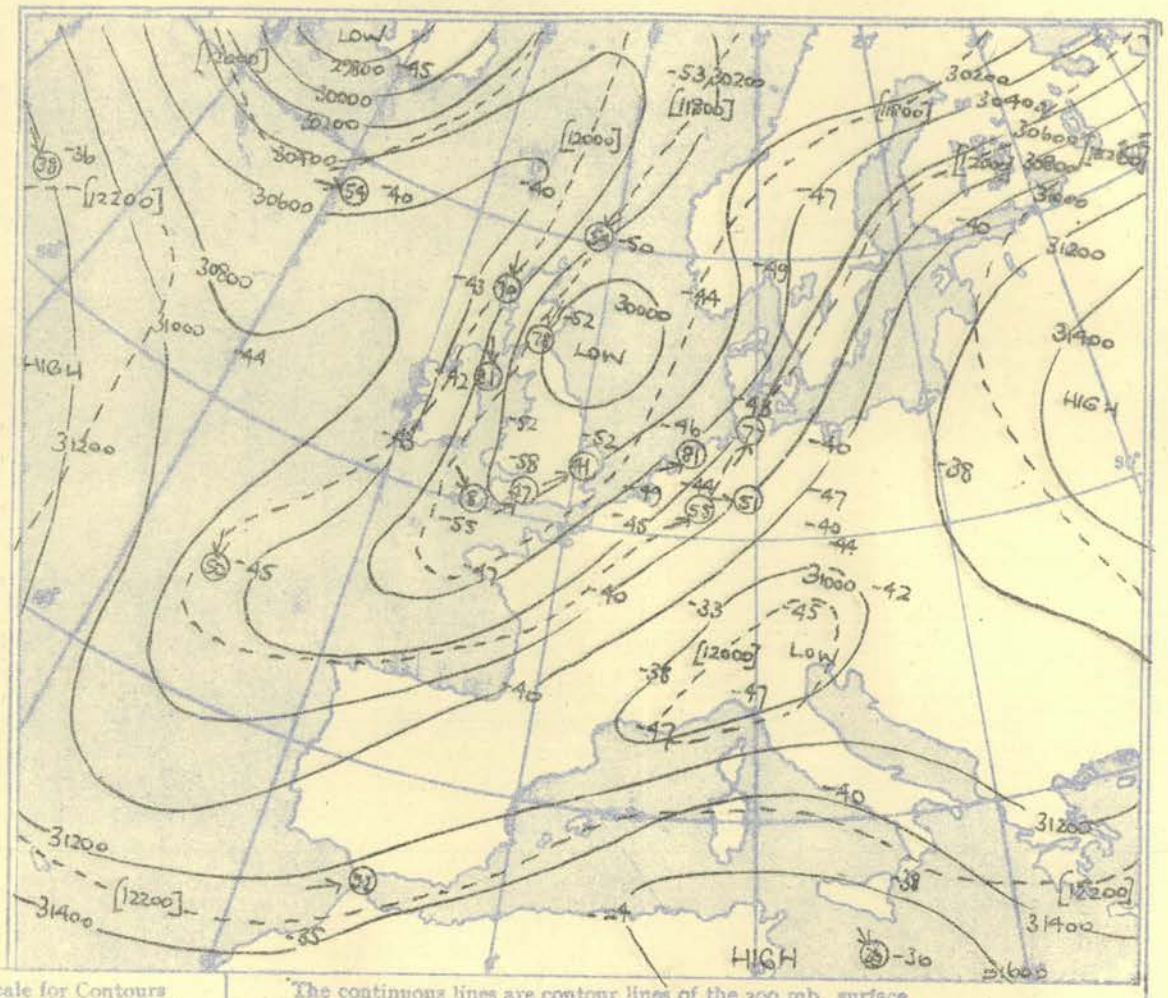
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



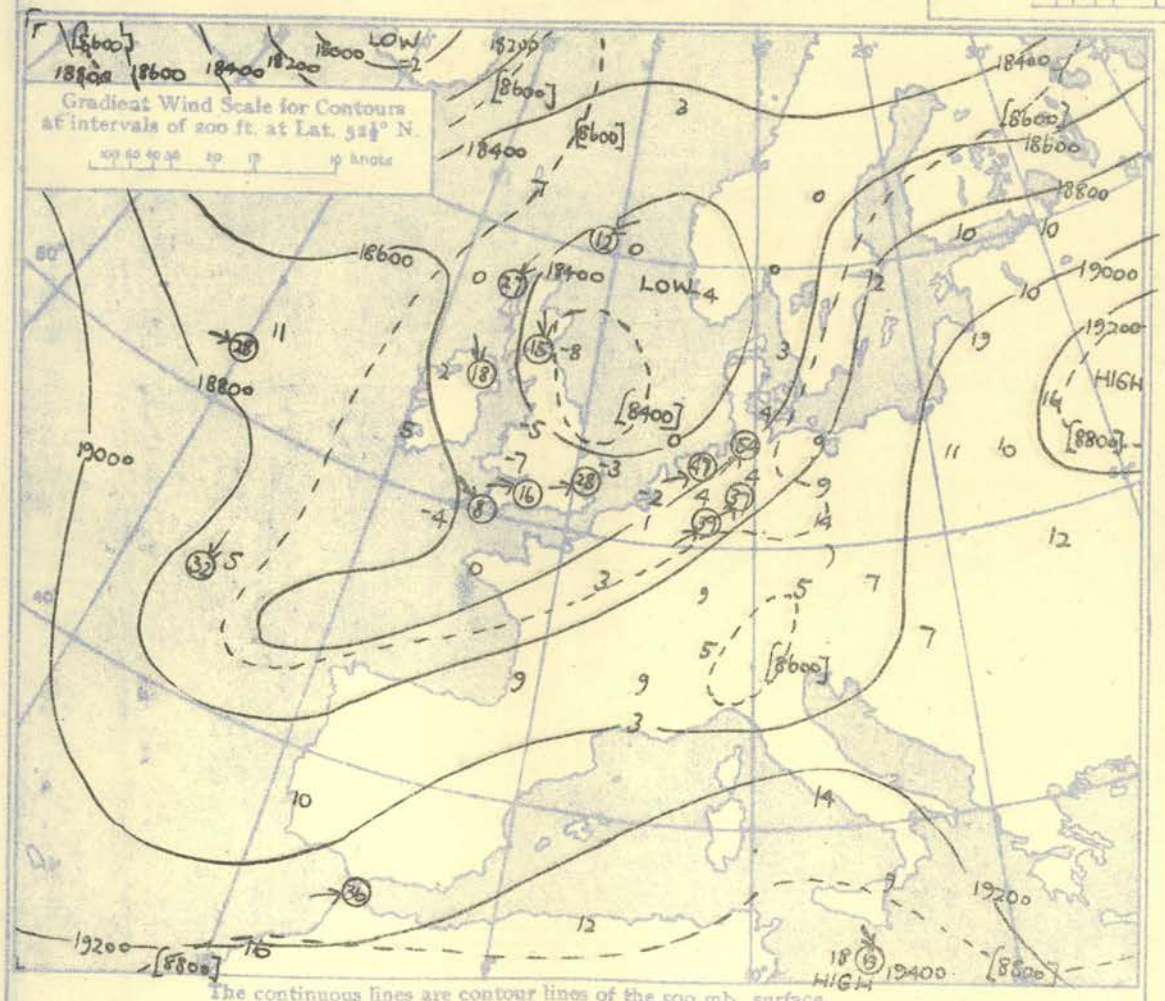
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

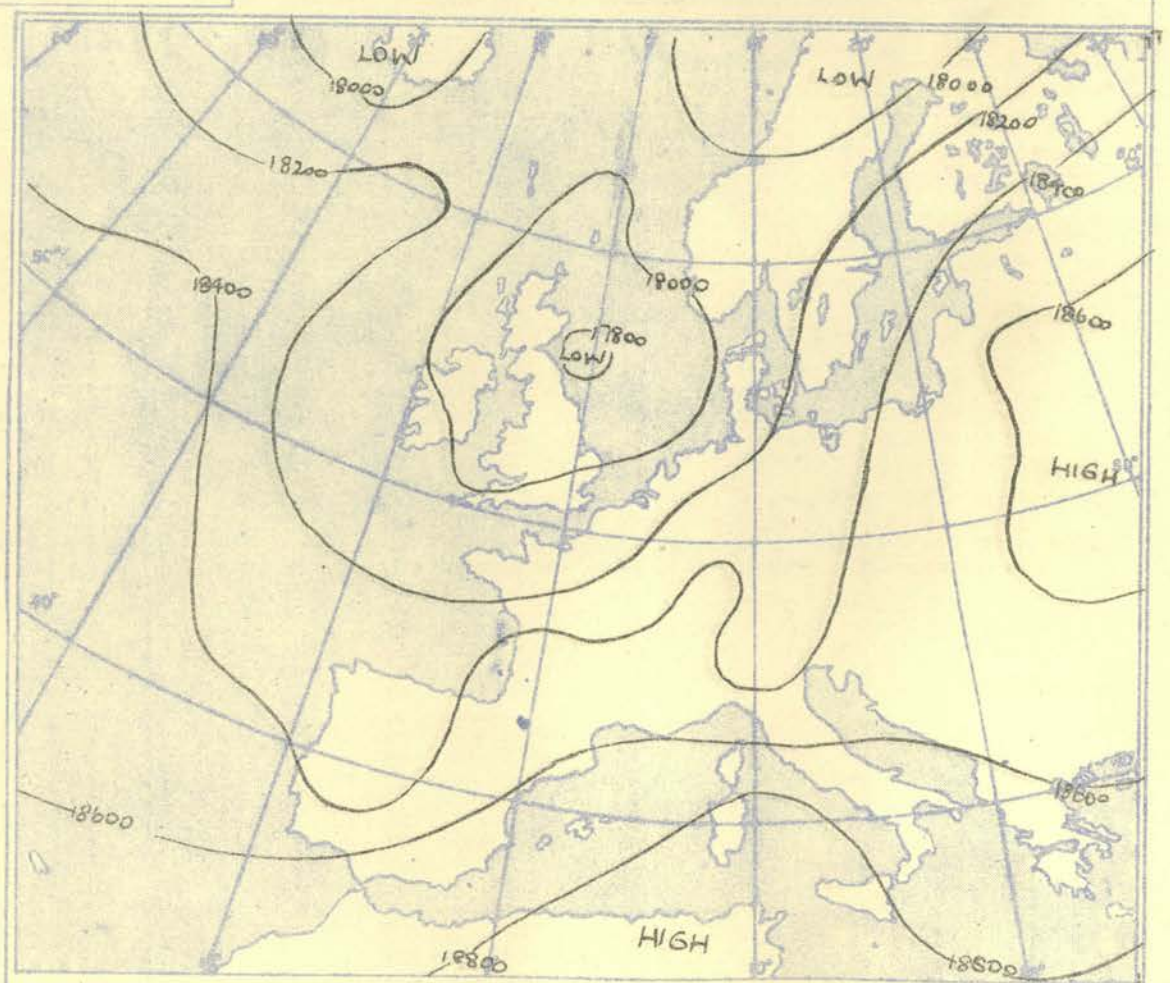




The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.



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.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

52·12N 02·12W

Pressure	
Time	1405L
M.S.L.	1018·5 mb
Surf	1017 mb
Freezing	745 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.
Surf	00·4		
1000	05·1		
950			
900	34·1	47	45
850		42	41
800	65·7	36	
750			
700	100·7	26	
650			
600	140·2	13	
550			
500	185·5	-4	
450			
400	238·9	-25	
350			
300	303·3	-48	
250			
200			
170			

Cloud.
3/8-4/8 Cu 910-670 mb.
7/8 As 770-755 mb.
1/8 Ci 430-325 mb

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

Place	Lympne.		Camborne.		Larkhill		Ronaldsway		Larkhill		Shannon		52·5N 20·0W Cirrus.		Larkhill	
Time	09h		09h		09h		15h		17h		03h		21h		2300L	
Type			Pilot													
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	Calm		350	05	Calm		330	11	Calm		310	10	010	02	040	03
1,000	200	01	332	06	250	04	340	11	"		330	12	020	04	040	09
2,000	050	01	319	06	250	05	350	12	330	02	350	09	020	04	040	09
3,000	Calm		310	06	250	05	350	09	350	03	090	05	020	05	040	09
4,000	"		300	05	240	05	350	11	350	03	050	02	020	07	040	07
5,000	110	01	279	05	210	06	330	13	350	02	210	03	020	09	030	07
6,000	120	02	269	05	230	06	330	16	340	03	120	05	050	09	020	05
8,000			267	09	300	05	290	05	290	06	340	09			060	03
10,000			274	13	270	10	310	05	270	10	340	10	090	11	350	06
14,000			264	10	250	15	340	11			340 (11,000)	12	010	20	350	05
18,000			283	12	250 (15,000)	15							060	19		
24,000			356	11									080	33		
30,000			026	18									080	34		
40,000			325	10									050 (37,000)	15		
50,000																

NEPHOSCOPE OBSERVATIONS

Place										
Time Type										
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	CIRRUS.	CIRRUS.
Lat/Long	59·2N 19·1W	59·2N 19·0W	59·2N 18·8W	59·2N 18·7W	52·8N 20·1W	52·8N 20·1W.
Time G.M.T.	03h	09h	15h	21h	03h	15h
M.S.L. mb	1010	1010	1013	1013	1015	1012
Surf mb	1010	1010	1013	1013	1015	1012
Freezing mb	680	680	630	650	700	660

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	54	195	20		54	52	340	12		55	49	270	16
1000	02·6	55	54	197	27	02·7	53	52	327	09	03·5	53	47	274	12
950		52	52	204	26		49	49	310	08		47	43	276	14
900	31·6	48	48	207	28	31·4	47	47	277	11	32·1	46	40	278	15
850		45	45	210	30		43	43	246	20		43	31	279	15
800	63·3	39	39	210	28	63·1	41	41	226	29	63·6	43	20	280	15
750		37	36	211	29		38	38	226	24		39	15	280	20
700	98·7	33	30	213	23	97·7	34	34	242	27	99·3	39	07	281	22
650		27	23	212	23		30	30	239	34		35	-08	283	23
600	139·8	18	16	214	24	138·1	24	23	238	32	139·8	27	-22	284	26
550		15	04	223	26		16	15	235	35		17	-21	275	37
500	186·0	06	-04	222	30	184·4	09	07	235	40	186·2	08	-22	275	44
450		-05	-11	221	35		01	-02	220	36		-01	-25	285	38
400	240·1	-16	-22	223	37	239·2	-11	-17	226	45	240·3	-08	-28	281	46
350		-26	-33	230	43		-23	-31	234	54		-18	-35	280	56
300	304·6	-40	-50	235	54	306·2	-33	-43	235	71	308·2	-35	-50	282	60
250		-59		236	51		-48		230	71		-50		286	65
200	391·4	-76		232	36		-54		223	48	396·4	-61		291	50
170		-67		249	25		-52		223	28		-57		291	30
150		-62		257	18		-52		232	20		-53		290	22
130		-61		269	17		-51		232	15		-52		287	76
110		-63		291	11		-49		232	12		-55		285	15
100	537·5	-63		297	12	546·4	-50		232	09	546·2	-54		284	10
90		-63					-48		232	07		-57		280	06
80							-48		Calm			-50		284	04
70							-44		"			-59		Calm	
60							-41		"			-45		"	
												-44		"	
												-42		"	
(30 mb)												-37			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	48	240	08		59	57	190	20		57	54	210	10
1000	03·5	54	45	243	15	03·3	57	55	190	21	03·9	55	51	208	11
950		56	38	249	20		52	50	192	32		51	44	198	10
900	32·4	52	23	262	20	33·2	47	44	217	37	32·8	49	41	186	10
850		48	20	272	21		44	42	212	23		45	38	175	10
800	64·4	45	15	285	24	65·0	40	39	212	19	64·7	43	27	168	14
750		41	12	293	25		37	37	215	21		39	12	133	14
700	100·1	39	03	293	24	100·5	32	30	228	22	100·3	35	-02	109	14
650		31	08	291	31		27	19	240	22		30	-09	099	12
600	140·5	25	-02	284	37	140·6	23	09	245	22	140·4	20	-17	103	15
550		19	-03	277	37		17	-04	258	27		12	-25	108	17
500	187·0	10	-07	276	45	187·1	11	-17	264	28	186·3	01	-33	119	16
450		02	-07	297	48		00	-27	268	33		-11	-41	131	20
400	242·0	-04	-13	283	56	241·7	-13	-33			239·7	-23	-49	140	35
350		-15	-25	286	57		-27	-47				-30		147	42
300	310·0	-30	-40	288	66	307·9	-44				305·4	-40		142	42
250		-49		291	73		-60					-55		105	25
200	398·3	-71		300	70	394·1	-74				393·9	-54			
170		-61		306	40		-67					-60			
150		-58		309	33		-68					-64			
130		-54		311	22		-70					-67			
110		-54		298	15		-67					-67			
100	546·4	-55		292	13	538·7	-66				540·4	-65			
90		-52		287	09							-63			
80		-50		287	03							-61			
70		-50		248	06							-59			
60		-48		193	18							-56			
		-49													

Weather Observer 03h: Inversion. 758 mb 35° - 747 mb 38°; 588 " 16° - 576 " 19°

Weather Observer 09h: Isothermal 850 - 812 mb 43°; Inversion 773 mb 38° - 758 mb 39°

Weather Observer 15h: Inversion 910 mb 42° - 878 mb 44°; Isothermal. 850 - 800 mb 43°; 750 - 700 " 39°

Weather Observer 21h: Inversion. 975 mb 52° - 930 mb 56°; Isothermal 740 - 705 mb 40°

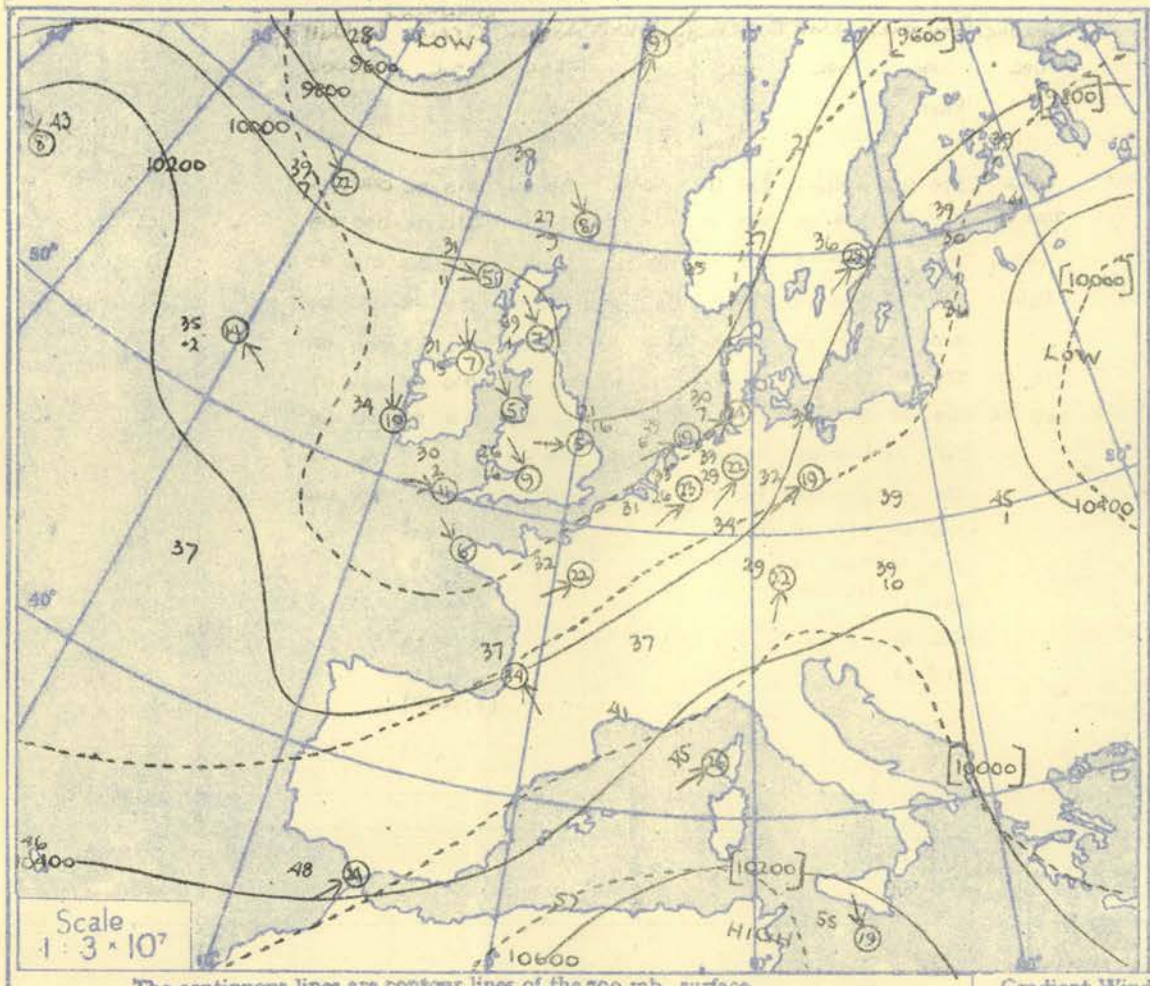
Cirrus 03h: Isothermal 750 - 744 mb 37°; Inversion 700 mb 32° - 684 mb 34°

Cirrus 15h: Inversion 955 mb 51° - 943 mb 52°; Isothermal. 950 - 825 mb 45°; 700 - 690 " 35°

Tropopause	
Weather Observer 03h	200 mb -76° 39,300
Weather Observer 09h	216 mb -59° 38,000
Weather Observer 15h	208 mb -67° 38,800
Weather Observer 21h	186 mb -75° 41,400
Cirrus 03h	200 mb -74° 39,400
Cirrus 15h	

Saturday 14th July 1951.

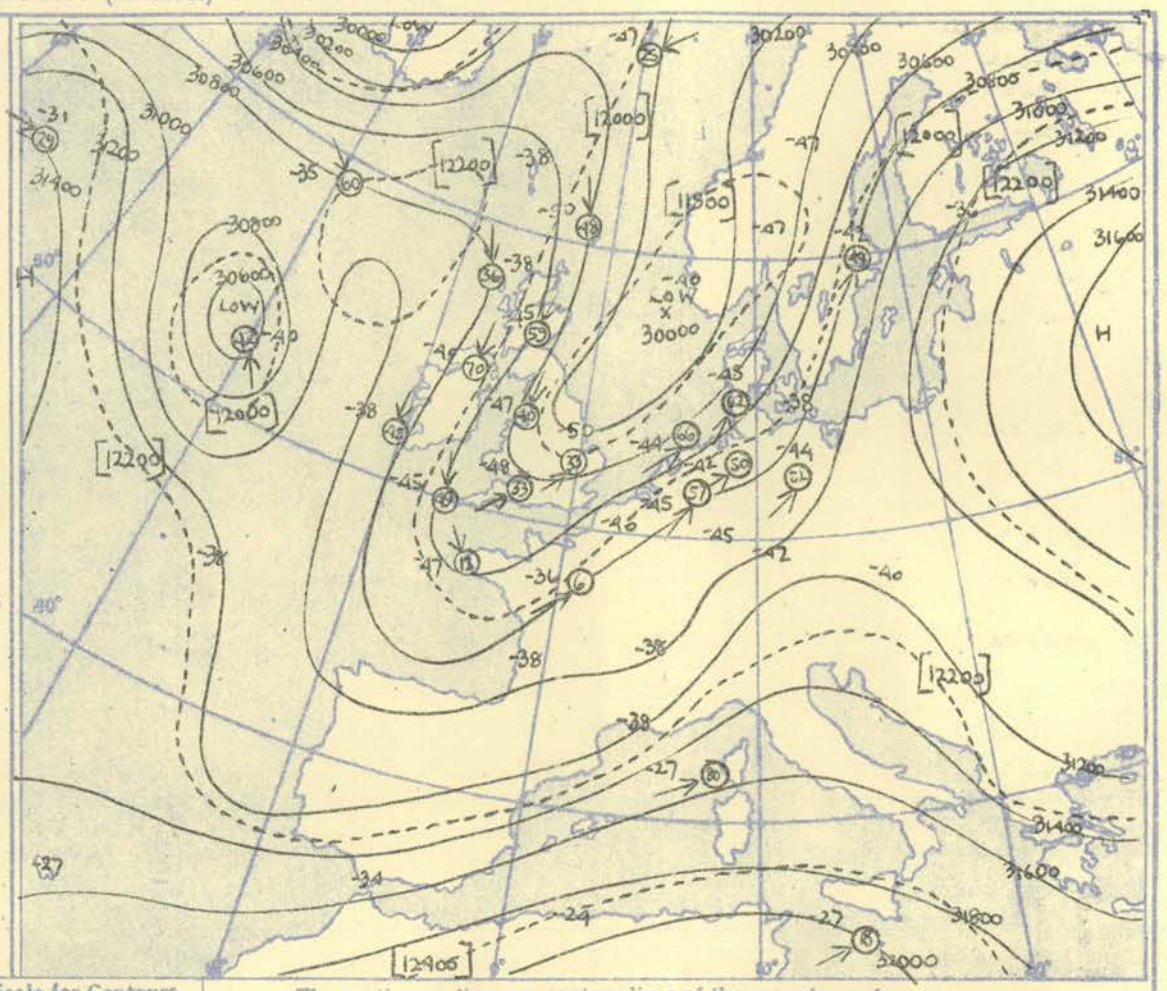
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

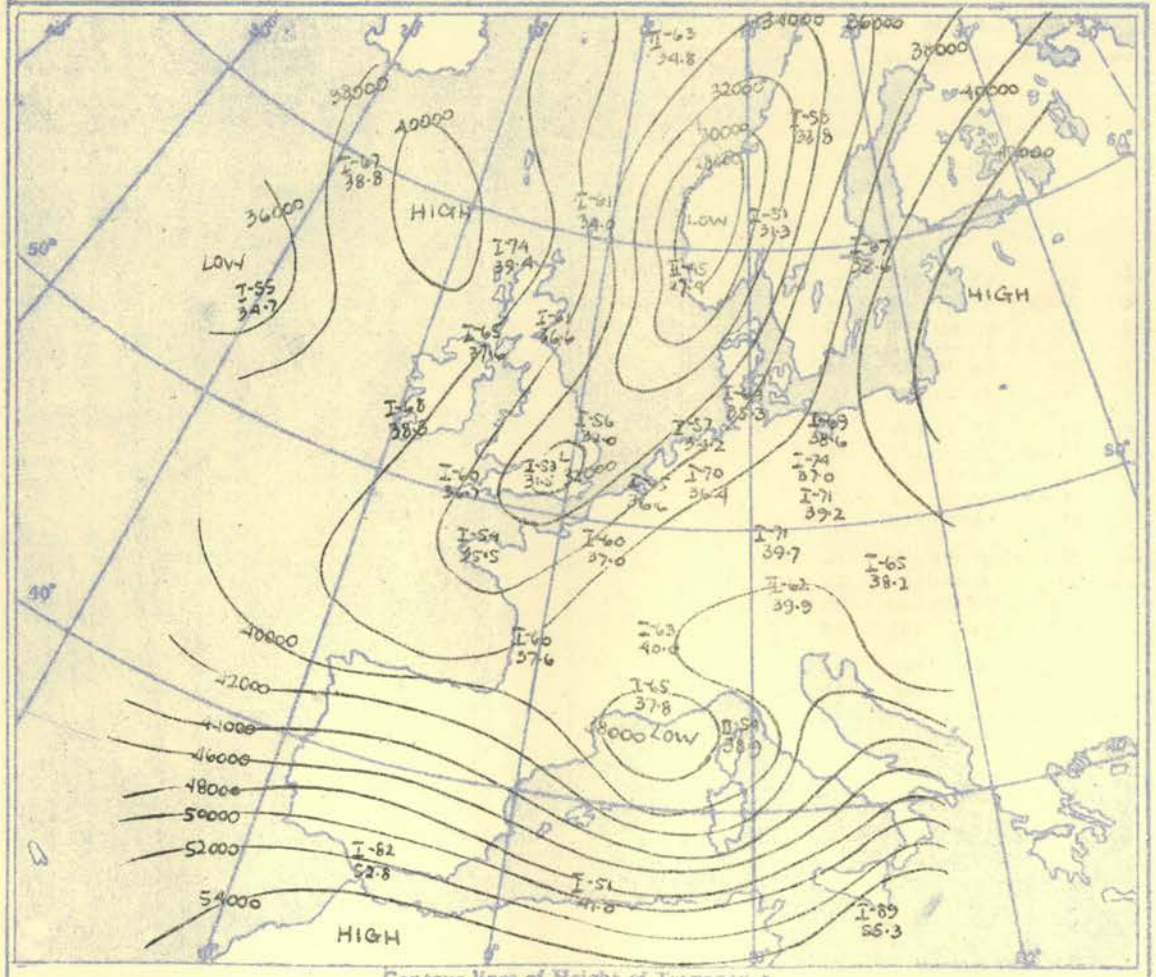
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 80 60 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The main feature of the charts is the sharpening of the trough which extended over the North Sea and Eastern districts of Great Britain. This trough apparently absorbs the smaller troughs moving eastward across the Atlantic.

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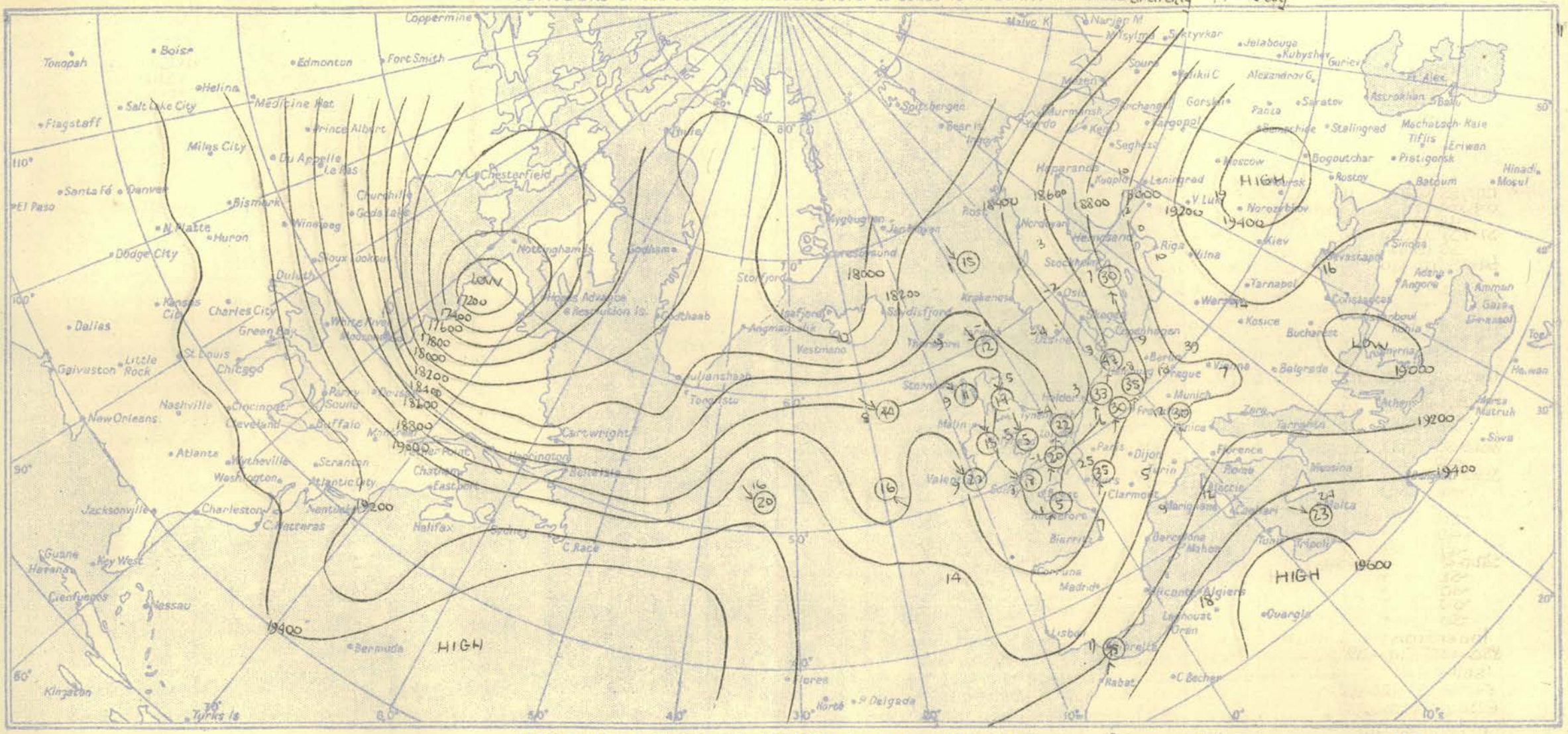
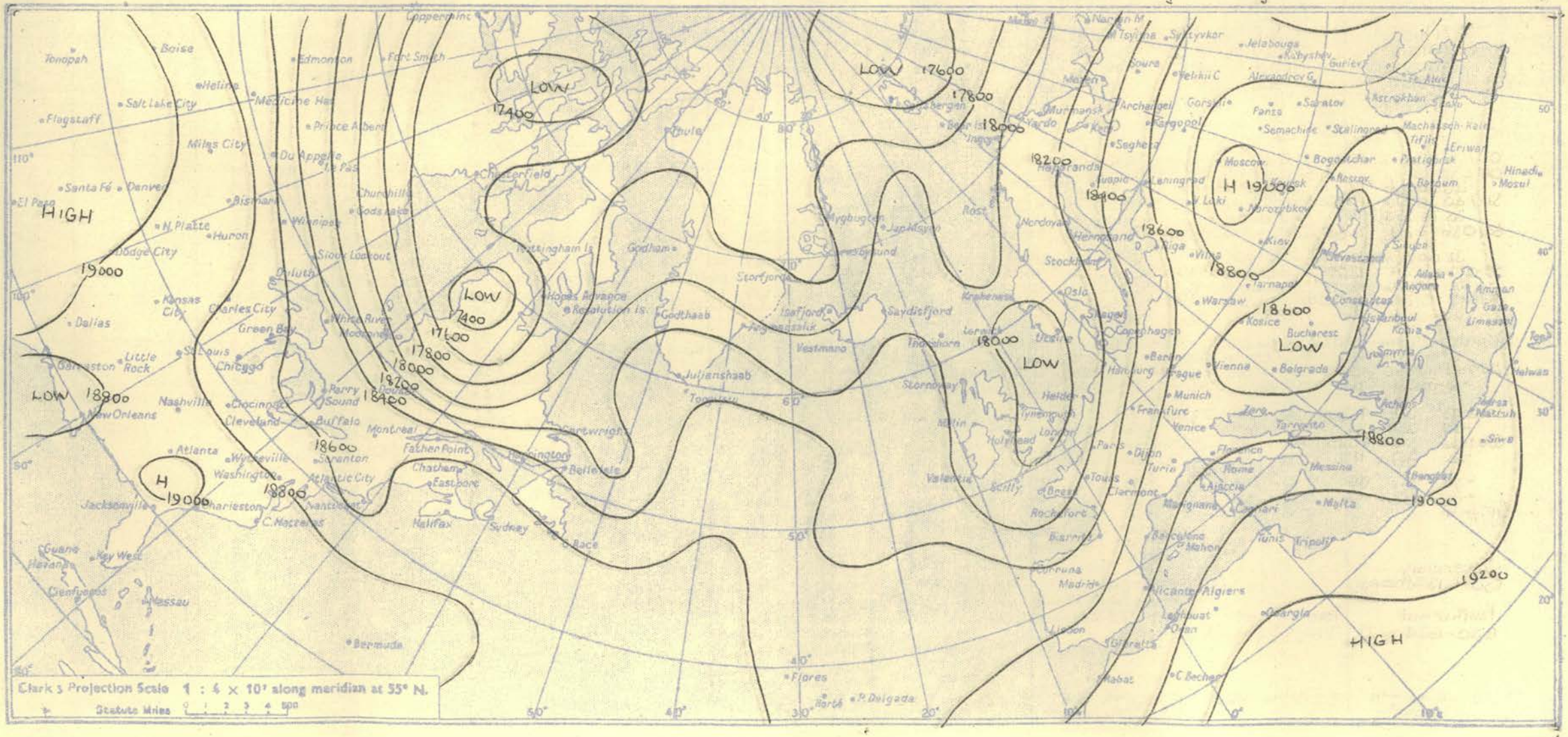
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Saturday 14th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Saturday 14th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Saturday 14TH July 1951.

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

15 hrs G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Pressure: Time	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.
Pressure: M.S.L.	1015·8 mb	1017·9 mb	1015·7 mb	1020·0 mb	1019·3 mb	1018·3 mb	1017·8 mb	1019·9 mb	1022·4 mb
Pressure: Surf	1005·8 mb	1016·3 mb	1017·9 mb	1010·5 mb	1017·3 mb	1013·9 mb	1002·2 mb	1009·4 mb	1020 mb
Pressure: Freezing	742 mb	713 mb	742 mb	813, 755, 724 mb	773 mb	768 mb	742 mb	726 mb	685 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Valentia Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	35	38	310	11	10·4	57	49	180	05	0·2	62	51	180	03	02·6	55	48	calm		0·6	61	47	310	05	01·2	63	51	295	05	04·4	66	49	265	03	02·3	60	50	010	08	0·3	61	45	290	04	Surf
1000	04·3	34	38			04·6	56	47			05·1	57	47	210	04	05·5	56	48			05·4	59	46	232	10	05·3	60	50			05·0	65	49			05·5	59	49	354	12	5·8	58	44	279	09	1000
950		44	35	285	12		51	42	231	12		49	41	222	06		50	42	004	05		50	46	308	10		52	46	273	05		57	48	318	03		50	42	356	08		53	43	235	05	950
900	32·7	37	32	331	07	33·7	44	37	250	13	33·8	44	38	282	10	34	43	34	330	05	33·3	47	34	216	04	34·0	46	40	186	05	34·1	49	44	220	03	34·3	44	38	003	04	34·7	44	35	163	03	900
850		35	19	321	08		37	31	257	13		37	31	293	14		37	30	316	06		37	24	174	12		42	35	176	07		41	40	177	06		38	34	336	04		37	35	112	04	850
800	640	38	02	310	07	65·0	35	27	260	11	65·2	37	21	282	09	65·5	36	25	330	07	65·2	31	21	165	07	65·6	36	29	206	07	65·7	36	35	181	05	65·6	34	20	283	04	66·1	38	23	037	04	800
750		33	-7	301	07		36	17	264	06		33	06	281	06		34	07	350	06		30	14	298	03		29	24	233	07		33	28	285	06		35	08	265	08		37	-28	344	07	750
700	99·1	27	-9	308	08	100·2	31	11	264	05	100·2	29	01	318	07	100·5	31	15	343	07	100·2	25	10	306	05	100·5	21	16	253	05	100·8	26	16	288	05	100·8	30	07	273	11	101·5	34	-30	347	10	700
650		23	-3	320	07		29	-1	293	06		26	-3	285	08		29	05	335	07		19	-9	314	06		19	07	243	06		22	-3	269	10		24	-11	232	10		28	-1	345	14	650
600	138·7	17	-12	307	09	140·3	23	-14	314	10	140·1	21	-17	356	08	140·3	15	-10	260	08	139·5	12	-16	334	06	139·7	14	-6	222	13	140·4	16	-12	260	13	140·6	07	-10	267	09	141·4	22	-17	337	17	600
550		10	-19	339	07		17	-11	300	10		15	-9	011	11		14	-23	016	12		04	-16	339	08		06	-26	231	19		08	-25	257	16		10	-19	284	11		17	-43	331	17	550
500	184·3	-1	-28	345	12	186·0	-09	-26	306	11	186·0	-05	-10	026	14	186·3	04	-32	013	15	184·6	-5	-25	003	05	184·9	-4	-21	238	22	185·3	-1	-17	248	20	186·3	03	-25	301	18	187·7	09	-25	342	22	500
450		-9	-37	357	20		-1	-24	332	13		-7	-29	004	16		-6	-42	020	26		-15	-30	023	10		-12	-24	232	22		-11	-24	248	22		-7	-30	303	15		00	-17	358	25	450
400	237·8	-21	-43	353	24	241·1	-11	-43	339	26	240·0	-26	-34	026	25	240·3	-16	-47	020	38	237·4	-29	-45	024	10	238·0	-26	-38	228	24	239·2	-21	-38	249	25	240·2	-17	-39	336	22	242·3	-11	-28	355	27	400
350		-34	-54	358	32		-25	-49	339	30		-33	-45	015	47		-19	-56	018	57		-42			030	27		-37	-53	235	28		-35	-48	260	29		-30	-52	340	22		-25	-46	001	31	350
300	302·9	-50		357	45	301·3	-38	-54	358	36	305·5	-45		018	59	306·5	-40	-60	006	70	301·6	-47		020	40	302·7	-50		22	33	304·4	-48		242	33	306·0	-45		360	48	308·8	-38	-58	005	46	300
250		-60		358	55		-54		357	45		-55		012	66		-56		002	71		-50		009	29		-51		225	32		-50		238	28		-56		004	55		-54		009	46	250
200	320·3	-51		358	18	323·3	-72		345	39	323·8	-47		015	19	324·0	-57		012	41	320·5	-47		347	14	320·7	-55		259	19	328·1	-47		264	21	329·7	-52		326	16	326·3	-65		360	23	200
170		-51		349	12		-51		348	20		-48		006	16		-51		357	23		-50		331	06		-52		244	18		-48		260	17		-52		295	13		-56		357	16	170
150		-50		L.V			-55		355	13		-49		007	11		-51		360	13		-52		320	09		-51		244	13		-49		253	15		-52		284	11		-58		359	19	150
130		-47		"			-48		321	10		-50		L.V			-51		006	12		-51		329	03		-50		244	10		-50		265	10		-54		307	06		-54		360	13	130
110		-43		"			-47		328	06		-46		L.V			-50		314	07		-51		L.V			-49		237	08		-50		257	06		-52		L.V.			-52		360	09	110
100	321·0	-48		"		326·0	-47		113	03	328·5	-46		L.V		329·0	-49		010	07	328·1	-51		L.V		341·8	-50		198	08	345·0	-51		226	05	344·2	-51				345·7	-52		360	08	100
90		-52		"			-46					-48		L.V			-48		017	07		-52		L.V			-50		176	08		-50		244	05		-51					-51		360	07	90
80		-50		"								-50		L.V			-49		350	24		-47		L.V			-52		176	05		-50					-50									80
70		-50		"								-49		L.V			-51		104	28		-45		L.V			-55		169	07		-51					-50									70
60		-50		"								-48					-50		138	08		-45		L.V			-50		166	06	(68)	-51					-50									60
	Inversion 850 mb 35°-814 mb 39° Isothermal 814 mb 35°-850 mb 35° 673 mb 23°-650 mb 23°					Inversion 807 mb 32°-750 mb 36° 683 mb 28°-668 mb 34° Isothermal 827 mb 34°-808 mb 37° 657-620 mb 28°					(55) -48 Inversion					Inversion 770 mb 26°-750 mb 34° 750 mb 29°-743 mb 27° 350 mb 29°-343 mb 27°					Inversion 782 mb 29°-773 mb 32° 315 mb -48°-305 mb -46°					Inversion 671 mb 19°-660 mb 26°					Inversion 772 mb 32°-755 mb 34°					(54) -45 Inversion 805 mb 33°-785 mb 40°					Inversion 836 mb 35°-786 mb 39°					
Tropopause	I 252 mb -61° 34000'			I 202 mb -74° 39400'		I 221 mb -61° 36600'					I 217 mb -65° 37600'					I 215 mb -48° 29100' I 253 mb -52° 34400'					I 271 mb -56° 32000'					I 285 mb -55° 31500'					I 232 mb -60° 36100'					I 211 mb -68° 38500'					Tropopause

21 hrs G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Pressure: Time	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.
Pressure: M.S.L.	1015·8 mb	1017·9 mb	1018·9 mb	1021·4 mb	1020·5 mb	1019·3 mb	1018·1 mb	1020·7 mb
Pressure: Surf	1005·8 mb	1016·3 mb	1018·1 mb	1011·8 mb	1018·5 mb	1014·8 mb	1002·3 mb	1010·0 mb
Pressure: Freezing	750 mb	790 mb	818 mb	710 mb	742 mb	768 mb	771 mb	732 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	45	285	100	04·9	56	49	280	05	0·2	54	49	calm		02·6	56	51	calm		0·6	55	49	305	05	01·2	55	51	060	07	04·4	60	50	350	03	02·3	53	48	360	01	Surf
1000	04·2	50	49			04·9	54	48	232	12	05·1	55	48	218	09	05·7	55	54			05·3	54	50								05	060	50			05·4	53	47	356	05	1000
950		45	44	266	18		51	44	238	16		52	45	247	10		49	47	355	05		50	53	295	16		51	49	092	06		55	46	001	10		47	42	348	06	950
900	32·7	40	35	277	16	33·5	41	38	245	21	33·9	45	36	284	12	34·3	47	36	344	05	34·4	45	37	252	05	34·1	48	42	080	09	34·0	47	43	009	08	34·2	47	33	330	09	900
850		35	26	285	14		07	35	260	19		38	32	280	12		37	33	329	06		35	31	218	09		42	37	026	07		41	38	047	09		36	32	328	07	850
800	64·0	36	12	288	13	64·8	33	22	275	13	65·2	29	26	272	10	65·8	31	27	358	08	65·8	33	26	192	12	62·7	36	30	300	04	65·6	36	29	055	06	65·5	38	29	347	05	800
750		32	09	288	12		28	27	292	12		30	18	250	09		29	21	284	06		33	16	207	01		30	26	271	06		30	24	360	05		39	20	352	06	750
700	99·0	27	08	288	13	99·7	25	05	290	13	100·2	27	03	287	10	100·3	31	13	286	05	100·3	27	-4	324	06	100·6	23	24	269	05	100·6	26	-4	283	08	100·8	30	09	341	07	700
650		22	08	286	12		23	04	289	16		23	-1	276	04		24	-1	296	05		22	-3	356	10		19	04	278	05		22	-11	294	09		24	-3	323	10	650
600	166	17	-13	282	13	139·4	18	06	283	16	139·9	13	-13	293	09	140·6	21	-25	322	05	140·5	16	-10	004	10	140·0	15	-10	273	05	140·1	15	-7	296	08	140·5	14	-2	323	12	600
550		10	-22	280	16		12	-4	282	15		10	-12	298	12		15	-23	332	10		11	-14	021	15		04	-10	240	07		04	-5	292	06		10	-7	348	18	550
500	184·2	03	-18	296	14	185·3	04	-12	293	22	185·5	01	-23	319	14	186·2	06	-38	342	13	186·2	02	-26	021	21	185·4	-2	-14	229	05	185·3	-4	-17	240	08	186·2	02	-17	351	22	500
450		-8	-26	314	16		-1	-25	294	30		-7	-32	343	19		-4	-42	354	13		-18	-34	03)	30		-13	-25	236	10		-13	-31	252	10		-10	-29	335	31	450
400	238·0	-19	-37	335	19	239·2	-18	-38	281	34	239·4	-19	-39	350	25	240·0	-14	-45	358	31	239·9	-18	-40	03)	35	238·5	-25	-36	245	11	238·3	-26	-43	239	13	239·1	-19	-37	344	40	400
350		-32	-49	340	31		-32	-46	280	30		-29	-43	356	33		-23	-40	356	43		-30	-46	023	58		-38	-49	227	30		-40	-58	228	24		-32	-43	003	53	350
300	303·6	-48		339	43	304·8	-47		280	29	305·3	-42		354	46	306·0	-38	-55	354	43	305·8	-41		018	81	303·3	-49		225	38	302·7	-46		253	20	306·4	-44		014	75	300
250		-58		334	51		-53		273	39		-56		354	56		-57		348	62		-50		012	76		-55		241	18		-46		311	11		-58		012	66	250
200	352·6	-66		341	75	353·5	-63		296	23	352·5	-61		355	43	354·9	-70		353	57	353·8	-56		010	28	351·2	-52		267	12	351·9	-49		292	05	353·1	-53		345	23	200
170		-53		327	11		-57		308	21		-54		358	21		-58		354	25		-51		350	18		-52		253	12		-51		262	08		-55		336	14	170
150		-51		318	06		-57		311	13		-54		342	13		-57		326	16		-52		339	10		-52		234	12		-04		249	11		-56		329	10	150
130		-51		273	06		-56		322	03		-55		322	12		-57		306	12		-54		344	06		-56		245	12		-53		266	12		-57		302	10	130
110	(117)	-51					-53							325	01		-55		350	05		-52		322	03		-55		256	03		-53		264	06		-57		288	10	110
100											541·1	-55		276	05	543·6	-54				544·3	-54		300	06	540·0	-56		252	07	542·2	-56		198	09	542·3	-58				100
90												-57		245	04		-55					-54		290	06							-57		207	06		-55				90
80												-57										-55		L.V								-58		240	05		-55				80
70												-57										-55		L.V							(66)	-58		044	05	(76)	-60				70
60																						-55		L.V								-58					-60				60
	Inversion 850 mb 35°-800 mb 36° Isothermal 850-834 mb 22°					Isothermal 710-675 mb 25°					Inversion 1018 mb 54°-978 mb 56° 788 mb 27°-750 mb 30°					Inversion 764 mb 26°-730 mb 33° 656 mb 23°-650 mb 24° Max wind 584 mb hts 248 mb 34900'					(57) -55 Inversion 1019 mb 55°-1010 mb 56° 775 mb 30°-758 mb 34° 230 mb -57°-224 mb -55° Max wind 018°/92 kts 265 mb 33900' 230 mb -57° 36300' 211 mb -61° 38200'					Inversion 687 mb 21°-680 mb 20°					Inversion 758 mb 29°-730 mb 30° Isothermal 1002-990 mb 60° 663-645 mb 22°					Inversion 828 mb 33°-752 mb 39° 600 mb 14°-575 mb 13° Max wind 011°/90 kts 274 mb 32500'					
Tropopause	I 214 mb -71° 37600'			I 217 mb -66° —		I 220 mb -66° 37300'					II 206 mb -70° 38100'														I 262 mb -55° 33200'					II 290 mb -48° 31000'					I 228 mb -63° 36400'					Tropopause

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No. 11795 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Sunday 15th July **1951.** Page 1.

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

03h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.
Pressure: M.S.L.	1014·6 mb	1017·0 mb	1019·7 mb	1022·2 mb	1021·8 mb	1020·9 mb	1020·6 mb	1022·1 mb	1023·2 mb
Pressure: Surf	1004·6 mb	1015·4 mb	1018·9 mb	1012·4 mb	1019·8 mb	1016·2 mb	1004·4 mb	1011·4 mb	1022 mb
Pressure: Freezing	770 mb	730 mb	725 mb	802, 717 mb	750 mb	772 mb	777 mb	713· mb	675 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	60	50	260	03	00·4	55	50	220	10	00·2	50	46	270	08	02·6	46	43	Calm		00·6	44	43	Calm		01·2	48	47	060	04	04·4	51	48			02·9	51	44	360	05	00·3	46	44	070	03	Surf
1000	03·9	50	50			04·6	53	48	230	26	05·3	51	46	270	15	05·9	49	46			05·9	50	49	275	08	05·6	60	49	102	04	05·6	52	49			06·0	54	46	326	06	06·4	55	50	156	03	1000
950		48	48	244	33		48	41	235	27		48	39	270	12		50	41	275	07		96	41	290	07		49	44	082	05		53	48				48	41	345	07		48	41	270	04	950
900	32·5	44	44	248	29	33·3	45	37	239	30	33·9	42	37	253	12	34·6	44	35	279	08	34·5	44	43	277	09	34·3	44	42	040	06	34·5	48	44			34·6	41	33	360	08	35·1	43	37	217	02	900
850		40	40	244	24		41	37	258	30		35	31	258	15		38	30	284	10		37	29	252	15		40	36	030	04		41	36				42	26	017	07		39	32	249	04	850
800	64·0	35	35	247	20	64·7	38	34	273	23	65·1	35	23	262	16	65·9	33	18	290	11	66·8	32	18	248	11	65·7	36	28	025	05	66·1	34	31			66·1	40	28	012	06	66·5	39	16	311	04	800
750		30	30	254	20		34	29	272	24		34	12	273	15		36	10	296	12		32	06	276	09		29	23	353	04		30	25	For Winds			35	10	352	06		38	03	301	04	750
700	99·0	25	25	266	24	99·9	29	24	271	23	100·3	29	13	273	15	101·1	31	08	305	13	100·7	27	05	315	08	100·6	22	19	275	03	101·0	25	14			101·4	31	03	348	07	101·9	35	01	270	05	700
650		18	18	278	26		23	18	275	22		22	07	289	14		28	05	316	14		21	03	341	09		22	02	348	05		22	-06	See			26	-03	346	07		29	01	290	10	650
600	138·4	15	10	279	24	139·5	16	11	283	23	140·3	17	-02	289	16	141·1	21	-01	315	11	140·3	18	00	005	10	140·2	18	-07	003	06	140·5	14	-07			141·3	19	-05	008	14	142·2	26	-05			600
550		08	04	282	25		08	02	284	25		10	-04	302	18		15	-04	312	10		10	-10	360	12		09	-14	358	09		06	-12	Page 3.			12	-10	010	27		18	-16			550
500	183·9	01	-03	274	21	185·0	00	-10	280	30	185·7	04	-06	305	15	187·2	05	-12	308	16	185·9	02	-19	353	18	186·8	-01	-22	001	10	185·8	-03	-22			187·2	05	-18	008	35	188·7	11	-22			500
450		-09	-13	269	13		-07	-21	287	33		-10	-16	313	17		-05	-21	317	22		-10	-30	004	24		-12	-31	350	07		-13	-36				05	-29	005	39		01	-29			450
400	237·4	-20	-24	253	21	238·8	-16	-31	293	30	239·3	-21	-28	313	24	241·6	-13	-27	334	28	239·6	-21	-39	353	33	239·0	-24	-42	005	07	238·8	-25	-47			241·3	-14	-36	008	46	243·4	-12	-37			400
350		-34	-38	264	26		-28	-42	299	41		-33	-40	320	20		-27	-38	336	39		-34	-48	003	39		-36	-54	008	11		-33	-55				-24	-42	010	55		-27	-48			350
300	302·7	-47		260	26	304·9	-44		295	49	304·5	-49		331	40	307·6	-43		336	43	304·7	-47		359	46	304·0	-46		022	28	304·1	-44				307·9	39	-52	009	67	309·6	-43				300
250		-60		259	26		-62		305	53		-66		333	46		-61		336	51							-56		020	26		-55					55		007	59		-61				250
200	390·2	-50		289	19						390·2	-62		322	20	394·0	-64		341	36						392·0	-64		340	07	392·2	-59				395·4	-63		006	39	396·9	-69				200
170		-51		290	18							-60		312	14		-60		327	24							-54		287	09		-64					59		341	21		-60				170
150		-50		291	13							-69		310	15		-59		329	18				For Rest			-56		271	09		-56					58		334	16		-63				150
130		-52		286	12							-68		311	09		-58		314	11				of Winds			-55		272	07		-57					59		312	08		-62				130
110		-50		211	08							-59		311	07		-56		331	05							-56		270	05		-57					60		L and V			-58				110
100	541·3	-51		230	07						538·2	-66		L and V		542·3	-56		L and V					See		541·7	-58		246	04	541·7	-66				543·5	-59		"		542·9	-58				100
90		-53										-60					-57										-68		223	03		-56					58		"			-57				90
80																	-57							Page 3.			-60		210	03		-57					58		"			-57				80
70																																-58					59		017	06						70
60																																-57				(64 mb)	60					Inversion				60
	Inversion 633 mb 16° - 619 mb 17°					Inversion 865 mb 40° - 853 mb 41°					Inversion 1019 mb 50° - 980 mb 53° 827 - 32° - 790 - 37°					Inversion 1012 mb 46° - 980 mb 54° 802 - 32° - 777 - 37°					Inversion 1020 mb 44° - 997 mb 51° 931 - 44° - 920 - 46° 779 - 30° - 750 - 32°					Inversion 1016 mb 48° - 985 mb 52° 700 - 22° - 676 - 24°					Inversion 1004·4 mb 51° - 986 mb 56°					Inversion 1011 mb 51° - 1003 mb 59° 896 - 40° - 877 - 42°					Inversion 1022 mb 46° - 1007 mb 55°				
																																				Isothermal 877 - 826 mb 42°					Isothermal 1007 - 1000 mb 55° 850 - 800 " 39° 750 - 724 " 38°				
Tropopause	I 238 mb - 62° 35,300'	I 235 mb - 65° 36,700'	I 234 mb - 72° 35,600'	I 220 mb - 71° 37,400'	N.R.	I 250 mb - 56° 34,371'	I 259 mb - 57° 33,600'	I 209 mb - 71° 38,500'	I 216 mb - 73° 38,000'	Tropopause
Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA	Station

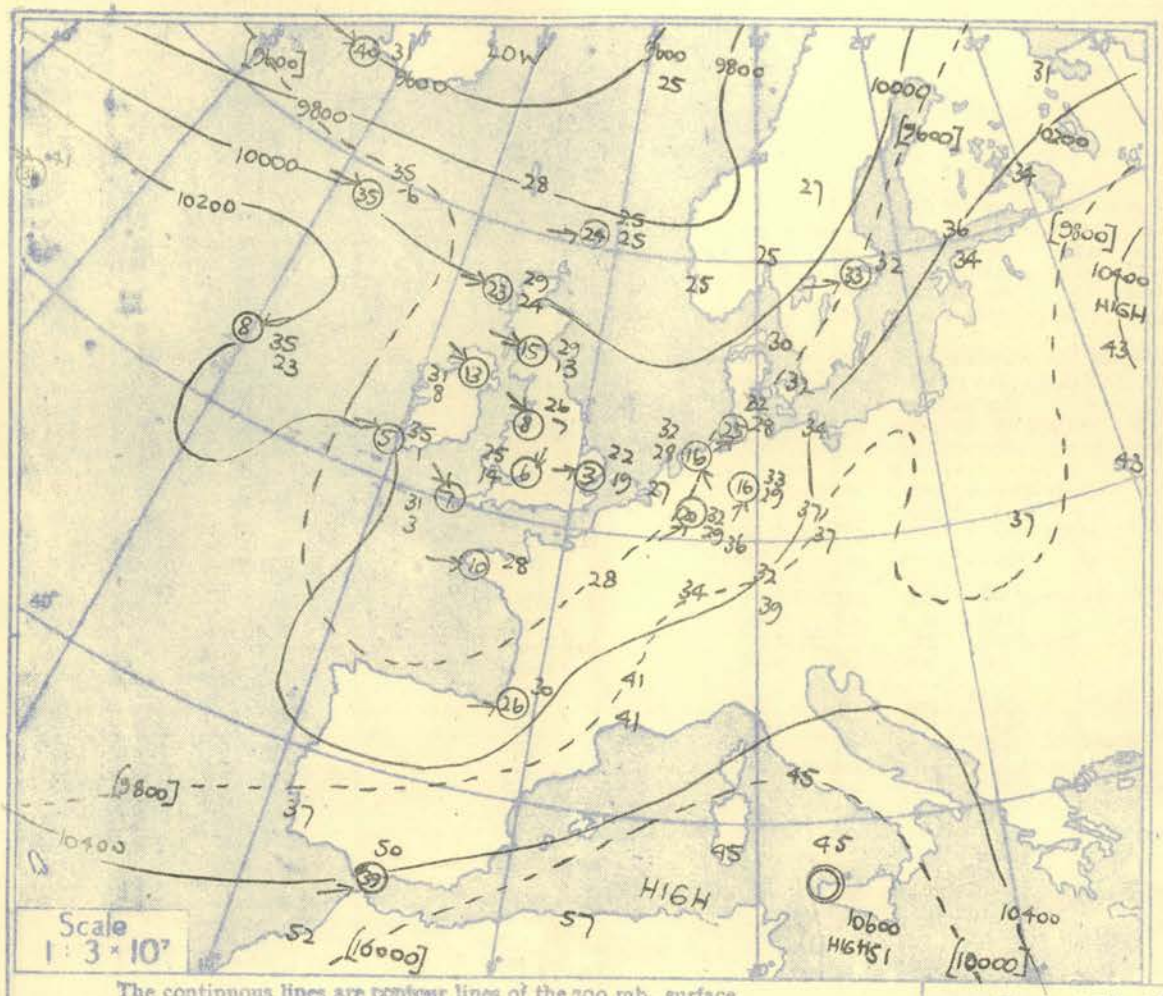
09h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	G.M.T.
Pressure: M.S.L.	1013·0 mb	1016·7 mb	1020·7 mb	1023·5 mb	1023·2 mb	1022·1 mb	1022·7 mb	1023·7 mb	mb
Pressure: Surf	1003·0 mb	1015·1 mb	1019·9 mb	1013·8 mb	1021·2 mb	1017·6 mb	1006·7 mb	1013·2 mb	mb
Pressure: Freezing	738 mb	737 mb	732 mb	700 mb	722 mb	778 mb	727 mb	685 650 mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	50	50			00·4	56	53	240	10	00·2	60	51	280	12	02·6	55	48	240	05	00·6	60	49			01·2	60	49	Calm		04·4	54	52	090	06	02·7	59	50	360	09						Surf
1000	03·5	49	49			04·5	55	52			05·7	54		276	15	06·9	53	45	256	09	06·9	66	45			06·0	57	49			06·1	53	51			06·6	56	44	355	07						1000
950		47	47				51	48	249	27		48		286	16		49	40	262	11		50	44	075	04		50	44	075	04		53	47	048	09		48	44	008	05						950
900	32·1	45	45			33·3	47	44	254	29	34·3	43		297	17	35·0	43	35	274	10	35·1	44	30			39·7	43	39	004	01	34·9	49	37	351	03	36·1	43	39	030	03						900
850		42	42				43	41	258	28		41		303	13		37	28	286	11		38	26				41	31	339	03		43	30	321	05		41	33	028	06						850
800	63·7	38	38			65·0	39	38	261	30	65·8	37		317	14	66·4	38	17	294	13	66·5	31	21			66·3	35	28	328	06	66·6	37	27	332	06	66·7	40	25	020	05						800
750		33	33	For Winds			33	32	261	32		33		337	16		36	11	295	13		35	05				28	24	318	09		33	08	342	07		37	04	038	05						750
700	98·9	26	25			100·2	29	19	269	24	101·0	27		333	14	101·7	32	01	303	13	101·6	30	12			101·1	28	13	318	13	101·6	29	-12	353	13	102·1	38	05	028	06						700
650		19	14	See			27	02	289	18		20		302	15		26	08	304	15		25	01				26	01	335	13		25	-21	350	14		32	-03	346	12						650
600	138·3	19	-12			140·1	19	03	283	25	140·5	18		288	18	141·7	21	06	306	21	141·4	20	-15			140·9	19	-13	354	16	141·4	20	-30	005	15	142·4	25	-06	346	16						600
550		05	-25	Page 3.			09	00	298	33		11		284	26		19	02	319	23		11	-21				13	-24	011	14		13	-34	011	24		17	-18	346	19						550
500	183·5	-06	-26			186·8	04	-06	293	36	186·3	02		304	21	187·8	06	-12	320	21	187·2	03	-11			186·8	02	-27	023	14	187·3	04	-43	011	28	188·7	07	-26	349	23						500
450		-16	-31				-06	-14	290	38		-07		307	24		-08	-17	316	24		-06	-17				-09	-36	028	27		-07	-48	010	32		-02	-33	351	28						450
400	236·3	-27	-39			240·0	-10	-27	306	41	240·2	-15		305	25	240·0	-13	-22	326	30	241·1	-16	-27			240·0	-20	46	024	35	241·2	-17	-53	013	41	243·1	-11	-31	350	39						400
350		-38	-47				-22	-41	317	59		-26		326	34		-23	-32	330	35		-28	-36				-27	-50	017	44		-28	-58	010	49		-22	-41	357	48						350
300	301·1	-46				306·9	-38	-58	316	65	306·6	-40		332	37	308·8	-39	-49	334	37	307·1	-42				306·2	-52		013	48	307·2	-44		010	56	310·0	-38	-54	009	45						300
250		-57					-63		315	75		-55		331	66		-55		336	48		-58					-56		010	43		-55		008	49		-54		007	57						250
200	389·7	-49				394·6	-64		311	56	394·1	-67		330	34	396·2	-72		338	52	390·8	-67				394·0	-53		357	16	394·9	-55		356	24	397·7	-62		353	33						200
170		-49					-57		307	38		-57		309	24		-64		330	36		-56					-53		319	07		-51		006	15		-59		358	23						170
150		-49					-54		302	23		-56		309	18		-57		316	21		-58					-52		280	05		-53		331	08		-58		354	16						150
130		-50					-54		295	15		-54		305	10		-57		318	13		-59					-54		248	07		-53		280	06		-56		357	12						130
110		-47					-52		277	13		-53		297	09		-56		349	11		-57					-53		265	07		-53		260	09		-57		326	06						110
100	591·7	-47				594·1	-51		267	11	593·5	-53		283	06	593·8	-54		L and V		592·5	-57				594·3	-52		265	06	595·5	-60		276	07	596·2	-58		289	08						100
90							-51		263	07		-54		270	06		-59					-56										-55		359	02		-58		319	06						90
80							-52		262	06		-54		274	05						(85 mb)										-56					-58		L and V							80
70							-53		262	05											Inversion															-57									70
60																					797 mb 30° - 770 mb 37°																										60
	Isothermal 950 - 925 mb 47° 859 - 850 " 42°					Inversion 680 mb 27° - 664 mb 28° 530 " 05° - 519 - 04° 426 " -10° - 417 " -08°					Isothermal 918 - 888 mb 43° 213 - 207 " -65°			Inversion 950 mb 37° - 900 mb 38°					Isothermal 904 - 893 mb - 44°					Inversion 659 " 24° - 643 " 25° 213 " -69° - 210 " -67° Isothermal 962 - 941 mb 50°					Inversion 725 mb 25° - 700 mb 28° Isothermal 786 - 732 mb 32° 666 - 639 " 25°					Inversion 978 mb 51° - 950 mb 55° Isothermal 766 - 732 mb 32° 666 " 30° - 650 " 32° 925 - 910 mb 40°					Inversion 870 mb 40° - 853 mb 42° 667 " 30° - 650 " 32° Isothermal 925 - 910 mb 40°					
Tropopause	II 269 mb 57° 32,100'	I 210 mb - 66° 38,900'	I 198 mb - 68° 39,600'	I 194 mb - 74° 40,100'	I 213 mb - 69° 38,000' I 203 " - 67° 39,000'	I 239 mb - 61° 36,000'	II 235 mb - 60° 36,100'	I 213 mb - 65° 37,700'		Tropopause

Sunday 15th July 1951.

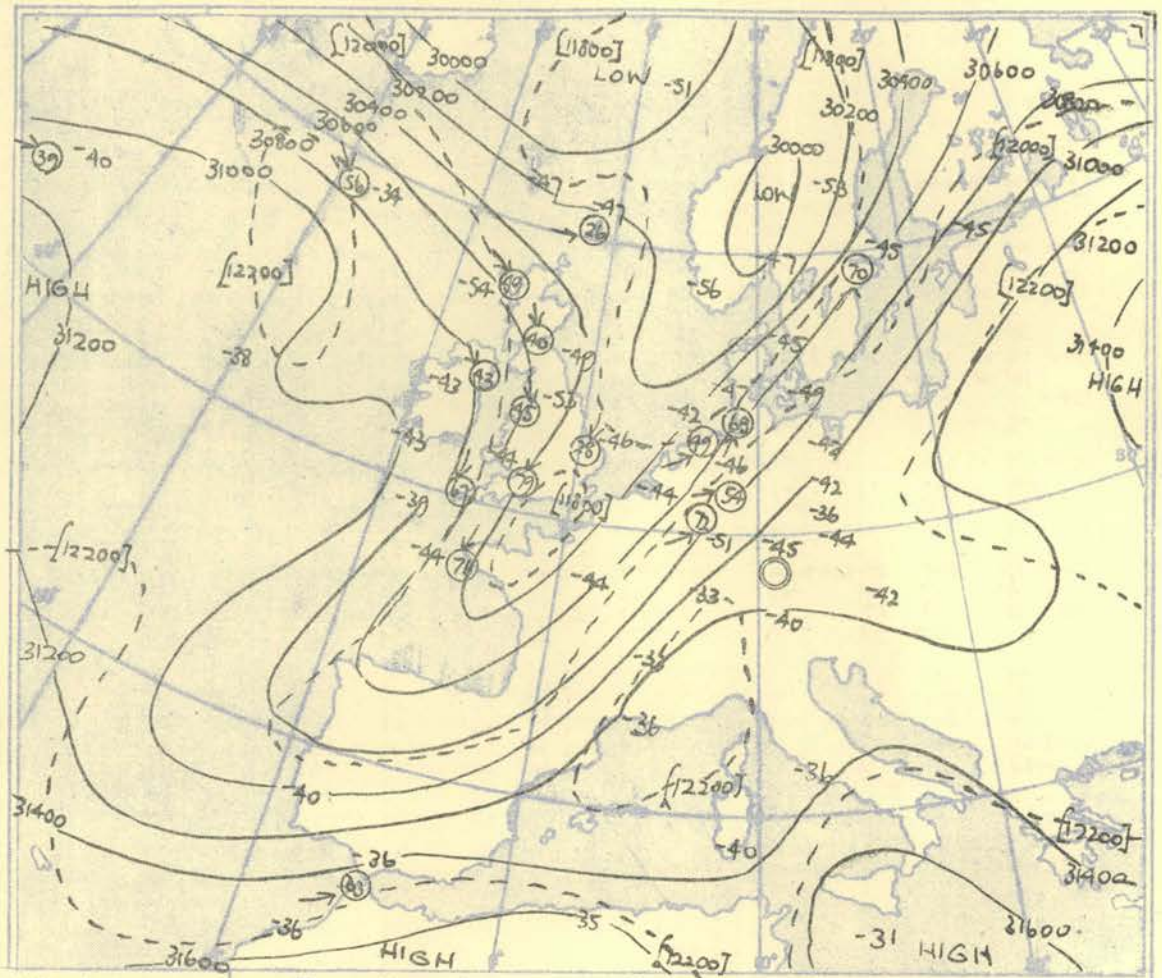
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



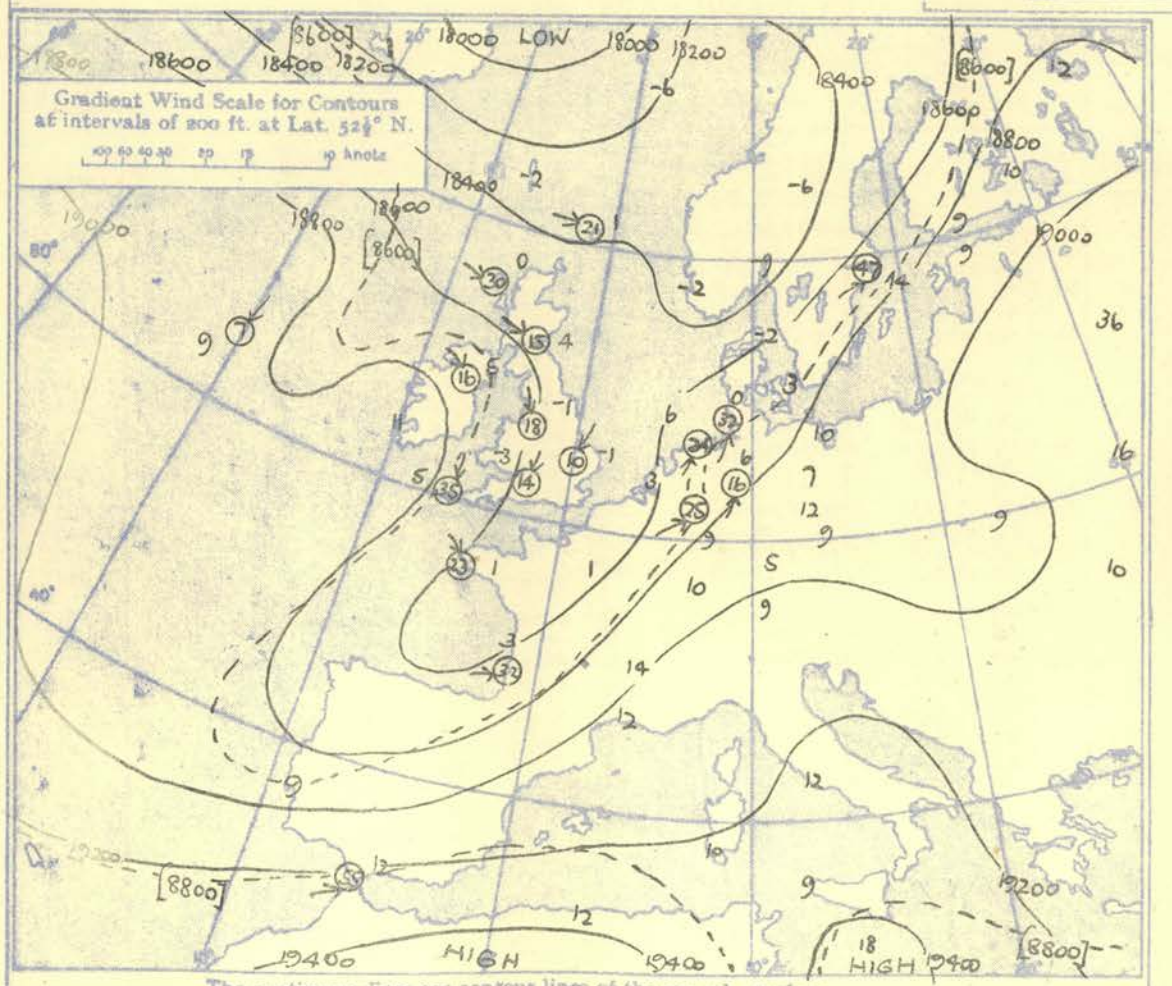
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

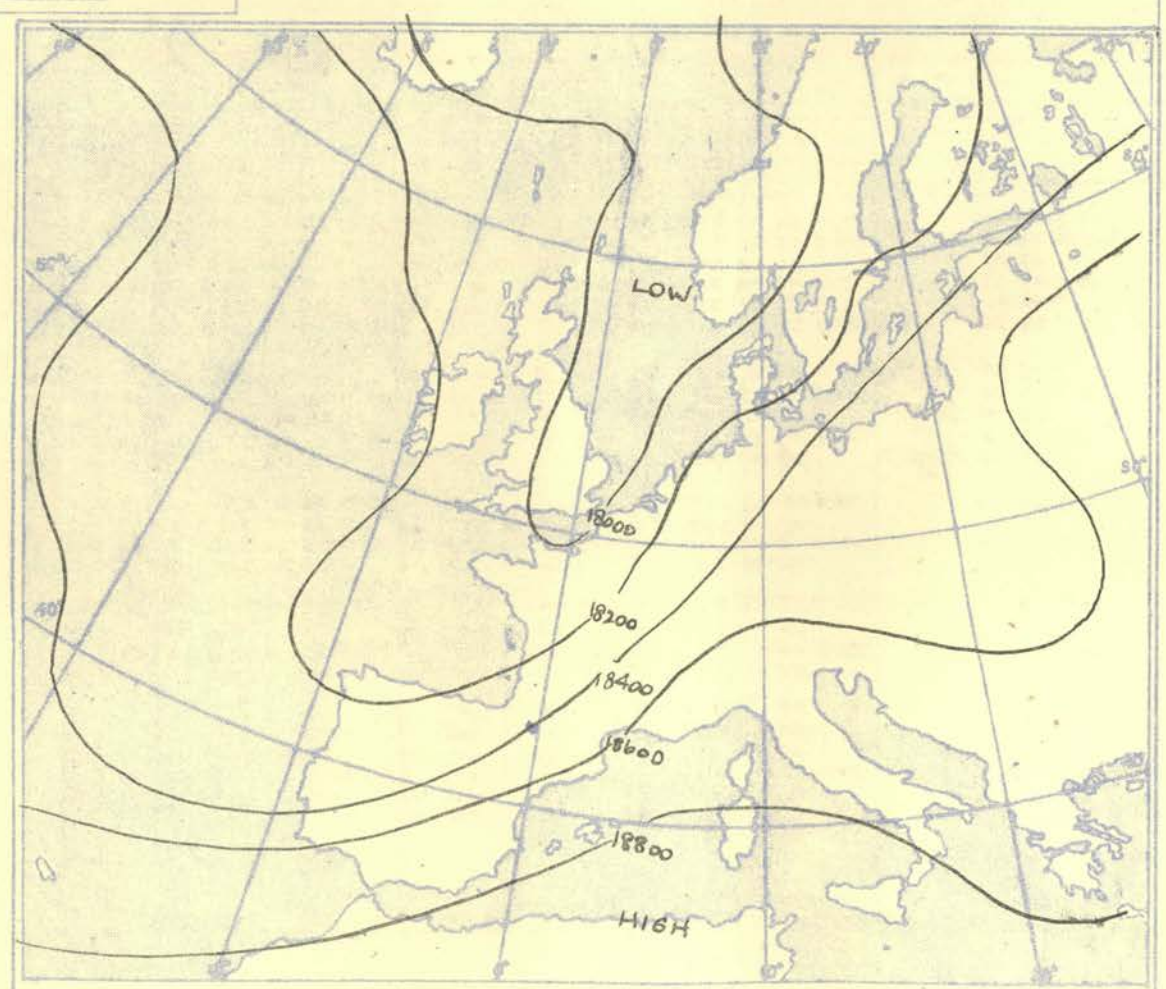
100 60 40 30 20 15 10 Knots



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



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



Isopleths of Thickness 500–1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

52·12N 02·12W

Pressure — Time 1403h; M.S.L. 1023 mb; Surf 1021·5 mb; Freezing 690 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew
Surf	00·9		
1000	06·4		
950			
900	35·7	50	46
850		42	
800	67·3	35	
750			
700	102·7	34	33
650			
600	142·9	22	
550			
500	189·1	04	
450			
400	243·1	-15	
350			
300	309·8	-40	
250			
200			
170			

Cloud.
3/8 Cu. 825-760 mb
1/8 As 495-490 mb.
1/8 Cu 410-400 mb
Inversion. 800 mb 35°
750 · 38°

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

Feet	Farkhill 03h Pilar Dir.	Vel.	Dublin 03h Dir.	Vel.	Lympne 03h Dir.	Vel.	Ronaldsway 09h Dir.	Vel.	Herwick 09h Pilar. Dir.	Vel	Farkhill 09h Dir.	Vel.	Ronaldsway 15h Dir.	Vel.	Herwick 15h Radar. Dir.	Vel.	Aldergrove 15h Pilar Dir.	Vel.	Dir.	Vel.	Feet
Surf.	080	03	250	06	020	09	260	10	250	30	Calm		250	12	290	10	260	08			Surf.
1,000	033	11	250	10	030	10	270	11	230	45	010	05	270	11	260	24	271	13			1,000
2,000	031	09	229	03	030	10	230	15	247	38	010	06	290	11	261	19	279	14			2,000
3,000	030	08	300	04	030	09	270	15	257	36	340	09	270	12	265	15	286	15			3,000
4,000	026	06	290	05	020	09	290	17	261	30	330	07	280	10	268	13	300	14			4,000
5,000	022	03	300	09	030	12	280	20	252	24	320	07	290	10	272	13	308	15			5,000
6,000	018	03	300	06	040	09	280	19	254	24	310	06	290	10	274	13	327	13			6,000
8,000	Calm		310	09			280	13	259	25	310	07	290	09	274	18	340	10			8,000
10,000	028	06					290	14	262	30	340	09			275	19	345	12			10,000
14,000	022	07							271	28	360	14			287	21	308	20			14,000
18,000	018	14							263	27	010 (15·000)	16			291	20	306	15			18,000
24,000	023	23							264	27					308	34	331	30			24,000
30,000	021	79							251	33					327	75	329	30			30,000
40,000	358	12							279	24					324 (33·000)	81	330	39			40,000
50,000	313	07							276	12											50,000
	Calm. (59·000)								252 (54·000)	11											

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 OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	CIRRUS	CIRRUS	CIRRUS	CIRRUS.	
Lat/Long	59·0N 18·9W	59·0N 19·3W	58·9N 19·4W.	58·9N 19·4W	52·5N 20·2W	52·5N 20·0W	52·4N 20·0W	52·4N 20·0W	
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.
Pressure M.S.L.	1013 mb	1013 mb	1011 mb	1012 mb	1020 mb	mb	1025 mb	mb	mb
Surf	1013 mb	1013 mb	1011 mb	1012 mb	1020 mb	mb	1025 mb	mb	mb
Freezing	680 mb	670 mb	620 mb	670 mb	665 mb	mb	640 mb	mb	mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		55	53	255	25
1000	03·5	53	52	255	24
950		54	36	260	27
900	32·4	52	35	263	31
850		51	19	268	31
800	64·5	45	21	270	34
750		38	10	267	30
700	100·0	33	-06	267	33
650		30	10	269	37
600	140·3	23	14	268	36
550		13	08	271	37
500	186·5	10	04	279	42
450		03	-10	284	51
400	241·5	-06	-17	303	48
350		-20	-31	300	53
300	308·7	-34	-49	295	56
250		-49		287	69
200	397·2	-66		282	60
170		-67		288	43
150		-57		309	34
130		-56		302	30
110		-54		284	20
100	545·3	-53		284	17
90		-53		284	18
80		-53		284	12
70		-52		284	05
60		-51		284	05
		-50			

Inversion 972 mb 50°- 958 mb 55°
889- 51°- 867 - 53°
Isothermal. 540- 530 mb 12°

Tropopause: I 182 mb -69° 41,700'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	53	250	20
1000	03·6	56	49	253	27
950		53	37	255	28
900	32·5	51	18	256	30
850		49	10	257	27
800	64·4	45	06	258	32
750		40	16	258	36
700	100·1	35	27	258	36
650		29	26	260	42
600	140·4	21	11	260	42
550		15	09	262	36
500	186·5	05	-04	263	41
450		-01	-13	263	45
400	241·0	-12	-26	263	45
350		-22	-43	265	42
300	308·0	-36	-53	261	50
250		-54		260	45
200	395·7	-63		270	54
170		-66		263	41
150		-61		268	28
130		-58		276	25
110		-54		264	15
100	543·7	-53		264	12
90		-51		264	08
80		-50		264	08
70		-48		261	06
60		-46		Calm	
		-45			

Inversion 500 mb 05°- 487 mb 07°
Isothermal 1013- 918 mb 56°
507 - 500 " 05°

Tropopause: I 214 mb -66° 38,200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	54	230	28
1000	03·0	55	54	231	36
950		51	50	235	37
900	31·8	48	48	248	45
850		49	46	247	46
800	63·8	47	42	245	42
750		43	36	243	48
700	99·7	38	31	243	50
650		34	21	243	52
600	140·4	29	15	246	53
550		21	08	249	53
500	187·2	11	-02	255	49
450		00	-12	255	54
400	241·9	-10	-23	256	66
350		-22	-35	258	63
300	308·8	-38	-51	262	65
250		-50		267	63
200	397·1	-53		276	61
170		-54		284	49
150		-54		276	32
130		-55		277	26
110		-48		272	20
100	547·5	-45		264	16
90		-45		257	15
80		-46		255	12

Inversion 873 mb 47°- 844 mb 50°
643 " 33°- 636 " 34°
Isothermal. 742- 725 mb 42°

Tropopause: I 226 mb -59° 37,200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		55	53	250	30
1000	03·4	54	45	260	33
950		49	47	262	37
900	32·3	53	39	266	42
850		52	34	273	45
800	64·9	46	27	268	40
750		42	29	269	40
700	100·3	36	23	272	39
650		29	16	273	41
600	140·6	24	-02	274	52
550		22	-19	272	51
500	187·3	13	-09	278	52
450		00	-20	282	56
400	242·0	-13	-33	277	55
350		-27	-40	281	70
300	308·3	-43		241	66
250		-60		278	60
200	394·7	-66		277	55
170		-59		272	41
150		-59		268	32
130		-59		274	30
110		-59			
100	523·0				

Inversion 950 mb 49°- 906 mb 56°
584 " 22°- 574 " 26°
Isothermal. 800- 777 mb 46°

Tropopause: I 217 mb -70° 37,800'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		58	56	360	15
1000	05·5	55	53	005	14
950		50	50	031	11
900	34·4	49	48	046	11
850		48	39	038	07
800	66·4	46	29	038	04
750		40	28	034	07
700	102·2	35	23	041	08
650		30	16	041	09
600	142·5	24	09	040	14
550		17	03	028	20
500	188·9	09	-09	004	07
450		00	-21	290	08
400	243·6	-11	-31		
350		-24	-43		
300	310·3	-38			
250		-54			
200	393·7	-74			
170		-86			
150		-82			
130		-80			
110		-78			
100	538·7	-77			
90		-76			
80		-74			

Inversion 915 mb 48°-882 mb 50°
830 " 46°- 815 " 47°
Isothermal 930- 915 mb 48°
700- 689 " 35°
600- 596 " 24°

Tropopause: II 170 mb -86° 43,200'

No Ascent. For winds see top of page.

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		56	51	280	08
1000	07·0	53	38	279	12
950		54	36	300	08
900	36·0	54	32	319	09
850		51	25	335	01
800	68·1	46	13	302	06
750		42	13	303	07
700	104·0	38	07	284	09
650		33	06	293	13
600	144·6	26	10	304	08
550		18	10	307	14
500	191·1	-08	-02	310	13
450		-09	-15	315	19
400	245·7	-11	-19	327	18
350		-23		325	19
300	312·6	-37			
250		-53			
200		-71			
170		-75			
	(193 mb)				

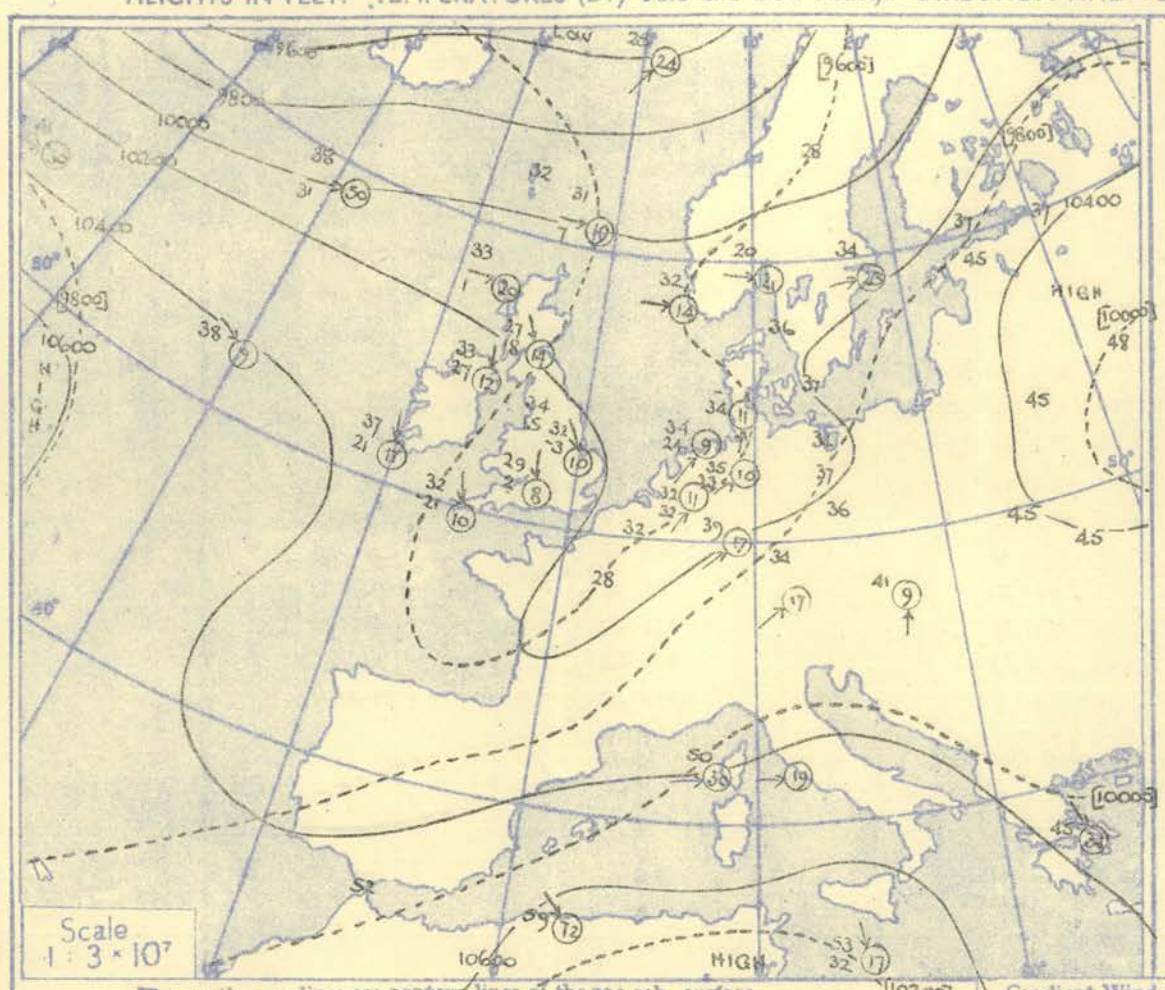
Inversion 967 mb 48°-938 mb 57°

No Ascent. For winds see top of page.

NR

Sunday, 15th July, 1951.

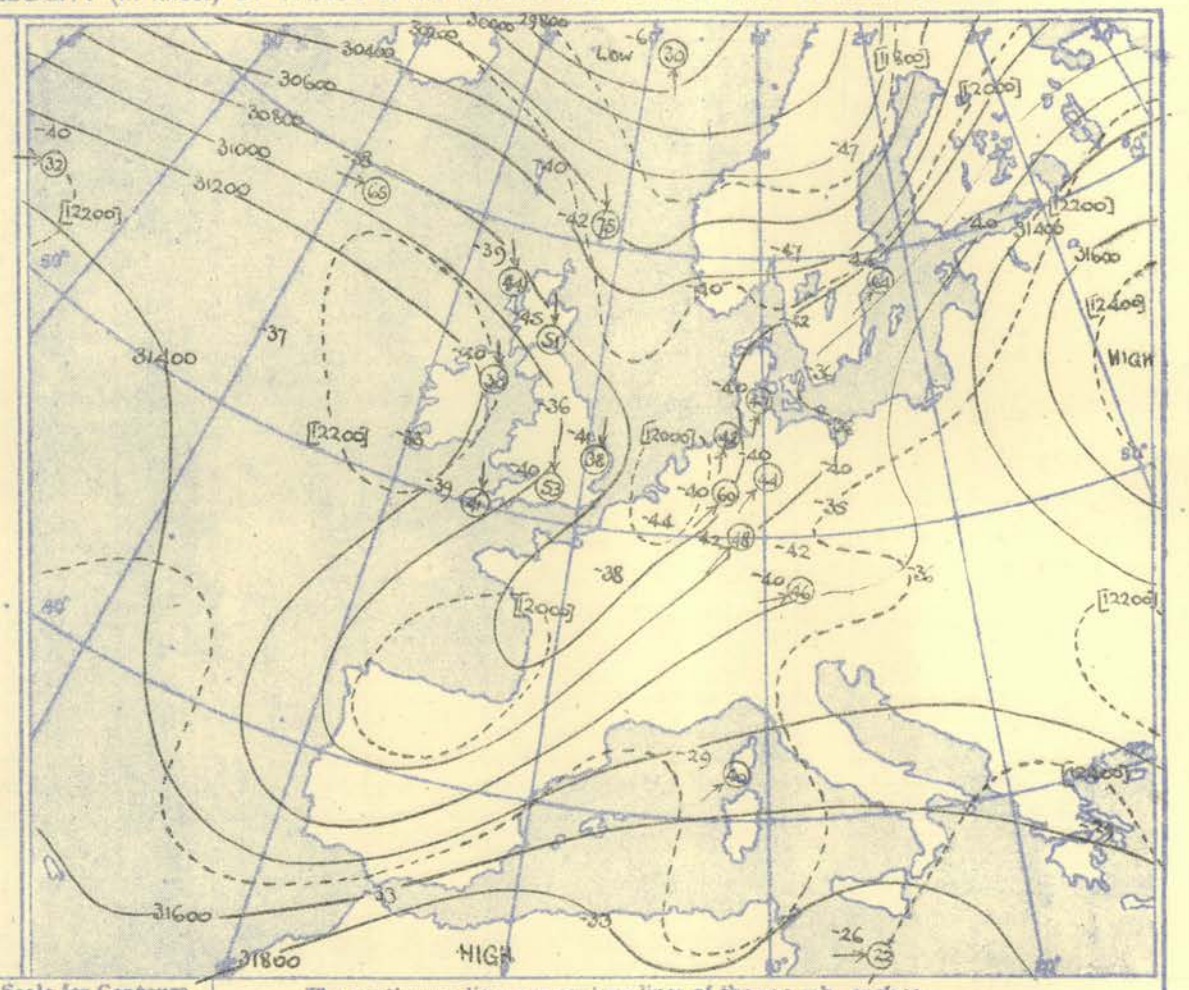
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

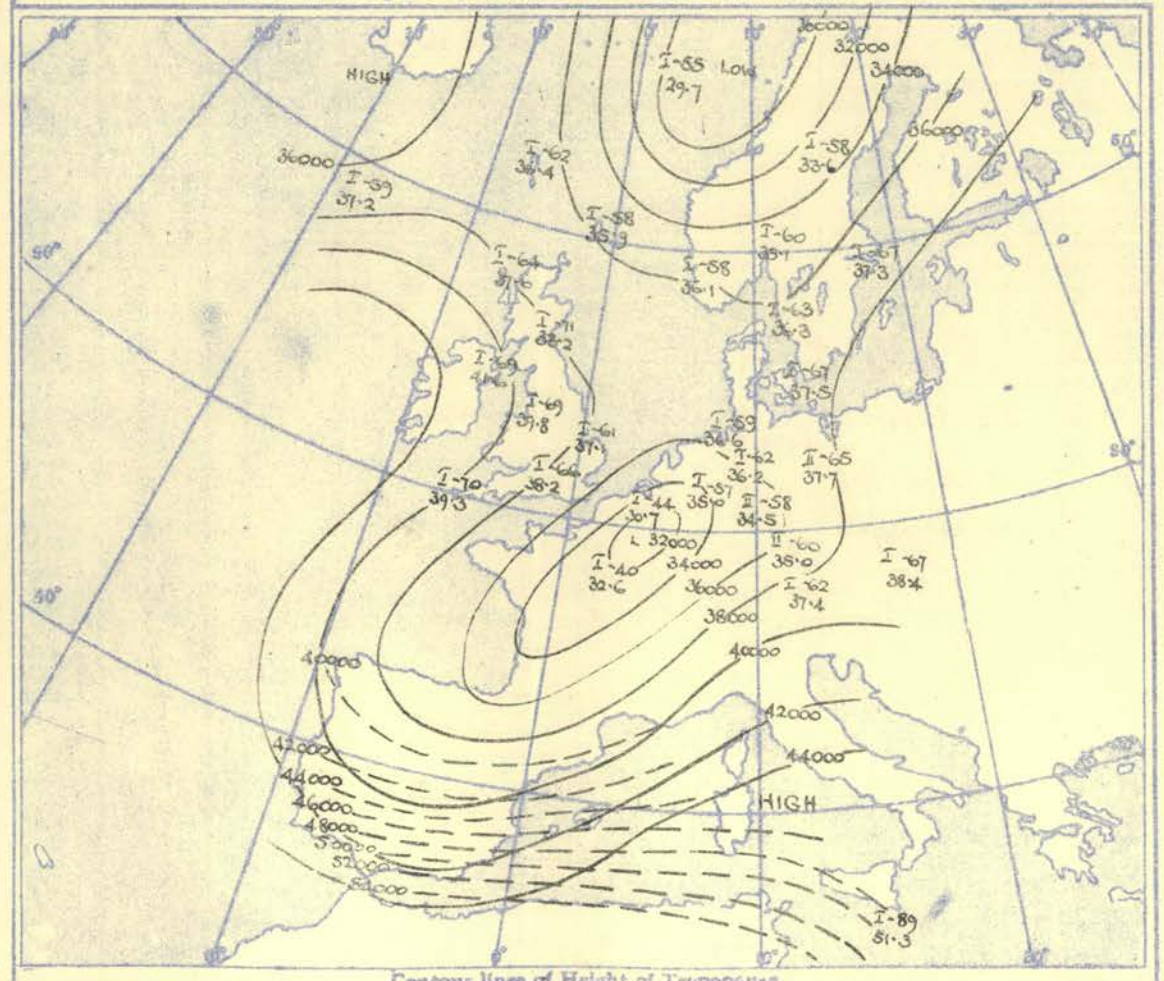
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 50 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Steady warming of the cold trough over the North Sea, mainly by advection from the West.

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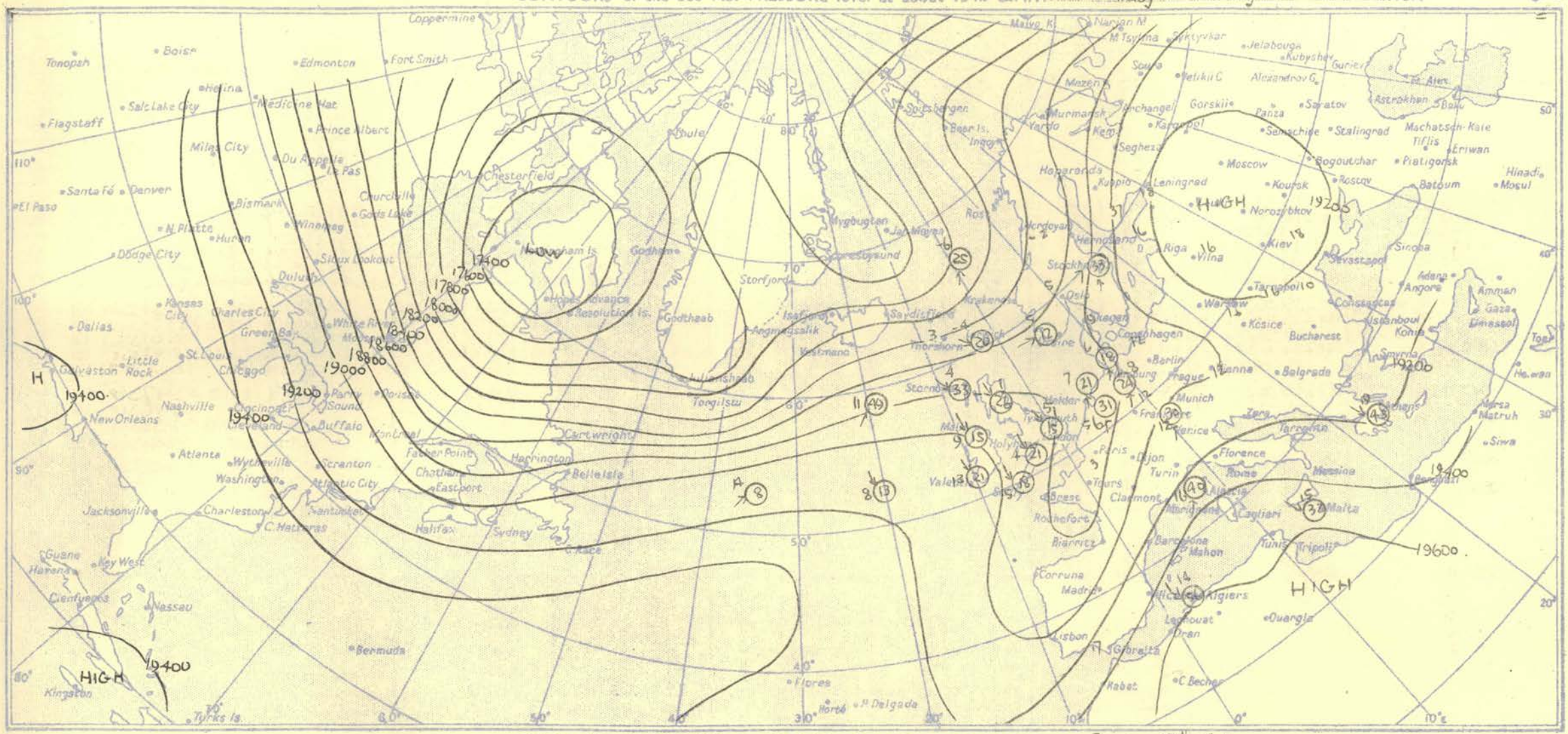
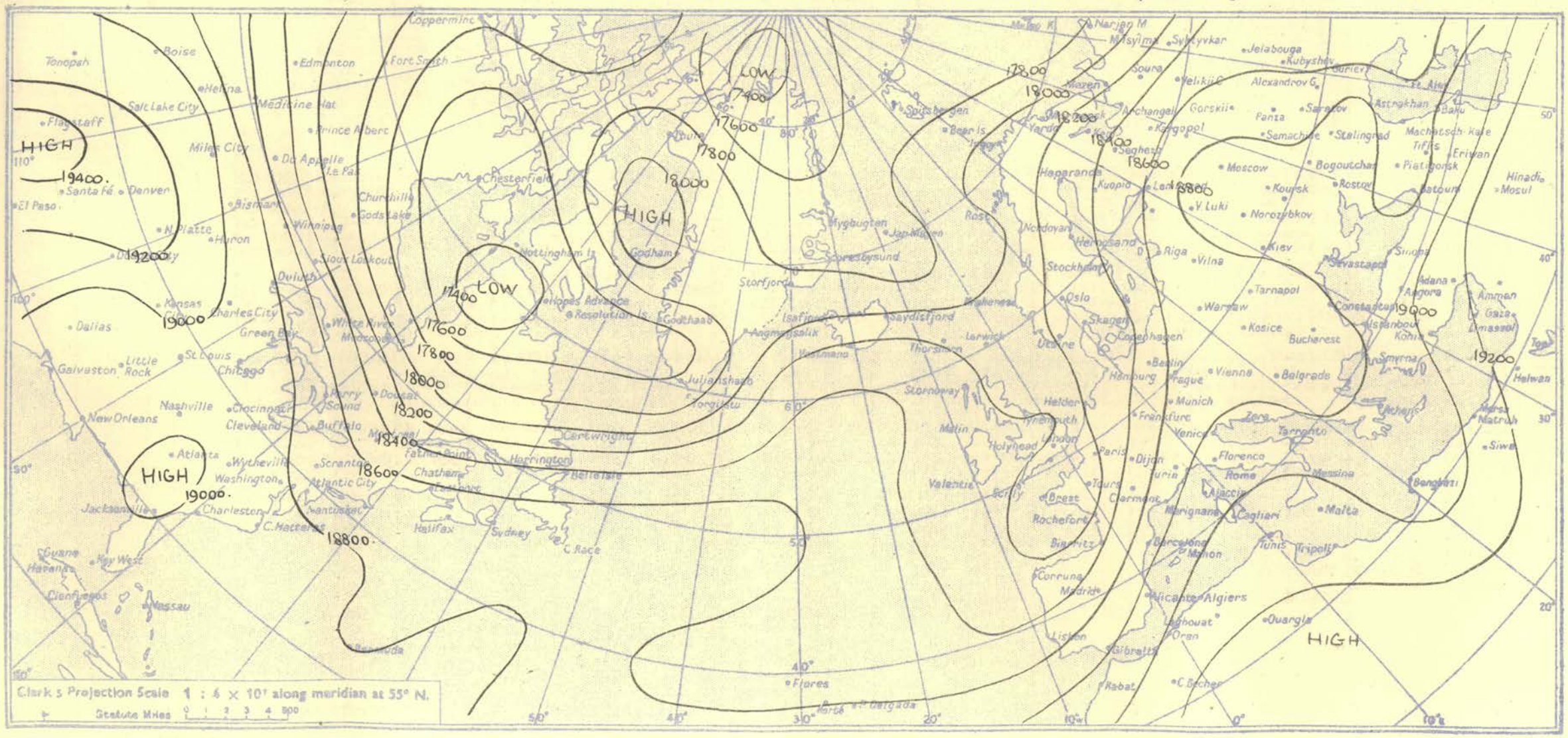
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Sunday 15th July 1951.



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



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Sunday 15th July 1951.

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

15hrs G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15hrs G.M.T.	1014.6 mb	1004.6 mb	205
STORNOWAY	15hrs G.M.T.	1017.6 mb	1016.0 mb	695
LEUCHARS	15hrs G.M.T.	1020.2 mb	1019.4 mb	721
ALDERGROVE	15hrs G.M.T.	1023.7 mb	1014.1 mb	651
LIVERPOOL	15hrs G.M.T.	1024.1 mb	1022.1 mb	673
DOWNHAM MARKET	15hrs G.M.T.	1022.0 mb	1017.6 mb	640
LARKHILL	15hrs G.M.T.	1023.3 mb	1009.6 mb	722
CAMBORNE	15hrs G.M.T.	1025.6 mb	1015.0 mb	700
Valentia	15hrs G.M.T.		1026 mb	

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53		
1000	03·3	52	52		
950		48	46		
900	32·7	49	26		
850		43	20		
800	64·3	42	18		
750		36	11		
700	93·1	31	07		
650		24	03		
600	139·5	16	-4		
550		08	-11		
500	184·9	4	-9		
450		40	-24		
400	238·3	23	-44		
350		-32			
300	303·1	42			
250		-56			
200	391·7	-50			
170		-50			
150		-51			
130		-48			
110		-50			
100	543·1	-46			
90		-44			
80		-49			
70		-50			
60		-49			

Isothermal 975-965 mb 49°
935-917 mb 50°

Tropopause: I236 mb -58° 35200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·4	62	54	250	08
1000	01·9	60	58		
950		57	49	249	20
900	33·8	48	42	247	21
850		47	21	251	21
800	65·7	43	09	268	18
750		39	05	271	20
700	101·2	33	01	271	20
650		27	-3	276	20
600	141·2	21	11	288	23
550		13	04	290	27
500	187·2	03	00	301	33
450		-1	-11	305	41
400	241·8	-12	-22	315	37
350		-24	-36	304	48
300	308·5	-39	-49	304	44
250		-54		314	05
200	396·1	-63		313	52
170		-64		306	34
150		-57		302	19
130		-53		276	14
110		-51		279	18
100	745·3	-51		267	10
90		-51		263	11
80		-50		267	11
70		-49			

Isothermal 893-850 mb 47°

Tropopause: I219 mb -64° 37600'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·2	61	53	300	15
1000	05·6	60	46	271	
950		54	40	268	17
900	34·6	47	32	270	14
850		43	25	282	16
800	66·3	39	25	295	17
750		34	24	310	17
700	101·5	27	15	301	19
650		20	11	288	13
600	141·1	13	04	304	19
550		08	-5	312	23
500	186·8	01	-8	318	26
450		-7	-17	315	25
400	240·7	-13	-41	332	32
350		-28	-48	337	46
300	310·8	-40		336	51
250		-54		333	55
200	398·6	-68		331	49
170		-60		322	15
150		-56		314	13
130		-54		305	14
110		-52		279	12
100	540·0	-51		278	02
90		-51		281	02
80		-50			
70		-50			
60		(55)			

Inversion 450 mb +8-431 mb +7°
Isothermal 650-607 mb 20°

Tropopause: I212 mb -71° 38200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	63	51		
1000	06·6	61	01		
950		53	47		
900	35·6	43	32		
850		40	27		
800	61·1	36	19		
750		26	07		
700	102·4	14	15		
650		29	08		
600	142·6	24	07		
550		14	-1		
500	188·7	06	-8		
450		-3	-17		
400	242·1	-9	-24		
350		-21	-38		
300	310·3	-36	-54		
250		-54			
200	398·0	-69			
170		-60			
150		-57			
130		-58			
110		-54			
100		-52			
90	946·4	-51			
80		-50			
70		(55)			

Inversion 820 mb 40°-800 mb 41°
693 mb 33°-682 mb 36°
Isothermal 464 mb 2°-455 mb 3°

Tropopause: I193 mb -69° 40600'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	64	48		
1000	06·7	59	41		
950		52	34		
900	35·6	43	32		
850		40	27		
800	61·1	36	19		
750		26	07		
700	102·4	14	15		
650		29	08		
600	142·6	24	07		
550		14	-1		
500	188·7	06	-8		
450		-3	-17		
400	242·1	-9	-24		
350		-21	-38		
300	310·3	-36	-54		
250		-54			
200	398·0	-69			
170		-60			
150		-57			
130		-58			
110		-54			
100		-52			
90	946·4	-51			
80		-50			
70		(55)			

Inversion 765 mb 35°-745 mb 33°
Isothermal 787-765 mb 35°
440-425 mb -5°

Tropopause: I200 mb -69° 39800'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	68	55	260	03
1000	06·2	65	53	297	06
950		57	47	303	07
900	35·3	49	40	305	08
850		43	32	297	12
800	61·0	39	31	294	10
750		30	23	315	11
700	102·3	22	19	326	19
650		20	08	336	10
600	142·4	21	-11	338	15
550		14	-17	340	16
500	188·5	05	-17	350	15
450		+5	-18	001	22
400	242·5	-16	-28	001	30
350		-26	-37	356	34
300	308·7	-41		358	38
250		-56		001	55
200	396·7	-56		352	20
170		-55		324	14
150		-53		313	08
130		-52		309	05
110		-52		285	03
100		-52		270	02
90	946·9	-52		252	02
80		-53		Calm	
70		-55		"	
60		-56		"	
		-53		"	
		49		"	

Inversion 826 mb 40°-814 mb 42°
750 mb 30°-718 mb 32°
Isothermal 718-680 mb 32°
670-645 mb 30°

Tropopause: I224 mb -61° 37100'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	66	54	030	05
1000	07·0	59	48	324	09
950		51	39	306	05
900	35·8	46	38	049	04
850		43	32	056	03
800	61·3	42	29	337	04
750		32	23	320	06
700	102·7	22	21	319	10
650		29	25	330	14
600	142·8	23	-8	335	12
550		20	-5	329	17
500	188·3	-5	-13	334	18
450		-3	-21	338	28
400	242·6	-13	-32	342	40
350		-25	-34	352	38
300	313·6	-35	-50	357	41
250		-56		003	53
200	391·1	-61		005	37
170		-60		349	20
150		-59		334	15
130		-58			
110		-58			
100		-58			
90		(56)			

(41) 43

Inversion 793 mb 29°-772 mb 32°
673 mb 26°-660 mb 27°
584 mb 19°-575 mb 23°
Isothermal 660-650 mb 27°

Tropopause: I213 mb -66° 38200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	58	50	350	08
1000	07·4	56	48	334	05
950		51	42	344	05
900	36·4	47	36	326	09
850		44	30	330	16
800	66·8	39	27	282	13
750		32	26	306	13
700	102·6	30	11	340	14
650		27	00	354	18
600	142·6	21	09	348	15
550		13	00	341	18
500	188·6	-3	-5	351	21
450		-6	-16	005	26
400	242·6	-14	-27	006	37
350		-27	-41	002	43
300	313·6	-44		006	46
250		-57		001	49
200	395·5	-66		001	39
170		-60		346	21
150		-61		340	16
130		-58		354	08
110		-61		297	08
100		-61		313	08
90		-60			
80		-60			
70		(58)			

Inversion 863 mb 40°-847 mb 44°
Isothermal 847-688 mb 31°

Tropopause: I204 mb -70° 39200'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	03·3	62	52	280	05
1000	07·3	60	50	270	10
950		51	39	276	09
900	36·4	46	26	284	08
850		44	22	056	08
800	66·2	43	22	019	11
750		36	19	330	15
700	103·7	27	21	332	17
650		25	07	337	15
600	144·3	28	07	331	15
550		20	-8	329	13
500	191·0	-1	-17	318	21
450		09	-26	318	34
400	246·1	-33	-44	314	30
350		-49	-61	321	29
300	313·6	-36	-48	354	16
250		-52		346	25
200		-52		346	25
170		(249)			

Inversion 721 mb 33°-685 mb 40°

MR

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	59	50	275	13
1000	04·1	56			
950		48	47	259	23
900	32·9	50	33	264	24
850		46	31	255	13
800	64·7	41	25	265	13
750		36	24	259	17
700	100·2	31	16	255	23
650		26	12	248	18
600	140·2	18	06	249	24
550		14	04	271	21
500	186·0	04	-15	279	26
450		-7	-19	284	29
400	240·0	-16	-30	302	42
350		-30	-33	309	43
300	305·8	-44		297	40
250		-60		288	53
200	392·3	-61		294	41
170		-58		286	22
150		-58		277	17
130		(57)			
110		(136)			

Inversion 950 mb 48°-930 mb 51°
565 mb 11°-554 mb 15°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·5	57	54	250	08
1000	08·2	56	52	258	18
950		53	50	256	22
900	33·8	51	39	269	29
850		46	34	260	27
800	64·2	42	22	263	24
750		39	34	280	30
700	101·6	34	32	289	35
650		27	23	286	40
600	141·7	18	14	283	41
550		14	06	278	39
500	187·8	04	-13	282	37
450		-4	-28	282	40
400	241·7	-21	-37	281	41
350		-29	-48	274	42
300	308·5	-45		275	44
250		-60		277	52
200	393·3	-65		275	49
170		-64		275	32
150		-63		277	21
130		-61		279	17
110					
100					
90					
80					
70					
60					

Inversion 966 mb 54°-950 mb 55°
570 mb 16°-573 mb 17°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	61	55	190	18
1000	05·6	58	54	245	27
950		52	49	247	28
900	34·6	47	42	253	26
850		44	33	262	22
800	66·2	39	37	276	22
750		35	28	263	18
700	101·4	30	15	282	15
650		24	11	294	21
600	141·2	19	11	300	27
550		13	08	328	28
500	187·2	05	00	334	34
450		-6	-11	326	37
400	241·7	-24	-36	310	35
350		-30	-35	310	37
300	311·4	-45		312	27
250		-60		314	42
200	399·6	-64		312	37
170		-65		314	25
150		-63		311	19
130		-61		313	15
110		-60		300	11
100	539·3	-61		306	06
90		-59		260	04
80		-56			
70					
60					

Inversion 950 mb 54°-930 mb 55°
Isothermal 930-910 mb 55°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	59	49	325	07
1000	06·3			355	15
950		56	47	342	20
900	35·6	45	36	325	16
850		41	28	317	18
800	66·8	39	27	282	13
750		32	26	306	13
700	101·5	29	11	334	12
650		27	01	353	18
600	142·7	22	-2	333	20
550		18	-5	331	22
500	187·4	00	-8	351	21
450		-8	-17	347	27
400	241·1	-19	-31	355	43
350		-29	-45	008	51
300	310·0	-44		007	52
250		-63		003	53
200	397·6	-61		355	33
170		-58		341	12
150		-53		009	09
130		-54		292	08
110		-60		263	06
100					
90					
80					
70					
60		(61)			

Inversion 1019 mb 59°-990 mb 60°
774 mb 30°-750 mb 33°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	51	300	09
1000	07·4	56	48	334	05
950		51	42	344	05
900	36·4	46	26	284	08
850		44	22	056	08
800	66·8	39	17	282	13
750		32	26	325	12
700	102·6	30	11	340	14
650		27	00	354	18
600	142·6	21	09	348	15
550		13	00	341	18
500	188·6	-3	-5	351	21
450		-6	-16	005	26
400	242·6	-14	-27	006	37
350		-27	-41	002	43
300	313·6	-44		006	46
250		-57		001	49
200	395·5	-66		001	39
170		-60		346	21
150		-61		340	16
130		-58		354	08
110		-61		297	08
100		-61		313	08
90		-60			
80		-60			
70		(58)			

Inversion 755 mb 29°-743 mb 32°
700 mb 30°-650 mb 31°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	03·2	58	50	350	08
1000	07·4	56	48	334	05
950		51	42	344	05
900	36·4	46	26	284	08
850		44	22	056	08
800	66·2	43	22	019	11
750		36	19	330	15
700	103·7	27	21	332	17
650		25	07	337	15
600	144·3	28	07	331	15
550		20	-8	329	13
500	191·0	-1	-17	318	21
450		09	-26	318	34
400	246·1	-33	-44	314	30
350		-49	-61	321	29
300	313·6	-36	-48	354	16
250		-52		346	25
200		-52		346	25
170		(249)			

Inversion 721 mb 33°-685 mb 40°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	59	50	275	13
1000	04·1	56			
950		48	47	259	23
900	32·9	50	33	264	24
850		46	31	255	13
800	64·7	41	25	265	13
750		36	24	259	17
700	100·2	31	16	255	23
650		26	12	248	18
600	140·2	18	06	249	24
550		14	04	271	21
500	186·0	04	-15	279	26
450		-7	-19	284	29
400	240·0	-16	-30	302	42
350		-30	-33	309	43
300	305·8	-44		297	40
250		-60		288	53
200	392·3	-61		294	41
170		-58		286	22
150		-58		277	17
130		(57)			
110		(136)			

Inversion 950 mb 48°-930 mb 51°
565 mb 11°-554 mb 15°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·5	57	54	250	08
1000	08·2	56	52	258	18
950		53	50	256	22
900	33·8	51	39	269	29
850		46	34	260	27
800	64·2	42	22	263	24
750		39	34	280	30
700	101·6	34	32	289	35
650		27	23	286	40
600	141·7	18	14	283	41
550		14	06	278	39
500	187·8	04	-13	282	37
450		-4	-28	282	40
400	241·7	-21	-37	281	41
350		-29	-48	274	42
300	308·5	-45		275	44
250		-60		277	52
200	393·3	-65		275	49
170		-64		275	32
150		-63		277	21
130		-61		279	17
110					
100					
90					
80					
70					
60					

Inversion 966 mb 54°-950 mb 55°
570 mb 16°-573 mb 17°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	61	55	190	18
1000	05·6	58	54	245	27
950		52	49	247	28
900	34·6	47	42	253	26
850		44	33	262	22
800	66·2	39	37	276	22
750		35	28	263	18
700	101·4	30	15	282	15
650		24	11	294	21
600	141·2	19	11	300	27
550		13	08	328	28
500	187·2	05	00	334	34
450		-6	-11	326	37
400	241·7	-24	-36	310	35
350		-30	-35	310	37
300	311·4	-45		312	27
250		-60		314	42
200	399·6	-64		312	37
170		-65		314	25
150		-63		311	19
130		-61		313	15
110		-60		300	11
100	539·3	-61		306	06
90		-59		260	04
80		-56			
70					
60					

Inversion 950 mb 54°-930 mb 55°
Isothermal 930-910 mb 55°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	59	49	325	07
1000	06·3			355	15
950		56	47	342	20
900	35·6	45	36	325	16
850		41	28	317	18
800	66·8	39	27	282	13
750		32	26	306	13
700	101·5	29	11	334	12
650		27	01	353	18
600	142·7	22	-2	333	20
550		18	-5	331	22
500	187·4	00	-8	351	21
450		-8	-17	347	27
400	241·1	-19	-31	355	43
350		-29	-45	008	51
300	310·0	-44		007	52
250		-63		003	53
200	397·6	-61		355	33
170		-58		341	12
150		-53		009	09
130		-54		292	08
110		-60		263	06
100					
90					
80					
70					
60		(61)			

Inversion 1019 mb 59°-990 mb 60°
774 mb 30°-750 mb 33°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	51	300	09
1000	07·4	56	48	334	05
950		51	42	344	05
900	36·4	46	26	284	08
850		44	22	056	08
800	66·8	39	17	282	13
750		32	26	325	12
700	102·6	30	11	340	14
650		27	00	354	18
600	142·6	21	09	348	15
550		13	00	341	18
500	188·6	-3	-5	351	21
450		-6	-16	005	26
400	242·6	-14	-27	006	37
350		-27	-41	002	43
300	313·6	-44		006	46
250		-57		001	49
200	395·5	-66		001	39
170		-60		346	21
150		-61		340	16
130		-58		354	08
110		-61		297	08
100		-61		313	08
90		-60			
80		-60			
70		(58)			

Inversion 755 mb 29°-743 mb 32°
700 mb 30°-650 mb 31°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	03·2	58	50	350	08
1000	07·4	56	48	334	05
950		51	42	344	05
900	36·4	46	26	284	08
850		44	22	056	08
800	66·2	43	22	019	11
750		36	19	330	15
700	103·7	27	21	332	17
650		25	07	337	15
600	144·3	28	07	331	15
550		20	-8	329	13
500	191·0	-1	-17	318	21
450		09	-26	318	34
400	246·1	-33	-44	314	30
350		-49	-61	321	29
300	313·6	-36	-48	354	16
250		-52		346	25
200		-52		346	25
170		(249)			

Inversion 721 mb 33°-685 mb 40°

Tropopause: I220 mb -70° 37200'

Tropopause: I222 mb -65° 37300'

Tropopause: I22 mb -73° 37000'

Tropopause: I194 mb -66° 40400'

Tropopause: I150 mb -68° 36300'

Tropopause: II210 mb -68° 37500'

Tropopause: I180 mb -70° 42000'

HMSO Press, MO. Dunstable

No. 11796

DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.

Monday 16th July 1951. Page 1.

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

03h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.
Pressure: M.S.L.	1014·5 mb	1018·4 mb	1020·7 mb	1025·1 mb	1025·4 mb	1024·9 mb	1026·5 mb	1028·6 mb	1029·8 mb
Pressure: Surf	1004·5 mb	1016·8 mb	1019·9 mb	1015·3 mb	1023·9 mb	1020·2 mb	1010·3 mb	1017·8 mb	1028 mb
Pressure: Freezing	712 mb	667 mb	698 mb	657 mb	664 mb	695 mb	687 mb	660 mb	650 mb

Pressure mb	LERWICK Height ft./100	LERWICK °F. Temp.	LERWICK °F. Dew	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F. Temp.	STORNOWAY °F. Dew	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F. Temp.	LEUCHARS °F. Dew	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F. Temp.	ALDERGROVE °F. Dew	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F. Temp.	LIVERPOOL °F. Dew	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F. Temp.	DOWNHAM MARKET °F. Dew	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F. Temp.	LARKHILL °F. Dew	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F. Temp.	CAMBORNE °F. Dew	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA Height ft./100	VALENTIA °F. Temp.	VALENTIA °F. Dew	VALENTIA Wind Dir. °	VALENTIA Wind Vel. knots	Pressure mb
Surf	02·7	51	51	276	26	00·4	55	54	230	08	00·2	58	56	280	12	02·6	58	56	270	13	00·6	59	51	270	05	01·2	48	43	290	06	04·4	53	48	010	03	02·9	53	51	354	05	00·3	58	56	200	04	Surf
1000	03·9	51	50			05·0	53	52	245	20	05·7	56	53	261	24	06·8	57	54	275	18	07·0	57	49	278	18	06·7	53	47	304	09	07·2	55	46			02·7	56	52	355	07	08·0	56	54	240	05	1000
950		47	47	250	30		48	48	274	29		52	48	274	23		51	48	274	20		54	46	297	19		52	44	306	07		53	43	033	09		51	41	001	10		52	50	268	06	950
900	32·5	48	37	245	23	33·7	47	47	255	35	34·7	61	41	290	22	35·6	45	42	280	19	35·9	49	41	309	15	35·5	46	39	309	09	36·9	47	43	002	06	36·6	46	38	012	10	36·9	47	45			900
850		44	11	242	25		47	47	263	40		49	29	291	21		43	31	289	18			42	35	318	12		39	32	312	11		41	40	277	07		43	27	356	05		47	41			850
800	64·1	38	10	245	27	65·5	42	42	259	43	66·7	44	24	292	16	67·3	45	15	304	16	67·6	42	32	329	13	66·9	28	17	317	10	67·3	34	33	292	12	68·2	41	20	336	06	68·8	47	39			800
750		36	29	259	30		38	34	266	40		37	22	305	15		42	14	322	17		36	25	337	10		36	16	321	07		35	00	323	14		41	05	338	10		43	20			750
700	99·4	31	27	268	32	100·9	35	18	277	44	102·2	32	29	313	24	103·2	37	02	320	18	103·1	34	13	344	16	102·3	33	10	328	14	102·5	33	-04	333	16	103·7	36	00	341	12	104·7	38	07			700
650		24	17	269	34		29	21	280	44		26	22	316	34		31	22	316	21		30	16	346	20		28	17	334	22		27	13	351	17		31	15	350	15		32	16			650
600	139·3	17	12	269	36	141·1	22	12	283	44	142·2	18	16	301	34	143·6	22	15	310	21	143·3	23	12	346	22	142·4	21	06	344	25	142·6	21	-03	359	23	144·0	25	07	001	17	145·1	27	19			600
550		13	02	263	32		15	-04	287	47		14	03	297	33		14	07	309	22		16	08	354	24		12	01	352	25		11	-05	355	27		18	-12	360	20		20	14			550
500	185·2	06	-14	264	32	187·3	09	-22	295	53	188·1	04	-18	300	36	189·9	07	-11	321	27	189·5	08	00	354	21	188·3	06	-05	356	25	188·5	06	-05	359	25	190·4	08	-08	352	20	191·7	11	-01			500
450		-09	-26	259	30		-02	-26	294	51		-05	-32	306	42		-01	-33	323	30		-02	-10	346	24		-02	-19	003	30		-01	-16	353	33		00	-09	346	20		02	-18			450
400	238·9	-21	-39	268	33	241·7	-16	-36	298	52	242·1	-16	-42	323	27	243·1	-13	-51	334	30	243·9	-13	-21	332	24	242·7	-13	-25	001	36	243·0	-12	-26	359	29	245·0	-09	-26	342	22	246·6	-09	-27			400
350		-33	-50	265	36		-30	-48	299	68		-30	-59	314	39		-27	-66	332	30		-26	-36	323	27		-26	-36	360	35		-27	-41	360	24		-23	-32	341	30		-22	-37			350
300	304·1	-48		273	44	307·5	-45		301	56	307·9	-45		308	35	310·6	-43		322	32	310·2	-40	-53	320	24	309·1	-41		357	34	309·3	-41		353	29	312·1	-36	-44	341	34	313·6	-39	-52			300
250		-57		265	42		-59		297	49		-60		289	39		-59		311	37		-57		336	25		-57		357	39		-58		354	33		-57		349	36		-56				250
200	392·0	-52		281	31	394·3	-63		294	45	394·2	-72		298	43	397·3	-71		302	36	397·3	-68		318	29	396·9	-69		359	39	396·0	-70		356	40	399·3	-73		343	31	400·6	-74				200
170		-53		287	26		-57		291	33		-65		297	24		-68		304	29		-70		314	20		-67		359	25		-66		356	26		-77		350	22		-74				170
150		-50		273	20		-58		287	28		-65		301	21		-68		309	24		-61		323	17		-63		347	14		-64		343	15		-69		342	14		-67				150
130		-51		261	16		-56		289	22		-68		298	20							-61		326	14		-62		338	10		-63		337	10		-64		327	13		-66				130
110		-52					-58		288	17		-61		286	22							-64		313	10		-62					-63		336	09		-66		345	08	1115 mb	-65				110
100	542·7	-52				542·7	-57		287	14	540·1	-61		282	10						343·3	-61		308	08						541·8	-63			1102 mb	-68									100
90		-52					-56		284	11		-61		292	10							-59		324	06																			90
80							-55		282	10		-63		298	10							-59																						80
70							-56		280	08		-62		298	09						(75 mb)	-58																						70
60							-56		261	02		-62		298	04																														60
	Inversion 928mb 49°-900mb 48° 785 - 36° - 759 .. 37° Isothermal 574 - 540 mb 13°						+53 Inversion 925mb 95°-883mb 48° 760 - 40° - 743 .. 41° Isothermal 883 - 862 mb 48° 561 - 640 .. 18°						Inversion 920mb 49°-890mb 52° 576 .. 13°-557 .. 15°					Inversion 861mb 140°-822mb 46° 808 .. 99°-797 .. 46° Isothermal 550-538 mb 14°					Inversion 833 mb 40°-812mb 93° 722 .. 32°-692 .. 36° Isothermal 206 - 195 mb -68°					Inversion 1020mb 48°-992mb 65° 510 .. 04 - 496 .. 07° Isothermal 850 - 827mb 39° 785 - 766 .. 37°					Inversion 1010mb 53°-995mb 56° 790 .. 33° - 757 .. 35° Isothermal 831 - 743mb 41°					Inversion 1018 mb 53°-1007mb 57° Isothermal 757 - 728mb 35°					Inversion 883 mb 95°-826mb 98° Isothermal 700 - 688 mb 38°					
Tropopause	I 258 mb -58° 33,200'	II 220mb -66° 37,400'	I 200mb -72° 39,922'	II 213mb -70° 38,300'		I 212mb -71° 38,400'	I 203mb -71° 39,200'	I 172mb -78° 42,900'	I 182mb -77° 42,100'	Tropopause

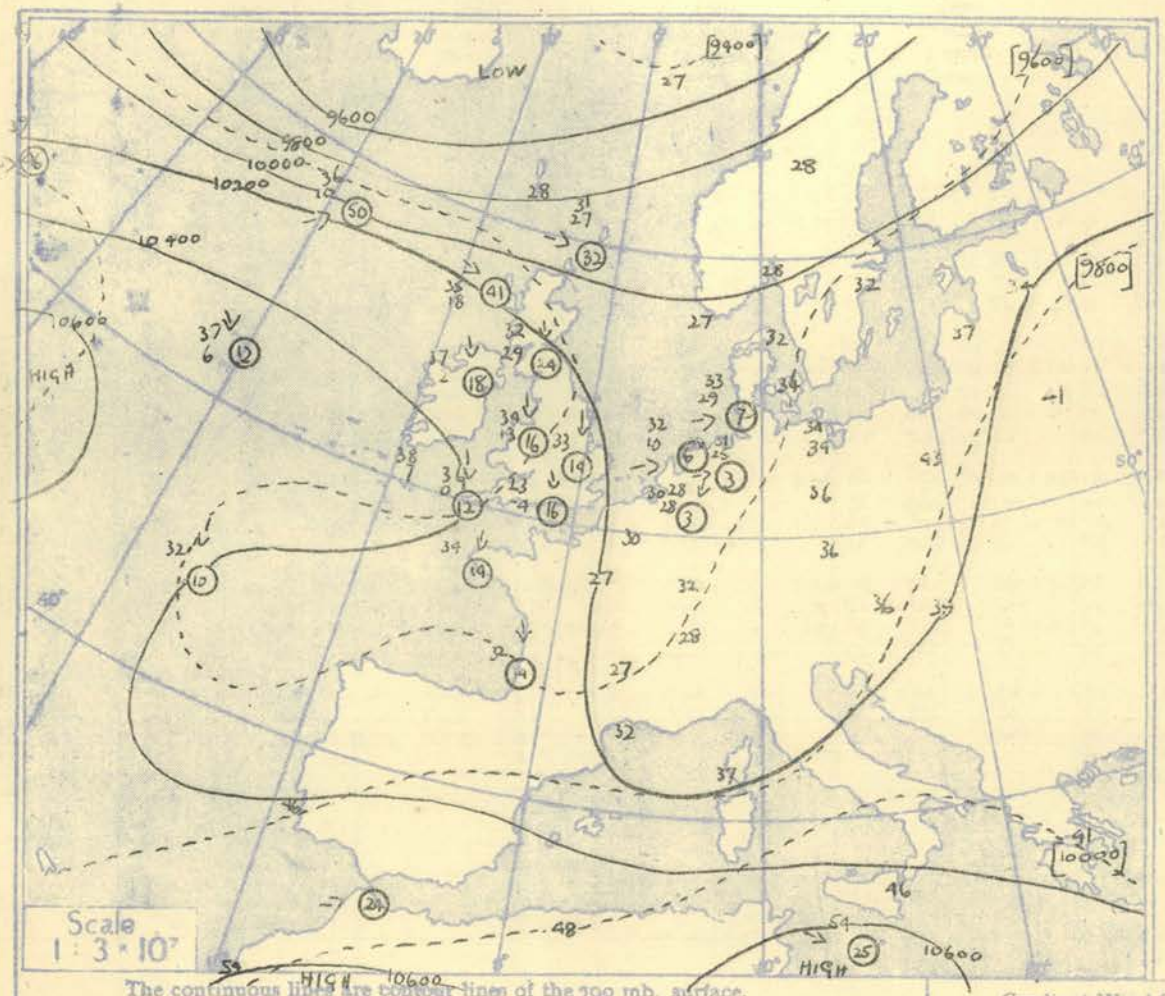
09h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	09h G.M.T.	G.M.T.
Pressure: M.S.L.	1013·0 mb	1018·9 mb	1021·9 mb	1026·3 mb	1026·7 mb	1025·5 mb	1027·4 mb	1029·6 mb	mb
Pressure: Surf	1003·0 mb	1017·3 mb	1021·1 mb	1016·5 mb	1024·7 mb	1021·0 mb	1011·6 mb	1019·0 mb	mb
Pressure: Freezing	732 mb	668 mb	682 mb	693 mb	658 mb	662 mb	655 mb	628 mb	mb

Pressure mb	LERWICK Height ft./100	LERWICK °F. Temp.	LERWICK °F. Dew	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F. Temp.	STORNOWAY °F. Dew	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F. Temp.	LEUCHARS °F. Dew	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F. Temp.	ALDERGROVE °F. Dew	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F. Temp.	LIVERPOOL °F. Dew	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F. Temp.	DOWNHAM MARKET °F. Dew	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F. Temp.	LARKHILL °F. Dew	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F. Temp.	CAMBORNE °F. Dew	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA Height ft./100	VALENTIA °F. Temp.	VALENTIA °F. Dew	VALENTIA Wind Dir. °	VALENTIA Wind Vel. knots	Pressure mb
Surf	02·7	57	51	260	29	00·9	58	57	260	15	00·2	63	56	280	13	02·6	59	52			00·6	60	56	290	10	01·2	61	49	320	05	04·4	63	48	310	06	02·9	62	57	330	05						Surf
1000	03·5	51	51			05·2	56	56	256	22	06·1	58	51	258	18	07·1	57	51			07·4	58	54	294	18	07·0	57	47	334	15	07·6	60	46	326	09	08·2	59	55	311	04						1000
950		49	49	257	33		50	50	254	25		52	42	271	21		50	47				53	50	297	15		53	45	341	12		53	42	329	10		55	47	366	07						950
900	32·0	45	45	263	32	34·0	53	49	260	30	35·1	54	49	289	27	35·8	51	40			36·3	49	45	294	20	35·9	48	39	351	12	36·5	47	36	337	10	37·2	49	40	353	10						900
850		42	42	261	33		49	47	272	31		53	45	293	27		51	24				44	41	297	22		45	29	010	12		41	23	348	12		42	34	356	12						850
800	63·6	39	39	260	33	66·1	44	37	273	34	67·4	48	40	304	33	68·0	47	32			68·1	48	12	323	13	67·7	44	35	014	15	68·2	42	16	357	14	68·9	43	36	004	12						800
750		34	33	263	33		41	25	272	40		48	36	311	23		45	32	For Winds			43	23	340	15		37	30	011	17		38	22	006	17		38	28	007	13						750
700	98·9	30	26	275	36	101·7	36	19	274	44	103·2	37	30	296	28	103·9	40	19	See		104·0	40	26	345	12	103·3	36	22	007	18	103·8	37	15	003	16	104·6	41	12	004	14						700
650		27	07	283	42		30	13	279	45		30	25	292	30		33	16				30	22	344	15		30	19	005	19		31	05	005	19		35	07	002	15						650
600	138·8	20	09	288	42	141·9	25	-02	280	39	143·6	23	17	296	33	144·9	25	09			144·3	23	05	332	29	143·6	22	14	003	24	144·1	24	09	016	24	145·3	28	12	003	16						600
550		13	-01	296	42		18	-08	284	40		20	12	310	33		20	-03	Page 3.			19	-11	339	25		15	09	359	27		19	04	020	25		21	12	021	19						550
500	189·8	06	-21	300	50	188·3	07	-15	286	44	190·1	11	-02	316	38	190·9	11	-10			190·8	12	-25	343	29	189·8	07	-01	356	27	190·6	08	-03	006	25	192·0	14	04	016	20						500
450		-03	-25	309	55		-04	-24	289	46		01	-12	329	42		-01	-20				02	-28	352	31		-03	-11	356	28		+01	+14	360	29		05	-03	004	21						450
400	234·1	-13	-39	308	62	242·5	-18	-35	289	50	244·9	-10	-20	323	41	245·9	-11	-31			245·8	-09	-34	347	33	244·0	-15	-23	361	25	245·1	-13	-23	353	24	247·3	-05	-21	356	23						400
350		-26	-60	311	66		-33	-48	298	52		-24	-33	326	42		-29	-45				-24	-45	347	30		-27	-35	351	27		-25	-40	353	26		-18	-35	334	24						350
300	305·3	-43		303	67	307·9	-48		303	99	311·7	-38	-47	329	42	311·3	-47				312·6	-38	-58	345	33	310·2	-41		337	29	311·6	-40	-52	347	28	315·1	-32	-44	338	26						300
250		-58		310	57		-66		298	49		-53		329	41		-61					-56		343	34		-57		316	31		-57		338	27											250
200	393·1	-51				394·0	-60		293	30	399·3	-70		322	35	397·3	-69				399·9	-64		329	30	397·4	-64		334	23	398·7	-65		322	29											200
170		-53					-58		289	26		-66		316	29		-65					-69		325	24		-65		339	14		-66		344	17											170
150		-52					-56		289	22		-61		302	21		-68					-61		325	18		-63		360	08		-61		003	10											150
130		-54					-56		288	15		-60		291	19		-69					-59		324	09		-60		Calm																130
110	(119 mb)	-55					-56		289	09		-59		297	14		-69					-60		314	15		-54				(145 mb)			For Rest												110
100						592·9	-56		289	08	596·2	-59		297	12	594·2	-56									599·9	-57							of Winds											100
90							-56					-59		285	10		-57										-60							See											90
80												-58		274	07		-57										-60							Page 3.											80
70												-58		288	07												-60																	70
60												-57		288	06																													60
	Inversion 710mb 29°-700mb 30° Isothermal 960 - 947 mb 99° 700 - 669 .. 30°					Inversion 720mb 47°-896mb 59°						-56 -55 Inversion 967 mb 51°-886mb 55° Isothermal 578 - 549 mb 20°					Inversion 924mb 48°-884mb 52° Isothermal 935 - 924mb 98° 884 - 863 .. 52°					Inversion 845mb 43°-816mb 98° 596 .. 22°-585 .. 29° Isothermal 1025 - 1014 mb 60° 816 - 800 .. 48°					Inversion 862 mb 93°-839mb 96° 728 .. 33°-696 .. 36° Isothermal 973 - 947 mb 53° 600 - 582 .. 22°					Inversion 850mb 41°-821mb 99° 720 .. 36°-712 .. 38° Isothermal 600-573 mb 24°					Inversion 835mb 40°-820mb 99° 734 .. 35°-723 .. 42° 547 .. -19°-535 .. -18°					
Tropopause	II 250mb -58° 34,510'	I 235mb -70° 36,000'	I 194mb -71° 40,900'	I 211 mb -73° 38,600'	I 210mb -69° 32,000'	I 218mb -66° 37,850'	I 228mb -68° 37,000'	N.R.		Tropopause

Monday 16th July. 1951.

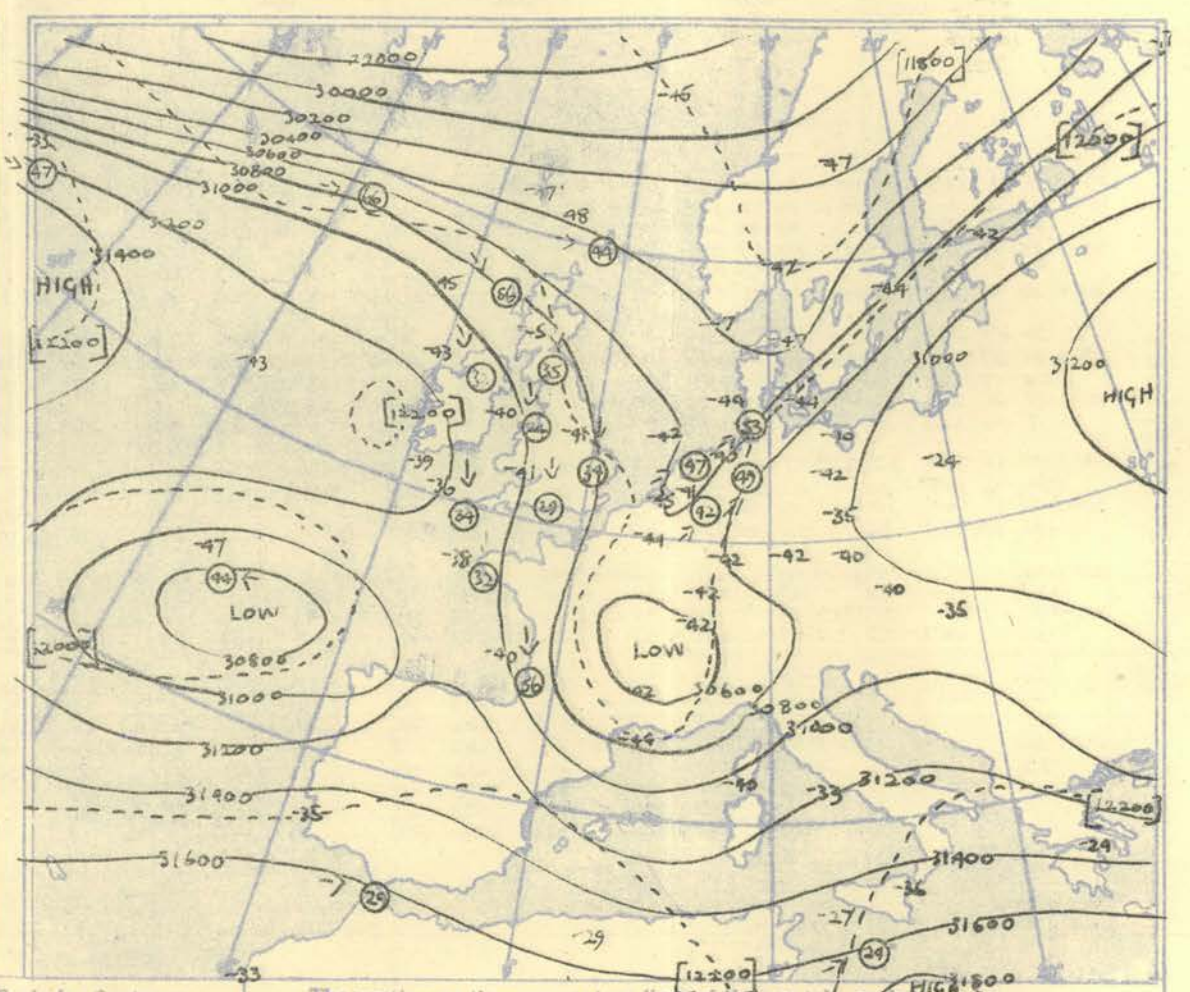
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



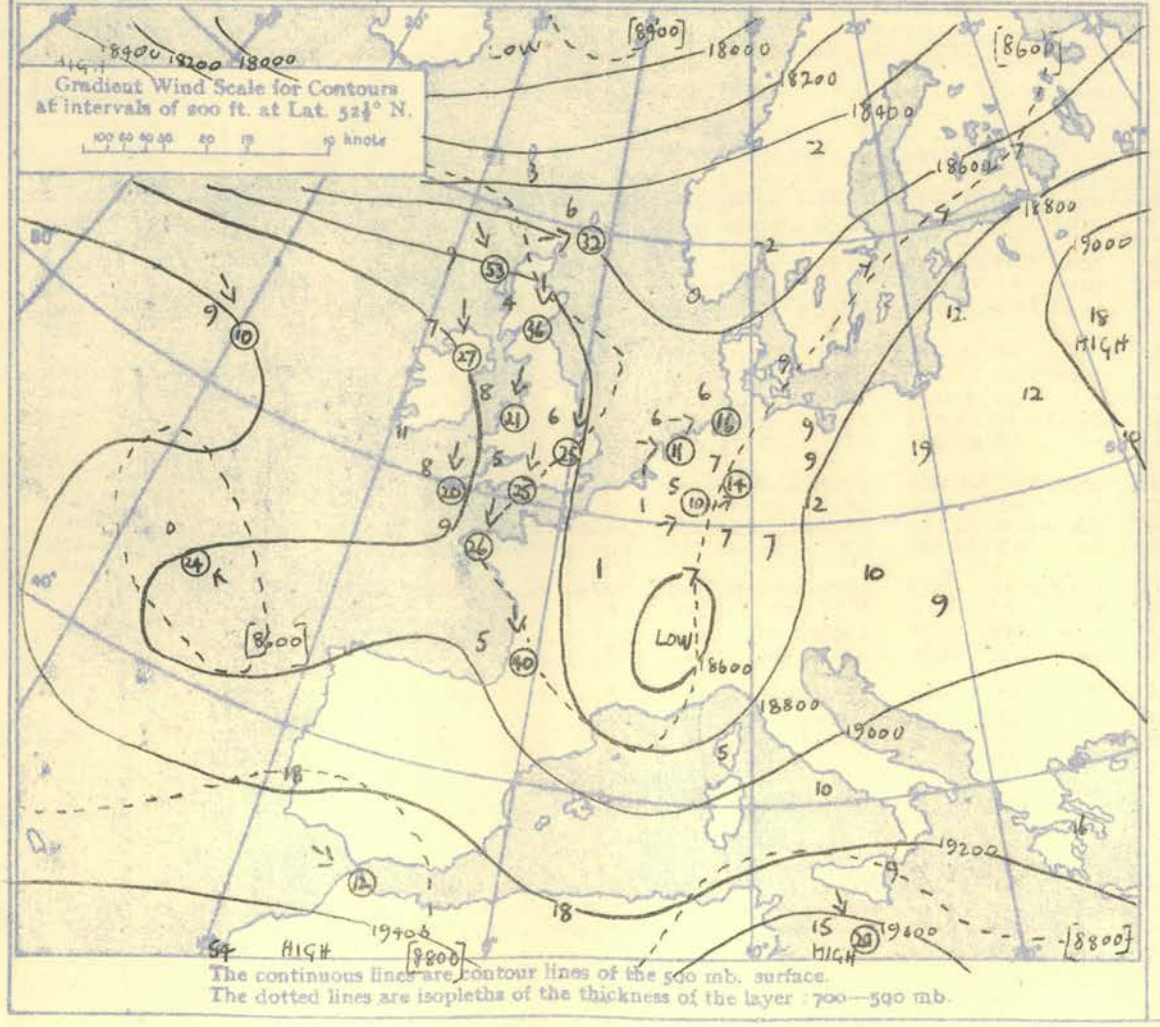
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

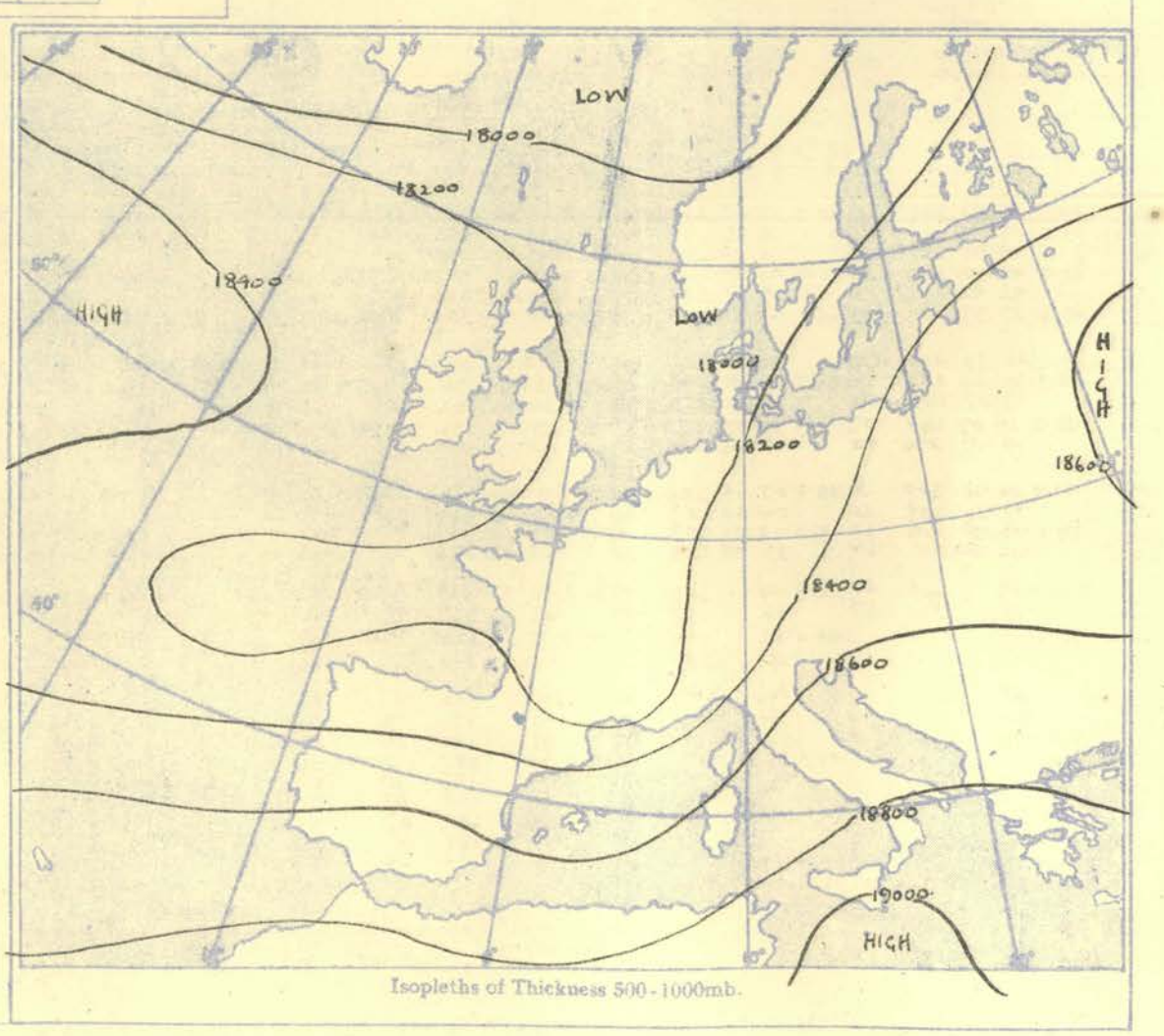
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500 - 1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure		46·1°N 11·0°W			47·1°N 12·3°W			52° 12'N 2° 12'W																								Time M.S.L. Surf Freezing Pressure
	Time	1250 hrs			1415 hrs			1355 hrs																									
	M.S.L.	1032 mb			1031 mb			1027 mb																									
	Surf	1029 mb			1015 mb			1025·5 mb																									
	Freezing	662			655			648																									
Pressure mb		Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Pressure mb
Surf		—	61	60	—	61		0·4																								Surf
1000		8·8	57	8·4	57	54		1·5																								1000
950			5141		5050																											950
900			5230		4834			36·8	52	51																						900
850			4930		4633				52	33																						850
800			4934		4038			69·0	50	19																						800
750																																750
700			3628		3837				—	—																						700
650		105·0	3533	34	1047	3528		105·1	40	33																						650
600			2923			3125			—	—																						600
550			25	—		21	—	145·7	26	—																						550
			19	—		19	—																									
500																																500
450		191·8	09	—	191·7			192·5	11	—																						450
400																																400
350								247·1	14	—																						350
300																																300
250		Surf wind			Surf wind			313·7	93	—																						250
200		Calm			NE. 7-11 kts																											200
170		Cloud			Cloud			Cloud.																								170
		1650 ft 8/10						1150 ft 8/10-																								
		Ns			3150 Ns 850			860																								
		3150 NR			1150 NR			Inversion																								
		Inversion			Isothermal			862 ms 49°																								
		350 ms 51°			750-700			850 ms 52°																								
		900 ms 52°			N 35°			Isothermal																								
		750 ms 36°						850-810 ms																								
		700 ms 39°						52°																								

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

Place		Cirrus 52·5N 20·0W		Aldergrove		Larkhill		Larkhill		Larkhill		Camborne		Camborne		Pembroke Dock		Aldergrove		Aldergrove		Place
Time		03hrs		05hrs		05hrs		11hrs		17hrs		03hrs		15hrs		14hrs		19hrs		21hrs		Time
Type				Pilot		Pilot						Pilot		Pilot						Radar Wind		Type
Feet		Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.		240	14	260	10			020	07	310	04			330	13	260	10	350	03	280	26	Surf.
1,000		250	14	260	10			090	05	310	03			327	06	260	10	040	05	264	40	1,000
2,000		260	13	265	12			350	08	300	07			331	06	270	10	010	07	265	35	2,000
3,000		250	13	275	14			350	09	300	07			336	09	290	12	340	07	275	40	3,000
4,000		260	17	275	18			340	09	300	07			336	09	310	09	340	09	276	40	4,000
5,000		260	19	278	18			350	10	320	07			347	10	010	11	010	16	278	45	5,000
6,000		—	—	288	24			360	12	340	06			006	13	350	15	020	19	275	44	6,000
8,000		—	—	303	30			020	16	010	14			015	15	350	26	030	24	270	41	8,000
10,000		310	14	311	33			020	19	010	15			027	16	350	21			268	54	10,000
14,000		270	15	312	25			010	24	010	20			029	18					274	72	14,000
18,000		310	16	312	19			010	23	(16000')				018	16					257	72	18,000
24,000		310	10	320	25			(16000')						024	21					272	84	24,000
30,000		(20000')		321	36									020	23					281	598	30,000
40,000				323	37							319	28	350	24							40,000
50,000						353	03					327	06	006	05							50,000
						025	06					222	03									
						(60000')						(57000')										

NEPHOSCOPE OBSERVATIONS

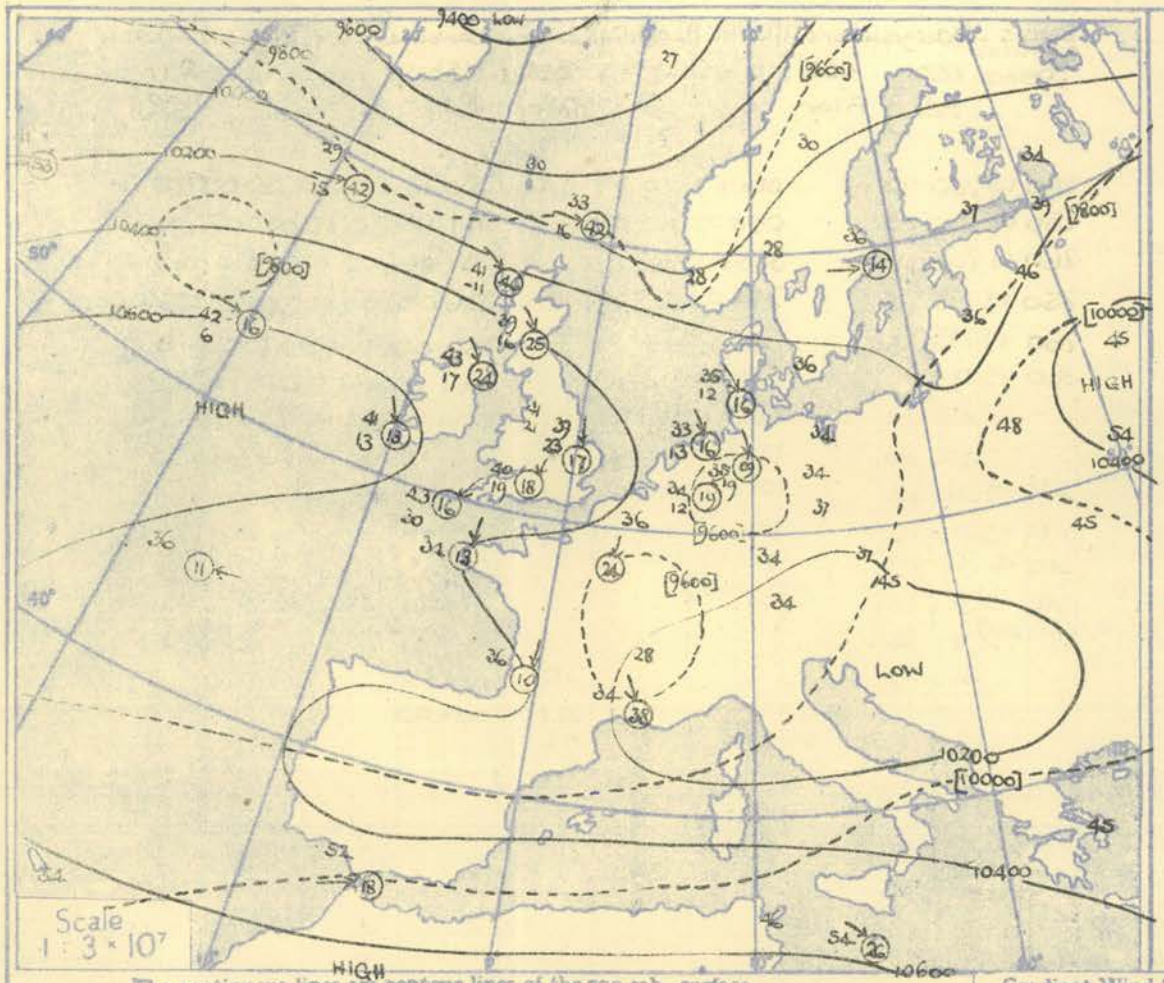
Place														Place
Time Type														Time Type
Dir. Vel.														Dir. Vel.

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

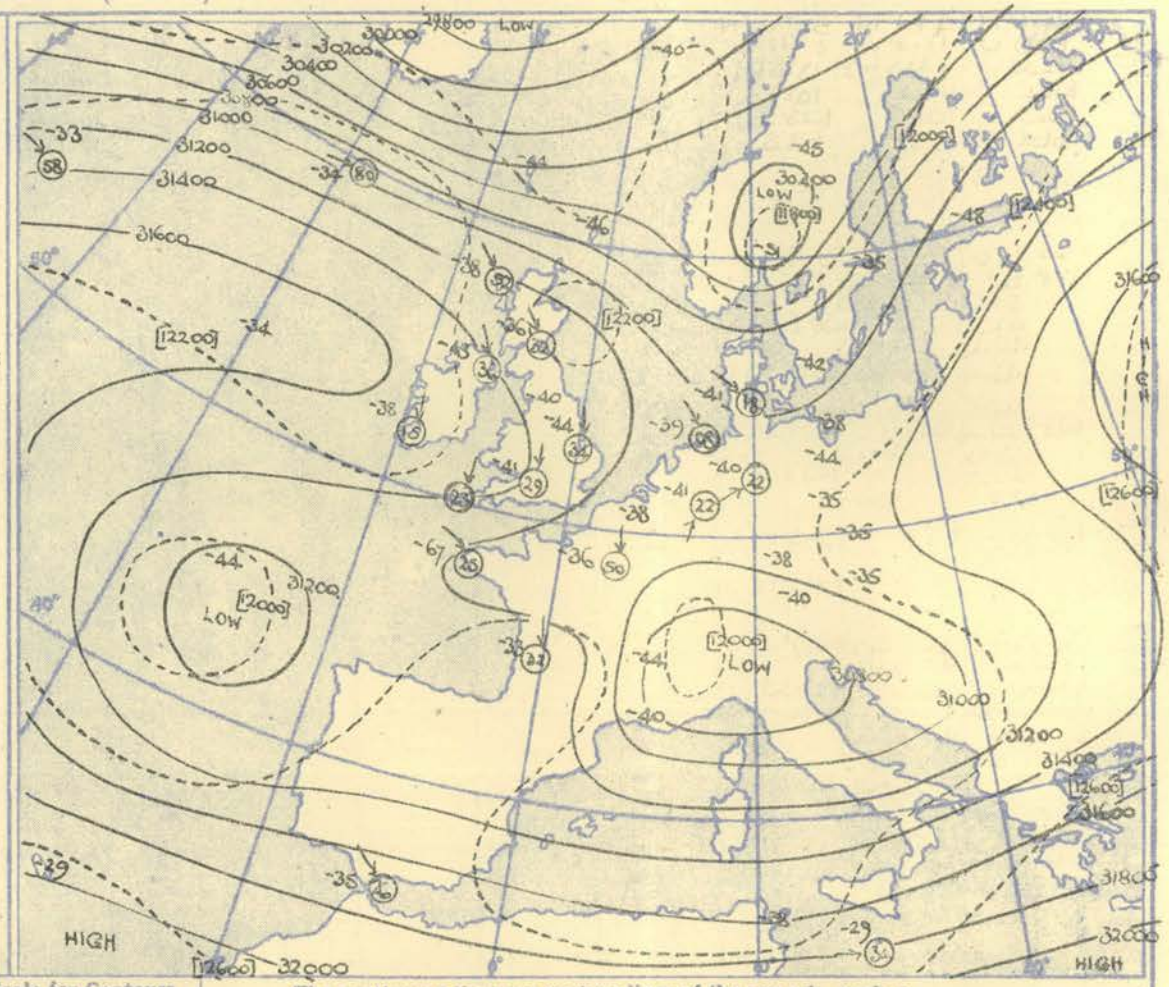
Ship		WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				WEATHER OBSERVER				CIRRUS				CIRRUS				CIRRUS						Ship
Lat/Long		57·N. 18·8W.				59·N. 18·9W.				57·0N. 19·3W.				58·9N. 19·4W.				52·4N. 19·7W.				52·4N. 19·6W.				52·4N. 19·7W.						Lat/Long
Pressure Time		03h.			G.M.T.	09h.			G.M.T.	15h.			G.M.T.	21h.			G.M.T.	03h.			G.M.T.	09h.			G.M.T.	15h.			G.M.T.			G.M.T.	Time
M.S.L.		1014			mb	1017			mb	1017			mb	1012			mb	1028			mb				mb	1029			mb			mb	M.S.L.
Surf		1014			mb	1017			mb	1017			mb	1012			mb	1028			mb				mb	1029			mb			mb	Surf
Freezing		650			mb	655			mb	745			mb	660			mb	625			mb				mb	625			mb			mb	Freezing Pressure
Pressure mb		Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Vel. knots	Pressure mb
Surf			55	52	260	27		54	48	250	28		56	50	250	27		55	54	215	17		59	55	250	13		60	57	280	15						Surf
1000		03·8	53	51	283	37	04·6	52	47	259	36	04·7	53	45	251	31	03·4	54	54	211	24	07·8	55	53	252	13	08·2	56	56	240	17						1000
950			46	46	254	37		45	42	263	34		51	35	254	38		51	51	220	28		54	52	256	12		56	54	257	21						950
900		32·4	49	44	256	41	33·2	49	24	268	41	33·5	49	23	255	38	32·2	47	47	242	39	36·8	54	52	261	11	34·1	53	50	267	26		No				900
850			46	34	259	46		45	18	269	45		47	19	256	40		43	43	258	46		52	50	270	14		54	28	272	24						850
800		64·3	46	24	261	48	64·9	40	08	268	46	65·4	42	31	257	42	63·3	41	39	252	48	69·2	47	46	280	16	69·7	51	15	262	17	Radio-Sonde					800
750																												48	09	263	15						750
700			37	21	260	47		38	15	266	48		38	25	257	45		41	38	245	72		41	39	270	18						Ascent Available.					700
650		99·8	36	06	259	50	100·4	37	00	265	60	100·8	28	15	257	42	99·6	37	33	246	72	105·0	37	06	288	12	105·8	42	06	270	16						650
600			32	-08	261	50		31	08	265	64		28	21	258	51		31	27	248	75		35	-06	311	16		38	02	273	19						600
550		140·1	25	-15	261	51	140·8	24	03	266	78	140·8	25	18	259	68	140·0	25	24	250	74	145·6	27	-09	314	14	146·5	28	-05	268	16						550
			17	-19	259	57		16	00	262	69		19	11	254	80		18	13	252	76		18	-16	300	12		22	-15	263	13						
500																																					500
450		186·4	06	-16	258	55	187·1	09	-06	261	72	187·3	11	03	253	82	186·6	11	04	252	71	192·1	09	-23	281	10	193·7	14	-24	275	09						450
400			-04	-21	260	63		-01	-17	260	68		03	-06	255	76		01	-12	259	71		-01		279	06		01	-33	275	12						400
350		240·5	-17	-34	259	66	241·6	-12	-31	258	70	242·3	-08	-18	256	83	241·4	-10	-21	267	71	246·7	-12		279	08	248·9	-07	-43	275	10						350
			-31	-41	259	68		-24	-43	255	69		-19	-30	255	83		-23	-34	263	81		-25					-20									
300		306·2	-46		259	66	308·3	-40	-51	258	71	309·7	-34	-44	255	80	308·3	-38	-50	262	97	313·0	-43				316·3	-34									300
250			-62		259	71		-57		267	84		-52		257	90		-57		254	97		-59					-31									250
200		390·4	-58		259	45	(234 mb)	-63				397·7	-65		272	78	395·2	-68		259	79	399·6	-73				404·6	-68									200
170			-59		253	39							-66		277	72		-67		265	65		-75					-75									170
150			-63		259	39							-60		280	51		-65		261	48		-72					-72									150
130			-62		259	71							-60		279	30		-60		260	39		-71					-73									130
110			-58		259	45						(121 mb)	-58					-59		258	36		-70					-74									110
100			-59		259	39											541·8	-59				542·8	-70				547·4	-73									100
90			-59		259	39																	-69					-72									90
80																							-68					-71									80
70		(141 mb)	-62																			(073 mb)	-68					-70									70
60																												-68									60
																												-67									
																											(050)	-65									
																											(040)	-63									
																											(020)	-61									
																											(018 mb)	-60									
		Inversion					Inversion					Inversion					Inversion					Inversion					Inversion										
		925 mb. 46°- 900 mb. 49°					945 mb. 44°- 930 mb. 51°					990 mb. 51°- 975 mb. 52°					800 mb. 41°- 782 mb. 44°					739 mb. 39°- 724 mb. 41°					1000 mb. 56°- 967 mb. 57°									
		858 mb. 45°- 818 mb. 49°					742 mb. 37°- 732 mb. 39°					675 mb. 39°- 650 mb. 35°					Isothermal					700 mb. 37°- 678 mb. 38°					882 mb. 52°- 863 mb. 55°									
		784 mb. 33°- 703 mb. 37°					700 mb. 37°- 690 mb. 39°					Isothermal					550 - 537 mb. 18°					Isothermal					800 - 791 mb. 51°									
		Isothermal										850 - 830 mb. 47°										990 - 900 mb. 54°					Trop- I 162 mb. -79° 48,700'									
		955 - 925 mb. 46°										785 - 750 mb. 38°										354 - 350 mb. -25°														
Tropopause		I 218 mb. -71° 37,800'					N.R.					I 220 mb. -65° 37,700'					I 220 mb. -71° 37,500'					I 190 mb. -78° 41,000'														Tropopause

Monday 16th July 1951.

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



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

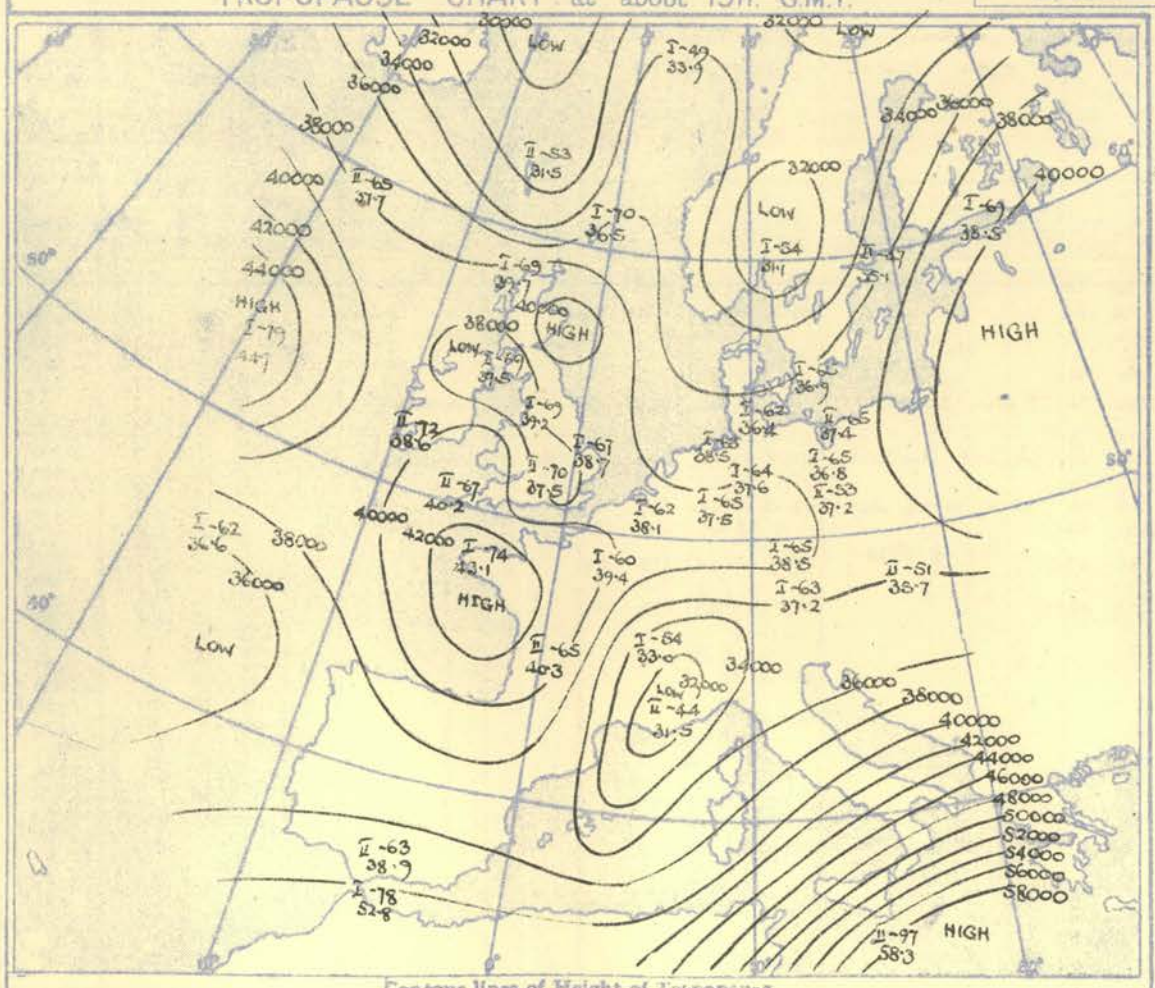


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Further warming occurred over Britain and Europe to weaken still further the cold trough over Europe. A strong westerly thermal gradient moved rapidly across the Northern Atlantic.

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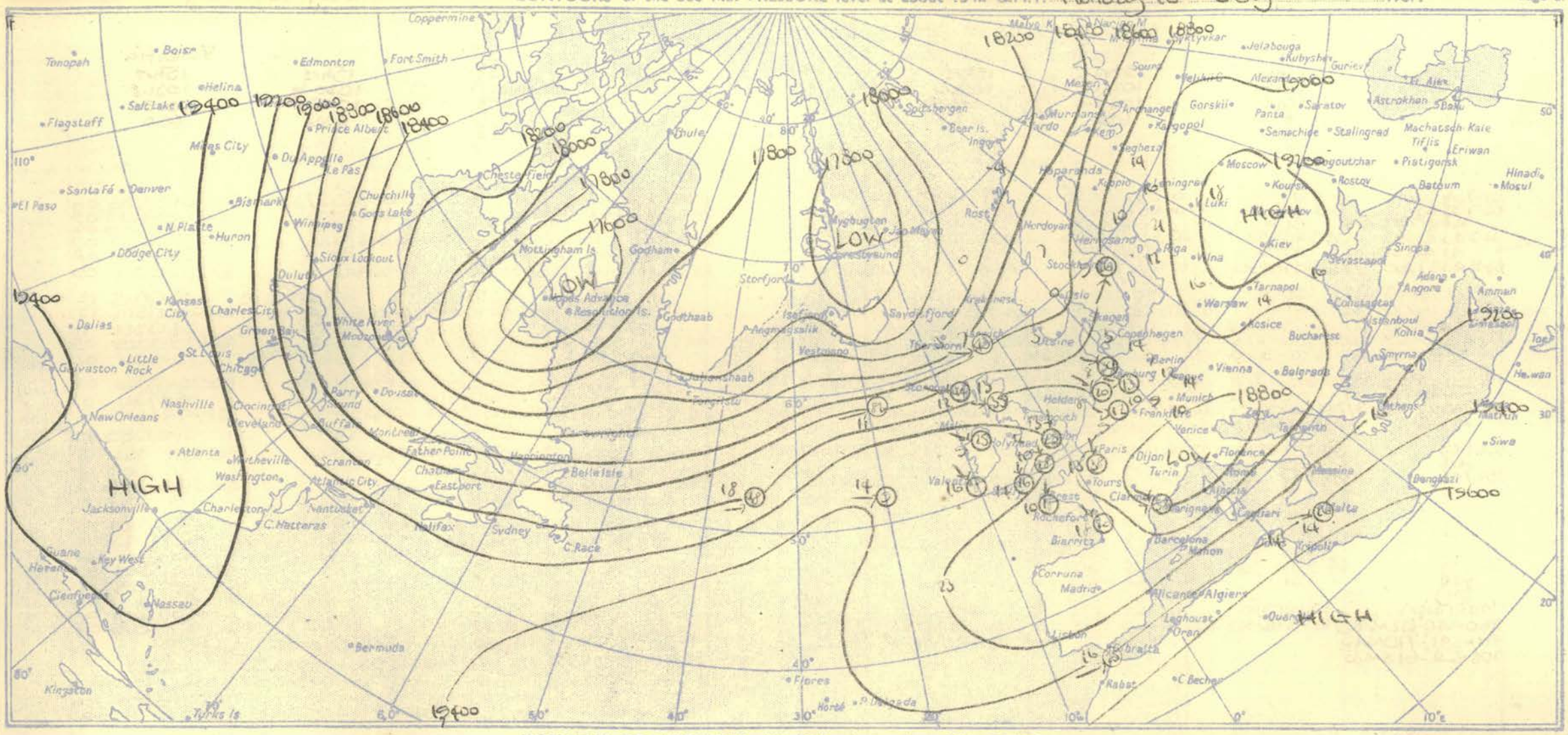
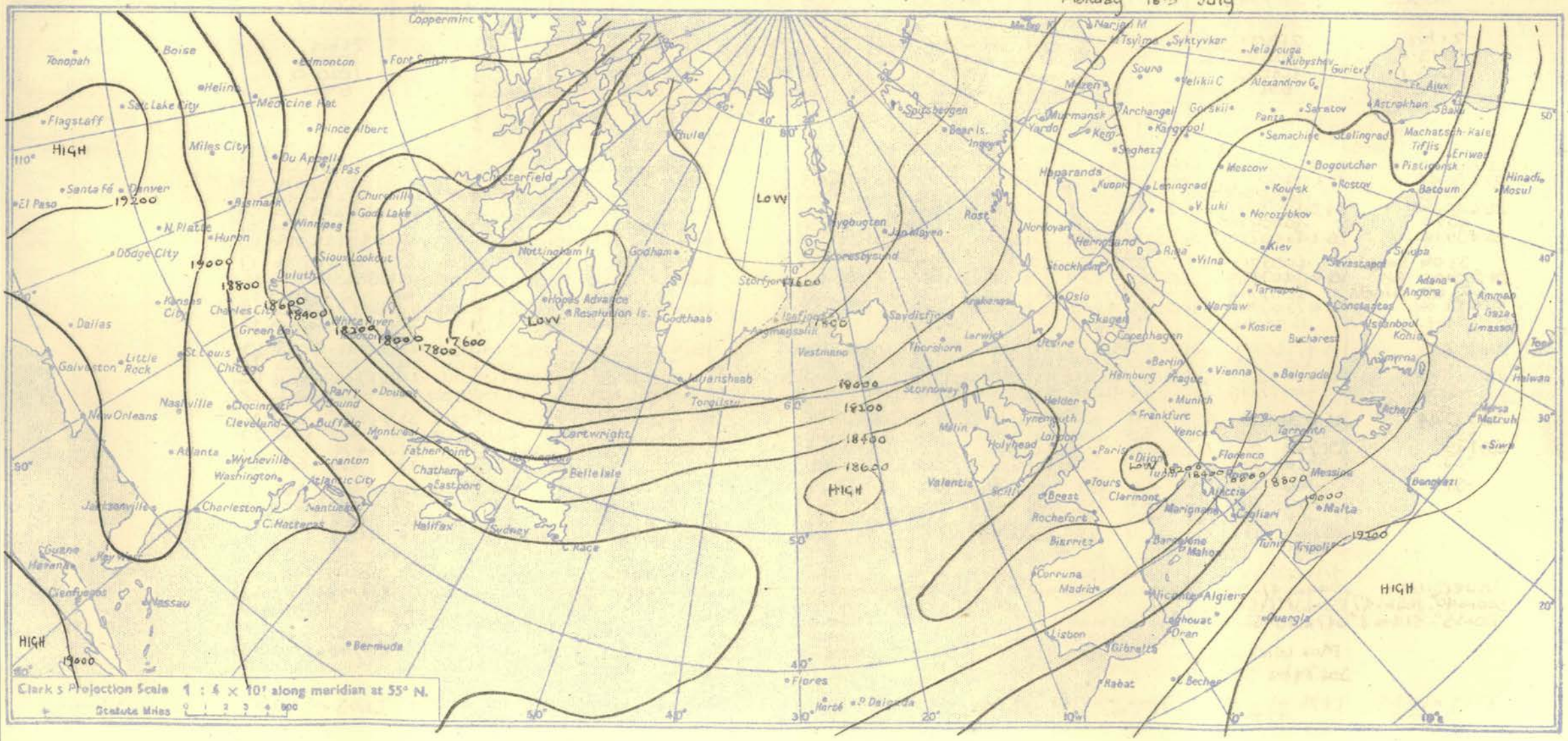
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Monday 16th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 16th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Monday 16th July 1951.

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

15 hrs G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15 hrs G.M.T.	1013·7 mb	1003·7 mb	650 mb
STORNOWAY	15 hrs G.M.T.	1019·6 mb	1018·2 mb	620 mb
LEUCHARS	15 hrs G.M.T.	1021·2 mb	1020·4 mb	639 mb
ALDERGROVE	15 hrs G.M.T.	1026·3 mb	1016·5 mb	643 mb
LIVERPOOL	15 hrs G.M.T.	1027·1 mb	1025·1 mb	635 mb
DOWNHAM MARKET	15 hrs G.M.T.	1025·5 mb	1021·1 mb	665 mb
LARKHILL	15 hrs G.M.T.	1027·1 mb	1011·8 mb	650 mb
CAMBORNE	15 hrs G.M.T.	1030·6 mb	1019·8 mb	635 mb
Valentia	15 hrs G.M.T.	1031·8 mb	1029 mb	630 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Valentia Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	54	52	280	25	00·4	59	55	270	18	00·2	73	59	280	20	02·6	67	58	280	10	00·6	67	54			01·3	71	53	245	13	04·4	70	63	030	05	02·9	63	57	330	15	03·3	64	57	280	06	Surf
1000	03·7	53	53			05·5	57	57	260	32	06·0	56	56	250	24	07·3	62	58	285	12	07·5	60	60			07·2	67	52	260	10	07·6	66	48			08·4	55	55			08·5	60	54	285	05	1000
950		48	48	262	34			51	51	257	28			60	50	277	26			55	48	282	14			58	47	275	10			58	45	341	07			53	52			52	49	300	06	950
900	32·3	43	43	263	31	34·3	45	45	257	30	35·3	56	44	296	26	36·4	56	46	284	17	36·6	55	37			36·4	52	47	292	10	36·9	51	42	336	06	37·4	55	43			37·5	56	54	337	07	900
850		41	41	261	37			47	29	265	35			53	37	293	23			51	31	286	20			50	28			46	42	302	11			44	39	341	07			46	40			54	28	326	08	850
800	63·9	43	37	260	39	66·1	47	08	266	43	67·6	48	34	288	21	68·7	61	11	297	23	08·8	49	19			68·3	48	32	322	13	68·7	45	33	011	07	69·4	48	28	33		69·8	52	22	310	09	800
750		41	24	263	35		44	9	271	43		41	24	288	22		48	17	302	24		45	33				45	19	353	15		43	35	013	15		49	10	Seeps for winds			47	09	315	12	750
700	93·5	33	16	270	42	02·0	41	-1	277	46	03·5	39	16	295	25	04·9	45	17	302	24	04·8	41	21			04·3	39	23	357	17	04·5	40	19	017	18	05·5	43	20			06·0	41	21	314	13	700
650		32	04	270	47		33	-16	278	43		24	09	298	29		33	09	295	23		34	21				19	20	359	20		32	18	013	20		35	22				34	13	322	11	650
600	139·8	24	-3	269	45	142·7	30	-12	278	43	144·1	27	04	298	36	145·5	26	00	293	21	145·5	30	08			144·9	26	-1	357	23	145·1	25	04	009	23	146·3	26	13			146·6	25	-5	329	09	600
550		17	-9	278	46		21	-9	278	48		20	00	295	26		20	-11	298	27		23	-2				18	-6	358	24		19	-5	011	22		20	07				22	-13	328	08	550
500	186·1	07	-13	278	43	189·5	12	-17	278	44	190·8	13	-11	295	35	192·0	09	-16	295	25	193·4	12	-7			191·3	13	-16	360	25	191·5	10	-21	008	28	193·0	14	-16			193·5	16	-23	320	08	500
450		-4	-19	276	54		02	-26	278	39		04	-20	303	36		-2	-28	300	25		01	+17				-1	-22	006	29		03	-29	011	29		03	-23				05	-27	347	08	450
400	240·2	-15	-27	278	37	244·4	-10	-34	275	46	245·9	-8	-30	314	35	246·4	-6	-40	306	33	247·1	-2	-25			246·0	-12	-35	006	31	246·1	-12	-37	008	30	247·3	-11	-30			248·7	-17	-36	046	13	400
350		-30	-41				-24	-43	287	51		-21	-40	316	30		-28	-50	318	29		-26	-39				-27	-48	002	33		-25	-48	007	27		-26	-40				-21	-48	350	15	350
300	306·1	-46				311·2	-38	-58	298	52	312·1	-36	-54	328	32	312·4	-43		313	36	313·6	-40	-51			312·4	-41		003	24	312·5	-41		006	29	314·4	-39	-56			315·8	-38		352	15	300
250		-64					-55		311	54		-59		333	41		-62		324	32		-58					-59		011	21		-59		003	36		-57					-56		003	20	250
200	392·7	-55				259	-66	9	300	52	400·7	-71		338	38	398·9	-63		326	33	400·5	-64				399·3	-60		337	17	399·1	-69		354	36	401·6	-66				402·5	-73		346	15	200
170		-57					-59		296	41		-69		314	31							-60					-62		328	14		-66		338	17		-64					-69		348	21	170
150		-59					-58		297	33		-55		318	31							-60					-59		327	12		-64		331	18		-64					-72		344	20	150
130		-54					-57		286	20		-64		321	31							-58					-57		328	10		-61		348	10		-65					-67		343	12	130
110		-50					-54		255	14		-63		321	24							-58					-56		330	06		-63					(144)					-63		320	08	110
100	542·3	-53				547·3	-52		242	10	546·6	-45		302	21						548·3	-56				547·4	-56		337	05	547·4	-61								547·7	-62		304	07	100
90		-48					-51					-61		273	24							-55					-55		349	04											-60		285	06	90
80		(51)										-61		273	33							-58					-55		355	02											-63		314	06	80
70		Inversion					Inversion					-61		272	39		Inversion					-58					-55		calm												-63		015	07	70
60		860 m 40°-832 m 43°, 811 m 42°-770 m 43°, 705 m 32°-615 m 35°					768 m 42°-742 m 49°					-56		272	09		925 m 52°-900 m 56°, 834 m 50°-811 m 52°					(65)					-51		"			Inversion					Inversion					Isothermal					(67)					60
												-54																													930 m 53°-915 m 55°, 821 m 48°-791 m 50°, 612 m 29°-600 m 30° Isothermal 22·1-700 m 41° 518-900 m 55°					873 m 42°-776 m 49°, 652 m 27°-623 m 29°, 557 m 15°-524 m 16° Isothermal 725-718 m 43°					825 m 41°-800 m 45°, 765 m 42°-750 m 43° Isothermal 723-697 m 40°					950-935 m 55°, 869-780 m 48°					340 m 51°-912 m 56° Isothermal 915-900 m 56°					
												(30) -54 Inversion 920 m 55°-880 m 51° Isothermal 824-694 m 39°																																		
Tropopause	I 228 m/s -70° 36500'					I 202 m/s -69° 39700'					I 184 m/s -71° 41800'					I 223 m/s -69° 37500'					I 208 m/s -69° 39200'					I 213 m/s -67° 38700'					II 224 m/s -70° 37500'					II 200 m/s -67° 40200'					II 216 m/s -72° 38600'					Tropopause

21 hrs G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21 hrs G.M.T.	1013·8 mb	1003·8 mb	742 mb
STORNOWAY	21 hrs G.M.T.	1020·3 mb	1019·3 mb	652 mb
LEUCHARS	21 hrs G.M.T.	1022·6 mb	1021·8 mb	650 mb
ALDERGROVE	21 hrs G.M.T.	1026·8 mb	1017·6 mb	650 mb
LIVERPOOL	21 hrs G.M.T.	1027·3 mb	1025·3 mb	647 mb
DOWNHAM MARKET	21 hrs G.M.T.	1025·4 mb	1021·0 mb	650 mb
LARKHILL	21 hrs G.M.T.	1027·7 mb	1011·8 mb	639 mb
CAMBORNE	21 hrs G.M.T.	1030·6 mb	1020·0 mb	640 mb
	G.M.T.	mb	mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	45			00·4	56	50	250	12	00·2	61	55	270	18	02·6	60	54	270	07	00·6	62	54			01·2	63	52	240	07	04·4	62	55	300	07	02·9	59	56	330	05						Surf
1000	03·7	51	45			05·7	54	50			06·2	60	54	256	32	07·4	58	55	250	18	07·6	61	63			07·5					07·7	63	56			07·5	57	54	331	09						1000
950		46	43				47	40	268	28		54	45	265	30		52	51	273	16		56	48									61	52	284	14		55	50	319	13		52	46	318	10		950
900	32·2	40	36			34·5	43	25	272	29	36·3	51	45	285	36	36·3	55	43	298	13	36·7	51	45			36·6	53	47	311	13	36·9	53	46	329	10	37·2	52	41	320	07						900
850		45	20				40	09	276	35		51	40	288	38		48	38	300	26		49	41				43	24	323	12		49	39	353	10		51	41	008	08						850
800	68·8	39	19			66·1	43	03	281	39	67·5	50	23	294	37	68·4	46	26	295	17	68·8	51	21			68·7	47	27	321	15	69·1	51	25	022	10	69·4	51	22	026	15						800
750		33	06	Seeps for winds			40	05	282	40		47	15	296	30		43	18	291	23		48	16				45	32	321	16		45	33	011	13		47	23	026	17						750
700	98·9	29	08			10·6	34	07	279	43	10·7	40	17	284	30	10·4	35	14	291	28	10·4	34	13			10·4	32	29	335	15	10·5	35	24	002	14	10·5	34	26	015	16						700
650		23	09				32	07	274	53		32	07	283	32		32	04	281	24		33	10				32	18	001	15		33	13	018	16		33	20	010	15						650
600	138·6	18	06			142·0	27	07	267	55	143·9	23	-4	285	33	144·8	26	-2	293	28	145·3	29	00			145·1	27	01	003	15	145·7	18	00	016	18	146·1	28	00	013	14						600
550		08	-1				16	00	272	63		16	-8	290	33		18	-9	253	29		19	43				19	01	360	22		22	-6	018	21		22	-26	020	17						550
500	184·3	07	05			188·4	12	06	281	69	190·1	09	-15	285	42	190·9	08	-19	291	28	191·8	10	-21			191·6	09	-6	355	25	192·3	11	-14	012	23	192·9	12	-9	025	15						500
450		01	-6				00	-12	279	67		00	-29	288	46		-2	-27	293	27		-2	-31				-3	-11	351	19		00	-26	011	24		01	-20	023	22						450
400	239·5	-10	-9			243·6	-8	-15	283	63	244·7	-10	-33	310	41	245·3	-14	-34	327	31	246·2	-16	-42			245·5	-15	-27	357	27	247·1	-13	-34	016	26	247·7	-10	-30	014	26						400
350		-23	-38				-26	-27	285	67		-24	-42	319	42		-26	-45	336	34		-28	-54				-27	-39	006	24		-28	-45	009	30		-25	-44	012	28						350
300	295·8	-35	-44			310·9	-36	-47	291	69	311·4	-41		332	37	311·6	-43		352	34	312·3	-44				312·7	-43		020	28	313·5	-44		005	33	314·3	-42		013	31						300
250		-55					-53		305	76		-59		341	49		-62		360	34		-61					-60		012	30		-63		010	34		-61		008	27						250
200	393·7	-69				398·7	-69		316	64	397·6	-82		319	42	397·3	-82		347	40	398·3	-74				398·5	-72		355	28	399·4	-69		011	34	400·4	-79		011	27						200
170		-53					-76		294	54		-71		319	21		-71		329	34		-69					-67		010	13		-66		017	19		-65		012	21						170
150		-53					-66		289	39		-65		281	11		-68		317	13		-65					-66		020	08		-68		020	12		-65		004	15						150
130							-70		285	26		-64		229	05		-68		302	13		-62					-65		032	08		-64		012	09		-64		357	11						130
110							-63		285	26		-63					-63		335	08		-66					-64		327	14		-63		357	10		-66									110
100	543·2					543·2	-62		281	17						542·1	-64				543·1	-64				544·0	-66				545·0	-63		012	10	(117)									100
90							-61															-62										-63														90
80																						-63																								80
70							Inversion					Inversion					Inversion					-63					Inversion					Inversion					Inversion									70
60		Inversion 900 m 48°-865 m 47°, 530 m 5°-514 m 8°					944 m 47°-910 m 50°, 858 m 38°-845 m 45°, 547 m 15°-532 m 16° Max wind 247 m 304°/84 kts 35500'					900 m 51°-860 m 51° Isothermal 825-770 m 50°					924 m 50°-904 m 51°, 840 m 47°-824 m 48°					(68) 62 Inversion 869 m 47°-816 m 52° Isothermal 608-581 m 24°					1021 m 63°-985 m 65°					1011·8 m 62°-1000 m 67°, 854 m 48°-836 m 53°					937 m 50°-918 m 51°, 860 m 50°-847 m 52° Isothermal 847-810 m 52°										60
Tropopause	I 227 m/s -64° 36600'					I 173 m/s -73° 42900'					I 200 m/s -82° 39800'					I 200 m/s -82° 39700'					I 210 m/s -77° 38800'					I 200 m/s -72° 39850'					II 222 m/s -72° 37800'					I 203 m/s -76° 39800'										Tropopause

(HMSO Pt 232 MG Dunstable

No. 11797. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Tuesday 17th July, 1951. Page 1.

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

03h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.
Pressure: M.S.L.	1013·5 mb	1019·8 mb	1022·5 mb	1026·8 mb	1026·8 mb	1026·1 mb	1028·1 mb	1030·0 mb	1031·1 mb
Pressure: Surf	1003·5 mb	1017·7 mb	1021·7 mb	1017·2 mb	1024·8 mb	1021·5 mb	1011·9 mb	1019·3 mb	1029 mb
Pressure: Freezing	768 mb	678 mb	656 mb	626 mb	648 mb	647 mb	655 mb	638 mb	610 mb

Pressure mb	Lerwick Height ft./100	Lerwick Temp. °F.	Lerwick Dew °F.	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway Temp. °F.	Stornoway Dew °F.	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars Temp. °F.	Leuchars Dew °F.	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove Temp. °F.	Aldergrove Dew °F.	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool Temp. °F.	Liverpool Dew °F.	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market Temp. °F.	Downham Market Dew °F.	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill Temp. °F.	Larkhill Dew °F.	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne Temp. °F.	Camborne Dew °F.	Camborne Wind Dir. °	Camborne Wind Vel. knots	Valentia Height ft./100	Valentia Temp. °F.	Valentia Dew °F.	Valentia Wind Dir. °	Valentia Wind Vel. knots	Pressure mb
Surf	02·7	31	49	290	22	00·4	54	52	225	10	00·2	57	55	280	08	02·6	57	55	270	08	00·6	56	55			01·2	52	49	240	07	04·4	52	52	290	03	02·9	56	56	Calm		00·3	60	59	Calm		Surf
1000	03·6	51	50			05·2	54	51			06·1	55				07·3	55	53	279	15	07·3	61	59			07·0	56	52			07·6	56	53			08·2	56	56	330	05	08·4	58	56	282	02	1000
950		46	46	272	34		48	43	236	26		51		274	21		50	46	271	16		54	51				55	48	319	15		58	48	318	07		53	48	355	07		54	51	282	11	950
900	32·1	40	37	280	36	34·0	50	44	250	37	35·1	59		286	25	36·3	55	39	274	15	36·5	51	40			36·1	55	45	296	20	36·8	53	41	328	07	37·2	56	32	017	07	37·5	52	48			900
850		33	33	281	43		45	42	261	49		55		282	33		52	30	281	21		53	29				51	38	301	17		52	22	334	07		55	26	033	08		54	43			850
800	63·3	35	19	281	46	65·8	40	37	270	52	67·5	50		288	34	68·6	50	12	287	27	68·7	49	-03			68·3	50	27	324	14	69·0	49	28	333	10	69·5	52	25	026	09	69·8	49	36			800
750		31	15	281	48		41	38	275	54		42		293	32		47	11	292	27		45	00				46	20	333	20		46	22	343	11		44	27	015	11		49	19			750
700	98·3	26	12	283	46	101·4	33	31	276	52	103·3	37		290	33	104·7	39	21	296	26	104·6	39	01			104·4	40	18	324	18	105·0	40	15	014	16	105·4	39	21	012	13	106·0	44	-21			700
650		24	-09	282	45		29	27	276	56		31		287	31		35	06	295	28		33	15	333	19		31	08	010	16							34	12	012	12		37	-23			650
600	138·1	20	-15	281	43	141·7	24	22	280	57	147·3	25		287	35	145·2	28	-06	300	27	145·0	26	-12			145·0	25	09	333	16	145·5	30	-03	360	14	146·0	28	-01	016	09	146·9	30	-22			600
550		12	-22	281	49		18	16	286	54		19		284	44		20	-05	297	27		20	-17				21	-04	336	16		21	-13	353	17		23	-10	021	10		22	-28			550
500	184·0	-04	-21	282	60	188·3	11	07	288	61	190·2	11		283	48	192·0	12	-10	296	28	191·6	10	-27			191·6	12	-12	334	17	192·2	11	-22	358	20	192·8	12	-15	002	17	193·8	14	-36			500
450		-05	-10	282	72		03	-01	291	64		02		286	54		02	-13	298	29		02	-34				02	-19	354	17		00	-32	004	18		00	-27	360	21		05	-37			450
400	238·1	-14	-18	282	76	243·3	-07	-12	286	60	245·1	-08		293	53	247·0	-07	-23	302	31	246·3	-11	-39			246·4	-11	-31	010	21	246·8	-12	-42	023	21	247·5	-12	-38	009	27	249·0	-06	-58			400
350		-26	-36	281	87		-20	-25	279	70		-21		304	50		-20	-34	310	30		-24	-44				-23	-42	032	24		-25	-54	035	27		-26	-50	030	26		-18				350
300	304·5	-41				310·5	-36	-42	277	76	312·3	-39		302	50	314·2	-37	-49	318	28	313·0	-39	-54			313·2	-39	-54	036	33	313·4	-41		047	39	313·9	-42		033	29	316·5	-34				300
250		-59					-54		278	80		-59		304	52		-57		334	29		-58					-56		027	43		-58		044	58		-60		051	45		-55				250
200	391·7	-60									398·9	-70		303	43	401·0	-78		314	33	319·5	-79				399·9	-76		029	51	399·9	-75		039	38	400·4	-74		044	36	403·9	-73				200
170		-57										-75		311	29		-77		327	22	399·5	-70					-68		027	20		-70		036	20	(78 mb)	-71					-78				170
150		-57										-78					-79		319	23		-69					-68		024	10		-70		034	15							-74				150
130		-58															-69		317	19		-67					-67		015	09		-68		009	13							-73				130
110		-58															-67		288	10		-66					-65		004	07		-67		025	06							-72				110
100	540·3	-54														543·6	-66		302	14	544·2	-63				544·6	-64		323	05	544·6	-67		352	03						546·3	-70				100
90																	-65				(695 mb)	-62					-65		338	04		-66		013	06							-69				90
80																											-65		007	05		-65		052	07							-68				80
70																											-64		032	05		-63		083	06							-65				70
60																											-62		041	05		-61														60
	Inversion 839 mb. 31°-815 mb. 36° 700 mb. 26°-684 mb. 28°					Inversion 920 mb. 48°-900 mb. 50° 800 mb. 40°-784 mb. 42° Isothermal 1018-1000 mb. 54° 950-920 mb 48° 696-678 mb. 32°					Inversion 940 mb. 51°-909 mb. 61° Isothermal 961-940 mb. 51°					Inversion 946 mb. 49°-923 mb. 57° Isothermal 658-645 mb. 35°					Inversion 1025 mb. 56°-1007 mb. 62° 892 mb. 50°-871 mb. 54°					Inversion 1021 mb. 52°-985 mb. 58° Isothermal 950-890 mb. 55°					Inversion 1012 mb. 52°-994 mb. 59° 990 mb. 53°-880 mb. 55° 220 mb. -71°-212 mb. 69° Isothermal 994-960 mb. 59° 850-830 mb. 52° 783-759 mb. 47°					Inversion 937 mb. 52°-916 mb. 56° 216 mb. -71°-212 mb. -70° Isothermal 1019-1000 mb. 56° 916-872 mb. 56°					Inversion 878 mb. 52°-862 mb. 53° 800 mb. 49°-771 mb. 50° Isothermal 923-878 mb. 52° 750-740 mb. 49°					
Tropopause	I 231 mb. -65° 36,000'					N.R.					I 186 mb. -82° 41,500'					I 183 mb. -85° 41,800'					I 202 mb. -80° 39,800'					I 187 mb. -80° 41,300'					I 200 mb. -75° 40,000'					I 200 mb. -74° 40,000'					I 182 mb. -80° 42,300'					Tropopause

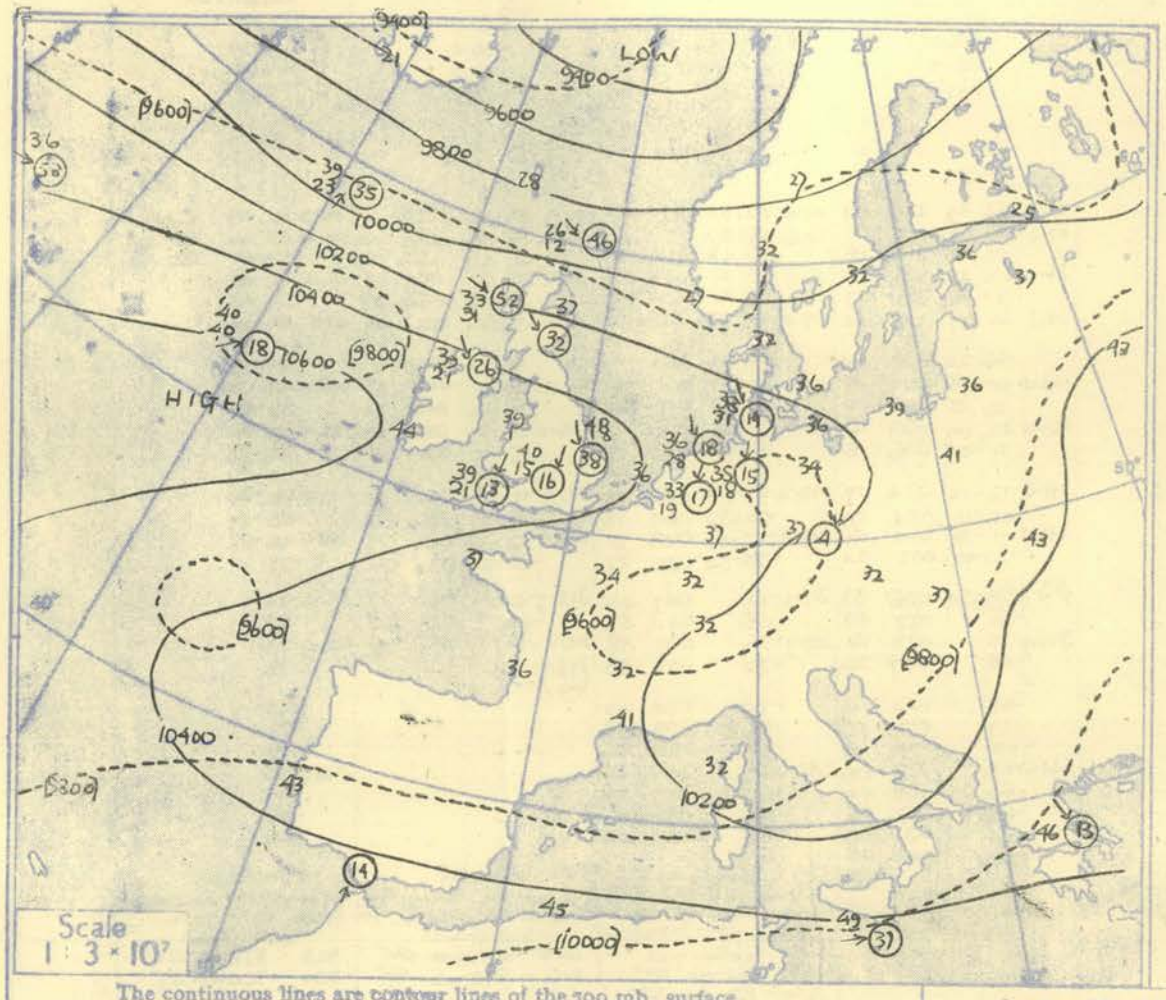
09h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	
Pressure: Time	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	G.M.T.
Pressure: M.S.L.	1013·0 mb	1015·3 mb	1020·8 mb	1025·1 mb	1026·8 mb	1026·0 mb	1027·4 mb	1029·8 mb	mb
Pressure: Surf	1003·0 mb	1013·7 mb	1020·0 mb	1015·6 mb	1024·8 mb	1021·6 mb	1011·2 mb	1019·2 mb	mb
Pressure: Freezing	710 mb	643 mb	664 mb	623 mb	611 mb	594 mb	645 mb	632 mb	mb

Pressure mb	Lerwick Height ft./100	Lerwick Temp. °F.	Lerwick Dew °F.	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway Temp. °F.	Stornoway Dew °F.	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars Temp. °F.	Leuchars Dew °F.	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove Temp. °F.	Aldergrove Dew °F.	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool Temp. °F.	Liverpool Dew °F.	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market Temp. °F.	Downham Market Dew °F.	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill Temp. °F.	Larkhill Dew °F.	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne Temp. °F.	Camborne Dew °F.	Camborne Wind Dir. °	Camborne Wind Vel. knots	Pressure mb
Surf	02·7	49	49	270	18	00·4	57	55	250	20	00·2	57	54	280	22	02·6	61	55	260	11	00·6	61	55	280	12	01·2	64	55	260	08	00·4	64	56	Calm		02·9	62	59	283	06	Surf
1000	03·5	49	49			04·2	56	54	242	33	05·7	55	52	252	27	06·9	59	54	252	15	07·4	58	53	284	18	07·2	62	54	290	08	07·6	62	55			08·2	60	55	320	06	1000
950		45	45	251	27		52	51	262	36		51	47	260	36		55	49	269	23		53	50	276	20		58	51	295	09		57	48	334	04		58	47	002	05	950
900	31·9	41	41	264	26	33·0	48	48	264	31	34·7	58	43	272	39	35·9	55	43	279	25	36·3	51	50	284	22	36·3	53	43	301	09	36·8	52	41	330	07	37·4	56	39	020	07	900
850		36	36	265	27		48	48	263	40		57	36	276	36		59	29	285	24		58	30	290	17		51	31	320	12		52	40	327	11		54	33	355	09	850
800	63·3	36	36	265	28	65·0	47	47	271	47	67·2	50	42	282	39	68·5	54	38	294	27	68·8	54	14	300	16	68·6	51	23	322	17	69·0	49	24	334	12	69·8	51	39	346	10	800
750		31	31	266	32		43	43	274	51		41	35	287	39		49	37	296	28		49	23	314	20		48	-04	321	18		45	23	348	11		43	26	348	12	750
700	98·4	31	28	275	33	100·9	39	39	272	52	103·1	38	30	288	50	104·7	43	26	288	30	105·1	42	26	319	20	104·7	43	-14	322	16	105·0	39	19	346	11	105·9	42	21	010	10	700
650		28	24	280	35		33	32	272	54		30	24	288	46		36	18	285	32		36	06	306	24		37	-06	322	18		33	07	348	14		34	31	020	13	650
600	138·6	26	16	277	42	141·5	27	24	269	55	143·5	24	19	285	38	145·5	28	15	281	29	148·9	30	-04	304	25	145·5	32	-17	323	19	145·5	29	-06	356	13	146·5	28	05	002	14	600
550		18	-12	283	55		21	-01	276	46		19	12	285	32		22	09	283	31		22	00	306	27		24	-29	324	18		20	-14	007	12		22	-01	002	14	550
500	185·0	11	-47	285	63	188·2	14	-15	283	46	190·1	11	03	284	31	192·3	13	04	279	29	192·8	16	-01	306	21	192·6	16	-38	327	18	192·1	12	-21	018	12	193·3	12	-11	019	16	500
450		00	-55	283	68		04	-22	284	51		02	-07	286	33		04	-07	282	36		06	-10	307	22		08	-44	333	18		02	-31	021	16		02	-21	029	21	450
400	239·6	-11	-53	286	80	243·3	-07	-28	280	57	245·0	08	-18	287	45	247·8	-07	-17	285	40	248·2	-04	-20	315	24	248·1	-03	-34	348	17	247·1	-09	-41	018	18	248·2	-09	-37	037	24	400
350		-24	-51	286	81		-20	-41	285	53		-21	-32	289	47		-17	-27	290	41		-17	-32	326	19		-16	-33	006	18		-23	-50	028	22		-22	-44	044	22	350
300	306·4	-37	-60			310·6	-37	-57	278	59	312·1	-38	-50	293	59	314·9	-34	-43	286	36	316·0	-34	-48	334	21	315·9	-32	-47	019	25	314·1	-35	-54	043	30	315·2	-37	-57	048	33	300
250		-54					-53		270	58		-55		293	63		-50		295	39		-53		335	22		-52		019	25		-53		048	34		-54		062	43	250
200	354·5	-53				398·4	-67		272	66	399·2	-73		292	66		-69		300	35	403·6	-73		342	25	403·8	-72		021	26	401·6	-73		045	40	402·5	-73		086	39	200
170		-49					-58		275	58		-65		295	42		-72		311	28		-69		354	16		-78		010	27		-76		034	31		-78		052	27	170
150	(155 mb)	-50					-58					-66		297	30		-69		317	22		-65		344	12		-74		008	15		-69		028	24		-70		040	24	150
130							-58					-68		299	22		-68		318	23		-60		325	09		-71		008	14		-66		044	11		-68		043	10	130
110							-57					-61		285	13		-64					-57		345	04		-65		033	04		-64		061	11		-68		047	10	110
100						546·7	-56				544·7	-57		281	08						550·0	-54				547·2	-66		035	03	545·9	-63		054	05	546·2	-68		044	09	100
90							-56					-57		284	08											-63		035	03		-62		055	06		-68		051	05	90
80							-56																			-61					-62		053	06		-64		063	12	80
70																															-62		009	04	(077 mb)	-62						70
60																															-62											60
	Inversion 832 mb. 35°-820 mb. 37° 735 mb. 31°-710 mb. 32° 625 mb. 25°-600 mb. 26° Isothermal 750-735 mb. 31°					Inversion 874 mb. 46°-859 mb. 49° Isothermal 850-812 mb. 48°					Inversion 940 mb. 51°-910 mb. 58° 743 mb. 40°-728 mb. 41° Isothermal 910-856 mb. 58°					Inversion 933 mb. 50°-861 mb. 61°					Inversion 908 mb. 50°-855 mb. 59°					Inversion 900 mb. 53°-884 mb. 54° 833 mb. 50°-809 mb. 52° Isothermal 761-747 mb. 58° 607-594 mb. 53°					Isothermal 900-855 mb 52° 800-784 mb. 49°					Inversion 995 mb. 58°-966 mb. 59° 730 mb. 40°-710 mb. 44° Isothermal 700-875 mb. 56°					
Tropopause	I 218 mb. -65° 37,500'					I 198 mb. -68° 41,000'					I 205 mb. -74° 39,300'					I 173 mb. -74° 43,400'					I 190 mb. -76° 41,500'					I 180 mb. -81° 42,500'					I 195 mb. -75° 40,700'					I 171 mb. -80° 43,400'					Tropopause

Tuesday 17th July 1951.

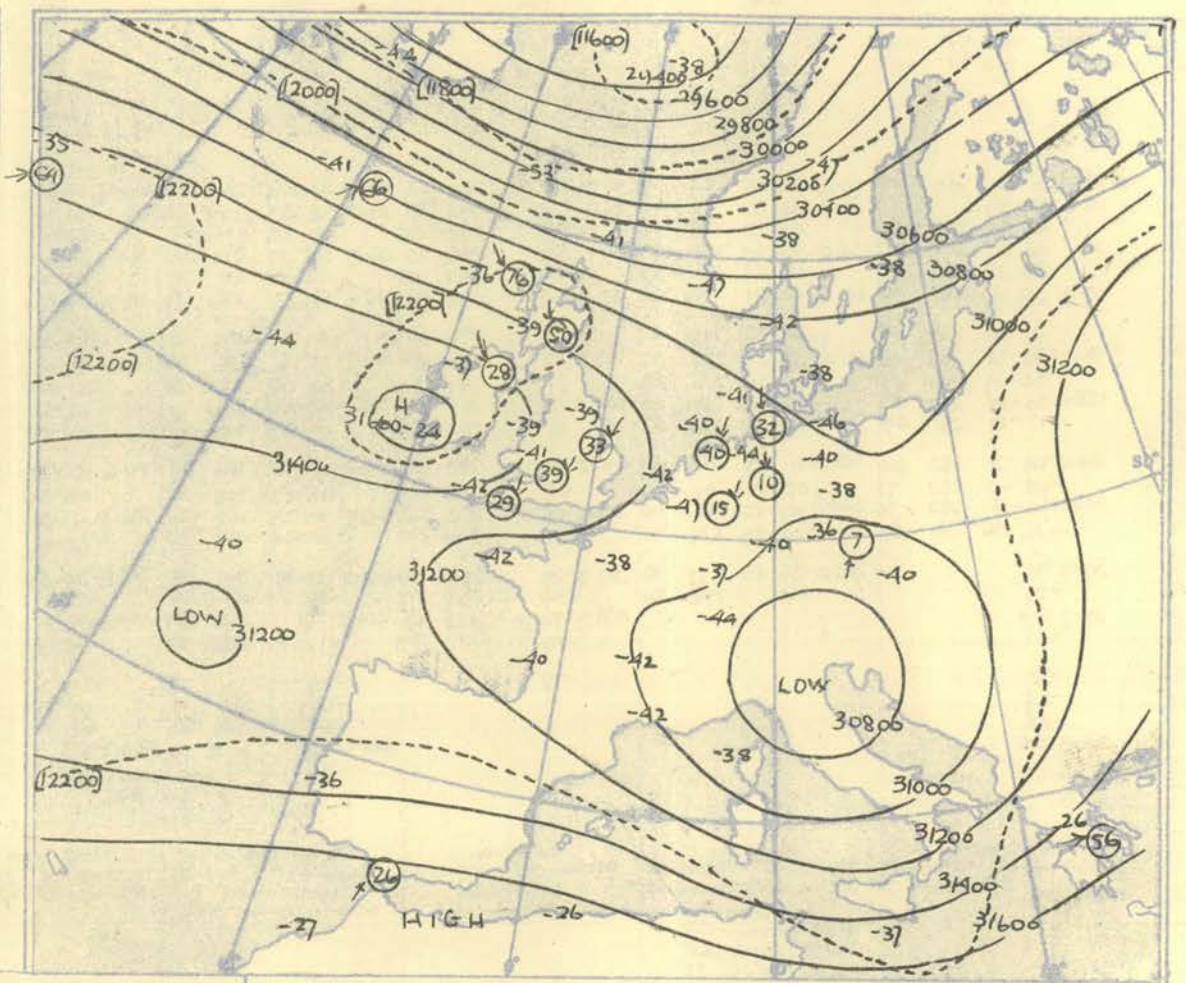
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



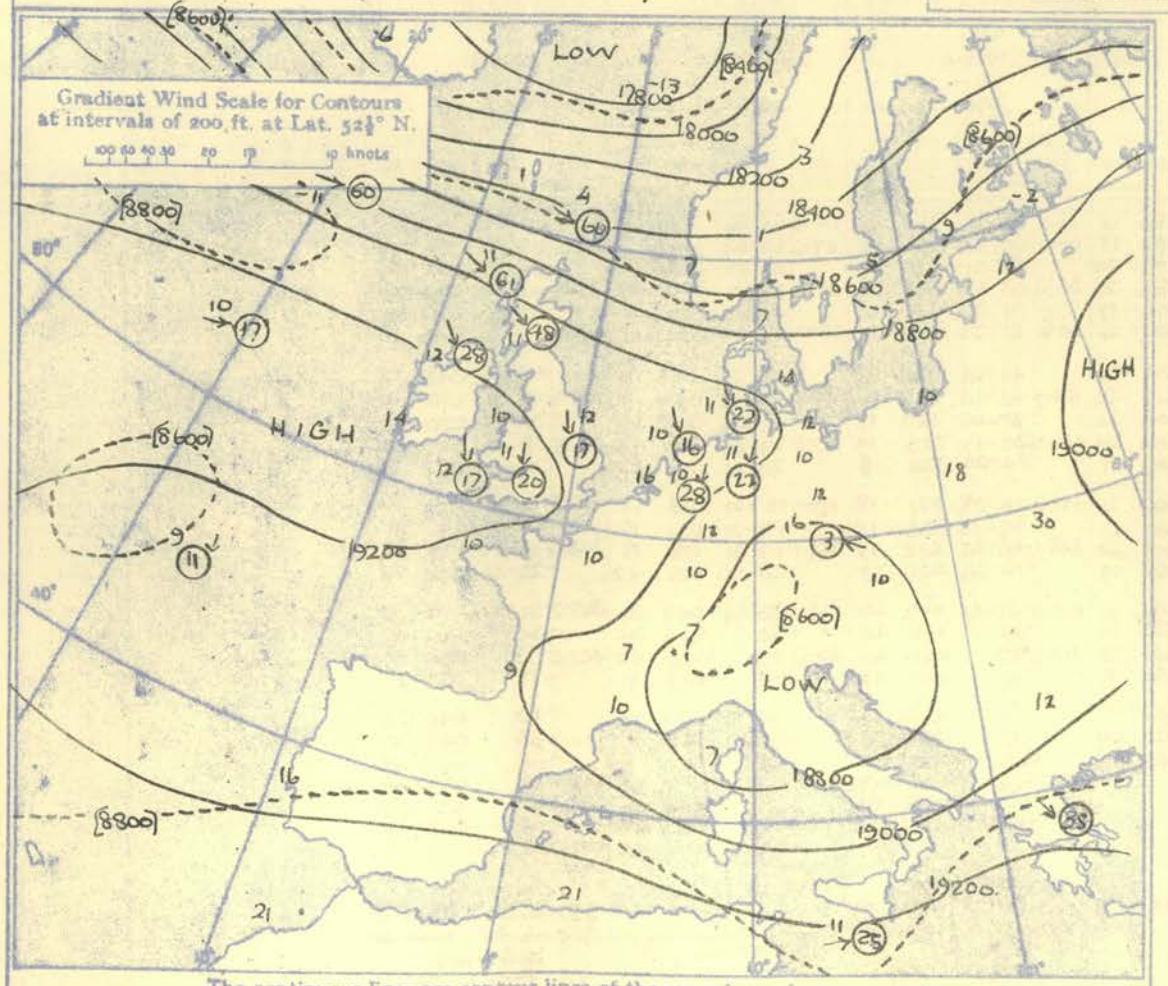
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

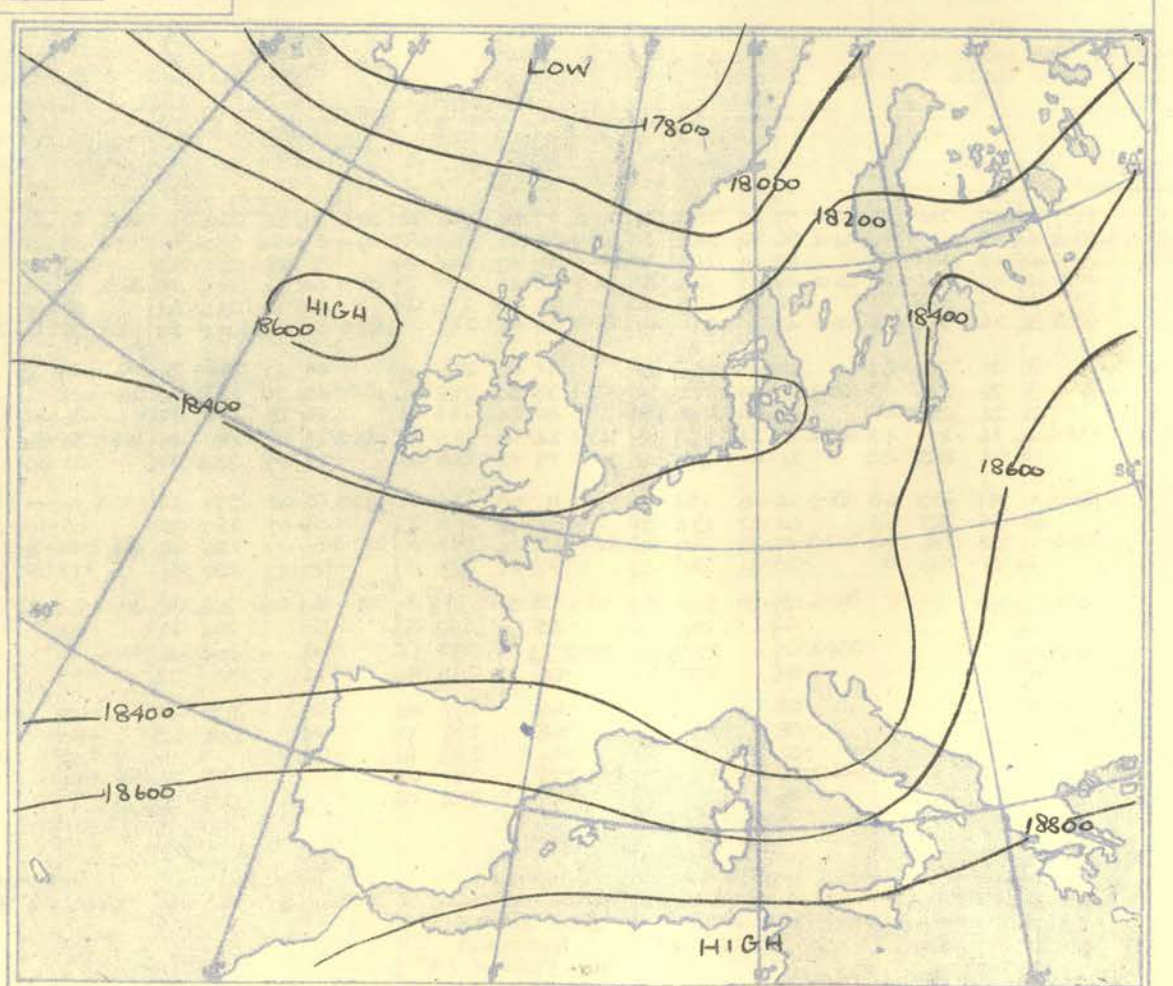
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500 - 1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Position	52.12N. 02.12W.		
Time	1350h.		
M.S.L.	1026 mb		
Surf	1024 mb		
Freezing	610 mb		
Pressure mb	**Height ft./100**	**°F. Temp.**	**°F. Dew**
Surf	00.4		
1000	07.3		
950			
900	37.0	57	56
850		60	22
800	69.7	57	26
750			
700	106.1	43	26
650			
600	147.4	30	25
550			
500	194.2	14	
450			
400	249.6	-05	
350			
300	317.2	-36	
250			
200			
170			

Inversion 3/8 Cu 880-865 mb.
Inversion 885 mb. 55° 850 mb. 60°

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

Place	Leeming		Ronaldsway		Lympne		Bristol		Larkhill		Shoeburyness		Lympne		Larkhill		Lympne		Downham Market	
Time	09h.		09h.		09h.		09h.		11h.		10h.		15h.		18h.		19h.		21h.	
Type																			Pilar	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	Calm		270	12	350	03	240	08	280	05	300	06	210	07	310	06	220	07		
1,000	260	10	280	14	300	09	220	08	290	09	290	14	220	07	290	12	250	17		
2,000	280	14	290	12	290	11	260	10	310	12	290	12	290	07	290	10	280	09		
3,000	260	15	280	22	300	11	260	13	320	09	300	12	320	11	310	09	290	09		
4,000	260	18			300	13	280	12	320	10	310	10	330	13	320	10	330	12		
5,000	250	21			320	16	310	17	330	11	330	10	330	13	330	10	320	09		
6,000	230	22			340	14	300	17	340	10	340	11	330	11	320	11	330	10		
8,000	250	22			350	15	320	11	350	08	330	14	350	15	340	11	340	14		
10,000	250	28			360	17 (9,000')	320	12	340	09	340	16			340	13				
14,000							330	16	360	13	350	14			340	11				
18,000							340	12	360	10 (15,000')	350	15			340	12 (15,000')				
24,000							360	12 (23,000')			020	18								
30,000											040	25							296	26
40,000											030	28							317	35
50,000																			318	06

NEPHOSCOPE OBSERVATIONS

Place	Hemswell	Aston Down	Calshot	St. Eval
Time Type	09h. Ci	09h. Ci	15h. Ci	15h. Ci
Dir. Vel.	310 40	020 30	020 45	020 30

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

Ship: Weather Observer — Lat/Long 59°N 19.2°W — Time 03hrs G.M.T.; Pressure M.S.L. 1011 mb; Surf 1011 mb; Freezing 625 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	54	53	340	13
1000	3.2	53	53	327	12
950		49	49	314	12
900	31.9	46	46	282	15
850		45	44	267	27
800	63.7	44	43	261	34
750		40	39	262	37
700	99.5	39	23	263	35
650		35	13	262	41
600	140.3	29	-13	262	49
550		22	-25	267	55
500	187.1	11	-35	267	60
450		06	-40	259	65
400	241.8	-12	-39	262	68
350		-24	-57	259	68
300	308.2	-41		258	66
250		-60		260	67
200	394.6	-67		261	71
170		-62		262	58
150		-64		262	48
130		-64		262	43
110		-63		262	31
100	541.1	-63		262	23
90		-62		262	20
80		-66		262	18

Isothermal 700 - 689 mbs 39°

Tropopause: I 206 mbs -73° 38800'

Ship: Weather Observer — Lat/Long 59.1°N 18.8°W — Time 09hrs G.M.T.; Pressure M.S.L. 1016 mb; Surf 1016 mb; Freezing 640 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	53	47	330	11
1000	4.3	51	47	313	15
950		44	41	312	17
900	32.9	48	28	308	13
850		46	22	303	21
800	64.8	43	23	295	22
750		40	27	287	21
700	100.5	38	19	279	31
650		33	-7	270	42
600	141.1	26	-10	265	48
550		19	00	260	51
500	187.5	11	-3	264	55
450		01	-13	264	60
400	242.3	-9	-24	263	66
350		-25	-43	260	69
300	309.1	-41		262	69
250		-56		262	74
200	396.4	-66		265	70
170		-56		267	55
150		-59		267	48
130		-59		267	38
110		-57		267	27
100	544.7	-56		267	27
90		-55		267	18
80		-53		267	07
70		-51		267	07
60		-48		267	06

Inversion
950 mbs 44° - 900 mbs 48°
710 mbs 36° - 693 mbs 39°
Isothermal
900 - 850 mbs 48°
790 - 765 mbs 42°

Tropopause: I 202 mbs -67° 39500'

Ship: Weather Observer — Lat/Long 59.1°N 18.7°W — Time 15hrs G.M.T.; Pressure M.S.L. 1020 mb; Surf 1020 mb; Freezing 680 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	55	47	275	14
1000	5.5	51	44	276	18
950		43	39	285	20
900	34.0	46	31	292	24
850		43	30	295	25
800	65.7	41	29	294	30
750		38	19	291	31
700	101.2	34	07	288	36
650		29	02	286	45
600	141.4	24	07	286	51
550		16	06	285	55
500	187.6	09	-7	284	52
450		00	-14	280	62
400	242.3	-11	-21	280	64
350		-24	-32	278	76
300	308.9	-40	-48	280	74
250		-58		280	86
200	396.3	-64		279	80
170		-57		275	63
150		-55		272	54
130		-55		269	40
110		-55		279	21
100		-55			

(108)

Inversion
935 mbs 41° - 914 mbs 47°
775 mbs 38° - 760 mbs 39°

Tropopause: II 230 mbs -62° 36700'

Ship: Weather Observer — Lat/Long 59.1°N 18.7°W — Time 21hrs G.M.T.; Pressure M.S.L. 1022 mb; Surf 1022 mb; Freezing 705 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	55	49	265	17
1000	6.1	53	40	265	24
950		51	33	279	27
900	34.9	46	26	285	27
850		41	18	287	27
800	66.4	39	15	290	30
750		33	14	288	36
700	101.7	31	18	286	42
650		24	14	286	53
600	141.6	20	02	284	63
550		14	04	281	66
500	187.8	08	-4	278	66
450		-3	-15	277	67
400	242.0	-16	-29	277	72
350		-31	-43	281	77
300	307.7	-44		281	85
250		-64		281	81
200	393.1	-81		281	89
170		-81		281	64
150		-69		281	56
130		-71		281	46
110		-70		281	35

Inversion
850 mbs 41° - 842 mbs 42°
750 mbs 33° - 732 mbs 36°
650 mbs 24° - 640 mbs 25°
Isothermal
522 - 510 mbs 10°

Tropopause: II 200 mbs -81° 39300'

Ship: Cirrus — Lat/Long 52.4 N 20.1 W — Time 03hrs G.M.T.; Pressure M.S.L. 1030 mb; Surf 1030 mb; Freezing – mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	51	58	260	21
1000	7.8	56	56	260	24
950		58	58	261	28
900	37.5	56	56	264	30
850		54	44	268	23
800	70.0	50	43	270	16
750		44	37	265	18
700	106.0	40	16	263	18
650		35	07	263	16
600	146.6	25	-3	263	17
550		19	-12	273	16
500	193.1	10	-22	264	17
450		01	-32	264	16
400	247.9	-11	-32	264	12
350		-26			
300	314.3	-42			
250		-61			
200	400.2	-82			
170		-84			
150		-86			
130		-84			
110		-81			
100	555.0	-79			
90		-75			
80		-72			
70		-68			

Inversion
873 mbs 53° - 835 mbs 56°
1000 mbs 56° - 956 mbs 61
Isothermal
950 - 945 mbs 58°
934 - 906 mbs 57°
710 - 688 mbs 40°

Tropopause: I 194 mbs -86° 40600'

Ship: Cirrus — Time 09hrs G.M.T.

No Radio Sonde ascent available. See top of page for winds.

Tropopause: –

Ship: Cirrus — Lat/Long 52.3°N 19.8°W — Time 15hrs G.M.T.; Pressure M.S.L. 1029 mb; Surf 1029 mb; Freezing 630 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	60	57	250	25
1000	8.2	56	53	257	25
950		59	57	269	25
900	37.4	58	54	281	22
850		55	50	278	18
800	70.0	53	41	263	23
750		49	36	262	26
700	106.3	43	28	262	26
650		35	18	262	20
600	147.2	30	06	262	26
550		23	-7	270	22
500	194.2	15	-14	276	17
450		09	-22	270	22
400	250.0	-2	-32	265	15
350		-13		265	13
300	318.1	-32		265	20
250		-51			
200	406.2	-71			
170		-78			
150		-78			
130		-77			
110		-76			
100	547.7	-72			
90		-71			
80		-68			
70		-65			
60		-62			
		-58			
		-53			
		-48			
	(26)	-45			

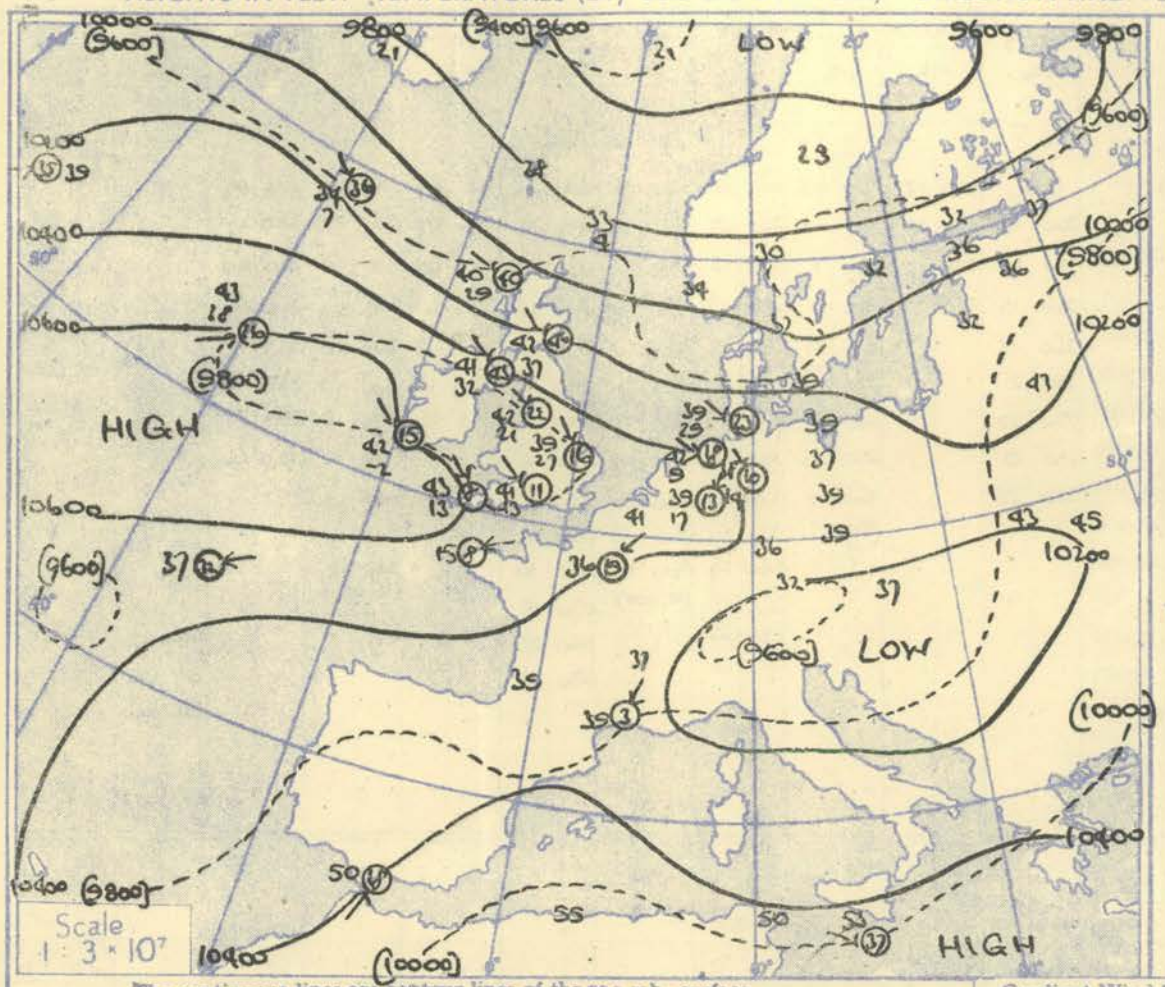
Isothermal
950 - 942 mbs 59°
630 - 646 mbs 35°

Inversion
972 mbs 52° - 950 mbs 59°
933 mbs 58° - 915 mbs 59°
840 mbs 54° - 815 mbs 55°
633 mbs 32° - 619 mbs 33°
477 mbs 11° - 466 mbs 13°

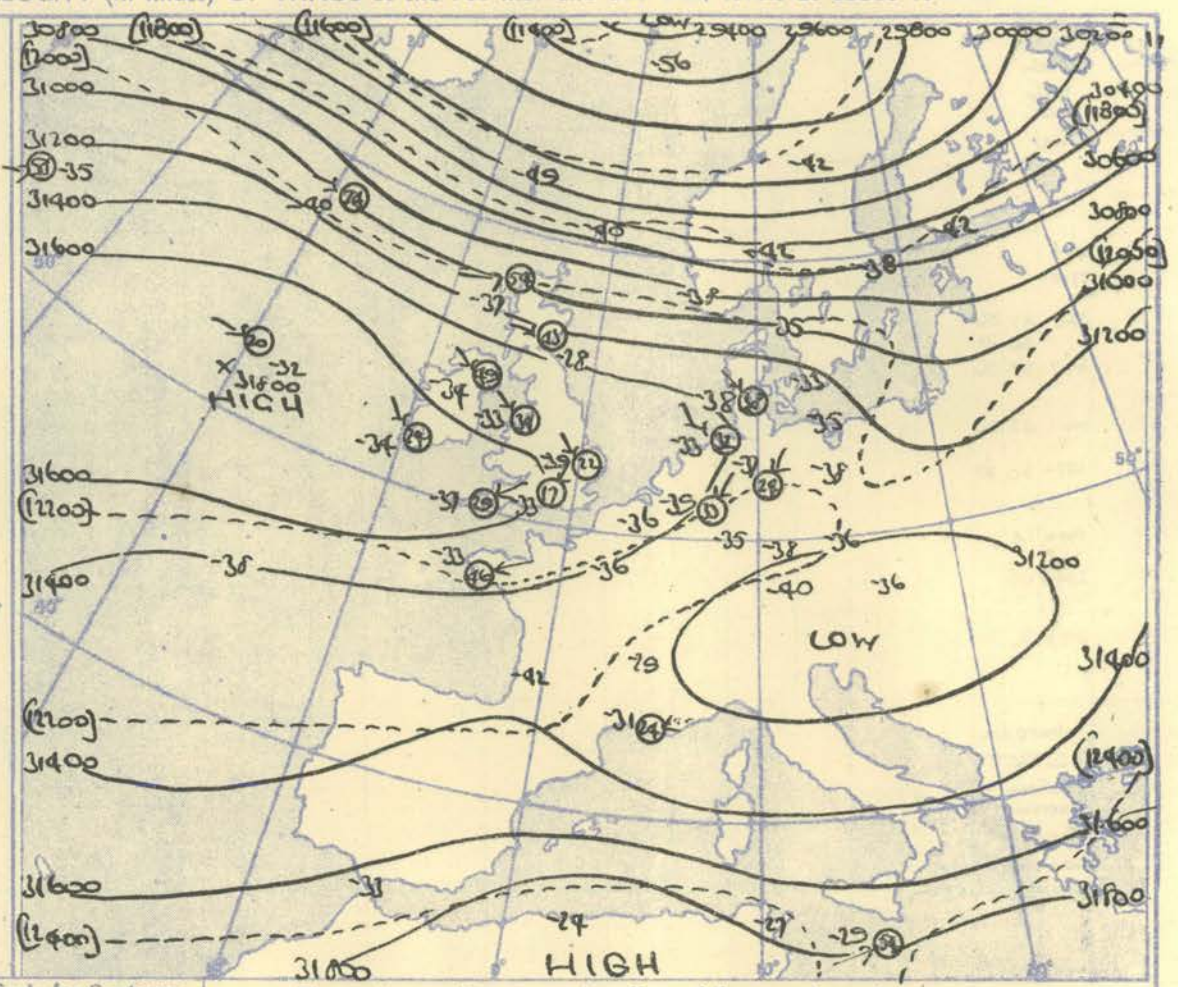
Tropopause: I 182 mbs -78° 42600'

July 17th 1951.

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



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

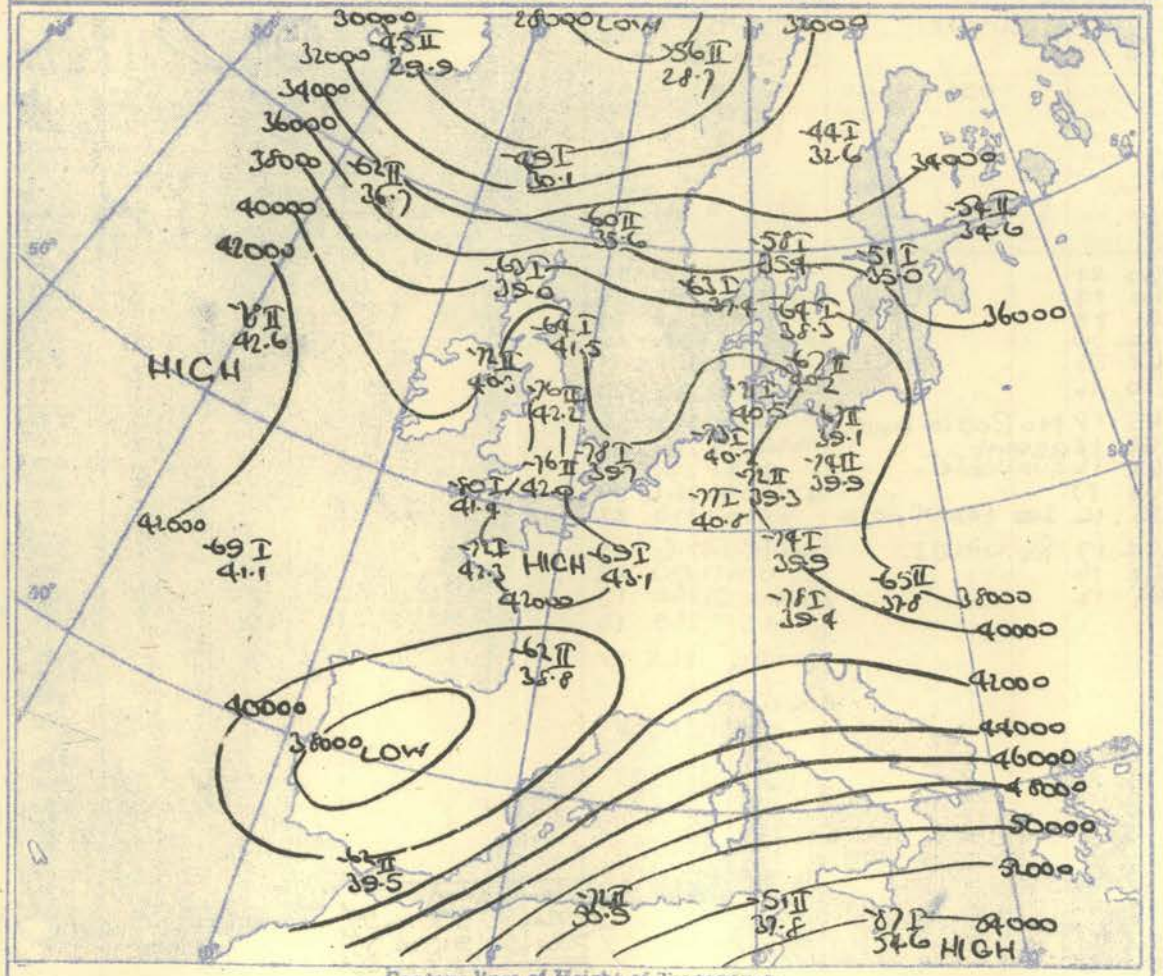


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

No major change in the situation.

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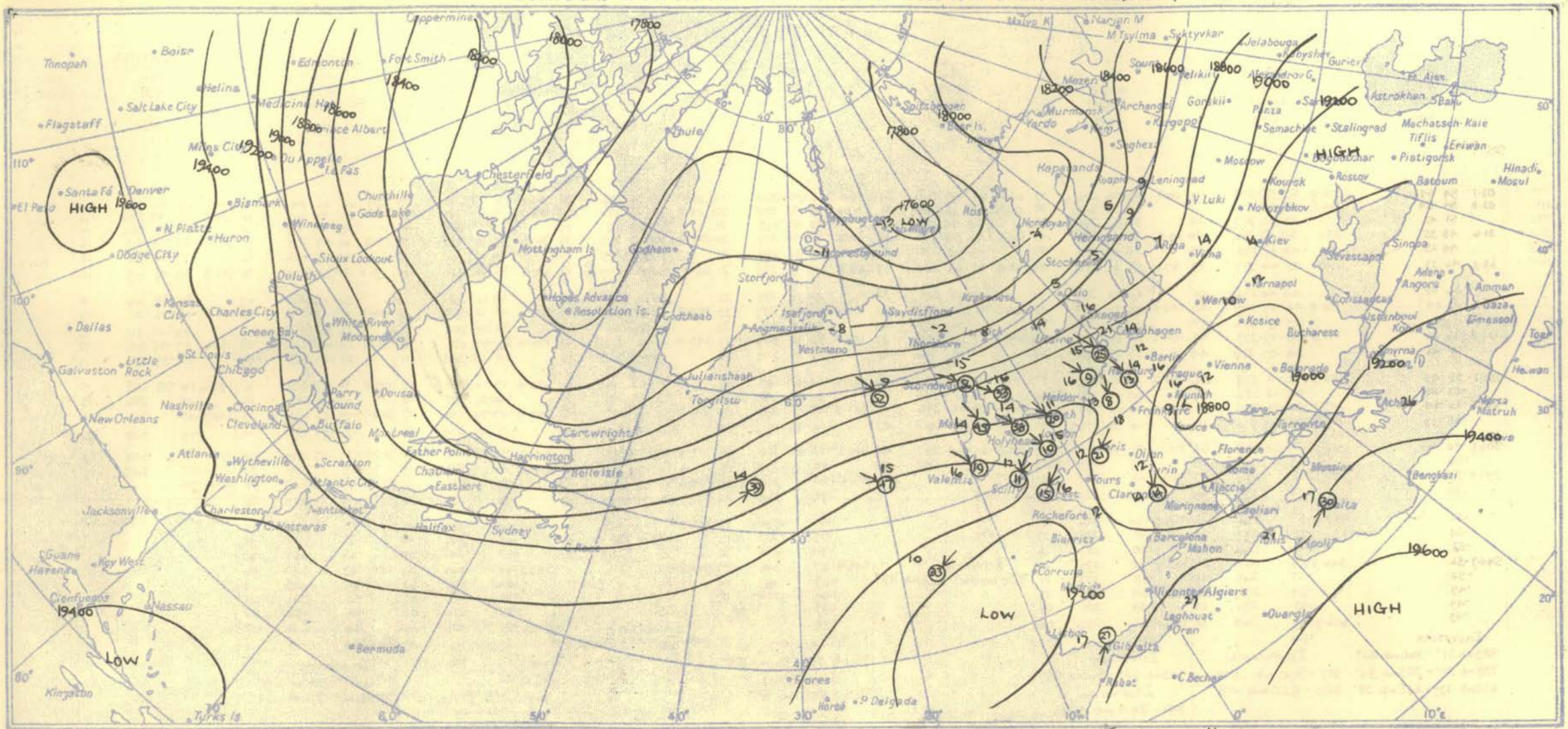
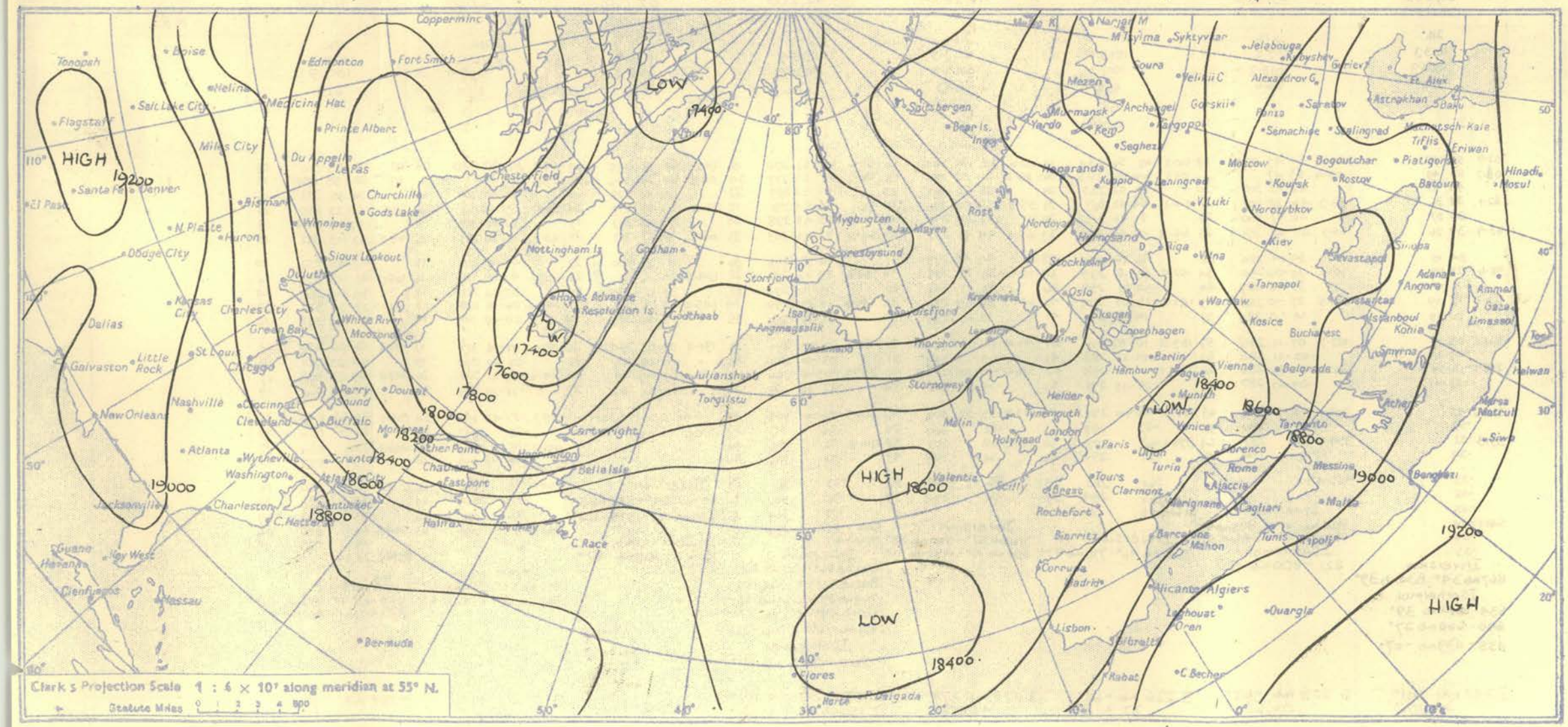
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Tuesday 17th. July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 17th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Tuesday 17th July 1951.

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

LERWICK

Pressure — Time 15h. G.M.T.; M.S.L. 1010·3 mb; Surf 100·4 mb; Freezing 690 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	51		
1000	02·8	51	51		
950		51	42		
900	31·6	48	35		
850		44	29		
800	63·3	40	27		
750		36	08		
700	98·6	33	04		
650		27	-11		
600	133·8	26	-36		
550		18	-42		
500	135·2	08	-49		
450		-02	-56		
400	239·6	-13	-54		
350		-25	-58		
300	306·1	-40	-60		
250		-56			
200	393·9	-54			
170		-50			
150		-52			
130		-54			
110		-53			
100	544·7	-52			
90		-50			
80		-49			
70		-49			
60		-49			

Inversion 983 mb 51° – 960 mb 52°; 720 mb 33° – 705 mb 34°; 650 mb 27° – 625 mb 28°

Tropopause: II 238 mb -60° 35,600'

STORNOWAY

Pressure — Time 15h. G.M.T.; M.S.L. 1015·4 mb; Surf 1013·8 mb; Freezing 618 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	59	57	270	16
1000	04·2	58	55		
950		52	51	277	26
900	33·1	50	49	276	30
850		48	47	275	34
800	650	45	44	275	37
750		44	40	274	39
700	100·8	40	29	275	40
650		35	13	276	39
600	141·5	30	-02	277	40
550		24	-07	278	44
500	188·5	15	-11	280	56
450		04	-18	277	63
400	243·7	-08	-31	274	61
350		-23	-45	276	62
300	310·7	-37	-57	268	54
250		-53		281	64
200	397·7	-61		278	67
170		-56		279	69
150	459·6	-57		283	55
130		-58		281	37
110		-60		268	39
100	546·3	-59		268	35
90		-57		268	29
80		-54		271	18
70		-53		276	08
60	656·7	-54		268	10
		-54			

Isothermal 917 – 900 mb 50°; 880 – 850 mb 48°

Tropopause: I 206 mb -63° 39,000'

LEUCHARS

Pressure — Time 15h. G.M.T.; M.S.L. 1019·1 mb; Surf 1018·3 mb; Freezing 616 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	63	56	280	22
1000		61	55	247	38
950		54	51	261	38
900	34·5	58	54	276	43
850		54	48	282	55
800	67·0	52	42	284	56
750		46	43	286	54
700	103·3	42	37	288	46
650		36	20	296	38
600	144·2	30	26	289	33
550		23	22	284	34
500	191·2	16	15	283	33
450		09	05	284	31
400	246·9	-01	-11	282	35
350		-16	-26	276	35
300	315·1	-28	-35	272	43
250		-45		279	53
200	404·6	-62		287	61
170		-59		289	56
150	463·8	-60		286	53
130		-61		287	37
110		-62		282	26
100	551·9	-62		277	26
90		-58		277	21
80		-54		275	12
70		-53		281	09
60	662·1	-52		286	06
		-51			

Inversion 943 mb 53° – 894 mb 59°; Isothermal 841 – 804 mb 53°

Tropopause: I 190 mb -64° 41,500'

ALDERGROVE

Pressure — Time 15h. G.M.T.; M.S.L. 1023·8 mb; Surf 1014·4 mb; Freezing 640 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	69	59	260	14
1000	06·6	67	58	266	21
950		60	54	275	35
900	36·0	56	54	274	33
850		53	50	280	33
800	68·4	51	43	282	33
750		47	38	281	38
700	104·5	41	32	280	43
650		33	21	283	44
600	145·1	27	19	289	37
550		23	18	290	42
500	191·9	14	11	290	45
450		05	01	290	45
400	247·1	-06	-12	296	47
350		-20	-25	284	42
300	314·5	-34	-40	293	49
250		-50		293	56
200	402·7	-72			
170		-73			
150		-75			
130		-72			

Inversion 900 mb 56° – 888 mb 58°

Tropopause: II 200 mb -72° 40,265'

LIVERPOOL

Pressure — Time 15h. G.M.T.; M.S.L. 1026·0 mb; Surf 1024·0 mb; Freezing 641 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	68	56	300	15
1000	07·2	63	52	290	20
950		55	47	273	21
900	36·3	53	46	277	20
850		53	31	299	21
800	68·8	55	19	298	21
750		49	32	297	22
700	105·1	42	21	297	22
650		34	20	292	22
600	145·8	27	15	295	27
550		22	01	292	28
500	192·7	14	-04	288	35
450		04	-12	298	29
400	247·8	-07	-21	298	32
350		-19	-28	296	34
300	315·2	-39	-41	306	34
250		-50		298	35
200	403·4	-68		309	38
170		-75		329	24
150		-76		330	17
130		-75		323	12
110		-68		304	10
100	546·8	-67		298	09
90		-63		285	09
80		-60		276	09
70		-57		LtV	
60		-55			

Inversion 915 mb 50° – 860 mb 59°; Isothermal 860 – 850 mb 59°

Tropopause: II 183 mb -75° 42,200'

DOWNHAM MARKET

Pressure — Time 15h. G.M.T.; M.S.L. 1024·0 mb; Surf 1019·6 mb; Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	74	55	270	08
1000	06·8	71	55	270	09
950		63	54	272	10
900	36·4	55	51	275	12
850		54	42	309	12
800	68·8	52	06	299	15
750		46	20	311	15
700	104·9	39	27	318	16
650		32	26	318	17
600	145·4	26	16	312	17
550		19	07	308	18
500	192·0	11	-05	301	20
450		02	-14	297	23
400	246·9	-09	-19	307	23
350		-22	-37	312	22
300	313·9	-39	-51	318	21
250		-56		331	23
200	400·5	-77		339	27
170		-76		360	19
150	459·5	-71		015	09
130		-67		283	07
110		-63		268	05
100	544·8	-62		CALM	
90		-61			
80		-58			
70		-55			

Inversion 889 mb 53° – 850 mb 57°

Tropopause: I 202 mb -78° 39,700'

LARKHILL

Pressure — Time 15h. G.M.T.; M.S.L. 1025·9 mb; Surf 1010·3 mb; Freezing 600 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	76	53	280	08
1000	07·3	74	55	281	12
950		65	53	288	14
900	36·9	58	50	297	14
850		54	42	309	12
800	69·4	55	28	330	10
750		49	19	333	10
700	105·6	41	13	328	11
650		36	06	355	11
600	146·4	32	00	001	11
550		24	-08	341	11
500	193·4	15	-16	339	10
450		08	-22	351	12
400	249·0	-03	-29	001	17
350		-17	-39	004	16
300	316·8	-33	-53	010	17
250		-49		022	19
200	403·1	-70		026	29
170		-76		028	28
150	464·7	-66		051	12
130		-67		022	05
110		-63		342	05
100	549·8	-61		014	04
90		-59		150	04
80		-58		120	02
70		-56		024	03
60	659·3	-53		026	05
		-49		112	05
	748·3	-45		100	11
	(35mb)	-44			

Inversion 842 mb 54° – 831 mb 56°; Isothermal 877 – 842 mb 54° – 831 – 803 mb 56°

Tropopause: II 185 mb -76° 42,000'

CAMBORNE

Pressure — Time 15h. G.M.T.; M.S.L. 1029·4 mb; Surf 1018·9 mb; Freezing 618 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	66	66	340	10
1000	08·1	61	56	317	10
950		59	54	317	10
900	37·4	60	49	321	12
850		55	45	323	12
800	69·8	50	35	329	12
750		51	24	330	09
700	106·2	43	13	342	08
650		36	06	004	10
600	147·1	29	-02	011	08
550		21	-09	013	09
500	193·8	12	-17	013	11
450		02	-27	017	10
400	248·7	-09	-37	033	23
350		-22	-47	035	22
300	315·8	-37	-55	049	29
250		-55		039	31
200	402·9	-76		047	33
170		-79		048	26
150		-72		053	18
130		-72		052	11
110		-68		044	07
100	545·8	-67		044	06
90		-65		046	05
80		-63		040	05
70		-61		056	09
60		-60		068	07
	(57mb)	-60			

Inversion 917 mb 57° – 900 mb 60°; 800 mb 60° – 770 mb 54°

Tropopause: I 190 mb -80° 41,400'

VALENTIA

Pressure — Time 15h. G.M.T.; M.S.L. 1031 mb; Surf 1029 mb; Freezing 630 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	63	62	290	06
1000	08·3	58	57	294	10
950		52	52	306	13
900	37·4	54	54	313	16
850		57	08	312	18
800	69·8	53	-02	313	14
750		48	-04	316	10
700	105·9	42	-02	311	15
650		36	-15	312	15
600	146·6	27	-35	306	15
550		23	-33	296	17
500	193·6	16	-38	293	19
450		05		286	15
400	248·7	-07		312	13
350		-19		329	24
300	316·1	-34		344	24
250		-52		346	18
200	(219mb)	-66			
170					

Inversion 950 mb 52° – 850 mb 57°

Tropopause: N.R.

LERWICK

Pressure — Time 21h. G.M.T.; M.S.L. 1013·3 mb; Surf 1003·3 mb; Freezing 738 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	49		
1000	03·7	51	49		
950		44	43		
900	32·1	39	36		
850		37	37		
800	63·9	39	26		
750		34	15		
700	98·6	28	09		
650		25	01		
600	138·4	19	-09		
550		12	-18		
500	184·2	03	-28		
450		-07	-21		
400	238·1	-18	-34		
350		-33	-47		
300	303·6	-45			
250		-59			
200	391·3	-52			
170		-54			
150		-55			
130		-55			
110		-55			
100	541·1	-54			
90		-54			
80		-55			
70		Inversion			
60		867 mb 34° – 834 mb 39°			

Isothermal 834 – 800 mb 39°; 690 – 660 mb 27°; 455 – 439 mb -07°

Tropopause: I 243 mb -61° 34,900'

STORNOWAY

Pressure — Time 21h. G.M.T.; M.S.L. 1019·8 mb; Surf 1018·2 mb; Freezing 666 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	54	49	290	08
1000	05·4	53	47		
950		46	42	310	20
900	33·9	46	28	302	29
850		45	17	300	23
800	65·7	42	25	291	25
750		39	14	290	32
700	101·2	35	-06	290	34
650		31	-16	287	40
600	141·5	25	-10	284	49
550		14	-12	284	52
500	187·7	07	-12	285	57
450		-02	-21	285	62
400	242·1	-14	-32	286	61
350		-29	-42	287	68
300	308·1	-44		284	63
250		-61		286	81
200	394·6	-67		287	64
170		-62		284	55
150	455·4	-62			

Inversion 804 mb 41° – 895 mb 49°; 762 mb 36° – 744 mb 40°; Isothermal 821 – 800 mb 42°

Tropopause: II 228 mb -67° 36,600'

LEUCHARS

Pressure — Time 21h. G.M.T.; M.S.L. 1018·1 mb; Surf 1017·3 mb; Freezing 628 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	62	56	290	12
1000	05·1	60	55	268	30
950		51	52	283	29
900	34·2	54	48	307	31
850		51	46	312	29
800	66·4	47	43	309	27
750		46	28	298	28
700	102·4	39	18	299	34
650		34	02	299	36
600	143·0	28	07	299	42
550		19	01	296	41
500	189·5	10	-07	292	41
450		-01	-21	288	42
400	244·1	-11	-31	294	42
350		-24	-45	291	50
300	310·9	-40	-60	291	54
250		-57		298	63
200	398·1	-63		295	58
170		-61		290	42
150		-61		282	23
130		-65		284	27
(116mb)		-58			

Inversion 785 mb 46° – 770 mb 47°

Tropopause: II 226 mb -65° 37,300'

ALDERGROVE

Pressure — Time 21h. G.M.T.; M.S.L. 1023·9 mb; Surf 1014·3 mb; Freezing 643 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	59	285	12
1000	06·6	60	57	290	18
950		55	52	293	25
900	35·8	53	50	292	35
850		52	48	290	40
800	68·1	49	45	292	43
750		44	40	295	46
700	104·1	38	32	295	46
650		33	27	292	40
600	144·7	30	09	292	36
550		22	10	297	37
500	191·4	10	02	289	37
450		04	-23	299	37
400	246·4	-10	-38	292	40
350		-19	-35	292	54
300	313·8	-33	-52	300	59
250		-52		300	74
200	401·8	-68		297	58
170		-74		295	43
150		-72		288	37
130		-70		283	24

Inversion 916 mb 52° – 900 mb 53°; 500 mb 10° – 490 mb 11°

Tropopause: II 178 mb -74° 42,500'

LIVERPOOL

Pressure — Time 21h. G.M.T.; M.S.L. 1023·9 mb; Surf 1021·9 mb; Freezing 636 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	66	57	270	15
1000	06·7	65	55	277	24
950		61	54	297	22
900	36·1	58	54	291	18
850		53	48	298	24
800	68·6	52	43	303	33
750		46	33	296	36
700	104·6	39	25	292	38
650		34	16	290	37
600	145·3	28	17	290	34
550		21	16	291	35
500	192·1	12	07	290	32
450		03	-01	300	34
400	247·2	-09	-12	300	41
350		-22	-30	299	37
300	314·3	-36	-41	304	49
250		-54		313	57
200	401·8	-72		313	54
170		-74		306	36
150		-73		301	23
130		-76		302	16
110		-72		304	15
100	544·7	-65		296	09
90	(95mb)	-67			

Inversion 1022 mb 66° – 1012 mb 67°; 842 mb 52° – 823 mb 54°; 704 mb 39° – 694 mb 40°; 170 mb -74° – 152 mb -72°; 191 mb -76° – 179 mb -73°; Isothermal 960 – 946 mb 61°

Tropopause: I 191 mb -76° 41,100'; I 134 mb -82° 48,500'

DOWNHAM MARKET

Pressure — Time 21h. G.M.T.; M.S.L. 1022·9 mb; Surf 1018·5 mb; Freezing 853 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	67	56	295	04
1000	06·4	67	56	286	12
950		62	50	279	15
900	35·8	57	48	277	20
850		53	48	298	24
800	68·3	54	27	317	21
750		47	33	320	22
700	104·5	39	26	311	23
650		31	12	295	21
600	145·0	25	05	286	22
550		18	-06	289	24
500	191·4	09	-05	294	26
450		00	-09	302	32
400	246·0	-09	-19	304	28
350		-21	-32	292	27

For continuation See Page 3.

Inversion 877 mb 54° – 850 mb 58°; 600 mb 25° – 595 mb 26°; Isothermal 1019 – 1000 mb 67°

Tropopause: N.R.

LARKHILL

Pressure — Time 21h. G.M.T.; M.S.L. 1025·2 mb; Surf 1009·4 mb; Freezing 630 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	57	280	03
1000	07·0	61	56		
950		62	55	314	12
900	36·4	59	44	317	07
850		61	25	318	10
800	69·1	55	20	317	12
750		48	14	328	17
700	105·3	42	07	330	16
650		35	00	321	14
600	146·0	26	-08	325	13
550		20	-07	319	14
500	192·6	14	-14	327	17
450		02	-17	330	19
400	247·6	-09	-21	324	20
350		-21	-29	329	23
300	314·7	-37	-45	342	24
250		-56		347	28
200	401·7	-78		340	23
170		-79		014	20
150	460·1	-77		020	12
130		-77		354	14
110		-72		031	05
100	543·4	-71		290	03
90		-67			

Inversion 987 mb 60° – 950 mb 62°; 907 mb 58° – 854 mb 62°

Tropopause: I 186 mb -81° 41,700'

CAMBORNE

Pressure — Time 21h. G.M.T.; M.S.L. 1028·9 mb; Surf 1017·9 mb; Freezing 625 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	59	55	310	08
1000	07·9	58	55	300	13
950		56	55	333	15
900	37·0	60	28	335	15
850		57	08	334	14
800	69·5	57	-13	352	15
750		49	-05	352	10
700	105·8	42	-18	353	14
650		35	-29	351	14
600	146·5	28	-34	352	10
550		21	-40	358	12
500	193·2	13	-26	357	13
450		04	-23	001	14
400	248·2	-09	-33	003	17
350		-24	-44	010	19
300	315·1	-38	-53	019	25
250		-54		026	29
200	402·3	-75		034	27
170		-79		059	22
150		-76		026	14
130		-74		038	13
110		-73		027	09
100	544·3	-73		030	06
90		-74		027	03
80	(85mb)	-74			

Inversion 969 mb 54° – 909 mb 61°; 842 mb 56° – 800 mb 57°

Tropopause: I 188 mb -81° 41,500'

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No. 11798. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Wednesday 18th July 1951. Page 1.

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

03h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03h	1014·7 mb	1004·7 mb	800 mb
STORNOWAY	03h	1022·3 mb	1020·7 mb	675 mb
LEUCHARS	03h	1020·1 mb	1019·3 mb	538 mb
ALDERGROVE	03h	1024·0 mb	1014·4 mb	611 mb
LIVERPOOL	03h	1023·7 mb	1021·7 mb	621 mb
DOWNHAM MARKET	03h	1022·4 mb	1018·0 mb	650 mb
LARKHILL	03h	1024·9 mb	1008·8 mb	645 mb
CAMBORNE	03h	1027·4 mb	1016·8 mb	670 mb
VALENTIA	03h	1030 mb	1028 mb	625 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	47			00·4	53	47	300	05	00·2	55	55	290	07
1000	03·9	49	47			06·1	51	45	313	22	05·5	56	55	334	12
950		44	44				45	39	309	19		53	49	325	12
900	32·3	39	36			34·6	39	35	306	19	34·3	47	44	322	11
850		34	33				43	20	304	18		43	43	319	15
800	63·5	32	24			66·1	39	18	303	27	66·1	43	16	306	25
750		27	20				35	09	303	32		39	18	302	28
700	98·3	22	05			101·3	32	-05	298	36	101·6	39	01	295	39
650		18	-07				27	-20	292	41		34	04	296	44
600	137·4	08	-16			141·4	22	-15	297	44	142·1	25	-02	295	46
550		-02	-23				16	-08	299	70		21	-07	302	98
500	181·9	-13	-33			187·8	12	-12	294	72	188·8	14	-13	302	57
450		-21	-43				00	-21	295	69		01	-26	297	56
400	233·9	-34	-52			242·5	-11	-30	295	81	243·6	-12	-38	298	56
350		-41					-26	-38	296	83		-25	-48	302	58
300	298·5	-41				309·0	-42		302	87	310·1	-41		310	60
250		-41					-60		301	98		-62		310	65
200	388·8	-45				395·5	-68		302	79	396·3	-71		310	70
170		-48					-59		301	60		-64		307	54
150	(165	-47					-62		298	53		-62		308	50
130	mb)						-63					-65			
110							-64					-65			
100						542·4	-59				542·3	-65			
90												-64			
80												-62			
70												-59			
60												-59			
Tropopause	II 350mb -41° 26,400					I 215mb -74° 38,000					II 228mb -71° 36,800				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	58	280	12	00·6	60	59	300	12	01·2	60	55	250	09
1000	06·6	57	56	295	17	06·5	59	57	299	21	06·2				
950		53	52	303	18		58	56	297	26		65	55	297	18
900	35·5	49	48	305	22	35·8	55	53	295	25	35·7	59	53	293	15
850		48	48	298	30		53	51	301	30		56	48	287	16
800	67·5	46	45	297	29	68·2	48	46	296	33	68·3	52	42	292	22
750		41	39	303	30		46	25	295	36		44	37	296	33
700	103·4	43	-04	303	32	104·3	40	19	300	39	104·3	39	36	302	35
650		38	-01	298	34		35	11	301	37		32	30	305	31
600	144·2	30	-14	297	34	145·1	30	20	301	36	144·9	26	23	306	37
550		22	-19	302	31		22	11	291	27		19	05	299	35
500	191·0	13	-16	307	30	192·0	13	-03	306	22	191·5	11	04	298	38
450		03	-32	307	33		03	-26	310	30		03	-06	300	40
400	246·0	-08	-42	306	39	247·0	-07	-38	310	39	246·5	-08	-18	307	37
350		-23	-65	310	47		-22	-53	312	46		-22	-32	307	37
300	312·8	-40	-60	313	53	314·1	-39	-59	318	49	315·5	-37	-47	309	43
250		-58		309	59		-54		312	45		-53		308	48
200	399·5	-72		303	61	401·5	-68		301	52	401·3	-66		299	37
170		-69		299	50		-66		295	36		-70		307	21
150		-72		291	34		-70		293	26		-74		294	16
130		-74		288	27		-74		293	28		-70		314	12
110		-67		288	19		-65		307	16		-69		281	12
100	543·5	-68		296	14	546·1	-66		315	10	545·1	-65		302	12
90		-68		305	10	(92 mb)	-65					-64		281	12
80		-64		299	10										
70		-62													
60															
Tropopause	II 212mb -71° 38,700					I 184mb -70° 41,800 I 128 .. -75° 49,500					II 189mb -68° 41,300 I 150 .. -74° 46,100				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	55	54	310	05	02·9	58	57	310	03	03	59	59		
1000	06·7	56	54			07·5	57	56	306	07	08	56	55		
950		61	49	340	11		66	54	317	12		50	49		
900	36·1	63	36	337	08	36·7	62	41	344	12	37·0	56	55		
850		59	36	330	09		61	25	004	09		53	53		
800	68·8	55	37	327	12	69·5	55	19	009	07	69·4	53	38		
750		48	30	322	15		48	12	010	12		45	29		
700	105·1	42	23	324	20	105·7	41	01	005	12	105·4	31	12		
650		33	13	328	23		35	-08	344	11		34	-02		
600	146·7	27	02	323	23	146·4	30	-14	333	11	146·0	27	-07		
550		21	02	316	23		-23	-21	329	12		18	-16		
500	192·4	14	-05	306	20	193·3	15	-28	320	13	192·5	11	-10		
450		04	-11	317	30		07	-37	330	17		03	-15		
400	247·6	-08	-15	323	31	249·7	-05	-40	341	20	247·5	-08	-29		
350		-22	-29	321	31		-20	-46	351	22		-20	-46		
300	314·8	-36	-50	336	32	316·0	-37	-58	360	23	314·5	-39	-56		
250		-55		332	36		-54		009	25		-60			
200	402·1	-75		339	36	403·3	-76		008	33	400·7	-81			
170		-77		335	15		-79		032	15		-81			
150		-79		321	10		-81		050	10		-77			
130		-72		287	09		-74		030	07		-79			
110		-70		306	08		-76		008	03		-75			
100	544·7	-67				544·6	-75		350	03	542·0	-69			
90							-71		323	05					
80							-68		322	05					
70							-67		009	06					
60							-67								
						(58 mb)	-66								
Tropopause	I 179mb -79° 42,400					II 193mb -79° 41,100					II 200mb -81° 40,100				

09h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	09h	1016·5 mb	1006·5 mb	823 mb
STORNOWAY	09h	1024·8 mb	1023·2 mb	697 mb
LEUCHARS	09h	1023·2 mb	1022·9 mb	683 mb
ALDERGROVE	09h	1025·9 mb	1016·2 mb	623 mb
LIVERPOOL	09h	1024·4 mb	1022·4 mb	600 mb
DOWNHAM MARKET	09h	1022·8 mb	1018·4 mb	610 mb
LARKHILL	09h	1024·9 mb	1009·0 mb	695 mb
CAMBORNE	09h	1027·6 mb	1017·0 mb	600 mb
VALENTIA		mb	mb	mb

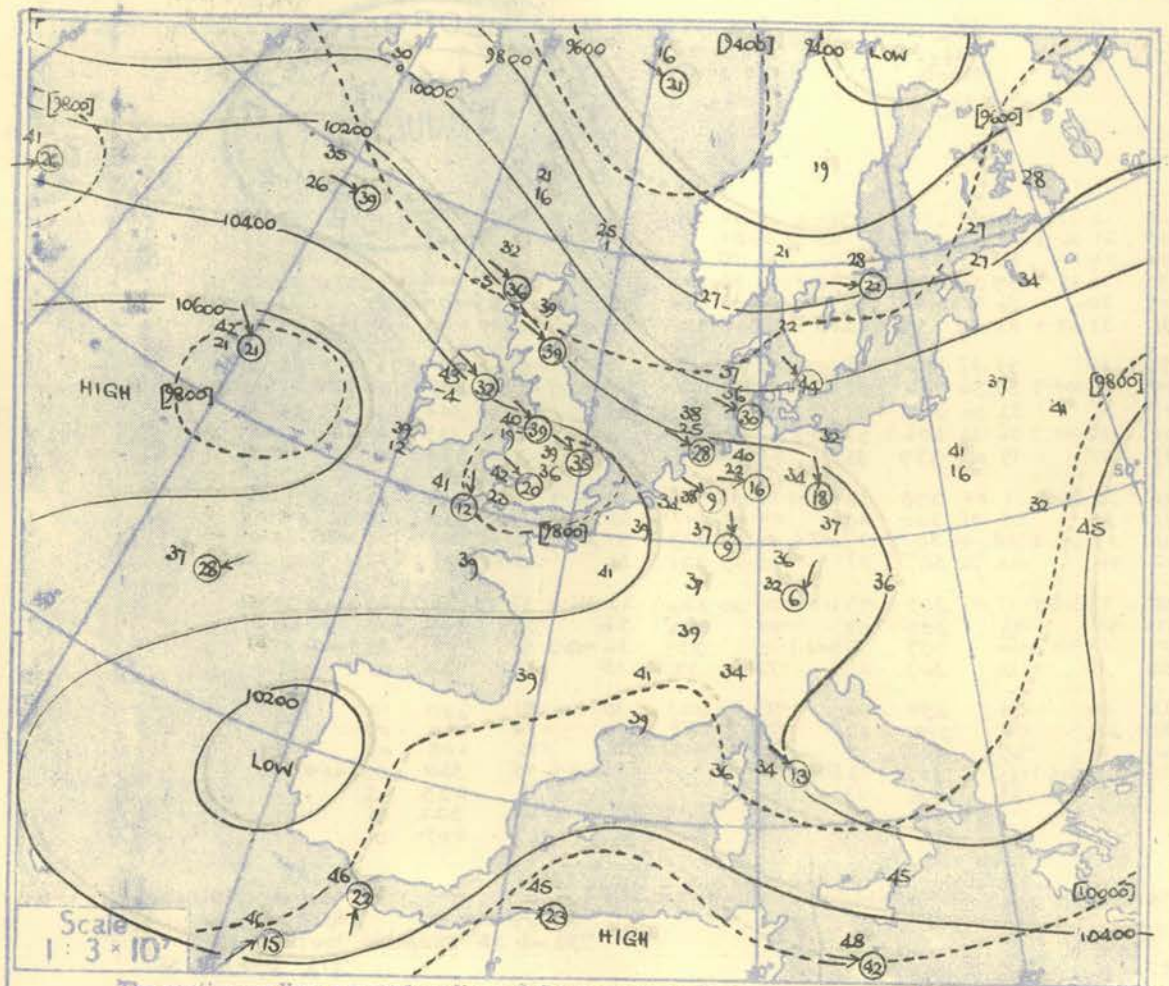
Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	49			00·4	56	48	280	10	00·2	61	49	360	05
1000	04·5	50	48			06·7	53	46	295	24	06·9	57	45	293	07
950		45	41				45	41	299	19		49	41	294	07
900	32·9	39	36			35·2	43	37	296	17	35·1	43	32	305	11
850		34	33				42	27	301	18		46	20	313	17
800	69·0	30	24			66·8	38	09	309	22	66·6	41	12	314	19
750		26	18				36	-02	305	25		38	05	316	23
700	98·0	21	07			102·2	32	-12	300	30	102·0	34	-07	317	29
650		16	-02				25	-19	301	36		31	-11	310	37
600	137·7	11	-15			142·2	22	-13	301	42	142·3	26	-10	309	46
550		09	-24				19	03	302	53		20	-03	312	54
500	182·7	-07	-37			188·6	08	-06	304	58	188·8	10	-06	310	56
450		-17	-46				-02	-16	304	70		00	-16	304	64
400	235·4	-25	-56			243·0	-14	-27	303	76	243·5	-11	-26	305	67
350		-30	-57				-26	-39	304	74		-26	-39	307	74
300	300·9	-46				309·5	-40	-52	305	80	310·0	-40	-50	307	77
250		-53					-55		306	84		-57		308	83
200	389·7	-41				396·6	-75		307	80	396·6	-77		315	76
170		-49					-67		307	76		-69		315	55
150		-50					-63		308	60		-64		307	44
130		-49					-60					-65		302	35
110		-50					-56					-66		298	32
100	541·7	-60				593·0	-54				591·5	-65			
90		-52					-55					-64			
80		-52					-57					-62			
70		-51				Max Wind 303° 91kts. 25,100 585						-59			
60															
Tropopause	II 276mb -52° 31,900					I 187mb -80° 41,000					I 190mb -80° 40,600				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	56	54	340	07	00·6	61	58	320	08	01·2	67	59	300	09
1000	07·0	54	52	330	13	06·7	58	57	322	12	06·4	64	58	307	20
950		49	47	324	13		53	53	312	17		55	51	318	22
900	36·0	54	39	320	18	35·7	49	49	303	26	35·6	56	50	316	24
850		53	29	321	18		48	44	306	26		49	45	293	27
800	68·2	49	27	320	25	67·7	45	31	305	25	67·8	49	41	291	32
750		47	22	317	33		45	14	306	27		44	33	294	36
700	104·2	41	23	309	33	103·7	42	11	310	27	103·8	38	27	294	38
650	37	37	17	302	31		36	02	314	25		35	23	296	33
600	145·0	29	08	297	27	144·5	32	-06	322	20	144·6	31	01	314	24
550		22	00	296	38		22	-17	327	23		23	-08	329	25
500	191·8	13	-11	312	29	191·4	13	-21	323	27	191·5	14	-14	328	25
450		02	-23	307	32		05	-26	317	27		05	-24	330	25
400	246·8	-07	-30	300	36	246·4	-09	-98	316	25	246·7	-07	-38	335	26
350		-21	-43	297	32		-23	-56	319	27		-21	-50	339	31
300	314·1	-37	-56	305	34	313·2	-39	-69	327	32	313·9	-37	-60	339	29
250		-57		313	48		-56		329	40		-57		328	35
200	401·3	-73		314	59	400·3	-72		317	52	401·2	-68		307	41
170		-70		312	48		-70		316	48					
150		-66		303	32		-63		299	32					
130		-67		299	27		-67		292	27					
110		-66		307	33		-64		318	19					
100	546·1	-65		308	22	545·5	-59		324	17					
90		-62		324	20		-57		324	13					
80							-55								
70															
60															
Tropopause	I 200mb -73° 40,130					I 190mb -75° 41,000					I 200mb -69° 39,600				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	59	330	02	02·9	62	60	340	07					
1000	06·9	60	57			07·6	61	60	333	12					
950		55	51	349	09		56	56	343	13					
900	36·1	58	52	335	11	36·7	57	51	332	14					
850		57	44	304	14		62	43	328	10					
800	68·6	63	31	303	17	69·4	56	38	324	08					
750		47	27	304	19		50	31	317	08					
700	103·8	40	18	301	21	105·8	44	26	323	09					
650		33	08	302	21		36	20	326	13					
600	145·3	26	-06	311	19	146·6	32	12	319	15					
550		18	-08	311	22		25	04	328	17					
500	191·9	19	-22	325	23	193·7	16	02	329	18					
450		09	-33	330	22		04	-03	339	16					
400	247·0	-09	-98	338	26	249·1	-03	-12	347	23					
350		-22	-57	327	25		-16	-27	347	23					
300	319·0	-39	-60	325	32	317·1	-31	-96	350	32					
250		-57		326	36		-49		350	34					
200	400·8	-71		322	40	406·5	-70		347	35					
170		-71		315	36		-76		342	28					
150		-74		311	17		-75		350	15					
130		-73		300	15		-73		353	09					
110		-67		311	15		-67		328	07					
100	544·2	-68		329	08	548·6	-66		348	05					
90		-69		297	05		-65		002	09					
80		-62		303	02		-63		350	06					
70		-61					-62								
60	(67 mb)	-61													
Tropopause	I 184mb -78° 41,800					I 175mb -77° 43,300									

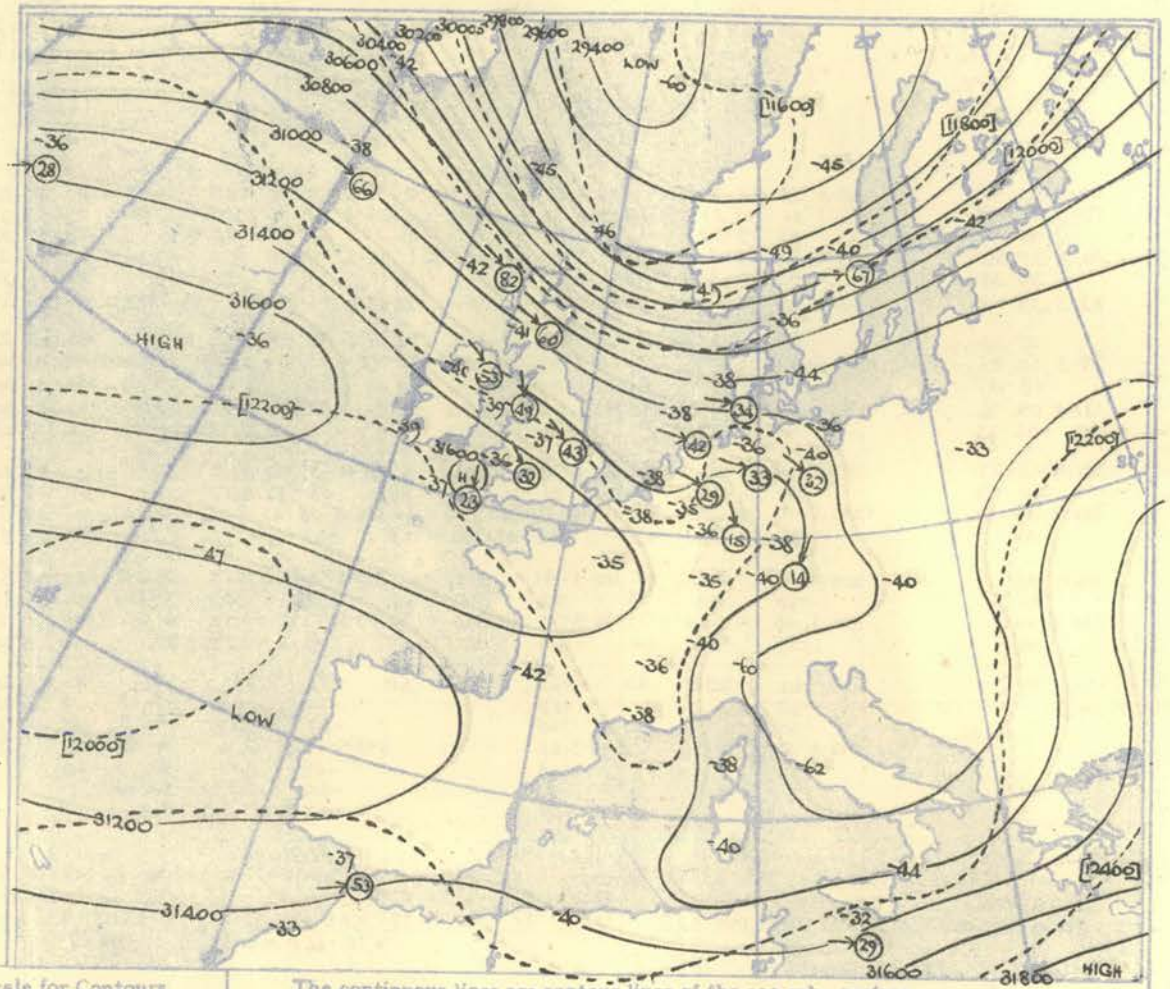
Wednesday 18th July, 1951.

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

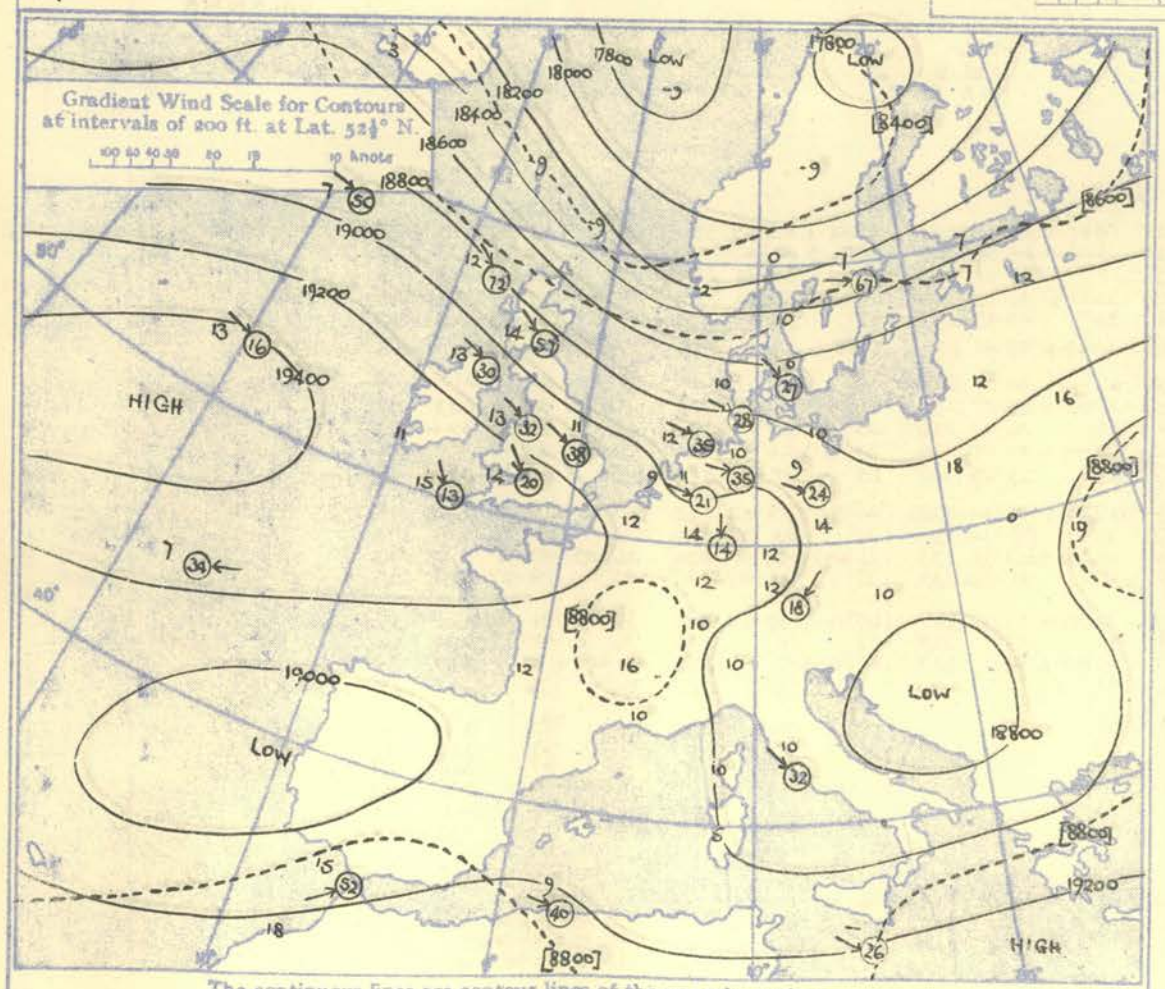


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

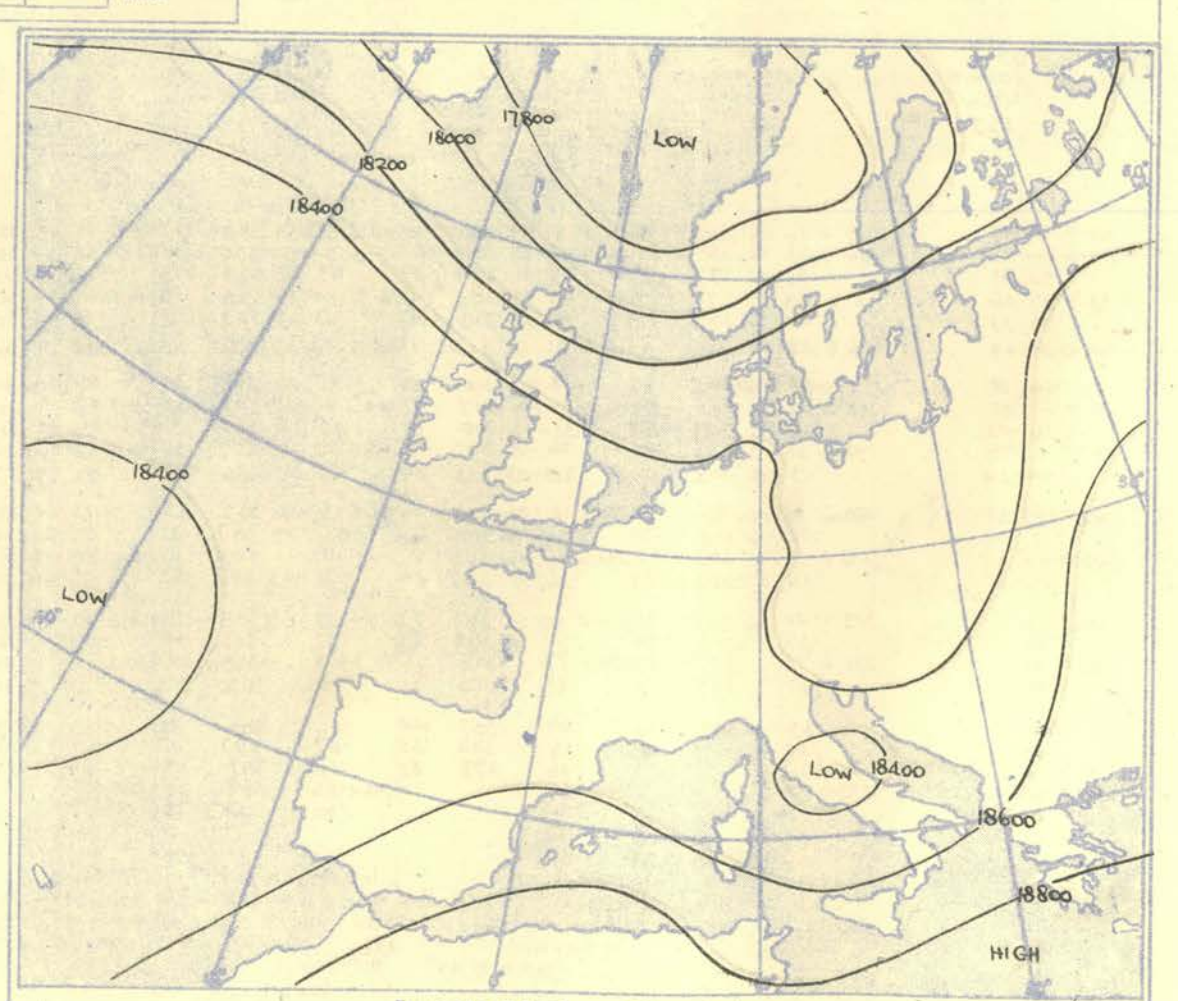
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N.



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.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	48·1N 17W			47·7N 12·3W			52°12'N 02°12'W		
Pressure: Time	12h			14h			14h		
M.S.L.	1031 mb			1027 mb			1026 mb		
Surf	1027 mb			1024 mb			1024·5 mb		
Freezing	655 mb			635 mb			610 mb		
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Height ft./100	°F. Temp.	Dew °F.	Height ft./100	°F. Temp.	Dew °F.
Surf		59	56		60	59	00·4		
1000	08·5	56	56	07·5	59	56	07·3		
950		57	56		57	54			
900		57	48		57	52	36·7	55	55
850		55	52		55	36		53	49
800		51	21		54	43	69·1	55	21
750		46	10		46	22			
700	106·1	37	07	105·3	41	28	105·5	45	27
850		31	22		34	17			
600		26	23		27		146·5	30	29
550		18	-07		20				
500	193·1	00		192·6	10		193·5	15	
450									
400							249·1	-06	
350									
300							316·5	-37	
250									
200									
170									

48·1N 17W	47·7N 12·3W	52°12'N 02°12'W
Cloud 8/8 Sc. 980-950mb 1/8 Ci. N.R. Inversion 960mb 53°- 920 - 66° Surf Wind N'ly 7-10 kts.	Cloud 7/8 Sc 1000-950 mb 2/8 Ci N.R. Inversion 950 mb 55°- 900 .. 57° Isothermal 980-950 mb 55° Surf wind N'ly 11-16 kts	Cloud 8/8 Cu Sc 945-815 mb Inversion 850 mb 53·1° 800 .. 54·7°

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

Place	Cirrus 52·4°N 19·9°W		Shoeburyness		Valentia		Lympne		Castle Archdale		Cirrus 52·4°N 20·0°W		Ronaldsway	
Time	09h		09h		15h		21h		21h		21h		21h	
Type														
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	270	16	310	09	330	11	080	08	270	11	270	14	031	13
1,000	260	16	330	14	350	09	070	11	300	14	270	16	330	29
2,000	260	16	330	18	350	10	040	05	310	02	280	17	290	13
3,000	270	14	330	16	340	14	360	10	270	08	280	18	320	27
4,000	280	15	320	15	340	16	340	13	300	17	280	16	310	16
5,000	300	17	310	14	330	17	330	17			270	15	350	10
6,000			300	19	330	21	310	19					330	14
8,000			300	28	330	20							320	28
10,000	280	17	300	28	330	22					270	19		
14,000	270	14	310	26	320	25					250	18		
18,000	270	18	340	22	330	26					260	14		
24,000	270	12			330	25					260	24		
30,000	(23,000')		340	28	320	34					240	12		
40,000			310	40	330	27					260	11		
50,000			300	18	340	12								
			290	12	360	06								
			(55,000')		(67,000')									

NEPHOSCOPE OBSERVATIONS

Place	Hemswell	Aston Down
Time Type	09h Ci	09h Ci
Dir. Vel.	310 40	020 25

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

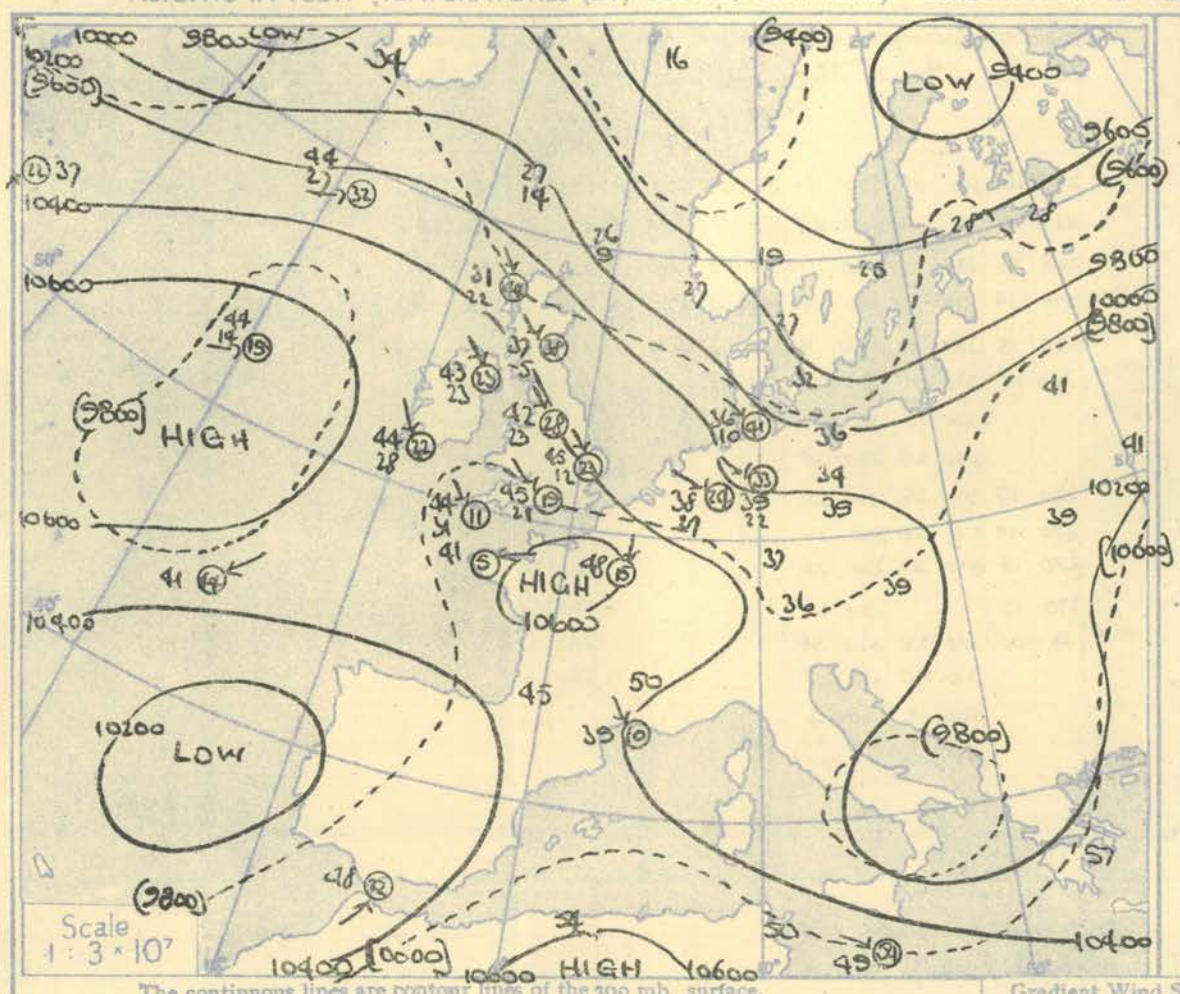
Ship	Weather Observer					Weather Observer				
Lat/Long	59·2°N 19·0°W					59·2°N 19·2°W				
Pressure: Time	03hrs G.M.T.					09hrs G.M.T.				
M.S.L.	1024 mb					1022 mb				
Surf	1024 mb					1022 mb				
Freezing	670 mb					640 mb				
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	—	55	50	270	14	—	55	53	200	19
1000	6·6	54	41	263	15	6·0	53	50	186	23
950		51	28	270	18		52	36	191	22
900	35·4	46	26	270	21	34·9	54	44	198	22
850		44	29	268	21		50	41	209	22
800	67·1	40	31	267	26	67·1	49	37	225	22
750		40	23	269	33		45	38	226	23
700	102·7	35	26	270	39	103·1	41	32	232	28
650		30	18	273	42		33	23	239	30
600	143·0	22	12	275	45	143·8	27	15	249	32
550		16	06	279	46		20	03	258	37
500	189·2	07	-4	282	50	190·4	11	-11	261	43
450		00	-14	279	51		03	-17	267	46
400	243·7	-11	-25	275	64	245·4	-8	-27	268	45
350		-24	-41	275	61		-20	-37	268	46
300	310·4	-38	-53	275	66	312·6	-34	-50	273	50
250		-56		275	66		-52		273	54
200	397·4	-74		279	68	400·3	-73		263	49
170		-73		279	66		-72		261	50
150		-64		278	45		-65		262	45
130		-66		274	48		-65		264	40
110		-64		274	38		-64		266	28
100	541·8	-63		275	31	545·0	-61		270	24
90							-61		271	27
80							-60		273	20
70							-58		278	07
60							-56		278	07
	Isothermal Surf - 980 mb 55° 800 - 740 mb 40°					Inversion 965 mb 51-919 mb 56° Isothermal 880 - 850 mb 51°				
Tropopause	I 180 mb -81° 41900'					II 191 mb -77° 41000'				

Ship	Weather Observer					Weather Observer				
Lat/Long	59·1°N 19·2°W					59°N 19°W				
Pressure: Time	15hrs G.M.T.					21hrs G.M.T.				
M.S.L.	1018 mb					1017 mb				
Surf	1018 mb					1017 mb				
Freezing	615 mb					660 mb				
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	—	57	56	230	20	—	56	56	255	21
1000	4·9	55	54	238	24	4·7	55	55	258	27
950		53	53	242	29		57	57	264	31
900	33·9	56	56	246	32	33·9	54	54	268	30
850		53	53	250	33		51	43	270	30
800	66·3	49	49	250	34	66·3	51	44	271	31
750		47	31	250	33		46	36	269	32
700	102·5	44	27	258	32	102·4	40	32	266	31
650		37	19	255	36		30	23	262	34
600	143·4	30	21	262	35	142·8	25	09	260	39
550		21	08	270	36		19	-11	262	36
500	190·2	16	-14	272	39	189·3	09	-24	263	38
450		08	-33	260	42		-2	-37	264	45
400	245·8	-5	-48	257	42	243·7	-11	-53	264	46
350		-17	-56	257	42		-21	-54	260	50
300	313·6	-29	-56	254	46	310·7	-37	-59	258	51
250		-48		244	42		-51		255	55
200	402·4	-67		253	50	398·8	-69		262	55
170		-68		254	56		-73		259	48
150		-63		257	48		-67		260	44
130		-59		266	36		-66		260	45
110		-58		278	36		-67		258	32
100	549·2	-57		281	25	543·2	-66		258	27
90		-54		284	22		-64		258	15
80		-50		277	15		-61		260	10
70		-47		264	12		-62		260	12
60		-48		256	09		-61		260	13
		-45		256	05		-57		260	15
	(44) -43					(42) -57				
	Inversion 963 mb 52°-905 mb 56° Isothermal 905-884 mb 56° 792-773 mb 48° 547-517 mb 19°					Inversion 1000 mb 55°-955 mb 57° 850 mb 51°-829 mb 54° Isothermal 955-930 mb 57°				
Tropopause	II 187 mb -70° 41700'					II 182 mb -73° 41800'				

Ship	Cirrus					Cirrus				
Lat/Long	52·3°N 19·6°W					52·4°N 20·1°W				
Pressure: Time	03hrs G.M.T.					15hrs G.M.T.				
M.S.L.	1013 mb					1032 mb				
Surf	1013 mb					1032 mb				
Freezing	630 mb					600 mb				
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	—	59	58	290	15	—	59	57	260	14
1000	8·7	55	55	296	15	8·8	56	54	263	15
950		58	58	306	16		53	52	267	16
900	38·0	54	54	297	21	37·9	59	27	272	19
850		52	50	279	19		58	22	270	20
800	70·4	53	36	280	20	70·5	56	18	250	19
750		49	29	282	22		50	19	239	17
700	106·8	45	21	287	21	106·9	44	14	259	18
650		36	14	287	18		37	09	271	13
600	147·6	28	05	287	16	147·9	32	03	269	15
550		20	00	287	14		23	-6	266	14
500	194·3	13	-4	287	16	194·9	16	-14	251	16
450		03	-18	287	14		08	-22	260	16
400	249·6	-5	-30	287	20	250·5	-3	-30	264	17
350		-20					-17		264	14
300	317·1	-36				318·3	-33		264	14
250		-53					-50		264	14
200	404·9	-73				406·6	-69			
170		-81					-72			
150		-80					-70			
130		-81					-69			
110		-77					-67			
100	545·6	-76				550·8	-66			
90		-74					-62			
80		-71					-68			
70		-69					-72			
60		-66					-52			
							-51			
							-50			
							-49			
						(26)	-49			
	Inversion 1000 mb 55°-986 mb 59° 859 mb 50°-842 mb 54° 450 mb 3°-435 mb 4° Isothermal 950-928 mb 58° 500-493 mb 13°					Inversion 936 mb 53°-907 mb 60° Isothermal 950-936 mb 53° ↗				
Tropopause	III 189 mb -81° 42200'					I 190 mb -73° 41700'				

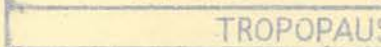
July 18th 1951

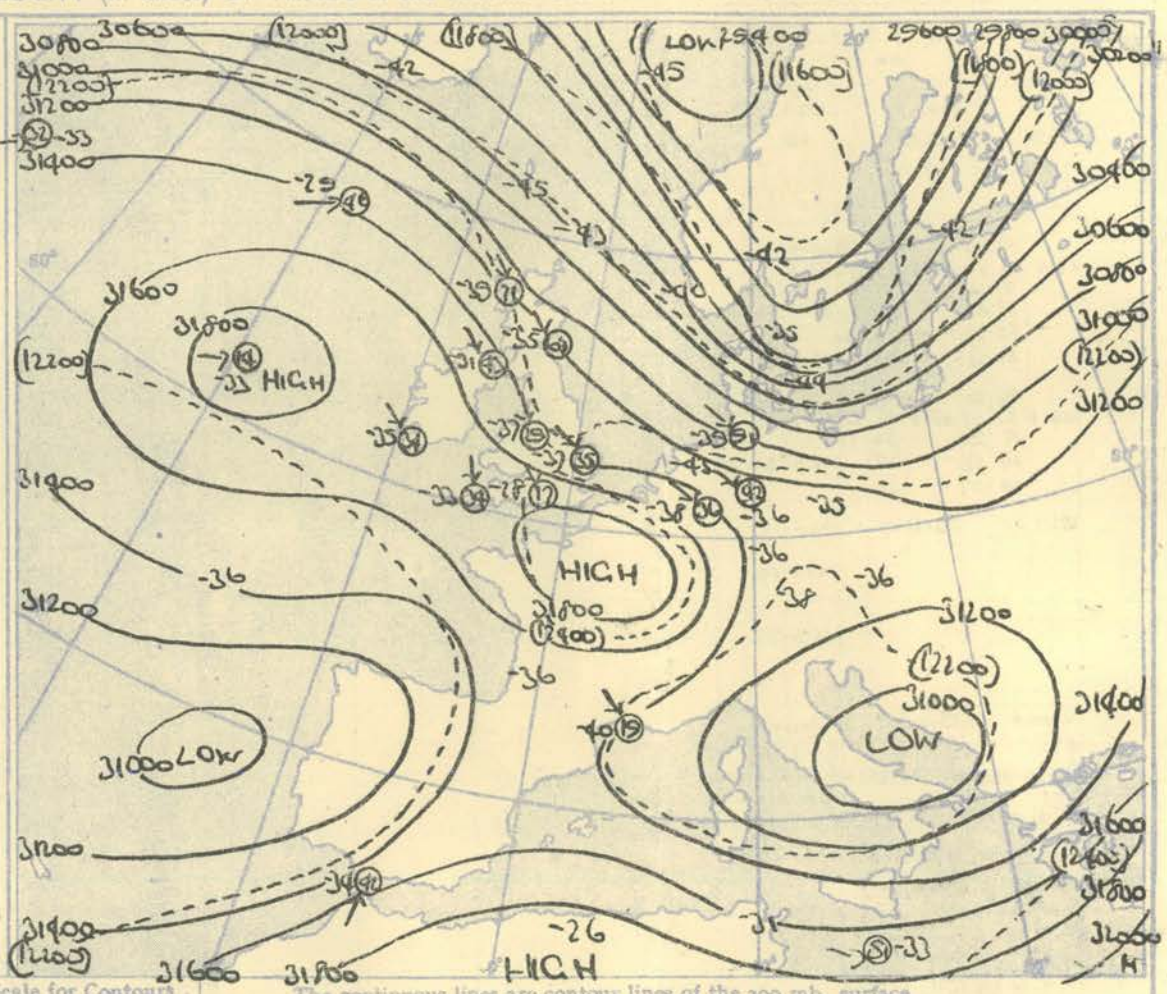
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

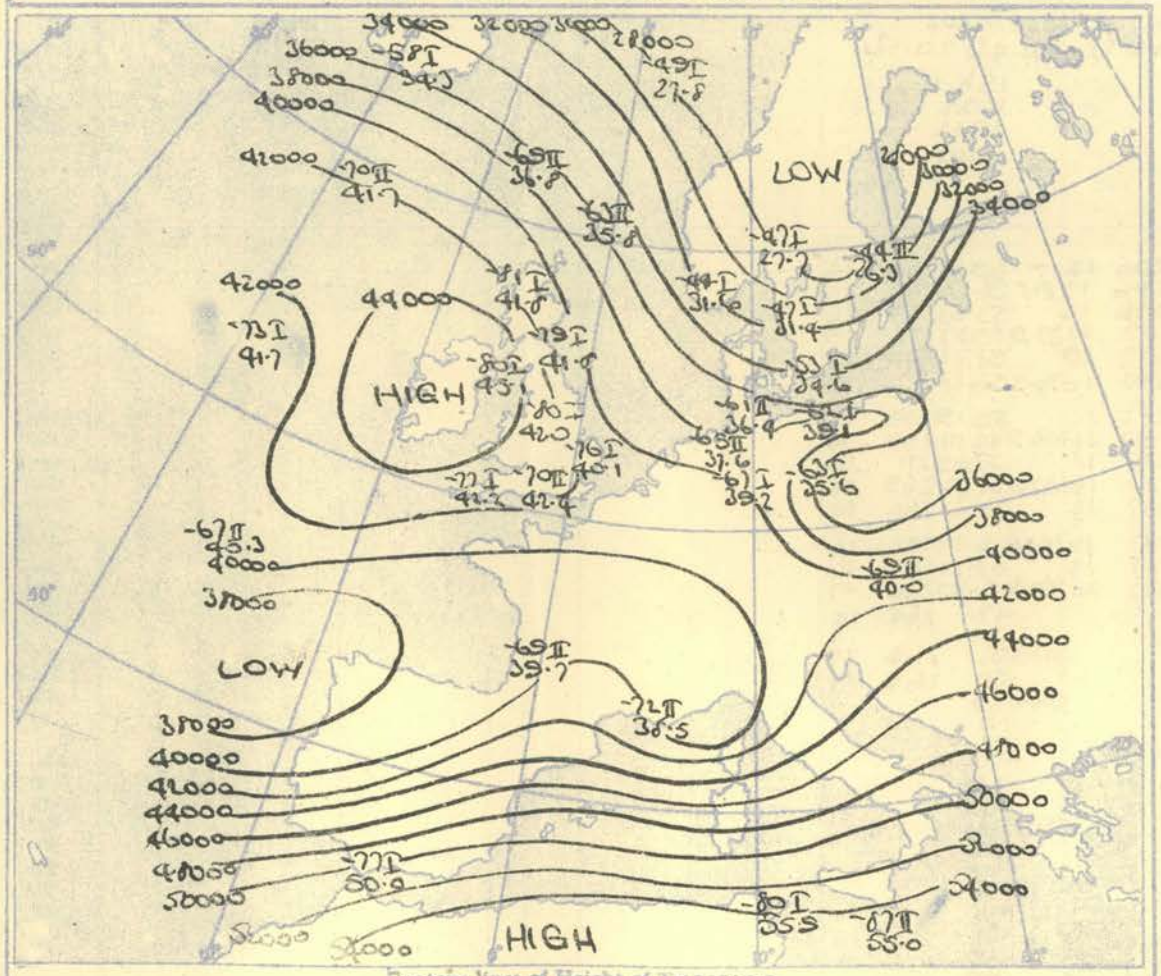
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N





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.

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Development of a wave in the 1000-500 mb thickness pattern over the North Atlantic, in association with the surface depression advancing Northeastwards towards Iceland.

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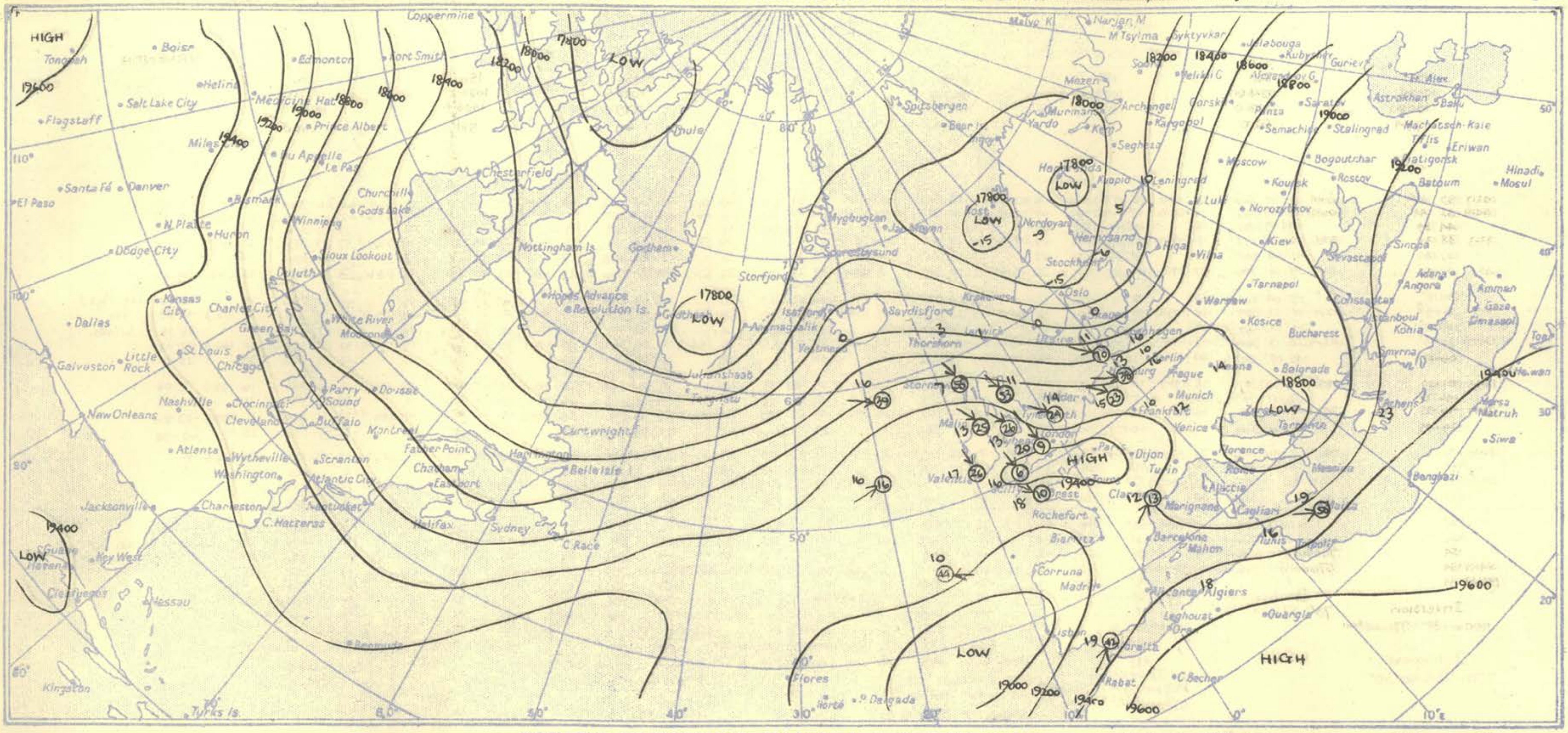
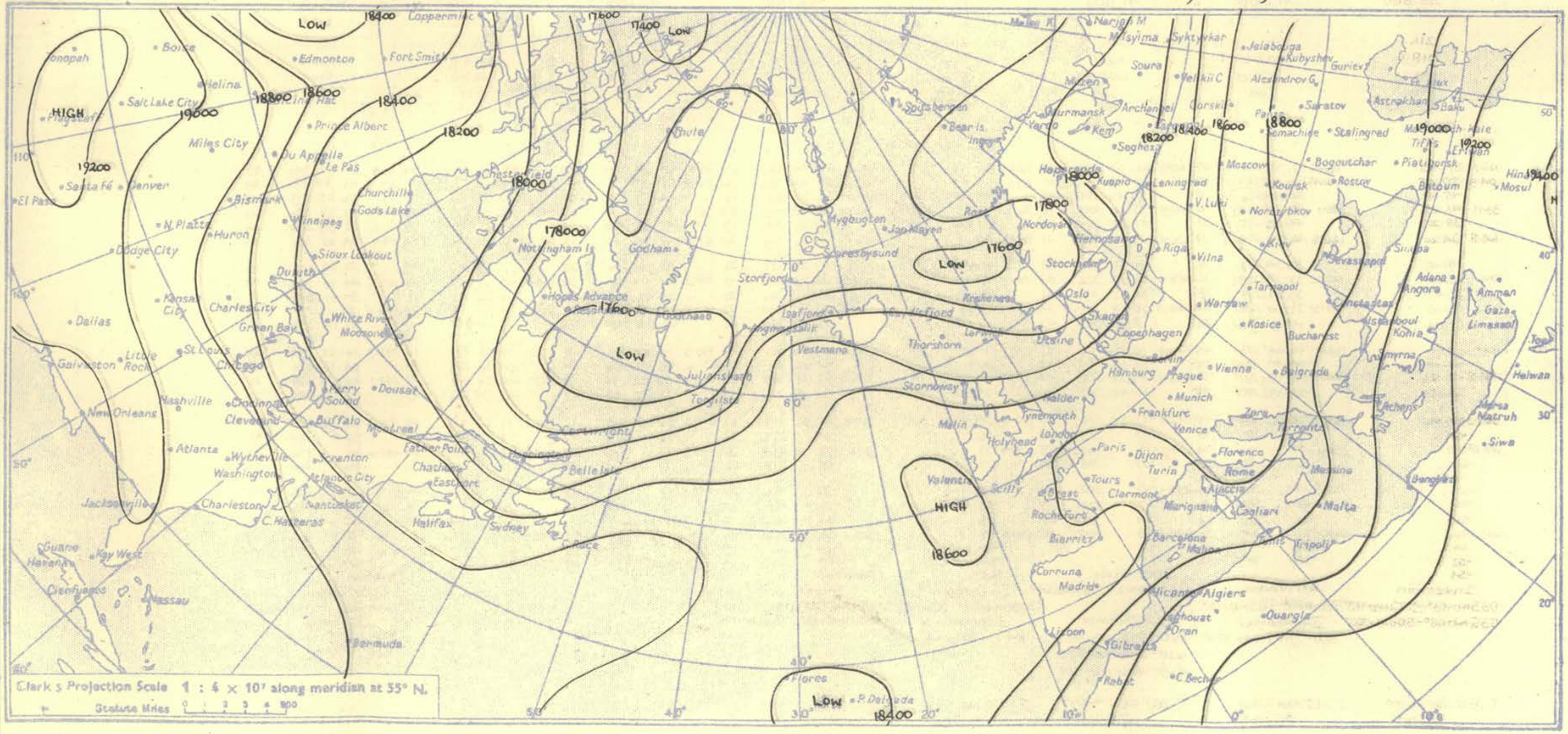
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Wednesday 18th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 18th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Wednesday 18th July 1951.

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

15h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h G.M.T.	15h. G.M.T.	15h. G.M.T.
Pressure: M.S.L.	1018·2 mb	1024·6 mb	1023·5 mb	1027·0 mb	1025·5 mb	1028·9 mb	1028·8 mb	1027·3 mb	1029·5 mb
Pressure: Surf	1008·2 mb	1023·0 mb	1022·7 mb	1017·3 mb	1023·5 mb	1019·5 mb	1008·4 mb	1016·8 mb	1027 mb
Pressure: Freezing	794 mb	680 mb	612 mb	634 mb	617 mb	611 mb	581 mb	600 mb	600 mb

Pressure mb	Lerwick Height ft./100	Lerwick °F	Lerwick Dew °F	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway °F	Stornoway Dew °F	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars °F	Leuchars Dew °F	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove °F	Aldergrove Dew °F	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool °F	Liverpool Dew °F	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market °F	Downham Market Dew °F	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill °F	Larkhill Dew °F	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne °F	Camborne Dew °F	Camborne Wind Dir. °	Camborne Wind Vel. knots	Valentia Height ft./100	Valentia °F	Valentia Dew °F	Valentia Wind Dir. °	Valentia Wind Vel. knots	Pressure mb
Surf	02·7	53	45			00·4	62	51	260	10	00·2	70	47	200	03	02·6	64	53	310	08	00·6	65	57	310	08	01·2	65	57	045	08	04·4	73	61	330	06	02·9	65	62	340	07	00·3	62	55			Surf
1000	04·9	52	44			06·8	58	49	267	21	06·6	67	45	259	07	07·4	61	50	312	09	07·1	60	53	313	12	06·7	61	55	040	10	06·7	72	61			07·6	62	61	341	12	07·9	59	54			1000
950		44	39				49	43	280	18		60	41	270	08		52	44	314	13		52	47	298	12		54	51	005	12		64	58	325	08		57	59	346	10		52	48			950
900	33·3	38	35			35·6	46	32	293	18	35·9	53	37	288	07	36·4	50	38	316	16	36·0	53	42	321	10	35·8	51	48	315	16	36·3	58	54	328	11	36·9	57	57	333	08	36·5	54	41			900
850		27	20				41	20	302	19		41	31	305	17		53	11	319	18		51	30	319	13		46	43	308	19		52	49	311	13		59	46	309	09		56	27			850
800	64·6	33	15			67·1	39	14	306	27	67·6	43	16	313	26	68·6	52	20	317	21	68·1	49	27	320	22	67·7	48	28	306	23	68·7	49	46	300	17	69·6	54	39	291	13	69·0	54	26			800
750		30	15				35	09	306	33		42	-11	308	32		48	24	321	23		46	27	317	30		46	19	308	23		49	40	295	25		49	31	286	15		49	32	See Page 3 for Winds.		750
700	99·5	26	09			102·4	31	22	309	44	103·4	37	-05	309	38	104·8	43	23	325	23	104·2	42	23	310	28	103·9	45	12	313	23	104·9	45	21	312	19	105·9	44	31	309	11	105·3	44	28			700
650		20	02				28	19	307	43		37	08	313	45		34	19	317	22		36	15	312	24		37	10	317	26		41	09	317	17		40	07	355	10		38	18			650
600	138·9	13	-11			142·4	20	13	304	42	144·3	30	07	311	47	145·5	27	13	312	24	145·0	29	09	310	25	144·8	31	04	314	30	146·1	35	-01	314	15	147·0	32	00	359	10	146·3	32	08			600
550		06	-21				15	07	307	49		22	01	307	48		21	08	302	24		21	00	296	28		23	-05	301	28		2[illegible]	-11	321	15		23	02	346	14		25	01			550
500	184·3	01	-29			189·5	07	-03	302	55	191·2	11	-10	305	53	192·2	13	01	290	25	191·7	13	-08	288	26	191·7	14	-16	294	24	193·4	20	-17	330	09	194·1	16	01	343	16	193·5	17	-08			500
450		-06	-23				00	-17	303	63		05	-27	306	58		04	-03	292	23		03	-21	290	25		04	-30	295	26		09	-42	326	11		09	-22	341	21		08	-23			450
400	238·1	-16	-35			243·1	-11	-28	303	66	246·3	-06	-37	310	58	247·3	-05	-10	303	24	246·7	-09	-28	295	25	246·8	-09	-43	301	30	249·2	-01	-36	334	14	249·7	-03	-21	340	21	249·0	-03	-36			400
350		-29	-45				-24	-36	304	70		-20	-33	310	58		-16	-31	309	34		-23	-37	300	27		-22	-55	308	32		-14	-50	330	13		-16	-31	354	25		-18	-58			350
300	304·1	-43				309·7	-39	-46	305	71	313·7	-35	-54	312	63	315·2	-31	-46	312	43	313·7	-37	-50	318	29	313·9	-37	-60	319	35	317·5	-28	-60	342	17	317·5	-33	-46	357	34	316·5	-35				300
250		-56					-54		308	66		-55		318	64		-50		314	51		-57		328	28		-55		333	42		-46		346	21		-51		001	38		-53				250
200	391·5	-55				397·1	-72		307	67	401·2	-79		316	59	403·5	-69		313	55	400·3	-77		329	41	401·0	-76		337	37	406·6	-65		333	34	403·4	-73		354	39						200
170		-53					-72		312	60		-67		314	46		-77		319	50		-72		323	31		-67		311	30		-67		323	30		-74		345	27						170
150		-54					Inversion				460·9	-63		318	42		-78		313	40		-69		316	31	461·1	-62		313	27	467·1	-62		305	24		-74		303	15		Inversion				150
130		-54				941 mb 47°- 932 mb 48°						-61		310	54		-71		307	40		-70		315	25		-64		311	23		-63		312	20		-70		299	10	927 mb 48°- 880 mb 60°				130
110		-54				700 mb 31°- 685 mb 33°						-58		263	42		-69		314	30		-64		315	20		-59		297	29		-65		313	17		-67		337	04	845 mb 55°- 835 mb 57°				110
100	541·5	-54				576 mb 16°- 566 mb 17°					547·4	-57		262	18	546·5	-69		311	28	544·3	-62		306	16	547·3	-57		295	17	552·6	-65		308	12	549·0	-69		324	06						100
90	(93 mb)	-54										-57		309	13		-70		304	24		-61					-55		297	15		-60		291	16		-63		324	07						90
80												-56					-67		301	19 (88 mb)	-60					-54		305	12		-59		321	12		-61		324	08						80
70												-51					-66		324	15						-49		360	09		-56		323	09		-62									70
60		Inversion					Isothermal				657·9	-51				653·3	-64		326	15		Inversion				658·4	-51																			60
		900 mb 38°- 876 mb 39°					730 -716 mb 33°					-49					-60		282	12		930 mb 49°- 892 mb 54°					Inversion				662·3	-55		346	03	Inversion								
		Isothermal										-48				739·5	-61		298	10		815 mb 48°- 788 mb 50°					819 mb 41°- 800 mb 48°					(44 mb) -50					920 mb 55°- 868 mb 61°								
		770 -750 mb 30°										Inversion					Inversion										739 mb 45°- 716 mb 47°					Inversion					Isothermal								
												827 mb 39°- 787 mb 46°					915 mb 46°- 866 mb 55°										Isothermal					787 mb 47°- 782 mb 49°					664 -650 mb 40°								
												679 mb 36°- 662 mb 39°					834 mb 50°- 800 mb 52°										485 - 476 mb 11°					Isothermal													
																																	782 -750 mb 49°- 345-335 mb 16°												
Tropopause	II 233 mb - 63° 35,800'					I 181 mb - 81° 41,700'					I 184 mb - 79° 41,800'					I 158 mb - 80° 45,100'					I 182 mb - 80° 42,000'					I 200 mb - 76° 40,100'					II 184 mb - 70° 42,400'					I 185 mb - 77° 42,200'										Tropopause

21h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne		
Pressure: Time	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.		G.M.T.
Pressure: M.S.L.	1018·3 mb	1023·6 mb	1022·7 mb	1026·7 mb	1026·0 mb	1025·2 mb	1024·4 mb	1026·6 mb		mb
Pressure: Surf	1008·2 mb	1022·0 mb	1021·9 mb	1017·0 mb	1024·0 mb	1020·8 mb	1008·8 mb	1016·1 mb		mb
Pressure: Freezing	780 mb	700 mb	665 mb	660 mb	654 mb	625 mb	621 mb	618 mb		mb

Pressure mb	Lerwick Height ft./100	Lerwick °F	Lerwick Dew °F	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway °F	Stornoway Dew °F	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars °F	Leuchars Dew °F	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove °F	Aldergrove Dew °F	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool °F	Liverpool Dew °F	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market °F	Downham Market Dew °F	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill °F	Larkhill Dew °F	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne °F	Camborne Dew °F	Camborne Wind Dir. °	Camborne Wind Vel. knots	Height ft./100	°F	°F	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	51	45			00·4	57	51	270	07	00·2	62	54	280	05	02·6	56	50			00·6	58	54	280	02	01·2	60	54	090	03	04·4	68	63	060	04	02·9	61	59	360	03						Surf
1000	04·9	50	45			06·4	54	48	253	18	06·6	63	50	267	11	07·2	54	49			07·1	55	49	286	06	06·9	58	53			06·8	69	63			07·3	60	59	351	09						1000
950		45	42				50	39	260	16		59	45	286	14		55	43				52	38	305	12		56	50	025	01		63	57	056	08		56	55	013	10						950
900	33·4	43	31			35·1	47	22	265	18	35·9	52	40	300	11	36·2	53	28			36·0	52	33	308	09	36·0	51	47	301	07	36·4	56	53	029	05	36·4	57	53	030	05						900
850		38	24				43	20	275	21		45	30	304	13		51	30				49	21	319	13		47	43	300	09		52	48	312	06		57	39	340	04						850
800	64·8	34	20			66·8	40	31	279	27	67·8	45	16	310	21	68·4	49	31			68·1	48	16	319	20	67·9	41	37	310	15	68·6	47	41	326	09	68·9	54	25	341	05						800
750		29	14				38	34	277	28		42	33	331	28		46	31				47	29	327	21		33	16	316	25		45	23	326	14		51	24	001	08						750
700	99·6	26	01			102·2	32	28	279	26	103·6	37	28	326	33	104·3	39	27			104·2	40	23	324	19	103·3	34	-06	322	24	104·6	40	15	315	19	105·2	44	13	356	08						700
650		21	-07				31	22	313	31		31	22	313	31		31	19				31	17	316	22		35	01	319	23		36	06	312	12		37	07	328	12						650
600	139·1	16	-05			142·2	22	20	288	36	144·0	26	07	311	34	144·7	25	17			144·6	23	12	304	23	143·9	29	-02	311	23	145·2	29	-07	318	14	146·0	29	11	321	16						600
550		08	04				15	13	286	44		18	-07	307	42		18	14				18	-03	320	21		21	-16	309	25		21	-15	308	17		22	12	333	15						550
500	184·7	05	01			188·4	08	04	293	45	190·4	10	-12	306	43	191·1	11	05			191·0	09	-06	319	20	190·5	14	-40	308	28	192·1	13	-23	293	18	192·9	16	-02	334	20						500
450		-04	-10				-04	-09	296	50		01	-08	308	45		00	05				00	-12	311	20		04	-52	306	29		04	-36	286	19		04	-13	328	22						450
400	238·8	-15	-22			242·7	-13	-19	297	51	245·2	-09	-28	308	48	245·8	-12	-48			245·6	-12	-27	319	25	245·6	-09	-33	290	28	247·2	-09	-26	312	21	248·1	-06	-26	339	21						400
350		-26	-33				-24	-37	295	57		-20	-40	308	48		-25	-31				-27	-40	317	23		-21	-42	303	27		-22	-39	321	23		-19	-38	355	20						350
300	305·3	-39	-45			309·4	-38	-56	291	55	312·3	-37	-50	316	47	312·4	-39	-49			311·8	-40	-52	314	27	312·8	-36	-59	303	27	314·2	-37	-60	315	19	315·5	-36	-54	359	25						300
250		-54					-56		295	53		-57		313	50		-56					-59		325	24		-56		308	23		-58		327	18		-55		356	31						250
200	392·8	-69				396·2	-77		294	54	399·2	-73		309	53	399·4	-73				398·2	-75		324	31	399·8	-77		316	25	400·9	-78		350	24	402·6	-75		356	29						200
170		+60					-74		302	50		-67		318	44		-77					-75		328	40		-77		323	28		-77		327	30		-80		310	23						170
150		-57				455·3	-68		305	44	459·3	-67		302	40		-75					-73		312	29	458·5	-73		319	28	459·5	-75		324	20		-75		325	24						150
130		-55					-67		307	39		-67		328	33		-72					-71		311	25		-72		309	24		-76		327	21		-75		335	11						130
110		-56					-61		315	24		-64		315	29		-73					-70		316	19	Inversion					-71		333	15		-72		341	08						110
100	541·2	-56				540·7	-62		319	20	544·5	-63		315	15	541·9	-71				541·2	-71		318	19	988 mb 56°- 957 mb 57°					942·9	-69		330	11	549	-72		345	07						100
90		-54					-64		313	19		-63					-68					-66		343	13	735 mb 31°- 715 mb 35°					-67					-73		354	04						90
80		-52					-67		313	22							-69					-64		359	06	695 mb 33°- 670 mb 38°					(86 mb) -68														80
70		-54															-63				(76 mb) -63															-69									70
60		Inversion					Inversion					Inversion					Inversion					Inversion											Inversion					Inversion									60
		933 mb 43°- 922 mb 45°					773 mb 38°- 763 mb 40°					1022 mb 62°- 986 mb 69°					1000 mb 54°- 930 mb 55°					960 mb 51°- 931 mb 55°										1008·8 mb 68°- 1000 mb 69°					934 mb 53°- 910 mb 57°									
		535 mb 05°- 508 mb 06°					Isothermal					Isothermal					Isothermal					800 mb 48°- 791 mb 49°											760 mb 43°- 743 mb 46°					Isothermal								
							970 - 943 mb 50°					850 -793 mb 45°					842 - 816 mb 50°																							910 - 850 mb 57°								
												620 -605 mb 27°																											823 -770 mb 54°								
												439 -426 mb -1°																																		
Tropopause	II 204 mb - 69° 38,700'					I 185 mb - 82° 41,300'					I 207 mb - 74° 39,200'					I 185 mb - 78° 41,500'					II 191 mb - 77° 40,700'					I 187 mb - 82° 41,300'					I 181 mb - 82° 42,100'					I 175 mb - 82° 43,000'										Tropopause

HMSO Press, MO, Dunstable

No. 1179. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Thursday, 19th July, 1951. Page 1.

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

LERWICK

Pressure: Time 03h. G.M.T.; M.S.L. 1017·7 mb; Surf 1007·7 mb; Freezing 745 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	50		
1000	04·8	49	49		
950		50	35		
900	33·4	45	01		
850		38	-02		
800	64·8	33	-04		
750		32	22	For	
700	998	29	26		
650		24	22	winds	
600	139·7	17	16		
550		11	08	see	
500	185·4	01	-03	page	
450		-07	-17		
400	239·2	-15	-25	3.	
350		-26	-36		
300	305·6	-40	-51		
250		-56			
200	392·4	-76			
170		-65			
150		-61			
130		-60			
110		-62			
100	539·0	-62			
90		-62			
80		-58			
70		-56			
60	(072 mb)				

Inversion 916mb. 47°–950mb. 50°; 763mb. 30°–773 mb. 32°; 565mb. 11°–557mb. 12°
Isothermal 773–750mb. 32°

Tropopause I 200mb. -76° 39,242'

STORNOWAY

Pressure: Time 03h. G.M.T.; M.S.L. 1018·8 mb; Surf 1017·2 mb; Freezing 661 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	51	51	180	15
1000	03·1	50	50		
950		49	49	233	26
900	33·8	49	49	265	30
850		49	49	277	31
800	65·8	45	45	279	33
750		41	41	283	33
700	101·6	37	24	290	34
650		30	19	295	37
600	141·9	22	06	293	35
550		15	-09	292	34
500	188·1	06	-19	291	35
450		-02	-29	293	40
400	242·6	-06	-34	294	43
350		-17	-42	294	45
300	310·4	-34	-56	292	51
250		-57		291	49
200	397·6	-72		291	53
170		-70		298	54
150		-67		298	43

Inversion 887mb. 49°–870mb. 51°
Isothermal 985–887mb. 47°; 715–704 mb. 38°

Tropopause I 189mb. -75° 40,800'

LEUCHARS

Pressure: Time 03h. G.M.T.; M.S.L. 1022·0 mb; Surf 1021·2 mb; Freezing 664 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	55	48	270	07
1000	06·0	56	46	266	09
950		53	40	269	10
900	34·9	51	32	276	11
850		48	30	280	15
800	66·9	44	31	280	28
750		40	34	280	34
700	102·6	35	34	287	34
650		30	27	300	24
600	142·9	24	20	302	36
550		17	13	304	25
500	189·3	08	04	302	34
450		00	-04	298	36
400	243·9	-11	-18	300	39
350		-22	-33	300	45
300	310·9	-37	-47	306	49
250		-55		307	48
200	398·1	-75		305	48
170		-75		302	44
150		-70		305	30
130		-74		323	28
110		-74		323	27
100	540·9	-74		315	27
90		-73		314	24
80		-72		314	21

Inversion 1021mb. 55°–1000mb. 56°; 810mb. 43°–791mb. 44°
Isothermal 911–885mb. 51°; 583–567mb. 20°

Tropopause I 173mb. -77° 42,700'

ALDERGROVE

Pressure: Time 03h. G.M.T.; M.S.L. 1025·9 mb; Surf 1016·1 mb; Freezing 656 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	50	48		
1000	07·0	52	48		
950		55	41		
900	36·0	55	43		
850		52	49		
800	68·2	51	43		
750		45	38		
700	104·3	38	31		
650		31	27		
600	144·8	24	19		
550		22	12		
500	191·5	14	07		
450		04	-12		
400	246·7	-05	-27		
350		-18	-39		
300	314·3	-38	-53		
250		-48			
200	403·0	-67			
170		-73			
150		-71			
130		-69			
110		-70			
100	547·1	-68			
90		-65			
80		-64			

Inversion 1016mb. 50°–989mb. 53°; 970mb. 53°–936mb. 57°
Isothermal 989–970mb. 53°; 839–800 mb. 51°; 600–570 mb. 24°

Tropopause I 165mb. -74° 44,300'

LIVERPOOL

Pressure: Time 03h. G.M.T.; M.S.L. 1025·5 mb; Surf 1023·5 mb; Freezing 640 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	53	51	Calm	
1000	07·0	54	50	275	11
950		53	46	295	13
900	35·9	56	21	311	14
850		53	07	314	15
800	68·1	49	17	317	16
750		44	25	315	17
700	104·1	38	22	307	20
650		33	12	307	23
600	144·6	27	19	306	24
550		20	12	302	25
500	191·3	10	02	301	27
450		00	-16	306	26
400	246·0	-09	-15	310	29
350		-19	-29	322	34
300	313·4	-35	-44	316	34
250		-53		316	37
200	401·1	-70		317	38
170		-77		315	37
150		-72		309	32
130		-70		317	32
110		-70		323	26
100	544·4	-68		314	21
90		-66		310	13
80		-65		305	10
70		-64		320	10
60	(064 mb)	-64			

Inversion 1024mb. 53°–1010mb. 55°; 958 mb. 52°–908mb. 57°
Isothermal 1000–977mb. 54°; 660–642 mb. 33°

Tropopause I 168mb. -78° 43,600'

DOWNHAM MARKET

Pressure: Time 03h. G.M.T.; M.S.L. 1025·4 mb; Surf 1021·0 mb; Freezing 640 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	54	52	115	06
1000	07·0	55	53		
950		54	50	154	08
900	38·9	50	48	229	06
850		44	42	298	15
800	67·8	46	26	312	21
750		45	11	318	20
700	103·8	41	19	317	22
650		34	13	315	27
600	144·5	26	04	309	27
550		21	-05	303	21
500	191·1	12	-13	299	22
450		01	-18	304	20
400	246·0	-09	-30	314	22
350		-23	-43	299	19
300	313·0	-36	-56	290	16
250		-54		307	11
200	400·5	-75		318	22
170		-82		317	33
150		-74		314	29
130		-71		316	27
110		-71		312	24
100	542·9	-69		310	20
90		-68		307	14
80		-67		311	15

Inversion 1021mb. 54°–990mb. 55°; 833mb. 42°–819 mb. 46°
Isothermal 975–940mb. 54°; 819–755 mb. 46°; 600–583mb. 26°

Tropopause I 176mb. -84° 42,600'

LARKHILL

Pressure: Time 03h. G.M.T.; M.S.L. 1025·1 mb; Surf 1009·3 mb; Freezing 633 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	59	060	02
1000	06·9	63	59		
950		59	56	084	07
900	36·3	55	52	060	01
850		50	48	279	07
800	68·5	51	23	317	10
750		47	17	324	12
700	104·7	41	13	325	14
650		35	08	328	18
600	145·3	24	13	310	18
550		19	04	313	16
500	191·7	11	-02	320	14
450		03	-16	325	20
400	246·7	-10	-30	320	24
350		-23	-48	327	28
300	313·5	-39	-60	327	35
250		-56		329	36
200	400·7	-71		335	32
170		-75		338	23
150		-72		312	24
130		-71		315	18
110		-72		313	15
100	544·0	-69		316	15
90		-69		310	13
80		-67		314	10
70		-65		342	14
60		-63			

Inversion 1009mb. 62°–996mb. 64°; 840mb. 49°–815mb. 52°; 573mb. 18°–555mb. 20°

Tropopause I 197mb. -73° 40,500'

CAMBORNE

Pressure: Time 03h. G.M.T.; M.S.L. 1026·3 mb; Surf 1015·7 mb; Freezing 636 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	60	60	300	02
1000	07·2	59	59	359	06
950		58	58	050	04
900	36·5	54	54	089	04
850		56	47	044	06
800	68·9	55	24	022	06
750		49	19	356	06
700	105·2	42	13	336	07
650		34	20	328	09
600	145·9	27	20	333	13
550		22	12	352	22
500	192·8	16	04	353	22
450		06	-09	353	20
400	248·2	-05	-32	347	19
350		-18	-45	352	22
300	315·8	-34	-57	356	25
250		-53		356	27
200	403·4	-74		352	35
170		-75		356	16
150		-73		342	09
130		-71		347	10
110		-72		332	10
100	546·0	-70		350	06
90		-69		350	05
80		-69		297	10
70		-68		342	03
60	(073 mb)	-65		302	09
	(058)	-62			
	(048 mb)	-61			

Inversion 969mb. 52°–940mb. 60°

Tropopause I 180mb. -82° 42,400'

VALENTIA

Pressure: Time 03h. G.M.T.; M.S.L. 1029· mb; Surf 1027· mb; Freezing 616 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	58	55	360	04
1000	07·8	55	54	008	05
950		57	48	016	07
900	36·9	60	36		
850		57	54		
800	69·3	53	36		
750		46	33		
700	105·4	42	08		
650		38	-16		
600	146·2	31	-29		
550		23			
500	193·2	14			
450		07			
400	248·6	-05			
350		-20			
300	316·0	-36			
250		-55			
200	408·2	-77			
170		-79			
150		-75			
130		-75			
110		-75			
100	545·1	-73			
90		-71			
80		-68			
70		-67			
60	(073 mb)				

Inversion 969mb. 52°–940mb. 60°

LERWICK

Pressure: Time 09h. G.M.T.; M.S.L. 1014·8 mb; Surf 1004·8 mb; Freezing 720 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	48	290	12
1000	03·7	50	48		
950		48	36	255	16
900	32·3	45	30	227	16
850		40	22		
800	47·6	38	38		
750		35	34		
700	99·1	30	29		
650		24	23		
600	138·9	17	16		
550		12	10		
500	184·8	04	01		
450		-05	-11		
400	238·8	-16	-23		
350		-28	-35		
300	304·9	-42			
250		-58			
200	392·2	-61			
170		-59			
150		-57			
130		-56			
110		-54			
100	541·0	-53			
90		-53			
80		-53			
70		-52			
60					

Inversion 820mb. 36°–807mb. 38°
Isothermal 981–950mb. 48°; 608–588 mb. 17°

Tropopause I 217mb. -68° 37,500'

STORNOWAY

Pressure: Time 09h. G.M.T.; M.S.L. 1017·2 mb; Surf 1015·6 mb; Freezing 652 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	58	57	270	10
1000	04·7	56	56	283	23
950		53	53	288	23
900	33·6	51	51	290	24
850		52	52	295	28
800	65·7	48	45	295	31
750		44	36	295	32
700	101·7	37	31	296	32
650		32	20	297	31
600	142·1	24	05	295	34
550		16	-12	294	37
500	188·6	07	-20	294	43
450		-02	-28	298	44
400	242·8	-10	-38	299	43
350		-22	-50	299	43
300	309·8	-36	-55	299	48
250		-53		300	65
200	397·3	-71		300	61
170		-60		299	55
150		-64		297	48
130		-65		300	40
110		-62		307	31
100	543·8	-61		306	31
90		-57		306	25
80		-56		314	13
70		-55			
60					

Inversion 890mb. 50°–877mb. 53°
Isothermal 965–929mb. 53°; 623–610 mb. 26°

Tropopause I 200mb. -71° 39,700'

LEUCHARS

Pressure: Time 09h. G.M.T.; M.S.L. 1018·3 mb; Surf 1019·1 mb; Freezing 652 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	64	54	270	12
1000	05·2	58	50	240	21
950		52	46	292	24
900	34·2	57	53	299	33
850		54	50	306	34
800	66·5	49	43	304	36
750		44	32	308	33
700	102·5	39	28	306	31
650		31	24	302	34
600	143·0	24	19	308	39
550		16	02	302	37
500	189·4	10	-08	306	42
450		00	-15	312	40
400	243·9	-10	-22	313	42
350		-24	-39	306	42
300	310·6	-38	-52	309	49
250		-51		311	42
200	398·4	-69		313	45
170		-65		297	39
150		-65		316	42
130		-64		323	31
110		-63		323	24
100	544·5	-59		322	24
90		-56		312	17
80		-57			
70					
60					

Inversion 950mb. 52°–900mb. 57°

Tropopause I 187mb. -72° 41,200'

ALDERGROVE

Pressure: Time 09h. G.M.T.; M.S.L. 1024·1 mb; Surf 1014·5 mb; Freezing 668 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	58	56		
1000	06·6	57	56		
950		53	50		
900	35·6	54	51		
850		53	49		
800	67·9	51	39		
750		46	12		
700	103·9	38	05		
650		30	-02		
600	144·2	25	-14		
550		17	-20		
500	190·6	09	-27		
450		01	-25		
400	245·2	-11	-26		
350		-22	-39		
300	312·3	-37	-54		
250		-55			
200	399·5	-71			
170		-67			
150		-67			
130		-68			
110		-66			
100	544·5	-64			
90		-65			
80					
70					
60					

Inversion 945mb. 53°–907mb. 55°; 872 mb. 52°–850mb. 53°
Isothermal 850–824mb. 53°

Tropopause II 210mb. -76°

LIVERPOOL

Pressure: Time 09h. G.M.T.; M.S.L. 1024·7 mb; Surf 1022·7 mb; Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	60	54	290	08
1000	06·8	57	51	289	12
950		54	49	294	16
900	35·7	52	31	304	18
850		54	46	316	22
800	68·1	50	39	322	24
750		46	34	321	28
700	104·1	38	26	320	29
650		32	24	317	25
600	144·6	25	18	321	26
550		19	11	324	30
500	191·2	11	00	315	27
450		02	-11	315	36
400	2··2·0	-09	-28	316	42
350		-21	-40	312	41
300	313·4	-34	-52	314	31
250		-50		317	38
200	401·7	-67		307	42
170		-68		313	41
150		-67		310	32
130		-65		314	29
110		-67		316	23
100	547·4	-64			
90					
80					
70					
60					

Inversion 967mb. 53°–950mb. 54°; 914mb. 50°–884mb. 56°
Isothermal 590–579mb. 24°

Tropopause I 192mb. -70° 41,000'

DOWNHAM MARKET

Pressure: Time 09h. G.M.T.; M.S.L. 1022·9 mb; Surf 1018·5 mb; Freezing 624 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	67	51		
1000	06·4	65	48		
950		59	43		
900	35·8	60	07		
850		56	-06	For	
800	68·2	53	07		
750		49	30	winds	
700	104·5	43	30		
650		36	24	see	
600	145·2	29	19		
550		23	12	page	
500	192·4	17	03		
450		07	-01	3.	
400	247·9	-04	-15		
350		-13	-28		
300	316·0	-26	-50		
250		-43			
200	405·8	-61			
170		-67			
150		-70			
130		-69			
110		-67			
100	550·3	-65			
90		-65			
80		-65			
70		-63			
60		-61			
	(050 mb)	-58			

Inversion 969mb. 59°–920mb. 61°
Isothermal 400–393mb. -04°

Tropopause I 182mb. -69° 42,300'

LARKHILL

Pressure: Time 09h. G.M.T.; M.S.L. 1024·8 mb; Surf 1009·1 mb; Freezing 631 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	64	60	Calm	
1000	06·9	62	60		
950		60	58	247	01
900	36·3	55	53	292	05
850		49	44	301	09
800	68·5	51	29	326	14
750		46	24	320	15
700	104·6	41	21	309	18
650		36	07	309	17
600	145·3	28	07	317	17
550		22	11	324	21
500	192·1	13	-13	326	20
450		04	-16	312	22
400	241·2	-06	-31	327	27
350		-19	-43	318	31
300	314·7	-34	-51	306	33
250		-50		320	39
200	402·9	-67		321	33
170		-67		320	24
150		-66		312	24
130		-63		314	21
110		-64		326	17
100	548·6	-61		327	17
90		-60		330	14
80		-59		341	09
70					
60	(073 mb)	-56			

Inversion 978mb. 58°–950mb. 60°
840mb. 48°–812mb. 52°

Tropopause II 182mb. -69° 42,300'

CAMBORNE

Pressure: Time 09h. G.M.T.; M.S.L. 1028·8 mb; Surf 1015·3 mb; Freezing 593 mb

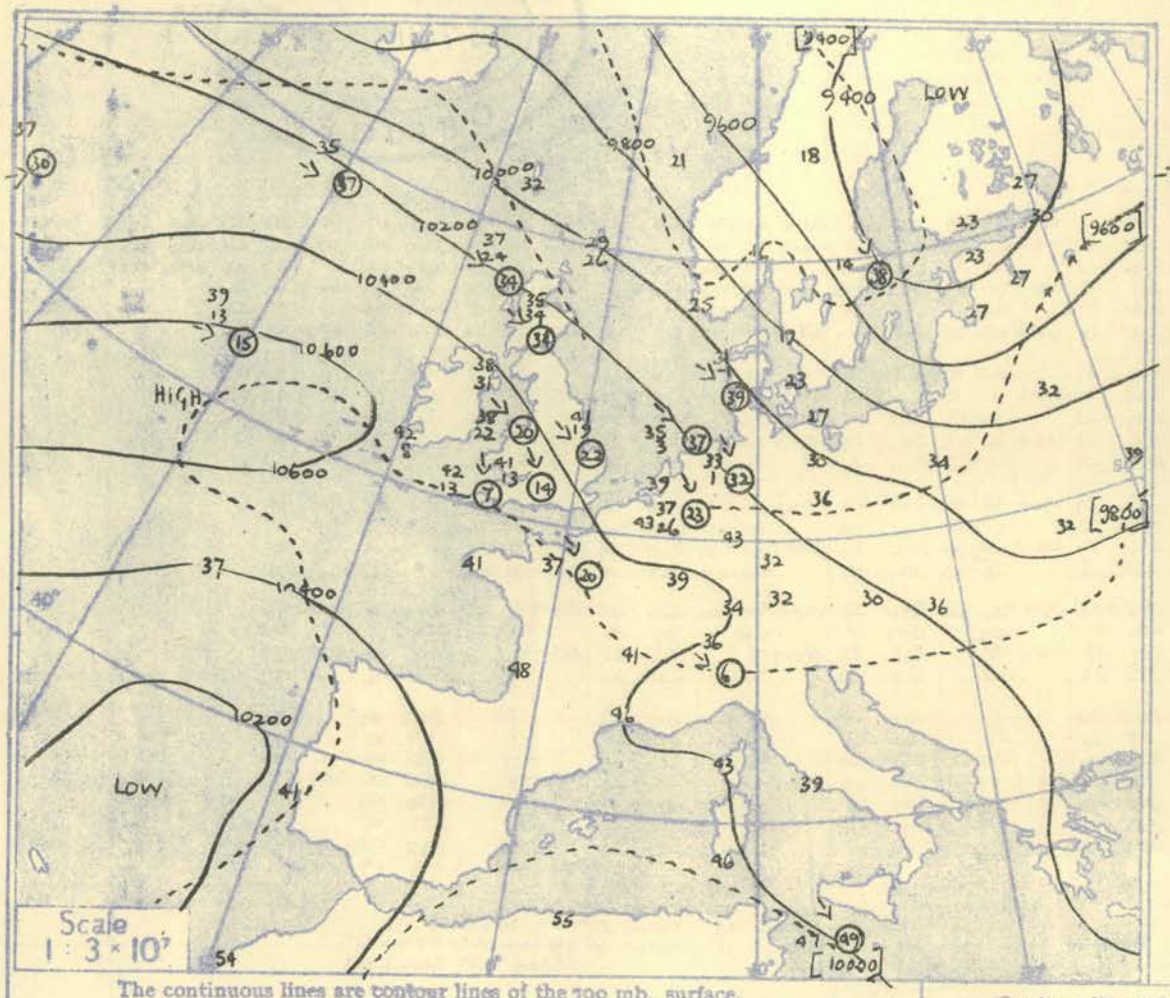
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	64	57	010	08
1000	07·2	63	56	032	07
950		61	55	034	07
900	36·5	54	51	356	06
850		59	31	348	06
800	69·0	56	28	024	06
750		51	27	030	06
700	105·4	43	32	346	07
650		37	27	003	10
600	146·3	33	16	004	16
550		26	-08	004	17
500	193·4	17	-22	356	17
450		10	-31	346	20
400	249·2	-02	-41	346	25
350		-15	-52	343	24
300	317·2	-31	-58	340	27
250		-48		336	26
200	405·9	-67		348	23
170		-74		350	18
150		-74		316	14
130		-70		318	13
110		-71		329	13
100	549·4	-70		327	10
90		-69		331	09
80		-66		336	12
70					
60					

Inversion 880mb. 52°–860mb. 60°
270 mb. -42°–265mb. -41°

Tropopause II 173mb. -74° 43,600

Thursday 19th July 1951.

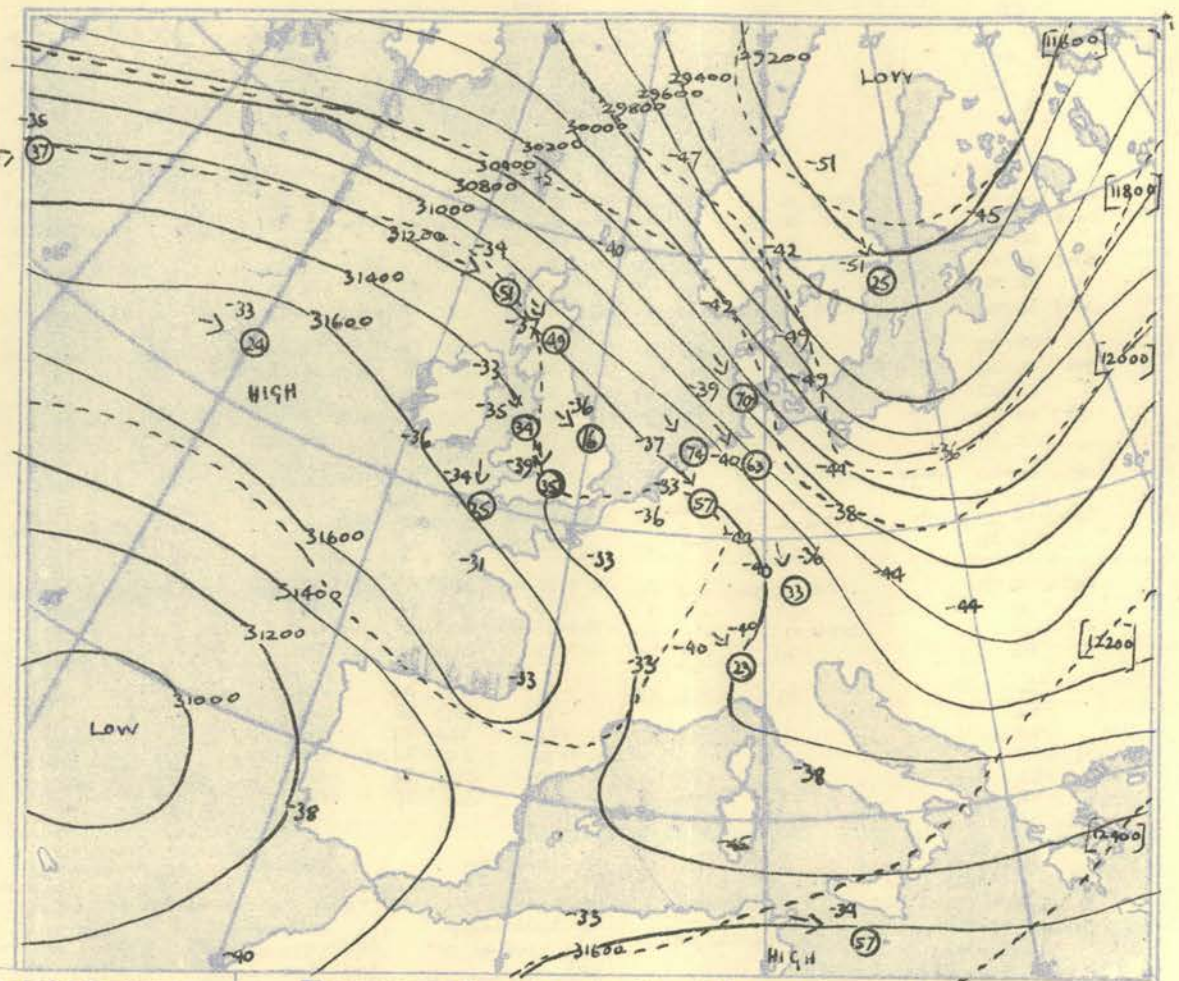
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03h. G.M.T.



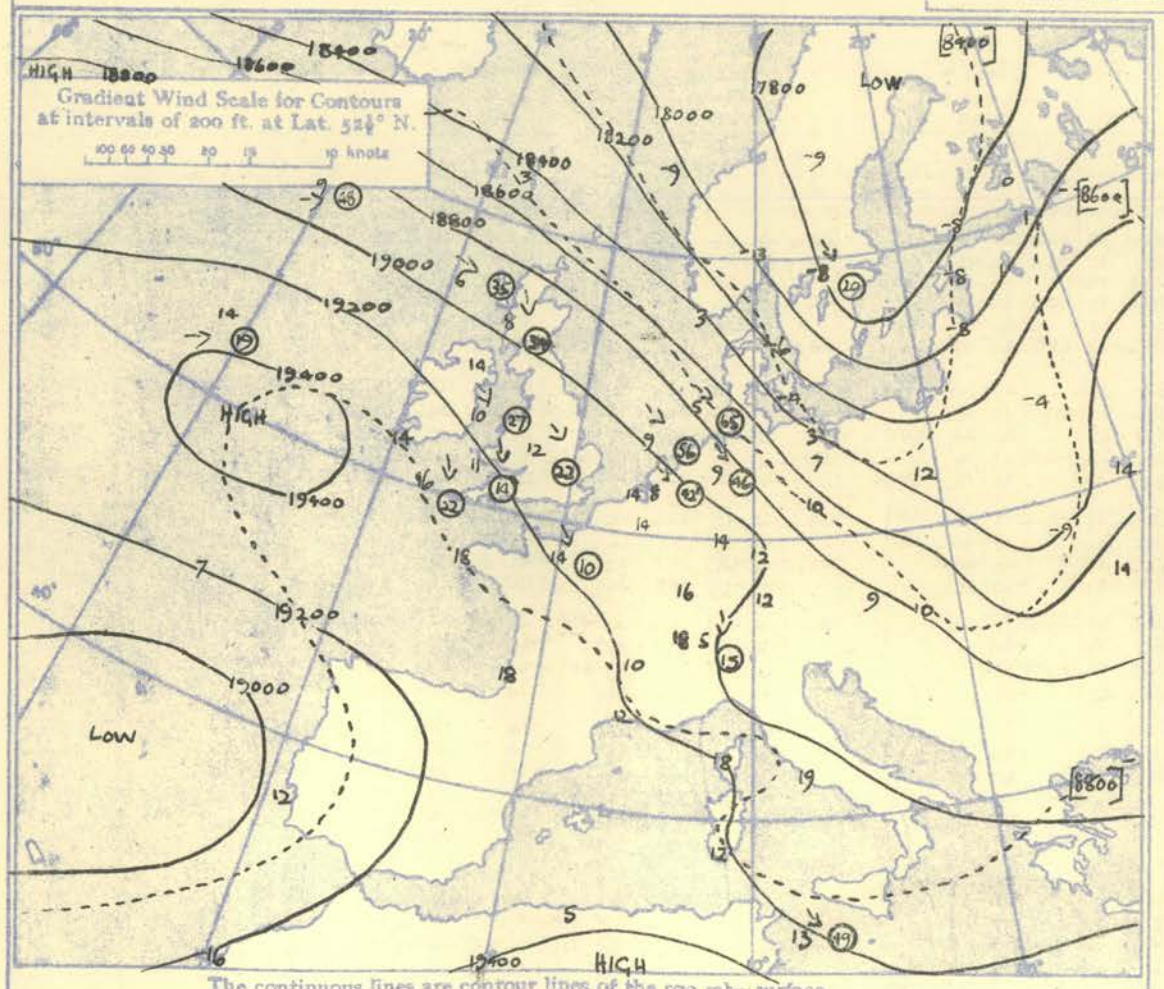
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

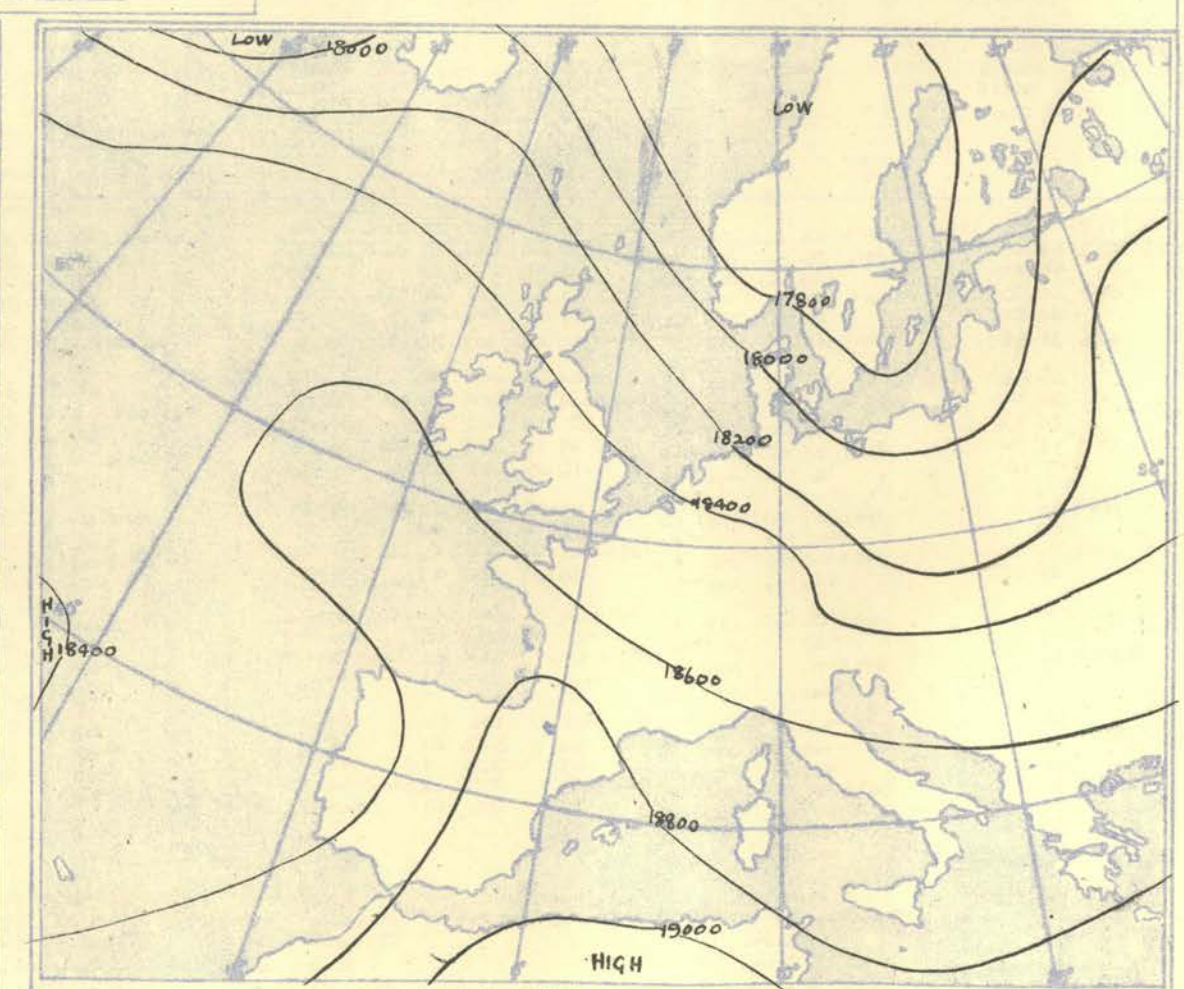
100 80 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500 - 1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	52 12N. 02 12W.		
Time	15h.		
Pressure M.S.L.	1023 mb		
Pressure Surf	1021·5 mb		
Pressure Freezing	629 mb		
Pressure mb	Height ft./100	°F. Temp.	°F. Dew
Surf	00·4		
1000	06·5		
950			
900	36·3	60	53
850		57	51
800	68·9	53	51
750			
700	105·2	41	
650			
600	145·9	28	
550			
500	192·6	12	
450			
400	247·7	-08	
350			
300	314·9	-39	
250			
200			
170			

Cloud.
2/8 Sc 865-845 mb.
3/8 Cs 416-405 mb.
4/8 Ci 310-250 mb.

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

Place	Lerwick		Cirrus 52·4N. 19·7W.		Lympne		Downham Market		Shoeburyness		Lerwick		Lympne		Waterbeach		Cirrus 52·3N. 19·5W.		Leuchars	
Time	03h.		09h.		09h.		09h.		09h.		09h.		15h.		15h.		21h.		21h.	
Type							Pilar													
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	290	12	270	13	150	05	230	08	190	02	290	12	210	06	310	07	250	11		
1,000	263	16	280	13	160	05	236	09	250	08	260	16	220	09	300	11	250	11		
2,000	251	18	290	14	260	06	245	10	270	09	250	18	270	12	280	10	260	10		
3,000	230	16	300	14	300	06	262	13	290	12	230	18	280	12	300	16	270	10		
4,000	220	15	310	14			280	15	300	13	220	15	290	15	290	17	310	07	312	59
5,000			300	15	300	35	297	17	300	16			300	15	290	22	290	09	308	28
6,000							307	17	310	18			320	17	290	24			299	12
8,000							312	17	330	18					290	24				
10,000			250	14			311	21	320	23					290	23	260	13		
14,000			240	13			298	25	310	18					290	18	240	13		
18,000			250	22			316	24	300	18					(11,000')		250	14		
24,000			270	30			304	28	300	24							250	11		
30,000			270	28			302	27	310	28							230	14		
40,000			(25,000')				311	31	310	30							220	20		
50,000							315	25	320	25							(32,000')			
							342	10	320	20										
							(58,000')		(54,000')											

NEPHOSCOPE OBSERVATIONS

Place	Driffield		Elmdon		Midleton		Aston Down		Swinderby		Stradishall		Cardiff	
Time Type	09h.	Cc	09h.	Ac	12h.	Ci	15h.	Ci	15h.	Ac	15h.	Ci	15h.	Ci
Dir. Vel.	310	40	280	30	300	20	340	36	290	33	320	25	320	30

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

Weather Observer — 58·9N 19·2W — 03hrs G.M.T. — M.S.L. 1019 mb, Surf 1019 mb, Freezing 615 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	54	52	275	24
1000	3·0	51	50	277	21
950		48	47	271	22
900	34·0	55	45	278	29
850		52	51	278	29
800	66·3	49	39	278	34
750		42	36	274	37
700	102·1	35	30	270	37
650		29	15	269	42
600	142·4	23	-2	267	40
550		17	-11	257	43
500	188·6	09	-26	253	48
450		-2	-29	258	57
400	243·0	-13	-41	264	45
350		-24	-43		
		(358)			

Inversion 957 mb 46°-924 mb 56°, 825 mb 50°-813 mb 51°.
Tropopause: NR

Weather Observer — 58·9N 19·4W — 09hrs G.M.T. — M.S.L. 1020 mb, Surf 1020 mb, Freezing 650 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	53	49	300	18
1000	5·6	51	47	283	18
950		46	40	288	21
900	34·3	53	35	278	22
850		49	34	269	28
800	66·4	44	38	264	35
750		41	24	261	33
700	102·1	37	30	262	41
650		32	15	261	45
600	142·6	25	13	260	46
550		17	07	261	50
500	189·0	10	02	260	46
450		00	-6	259	39
400	243·6	-11	-18	260	45
350		-22	-30	260	45
300	310·5	-37	-46	262	50
250		-54		262	72
200	395·1	-65		259	73
170		-57		259	62
150		-61		258	48
130		-61		258	50
110		-59		250	40
100	545·7	-57		243	28
90		-55		243	23
80		-53		242	19
70		-51		241	15
60		-53		240	10
	(53)	-52			

Inversion 955 mb 45°-930 mb 53°, 770 mb 39°-755 mb 41
Isothermal 755-750 mb 41°
Tropopause: II 215 mb -65° 38300'

Weather Observer — 58·8N 19·1W — 15hrs G.M.T. — M.S.L. 1022 mb, Surf 1022 mb, Freezing 690 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	54	45	280	05
1000	5·9	51	46	284	05
950		43	43	265	09
900	34·5	49	47	257	12
850		45	36	257	17
800	66·4	45	41	257	22
750		35	33	256	30
700	102·0	33	26	255	33
650		29	22	257	36
600	142·2	22	14	221	40
550		13	06	257	40
500	188·2	04	00	257	35
450		-4	-9	257	38
400	242·3	-13	-20	257	39
350		-26	-34	257	56
300	308·6	-39		257	56
250		-59		257	78
200	394·9	-73		257	61
170		-71		257	61
150		-69		257	42
130		-67		257	27
110		-74		257	22
100	539·2	-61		257	23
90		-57		257	12
80		-56		257	09
70		-53		257	10
60		-51		257	05
	(36)	-43			

Inversion 943 mb 42°-922 mb 50°, 826 mb 44°-800 mb 45°
Tropopause: I 194 mb -80° 40100'

Weather Observer — 58·8N 19·1W — 21hrs G.M.T. — M.S.L. 1020 mb, Surf 1020 mb, Freezing 650 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	54	48	230	06
1000	5·6	52	48	239	09
950		47	46	232	11
900	34·3	51	41	234	15
850		52	46	235	18
800	66·5	47	45	287	26
750		42	36	246	33
700	102·4	35	32	258	37
650		32	25	265	32
600	142·8	24	21	267	30
550		18	15	271	33
500	189·4	13	-1	270	39
450		04	-6	264	43
400	244·4	-6	-12	263	46
350		-20	-25	260	55
300	311·8	-32	-40	261	54
250		-48		261	67
200	400·4	-65		263	71
170		-65		265	53
150		-62		267	46
130		-63		267	34
110		-61		262	30
100	547·1	-59		266	28
90		-57		266	25
80		-57		263	17
70		-54		261	14
60		-53		259	10
		-49		325	04
		-47		034	06

Inversion 950 mb 47°-916 mb 52°, 888 mb 50°-880 mb 52°
Isothermal 951-950 mb 47°, 689-662 mb 34°
Tropopause: I 194 mb -66° 40100'

Cirrus — 52·4N 19·9W — 03hrs G.M.T. — M.S.L. 1030 mb, Surf 1030 mb, Freezing 630 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	59	58	260	12
1000	8·5	55	55	270	14
950		52	51	281	16
900	37·4	51	45	292	20
850		57	23	282	21
800	69·8	52	27	279	17
750		46	22	274	12
700	106·1	39	13	260	15
650		35	02	254	15
600	146·9	26	-4	249	12
550		22	-13	248	18
500	193·8	14	-21	250	19
450		04	-30	253	27
400	249·0	-4	-38	261	23
350		-18		263	23
300	316·8	-33		261	24
250		-50		252	28
200	405·2	-70		261	28
170		-77		261	27
150		-84		268	21
130		-83		269	17
110		-82		262	17
100	545·3	-81		262	17
90		-80			
80	(83)	-80			

Isothermal 862-850 mb 57°, 550-542 mb 22°.
Inversion 1000 mb 55°-980 mb 56°, 931 mb 49°-862 mb 57°, 692 mb 38°-676 mb 40°, 583 mb 22°-569 mb 24°
Tropopause: I 150 mb -84° 46700'

Cirrus — 52·4N 19·9W — 09hrs G.M.T.

No Radio-Sonde ascent available.
See top of page for winds.
Tropopause: —

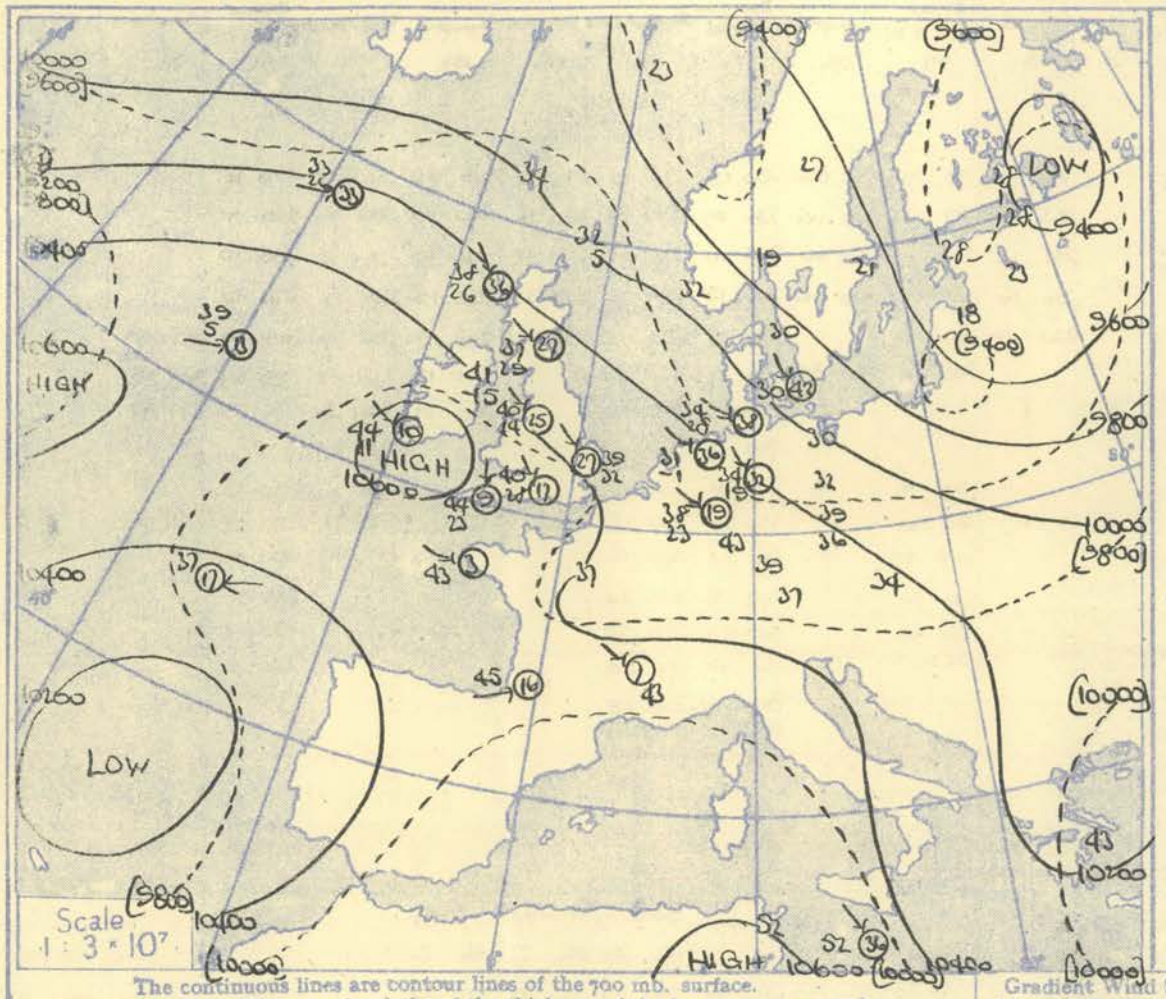
Cirrus — 52·3N 19·5W — 15hrs G.M.T. — M.S.L. 1028 mb, Surf 1028 mb, Freezing — mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	—	59	58	260	10
1000	8·0	54	54	264	10
950		52	52	271	10
900	37·0	51	51	277	10
850		52	30	285	10
800	69·3	49	24	267	11
750		43	18	241	15
700	106·2	39	05	243	13
650		32	-1	254	13
600	145·7	26	-7	265	17
550		20	-14	265	12
500	192·3	11	-23	265	22
450		03	-28		
400	247·2	-8	-36		
350		-22			
300	314·5	-37			
250		-55			
200	401·8	-72			
170		-73			
150		-72			
130		-68			
110		-64			

Inversion 983 mb 53°-973 mb 54°, 900 mb 51°-882 mb 52°
Isothermal 882-825 mb 52°, 750-721 mb 43°, 655-650 mb 32°
Tropopause: II 200 mb -72° 40200'

July 15 TH 1951

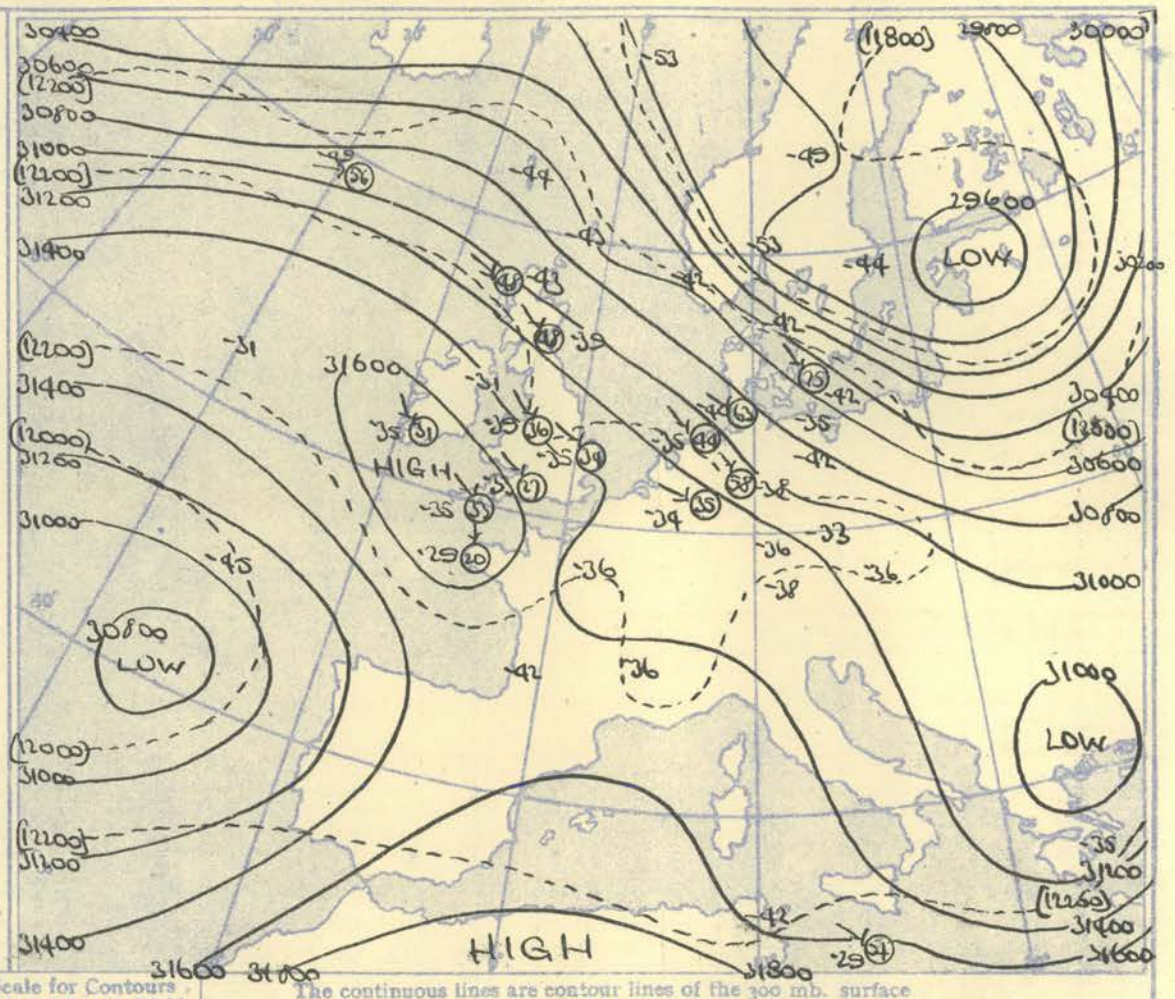
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

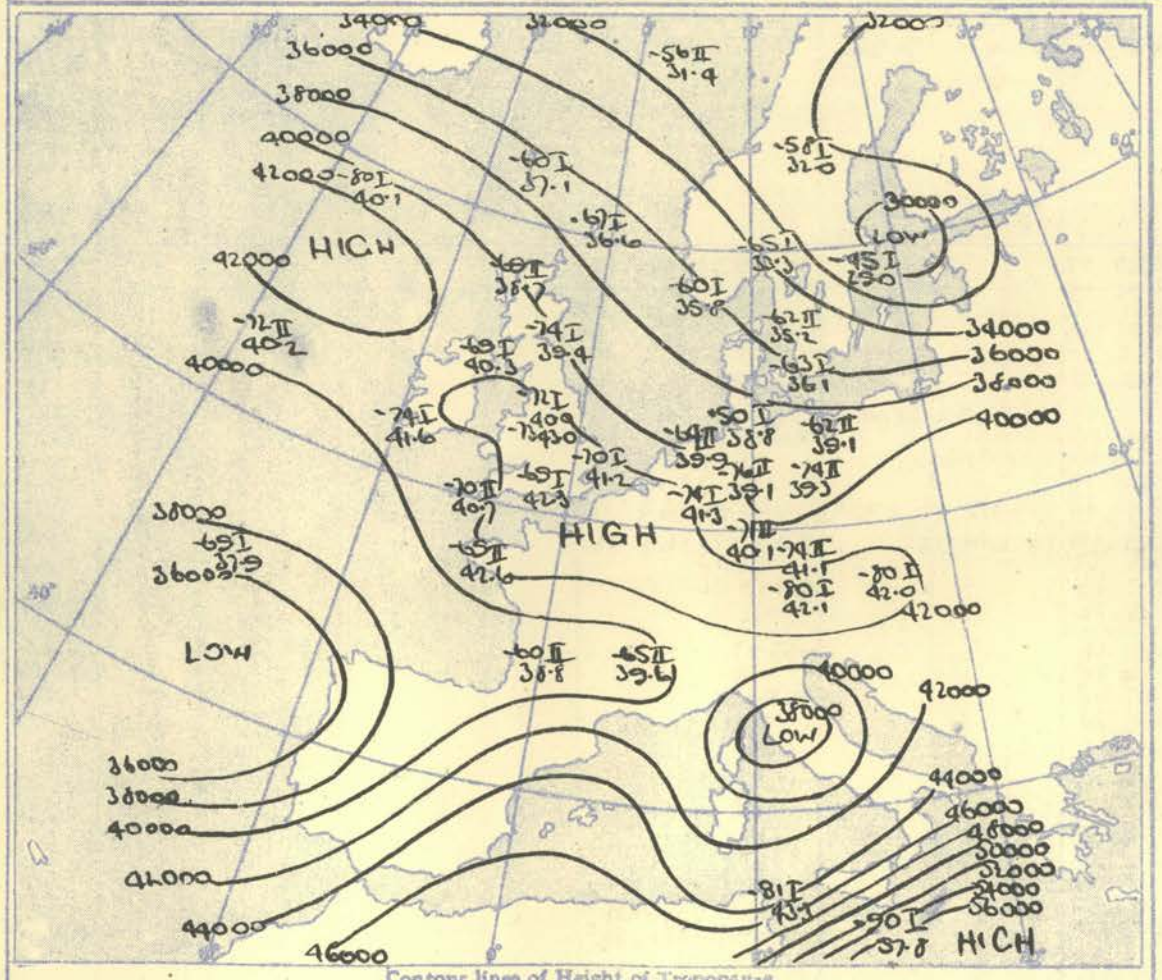
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 60 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The wave pattern in the thermal distribution increased somewhat in amplitude due to a Southward thrust of cold air over Eastern Europe, to an intensification of the cold pool near the Azores, and to the approach of a further cold trough in the Northwest Atlantic.

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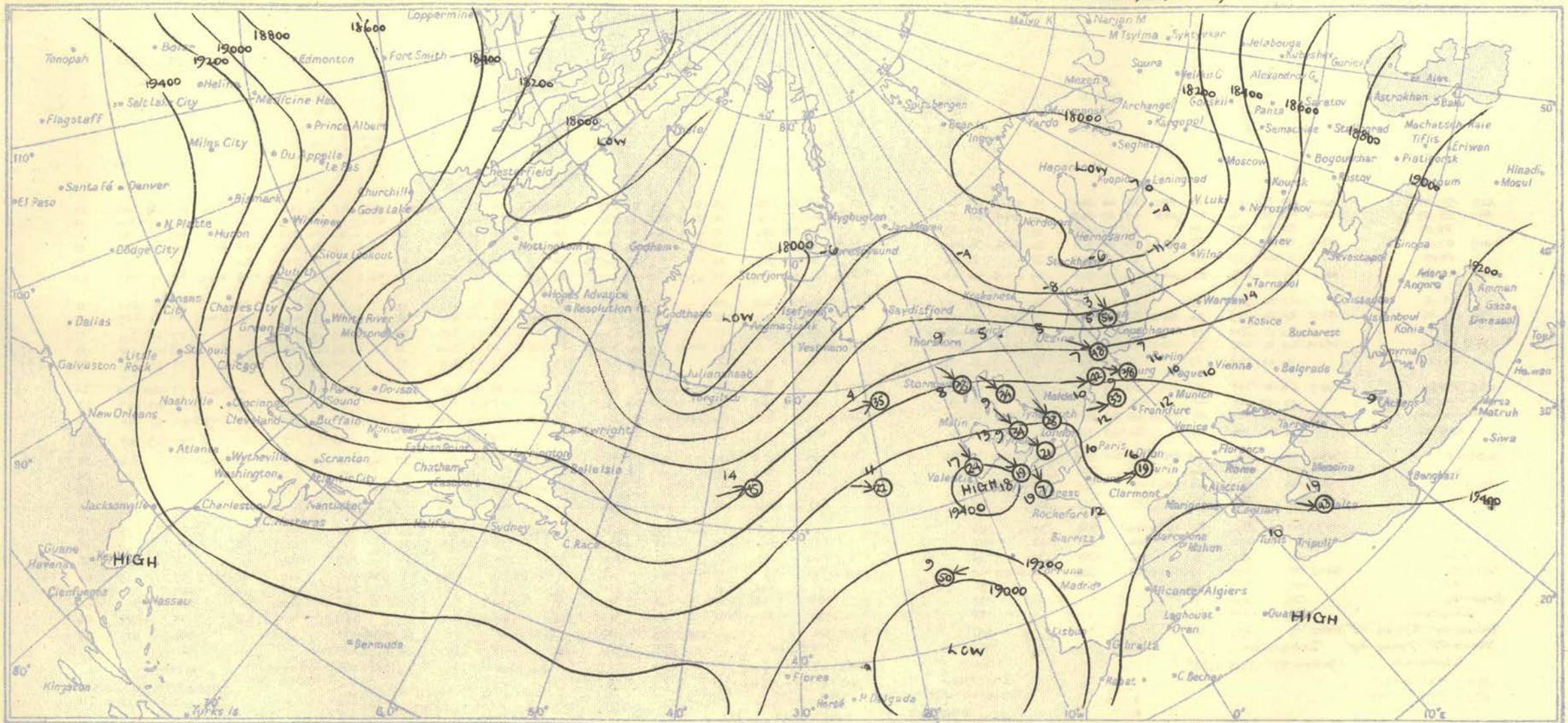
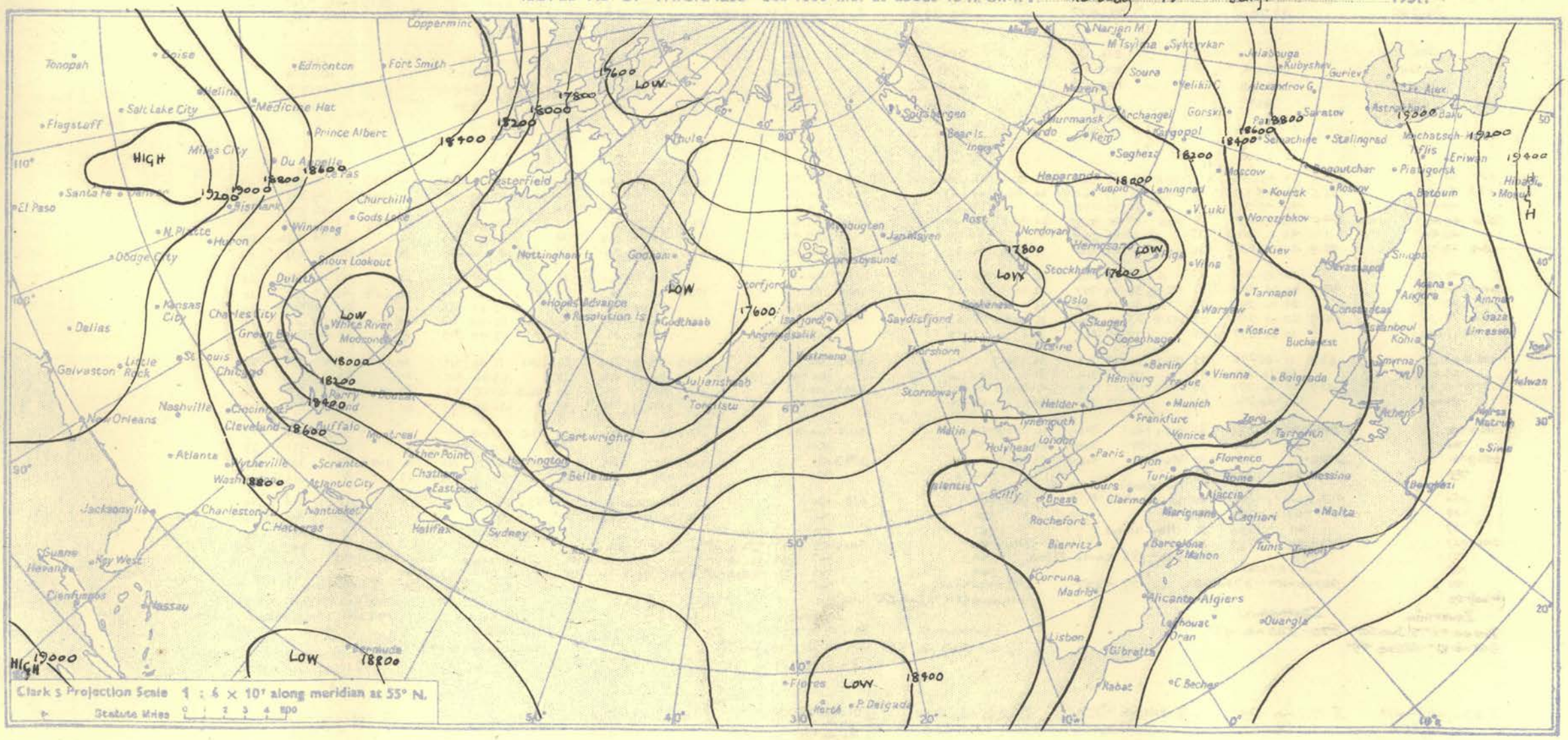
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Thursday 19th. July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Thursday 19th July. 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Thursday 19th July 1951.

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

LERWICK

15h. G.M.T.
Pressure: Time 1011·3 mb; M.S.L. —; Surf —; Freezing 1001·3 mb
700

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53		
1000	03·1	53	53		
950		50	50		
900	31·7	47	47		
850		48	47		
800	63·7	42	39		
750		39	15		
700	99·2	32	05		
650		27	-02		
600	139·2	23	-08		
550		14	-20		
500	185·3	05	-26		
450		-04	-35		
400	239·4	-16	-44		
350		-29	-55		
300	305·3	-43			
250		-60			
200	392·3	-55			
170		-53			
150		-52			
130		-56			
110		-54			
100	542·3	-55			
90		-54			
80	(84 mb)	-53			
70					
60					

Inversion
895 mb 46° - 874 mb 48°
800 mb 42° - 794 mb 43°
Isothermal
990 - 962 mb 51°
876 - 850 mb 48°

Tropopause: I 227 mb -67° 36,500'

STORNOWAY

15h. G.M.T.
Pressure: Time 1018·2 mb; M.S.L. —; Surf 1016·6 mb; Freezing —
652

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	60	57	270	15
1000	05·0	58	55	290	21
950		52	51	287	23
900	33·9	50	46	287	27
850		52	44	289	35
800	66·1	48	38	287	32
750		43	36	287	32
700	102·0	38	26	293	36
650		32	15	294	38
600	142·4	24	12	293	38
550		16	07	294	39
500	188·7	08	-01	293	38
450		-01	-09	296	44
400	243·2	-11	-21	300	41
350		-26	-36	300	49
300	309·6	-43		296	54
250		-57		288	60
200	396·5	-69		296	66
170		-62		280	61
150	457·3	-60		289	50
130		-63		296	49
110		-60		298	38
100	543·5	-59		295	37
90		-57		305	20
80		-54		295	19
70		-52		319	08
60	654·2	-49		295	06

Inversion
908 mb 49° - 865 mb 53°

Tropopause: II 210 mb -69° 38,700'

LEUCHARS

15h. G.M.T.
Pressure: Time 1017·0 mb; M.S.L. —; Surf 1016·2 mb; Freezing —
668

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	74	66	240	15
1000	04·8	69	59	265	21
950		61	54	280	27
900	34·3	59	50	314	26
850		56	44	324	25
800	66·7	50	37	319	24
750		43	32	310	24
700	102·6	37	29	309	27
650		31	21	306	29
600	143·1	26	10	305	30
550		18	-05	301	33
500	189·5	09	-13	304	34
450		-02	-23	314	34
400	244·1	-09	-33	307	36
350		-24	-43	300	46
300	310·9	-39	-54	304	48
250		-55		298	50
200	398·1	-71		305	57
170		-69		312	44
150	458·6	-66		314	39
130		-64		310	32
110		-65		318	21
100	544·1	-63		323	19

Tropopause: I 205 mb -74° 39,400'

ALDERGROVE

15h. G.M.T.
Pressure: Time 1023·5 mb; M.S.L. —; Surf 1014·0 mb; Freezing —
630

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	65	61		
1000	06·4	64	59		
950		57	53		
900	35·6	52	46		
850		50	44		
800	67·8	48	40		
750		46	12		
700	103·7	41	-15		
650		35	-06		
600	144·4	28	04		
550		22	-18		
500	191·2	13	-22		
450		03	-31		
400	246·3	-06	-24		
350		-18	-36		
300	314·0	-31	-58		
250		-48			
200	402·5	-69			
170		-65			
150		-63			
130		-64			
110		-62			
100	548·7	-60			
90		-59			
80		-58			
70		-50			
60		-47			
		-41			
		-40			

Inversion
780 mb 44° - 750 mb 46°
Isothermal
376 - 827 mb 50°

Tropopause: I 200 mb -69° 40,254'

LIVERPOOL

15h. G.M.T.
Pressure: Time 1023·9 mb; M.S.L. —; Surf 1021·9 mb; Freezing —
645

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	67	57	270	05
1000	00·7	64	57	276	12
950		53	45	296	17
900	35·9	56	42	311	20
850		53	43	307	22
800	68·2	51	30	304	25
750		46	22	304	25
700	104·3	40	14	302	25
650		33	03	312	27
600	144·8	26	-09	309	30
550		18	-14	307	31
500	191·2	09	-08	305	34
450		01	-10	308	39
400	245·9	-11	-20	313	36
350		-23	-34	319	36
300	312·7	-39	-51	324	36
250		-55		320	33
200	399·8	-72		318	40
170		-72		316	38
150		-65		315	27
130		-69		316	19
110		-66		323	15
100	545·0	-62		327	13
90		-61		294	11
80		-58		328	10
70		-54		321	12
60	(65 mb)	-52			

Inversion
945 mb 52° - 915 mb 58°
200 mb -72° - 192 mb -70°
Isothermal
867 - 845 mb 53°

Tropopause: I 200 mb -72° 40,000'; I 172 mb -73° 43,000'

DOWNHAM MARKET

15h. G.M.T.
Pressure: Time 1021·4 mb; M.S.L. —; Surf 1016·9 mb; Freezing —
650

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	75	50	235	13
1000	06·0	72	50	281	18
950		64	49	290	16
900	35·5	57	42	296	17
850		53	47	307	20
800	67·9	50	44	312	20
750		45	39	317	22
700	103·7	39	32	327	27
650		32	26	324	28
600	144·2	26	19	314	27
550		20	09	317	27
500	190·8	13	-01	320	28
450		02	-06	322	29
400	248·7	-09	-16	321	34
350		-19	-27	315	37
300	313·0	-35	-45	316	39
250		-55		315	33
200	400·7	-68		312	34
170		-69		321	36
150	460·7	-65		316	34
130		-67		322	27
110		-67		312	20
100	545·6	-66		315	15
90		-64		311	19
80		-61		310	15
70		-60		316	14
60	654·1	-56		313	12
		-55		022	09

Tropopause: I 190 mb -70° 41,200'

LARKHILL

15h. G.M.T.
Pressure: Time 1022·6 mb; M.S.L. —; Surf 1007·2 mb; Freezing —
629

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	75	63	CALM	
1000	06·4	73	62		
950		66	60	292	04
900	36·2	59	53	306	08
850		52	48	324	13
800	68·5	51	42	345	14
750		48	36	351	15
700	104·7	40	28	356	17
650		35	28	345	17
600	145·5	29	14	340	20
550		21	07	329	23
500	192·4	14	-11	314	21
450		05	-25	316	25
400	247·6	-05	-34	316	26
350		-19	-42	321	26
300	315·2	-33	-51	316	27
250		-51		325	21
200	403·3	-67		313	34
170		-67		325	32
150	463·5	-68		317	25
130		-70		312	24
110		-70		312	21
100	547·9	-70		303	16
90		-68		283	15
80		-66		314	14
70		-63		316	07
60	655·3	-62		301	08
		-58		352	14
	742·1	-55		355	06
		-52			

Inversion
839 51° - 823 mb 54°
Isothermal
800-738 mb 51° 472-460 mb 8°

Tropopause: I 182 mb -69° 42,300'

CAMBORNE

15h. G.M.T.
Pressure: Time 1025·0 mb; M.S.L. —; Surf 1014·7 mb; Freezing —
595

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	68	60	010	12
1000	07·0	65	58	349	07
950		62	46	352	07
900	36·4	58	46	016	05
850		61	33	032	06
800	96·2	58	38	027	08
750		51	37	014	08
700	105·1	44	23	010	09
650		40	07	351	12
600	146·8	33	-02	330	12
550		24	-07	322	13
500	193·8	18	-16	327	19
450		08	-29	323	23
400	249·4	-03	-39	324	29
350		-19	-53	319	31
300	316·8	-35	-58	318	33
250		-51		327	29
200	404·9	-69		329	24
170		-67		339	17
150		-68		331	13
130		-69		297	10
110		-68		295	12
100	540·5	-68		284	10
90		-66		297	08
80		-63		310	06
70		-60		307	05
60	(65 mb)	-59			

Inversion
895 mb 58° - 886 mb 63°
527 mb 18° - 505 mb 19°
Isothermal
970 - 941 mb 62°

Tropopause: II 198 mb -70° 40,700'

VALENTIA

15h. G.M.T.
Pressure: Time 1027·9 mb; M.S.L. —; Surf 1025 mb; Freezing —
630

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	61	58	345	14
1000	07·5	62	57	331	12
950		59	53	312	11
900	36·9	63	35	306	10
850		61	34	303	08
800	69·6	58	19	294	08
750		51	18	281	11
700	106·1	44	11	289	10
650		37	04	301	12
600	146·9	29	-04	298	17
550		24	-25	301	22
500	194·0	17	-40	309	24
450		05	-47	307	27
400	249·5	-04	-51	310	28
350		-19	-59	307	31
300	317·0	-35		316	31
250		-53		322	24
200	404·7	-71		309	28
170		-73		312	18
150		-72		297	18
130		-71		260	07
110		-70		221	05
100	548·2	-69		225	06
90		-67		107	04
80		-65		259	06
70		-74		299	06
60		-62		019	09
		-61			

Inversion
959 mb 57° - 922 mb 64°
584 mb 26° - 573 mb 27°
474 mb 10° - 460 mb 11°

Tropopause:

LERWICK

21h. G.M.T.
Pressure: Time 1012·1 mb; M.S.L. —; Surf 1002·1 mb; Freezing —
680

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	51		
1000	03·3	51	51		
950		48	48		
900	32·0	49	41		
850		43	40		
800	63·8	43	-23		
750		41	-25		
700	99·4	34	-30		
650		29	-34		
600	139·6	23	-38		
550		17	-43		
500	185·8	05	-51		
450		-06	-50		
400	239·8	-15	-36		
350		-28	-49		
300	305·9	-44			
250		-60			
200	392·8	-61			
170		-53			
150		-56			
130		-58			
110		-57			
100	541·7	-57			
90		-57			
80		-55			
70		-55			
60	(67 mb)	-55			

Inversion
960 mb 48° - 913 mb 50°
847 mb 42° - 820 mb 44°

Tropopause: I 224 mb -67° 36,700'

STORNOWAY

21h. G.M.T.
Pressure: Time 1020·4 mb; M.S.L. —; Surf 1018·8 mb; Freezing —
668

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	54	49	310	12
1000	05·5	52	48	312	16
950		46	45	303	18
900	34·0	42	33	298	22
850		46	12	298	25
800	65·8	44	-04	299	26
750		41	-03	299	28
700	101·4	36	14	299	32
650		31	16	296	36
600	141·7	25	07	299	37
550		19	02	297	35
500	188·1	11	-05	298	35
450		01	-15	297	39
400	242·9	-10	-26	297	39
350		-23	-40	291	47
300	309·8	-39	-56	292	55
250		-54		30)	54
200	397·2	-72		307	86
170		-65		300	55
150	457·3	-64		300	44
130		-63		297	36
110		-61		290	36
100	543·3	-59		299	18

Inversion
907 mb 40° - 878 mb 48°
Isothermal
850 - 825 mb 46°

Tropopause: II 195 mb -74° 40,200'

LEUCHARS

21h. G.M.T.
Pressure: Time 1017·4 mb; M.S.L. —; Surf 1016·6 mb; Freezing —
680

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	67	59	300	13
1000	04·8	65	57	260	20
950		61	55	298	21
900	34·3	55	48	323	24
850		53	45	326	21
800	66·6	51	40	315	17
750		44	33	301	18
700	102·5	38	29	297	22
650		29	13	308	25
600	142·8	23	07	306	35
550		18	00	308	34
500	189·2	10	-07	318	36
450		-01	-13	314	31
400	243·7	-13	-22	314	41
350		-26	-37	316	40
300	310·1	-42		318	46
250		-58		329	59
200	396·7	-72		315	53

For continuation of Winds see P. 3.

Max. wind.
320° 85 knots 223 mb.
37,400'

Tropopause: II 214 mb -72° 38,100'

ALDERGROVE

21h. G.M.T.
Pressure: Time 1023·3 mb; M.S.L. —; Surf 1013·8 mb; Freezing —
644

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	58	250	08
1000	06·4	61	57		
950		55	49		
900	35·5	52	48		
850		50	49		
800	67·6	46	32		
750		46	35		
700	103·7	39	28		
650		33	22		
600	144·2	28	-03		
550		19	-19		
500	190·7	12	-30		
450		04	-26		
400	245·8	-07	-40		
350		-18	-47		
300	313·3	-33	-60		
250		-51			
200	401·2	-71			
170		-66			
150	461·3	-69			
130		-68			
110		-67			
100	546·1	-66			
90		-65			
80		-60			
70		-64			
60	(65 mb)	-62			

Inversion
811 mb 44° - 788 mb 50°
Isothermal
915 - 867 mb 52°

Tropopause: I 200 mb -71° 40,120'

LIVERPOOL

21h. G.M.T.
Pressure: Time 1022·6 mb; M.S.L. —; Surf 1020·6 mb; Freezing —
646

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	63	58		
1000	06·2	60	55		
950		56	54		
900	35·4	52	50		
850		54	48		
800	67·6	49	30		
750		46	11		
700	103·6	39	-13		
650		33	03		
600	144·0	24	-19		
550		17	-23		
500	190·2	08	-32		
450		00	-07		
400	244·8	-10	-24		
350		-24	-32		
300	311·5	-40	-55		
250		-58			
200	398·3	-71			
170		-71			
150	458	-74			
130		-68			
110		-70		Isothermal	
100	541·9	-73		937 - 976 mb 59°	
90		-67		888 - 866 mb 51°	
80		-65		770 - 750 mb 46°	
70		-64			
60	(65 mb)	-62			

Inversion
866 mb 51° - 850 mb 54°
214 mb -72° - 195 mb -70°
189 mb -73° - 173 mb -70°

Tropopause: I 214 mb -72° 38,400'; I 189 mb -73° 41,000'; I 166 mb -75° 44,900'

DOWNHAM MARKET

21h. G.M.T.
Pressure: Time 1020·2 mb; M.S.L. —; Surf 1015·8 mb; Freezing —
650

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	68	52	270	03
1000	05·6	68	54	275	10
950		62	52	296	16
900	35·2	57	50	312	21
850		54	47	309	22
800	67·6	49	40	308	22
750		44	27	308	22
700	103·5	38	20	307	24
650		32	02	310	27
600	143·9	26	-14	314	31
550		18	-02	320	32
500	190·3	09	-01	324	28
450		01	-07	314	28
400	245·0	-08	16	313	33
350		-21	31	313	35
300	312·2	-36	48	313	34
250		-51		314	35
200	400·2	-70		315	35
170		-70		317	35

Inversion
405 mb -03° - 400 mb -08°
Isothermal
1016 - 992 mb 68°
890 - 868 mb 56°

Tropopause: I 193 mb - 73° 40,800'

LARKHILL

21h. G.M.T.
Pressure: Time 1021·5 mb; M.S.L. —; Surf 1006·0 mb; Freezing —
650

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	69	53	285	04
1000	06·0	69	49		
950		66	49	320	08
900	35·6	59	44	341	09
850		57	36	329	12
800	68·0	53	30	320	15
750		49	19	317	22
700	104·2	41	22	317	18
650		32	03	318	16
600	144·7	25	-04	318	18
550		17	-10	315	21
500	191·1	11	-21	318	20
450		03	-26	315	24
400	246·0	-09	-37	318	30
350		-21	-39	324	30
300	313·0	-39	-55	315	31
250		-55		324	28
200	400·4	-71		328	31
170		-73		312	24
150	459·0	-74		311	27
130		-74			
(121 mb)		-74			

Inversion
1000 mb 69° - 989 mb 70°
873 mb 56° - 860 mb 58°
Isothermal
506 - 500 mb 11°
1006 - 1000 mb 69°

Tropopause: I 204 mb -71° 39,600'

CAMBORNE

21h. G.M.T.
Pressure: Time 1024·4 mb; M.S.L. —; Surf 1013·9 mb; Freezing —
622

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	59	58	360	07
1000	06·7	58	54	358	09
950		64	40	019	08
900	36·1	62	31	054	08
850		59	34	046	09
800	52·0	53	31	032	09
750		47	29	017	08
700	104·9	42	13	002	11
650		36	04	351	10
600	145·7	29	-06	318	10
550		22	-14	316	17
500	192·5	15	-23	323	25
450		04	-38	326	27
400	247·7	-08	-47	331	30
350		-21	-54	334	27
300	314·9	-36	-59	326	23
250		-55		331	23
200	404·7	-69		333	22
170		-71		313	12
150	495·6	-72		320	19
130		-73		313	16
110		-71		333	10
100		-71		331	10
90		-70			
(92 mb)					
80					
70					
60					

Inversion
1000 mb 58° - 990 mb 65°
192 mb -70° - 188 mb -69°

Tropopause: I 166 mb -72° 44,100'

HMSO Pr 255 MO. Dunstable

No. 11800 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Friday 20th July 1951. Page 1.

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

03h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	03h.	1015·5 mb	1005·5 mb	687 mb
STORNOWAY	03h.	1021·9 mb	1020·3 mb	655 mb
LEUCHARS	03h.	1019·4 mb	1018·6 mb	650 mb
ALDERGROVE	03h.	1023·6 mb	1013·8 mb	638 mb
LIVERPOOL	03h.	1022·4 mb	1020·4 mb	660 mb
DOWNHAM MARKET	03h.	1020·7 mb	1016·3 mb	642 mb
LARKHILL	03h.	1022·5 mb	1006·7 mb	650 mb
CAMBORNE	03h.	1023·8 mb	1013·3 mb	635 mb
VALENTIA	03h.		1024 mb	610 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	50			00·4	53	48	300	06	00·2	55	52	350	01
1000	04·2	50	50			05·9	50	44	310	15	05·2	54	53	279	15
950		46	45				44	41	296	14		53	49	301	14
900	32·7	43	39			34·3	42	39	300	16	34·2	54	41	308	15
850		38	33				49	26	299	21		51	24	312	17
800	64·1	38	21			66·1	45	00	301	26	66·4	46	12	310	20
750		39	-22				40	-04	301	31		42	24	302	25
700	99·6	34	-30			101·8	38	21	304	26	102·2	38	18	299	30
650		28	-34				31	17	304	37		32	10	302	31
600	139·7	23	-38			142·2	24	10	301	37	142·7	26	16	310	36
550		13	-14				17	-06	299	37		20	09	311	35
500	185·7	06	-10			188·5	08	-06	302	40	189·3	12	00	304	36
450		-04	-16				-01	-12	301	45		03	-11	309	36
400	239·9	-15	-26			243·0	-11	-23	302	49	244·3	-07	-21	309	44
350		-29	-39				-25	-38	305	54		-19	-32	311	44
300	305·7	-47				309·6	-40	-52	306	52	311·7	-34	-46	318	45
250		-62					-51		303	72		-52		313	51
200	392·0	-64				396·4	-72		307	61	399·6	-71		323	56
170		-59					-70		304	53		-69		314	56
150		-57				456·3	-68		303	43	459·1	-68		312	47
130		-60					-67		303	33		-68		311	45
110		-58					-66		300	26		-68		317	33
100	539·9	-58				541·4	-64		296	25	543·9	-69		317	32
90		-57										-69		309	18
80		-56										-63		294	17
70												-62			
60											651·4	-64			
Tropopause	I 209 mb -69° 38,200'					II 190 mb -73° 40,600'					I 180 mb -76° 42,100'				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	57			00·6	60	54			01·2	57	55	250	03	04·4	58	55	CALM		02·9	58	58	020	05	00·3	53	52	CALM	
1000	06·4	58	56			06·2	58	54			05·7	59	57	290	12	06·2	58	55			06·6	58	54	355	06	06·8	55	52	350	02
950		53	52				53	53				57	54	332	18		57	54	360	09		66	41	351	05		59	51	358	02
900	35·6	59	52			35·3	50	49			35·0	53	51	317	20	35·3	58	47	312	11	36·0	61	45	345	05	36·0	57	41	342	02
850		53	42				46	45				51	47	293	23		57	32	287	14		57	39	338	06		57	43	309	05
800	67·9	50	36			67·3	43	37			67·2	50	33	299	26	67·9	52	14	296	16	68·6	55	22	338	06	68·5	55	32	293	06
750		44	32				44	-03				44	33	311	23		46	10	296	21		48	13	332	07		50	16	292	08
700	103·8	38	30			103·1	38	11			103·1	40	25	313	22	103·9	39	09	296	22	104·7	41	05	337	07	104·9	46	07	306	06
650		33	21				31	10				33	25	316	21		32	06	294	22		35	-02	332	10		38	-01	315	09
600	144·4	29	12			143·5	26	-09			142·8	28	20	316	21	144·3	24	-03	300	25	145·3	25	-09	337	11	146·8	30	-08	308	09
550		22	00				19	-22				22	02	315	21		18	04	312	28		21	-16	337	14		25	-11		
500	191·2	13	-08			189·9	10	-36			190·6	13	01	321	21	190·7	12	-10	316	30	192·0	15	-25	333	18	192·9	17	02		
450		03	-10				01	-47				05	-25	333	19		03	-12	320	21		06	-14	328	21		09	-18		
400	246·3	-06	-23			249·6	-11	-50			245·9	-04	-33	337	20	245·7	-07	-21	320	20	247·3	-07	-17	324	25	248·6	-02	-11		
350		-20	-32				-23	-56				-15	-36	338	26		-21	-31	326	24		-19	-33	332	24		-16	-38		
300	313·7	-35	-43			311·4	-40	-60			314·0	-28	-50	342	39	312·9	-38	-49	329	25	314·8	-34	-48	337	24	316·5	-32	-48		
250		-50					-56					-45		347	34		-53		336	29		-51		351	19		-51			
200	401·6	-72				398·3	-76				403·3	-63		345	35	400·7	-67		329	30	403·0	-68		359	16	404·5	-70			
170		-74					-74					-65		329	44		-69		312	25		-66		320	13		-70			
150	460·8	-75					-75				463·9	-62		317	36	460·7	-72		316	25		-69		287	11		-71			
130		-72					-75					-67		309	31		-73		317	25		-73		285	09		-71			
110		-72					-74					-69		310	30		-73		317	17		-75		282	09		-71			
100	544·6	-70				540·5	-73				548·9	-65		317	27	544·3	-75		317	12	546·7	-73		283	07	548·3	-69			
90		-70					-74					-64		324	21		-74					-71		282	08		-67			
80		-70					-74					-65		326	18		-70					-71		329	07					
70		-69					-72					-65		326	17						(74mb)	-70								
60	651·0	-66					-71				656·4	-64		328	16															
Tropopause	I 195 mb -74° 40,700'					I 195 mb -78° 40,300'					I 184 mb -71° 42,000'					I 197 mb -68° 40,400'					I 195 mb -69° 40,800'					I 193 mb -73° 41,200'				

Inversion 913 mb 39°-875 mb 49°
Isothermal 875-850 mb 49°, 725-700 mb 38°

Inversion 1019 mb 55°-996 mb 57°, 937 mb 52°-925 mb 55°

Inversion 950 mb 53°-900 mb 59°

Inversion 814 mb 41°-791 mb 44°
Isothermal 791-750 mb 44°

Inversion 1016 mb 57°-985 mb 60°, 843 mb 50°-810 mb 51°
Isothermal 882-864 mb 52°, 722-700 mb 40°

Inversion 1000 mb 58°-988 mb 59°, 903 mb 57°-890 mb 59°
Isothermal 958-903 mb 57°, 865-850 mb 57°, 1006·7-1000 mb 58°

Inversion 990 mb 58°-946 mb 67°, 910 mb 60°-890 mb 61°
Isothermal 1013-990 mb 58°

Inversion 1000 mb 55°-950 mb 59°
Isothermal 915-832 mb 57°

09h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	09h.	1018·1 mb	1008·1 mb	700 mb
STORNOWAY	09h.	1022·8 mb	1021·2 mb	645 mb
LEUCHARS	09h.	1021·6 mb	1020·8 mb	665 mb
ALDERGROVE	09h.	1024·1 mb	1014·4 mb	653 mb
LIVERPOOL	09h.	1023·4 mb	1021·4 mb	626 mb
DOWNHAM MARKET	09h.	1021·4 mb	1016·8 mb	653 mb
LARKHILL	09h.	1022·8 mb	1007·2 mb	665 mb
CAMBORNE	09h.	1024·6 mb	1014·0 mb	626 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	49			00·4	55	47	250	05	00·2	63	54	090	05
1000	04·9	50	47			06·2	52	44			05·2	56	49	307	09
950		44	39				46	42	277	09		52	49	308	12
900	33·3	39	36			34·7	41	40	292	11	34·8	54	45	313	14
850		34	32				50	11	300	17		51	08	320	18
800	64·6	41	12			66·6	78	29	303	21	67·0	45	05	329	22
750		37	08				43	27	303	24		37	23	332	22
700	100·1	32	03			102·5	36	26	300	31	102·8	37	23	314	25
650		26	-03				32	22	293	33		30	18	314	28
600	140·0	20	13			143·0	27	14	290	34	142·2	23	13	312	32
550		13	08				20	10	291	34		18	06	307	35
500	186·0	05	00			189·6	13	-07	298	36	189·6	10	-03	308	30
450		-05	-11				03	-16	298	41		02	-12	307	34
400	240·0	-16	-22			244·7	-08	-17	298	41	244·5	-09	-23	308	37
350		-28	-34				-20	-33	304	48		-24	-35	309	38
300	306·0	-45				312·1	-35	-55	318	52	311·3	-39	-48	314	48
250		-60					-52		313	59		-55		317	52
200	392·7	-59				400·2	-65		297	60	399·0	-67		315	39
170		-56					-70		295	52		-70		308	48
150		-57				460·4	-65		294	37	459·0	-66		304	39
130		-59					-63		292	34		-67		311	33
110		-54					-61		291	22		-66		308	30
100	598·5	-51				546·4	-59		289	23	549·2	-61		309	25
90		-51										-62		312	27
80		-51										-64		310	27
70	(76mb)	-51										-60		314	24
60															
Tropopause	I 230 mb -67° 36,300'					I 172 mb -71° 43,000'					I 182 mb -71° 41,800'				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	60	54			00·6	60	57	310	12	01·2	66	58	310	08	04·4	66	59	360	02	02·9	62	60	050	09
1000	06·6	58	54			06·5	57	54	318	24	06·9	62	55			06·4	65	58			06·8	60	58	025	09
950		51	48				51	50	317	20		55	52	324	10		56	55	351	06		59	54	014	08
900	35·6	59	45			35·5	54	51	319	21	35·1	52	49	303	17	35·6	51	46	303	10	36·1	61	48	332	07
850		54	38				51	40	325	19		50	44	298	22		57	21	297	13		58	44	326	07
800	67·9	49	32			67·7	49	26	327	18	67·2	50	35	313	19	67·9	49	38	311	18	68·6	56	29	328	10
750		44	29				46	17	327	18		49	31	306	10		45	36	315	20		49	25	336	09
700	103·9	37	23			103·7	40	15	323	16	103·4	41	26	298	16	103·9	37	27	321	21	104·9	43	21	330	09
650		31	20				36	01	304	08		31	15	313	15		31	15	328	22		35	16	334	11
600	144·4	26	16			144·4	28	-07	312	09	144·0	29	-07	331	18	144·3	26	-03	340	20	145·6	29	08	337	10
550		22	10				22	-14	327	17		21	-23	326	20		21	-14	344	18		21	-01	329	09
500	191·1	14	01			191·2	14	-11	326	21	190·8	14	-32	324	23	191·1	13	-24	322	16	192·3	12	-04	349	13
450		04	-20				04	-19	319	23		04	-25	323	22		03	-33	342	15		06	-06	004	12
400	246·3	-06	-26			246·3	-08	-24	319	23	246·0	-06	-34	336	22	246·2	-05	-40	342	18	247·6	-05	-18	029	13
350		-19	-40				-22	-33	314	25		-19	-44	351	23		-20	-53	326	25		-17	-34	040	22
300	313·8	-32	-54			313·9	-36	-46	325	33	313·6	-32	-53	335	28	313·6	-37	-65	320	24	315·4	-32	-48	036	18
250		-52					-50		329	31		-51		335	36		-53		341	22		-50		031	14
200	401·8	-70				401·4	-71		318	33	401·9	-67		331	26	400·9	-69		335	25	403·1	-69		026	08
170		-76					-65		319	29		-74		338	33		-69		308	22		-66		302	07
150		-76					-69		308	26	461·6	-68		324	33	461·0	-70		304	22		-69		270	08
130		-72					-69		298	23		-68		314	33		-69		316	20		-73		265	11
110		-69					-67		302	20		-69		326	25		-69		302	13		-71		278	10
100	544·7	-68				546·2	-67		303	18	546·4	-68		306	29	545·9	-67		312	10	548·0	-71		285	08
90		-69					-65		313	16		-67		309	24		-63		330	06		-71		304	07
80		-69					-65		332	19		-64		321	21		-61					-70		321	06
70		-68					-59					-65		332	16							-69		327	05
60						(68mb)	-57				654·0	-61										-67		010	05
Tropopause	I 180 mb -78° 41,400'					I 189 mb -72° 41,300'					I 170 mb -74° 43,500'					I 208 mb -71° 39,000'					I 196 mb -70° 40,800'				

Inversion 939 mb 49°-900 mb 69°, 696 mb 36°-685 mb 37°
Isothermal 762-750 mb 44°

Inversion 930 mb 50°-910 mb 53°

Inversion 912 mb 51°-900 mb 52°, 812 mb 48°-795 mb 51°

Inversion 883 mb 51°-850 mb 57°, 800 mb 49°-789 mb 51°, 600 mb 26°-590 mb 27°, 413 mb -04°-408 mb -03°
Isothermal 912-883 mb 51°

Inversion 982 mb 58°-925 mb 63°, 858 mb 57°-827 mb 59°
Isothermal 492-477 mb 11°

Inversion 850 mb 34°-812 mb 42°

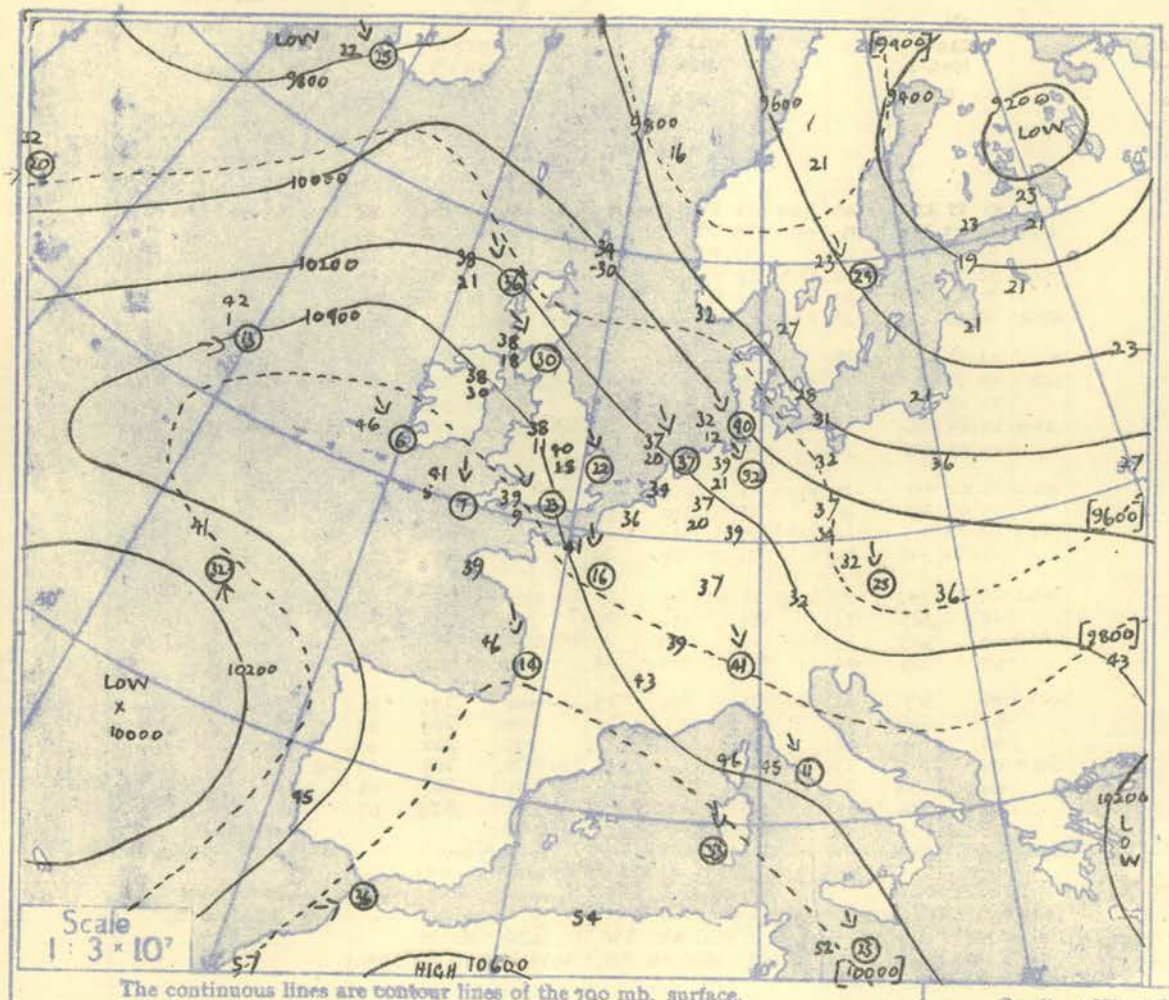
Isothermal 863-842 mb 50°

Inversion 880 mb 39°-863 mb 50°

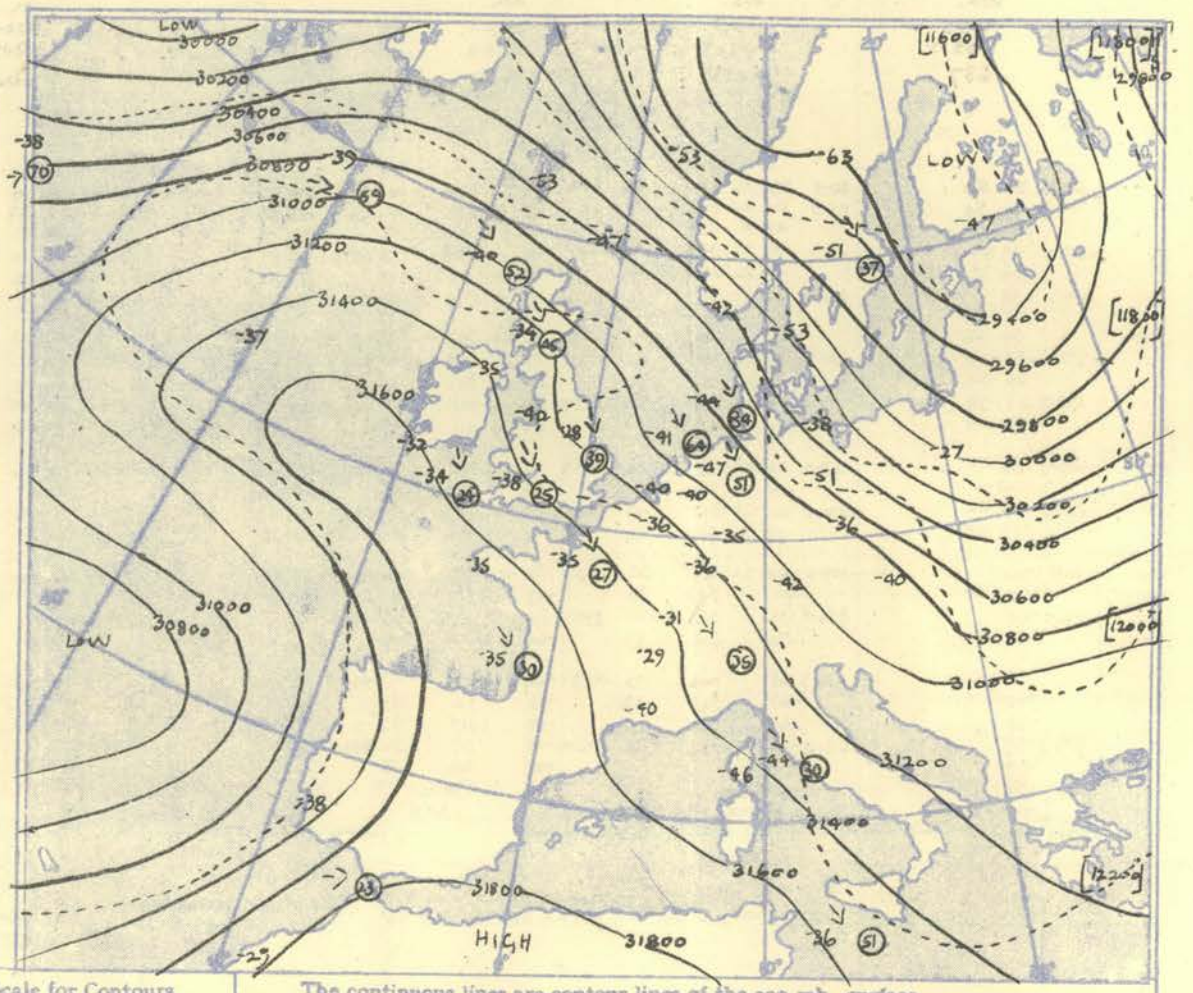
Inversion 930 mb 51°-888 mb 55°

Friday 20th July 1951.

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



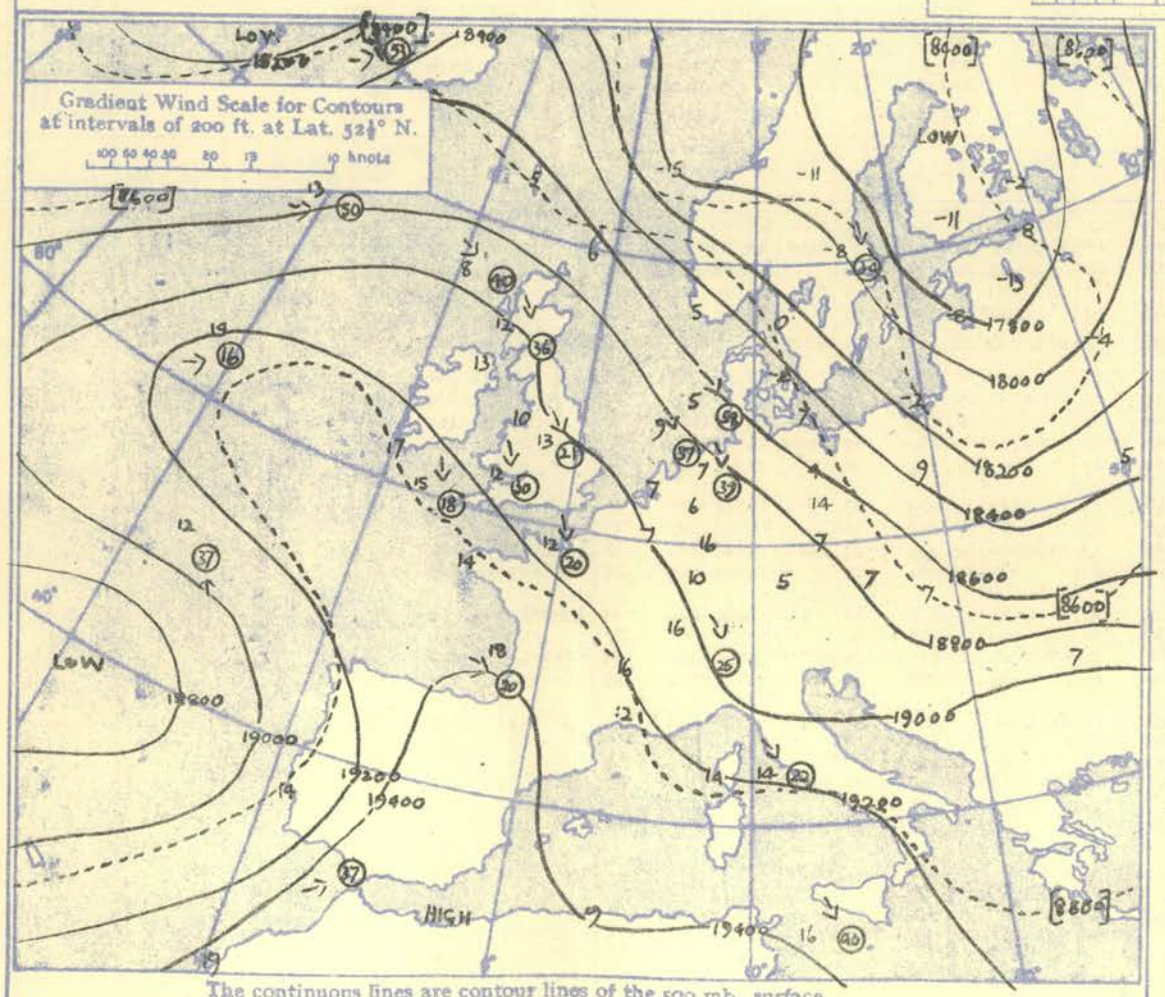
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



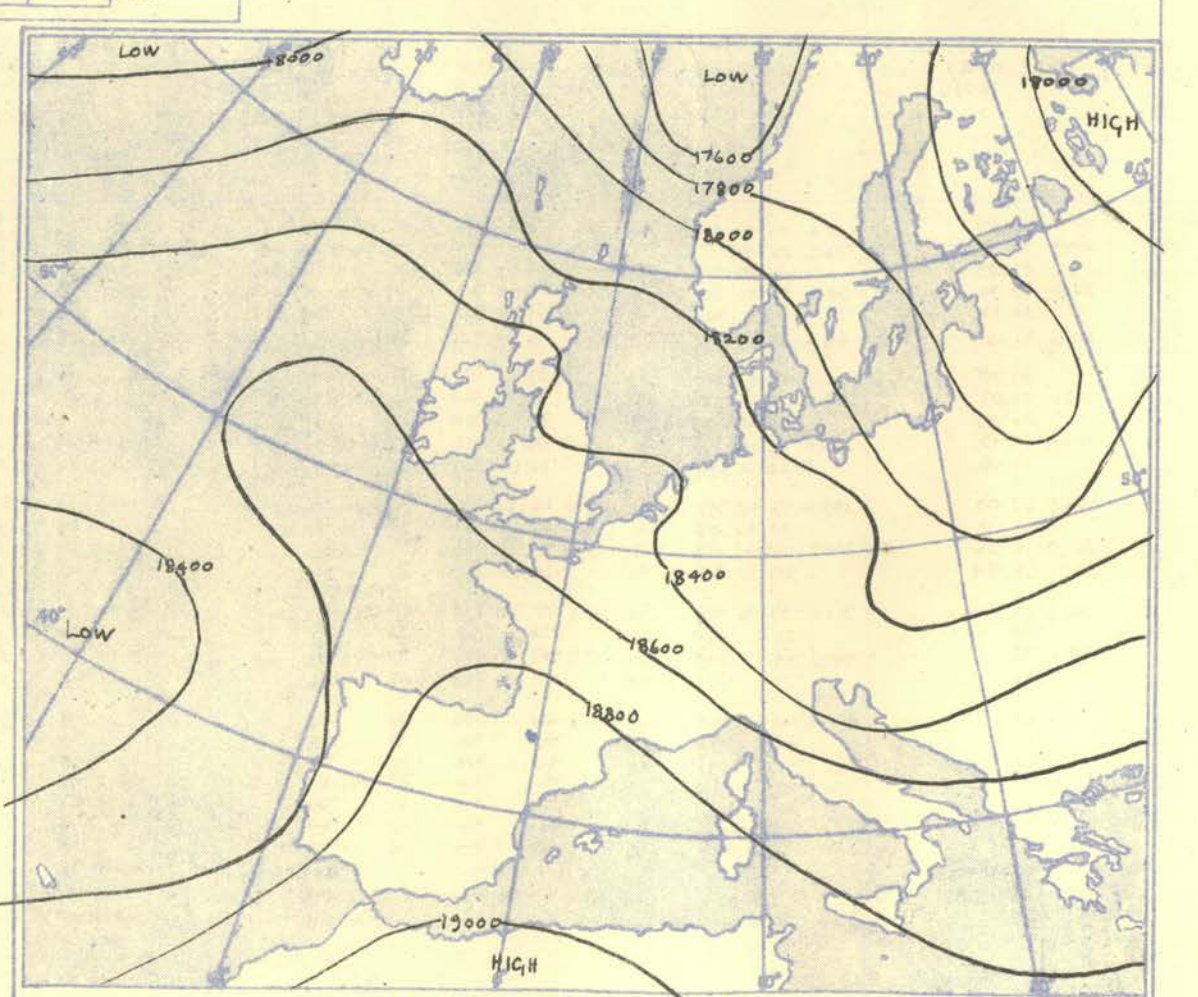
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 60 50 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

	52°12'N 2°12'W			48.1°N 17.0°W			47.7°N 12.3°W		
Pressure: Time	1005hrs			1200hrs			1345hrs		
M.S.L.	1023.6 mb			1020 mb			1022 mb		
Surf	1022.0 mb			1016 mb			1011 mb		
Freezing	617 mb			640 mb			630 mb		
Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Height ft./100	°F. Temp.	Dew °F.	Height ft./100	°F. Temp.	Dew °F.
Surf	0.4	-	-	-	62	58	-	63	58
1000	6.5	-	-	5.5	60	57	6.0		
950		-	-		53	51		53	52
900	35.9	55	55		56	50		62	53
850		49	-		56	20		60	49
800	65.3	52	46		54	07		55	44
750		-	-		47	46		50	40
700	104.5	41	-	103.2	38	31	104.3	39	38
650		-	-		33	13		34	33
600	145.3	29	-		26	10		28	19
550		-	-		17	10		19	
500	192.3	15	-	190.2	07		191.5	07	
450		-	-						
400	247.7	-6	-						
350		-	-						
300	315.2	-35							
250									
200									
170									
	Cloud. 3/8 5/8 Sc 935-870; 7/8 Sc 870-850; Inversion 1023 mb 65°-1003 mb 68°; 852 mb 49°-822 mb 53°			Cloud 3/8 Sc 970-960; 8/8 Sc 940-910; 2/8 Ac 760; Inversion 950 mb 53°-900 mb 56°; Isothermal 900-850 mb 56°			Cloud 3/8 Sc 900-970; 8/8 Sc 950-930; 3/8 Cu NR.; Inversion 950 mb 53°-900 mb 62°		

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

Place	Cirrus 52.3°N 20.0°W		Shoeburyness		St Eval		Top Cliff		Lympne		Cirrus 52.4°N 20.0°W		Downham Market	
Time	09hrs		09hrs		1015hrs		13hrs		-		21hrs		03hrs	
Type														
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	210	09	320	04	350	35	160	05	130	04	110	05	090	05
1,000	200	09	310	10	020	11	170	06	170	03	140	09	330	11
2,000	190	10	310	10	040	08	080	04	350	04	150	12	330	12
3,000	190	10	300	12	020	08	050	06	350	11	170	14	340	12
4,000	190	09	300	12	340	07	040	05	330	11	150	15	350	12
5,000	210	08	300	11	340	08			330	13	180	12	350	12
6,000			300	12	010	09			330	05	170	12	350	12
8,000			311	11	320	11			270	07			350	12
10,000	250	11	320	12	340	08			310	13	160	13	360	14
14,000	240	22	330	15	330	09			320	12	150	25	340	15
18,000	220	04	330	15	320	13					160	20	340	13
24,000	330	07	320	17	010 (23000')	06					170	29	340	23
30,000	200	10	330	28							170	49	320	19
40,000			340	33							170 (53000')	44	330	21
50,000			320	28									300	24
			310 (54000')	16									110 (75000')	09

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 Observer — Lat/Long 59.0°N 19.1°W — Time 03hrs G.M.T. — M.S.L. 1016 mb — Surf 1016 mb — Freezing 670 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	51	56	230	19
1000	4.5	55	55	228	28
950		53	53	231	28
900	33.4	51	51	234	30
850		48	48	232	31
800	65.5	42	42	226	34
750		37	37	224	38
700	101.0	34	33	220	44
650		30	29	226	42
600	141.3	25	24	235	44
550		15	10	247	44
500	188.3	13	-3	256	50
450		01	-9	260	59
400	242.8	-9	-18	255	52
350		-23	-36	252	52
300	309.6	-39	-51	253	59
250		-57		267	69
200	396.6	-71		264	71
170		-69		265	65
150		-68		266	52
130		-65		259	38
110		-65		254	20
100	541.7	-63		154	24
90		-60		254	12
80		-59		254	09
70		-58		254	09
60					

Isothermal 982-963 mb 54°; 932-881 mb 51°; 775-761 mb 38°

Tropopause: I 193 mb -72° 40400'

Ship: Weather Observer — Lat/Long 59°0' 19°0' — Time 09hrs G.M.T. — M.S.L. 1013 mb — Surf 1013 mb — Freezing 620 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	56	55	220	23
1000	3.5	55	55	220	27
950		52	52	230	32
900	32.5	53	53	237	36
850		51	51	245	36
800	64.8	51	40	247	36
750		46	37	246	41
700	100.7	40	21	243	39
650		36	12	240	34
600	141.6	29	06	240	39
550		21	00	240	46
500	185.3	12	-8	240	45
450		04	-13	241	56
400	242.5	-5	-24	250	61
350		-19	-38	246	75
300	311.1	-33	-50	242	62
250		-48		242	69
200	399.9	-67		242	65
170		-69		242	46
150		-64		242	45
130		-59		242	46

Inversion 950 mb 52°-938 mb 53°; 850 mb 51°-823 mb 53°; 708 mb 39°-697 mb 41°

Isothermal 938-878 mb 53°

Tropopause: I 188 mb -72° 41300'

Ship: Weather Observer — Lat/Long 59°N 18.9°W — Time 15hrs G.M.T. — M.S.L. 1015 mb — Surf 1015 mb — Freezing 655 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	57	56	235	18
1000	4.0	55	54	232	24
950		51	51	234	28
900	32.9	53	50	236	33
850		52	46	237	33
800	65.1	50	44	236	32
750		42	34	234	36
700	101.0	36	30	232	36
650		31	07	229	40
600	141.6	27	-7	228	45
550		20	-25	229	52
500	188.0	11	-28	231	58
450		03	-25	229	61
400	242.9	-10	-36	229	63
350		-24	-47	230	77
300	309.7	-38	-58	212	72
250		-56		233	81
200	397.0	-65		230	54
170		-65		230	48
150		-60		231	403
130		-59		232	30
110		-52		231	15
100	544.8	-51		231	19
90		-50		231	13
80		-48		231	06
70		-46		231	06
60	(66)	-45			

Inversion 950 mb 51°-918 mb 54°

Isothermal 633-623 mb 29°

Tropopause: I 213 mb -68° 38400'

Ship: Weather Observer — Lat/Long 59.0°N 19°W — Time 21hrs G.M.T. — M.S.L. 1014 mb — Surf 1014 mb — Freezing 670 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	57	57	220	23
1000	3.8	56	56	228	29
950		53	52	229	30
900	32.8	50	49	230	42
850		48	47	229	45
800	64.9	45	42	224	46
750		40	34	229	47
700	100.6	36	33	229	45
650		30	25	229	45
600	141.0	24	10	226	55
550		17	-9	221	54
500	187.3	10	-19	220	56
450		00	-31	219	59
400	242.0	-10	-33	218	67
350		-21	-46	219	78
300	309.2	-36	-56	219	76
250		-52		212	84
200	397.2	-66		215	26
170		-59		220	33
150		-59		220	33
130		-62		221	26
110		-58		220	28
100	544.2	-58		220	18
90		-55		220	15
80		-52		220	16
70		-52		220	12
60		-50		220	08
		-51		calm	
		-47		calm	

Tropopause: I 190 mb -68° 40800'

Ship: Weather Watcher — Lat/Long 54.7°N 10.8°W — Time 09hrs G.M.T. — M.S.L. 1025 mb — Surf 1025 mb — Freezing 600 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	60	58	250	08
1000	6.8	58	58	260	06
950		55	55	255	07
900	36.0	57	52	258	10
850		43	48	292	14
800	68.2	53	18	283	18
750		48	15	277	17
700	104.4	43	04	277	17
650		37	-12	272	18
600	145.3	32	-6	270	22
550		25	-15	276	21
500	192.5	19	-22	284	25
450		10	-30	301	27
400	248.2	-4	-39	311	30
350		-16	-49	310	33
300	316.2	-31	-58	310	31
250		-49		321	37
200	404.7	-69		337	25
170		-73		297	21
150		-72		302	15
130		-72		278	21
110		-71		255	23
100	548.2	-67		240	23
90		-69		242	17
80		-66		252	15
70		-62		225	09
60		-61			
		-59			

Inversion 943 mb 54°-900 mb 57°; 850 mb 49°-807 mb 54°

Tropopause: I 182 mb -75° 42500'

Ship: Cirrus — Lat/Long 52.3°N 19.7°W — Time 03hrs G.M.T. — M.S.L. 1026 mb — Surf 1026 mb — Freezing 610 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	-	55	56	220	04
1000	7.3	54	49		
950		51	45		
900	36.4	60	42	279	08
850		54	37	274	08
800	68.8	50	23	266	08
750		46	11	260	10
700	105.0	42	01	252	13
650		27	-5	240	16
600	145.8	31	-3	244	18
550		21	-7	248	18
500	192.7	14	-17	243	16
450		06	-26	243	14
400	248.1	-7	-36		
350		-22			
300	315.2	-37			
250		-55			
200	402.4	-73			
170		-75			
150		-78			
130		-76			
110		-75			
100	544.3	-73			
90		-72			
80		-71			
70		-69			
60		-68			

Inversion 1000 mb 54°-975 mb 55°; 941 mb 50°-907 mb 61°

Isothermal 824-790 mb 50°

Tropopause: I 180 mb -78° 42400'

Ship: Cirrus — Lat/Long 52.4°N 20.1°W — Time 15hrs G.M.T. — M.S.L. 1023 mb — Surf 1023 mb — Freezing 625 mb

Pressure mb	Height ft./100	°F. Temp.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		59	56	160	10
1000	6.6	54	50	165	07
950		50	48	155	10
900	35.5	57	39	140	10
850		54	32	122	10
800	67.8	50	01	173	09
750		48	-1	179	11
700	103.9	43	05	174	10
650		36	04	174	13
600	144.7	28	-4	185	18
550		20	-5	172	19
500	191.3	11	-3	182	16
450		01	-20	173	28
400	246.2	-8		170	31
350		-22			
300	313.2	-37			
250		-54			
200	400.7	-72			
170		-69			
150		-68			
130		-66			
110		-65			
100	545.6	-64			

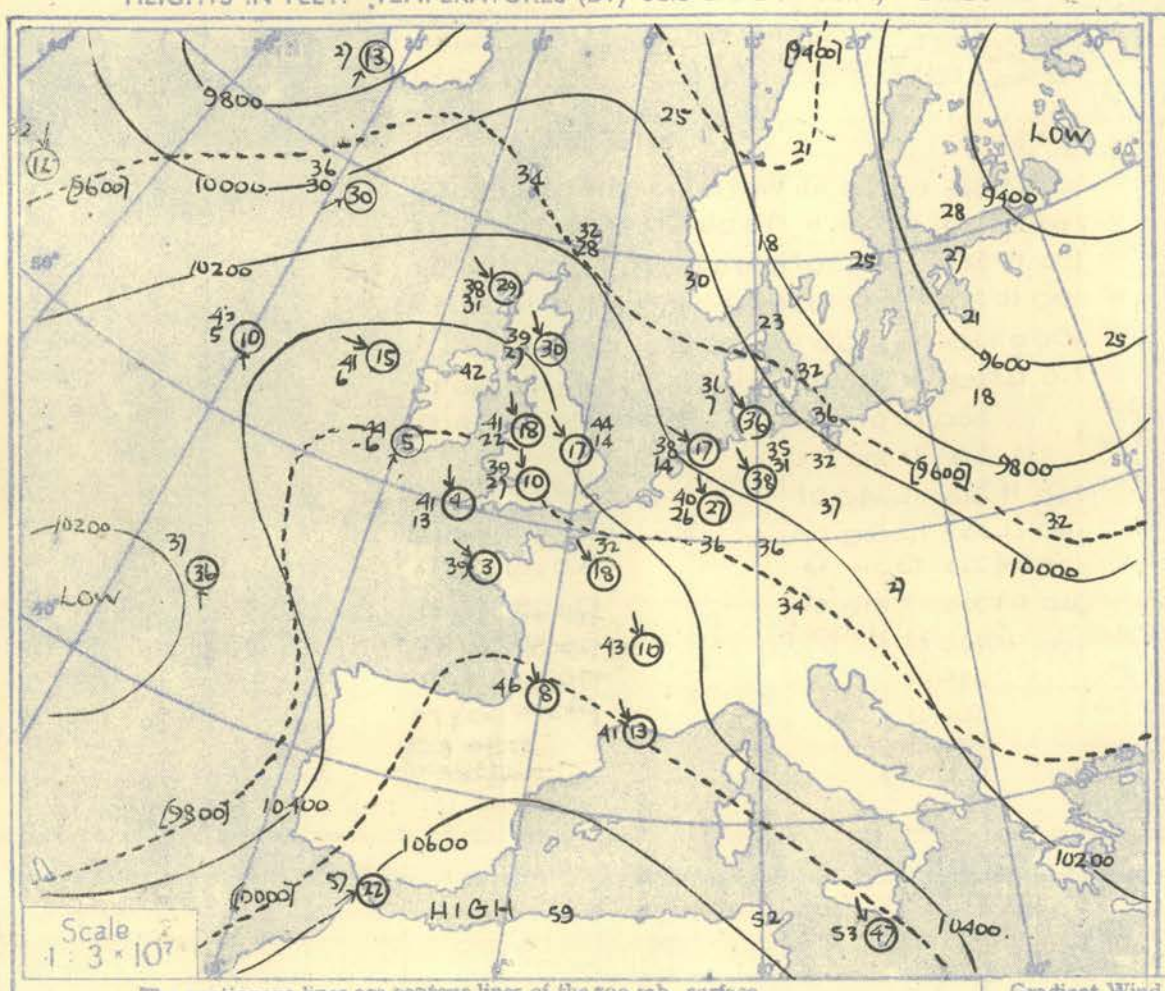
Inversion 930 mb 49°-900 mb 57°; 478 mb 6°-670 mb 7°

Isothermal 900-876 mb 57°; 820-800 mb 50°; 755-750 mb 48°

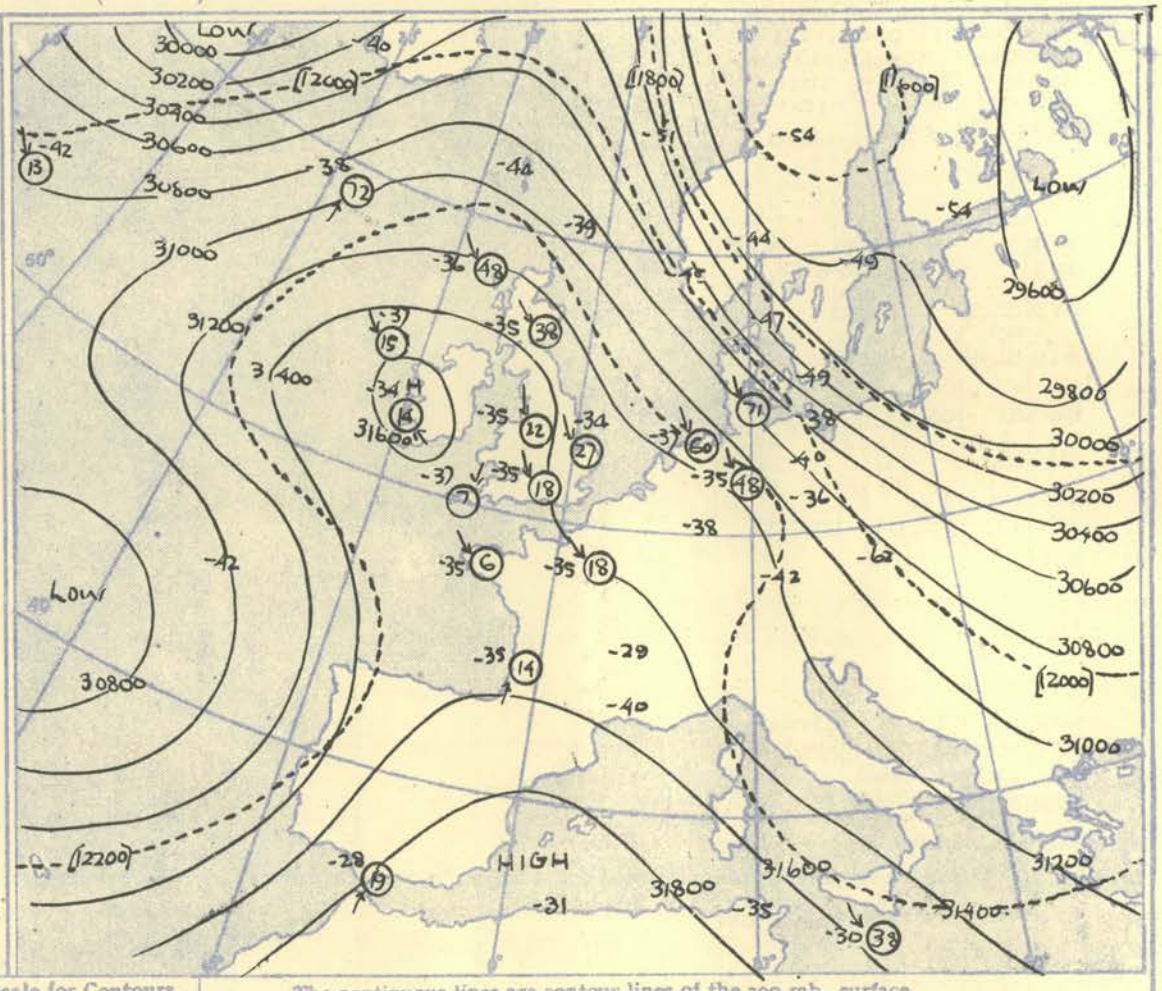
Tropopause: I 194 mb -73° 40700'

Friday 20th July 1951

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



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

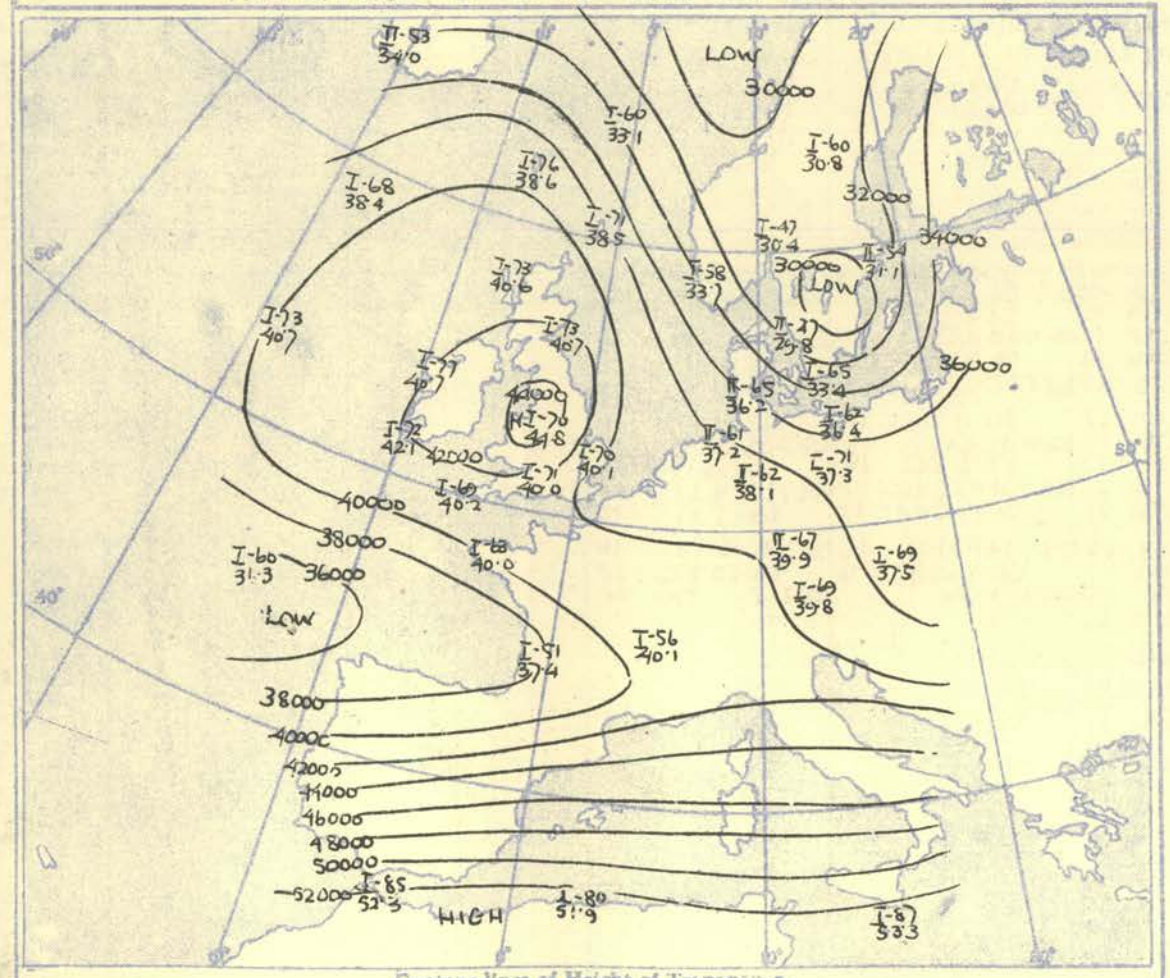


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 60 50 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough in the Atlantic moved steadily east and the cold pool near the Azores tended to become absorbed in this trough. The warm ridge across the British Isles declined slowly.

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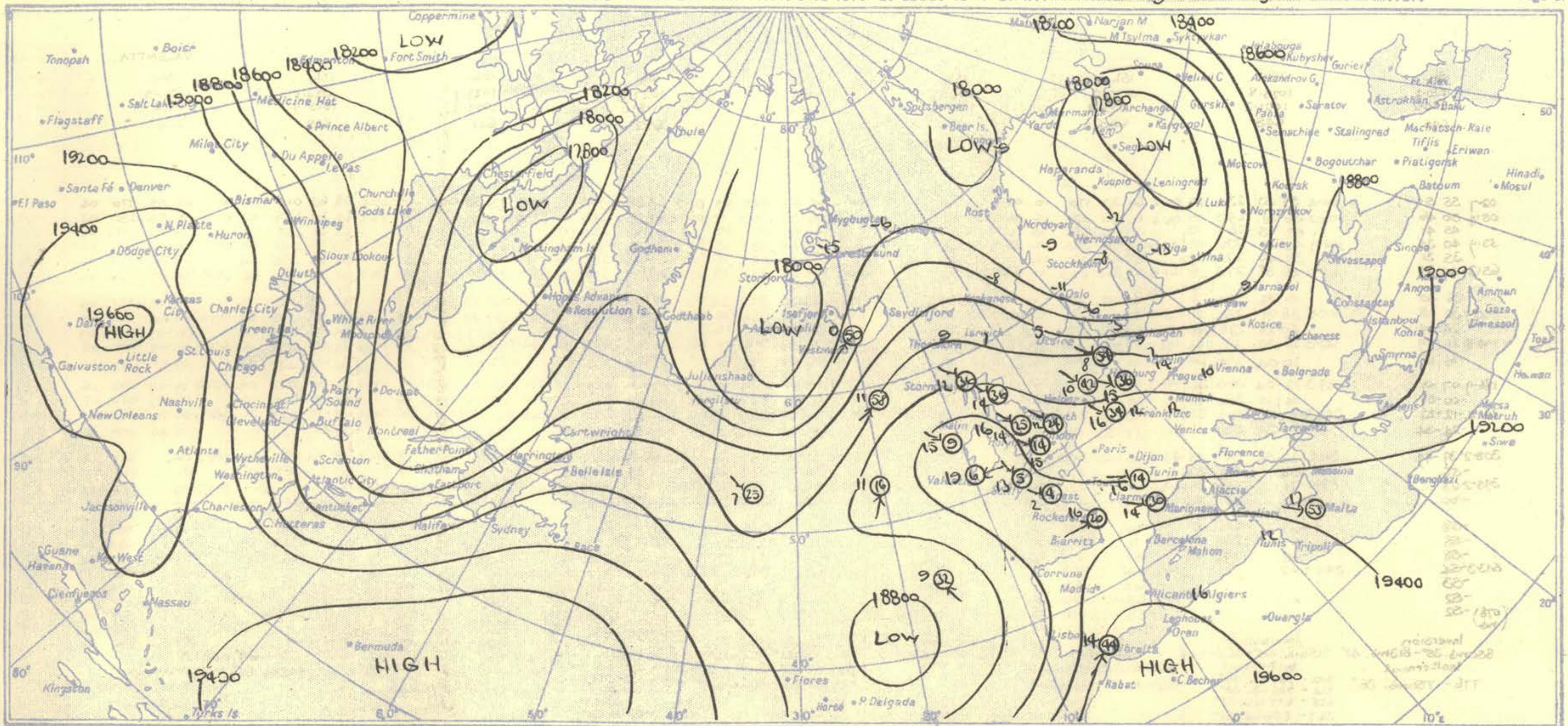
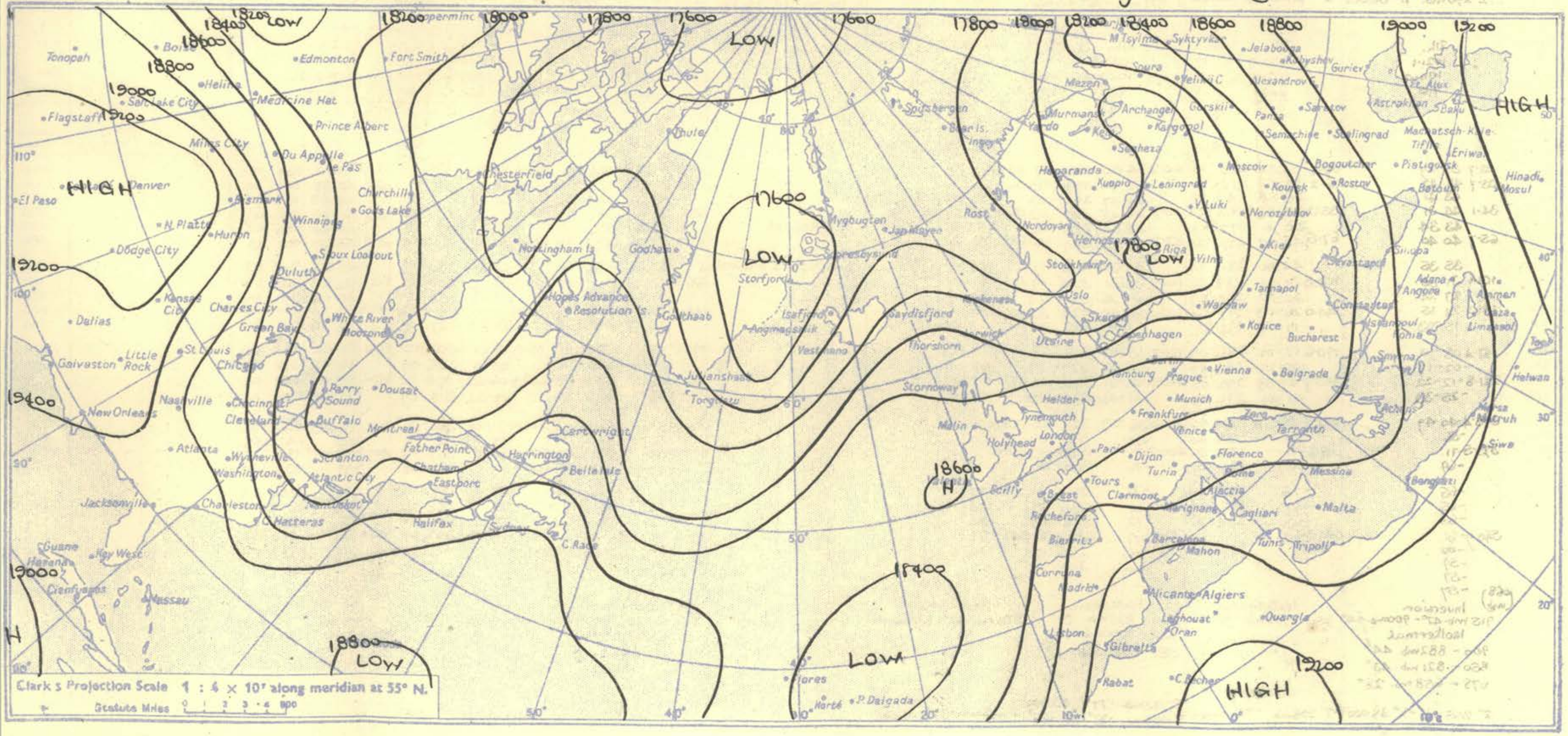
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Friday 20TH July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 20TH July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Friday 20th July, 1951.

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

15h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h.	1020·2 mb	1010·2 mb	696 mb
STORNOWAY	15h.	1023·8 mb	1021·2 mb	648 mb
LEUCHARS	15h.	1023·2 mb	1022·4 mb	630 mb
ALDERGROVE	15h.	1025·2 mb	1015·5 mb	612 mb
LIVERPOOL	15h.	1024·5 mb	1022·5 mb	635 mb
DOWNHAM MARKET	15h.	1022·4 mb	1018·0 mb	622 mb
LARKHILL	15h.	1022·7 mb	1007·2 mb	641 mb
CAMBORNE	15h.	1024·2 mb	1013·9 mb	638 mb
VALENTIA	15h.	1026·5 mb	1024 mb	625 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	55	51			00·4	59	53	230	05	00·2	64	53	170	10	02·6	63	60		
1000	05·4	50	46			06·2	56	51	245	15	06·4	60	50	238	06	06·9	59	57		
950		45	41				49	45	257	13		55	46	252	05		53	53		
900	33·9	40	35			34·9	43	43	276	15	35·5	54	38	305	06	35·9	51	48		
850		35	31				52	43	278	17		52	40	321	16		55	47		
800	65·3	40	35			67·0	46	38	273	18	67·8	49	38	309	21	68·2	50	39		
750		36	30				41	29	280	21		43	32	309	25		47	34		
700	100·7	32	28			102·8	38	31	294	29	103·8	39	27	316	30	104·2	42	25		
650		28	24				33	28	298	30		34	21	322	30		36	11		
600	140·8	21	19			143·3	26	20	291	31	144·5	29	09	319	33	145·0	30	02		
550		14	10				20	04	296	34		20	10	318	36		23	-06		
500	186·9	07	-01			189·3	12	-04	300	36	191·3	14	03	314	36	191·9	16	-12		
450		-00	-09				04	-15	304	41		04	-12	313	40		07	-19		
400	241·4	-12	-25			244·3	-07	-28	304	55	246·5	-05	-19	319	34	247·3	-04	-29		
350		-24	-34				-20	-39	301	57		-17	-33	299	34					
300	308·2	-39	-49			311·6	-36	-54	301	48	314·1	-35	-53	304	38					
250		-56					-54		301	52		-55		320	41					
200	395·2	-68				399·1	-71		296	50	401·5	-72		320	50					
170		-60					-69		297	43		-75		314	45					
150		-58					-68		294	41		-70		306	36					
130		-58					-67		284	28		-71		307	30					
110		-58					-62		290	26		-68		296	23					
100	513·3	-54				544·2	-62				545·2	-66		305	22					
90		-53										-65		312	19					
80		-52										-62		312	15					
70	(078) mb	-52										-58		312	15					
60												-61								
	Inversion 850mb. 35°–813mb. 42° Isothermal 776 – 758mb. 36°					Inversion 915mb. 45°–865mb. 54° Isothermal 802 – 787mb. 46° 724 – 706 mb. 38° 628 – 617 mb. 28° 567 – 556 mb. 21° 465 – 450mb. 04°					Inversion 965mb. 54°–929 mb. 38° 530mb. 16°–525mb. 18°					Inversion 912mb. 50°–857mb. 55°				
Tropopause	I 290mb. -71° 38,300'					I 192mb. -73° 40,600'					I 195mb. -73° 40,700' I 177mb. -76° 42,800'					N.R.				

Pressure mb	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	64	56	300	09	01·2	68	58	Calm		04·4	73	58	010	05	02·9	68	63	010	10	00·3	64	59	270	04
1000	06·8	60	52	305	12	06·2	62	53	343	06	06·4	71	56			06·6	64	60	338	03	07·1	58	54	250	03
950		58	44	319	12		57	52	334	07		62	53	009	09		63	51	338	06		55	52	176	02
900	35·9	58	44	337	15	35·4	53	47	326	10	35·9	53	48	004	09	36·1	63	27	340	03	36·2	60	44	128	02
850		55	41	343	15		49	43	319	15		51	51	356	08		58	20	350	04		58	26	183	02
800	68·3	51	38	344	18	67·6	50	29	314	16	68·1	52	39	332	12	68·7	52	27	347	06	68·8	54	07	204	02
750		44	30	342	24		46	16	311	17		45	23	323	11		46	23	333	03		49	09	221	04
700	104·3	41	22	334	18	103·7	44	04	315	17	104·1	39	27	310	10	104·8	41	13	332	04	105·0	44	-06	229	05
650		34	15	321	15		36	-02	315	17		34	17	311	12		34	02	323	06		36	-17	215	07
600	144·9	29	08	314	17	144·6	28	-08	325	19	144·7	28	07	307	13	145·4	27	-09	322	06	145·8	31	-19	178	05
550		22	08	327	22		21	-04	330	21		23	06	315	15		20	-05	330	05		24	01	117	05
500	191·7	14	00	324	25	191·2	12	-09	329	24	191·7	13	-06	333	14	192·1	13	00	322	05	193·0	19	-19	092	06
450		07	-11	332	22		04	-26	326	22		04	-15	326	16		04	-15	360	10		08	-42	084	08
400	247·0	-05	-29	343	23	246·4	-06	-23	320	23	246·7	-07	-23	326	16	247·2	-08	-28	023	11	248·6	-04	-37	083	11
350		-19	-37	334	23		-21	-35	318	28		-20	-34	322	18		-21	-39	030	07		-18	-49	099	11
300	314·0	-35	-51	342	22	313·6	-34	-49	328	27	314·1	-35	-50	333	18	314·2	-37	-54	033	07	316·2	-34		107	14
250		-54		328	28		-51		324	33		-52		333	17		-53		058	06		-51		112	12
200	402·2	-68		321	25	401·5	-70		325	37	401·9	-70		327	16	402·0	-69		L&V.		404·3	-70		148	13
170		-68		304	24		-67		318	35		-68		306	19		-68		258	13		-68		182	12
150		-68		307	27		-69		304	30		-70		297	22		-69		262	17		-72		208	15
130		-66		292	21		-67		302	23		-71		295	21		-70		264	15		-70		234	15
110		-65		294	12		-62		313	28		-70		306	15		-71		253	10		-68		225	14
100	547·5	-63		325	10	546·7	-66		327	21	546·2	-69		310	15	546·3	-71				548·5	-68		220	13
90		-60					-62		335	16		-66		313	09		-71					-67		224	08
80							-62		316	12		-66		327	07							-66		201	06
70							-60		318	07		-59		307	04							-64		184	06
60							-56		347	06		-56		340	01							-62		186	03
												-52		082	06							-59		153	02
	Inversion 953mb. 52°–922mb 60° 865 mb. 54°–847mb. 56° 193 mb. -69°–182mb. -66°					Inversion 855mb. 49°–837mb. 51° 556 mb. 20°–542 mb. 21° Isothermal 914 – 900mb. 53° 837 – 810 mb. 51° 775 – 722 mb. 46° 480 – 470 mb. 10°					(043) mb -49 Inversion 862mb. 49°–817mb. 53°					Inversion 993mb. 62°–955mb. 64° 928 mb. 61°–905mb. 64°					(048) mb -58 Inversion 920mb. 58°–900mb. 60° Isothermal 620 – 590mb. 31°				
Tropopause	I 193mb. -69° 40,800' I 160mb. -70° 44,800'					I 198mb. -70° 40,300'					I 202mb. -71° 40,000'					I 200mb. -69° 40,200'					I 185mb. -72° 42,100'				

21h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h.	1021·1 mb	1011·0 mb	710 mb
STORNOWAY	21h.	1022·7 mb	1021·1 mb	648 mb
LEUCHARS	21h.	1023·8 mb	1023·0 mb	661 mb
ALDERGROVE	21h.	1025·0 mb	1015·8 mb	616 mb
LIVERPOOL				
DOWNHAM MARKET	21h.	1023·4 mb	1019·0 mb	630 mb
LARKHILL	21h.	1023·1 mb	1007·6 mb	620 mb
CAMBORNE	21h.	1023·7 mb	1013·2 mb	625 mb
VALENTIA				

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	5	49			00·4	56	54	220	10	00·2	54	50	135	07	02·6	63	58		
1000	05·7	48	47			06·2	55	54	234	13	06·5	52	46	199	03	06·9	62	56		
950		43	41				53	53	242	19		51	47	204	03		57	52		
900	34·1	44	31			38·3	53	53	268	20	38·2	51	48	237	03	36·0	50	47		
850		43	34				50	41	272	19		48	44	302	08		51	38		
800	65·7	40	40			67·5	48	42	277	20	67·2	47	39	290	15	68·2	52	26		
750		35	35				44	40	283	24		42	33	298	19		47	19		
700	101·1	31	30			103·5	39	34	289	25	103·1	38	31	325	19	104·3	41	19		
650		27	24				32	32	294	27		31	26	321	22		36	17		
600	141·3	22	15			144·0	26	-03	297	25	143·5	25	13	324	23	145·0	30	16		
550		15	-03				19	-15	294	31		21	00	319	25		22	12		
500	187·4	08	-13			190·6	12	-21	286	39	190·2	13	-07	315	28	191·9	15	03		
450		-02	-19				04	-29	287	39		04	-18	327	39		04	-09		
400	241·8	-12	-22			245·7	-07	-38	292	45	245·3	-08	-31	324	40	247·1	-07	-21		
350		-25	-33				-21	-49	296	46		-21	-46	328	45		-21	-35		
300	308·4	-40	-49			312·8	-38	-58	294	45	312·5	-36	-59	329	40	314·3	-38	-57		
250		-56					-56		286	45		-54		330	39		-54			
200	395·5	-71				399·8	-71		286	36	400·2	-71		318	36	401·6	-73			
170		-69					-71		285	31		-76		304	29		-75			
150		-65					-70		281	29		-78		297	31		-77			
130		-65					-67		275	25		-74		296	29		-74			
110		-65					-63		284	18		-72		314	28		-74			
100	540·9	-61				544·8	-62				542·7	-69		324	21	543·9	-72			
90		-60										-66		287	17		-70			
80		-59										-65		309	10					
70		-57																		
60	(068) mb	-57																		
	Inversion 915 mb. 47°–900mb. 44° Isothermal 900 – 882mb. 44° 850 – 821 mb. 43° 678 – 658 mb. 28°					Isothermal 950 – 900mb. 53°					Isothermal 960 – 895 mb. 51° 834 – 800mb. 47° 582 – 564 mb. 23°					Inversion 875mb. 47°–830mb. 54°				
Tropopause	I 205mb. -71° 39,000'					I 208mb. -73° 39,100'					I 173mb. -77° 43,000' I 150mb. -78° 45,900'					I 188mb. -77° 41,300'				

Pressure mb	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf						01·2	61	56	080	03	04·4	69	59	Calm		02·9	62	61	030	05					
1000						06·5	59	54	325	05	06·5	68	57			06·6	62	58	012	06					
950							58	51	344	07		64	57	022	09		65	58	139	05					
900						35·6	52	49	346	09	36·1	57	55	012	10	36·2	61	49	100	05					
850							48	44	353	12		52	37	013	12		60	40	056	04					
800	Ascent					67·7	47	26	352	16	68·3	50	34	014	14	68·9	55	37	022	03					
750							45	31	338	16		44	27	354	12		47	34	310	03					
700	Suspected anomalous					103·6	40	25	327	15	104·3	38	23	349	12	105·1	42	23	327	06					
650							35	04	324	16		34	18	354	13		35	05	341	06					
600						144·2	28	-09	328	18	144·9	30	10	347	12	145·8	27	17	360	06					
550							21		325	18		22	03	327	09		19	08	011	04					
500						191·1	15		320	18	191·9	13	01	318	10	192·4	12	-04	043	23					
450							05		322	18		03	+11	326	09		02	-18	078	08					
400						246·3	-08		333	18	247·1	-06	-24	336	14	247·4	-09	-27	067	08					
350							-19		335	16		-19	-34	312	09		-24	-39	116	04					
300						313·7	35		334	14	314·5	33	49	314	11	314·2	39	53	142	06					
250							-56		341	27		-50		341	10		-55		141	08					
200						401·3	-70		331	27	402·7	-68		307	09	401·5	-68		196	13					
170							-72		318	26		-69		284	15		-67		235	20					
150							-75		310	31		-68		287	19		-70		246	23					
130							-74		306	23		-72		288	22		-76		259	17					
110							-72		305	23		-73		296	16		-76		262	15					
100						544·3	-71		305	23	546·7	-73		308	14	544·9	-74		278	11					
90							-72		308	16	(096) mb	-72					-71		262	03					
80							-71		308	15						(083) mb	-70								
70							-72																		
60																									
						Inversion 837 mb. 46°–800mb. 47° Isothermal 977 – 943mb. 58°					Isothermal 868 – 818mb. 52° 441 – 421mb. 01°					Inversion 1000mb. 62°–961mb. 66° 893mb. 60°–863mb. 62°									
Tropopause						I 192mb. -72° 41,000'					I 188mb. -71° 41,500'					I 200mb. -68° 40,100'									

HMSO Press, MO. Dunstable.

No. 11801 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Saturday 21st July 1951. Page 1.

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

LERWICK

Pressure: Time 03h. G.M.T.; M.S.L. 1020·1 mb; Surf 1010·0 mb; Freezing 675 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	50	50		
1000	05·9	49	49		
950		48	48		
900	34·0	47	47		
850		46	46		
800	65·9	43	43		
750		39	39		
700	101·4	24	24		
650		29	10		
600	141·6	22	07		
550		17	-02		
500	187·8	08	-13		
450		00	-22		
400	242·4	-11	-31		
350		-23	-42		
300	309·1	-40	-60		
250		-56			
200	396·1	-72			
170		-70			
150	(160mb)	-68			
130					
110					
100					
90					
80					
70					
60					

Inversion 979 mb 47° - 925 mb 48°

Tropopause: I 192 mb -74° 40,400'

STORNOWAY

Pressure: Time 03h. G.M.T.; M.S.L. 1022·7 mb; Surf 1021·1 mb; Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·9	57	53		
1000	06·2	55	52		
950		51	49		
900	35·0	51	50		
850		47	46		
800	67·1	47	44		
750		43	29		
700	103·0	38	15		
650		32	04		
600	143·4	25	03		
550		19	02		
500	189·9	11	-05		
450		05	-18		
400	245·1	-07	-32		
350		-21	-42		
300	312·2	-38	-87		
250		-55			
200	399·3	-73			
170		-75			
150	458·7	-71			
130		-67			
110		-68			
100	543·5	-67			
90		-65			
80		-62			
70					
60					

Inversion 940 mb 50° - 915 mb 53°; 845 mb 47° - 830 mb 50°; 493 mb 10° - 470 mb 11°

Isothermal 600 - 578 mb 25°

Tropopause: I 190 mb -74° 40,900'

LEUCHARS

Pressure: Time 03h. G.M.T.; M.S.L. 1024·1 mb; Surf 1023·3 mb; Freezing 646 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	50	48	010	02
1000	06·5	52	49	LtV	
950		53	49	306	04
900	35·5	54	50	306	05
850		50	45	282	04
800	67·6	47	39	286	06
750		45	41	294	06
700	102·6	39	31	307	11
650		33	21	308	17
600	144·2	27	08	309	18
550		21	-07	311	24
500	190·9	13	-21	313	27
450		05		309	26
400	246·1	-05		285	26
350		-06		308	24
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Inversion 1023 mb 50° - 967 mb 54°; 927 mb 52° - 925 mb 55°

Tropopause: N.R.

ALDERGROVE

Pressure: Time 03h. G.M.T.; M.S.L. 1025·7 mb; Surf 1015·9 mb; Freezing 636 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	50	49		
1000	06·9	53	52		
950		52	50		
900	35·9	50	46		
850		53	32		
800	68·1	52	15		
750		47	05		
700	104·2	41	-05		
650		35	-05		
600	144·9	28	-22		
550		23	-38		
500	191·8	15	-44		
450		04	-50		
400	247·0	-07	-50		
350		-21	-54		
300	314·2	-39	-59		
250		-57			
200	400·8	-78			
170		-75			
150		-78			
130		-76			
110		-75			
100	542·6	-73			
90		-74			
80		-71			
70					
60					

Inversion 1016 mb 50° - 987 mb 56°; 870 mb 50° - 845 mb 54°

Isothermal 910 - 870 mb 50°

Tropopause: I 195 mb -80° 40,600'

LIVERPOOL

Pressure: Time 03h. G.M.T.; M.S.L. 1024·9 mb; Surf 1022·9 mb; Freezing 646 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	51	51	CALM	
1000	06·7	57	53	324	06
950		53	48	274	07
900	35·8	58	43	250	11
850		55	37	270	10
800	68·1	49	29	280	09
750		44	15	295	09
700	104·0	39	03	314	09
650		33	03	324	07
600	144·4	26	-04	335	08
550		21	-09	008	11
500	191·1	14	-19	028	10
450		02	-29	043	10
400	246·1	-09	-38	017	12
350		-23	-50	033	11
300	312·9	-40	-60	031	06
250		-56		016	06
200	400·0	-72		245	14
170		-74		262	22
150		-74		269	21
130		-74		272	18
110		-72		278	12
100	542·7	-71		281	11
90		-70		283	09
80	(85mb)	-69			
70					
60					

Inversion 1023 mb 51° - 1010 mb 58°; 957 mb 52° - 915 mb 60°; 865 mb 54° - 850 mb 55°; 193 mb -75° - 155 mb -74°

Tropopause: I 193 mb -75° 40,600'; II 142 mb -75° 47,000'

DOWNHAM MARKET

Pressure: Time 03h. G.M.T.; M.S.L. 1024·7 mb; Surf 1020·3 mb; Freezing 623 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	56	52	140	05
1000	06·8	55	52		
950		55	53		
900	35·9	49	47		
850		51	38		
800	68·0	48	38		
750		42	31		
700	103·8	38	24		
650		35	03		
600	144·9	28	16		
550		21	05		
500	191·1	13	-18		
450		06	-30		
400	246·4	-05	-42		
350		-18	-56		
300	314·0	-33	-60		
250		-51			
200	402·1	-70			
170		-72			
150	461·5	-73			
130		-74			
110		-74			
100	545·1	-72			
90		-69			
80		-68			
70					
60					

See Page 3 for Winds

Inversion 992 mb 55° - 963 mb 57°; 892 mb 48° - 842 mb 51°

Isothermal 664 - 642 mb 35°; 567 - 550 mb 21°

Tropopause: I 193 mb -73° 40,800'

LARKHILL

Pressure: Time 03h. G.M.T.; M.S.L. 1024·1 mb; Surf 1008·2 mb; Freezing 623 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	58	56	010	04
1000	06·6	60	57		
950		61	53	048	06
900	36·0	56	47	048	06
850		53	41	046	07
800	68·3	48	36	042	14
750		44	25	038	14
700	104·3	40	18	024	08
650		35	13	015	05
600	145·0	29	06	004	06
550		20	-05	338	06
500	191·7	13	-16	336	06
450		04	-27	036	07
400	246·9	-09	-35	021	06
350		-23	-44	042	02
300	313·7	-39	-57	222	05
250		-57		228	06
200	400·5	-73		245	12
170		-75		265	22
150	459·7	-77		281	22
130		-77		278	22
110		-76		274	15
100	542·7	-75		276	12
90		-73		305	10
80		-74		297	07
70		-70			
60					

Inversion 1008·2 mb 58° - 983 mb 65°

Tropopause: I 203 mb - 74° 39,700'

CAMBORNE

Pressure: Time 03h. G.M.T.; M.S.L. 1023·3 mb; Surf 1012·8 mb; Freezing 635 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	58	57	CALM	
1000	06·5	64	58	160	07
950		63	57	139	10
900	35·9	58	51	119	09
850		58	36	102	06
800	68·5	53	34	120	03
750		45	29	230	02
700	104·6	41	13	213	02
650		34	06	LtV	
600	145·3	27	15	LtV	
550		19	07	216	09
500	191·9	11	01	232	09
450		01	-14	203	10
400	246·9	-07	-28	190	11
350		-21	-38	154	14
300	314·1	-35	-52	142	18
250		-53		161	22
200	402·0	-67		208	23
170		-66		208	27
150		-71		239	25
130		-72		232	22
110		-76		229	21
100	546·0	-73		247	12
90		-72		261	09
80		-70		255	09
70	(78mb)	-68			
60					

Inversion 1013 mb 58° - 990 mb 68°; 907 mb 57° - 872 mb 61°

Isothermal 743 - 720 mb 44°

Tropopause: I 205 mb - 68° 39,700'

VALENTIA

Pressure: Time 03h. G.M.T.; M.S.L. 1023·8 mb; Surf 1022 mb; Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	69	58	050	01
1000	06·4	61	58	077	04
950		56	54	122	10
900	35·7	60	42		
850		57	23		
800	68·2	52	11		
750		46	06		
700	104·2	40	01		
650		32	-06		
600	144·6	24	-12		
550		18	-06		
500	191·0	08	-01		
450		-01	-10		
400	245·6	-12	-27		
350		-25	-40		
300	312·0	-39	-53		
250		-56			
200	399·1	-69			
170		-68			
150		-70			
130		-71			
110	(116mb)	-71			
100					
90					
80					
70					
60					

Inversion 1022 mb 59° - 1000 mb 61°; 926 mb 53° - 892 mb 61°

Isothermal 600 - 586 mb 24°

Tropopause: I 212 mb - 71° 38,700'

LERWICK

Pressure: Time 09h. G.M.T.; M.S.L. 1019·3 mb; Surf 1009·3 mb; Freezing 693 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53		
1000	05·2	53	53		
950		53	53		
900	34·1	50	50		
850		46	46		
800	66·0	46	33		
750		42	21		
700	101·8	33	16		
650		30	-20		
600	142·1	26	-36		
550		19	-42		
500	188·6	10	-22		
450		03	-39		
400	243·6	-08	-50		
350		-22	-55		
300	310·6	-38	-58		
250		-53			
200	398·5	-70			
170		-70			
150		-72			
130		-68			
110		-64			
100	543·1	-60			
90		-58			
80	(85mb)	-56			
70					
60					

Isothermal 1009 - 935 mb 53°; 850 - 795 mb 46°

Tropopause: I 193 mb -72° 40,500'

STORNOWAY

Pressure: Time 09h. G.M.T.; M.S.L. 1022·8 mb; Surf 1021·2 mb; Freezing 632 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	58	55	260	05
1000	06·2	55	52		
950		49	46	255	17
900	35·0	50	44	250	15
850		51	40	244	16
800	67·2	48	35	241	17
750		41	29	241	14
700	103·0	37	20	246	13
650		34	12	248	14
600	143·6	27	16	242	17
550		18	13	212	19
500	190·1	10	01	220	20
450		02	-14	239	34
400	244·9	-10	-28	237	34
350		-24	-38	228	34
300	311·5	-41		224	45
250		-57		216	45
200	398·2	-73		224	45
170		-69		241	38
150	458·0	-67		253	26
130		-63		253	24
110		-61		254	19
100	544·0	-59		269	14
90					
80					
70					
60					

Inversion 912 mb 45° - 891 mb 52°

Isothermal 891 - 878 mb 52°

Tropopause: I 195 mb -74° 40,400'

LEUCHARS

Pressure: Time 09h. G.M.T.; M.S.L. 1023·6 mb; Surf 1022·8 mb; Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	64	54	190	05
1000	06·5	60	50	154	05
950		52	45	196	05
900	35·5	50	45	246	06
850		49	41	246	06
800	67·6	48	35	288	06
750		44	33	300	09
700	103·5	35	23	291	14
650		32	10	291	14
600	144·0	27	03	281	16
550		19	01	272	11
500	190·6	10	-14	282	12
450		02	-26	277	11
400	245·4	-11	-34	254	14
350		-25	-46	242	17
300	312·1	-40	-60	234	17
250		-57		230	26
200	399·0	-75		242	28
170		-71		259	25
150	458·1	-73		267	21
130		-71		276	21
110		-70		276	14
100	542·3	-66		276	14
90		-67		282	12
80		-66			
70	(78mb)	-65			
60					

Isothermal 960 - 950 mb 52°; 232 - 225 mb -65°

Tropopause: I 198 mb - 78° 40,600'

ALDERGROVE

Pressure: Time 09h. G.M.T.; M.S.L. 1024·2 mb; Surf 1014·7 mb; Freezing 623 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	63	58		
1000	06·6	61	56		
950		55	51		
900	35·6	49	45		
850		56	45		
800	67·8	52	23		
750		48	16		
700	104·0	42	08		
650		35	02		
600	144·7	30	-02		
550		21	-08		
500	191·5	15	-18		
450		06	-24		
400	246·8	-07	-34		
350		-18	-43		
300	314·2	-35	-58		
250		-51			
200	401·8	-68			
170		-65			
150		-61			
130		-65			
110		-65			
100	548·2	-64			
90					
80					
70					
60					

Inversion 875 mb 46° - 850 mb 56°

Tropopause: I 196 mb -69° 40,600'

LIVERPOOL

Pressure: Time 09h. G.M.T.; M.S.L. 1024·6 mb; Surf 1022·6 mb; Freezing 641 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	58	58		
1000	06·7	57	53		
950		56	54		
900	35·9	56	48		
850		53	37		
800	68·2	48	33		
750		44	26		
700	104·2	40	12		
650		33	02		
600	144·7	26	-04		
550		19	-11		
500	191·2	12	-21		
450		01	-27		
400	245·9	-10	-36		
350		-24	-49		
300	312·5	-42			
250		-59			
200	399·0	-68			
170		-66			
150		-69			
130		-71			
110		-69			
100		-64			
90	544·1	-64			
80		-60			
70		-57			
60		-54			
		-49			
	(58mb)	-47			

Inversion 958 mb 52° - 943 mb 60°

Isothermal 1023 - 1008 mb 58°; 750 - 734 mb 44°

Tropopause: I 218 mb -70° 38,000'

DOWNHAM MARKET

Pressure: Time 09h. G.M.T.; M.S.L. 1024·7 mb; Surf 1020·3 mb; Freezing 619 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	65	56	130	06
1000	06·9	59	52	133	01
950		57	50	150	02
900	36·0	52	47	256	01
850		51	42	248	04
800	68·2	50	38	358	09
750		43	32	358	09
700	104·1	39	22	003	09
650		35	17	338	10
600	144·9	30	17	311	09
550		22	04	345	04
500	191·8	15	-08	240	08
450		05	-18	246	05
400	247·1	-06	-29	281	05
350		-18	-42	312	04
300	314·6	-35	-58	348	05
250		-52		026	05
200	402·5	-69		256	14
170		-71		271	20
150	462·1	-72		275	21
130		-71		279	23
110		-69		290	21
100	546·3	-70		288	20
90		-69		287	18
80		-69		299	12
70		-63		322	10
60	653·3	-63		322	07

Inversion 913 mb 52° - 863 mb 53°; 824 mb 49° - 800 mb 50°; 720 mb 39° - 711 mb 40°

Tropopause: II 197 mb - 76° 40,500'

LARKHILL

Pressure: Time 09h. G.M.T.; M.S.L. 1024·8 mb; Surf 1008·9 mb; Freezing 622 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	59	130	03
1000	06·8	61	58		
950		59	54	166	08
900	36·1	56	53	150	09
850		53	39	114	09
800	68·4	50	35	087	10
750		45	30	079	09
700	104·4	39	17	067	07
650		35	06	082	06
600	145·1	29	07	115	04
550		22	01	245	01
500	191·9	13	-13	151	03
450		07	-24	141	12
400	247·2	-05	-32	151	12
350		-18	-43	185	10
300	314·8	-32	-55	200	14
250		-49		182	17
200	403·4	-63		231	24
170		-63		251	24
150	464·4	-64		251	24
130		-67		259	25
110		-70		275	17
100	549·2	-68		274	12
90		-65		258	07
80		-63		242	08
70		-62		283	05
60	657·2	-59		002	05
	(54mb)	-57			

Inversion 972 mb 57° - 961 mb 59°

Isothermal 961 - 950 mb 53°; 875 - 845 mb 53°; 690 - 670 mb 38°; 600 - 587 mb 13°

Tropopause: II 217 mb - 67° 38,600'

CAMBORNE

Pressure: Time 09h. G.M.T.; M.S.L. 1022·4 mb; Surf 1012·1 mb; Freezing 640 mb

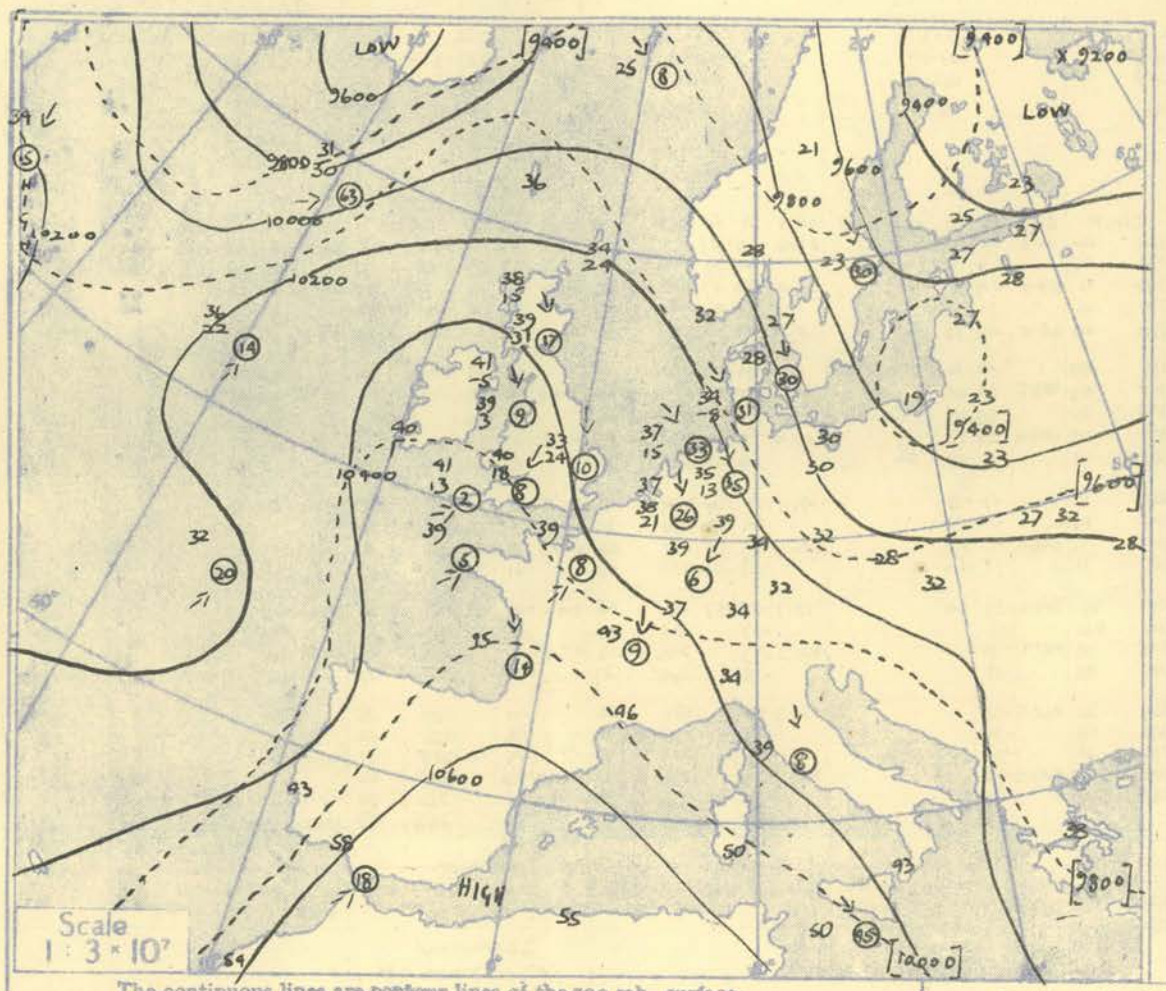
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	69	60	135	13
1000	06·3	68	58	139	24
950		62	56	139	24
900	35·8	62	48	138	12
850		57	41	138	07
800	68·4	52	39	144	06
750		46	26	168	05
700	104·5	41	26	189	05
650		33	10	198	06
600	145·0	26	03	193	08
550		18	-12	201	12
500	191·6	11	-18	196	13
450		02	-26	188	15
400	246·5	-09	-37	185	19
350		-21	-45	204	24
300	313·5	-39	-57	195	27
250		-52		178	31
200	401·3	-61		199	33
170		-62		213	29
150		-65		210	27
130		-69		224	30
110		-69		268	15
100	546·8	-70		234	10
90		-68			
80					
70					
60					

Inversion 933 mb 61° - 900 mb 62°

Tropopause: II 228 mb -61° 37,100'

Saturday 21st July 1951.

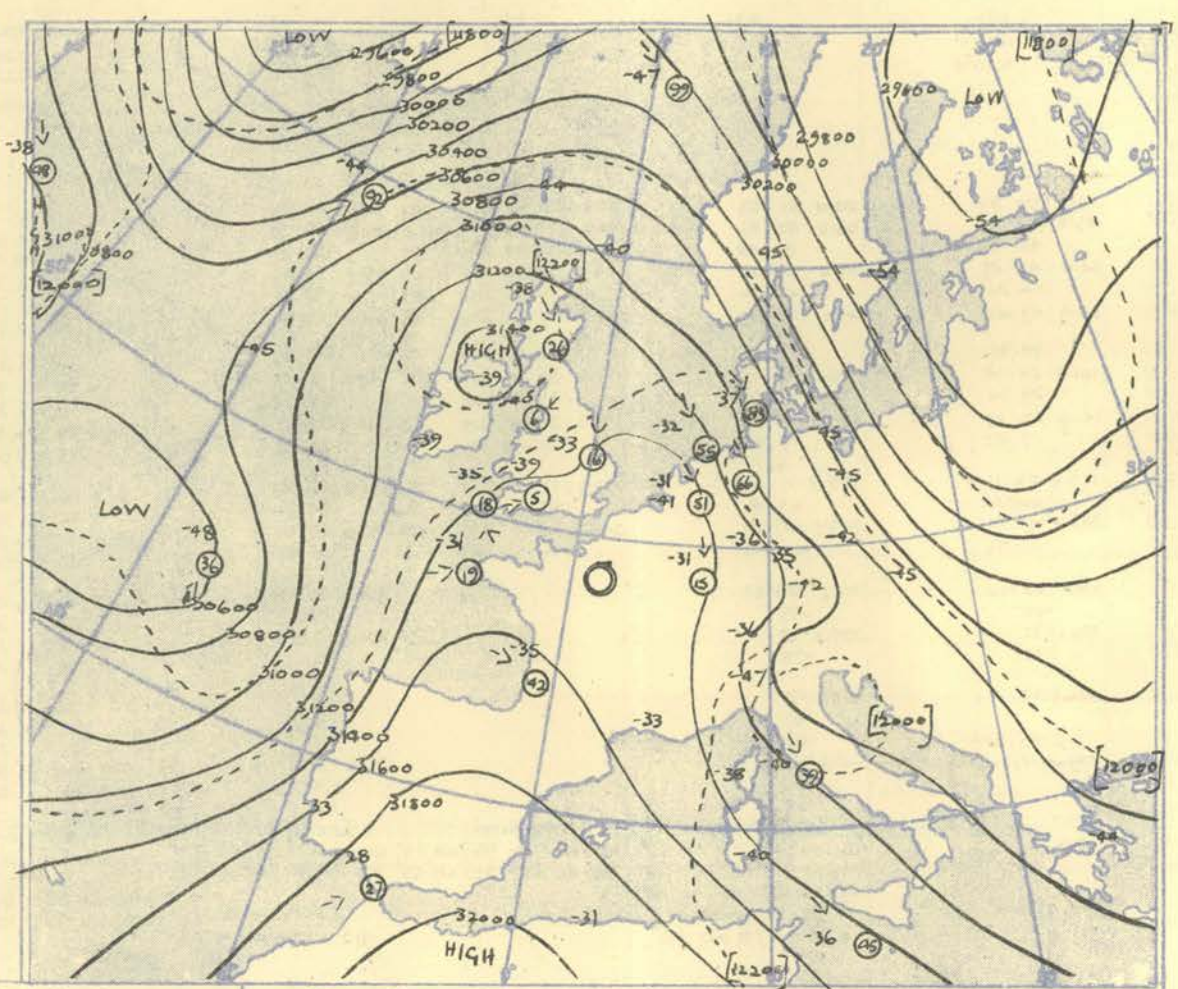
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



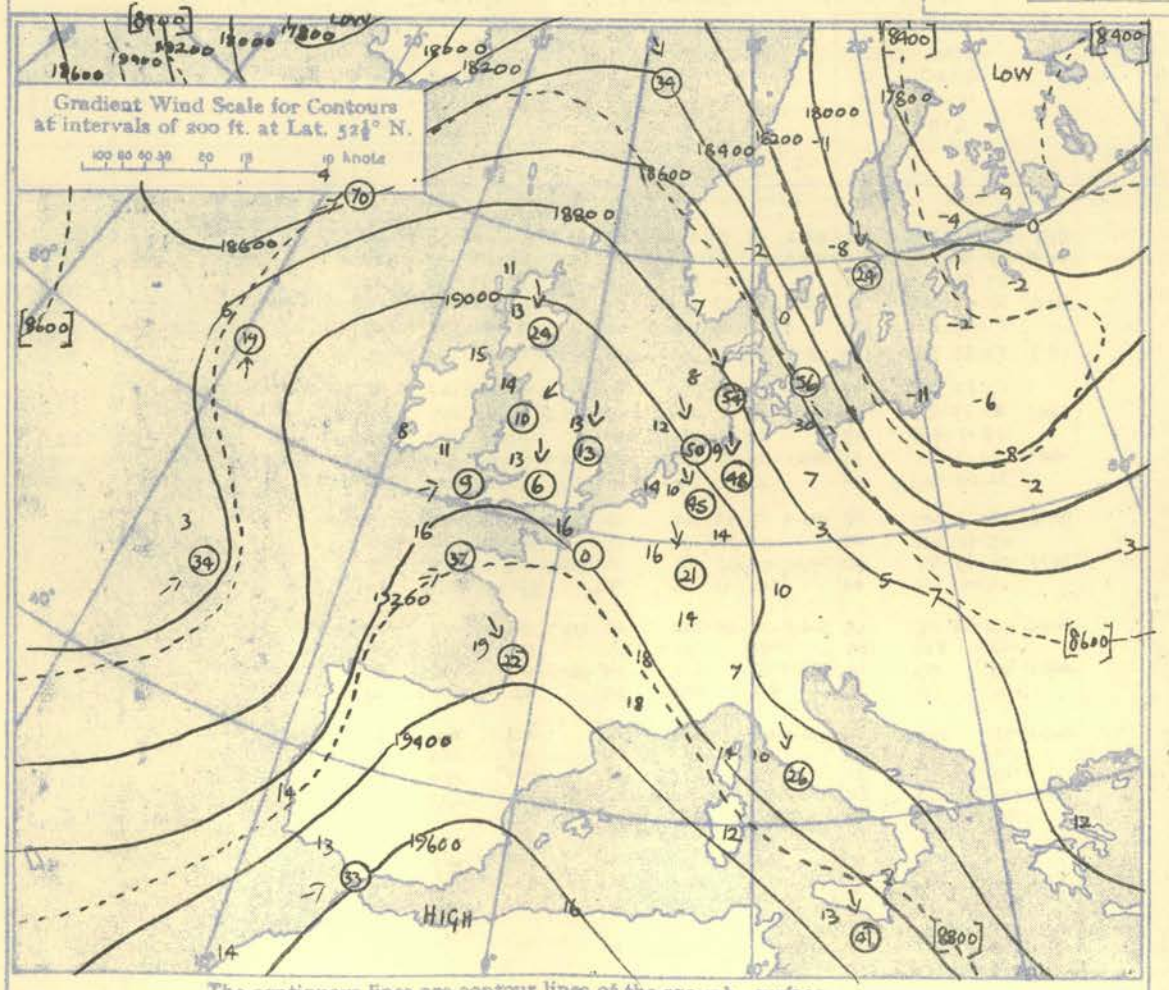
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

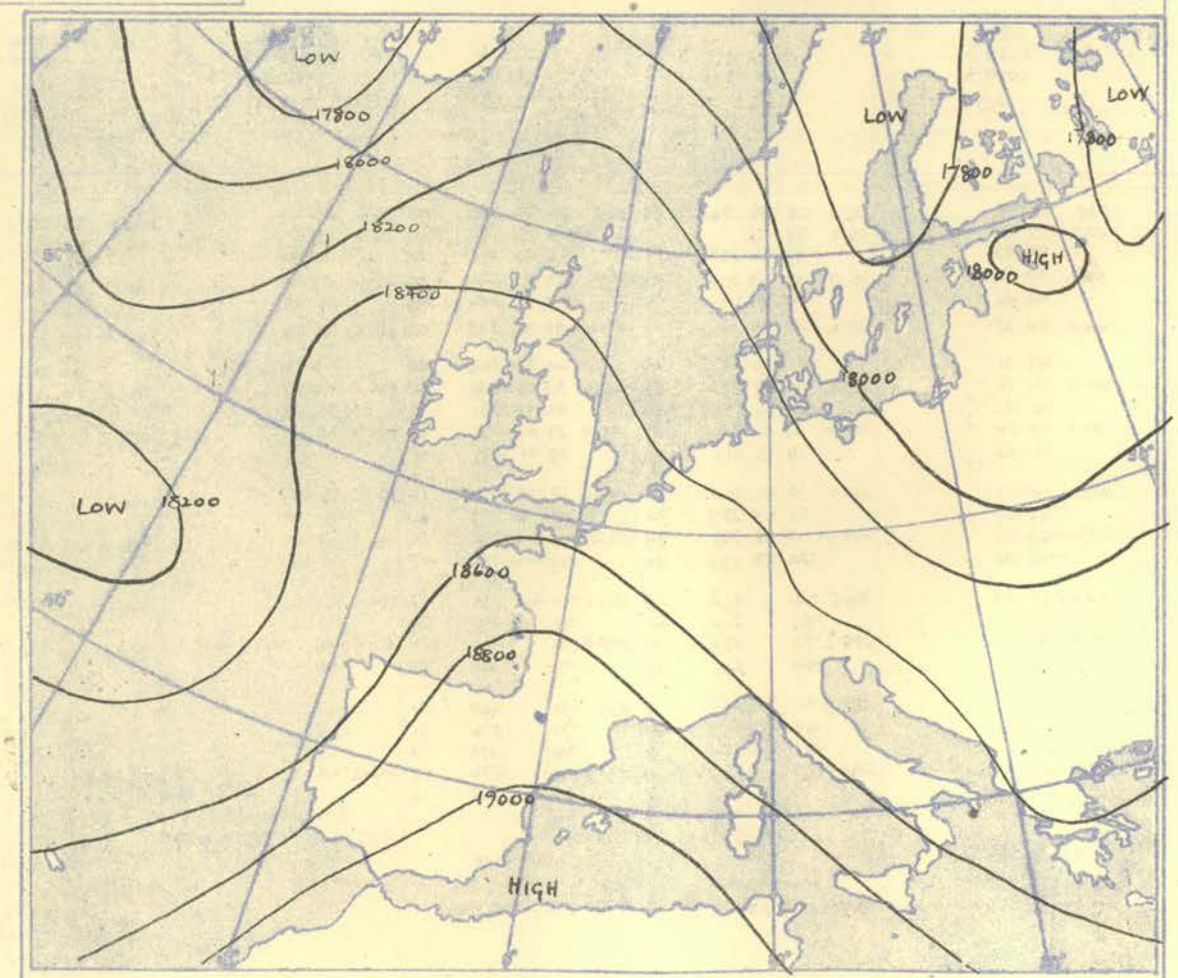
100 80 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure mb	52° 12' N 02° 12' W. Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Time	09h.																		Time
M.S.L.	1025 mb			mb			mb			mb			mb			mb			M.S.L.
Surf	1023.5 mb			mb			mb			mb			mb			mb			Surf
Freezing	625 mb			mb			mb			mb			mb			mb			Freezing
Surf	00·4																		Surf
1000	06·9																		1000
950																			950
900	36·1	57																	900
850	51·8	56																	850
800	68·5	51																	800
750																			750
700	104·6	40																	700
650																			650
600	145·3	29																	600
550																			550
500	192·1	15																	500
450																			450
400	247·4	-07																	400
350																			350
300	314·9	-35																	300
250																			250
200	Cloud																		200
170	8/8 S.Scu. below 900mb																		170

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

Feet	Downham Dir.	Vel.	Leuchars Dir.	Vel.	Cirrus 52.4N 17.9W Dir.	Vel.	Lympne Dir.	Vel.	Larkhill Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Place	Downham		Leuchars		Cirrus 52.4N 17.9W		Lympne		Larkhill												Place
Time	03h.		03h.		09h.		15h.		21h.												Time
Type																					Type
Surf.	140	05	010	02	300	04	100	08	CAhM												Surf.
1,000			L3V				040	10	125	15											1,000
2,000	354	08	310	04			050	12	119	14											2,000
3,000	001	09	310	05			050	10	104	14											3,000
4,000	013	10	280	04			060	10	111	11											4,000
5,000	018	10	290	06			080	11	118	09											5,000
6,000	014	12	290	06	230	21	110	13	141	07											6,000
8,000	004	12	310	11	210	24	140	10	178	08											8,000
10,000	350	10	310	17	200	13	130	06	209	09											10,000
14,000	345	10	300	18	170	24			228	13											14,000
18,000	002	13	310	24	180	32			207	21											18,000
24,000	005	22	310	27	190	29			193	27											24,000
30,000	352	16	310	26	180	26			193	37											30,000
40,000	292	19	290	26					213	44											40,000
50,000	302	24	310	24					214	27											50,000
(58,000')	310	09	310 (60,000')	07																	

NEPHOSCOPE OBSERVATIONS

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

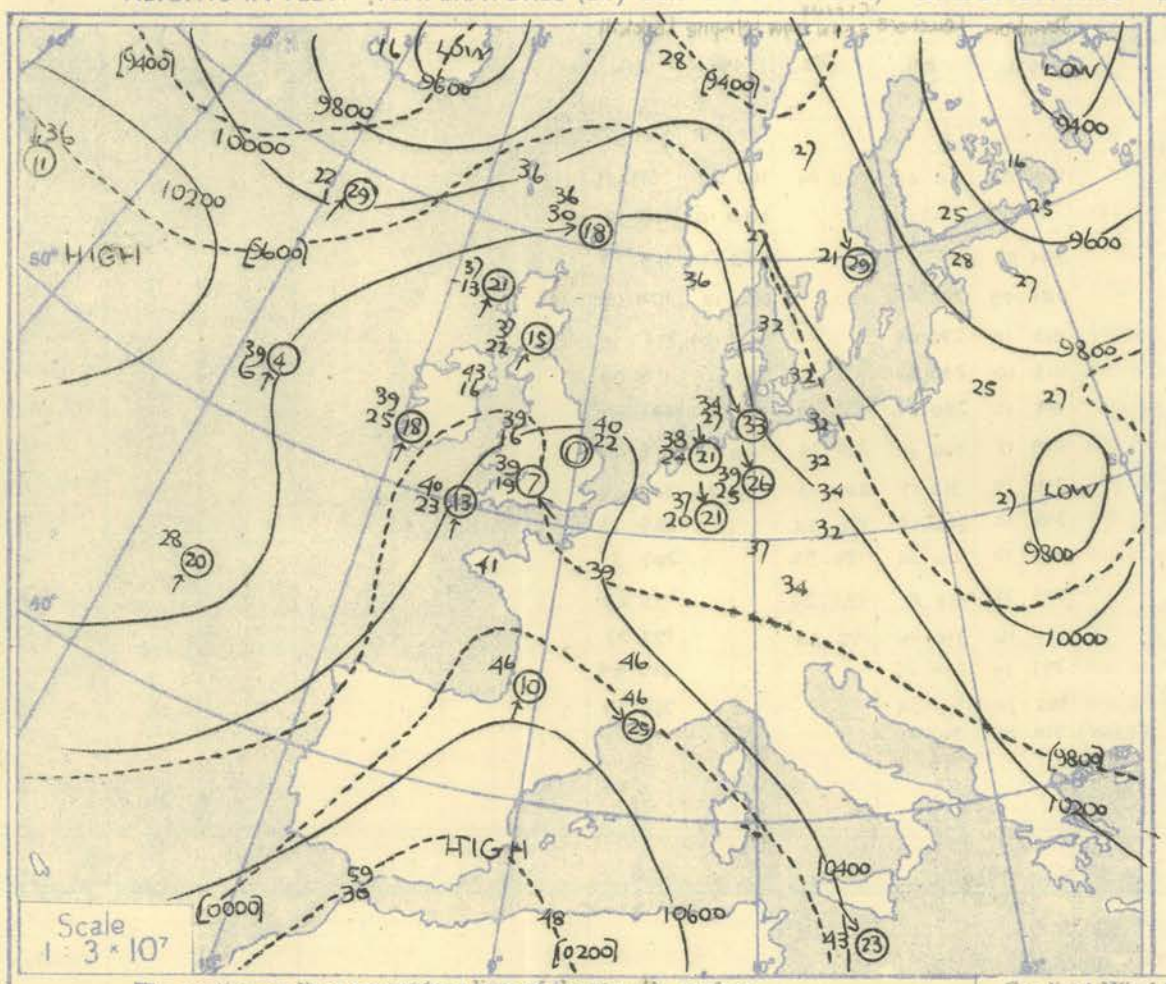
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Pressure mb	CIRRUS 52·4N 19·3W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	CIRRUS 52·4N 19·3W Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER WATCHER 52·5N 17·4W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER WATCHER. 52·6N 18·4W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER OBSERVER 58·7N 19·0W Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER OBSERVER 58·8N 19·0W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER OBSERVER. 59·0N 18·7W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	WEATHER OBSERVER 59·0N 19·5W. Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Pressure mb
Ship	CIRRUS.					CIRRUS.					WEATHER WATCHER					WEATHER WATCHER.					WEATHER OBSERVER					WEATHER OBSERVER					WEATHER OBSERVER.					WEATHER OBSERVER									Ship
Lat/Long	52·4N 19·3W.					52·4N 19·3W					52·5N 17·4W.					52·6N 18·4W.					58·7N 19·0W					58·8N 19·0W.					59·0N 18·7W.					59·0N 19·5W.									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.	1020 mb					mb					1019 mb					1018 mb					1015 mb					1016 mb					1017 mb					1015 mb					mb				M.S.L.
Surf	1020 mb					mb					1019 mb					1018 mb					1015 mb					1016 mb					1017 mb					1015 mb					mb				Surf
Freezing	670 mb					mb					685 mb					680 mb					710 mb					825 mb					785 mb					850 mb					mb				Freezing
Surf		61	56	160	07							60	58	Calm.			61	58	350	10		54	53	285	13		53	49	295	19		55	50	255	17		54	52	290	19						Surf
1000	05·7	59	49	143	07						05·2	58	54	"		04·8	59	54	350	08	04·0	52	52	308	12	04·4	51	48	285	12	04·5	53	50	268	19	04·0	51	50	282	18					1000
950		52	47	143	07							53	48	"			54	51	350	07		47	47	278	15		45	45	284	15		45	45	267	20		45	45	285	20						950
900	34·7	53	48	128	12						34·1	48	44	"		33·9	50	48	349	08	32·6	45	46	258	19	32·8	40	40	282	18	33·0	39	37	267	22	32·4	39	39	285	21					900
850		53	30	149	13							48	42	"			45	43	014	06		43	43	248	30		35	34	275	16		35	26	263	22		32	32	284	24						850
800	67·0	48	36	167	14	No Ascent.					66·1	48	36	"		65·8	45	36	029	05	64·3	40	39	248	36	64·0	31	24	265	18	64·3	34	11	256	23	63·4	30	27	283	23					800
750		44	16	176	14							41	31	"			41	33	340	05		37	36	244	53		28	11	251	30		28	06	251	25		26	19	280	22						750
700	102·9	36	22	193	14	For winds see					102·0	39	06	205	04	101·6	34	22	304	09	99·7	31	30	235	63	98·8	25	-10	239	33	99·0	22	01	240	29	98·1	21	01	273	26					700
650		29	10	179	19							31	16	205	01		28	24	272	17		22	19	223	64		19	-21	233	36		16	-04	236	37		15	-01	266	33						650
600	143·1	22	00	174	21	top of page.					142·3	20	08	206	16	141·7	21	16	254	23	139·5	18	-03	220	64	138·2	15	-05	221	60	138·1	10	-12	236	41	137·1	08	-10	253	42					600
550		14	-08	173	26							12	00	190	21		13	03	248	20		10	-01	221	68		07	-10	208	76		03	-28	230	46		00	-18	256	39						550
500	189·2	06	-15	159	19						188·2	03	-23	187	20	187·7	05	-21	258	18	185·3	04	-08	223	70	183·6	-02	-20	202	75	183·1	-05	-30	225	49	181·8	-09	-23	264	55					500
450		-04		160	22							-05	-28	190	21		-05	-35	257	23		-07	-18	222	84		-11	-23	210	63		-15	-39	227	52		-19	-32	263	42						450
400	243·3	-17		165	23						242·3	-16	-30	195	28	241·8	-16	-56	256	31	239·1	-15	-37	217	92	237·0	-18	-38	213	87	236·0	-24	-48	224	71	234·3	-29	-41	262	48					400
350		-30										-30	-47	205	28		-30	-57	250	34		-28	-41	216	84		-29	-50	210	84		-33	-55	211	90		-41		245	48						350
300	309·1	-45									308·2	-40	-59	206	20	307·5	-46		256	30	305·3	-44		210	92	303·0	-43		202	99	301·2	-45		198	95	298·6	-45		220	56						300
250		-60										-51		200	22		-58		250	24		-60		208	102		-56		199	76		-47		196	70		-39		230	45						250
200	395·6	-68									396·1	-51		214	21	395·6	-49		267	24	391·7	-65		216	63	391·1	-49		199	50	390·7	-42		227	39	389·2	-41		245	39						200
170		-67										-49		220	24		-48		277	23		-64		213	36		-51		207	42		-45		231	22											170
(190 mb)																																													
150												-50		230	22		-52		282	20		-65		216	37		-51		212	30		-48		231	21											150
130												-53		234	19		-52		282	17		-63		216	44		-51		211	23															130
110												-52		222	14		-52		277	12		-60		216	18		-50		209	12															110
100											54·4	-50		212	12	54·7	-52		278	08	53·8	-59		216	14	54·4	-48		209	06															100
90												-51					-52		278	07		-58		216	13		-47		209	08															90
80												-52										-60		216	11		-46		209	08															80
(88 mb)																						(75 mb)					-46																		70
70																											(78 mb)																		60
60																																													
	Inversion. 921 mb 50°-909 mb 54° 895 " 53°-888 " 54° Isothermal. 900-895 mb 53° 888-864 " 54° 800-778 " 48°										Inversion 868 mb 46°-820 mb 50° 738 " 39°-715 " 41°					Inversion. 850 mb 45°-813 mb 46°					Isothermal. 762-750 mb 37° 650-622 " 22°					Isothermal. 600-582 mb 15°					Inversion 860 mb 34°-850 mb 35° Isothermal. 850-843 mb 35°.					Inversion 823 mb 29°-811 mb 30° Isothermal. 811-790 mb 30°									
Tropopause	I 218 mb -69° 31.700										I 240 mb -59° 35.700					II 250 mb -58° 34.700					I 222 mb -70° 37.000					II 253 mb -56° 33.900					I 212 mb -52° 32.200					I 317 mb -47° 27.700									Tropopause

plot #12 February

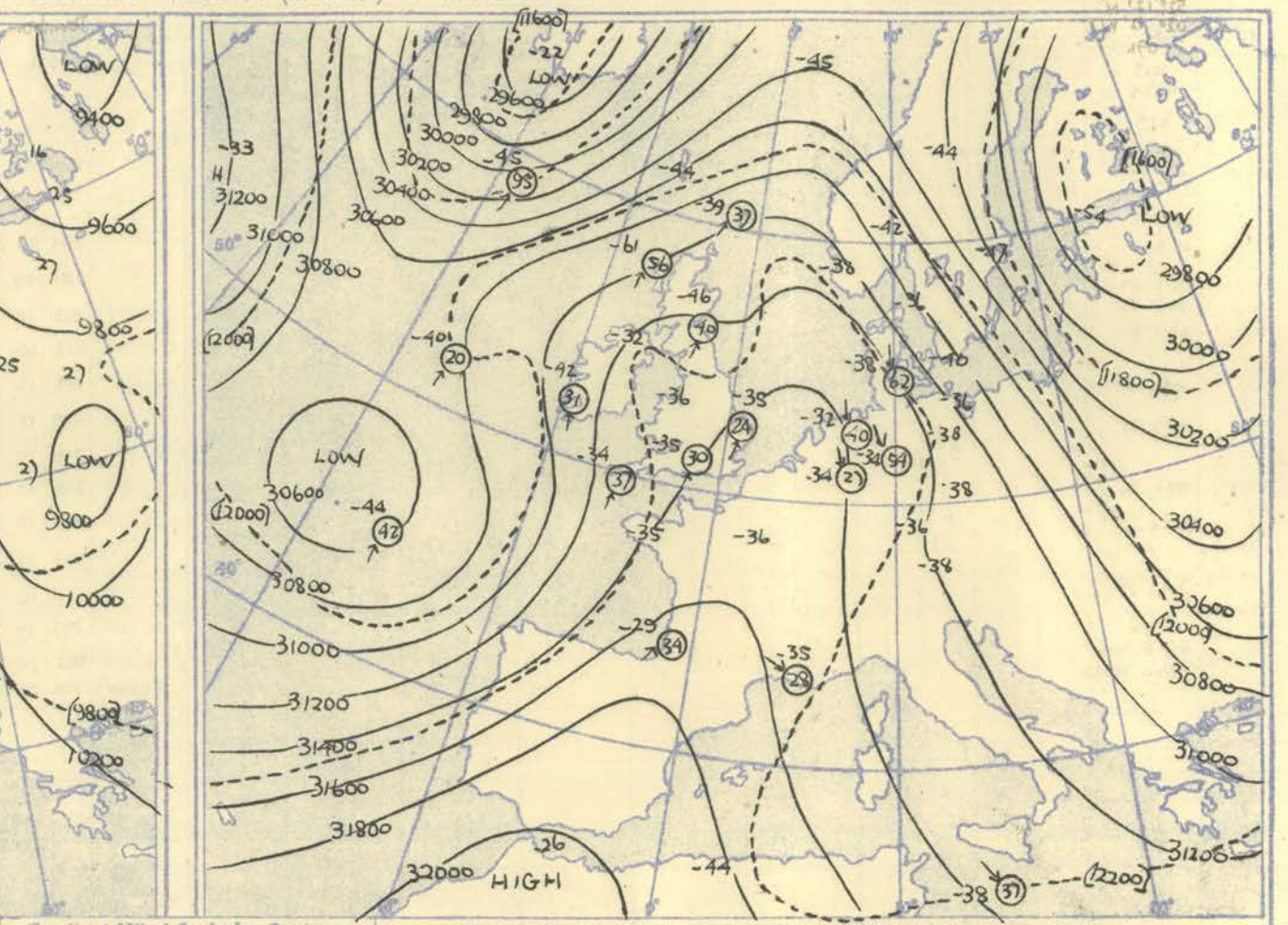
Saturday 21st July 1951

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.



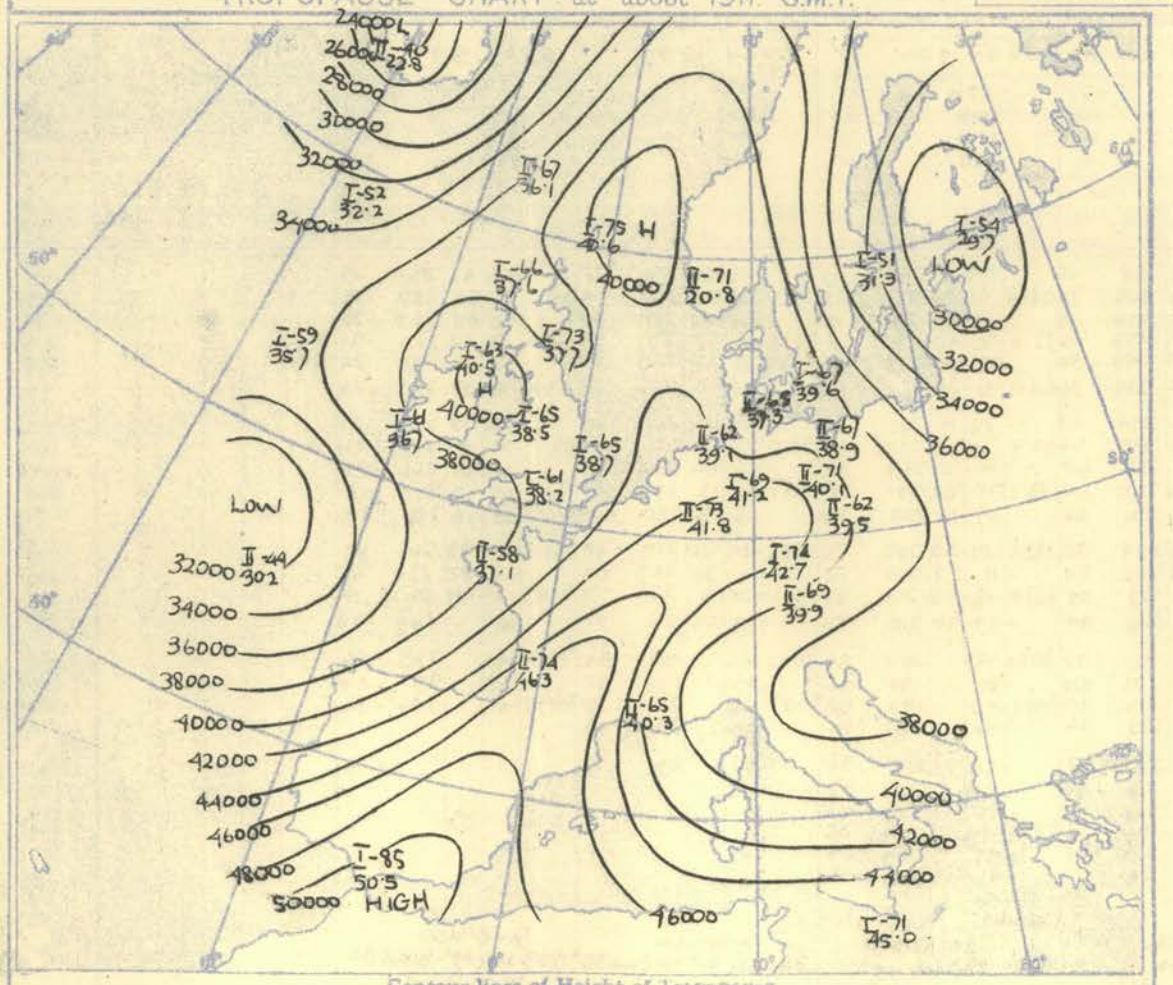
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Pronounced cooling along the cold trough produced stronger Southerly winds to the west of the British Isles. Warm-frontogenesis over Bay of Biscay.

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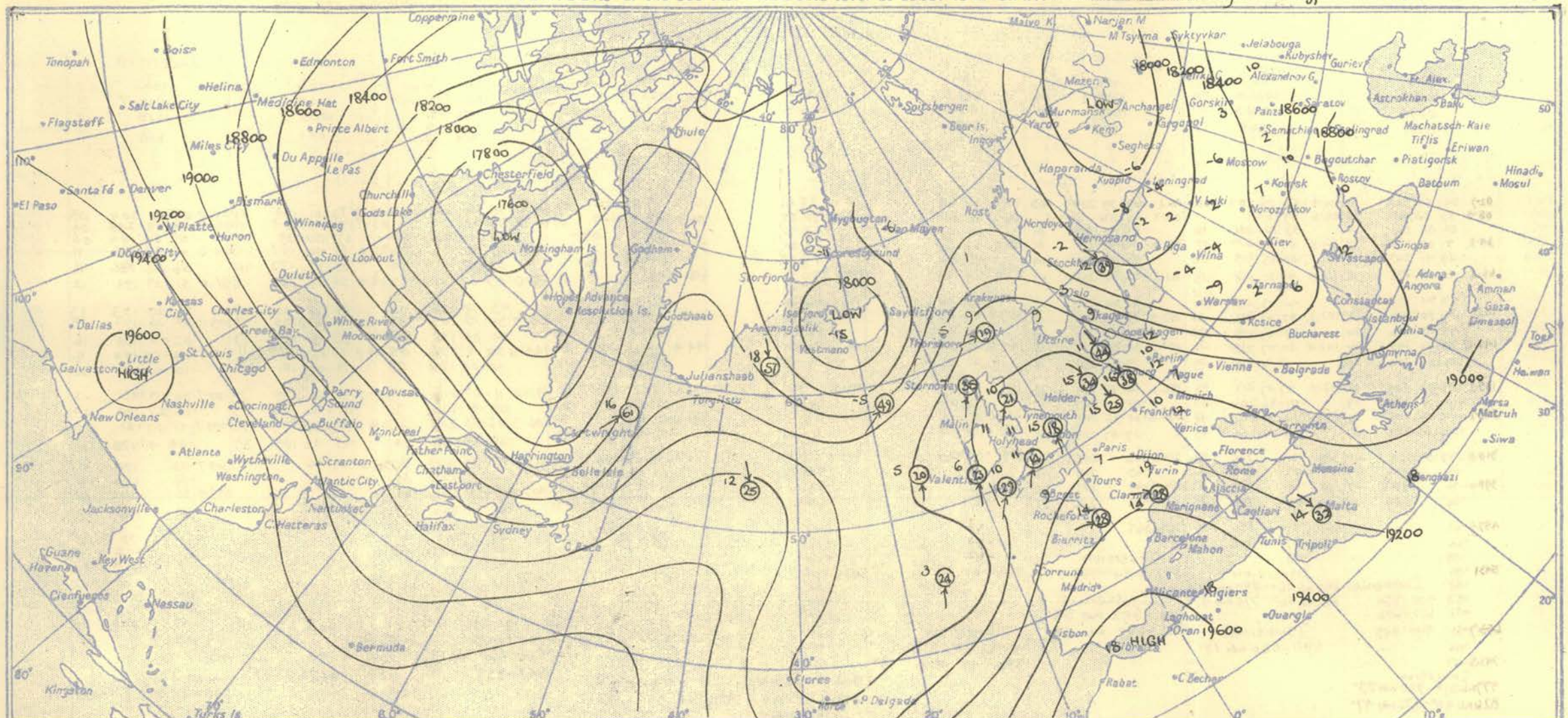
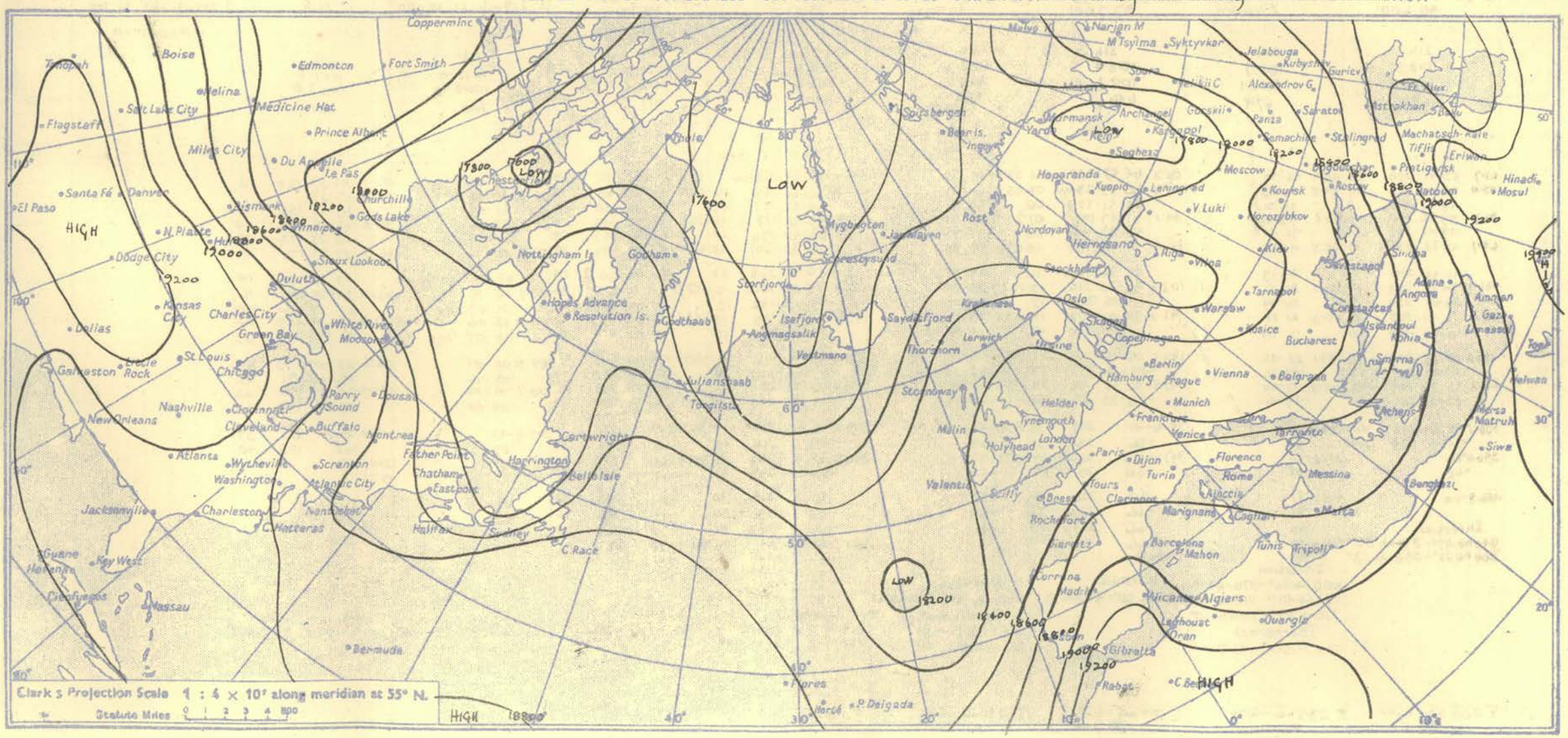
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Saturday 21st July, 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Saturday 21st July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Saturday 21st July 1951.

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

15h G.M.T.

Station	Pressure	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
	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.
	M.S.L.	1019·9 mb	1020·4 mb	1020·9 mb	1021·8 mb	1021·2 mb	1022·9 mb	1022·1 mb	1020·2 mb	1019·7 mb
	Surf	1009·9 mb	1018·8 mb	1020·1 mb	1012·4 mb	1019·2 mb	1017·6 mb	1006·7 mb	1009·9 mb	1018 mb
	Freezing	632 mb	668 mb	653 mb	628 mb	647 mb	620 mb	632 mb	641 mb	650 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	54	285	13	00·4	58	55	225	05	00·2	69	59	200	03	02·6	67	62		
1000	05·4	53	53	265	24	05·6	57	54			05·7	65	56	MV		06·1	65	60		
950		52	52	262	20		53	52	226	16		55	51	189	01		60	57		
900	34·2	51	47	268	19	34·5	47	47	230	17	34·9	54	47	237	01	35·4	52	50		
850		49	41	263	18		48	35	225	20		56	44	244	04		48	32		
800	66·2	46	33	276	18	66·5	46	20	218	25	67·3	52	38	233	07	67·5	54	29		
750		43	34	273	18		44	03	215	21		44	34	231	12		49	26		
700	102·1	36	30	269	15	102·3	37	-13	223	26	103·3	37	22	238	15	103·8	43	16		
650		32	15	270	16		29	-09	228	26		31	09	247	18		37	12		
600	142·6	29	-02	269	16	142·4	20	-17	225	26	143·7	24	00	238	16	144·6	28	05		
550		19	-01	262	19		17	-11	220	29		19	-04	220	21		21	02		
500	189·2	09	-02	249	21	188·5	07	-17	212	35	190·1	10	-13	205	22	191·3	11	-06		
450		-01	-15	256	29		-01	-36	206	43		-01	-25	207	27		02	-09		
400	243·8	-09	-32	259	22	243·0	-13	-36	201	48	244·6	-14	-35	207	31	246·2	-07	-19		
350		-22	-40	249	37		-26	-40	202	55		-29	-47	205	35		-19	-30		
300	310·8	-39	-54	254	48	309·3	-41		205	56	310·6	-46		202	40	313·7	-32	-40		
250		-56		246	49		-57		206	61		-63		209	42		-49			
200	398·0	-72		250	47	396·5	-64		215	53	396·4	-67		237	32		-62			
170		-66		249	30		-56		238	39		-65		250	31		-57			
150	457·9	-67				458·1	-59		240	29	(164mb)	67					-58			
130		-66					-57		236	26							-59			
110		-59					-58										-62			
100	543·1	-59														550·4	-61			
90		-58	Isothermal																	
80		-53	900-854																	
70		-52	672-632																	
60	653·7	-51	460-445																	
		-49																		
	742·5	-47																		

	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Tropopause	I 192 mb - 75° 40,600'	I 220 mb - 66° 37,600'	I 218 mb -73° 37,700'	I 197 mb -63° 40·500	I 216 mb -65° 38·500	I 215 mb -65° 38·700	I 219 mb -61° 38,200'	N.R.	I 231 mb -61° 36,700'

21h G.M.T.

Station	Pressure	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
	Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	G.M.T.
	M.S.L.	1018·3 mb	1017·7 mb	1018·0 mb	1018·8 mb	1018·6 mb	1020·9 mb	1019·9 mb	1017·5 mb	mb
	Surf	1008·4 mb	1016·1 mb	1017·2 mb	1010·7 mb	1016·6 mb	1016·4 mb	1003·6 mb	1007·0 mb	mb
	Freezing	686 mb	674 mb	646 mb	665 mb	690 mb	677 mb	660 mb	687 mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	51	250	06	00·4	56	54			00·2	64	57	250	04	02·6	61	56		
1000	05·0	52	50	258	13	04·8	56	53			05·0	60	53	231	03	05·6	61	55		
950		48	47	258	18		55	51				57	51	229	06		59	51		
900	33·7	49	46	255	16	33·8	49	46			34·1	51	47	197	07	34·8	54	50		
850		49	41	237	18		42	41				55	39	166	06		51	40		
800	65·7	45	32	233	17	65·5	44	37			66·4	51	38	197	10	67·0	49	38		
750		40	23	230	19		39	19				45	36	196	16		44	27		
700	101·4	34	15	232	19	101·2	36	13			102·4	38	23	216	15	102·9	39	08		
650		28	07	230	20		28	09				33	08	230	15		30	00		
600	141·4	22	-01	225	23	141·3	21	01			142·9	24	-02	218	18	143·2	23	+01		
550		18	09	217	30		11	-09				16	-07	220	19		14	02		
500	187·8	08	-04	222	32	189·1	02	-20			189·1	08	-11	208	22	189·3	06	-13		
450		-03	-27	223	42		-07	-30				-03	-19	214	23		-05	+21		
400	242·2	-13	-32	224	42	240·9	-17	-40			243·5	-12	-32	218	28	243·4	-15	-28		
350		-26	-37	221	49		-29	-41				-25	-39	211	34		-26	-35		
300	308·6	-40	-47	228	45	306·9	-44				310·0	-41		207	35	309·8	-41			
250		-54		236	54		-01					-56		216	37		-59			
200	396·0	-69				393·2	-61				397·2	-66		211	39	397·1	-57			
170		-62					-55					-60		231	28		-56			
150	456·8	-60				455·2	-57					-63		220	26		-57			
130							-61					-64		232	28		-60			
110							-59					-66		247	29		-61			
100											(109mb)	-66								
90						541·6	-59													
80							-57													
70																				
60																				
	Inversion 940mb 47°-871mb 50° 600mb 22°-586mb 23°			Inversion 1000mb 56°-970mb 57° 831mb 40°-813mb 46° 750mb 39°-730mb 40° Isothermal 1016-1000mb 56°		Inversion 892mb 50°-850mb 55°		Inversion 863mb 49°-842mb 52° Isothermal 1011-987mb 61° 518-502- 07°		Inversion 613mb 22°-600mb 23° 160- -40 -450- -30		Inversion 978mb 60°-950mb 62°		Inversion 1003·6mb 59°-974mb 63° Isothermal 950-935mb 61°		Inversion 1007mb 62°-973mb 67°	

	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Tropopause	II 200 mb -69° 39,600'	II 235 mb -67° 36,000'	I 210 mb -69° 38·700'	I 241 mb -63° 35·800'	I 210 mb -71° 38·700'	I 215 mb -70° 38·200'	I 219 mb -67° 37,800'	II 262 mb -63° 33,700'	

For Winds See Page 3.

HMSO Press, MO, Dunstable

No. 11802 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Sunday 22nd July 1951. Page 1.

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

03h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing	Tropopause
LERWICK	03h.	1016·2 mb	1006·2 mb	712	I 238 mb −71° 35,200'
STORNOWAY	03h.	1013·6 mb	1012·0 mb	698	I 225 mb −68° 36,600'
LEUCHARS	03h.	1014·8 mb	1014·0 mb	678	N.R.
ALDERGROVE	03h.	1015·2 mb	1005·7 mb	694	II 240 mb −63° 35,500'
LIVERPOOL	03h.	1015·7 mb	1013·7 mb	709	I 228 mb −69° 36,600'
DOWNHAM MARKET	03h.	1018·4 mb	1014·0 mb	681	I 225 mb −67° 37,200'
LARKHILL	03h.	1016·9 mb	1001·0 mb	675	II 242 mb −61° 35,300'
CAMBORNE	03h.	1013·0 mb	1002·6 mb	686	I 231 mb −64° 36,200'
VALENTIA	03h.			685	II 264 mb −61° 33,300'

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52		
1000	04·3	52	51		
950		51	48		
900	33·1	44	43		
850		41	39		
800	64·1	41	24		
750		36	17		
700	100·1	30	09		
650		24	04		
600	139·9	17	−02		
550		09	−04		
500	185·4	−02	−13		
450		−11	−18		
400	238·8	−23	−28		
350		−35	−42		
300	303·8	−50			
250		−67			
200	389·8	−59			
170		−60			
150		−62			
130		−62			
110		−60			
100	Inversion				
90	860 mb 41°−815 mb 42°				
80					
70	Isothermal				
60	1006 − 955 mb 52°				

Pressure mb	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	55	53	170	08
1000	03·7	56	53	199	12
950		55	51	198	18
900	32·7	50	46	207	18
850		44	41	235	20
800	64·5	39	38	237	20
750		38	34	221	22
700	99·9	32	11	215	25
650		26	16	213	30
600	139·9	19	03	212	35
550		11	−04	210	33
500	185·6	02	−09	216	34
450		−09	−15	217	33
400	239·2	−20	−25	216	35
350		−32	−37	211	39
300	304·6	−46		206	46
250		−61		204	51
200	391·2	−56		211	37
170		−54		215	30
150	453·4	−54		217	33
130		−59		233	24
110		−58		225	18
100	Inversion				
90	1012 mb 55°−976 mb 58°				
80					
70	Isothermal				
60	786 − 750 mb 38°				

Pressure mb	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	58	55	CALM	
1000	04·4	61	56	252	12
950		55	48	227	11
900	33·4	48	42	233	14
850		51	37	238	16
800	66·5	46	30	222	17
750		41	27	218	21
700	101·2	34	−02	217	21
650		28	00	209	17
600	141·3	20	06	202	20
550		09	00	213	21
500	186·9	00	−04	225	24
450	(265mb)	−09	−16	212	30
400	240·5	−20	−25	210	33
350		−31	−36	213	33
300	306·0	−46		214	44
250		−58			
200					
170					
150					
130					
110					
100	Inversion				
90	1014 mb 58°−999 mb 62°				
80					
70	890 mb 47°−876 mb 53°				
60					

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	56	54		
1000	04·2	57	56		
950		59	56		
900	33·4	54	52		
850		49	46		
800	65·4	45	28		
750		42	31		
700	101·2	33	30		
650		25	22		
600	141·2	19	10		
550		11	00		
500	187·0	03	−04		
450		−07	−17		
400	240·9	−16	−22		
350		−29	−38		
300	306·9	−44			
250		−61			
200	393·7	−60			
170		−55			
150		−57			
130		−59			
110		−62			
100	543	−62			
90		−62			
80		−61			
70		−60			
60		−59			
		−57			
	Inversion				
	1006 mb 56°−980 mb 59°				
	819 mb 44°−807 mb 45°				
	Isothermal				
	807 − 785 mb 45°				
	980 − 950 mb 59°				

Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	60	59	CALM	
1000	04·4	62	61	184	05
950		62	56	185	08
900	33·9	58	52	180	10
850		51	48	172	12
800	66·1	45	37	170	14
750		38	31	175	16
700	101·6	31	27	180	16
650		25	21	177	13
600	141·6	20	07	187	13
550		11	05	196	19
500	187·4	04	01	218	29
450		−05	−08	210	27
400	241·3	−18	−22	215	24
350		−32	−36	207	32
300	306·9	−46		204	34
250		−62		196	37
200	393·2	−61		206	36
170		−59		227	30
150		−59		213	30
130	(133mb)	−60			
110					
100	Inversion				
90	1014 mb 60°−982 mb 64°				
80					
70					
60					

Pressure mb	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	50	49	110	05
1000	05·0	52	48	170	15
950		61	36	166	16
900	34·1	56	44	164	10
850		51	41	162	12
800	66·3	46	31	157	11
750		39	31	164	11
700	102·0	34	25	178	12
650		30	09	198	11
600	142·2	22	00	207	12
550		16	10	213	15
500	188·5	09	−09	216	19
450		−02	−15	205	21
400	242·9	−14	−21	201	27
350		−27	−33	192	33
300	309·1	−42		198	33
250		−59		199	45
200	396·0	−64		212	41
170		−58		222	33
150	457·3	−60		231	27
130		−65		247	30
110		−66		254	20
100	542·8	−67		250	20
90		−67		276	16
80		−66		286	07
70		−64		289	04
60	650·4	−62		218	06
	Inversion				
	1014 mb 50 − 950 mb 61°				
	Isothermal				
	675 − 655 mb 31°				
	585 − 576 mb 20°				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	55	52	070	04
1000	04·6				
950		62	48	145	14
900	33·9	60	34	186	14
850		55	37	222	10
800	66·4	50	31	242	14
750		43	27	239	12
700	102·3	36	23	227	10
650		28	20	229	14
600	142·5	20	16	221	16
550		12	06	208	20
500	188·4	03	−05	205	22
450		−07	−15	205	25
400	242·3	−18	−35	187	33
350		−31	−43	193	33
300	307·9	−47		185	33
250		−60		200	39
200	394·9	−58		218	37
170		−56		221	34
150	456·6	−58		228	34
130		−64		251	30
110		−64		235	20
100	542·2	−66		250	13
90		−65		262	17
80		−63		270	04
70		−61		335	05
60	(68mb)	−60			
	Inversion				
	1001 mb 55°−964 mb 63°				
	918 mb 59°−896 mb 61°				
	834 mb 52°−816 mb 53°				

Pressure mb	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	63	56	070	03
1000	03·6	64	58		
950		68	57	158	07
900	33·4	62	55	192	06
850		55	47	195	10
800	66·0	49	40	192	15
750		42	33	171	17
700	101·8	34	25	179	18
650		27	21	184	19
600	141·9	21	11	192	22
550		13	−02	201	24
500	187·8	02	−14	213	22
450		−10	−22	212	23
400	241·3	−21	−28	202	27
350		−32	−39	181	37
300	306·7	−46		174	34
250		−60		188	51
200	393·8	−56		216	21
170		−58		219	29
150		−60		220	35
130	(139mb)	−59			
110					
100	Inversion				
90	1003 mb 63°−962 mb 70°				
80					
70					
60					

Pressure mb	VALENTIA Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	61	60	CALM	
1000	03·4	60	58	"	04
950	113	56	49		
900	32·6	54	53		
850		49	47		
800	64·8	44	41		
750		39	28		
700	100·4	34	28		
650		26	22		
600	140·4	18	06		
550		12	−10		
500	186·2	04	−35		
450		−06	−40		
400	240·1	−18	−44		
350		−32	−54		
300	305·5	−48			
250		−62			
200	392·2	−57			
170		−54			
150		−55			
130		−59			
110		−59			
100	541·2	−61			
90		−64			
80		−62			
70		−62			
60	(67mb)	−63			
	Isothermal				
	950 − 925 mb 54°				
	750 − 737 mb 39°				

09h. G.M.T.

Station	Time	M.S.L.	Surf	Freezing	Tropopause
LERWICK	09h.	1012·3 mb	1002·3 mb	710	I 227 mb −63° 36,500'
STORNOWAY	09h.	1009·1 mb	1007·5 mb	736	I 255 mb −57° 33700'
LEUCHARS	09h.	1011·7 mb	1010·9 mb	708	I 220 mb −65° 37,200'
ALDERGROVE	09h.	1011·3 mb	1002·3 mb	672	N.R.
LIVERPOOL	09h.	1012·3 mb	1010·3 mb	705	I 240 mb −62° 35,400'
DOWNHAM MARKET	09h.	1014·7 mb	1010·3 mb	687	I 222 mb −64° 37,500'
LARKHILL	09h.	1013·5 mb	997·8 mb	678	I 240 mb −57° 35,700'
CAMBORNE	09h.	1011·9 mb	1001·5 mb	700	I 270 mb −56° 32,600'

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52	170	09
1000	03·3	51	52		
950		50	50	155	27
900	32·0	48	46	155	22
850		49	40	179	12
800	63·9	42	36	193	16
750		36	33	191	21
700	99·4	31	21	186	24
650		23	06	190	24
600	139·5	20	−12	199	27
550		10	−14	203	30
500	185·1	00	−14	212	26
450		−08	−21	210	30
400	238·1	−20	−31	202	34
350		−32	−43	208	22
300	304·2	−46		209	42
250		−61		214	45
200	391·3	−53		215	32
170		−51		216	27
150		−51		217	21
130		−53			
110		−52			
100	542·2	−52			
90		−53			
80		−49			
70	Inversion				
60	887 mb 47°−860 mb 50°				
	Isothermal				
	1002 − 985 mb 50°, 950 − 931 mb 50°				
	725 − 713 mb 33°, 703 − 693 mb 31°				
	476 − 462 mb −5°, 250 − 238 mb −61°				

Pressure mb	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	55	54	170	04
1000	02·5	55	54		
950		51	50	180	15
900	31·3	48	48	206	20
850		44	44	215	21
800	63·0	38	38	210	21
750		34	34	196	31
700	98·1	27	27	199	32
650		20	18	207	40
600	137·6	16	13	210	37
550		08	−06	201	42
500	183·0	00	−08	205	41
450		−10	−15	196	48
400	236·5	−22	−26	202	50
350		−33	−38	211	50
300	301·8	−47		208	61
250		−56		209	53
200	390·0	−48			
170		−48			
150	453·1	−49			
130		−50			
110		−48			
100	Inversion				
90	275 mb −55°−270 mb −54°				
80					
70					
60					

Pressure mb	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	67	56	230	02
1000	03·2	63	52	235	07
950		57	45	232	11
900	32·4	52	41	224	11
850		48	39	224	13
800	64·5	45	35	219	15
750		39	29	216	17
700	100·0	31	22	215	19
650		24	10	208	20
600	139·8	17	06	206	19
550		10	−03	212	19
500	185·4	01	−08	200	21
450		−08	−15	208	28
400	239·1	−18	−25	216	33
350		−31	−39	209	36
300	304·7	−47		212	37
250		−60		209	41
200	391·4	−59			
170		−54			
150		−53			
130		−55			
110		−57			
100	541·2	−57			
90		−55			
80		−55			
70		−53			
60	651·7	−55			
	(541mb)	−46			
	Inversion				
	857 mb 47°−843 mb 49°				
	Isothermal				
	270 − 262 mb −57°				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	65	62		
1000	03·2				
950		59	56		
900	32·8	54	51		
850		49	45		
800	64·5	43	34		
750		42	26		
700	100·2	39	22		
650		30	10		
600	140·3	21	09		
550		12	04		
500	186·3	06	−09		
450		−05	−18		
400	240·9	−16	−25		
350		−28			
	Inversion				
	777 mb 41°−765 mb 44°				
	535 mb 09°−517 mb 10°				

Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	64	59	180	05
1000	03·4	63	58	179	15
950		60	55	185	10
900	32·7	55	52	161	09
850		49	42	164	11
800	64·8	42	41	174	12
750		38	34	197	11
700	100·3	31	26	186	12
650		27	24	193	15
600	140·3	20	17	195	17
550		11	08	191	21
500	186·1	02	−04	190	23
450		−06	−13	186	20
400	240·0	−19	−24	183	16
350		−32	−37	200	19
300	305·6	−45		223	27
250		−59		218	36
200	393·1	−51		218	23
170		−51		222	26
150		−51		221	20
130		−53		226	27
110		−53		243	17
100	544·0	−55		242	10
90		−54		234	06
80		−51			
70	(78mb)	−50			
60					
	Isothermal				
	785 − 764 mb 40°				
	668 − 650 mb 27°				

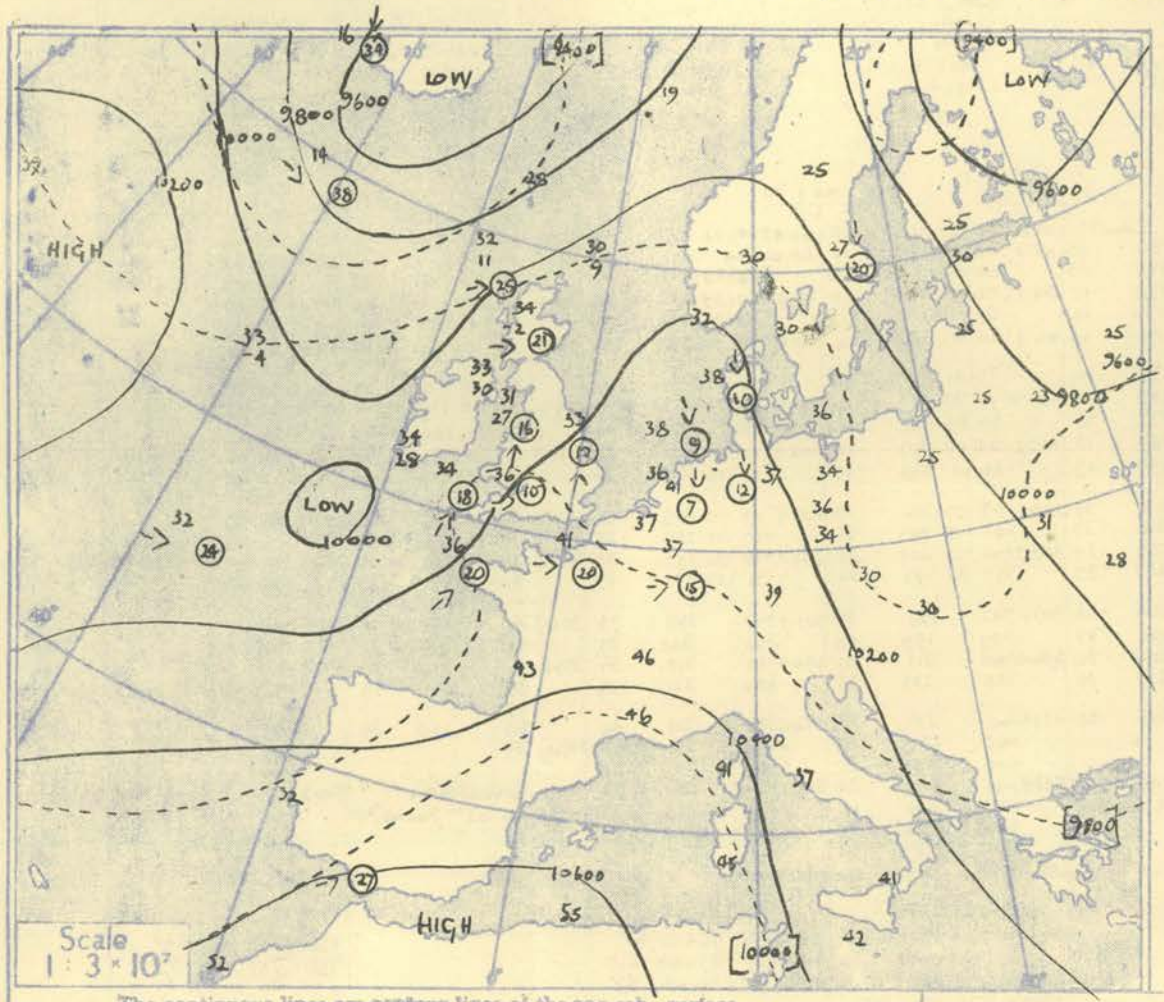
Pressure mb	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	63	57	130	06
1000	04·1				
950		58	49	161	14
900	33·4	55	45	162	15
850		53	41	161	13
800	65·6	48	35	178	13
750		42	26	197	14
700	101·4	34	27	216	17
650		29	21	213	17
600	141·7	23	10	204	15
550		13	07	218	16
500	178·8	07	02	221	17
450		−03	−08	203	15
400	242·1	−14	−19	190	16
350		−26	−33	195	21
300	308·4	−42		203	20
250		−55		264	15
200	396·0	−56		207	27
170		−52		227	30
150	458·4	−52		228	29
130		−54		228	22
110		−58		228	22
100	545·7	−59		243	18
90		−61		263	12
80		−57		263	10
70					
60					
	Inversion				
	976 mb 59°−965 mb 61°				
	Isothermal				
	965 − 936 mb 41°				
	794 − 780 mb 46°				
	592 − 573 mb 17°				
	560 − 535 mb 13°				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	57	CALM	
1000	03·7				
950		61	53	258	06
900	33·1	57	54	225	07
850		51	48	197	10
800	65·5	47	42	182	10
750		42	31	166	13
700	101·3	35	22	172	19
650		28	17	179	24
600	141·4	19	10	179	32
550		13	05	180	39
500	187·5	06	01	191	30
450		−01	−08	191	34
400	242·1	−11	−20	212	32
350		−23	−35	205	27
300	308·8	−39	−51	207	21
250		−55		173	24
200	397·1	−53		224	30
170		−46		231	32
150	460·1	−49		228	24
130		−53		225	21
110		−53			
100	Inversion				
90	976 mb 59°−965 mb 61°				
80					
70	Isothermal				
60	965 − 936 mb 41°				
	794 − 780 mb 46°				
	592 − 573 mb 17°				
	560 − 535 mb 13°				

Pressure mb	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	62	61		
1000	03·3				
950		58	58		
900	32·6	54	54		
850		50	50		
800	64·8	45	45		
750		39	39		
700	100·4	32	32	See Page 3 for Winds.	
650		25	21		
600	140·3	19	12		
550		08	00		
500	185·8	−01	−14		
450		−10	−24		
400	239·2	−21	−34		
350		−34	−46		
300	304·4	−48			
250		−54			
200	393·0	−49			
170		−55			
150		−56			
130		−54			
110		−58			
100	542·6	−58			
90		−60			
80		−60			
70		−61			
60		−61			
	(52mb)	−62			
	Inversion				
	605 mb 18°−595 mb 20°				

Sunday 22nd July 1951.

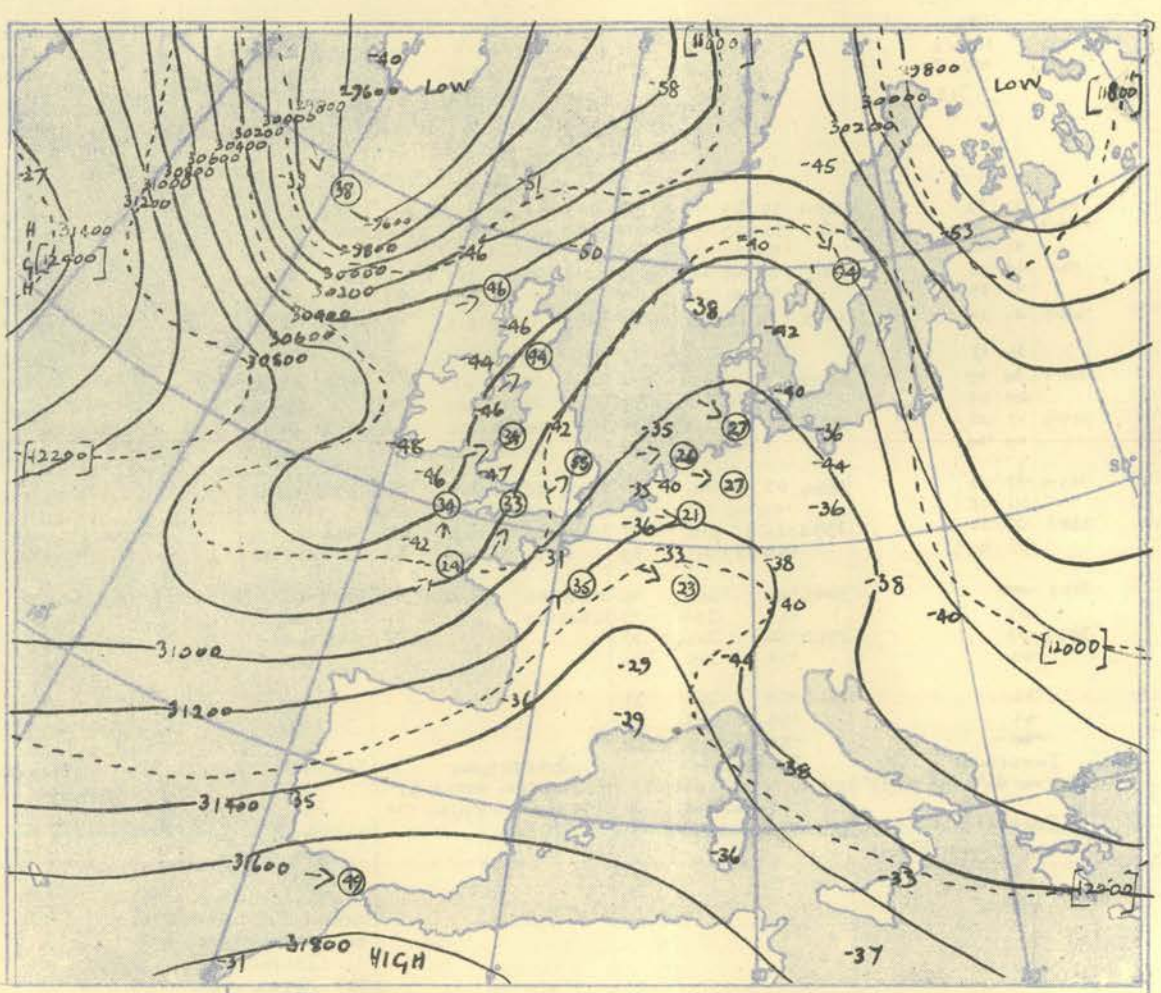
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



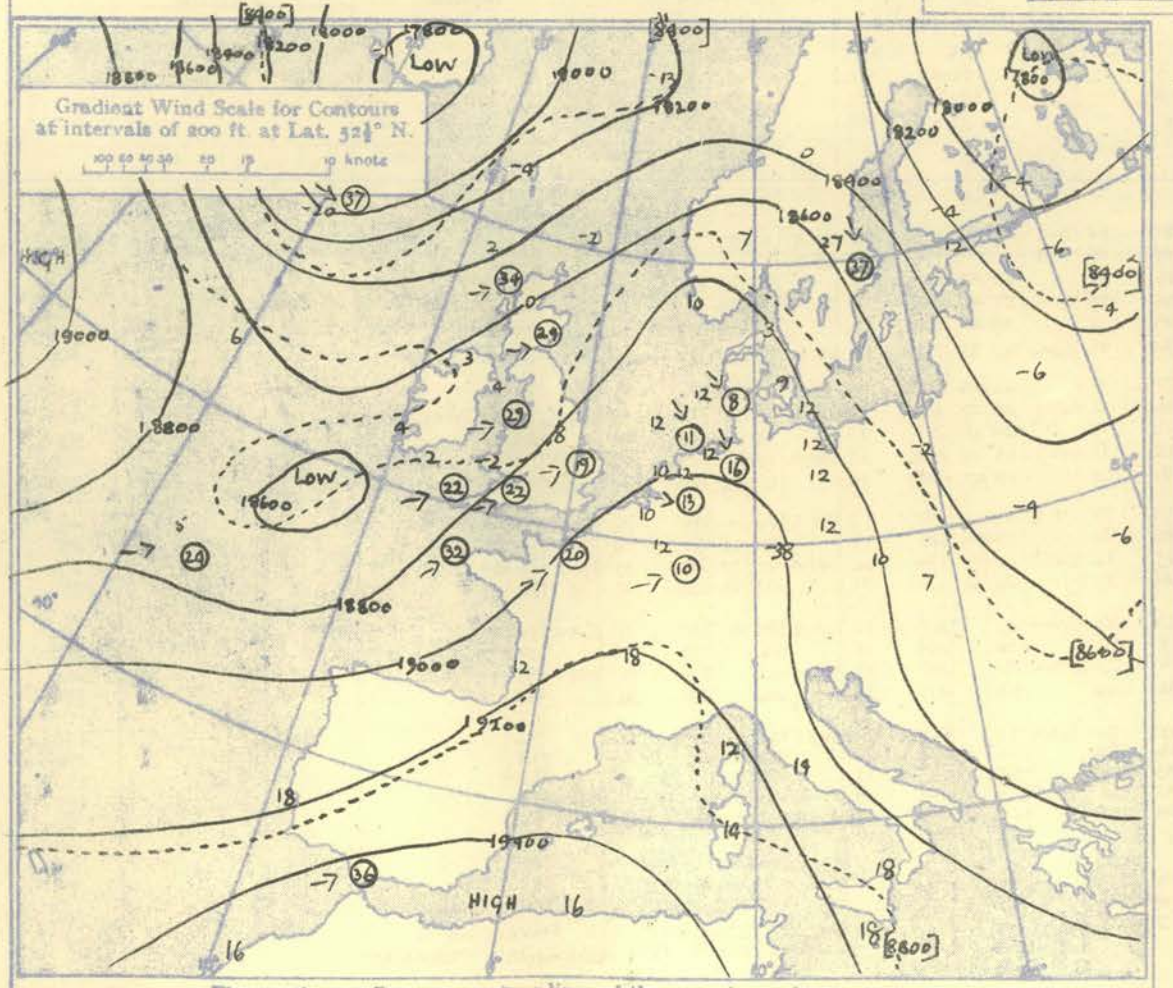
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

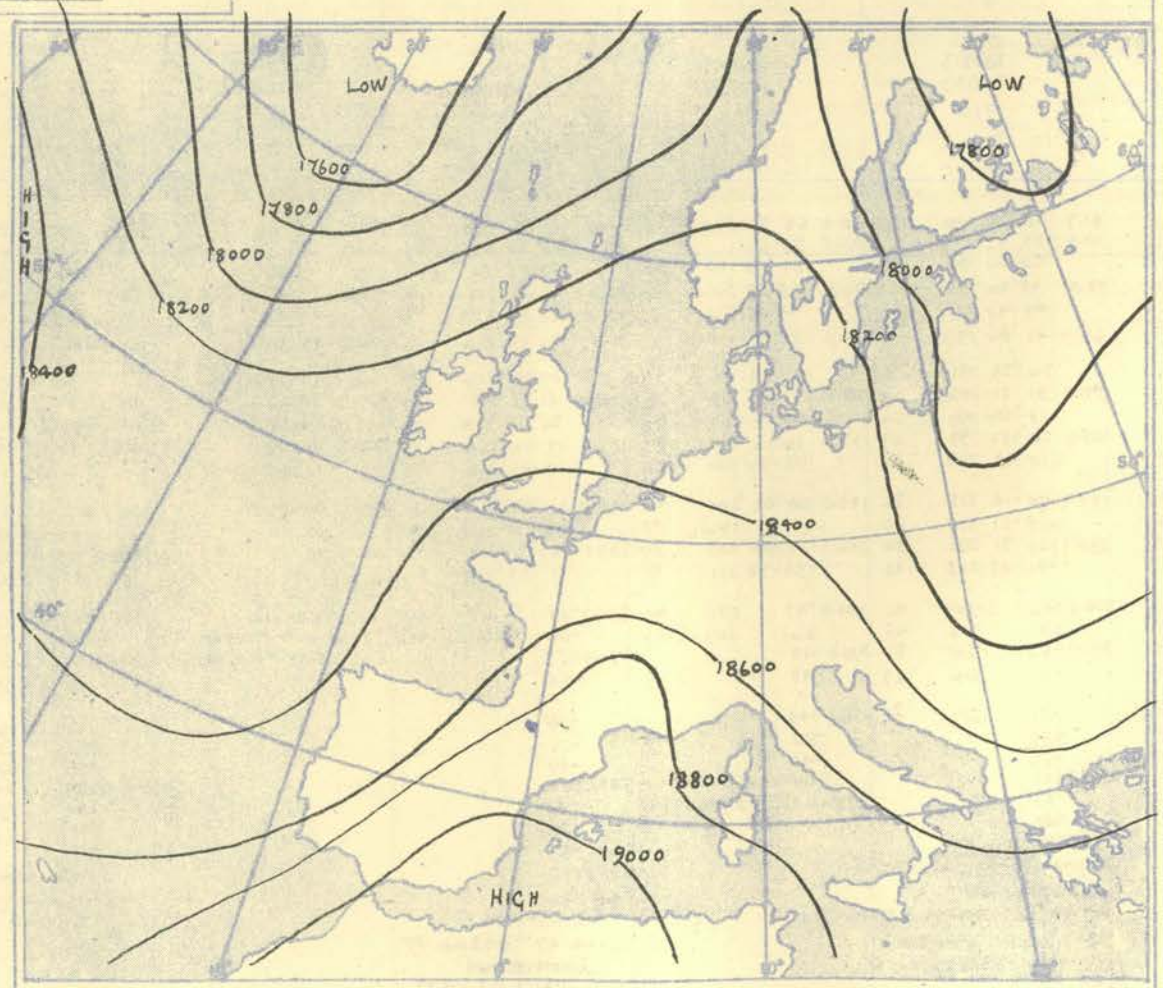
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	52° 12'N 02° 12'W																																	
Pressure: Time	15h.																																	
Pressure: M.S.L.	1008 mb																																	
Pressure: Surf	1006·5 mb																																	
Pressure: Freezing	680 mb																																	
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Surf	00·4																																	Surf
1000	02·2																																	1000
950																																		950
900	31·9	57	55																															900
850	17·6	51	49																															850
800	64·1	47																																800
750																																		750
700	99·9	34																																700
650																																		650
600	140·1	21																																600
550																																		550
500	186·1	05																																500
450																																		450
400	240·3	-16																																400
350																																		350
300	306·3	-44																																300
250																																		250
200	Cloud																																	200
170	2/8 Cu																																	170
	885-880 mb																																	
	3/8 As																																	
	710-705 mb																																	
	8/8 As																																	
	435-275 mb.																																	

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

Place	Camborne		Stornoway		Castle Archdale																Place
Time	09h.		15h.		21h.																Time
Type																					Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	190	05	360	06	330	19															Surf.
1,000	222	09	350	12	340	28															1,000
2,000	224	07	338	10	340	34															2,000
3,000	216	07	306	09	350	39															3,000
4,000	187	10	288	10	340	30															4,000
5,000	131	13	270	17	340	29															5,000
6,000	153	12	262	20	330	29															6,000
8,000	192	11	220	17	330	22															8,000
10,000	195	15	205	25	340	25															10,000
14,000	193	15	200	37																	14,000
18,000	208	18	188	41																	18,000
24,000	208	19	182	53																	24,000
30,000	151	24	197	65																	30,000
40,000	243	32	220	24																	40,000
50,000	283	17																			50,000
	230 (55,000')	15																			

NEPHOSCOPE OBSERVATIONS

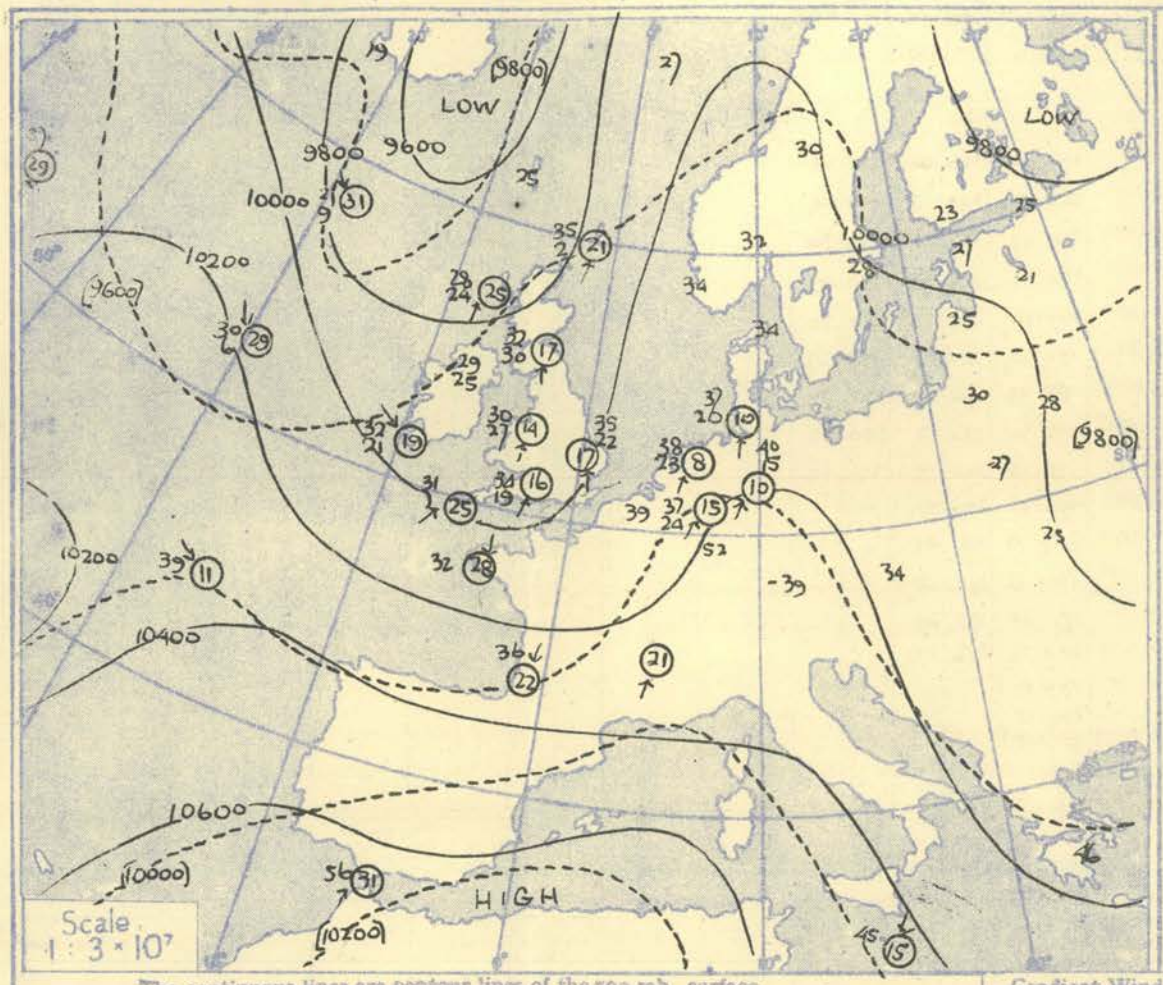
Place													Place
Time Type													Time Type
Dir. Vel.													Dir. Vel.

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

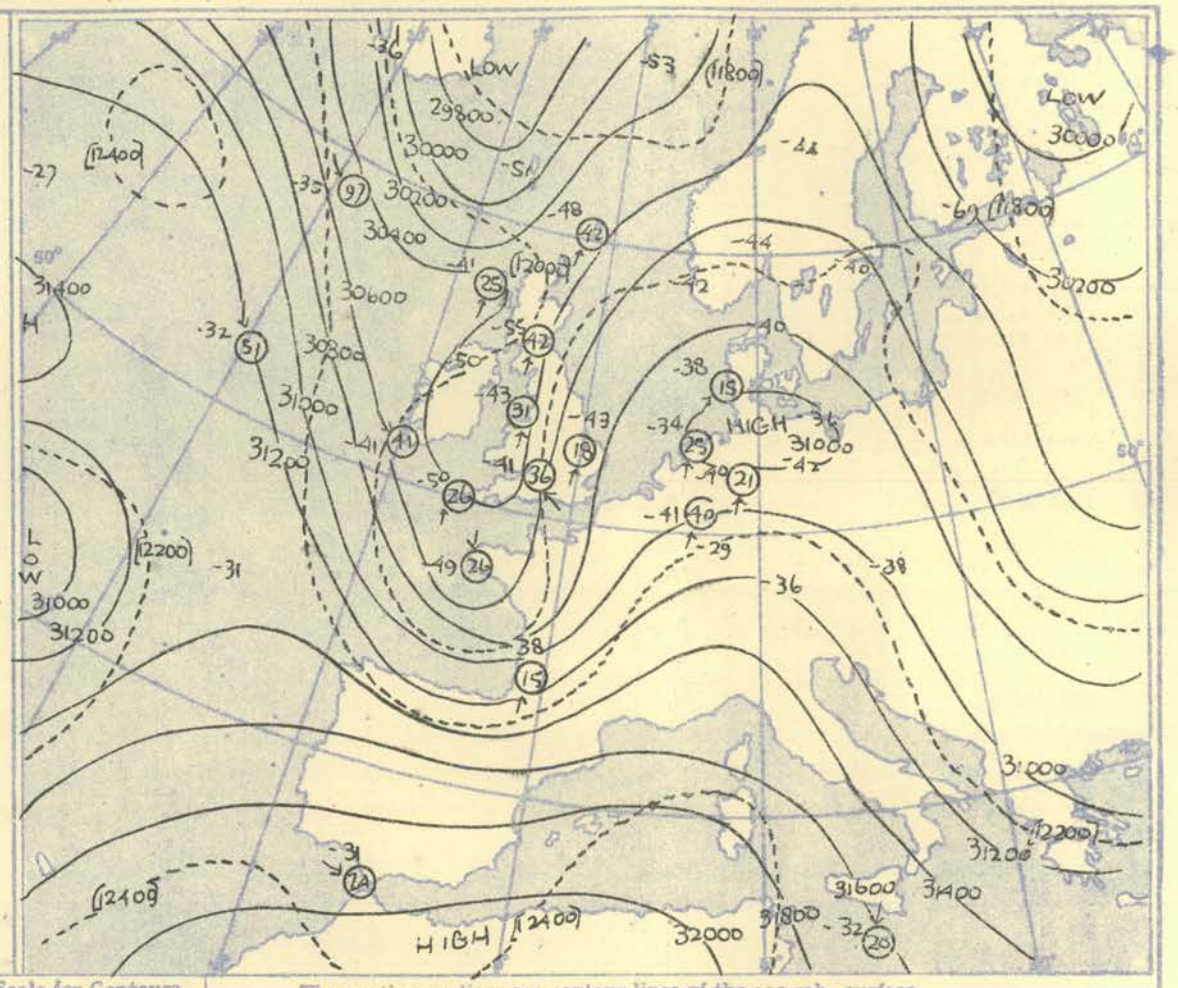
Ship	WEATHER OBSERVER	WEATHER OBSERVER.	WEATHER OBSERVER.	WEATHER OBSERVER.	WEATHER WATCHER.	WEATHER WATCHER	WEATHER WATCHER.	WEATHER WATCHER.			Ship
Lat/Long	59·0N 18·7W.	59·0N 18·7W.	59·1N 19·3W.	59·1N 19·6W.	52·4N 19·7W	52·5N 19·8W.	52·4N 19·9W.	52·3N 19·8W.			Lat/Long
Pressure: Time	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	G.M.T.		Time
Pressure: M.S.L.	1015 mb	1013 mb	1014 mb	1016 mb	1020 mb	1021 mb	1023 mb	1023 mb	mb		M.S.L.
Pressure: Surf	1015 mb	1013 mb	1014 mb	1016 mb	1020 mb	1021 mb	1023 mb	1023 mb	mb		Surf
Pressure: Freezing	860 mb	860 mb	860 mb	845 mb	685 mb	690 mb	730 mb	660 mb	mb		Freezing
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		51	43	300	27		53	42	315	25		51	44	310	27		51	15	310	28		57	45											Surf
1000	04·6	49	41	288	33	03·5	51	41	305	34	03·9	49	41	308	27	04·2	49	43	315	25	05·4	55	53											1000
950		42	37	288	30		44	37	306	31		43	36	305	31		43	39	315	27		48	38											950
900	32·3	36	36	285	29	31·9	36	36	308	30	32·2	36	32	302	31	32·5	36	36	314	24	34·0	41	31											900
850		31	26	282	29		31	24	308	33		31	30	302	30		33	33	311	22		45	14											850
800	63·2	25	18	273	29	62·8	26	22	302	34	63·1	27	24	303	31	63·5	29	28	311	27	65·6	40	03											800
750		20	06	272	32		21	16	295	33		26	18	305	31		28	16	314	27		37	03											750
700	97·3	14	01	275	33	91·1	15	10	288	36	91·8	21	09	310	31	98·3	25	09	316	27	100·9	33	14											700
650		07	12	277	34		10	02	294	36		18	02	315	30		19	01	320	28		29	21											650
600	135·1	06	18	278	33	135·7	06	03	284	31	137·0	14	03	318	39	137·6	14	15	320	36	141·0	22	28											600
550		08	22	278	36		02	11	293	39		07	12	319	31		08	17	320	27		15	38											550
500	179·5	20	32	276	37	180·2	10	19	304	41	182·4	00	19	321	42	183·2	08	03	317	40	187·1	06	35											500
450		30	42	275	31		19	28	304	56		12	35	322	68		01	07	316	45		03	34											450
400	230·8	36	50	276	36	232·6	29	40	310	62	236·4	05	29	323	97	238·1	06	13	313	58	241·4	12	43											400
350		37	51	279	37		25	41	324	121		17	27	312	96		19	32	310	60		23	47											350
300	295·7	33	49	278	38	298·7	36	54	338	119	304·1	35	41	321	97	305·8	35	44	310	69	308·2	38	58											300
250		37	55	278	42		38	60	316	72		48		320	113		51		311	83		54												250
200	38·0	42		284	30	38·9	41		341	39	39·3	54		319	79	39·0	59		298	64	39·5	69												200
170		46		287	26		47		320	39		53		322	51		62		280	39		61												170
150		47		291	24		46		320	32		54		321	31		59		285	36		60												150
130		50		291	18		47		320	24		54		321	32		52		285	21		60												130
110		52		294	15							53					52		285	09		60												110
100	539·1	52		294	05						(115 mb)					543·1	52		285	07	543·0	60												100
90		52		Calm																		60												90
80		52																				59												80
70	(82 mb)																					55												70
60																						54												60
																						52												
																						51												
											Inversion 800 mb 27°-785 mb 29° 718 - 720 - 400 .. 5° Isothermal. 675 - 635 mb 18°					Inversion 524 mb 4°- 500 mb 8° Isothermal. 808 - 763 mb 29°					Inversion 895 mb 40°- 860 mb 46° 795 .. 39°- 785 .. 40°					Inversion (36 mb) 50° 836 mb 33°- 814 - 39° Isothermal. 814 - 800 mb 39°					Inversion 850 mb 38°- 825 mb 38° 573 - 22°- 563 .. 23°					Inversion (64 mb) 857 mb 36°-813 mb 40° 588 .. 24°- 575 .. 25° Isothermal. 813 - 800 mb 40° 700 - 611 .. 33° 458 - 439 - 8°					
Tropopause	I 376 mb -40° 24.600					I 394 mb -37° 30.200					I 220 mb -59° 37.200					I 224 mb -61° 37.000					I 208 mb -69° 38,700					I 200 mb -62° 40.000					I 170 mb -71° 43.400					I 182 mb -69° 42.200					Tropopause

Sunday 22 July 1951.

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



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

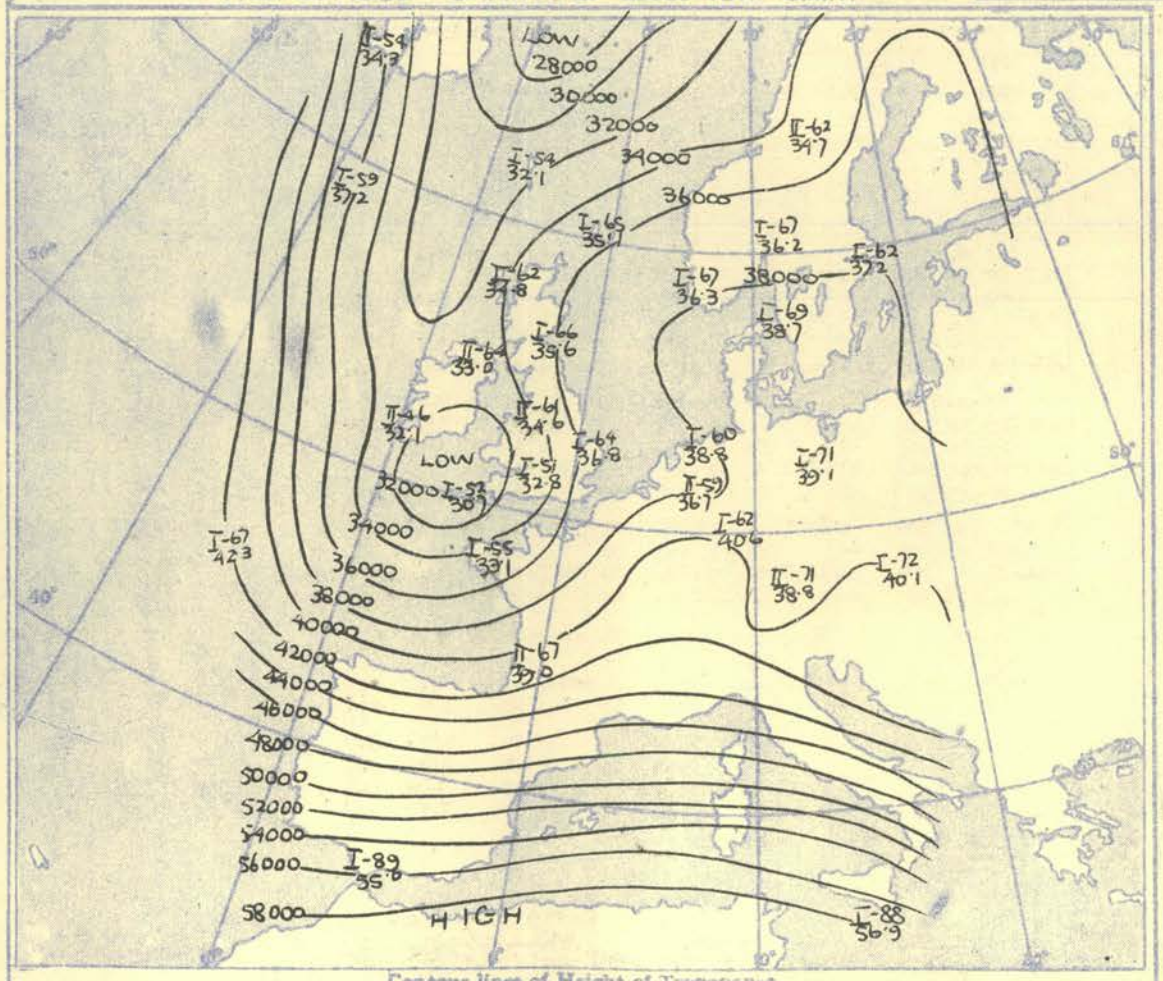


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 40 20 10 5 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Cold pool which had moved from the Azores was still showing in the Western English Channel at 1500 Z. Movement eastward of this cold pool and the cold trough which extended southwards from Iceland brought unstable thundery conditions to the British Isles.

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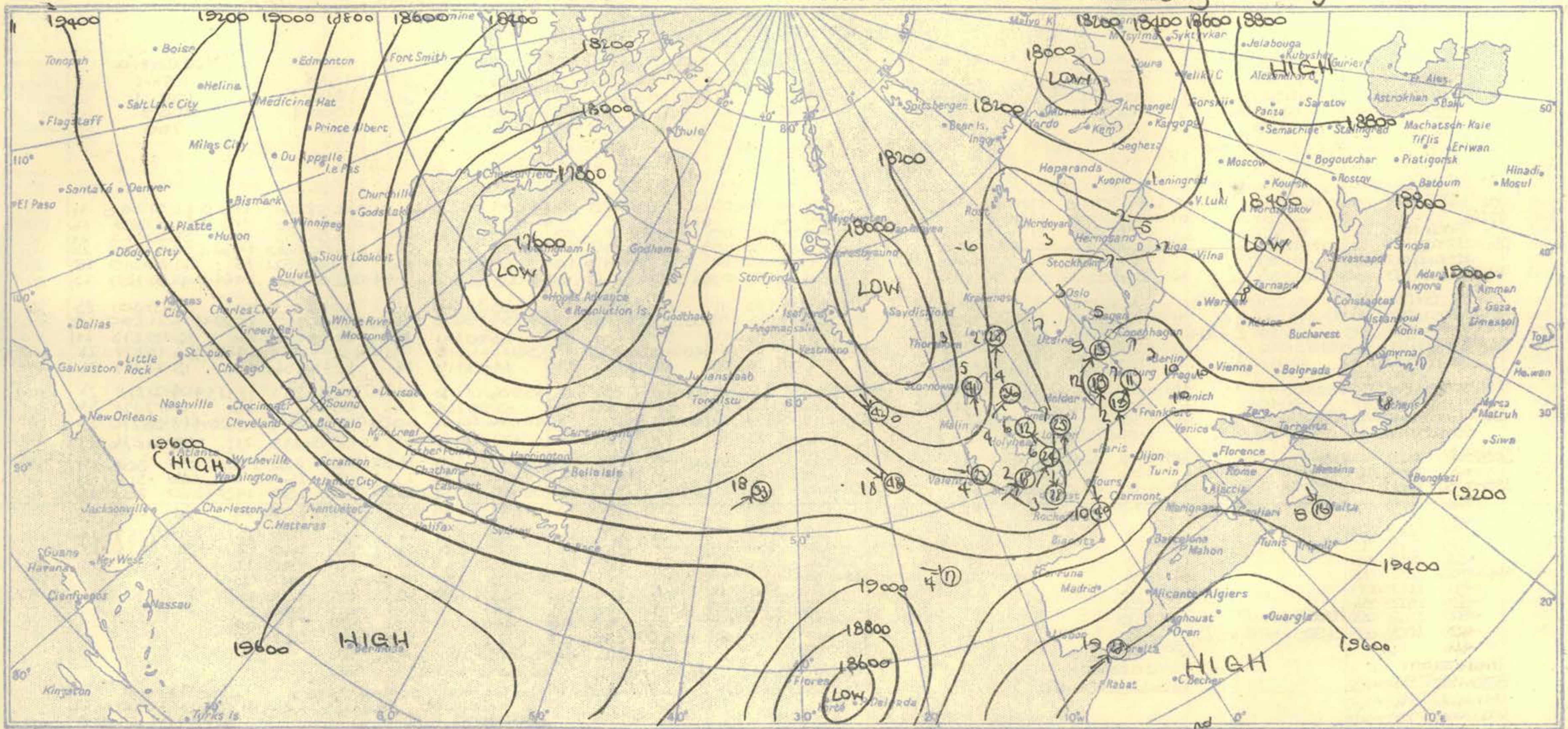
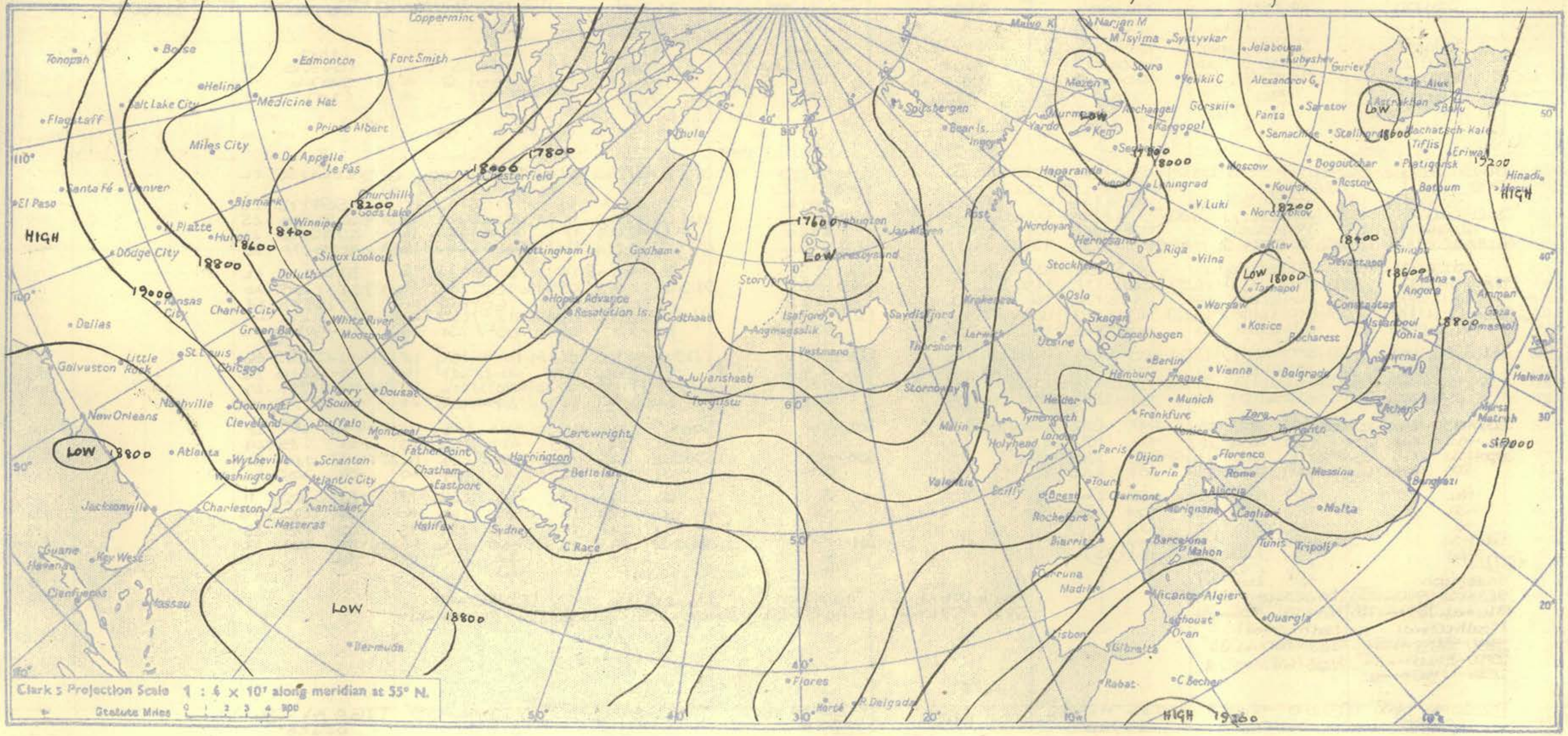
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Sunday 22nd July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 22nd July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Sunday 22nd July 1951.

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

15 hrs G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.
Pressure: M.S.L.	1008·4 mb	1008·2 mb	1007·4 mb	1006·6 mb	1007·8 mb	1009·1 mb	1008·7 mb	1010·8 mb	1011·1 mb
Pressure: Surf	998·5 mb	1006·6 mb	1006·6 mb	997·3 mb	1005·8 mb	1004·6 mb	999·2 mb	1000·4 mb	1009 mb
Pressure: Freezing	680 mb	739 mb	700 mb	736 mb	714 mb	682 mb	664 mb	710 mb	700 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	53	180	04
1000	02·5				
950		51	51	165	23
900	31·1	50	45	173	20
850		49	44	207	28
800	62·0	45	34	188	16
750		42	15	178	21
700	38·7	35	02	181	21
650		27	-3	184	25
600	138·7	19	-9	186	28
550		10	-10	183	32
500	184	02	-14	191	28
450		-10	-18	200	28
400	238·0	-20	-37	206	32
350		-38	-49	206	36
300	303	-48		202	42
250		-63		204	43
200	390·0	-55		207	32
170		-53		203	22
150		-55		223	22
130		-53		218	15
110		-55		243	15
100	940·0	-65		238	15
90		-51		218	07
80		-50		240	06
70		-50		254	03
60		-49		103	03

Inversion 955 mb 50°-931 mb 55°; 881 mb 48°-842 mb 50°; 803 mb 44°-791 mb 46°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·4	52	52	200	06
1000	01·9				
950		55	51	193	18
900	31·0	52	46	188	18
850		47	44	176	15
800	62·9	44	38	173	15
750		40	27	175	19
700	98·6	34	16	171	28
650		25	13	172	32
600	138·6	18	10	178	27
550		11	05	188	28
500	184·3	02	-4	193	31
450		-8	-14	177	25
400	238·1	-15	-29	184	29
350		-31	-40	195	36
300	303	-48		206	43
250		-62		204	40
200	390·4	-53		213	25
170		-50		204	15
150		-52			
130		-52			
110		-53			
100	941·1	-54			
90		-54			
80	(51)				
70					
60					

Inversion 985 mb 52°-970 mb 53°; 816 mb 42°-787 mb 46°; Isothermal 997-985 mb 52°; 970-930 mb 55°; 255-248 mb -62°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	51	47		
1000	02·3	50	51		
950		49	47		
900	31·0	46	44		
850		41	37		
800	62·5	33	30		
750		33	27		
700	97·7	28	24		
650		23	19		
600	137·6	21	16		
550		13	08		
500	183·5	05	-1		
450		-3	-10		
400	237·8	-13	-23		
350		-24	-33		
300	304	-41			
250		-60			
200	394	-44			
170		-46			
150		-47			

Isothermal 690-614 mb 25°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·2	63	59	160	12
1000	02·0	62	58	128	12
950		59	53	142	11
900	31·3	55	51	161	12
850		49	45	174	08
800	63·3	43	40	206	05
750		38	38	199	15
700	98·9	32	30	187	17
650		24	19	185	19
600	138·8	20	11	194	19
550		10	01	210	26
500	184·6	04	-5	223	36
450		-6	-18	221	37
400	235·6	-16	-26	215	40
350		-29	-40	195	34
300	309	-45		206	42
250		-63		215	39
200	391·6	-50		210	20
170		-50			
150		-52			
130		-52			
110		-54			
100	942·4	-54			
90		-54			
80		-52			
70		-50			
60		-48			
	(55)	-45			

Inversion 616 mb 26°-606 mb 21°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	67	64		
1000	02·3				
950		58	55		
900	31·3	52	49		
850		46	43		
800	63·3	39	36		
750		33	26		
700	98·5	29	25		
650		25	22		
600	138·4	18	15		
550		12	07		
500	184	04	-5		
450		-7	-18		
400	235·4	-18	-26		
350		-32	-40		
300	306	-41			
250		-65			
200	390·1	-52			
170		-51			
150		-55			
130		-56			
110		-54			
100	940·1	-56			
90		-55			

Isothermal 556 mb 13°-550 mb 14°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	68	56	190	05
1000	02·2	67	56		
950		60	51	193	09
900	01·5	65	46	214	03
850		51	40	206	10
800	63·6	44	36	198	09
750		37	31	180	11
700	99·1	30	27	175	14
650		25	23	176	12
600	139·0	19	15	175	06
550		11	05	186	09
500	184·9	06	-1	166	12
450		-2	-9	178	15
400	239·2	-15	-24	(17)	25
350		-25	-34	173	26
300	305	-43		177	31
250		-60		182	31
200	393·0	-52		223	22
170		-52		234	23
150		-49		245	21
130		-50		254	18
110		-52		225	12
100	944·2	-54		221	14
90		-54		261	14
80		-54		295	09
70		-54		298	06
60		-47		298	05
	(57)	-45			

Isothermal 915-892 mb 55°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	70	58	180	10
1000	02·5				
950		66	46	182	07
900	32·3	58	41	195	06
850		53	40	207	10
800	64·4	47	27	206	13
750		41	21	195	15
700	99·7	34	19	223	16
650		27	17	185	16
600	139·9	22	-1	219	24
550		14	-14	216	24
500	186	07	-31	191	25
450		-3	-45	196	24
400	240·0	-16	-40	191	20
350		-27	-47	149	32
300	306	-41		115	36
250		-49		180	27
200	395	-48		231	23
170		-47		244	27
150		-49		241	21
130		-50		241	23
110		-55		245	12
100	948·1	-55		241	11
90		-54		239	10
80		-54			
70		-54			
60		(78)			
		-47			

Inversion 682 mb 32°-674 mb 33°; Isothermal 928-904 mb 56°; 814-789 mb 47°; 556-548 mb 14°; 545-535 mb -28°; 273 mb -51°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	62	58	220	11
1000	02·6	62	58	220	11
950		58	54	225	23
900	32·1	51	50	260	26
850		47	47	252	25
800	64·0	42	42	245	24
750		40	38	249	25
700	99·4	31	07	257	25
650		27	06	261	26
600	139·4	21	-1	261	24
550		12	-2	256	22
500	185	02	-17	258	18
450		-10	-26	252	16
400	239·4	-21	-35	254	19
350		-30	-51	225	21
300	306	-41		229	26
250		-45		262	12
200	394	-49		250	24
170		-51		249	24
150		-52		259	23
130		-54		260	18
110		-54		249	12
100	943	-57		240	08
90		-60		251	13
80		-59		255	15
70		-59		251	09
60		-57		247	05
		-56			
		(65)			

Inversion 768 mb 39°-764 mb 41°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	03·0	62	61	255	12
1000	02·7				
950		55	47	273	25
900	31·4	55	52	280	25
850		47	45	279	23
800	63·2	41	39	278	23
750		37	33	279	22
700	98·7	31	27	285	20
650		27	23	283	18
600	138·8	20	-5	272	20
550		11	-15	269	22
500	185	04	-15	269	26
450		-5	-23	270	26
400	238·4	-20	-48	277	27
350		-33	-58	276	29
300	306	-41		267	28
250		-52		289	24
200	394	-47		284	30
170		-52		300	22
150		-53		303	11
130		-54		279	16
110		-55		278	25
100	942	-61		292	22
90		-62			
80					
70					
60					

Isothermal 1009-1000 mb 62°; 816-801 mb -40°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·3	62	51	340	11
1000	03·0	62	57	339	12
950		56	53	325	21
900	32·2	50	47	325	23
850		41	35	319	25
800	64·0	35	30	307	23
750		29	30	301	23
700	99·4	21	20	290	19
650		13	12	273	21
600	139·4	21	10	277	23
550		13	-25	277	25
500	185	04	-21	278	23
450		-6	-17	278	36
400	239·4	-18	-33	270	39
350		-30	-51	276	27
300	306	-41		306	41
250		-46		320	57
200	394	-50		308	45
170		-51		294	25
150		-50		287	26
130		-54		278	18
110		-54			
100	942	(113)			

21 hrs G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne
Pressure: Time	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.	21hrs G.M.T.
Pressure: M.S.L.	1007·2 mb	1009·5 mb	1005·2 mb	1008·2 mb	1004·9 mb	1006·1 mb	1007·3 mb	1005·0 mb
Pressure: Surf	997·2 mb	1007·9 mb	1004·4 mb	998·7 mb	1002·9 mb	1001·8 mb	991·6 mb	997·6 mb
Pressure: Freezing	691 mb	790 mb	726 mb	780 mb	707 mb	707 mb	728 mb	707 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52	200	06
1000	01·9				
950		55	51	193	18
900	31·0	52	46	188	18
850		47	44	176	15
800	62·9	44	38	173	15
750		40	27	175	19
700	98·6	34	16	171	28
650		25	13	172	32
600	138·6	18	10	178	27
550		11	05	188	28
500	184·3	02	-4	193	31
450		-8	-14	177	25
400	238·1	-15	-29	184	29
350		-31	-40	195	36
300	303	-48		206	43
250		-62		204	40
200	390·4	-53		213	25
170		-50		204	15
150		-52			
130		-52			
110		-53			
100	941·1	-54			
90		-54			
80	(51)				
70					
60					

Inversion 985 mb 52°-970 mb 53°; 816 mb 42°-787 mb 46°; Isothermal 997-985 mb 52°; 970-930 mb 55°; 255-248 mb -62°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	53	315	05
1000	02·6	51	47		
950		45	41	303	16
900	31·1	39	33	322	19
850		34	30	300	13
800	62·3	33	29	265	11
750		27	09	254	13
700	97·7	24	03	237	16
650		20	-3	229	19
600	137·6	14	-12	218	20
550		07	-21	201	23
500	183·2	00	-5	189	16
450		-9	-12	186	21
400	236·6	-20	-23	188	27
350		-32	-36	191	23
300	301·1	-44		193	66
250		-59		204	42
200	388·8	-45		261	21
170		-48		265	12
150		-49		261	13
130		-51		259	13
110		-54		273	12
100	944	-52		265	11
90		-52		259	07
80		-52		247	06
70		-50		261	07
60					

Inversion 718 mb 23°-703 mb 24°; Isothermal 833-800 mb 33°; 703-682 mb 24°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	57	120	02
1000	01·4	58	57		
950		55	54	152	08
900	30·5	51	48	196	07
850		47	41	213	10
800	62·4	42	36	203	13
750		37	31	198	13
700	97·3	30	29	178	14
650		25	23	174	12
600	137·8	18	15	187	16
550		10	06		
500	183·5	02	-2		
450		-8	-13		
400	235·3	-18	-28		
350		-30	-36		
300	302	-46			
250		-57			
200	390·7	-49			
170		-50			
150		-53			
130		-54			
110		-56			
100	941·1	-58			
90		-55			
80		-60			

Isothermal 588-572 mb 12°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	61	58		
1000	02·3				
950		59	54		
900	30·3	53	52		
850		47	40		
800	62·4	42	36		
750		31	25		
700	97·3	26	18		
650		22	13		
600	137·8	18	15		
550		10	06		
500	182·3	02	-6		
450		-9	-17		
400	235·9	-21	-31		
350		-34	-44		
300	301·1	-47			

Inversion 268 mb -57-253 mb -36°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	61	57	155	07
1000	01·7				
950		62	52	222	21
900	31·1	55	47	220	18
850		48	45	224	18
800	63·1	47	38	214	16
750		31	24	220	10
700	98·5	21	21	245	09
650		25	22	230	12
600	138·3	16	14	214	09
550		10	-7	217	06
500	183·5	02	-14	193	06
450		-7	-25	202	08
400	237·7	-20	-37	169	07
350		-32	-53	140	29
300	303	-45		133	40
250		-58		167	26
200	391·6	-50		220	15
170		-51		241	15
150		-53		243	17
130		-56		241	15
110		-57		241	16
100	940·8	-57		268	14
90		-55			
80		-60			

Inversion 1002 mb 61°-960 mb 63°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·4	60	58	calm	
1000	02·0				
950		57	55	263	10
900	31·5	52	49	261	13
850		47	44	246	16
800	63·2	41	38	235	16
750		35	29	227	16
700	98·6	30	19	233	16
650		26	01	259	20
600	138·5	18	-7	259	21
550		08	-8	251	21
500	184·1	01	-16	252	18
450		-11	-28	241	16
400	237·6	-26	-37	212	20
350		-34	-47	206	21
300	302·8	-50		185	15
250		-47		229	25
200	392·2	-47		284	30
170		-52		300	22
150		-53		303	11
130		-55		261	16
110		-58		254	15
100	942·1	-60		256	14
90		-60		258	14
80		-63			
70					
60					

Isothermal 836-813 mb 45°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	62	61	255	12
1000	02·2				
950		55	47	273	25
900	31·4	55	52	280	25
850		47	45	279	23
800	63·3	41	39	278	23
750		37	33	279	22
700	98·7	31	27	285	20
650		27	23	283	18
600	138·8	20	-5	272	20
550		11	-15	269	22
500	185	04	-15	269	26
450		-5	-23	270	26
400	238·4	-20	-48	277	27
350		-33	-58	276	29
300	306	-41		267	28
250		-52		289	24
200	394	-47		284	30
170		-52		300	22
150		-53		303	11
130		-54		279	16
110		-55		278	25
100	942	-61		292	22
90		-62			
80					
70					
60					

Isothermal 1009-1000 mb 62°; 816-801 mb -40°

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·3	62	51	340	11
1000	03·0	62	57	339	12
950		56	53	325	21
900	32·2	50	47	325	23
850		41	35	319	25
800	64·0	35	30	307	23
750		29	30	301	23
700	99·4	21	20	290	19
650		13	12	273	21
600	139·4	21	10	277	23
550		13	-25	277	25
500	185	04	-21	278	23
450		-6	-17	278	36
400	239·4	-18	-33	270	39
350		-30	-51	276	27
300	306	-41		306	41
250		-46		320	57
200	394	-50		308	45
170		-51		294	25
150		-50		287	26
130		-54		278	18
110		-54			
100	942	(113)			

Tropopause

	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
15 hrs G.M.T.	I 241 mb -65° 35100'	I 245 mb -62° 34800'	I 236 mb -66° 35600'	II 265 mb -64° 38000'	II 248 mb -61° 34600'	I 226 mb -64° 36800'	I 273 mb -51° 32800'	I 293 mb -52° 30700'	II 283 mb -46° 32100'
21 hrs G.M.T.	I 233 mb -65° 35800'	I 250 mb -59° 34100'	I 255 mb -65° 33700'	NR.	I 232 mb -60° 35800'	I 242 mb -57° 35000'	I 275 mb -55° 32200'	I 260 mb -56° 33500'	

No. 11803 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Monday 23rd July 1951. Page 1.

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

03h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	03h. G.M.T.	03h. G.M.T.	03h. G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h G.M.T.	03h. G.M.T.	03h. G.M.T.
Pressure: M.S.L.	1006·1 mb	1010·6 mb	1006·5 mb	1010·9 mb	1005·3 mb	1005·1 mb	1005·4 mb	1010·2 mb	1018·2 mb
Pressure: Surf	996·1 mb	1009·0 mb	1005·7 mb	1001·2 mb	1003·3 mb	1000·8 mb	989·7 mb	999·7 mb	1017 mb
Pressure: Freezing	738 mb	784 mb	708 mb	741 mb	740 mb	732 mb	718 mb	760 mb	815 mb

Pressure mb	Lerwick Height ft./100	Lerwick °F.	Lerwick Dew °F.	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway °F.	Stornoway Dew °F.	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars °F.	Leuchars Dew °F.	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove °F.	Aldergrove Dew °F.	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool °F.	Liverpool Dew °F.	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market °F.	Downham Market Dew °F.	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill °F.	Larkhill Dew °F.	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne °F.	Camborne Dew °F.	Camborne Wind Dir. °	Camborne Wind Vel. knots	Valentia Height ft./100	Valentia °F.	Valentia Dew °F.	Valentia Wind Dir. °	Valentia Wind Vel. knots	Pressure mb
Surf	027	52	51	200	02	009	45	43	315	05	001	54	53			026	50	48			006	56	55			012	59	55	190	08	044	57	57	CALM		029	58	55	330	20	003	55	47	340	08	Surf
1000	016					028	50	46			018	53	52			029					015					014					015					028					009	54	46	337	12	1000
950		51	51	204	13		44	42	320	14		49	48				46	42									57	54	250	14		55	55	273	10		50	49	326	34		48	40	322	20	950
900	030·5	51	51	202	18	031·2	39	33	316	12	030·5	46	45			031·4	40	34			030·2	45	44			030·7	53	48	240	12	030·7	52	52	277	10	031·6	46	45	334	35	033·6	42	34	333	25	900
850		47	46	194	20		34	27	312	11		45	45				36	19				42	42				47	43	224	13		47	47	289	06		41	39	339	36		36	28	334	28	850
800	062·4	42	41	189	24	062·4	32	03	304	11	062·2	41	41			062·8	35	05			061·8	39	39			062·5	40	37	218	15	062·7	42	42	288	07	063·2	36	33	331	35	064·7	30	22	335	29	800
750		33	32	186	30		29	13	282	12		36	36	For Winds See Page 3.			33	16				33	33				34	33	220	15		36	30	273	09		31	28	328	35		30	04	335	29	750
700	977	30	29	187	30	972	25	12	262	13	976	31	31			978	26	21			970	28	27			978	28	28	217	14	981	30	24	264	10	983	29	26	329	31	995	27	00			700
650		24	23	187	28		20	08	237	14		27	26				19	28				22	17				23	23	214	12		25	06	245	10		20	16	329	24		24	05			650
600	137·5	18	17	182	33	136·6	15	09	226	16	137·6	19	16			137·2	13	27			136·1	15	08			137·5	17	17	214	10	138·0	18	10	239	10	137·9	12	07	333	19	139·2	19	13			600
550		10	09	188	34		06	12	218	23		11	07				07	28				08	01				08	06	240	09		10	19	246	08		01	07	331	15		13	21			550
500	183·2	01	03	195	35	181·8	01	12	206	38	183·5	03	01			182·6	00	28			182·1	01	12			182·9	02	05	270	09	183·6	01	25	246	06	182·8	05	14	312	12	185·3	07	17			500
450		09	12	181	36		11	19	201	45		08	13				09	32				11	23				13	20	244	09		10	29	261	06		12	21	234	09		05	20			450
400	236·1	20	27	185	35	235·2	19	33	205	37	237·4	17	23			236·1	20	38			235·4	24	37			236·1	24	35	242	12	237·1	21	31	271	16	236·0	22	32	260	10	240·3	05	23			400
350		32	38	188	36		24	43	327	37		32	39				29	47				39	51				36	44	227	04		35	46	266	19		31	42	338	33	(352mb)	14				350
300	301·9	49		195	45	301·7	40	57	333	55	302·9	50				302·3	35	54			299·8	55				300·8	53		150	07	302·1	49		261	18	302·1	33	45	343	78						300
250		65		196	39		54		322	48		56					51					54					50		205	03		46		324	12		39	51	341	57		Inversion				250
200	388·5	55				390·2	51		290	21	390·4	53				391·0	55				387·8	52				389·1	49		237	12	391·4	45		293	12	392·9	46		325	45	800mb 30° - 762mb 31°					200
170		53					54		280	19		54					56					54					53		254	13		49		285	14	(91mb)	48				537mb 11° - 525mb 12°					170
150		52				452·5	51		280	18	452·6	57										56				451·6	56				454·5	52		296	18						482mb 3° - 443mb 6°					150
130		52					53		280	15												57										53		271	14	Max. Wind.										130
110		56				Inversion																59				Inversion						56		286	10	334° 90 kts.										110
100	537·5	56				1009mb 45° - 1000mb 60°																57				1001mb 59° - 980mb 61°						58		284	10	292mb 30,600'										100
90		56																				60										61		283	06										90
80		57				Isothermal																62										60		272	05										80
70	Inversion					842 - 818 mb 33°																62										59														70
60	950mb 51° - 935mb 53°					805 - 784 mb 32°										Inversion						62																										60
						417 - 380 mb - 19°										865mb 35° - 837mb 39°																																
																Isothermal																														
																1001 - 989mb 50°																														
Tropopause	I 240 mb -68° 34,900'					II 255 mb -54° 33,700'					II 285mb -56° 31900' I 264mb -60° 33100'					I 232 mb - 58° 36,100'					I 288 mb -58° 30,800'					I 287 mb -58° 31,000'					I 280 mb -54° 31,700'					N.R.					N.R.					Tropopause

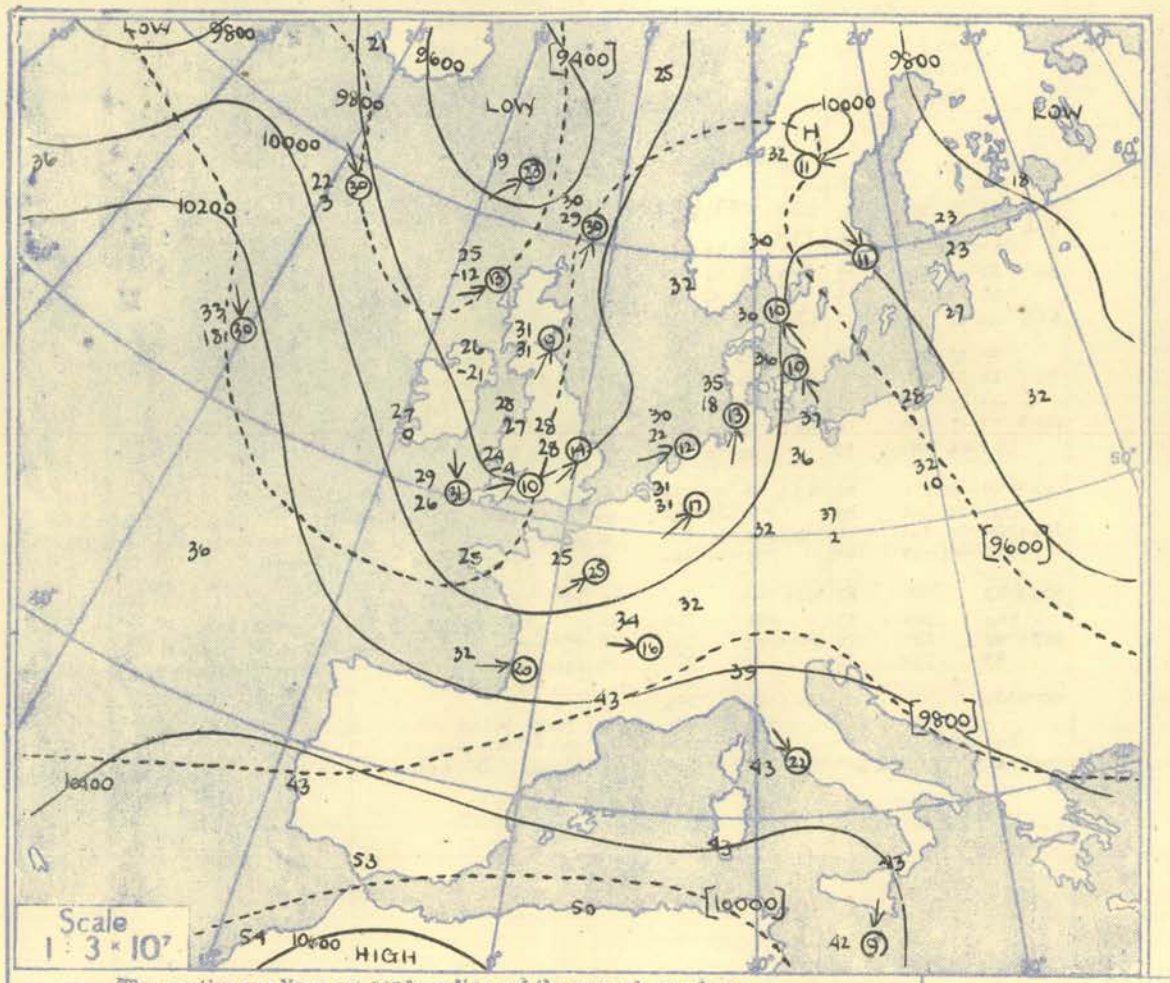
09h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne		Station
Pressure: Time	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	09h. G.M.T.	G.M.T.	Pressure: Time
Pressure: M.S.L.	1008·9 mb	1012·8 mb	1010·8 mb	1013·9 mb	1008·2 mb	1005·6 mb	1008·6 mb	1014·7 mb	mb	Pressure: M.S.L.
Pressure: Surf	998·9 mb	1011·2 mb	1010·0 mb	1004·4 mb	1006·2 mb	1001·3 mb	992·9 mb	1004·2 mb	mb	Pressure: Surf
Pressure: Freezing	740 mb	853 mb	731 mb	750 mb	706 mb	700 mb	700 mb	720 mb	mb	Pressure: Freezing

Pressure mb	Lerwick Height ft./100	Lerwick °F.	Lerwick Dew °F.	Lerwick Wind Dir. °	Lerwick Wind Vel. knots	Stornoway Height ft./100	Stornoway °F.	Stornoway Dew °F.	Stornoway Wind Dir. °	Stornoway Wind Vel. knots	Leuchars Height ft./100	Leuchars °F.	Leuchars Dew °F.	Leuchars Wind Dir. °	Leuchars Wind Vel. knots	Aldergrove Height ft./100	Aldergrove °F.	Aldergrove Dew °F.	Aldergrove Wind Dir. °	Aldergrove Wind Vel. knots	Liverpool Height ft./100	Liverpool °F.	Liverpool Dew °F.	Liverpool Wind Dir. °	Liverpool Wind Vel. knots	Downham Market Height ft./100	Downham Market °F.	Downham Market Dew °F.	Downham Market Wind Dir. °	Downham Market Wind Vel. knots	Larkhill Height ft./100	Larkhill °F.	Larkhill Dew °F.	Larkhill Wind Dir. °	Larkhill Wind Vel. knots	Camborne Height ft./100	Camborne °F.	Camborne Dew °F.	Camborne Wind Dir. °	Camborne Wind Vel. knots	Pressure mb
Surf	027	51	50	325	06	004	55	46	330	07	002	52	49	CALM		026	56	46	335	18	006	56	52	325	15	012	59	57	270	08	044	58	55	330	12	029	57	49	350	22	Surf
1000	024					035	53	43			029	51	47	360	11	038	56	45			023	55	51	324	24	015					024					040	56	47			1000
950		46	46	325	11		45	37	299	13		45	41	360	11		48	40				50	47	323	24		55	54	285	10		51	46	328	24		47	39	341	36		950
900	030·9	40	36	308	10	032·0	38	31	289	12	031·4	44	42	360	11	032·4	40	32			031·0	47	47	314	25	030·7	51	49	267	08	031·2	46	44	339	24	032·7	41	35	344	38	900
850		37	27	275	12		31	26	281	12		41	39	360	11		36	27				44	44	319	22		48	41	259	07		45	42	340	23		36	25	342	37	850
800	062·2	36	31	211	15	063·0	29	22	286	11	062·9	36	36	359	08	063·7	35	05			062·7	39	39	330	20	062·6	42	39	272	07	063·0	41	35	327	23	064·0	39	07	334	32	800
750		33	33	200	24		29	12	299	11		33	33	229	03		32	17				37	35	333	13		37	34	284	07		36	28	326	21		34	03	330	27	750
700	974	30	30	207	29	978	25	04	295	13	981	29	29	220	05	987	26	16			981	31	26	333	07	981	32	29	301	05	984	32	25	331	10	992	30	08	327	21	700
650		25	24	209	28		18	14	283	15		24	24	194	05		23	21				23	20	325	08		26	21	325	02		26	16	317	12		25	15	320	15	650
600	137·3	19	16	205	28	137·2	13	24	273	14	138·0	19	17	173	04	138·3	17	26			138·0	21	11	317	08	138·1	20	08	286	03	138·4	22	00	313	12	139·0	16	18	313	18	600
550		12	07	193	30		07	29	276	15		10	06	190	06		13	43				15	03	334	10		12	03	295	06		12	07	321	12		11	18	314	21	550
500	183·2	03	09	190	33	182·5	03	37	280	16	183·8	03	04	224	07	184·3	07	50			184·1	06	07	333	11	184·0	04	07	301	08	184·3	02	13	335	13	184·7	05	25	334	40	500
450		07	14	192	37		05	34	309	24		05	13	239	09		04	29				09	21	331	15		05	21	314	09		08	22	346	20		06	28	335	67	450
400	237·0	18	26	195	40	236·4	14	31	301	30	237·8	16	31	235	16	239·3	06	37			238·3	15	35	324	17	238·0	17	29	328	10	237·9	19	37	349	17	239·8	06	37	336	73	400
350		29	40	201	45		26	46	309	34		26	45	260	08		22	47				28	49	330	16		30	40	337	14		33	51	350	24		21	50	332	75	350
300	303·1	40	53	199	48	302·8	42		292	27	304·1	41		333	31	306·3	39	59			304·5	40	60	346	39	303·8	45		350	10	303·3	45		339	37	307·1	35	58	337	80	300
250		53		281	26		60		272	25		54		340	31		53					51		342	48		44		327	10		45		337	47		50		338	88	250
200	391·5	49		233	18	389·9	57		281	27	391·9	55		319	25	394·0	63				393·2	53		338	41	393·6	42		326	14	393·0	44		328	32	395·6	60		335	61	200
170		48					58		286	13		53		308	15		60					51		326	30		46		314	15		50		334	24		61		342	40	170
150	(154mb)	47				451·5	56		276	24																															150
130							51		274	18		54		285	12		61					51		326	23	457·2	45				456·3	49		315	18		57		345	38	130
110							54		272	13		57		275	12		57					53		308	13							53		316	16		59				110
100	Inversion					539·7	51		263	12	542·4	53		279	12		58					51		274	09							54		270	10		57				100
90	850mb 37° - 840mb 38°						49		268	06		53		280	06						543·9	53		304	13						544·6	53		285	09	544·1	55				90
80							50		253	09		52		214	03							53		326	06							52		313	04						80
70	Isothermal						52		238	03		52		175	03							53		325	05							50		004	02	Inversion					70
60	864 - 850 mb 37°					651·0	54				653·5	51									(73mb)	53										50		073	01	858mb 35° - 850mb 36°					60
						Inversion					Isothermal					Inversion					Inversion										(63mb)	46				830mb 34° - 800mb 39°				
						813mb 26° - 790mb 30°					942 - 900 mb 44°					850mb 36° - 833mb 37°					636mb 21° - 628mb 24°										Inversion					508mb 4° - 464mb 9°					
						487mb 06° - 456mb 09°					252 - 242 mb - 54°					Isothermal					Isothermal										907mb 45° - 887mb 47°					Isothermal				
						Isothermal										61° - 600 mb 17°					1006 - 995mb 56°										787mb 39° - 750mb 40°					581 - 560mb 12°				
						650 - 640 mb 18°										508 - 465 mb 07°					920 - 885 mb 47°										613mb 21° - 600mb 23°									
																					782 - 746 mb 37°																			
																					737 - 727 mb -53°																			
Tropopause	I 238 mb -55° 35,300'					I 233 mb -66° 35,700'					I 217mb -64° 37,500'					I 218 mb - 66° 38,000'					II 237mb -53° 35,600' II 220mb -55° 37,300'					I 280mb -52° 31,800'					I 311 mb - 46° 29,500'					I 208mb - 62° 38,700'					Tropopause

Monday 23rd. July 1951.

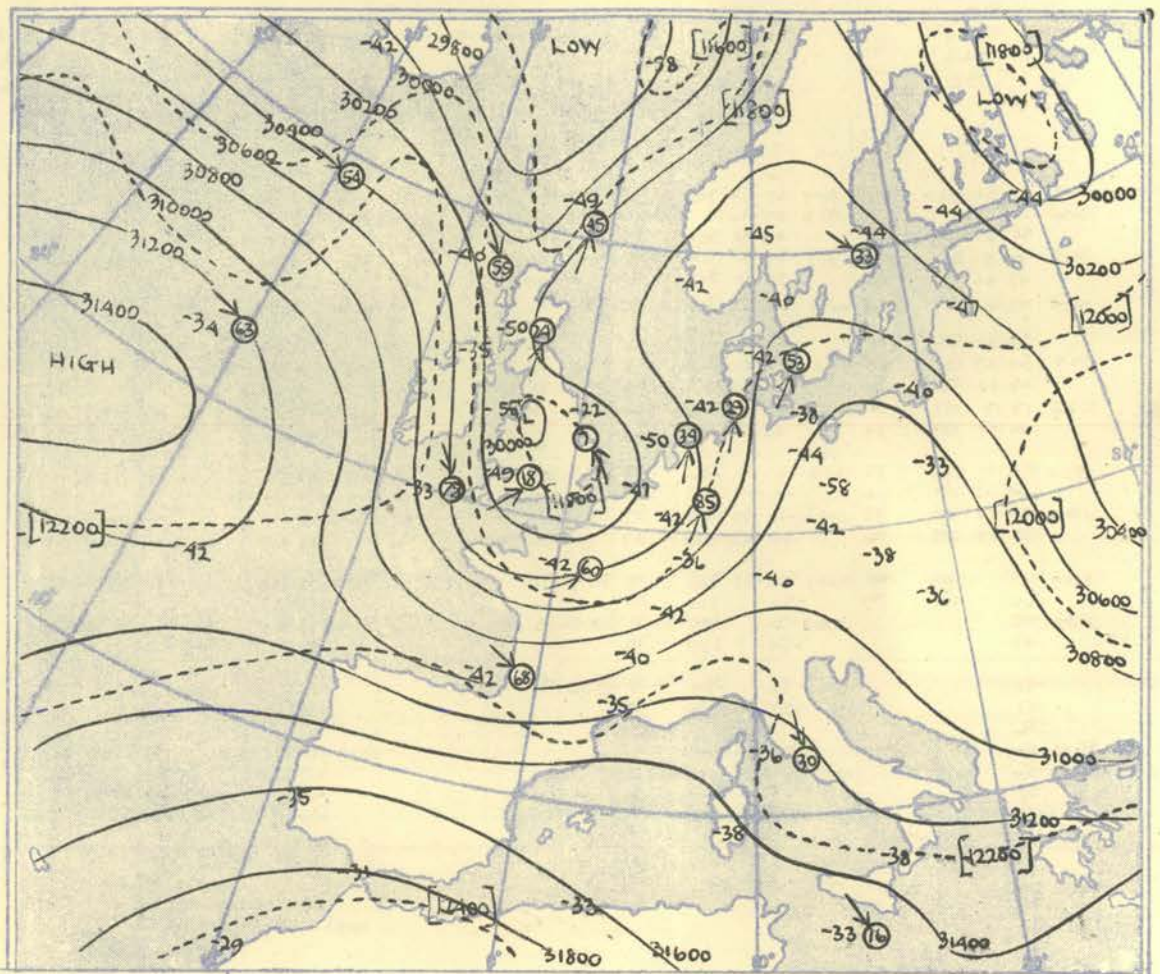
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



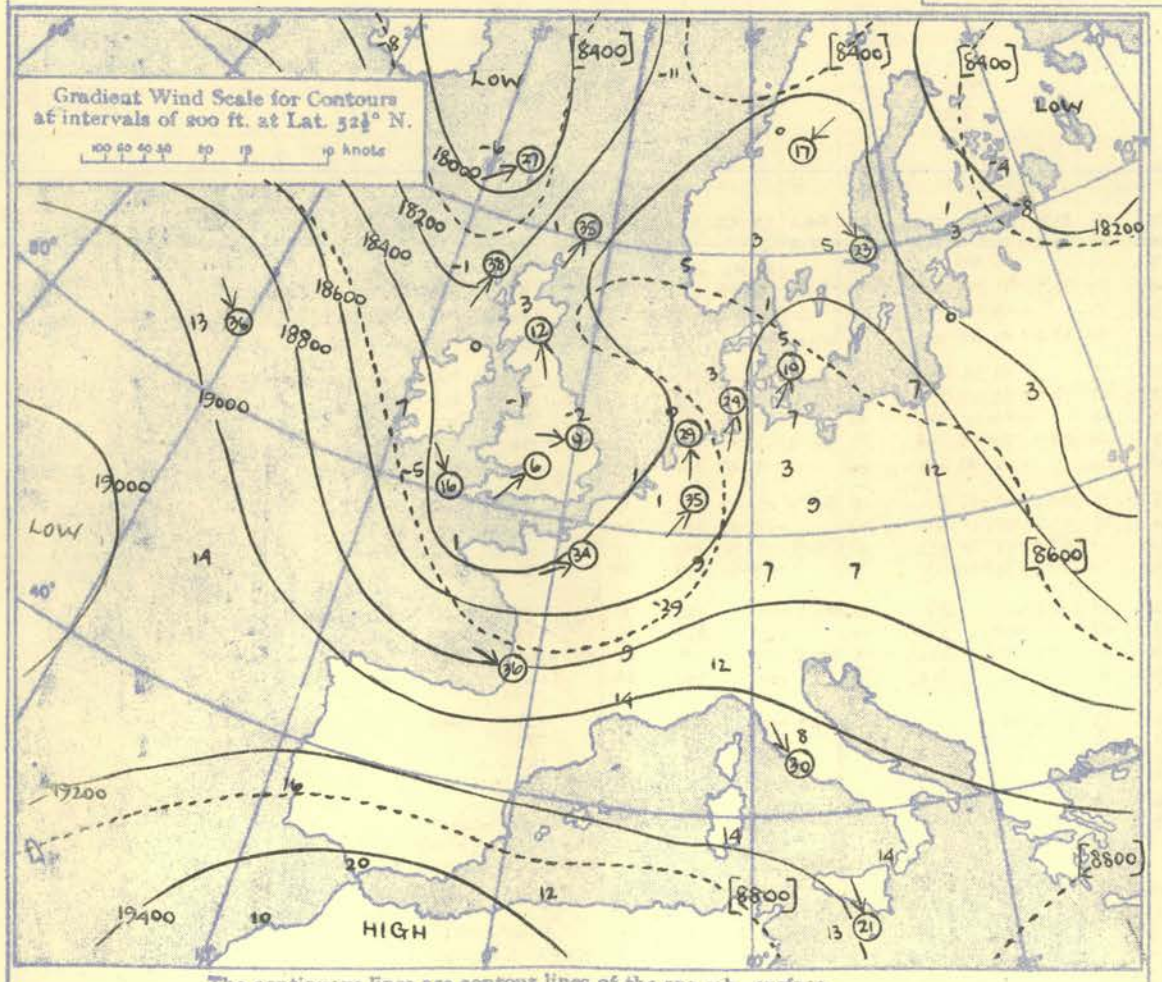
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

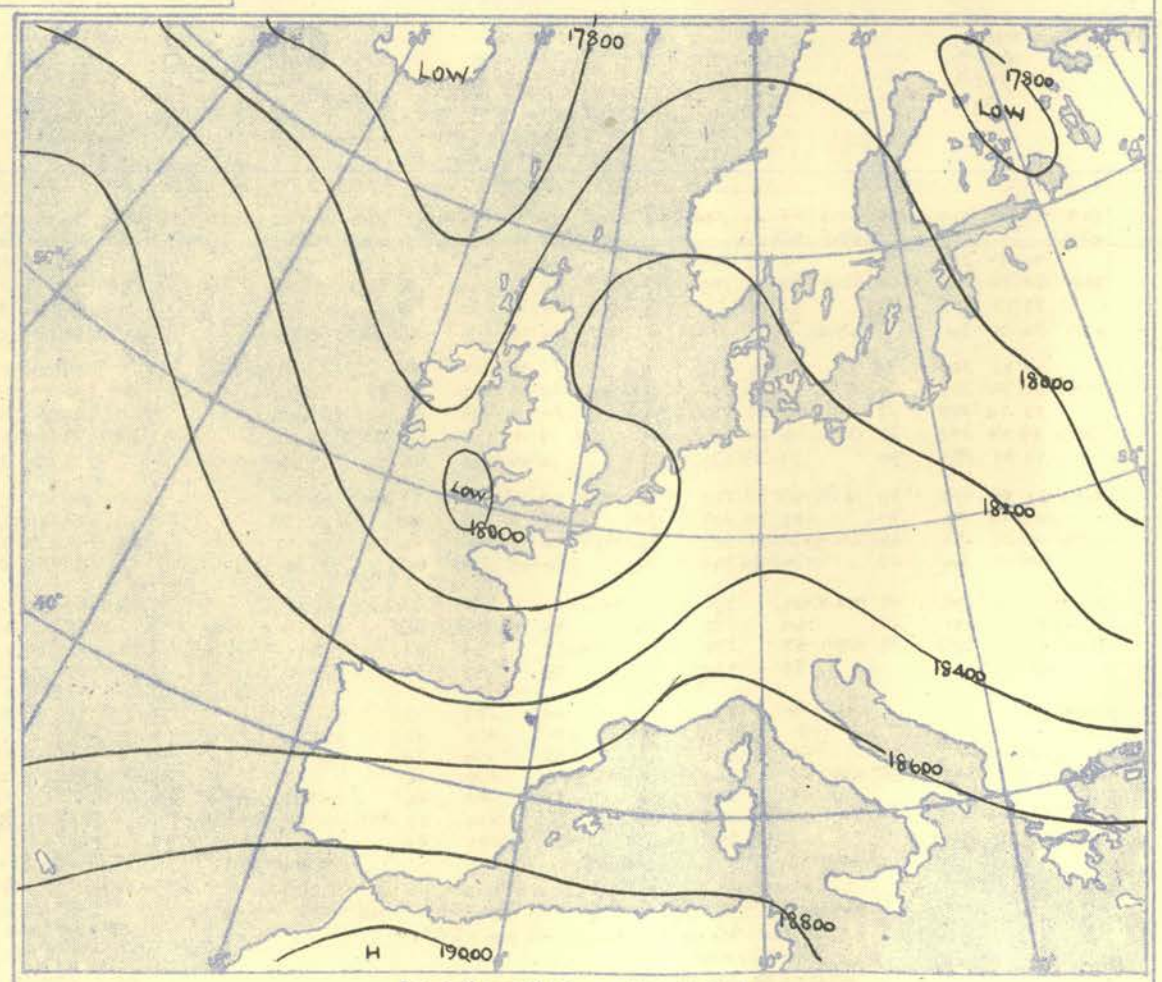
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	48.1°N 17°W			47.6°N 12-30°W			52°12'N 2°12'W		
Time	1230 hrs			1415 hrs			14 hrs		
Pressure M.S.L.	1024.9 mb			1023.9 mb			1012 mb		
Pressure Surf	1021.3 mb			1020.3 mb			1010.3 mb		
Pressure Freezing	668 mb			675 mb			690 mb		
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.	Height ft./100	Temp. °F.	Dew °F.
Surf	01.0	60	53	01.0	57	55	0.4	–	–
1000	06.8	58	56	06.5	53	52	3.3	–	–
950		49	47		50	44		–	–
900	35.5	43	37	35.2	43	39	32.2	46	45
850		48	21		36	36		43	43
800	67.3	46	29	66.6	44	23	63.9	42	40
750		41	30		39	36		–	–
700	103	37	12	102	36	30	99.5	33	30
650		31	16		28	–		–	–
600	143	24	×	143	26	–	139.7	22	16
550		15	×		23	–		–	–
500	190	12	×	189	15	–	185.9	08	–
450								–	–
400							240.5	-10	–
350								–	–
300							307.7	-37	–
250									
200									
170									

Cloud.
418 Cu 940-930
318 Cu —
Inversion
900 mb 43°
850 mb 48°

cloud.
418 Cu 900-840
318 Sc 830-820
318 Cu —
Inversion
850 mb 36°
800 mb 41°

cloud.
818 St 940-840
418 As 775-665
318 As 660-640

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

Place	Weather observer 58.9N 19.2W		Ronaldsway		Leuchars		Shoeburyness		Castle Archdale		Leuchars		Camborne								Place
Time	03hrs		03hrs		03hrs		09hrs		15hrs		21hrs		21hrs								Time
Type													Pilar								Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	310	25	340	18	Calm		300	04	310	13											Surf.
1,000	300	23	330	41	360	09	310	12	310	20	340	09									1,000
2,000	300	25	330	48	350	15	310	07	310	22	340	09									2,000
3,000	300	26	330	39	330	17	300	07	320	24	340	09									3,000
4,000	310	29	340	23	320	19	300	08	330	26	340	10									4,000
5,000	310	30			290	12			320	28	330	13									5,000
6,000	320	21			280	12	290	09	320	34	320	15									6,000
8,000					180	04	280	12			330	13									8,000
10,000	310	30			190	09	230	12			300	08									10,000
14,000	310	36			170	12	240	04			280	09									14,000
18,000	300	48			160	12	320	03			250	09									18,000
24,000	280	51			180	14	330	11			270	10									24,000
30,000	270	54			190	24	340	17			180	15	302	69							30,000
40,000	260	60			300	15	310	16					294	66							40,000
50,000	270	26			290	15	260	08					289	36							50,000
	(47000')				(45000')		280	09													
							(55000')														

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 OBSERVER.	WEATHER OBSERVER.	WEATHER OBSERVER.	WEATHER OBSERVER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER.	WEATHER WATCHER.		Ship
Lat/Long	58.9N 19.2W	58.7N 19.0W.	58.6N 18.2W	58.4N 17.5W	52.3N 19.6W.	52.5N 20.0W	52.6N 19.9W.	52.4N 20.0W		Lat/Long
Time G.M.T.	03Z	09Z	15Z	21Z	03Z	09Z	15Z	21Z		Time
Pressure M.S.L. mb	1017	1016	1016	1013	1024	1023	1022	1021		M.S.L.
Pressure Surf mb	1017	1016	1016	1013	1024	1023	1022	1021		Surf
Pressure Freezing mb	695	810	800.	760	695	690.	685	670		Freezing

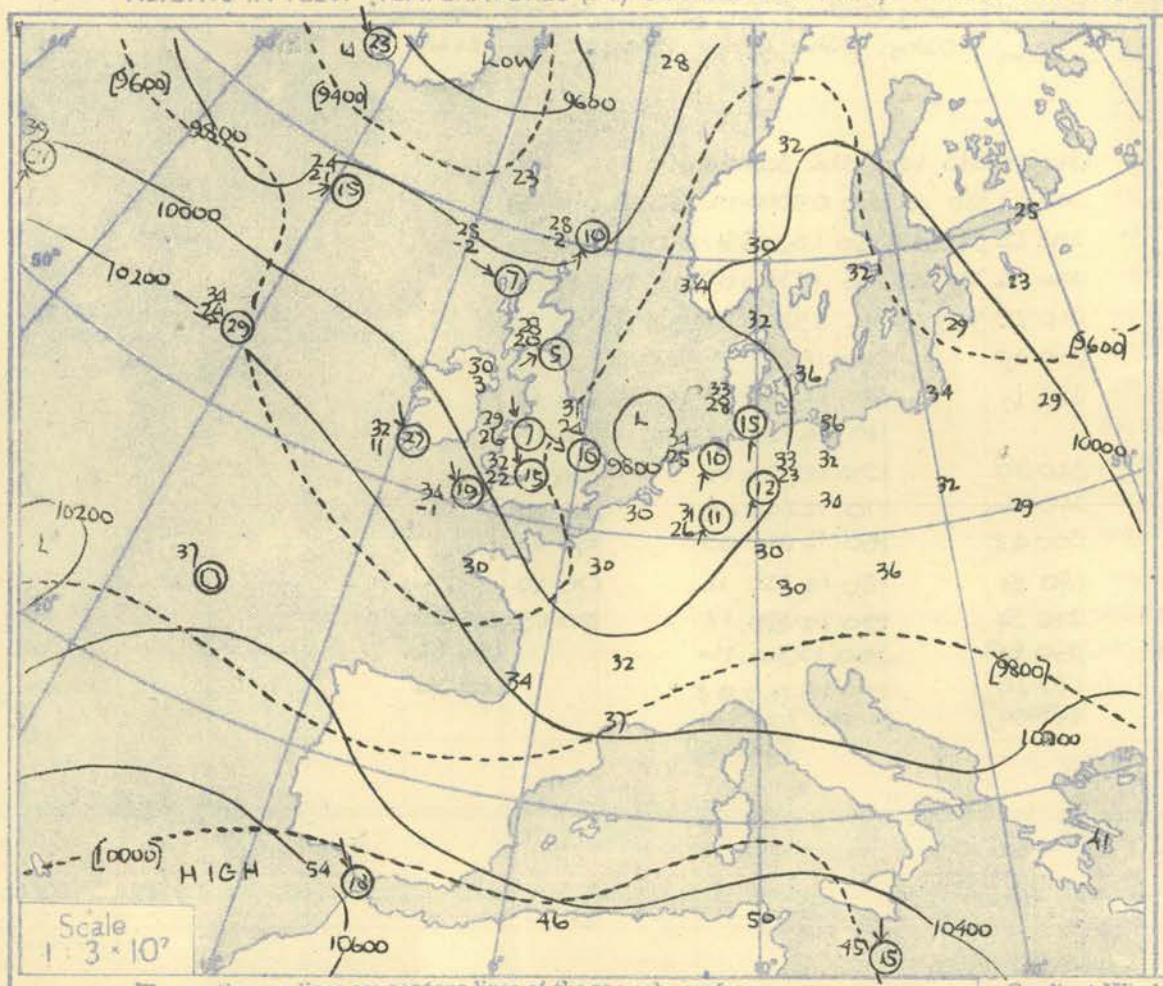
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		52	45	305	25		53	45	300	19		55	46	210	12		53	49	161	18
1000	04.5	50	44			04.3	51	43	280	18	04.3	52	44	228	12	03.7	52	52	165	22
950		42	38				45	38	286	18		45	41	233	13		46	45	166	21
900	32.8	35	30			32.8	42	34	294	15	32.8	39	36	238	15	32.2	43	41	188	23
850		32	24				36	27	297	16		34	30	240	14		42	42	233	22
800	63.8	29	18			64.0	31	22	295	19	64.0	32	22	238	11	63.7	37	37	249	23
750		27	12				28	18	289	23		26	18	234	12		31	28	250	25
700	98.6	22	03			98.8	22	14	285	27	98.6	24	21	235	15	98.8	26	18	260	24
650		16	-08				17	11	282	31		20	18	245	19		20	00	256	24
600						138.1	14	08	278	34	138.0	14	11	260	28	138.2	14	-03	256	25
550		For winds					06	00	277	37		09	03	270	37		09	-06	266	23
500		See top of page.				183.3	-04	-10	275	36	183.4	-01	-06	272	35	183.7	01	-15	270	24
450							-14	-20	277	46		-11	-19	273	34		-08	-33	282	27
400						236.3	-23	-29	279	43	236.7	-23	-29	272	32	237.3	-21	-42	296	43
350							-35	-42	267	24		-37	-41	265	33		-35	-53	303	54
300						301.3	-47		242	20	301.4	-50		271	38	302.9	-42		305	8
250							-51		220	45		-52		277	36		-54		312	81
200						390.0	-44		260	36	390.2	-40		276	36	391.4	-53		322	58
170							-44		265	29		-44		295	26		-52		324	39
150							-48		265	25		-44		292	29		-53		315	33
130							-47		267	22		-47		287	19		-51		297	26
110							-46		272	12		-43		289	20		-52			
100						542.9	-45		274	15	544.0	-44		290	20	(115 mb)				
90							-47		276	12		-44		295	13					
80							-47		276	13		-43		310	09					
70							-43		276	05		-42								
60							-42		Calm.											

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		57	42	280	08		58	58	250	15		59	49	225	17		62	55	225	18						Surf
1000	06.7	54	41	286	06	06.4	55	47	240	09	06.2	57	49	226	16	05.9	58	52	226	18						1000
950		48	40	288	06		48	44	240	09		51	44	229	17		51	47	227	18						950
900	35.3	41	37	290	07	34.9	41	31	242	13	34.9	44	43	233	21	34.7	45	42	231	19						900
850		48	32	303	10		45	22	244	10		48	12	251	21		44	38	235	19						850
800	67.0	42	40	308	13	66.5	45	13	247	17	66.8	45	03	263	22	66.5	42	31	245	18						800
750		38	23	313	21		40	-03	279	41		36	33	266	24		37	25	252	21						750
700	102.5	33	18	313	30	102.1	36	-01	271	23	102.2	34	24	263	29	102.0	36		253	26						700
650		28	10	313	35		30	-02	274	28		26	14	263	38		30		262	28						650
600	142.7	23	00	308	42	142.3	23	05	279	41	142.4	24	-14	270	39	142.3	26		263	33						600
550		16	02	304	48		20	13	283	47		19	-24	273	40		19		266	33						550
500	189.0	13	11	288	36	188.9	14	-07	288	45	188.9	11	-32	278	49	188.8	11		268	36						500
450		05	01	288	43		05	-21	291	50		01	-36	273	54		03		273	43						450
400	244.2	-05	-11	287	41	243.2	-06	-33	285	53	243.7	-10	-41	286	56	243.8	-07		285	41						400
350		-19	-23	283	49		-21	-43	278	62		-23	-49	301	75		-17		290	40						350
300	311.8	-34	-43	276	65	311.3	-34	-47	266	72	310.5	-40	-60	285	62	311.5	-33		297	42						300
250		-52		290	56		-49		254	98		-57		275	70		-52		313	43						250
200	399.6	-72		296	68		-64		270	103	397.5	-62		277	70	399.4	-72		294	45						200
170		-78		307	55		-64		270	70		-60		287	51		-69		292	40						170
150		-78		312	40		-65		270	59		-60		297	46		-67		297	41						150
130		-77		299	27		-67		270	37		-59		296	34		-68		306	41						130
110		-71		266	18		-65		270	30		-58		281	19		-63		307	27						110
100	541.7	-69		246	22	545.7	-63		270	29	545.5	-56		280	17	543.9	-63		310	16						100
90		-68		243	26		-62		270	28		-53		279	14		-60		310	16						90
80		-67					-58					-51		279	11		-57									80
70		-66					-54					-51		279	06											70
60	(78 mb)						-54																			60
							-55																			
						(44 mb)	-53																			

	WEATHER OBSERVER. 03Z	WEATHER OBSERVER. 09Z	WEATHER OBSERVER. 15Z	WEATHER OBSERVER 21Z	WEATHER WATCHER 03Z	WEATHER WATCHER 09Z	WEATHER WATCHER. 15Z	WEATHER WATCHER. 21Z	
	Isothermal. 882 mb - 860 mb 33° 800 " - 762 " 29°	Inversion. 913 mb 40°-900 mb 42° Isothermal. 805-776 mb 31° 706-690" 22° 623-600" 14°	Inversion 744 mb 25°-718 mb 26° Isothermal. 860-816 mb 34° 693-675" 23°	Isothermal. 891-850 mb 42° 325-311- -40° Inversion 561 mb 8°-554 mb 10°	Inversion. 880 mb 39°-850 mb 48° 530- 12°-513- 14°	Inversion 888 mb 40°- 859" 45° Isothermal. 859-800 mb 45° 604-600" 23°	Inversion 650 mb 26°-635 mb 28° Isothermal. 750-715 mb 36°	Inversion 850 mb 44°-831 mb 45° 720- 32°- 700- 36° Isothermal. 870-850 mb 44°	
Tropopause	NR	II 278 mb -54° 31.800'	I 265 mb -59° 33.100'	II 250 mb -54° 34.200'	II 181 mb -77° 42.100'	II 200 mb -64° 40.000'	I 207 mb -70° 39.000'	I 180 mb -82° 42.200'	Tropopause

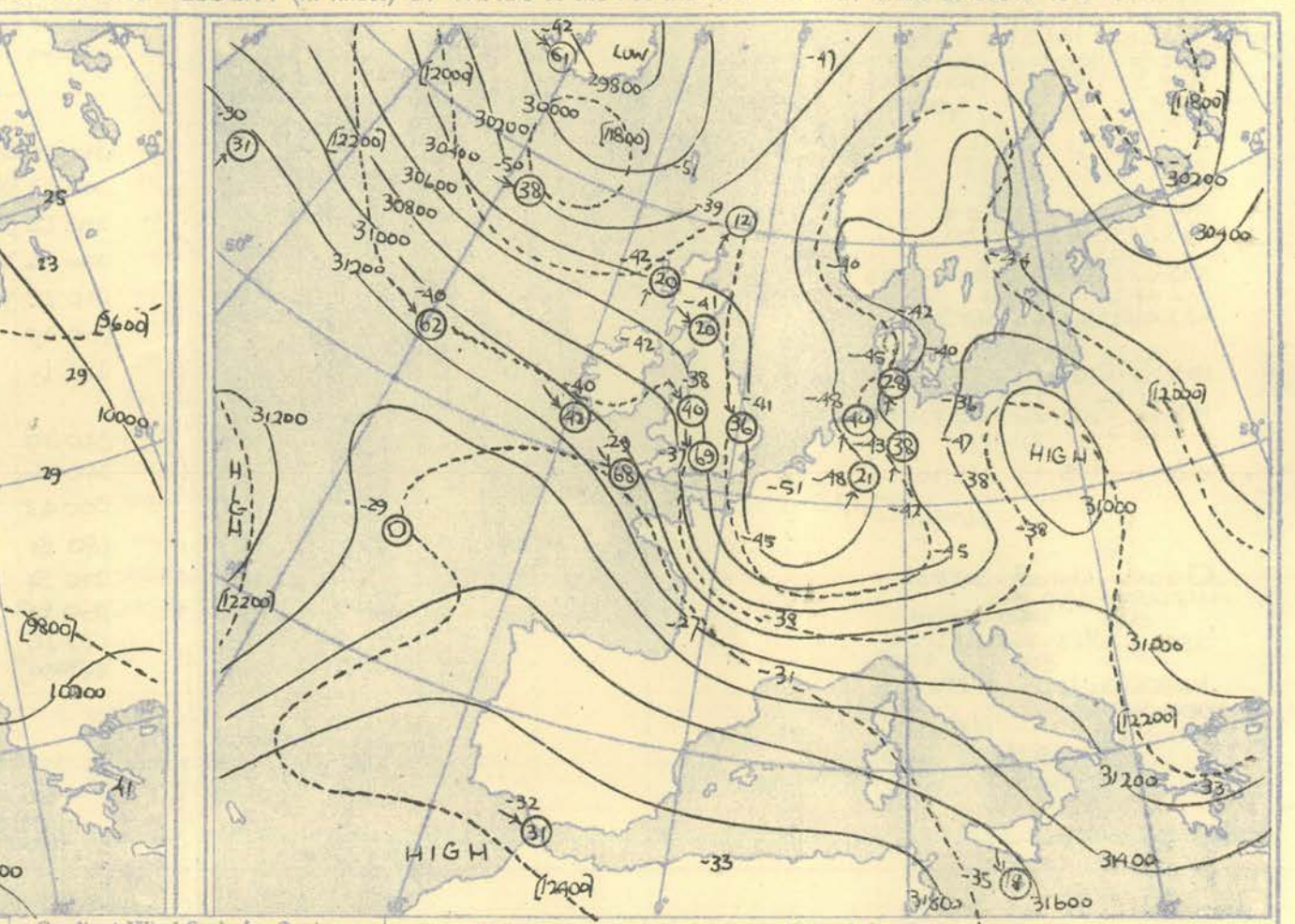
Monday 23rd July 1951

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.



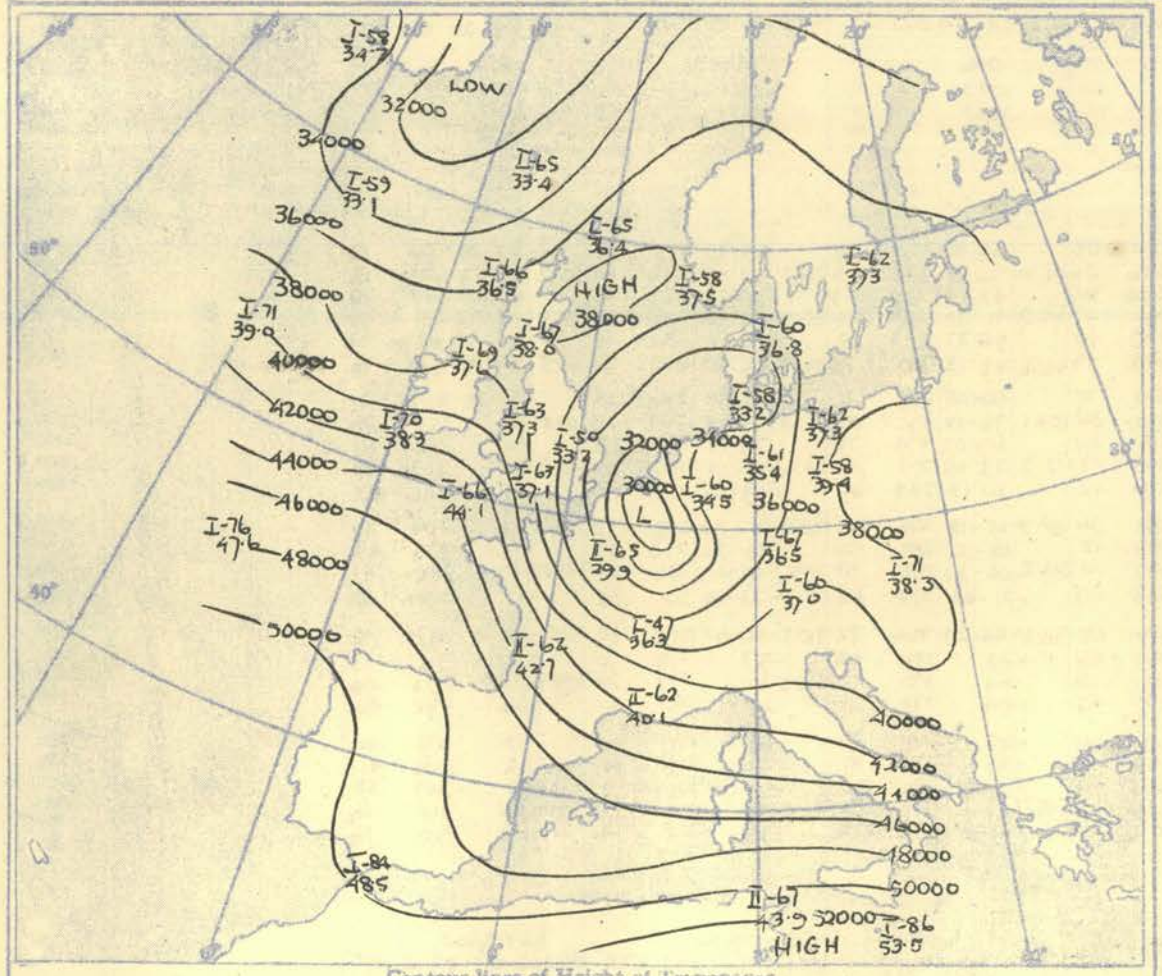
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little change occurred in the broad thermal pattern but there were some remarkable changes in the detailed winds at 300 mb over the British Isles.

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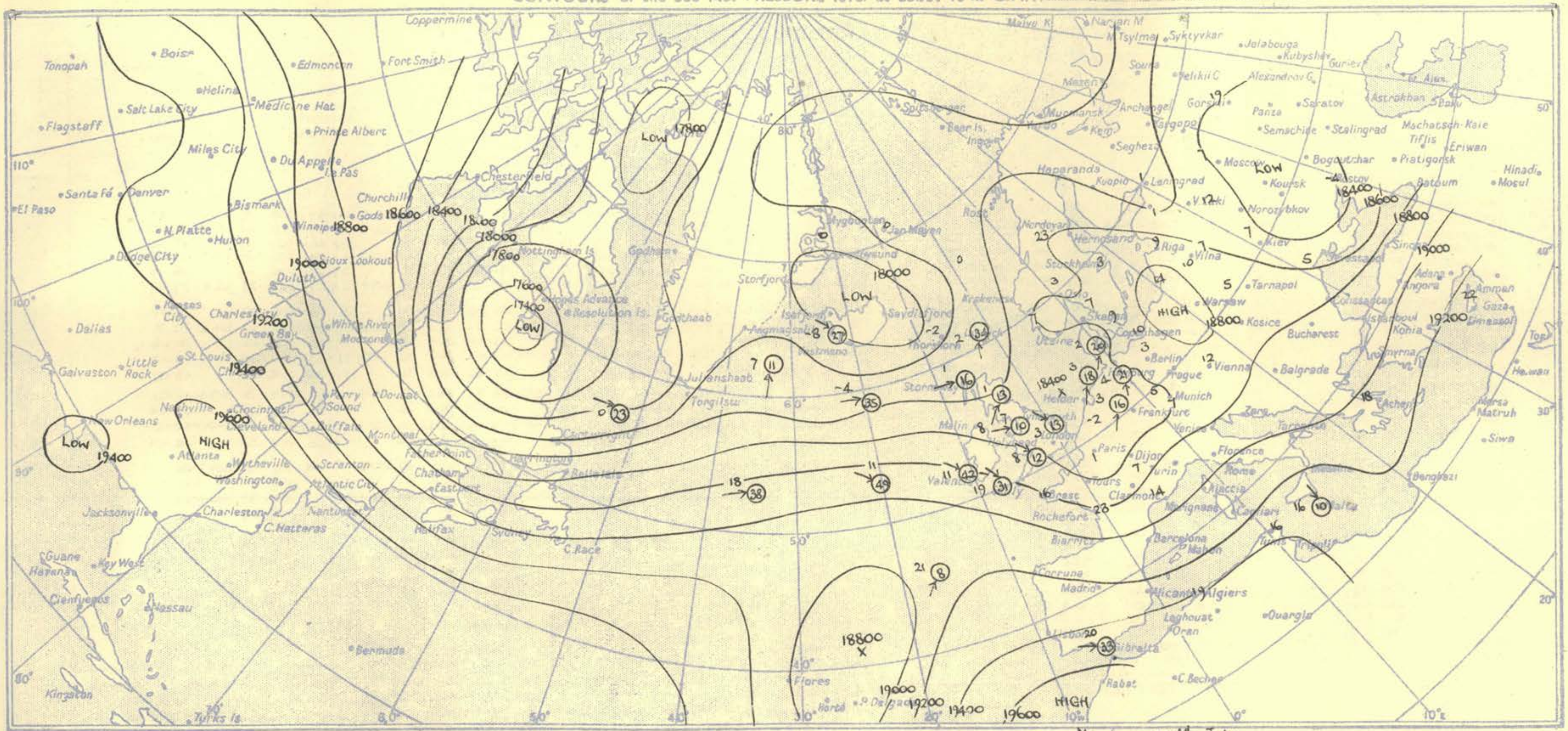
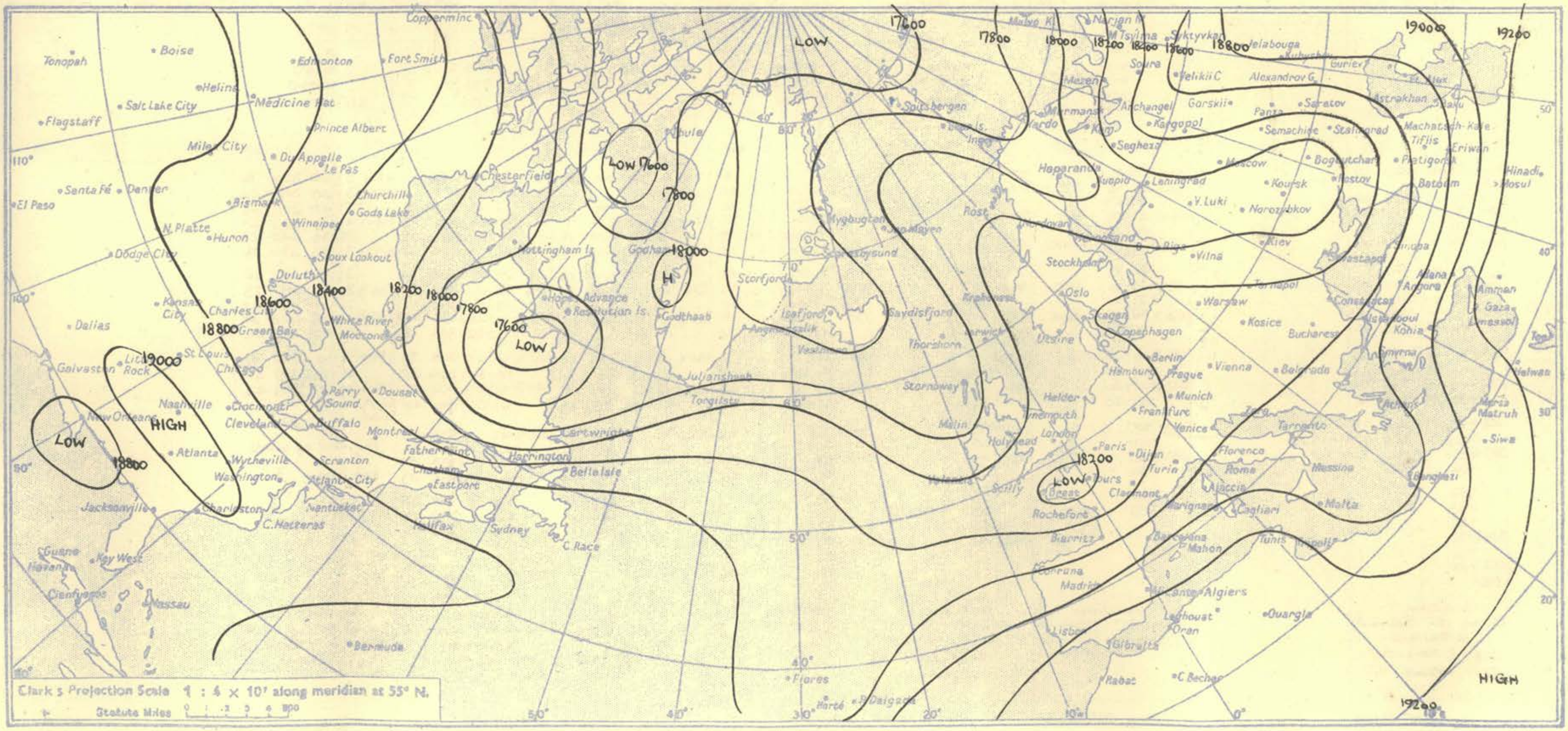
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Monday 23rd July, 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Monday 23rd July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Monday 23rd July, 1951.

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

15h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	Valentia
Pressure: Time	15h. G.M.T.	G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.	15h. G.M.T.
Pressure: M.S.L.	1011.5 mb	mb	1012.4 mb	10.57 mb	1012.1 mb	1008.1 mb	1010.9 mb	1019.1 mb	1022.3 mb
Pressure: Surf	1001.5 mb	mb	1011.6 mb	1006.2 mb	1010.1 mb	1003.8 mb	995.3 mb	1007.6 mb	1021 mb
Pressure: Freezing	742 mb	mb	754 mb	720 + 809 mb	723 mb	711 mb	681 mb	717 + 671 mb	700 mb

Pressure mb	Lerwick Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Stornoway Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Leuchars Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Aldergrove Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Liverpool Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Downham Market Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Larkhill Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Camborne Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Valentia Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	55	43	330	09						00·2	55	51	150	03	02·6	59	52	320	18	00·6	56	53	360	12	01·2	60	56	310	10	04·4	62	49	320	15	02·9	60	49	330	18	00·3	59	49			Surf
1000	02·9	55	43								03·3	53	48	335	09	04·3	58	51			03·3	55	51	350	15	02·3					60·1					05·0	59	49	318	24	06·0	56	47			1000
950		47	40	320	09							48	43	335	09		50	44				49	44	340	22		54	51	317	19		54	45	315	21		50	46	327	27		49	42			950
900	31·4	40	37	310	07						31·9	41	40	335	09	33·1	43	40			32·0	44	40	340	25	01·4	49	46	315	15	02·1	47	42	317	20	03·7	43	40	333	27	34·8	42	36			900
850		36	29	297	07							37	37	332	08		37	35				40	37	336	28		45	42	306	13		41	40	326	18		39	32	330	29		36	32			850
800	62·7	35	25	274	07						63·3	36	32	319	07	64·4	31	30			63·5	38	34	335	24	63·2	41	37	295	11	63·6	37	35	337	19	65·1	34	27	324	27	66·1	37	27			800
750		33	04	252	09							32	20	308	06		34	10				34	30	335	15		36	30	291	09		37	30	337	15		36	10	328	23		38	00			750
700	97·7	28	02	222	10						98·4	28	20	251	05	99·6	30	03			98·8	29	26	335	07	98·5	31	24	278	16	99·1	32	22	324	15	100·4	34	01	327	19	101·4	32	11			700
650		22	01	219	16							24	17	235	08		25	03				24	19	306	08		24	14	294	09		27	01	309	19		29	13	319	24		26	06			650
600																																														600
550	137·3	17	04	214	26						138·2	18	14	240	08	139·5	21	-07			138·6	19	05	290	09	138·5	19	08	299	10	139·2	22	02	307	14	140·6	22	-23	322	29	141·4	20	10			550
		10	05	205	37							11	05	197	12		13	-14				14	-08	277	09			11	05	307	11		17	-03	318	11		17	-30	324	30		13	02			
500	182·9	02	-01	201	34						184·0	01	-07	209	13	185·5	08	-19			184·7	07	-13	270	10	184·3	03	-06	326	13	183·4	08	-14	322	12	187·2	19	-07	322	31	187·6	11	-21			500
450		-07	-10	198	35							-07	-19	227	13		-02	-05				00	-26	292	15		-08	-16	339	20		-02	-27	333	30		07	-13	315	43		02	-36			450
400																																														400
350	236·7	20	-25	202	29						237·9	-14	-29	300	16	239·9	-14	-19			239·3	-08	-34	329	34	238·1	-18	-36	343	20	240·7	-14	-40	336	20	242·9	-03	-25	314	46	242·5	-10	-45			350
		-25	-35	235	16							-26	-39	300	16		-25	-33				-24	-45	327	37		-30		348	36		-22	-47	331	54		-14	-35	314	53		-24	-51			
300	302·9	-39	-50	245	12						304·3	-41		284	20	306·3	-41				306·1	-38	-55	319	40	302·0	-41		340	36	307·6	-37	-60	327	69	311·1	-29	-46	311	68	309·1	-40				300
250		-55		245	13							-59		289	20		-60					-54		311	65		-50		339	38		-55		320	89		-47		308	71		-55				250
200																																														200
170	390·4	-59		224	14						391·3	-60		273	18	393·1	-58				393·3	-51		309	42	392·7	-49		310	21	395·4	-60		327	59	400·1	-62		312	73	396·3	-64				170
		-51		229	14							-54		285	18		-55					-53		304	26		-49		290	19		-61		331	36		-65		309	54		-60				
150		-51		226	14							-54		278	17		-62					-53		301	20		-50		274	17		-61		317	27		-63		310	36		-60				150
130		-50		222	10							-51		269	15		-58					-53		285	15		-52		290	14		-58		285	22		-61									130
110		-50		230	12							-53		254	14		-58					-49					-52		286	12		-58		279	15		-60									110
100	541·4	-50		238	10						541·6	-53		247	14	541·5	-59									543·9	-53		250	06	543·5	-58		276	13	547·1	-61									100
90		-50		234	07							-51		256	11		-55										-52		254	07		-55		293	04		-60									90
80		-49		224	06							-51		268	09		-55										-49		280	07		-58					-59									80
70		-48		211	03							-52		L.v.			-58																			-58									70
60		-45		190	03							-47		L.v.			-54																			-54									60
	(058 mb) -45										(050 mb) -44					(050) -53																			(053 mb) -51									
	Isothermal 828-783mb. 35° 369-350mb. -25°										Isothermal 810-785mb. 35° 562-543mb. 11°					(040) -51 (034) -53 mb Inversion 796mb. 30°-762mb. 35° Isothermal 738-723mb. 33° 525-496mb. 08°					Inversion 600mb. 19°-582mb. 20° Isothermal 837-810mb. 39° 457-443mb. 0° Max wind:- 310° 75kts. 232mb. 36,300'										Inversion 795mb. 36°-774mb. 40° 700mb. 32°-685mb. 33° 400mb. -14°-391mb. -13° Isothermal 754-737mb. 37°					Inversion 809mb. 33°-740mb. 36° 717mb. 32°-700mb. 34° 550mb. 17°-518mb. 21° 444mb. 05°-437mb. 06°					Inversion 828mb. 33°-790mb. 38° 545mb. 13°-524mb. 15° Isothermal 790-750mb. 38° 550-545mb. 13°				
Tropopause	I 227mb. -65° 36,400'		I 211mb. -67° 38,000'	I 217mb. -69° 37,600'	I 223mb. -63° 37,300'	I 265mb. -50° 33,200'	I 223mb. -63° 37,100'	I 165mb. -66° 44,100'	I 214mb. -70° 38,300'	Tropopause

21h. G.M.T.

Station	Lerwick	Stornoway	Leuchars	Aldergrove	Liverpool	Downham Market	Larkhill	Camborne	
Pressure: Time	21h. G.M.T.	G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	21h. G.M.T.	G.M.T.
Pressure: M.S.L.	1013.3 mb	mb	1014.7 mb	1018.5 mb	1015.4 mb	1012.4 mb	1015.2 mb	1020.2 mb	mb
Pressure: Surf	1003.4 mb	mb	1013.9 mb	1008.9 mb	1013.4 mb	1008.0 mb	999.3 mb	1009.5 mb	mb
Pressure: Freezing	755 mb	mb	745 mb	820 mb	750 mb	724 mb	726 mb	820+797+700 mb	mb

Pressure mb	Lerwick Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Stornoway Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Leuchars Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Aldergrove Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Liverpool Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Downham Market Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Larkhill Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Camborne Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	53	45	350	04						00·2	53	49			02·6	54	49			00·6	56	48	310	15	01·2	53	51	310	15	04·4	57	49	350	14	02·9	57	50	320	16						Surf
1000	03·6										04·0	52	48			05·0	53	49			04·2	55	48	314	30	03·4	52	50			04·1					05·8	57	50	312	24						1000
950		46	32	323	06							47	43				47	43				50	45	322	24		47	46	329	22		52	47	348	21		51	45	321	24						950
900	32·1	39	32	307	05						32·6	43	39	For		33·6	41	40			33·0	45	40	322	21	32·0	44	43	333	18	33·0	45	38	339	29	34·3	42	37	333	23						900
850		37	16	296	05							36	33				35	35				38	36	324	19		44	43	337	18		40	37	338	28		36	30	340	23						850
800	63·4	36	11	282	05						63·8	30	27	winds		64·8	29	27			64·4	35	11	327	18	63·7	41	40	325	15	64·5	35	32	338	21	65·6	30	23	330	26						800
750		31	05	227	07							30	17				25	07				32	02	320	16		35	34	317	14		31	27	335	14		37	13	321	26						750
700	98·4	25	-02	207	07						98·7	27	01	see		99·8	25	-11			99·4	30	-02	313	10	99·0	29	28	320	12	99·6	28	09	302	11	100·9	32	05	318	23						700
650		22	-07	212	12							21	-07				20	-20				23	-04	35	10		23	21	326	10		23	-01	292	12		26	-01	320	27						650
600																																														600
550	137·9	17	-11	199	21						138·3	16	-18	page		139·0	16	-07			139·1	17	-06	313	18	138·8	15	11	314	13	139·3	20	-28	284	07	140·8	20	-06	320	30						550
		08	-06	195	25							09	-26				08	-08				12	-16	308	20		10	00	303	14		17	-32	292	18		16	-05	310	36						
500	183·4	01	-11	198	36						183·8	00	-35	3.		184·4	03	-15			184·9	06	-19	307	21	184·4	02	-11	292	18	185·6	11	-22	308	29	187·0	12	-10	308	39						500
450		-11	-18	201	36							-09	-44				-10	-33				-01	-10	290	23		-05	-28	281	22		00	-14	306	33		01	-18	299	41						450
400																																														400
350	236·9	-17	-35	209	12						237·5	-17	-30			237·6	22	-45			239·4	-12	-18	282	23	238·3	-18	-36	276	22	240·3	-12	-26	302	32	241·8	-09	-29	304	44						350
		-30	-38	209	12							-30	-40				-35	-53				-26	-30	274	21		-28	-45	307	30		-27	-54	301	42	(072 mb)	-15	-37							
300	302·9	-42		204	08						303·1	-48				302·7	-50				305·8	-42		260	22	304·3	-43		317	32	306·6	-42		295	40												300
250		-62		208	13							-67					-55					-59		267	19		-61		313	32		-62		301	54		For rest of winds									250
200	389·6	-56		194	12						389·4	-53				390·7	49				393·3	-53		278	27	391·2	-53		296	27	393·1	-60		295	50												200
170		-54		215	15							-54					-51					-49		284	28		-56		289	24		-61		291	39		See page 3.									170
150		-53																				-53		293	27		-57		287	19		-64		291	35												150
130		-53										-54					-53					-55		290	22		-57		286	15		-60		293	22												130
110		-52										-55					-55					-52		290	10		-57		285	12		-62		288	18												110
100	539·8	-52																			543·3	-52		286	11						540·4	-63																100
90		-51																				-54		250	09						(096 mb)	-62																90
80	(082 mb)	-50																				-55		287	06																						80
70																						-56																									70
60																																														60
	Inversion 862mb. 35°-834mb. 39° Isothermal 525-515mb. 04° 432-402mb. 16°										Inversion 950mb. 47°-935mb. 48° 772mb. 26°-745mb. 32°					Inversion 750mb. 25°-721mb. 27° 475mb. -9°-465mb. -7° Isothermal 765-750mb. 25°					Inversion 822mb. 34°-810mb. 36°					Inversion 900mb. 44°-875mb. 46° Isothermal 380-371mb. 24°					Inversion 740mb. 30°-726mb. 32° Isothermal 675-662mb. 24° 630-600mb. 20°					Inversion 800mb. 30°-789mb. 36° 789mb. 36°-758mb. 38° Isothermal 1010-1000mb. 57°					
Tropopause	I 233mb. -70° 35,600'		I 287mb. -72° 35,300'	I 267mb. -59° 32,700'	I 227mb -65° 36,700'	I 232mb. -68° 36,000'	I 211mb. -70° 38,300'	N.R.		Tropopause

HMSO P.533 MO Dunstable

No. 11804 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Tuesday 24th July 1951. Page 1.

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

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Pressure: Time	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.
Pressure: M.S.L.	1015·3 mb	1017·6 mb	1016·9 mb	1019·9 mb	1017·2 mb	1014·2 mb	1017·8 mb	1021·3 mb	1025·8 mb
Pressure: Surf	1005·2 mb	1016·0 mb	1016·1 mb	1011·3 mb	1015·2 mb	1009·7 mb	1001·7 mb	1010·7 mb	1022 mb
Pressure: Freezing	768 mb	836 mb	768 mb	835, 745 mb	740 mb	738 mb	763 mb	820, 782, 734 mb	710 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	45	43	calm		0·4	48	47	315	05	0·2	50	48	Calm		02·6	53	51		
1000	04·1	46	43			04·7	51	47			04·6	49	45	345	09	05·6	52	49		
950		44	26	320	03		45	40	303	18		47	40	345	10		48	45		
900	32·5	38	34	300	03	33·2	39	35	296	16	33·1	40	34	345	14	34·2	41	37		
850		36	25	270	04		34	31	292	15		35	29	337	17		35	32		
800	68·8	33	13	235	03	64·4	30	23	294	14	64·1	27	23	317	16	65·4	36	23		
750		30	06	210	03		28	08	296	13		31	11	317	15		33	23		
700	98·6	25	-2	196	07	99·1	24	00	298	15	98·9	27	-1	317	15	100·5	27	19		
650		21	-6	183	13		19	13	295	18		22	-17	325	16		20	15		
600	138·1	14	-15	193	18	139·6	12	07	297	20	138·5	14	-15	331	16	140·0	15	09		
550		08	-03	187	21		05	-4	300	22		06	-8	321	15		08	00		
500	183·5	2	-6	184	30	184·8	-4	-15	304	21	185·7	-3	-13	292	12	185·9	-3	-9		
450		-11	-17	188	30		-13	-24	305	28		-15	-21	283	12		-13	-21		
400	236·8	-20	-26	202	20	237·6	-27	-34	303	28	236·6	-26	-33	263	10	238·5	-29	-32		
350		-30	-37	203	15		-40	-48	300	23		-37	-48	220	12		-37	-44		
300	301·4	-43		197	13	302·8	-53		276	16	301·4	-50		206	23	303·2	-55			
250		-63		182	21		-48		274	15		-64		208	22		-55			
200	389·4	-55		214	07	390·6	-51		298	17	387·7	-53		283	13	391·4	-47			
170		-55		223	06		-52		303	16		-52		291	12		-50			
150		-53		228	06		-51		301	16		-53		283	11		-55			
130		-54		231	07		-52					-54		290	10		-56			
110		-54		247	07							-55		283	10		-56			
100	539·5	-54		233	06						541·6	-58		294	09	541·3	-56			
90		-54		187	03							-58		291	07		-56			
80		-54		198	03							-57		296	08					
70		-54		242	03							-56		288	04					
60												-56								
	Inversion 1005m 43°-985m 41° 870m 35°-840m 37°					Isothermal 812-766mb 30°					Inversion 793m 26-768m 32° Isothermal 750-732mb 31°					Inversion 836mb 32-782mb 38° Isothermal 707-691mb 27°				
Tropopause	I 232 mb -71° 35800'					I 292 mb -56° 30800'					I 230 mb -68° 35800'					I 276 mb -61° 32400'				

Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	[illegible] Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	57	48	320	12	01·2	52	44	300	15	04·4	48	44	320	16	02·9	57	53	330	12	0·3	54	51	350	04
1000	04·7	51	47	325	10	05·8	51	43			04·8					05·8	55	51	328	18	04·5	53	48	328	03
950		46	43	324	28		46	39	335	28		47	39	333	27		49	45	330	21		51	43	305	09
900	33·2	42	38	321	21	32·4	44	37	337	28	33·3	41	34	340	28	34·5	44	39	329	26	34·2	44	39	307	14
850		37	33	321	20		40	21	335	24		37	27	328	20		38	31	326	16		37	34	305	18
800	64·5	33	24	324	21	65·9	38	37	327	17	64·7	35	17	315	17	65·8	29	26	328	24	66·6	36	32	302	19
750		32	17	326	24		33	32	309	17		31	04	315	17		34	17	330	31		33	19	298	18
700	99·6	28	07	326	24	99·1	28	28	296	13	99·6	27	00	320	17	100·9	28	13	328	30	101·3	31	22		
650		24	00	333	20		21	21	266	07		22	-6	320	19		20	11	320	31		24	08		
600	138·3	16	-8	328	16	138·7	14	11	260	06	139·4	16	-14	313	20	140·4	13	07	314	33	141·8	21	-2		
550		07	-15	330	20		07	-2	278	08		06	-21	303	25		10	-6	309	42		14	-6		
500	184·7	-1	-10	322	21	184·1	-1	-12	275	12	184·6	00	-8	301	28	185·9	01	-28	307	46	187·9	06	-11		
450		-10	-16	319	18		-10	-18	269	18		-9	-24	297	28		-9	-39	307	57		-3	-21		
400	238·1	-22	-26	307	15	237·6	-19	-25	267	13	238·1	-22	-40	289	27	239·5	-18	-47	302	70	241·3	-10	-26		
350		-35	-40	341	05		-34	-41	240	07		-36	-53	277	33		-31	-55	293	83		-21	-27		
300	303·1	-50		124	09	302·4	-50		168	10	303·1	-45		270	46	305·3	-46		302	84	309·4	-37	-42		
250		-52		287	09		-65		218	10		-55		278	46		-61		306	73		-55			
200	391·4	-47		300	24	389·7	-52		279	20	391·2	-52		287	38	392·3	-58		287	85	396·6	-72			
170		-47		302	21		-55		282	16		-52		292	30		-58		306	52		-63			
150		-53		303	17		-58		281	16		-60		280	23		-61					-62			
130		-62		288	17		-58		280	15		-68		279	20		-64					-62			
110		-56		293	16		-57		280	10		-58		278	17		-62					-63			
100	542·6	-54		266	08	540·7	-55		275	07	540·4	-59		263	15	539·7	-64				543·1	-64			
90		-54		274	10		-62					-60		272	11		-64					-64			
80		-54										-61		285	10		(71)								
70												-60													
60																									
	Isothermal 776-740mb 32°					Isothermal 958-920mb 46°					Inversion 1002m 48°-980m 46° Isothermal 861-838mb 37° 786-778mb 32°					Inversion 800mb 29-762mb 36° Isothermal 590-555mb 11°					Inversion 808mb 34°-790mb 35° 757mb 32°-734mb 34°				
Tropopause	I 270 mb -59° 32500'					I 255 mb -66° 33700'					I 280 mb -52° 31400' I 250 mb -55° 34300'					I 258 mb -62° 33800'					I 206 mb -74° 38100'				

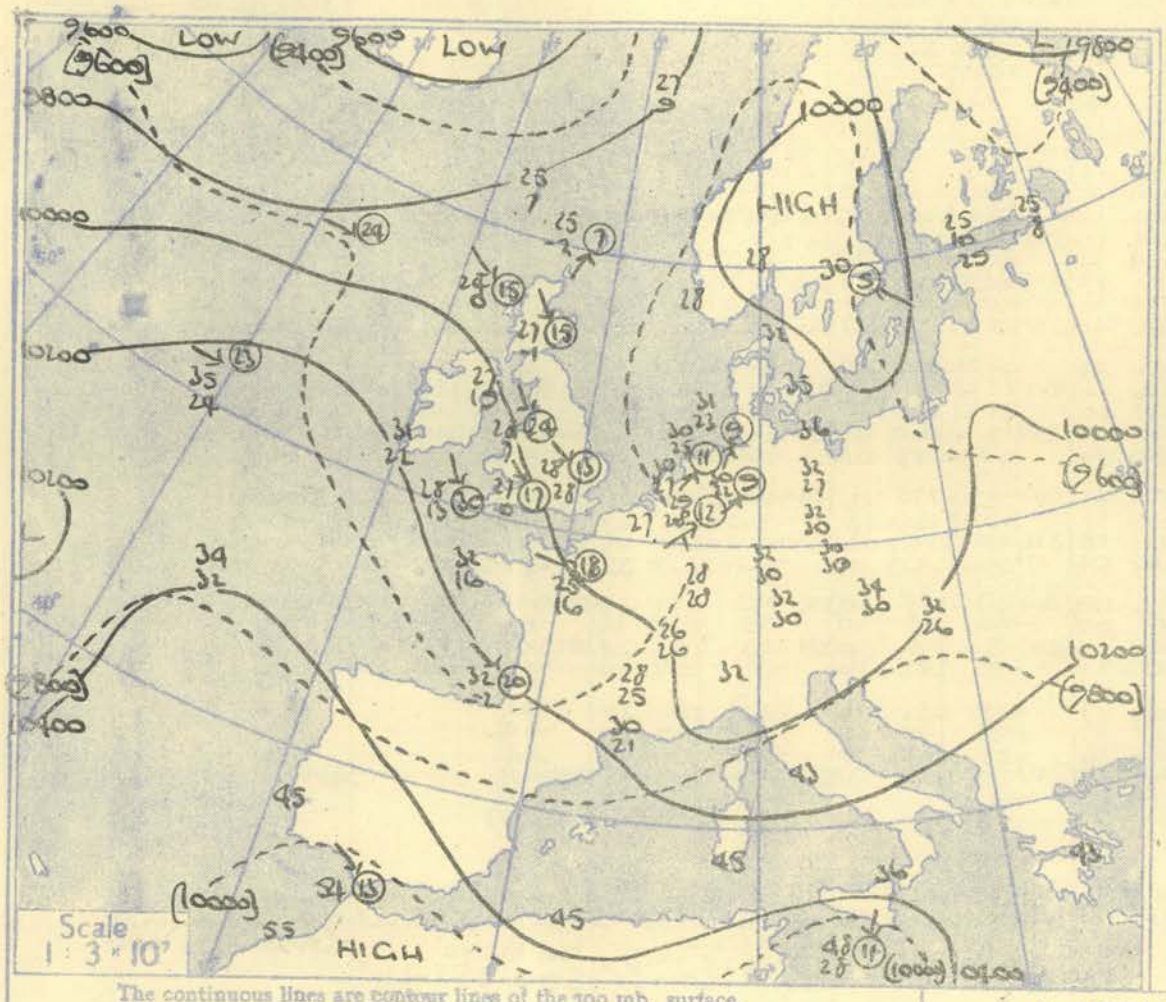
Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	
Pressure: Time	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	G.M.T.
Pressure: M.S.L.	1016·6 mb	1019·0 mb	1019·0 mb	1021·8 mb	1020·1 mb	1016·7 mb	1019·6 mb	1024·3 mb	mb
Pressure: Surf	1006·6 mb	1017·4 mb	1018·2 mb	1012·1 mb	1018·1 mb	1012·3 mb	1003·8 mb	1013·7 mb	mb
Pressure: Freezing	773 mb	787 mb	759 mb	727 mb	740 mb	750 mb	782 mb	720 mb	mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	34	43	360	02	0·4	57	48	250	08	0·2	58	49	340	07	02·6	57	51	300	10
1000	04·5	52	42			05·1	55	44	253	11	05·2	53	43	279	15	05·9	55	48	307	12
950		43	37	330	08		46	42	259	13		47	38	326	11		49	43	310	13
900	32·9	36	28	299	05	33·7	41	31	278	12	33·8	41	34	332	14	34·6	42	35	312	14
850		37	23	270	08		36	23	281	13		32	15	333	12		36	31	317	14
800	64·4	34	18	248	08	65·0	33	18	284	14	64·9	33	23	329	15	65·9	35	26	327	20
750		29	09	224	05		31	17	293	15		33	08	333	18		33	28	324	23
700	98·8	22	00	193	05	100·1	27	16	300	20	100·1	28	13	327	21	101·1	29	24	318	28
650		19	-11	193	07		22	14	306	21		21	06	315	19		23	16	318	27
600	138·1	12	-9	206	10	139·1	15	07	298	21	139·5	14	00	323	19	140·9	16	08	313	25
550		04	-12	199	21		08	00	299	24		06	-9	329	21		09	-4	309	24
500	183·1	-5	-16	184	18	185·2	-7	-20	309	23	184·7	-4	-19	324	18	186·4	-4	-11	323	25
450		-12	-19	187	16		-10	-21	316	24		-11	-27	310	20		-7	-22	326	35
400	236·3	-20	-26	194	17	238·7	-25	-34	328	33	237·5	-29	-38	287	16	240·3	-16	-31	333	42
350		-34	-39	183	10		-38	-44	332	49		-41		286	21		-27	-42	332	54
300	301·6	-48		175	14	304·5	-41		336	78	301·8	-56		286	19	306·9	-35	-51		
250		-66		174	16		-58		334	60		-53		312	20		-53			
200	388·5	-52		253	07	389·9	-50		327	33	388·3	-50		325	18	394·3	-61			
170		-51		270	06		-50		330	23							-50			
150		-51		282	06		-49		308	22							-52			
130		-52		275	05		-50		301	11							-57			
110	(126)	-50					-49		302	14							-53			
100						944	-47		297	07						986	-54			
90							-47		275	04							-53			
80																	-53			
70																	-52			
60																				
	Inversion 890m 35°-850m 37°					Isothermal 890-850mb 35° 632-612mb 17°					Inversion 828m 28°-804m 35°					Inversion 832m 34°-790m 36° Isothermal 750-738mb 33°				
Tropopause	I 240 mb -69° 34900'					I 238 mb -56° 35500'					I 296 mb -58° 30500'					I 226 mb -61° 36800'				

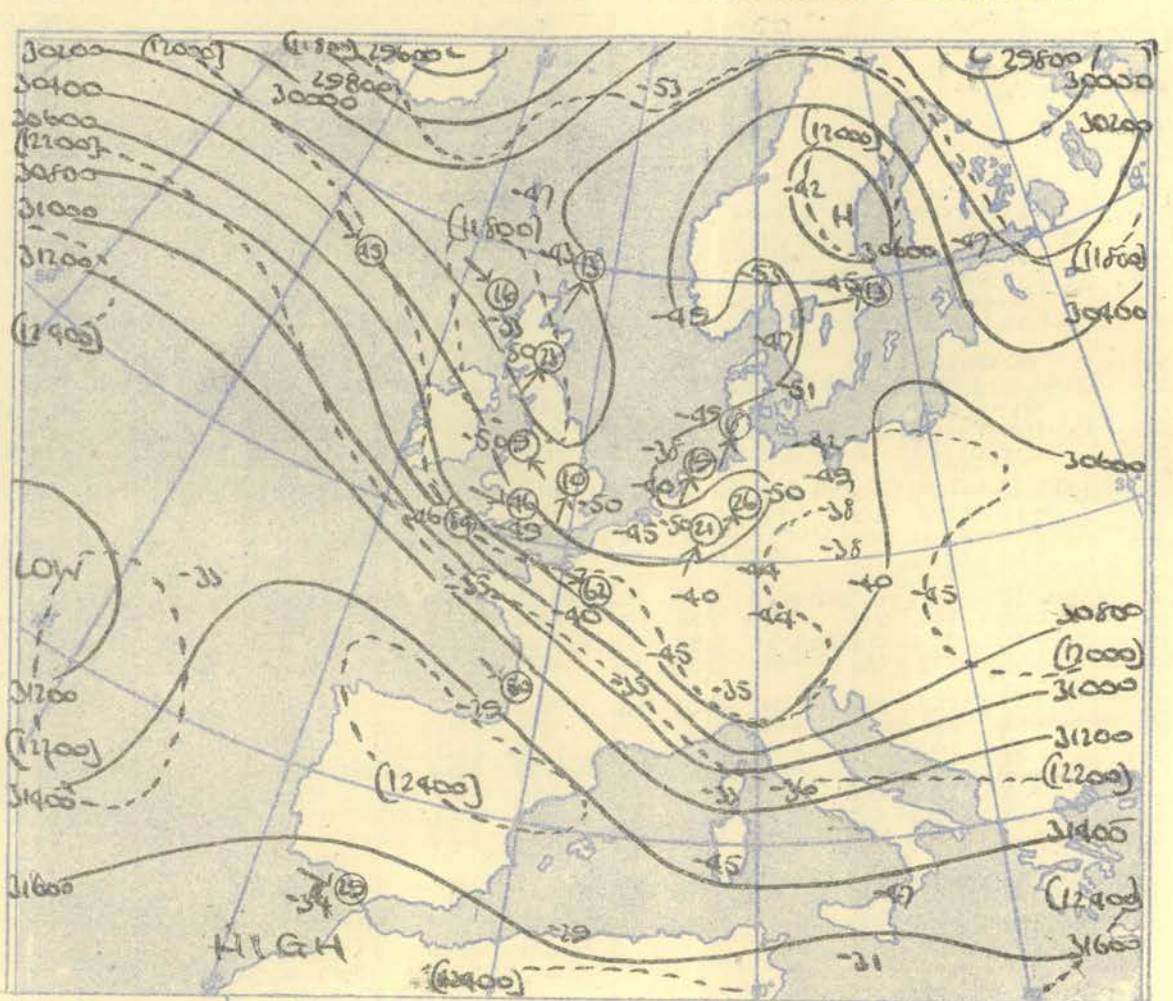
Pressure mb	LIVERPOOL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	[illegible] Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·6	56	49	320	12	01·2	56	45			04·4	57	45	350	16	02·9	58	53	330	10					
1000	05·3	55	48	307	12	04·5	54	44			03·4	56	45			06·6	55	50	316	14					
950		47	40	315	25		46	40				48	44	335	18		49	46	326	15					
900	34·1	46	36	328	23	34·0	42	35			34·0	41	38	319	22	35·3	43	38	335	17					
850		39	29				35	32	327	20		37	34	341	19		37	34	341	19					
800	65·3	37	16	342	20	65·3	32	24	336	20	64·4	33	29			66·8	42	17	337	20					
750		32	-2	338	24	Seaps for winds	34	11	336	21		36	18	334	21										
700	100·3	29	01	335	22		29	13	331	21	99·5	27	23			102·2	29	13	331	21					
650		23	-10	341	27		22	11	331	22		22	16				23	11	331	22					
600	140·0	16	-17	340	33	139·1	15	10			140·0	16	-17	340	33	141·9	17	03	329	26					
550		09	-16	336	32		08	02				09	-16	336	32		10	-8	327	31					
500	185·3	01	-10	339	26	184·6	00	-5			185·1	01	-10	339	26	187·9	04	-18	322	42					
450		-8	-22	336	34		-7	-17				-8	-22	336	34		-6	-26	322	51					
400	239·3	-19	-30	340	31	238·1	-15	-21			239·3	-19	-30	340	31	241·4	-14	-36	324	68					
350		-34	-44	336	30		-28	-33				-34	-44	336	30		-29	-44	323	80					
300	304·4	-47		330	36	304·2	-44				304·4	-47		330	36	308·0	-39	-54	325	92					
250		-49		329	40		-60					-49		329	40		-57		327	89					
200	393·1	-47		329	36	394·4	-47				393·1	-47		329	36	395·1	-60		327	65					
170		-48		312	30		-48					-48		312	30		-59		324	32					
150		-51		301	27		-49					-51		301	27		-61		324	32					
130		-52		312	23		-51					-52		312	23		-60		325	29					
110		-53		312	16		-51					-53		312	16		-59		325	18					
100	543·9	-53				543·9	-51				544·5	-53				543·2	-58								
90		-53					-52					-53					-58								
80		-53					-56					(93)					-58								
70		-52																							
60																									
	Inversion 820m 31°-810m 38°					Inversion 824m 16°-406m 19° Isothermal 200-682mb 21° 900-888mb 42°					Inversion 823m 32°-815m 34° 800m 32°-773mb 36°					Inversion 840mb 36°-800mb 42° Isothermal 486-478mb -1°									
Tropopause	I 278 mb -62° 31800'					I 245 mb -62° 34700'					I 271 mb -56° 32700'					II 221 mb -69° 37400'									

July 24 GMT 1951.

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



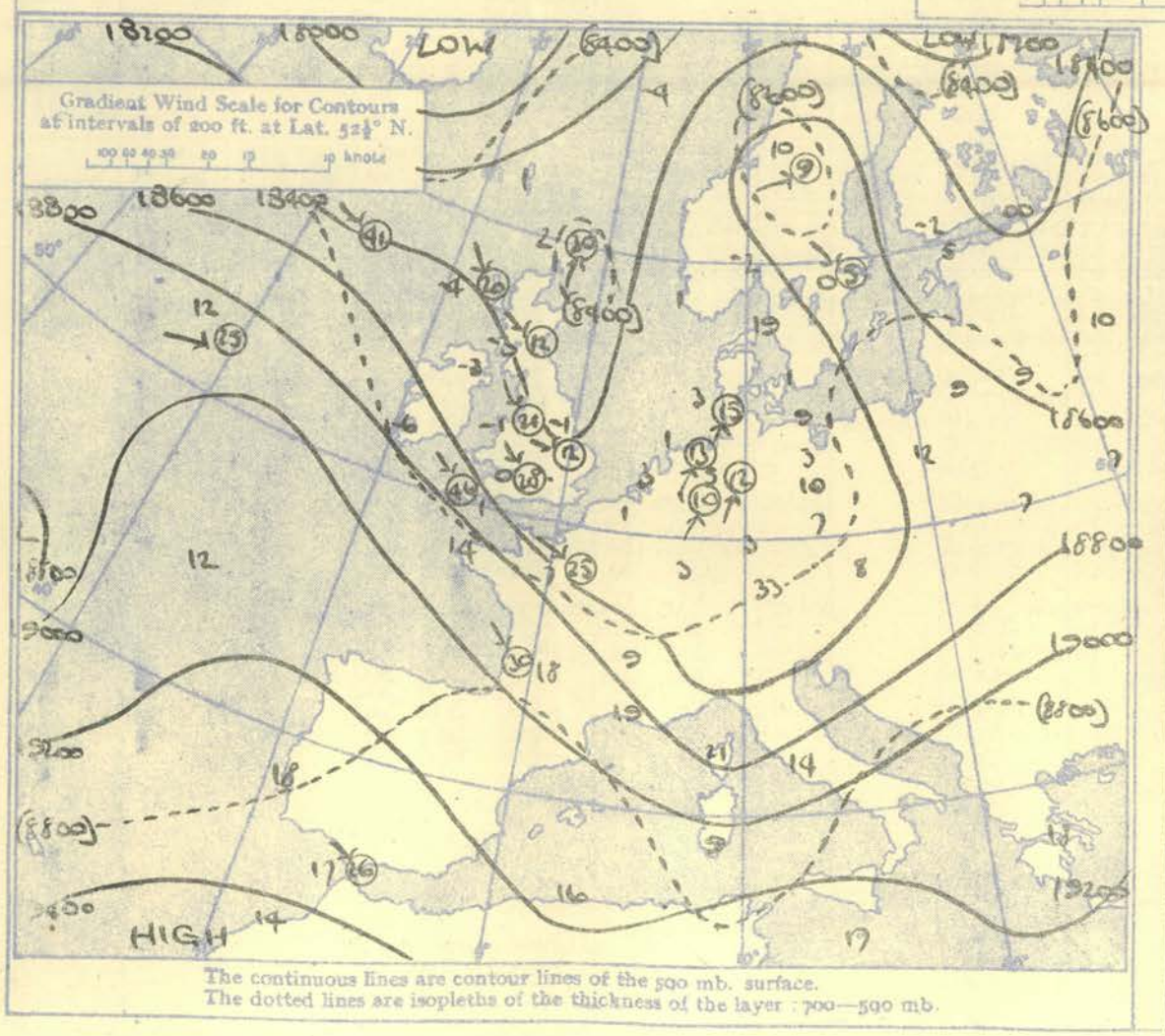
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



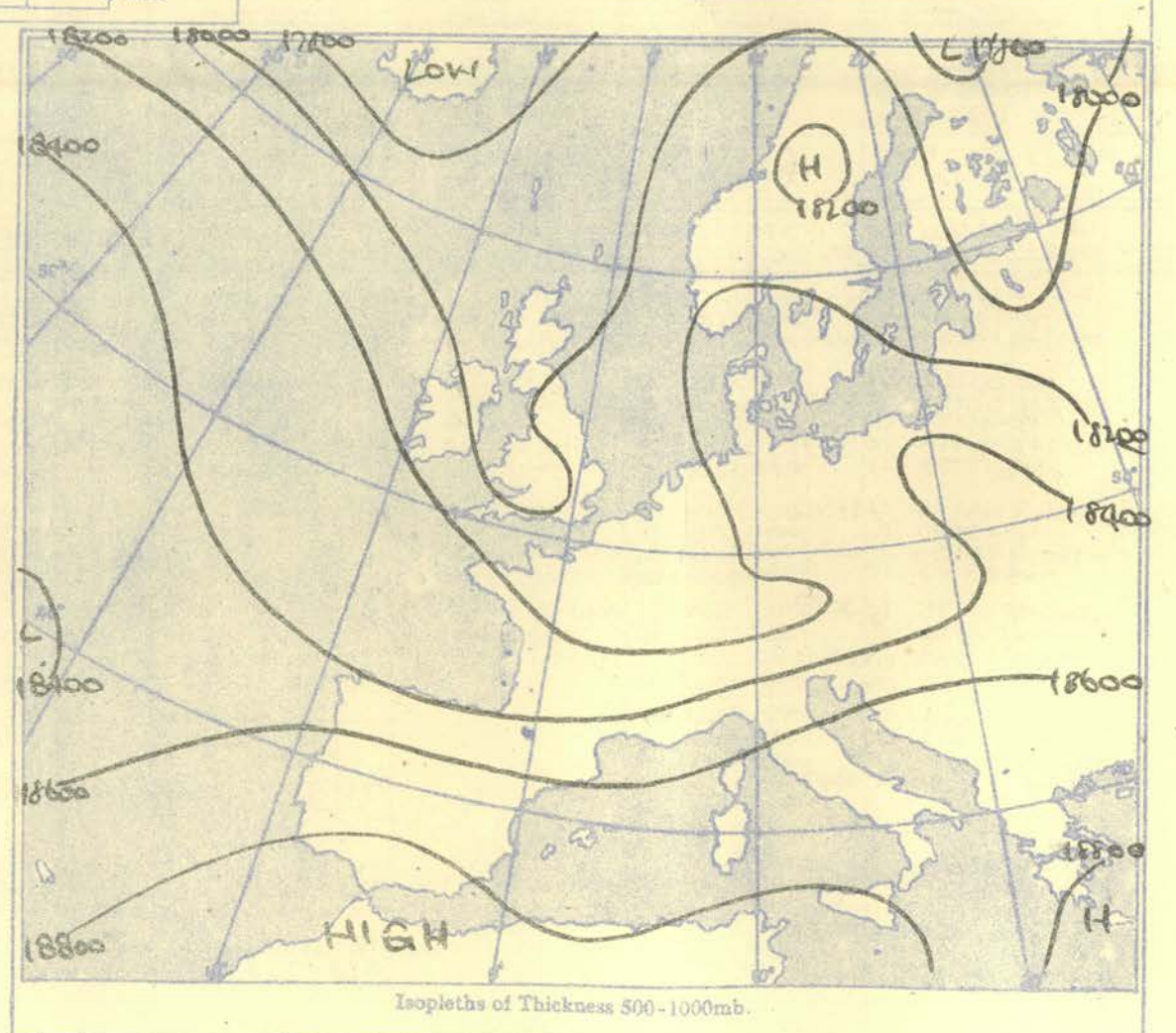
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

NO FLIGHTS AVAILABLE.

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

Place	Kympne.	W. Observer 57.9N 15.6W.	Doonhom	Shoebury	W. Observer 57.3N 13.9W.	Acklington	Valentia.	W. Observer 56.9N 12.3W	W. Observer 58.2N 16.6W	Place
Time	09h	09h	09h	09h	15h	15h	15h	21h	03h	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.	330 13	310 14	310 18	310 11	180 12	265 14	270 05	220 21	180 12	Surf.
1,000	320 30	230 24	331 33	330 23	220 27	255 09	250 08	240 28	210 15	1,000
2,000	320 23	240 24	338 32	340 21	230 25	255 09	240 09	250 27	220 17	2,000
3,000	340 31	240 23	340 31	340 27	240 25	255 07	360 10	250 29	230 18	3,000
4,000	340 31	250 21	339 35	340 30	250 25	263 08	270 12	230 30	230 20	4,000
5,000	330 23	250 23	336 27	350 35	250 26	263 08	280 13	250 34	230 23	5,000
6,000	320 19	250 23	338 24	330 21	250 28	265 09	280 10	250 33	230 24	6,000
8,000	321 22	250 20	348 15	320 15	240 29	258 07	300 10	250 30	230 24	8,000
10,000	310 14	250 23	343 14	310 14	240 27	237 10	300 19	250 30	230 24	10,000
14,000		240 25	344 11	330 14	240 33	220 13	290 22	260 33	260 29	14,000
18,000		250 40	037 06	330 14	240 52	211 18	300 29	280 45	290 41	18,000
24,000		270 39	004 08	340 14	260 47	207 05	300 34	280 59	280 39	24,000
30,000		270 51	012 13		240 46	241 10	300 38	270 84	280 45	30,000
40,000		280 52	301 13	310 17	250 55	321 18	310 35	300 59.	310 56	40,000
50,000		310 27	300 09	290 07	280 21	279 10	310 17		270 12	50,000
		310 11 (55.000)	291 06 (55.000)		290 15 (53.000)	294 03 (54.000)	300 11 (60.000)			

NEPHOSCOPE OBSERVATIONS

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

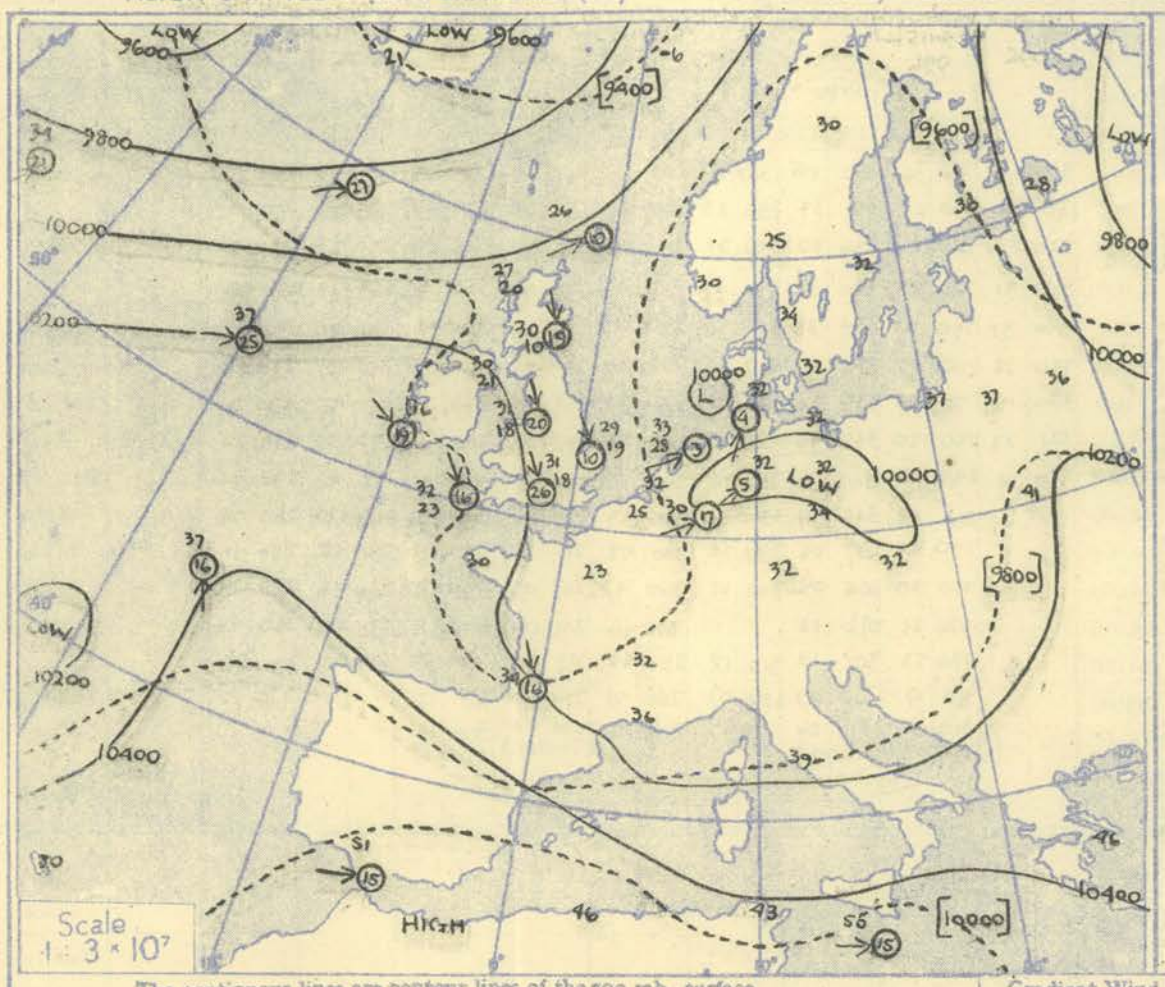
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	WEATHER OBSERVER	Ship
Lat/Long	52·6 N 19·9W	52·6N 19·0W	52·5N 19·9W.	52·5N 19·9W	58·2 N 16·6W	57·9 N 15·6W	57·3N 13·9W	56·9 N 12·3 W	Lat/Long
Pressure Time	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	03h. G.M.T.	09h G.M.T.	15h. G.M.T.	21h. G.M.T.	G.M.T. Time
Pressure M.S.L.	1020 mb	1020 mb	1020 mb	1019 mb	mb	mb	mb	mb	mb M.S.L.
Pressure Surf	1020 mb	1020 mb	1020 mb	1019 mb	mb	mb	mb	mb	mb Surf
Pressure Freezing	650 mb	670 mb	660 mb	640 mb	mb	mb	mb	mb	mb Freezing

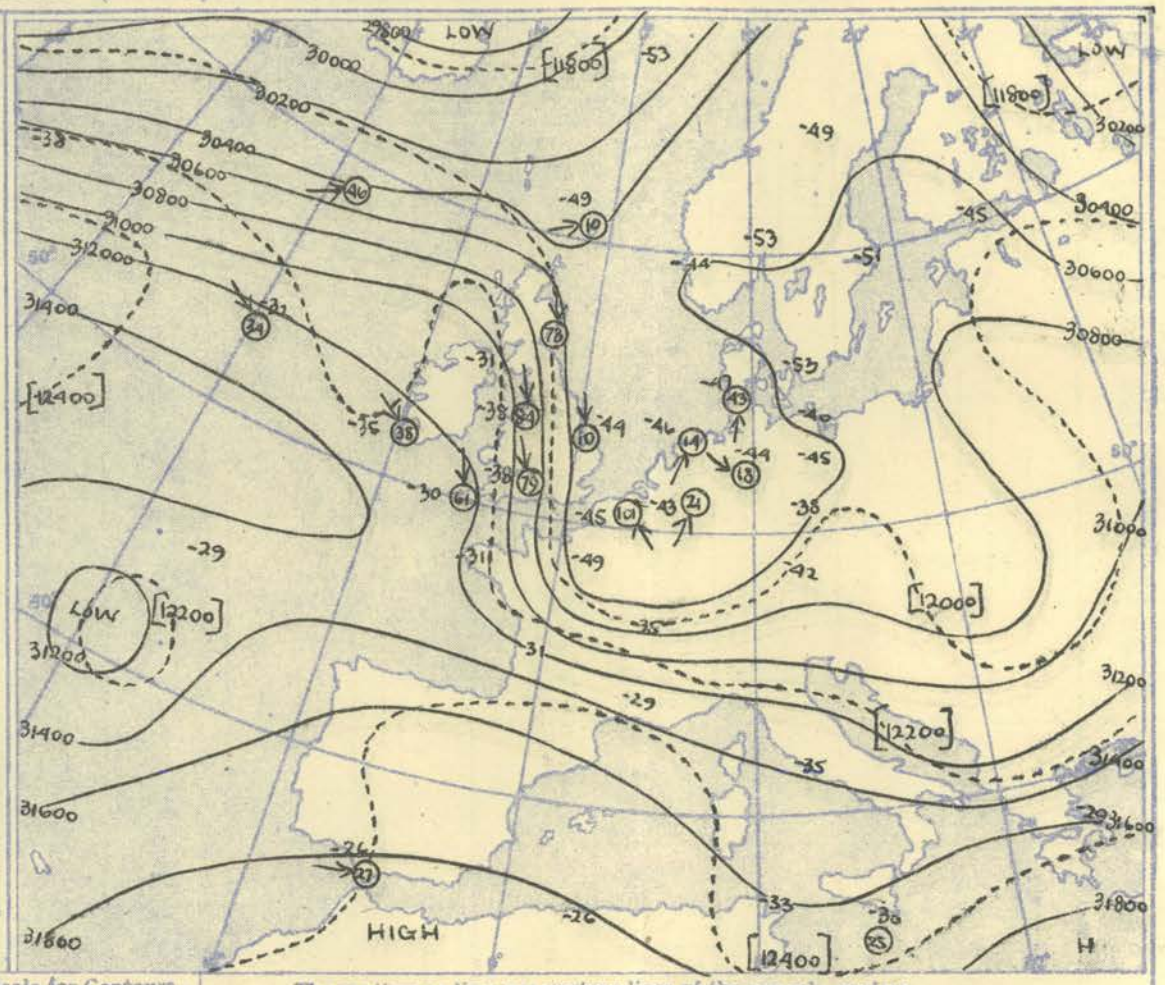
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		60	57	220	15		61	57	205	16		60	58	210	05		60	59	210	12											Surf
1000	03·7	58	53	231	12	05·6	59	54	213	19	05·6	59	54	214	18	05·2	59	58	192	13											1000
950		52	46	231	15		55	47	219	21		56	45	216	21		56	55	196	18											950
900	34·6	47	42	230	17	34·6	49	44	230	17	34·7	52	42	221	25	34·3	52	51	202	27											900
850		45	39	234	16		47	44	248	15		47	34	228	24		48	47	217	25											850
800	66·4	41	34	235	15	66·5	45	22	257	16	66·7	46	06	233	25	66·3	44	31	232	26	No	Radio - Sonde Ascent									800
750		37	27	239	25		36	32	257	17		41	-11	235	25		42	14	241	25											750
700	102·0	35	24	247	23	102·0	36	32	258	28	102·9	37	-12	237	25	102·0	37	06	232	26											700
650		32	04	266	22		30	26	253	36		31	17	239	27		33	-02	232	24											650
600	142·4	28	-05	266	33	142·4	25	11	236	39	142·8	28	06	243	31	142·4	27	-15	237	82	See Page 3 for Winds.										600
550		21	-15	258	21		21	04	232	33		22	-19	247	29		19	00	245	29											550
500	189·1	12	-18	255	25	189·1	12	-09	249	27	189·6	14	-25	252	32	189·0	13	08	261	23											500
450		03	-23	259	28		05	-12	249	24		05	-25	253	36		05	-04	262	34											450
400	244·2	-05	-31	267	25	242·3	-05	-20	247	35	244·8	-07	-15	263	32	244·2	-05	-21	268	35											400
350		-19	-44	263	30		-20	-37	240	40		-17	-25	263	31		-18	-27	262	30											350
300	311·7	-35	-37	258	28	311·5	-36	-52	235	36	312·6	-32	-44	283	34	311·8	-34	-43	264	30											300
250		-54		260	20		-53		258	33		-51		263	33		-52		268	39											250
200	399·3	-65		269	51	399·6	-64		284	31	401·2	-63		283	41	399·6	-68		277	49											200
170		-70		307	40		-66		279	26		-68		279	44		-67		290	52											170
150		-69		326	33		-68		269	23		-68		279	37		-70		291	37											150
130		-64		308	18		-63		263	15		-65		275	25		-68		281	30											130
110		-65		296	16		-60		269	10		-65		319	09		-68		282	25											110
100	549·6	-63		308	12	545·8	-58		277	08	546·8	-63		239	13	544·5	-65		284	18											100
90		-60		298	08		-59		285	06		-55		247	14		-62		283	15											90
80		-58		CALM			-53		327	05		-53		263	05		-60		260	06											80
70		-55					-49		023	04		-56		257	06		-57		260	04											70
60							-44		077	09		-60				(63mb)	-57														60
	Inversion 750 mb 37° - 728 mb 38°					Inversion 869 mb 44° - 835 mb 49° 725 mb 34° - 710 mb 37° 600 mb 25° - 586 mb 26°					Inversion 822 mb 44° - 794 mb 47°					Inversion 815 mb 43° - 789 mb 46°. Isothermal 766 - 750 mb 42° 546 - 528 mb 18°														
Tropopause	I 206 mb -68° 39,300'					II 232 mb -58° 36,800'					II 200 mb -63° 40,100'					I 207 mb -70° 39,200'														Tropopause

Tuesday 24th July 1951

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



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

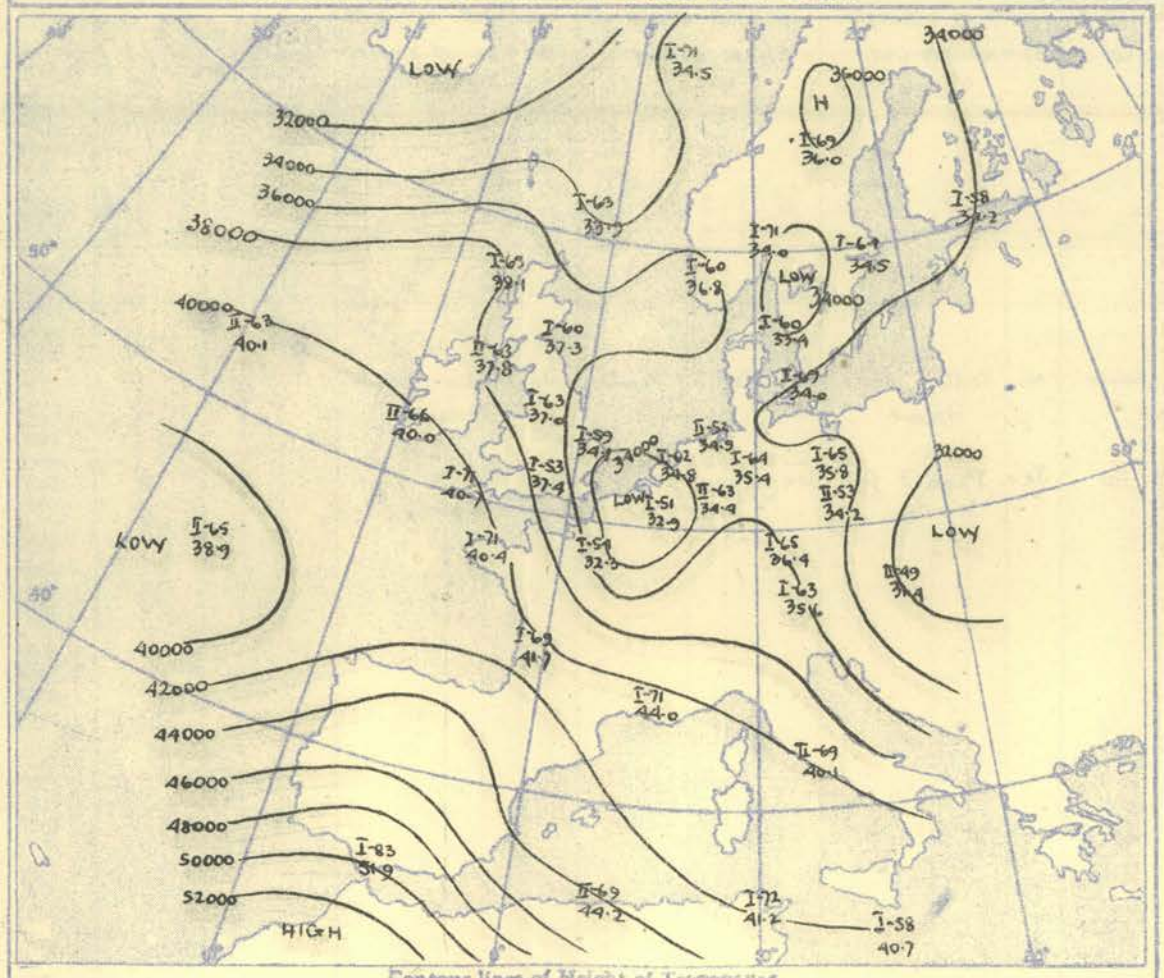


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 50 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The cold trough over Britain and France moved east a little and declined slightly. Cooling in the northwest Atlantic led to the intensification of the southwesterly thermal gradient in the west central Atlantic.

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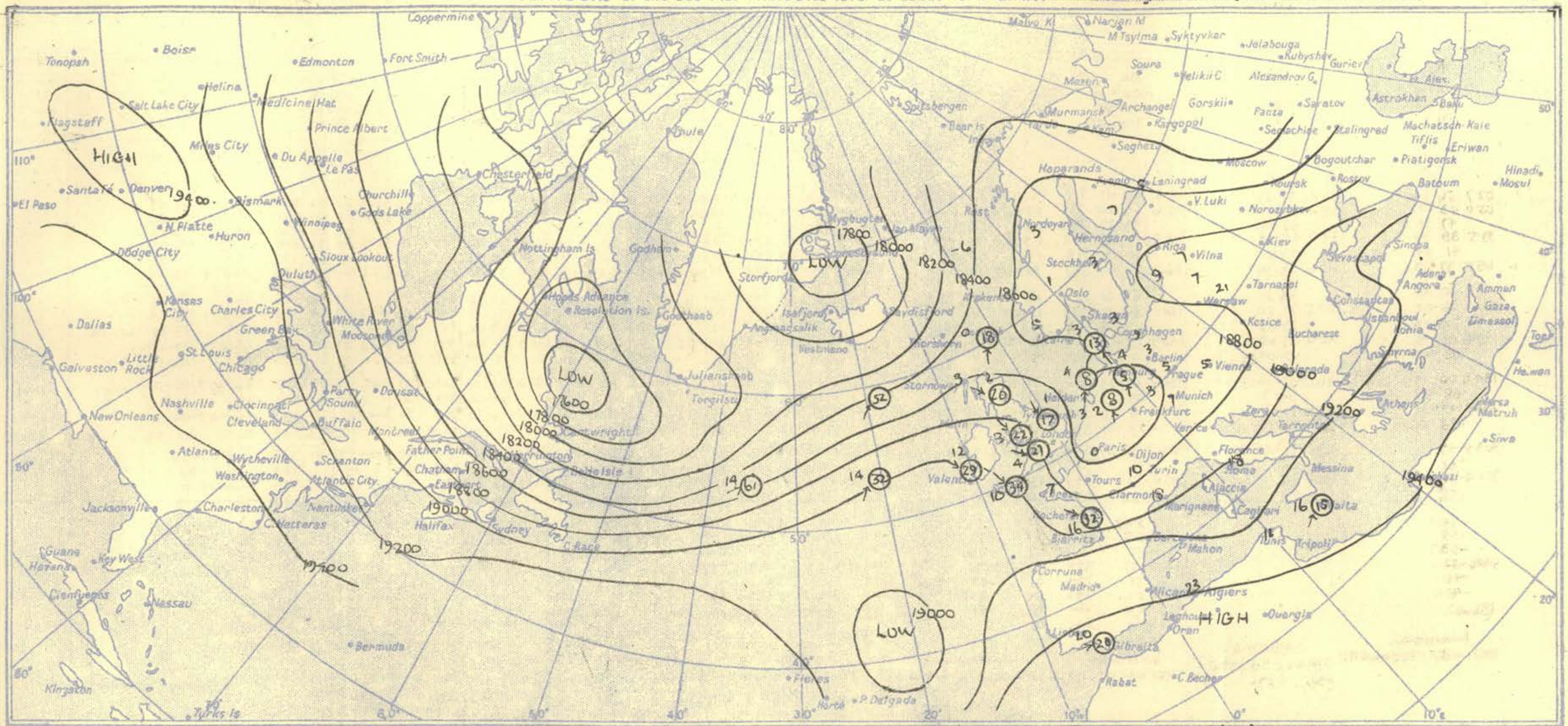
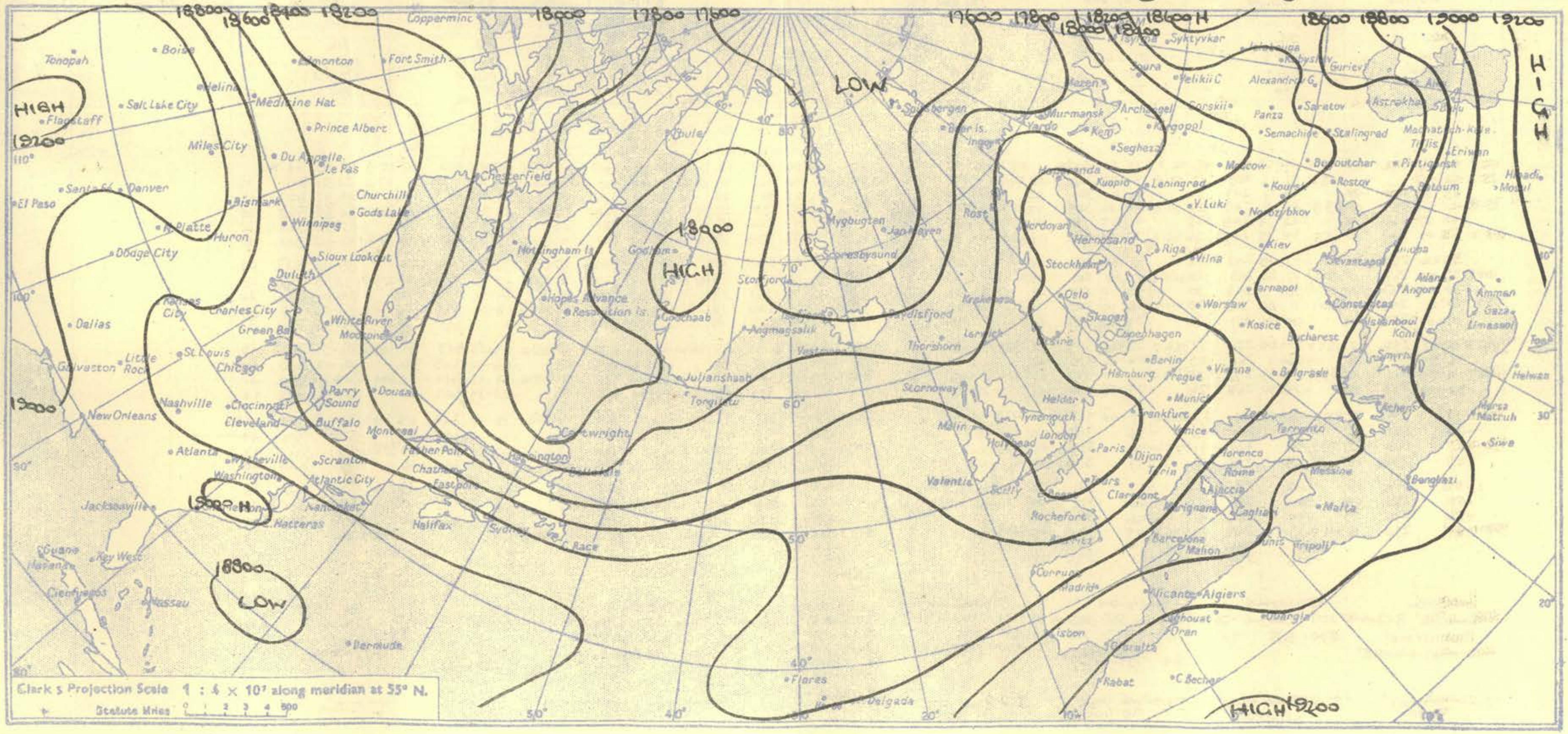
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Tuesday 24th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 24th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Tuesday 24th July 1951.

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

15h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA.
Pressure: Time	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.
Pressure: M.S.L.	1018·4 mb	1019·6 mb	1020·4 mb	1023·3 mb	1022·5 mb	1019·5 mb	1021·8 mb	1026·2 mb	1024 mb
Pressure: Surf	1008·4 mb	1018·0 mb	1019·6 mb	1013·7 mb	1020·5 mb	1015·0 mb	1006·0 mb	1015·6 mb	1024 mb
Pressure: Freezing	768 mb	743 mb	719 mb	720 mb	728 mb	729 mb	708 mb	700 mb	640 mb

Pressure mb	LERWICK Height ft./100	LERWICK °C.	LERWICK °F.	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F.	STORNOWAY °F.	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F.	LEUCHARS °F.	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F.	ALDERGROVE °F.	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F.	LIVERPOOL °F.	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F.	DOWNHAM MARKET °F	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F.	LARKHILL °F.	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F.	CAMBORNE °F.	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA. Height ft./100	VALENTIA. °F.	VALENTIA. °F.	VALENTIA. Wind Dir. °	VALENTIA. Wind Vel. knots	Pressure mb
Surf	027	56	44			004	57	51			002	66	47	310	05	026	63	51			006	63	49	300	15	012	60	45	360	11	044	62	44	350	15	029	61	52	330	12	003	62	51			Surf
1000	050	53	42			054	54	49			056	62	44	272	03	064	61	58			063	58	43	301	22	053	58	44			060	61	43			072	58	50	321	12	071	59	50			1000
950		47	39				47	44				53	38	292	05		53	45				51	41	311	21		51	39	335	21		53	37	329	18		50	44	330	08		52	48			950
900	335	39	36			340	45	44			345	47	35	294	09	353	45	41			350	43	35	335	21	341	44	34	331	24	349	46	36	333	16	365	44	37	334	13	361	45	45			900
850		41	24				43	41				40	30	313	12		40	36				38	30	321	21		39	31	335	16		41	33	332	15							39	36			850
800	650	37	13			656	38	34			660	33	24	337	16	668	36	32			664	37	20	338	21	654	36	28	315	15	663	35	31	337	20	676	43	27	328	16	676	42	38			800
750		30	16				33	31				35	03	334	18		35	29				35	20	345	16		34	25	331	10		38	13	343	24		39	24	328	16		37	25	For		750
700	699	26	02			1008	27	20			1011	30	10	333	19	1021	30	21			1017	31	18	347	20	1006	29	19	353	10	1018	31	18	341	26	1032	32	23	329	16	1031	36	24	winds		700
650		21	-08				22	06				25	08	323	17		23	13				24	10	348	22		27	15	349	14		28	10	337	29		26	16	327	21		33	19			650
600	1394	14	-15			1404	17	09			1409	19	01	307	16	1419	19	01			1416	18	03	344	20	1405	20	08	353	14	1419	21	04	337	27	1433	23	05	324	24	1436	27	-10			600
550		08	-09				10	02				11	-06	295	18		16	-07				13	04	344	18		10	-03	348	16		12	-04	336	25		15	00	328	33		20	-19	See		550
500	1848	00	-19			1861	03	-14			1867	02	-14	296	20	1880	08	-15			1874	03	-17	338	22	1862	01	+12	351	17	1878	04	-08	326	27	1895	10	-09	327	34	1903	02	-29	page		500
450		-08	-31				-04	-21				-08	-25	314	21		-02	-24				-08	+35	339	27		-10	-22	001	18		-05	-26	331	23		00	-11	324	38						450
400	2384	-19	-38			2403	-12	-21			2404	-19	-40	326	28	2425	-08	-17			2410	-18	-44	340	42	2397	-19	-32	360	18	2417	-18	-38	340	36	2443	-05	-14	326	44	2452	-09	-38	3.		400
350		-35	-51				-21	-28				-29	-51	336	51		-17	-27				-26	-52	346	62		-30	-43	352	20		-27	-49	340	45		-14	-23	332	56		-22	-48			350
300	3035	-49				305	-36	-42			3067	-35	-57	344	78	3102	-31	-41			3074	-38	-58	346	84	3055	-44		349	10	3079	-38	-60	341	79	3124	-30	-41	335	61	3122	-35				300
250		-61					-55					-51		341	82		-50					-56		347	87		-58		346	15		-49		344	84		-49		333	65		-50				250
200	3904	-55				3952	-61				3954	-52		343	43	3987	-62				3953	-53		343	46	3936	-50		338	27	3991	-47		339	44	4009	-69		334	66	4004	-66				200
170		-55					-58					-52		334	30		-62					-52		332	36		-49		329	16		-49					-62		330	48		-69				170
150		-54										-55		341	21		-58					-52		341	23		-51		332	14		-52					-58		324	35		-68				150
130		-53										-55		324	14		-59					-54		338	18		-52		309	12		-52					-59		308	36		-63				130
110		-53										-55		302	12		-56					-52		315	09		-52		309	10		-52					-58		330	25		-63				110
100	5406	-52									5412	-57		329	08	5421	-55				5459	-52		277	07	5447	-51		299	06						5483	-58		337	18	5460	-60				100
90		-48										-51		329	05		-53					-53		298	07		-51		277	05							-59		358	11						90
80		-45										-52		292	04		-53					-51		332	07		-52		321	03							-57		347	07						80
70	(86mb)											-52		261	05		-51					-48		203	05		-50		050	04							-53		315	04						70
60												-51		261	06		-50				(65mb)	-47															-52		306	04						60
																																						-50		135	06						
	Inversion 882mb 37°-850mb 41°					Isothermal. 958 mb -943mb 47° 693- 674 - 25°					Inversion 784 mb 33°-778 mb 39°					Inversion 800mb 36°-782 mb 38° 431- -06°- 419- -05° Isothermal. 572- 550mb 16°					Inversion 838mb 33°-806mb 38° Isothermal. 793- 763 mb 36° 724 - 700 - 31°					Isothermal. 820 - 800 mb 36° 680 - 646 - 27° 616 - 600 - 26°					Inversion 805mb 34°-786mb 39° Isothermal. 666 - 655mb 29°					(48mb) Inversion 858 mb 39°-833mb 46°					Inversion 833mb 37°-814mb 44°					
Tropopause	I 255 mb -63° 33,900.					I 215 mb -65° 38·100.					I 221 mb -60° 37·300.					II 219 mb -63° 37 800.					I 225 mb -63° 37·000.					I 254 mb -59° 34·100.					I 223 mb -53° 37·400.					I 196 mb -71° 40·700.					II 200 mb -66° 40·000.					Tropopause

21h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Pressure: Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.
Pressure: M.S.L.	1019·4 mb	1018·5 mb	1020·6 mb	1024·0 mb	1023·6 mb	1022·0 mb	1022·1 mb	1027·0 mb
Pressure: Surf	1009·4 mb	1016·3 mb	1021·4 mb	1014·3 mb	1021·6 mb	1017·6 mb	1006·3 mb	1016·4 mb
Pressure: Freezing	741. mb	740 mb	730 mb	726 mb	709 mb	702 mb	700 mb	700 mb

Pressure mb	LERWICK Height ft./100	LERWICK °C.	LERWICK °F.	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °F.	STORNOWAY °F.	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °F.	LEUCHARS °F.	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °F.	ALDERGROVE °F.	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °F.	LIVERPOOL °F.	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °F.	DOWNHAM MARKET °F	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °F.	LARKHILL °F.	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °F.	CAMBORNE °F.	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	Pressure mb
Surf	027	52	48	300	08	004	56	55	180	05	002	55	51	Calm		026	60	54			006	57	50	290	14	012	54	44	360	03	042	58	46	350	07	029	55	53	Calm		Surf
1000	052	52	47			050	56	55	259	12	059	53	50	306	08	066	59	53			065	57	46	310	18	060	54	44	360	18	061	59	46			074	54	51	310	12	1000
950		41	39	220	07		52	51	247	20		54	50	304	12		54	50				52	52	323	15			54	40	352	16			49	47	327	12	950
900	338	40	34	257	09	338	48	47	245	24	348	49	46	304	12	355	48	42			353	46	37	339	15	347	45	39	329	25	350	47	37	345	16	361	44	38	355	15	900
850		40	27	266	12		44	38	249	25		41	38	313	12		42	40				39	33	344	15		37	32	331	25		40	34	335	16		45	25	358	15	850
800	652	38	19	267	10	655	39	35	249	26	664	37	34	322	18	672	38	36			661	42	25	339	21	661	32	25	337	21	665	35	25	341	16	678	43	03	341	11	800
750		33	06	268	10		33	29	245	25		35	30	313	14		35	28				38	24	338	20		35	15	342	20		36	23	346	22		39	-13	327	09	750
700	1002	27	-05	267	10	1007	27	24	243	28	1016	27	19	310	15	1025	29	25			1023	31	18	341	19	1013	31	08	342	21	1018	32	15	338	29	1032	32	13	323	13	700
650		26	04	256	10		20	13	243	30		22	10	312	17		26	08				25	09	337	18		25	00	348	21		24	02	332	25		29	-01	332	20	650
600	1396	14	01	249	12	1401	11	00	245	29	1414	16	10	309	18	1424	21	08			1421	20	04	326	19	1417	07	-02	347	23	1416	18	-04	335	23	1433	24	-02	338	30	600
550		07	-07	242	14		05	-01	241	31		08	02	307	16		12	03				15	-05	318	21		08	-09	344	23		11	-15	341	27		15	-05	337	37	550
500	1850	00	-12	236	12	1853	00	-04	256	32	1869	02	-09	309	21	1884	07	-24			1883	04	+15	323	25	1866	-01	-20	350	27	1874	03	-25	343	31	1895	07	-11	345	43	500
450		-06	-33	214	13		-06	-11	266	29		-06	-16	315	27		-03	-24				-03	+15	331	31		-12	-31	339	29		-06	-34	343	36		01	-12	330	42	450
400	2387	-16	-36	213	13	2393	-15	-19	276	33	2410	-10	-17	327	35	2426	-11	-18			2399	-09	+15	328	47	2394	-23	-41	331	21	2414	-13	-38	342	53	2441	-09	-23	332	41	400
350		-30	-49	298	15		-25	-30	268	26		-23	-28	338	41		-20	-24				-21	-25	334	45		-32	-49	348	39		-24	-39	342	63		-20	-36	322	42	350
300	3048	-43		319	21	3059	-40	-46	253	22	3080	-37	-44	327	51	3098	-35	-40			3096	-38	-44	332	57	3054	-43		349	76	3081	-38	-50	344	68	3113	-36	-47	322	40	300
250		-60		321	40		-58		255	36		-58		316	60		-55					-54		330	69		-58		350	80		-56		345	82		-58		319	42	250
200	3920	-57		318	21	3932	-59		274	31	3956	-59		333	45	3971	-62				3912	-65		340	59	3922	-63		344	48	3952	-67		345	68	3986	-69		331	44	200
170		-57		298	15		-59		278	27		-57		327	30		-66					-61		339	37		-60		346	32		-63		345	46		-74		344	40	170
150		-59		306	16		-62		281	24		-57		321	24		-67					-62		336	31		-62		344	24		-64		338	33		-68		340	29	150
130		-59		288	09		-61		281	15		-56		321	09		-66					-63		332	21		-63		343	15		-64		332	23		-69		331	24	130
110		-56		276	09		-59		268	11		-56		316	06		-64					-59		326	11		-61		331	10		-62		340	10		-66		331	10	110
100	5401	-54		270	13	5410	-57		288	12	5447	-55		330	05	5433	-61				5439	-62		326	10	5394	-62		320	10	5418	-62				5429	-66				100
90							-57		286	11		-54		330	07		-58					-60										(97mb)									90
80							-56		273	11		-51		295	05		-57					-59																			80
70												-51									(87mb)																			70
60																																									60
	Inversion 888 mb 38°-842mb 41° Isothermal. 480 - 465 mb -03°					Isothermal. 1017 -1000 mb 56° 890 - 875 .. 47°					Inversion 1021 mb 55°- 985 mb 59° 793 - 37°- 775 .. 38° Isothermal. 813 -793 mb 37°					Isothermal. 773 - 759 mb 36° 550 - 530 - 12° 422 - 400 .. -11°					Inversion 1022 mb 57°- 1006 mb 58° 832 .. 37°- 817 - 43° 224 - -65°- 217 - -62° Isothermal. 461 - 450 mb - 03°					Inversion 800 mb 32°- 775 mb 36° Isothermal. 1018 - 1000 mb 54°					Inversion 1006 mb 58°- 994 mb 60° 800 - 35°- 769 - 37° Isothermal. 734 - 718 mb 34°					Inversion 875 mb 41°- 847 mb 46° Isothermal. 690 - 660 mb 30°					
Tropopause	I 224 mb -63° 36·700					I 233 mb -66° 36.000					I 240 mb -62° 35·600					I 212 mb -70° 38·500					I 185 mb -68° 41·000					I 213 mb -68° 38·000					I 206 mb -70° 39.000					II 180 mb -74° 41·800					Tropopause

H.M.S.O. Pr 833. M.O. Dunstable

No. 11805 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Wednesday 25th July, 1951. Page 1.

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

LERWICK

Pressure — Time 0300h G.M.T.; M.S.L. 1019·7 mb; Surf 1005·7 mb; Freezing 761 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	49	45	205	01
1000	05·3	50	44	193	12
950		47	39	210	14
900	33·9	44	42	244	18
850					
800	65·4	37	33	245	09
750		30	23	235	09
700	100·4	25	21	231	10
650		18	17	239	14
600	139·7	12	10	240	16
550		04	01	227	18
500	184·5	-03	-09	229	19
450		-11	-15	228	21
400	238·3	-17	-21	234	19
350		-30	-34	230	19
300	304·1	-44		229	15
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Inversion. 1010mb 48° 1,000mb 50°

Tropopause: N.R.

STORNOWAY

Pressure — Time 0300h G.M.T.; M.S.L. 1018·9 mb; Surf 1017·3 mb; Freezing 762 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	56	55	200	07
1000	05·2	56	55	241	14
950		53	53	247	19
900	34·2	48	48	252	25
850					
800	66·0	37	37	249	24
750		30	30	263	26
700	100·9	24	24	272	33
650		18	18	265	36
600	140·2	14	14	265	36
550		10	10	297	33
500	185·7	00	-2	289	31
450		-07	-12	288	32
400	239·5	-18	-37	287	32
350		-31	-43	287	33
300	305·2	-45		293	55
250		-58		294	54
200	392·6	-56		289	34
170		-58		286	33
150	454·3	-60		284	29
130		-61		284	21
110		-62		283	11
100	540·5	-62		283	08
90		-61			
80		-60			
70		-59			
60					

Isothermal 10·7 mb -985 mb 56°; 491 mb - 479 mb -2°

Tropopause: I 224 mb -60° 36,800'

LEUCHARS

Pressure — Time 0300h G.M.T.; M.S.L. 1021·2 mb; Surf 1022·0 mb; Freezing 760 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	55	53	280	06
1000	000	54	52	300	10
950		50	46	297	15
900	34·8	49	45	295	17
850					
800	66·5	38	36	291	14
750		31	20	285	13
700	101·5	25	23	285	16
650		19	17	275	15
600	141·0	12	07	272	15
550		06	-08	285	12
500	186·2	-01	-19	298	27
450		-12	-18	315	27
400	239·5	-22	-34	310	31
350		-35	-54	300	32
300	304·6	-48		290	27
250		-64		302	26
200	391·1	-61		295	29
170		-64		310	30
150	451·9	-66		318	22
130		-67		309	18
110		-65		309	14
100	537·0	-65			

Isothermal 950 -914 mb 50°

Tropopause: I 250 mb -64° 34380'

ALDERGROVE

Pressure — Time 0300h G.M.T.; M.S.L. 1025·0 mb; Surf 1015·4 mb; Freezing 750 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	58	54		
1000	06·8	57	53		
950		52	48		
900	35·6	45	41		
850					
800	67·2	38	35		
750		32	25		
700	102·3	23	18		
650		25	-06		
600	142·0	20	-22		
550		14	-26		
500	188·1	04	-09		
450		-02	-28		
400	242·5	-11	-35		
350		-25	-39		
300	309·2	-38	-48		
250		-57			
200	396·2	-61			
170		-63			
150		-65			
130		-64			
110		-64			
100	542·7	-63			

Inversion. 904 mb 45° - 897 mb 46°; 690 mb 21° - 673 mb 26°; 491 mb 03° - 462 mb 04°

Tropopause: I 215 mb -71° 38,100'

LIVERPOOL

Pressure — Time 0300h G.M.T.; M.S.L. 1020·7 mb; Surf 1022·7 mb; Freezing 739 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	56	53	280	07
1000	06·7	57	49	282	12
950		51	44	303	13
900	35·6	46	40	324	15
850	50·9	41	34	336	17
800	67·1	37	30	339	14
750		34	24	340	11
700	102·3	28	18	337	10
650		25	08	323	15
600	142·2	20	06	305	20
550		11	-3	311	24
500	188·0	04	-24	314	25
450		-2	-15	322	36
400	242·2	-12	-24	325	44
350		-27	-40	325	45
300	308·5	-42		321	62
250		-60		322	72
200	395·1	-64		318	57
170		-64		312	34
150		-67		320	29
130		-67		320	24
110		-66		318	15
100	540·6	-66		316	12
90		-63		320	10
80		-63		320	10
70		-63			
60					

Inversion 676 mb 25° - 667 mb 26°

Isothermal. 1023 mb 58° - 1009 mb 58°; 812 mb - 782 mb 37°; 555 mb - 536 mb 11°; 465 mb - 450 mb - 2°

Tropopause: I 223 mb -69° 37,400'

DOWNHAM MARKET

Pressure — Time 0300h G.M.T.; M.S.L. 1023·6 mb; Surf 1019·0 mb; Freezing 708 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	50	45	260	07
1000	06·4	53	45	285	12
950		50	44	305	13
900	35·1	45	41	337	18
850					
800	66·6	39	18	341	14
750		36	14	340	15
700	102·0	31	07	340	20
650		26	11	328	19
600	141·9	18	03	312	17
550		10	-05	323	22
500	187·6	01	-13	328	27
450		-09	-23	328	31
400	241·4	-16	-23	332	42
350		-23	-27	330	52
300	308·0	-35	-43	331	52
250		-58		329	60
200	395·5	-60		332	55
170		-61		335	38
150	456·7	-62		340	23
130		-61		333	18
110		-60		325	12
100	543·2	-59		318	09
90		-60			

Inversion 1019 mb 50° - 993 mb 54°; 835 mb 35° - 814 mb 40°

Tropopause: I 237 mb -62° 35,200'

LARKHILL

Pressure — Time 0300h G.M.T.; M.S.L. 1025·8 mb; Surf 1009·5 mb; Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	51	44	350	10
1000	06·9	54	47	-	-
950	-	51	41	354	17
900	35·7	44	36	347	16
850					
800	67·3	41	23	342	16
750	-	36	21	339	17
700	102·7	32	15	338	20
650	-	27	03	337	20
600	142·7	20	01	333	21
550		14	-03	331	27
500	188·7	06	-07	336	33
450		-03	-20	333	47
400	243·0	-11	-20	340	48
350		-21	-30	333	56
300	310	-37	-49	329	54
250		-56		330	57
200	397·3	-66		327	53
170		-70		332	34
150	457·4	-68		333	29
130		-67		338	27
110		-66		320	14
100	542·4	-65		304	10
90		-63		338	09
80		-63		350	09
70		-62			
60					

Inversion. 1009 - 994 mb 51-56°; 845 - 830 " 37-43°

Isothermal. 410 - 400 mb -11°

Tropopause: I 213 mb -70° 38,500'

CAMBORNE

Pressure — Time 0300h G.M.T.; M.S.L. 1027·9 mb; Surf 1017·2 mb; Freezing 670 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	52	51	-	-
1000	07·6	57	54	255	06
950		52	47	324	08
900	36·4	46	42	357	09
850					
800	65·1	43	19	330	07
750		38	21	314	09
700	103·7	33	14	321	12
650		30	06	305	14
600	143·9	35	-1	302	18
550		18	-7	301	25
500	190·3	10	-12	307	26
450		02	-12	320	35
400	245·3	-5	-16	327	33
350		-20	-33	332	30
300	312·7	-34	-44	345	38
250		-53		331	35
200	400·5	-64		322	40
170		-69		323	33
150		-73		318	25
130		-71		324	19
110		-68		329	17
100	544·7	-68		329	16
90		-66		329	12
80		-65		328	05
70		-63		328	05
60		-61			

Inversion. 1017 - 1000 mb 52-57°; 880 - 835 mb 40-46°

Isothermal 700 mb 33°; 680 mb 32°

Tropopause: II 220 mb -67° 38,000'

Valentia

Pressure — Time 0300 G.M.T.; M.S.L. 1026·4 mb; Surf 1025 mb; Freezing 680 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	58	57	170	06
1000	71	58	56	198	08
950		52	50	235	14
900	36·1	46	38	242	15
850					
800	67·8	41	21		
750		38	02		
700	103 4	34	-13		
650		30	-18		
600	148	23	-16		
550		15	-19		
500	189·9	11	-33		
450		04	-19		
400	245·0	-4	-13		
350		-18	-34		
300	312·3	-34	-55		
250		-52			
200	400·1	-73			
170		-68			

Inversion. 332 mb 40°; 300 mb 45°

Isothermal. 459 - 437 mb 69°

Tropopause:

LERWICK

Pressure — Time 0800h G.M.T.; M.S.L. -; Surf -; Freezing 762 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	51	220	11
1000	05·2	51	51	227	15
950		51	51	227	15
900	33·9	47	47	227	16
850					
800	65·6	37	31	220	19
750		31	28	224	20
700	100·6	27	19	225	22
650		21	13	214	18
600	140·1	13	07	196	20
550		08	01	242	18
500	185·6	03	-6	203	17
450		-6	-17	279	24
400	239·5	-18	-30	282	22
350		-30	-48	267	25
300	305·4	-44		237	23
250		-59		236	27
200	392·7	-55			
170		-55			
150	454·9	-57			
130		-57			
110		-55			
100	542·2	-55			
90		-54			
80					
70					
60					

Inversion: 986 mb 50° 950 mb 51°

Isothermal. 564 - 550 mb 08°

Tropopause: I 254 mb -66° 34,100ft

STORNOWAY

Pressure — Time 0800h G.M.T.; M.S.L. 1018·8 mb; Surf 1018·2 mb; Freezing 712 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	58	57	170	08
1000	05·4	57	56		
950		52	51	204	17
900	34·3	48	46	206	26
850	49·8	45	42	209	22
800	66·1	40	37	213	24
750		36	32	212	25
700	101·5	31	19	215	33
650		24	19	220	31
600	141·4	17	09	222	36
550		12	06	227	34
500	187·3	08	-17	237	28
450		-3	-24	237	36
400	241·7	-9	-27	235	33
350		-20	-35	242	32
300	309·7	-33	-47	250	36
250		-49		249	35
200	397·5	-64		241	37
170		-76		240	27
150	459·4	-53		243	28
130		-53		247	25
110		-52		245	21
100	543·4	-49			
90		-48			
80					
70					
60					

Inversion. 760 mb 10° 540 mb 14°; 418 mb -10° 410 mb -8°

Isothermal. 880 mb - 860 mb 45°

Tropopause: I 208 mb -66° 38,600'

LEUCHARS

Pressure — Time 0800h G.M.T.; M.S.L. 1022·1 mb; Surf 1022·9 mb; Freezing 743 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	63	57		
1000	06·3	59	53		
950		55	45		
900	35·3	51	41		
850	50·8	46	38		
800	67·2	40	33		
750		33	27		
700	102·4	27	20		
650		23	16		
600	142·2	20	12		
550		13	02		
500	188·0	01	-5		
450		-3	-21		
400	242·1	-12	-38		
350		-23	-46		
300	305·1	-34	-44		
250		-51			
200	397·0	-70			
170		-59			
150	457·5	-59			
130		-60			
110		-59			
100	544·4	-58			
90		-57			
80		-56			
70		-55			
60	654·6	-53			
		-51			

Inversion. 481 - 464 mb -4° - -1°

Tropopause: I 193 mb -72° [illegible]

ALDERGROVE

Pressure — Time 0900 G.M.T.; M.S.L. 1025·7 mb; Surf 1016·1 mb; Freezing 688 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	54	260	08
1000	07·0	57	53	240	08
950		51	46	240	09
900	35·8	46	42	242	11
850		45	41	240	13
800	67·5	40	35	244	06
750		37	22	322	09
700	102·9	34	08	314	13
650		27	20	318	16
600	142·9	20	12	320	18
550		10	01	304	22
500	188·5	08	-14	290	28
450		-03	-13	300	32
400	243·5	-09	-14	312	37
350		-21	-27	302	45
300	310·6	-37	-43	298	51
250		-55		311	61
200	397·7	-71		312	47
170		-63		306	33
150		-62		290	30
130		-62		298	19
110		-60		280	13
100	544·4	-58		310	15
90		-57		316	11
80					
70					
60					

Inversion. 873 mb 43° 842 mb 46°; 757 mb 36° - 742 mb 38°; 550 mb 10° - 533 mb 14°

Isothermal. 781 - 757 mb 36°; 443 - 432 " -04°

Tropopause: I 204 mb -74° 39,400ft

LIVERPOOL

Pressure — Time 0900 G.M.T.; M.S.L. 1025·8 mb; Surf 1023·8 mb; Freezing 741 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	55	270	05
1000	06·7	57	53	278	12
950		52	48	298	14
900	35·6	47	45	305	15
850	51·0	41	37	311	11
800	67·1	36	35	313	07
750		33	27	282	04
700	102·3	28	20	268	06
650		27	06	296	12
600	142·3	20	-17	328	14
550		12	+22	318	20
500	188·1	05	-22	318	29
450		-01	26	314	34
400	242·5	+13	-30	320	39
350		-22	-30	330	60
300	309·5	-37	-45	331	65
250		-56		335	77
200	396·5	-74		345	65
170		-59		319	39
150		-64		316	31
130		-63		331	19
110		-57		301	10
100	543·6	-60		321	09
90		-58		348	06
80		-55		331	06
70		-52		303	05
60		-48			

Inversion 804 mb 35° - 792 mb 38°

Isothermal. 682 - 650 mb 27°

Tropopause: I 200 mb -74° 39,700'

DOWNHAM MARKET

Pressure — Time 0900 G.M.T.; M.S.L. 1024·3 mb; Surf 1019·8 mb; Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	60	50	325	11
1000	06·7	58	49	325	15
950		54	45	349	13
900	35·6	49	38	346	16
850					
800	67·3	39	21	353	19
750		38	20	355	21
700	102·8	32	16	356	15
650		26	11	344	15
600	142·8	21	07	340	21
550		13	01	344	28
500	188·2	04	-14	342	31
450		-05	-15	335	40
400	243·1	-13	-33	327	48
350		-22	-34	330	62
300	309·2	-38	-47	338	68
250		-57		339	76
200	397·2	-56		335	48
170		-53		327	36
150	459·9	-56		323	31
130		-59		328	22
110				329	12
100	546·9			316	07

Isothermal. 807 - 762 mb 39°

Tropopause: I 238 -61° 36,100'

LARKHILL

Pressure — Time 0900h G.M.T.; M.S.L. 1026·6 mb; Surf 1010·7 mb; Freezing 712 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	59	50	Calm	
1000	07·3	56	48		
950		51	43	002	08
900	36·1	46	40	004	12
850					
800	67·7	42	26	358	16
750		36	23	343	15
700	103·1	31	20	327	15
650		27	09	325	16
600	143·3	23	08	326	15
550		14	+03	331	28
500	189·4	08	-10	333	35
450		00	-13	334	37
400	244·1	-07	-30	329	36
350		-19	-32	334	50
300	311·7	-32	-42	335	57
250		-49		344	71
200	400·3	-66		353	77
170		-61		321	48
150	461·1	-61		325	37
130		-64		330	27
110		-63		328	25
100	546·9	-64		336	18
90		-61		340	14
80		-59		334	06
70		-59		303	07
60	655·8	-58		309	07
		-59		329	05
	742·7	-55			

Inversion. 836 - 815 mb 39°-42°; 456 - 444 mb -01° + 01°

Isothermal. 815 - 800 mb 42°F.

Tropopause: I 188 mb -71° 41,400'

CAMBORNE

Pressure — Time 0900 G.M.T.; M.S.L. 1028·4 mb; Surf 1017·8 mb; Freezing 670 - 671 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	61	54	320	05
1000	07·8	57	52	311	09
950		52	44	327	06
900	36·6	46	42	346	08
850					
800	68·2	40	31	340	06
750		39	24	339	13
700	103·7	34	26	332	18
650		30	17	323	23
600	144·0	22	14	323	26
550		19	01	329	23
500	190·4	12	-03	333	26
450		02	-05	334	31
400	245·4	-08	-18	331	35
350		-19	-28	334	39
300	312·8	-36	-45	342	34
250		-55		354	39
200	399·9	-73		348	39
170		-68		323	33
150		-69		214	27
130		-68		328	22
110		-66		352	15
100	544·8	-65		327	10
90		-63		321	07
80		-60		333	05
70		-57			
60					

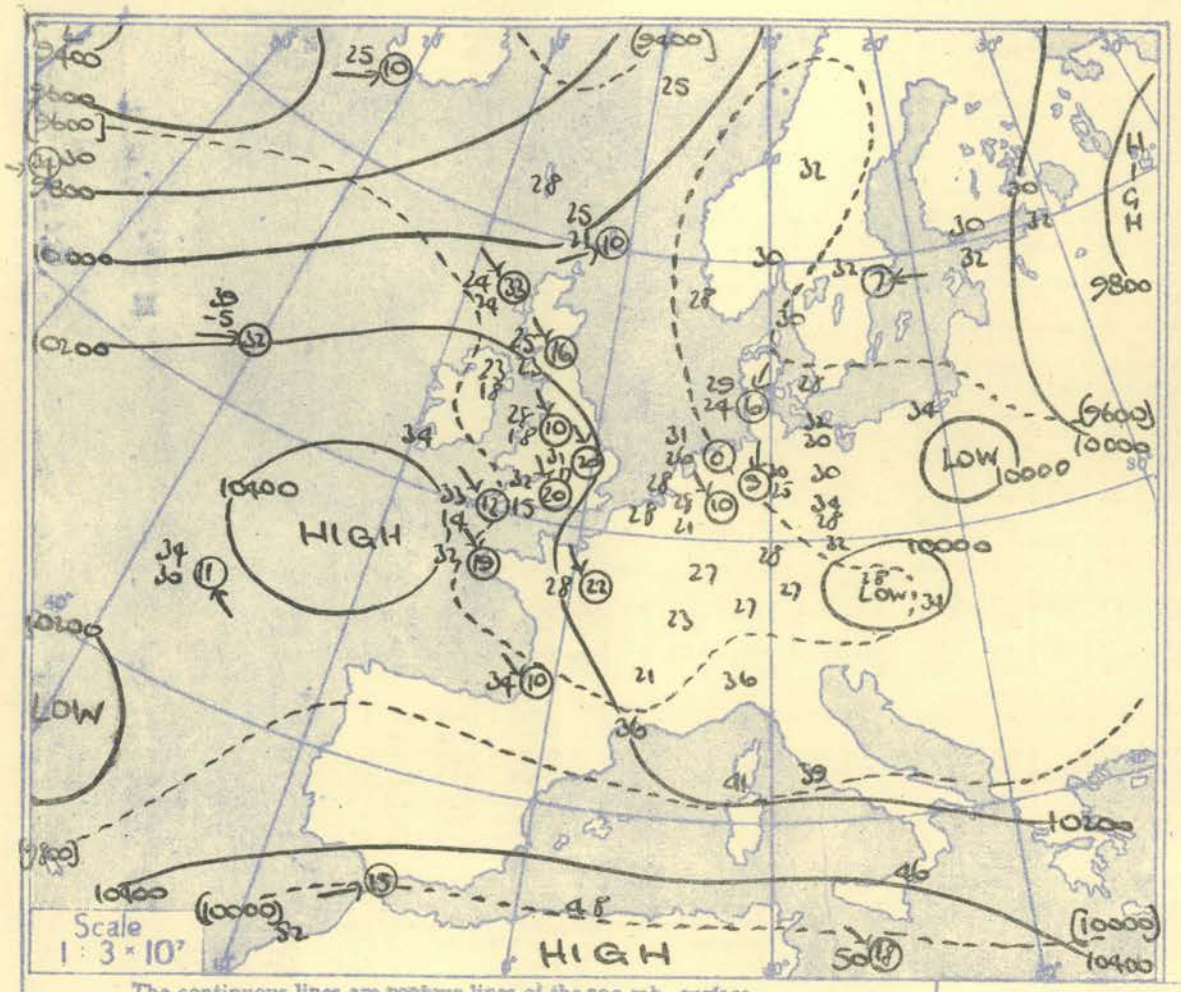
Inversion. 840 - 817 mb 38°-41°

Isothermal. 773 - 750 mb 39°-39°; 630 - 621 mb 32°-32°; 610 - 583 mb 22°-22°

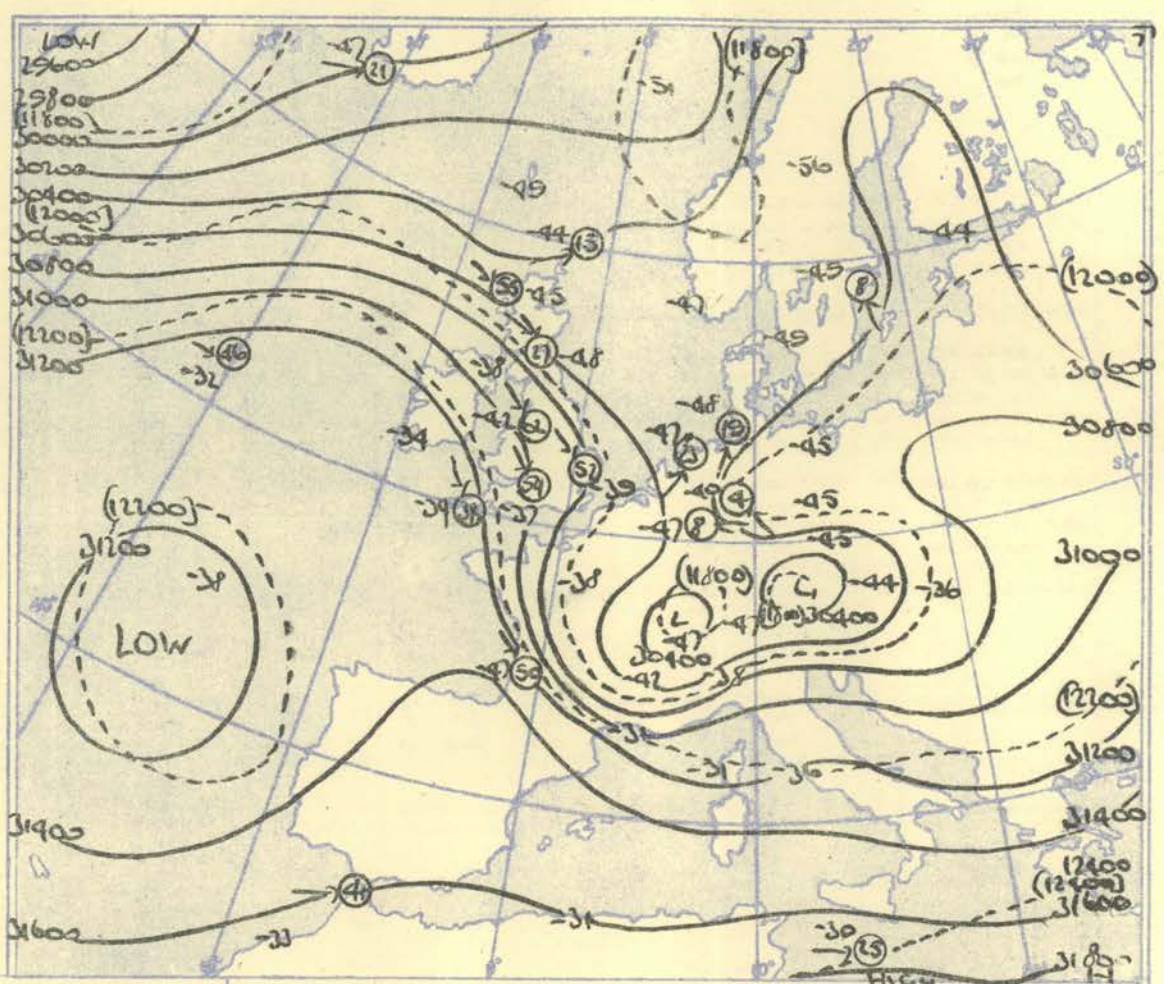
Tropopause: I 202 mb -74° 39,800'

July 25th 1951.

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



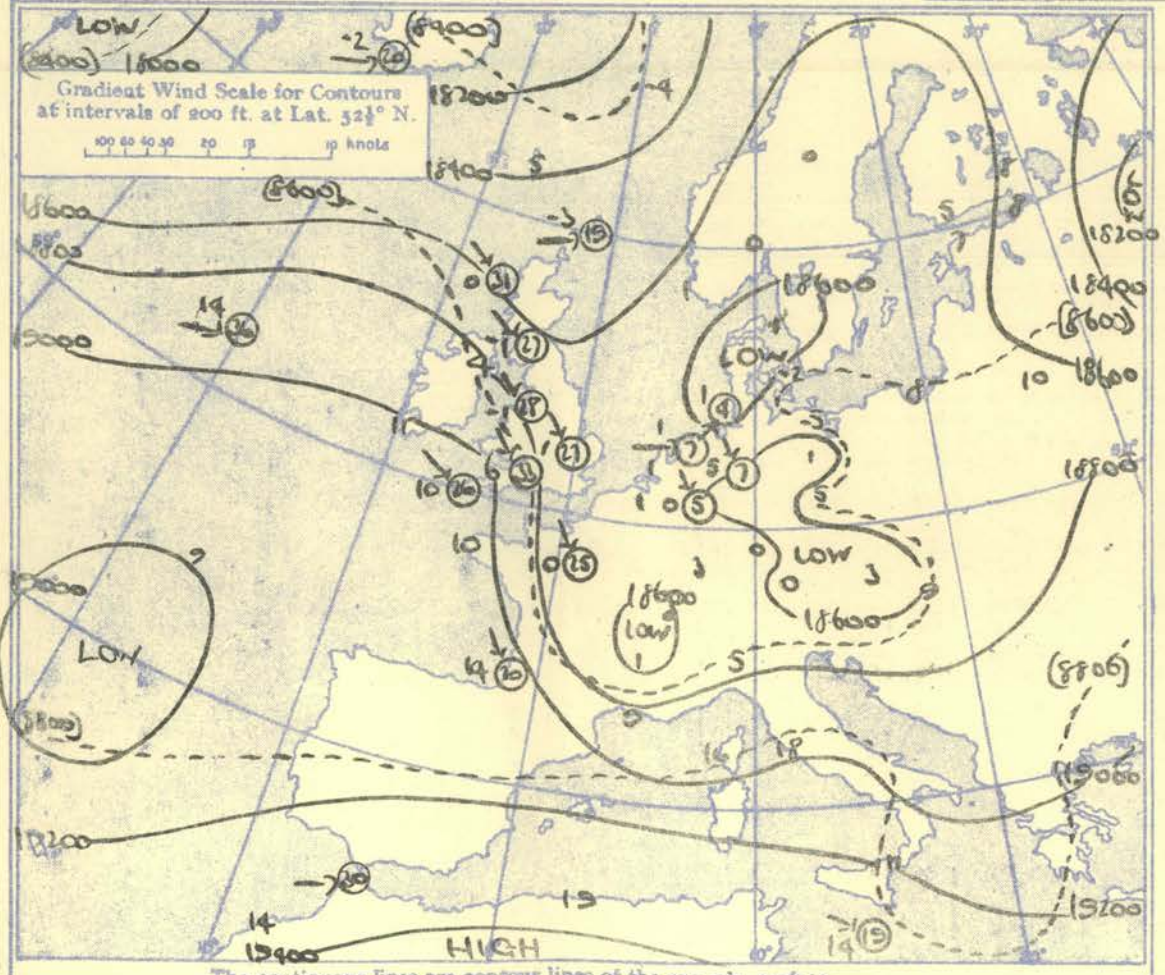
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.



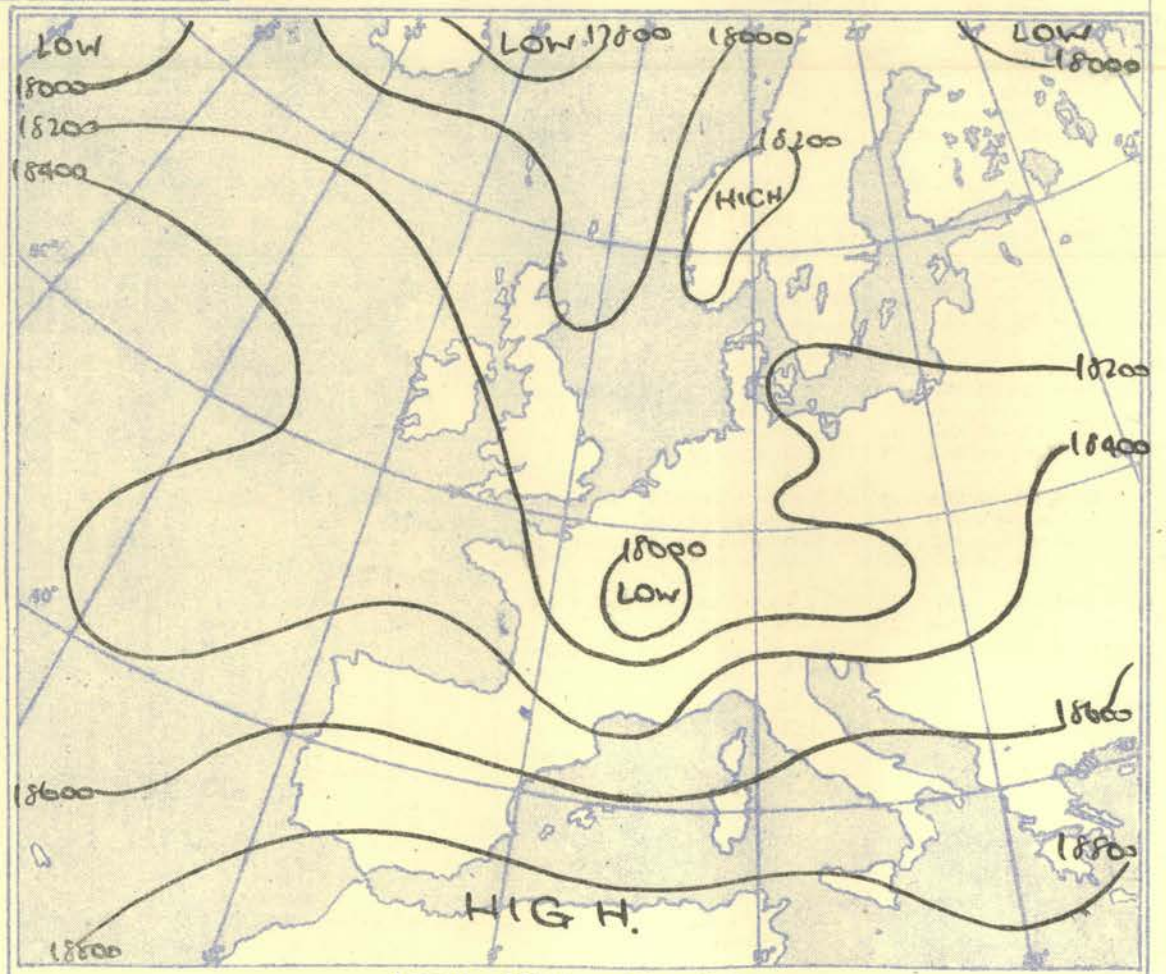
The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 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

	48·1N 7·0W			47·6N 12·3W																														
Pressure Time	1145 GMT			1315 GMT																														
Pressure M.S.L.	1026·3 mb			1026·3 mb			mb			mb			mb			mb			mb			mb			mb			Time M.S.L.		
Pressure Surf	1021·7 mb			1022·7 mb			mb			mb			mb			mb			mb			mb			mb			Surf Pressure		
Pressure Freezing	635 mb			625 mb			mb			mb			mb			mb			mb			mb			mb			Freezing		
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb		
Surf	01·0	62	59	01·0	61	54																						Surf		
1000	07·0	55	57	07·2	58	51																						1000		
950		53	53		50	50																						950		
900	36·0	47	47	36·0	45	41																						900		
850		42	42		43	24																						850		
800	67·8	46	39	68·0	46	23																						800		
750		39	35		44	23																						750		
700	103	35	14	104	37	15																						700		
650		33	08		34	10																						650		
600	144	29	17	145	29	-																						600		
550		22	-		22	-																						550		
500	191	14	-	191	13	-																						500		
450																												450		
400																												400		
350																												350		
300																												300		
250																												250		
200																												200		
170																												170		
Cloud Inversions	7/8 Sc 870-840 850-800 (42) (46)			Cloud:- 5/8 Sc 910-840 Inversion:- 910-860 (44) (51)																														

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

Place	Lerwick		Leeming		Lympne		Shoeburyness		Leuchars		Ronaldsway		Ronaldsway		Wick							
Time	0300h		0800h		0800h		10h		1000h		0815h		0900h		0800h							
Type	Radar																					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.			300	08	340	07	310	07	280	16	250	10	280	12	240	09						
1,000			300	09	340	18	320	13	280	18	260	11	250	12	240	18						
2,000			330	23	350	22	340	15	280	21	270	13	250	11	250	21						
3,000			340	09	350	19	360	16	280	20			250	14	260	16						
4,000			311	11	340	14	350	16	280	16			260	16	260	18						
5,000					330	12	350	16	280	16					250	14						
6,000			030	06	320	11	350	17	290	11					250	19						
8,000			010	10	350	15	010	17	280	09					250	22						
10,000					340	17			280	13												
14,000					340	21	340	23	320	17												
18,000					(12,000ft)		350	28	310	15												
24,000							330	50	320	30												
30,000							340	70	320	55												
40,000	279	17					330	44	320	53												
50,000	292	15					330	20	310	14												
	258 (56,000ft)	09					CALM (57,000ft)															

NEPHOSCOPE OBSERVATIONS

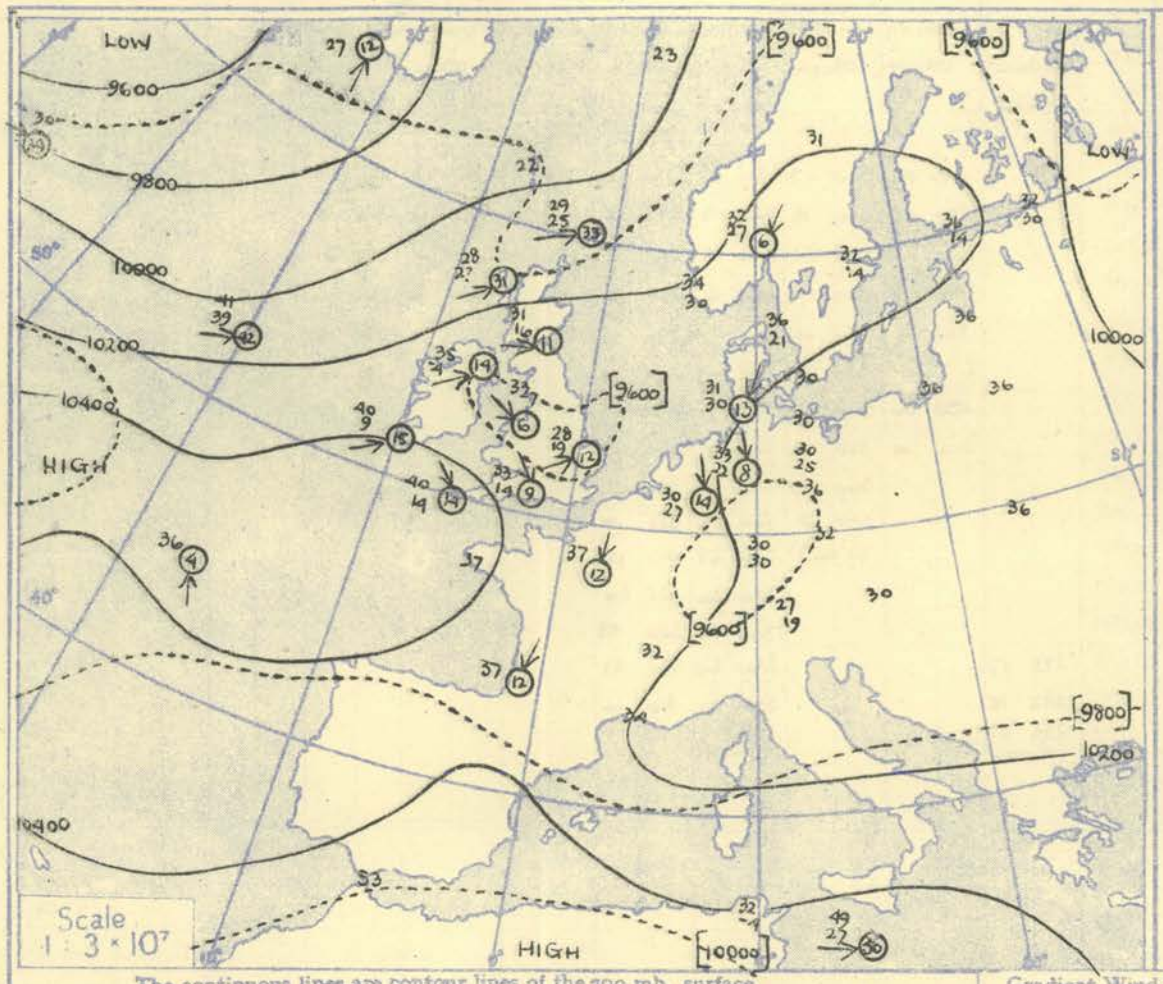
Place													
Time Type													
Dir. Vel.													

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

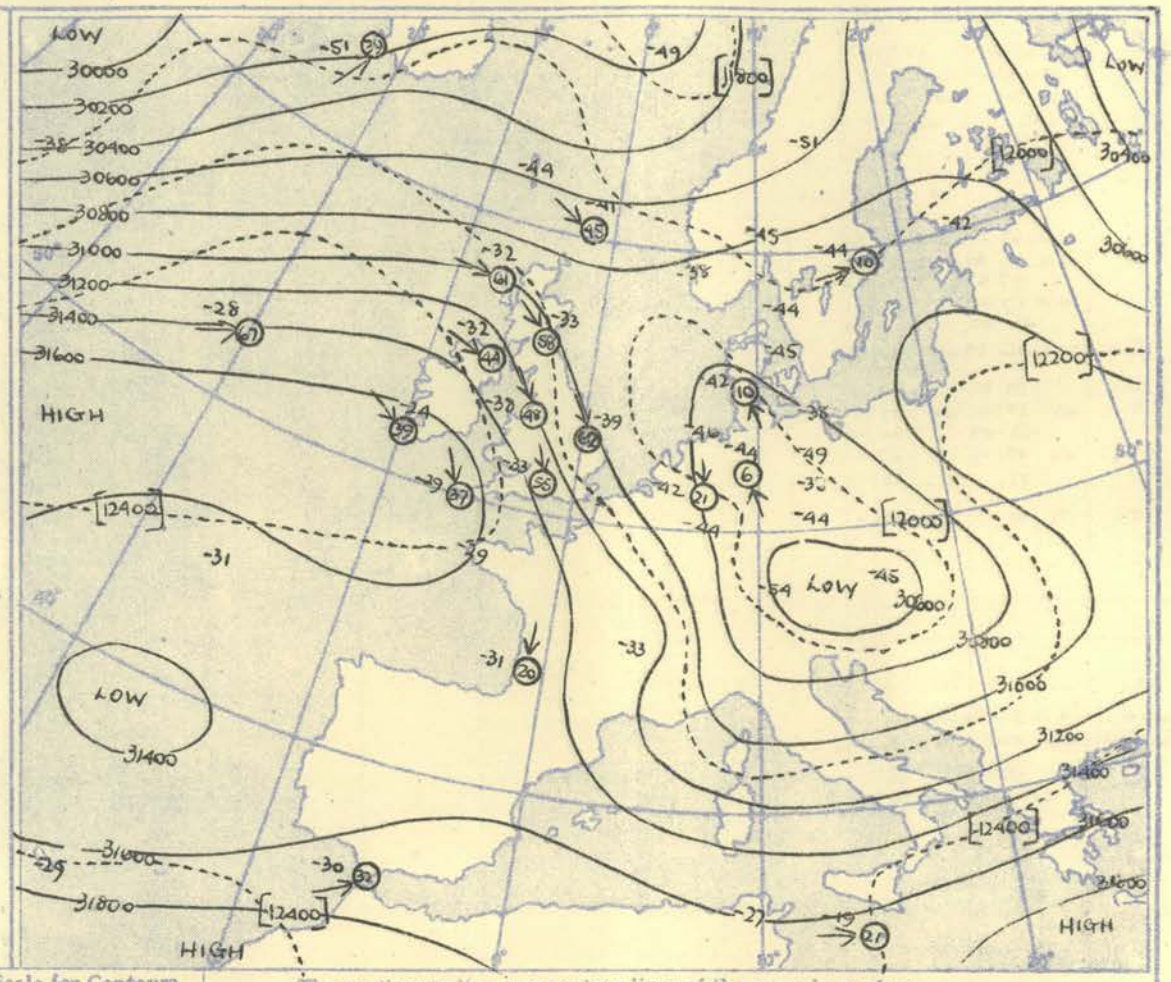
Ship	WEATHER WATCHER					WEATHER WATCHER					WEATHER WATCHER					WEATHER WATCHER				
Lat/Long	52·4N 19·9W					52·6N 19·9W					52·4N 19·9W					52·6N 19·7W				
Pressure Time	03h. G.M.T.					09h. G.M.T.					15h. G.M.T.					21h. G.M.T.				
Pressure M.S.L.	1018 mb					1017 mb					1015 mb					1013 mb				
Pressure Surf	1018 mb					1017 mb					1015 mb					1013 mb				
Pressure Freezing	640 mb					640 mb					600 mb					610 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf		61	59	215	20		63	60	210	18		63	61	210	21		61	60	210	25
1000	05·0	60	57	216	20	04·6	61	57	215	24	04·1	62	61	220	25	03·6	60	59	229	29
950		58	55	216	23		58	52	220	26		59	58	225	34		59	57	236	30
900	34·2	52	46	222	31	33·7	54	44	224	28	33·4	53	49	230	38	32·9	56	53	242	31
850		49	36	229	31		47	40	228	37		49	36	235	42		54	51	246	33
800		47	29	233	29	65·6	45	37	229	41	65·4	45	40	233	41	65·3	49	46	248	35
750		43	17	231	28		40	34	227	41		45	44	233	39		46	40	254	34
700	101·9	39	-05	229	32	101·2	32	25	222	44	101·5	41	39	243	42	101·5	41	21	261	34
650		33	-31	229	34		33	28	221	42		36	33	246	49		36	-12	265	35
600	142·5	29	19	229	32	141·7	28	24	224	47	142·4	32	29	247	30	142·3	31	-32	268	41
550		22	17	231	33		23	19	227	43		25	21	248	51		28	-29	263	44
500	189·3	14	10	235	36	188·7	17	11	235	38	189·7	19	13	251	51	189·5	16	-16	255	56
450		08	00	248	35		09	02	242	30		11	00	259	54		10	00	258	58
400	244·7	00	-08	250	34	244·4	-01	-10	249	42	245·8	00	-11	263	63	245·1	01	-10	257	62
350		-14	-22	253	43		-12	-21	281	55		-11	-20	263	68		-12	-23	297	72
300	312·8	-32	-38	262	41	312·9	-26	-35	259	57	314·4	-28	-39	261	67	313·7	-26	-35	258	79
250		-51		262	44		-43		263	56		-45		262	81		-41		261	90
200	400·7	-74		271	55	402·5	-65		262	67	403·7	-62		278	89	403·9	-58		267	97
170		-77		285	61		-68		276	65		-67		286	66		-69		273	91
150		-77		291	59		-69		273	49		-66		288	50		-74		274	76
130		-76		302	56		-67		252	35		-61		286	30		-74		275	51
110		-74		324	41		-63		249	28		-55		270	22		-76		284	48
100	542·7	-71		321	30	548·1	-60		250	39	(105mb)	-50				547·4	-70		287	37
90		-71		209	16		-56		248	28							-68		280	27
80		-66		195	13		-53		243	27							-64		280	21
70		-66					-51										-62		278	14
60							-49										-59		279	12
	Inversion 772mb 42° - 750mb 43° 462mb 6° - 450mb 8° Isothermal 875 - 815 mb 49° 692 - 622 mb 32°					Inversion 978mb 58° - 958mb 59° Isothermal 707 - 676 mb 35°					Inversion 800mb 44° - 761mb 46° 180mb -66° - 175mb -65°					Isothermal 800 - 775 mb 49° 920 - 900 mb 56° 580 - 550 mb 28°				
Tropopause	II 190 mb -77° 41,100'					I 200 mb -65° 40,200'					I 158 mb -70° 45,400'					II 164 mb -72° 45,000'				

Wednesday 25th July 1951.

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



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

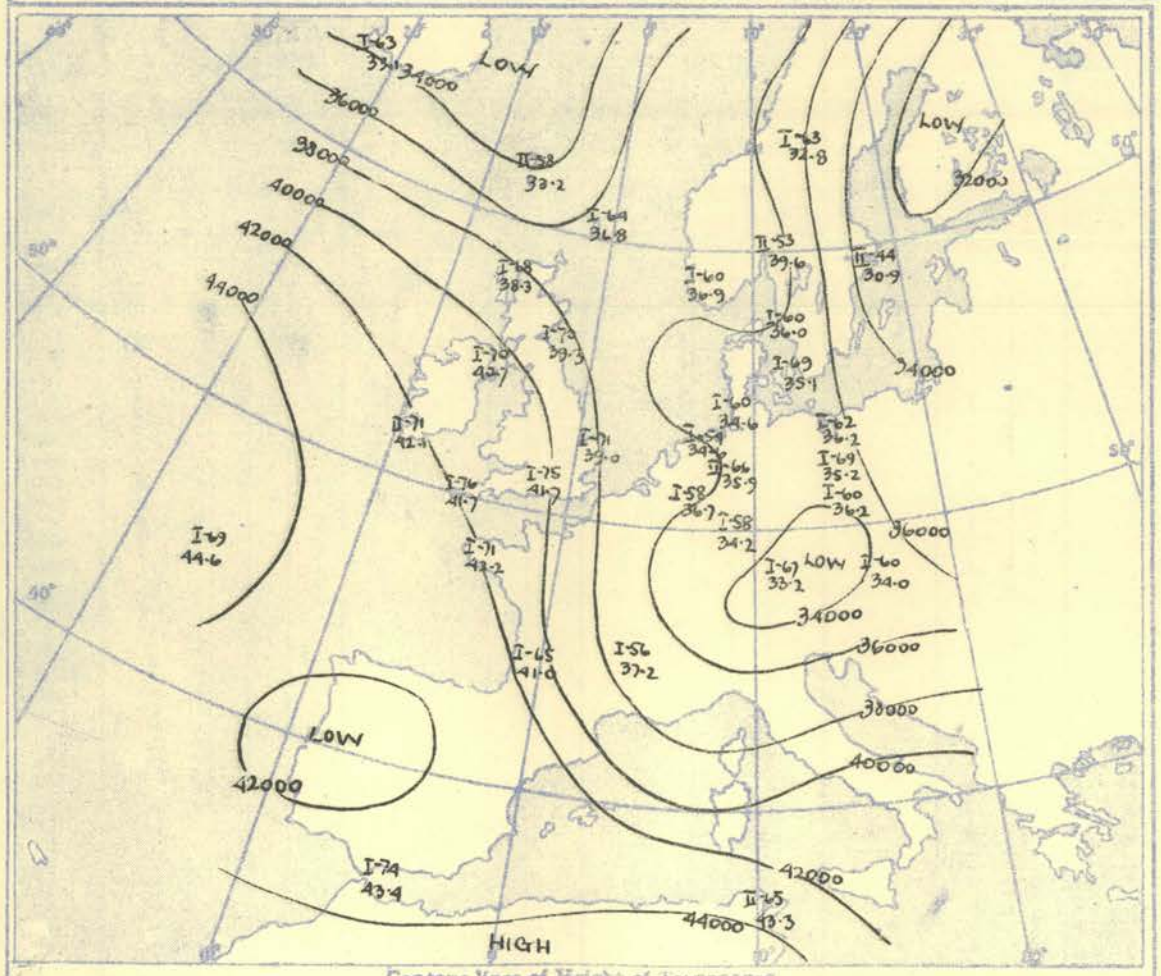


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 80 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

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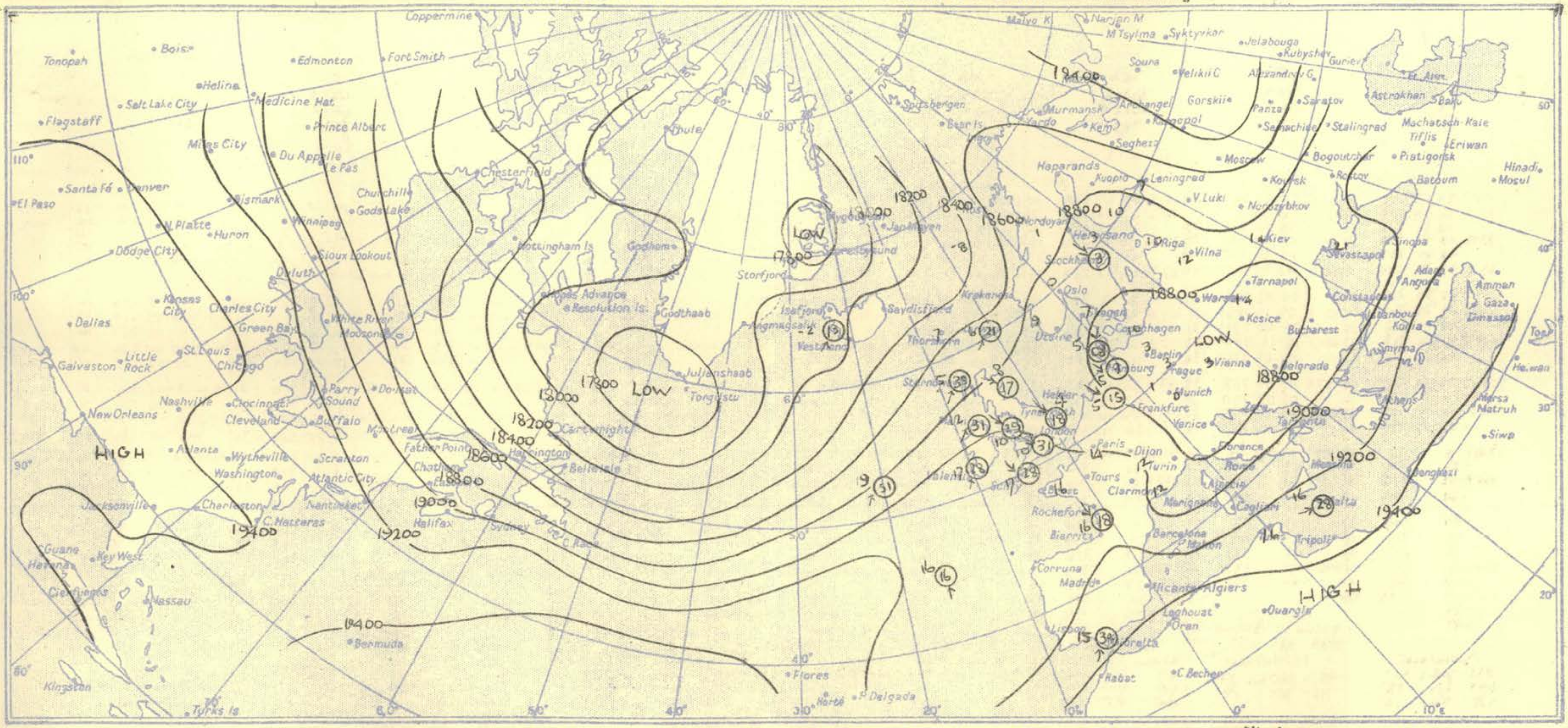
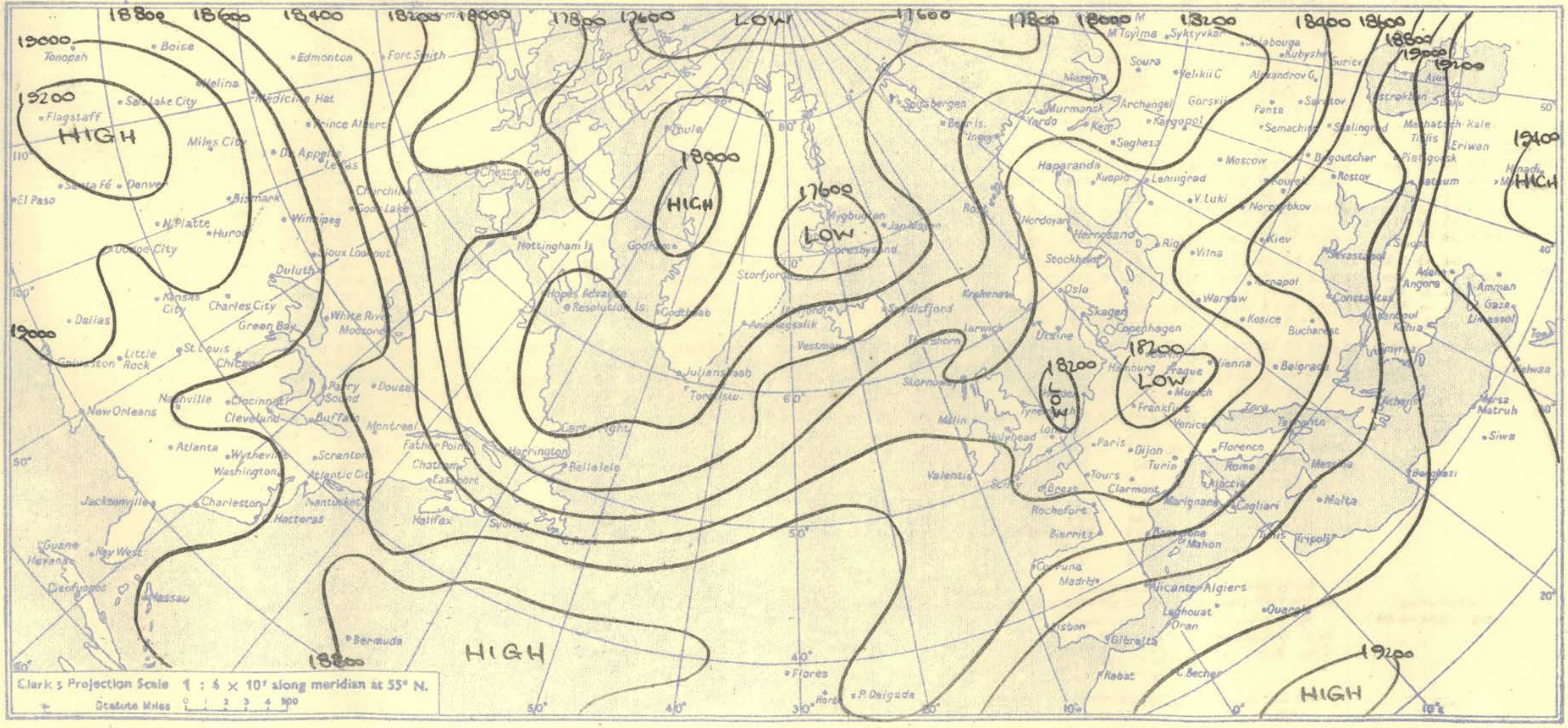
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Wednesday 25th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Wednesday 25TH July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Wednesday 25th July, 1951.

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

15h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.
Pressure: M.S.L.	1018·9 mb	1019·9 mb	1021·6 mb	1024·0 mb	1025·8 mb	1023·6 mb	1025·7 mb	1027·9 mb	1026·5 mb
Pressure: Surf	1008·9 mb	1018·3 mb	1022·4 mb	1014·5 mb	1023·8 mb	1019·2 mb	1010·0 mb	1017·3 mb	1024 mb
Pressure: Freezing	723 mb	737 mb	709 mb	675 mb	675 mb	741 mb	684 mb	623 mb	625 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	57	57	220	17	00·6	57	55	200	15	00·2	69	57	270	10
1000	05·0	56	56	225	24	03·5	55	53			06·2	63	54	244	21
950		52	51	226	24		53	50	219	29		58	47	259	20
900	33·8	49	48	227	21	34·3	48	43	223	28	35·4	52	43	278	18
850		43	40	222	17		42	38	228	27		45	37	262	13
800	65·5	39	28	248	20	60·0	42	25	237	30	67·3	43	33	259	11
750		35	30	255	25		34	32	232	31		36	22	252	10
700	100·8	29	25	260	25	101·3	28	23	228	31	102·8	31	16	261	11
650		24	19	261	25		24	20	231	31		29	17	268	10
600	140·6	16	06	268	27	141·1	18	14	232	33	142·9	21	07	251	07
550		13	-06	258	22		12	07	236	36		11	01	252	07
500	186·3	06	-39	260	21	187·0	05	00	238	35	189·0	08	-11	283	17
450		-05	-47	271	21		02	-03	250	31		03	-08	297	28
400	240·5	-19	-47	272	25	241·7	-07	-18	269	31	243·9	-06	-16	302	45
350		-26	-49	276	36		-18	-25	275	44		-20	-31	310	50
300	306·7	-41		287	45	309·3	-32	-41	271	61	311·4	-33	-46	318	58
250		-59		290	57		-52		271	70		-51		316	66
200	394·3	-52		276	31	397·2	-66		279	57	399·7	-64		314	54
170		-54		268	23		-59		290	48		-62		303	28
150		-53		244	27		-57		277	26		-61		316	19
130		-57		270	15		-57		272	24		-59		299	21
110		-52		256	09		-53		277	16		-60		328	14
100	544·6	-51		282	10	546·6	-51		285	11	546·9	-56		309	13
90		-50		241	06		-49		303	10		-55		327	08
80		-49		246	06							-52		279	05
70		-45										-51		220	15
60		-47										-48			
Inversions / Isothermal	Isothermal 932-918·6 51° 693-675 .. 28° 575-561 .. 14°			Inversion 825 mb 39°-800 mb 42° 488 .. 03°-470 .. 05° Isothermal 987-960 mb 54° 716-700 .. 28°							Inversion 824 mb 42°-800 mb 43° 677 .. 28°-660 .. 30° 541 .. 10°-516 .. 12° 460 .. 02°-424 .. 03°				
Tropopause	I 225 mb -64° 36·800			I 214 mb -68° 38·300							I 206 mb -70° 39·300				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	66	50	260	05	00·6	68	51	280	12	01·2	70	48	330	08
1000	06·6	64	49	242	12	07·2	61	46	280	18	06·6	66	47	320	09
950		56	43	242	14		54	40	278	19		57	42	321	09
900	35·4	52	43	278	18	35·7	49	39	253	17	36·1	48	39	324	09
850		45	37	262	13		43	38	244	11		43	36	333	11
800	67·4	41	31	234	13	67·7	40	29	271	07	67·4	35	32	349	10
750		38	12	235	12		34	20	283	06		33	24	354	11
700	102·9	35	-05	235	14	103·0	33	-07	287	06	102·6	28	19	356	12
650		29	-02	245	14		30	-33	300	11		25	13	347	14
600	143·0	23	-06	255	18	143·2	23	02	318	12	142·5	18	02	331	14
550		16	-01	251	28		20	-16	327	17		12	-22	329	17
500	189·4	12	03	268	31	189·6	10	-34	328	29	188·3	04	-13	345	18
450		05	-04	276	19		01	-10	328	34		-02	-28	336	27
400	244·6	-04	-13	294	25	244·5	-07	-18	327	34	242·7	-11	-32	343	40
350		-15	-25	294	35		-20	-32	324	48		-21	-38	347	50
300	312·5	-32	-43	295	44	311·8	-38	-51	327	48	309·7	-39	-55	346	62
250		-52		302	64		-58		330	59		-56		344	71
200	400·6	-69		305	48	398·4	-73		330	51	396·8	-69		339	69
170		-66		295	43		-63		326	29		-63		334	34
150		-65		285	33		-65		320	27		-63		330	25
130		-63		296	20		-65		319	21		-61		336	17
100							-59		318	14		-58		319	12
90						544·5	-59		318	08					
80							-57		323	06					
70							-54		013	05					
60							-50		322	06					
							-46								
Inversions / Isothermal	Inversion 821 mb 40°-801 mb 42° 530 .. 13°-511 .. 14°					Inversion 825 mb 38°-805 mb 41° 575 .. 19°-560 .. 20° 210 .. -75°-206 .. -71° Isothermal 763-713 mb 34° 693-675 .. 32° 560-550 .. 20°					Inversion 670 mb 24°-650 mb 25° Isothermal 488-476 mb 02° 392-361 .. 34°				
Tropopause	I 195 mb -70° 40.700					I 210 mb -75° 38.800 I 190 -76° 40.900					I 206 mb -71° 39.000				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	67	53	320	03	02·9	64	52	350	08	00·3	65	54	220	12
1000	07·2	64	50			07·7	60	49	297	09	07·1	63	53	219	14
950		56	44	323	08		54	40	273	04		53	45	221	16
900	36·3	49	40	334	07	36·7	49	40	231	04	36·0	47	38	229	15
850		42	34	002	06		44	33	L.V.			42	35	243	13
800	67·9	36	31	349	05	68·6	45	33	333	05	67·7	45	33	256	12
750		35	27	332	05		44	18	310	10		44	17	256	14
700	103·2	33	14	328	09	104·4	40	14	31	14	103·7	40	09	253	25
650		27	-09	326	15		36	16	319	17		35	05	255	16
600	143·3	25	-11	319	20	145·1	29	10	322	20	144·3	29	00	256	20
550		20	04	328	22		25	09	324	21		25	-05	256	26
500	189·9	10	-29	338	31	192·1	17	04	326	21	191·4	17	-11	261	28
450		01	-18	336	41		10	-08	320	21		09	-06	273	31
400	244·8	-05	-21	340	44	247·9	01	-12	320	25	249·2	01	-12	280	32
350		-17	-30	342	49		-11	-25	322	31		-10	-20	281	35
300	312·4	-32	-46	337	55	316·6	-27	-40	325	27	316·0	-24	-35	289	39
250		-51		340	57		-48		330	38		-41		303	42
200	400·5	-69		338	56	405·2	-71		341	43	406·0	-63		315	48
170		-71		336	49		-69		340	31		-71		308	43
150		-65		342	38		-66		335	25		-71		307	37
130		-68		333	37		-66		325	19		-70		309	24
110		-66		330	20		-63		323	15		-67		285	14
100	545·4	-63		322	15	550·2	-63		326	12	550·2	-64		288	12
90		-63		313	13		-61		331	07		-59		282	06
80		-62		311	09		-58		037	06		-58		280	03
70		-60		329	05		-56		L.V.			-58		Calm	
60		-59		338	04	(162 mb)									
		-56		342	04										
Inversions / Isothermal	-55 Inversion (45 mb) 777 mb 33°-762 mb 36° Isothermal 636-570 mb 35° 438-415 .. -02°					Inversion 860 mb 44°-816 mb 46° 775 .. 43°-757 .. 45° Isothermal 594-572 mb 28°					Inversion 832 mb 40°-800 mb 45° Isothermal 459-437 mb 9°				
Tropopause	I 185 mb -75° 41.700					I 189 mb -76° 41.700					II 186 mb -71° 42.100				

21h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Pressure: Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.
Pressure: M.S.L.	1017·8 mb	1016·8 mb	1021·8 mb	1022·2 mb	1025·1 mb	1024·0 mb	1025·6 mb	1027·6 mb
Pressure: Surf	1007·9 mb	1015·2 mb	1021 mb	1012·7 mb	1023·1 mb	1019·6 mb	1009·8 mb	1027·0 mb
Pressure: Freezing	738 mb	733 mb	738 mb	701 mb	680 mb	718 mb	658 mb	650 mb

Pressure mb	LERWICK Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	54	54	280	19	00·6	54	54	180	18	00·2	60	56	280	04
1000	04·8	54	54			04·6	53	52	202	33	06·0	59	53	258	21
950		52	45	250	21		51	50	205	34		53	47	254	19
900	33·7	48	42	240	24	33·4	48	47	213	35	34·9	49	40	245	18
850		43	40	227	20		44	41	219	32		44	37	228	15
800	65·4	38	37	221	21	65·1	39	33	226	32	66·6	40	31	214	12
750		34	33	221	20		34	30	232	44		33	28	217	10
700	100·6	28	28	220	22	99·4	29	25	229	51	101·9	29	25	237	15
650		22	21	221	28		24	19	226	46		23	18	241	22
600	140·3	16	14	229	29	139·2	19	14	228	47	141·6	15	11	249	29
550		09	05	236	27		12	06	234	42		09	06	257	23
500	186·0	01	-02	234	27	185·1	09	02	242	32	187·4	11	09	249	23
450		-08	-13	237	23		01	-07	239	27		02	00	266	31
400	239·8	-16	-23	238	24	239·9	-09	-18	248	36	242·2	-08	-10	272	34
350							-21	-31	251	36		-20	-23	278	37
300						307·1	-35	-50	246	38	309·4	-37	-40	281	46
250							-53		250	60		-55		283	62
200						395·2	-64				396·5	-68		299	55
170							-62					-67		304	33
150							-62					-65		301	27
130												-62		301	26
110												-61		293	12
100											543·0	-58		283	09
90												-58		L.V.	
80												-58		L.V.	
70															
60															
Inversions / Isothermal	Isothermal 1008 - 994 mb 53°					Inversion 925 mb 09°-516 mb 11° Isothermal 962-936 mb 51° 876-862 .. 45°					Inversion 525 mb 07°-500 mb 11° Isothermal 1021-1009 mb 60° 850-831 .. 44° 590-575 .. 13° 536-525 .. 7°				
Tropopause	HR					I 215 mb -62° 38.000					I 207 mb -73° 39.000				

Pressure mb	ALDERGROVE Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	LIVERPOOL Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	55	210	07	00·6	61	51	Calm		01·2	63	54	360	03
1000	06·1	60	53	210	20	07·0	61	48	275	12	06·7	63	53	358	06
950		55	48	243	20		54	44	262	12		58	48	354	08
900	35·1	49	42	236	19	35·9	47	37	253	15	36·9	50	44	337	08
850		44	38	225	15		40	34	236	16		44	42	312	07
800	66·9	42	39	242	14	67·9	41	30	241	12	67·6	38	37	301	07
750		40	25	261	22		33	25	258	10		32	31	310	06
700	102·5	30	19	272	25	102·9	35	-13	278	14	102·8	30	24	337	05
650		22	16	263	27		28	14	273	12		25	10	341	06
600	142·1	17	12	252	31	143·0	21	03	279	16	142·8	21	-01	326	12
550		12	07	263	44		13	02	290	21		14	03	321	20
500	188·0	09	04	269	28	189·2	10	02	282	21	189·0	10	-10	329	25
450		06	01	276	39		01	-04	290	30		02	-06	346	35
400	243·2	-05	-10	260	42	244·0	-07	-15	300	28	243·9	-08	-14	337	40
350		-17	-23	273	53		-20	-28	309	36		-21	-27	340	40
300	311·0	-33	-39	270	56	311·3	-35	-44	312	39	311·0	-36	-43	351	47
250		-52		280	52		-54		314	54		-55		335	65
200	398·8	-73		290	44	398·4	-78		321	45	398·2	-74		344	64
170		-73		290	31		-73		324	39		-69		342	40
150		-72		289	20		-71		326	30		-66		340	32
130		-72		247	72		-69		323	21		-66		337	25
100		-72		285	13		-68		311	11		-68		338	14
90	542·1	-68		283	12	542·3	-65		298	10	543·0	-67		336	09
80		-67		283	12		-64					-63			
70		-66					-64								
60		-64				(8) mb									
Inversions / Isothermal	Inversion 810 mb 40°-787 mb 47° 508 .. 08°-497 .. 10°					Inversion 1023 mb 61°-1015 mb 63° 832 .. 39°-809 .. 42° 750 .. 33°-722 .. 38° 541 .. 12°-530 .. 15°					Inversion 738 mb 30°-722 mb 33° 645 .. 13°-530 .. 15° Isothermal 1020-980 mb 63°				
Tropopause	I 197 mb -74° 40.100					I 200 mb -78° 39.800					I 203 mb -74° 39.500				

Pressure mb	LARKHILL Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	°Temp. °F.	°Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	51	320	05	02·9	59	54	Calm	
1000	07·1	63	51			07·6	59	53	270	06
950		58	47	326	07		55	47	251	06
900	36·3	51	44	330	05	36·5	49	45	201	08
850		44	39	326	02		45	36	205	07
800	68·1	39	34	331	02	68·4	45	28	291	11
750		37	22	308	07		41	23	277	14
700	108·5	33	19	304	11	104·2	39	17	270	16
650		31	06	320	15		32	09	279	15
600	143·9	26	14	325	25	144·7	25	03	295	14
550		21	07	323	25		20	01	302	21
500	190·6	15	05	327	25	191·3	12	-05	298	22
450		05	04	325	25		03	-14	299	27
400	246·0	-04	-14	332	26	246·4	-05	-21	305	31
350		-15	-25	331	36		-19	-30	321	33
300	314·0	-29	-40	330	37	313·8	-36	-45	323	36
250		-48		335	50		-55		337	44
200	402·7	-70		340	56	400·9	-76		339	41
170		-70		341	44		-78		334	43
150		-67		335	38		-78		329	27
130		-68		328	28		-76		341	21
110		-66		331	21		-72		338	14
100		-66		337	15	542·5	-71			
90		-66								
80		-66								
70										
60										
Inversions / Isothermal	Inversion 1009 mb 62°-1000 mb 63° 777 .. 36°-760 .. 38° 700 .. 33°-676 .. 34° Isothermal 1000-989 mb 63° 850-838 .. 44° 746-728 .. 36° 560-535 .. 21°					Isothermal 1017-1000 mb 59° 972-950 .. 55° 850-800 .. 45° 765-714 .. 41° 600-582 .. 25°				
Tropopause	I 187 mb -75° 41.600					I 188 mb -82° 41.200				

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

LERWICK

Pressure — Time 03h G.M.T. | M.S.L. 1017·0 mb | Surf 1007·0 mb | Freezing 750 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	52	200	10
1000	04·5	52	52	-	-
950		51	46	197	27
900	33·3	48	37	203	28
850					
800	65·0	37	34	211	32
750		32	31	214	29
700	100·1	28	27	215	30
650		23	22	216	28
600	139·9	17	16	223	30
550		09	07	227	31
500	185·6	01	-1	226	32
450		-7	-10	229	27
400	239·6	-12	-16	235	22
350		-26	-30	231	24
300	306·0	-40	-45	239	30
250		-60		236	36
200	392·8	-61		256	44
170		-55		264	40
150		-59		269	28
130		-60		262	22
110		-63		271	17
100	540·5	-61			
90		-60			
80		-60			
70		(44 mb)			
60					

Inversion 1007 mb 52°-985 mb 53°
Isothermal. 682-681 mb 27°
456-428 mb -7°

Tropopause: I 225 mb -62° 36,800 ft.

STORNOWAY

Pressure — Time 03h G.M.T. | M.S.L. 1012·8 mb | Surf 1011·2 mb | Freezing 700 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	57	55	200	20
1000	03·5	56	53	206	33
950		53	50	210	38
900	32·4	50	47	222	36
850					
800	64·3	42	38	228	32
750		37	33	230	33
700	99·6	32	·	239	33
650		27	·	253	32
600	139·6	21	·	252	32
550		15	·	253	30
500	185·7	07	·	244	36
450		-2		240	41
400	240·1	-14		225	33
350		-28		227	38
300	306·4	-40		243	43
250		-47		248	49
200	395·7	-47		255	51
170		-49		259	42
150	458·6	-53			

U Element

Isothermal. 250-237 mb -47°

Tropopause: I 220 mb -50° 37,500 ft.

LEUCHARS

Pressure — Time 03h G.M.T. | M.S.L. 1019·1 mb | Surf 1018·1 mb | Freezing 711 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	58	53	250	07
1000	05·5	57	53	233	20
950		55	47	232	24
900	34·5	50	42	233	24
850					
800	66·3	42	35	235	24
750		36	29	242	22
700	101·7	31	28	263	24
650		26	25	273	23
600	141·6	20	19	283	22
550		14	12	286	21
500	187·7	07	05	290	27
450		-1	-3	280	24
400	242·3	-8	-12	263	33
350		-22	-27	269	32
300	309·4	-34	41	272	37
250		-48		273	42
200	398·5	-57		273	46
170		-60		286	39
150	458·6	-61		289	36
130		-63		274	37
110		-68		272	22
100	548·5	-64		274	20
90		-62		282	15
80		-60		282	09
70		-59		291	07
60	658·3	-58			
		(56 mb)			

Inversion. 435 mb -4° - 427 mb -2°

Tropopause: I 208 mb -58° 39,200 ft.

ALDERGROVE

Pressure — Time 03h G.M.T. | M.S.L. 1020·8 mb | Surf 1011·1 mb | Freezing 700 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	59	51	230	13
1000	05·7	58	51	230	27
950		54	50	234	31
900	34·7	51	47	236	32
850					
800	66·5	40	36	242	22
750		37	32	249	22
700	101·9	32	28	268	23
650		27	23	281	20
600	142·0	21	16	261	18
550		14	09	262	25
500	188·2	05	-3	270	35
450		02	-31	274	37
400	243·0	-8	-35	282	61
350		-23	-34	281	67
300	310·0	-36	-54	280	70
250		-46		282	62
200	398·9	-61		285	50
170		-65		295	50
150	459·4	-68		284	37
130		-69		276	23
110		-70		271	15
100	543·9	-68		274	10
90		-65		296	15
80		-63		282	07
70		-62		274	03
60					

Inversion. 488 mb 04° 480 mb 05°
Isothermal. 940-923 mb 23°
800-785 mb 40°
555-545 mb 14°

Tropopause: II 185 mb -64° 41,500 ft.

LIVERPOOL

Pressure — Time 03h G.M.T. | M.S.L. 1024·2 mb | Surf 1022·2 mb | Freezing 705 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	56	51	Calm	
1000	06·7	57	51	225	07
950		52	44	201	06
900	35·6	47	41	213	05
850					
800	67·2	43	24	236	15
750		38	22	236	11
700	102·7	31	21	253	14
650		25	15	262	25
600	142·6	16	12	261	33
550		13	12	286	36
500	188·7	13	12	289	34
450		05	00	291	45
400	243·8	-9	-14	295	54
350		-22	-26	285	55
300	310·8	-39	-44	278	63
250		-57		286	57
200	398·1	-66		299	48
170		-67		305	33
150		-68		296	25
130		-67		311	18
110		-63		310	06
100	543·5	-61		306	09
90		-60			
80		(37 mb)			

Inversion. 1022 mb 56° 1010 mb 58°
832 mb 40° 791 mb 44°
530 mb 12° 518 mb 14°
Isothermal. 700-682 mb 31°
594-575 mb 15°

Tropopause: II 189 mb -67° 41,100 ft.

DOWNHAM MARKET

Pressure — Time 03h G.M.T. | M.S.L. 1024·3 mb | Surf 1019·9 mb | Freezing 712 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	1·2	58	54	Calm	
1000	6·7	56	54	275	06
950		56	49	276	07
900	35·8	50	44	273	06
850					
800	67·5	38	33	262	09
750		35	29	256	05
700	102·8	30	23	255	09
650		27	07	303	12
600	142·9	21	13	313	18
550		13	09	303	25
500	189·0	06	5	257	27
450		02	+01	256	30
400	244·0	-6	-8	256	32
350		-18	-21	308	40
300	311·6	-33	-36	311	50
250		-53		317	51
200	399·3	-72		317	48
170		-69		327	39
150	459·1	-68		330	27
130		-65		330	22
110		-63		308	20
100	544·3	-65		307	14
90		-64		319	09
80		-63			
70					
60					

Inversion. 1020 mb 58° 1000 mb 61°
761 mb 33° 744 mb 36°
500 mb 06° 484 mb 08°

Tropopause: I 200 mb -72° F 39,931 ft. II 200 mb -70° 40,200 ft.

LARKHILL

Pressure — Time 03h G.M.T. | M.S.L. 1026·3 mb | Surf 1010·0 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	51	50	320	02
1000	07·1	54	51	325	11
950		55	43	301	09
900	36·1	50	39	259	07
850					
800	67·8	38	34	242	10
750		39	06	294	09
700	103·3	37	16	322	13
650		32	04	313	15
600	143·7	26	06	303	19
550		20	-05	294	23
500	190·3	12	-05	293	25
450		06	00	302	29
400	245·6	-04	-10	306	35
350		-15	-22	311	42
300	313·7	-30	-39	311	44
250		-49		310	48
200	402·1	-70		322	57
170		-72		327	48
150	461·5	-74		327	42
130		-71		323	27
110		-72		331	25
100	545·4	-70		307	17
90		-69		318	11
80		-69		329	14
70		-68		343	07
60	658·2	-65			

Inversion. 1010-984 mb 51°-58°
780-750 mb 36-39°
490-485 mb 10-12°

CAMBORNE

Pressure — Time 03h G.M.T. | M.S.L. 1027·4 mb | Surf 1016·6 mb | Freezing 643 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	52	51	190	03
1000	07·4	54	51	237	06
950		53	41	238	07
900	36·3	47	37	228	09
850					
800	68·1	43	19	255	12
750		39	19	279	18
700	103·8	39	02	278	14
650		33	05	274	14
600	144·3	29	-10	282	21
550		23	-04	290	26
500	191·2	16	-06	294	31
450		07	-02	300	35
400	246·7	-2	-08	304	30
350		-14	-20	302	30
300	315·0	-28	-33	300	35
250		-45		319	40
200	404·2	-67		326	54
170		-74		333	51
150		-75		322	36
130		-76		315	26
110		-70		311	13
100	547·3	-69		305	12
90		-68			
80		-68			
70		(38 mb)			

Inversion. 1017 mb 53° 985 mb 55°
884 mb 45° 850 mb 46°
Isothermal. 750-700 mb 39°
560-540 mb 23°

Valentia

Pressure — Time 03h G.M.T. | M.S.L. 1023·6 mb | Surf 1022 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	60	57		
1000	6·3	65	57	202	15
950		64	48	213	26
900	35·4	50	47	215	27
850					
800	67·3	43	42		
750		39	22		
700	103·0	36	17		
650		34	25		
600	143·6	28	25		
550		22	17		
500	190·6	15	01		
450		05	00		
400	246·0	-2	-8		
350		-16	-26		
300	314·0	-30	-39		
250		-44			
200	403·5	-64			
170		-75			
150		-76			
130		-76			
110		-69			
100		-70			
90		-70			
80		-70			
70					
60					

Inversion. 157 mb -78° - 154 mb -76°
Isothermals. 154 mb - 150 mb -76°

Tropopause: I 155 mb -77° 45,600 ft. I 157 mb -78° 46,500 ft.

Pressure — Time 09h G.M.T. | M.S.L. 1013·0 mb | Surf 1003·1 mb | Freezing 692 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53	200	13
1000	03·5	53	53		
950		52	49	195	37
900	32·4	50	49	199	36
850					
800	64·2	41	41	202	26
750		37	36	219	25
700	99·7	33	32	225	22
650		27	25	234	22
600	139·8	20	18	234	23
550		13	-11	242	24
500	185·9	07	-04	241	24
450		-03	-09	229	29
400	240·2	-16	-23	230	36
350		-29	-34	229	34
300	306·4	-42		216	27
250		-55		217	34
200	394·2	-47		248	35
170		-52		260	33
150		-53		265	30
130		-56			
110		-54			
100	545·2	-53			
90					
80					
70					
60					

Isothermal. 845 mb - 830 mb 44°

Tropopause: I 240 mb -56° 35,500 ft.

STORNOWAY

Pressure — Time 09h G.M.T. | M.S.L. 1011·8 mb | Surf 1012·2 mb | Freezing 672 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	59	58	250	05
1000	03·2	58	57		
950		54	54	241	24
900	32·3	51	51	242	25
850					
800	64·3	44	43	239	27
750		40	39	238	32
700	100·0	35	28	241	34
650		30	16	245	30
600	140·3	24	07	247	26
550		18	-12	256	24
500	186·7	08	-21	260	26
450		-4	-33	262	30
400	241·0	-15	-43	260	39
350		-27	-55	264	45
300	307·2	-42		274	53
250		-54		273	72
200	395·7	-49		269	55
170		-52		263	42
150	458·3	-56		257	39
130		-56			
110					
100					
90					
80					
70					
60					

Isothermal. 766 - 750 mbs 40°

Tropopause: II 250 mb -54° 34,700 ft.

LEUCHARS

Pressure — Time 09h G.M.T. | M.S.L. 1016·7 mb | Surf 1017·5 mb | Freezing 712 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	61	57	260	15
1000	04·8	59	56	236	22
950		53	50	240	32
900	34·0	50	47	246	29
850					
800	65·8	40	37	257	27
750		37	34	261	28
700	101·2	30	27	262	28
650		25	22	262	29
600	141·2	19	13	260	25
550		10	02	249	27
500	186·9	02	-07	260	23
450		-08	-22	280	26
400	240·6	-18	-39	281	37
350		-30	-54	288	48
300	306·4	-46		289	56
250		-56		285	57
200	394·0	-60		285	41
170		-69		276	37
150		-65		274	29
130		-65		271	16
110		-62		261	10
100	540·2	-60		252	09
90		-58		213	06
80		-54		153	07
70		-51			
60					

Inversion. 947 mb -887 mb 52-54°
430 mb - 425 mb -12°--11°
285 mb - 274 mb -51°--54°
Isothermal. 765 mb - 755 mb 38°
626 mb - 627 mb 24°

Tropopause: II 246 mb -57° 34,900 ft. I 164 mb -70° 43,500 ft.

ALDERGROVE

Pressure — Time 09h G.M.T. | M.S.L. 1019·5 mb | Surf 1009·8 mb | Freezing 663 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	58	56	230	09
1000	05·3	57	56	220	25
950		52	51	230	24
900	34·3	52	51	252	21
850					
800	66·4	44	43	244	27
750		39	38	248	29
700	102·0	34	33	254	25
650		30	29	252	29
600	142·2	23	21	264	30
550		16	05	274	35
500	188·6	11	-23	275	39
450		00	-26	282	51
400	243·3	-09	-31	287	67
350		-19	-46	288	90
300	310·9	-31	-56	292	87
250		-45		286	55
200	400·7	-57			
170		-63			
150		-67			
130		-69			
110		-64			
100	546·6	-57			

Inversion. 688-677 mb 33-34°
Isothermal. 950-900 mb 23°
733-682 mb 22°
550-536 mb 18°

Tropopause: I 133 mb -71° 50,200 ft.

LIVERPOOL

Pressure — Time 09h G.M.T. | M.S.L. 1023·2 mb | Surf 1021·2 mb | Freezing 684 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	63	54	260	05
1000	06·4	60	53	258	10
950		53	47	254	11
900	35·4	50	43	262	09
850					
800	67·2	43	28	283	14
750		40	36	275	15
700	102·8	33	29	265	14
650		30	26	265	15
600	143·1	24	21	287	19
550		18	10	291	29
500	189·6	12	-14	292	37
450		02	-14	297	28
400	244·6	-6	-13	298	45
350		-17	-26	297	63
300	312·4	-29	-46	296	75
250		-45		302	66
200	402·1	-58		309	63
170		-63		295	58
150		-67		301	47
130		-64		308	31
110		-65		285	20
100	548·3	-61		284	18
90		-61		296	13
80		-60			
70					
60					

Inversion. 820 mb 41°-811 mb 44°
660 mb 18°-544 mb 20°

Tropopause: I 142 mb -70° 47,500 ft.

DOWNHAM MARKET

Pressure — Time 09h G.M.T. | M.S.L. 1024·2 mb | Surf 1019·7 mb | Freezing 680 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	1·2	62	51	Calm	
1000	6·6	61	49	253	03
950		56	46	254	09
900	35·7	50	43	246	15
850					
800	67·5	39	32	237	15
750		37	25	232	12
700	102·9	34	20	250	13
650		28	14	280	18
600	143·1	20	06	295	18
550		16	08	301	18
500	189·4	12	04	304	34
450		08	02	300	48
400	244·6	-4	-14	295	29
350		-14	-24	296	47
300	312·9	-28	-40	303	74
250		-47		303	67
200	402·3	-59		305	55
170		-61		316	51
150	463·5	-64		318	34
130		-66		315	29
110		-65		317	22
100	548·7	-65		318	11
90		-63		318	09
80		60		307	09
70		58		292	08
60					

Inversion. 763 mb 35° 37°
565 mb 15° 16°
Isothermal. 525 - 513 mb 14°

Tropopause: II 203 mb -59° 39,900 ft.

LARKHILL

Pressure — Time 09h G.M.T. | M.S.L. 1025·8 mb | Surf 1009·9 mb | Freezing 659 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	61	54	Calm	
1000	07·1	59	51		
950		56	45	260	08
900	36·2	51	45	248	12
850					
800	68·0	44	25	263	12
750		41	17	279	10
700	103·7	37	16	281	12
650		31	14	291	18
600	144·2	25	17	291	25
550		23	15	315	29
500	191·2	20	14	298	30
450		10	06	298	36
400	246·8	-01	-8	309	45
350		-13	-22	301	53
300	315·2	-28	-39	302	54
250		-45		312	69
200	405·0	-59		321	67
170		-65		312	57
150	465·6	-69		322	45
130		-65		326	30
110		-63		313	18
100	550·9	-61			
90					
80					
70					
60					

Inversion. 820-800 mb 41-44°
592-572 mb 24-27°
Isothermal. 550-537 mb 58°

Tropopause: I 180 mb -66° 42,700 ft.

CAMBORNE

Pressure — Time 09h G.M.T. | M.S.L. 1026·4 mb | Surf 1015·9 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	59	56	210	05
1000	07·3	58	56	223	10
950		52	45	227	10
900	36·2	48	39	233	09
850					
800	68·2	48	41	001	05
750		43	36	003	09
700	104·1	37	30	319	19
650		32	28	298	29
600	144·6	28	27	289	25
550		26	23	297	23
500	191·7	20	14	298	30
450		10	06	298	36
400	247·5	00	-03	299	40
350		-12	-16	295	39
300	316·1	-25	-30	306	39
250		-44		321	54
200	405·9	-68		323	56
170		-72		328	49
150		-75		331	38
130		-77		331	29
110		-71		324	15
100	545·1	-69		287	12
90		-68		229	11
80		-64			
70					
60					

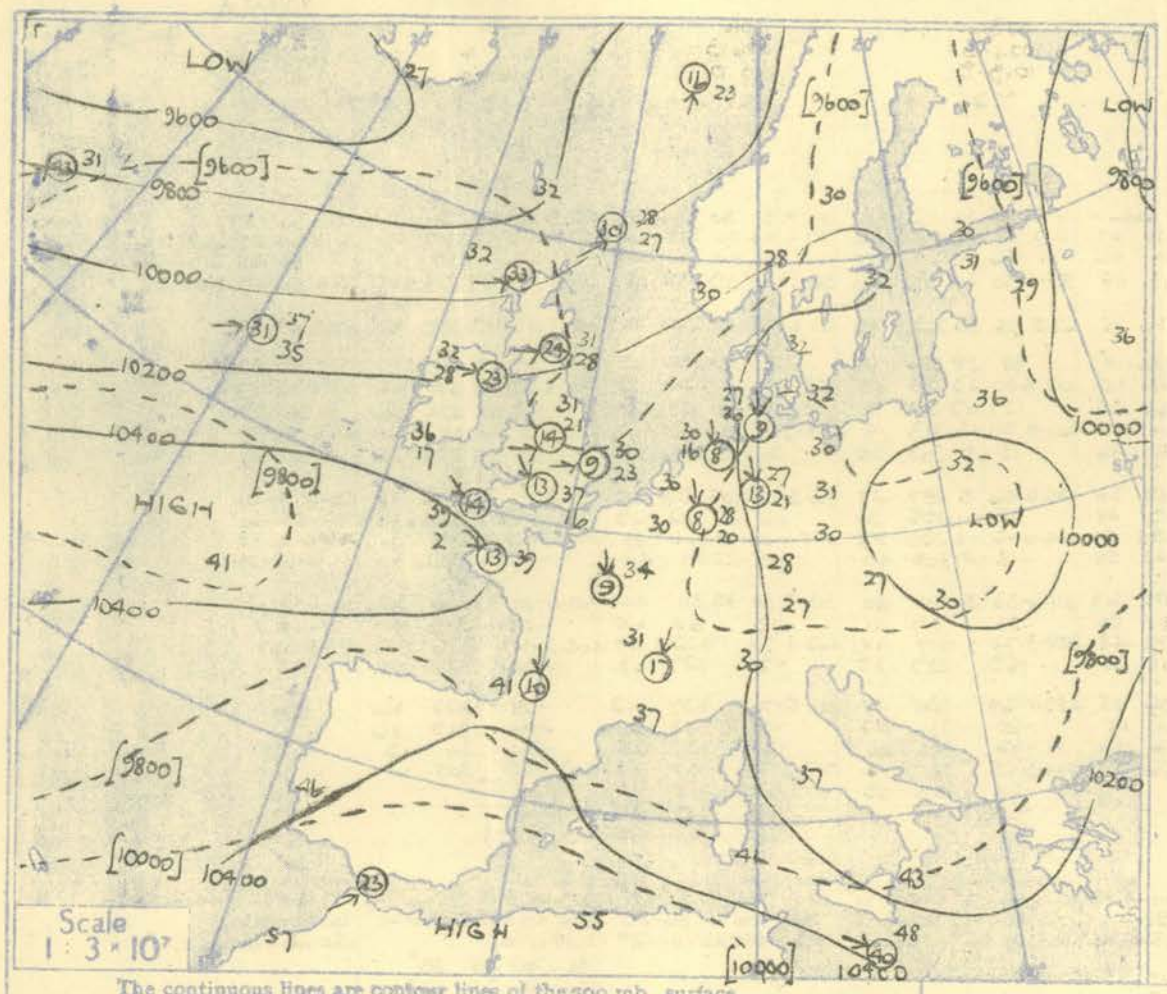
Isothermal. 900 - 787 mb 48°

Tropopause: I 157 mb -76° 45,700 ft.

plot 48Z patent

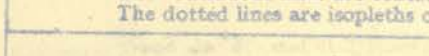
Thursday 26th July 1951

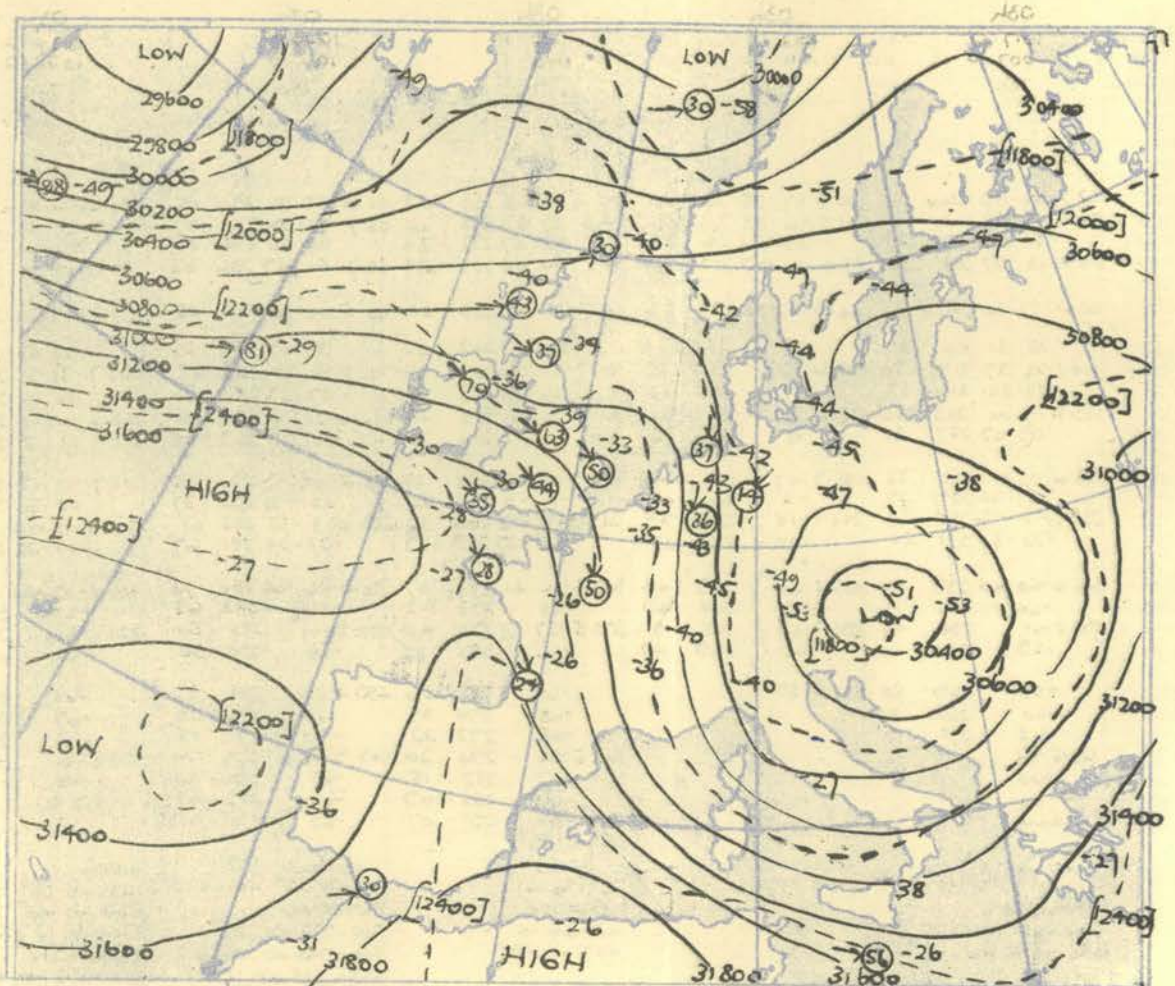
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



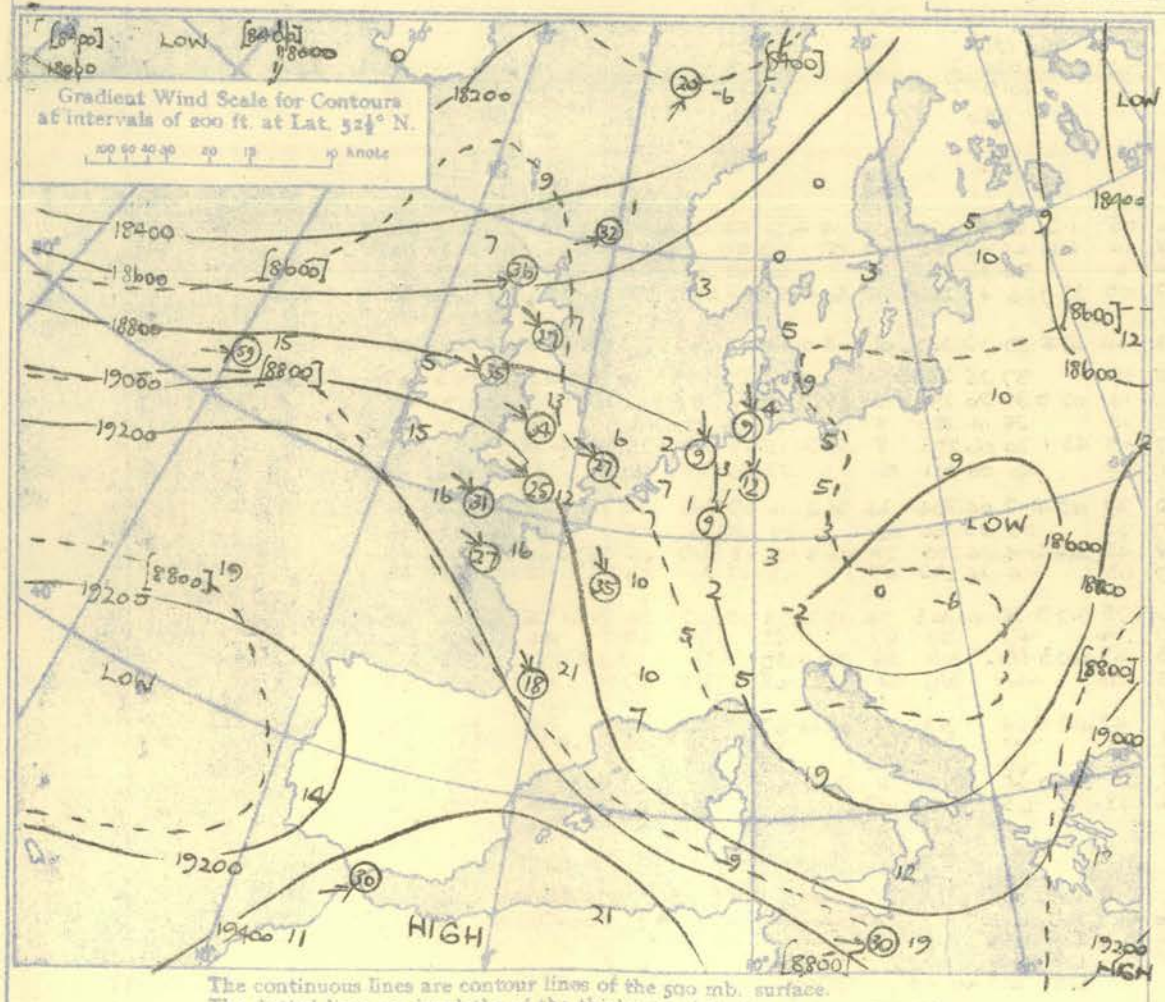
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

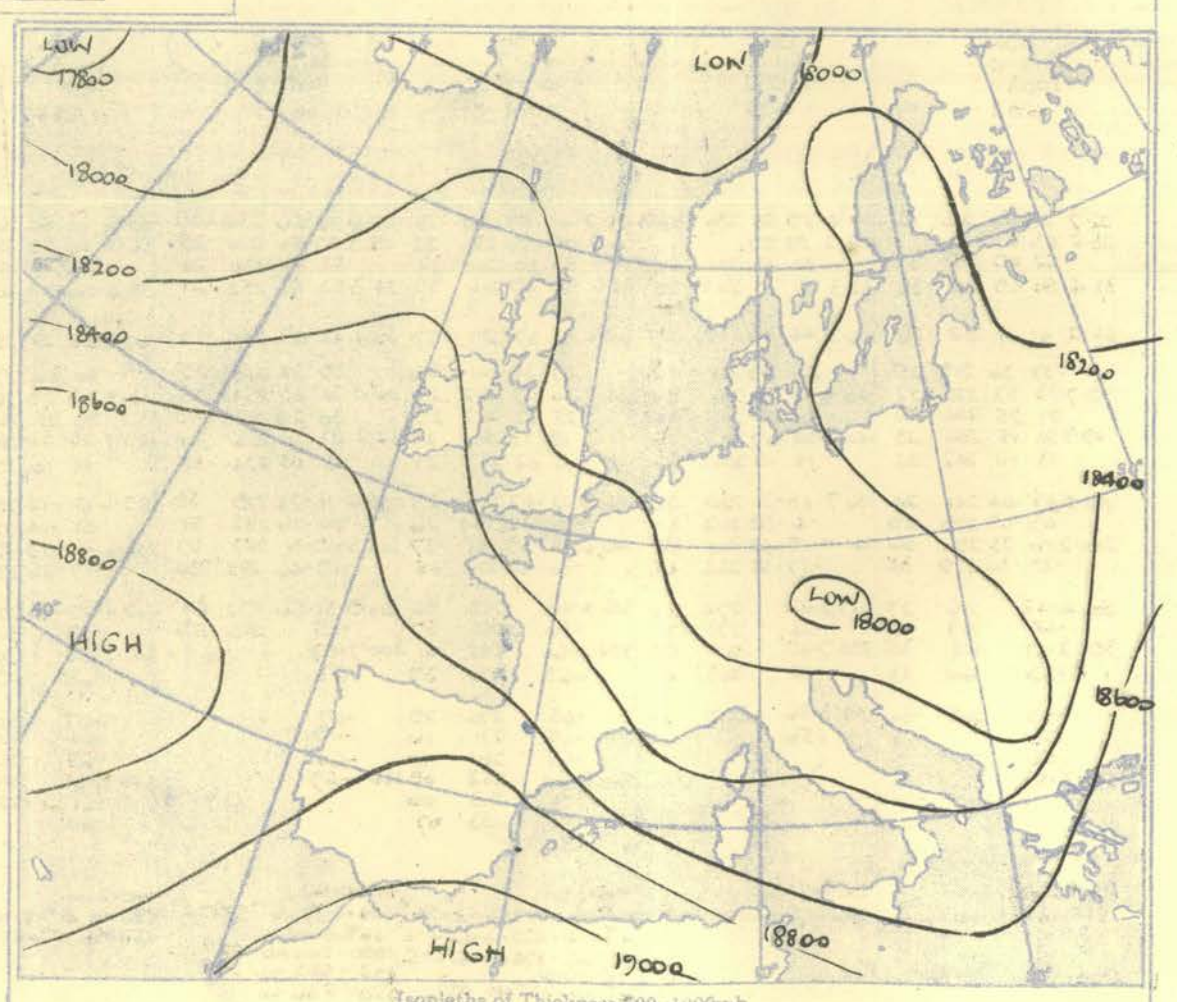




The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.



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.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	52°.12'N 02°.12'W	52°.12'N 02°.12'W																							
Pressure: Time	13·55	14·48																							Time
Pressure: M.S.L.	1024 mb	1026 mb	mb			mb			mb			mb			mb			mb			mb			M.S.L.
Pressure: Surf	1022·5 mb	1024·5 mb	mb			mb			mb			mb			mb			mb			mb			Surf
Pressure: Freezing	695 mb	760 mb	mb			mb			mb			mb			mb			mb			mb			Freezing
Pressure mb	Height ft./100	°C. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Height ft./100	°C. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Height ft./100	°F. Temp.	Dew	Pressure mb
Surf	0·4	·	·	0·4	·	·																			Surf
1000	6·6	·	·	7·2	·	·																			1000
950	·	·	·	·	·	·																			950
900	38·7	47	45	36·3	49	42																			900
850	51·0	41	·	51·7	43	38																			850
800	67·4	44	38	68·0	37	35																			800
750																									750
700	103·0	32	30	103·1	29	·																			700
650																									650
600	143·3	24	·	143·1	20	·																			600
550																									550
500	189·7	10	·	189·5	10	·																			500
450																									450
400	244·7	-7	·	244·3	-9	·																			400
350																									350
300	312·5	-33	·	311·7	-37	·																			300
250																									250
200																									200
170																									170

Cloud. 7/8 Cu Sc 910-830 mb; 3/8 As 660-650 mb; 3/8 As 540-505 mb; 3/8 As 380-365 mb

Inversion. 850 mb 43·5°F; 800 mb 47·5°F

Cloud. 3/8 Sc Cu 800-740 mb.

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

Place	Aldergrove		Rockaway		Lympne		Shoeburyness		St. Eval		Lympne												Place
Time	2000h		03h		08h		09h		14h		16h												Time
Type	Pilot																						Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.			280	5	Calm		Calm		270	12	220	12											Surf.
1,000			230	20	310	07	300	03	270	07	220	17											1,000
2,000			240	22	280	06	280	05	190	10	230	13											2,000
3,000			220	20	300	07	280	05	190	13	250	10											3,000
4,000			230	21	280	05	250	06	240	12	250	9											4,000
5,000			230	20	280	08	250	07	260	12	280	8											5,000
6,000			230	24	280	09	240	10	250	17	260	7											6,000
8,000			240	13	270	05	250	14	250	17	280	11											8,000
10,000			(7,000')		100	1	–		240	19	300	15											10,000
14,000					320	21	280	14	270	26													14,000
18,000							300	25	(12,000')														18,000
24,000							310	40															24,000
30,000	258	92					310	65															30,000
40,000	266	112					310	40															40,000
50,000	(34,000')																						50,000

NEPHOSCOPE OBSERVATIONS

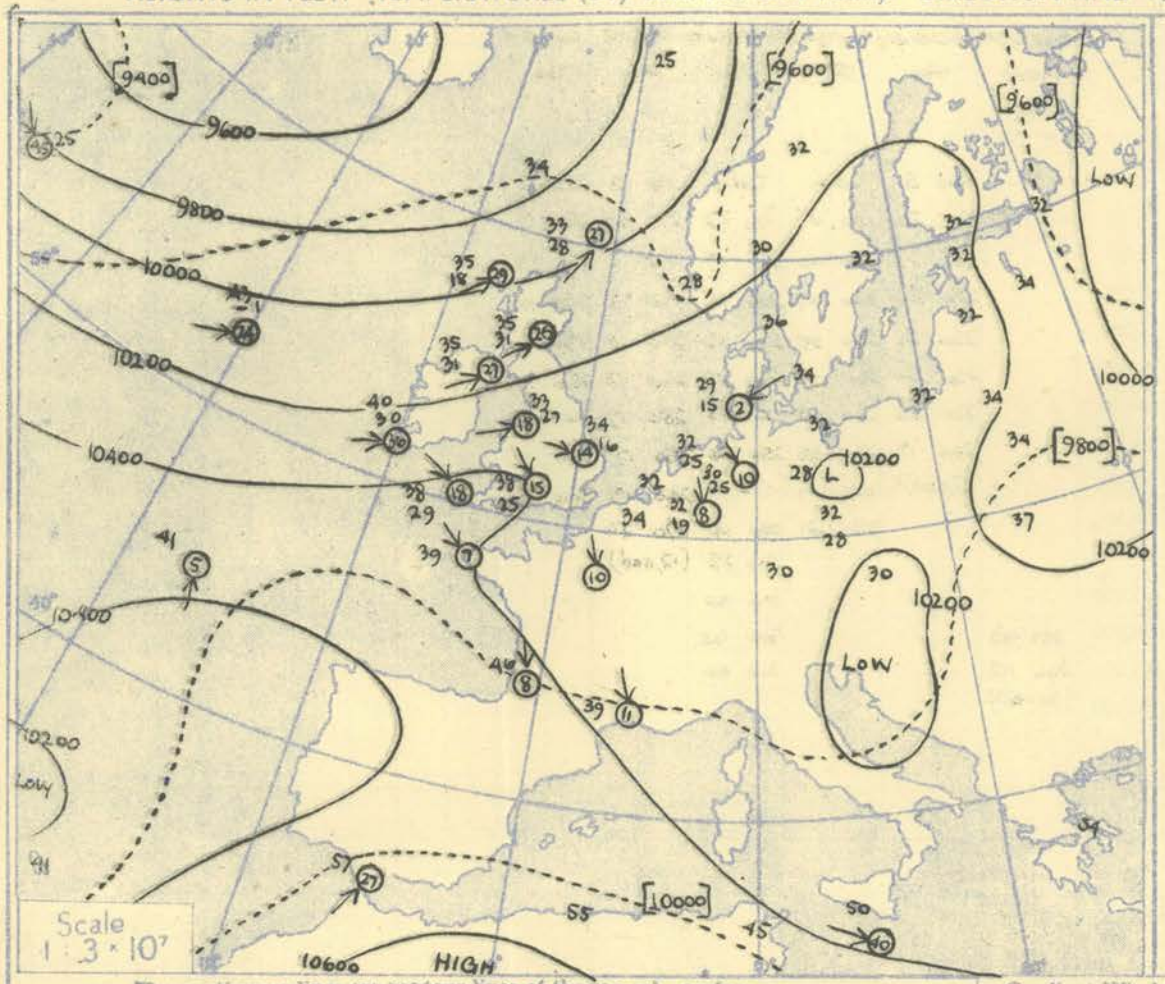
Place													Place
Time Type													Time Type
Dir. Vel.													Dir. Vel.

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

Ship	WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER WATCHER				WEATHER EXPLORER														Ship
Lat/Long	52·5N 20·0W				52·5N 19·9W				52·5N 20·0W				52·5N 20·0W.				56·7N 10·6W														Lat/Long
Pressure: Time	03h G.M.T.				09h. G.M.T.				15h G.M.T.				21h. G.M.T.				21h. G.M.T.				G.M.T.				G.M.T.				G.M.T.			Time
Pressure: M.S.L.	1013 mb				1013 mb				1014 mb				1017 mb				1010 mb				mb				mb				mb			M.S.L.
Pressure: Surf	1013 mb				1013 mb				1014 mb				1017 mb				1010 mb				mb				mb				mb			Surf
Pressure: Freezing	650 mb				620 mb				610 mb				640 mb				645 mb				mb				mb				mb			Freezing
Pressure mb	Height ft./100	°C. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		63	61	220	17		61	60	250	12		60	55	300	11		62	55	270	20		58	56	246	20												Surf
1000	03·7	61	60	235	21	03·5	60	59	257	12	4·0	59	54	282	12	04·6	60	53	280	18	02·7	57	54													1000
950		59	58	236	20		59	59	257	16		55	54	280	12		53	45	278	19		54	50	267	23												950
900	33·1	57	55	239	20	32·8	57	57	255	22	33·2	58	45	276	15	33·6	53	37	276	22	31·8	50	47	267	26												900
850		53	50	241	21		54	54	252	28		53	43	269	20		50	27	274	26		50	39	264	27												850
800	65·5	49	46	241	27	65·2	49	46	251	35	65·6	52	25	260	28	65·6	47	09	267	30	63·8	45	34	263	32												800
750		43	40	239	33		45	43	250	47		50	13	255	29		43	-06	261	30		41	21	268	36												750
700	101·4	37	35	239	31	101·3	39	37	249	50	101·7	43	-01	255	24	101·4	39	-26	255	39	99·5	38	11	264	36												700
650		32	27	242	31		36	12	249	50		36	-11	254	39		34	-30	253	43		33	02	250	36												650
600	141·9	24	09	248	34	142·1	30	-01	247	45	142·5	31	-11	252	51	141·9	25	-27	250	62	140·1	23	-09	243	43												600
550		19	14	246	43		23	-14	244	47		23	-18	249	46		28	-32	255	69		18	-19	245	49												550
500	188·6	15	10	235	59	189·0	14	-01	240	48	189·4	13	-26	247	59	188·3	08	-40	252	58	186·1	05	-23	251	51												500
450		04	-08	244	56		05	-40	246	93		02	-35	241	56		-04	-37	242	69		-04	-30	262	62												450
400	243·8	-05	-14	252	74	244·3	-09	-50	249	111	244·3	-09	-44	242	57	242·5	-16	-45	240	70	240·2	-18	-40	265	59												400
350		-15	-36	247	84		-16	-57	248	104		-20	-53	249	74		-29	-56	248	93		-31	-51	261	75												350
300	311·8	-29	-44	230	81	312·5	-26	-48	241	112	311·9	-27	-59	246	103	308·8	-33	-60	246	116	305·8	-45		269	84												300
250		-41		256	107		-39	-56	244	115		-39	-59	243	121		-48		250	126		-53		262	86												250
200	400·5	-66		261	103	403·0	-59		244	127	402·4	-56		247	125	397·5	-61		250	110	393·9	-51		244	88												200
170		-71		269	87		-63		246	84		-61		249	108		-67		249	80		-52		241	82												170
150		-75		266	68	464·0	-69					-68		249	79		-61		233	63		-55		247	63												150
130		-78		242	54		-71					-65		249	72		-62		241	53		-58		263	34												130
110		-75		248	36		-63					-59					-57		275	30		-56		255	39												110
100	543·5	-70		245	36	548·9	-62				549·5	-56				544·6	-55		228	32	543·3	-57		249	31												100
90		-70		242	30		-61					-54					-55		246	18		-67		243	27												90
80		-67		252	21		-55					-53					-53		249	10		-56		249	26												80
70		-60					-53					-51					-56					-54		247	19												70
60	Inversion 965 mb 62°-940 mb 60°					Inversion 250 mb -39°-242 mb -48°					Isothermal 950-940 mb 58°					(64 mb) -48					(45 mb) -52																	60
	Isothermal 532-512 mb 17°					Isothermal 200-183 mb -59°					Inversion 940 mb 55°-920 mb 60° 826 mb 50°-813 mb 53° 770 mb 48°-750 mb 50°					Isothermal 750-724 mb 43° Inversion 948 mb 52°-930 mb 55° 822 mb -32°-312 mb -30°					Isothermal 980-968 mb 56° 770-750 mb 41° Inversion 893 mb 49°-866 mb 51° 727 mb 37°-700 mb 38°														
Tropopause	I 126 mb - 79° 49,600'					I 126 mb - 72° 50,300'					I 150 mb - 68° 46,400'					I 215 mb - 61° 38,300'					I 275 mb -55° 32,400'														Tropopause

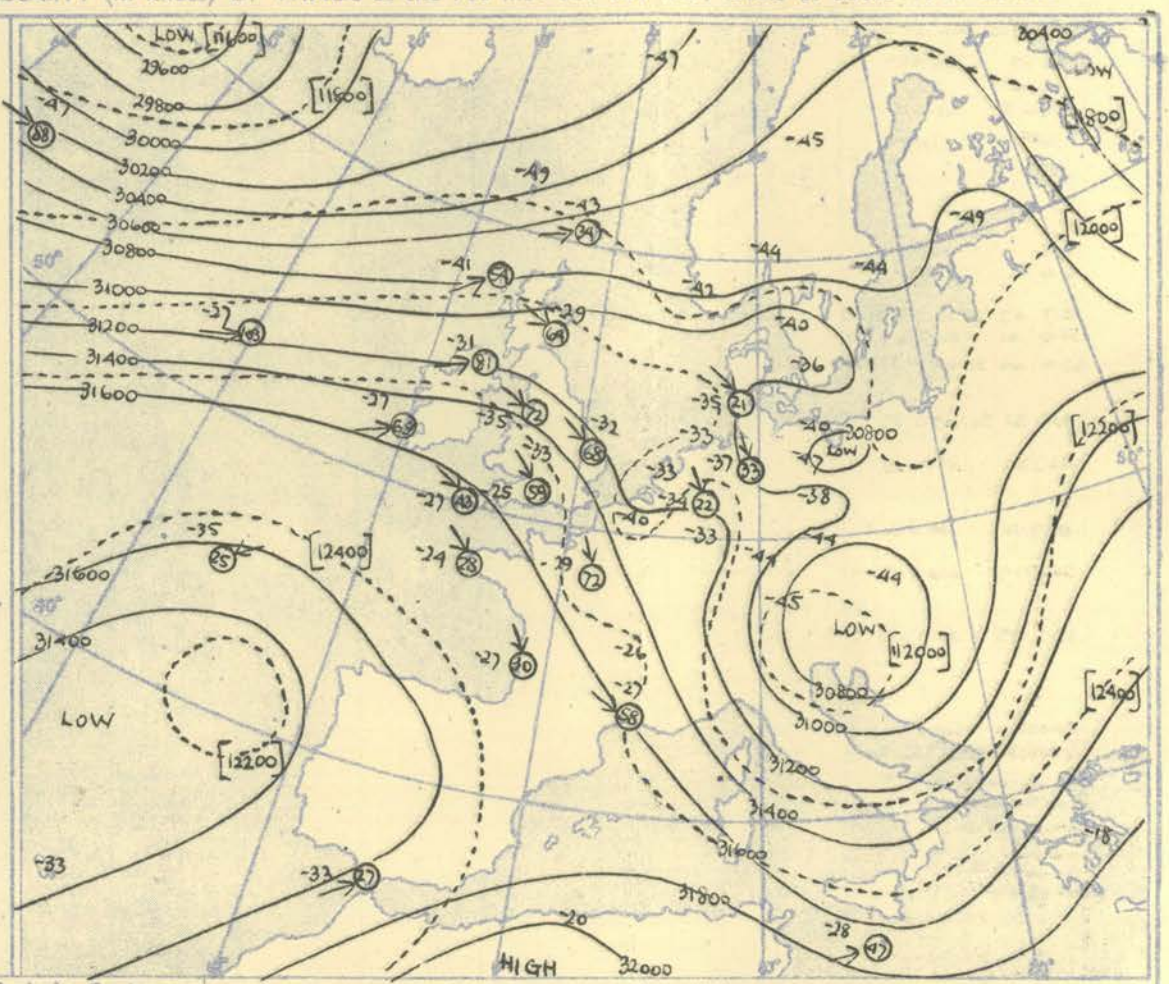
Thursday 26th July 1951

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.



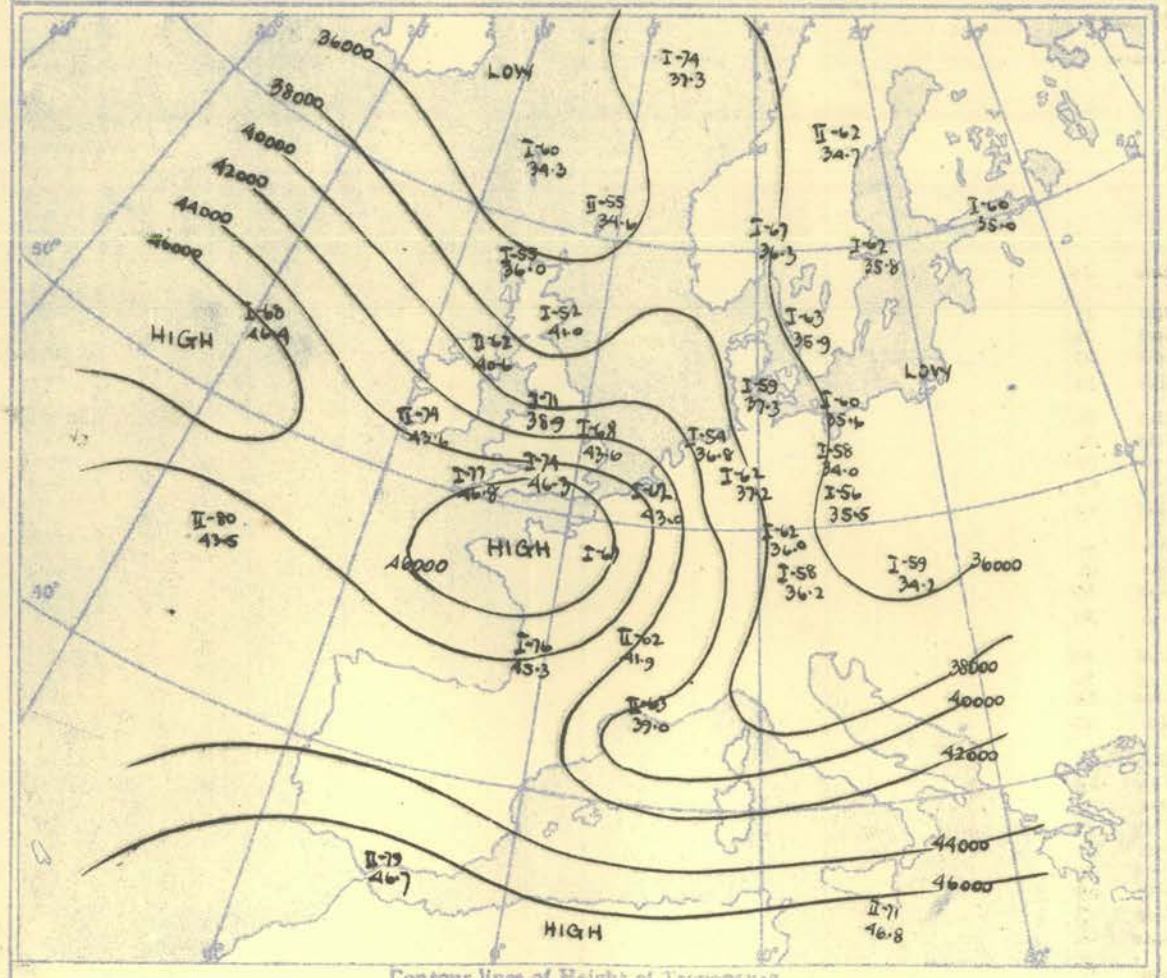
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

No noteworthy change in the situation.

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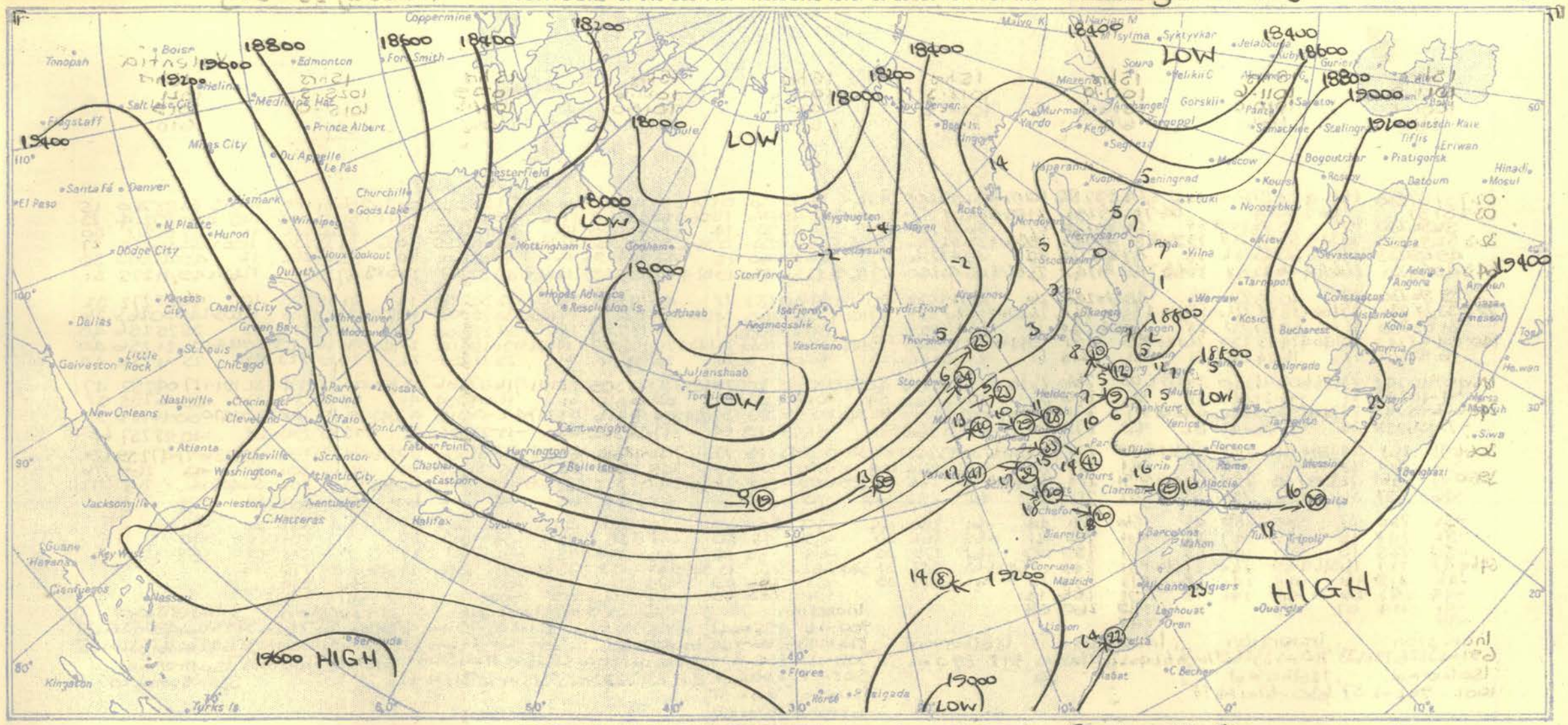
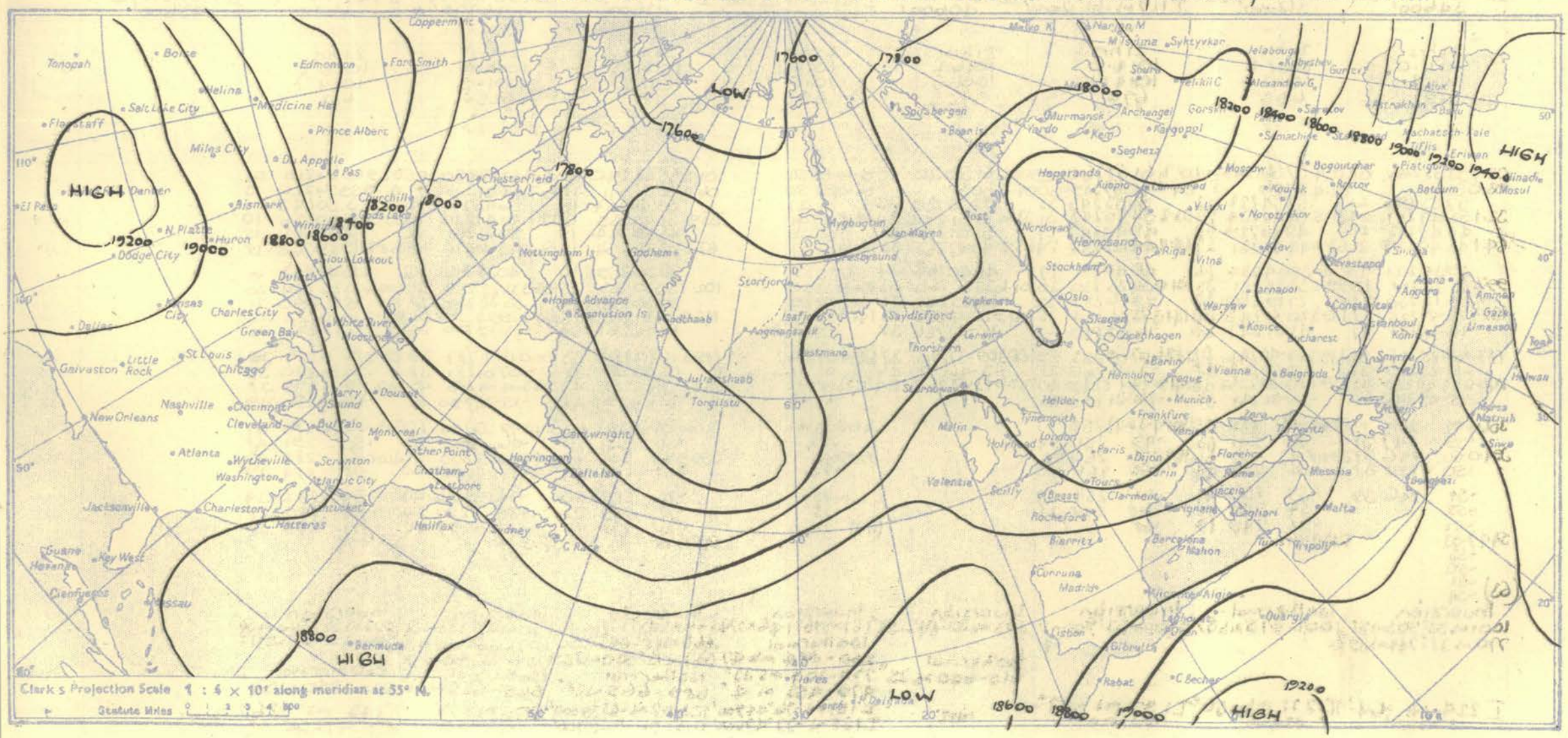
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Sir Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Thursday 26th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Thursday 26th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Thursday 26th July 1951.

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

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Pressure: Time	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.	15hrs G.M.T.
Pressure: M.S.L.	1011.9 mb	1011.6 mb	1011.0 mb	1018.3 mb	1022.2 mb	1022.6 mb	1023.9 mb	1025.5 mb	1021 mb
Pressure: Surf	1002.0 mb	1010.0 mb	1016.2 mb	1008.6 mb	1020.2 mb	1018.0 mb	1008.3 mb	1015.0 mb	1019 mb
Pressure: Freezing	668 mb	662 mb	671 mb	672 mb	678 mb	685 mb	606 mb	612 mb	610 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	57	57	230	16
1000	03·2	57	57		
950		56	56	230	29
900	32·3	52	52	232	24
850		49	49	233	26
800	64·3	45	45	231	26
750		39	36	230	27
700	99·9	33	29	231	27
650		31	03	239	31
600	140·2	24	-18	243	30
550		16	-22	246	27
500	186	40	-7	330	24
450		-4	-40	248	21
400	240	-6	-16	-55	249
350		-29	-56	253	30
300	306	6	43	261	34
250		-55		267	43
200	395	0	47	256	42
170		-46		257	36
150		-52		252	27
130		-52		248	16
110		-50		235	15
100	446	48		227	16
90		-46		229	16
80		-44		243	09
70		-41		214	07
60		-39			

Inversion 691 ms 32°-672 ms 33°
Isothermal 1002-962 ms 57°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	57	56	190	12
1000	02·4	57	56		
950		56	54	222	23
900	31·5	54	45	234	25
850		49	45	225	25
800	63·6	44	42	231	27
750		39	34	234	32
700	99·2	33	29	251	33
650		28	19	250	35
600	139·3	20	-6	245	45
550		14	-31	247	49
500	185	8	-46	242	52
450		-6	-25	239	31
400	240	-14	-40	239	38
350		-25	-45	240	39
300	306	-42		236	39
250		-59		247	37
200	394	-50		246	38
170		-50		250	38
150		-51		246	39
130		-55			
110		-52			
100	544	-53			
90		-53			
80		-50			
70		-52			
60	(63)	-54			

Inversion 710 ms 35°-697 ms 36°
Isothermal 630-620 ms 28°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	64	59	250	10
1000	04·7	61	55	241	21
950		58	51	239	27
900	34·1	52	47	243	29
850		49	44	253	25
800	66·1	45	41	248	23
750		40	36	244	26
700	101·8	35	31	238	30
650		30	25	248	23
600	142·2	26	15	243	23
550		21	05	260	28
500	188·9	15	06	264	40
450		09	-2	262	54
400	244	0	-19	268	52
350		-19	-32	268	71
300	311	-29	-43	263	81
250		-43		264	104
200	401	-60		266	37
170		-62		258	60
150		-61		260	44
130		-65		262	33
110		-68		275	35
100	547	-69		288	37
90		-62		288	39

Isothermal 624 ms 26°-605 ms 30°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	59	225	15
1000	06·2	63	58		
950		59	47		
900	34·1	52	40	233	29
850		46	40	233	31
800	66·9	43	31	256	33
750		40	30	258	18
700	102·4	33	27	260	30
650		30	25	263	21
600	142·7	23	18	266	22
550		16	05	272	21
500	188·9	15	06	264	40
450		09	-2	262	54
400	244	0	-19	268	52
350		-19	-32	268	71
300	311	-29	-43	263	81
250		-43		264	104
200	401	-60		266	37
170		-62		258	60
150		-60		260	44
130		-63		262	33
110		-68		275	35
100	547	-69		288	37
90		-62		288	39

Isothermal 918-890 ms 52°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	75	45	215	06
1000	06·2	63	49	226	15
950		64	45	233	14
900	35·1	46	40	233	13
850		45	36	229	15
800	66·9	43	31	256	19
750		40	30	258	18
700	102·4	33	27	260	18
650		30	25	263	21
600	142·7	23	18	266	22
550		16	05	272	21
500	188·9	15	06	264	40
450		09	-2	262	54
400	244	0	-19	268	52
350		-19	-32	268	71
300	311	-29	-43	263	81
250		-43		264	104
200	401	-60		266	37
170		-62		258	60
150		-61		260	44
130		-65		262	33
110		-68		275	35
100	547	-69		288	37
90		-62		288	39

Inversion 900 ms 46°-855 ms 47°
823 ms 43°-886 ms 44°
709 ms 32°-695 ms 39°
508 ms 9°-490 ms 11°
210 ms -61°-204 ms -58°
168 ms -71°-163 ms -69°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	75	45	215	06
1000	06·3	63	43	268	18
950		64	40	250	14
900	35·6	51	37	233	13
850		46	38	242	16
800	66·9	43	27	267	16
750		40	27	268	14
700	102·4	33	25	263	18
650		28	18	284	18
600	142·2	24	11	305	19
550		20	-9	313	21
500	188·9	11	-35	309	28
450		03	-16	310	31
400	244	-8	-41	316	52
350		-21	-29	289	64
300	311	-35	-43	288	72
250		-45		293	85
200	401	-60		298	76
170		-70		300	50
150		-70		302	39
130		-69		278	30
110		-69		285	14
100	544	-62		252	13
90		-53		262	09
80		-51		283	09
70		-49		260	09
60		-48			

Inversion 821 ms 41°-800 ms 44°
441 ms 1°-430 ms 3°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	66	61	180	10
1000	07·1	61	55	204	14
950		55	43	212	11
900	36·1	51	38	237	10
850		47	38	242	12
800	68·3	47	39	261	12
750		41	35	270	14
700	104·1	38	27	278	18
650		36	28	286	23
600	144·9	31	26	285	29
550		24	19	283	32
500	192·0	17	12	284	32
450		08	03	286	33
400	247	-2	-7	288	33
350		-15	-18	290	38
300	316·0	-27	-31	290	43
250		-44		301	47
200	406·9	-61		306	50
170		-70		303	39
150		-76		301	30
130		-77		291	24
110		-77		278	19
100	549·1	-69		270	16
90		-64		254	12
80		-61			

Inversion 816 ms 50°-862 ms 51°
773 ms 37°-700 ms 38°
675 ms 35°-650 ms 36°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	61	58	240	15
1000	05·8	60	57	214	25
950		55	43	212	30
900	36·0	52	46	225	27
850		49	41	243	30
800	68·1	49	41	275	31
750		46	38	272	32
700	104·0	38	26	263	36
650		35	25	256	40
600	144·0	31	21	256	40
550		25	11	256	40
500	191·1	17	04	257	47
450		08	-6	255	58
400	247	0	-16	256	59
350		-10	-28	257	68
300	316·0	-27	-47	259	69
250		-43		269	76
200	408·2	-61		268	72

Inversion 850 ms 49°-851 ms 51°
642 ms 36°-632 ms 35°
Isothermal 538-520 ms 20°

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Tropopause	II 250 ms -55° 34600'	I 230 ms -55° 36600'	I 192 ms -52° 41000' I 127 ms -62° 50000'	II 196 ms -62° 40600'	I 210 ms -71° 38900' I 168 ms -71° 43500' I 158 ms -75° 45200'	I 170 ms -68° 43600'	I 150 ms -74° 46700'	I 148 ms -77° 46800'

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53	200	08
1000	03·0	53	53		
950		57	53	195	20
900	32·1	53	47	217	24
850		48	45	213	22
800	64·1	43	40	227	22
750		39	30	221	19
700	99·6	33	23	218	19
650		28	12	230	28
600	139·7	22	-8	225	28
550		14	-26	238	27
500	185	8	-25	223	26
450		-6	-25	239	31
400	240	-14	-40	239	38
350		-25	-45	240	39
300	306	-42		236	39
250		-59		247	37
200	394	-50		246	38
170		-50		250	38
150		-51		246	39
130		-55			
110		-52			
100	544	-53			
90		-53			
80		-50			
70		-52			
60	(63)	-54			

Inversion 1001 ms 53°-953 ms 58°
770 ms 38°-744 ms 39°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	57	56	190	12
1000	02·4	57	56		
950		56	54	222	23
900	31·5	54	45	234	25
850		49	45	225	25
800	63·6	44	42	231	27
750		39	34	234	32
700	99·2	33	29	251	33
650		28	19	250	35
600	139·3	20	-6	245	45
550		14	-31	247	49
500	185	8	-46	242	52
450		-6	-25	238	48
400	239	-14	-39	236	43
350		-32	-32	231	51
300	304	-47		232	55
250		-56		241	63
200	392	-47		259	66
170		-52		255	44
150		-55		250	44
130		-54		248	32
110		-52		249	19
100	543	-51			

Isothermal 1001-975 ms 57°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·4	61	58	260	09
1000	04·0	60	57	239	10
950		55	53	243	33
900	34·1	52	50	243	31
850		49	45	243	27
800	65·4	44	43	238	24
750		40	40	231	27
700	101·0	34	33	230	30
650		29	26	237	22
600	141·3	23	22	244	28
550		16	15	245	25
500	187·6	07	05	253	29
450		+3	-7	249	33
400	241	-9	-14	242	40
350		-26	-31	255	53
300	304	-38	-43	259	77
250		-49		251	94
200	397	-56		260	95
170		-55		266	70
150		-62		254	47
130		-68		248	37
110		-68			

Inversion 930 ms 53°-900 ms 54°
Isothermal 615-600 ms 25°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	61	59	210	15
1000	06·0	58	58		
950		55	55	230	35
900	34·8	47	41		
850		45	39		
800	66·6	41	37		
750		35	33		
700	101·9	33	30		
650		29	29		
600	142·1	23	23		
550		16	16		
500	188·4	08	06		
450		03	-1		
400	242	-8	-12		
350		-22	-27		
300	305	-35	-42		
250		-50			
200	398	-66			
170		-72			
150		-75			
130		-75			
(11)		-72			

Inversion 873 mb 30-845 mb 32°
Isothermal 615-600 ms 25°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	54		
1000	06·0	58	50		
950		51	47		
900	34·8	47	41		
850		45	39		
800	67·3	43	36	254	15
750		37	24	259	15
700	102·7	30	30	263	15
650		30	30	259	19
600	142·9	24	21	260	15
550		14	13	261	24
500	189·3	11	10	280	33
450		03	00	288	33
400	244	-7	-12	288	47
350		-20	-24	290	48
300	311·6	-34	-39	292	65
250		-50		302	79
200	399	-66		302	88
170		-67		293	47
150		-75		289	30
130		-77		289	23
110		-78		279	18
100	543	-75			

Inversion 884 mb 43°-827 mb 46°
665 ms 28°-645 ms 30°
547 ms 13°-530 ms 15°
Isothermal 689-665 ms 28°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	65	53	240	10
1000	06·2	63	51	271	18
950		58	46	254	18
900	35·4	51	42	235	13
850		43	39	244	15
800	67·3	43	36	254	15
750		37	24	259	15
700	102·7	30	30	263	15
650		30	30	259	19
600	142·9	24	21	260	15
550		14	13	261	24
500	189·3	11	10	280	33
450		03	00	288	33
400	244	-7	-12	288	47
350		-20	-24	290	48
300	311·6	-34	-39	292	65
250		-50		302	79
200	399	-66		302	88
170		-67		293	47
150		-75		289	30
130		-77		289	23
110		-78		279	18
100	543	-75			

Inversion 870 ms 47°-853 ms 51°
677 ms 30°-665 ms 33°
170 ms -73°-160 ms -71°
Isothermal 665-635 ms 33°

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	60	56	210	03
1000	06·3	59	56	222	15
950		55	50	245	11
900	35·9	54	40	256	10
850		54	46	262	15
800	68·2	45	46	265	18
750		43	40	263	20
700	104·2	40	36	274	20
650		36	32	290	21
600	145·0	29	26	285	28
550		21	18	277	35
500	191·9	14	11	277	36
450		04	02	280	33
400	247	-4	-11	279	38
350		-19	-27	280	43
300	314·6	-33	-43	276	51
250		-50		291	47
200	404·0	-67		285	43
170		-78		284	33
150		-84		282	34
130		-84		285	28
110		-77		275	18

Inversion 933 ms 52°-920 ms 54°
390 ms -72°-377 ms -71°
Isothermal 920-850 ms 54°

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Tropopause	I 224 mb -64° 37000'	II 271 ms -56° 32600'	I 197 ms -57° 40100'	NR.	I 167 ms -76° 44900' I 138 ms -77° 47600'	II 208 ms -63° 39000' I 138 ms -80° 47700'	I 170 ms -73° 43700'	II 143 ms -86° 47200'

No. 11807 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Friday 27th July 1951. Page 1.

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

LERWICK — 03h G.M.T.

Pressure: Time 03h G.M.T. | M.S.L. 1007·8 mb | Surf 997·8 mb | Freezing 718 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	55	55	250	20
1000	02·1				
950		54	53	240	31
900	31·1	51	50	235	30
850					
800	63·0	41	40	235	31
750		36	35	236	31
700	98·3	29	28	236	35
650		28	28	234	36
600	138·2	19	19	238	31
550		10	10	243	37
500	183·9	01	01	242	41
450		-12	-12	238	42
400	232·2	-23	-23	227	40
350		-37	-37	222	37
300	302·0	-52		223	37
250		-60		238	43
200	389·3	-51		234	32
170		-51		247	30
150		-55		228	28
130		-54		255	25
110					
100					
90					
80					
70					
60					

Inversion. 679 - 658 mb 25° - 28°F
Isothermal 985 mb - 950 mb 54°F.

Tropopause: I 254 mb -62°F 33,600 ft.

STORNOWAY — 03h G.M.T.

Pressure: Time 03h G.M.T. | M.S.L. 1010·9 mb | Surf 1009·3 mb | Freezing 707 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·4	56	53	24	012
1000	2·9	55	51		
950		51	46	262	26
900	31·7	43	40	265	30
850					
800	63·5	42	24	256	30
750		36	19	256	32
700	98·8	32	04	257	36
650		26	-17	251	43
600	138·7	20	-20	248	47
550		11	-18	248	52
500	184·5	+01	-25	253	45
450		-10	-31	249	49
400	238·0	-24	-40	254	58
350		-36	-54	256	62
300	302·8	-49		258	65
250		-57		256	70
200	390·4	-50		256	63
170		-52		257	47
150	453·0	-53		254	46
130		-56		254	46
110		-56		261	35
100	540·5	-52		260	22
90		-53		265	12
80		-54		260	11
70		-55			
60					

Inversion. 895 mb 42° - 878 mb 52°
Isothermal. 761 - 745 mb 36°

Tropopause: II 276 mb -56° 32,000 ft.

LEUCHARS — 03h G.M.T.

Pressure: Time 03h G.M.T. | M.S.L. 1013·1 mb | Surf 1013·9 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	61	60	260	12
1000	03·8	60	59	244	28
950		56	55	247	28
900	33·0	55	51	270	29
850					
800	65·1	44	37	260	31
750		37	21	260	33
700	100·8	34	01	266	33
650		32	-11	266	33
600	141·2	24	-25	263	37
550		15	-32	261	38
500	187·3	05	-40	256	38
450		-07	-50	259	36
400	241·1	-21	-54	267	45
350		-34	-57	265	45
300	306·3	-48		269	75
250		-55		270	120
200	393·9	-58		269	104
170		-62		270	74
150	455·1	-63		264	60
130		-62		265	33
110					
100					
90					
80					
70					
60					

Inversion. 840 - 822 mb 45 - 47°
750 - 725 mb 37 - 40°
Isothermal. 732 - 700 mbs 55°
Max wind 270° 135 knots. 231 mbs. 36,300 ft.

Tropopause: II 225 mb -58° 36,800 ft.

ALDERGROVE — 02h G.M.T.

Pressure: Time 02h G.M.T. | M.S.L. 1016·7 mb | Surf 1007·2 mb | Freezing 667 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	61	60	220	08
1000	04·6	-	-	-	-
950		56	56	241	20
900	33·8	53	53	250	21
850					
800	65·9	43	43	258	31
750		-	41	258	33
700	101·6	34	25	256	36
650		30	30	254	39
600	141·9	22	21	262	46
550		14	-9	266	44
500	189·9	03	-15	260	52
450		-6	-23	257	59
400	241·8	-18	-33	256	64
350		-31	-39	262	82
300	307·7	-40	47	258	113
250		-54		258	124
200	395·4	-66		262	115
170		-65			
150		-68			
130		-71			
110		-71			
100	539·9	-71			
90		-64			
80		-62			
70					
60					

Inversion 773 mb 40° - 750 mbs 41°F

Tropopause: I 200 mbs - 66°F 39,536 ft.

LIVERPOOL — 02h G.M.T.

Pressure: Time 02h G.M.T. | M.S.L. 1020·3 mb | Surf 1018·3 mb | Freezing 660 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	54		
1000	05·6	59	51		
950		54	48		
900	34·6	51	48		
850					
800	66·8	46	46		
750		42	30		
700	102·6	37	15		
650		30	09		
600	142·9	27	-30		
550		18	-42		
500	189·3	08	-49		
450		-2	-57		
400	243·7	-11	-53		
350		-20	-49		
300	310·9	-31	-46		
250		-46			
200	400·0	-63			
170		-72			
150		-73			
130		-73			
110		-68			
100	544·1	-69			
90		-66			
80		-61			
70		-61			
60					

See Page Three for Winds.

Inversion. 632 mb 27° 615 mb 28°
361 mb -21° 350 mb -20° 292 mbs
152 mb -74° 145 mb -72°
Isothermal. 229 - 873 mb 51°
774 - 745 mb 42°

Tropopause: II 166 mb -73° 44,000 ft.
I 135 mb -74° 48,300 ft.

DOWNHAM MARKET — 02h G.M.T.

Pressure: Time 02h G.M.T. | M.S.L. 1022·5 mb | Surf 1018·0 mb | Freezing 629 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	1·2	53	52		
1000	06·1				
950		56	48		
900	35·2	50	45		
850					
800	67·1	42	38		
750		36	35		
700	102·4	32	32		
650		36	32		
600	142·8	27	21		
550		17	13		
500	189·2	09	00		
450		00	-15		
400	243·9	-09	-16		
350		-22	-27		
300	311·1	-33	-44		
250		-50			
200	399·4	-66			
170		-72			
150	459·2	-74			
130		-70			
110					
100					
90					
80					
70					
60					

See Page Three for Winds.

Inversion. 1018 mbs 58° -
992 mbs 60°
875 mb 48° - 850 mb 49°
700 mb 32° 692 mb 34°
666 mb 30° 650 mb 36°
404 mb - 10° 397 mb - 09°

Tropopause: I 170 mbs -72°F. 43,300 ft.

LARKHILL — 02h G.M.T.

Pressure: Time 02h G.M.T. | M.S.L. 1024·1 mb | Surf 1008·0 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	56	53	250	03
1000	06·5	56	53		
950		53	47	250	13
900	35·5	52	32	251	14
850					
800	67·6	45	35	268	22
750		39	31	275	23
700	103·3	37	33	282	20
650		32	25	283	18
600	143·8	25	22	289	28
550		19	15	296	32
500	190·4	12	07	288	38
450		03	-04	289	50
400	245·4	-08	-18	285	57
350		-19	-27	286	62
300	312·8	-32	-47	287	62
250		-48		285	63
200	401·6	-65		285	62
170		-77		275	59
150	461·1	-83		278	51
130		-82		280	36
110		-81		280	26
100	542·4	-76		275	18
90		-75		255	15
80		-71		252	14
70					
60					

Inversion 942 - 923 mb 52 - 53°F
900 - 882 mb 52 - 53°F
742 - 731 mb 38 - 39°F
363 - 356 mb 19 - 18°F
Isothermal. 1008 - 991 mbs 56°F

Tropopause: I 150 mbs - 83°F. 46,100 ft.

CAMBORNE — 03h G.M.T.

Pressure: Time 03h G.M.T. | M.S.L. 1024·4 mb | Surf 1013·8 mb | Freezing 612 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	58	56	180	07
1000	06·7	58	57	210	13
950		57	44	234	16
900	35·9	57	25	241	18
850					
800	68·2	49	38	268	14
750		45	22	266	16
700	104·3	41	27	257	24
650		36	31	267	25
600	145·2	30	26	270	27
550		23	18	273	31
500	192·1	15	05	272	39
450		08	02	270	42
400	247·8	-3	-11	271	42
350		-15	-	276	49
300	315·9	-27	-	270	49
250		-42		268	60
200	405·6	-65		264	51
170		-77		264	51
150		-80		254	40
130		-78		245	24
110		-73		271	22
100	547·5	-68		265	12
90					
80					
70					
60					

Inversion. 1014 - 1000 mb 58° - 59°
978 - 965 mb 56 - 55°
Isothermal. 965 - 922 mb 55°
764 - 739 mb 45°

Tropopause: I 159 mb -82° 45,200 ft.

Valentia — 03h G.M.T.

Pressure: Time 03h G.M.T. | M.S.L. 1018 mb | Surf [illegible] mb | Freezing 656 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	60	60		
1000		60	60		
950		57	56		
900	34·5	54	53		
850		52	50		
800	66·8	49	46		
750		45	41		
700	102·7	40	36		
650		32	37		
600	143·3	25	- 3		
550		18	-18		
500	189·7	10	-32		
450		3	-31		
400	264·7	-6	-23		
350		-18	-28		
300	312·3	-33	-43		
250		-48			
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Isothermals. 870 mb - 850 mb 52°
615 mb - 600 mb 25°

LERWICK — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1008·7 mb | Surf 998·9 mb | Freezing 688 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	55	53	275	25
1000	02·4	-	-	-	-
950		50	46	255	36
900	31·1	46	42	259	30
850					
800	63·0	42	19	251	29
750		30	12	238	27
700	98·5	33	-7	237	25
650		26	-15	242	29
600	138·4	19	-15	243	33
550		10	-15	240	42
500	184·0	-2	-25	235	45
450		-12	-32	237	48
400	237·3	-23	-41	244	49
350		-38	-55	247	52
300	301·9	-54		249	60
250		-67		248	51
200	388·5	-52		245	40
170		-50		-	-
150		-52			
130		-52			
110		-51			
100	585·7	-50			
90		-51			
80		-48			
70					
60					

Inversion.
892 mb 45° 856 mb 51°

Tropopause: I 246 mb -68°F 34,400 ft.

STORNOWAY — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1012·3 mb | Surf 1010·7 mb | Freezing 758 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	0·4	58	51	230	08
1000	3·4	56	52		
950		50	45	234	23
900	32·1	43	40	236	24
850					
800	63·6	38	29	237	34
750		32	14	236	34
700	98·6	29	-2	238	34
650		25	-30	240	41
600	138·4	18	-22	241	51
550		09	-8	240	54
500	184·0	00	-14	237	60
450		-9	-15	237	60
400	237·5	-21	-27	243	71
350		-33	-41	246	83
300	302·5	-47		249	94
250		-55		254	93
200	390·4	-52		254	66
170		-50		254	52
150	453·2	-52		252	55
130		-56			
110		-58			
100	540·6	-59			
90					
80					
70					
60					

Inversion.
857 mb 39° - 830 mb 41°
718 mb 29° - 712 mb 31°
Isothermal. 690 - 676 mb 28°

Tropopause: II 244 mb -60° 34,700 ft.

LEUCHARS — 08h G.M.T.

Pressure: Time 08h G.M.T. | M.S.L. 1014·3 mb | Surf 1015·1 mb | Freezing 666 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	66	55		
1000	04·2	64	54		
950		57	49		
900	33·4	52	46		
850					
800	65·5	45	38		
750		41	34		
700	101·3	38	19		
650		29	14		
600	141·8	27	-		
550		18	-16		
500	188·2	9	-24		
450		-1	-33		
400	242·7	-12	-38		
350		-26	50		
300	309·2	-40	-60		
250		-50			
200	397·8	-53			
170		-51			
150	460·3	-53			
130		-55			
110		-55			
100	547·7	-54			
90		-52			
80		52			
70		-52			
60	638·7	-50			

No Winds Recorded

Inversion.
902 - 880 mb 51 - 53°F
750 - 735 mb 41 - 43°F
Isothermal.
640 - 600 mb 27°
507 - 496 mb 09°

Tropopause: I 264 mb -51°F 33,600 ft.

ALDERGROVE — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1015·9 mb | Surf 1007·0 mb | Freezing 634 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	63	61		
1000	04·5	62	61		
950		57	53		
900	33·8	53	49		
850					
800	66·1	46	43		
750		41	38		
700	102·0	40	-14		
650		34	-30		
600	142·6	27	-35		
550		18	-42		
500	189·0	10	-48		
450		-01	-50		
400	243·5	-12	-53		
350		-28	-56		
300	309·9	-38	-58		
250		-48			
200	398·5	-60			
170		-61			
150		-61			
130		-60			
110					
100					
90					
80					
70					
60					

Inversion.
742 - 725 mb 41 - 42°F
Isothermal
832 - 850 mbs 52°
763 - 742 mbs 41°
308 - 288 mbs - 38°

Tropopause: II 229 mb -57°F 36,900 ft.

LIVERPOOL — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1019·9 mb | Surf 1017·9 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	64	57	220	10
1000	05·6	62	55	218	12
950		56	53	241	20
900	34·8	52	51	249	25
850					
800	67·0	48	44	237	22
750		42	38	253	24
700	102·8	37	34	258	26
650		32	18	271	26
600	143·3	28	-06	277	27
550		19	-29	264	30
500	189·8	09	-24	265	33
450		-01	-40	278	42
400	244·4	-11	-44	287	57
350		-19	-38	267	73
300	311·8	-33	-48	268	91
250		-48		269	92
200	400·6	-64		267	99
170		-69		266	80
150		-68		266	68
130		-69			
110					
100					
90					
80					
70					
60					

Inversion.
913 mbs 51°F
850 mbs 53°F.

Tropopause: II 188 mbs -69°F 41,300 ft.

DOWNHAM MARKET — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1022·3 mb | Surf 1017·8 mb | Freezing 650 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	1·2	63	53	220	12
1000	6·2	61	52	235	12
950		54	47	244	18
900	35·3	53	43	259	14
850					
800	67·6	50	41	259	14
750		44	31	309	13
700	103·6	39	20	312	20
650		32	20	296	26
600	144·1	27	08	285	26
550		21	-08	281	25
500	190·8	11	-22	286	27
450		00	-31	293	35
400	245·7	-05	-25	292	47
350		-18	-31	280	70
300	313·5	-30	-41	286	82
250		-45		282	94
200	402·9	-62		277	85
170		-66		279	68
150	463·4	-69		281	57
130		-73			
110					
100					
90					
80					
70					
60					

Inversion.
918 mb 52°F
900 mb 53°F
436 mb -02°F
430 mb -01°F
Isothermal.
900 - 845 mb 53°

Tropopause: I 189 mbs -65°F 41,500 ft.

LARKHILL — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1023·8 mb | Surf 1008·0 mb | Freezing 614 mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	61	55		
1000	06·6	60	54		
950		56	40		
900	35·7	55	33		
850					
800	68·0	50	40		
750		45	42		
700	104·0	40	38		
650		35	28		
600	144·8	30	17		
550		21	10		
500	191·7	17	11		
450		07	02		
400	247·3	00	-07		
350		-13	-22		
300	315·8	-26	-36		
250		-35	-53		
200	406·3	-58			
170		-66			
150	466·8	-71			
130		-74			
110		-75			
100	550·3	-71			
90		-64			
80		-64			
70					
60					

Inversion.
950 - 924 mb 55° - 53°F
875 - 850 mb 53 - 55°F
655 - 647 mb 38° - 36°F
534 - 518 mb 19° - 18°F
426 - 417 mb 02° - 04°F

Tropopause: I 153 mb -72°F 46,300 ft.

CAMBORNE — 09h G.M.T.

Pressure: Time 09h G.M.T. | M.S.L. 1024·5 mb | Surf 1014·0 mb | Freezing 622 mb

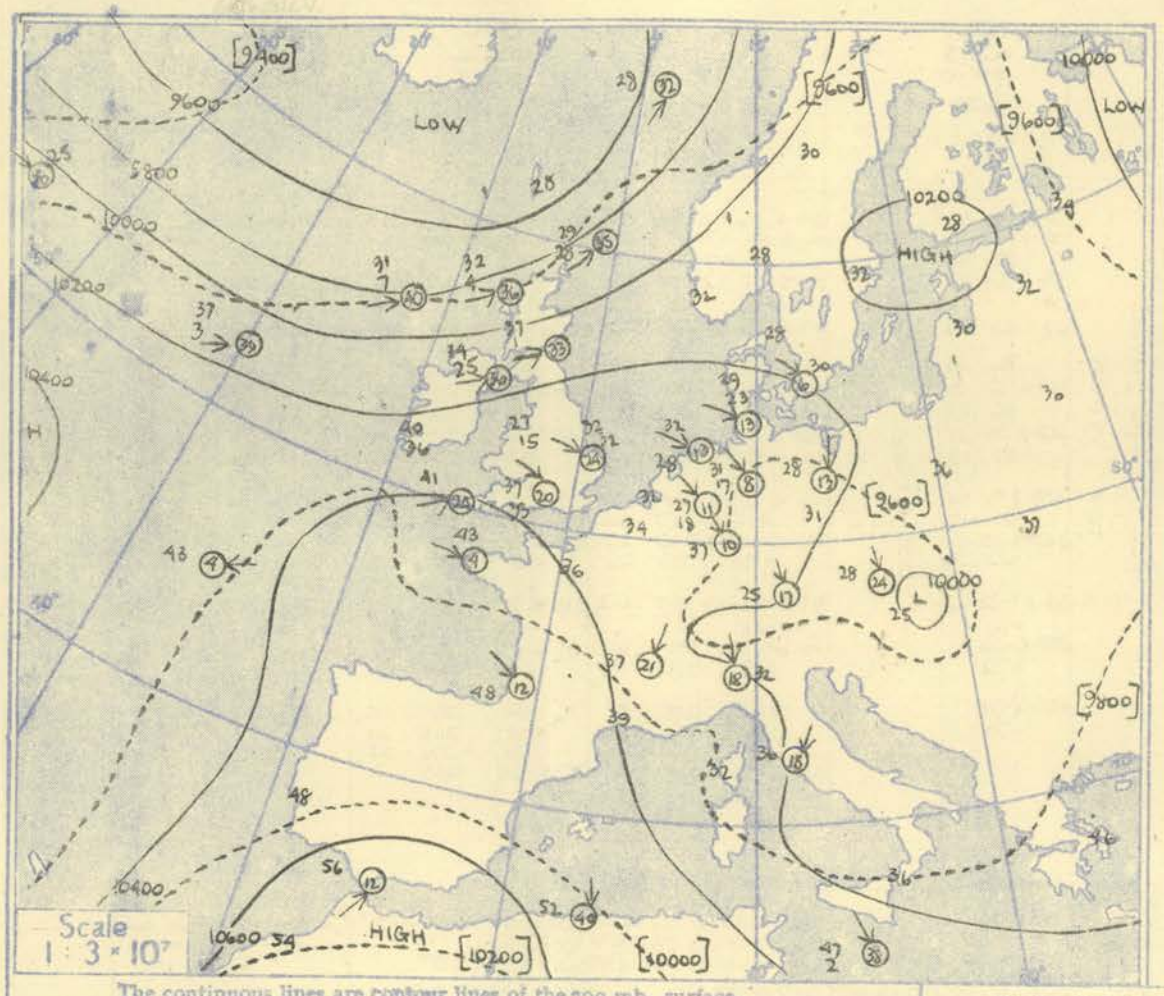
Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	63	59	210	
1000	06·8	61	58	217	
950		55	54	233	18
900	36·0	55	39	245	18
850					
800	68·4	51	35	248	12
750		47	27	267	10
700	104·8	42	38	290	11
650		37	34	272	18
600	145·4	30	23	264	22
550		25	14	259	36
500	192·5	16	10	264	37
450		07	-1	264	37
400	247·9	-2	-5	264	39
350		-14	-25	259	48
300	316·1	-28	-40	254	50
250		-44		251	52
200	405·6	-63		242	54
170		-73		247	45
150		-74		244	43
130		-76		252	34
110		-77		254	25
100	548·3	-72		254	24
90		-70		253	20
80		-64		252	13
70		-57		228	07
60		-56		221	04
		-53		194	08
		-49 (40 mb)			

Inversion
935 - 850 mb 53 - 56°

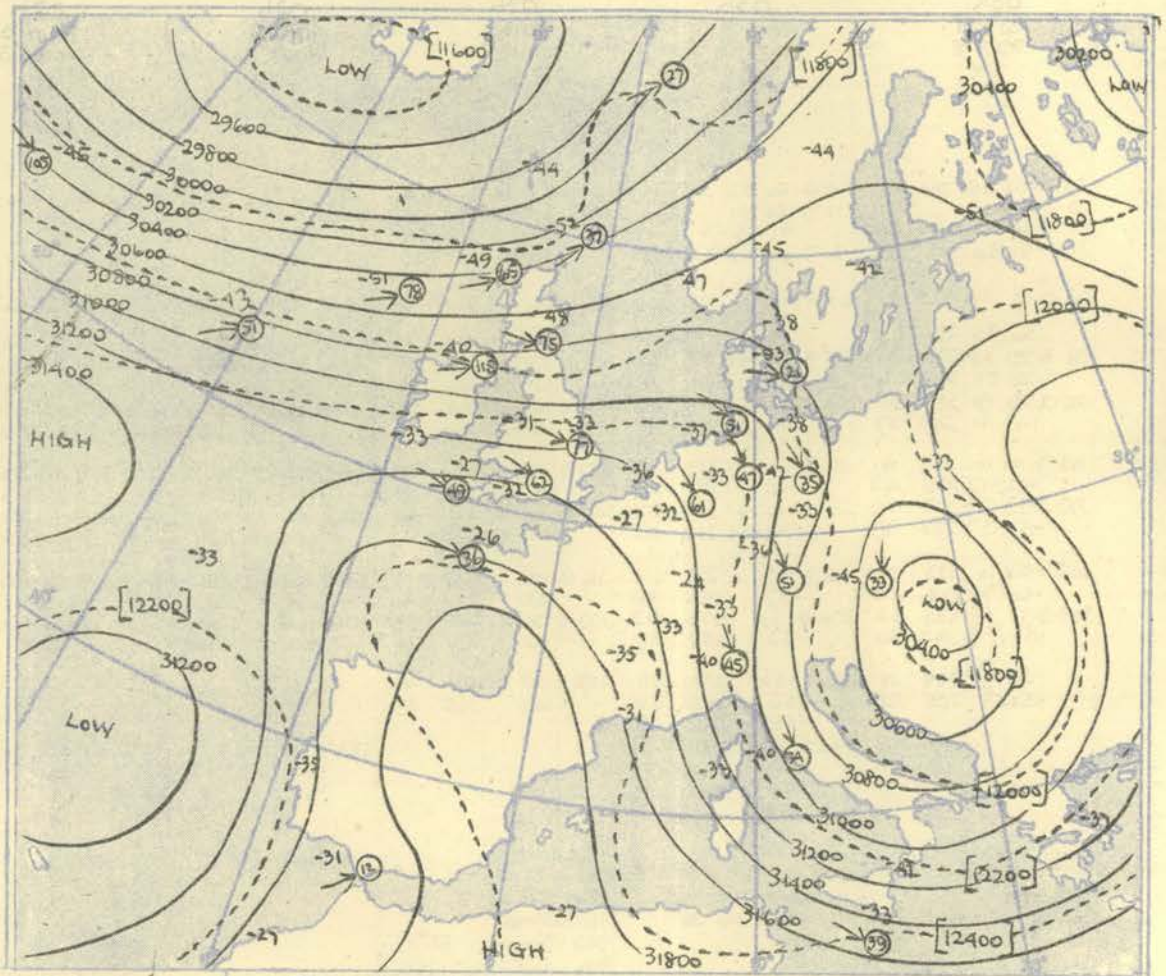
Tropopause: I 160 mb -75°F 45,300 ft.

Friday 27th July 1951.

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

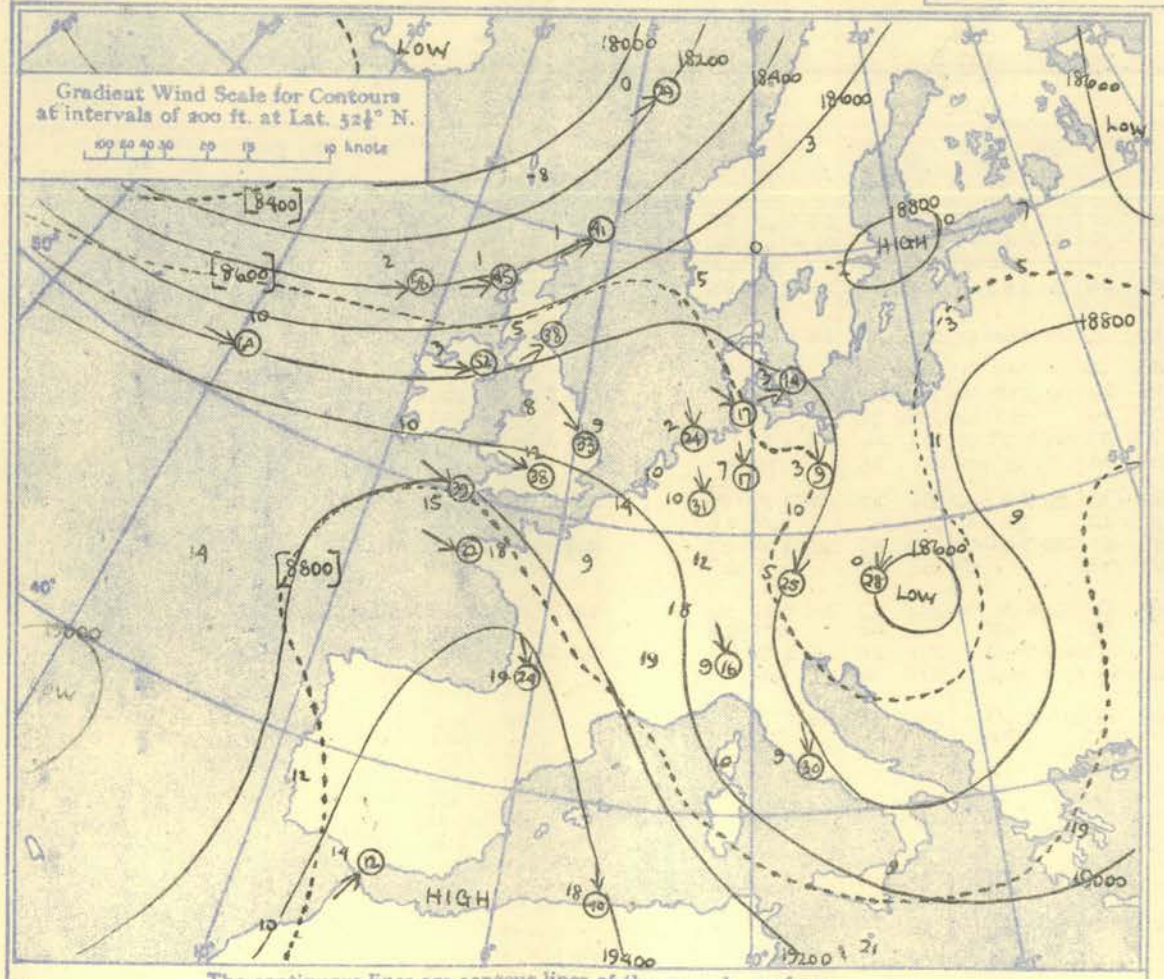


The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

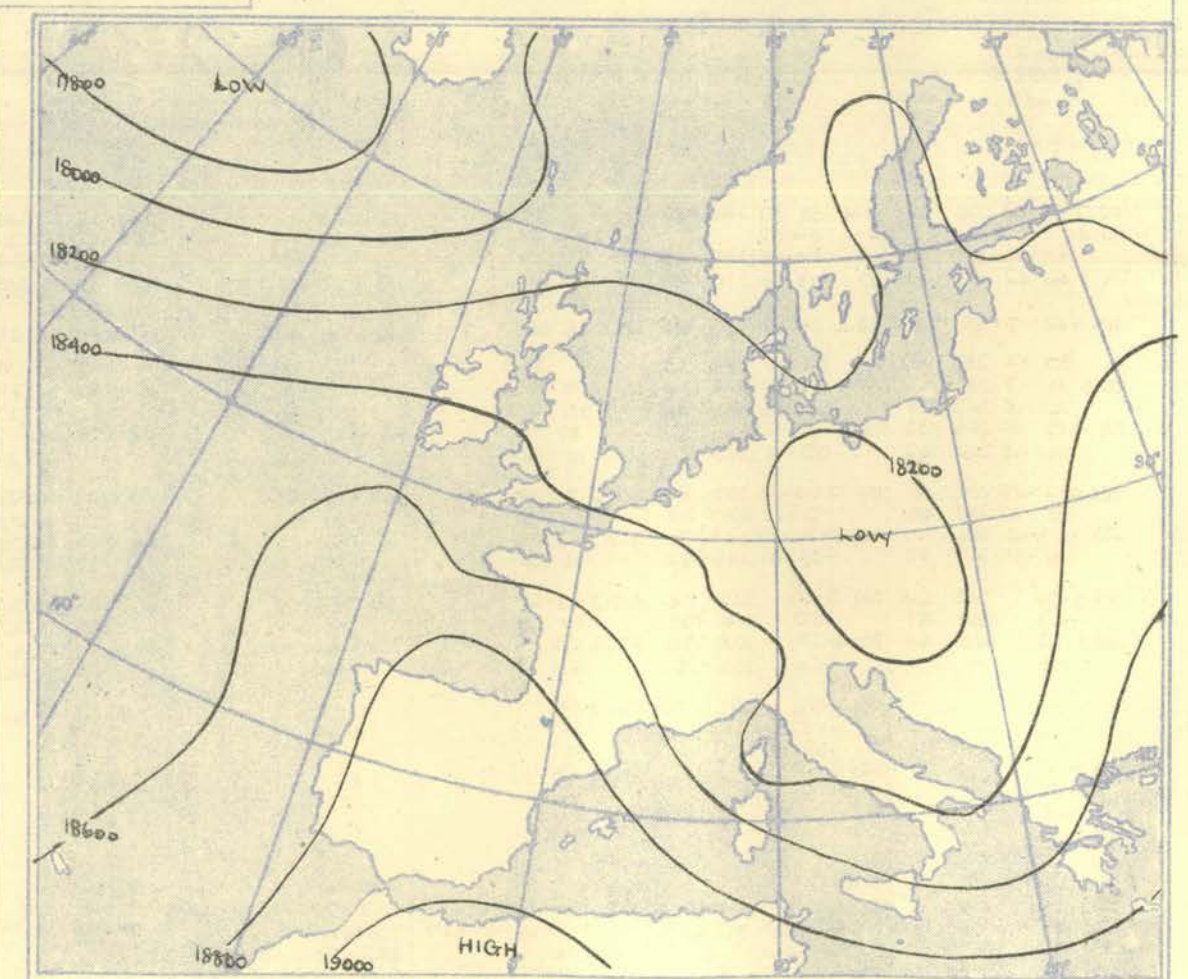


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

	48·1°N 17·0°W	47·7°N 12·3°W	52°12'N 32°12'W																			
Pressure Time	12h	14h	1423h																			Time
Pressure M.S.L.	1020 mb	1020 mb	1020·0 mb	mb			mb			mb			mb			mb			mb			M.S.L.
Pressure Surf	1009 mb	1017 mb	1018·5 mb	mb			mb			mb			mb			mb			mb			Surf
Pressure Freezing	630 mb	620 mb	650 mb	mb			mb			mb			mb			mb			mb			Freezing

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Height ft./100	°Temp. °F.	Dew °F.	Pressure mb
Surf		62	62		65	61	0·4																		Surf
1000	5·6	61		5·5	61	59	6·1																		1000
950		59	59		63	38																			950
900		58	55		60	31	35·5	54	35																900
850		53	52		58	43	51·1	53	29																850
800		47	47		52	36	67·7	49	45																800
750		44	44		49	28																			750
700	103·1	38	38	103·5	42	24	103·5	41	29																700
650		35	32		36	32																			650
600		28	28		29	23	144·5	24	23																600
550		17	·		21																				550
500	1905	14	·	190·1	11		190·5	7	·																500
450																									450
400							245·7	-6	·																400
350																									350
300							313·2	-35	·																300
250																									250
200																									200
170																									170

Cloud:- 2/8 Sc at 36mb, 1/8 Sc at 84mb, 1/8 Sc at 24mb, 4/8 AS 61-52mb, 2/8 As Base 56mb, Top N.R. Trad clear ice in cloud:- 53-50mb Surf. Wind L.V.

Inversion. 1000 mb 6° -950 mb 6° Cloud 3/8 Sc 900mb 2/8 AS N.R. 3/8 Ci N.R. Surface Wind Calm

Cloud. 3/10 Sc 890-880mb 1/8 AS 685-670mb 3/8 Cs 460-330mb Inversion. 900mb 53·9°F 892mb 53·1°F

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

Place	Lympne	Downham	Lympne	Larkhill	Leuchars	Shadwell	Aldergrove	Ronaldsway					Place
Time	01h	0330h	08h	08h	09h	09h	15h	20h					Time
Type				Pilot			Pilot						Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	250 1	190 07	230 04	230 04	300 08	200 10	260 15	260 04					Surf.
1,000	250 13	250 20	240 10	241 10	260 18	230 13	274 11	300 07					1,000
2,000	240 13	250 21	250 13	241 12	260 21	240 14	266 12	300 08					2,000
3,000	230 13	250 20	240 22	258 17	250 25	250 16	260 15	280 14					3,000
4,000	230 16	250 20	250 22	263 20	250 28	260 18	252 18	260 23					4,000
5,000	220 16	250 20	250 19	276 21	250 28	270 19	250 22	280 22					5,000
6,000	230 14	250 19	250 18	269 18	250 31	270 20	252 28	250 21					6,000
8,000		280 20	270 21	268 10	250 32	280 13	247 30	250 32					8,000
10,000		300 24	270 22	274 11	260 30		246 40	230 36					10,000
14,000		290 29	(2,000ft)	280 12	260 42	300 21	248 51						14,000
18,000		290 28		275 22	250 46	300 25	246 60						18,000
24,000		280 57		274 52	260 56	280 48	259 74						24,000
30,000		290 77		283 63	280 78	280 54	249 94						30,000
40,000		280 74		274 66	270 131	280 70	289 127						40,000
50,000		280 54 (45,000ft)		272 31 183 14 (64,000ft)	270 101 (42,000ft)	280 35 260 32 (52,000ft)							50,000

NEPHOSCOPE OBSERVATIONS

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

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

Ship	Weather Watcher	Weather Watcher	Weather Watcher	Weather Watcher	Weather Explorer	Weather Explorer	Weather Explorer	Weather Explorer					Ship
Lat/Long	52·4°N 13·8°W	52·5°N 13·9°W	52·4°N 13·9°W	52·4°N 13·6°W	57·1°N 11·9°W	57·5°N 13·2°W	57·7°N 14·2°W	58·1°N 15·2°					Lat/Long
Pressure Time	03hrs G.M.T.	09hrs G.M.T.	15hrs G.M.T.	21hrs G.M.T.	03hrs G.M.T.	09hrs G.M.T.	15hrs G.M.T.	21hrs G.M.T.				G.M.T.	Time
Pressure M.S.L.	1018 mb	1020 mb	1021 mb	1022 mb	1011 mb	1003 mb	1010 mb	1007 mb				mb	M.S.L.
Pressure Surf	1018 mb	1020 mb	1021 mb	1022 mb	1011 mb	1003 mb	1010 mb	1007 mb				mb	Surf
Pressure Freezing	650 mb	720 mb	735 mb	820 mb	710 mb	870 mb	785 mb	750 mb				mb	Freezing

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	—	59	55	270	15	—	59	48	270	15	—	59	50	260	18	—	61	53	270	17	—	57	51	237	23	—	57	49	240	27							Surf
1000	54	57	53	270	13	55·6	56	49	277	12	55·3	56	48	256	16	61·1	58	51	271	18	53·1	52	51	241	18	52·6	55	47			51·8	56	49	245	21	51·9	52	47			1000
950		53	47	273	16		49	43	280	14		50	45	259	12		50	45	271	18		51	48	243	23		48	43	251	28		50	41	248	25		48	45	265	21	950
900	54·0	47	40	278	24	54·2	49	37	283	19	54·7	46	33	266	19	54·8	46	33	278	24	52·3	47	44	240	26	51·2	43	37	260	28	51·5	44	35	248	38	50·8	42	39	261	24	900
850		39	36	284	24		42	26	292	21		44	30	271	27		41	32	289	25		46	39	245	28		36	31	255	24		38	21	258	27		36	33	246	23	850
800	68·7	44	15	282	26	65·8	39	17	287	24	66·4	35	24	274	29	66·3	36	26	290	27	63·7	38	30	243	31	62·5	30	26	248	32	62·7	34	12	260	26	61·8	30	26	240	31	800
750		41	10	267	33		35	12	281	25		34	20	274	31		32	21	282	30		33	21	241	36		27	13	251	46		28	18	257	33		25	20	244	38	750
700	101·4	37	03	255	35	101·0	30	10	277	37	101·6	27	15	272	36	101·4	29	01	272	32	99·0	31	07	238	40	97·3	25	07	251	45	97·4	22	08	255	35	96·3	17	13	230	41	700
650		32	04	250	51		27	14	272	43		26	20	270	52		29	40	269	40		26	5	243	39		17	-2	253	45		15	-3	254	37		11	08	228	34	650
600	141·8	26	-12	268	54	141·0	22	13	266	55	141·6	21	10	270	59	141·1	15	-13	269	48	138·9	13	-13	240	44	136·5	09	-10	248	60	136·5	11	-14	255	34	135·0	04	01	236	22	600
550		13	-10	250	59		17	08	262	64		14	06	263	60		12	-22	270	52		13	-21	245	60		01	-28	250	56		01	-13	258	48		-5	-9	230	17	550
500	188·3	10	-15	255	64	187·3	10	00	254	70	187·8	07	-1	255	66	187·0	06	-12	270	63	184·7	02	-21	245	58	181·3	-9	-28	245	72	181·3	-6	-29	248	48	179·2	-15	-26	217	22	500
450		00	-28	253	66		02	-9	248	74		-3	-10	247	68		-2	-16	268	68		-9	-27	246	57		-18	-40	233	60		-27	-34	214	21	450
400	243·0	-11	-37	250	72	242·2	-7	-21	252	75	242·2	-13	-19	246	77	241·4	-14	-28	263	74	238·3	-22	-36	238	71	235·8	-28	-32	243	56	235·5	-29	-47	250	50	236·6	-40	-56	206	32	400
350		-26	-46	253	74		-21	-36	250	81		-25	-36	248	80		-26	-40	259	76		-35	-49	245	78		-35	-54	235	102		-41		253	64		-38	-47	219	42	350
300	309·4	-43		246	51	309·4	-35	-48	246	84	308·6	-41		247	35	307·7	-41		259	72	308·1	-51		253	78	298·2	-50		233	93	295·5	-47		253	70	295·2	-40	-55	233	43	300
250		-52		255	141		-51		253	33		-60		243	24		-52		253	78											-43		215	75		-34	-52	234	41	250
200	359·1	-61		250	115	359·4	-55		248	83	359·5	-65		252	76	359·4	-66		255	75											388·6	-41				386·7	-40	-58	233	40	200
170		-63		237	100		-62		250	30		-60		243	30		-60		251	66												-44					-42		236	40	170
150		-67		238	84		-60		245	85		-62		245	72		-55		261	51												-45					-46		256	37	150
130		-66		225	67		-63		239	84		-59		243	60		-59		263	39												-48					-48		271	33	130
110		-64					-61		244	67		-58		247	38		-56		263	30												-47					-48		286	28	110
100	343·4	-68				344·1	-62		245	56	343·1	-57		253	34																				339·7	-47		273	24	100
90		-61					-60		238	51		-55		253	25																					-48		256	18	90
80		-61					-58		236	39		-54		263	30																					-49		252	17	80
70		-60					-57		245	32																										-50		254	114	70
60		-59					-57																													-50				60
		-57					(64)																													(50)				
		-55																																						

Inversion 550mb 39°-515mb 45° 268mb 53°-263mb 51°

Inversion 880mb 41°-840mb 37° Isothermal 840-830mb 37° 770-775mb 34° 590-580mb 21°

Inversion 700mb 27°-676mb 36° Isothermal 912-872mb 46° 626-613mb 22°

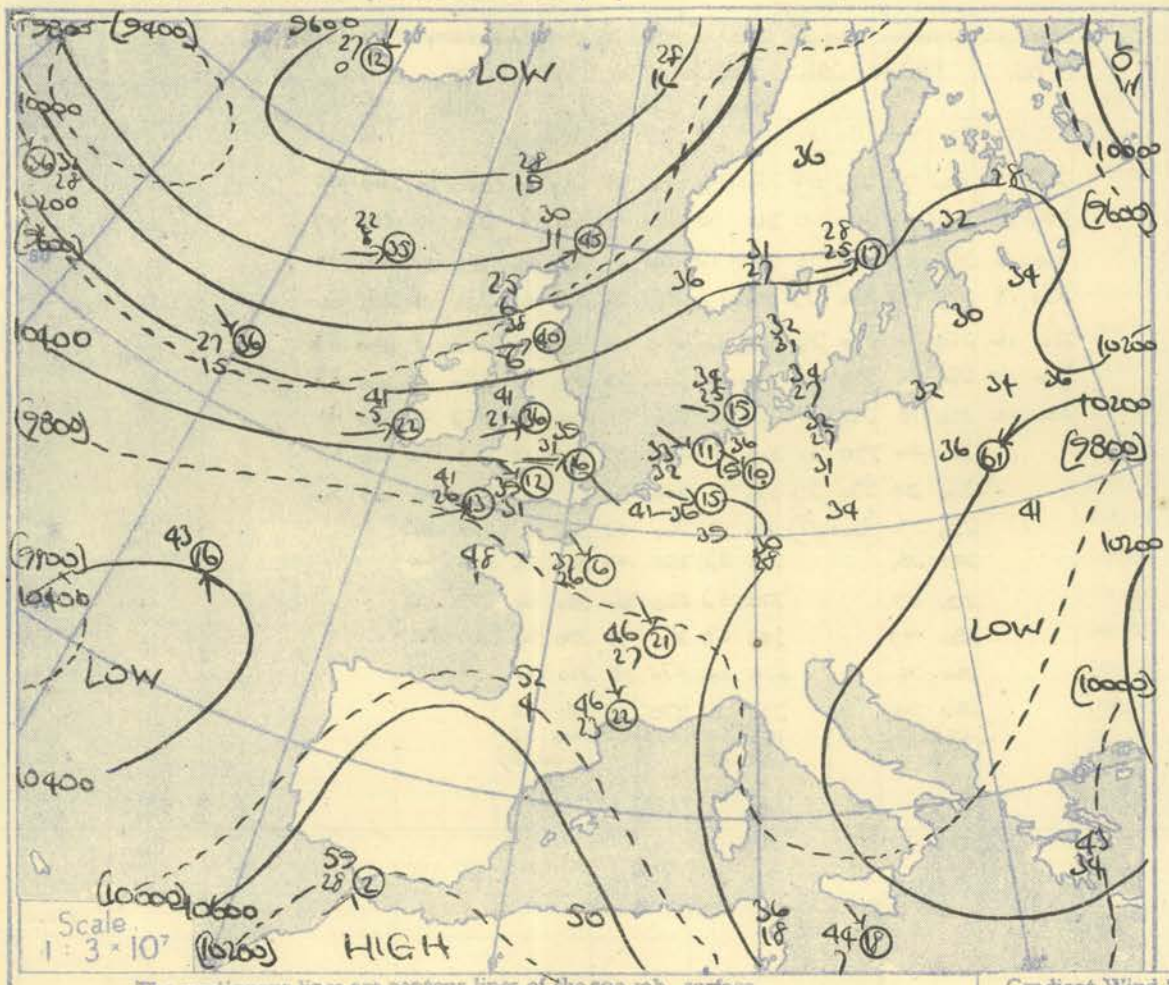
Inversion 893mb 47°-863mb 48° Isothermal 922-893mb 47° 750-718mb 33°

Isothermal 344-340mb 42° 324-312mb 45°

Tropopause	II 223mb -59° 37500'	I 205mb -67° 39200'	I 208mb -70° 38700'	I 390mb -42° 23900'	NR.	NR.	II 304mb -47° 29600'	I 208mb -69° 38600'					Tropopause

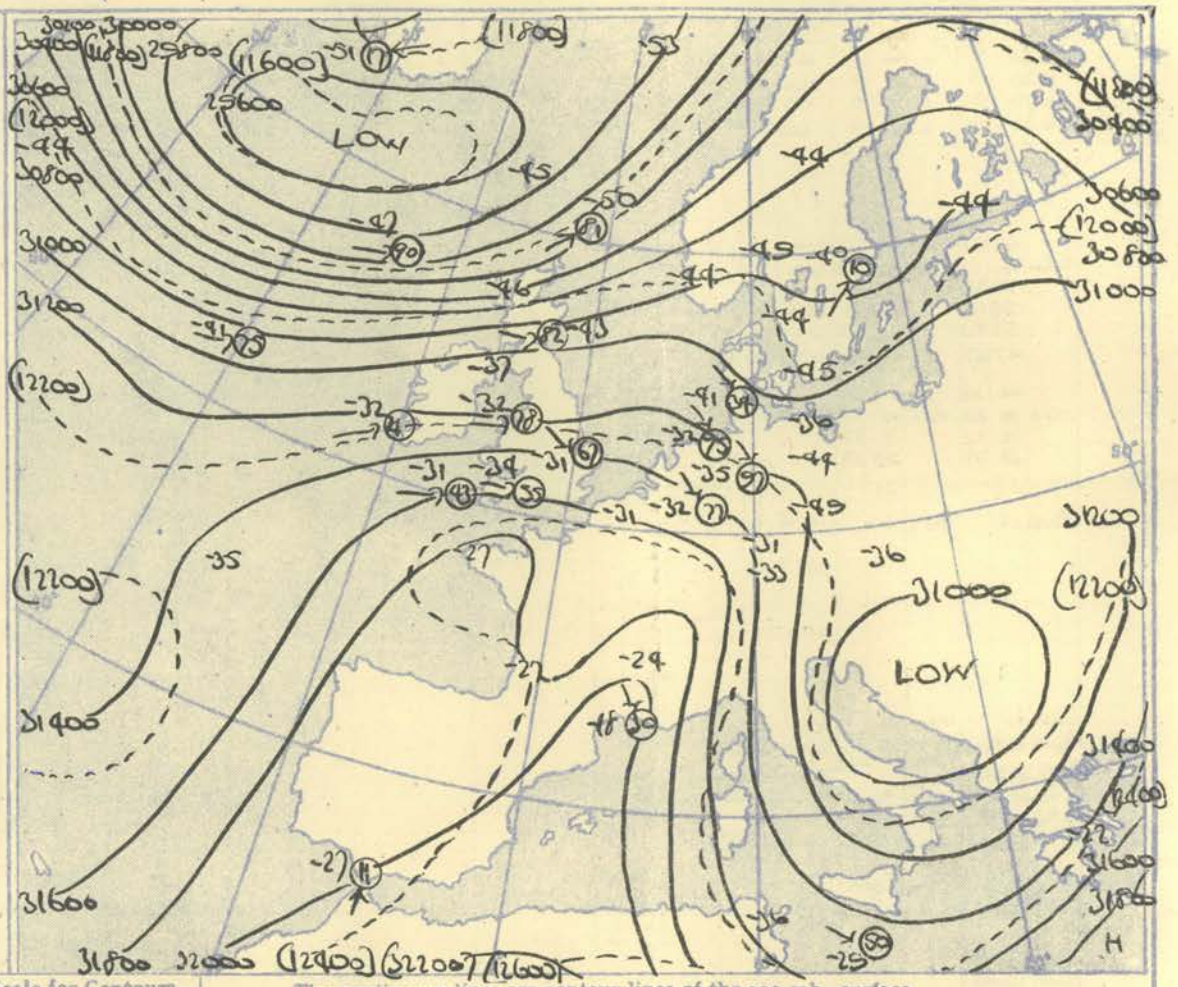
July 27th 1951.

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.



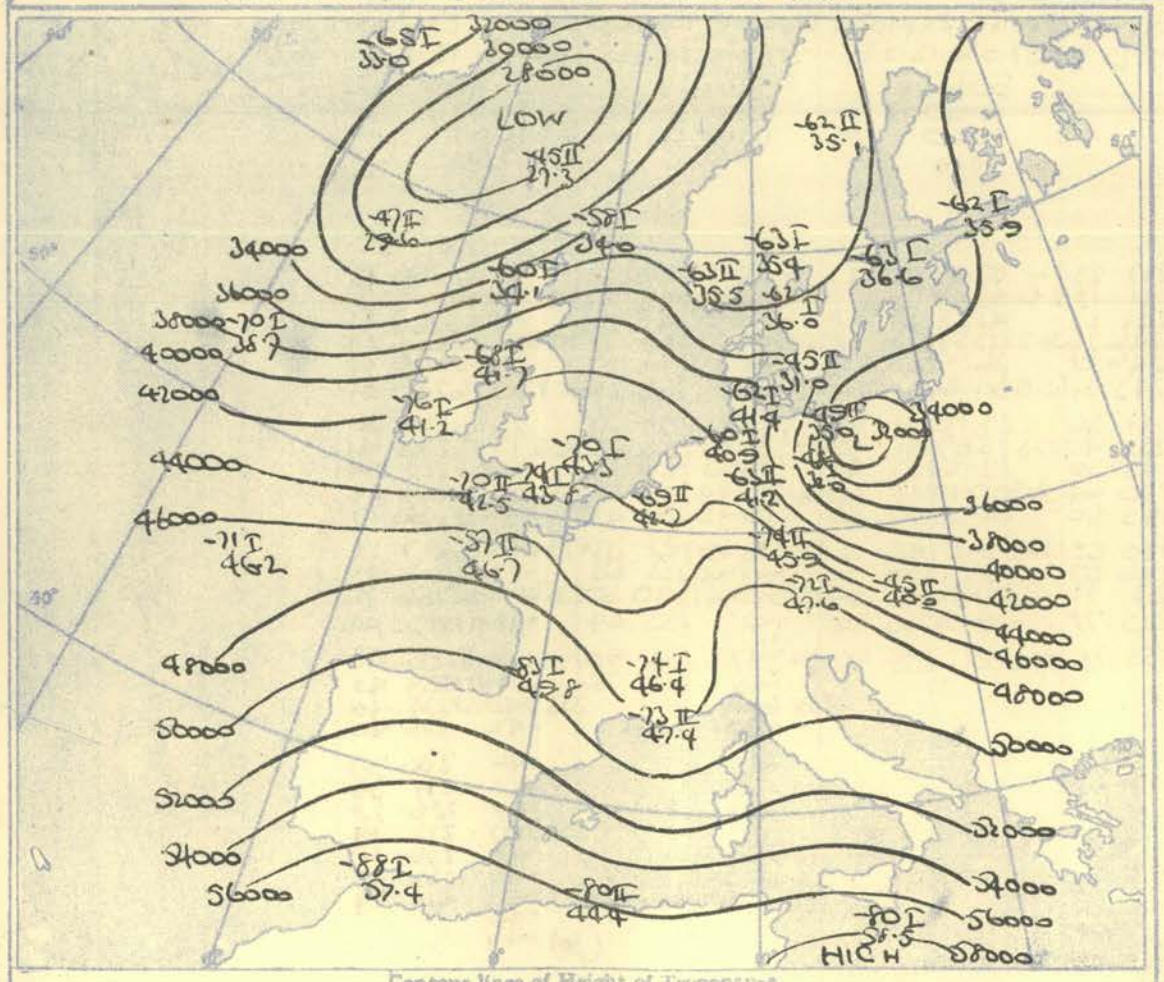
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

As a cold pool moved across the Atlantic there was a strong Eastward thrust of cold air over Northwest Scotland and the Shetlands. There was also considerable warming over Spain and France leading to a much stronger thermal-gradient over the British Isles.

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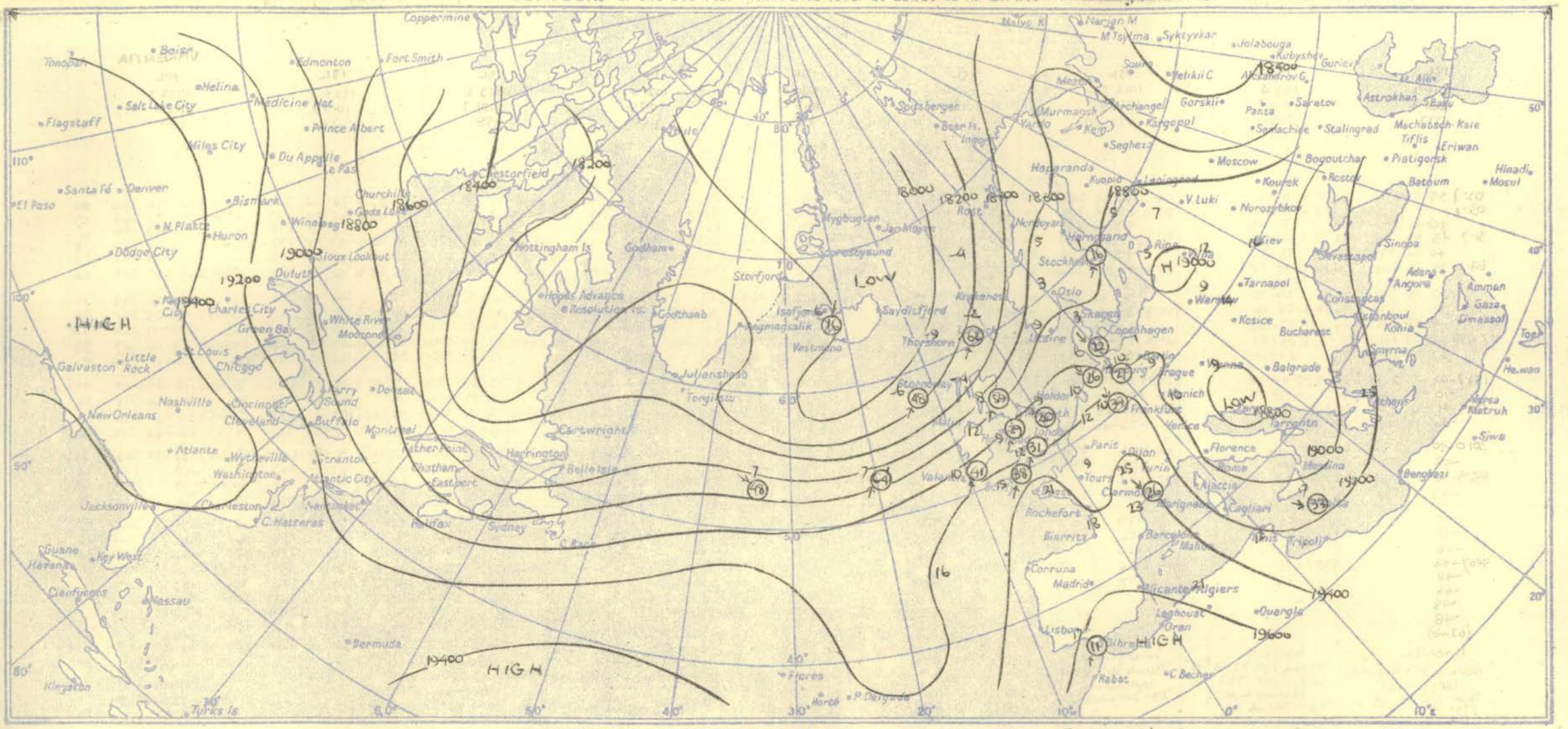
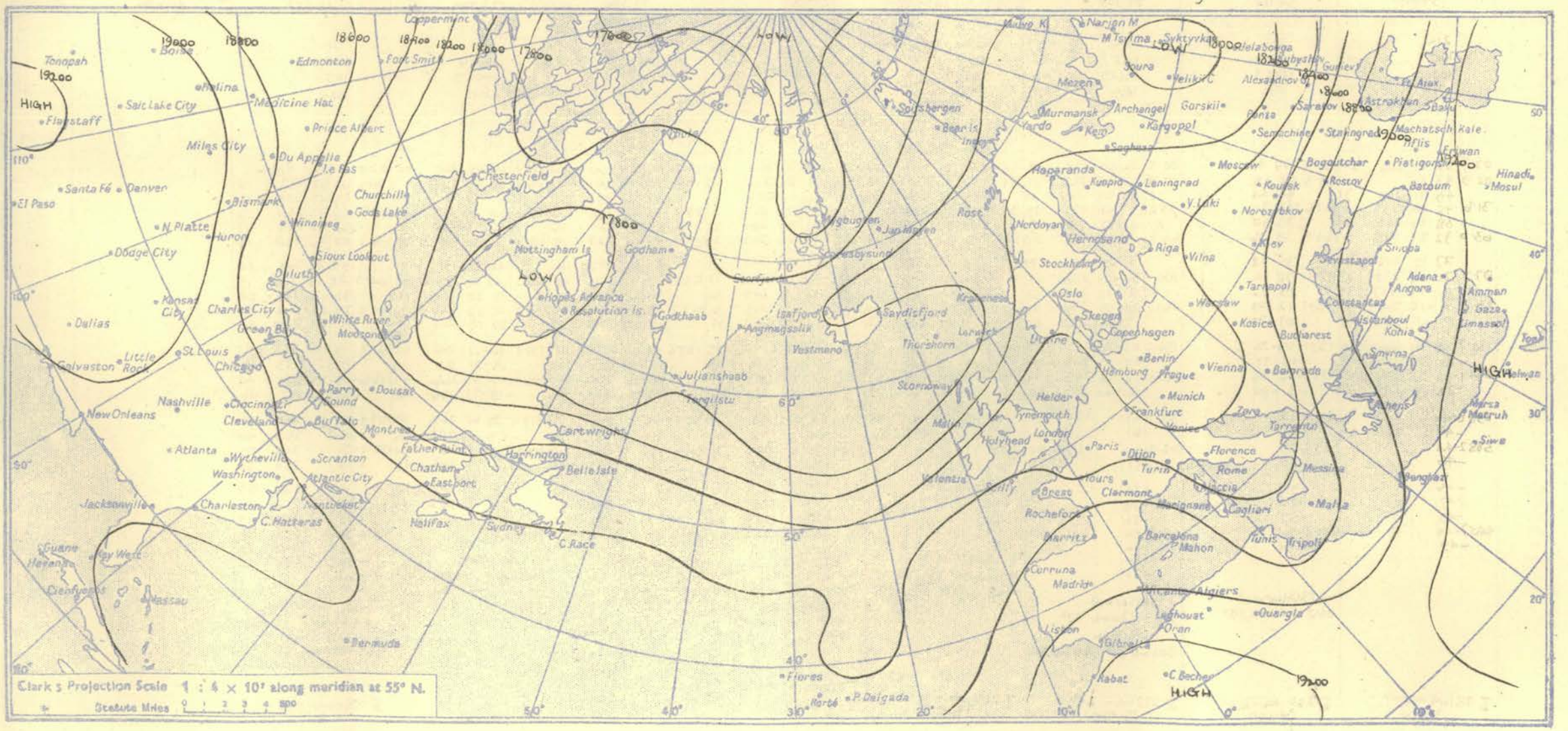
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Friday 27th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Friday 27th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Friday 27th July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h G.M.T.	1011·2 mb	1001·3 mb	777 mb
STORNOWAY	15h G.M.T.	1012·4 mb	1010·7 mb	798 mb
LEUCHARS	15h G.M.T.	1013·7 mb	1014·5 mb	653 mb
ALDERGROVE	15h G.M.T.	1017·0 mb	1008·0 mb	618 mb
LIVERPOOL	15h G.M.T.	1020·0 mb	1018·0 mb	637 mb
DOWNHAM MARKET	15h G.M.T.	1021·6 mb	1017·1 mb	650 mb
LARKHILL	15h G.M.T.	1023·2 mb	1007·7 mb	658 mb
CAMBORNE	15h G.M.T.	1024·3 mb	1013·9 mb	623 mb
VALENTIA	15h G.M.T.	1022·3 mb	1020 mb	630 mb

Pressure mb	LERWICK Height ft./100	LERWICK °Temp. °F.	LERWICK Dew °F.	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °Temp. °F.	STORNOWAY Dew °F.	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °Temp. °F.	LEUCHARS Dew °F.	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °Temp. °F.	ALDERGROVE Dew °F.	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °Temp. °F.	LIVERPOOL Dew °F.	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °Temp. °F.	DOWNHAM MARKET Dew °F.	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °Temp. °F.	LARKHILL Dew °F.	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °Temp. °F.	CAMBORNE Dew °F.	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	VALENTIA Height ft./100	VALENTIA °Temp. °F.	VALENTIA Dew °F.	VALENTIA Wind Dir. °	VALENTIA Wind Vel. knots	Pressure mb
Surf	02·1	55	50	250	22	00·4	60	54			00·2	70	61	240	05	02·6	66	58			00·6	69	57	230	15	01·2	70	54	200	15	04·4	70	54	240	06	02·9	70	62	210	14	00·3	62	54	280	04	Surf
1000	03·1					03·4	58	52			04·0	66	58	246	14	04·8	64	57			05·6	66	55	232	21	06·0	66	53	219	21	06·5	68	53			06·8	65	57	227	12	06·0	59	51	268	07	1000
950			50	42	241	26			51	46		57	53	251	18			57	54				58	49	237	25			58	49	245	14			58	49	265	14			59	50	236	14			54	48	256	11	950
900	31·7	43	39	240	23	32·2	44	40			33·2	53	49	251	21	34·0	50	50			34·8	51	44	242	28	35·3	58	49	256	14	35·8	67	33	251	17	36·1	57	39	247	15	35·1	54	41	256	18	900
850			40	34	234	28			38	35			49	245	25			48	44				49	42	257	29			54	46	245	15			55	40	256	17			55	39	252	16			51	24	251	23	850
800	63·2	35	28	229	36	63·6	33	30			65·3	45	41	244	36	66·0	47	18			66·9	48	41	264	29	67·7	52	43	241	16	68·3	51	41	282	15	68·5	51	39	256	15	67·2	49	15	248	26	800
750			30	19	229	37			26	22			38	32	239	40			45	-06	For			44	35	262	33			44	34	244	16			45	36	291	15			46	35	250	12			44	03	245	26	750
700	98·3	30	11	229	45	98·3	25	06			100·9	38	-06	247	40	101·9	10	-14	winds		102·9	41	21	252	36	103·7	39	31	260	16	104·4	39	31	284	12	104·6	41	26	228	13	103·2	41	-05	251	28	700
650			20	-01	225	44			17	-02			31	-08	243	41			34	-20				34	20	245	34			32	24	272	17			31	25	255	13			35	27	244	13			34	-11	254	34	650
600	15·7	10	-03	221	42	13·5	09	-03			14·3	25	-12	244	50	14·6	28	-19	See		14·3	26	06	250	34	14·3	26	11	280	19	14·9	25	17	242	07	14·5	29	22	260	26	14·8	29	-16	247	38	600
550			05	-06	224	51			04	-10			16	-12	249	56			22	-12				19	-41	256	32			18	-06	280	19			17	07	318	05			24	09	258	38			20	-15	242	41	550
500	18·7	-02	-07	227	62	18·5	04	-28			18·5	08	-19	238	59	18·3	12	-19	page		19·0	09	-49	258	29	19·0	09	-14	284	20	19·1	12	09	259	31	19·2	15	-03	257	38	19·0	10	-33	249	41	500
450		-10	-15	231	70		-13	-37				-03	-20	252	59		00	-24	3.			-01	-56	257	26		00	-21	290	22		05	02	272	41		07	-03	254	33		00	-44	255	38	450
400	23·6	-21	-26	229	70	23·5	-32	-43			24·1	-14	-28	259	67	24·1	-09	-32			24·7	-13	-54	279	35	24·5	-09	-21	284	39	24·6	-06	-10	264	45	24·7	-03	-21	260	35	24·5	-11	-50	251	44	400
350		-36	-42	228	66		-30	-53				-26	-40	286	77		-24	-51				-21	-50	267	62		-19	-25	273	65		-19	-29	271	42		-15	-38	251	41		-16	-44	242	66	350
300	30·1	-50		231	81	30·1	-46				30·8	-43		268	82	31·0	-31	-60			31·9	-32	-52	259	78	31·2	-31	-37	278	67	31·4	-34	-52	256	55	31·5	-31	-49	247	43	31·2	-32	-52	242	74	300
250		-58		250	81		-60					-53		260	119		-48					-49		259	79		-48		267	75		-50		248	60		-47		247	48		-50		340	73	250
200	38·9	-50		242	52	38·9	-53				39·5	-64				39·9	-61				40·5	-65		256	83	40·1	-64		269	78	40·2	-66		248	60	40·4	-62		251	30	40·1	-69		240	69	200
170		-47		245	40		-54					-61					-66					-73		251	79		-70		270	68		-73		250	55		-71		258	22		-74		242	70	170
150		-50					-52					-59					-64					-76					-67		270	53		-72		260	42		-72		260	18		-71		244	55	150
130		-50					-51					-56					-62					(158 mb)										-74		260	36		-73		235	16		-70		244	46	130
110		-48					-52					-56					-59															-69		259	30		-72		250	35		-66		248	38	110
100	54·0	-48				53·7	-53				54·2	-54				54·6	-62														54·6	-67		255	25	54·8	-70		251	31	54·5	-64		252	29	100
90		-48					-51					-49					-60															-67		257	24		-67		250	36		-62		252	16	90
80		-48															-59															-64		255	16		-64		255	20		-60		252	17	80
70		-48															-57															-61		240	16		-61		249	15		-59				70
60		-48															-50															-59		248	14		-59		227	15						60
		(62 mb)																														-56					-55		226	12						
		Inversion 860 mb 39° - 845 mb 41° Isothermal 760 - 700 mb 30° 573 - 545 " 05°					Inversion 730 mb 23° - 712 mb 25° 600 " 09° - 587 " 10° Isothermal. 712 - 700 mb 25°					Inversion 730 mb 36° - 719 mb 38° Isothermal. 719 - 700 mb 38°					Inversion 847 mb 46° - 782 mb 48° 645 " 33° - 630 " 34° Isothermal 577 - 568 mb 59° 296 - 281 " - 38° I 182 mb - 68° 41.700						Inversion 871 mb 48° - 832 mb 50° 600 " 26° - 593 " 27° 367 - -22° - 354 " -20° Isothermal 750 - 723 mb 44° MR					Inversion 935 mb 56° - 900 mb 58° Isothermal. 841 - 812 mb 53°					Inversion 926 mb 55° - 885 mb 58° Isothermal 532 - 510 mb 13°										Inversion 950 mb 54° - 924 mb 56° Isothermal. 750 - 722 mb 44°					
Tropopause	I 250 mb -58° 34.000					I 250 mb -60° 34.100					III 208 mb -63° 38.700															I 170 mb -70° 43.500					I 168 mb -74° 43.800					II 180 mb -70° 42.500					I 190 mb -54° 41.200					Tropopause

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h G.M.T.	1010·9 mb	1001·0 mb	796 mb
STORNOWAY	21h G.M.T.	1013·9 mb	1012·3 mb	782 mb
LEUCHARS	21h G.M.T.	1015·7 mb	1014·9 mb	689 mb
ALDERGROVE	21h G.M.T.	1019·0 mb	1009·5 mb	692 mb
LIVERPOOL	21h G.M.T.	1020·1 mb	1018·1 mb	644 mb
DOWNHAM MARKET	21h G.M.T.	1021·2 mb	1016·8 mb	659 mb
LARKHILL	21h G.M.T.	1022·6 mb	1006·9 mb	641 mb
CAMBORNE	21h G.M.T.	1023·9 mb	1013·4 mb	624 mb

Pressure mb	LERWICK Height ft./100	LERWICK °Temp. °F.	LERWICK Dew °F.	LERWICK Wind Dir. °	LERWICK Wind Vel. knots	STORNOWAY Height ft./100	STORNOWAY °Temp. °F.	STORNOWAY Dew °F.	STORNOWAY Wind Dir. °	STORNOWAY Wind Vel. knots	LEUCHARS Height ft./100	LEUCHARS °Temp. °F.	LEUCHARS Dew °F.	LEUCHARS Wind Dir. °	LEUCHARS Wind Vel. knots	ALDERGROVE Height ft./100	ALDERGROVE °Temp. °F.	ALDERGROVE Dew °F.	ALDERGROVE Wind Dir. °	ALDERGROVE Wind Vel. knots	LIVERPOOL Height ft./100	LIVERPOOL °Temp. °F.	LIVERPOOL Dew °F.	LIVERPOOL Wind Dir. °	LIVERPOOL Wind Vel. knots	DOWNHAM MARKET Height ft./100	DOWNHAM MARKET °Temp. °F.	DOWNHAM MARKET Dew °F.	DOWNHAM MARKET Wind Dir. °	DOWNHAM MARKET Wind Vel. knots	LARKHILL Height ft./100	LARKHILL °Temp. °F.	LARKHILL Dew °F.	LARKHILL Wind Dir. °	LARKHILL Wind Vel. knots	CAMBORNE Height ft./100	CAMBORNE °Temp. °F.	CAMBORNE Dew °F.	CAMBORNE Wind Dir. °	CAMBORNE Wind Vel. knots	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf	02·7	53	51	240	21	00·4	55	49			00·2	60	50	290	05	02·6	60	51	260	08	00·6	64	57	240	08	01·2	65	53	200	04	04·4	68	58	260	03	02·9	61	54	Calm							Surf
1000	02·9	53	52			03·8	54	48			04·3	58	48	255	17	05·2	59	51	270	13	05·6	63	55	244	15	05·9	65	53	241	21	06·3	66	58			06·6	60	53	237	15						1000
950		49	41	239	31		49	44				53	44	266	18		53	48	269	13		56	52	258	17		58	46	252	17		61	55	265	09		57	47	235	12							950
900	31·6	45	36	239	30	32·5	43	36			33·2	47	40	277	19	34·0	47	39	265	18	34·9	54	52	263	21	35·2	56	45	274	16	35·6	60	38	256	13	35·8	56	32	234	12						900
850		38	29	239	30		38	30				41	37	276	17		40	37	258	25		50	49	261	21		53	49	271	16		56	39	256	20		56	40	245	13							850
800	63·0	32	23	238	33	63·9	33	26			64·8	36	26	261	25	65·5	40	20	253	28	67·1	46	44	252	29	67·5	48	44	262	15	68·1	56	36	240	18	68·2	50	36	260	14						800
750		27	19	233	34		30	22				37	-02	254	39		39	17	245	39		42	38	245	31		44	39	252	16		46	33	231	11		45	29	264	14							750
700	97·7	22	08	235	33	98·8	25	12			100·3	34	-05	248	47	101·0	34	12	240	43	103·1	39	30	246	37	103·4	38	31	258	19	104·2	40	32	259	05	104·3	42	13	266	19						700
650		16	-03	237	35		19	02				21	13	243	51		26	09	245	39		33	08	245	36		30	23	253	21		33	25	266	12		36	13	267	24							650
600	136·8	11	-12	241	41	138·1	12	-09			140·4	20	09	249	57	140·9	19	09	244	49	143·8	27	-15	243	36	143·7	23	19	248	20	144·8	25	18	260	17	145·1	39	07	264	33						600
550		03	-21	242	45		03	-20				15	00	250	63		13	00	243	56		18	-24	247	35		15	08	242	19		20	08	263	30		20	-03	260	40							550
500	181·7	-08	-31	246	49	183·1	-06	-28			186·4	05	-03	247	70	186·7	05	-12	241	51	190·2	07	-20	245	30	189·8	03	00	232	17	191·3	12	-12	264	42	191·7	12	-10	257	40						500
450		-18	-39	246	53		-15	-37				-05	-10	246	69		-01	-23	244	65		-02	-16	249	25		-04	-07	241	23		03	-24	263	15		02	-21	253	40							450
400	234·1	-30	-51	241	65	235·9	-26	-46			240·4	-18	-26	249	76	240·7	-19	-35	248	67	244·6	-12	-20	245	37	243·9	-14	-16	265	47	246·4	-06	-39	266	47	246·6	-09	-29	254	44						400
350		-38	-58	239	83		-31	-50				-30	-40	252	80		-31	-43	250	72		-22	-28	261	66		-25	-28	269	54		-19	-53	266	46		-20	-39	255	46							350
300	298·8	-46		247	94	301·5	-42				306·1	-47		253	86	306·1	-48		250	85	311·6	-36	-42	262	70	310·3	-41		275	46	313·8	-35	-60	262	32	313·9	-50		251	36							300
250		-47		251	87		-58					-61		252	101		-61		248	104		-54		256	67		-59		267	50		-53		257	35		-66		250	40							250
200	388·2	-44				389·1	-49				392·8	-60		259	90	392·8	-73				398·9	-73		254	70	396·9	-73		266	49	401·9	-66		261	54	402·2	-71		248	52							200
170		-46					-50					-51					-73					-71		265	67		-72		264	44		-69		263	49		-74		254	56							170
150		-46					-51					-56										-75		257	51		-72		252	43		-71		262	40		-74		256	53							150
130		-47					-54					-58										-73		259	53		-71		280	27		-72		262	42		-74		256	44							130
110		-49					-52					-56										-59		253	24		-67		252	24		-69					-74		258	33							110
100	540·7	-49				540·8	-50				541·7	-54									543·5	-62		256	12	540·9	-64		252	19	(119 mb)					545·1	-74		258	29							100
90		-49					-48					-56										+62														-72		248	24							90
80												-56																								-70		248	23							80
70												-53																								-68										70
60																																				-67										60
							Isothermal. 665 - 650 mb 19°					Isothermal. 750 - 720 mb 37° Inversion 802 mb 36° - 782 mb 39°.					Inversion 821 mb 35° - 793 mb 41° 768 " 38° - 737 " 40°					Inversion 755 mb 41° - 741 mb 44° 200 " -73° - 185 " -69° Isothermal 1018 " 100 mb 64° 700 - 687 " 39°					Isothermal. 1017 - 997 mb 65° 908 - 878 " 56°					Inversion 1007 mb 65° - 1000 mb 66° 917 " 51° " 900 " 60° 566 - 260 " 557 - 21°					(67 mb) Inversion 884 mb 56° - 85 mb 51° Isothermal 933 - 884 mb 56°										
Tropopause	I 281 mb -50° 31.300					I 250 mb -58° 34.100					I 235 mb - 64° 35.800					I 206 mb -75° 39.500					I 200 mb -73° 39.900 I 150 mb -75° 45.900					I 198 mb -73° 39.900					II 187 mb -69° 41.600					II 186 mb -69° 41.700										Tropopause

For winds See page 3.

HMSO Press, MO, Dunstable.

No. 11808 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Saturday 28th July.

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

LERWICK

Pressures — Time 03h G.M.T. | M.S.L. 1010·5 mb | Surf 1000·5 mb | Freezing 771 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	50	270	18
1000	02·8	51	50		
950		47	46	255	35
900	31·4	43	37	252	26
850					
800	62·8	35	24	253	24
750		29	15	235	24
700	97·7	22	08	235	26
650		16	00	243	28
600	136·9	11	-08	247	32
550		02	-18	242	38
500	181·7	-08	-28	236	48
450		-19	-30	231	55
400	234·1	-30	-41	230	59
350		-41		239	68
300	298·4	-50		241	81
250		-47		242	72
200	387·6	-45		241	48
170		-48		244	39
150		-50		245	31
130		-50		245	28
110		-49		246	20
100	539·5	-49		255	22
90		-49			
80					
70					
60					

Inversion. 836 mb 36° 823 mb 37°

Tropopause: I 297 mbs -51°F. 30,100ft

STORNOWAY

Pressures — Time 03h G.M.T. | M.S.L. 1012·0 mb | Surf 1010·4 mb | Freezing 790 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	53	51		
1000	03·3	53	50		
950		49	48		
900	31·9	43	40		
850					
800	63·2	33	28		
750		27	20		
700	98·0	20	15		
650		12	08		
600	136·8	09	-02		
550		00	-19		
500	181·4	-10	-25		
450		-20	-31		
400	233·7	-30	-42		
350		-40	-53		
300	298·1	-45			
250		-43			
200	388·3	-44			
170		-47			
150	451·7	-49			
130		-50			
110		-49			
100	540·3	-51			
90		-53			
80					
70					
60					

No Winds Reported

Inversion. 810 mbs 34°-800mb 33° Isothermal. 1010-988 mbs 53°F 642-611 mbs 11°F.

Tropopause: I 297 mbs -46°F 30,000ft.

LEUCHARS

Pressures — Time 03h G.M.T. | M.S.L. 1015·9 mb | Surf 1016·7 mb | Freezing 735 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	55	51	280	07
1000		54	50	261	20
950	04·5	50	42	261	22
900	33·3	44	36	261	22
850					
800	64·6	33	29	253	23
750		33	13	253	27
700	99·8	29	13	252	37
650		23	10	249	46
600	139·4	16	07	246	49
550		09	-11	245	61
500	184·9	01	-8	245	63
450		-6	-11	243	73
400	238·7	-18	-23	242	82
350		-32	-37	244	88
300	304·3	-44		251	92
250		-59		248	103
200	390·6	-68		254	91
170		-60		252	75
150	451·8	-58			
130		-60			
110		-61			
100	528·1	-59			
90		-60			
80		-58			
70		-58			
60					

Inversion. 806 - 765mbs 33° - 35°

Tropopause: I 206 mbs -73°F 38,400ft.

ALDERGROVE

Pressures — Time 03h G.M.T. | M.S.L. 1019·2 mb | Surf 1009·6 mb | Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	56	53	260	08
1000	05·2	54	51		
950		49	47	263	22
900	33·9	43	41	260	23
850					
800	65·2	32	28	256	29
750		37	29	255	37
700	100·5	32	23	255	44
650		27	24	253	50
600	140·4	19	17	249	54
550		10	08	247	60
500	186·2	05	02	246	69
450		-4	-8	245	72
400	240·4	-13	-20	246	73
350		-26	-34	248	81
300	306·9	-39	-48	247	94
250		-55			
200	324·6	-59			
170		-57			
150		-58			
130		-60			
110		-60			
100		-59			
90	542·7	-59			
80		-59			
70		-57			
60		-59			
		-58			

Inversion 788 mbs 31° - 758 mbs 38°

Tropopause: I 220 mbs -65°F 37,400ft.

LIVERPOOL

Pressures — Time 03h G.M.T. | M.S.L. 1020·1 mb | Surf 1018·1 mb | Freezing 665 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	61	58	250	08
1000	05·6	60	55	252	15
950		55	46	255	20
900	34·6	49	45	261	21
850					
800	66·4	47	13	260	31
750		43	-1	256	42
700	102·2	37	-15	252	39
650		30	-20	247	36
600	142·5	24	-34	248	37
550		15	-41	251	39
500	188·6	06	-48	251	42
450		-5	-48	252	48
400	242·7	-16	-36	253	48
350		-28	-41	255	55
300	300·1	-40	-54	260	74
250		-58		253	69
200	396·0	-73		252	70
170		-74		253	70
150		-74		256	63
130		-73		265	60
110		-68		256	42
100	539·5	-65		255	34
90		-68		253	24
80		-67		247	18
70		-66			
60		-65			

Inversion. 829 mbs 42° 808 mbs 48° 198 mbs -74° 185 mbs -70° Isothermal 1018-1005mb 61°F. Max wind 252 87kts 400 mbs 35,600ft. I 198mbs -74° 40,000ft. I 167 mbs -75° 43,300ft.

Tropopause: II 207mb -70°F 39,100ft.

DOWNHAM MARKET

Pressures — Time 03h G.M.T. | M.S.L. 1021·1 mb | Surf 1016·7 mb | Freezing 671 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	1·2	61	54	220	07
1000	5·9	61	53	260	20
950		59	55	265	18
900	35·3	55	53	262	14
850					
800	67·5	47	47	257	20
750		43	39	256	18
700	103·3	34	31	228	23
650		30	30	212	27
600	143·7	23	23	221	29
550		15	15	245	31
500	189·9	07	06	257	28
450		+03	-03	266	39
400	244·3	-10	-16	265	45
350		-21	-28	259	49
300	311·5	-38	-45	264	42
250		-57		253	44
200	398·5	-70		263	54
170		-69		259	50
150	458·4	-72		255	45
130		-72		255	42
110		-70		257	34
100	542·4	-67		257	25
90		-65		255	20
80					
70					
60					

Inversion. 985 mb 61° 935mb 62° Isothermal. 1017 - 985 mb 61° 950 - 936mb 59° 441 - 433mb -05°

Tropopause: II 207mb -70°F 39,100ft.

LARKHILL

Pressures — Time 03h G.M.T. | M.S.L. 1021·2 mb | Surf 1006·0 mb | Freezing 661 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	4·4	51	51	Calm	
1000	6·0	53	53		
950		57	49	258	16
900	35·1	59	29	256	20
850					
800	67·5	49	31	250	20
750		42	24	255	16
700	103·4	37	23	267	18
650		31	22	263	25
600	143·8	24	16	260	29
550		18	-01	263	39
500	190·1	09	-16	266	44
450		01	-24	266	46
400	244·8	-11	-33	267	49
350		+24	-46	260	48
300	311·5	-40	-60	254	41
250		-58		254	44

Inversion 1006 - 984 mb 51-58°F 935 - 908 mb 56-60°F

Tropopause: II 237 mb -61°F 36,300ft.

CAMBORNE

Pressures — Time 03h G.M.T. | M.S.L. 1023·0 mb | Surf 1012·4 mb | Freezing 616 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	57	57	180	03
1000	06·4	58	58	234	09
950		60	46	231	11
900	35·6	58	28	256	09
850					
800	68·0	48	35	244	12
750		46	20	245	17
700	104·0	40	17	246	25
650		36	04	248	29
600	144·9	31	00	250	30
550		23	-5	259	36
500	191·8	15	-11	255	42
450		05	-21	255	45
400	247·2	-6	-33	254	48
350		-17	-42	251	46
300	314·9	-33	-56	244	45
250		-51		245	48
200	403·5	-60		247	27
170		-69		246	70
150		-73		252	57
130		-73		249	46
110		-71		257	35
100	547·6	-72		251	35
90		-71		252	28
80		-69		270	15
70		-68			
60					

Inversion 1012 - 950mb 57° - 60° Isothermal. 912 - 883 mbs 58°F.

Tropopause: I 140 mbs -75°F 47,700ft.

[unnamed]

Pressures — Time 03h G.M.T. | M.S.L. 1023·7 mb | Surf 1021 mb | Freezing 650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf		50	49	Calm	
1000	6·1	52	51	257	03
950		52	51	297	08
900	34·9	46	44	282	10
850					
800	66·9	48	-1		
750		43	-12		
700	102·7	38	-27		
650		32	-17		
600	143·0	24	-11		
550		15	-16		
500	189·3	8	-33		
450		0	-31		
400	243·9	-11	-31		
350		-24	-43		
300	310·6	-38			
250		-56			
200	398·1	-68			
170		-66			
150		-66			
130		-63			
110		-64			
100	544·1	-67			

Inversion. 1021 - 975 mbs 56-56°F 875 - 841 mbs 44-48°F Isothermal. 841 - 800 mbs 48°F.

Tropopause: I 186 mbs -69°F 41,300ft.

LERWICK

Pressures — Time 09h G.M.T. | M.S.L. 1009·4 mb | Surf 999·4 mb | Freezing 792 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	57	47	240	21
1000	02·5				
950		49	43	226	29
900	31·2	43	38	229	28
850					
800	62·5	33	26	236	30
750		26	19	236	30
700	97·2	19	11	234	29
650		14	08	230	27
600	136·1	06	-2	232	25
550		-3	-10	241	27
500	180·5	-12	-17	245	32
450		-22	-31	246	36
400	22·5	-36	-43	238	45
350		-47		234	52
300	296·4	-43		231	50
250		-41		236	50
200	386·7	-43		241	40
170		-45		240	31
150	450·5	-45		251	29
130		-45			
110		-44			
100	540·2	-46			
90		-46			
80		-44			
70		-46			
60					

Inversion 815 mbs 32° 800 mbs 33°

Tropopause: I 340 mb -48°F 26,800ft.

STORNOWAY

Pressures — Time 09h G.M.T. | M.S.L. 1010·2 mb | Surf 1008·6 mb | Freezing 830 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	53	46		
1000	02·7	52	46		
950		47	41		
900	31·3	40	33		
850					
800	62·4	25	24		
750		24	19		
700	96·9	13	14		
650		12	04		
600	135·7	04	-05		
550		-05	-17		
500	179·9	-14	-31		
450		-25	-41		
400	231·5	-38	-53		
350		-36	-54		
300	286·4	-36	-59		
250		-34			
200	388·3	-36			
170		-39			
150	452·9	-41			
130		-43			
110		-44			
100	543·0	-43			
90		-45			
80		-47			
70					
60					

No Winds Reported.

Inversion. 810 mbs 34°-800mb 33° Isothermal. 1010-988 mbs 53°F 642-611 mbs 11°F.

Tropopause: I 297 mbs -46°F 30,000ft.

LEUCHARS

Pressures — Time 09h G.M.T. | M.S.L. 1014·4 mb | Surf 1015·2 mb | Freezing 769 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	66	52		
1000	04·2	61	48		
950		52	43		
900	33·1	45	39		
850					
800	64·6	37	28		
750		29	20		
700	99·5	28	11		
650		19	00		
600	138·9	13	-7		
550		06	-14		
500	184·2	-3	-23		
450		-13	-33		
400	237·3	-23	-44		
350		-30	-50		
300	302·9	-44			
250		-53			
200	391·4	-49			
170		-43			
150	455·0	-43			
130		-50			
110		-54			
100	543·5	-51			
90		-46			
80		-49			
70		-52			
60					

See Page Three for Winds

Isothermal. 873 - 841 mb 41°F 820 - 806 mb 38°F 368 - 354 mb -29°F

Tropopause: I 247 mbs -54°F 34,500ft.

ALDERGROVE

Pressures — Time 09h G.M.T. | M.S.L. 1019·3 mb | Surf 1009·8 mb | Freezing 745 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	58	52	255	18
1000	05·3	56	53	258	24
950		50	49	260	27
900	34·0	45	42	263	27
850					
800	65·5	34	33	267	31
750		31	24	265	35
700	100·5	29	08	260	39
650		22	00	259	43
600	140·1	17	-06	256	48
550		-10	-13	254	56
500	185·7	00	-24	250	69
450		-08	-35	246	81
400	239·4	-17	-38	249	90
350		-27	-46	250	102
300	305·6	-42		246	105
250		-58		247	109
200	392·7	-54			
170		-55			
150	454·8	-56			
130		-58			
110		-58			
100	541·8	-54			
90		-52			
80		-53			
70		-56			
60					

Inversion. 756 mb. 36°F 745mb 32°F

Tropopause: II 244 mbs -60°F 35,000ft.

LIVERPOOL

Pressures — Time 09h G.M.T. | M.S.L. 1020·5 mb | Surf 1018·5 mb | Freezing 672 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	62	54	275	08
1000	05·7	59	51	276	14
950		53	46	280	15
900	34·6	47	40	266	21
850					
800	66·4	45	20	257	26
750		41	12	253	31
700	102·1	36	12	253	39
650		29	12	257	42
600	142·4	22	05	257	49
550		15	-06	252	54
500	188·6	07	-16	247	56
450		-02	-26	247	55
400	242·9	-15	-36	247	59
350		-25	-43	253	59
300	309·3	-39	-54	252	68
250		-54		250	78
200	396·8	-65		255	79
170		-60		252	73
150		-60		261	53
130		-60		257	36
110		-53		255	28
100	545·1	-55		248	21
90		-57		258	19
80		-57			
70		-56			
60		(78mbs)			

Inversion. 862mbs 44°F 843mb 46°F Isothermal. 843 - 825 mbs 46°F

Tropopause: II 225 mbs -66°F 37,200ft.

DOWNHAM MARKET

Pressures — Time 09h G.M.T. | M.S.L. 1020·9 mb | Surf 1016·5 mb | Freezing 665 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	66	56	220	08
1000	05·8	62	55	230	15
950		57	52	255	20
900	35·0	55	45	251	19
850					
800	67·3	49	42	257	18
750		43	37	263	18
700	103·2	36	29	260	21
650		31	21	243	29
600	143·6	23	12	246	30
550		18	08	251	30
500	190·0	10	-01	258	35
450		02	-12	261	39
400	244·9	-07	-30	257	47
350		-19	-36	258	49
300	312·5	-33	-49	261	49
250		-50		249	43
200	401·0	-59		258	69
170		-63		263	57
150	462·0	-65		256	49
130		-62		263	40
110		-59		266	28
100	548·2	-59		257	26
90		-58		244	22
80					
70					
60					

See Page Three for Winds

Isothermal. 809 - 792 mbs 49°F

LARKHILL

Pressures — Time 09h G.M.T. | M.S.L. 1022·6 mb | Surf 1006·8 mb | Freezing 634 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	62	57		
1000	06·2	61	56		
950		57	47		
900	35·4	57	31		
850					
800	67·8	49	39		
750		43	32		
700	103·8	39	23		
650		35	11		
600	144·5	27	09		
550		20	01		
500	191·2	10	-08		
450		0	-19		
400	246·0	-07	-30		
350		-20	-38		
300	313·0	-36	-53		
250		-51			
200	401·7	-59			
170		-62			
150	462·7	-65			
130		-67			
110		-64			
100	547·9	-64			
90		-62			
80		-59			
70		-56			
60		(73mbs)			

See Page Three for Winds

Inversion. 960-922 56-59°F 861-850 55-56°F

CAMBORNE

Pressures — Time 09h G.M.T. | M.S.L. 1022·7 mb | Surf 1012·2 mb | Freezing 617 mb

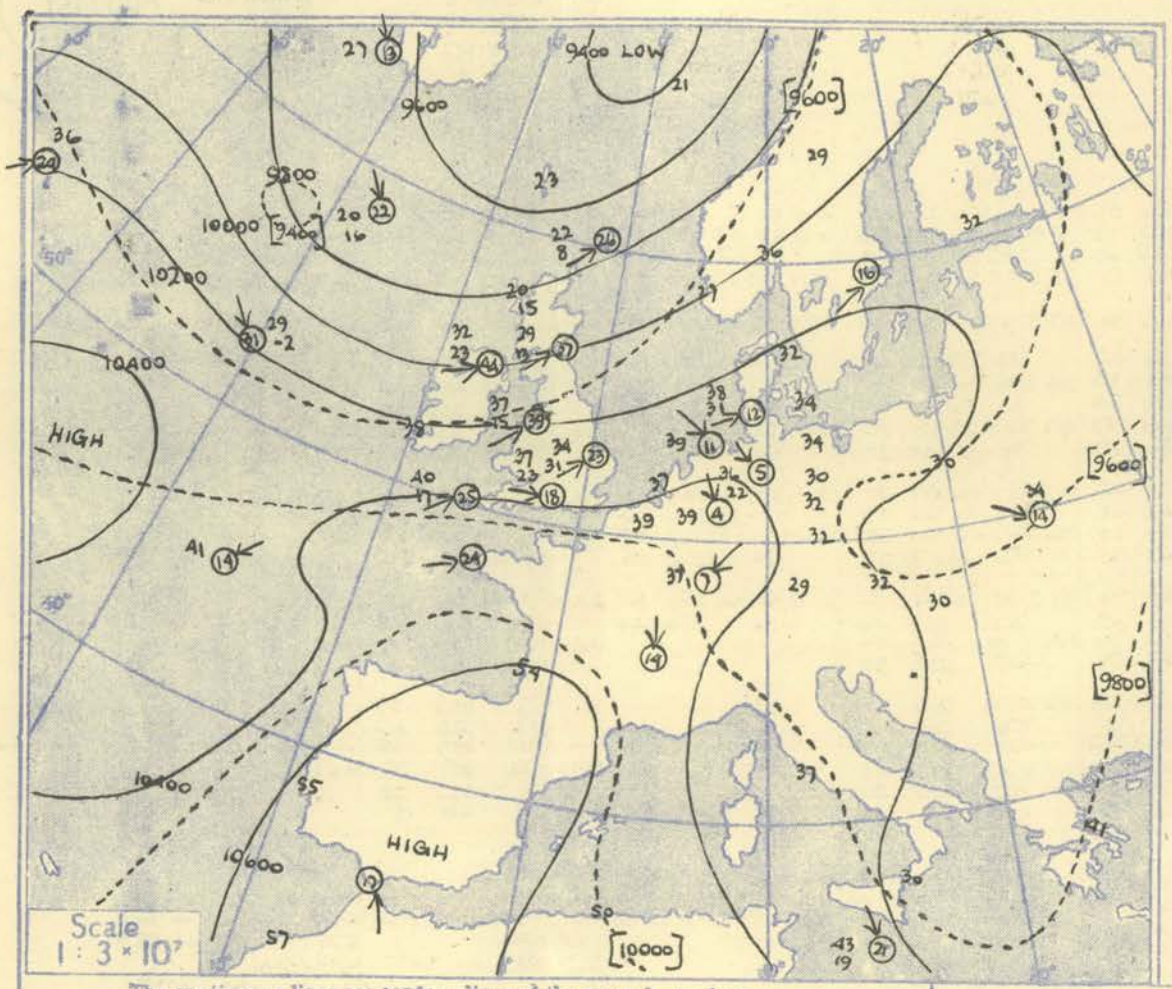
Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	65	58	Calm	
1000	06·4	62	56	L 2 V	
950		59	45	240	06
900	35·7	59	29	243	07
850					
800	68·2	52	34	250	13
750		48	29	288	15
700	104·5	43	18	265	26
650		36	18	254	30
600	145·3	30	10	252	35
550		23	00	255	36
500	192·2	14	-8	255	45
450		08	-16	256	43
400	247·6	-3	-24	257	45
350		-15	-33	255	48
300		-28	-40		
250		(25mbs)			
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Inversion 479-465 mbs 10°-41° Isothermal. 375 - 800mbs 59-59°F

Tropopause: N.R.

Saturday 28th. July 1951.

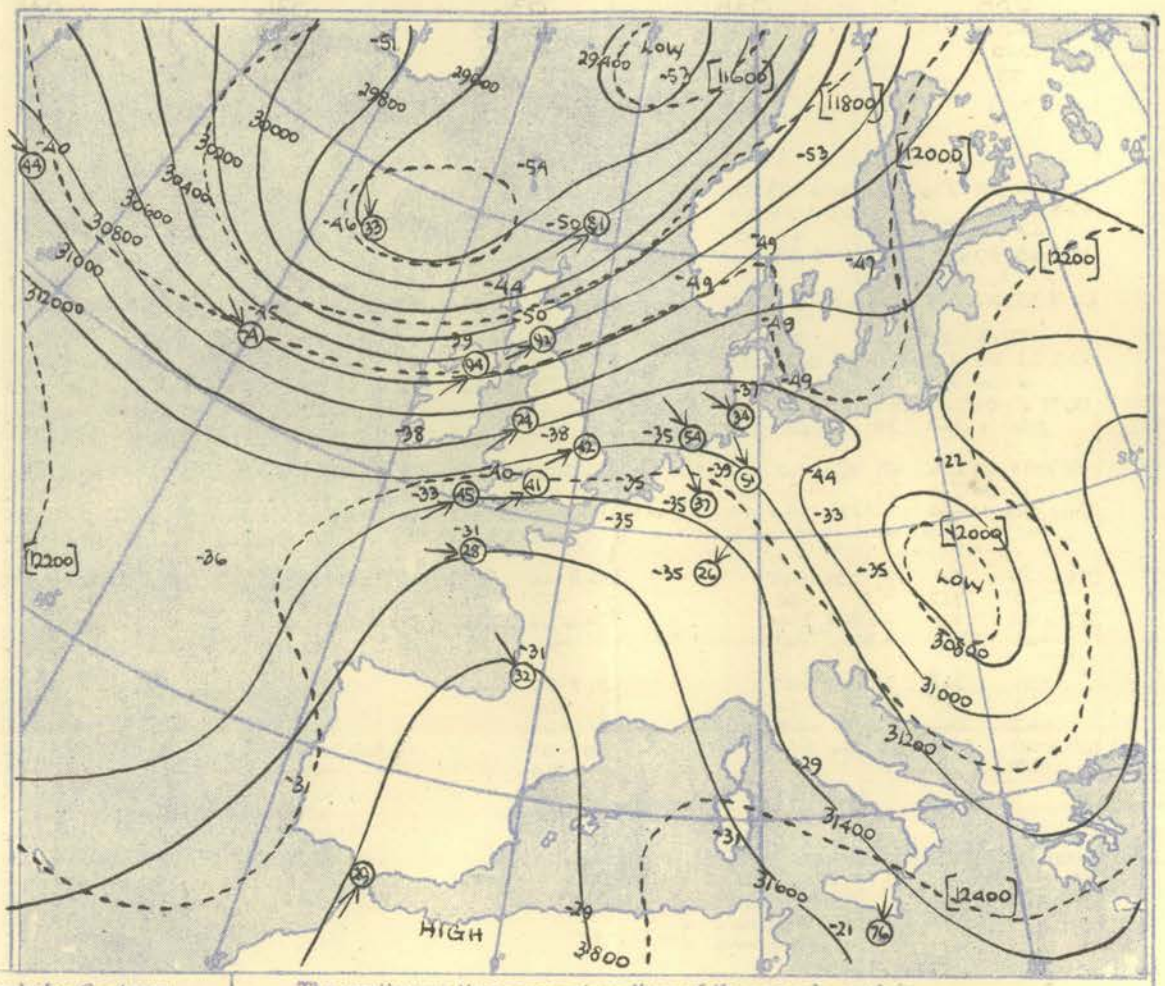
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



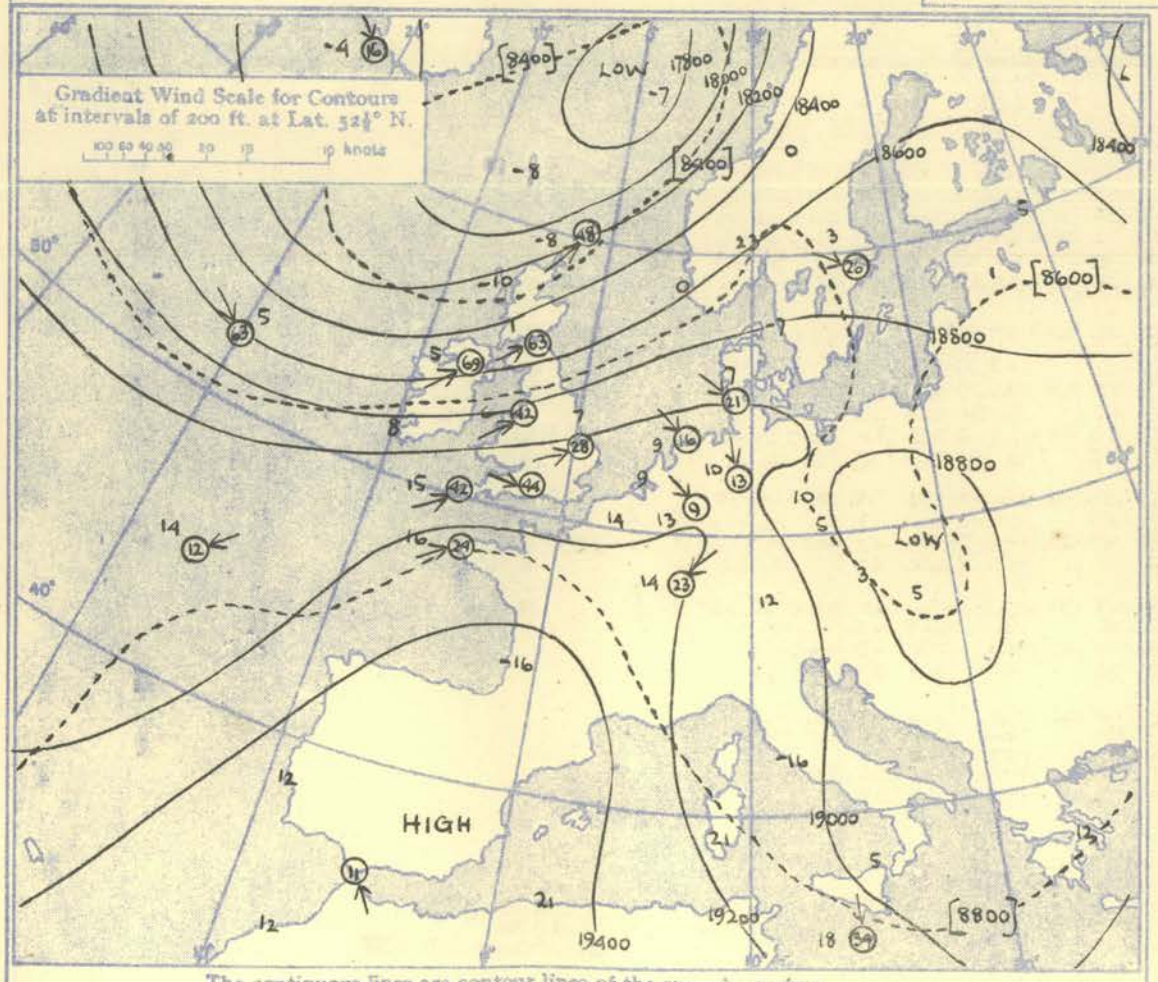
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

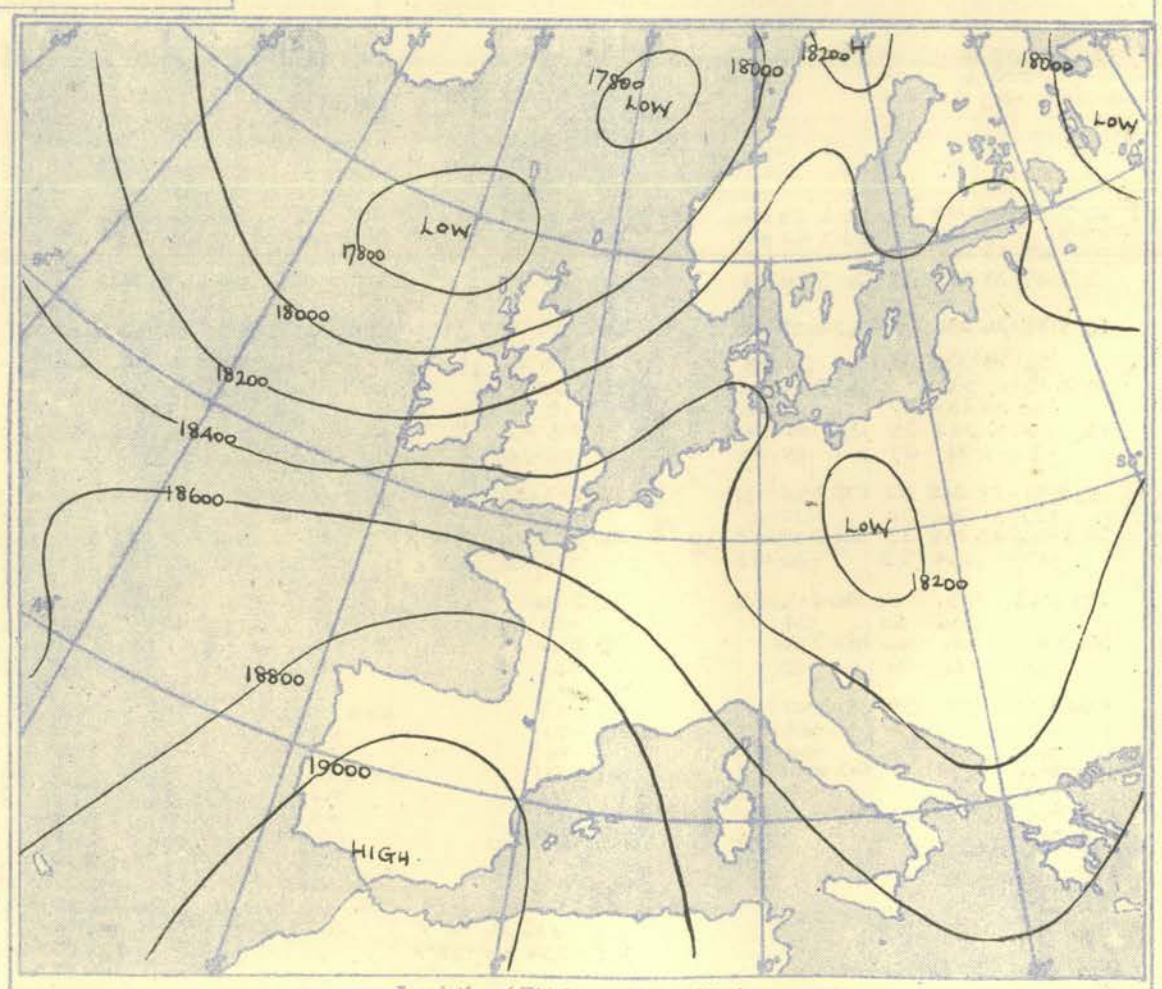
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

	52°12'N 02°12'W		
Time	1410h		
M.S.L.	1023 mb		
Surf	1021.5 mb		
Freezing	670 mb		
Pressure mb	Height ft./100	°F. Temp.	°F. Dew
Surf	0.4		
1000	6.3		
950			
900	35.5	54	30
850	51.1	48	37
800	67.5	45	39
750			
700	103.3	35	.
650			
600	143.6	23	.
550			
500	189.8	6	.
450			
400	244.2	-14	.
350			
300	310.7	-41	.
250			
200			
170			

Cloud.
3/8 Cu 960-890 mb
4/8 Sc 840-825 mb
5/8 AcAs 565-470 mbs

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

Place	Larkhill		Lympne		Leuchars		Valentia		Lympne	
Time	0215h		08h		09		15h		16h	
Type	Pilar				Pilar					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.			230	09	270	16	350	6	210	06
1,000			250	11	241	24	340	9	230	15
2,000			250	16	250	27	330	11	227	10
3,000			250	14	254	28	330	10	331	10
4,000					266	36	330	9	310	07
5,000			250	13	263	33	320	9	260	10
6,000			250	13	256	30	320	11	250	11
8,000			260	16	254	30	290	19	270	11
10,000			250	21	248	38	270	22	270	19
14,000			260	23	246	51	260	30		
18,000					245	61	260	39		
24,000					243	92	260	52		
30,000					245	107	250	54		
40,000	258	60			248 (27,000 ft)	119	260 (33,300 ft)	57		
50,000	259	42								
	267 (58,000 ft)	15								

NEPHOSCOPE OBSERVATIONS

Place										
Time Type										
Dir. Vel.										

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

Ship	Weather Explorer					Weather Explorer				
Lat/Long	58.3N 16.7W					58.7N 17.9W				
Time	03hrs G.M.T.					09hrs G.M.T.				
M.S.L.	1009 mb					1012 mb				
Surf	1009 mb					1012 mb				
Freezing	815 mb					740 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	55	47	285	23	–	54	51	270	18
1000	2.5	54	46	291	34	3.3	55	51	267	12
950		47	40	294	32		50	46	279	15
900	31.1	41	35	298	25	32.0	45	41	284	19
850		36	29	297	25		41	38	282	23
800	62.4	31	24	296	24	63.4	39	32	288	24
750		26	23	295	22		35	22	296	21
700	97.1	20	16	293	22	98.9	27	11	299	20
650		12	00	291	25		20	04	305	21
600	135.9	05	-8	291	25	138.3	14	-1	312	29
550		-3	-15	299	24		05	-10	318	32
500	180.2	-13	-24	307	25	183.5	-6	-16	315	27
450		-25	-36	312	26		-14	-28	309	25
400	231.9	-38	-48	317	29	236.4	-26	-45	303	20
350		-47		333	33		-39	-57	306	15
300	295.5	-46		331	33	300.8	-59		314	10
250		-59		304	29		-57		329	17
200	386.1	-42		268	30	388.6	-47		310	26
170		-46		253	36		-45		292	28
150		-48		251	32		-46		297	25
130		-49		253	27		-46		300	27
110		-51		283	18		-47		278	23
100	531.3	-52		292	17	541.4	-48		264	19
90		-50		282	18		-49		275	21
80		-50		242	20		-48		273	12
70		-50		231	15		-47		263	12
60							-47		261	12
							-46		279	09
							-44		295	09
Tropopause	I 318 mb -50° 28300'					II 275 mb -61° 37900'				

Ship	Weather Explorer					Weather Explorer				
Lat/Long	59.0N 19.0W					59.1N 19.1W				
Time	15hrs G.M.T.					21hrs G.M.T.				
M.S.L.	1015 mb					1019 mb				
Surf	1015 mb					1019 mb				
Freezing	700 mb					720 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	55	45	275	24	–	54	46	280	17
1000	4.2	55	46	288	21	5.2	52	46	303	16
950		48	42	288	25		46	42	303	20
900	32.9	47	29	290	28	33.8	42	37	302	22
850		46	09	292	26		43	30	303	23
800	64.8	43	27	293	19	65.4	40	21	291	18
750		39	21	296	15		36	23	270	17
700	100.3	32	14	303	15	100.7	28	15	265	21
650		24	06	311	15		22	08	258	22
600	140.1	17	02	307	17	140.3	15	00	263	19
550		07	-4	298	22		08	-8	290	26
500	185.6	00	-12	296	25	185.7	-2	-18	290	25
450		-7	-23	301	30		-11	-30	286	25
400	239.4	-17	-31	301	30	239.0	-23	-43	286	27
350		-31	-43	298	30		-38	-56	293	33
300	305.0	-47		298	30	305.7	-51		297	51
250		-59		298	27		-62		316	67
200	393.0	-45		298	30	390.8	-53		316	46
170		-42		299	31		-50		298	37
150		-41		296	30		-50		298	30
130		-42		291	27		-50		293	25
110		-43		295	25		-51		262	30
100	547.3	-42		286	28	542.1	-49		294	16
90		-42		265	18		-47		297	09
80		-42 (84)					-47		297	13
70							-46		297	13
Tropopause	II 257 mb -59° 33800'					I 252 mb -63° 34300'				

Weather Explorer 15hrs: Inversion 916 mb 43°-892 mb 49°; 472 mb -4°-467 mb -3°. Isothermal 1015-994 mb 55°; 341-335 mb -34°.

Weather Explorer 21hrs: Inversion 900 mb 42°-887 mb 44°. Isothermal 903-900 mb 42°; 500-493 mb -2°.

Ship	Weather Watch					Weather Watcher				
Lat/Long	52.5N 19.5W					52.5N 19.8W				
Time	03hrs G.M.T.					09hrs G.M.T.				
M.S.L.	1022. mb					1024 mb				
Surf	1022 mb					1024 mb				
Freezing	730 mb					700 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	59	55	280	20	–	58	51	280	07
1000	6.1	55	51	280	18	6.6	58	48	280	07
950		48	44	289	21		48	41	280	08
900	34.8	44	38	290	27	35.3	43	35	283	10
850		39	31	288	31		38	31	284	16
800	66.3	37	22	287	28	66.8	42	-2	286	19
750		34	09	284	25		35	01	283	18
700	101.4	29	-2	283	31	102.2	32	-24	277	22
650		24	-11	282	33		25	-37	273	26
600	141.2	18	-16	282	37	142.1	15	-42	276	28
550		11	-24	281	52		11	-47	276	35
500	187.0	05	-15	279	63	187.9	06	-44	282	46
450		-4	-18	279	69		-1	-23	284	52
400	241.1	-16	-29	276	68	242.3	-14	-38	291	46
350		-29	-41	275	69		-16	-51	286	49
300	307.0	-45		274	74	308.5	-43		266	49
250		-65		271	76		-58		266	51
200	392.9	-66		266	66	394.9	-73		256	63
170		-61		263	57		-62		279	52
150		-63		246	56		-60		274	46
130		-63		239	48		-60		252	32
110		-62		247	33		-61		265	33
100	539.7	-59		260	28	541.8	-60		270	37
90							-58		275	28
80							-57		280	21
70							-54		284	18
60							-53		285	15
							-52			
Tropopause	I 219 mb -72° 37400'					I 214 mb -72° 38200'				

Weather Watch 03hrs: Inversion 838 mb 38°-821 mb 39°.

Weather Watcher 09hrs: Inversion 828 mb 35°-805 mb 43°.

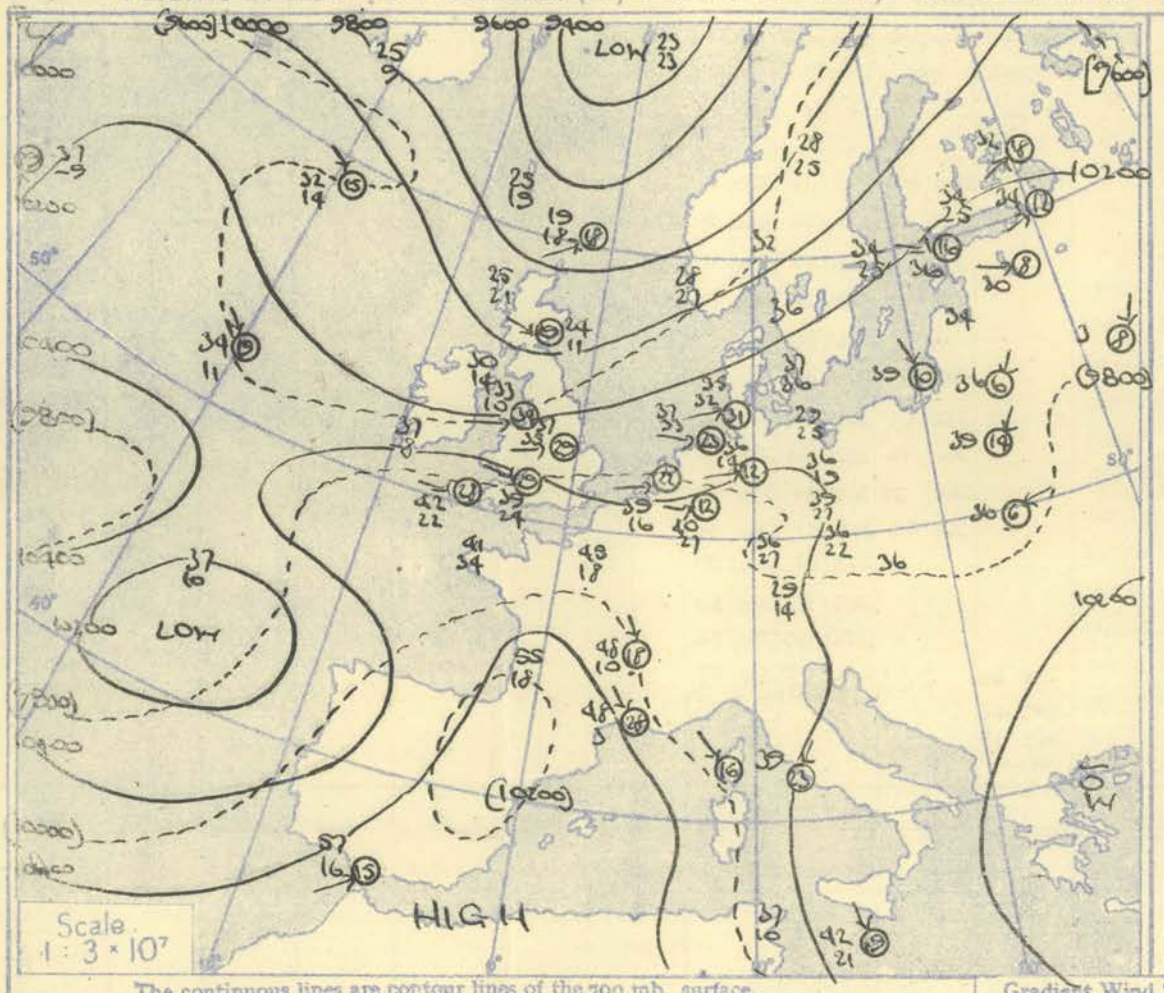
Ship	Weather Watcher					Weather Watcher				
Lat/Long	52.5N 29.8W					52.5W 20.0W				
Time	15hrs G.M.T.					21 hrs G.M.T.				
M.S.L.	1026 mb					1026 mb				
Surf	1026 mb					1026 mb				
Freezing	680 mb					690 mb				
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots
Surf	–	59	53	270	12	–	61	54	calm	
1000	7.1	56	52	270	10	7.2	57	50	296	06
950		50	44	271	10		51	43	296	06
900	35.9	46	40	276	10	36.1	47	40	296	06
850		39	35	283	12		41	34	294	06
800	67.4	43	14	294	13	67.7	41	29	292	06
750		37	10	300	16		38	21	287	07
700	102.8	34	11	306	19	103.2	33	08	288	09
650		29	09	306	20		28	-8	296	13
600	143.0	23	-7	297	23	143.3	23	-18	298	17
550		17	-3	286	29		16	-2	298	22
500	189.3	09	-2	276	38	189.5	06	-5	291	23
450		-2	-11	278	35		-4	-8	286	27
400	243.7	-13	-21	272	32	243.7	-15	-26	279	29
350		-25	-36	274	35		-27	-35	274	35
300	310.1	-44		272	36	309.9	-43		280	29
250		-62		272	43		-61		279	36
200	396.5	-63		290	42					
170		-60		282	40					
150		-59		283	35					
130		-56		284	27					
110		-56		284	13					
100	545.1	-54		282	15					
90		-52								
80	(88)	-53								
Tropopause	I 230 mb -69° 36800'					NR.				

Weather Watcher 15hrs: Inversion 850 mb 39°-800 mb 43°. Isothermal 852-850 mb 39°; 830-800 mb 43°; 586-578 mb 21°.

Weather Watcher 21hrs: Inversion 853 mb 40°-832 mb 43°.

July 28 M 1951.

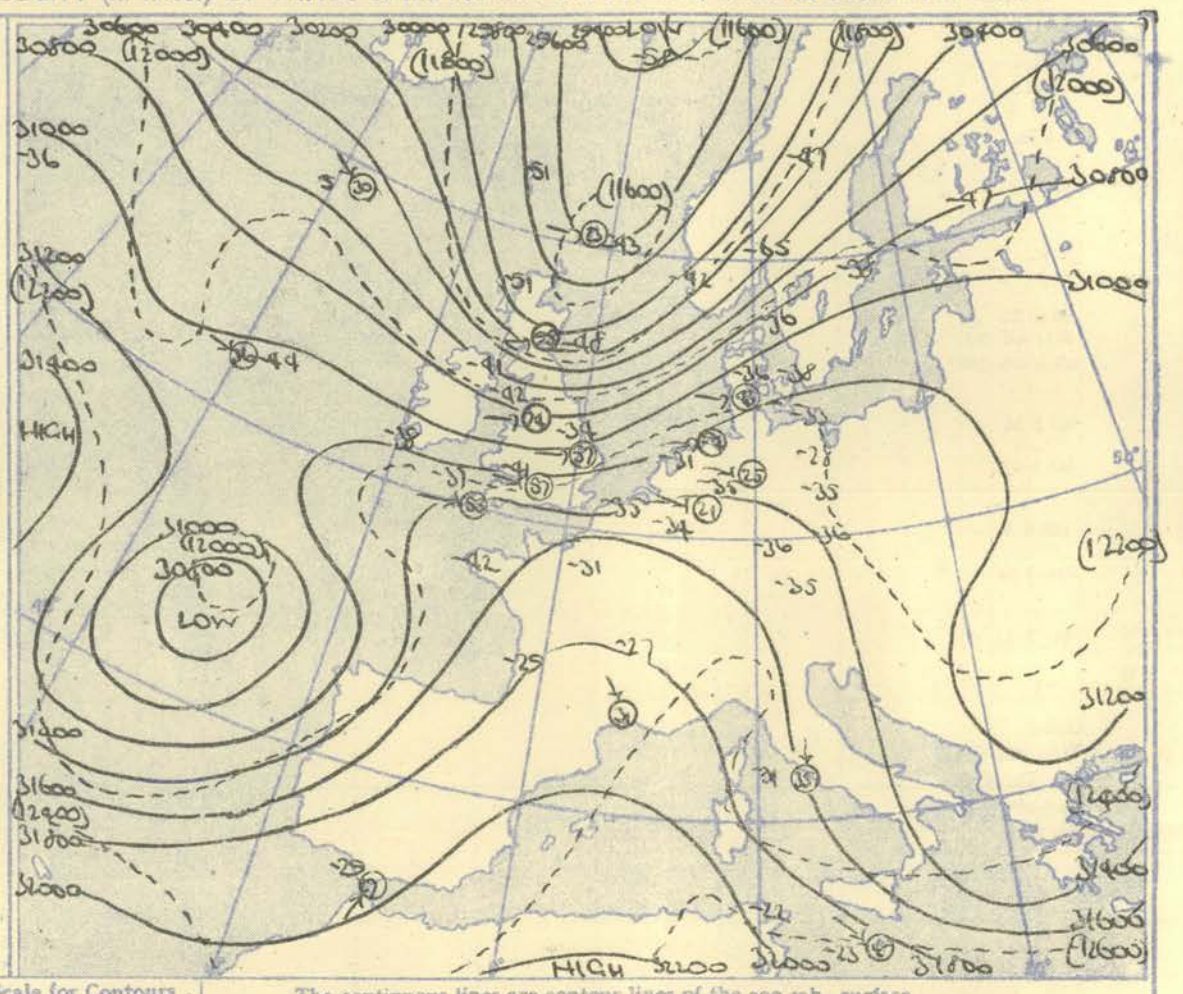
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

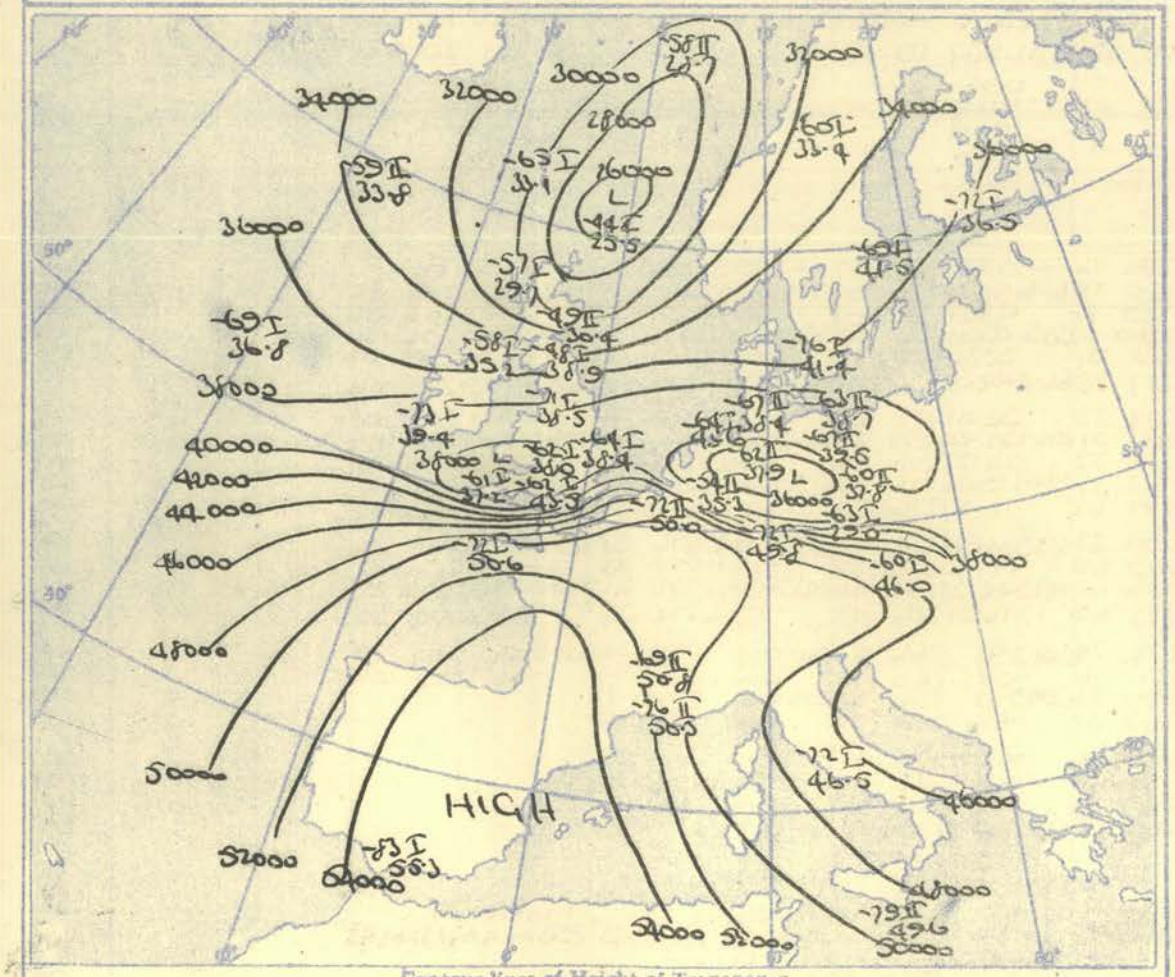
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 60 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The warming over Spain and France continued leading to a strong thermal confluence over the British Isles. Advective and dynamical warming was taking place over the East Atlantic.

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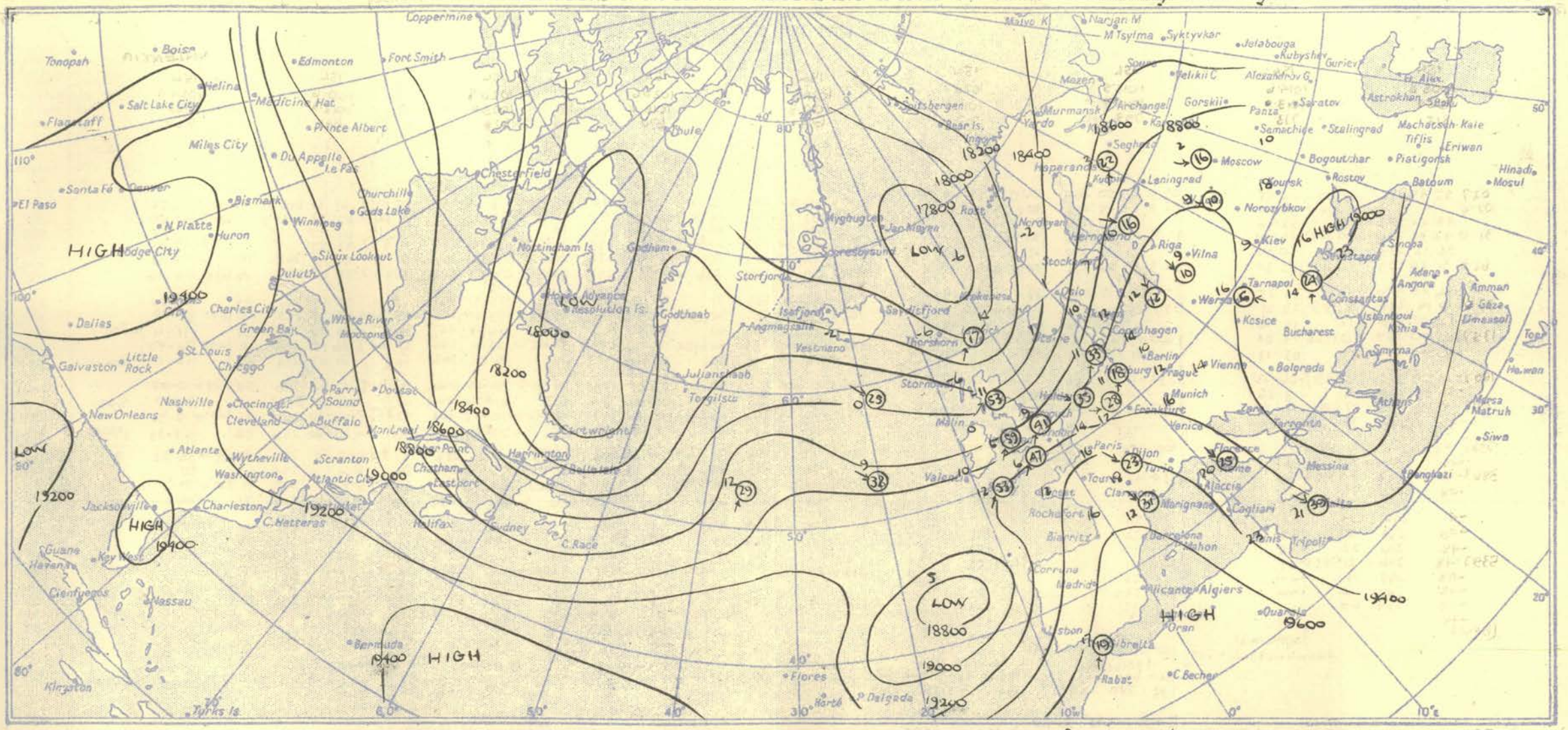
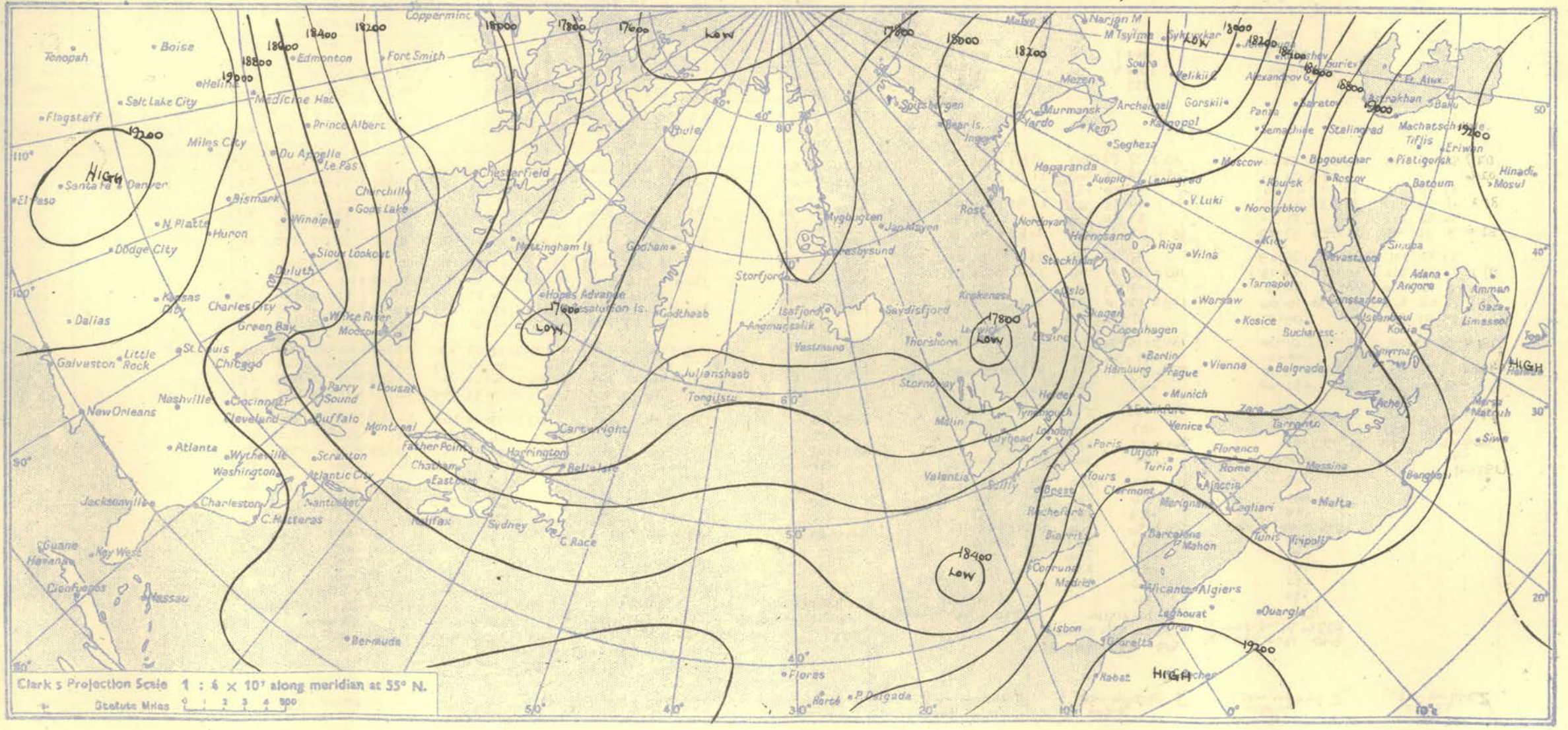
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Saturday 28th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Saturday 28th July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON — Saturday 28th July 1951.

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

15h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	15h	1008·8 mb	998·9 mb	815 mb
STORNOWAY	15h	1014·6 mb	1013·0 mb	773 mb
LEUCHARS	15h	1015·5 mb	1014·7 mb	793 mb
ALDERGROVE	15h	1020·7 mb	1011·2 mb	715 mb
LIVERPOOL	15h	1021·8 mb	1019·8 mb	696 mb
DOWNHAM MARKET	15h	1020·6 mb	1016·2 mb	670 mb
LARKHILL	15h	1020·8 mb	1005·4 mb	628 mb
CAMBORNE	15h	1022·6 mb	1012·3 mb	641 mb
VALENTIA	15h	1024·9 mb	1023 mb	660 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	55	47	255	24	004	60	45			002	69	50	280	20	026	66	49		
1000	024					040	58	46			043	63	45	275	30	057	64	49		
950		48	46	248	29		52	46				54	47	268	30		56	46		
900	310	42	35	246	20	329	46	46			333	47	35	265	30	348	48	41		
850		36	32	238	19		40	34				40	31	270	27		42	32		
800	623	31	28	229	17	649	35	30			648	33	26	278	30	664	34	24		
750		26	23	226	16		30	25				29	17	274	29		36	18		
700	970	19	18	228	18	993	25	21			997	24	11	273	29	1016	30	14		
650		12	07	233	18		18	14				17	00	278	34		23	09		
600	1357	05	00	239	19	1386	13	04			1389	09	-13	271	39	1413	17	00		
550		-03	-12	240	18		05	-12				-01	-20	261	43		08	-06		
500	1801	-14	-29	241	17	1837	-06	-23			1835	-11	-31	263	53	1868	00	-16		
450		-26	-39	244	18		-18	-26				-20	-37	254	71		-10	-27		
400	2317	-38	-51	269	17	2362	-30	-50			2358	-30	-41	259	78	2403	-20	-36		
350		-43		294	20		-40	-46				-41		254	96		-23	-38		
300	2957	-43		271	23	3004	-51				3001	-48		253	95	3067	-41			
250		-41		261	24		-39					-45		252	94		-57			
200	3863	-42		247	30	3909	-39				3894	-48				3966	-52			
170		-44		250	29		-41					-49					-50			
150		-46		252	28		-43					-50					-54			
130		-49		253	27		-45					-54					-52			
110		-48		249	20		-45					-55					-53			
100	5393	-48		246	21	5450	-45				5402	-51				5452	-52			
90		-48		245	19		-44					-52					-51			
80		-48		240	12		-44					-54					-52			
70		-48		234	09							-55					-53			
60		-48									(72 mb)						-51			
	(64 mb)																-46			
						Isothermal 444 mb -433 mb -21°					Inversion 280 mb -49° - 215 mb -43° Isothermal. 714 - 690 mb 24° 295 - 280 - 49°					Inversion 782 mb 31° - 750 mb 36° 384 - 22° - 371 - -20°				
Tropopause	I 360 mb -44° 25·500.					I 305 mb -53° 29·700.					II 295 mb -49° 30·400. I 200 - -52° 38·900.					I 243 mb -58° 35·200.				

Pressure mb	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	68	50	300	12	012	69	57	290	10	044	76	54	280	05	029	67	51	010	08	003	64	54		
1000	061	62	46	291	20	057	66	51	290	10	058	75	53			063	65	53	L.V.		067	60	50		
950		54	39	288	20		58	48	260	13		67	53	285	09		61	49	"			53	45		
900	351	48	34	283	20	349	51	48	255	16	358	58	50	280	11	357	57	49	"		358	47	39		
850		42	25	283	20		47	45	250	20		57	43	268	12		53	46	260	09		42	32		
800	667	39	18	272	23	670	43	42	251	27	683	60	43	266	18	682	53	07	263	18	678	43	16		
750		37	10	263	31		41	40	256	29		43	37	267	22		50	11	261	24		41	04		
700	1022	33	10	262	34	1027	37	35	258	29	1042	39	24	268	29	1044	42	22	259	28	1031	37	-09		
650		25	02	264	40		30	22	260	30		36	19	267	34		33	26	257	35		31	-11		
600	1420	19	-10	264	44	1431	23	12	258	33	1450	27	11	266	37	1451	26	19	258	40	1434	24	-09		
550		14	-18	261	55		17	-02	255	37		19	01	263	41		20	07	259	40		17	-01		
500	1880	06	-05	257	59	1893	09	00	255	41	1915	10	-09	266	47	1917	12	-10	260	53	1848	10	-05		
450		-03	-15	257	68		01	-09	254	43		01	-16	262	47		03	-20	258	54		01	-17		
400	2423	-14	-29	258	66	2443	-09	-22	25)	48	2463	-10	-25	262	52	2467	-08	-30	262	51	2446	-10	-32		
350		-26	-44	259	69		-21	-33	260	53		-23	-38	260	56		-20	-40	256	52		-23	-39		
300	3086	-42		258	74	3113	-34	-47	258	51	3131	-41		258	57	3140	-37	-54	251	55	3114	-38	-52		
250		-58		255	83		-52		257	60		-56		256	56		-54		251	60		-55			
200	3953	-64		258	100	3995	-61		261	71	4007	-62		259	84	4018	-63		247	77	3986	-71			
		-61		252	67		-63		259	66		-68		255	80		-67		241	77		-62			
150		-59		265	58		-60		256	54		-64		266	65		-67		241	61		-60			
130		-62		268	49		-62		258	43		-69		259	52		-68		253	45					
110		-62		261	43		-59		255	34		-65		252	41		-65		248	36					
100	5429	-58				5471	-58		257	31	5461	-64		250	33	5472	-66		243	30					
90		-57					-56		257	27		-63		258	28		-65		247	27					
80	(99 mb)						-53		260	18		-62		258	23		-65		250	27					
70							-51		259	13		-61		260	17		-65								
60							-48		257	08		-57				(92 mb)									
							-45		Calm.																
	Inversion 806 mb 38° - 784 mb 40°					Isothermal. 507 - 492 mb 09°					Inversion 875 mb 54° - 850 mb 51° 220 - -62° 206 - -61°					Inversion 900 mb 57° 870 mb 58°					Inversion 850 mb 42° - 819 mb 45°				
Tropopause	I 210 mb -71° 38·500.					I 215 mb -64° 38·400.					I 220 mb -62° 38·000. I 170 - -68° 43·500.					II 230 mb -61° 31·200.					I 204 mb -73° 39·400.				

21h G.M.T.

Station	Time	M.S.L.	Surf	Freezing
LERWICK	21h	1009·7 mb	999·8 mb	808 mb
STORNOWAY	21h	1017·8 mb	1016·2 mb	743 mb
LEUCHARS	21h	1019·1 mb	1018·3 mb	755 mb
ALDERGROVE	21h	1022·6 mb	1013·0 mb	735 mb
LIVERPOOL	21h	1022·4 mb	1020·4 mb	692 mb
DOWNHAM MARKET	21h	1020·9 mb	1016·5 mb	673 mb
LARKHILL	21h	1021·0 mb	1005·3 mb	648 mb
CAMBORNE	21h	1022·4 mb	1011·9 mb	650 mb
VALENTIA				

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	51	51	290	16	004	56	50			002	57	48	300	07	026	58	51		
1000	026					048	54	49			053	58	48	260	21	062	57	49		
950		47	46	277	30		49	45				51	40	285	22		52	45		
900	812	41	39	289	30	335	44	38			341	44	35	306	24	357	44	41		
850		36	36	293	33		37	34				37	30	309	21		37	36		
800	624	31	30	290	33	649	37	28			654	33	21	302	21	665	40	14		
750		27	27	291	29		33	23				31	15	292	24		34	09		
700	912	23	22	302	30	1001	28	18			1004	26	11	291	24	1017	28	05		
650		18	16	306	33		20	13				19	02	286	26		22	00		
600	1365	12	08	308	34	1396	16	06			1398	12	-10	288	27	1413	15	-09		
550		05	01	309	36		09	-02				05	-13	295	30		08	-21		
500	1816	-05	-09	310	35	1852	01	-10			1849	-05	-21	292	33	1867	-03	-34		
450		-15	-19	311	36		-09	-21				-17	-30	295	33		-12	-42		
400	2344	-25	-30	315	37	2388	-19	-30			2356	-29	-41	293	33	2400	-21	-50		
350		-38	-44	321	36		-32	-40				-42		286	36		-30	-57		
300	2989	-52		328	36	3042	-47				3017	-52		271	58	3056	-45			
250		-60		307	33		-63					-57		268	72		-60			
200	3868	-46		293	27	3912	-52				3892	-53		270	54	3928	-58			
170		-46					-48					-54		261	45		-67			
	(185 mb)																			
150							-48					-54		265	39		-57			
130							-49					-56		265	35		-53			
110							-49					-58		255	30		-57			
100						5430	-49				5388	-56		266	24	5423	-57			
90							-50					-56		282	23		-56			
80							-51					-56		266	20		-57			
70							-51					-56		247	11					
60							-50					-56		269	10					
							-50					-56								
						Inversion 835 mb 35° - 813 mb 38° 640 - 18° - 630 - 20°					Inversion 1018 mb 57° 997 mb 58° 815 - 32° - 785 - 35°					Inversion 830 mb 34° - 797 mb 41°				
Tropopause	I 253 mb -62° 33·300.					I 244 mb -65° 34·900.					I 282 mb -55° 31·50[illegible].					I 240 mb -63° 35·300.				

Pressure mb	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	60	51			012	64	57	Calm		044	66	58	Calm		029	59	57	020	10
1000	062	59	47			058	65	56	325	17	059	66	58			062	58	54	015	03
950		60	41				60	47	337	14		62	57	328	07		62	52	015	03
900	351	47	36			351	52	46	316	10	354	57	51	286	07	355	59	35	015	03
850		41	32				49	42	284	10		53	51	271	09		54	27	265	05
800	667	41	22			671	46	23	263	18	678	50	46	273	13	679	50	27	239	10
750		39	13				41	12	267	27		47	34	274	24		48	24	248	12
700	1022	33	09			1028	37	14	269	30	1039	40	30	278	36	1041	41	32	245	20
650		26	02				28	12	269	33		33	27	278	41		32	27	250	26
600	1420	20	13	268	38	1430	21	11	275	41	1445	27	11	275	41	1447	38	09	263	38
550		12	04	269	40		19	01	269	43		19	01	269	43		20	04	264	43
500	1879	03	-23			1889	06	-02	268	45	1912	12	-08	271	49	1913	10	-06	263	11
450		-03	-30				-05	-10	267	56		02	-16	269	53		-02	-16	263	13
400	2422	-12	-33			2430	-16	-27	265	59	2462	-06	-23	261	53	2459	-11	-22	263	45
350		-27	-45				-31	-37	264	69		-19	-33	268	66		-21	-36	253	33
300	3086	-42				3087	-46		263	72	3137	-33	-44	263	64	3129	-38	-55	228	09
250		-58					-63		263	80		-52		262	75		-58		214	11
200	3954	-65				3945	-68		263	85	4018	-59		257	81	3996	-76		208	10
170		-59					-67		258	62		-59		259	70		-66		210	09
150		-61					-68		257	49		-61		269	54		-68		217	06
130		-60					-70		261	52		-60		250	57		-68		250	06
110		-60					-66		266	33		-59		254	41		-73		260	04
100	5430	-62				5394	-66		270	24						5436	-69		240	03
90																	-68		256	03
80																	-68			
70																(86 mb)				
60																				
	Inversion 1020 mb 60° 1041 mb 61° 822 - 38° 791 - 42°					Inversion 1017 mb 64° 1000 mb 65° 818 - 45° 787 - 46°					Inversion 1000 mb 66° - 990 mb 67° Isothermal. 1005 - 1000 mb 66° 814 - 800 - 50° 772 - 740 - 47°					Inversion 990 mb 57° - 957 mb 63° Isothermal. 614 - 615 mb 30°				
Tropopause	I 217 mb -69° 37·900.					I 227 mb -71° 36·800.					I 218 mb -66° 38·300.					I 190 mb -80° 41·000.				

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No. 11809. **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Sunday 29th July 1951. Page 1.

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

LERWICK

Pressure: Time 03h G.M.T. | M.S.L. 1013·6 mb | Surf 1003·6 mb | Freezing 812 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	51	49	300	12
1000	03·6	50	47		
950		47	43	286	27
900	32·2	41	39	290	25
850					
800	63·5	31	29	283	27
750		29	26	283	25
700	98·2	26	22	281	23
650		18	13	288	24
600	137·5	10	06	287	23
550		03	01	282	23
500	182·4	-6	-9	282	26
450		-15	-22	284	29
400	235·3	-26	-36	295	35
350		-38	-47	292	38
300	299·9	-53		286	45
250		-62		283	40
200	387·1	-48		286	27
170		-47		264	26
150		-49		269	29
130		-49		271	23
110		-49		271	21
100	539·1	-49		269	16
90		-49		259	12
80		-49		255	11
70		-51		264	15
60		-50		252	07
		-49			

(55 mbs)

Inversion. 862 mbs 36°F - 837 mbs 40°F.

Tropopause: I 250 mbs -66°F 34,000ft.

STORNOWAY

Pressure: Time 03h G.M.T. | M.S.L. 1018·0 mb | Surf 1017·4 mb | Freezing 750 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	52	50		
1000	05·2	52	49		
950		47	42		
900	33·7	41	37		
850					
800	65·1	37	06		
750		32	18		
700	100·2	25	18		
650		18	12		
600	139·5	12	04		
550		04	-05		
500	184·5	-05	-14		
450		-15	-27		
400	237·4	-25	-39		
350		-37	-48		

No winds Reported

Inversion. 862 mbs 36°F - 837 mbs 40°F.

Tropopause: N.R.

LEUCHARS

Pressure: Time 03h G.M.T. | M.S.L. 1020·3 mb | Surf 1021·1 mb | Freezing 775 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	49	45	270	08
1000	05·7	51	45	274	15
950		48	39	287	16
900	34·3	42	33	304	18
850					
800	65·7	36	17	277	15
750		28	15	269	16
700	100·6	23	15	272	23
650		21	08	277	27
600	140·0	15	-04	279	29
550		05	-15	275	30
500	185·1	-05	-27	275	33
450		-18	-36	277	28
400	237·7	-31	-46	287	27
350		-45		297	22
300	301·3	-58		276	25
250		-57		273	49
200	388·3	-54		272	49
170		-54		276	43
150	450·5	-55		270	39
130		-53		283	27
110		-57			

No Winds Recorded

Inversion. 1020-989 mbs 48° 52°F Isothermal. 850-805 mbs 37°F 703-668 mbs 23°F

Tropopause: II 290 mbs -61°F 30,800ft.

ALDERGROVE

Pressure: Time 03h G.M.T. | M.S.L. 1024·6 mb | Surf 1014·6 mb | Freezing 821 & 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	47	45		
1000	06·6	51	50		
950		47	45		
900	35·2	42	40		
850					
800	66·4	29	15		
750		38	11		
700	101·8	32	06		
650		26	03		
600	141·7	17	-05		
550		09	-14		
500	187·3	00	-22		
450		-11	-34		
400	240·6	-24	-45		
350		-32	-53		
300	306·0	-44			
250		-63			
200	392·8	-57			
170		-57			
150		-59			
130		-57			
110		-58			
100	541·6	-59			
90		-58			
80		-56			

No Winds Recorded

Inversion. 1015 - 997 mb 47-52°F 800 - 779 mb 29-40°F

Tropopause: I 245 mb -64°F 35,000ft.

LIVERPOOL

Pressure: Time 03h G.M.T. | M.S.L. 1023·5 mb | Surf 1021·5 mb | Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	47	44		
1000	06·4	58	51		
950		53	43		
900	35·3	47	38		
850					
800	66·9	34	10		
750		38	09		
700	102·2	32	07		
650		25	-1		
600	142·1	18	-8		
550		10	-15		
500	187·8	03	-24		
450		-3	-30		
400	242·0	-11	-39		
350		-12	-46		

(393 mbs)

No Winds

Inversion. 1021 mbs 47° 1010 mbs 52° 990 mbs 38° 770 mbs 41°

Tropopause: N.R.

DOWNHAM MARKET

Pressure: Time 03h G.M.T. | M.S.L. 1022·6 mb | Surf 1018·1 mb | Freezing 682 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	54	50	315	05
1000	06·1	56	49	340	12
950		54	44	339	10
900	35·0	49	35	287	09
850					
800	66·8	43	26	263	19
750		38	23	260	24
700	102·4	34	03	263	30
650		27	02	264	34
600	142·4	20	-06	263	35
550		12	-04	263	42
500	188·3	05	-04	265	49
450		-01	-17	268	50
400	242·3	-16	-27	269	54
350		-29	-40	270	68
300	308·3	-43		272	95
250		-61		261	102
200	394·1	-73		267	81
170		-66		262	57
150	454·5	-68		257	58
130		-69		258	52
110		-66		258	27
100	539·2	-67		25	27
90		-68			

Inversion. 1018 - 990 mbs 54 - 58°F. 838 - 812 mbs 41° - 45°F.

Max Wind 268° 120 kts (27 mbs) 32,500ft.

Tropopause: I 204 mbs -82°F 39,000ft.

LARKHILL

Pressure: Time 03h G.M.T. | M.S.L. 1022·6 mb | Surf 1006·6 mb | Freezing 659 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	55	53	050	05
1000	06·1	56	51		
950		57	50	049	11
900	35·2	53	50	348	02
850					
800	67·4	48	37	247	16
750		44	21	251	20
700	103·4	38	28	255	27
650		31	25	258	28
600	143·8	22	15	259	31
550		17	-05	268	39
500	190·0	09	-13	260	48
450		-01	-26	258	46
400	245·5	-14	-32	263	46
350		-25	-44	264	51
300	311·0	-40	-55	298	71
250		-59		252	81
200	397·4	-75		259	70
170		-62		252	54
150	457·7	-66		243	57
130		-67		265	40
110		-66		251	30
100	542·6	-65		247	25
90		-65		272	20
80		-64		284	16
70		-61			

Inversion. 1007-980 mbs 55-59°F 842 - 819 mbs 49-50°F

Tropopause: I 192 mbs -78°F 40,600ft.

CAMBORNE

Pressure: Time 03h G.M.T. | M.S.L. 1021·9 mb | Surf 1011·2 mb | Freezing 640 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	55	53	060	05
1000	05·9	58	54	L&V	
950		60	54	L&V	
900	35·2	57	43	L&V	
850					
800	67·6	51	26	216	13
750		47	22	234	12
700	103·7	40	12	234	16
650		33	25	245	18
600	144·3	27	20	255	17
550		21	13	258	21
500	191·9	12	03	243	25
450		02	-08	245	23
400	246·0	-08	-21	247	30
350		-20	-31	245	35
300	313·2	-37	-44	229	50
250		-57		225	68
200	400·0	-73		233	72
170		-68		250	45
150		-65		242	42
130		-69		245	38
110		-66		262	21
100	544·6	-66		252	28
90		-66		245	21
80		-66		256	15
70		-64		242	12
60		-63			

(67 mbs)

Inversion. 1011 mb 55°-983 mb 62° 911 mb 56°-882 mb 58°

Tropopause: I 208 mbs -75°F 39,100ft.

[STATION]

Pressure: Time 03h G.M.T. | M.S.L. 1024·5 mb | Surf 1023 mb | Freezing 680 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	53	48	050	5
1000	6·6	55	47	053	9
950		50	40	052	10
900	30·4	45	30	052	3
850					
800	67·1	42	15	054	5
750		38	7		
700	102·4	34	-1		
650		29	-13		
600	142·8	23	-23		
550		18	-27		
500	189·2	10	-22		
450			-30		
400	244·0	-9	-38		
350		-21	-48		
300	311·3	-33	-58		
250		-50			
200	399·5	-71			
170		-75			
150		-67			
130		-65			
110		-63			
100	544·5	-60			

Inversion. 1023 - 998 mb 53-55° 990 - 875 mb 45-49°

Tropopause: I 186 mbs -68°F 41,400ft.

LERWICK

Pressure: Time 09h G.M.T. | M.S.L. 1015·2 mb | Surf 1003·2 mb | Freezing 750 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	52	48	290	13
1000	04·1	52	48		
950		45	38	276	20
900	32·6	39	34	277	14
850					
800	63·8	33	26	279	28
750		32	13	279	30
700	98·9	26	05	277	33
650		18	01	277	33
600	138·2	13	-07	281	33
550		05	-14	287	32
500	183·4	-03	-22	284	34
450		-12	-32	280	33
400	236·6	-26	-45	272	33
350		-39	-55	273	33
300	301·0	-54	.	267	38
250		-66	.	273	37
200	388·4	-45	.		
170		-42	.		
150		-42	.		
130		-45	.		
110		-45	.		
100	542·1	-45	.		
90		-43	.		
80		-44	.		
70					
60					

Inversion. 867 mbs 35°-850 mb 37° 625 mbs 14°-615 mb 15°

Tropopause: I 250 mbs -66°F 34,000ft.

STORNOWAY

Pressure: Time 09h G.M.T. | M.S.L. 1020·9 mb | Surf 1019·3 mb | Freezing 738 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	55	46		
1000	05·7	52	44		
950		46	42		
900	34·2	40	37		
850					
800	65·7	39	22		
750		34	15		
700	100·8	27	08		
650		19	03		
600	140·2	10	-05		
550		03	-14		
500	185·2	-04	-22		
450		-14	-31		
400	238·2	-28	-46		
350		-40	-57		
300	302·6	-51	.		
250		-61	.		
200	389·6	-53	.		
170		-51	.		
150	452·2	-50	.		
130		-55	.		
110		-53	.		
100	540·1	-52	.		
90		-52	.		
80		-51	.		
70		-50	.		
60	651·4	-50	.		

No Winds Recorded

Inversion. 875 mbs 36°F - 857 mbs 44°F.

Tropopause: N.R.

LEUCHARS

Pressure: Time 09h G.M.T. | M.S.L. 1020·8 mb | Surf 1021·6 mb | Freezing 768 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	61	54	290	08
1000	05·9	54	49	238	15
950		45	43	276	16
900	34·6	43	38	298	20
850					
800	65·9	35	30	305	18
750		30	16	290	18
700	100·6	24	10	289	21
650		17	05	280	29
600	140·0	11	-4	272	38
550		06	-9	269	39
500	185·3	-2	-23	269	34
450		-14	-31	269	31
400	238·3	-27	-43	267	29
350		-41		273	27
300	302·4	-57		272	25
250		-60		279	44
200	389·4	-52		279	41
170		-54		279	35
150	451·7	-57		279	32
130		-56		276	28
110		-55		276	24
100	589·1	-55		272	21
90		-56		284	15
80		-53		293	13
70		-54		307	08
60		-55			

Inversion. 833 - 793 mbs 33-36°F. 857 mbs 40° - 820 mbs 43°

Tropopause: I 272 mbs -66°F 32,300ft.

ALDERGROVE

Pressure: Time 09h G.M.T. | M.S.L. 1025·0 mb | Surf 1015·4 mb | Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	57	51	300	05
1000	06·8	55	48	292	09
950		50	45	307	08
900	35·5	45	40	310	08
850					
800	67·1	42	25	283	08
750		37	19	282	12
700	102·5	32	13	280	16
650		25	06	283	20
600	142·4	18	-1	285	22
550		12	-9	286	23
500	188·2	03	-21	289	24
450		-5	-29	289	47
400	242·2	-13	-36	285	69
350		-25	-46	292	67
300	308·7	-40	-60	286	73
250		-57		276	66
200	395·8	-61		286	65
170		-56		270	35
150	457·6	-57		277	33
130		-56		278	32
110		-56		262	22
100	544·3	-56		267	27
90		-55		270	21
80		-55		winds by	
70				theodolite	
60					

Inversion. 857 mbs 40° - 820 mbs 43°

Tropopause: I 227 mbs -66°F 37,000ft.

LIVERPOOL

Pressure: Time 09h G.M.T. | M.S.L. 1024·3 mb | Surf 1022·3 mb | Freezing 700 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	62	50	Calm	
1000	06·8	56	46	352	03
950		49	40	347	05
900	35·5	43	38	315	09
850					
800	67·0	43	09	285	12
750		38	09	282	12
700	102·4	32	03	278	18
650		25	-05	278	24
600	142·2	16	-15	281	25
550		09	-23	278	33
500	187·8	03	-31	276	45
450		-05	-39	280	61
400	241·7	-18	-50	275	63
350		-31	-58	269	61
300	307·3	-46	.	260	79
250		-64	.	254	86
200	393·2	-65	.	276	58
170		-61	.	269	38
150		-59	.	261	34
130		-62	.	263	27
110		-59	.	280	18
100	541·0	-57	.	284	13

See Page Three for Winds

Inversion. 858-830 mbs 36-44°F 228-217 mbs -71--70°F

Tropopause: I 228 mbs -71°F 36,500ft. I 212 mbs -72°F 38,200ft.

DOWNHAM MARKET

Pressure: Time 09h G.M.T. | M.S.L. 1023·1 mb | Surf 1018·7 mb | Freezing 660 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	63	49		
1000	06·4	60	47		
950		57	49	082	08
900	35·3	47	39		
850					
800	67·1	45	19		
750		41	13		
700	102·7	38	07		
650		30	-03		
600	143·0	22	-13		
550		15	-14		
500	189·1	09	-18		
450		-02	-18		
400	243·5	-14	-27		
350		-26	-37		
300	309·9	-40	-51		
250		-57			
200	396·6	-75			
170		-59			
150	457·4	-59	.		
130		-62	.		
110		-61	.		
100	543·6	-61	.		
90		-61	.		
80		-61	.		
70		-61	.		
60					

Inversion. 840 - 790 mbs 42° - 45°F.

Tropopause: I 204 mbs -82°F 39,000ft.

LARKHILL

Pressure: Time 09h G.M.T. | M.S.L. 1022·7 mb | Surf 1006·8 mb | Freezing 662 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	60	51	060	06
1000	06·3	59	50		
950		57	49	082	08
900	35·4	53	50	104	04
850					
800	67·5	46	38	221	07
750		42	24		
700	103·3	37	18	257	09
650		30	17	268	12
600	143·7	27	11	278	22
550		19	10	262	25
500	190·3	12	04	233	33
450		03	-05	238	40
400	245·3	-06	-15	244	39
350		-18	-28	242	40
300	312·8	-35	-46	243	46
250		-56		239	46
200	399·9	-72		250	52
170		-60		252	45
150	460·4	-62		250	44
130		-61		256	39
110		-59		261	27
100	546·7	-58		269	21
90		-56		269	18
80		-59		276	10
70		-62		256	10
60	655·7	-62		227	16
		-62			

Inversion. 968-950 mb 55-57°F. 875-836 mb 50-52°F. 620-600 mb 26-27°F

Tropopause: I 198 mbs -78°F 40,600ft. I 185 mbs -74°F 41,400ft.

CAMBORNE

Pressure: Time 09h G.M.T. | M.S.L. 1020·1 mb | Surf 1009·6 mb | Freezing 660 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	62	53	100	12
1000	05·6	61	55	101	22
950		61	57	096	13
900	35·0	57	46	077	15
850					
800	67·3	50	45	106	5
750		44	28	124	7
700	103·2	38	19	L&V	
650		31	27	L&V	
600	143·7	26	22	L&V	
550		17	15	210	11
500	190·2	05	08	224	12
450		01	-1	241	12
400	245·1	-8	-11	228	23
350		-21	-23	229	27
300	312·2	-37	-41	228	33
250		-57		222	39
200	399·2	-69		238	29
170		-69		240	36
150		-61		246	32
130		-61		242	28
110		-63		240	29
100	545·4	-63		286	23
90		-62		279	13
80		-63		256	09
70		-62			
60					

Inversion. 1000-945 mbs 61°F 824 - 799 mbs 59°F 642 - 624 mbs 30°F 484 - 472 mbs 06°F 213 - 192 mbs -69°F

Tropopause: I 178 mbs -73°F 42,600ft.

[STATION]

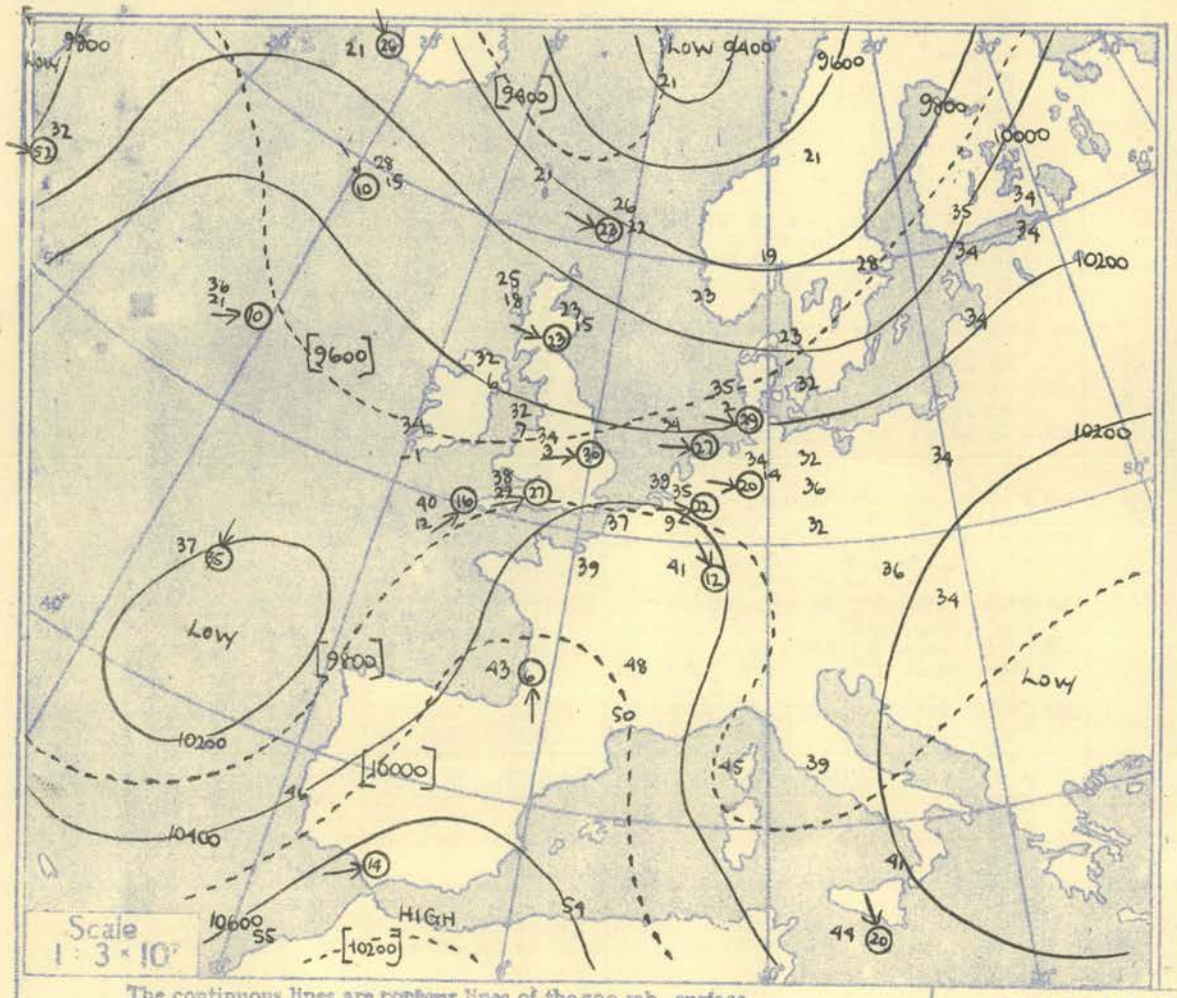
Pressure: Time G.M.T. | M.S.L. mb | Surf mb | Freezing mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf					
1000					
950					
900					
850					
800					
750					
700					
650					
600					
550					
500					
450					
400					
350					
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Tropopause:

Sunday 29th. July 1951.

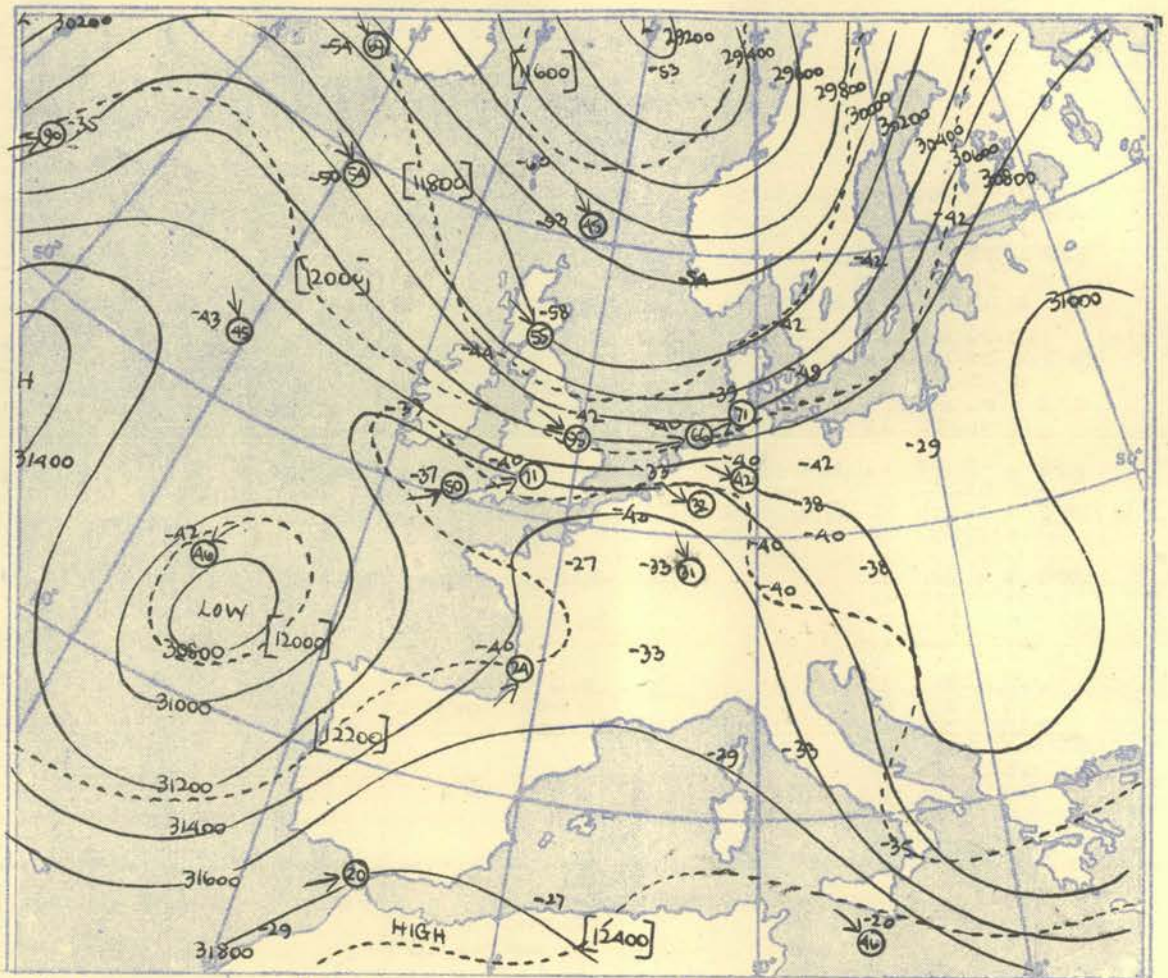
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



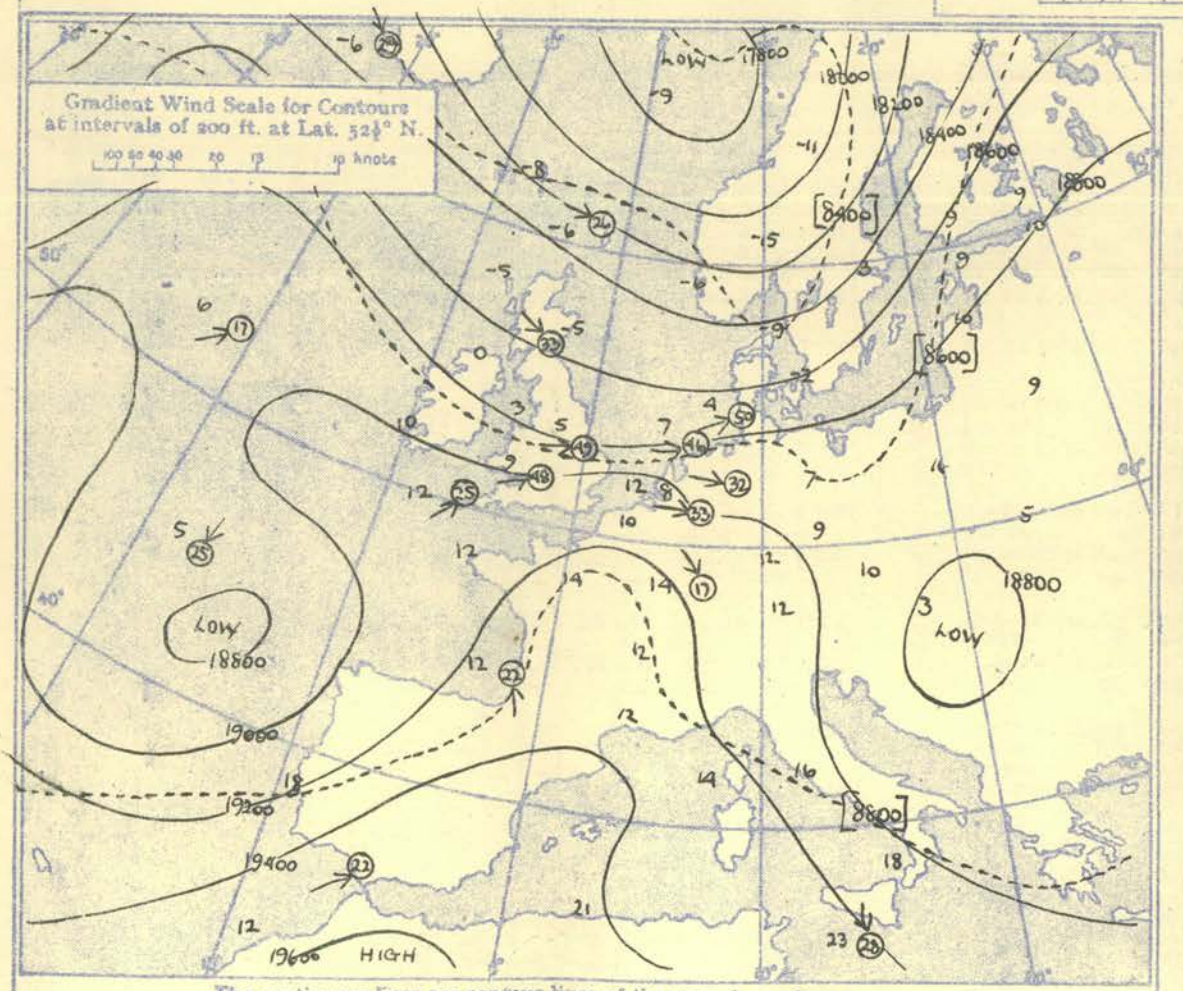
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

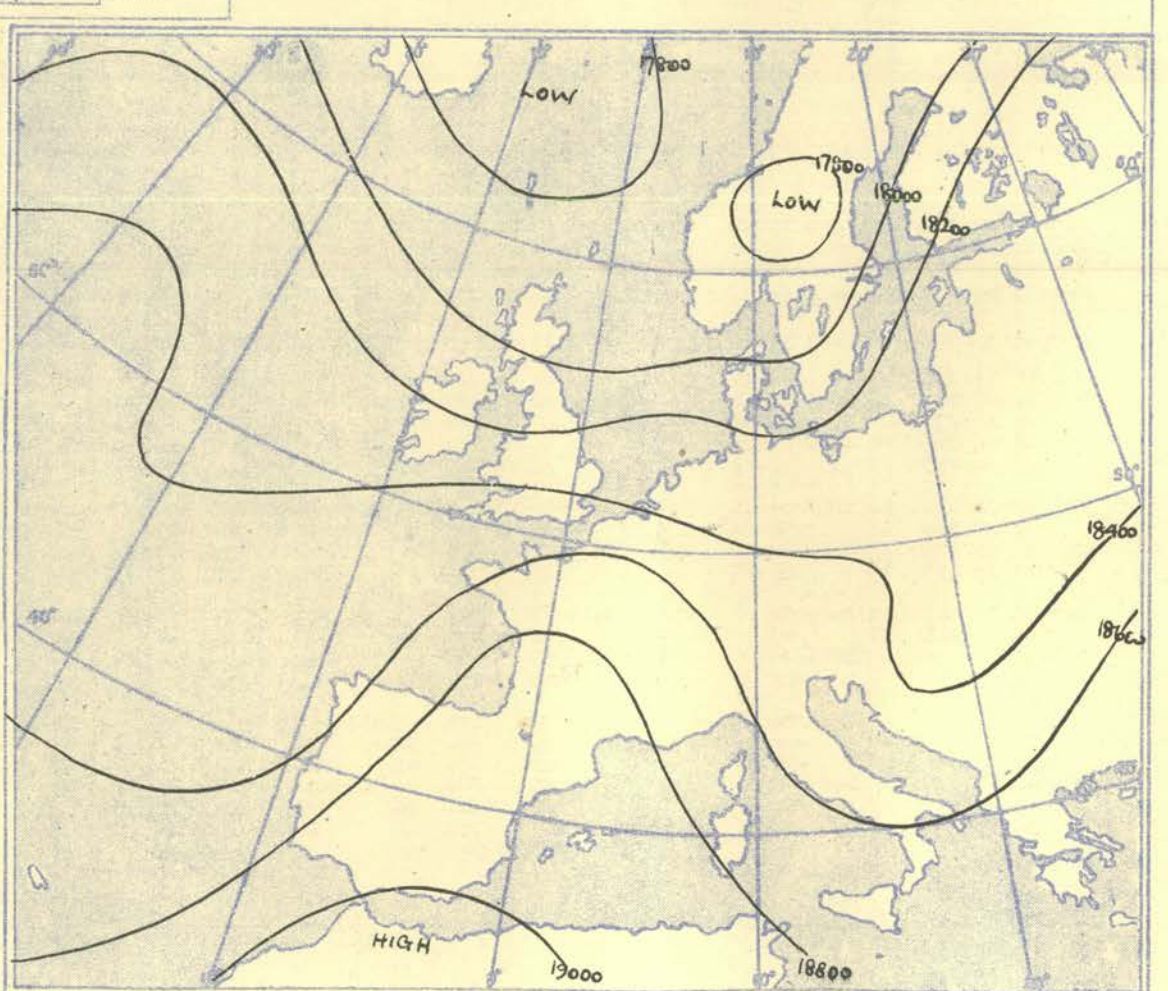
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

52°12' N — Time 1430h; Pressure M.S.L. 1022.0 mb; Surf 1020.5 mb; Freezing 675 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew
Surf	0.4	·	·
1000	6.1		
950			
900	35.3	49	43
850	50.7	44	31
800	67.1	45	9
750			
700	102.8	35	·
650			
600	143.1	23	·
550			
500	189.5	9	·
450			
400	243.9	-14	·
350			
300	310.4	-43	·
250			
200			
170			

Cloud.
3/8 Cu 850-830 mb
6/8 Ci 350-270 mb
Inversion.
850 mb 44.1°F
800 mb 44.6°F

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

Place	Lympne		Downham Market		Ringway		Leeming		Filton		Lympne		Shannon	
Time	08h		09h		14h		1215h		13h		13h		20h	
Type			Pilar											
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.	030	11	050	06	240	10	030	09	030	09	040	12	070	05
1,000	040	19	037	06	240	07	010	07	040	15	050	25	090	08
2,000	100	09	023	06	270	04	350	08	040	15	060	18	100	07
3,000	090	07	327	04	350	05	340	05	050	13	070	15	110	06
4,000	090	05	296	04	010	09	310	06	050	07	360	07	140	10
5,000	200	03	297	06	010	14	260	04	350	05	250	03	180	10
6,000	220	03	300	04	340	08	250	10	240	07	260	10	260	07
8,000	250	09	297	14	270	07	280	12	180	05	250	07		
10,000	280	16	288	19	290	07	290	14	230	06	230	08		
14,000	260	24	266	29			300	18	260	03	260	18		
18,000			261	42			300	34	260	09	250	20		
24,000			264	55			300 (19,000ft)	26						
30,000			262	78										
40,000			263	64										
50,000			259 (48,000ft)	39										

NEPHOSCOPE OBSERVATIONS

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

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

Ship: Weather Explorer — 59.1°N 19.9°W — 03hrs G.M.T.; M.S.L. 1021 mb; Surf 1021 mb; Freezing 750 mb
Ship: Weather Explorer — 59.1°N 18.8°W — 09hrs G.M.T.; M.S.L. 1021 mb; Surf 1021 mb; Freezing 680 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots
Surf	—	53	48	300	18	—	54	45	275	10
1000	5.5	51	45	280	18	5.7	53	44	262	10
950		46	52	282	18		48	43	257	11
900	34.1	42	40	280	18	34.3	42	39	248	12
850		39	33	278	13		40	34	227	11
800	65.5	37	28	278	10	65.6	37	29	222	10
750		32	22	280	08		38	23	244	09
700	100.6	28	15	280	10	101.3	34	13	256	10
650		22	06	280	16		28	-1	261	17
600	140.2	15	-6	280	19	141.4	23	-18	271	20
550		09	-29	286	24		14	-40	280	27
500	185.7	-1	-44	291	32	187.5	05	00	286	30
450		-9	-25	297	35		-3	-40	286	32
400	239.2	-21	-28	302	48	241.7	-15	-22	284	40
350		-35	-42	297	45		-27	-34	288	44
300	304.2	-50		290	54	308.1	-38	-45	290	51
250		-66		297	73		-56		292	59
200	390.4	-55		304	54	395.5	-67		296	63
170		-54		295	36		-52		296	42
150		-52		295	32		-53		296	34
130		-55		295	28		-53		302	29
110		-54		295	18		-60		298	21
100	540.3	-54		295	12	545.8	-49		291	21
90		-52		295	12		-47		287	15
80		-51		295	10		-45		287	12
70		-53		295	08		-47		287	06
60							-40		287	08
Tropopause	I 234 mbs -70° 35700'					I 200 mbs -67° 40000'				

Ship: Weather Explorer — 59°N 18.6°W — 15hrs G.M.T.; M.S.L. 1019 mb; Surf 1019 mb; Freezing 670 mb
Ship: Weather Explorer — 59.1°N 18.7°W — 21hrs G.M.T.; M.S.L. 1015 mb; Surf 1015 mb; Freezing 715 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots
Surf	—	55	46	200	10	—	55	49	180	18
1000	5.3	53	45	192	09	4.1	53	49	168	16
950		48	44	199	09		48	47	175	21
900	33.9	43	39	209	11	32.7	44	43	180	25
850		43	28	221	10		44	41	191	26
800	65.6	45	10	228	15	64.5	39	35	201	28
750		38	31	238	18		36	35	204	27
700	101.2	35	20	252	23	99.8	30	25	196	29
650		29	22	250	15		22	15	194	31
600	141.5	23	19	235	22	139.6	18	17	204	30
550		16	05	235	25		15	13	220	25
500	187.7	10	-12	235	25	185.7	06	04	241	27
450		00	-9	251	31		-4	-7	238	35
400	242.4	-9	-15	264	37	239.5	-14	-17	250	38
350		-21	-28	266	41		-27	-31	244	48
300	309.6	-37	-43	266	43	306.2	-42		233	55
250		-56		263	56		-59		220	59
200	396.9	-68		269	57	393.5	-54		225	51
170		-60		276	48		-54		235	33
150		-59		284	40		-52		232	35
130		-54		276	29		-55		229	23
110		-53		260	30		-53		231	11
100	545.5	-50		260	24	543.5	-50		236	10
90		-49		260	13		-48		242	10
80		-47		260	21		-48		246	06
70		-45		260	10		-48		247	06
60		-45		260	10					
	(55)	-41				(63)	-49			
Tropopause	I 226 mbs -67° 37100'					I 242 mbs -60° 35400'				

Weather Explorer 15hrs: Inversion 885 mbs 41° - 800 mbs 45°

Weather Explorer 21hrs: Inversion 900 mbs 44° - 864 mbs 45°; Isothermal 939 - 923 mbs 46°, 909 - 900 mbs 44°, 772 - 750 mbs 36°, 654 - 625 mbs 22°

Ship: Weather Watcher — 52.5°N 20°W — 03hrs G.M.T.; M.S.L. 1026 mb; Surf 1026 mb; Freezing 670 mb
Ship: Weather Watcher — 52.5°N 19.9°W — 09hrs G.M.T.; M.S.L. 1025 mb; Surf 1025 mb; Freezing 640 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots
Surf	—	59	53	160	06	—	59	54	190	12
1000	7.2	57	52	162	04	6.9	57	51	195	07
950		51	45	185	03		53	45	197	07
900	36.0	45	38	194	04	35.8	48	41	202	07
850		40	34	208	04		46	36	207	09
800	67.7	42	34	228	05	67.7	46	33	219	09
750		40	30	246	06		44	32	232	08
700	103.3	36	21	260	10	103.7	40	29	260	08
650		29	19	285	16		35	22	273	11
600	143.6	22	13	305	16	144.4	28	09	287	11
550		15	05	316	15		19	-2	301	12
500	189.7	06	-4	326	17	191.0	13	-7	298	12
450		-2	-15	331	17		04	-18	295	16
400	244.1	-13	-31	326	29	246.1	-7	-26	296	23
350		-28	-46	327	31		-19	-31	297	23
300	310.2	-43		329	45	313.6	-33	-44	300	35
250		-63		341	51		-50		309	51
200	396.4	-71		325	54	402.0	-66		313	73
170		-62		315	32		-65		319	47
150		-66		308	25		-61		330	30
130		-67		306	25		-59		314	26
110		-64		306	24		-55		289	07
100	542.4	-62		303	15	549.7	-54		288	14
90		-61		298	16		-53		285	18
80		-60					-50		289	15
70							-47		279	09
60							-44			
Tropopause	II 235 mbs -69° 36300'					I 196 mbs -67° 40600'				

Weather Watcher 03hrs: Inversion 850 mbs 40° - 837 mbs 44°, 808 mbs 41° - 800 mbs 42°; Isothermal 800 - 783 mbs 42°

Weather Watcher 09hrs: Inversion 864 mbs 44° - 828 mbs 48°, 800 mbs 46° - 783 mbs 47°

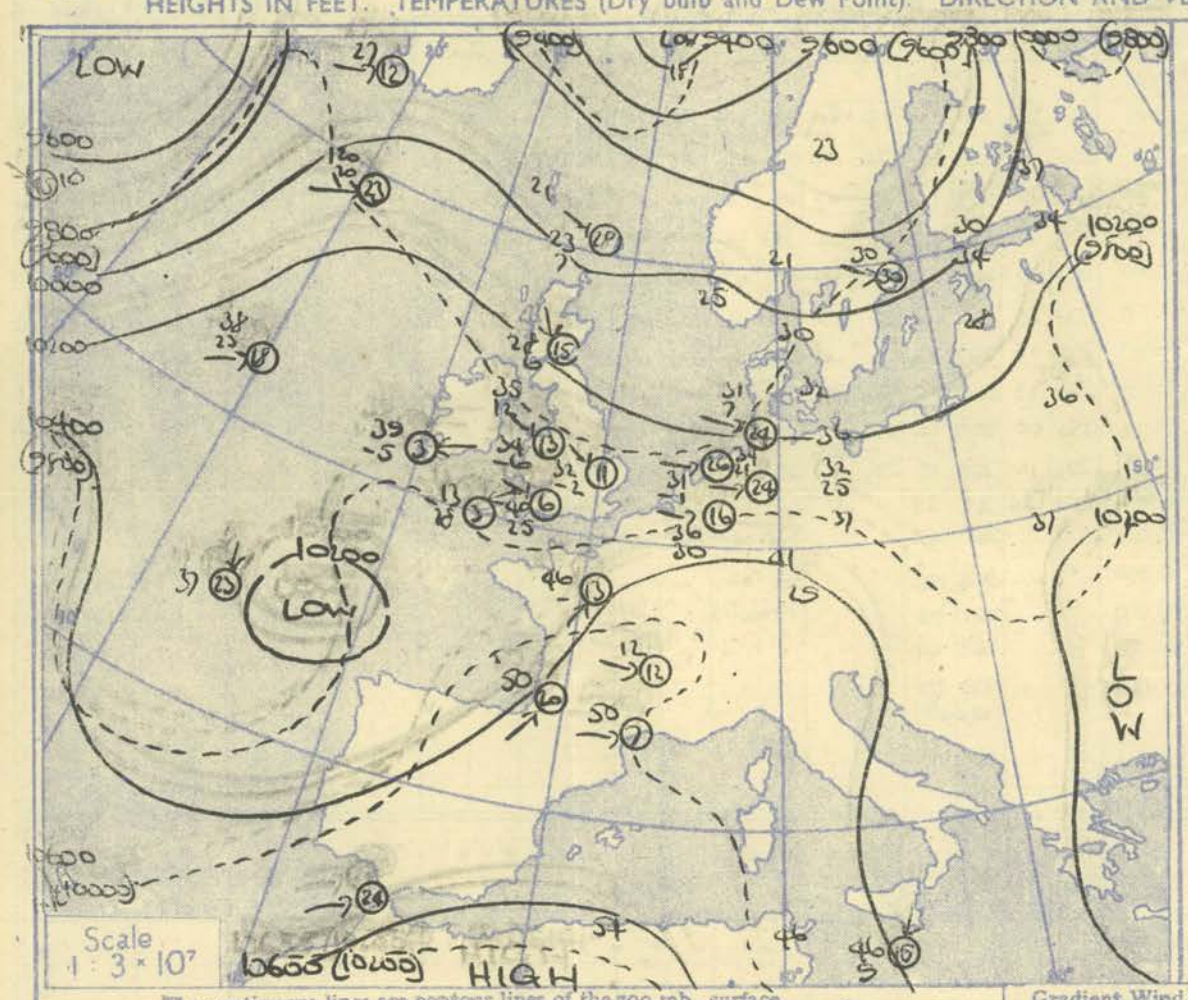
Ship: Weather Watcher — 52.6°N 19.8°W — 15hrs G.M.T.; M.S.L. 1023 mb; Surf 1023 mb; Freezing 640 mb
Ship: Weather Watcher — 52.6°N 19.8°W — 21hrs G.M.T.; M.S.L. 1017 mb; Surf 1017 mb; Freezing 625 mb

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Vel. knots
Surf	—	60	55	180	21	—	61	54	180	24
1000	6.2	58	53	175	18	4.9	55	53	180	24
950		51	47	184	18		54	51	184	25
900	35.1	47	37	198	18	33.8	52	41	188	27
850		49	36	214	18		53	33	203	27
800	67.0	46	31	223	19	66.1	50	37	215	25
750		44	30	223	18		48	28	223	26
700	102.9	38	23	218	18	102.3	41	37	226	29
650		34	10	214	19		35	29	007	29
600	143.5	25	01	227	18	140.0	28	18	240	31
550		19	00	234	20		22	14	246	36
500	190.1	13	-16	235	24	189.9	13	11	246	32
450		04	-22	245	24		06	-9	245	40
400	245.2	-6	-23	262	27	245.2	-6	-15	236	44
350		-18	-29	262	31		-19	-23	249	49
300	312.8	-33	-44	262	33	312.7	-35	-40	253	65
250		-52		269	46		-53		262	79
200	400.9	-66		284	70	400.2	-68		266	77
170		-65		306	60		-62		265	46
150		-66		313	49		-65		250	39
130		-66		290	27		-67		220	30
110		-63		266	21		-59		247	25
100	546.7	-59		266	19	546.6	-59		268	22
90		-57		266	14		-57		286	15
80		-52		266	13		-52		292	12
70		-51		266	12		-51		292	13
60		-50		266	06		-49		282	15
	(50)	-47				(55)	-46			
Tropopause	I 211 mbs -66° 38900'					II 211 mbs -68° 38900'				

Weather Watcher 15hrs: Inversion 882 mbs 47° - 855 mbs 49°, 800 mbs 46° - 768 mbs 47°; Isothermal 900 - 882, 858 - 850 mbs 49°, 688 - 660 mbs 36°

Weather Watcher 21hrs: Inversion 911 mbs 51° - 879 mbs 54°; Isothermal 857 - 842 mbs 53°, 755 - 750 mbs 48°

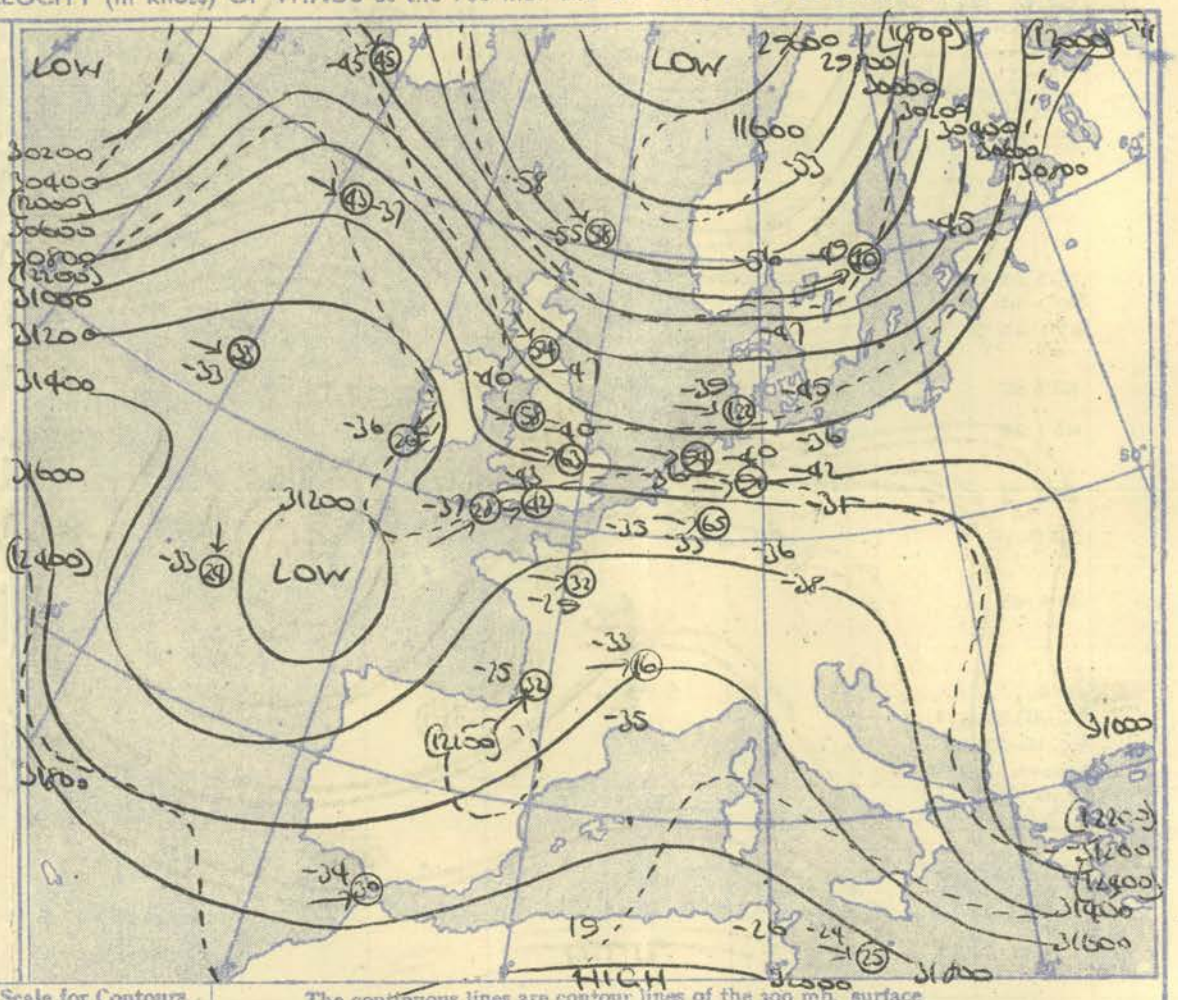
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

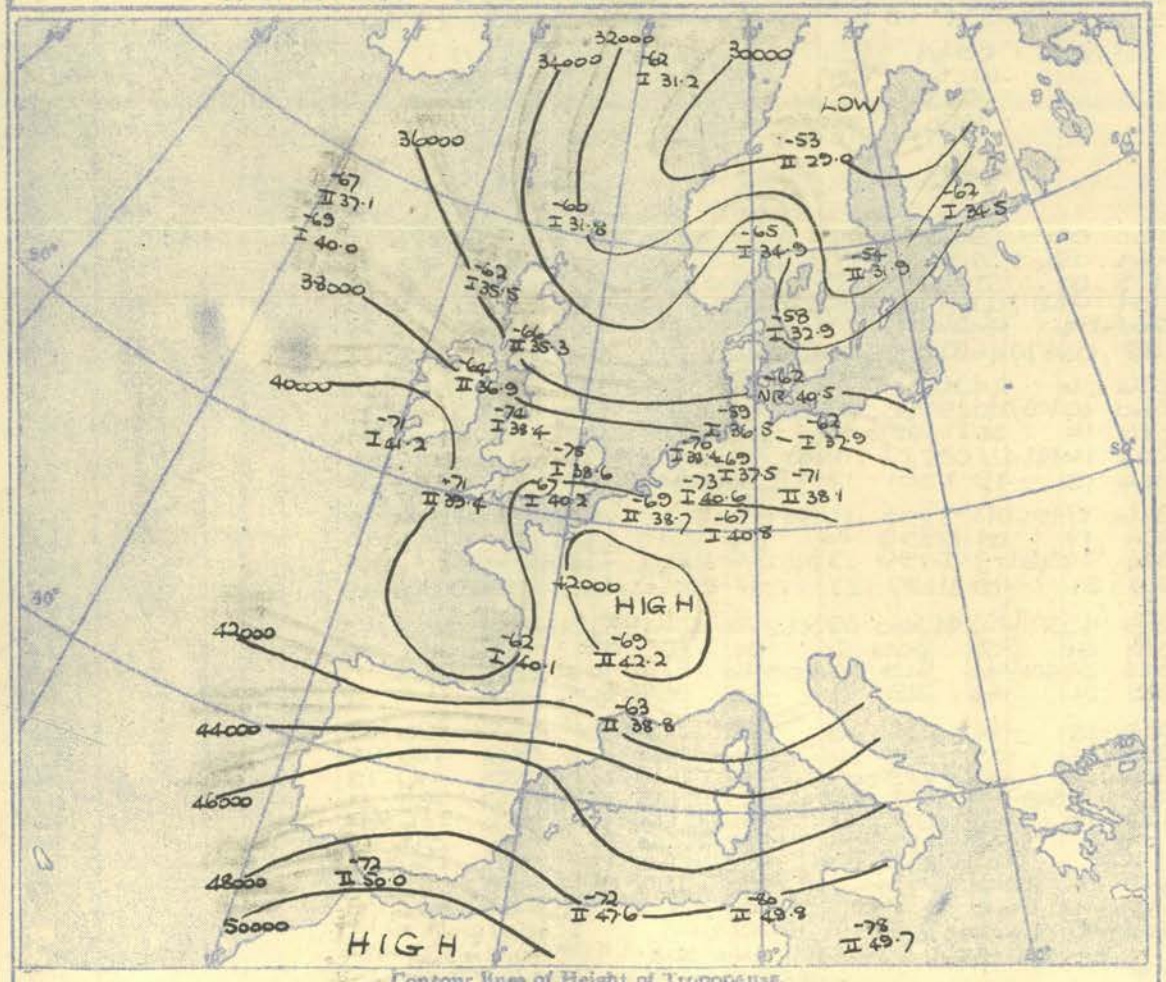
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 60 40 30 20 15 10 knots



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

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

Little change in the thermal pattern though a slight eastward motion of all the main features; these included a small ridge in the Eastern Atlantic and a trough across the Norwegian Sea to Denmark.

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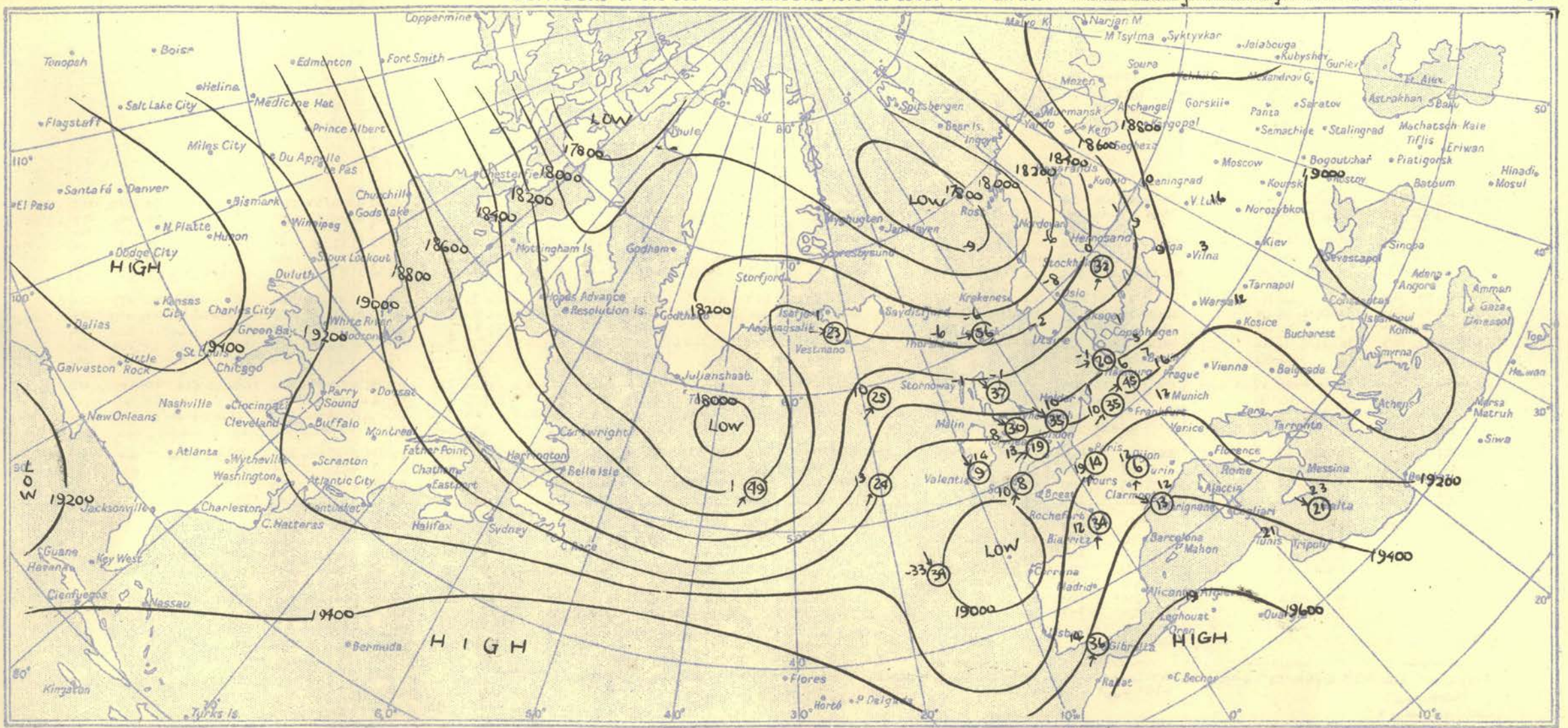
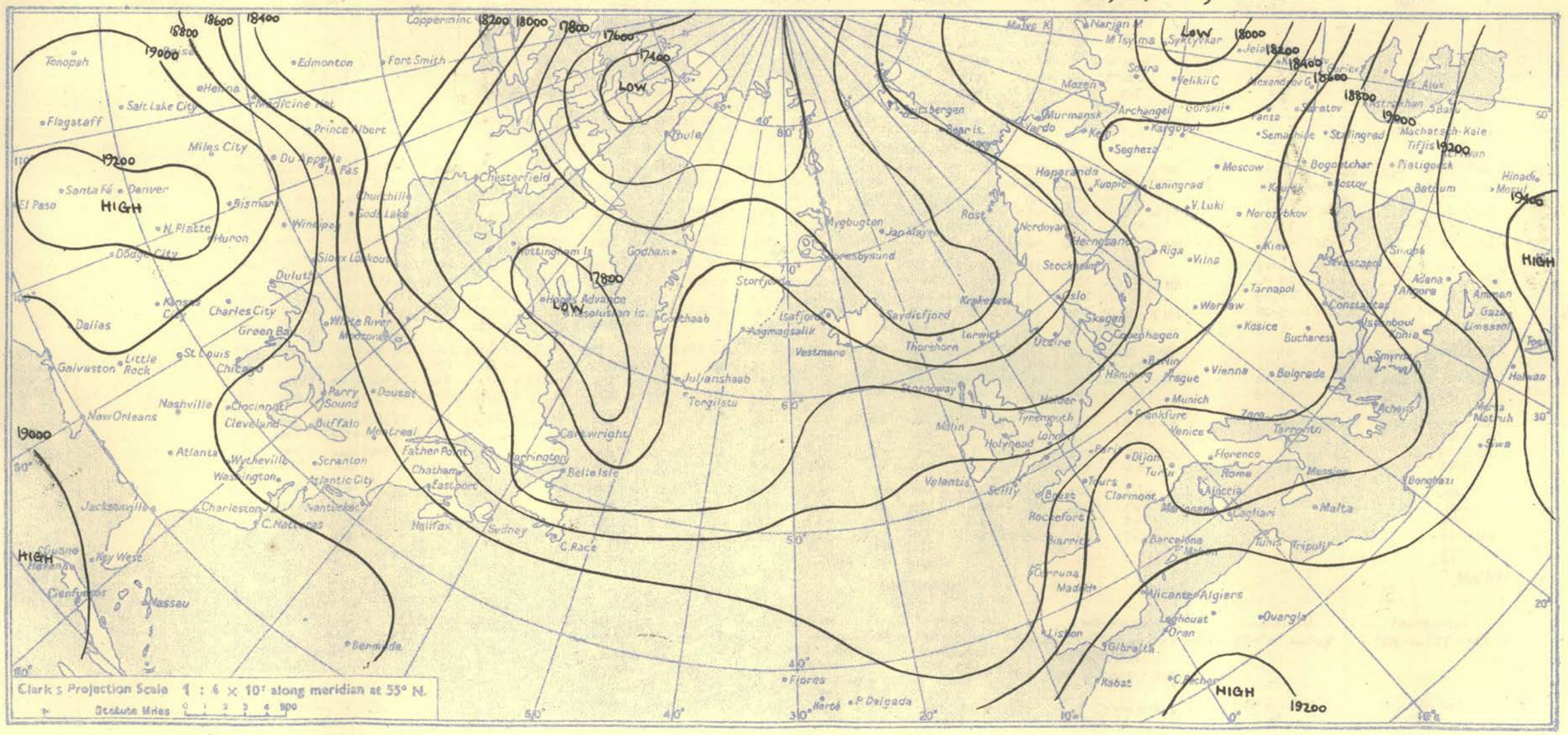
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
Nelson K. Johnson, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Sunday 29th July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Sunday 29th. July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Sunday 29th July 1951.

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

15h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
Pressure: Time	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.	15h G.M.T.
Pressure: M.S.L.	1016·7 mb	1021·8 mb	1020·5 mb	1024·6 mb	1023·4 mb	1022·2 mb	1021·8 mb	1020·2 mb	1023·8 mb
Pressure: Surf	1006·8 mb	1020·2 mb	1021·3 mb	1015·1 mb	1021·4 mb	1007·7 mb	1006·3 mb	1009·8 mb	1022 mb
Pressure: Freezing	800 mb	730 mb	724 mb	660 mb	687 mb	695 mb	650 mb	664 mb	630 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	55	47	290	26
1000	095	53	46	275	25
950		45	40	276	22
900	330	38	33	284	20
850		32	28	284	22
800	630	32	26	281	25
750		29	09	280	28
700	989	23	07	285	28
650		15	02	291	29
600	1380	10	-08	283	32
550		05	-17	279	33
500	1830	-06	-24	277	36
450		-17	-33	272	37
400	2356	-29	-43	277	38
350		-43		278	36
300	2996	-55		278	38
250		-52		294	38
200	3878	-47		283	31
170		-45		295	32
150		-46		295	29
130		-49			
110		-47			
100	5404	-45			
90		-45			
80		-47			
70		-46			
60		-45			
	(63mb)				

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	004	56	49		
1000	059	54	48		
950		48	42		
900	345	43	37		
850		40	27		
800	660	40	08		
750		24	11		
700	1012	28	07		
650		22	-01		
600	1408	16	-24		
550		08	-30		
500	1863	-01	-38		
450		-10	-37		
400	2398	-19	-38		
350		-32	-50		
300	3053	-47			
250		-60			
200	3926	-53			
170		-51			
150		-50			
130		-49			
110		-49			
100	5444	-48			
90		-45			
80		-43			
70		-43			
60		-42			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	002	67	50	290	09
1000	059	62	46	263	09
950		55	41	263	09
900	350	48	39	278	14
850		41	34	298	10
800	666	40	25	325	12
750		37	13	325	14
700	1019	28	07	317	15
650		20	02	313	18
600	1414	13	-04	305	26
550		08	-11	302	31
500	1867	-01	-22	303	37
450		-10	-29	301	46
400	2403	-17	-31	300	52
350		-32	-45	297	55
300	3065	-47		297	54
250		-63		291	57
200	3925	-55		290	49
170		-51		288	43
150		-51		290	34
130		-54		286	24
110		-54		292	26
100	5428	-52		299	18
90		-52		287	16
80		-51		263	09
70		-51		242	09
60		-48			
	(62mb)				

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	026	63	54		
1000	069	61	53		
950		54	51		
900	358	46	43		
850		39	36		
800	673	41	28		
750		41	24		
700	1029	35	12		
650		31	-01		
600	1432	23	-13		
550		17	-21		
500	1895	09	-23		
450		-01	-26		
400	2440	-13	-37		
350		-25	-46		
300	3105	-40	-60		
250		-55			
200	3918	-66			
170		-58			
150		-58			
130		-56			
110		-57			
100	5961	-57			
90		-53			
80		-51			
70		-52			
60		-50			
		-50			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	67	48	330	07
1000	065	63	45	324	15
950		54	37	315	09
900	355	46	34	275	07
850		42	27	276	06
800	672	44	04	307	07
750		39	03	285	11
700	1027	34	-06	281	13
650		26	-15	294	17
600	1426	19	-21	292	25
550		14	-29	289	27
500	1887	08	-37	291	30
450		-03	-45	289	36
400	2430	-16	-56	285	42
350		-30	-57	277	45
300	3089	-45		265	58
250		-60		254	63
200	3951	-72		263	60
170		-67		280	41
150		-63		280	40
130		-63		261	37
110		-64			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	012	69	46	335	10
1000	062	65	45		
950		56	42	083	08
900	353	48	39	359	03
850		45	31	231	04
800	671	48	11	243	09
750		40	07	255	10
700	1027	32	-02	278	11
650		26	-08	284	16
600	1426	20	-16	290	26
550		13	-24	281	30
500	1886	10	-30	293	35
450		+02	-39	287	38
400	2431	-14	-49	278	43
350		-24	-54	264	54
300	3097	-40	-60	256	63
250		-59		259	59
200	3964	-71		262	60
170		-59		263	53
150		-62		263	42
130		-59		264	33
110		-58		265	28
100	5438	-57		266	24
90		-56		271	20
80		-56		271	19
70		-55		262	15
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	044	69	55	080	05
1000	061	68	54		
950		60	53	090	05
900	354	53	50	048	03
850		51	44	290	04
800	676	47	34	252	06
750		44	24	253	04
700	1036	40	25	279	04
650		32	29	282	09
600	1441	26	15	264	13
550		22	12	260	15
500	1908	13	01	273	19
450		05	00	248	25
400	2460	-04	-10	250	37
350		+16	-27	241	38
300	3139	-32	-44	254	42
250		-47		253	52
200	4024	-67		253	45
170		-64		248	48
150		-62		259	42
130		-57		267	36
110		-57		269	25
100	5501	-57		262	20
90		-55		254	20
80		-57		259	18
70		-57		254	20
60		-53		289	14
		-49		168	09
		-48			
	(48mb)				

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	029	66	58	090	14
1000	076	64	58	097	18
950		61	55	105	16
900	350	57	45	114	18
850		50	42	096	12
800	612	47	43	061	05
750		42	38	063	03
700	1030	38	28	058	03
650		30	25	098	06
600	1434	26	22	173	04
550		20	13	215	07
500	1901	10	06	220	08
450		02	-07	228	17
400	2450	-08	-16	220	21
350		-21	-29	210	25
300	3122	-37	-46	212	28
250		-56		219	35
200	3993	-71		229	31
170		-61		244	23
150		-62		252	21
130		-61		262	27
110		-61		262	21
100	5461	-58		257	17
90		-59		268	16
80		-59		257	13
70		-60		280	06
60		-56		301	06
		-51		238	03
		-48			
	(45mb)				

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	003	70	49	050	05
1000	064	66	46	045	05
950		59	43	094	06
900	357	51	38	126	06
850		45	29	137	06
800	676	48	18	112	05
750		48	04	077	04
700	1034	39	-05	079	03
650		34	-11	303	04
600	1440	28	-21	302	06
550		21	-17	303	06
500	1908	14	-20	301	09
450		04	-28	307	11
400	2459	-07	-38	325	16
350		-20	-52	142	17

21h G.M.T.

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Pressure: Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.
Pressure: M.S.L.	1019·6 mb	1022·3 mb	1021·6 mb	1024·3 mb	1023·1 mb	1022 mb	1020·7 mb	1019·8 mb
Pressure: Surf	1009·5 mb	1020·7 mb	1020·8 mb	1014·7 mb	1021·1 mb	1018·0 mb	1004·9 mb	1009·3 mb
Pressure: Freezing	820 mb	730 mb	742 mb	692 mb	710 mb	674 mb	670 mb	650 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	50	41	320	08
1000	053	50	40		
950		45	27	312	14
900	337	40	20	320	15
850		35	14	318	18
800	648	31	13	310	23
750		28	10	306	25
700	993	23	10	302	29
650		17	03	297	34
600	1387	12	-05	297	37
550		06	-14	299	37
500	1839	-04	-24	301	39
450		-15	-37	303	41
400	2368	-25	-46	302	42
350		-38	-58	305	55
300	3014	-51		311	64
250		-59			
200	3892	-49			
170		-49			
150		-49			
130		-49			
110		-49			
100	5410	-49			
90		-49			
80		-49			
70					
60					
	(88mb)				

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	004	55	49		
1000	061	53	47		
950		47	41		
900	347	40	36		
850		38	34		
800	661	40	23		
750		34	22		
700	1014	29	16		
650		24	09		
600	1412	19	-01		
550		13	-15		
500	1871	05	-11		
450		-04	-12		
400	2412	-15	-23		
350		-25	-33		
300	3017	-38	-47		
250		-52			
200	3954	-66			
170		-59			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	002	59	54	270	09
1000	057	58	51	268	09
950		53	46	301	15
900	346	48	42	310	07
850		42	38	L.V.	
800	662	38	30	266	06
750		33	21	261	13
700	1014	27	14	277	16
650		21	07	289	19
600	1411	17	-01	294	26
550		09	-13	296	28
500	1866	01	-14	300	33
450		-09	-16	296	43
400	2400	-23	-28	293	43
350		-36	-42	307	49
300	3050	-49		312	65
250		-67		319	64
200	3903	-68		299	55
170		-63		319	39
150		-64		303	38
130		-63		295	25
110		-68			
100		-65			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	026	58	50	Calm	
1000	066	56	50	302	07
950		50	48	300	11
900	354	44	44	284	13
850		41	44	267	14
800	672	43	25	252	15
750		39	20	236	18
700	1026	33	13	244	18
650		27	06	280	17
600	1425	23	05	303	25
550		17	13	298	25
500	1888	08	18	295	28
450		-02	20	290	33
400	2433	-13	-26	300	33
350		-26	-35	300	36
300	3097	-39	-46	308	39
250		-58		315	46
200	3966	-73		315	42
170		-68		300	36
150		-67		303	40
130		-66		299	29
110		-66		293	30
100	5418	-63		272	15
90		-66		275	21
80				Winds by	
70				Theodolite.	
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	58	51	Calm	
1000	064	56	48	314	09
950		51	38	346	08
900	352	49	40	289	08
850		45	29	279	07
800	670	43	12	301	04
750		38	09	305	05
700	1024	31	05	301	09
650		23	-03	302	12
600	1424	22	-09	291	15
550		16	-15	295	18
500	1886	07	-19	293	20
450		-04	-27	295	28
400	2428	-14	-35	294	32
350		-27	-48	287	32
300	3090	-44		299	32
250		-61		314	33
200	3953	-72		303	36
170		-63		294	33
150		-64		289	28
130		-61		288	22
110		-62		288	21
100	5416	-63		266	19
90		-63			
80		(95mb)			

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	012	58	47	060	05
1000	062	59	45	015	12
950		55	43	055	09
900	352	50	40	345	10
850		43	32	320	10
800	670	45	15	283	10
750		42	09	239	11
700	1027	36	01	274	11
650		29	-08	276	12
600	1423	23	-19	282	14
550		17	-29	286	20
500	1892	10	-33	283	25
450		+02	-40	282	27
400	2436	-16	-50	282	34
350		-27	-58	279	53
300	3098	-41		269	55
250		-61		265	60
200	3959	-76		271	52
170		-68		277	42
150		-66		279	34
130		-63		274	28
110		-65		270	25
100	5414	-66		272	24
90		-67		278	22
80		-63		284	15
70					
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	047	61	55	055	04
1000	057	62	56		
950		58	52	068	16
900	349	51	48	070	10
850		51	44	306	06
800	670	45	39	277	07
750		40	13	233	03
700	1027	36	29	207	06
650		29	25	211	07
600	1431	24	05	258	07
550		16	09	255	11
500	1895	09	-08	256	08
450		-02	-16	276	12
400	2439	-14	-19	269	21
350		-25	-31	266	23
300	3105	-40	-49	262	29
250		-61			
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	029	63	56	080	05
1000	053	63	55	076	12
950		60	55	073	15
900	348	56	51	085	10
850		54	39	090	10
800	611	47	37	084	12
750		42	37	387	04
700	1031	40	36	207	06
650		32	28	226	07
600	1436	25	20	233	06
550		17	12	201	06
500	1900	10	05	205	03
450		01	-15	247	05
400	2448	-09	-27	230	07
350		-22	-39	241	08
300	3118	-39	-52	229	06
250		-56		250	15
200	3992	-66		264	18
170		-61		276	18
150		-63		270	15
130		-62		271	22
110		-63		271	12
100	5458	-64		272	10
90		-64			
80					
70					
60					

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE
Tropopause	II 262 mb -59° 33,000	I 208 mb -69° 38,700	I 218 mb -75° 37,200	I 198 mb -73° 39,800	I 193 mb -74° 40,300	I 210 mb -78° 38,500	NR	II 227 mb -64° 37,100

	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion
	790 – 777 mb 30°	860 mb 34° – 832 mb 44°	832 mb 39° – 818 mb 46°	873 mb 42° – 843 mb 48°	860 mb 44° – 840 mb 46°	1018 mb 58° – 992 mb 60°	1005 mb 61° – 993 mb 63°	910 mb 55° – 887 mb 57°
		Isothermal.	Isothermal.	Isothermal.	235 mb -67° – 227 mb -66°	834 mb 41° – 816 mb 46°	898 mb 50° – 872 mb 53°	Isothermal.
		915 – 892 mb 48°	657 – 625 mb 27°		Isothermal.	Isothermal.	650 mb 29° – 638 mb 30°	750 – 720 mb 42°
					942 – 915 mb 50°	800 – 780 mb 45°		
					I 235 mb -67° 36,100	565 – 540 17°		

HMSO Press, MO, Dunstable

No. 11819 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Monday 30th July, 19[illegible]

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

03h G.M.T.

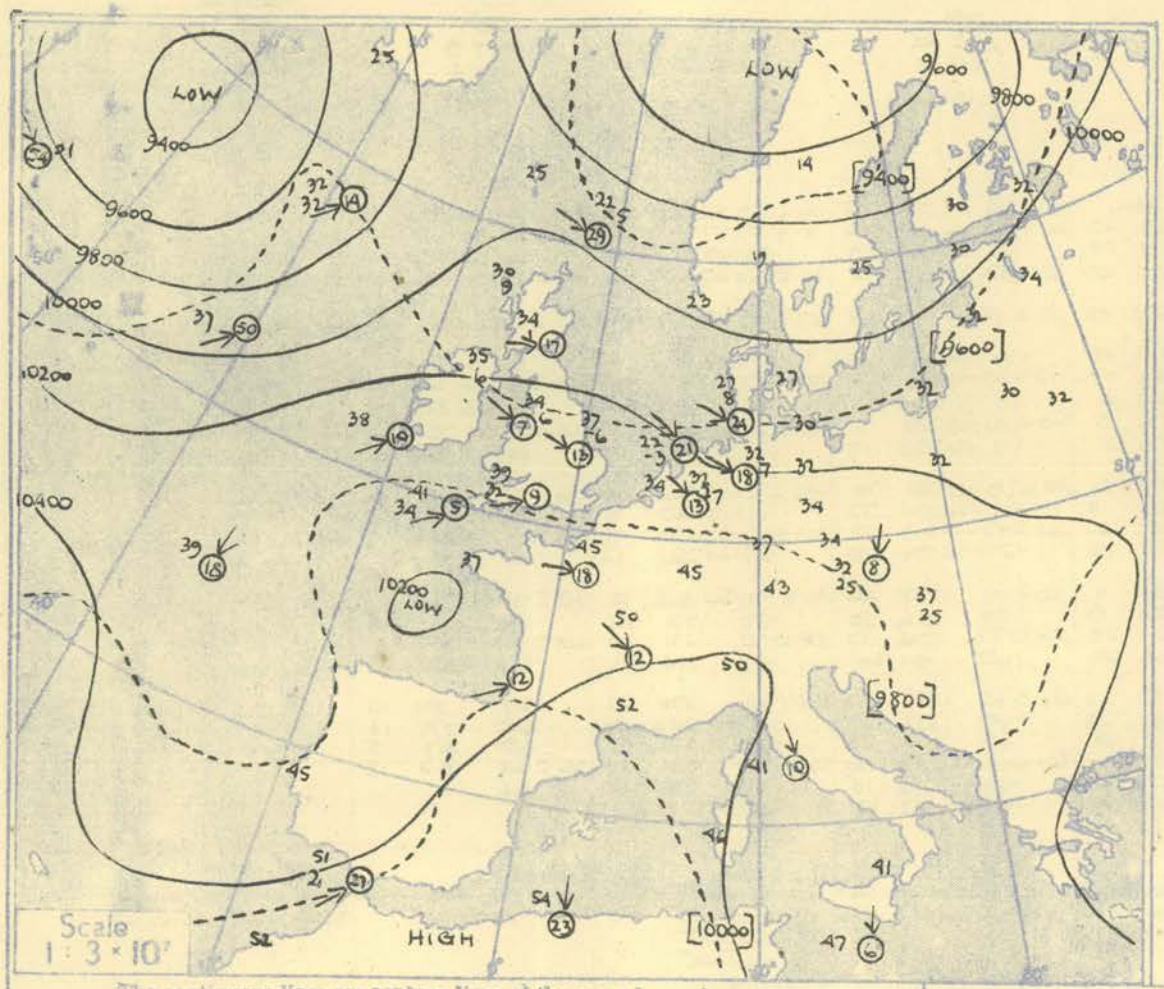
Station	Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
LERWICK	Time 03h G.M.T.					
	M.S.L. 1020·5 mb					
	Surf 1010·3 mb					
	Freezing 218 mb					
	Surf	02·7	48	43	240	03
	1000	05·5	44	43		
	950		43	34	249	14
	900	33·8	41	14	245	12
	850					
	800	65·0	31	10	277	15
	750		26	09	287	27
	700	99·6	22	05	287	29
	650		17	-7	284	32
	600	38·8	12	-21	285	34
	550		03	-29	282	36
	500	183·3	-4	-33	286	42
	450		-12	-36	301	48
	400	237·1	-23	-35	305	54
	350		-37	-54	305	63
	300	301·9	-50		311	78
	250		-70		311	82
	200	386·8	-63			
	170		-60			
	150		-61			
	130					
	110					
	100					
	90					
	80					
	70					
	60					
	Inversion. 1010 mbs 43° - 987 mbs 46° Isothermal. 935 mbs - 918 mbs 42°F.					
	Tropopause	I 222 mbs -81°F 36,600ft.				
STORNOWAY	Time 03h G.M.T.					
	M.S.L. 1021·0 mb					
	Surf 1019·4 mb					
	Freezing 720 mb					
	Surf	0·4	53	52		
	1000	05·7	52	51		
	950		48	48		
	900	34·3	41	38		
	850					
	800	65·7	38	21		
	750		35	16		
	700	101·0	30	09		
	650		26	-3		
	600	140	9·0	-20		
	550		13	-8		
	500	186·8	05	-17		
	450		-4	-15		
	400	241·0	-14	-22		
	350		-26	-35		
	300	307·3	-42			
	250		-58			
	200	374·0	-66			
	170		-63			
	150	454·8	-62			
	130		-59			
	110		-57			
	100	541·6	-55			
	90					
	80					
	70					
	60					
	Inversion. 860 mbs 36° - 826 mbs 40°F.					
	Tropopause	I 217 mbs -74°F 37,600ft.				
LEUCHARS	Time 03h G.M.T.					
	M.S.L. 1021·4 mb					
	Surf 1022·2 mb					
	Freezing 711 mb					
	Surf	00·2	49	46		
	1000	06·0	52	49		
	950		49	41		
	900	34·7	45	41		
	850					
	800	66·4	42	17		
	750		37	4		
	700	101·7	31	1		
	650		24	73		
	600	141·5	20	-33		
	550		14	+31		
	500	187·6	07	-26		
	450		-3	-22		
	400	242·0	-10	-26		
	350		-23	+41		
	300	308·8	-40	-56		
	250		-56			
	200	375·7	-71			
	170		-63			
	150	456·1	-63			
	130		-60			
	110		-58			
	100					
	90					
	80					
	70					
	60					
	Inversion. 1021 mb 49° 1000mbs 52° 860 mb 41° 850 mbs 44° Isothermal 600 - 583 mb 20°F					
	Tropopause	I 200 mbs -72° 39,000ft. I 186 mb -72° 41,100ft.				
ALDERGROVE	Time 03h G.M.T.					
	M.S.L. 1022·7 mb					
	Surf 1013·2 mb					
	Freezing 670 mb					
	Surf	02·6	53	50		
	1000	02·2	53	49		
	950		50	46		
	900	34·9	43	41		
	850					
	800	66·5	43	26		
	750		39	16		
	700	102·0	38	06		
	650		30	-2		
	600	142·2	24	-11		
	550		17	+02		
	500	185·5	10	-10		
	450		00	-19		
	400	243·1	-11	-25		
	350		-23	-33		
	300	310·0	-36	-44		
	250		-56			
	200	397·0	-72			
	170		-66			
	150		-68			
	130		-64			
	110		-66			
	100					
	90	542·4	-64			
	80		-62			
	70		-62			
	60					
	Inversion. 856 mbs 37° - 843 mbs 46° Isothermal. 1013 mbs - 1000 mbs 53°F.					
	Tropopause	I 207 mbs -74°F 39,000ft.				
LIVERPOOL	Time 03h G.M.T.					
	M.S.L. 1022·0 mb					
	Surf 1020·0 mb					
	Freezing 685 mb					
	Surf	00·6	47	45	Calm	
	1000	06·1	58	51	125	05
	950		53	43	158	04
	900	35·0	48	44	195	05
	850					
	800	66·8	45	17	233	05
	750		39	12	277	05
	700	102·3	34	06	280	07
	650		28	-02	283	10
	600	142·4	23	-11	278	15
	550		17	-13	270	21
	500	188·7	06	-20	275	21
	450		-06	-28	296	18
	400	242·7	-13	-34	297	20
	350		-28	-43	301	19
	300	308·7	-44		331	11
	250		-61		330	19
	200	374·6	-75		301	29
	170		-73		308	28
	150		-68		289	24
	130		-69		281	23
	110		-68		277	19
	100	538·7	-67		297	18
	90		-65		322	12
	80		-65		303	07
	70		-65		294	06
	60		-60			
	Inversion. 1020 mbs 47° - 1000 mbs 52° 853 mbs 41° - 810 mbs 46°F 220 mbs -24° - 207 mbs -71°F					
	Tropopause	I 220 mbs -74°F 37,500ft. I 194 mbs -78°F 40,100ft.				
DOWNHAM MARKET	Time 03h G.M.T.					
	M.S.L. 1022·6 mb					
	Surf 1018·0 mb					
	Freezing 661 mb					
	Surf	01·2	48	48	080	05
	1000	06·1	52	46	077	12
	950		55	38	066	11
	900	35·1	49	38	057	11
	850					
	800	67·0	45	07	333	08
	750		42	04	285	10
	700	102·6	37	-06	278	13
	650		31	-21	275	15
	600	143·0	26	-45	288	15
	550		18	-50	295	17
	500	189·4	09	-49	284	20
	450		+01	-56	274	22
	400	243·9	-12	-53	283	23
	350		-25	-58	290	29
	300	310·4	-41		292	26
	250		-59		286	29
	200	386·9	-75		294	27
	170		-69		301	30
	150	456·5	-65		287	30
	130		-69		277	29
	110		-67		273	23
	100	541·4	-66		282	30
	90		-65		292	18
	80		-65		287	12
	70		-64			
	60					
	Inversion. 1018 - 980 mb 48° - 58°F 868 - 832 mb 45° - 48°F					
	Tropopause	I 193 mbs -76°F 40,400ft.				
LARKHILL	Time 03h G.M.T.					
	M.S.L. 1021·2 mb					
	Surf 1005·2 mb					
	Freezing 653 mb					
	Surf	04·4	57	52	070	05
	1000	05·8	57	51		
	950		58	49	087	17
	900	34·9	54	47	092	12
	850					
	800	67·1	47	39	219	02
	750		41	37	252	05
	700	103·0	39	32	259	09
	650		31	25	258	10
	600	143·5	27	18	249	09
	550		26	07	246	06
	500	190·2	11	-01	240	10
	450		-01	-15	249	18
	400	244·8	-12	-26	253	15
	350		-25	-38	256	12
	300	311·4	-40	-52	262	12
	250		-59		271	12
	200	378·0	-72		271	20
	170		-67		274	21
	150	458·1	-68		278	22
	130		-70		280	20
	110		-69		273	19
	100	542·7	-67		281	20
	90		-65		284	12
	80		-65			
	70					
	60					
	Inversion. 1000·0 mbs 57° - 950 mbs 38° 732 mbs 39° -708 mbs 40° Isothermal. 860 mbs - 840 mbs 51° 1005·2 - 1000 mbs 57°F					
	Tropopause	II 226 mbs -69° 37,300ft.				
CAMBORNE	Time 03h G.M.T.					
	M.S.L. 1017·9 mb					
	Surf 1007·4 mb					
	Freezing 626 mb					
	Surf	02·9	61	54	090	12
	1000	04·9	62	55	-	-
	950		66	50	080	14
	900	34·6	62	50	100	15
	850					
	800	67·1·0	50	44	145	09
	750		47	41	201	5
	700	103·3	41	34	246	5
	650		36	23	235	7
	600	144·1	28	10	254	11
	550		20	4	229	10
	500	150·9	15	-10	213	12
	450		05	-19	209	10
	400	246·2	-6	-24	204	7
	350		-20	-38	L & V	
	300	313·5	-37	-53	L & V	
	250		-53		261	08
	200	401·2	-66		282	10
	170		-67		291	12
	150		-65		290	12
	130		-69		276	13
	110		-69		257	15
	100	546·2	-68		262	13
	90		-64			
	80					
	70					
	60					
	Inversion. 1007 - 950 mbs 61 - 66°F.					
	Tropopause	II 218 mbs -66°F 38,200ft.				
Valentia	Time 03h G.M.T.					
	M.S.L. 1020·3 mb					
	Surf 1019 mb					
	Freezing 650 mb					
	Surf		49	48	050	03
	1000	5·5	54	50	078	05
	950		55	44	51	10
	900	34·5	50	39	67	11
	850					
	800	66·4	46	13	218	09
	750		43	01	235	09
	700	102	36	-19	228	10
	650		32	-32	238	12
	600	142·5	25	-8	252	09
	550		19	-10	257	11
	500	189·1	12	-15		
	450		3	-24		
	400	244·1	-7	-36		
	350		-20	-48		
	300	311·5	-35	-		
	250					
	200					
	170					
	150					
	130					
	110					
	100					
	90					
	80					
	70					
	60					
	Inversion. Surf. 49°-38 mbs 58°F 882 mbs 48°- 850 mbs 49°F					
	Tropopause	N.R.				

09h G.M.T.

Station	Pressure	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
LERWICK	Time 09h G.M.T.					
	M.S.L. 1019·3 mb					
	Surf 1009·3 mb					
	Freezing 741 mb					
	Surf	02·7	53	47	235	10
	1000	05·2	52	44	222	15
	950		46	39	233	16
	900	33·7	40	34	248	15
	850					
	800	65·1	38	18	246	14
	750		33	10	254	15
	700	100·2	27	11	264	19
	650		23	02	270	25
	600	139·8	18	-15	279	30
	550		13	00	285	37
	500	185·6	02	-08	287	39
	450		-03	-10	283	38
	400	239·7	-11	-21	289	44
	350		-24	-33	291	50
	300	306·3	-40	-52	287	41
	250		-59		282	57
	200	373·2	-63		285	55
	170		-58		289	42
	150		-55			
	130		-55			
	110		-55			
	100		-55			
	90	542·2	-55			
	80		-55			
	70		-55			
	60		(84 mbs)			
	Inversion. 861 mbs 35° 824 mbs 41° 678 mbs 25° 672 mbs 26°					
	Tropopause	I 219 mbs -68°F 37,500ft.				
STORNOWAY	Time 09h G.M.T.					
	M.S.L. 1018·8 mb					
	Surf 1017·2 mb					
	Freezing 671 mb					
	Surf	0·4	54	50		
	1000	05·4	53	50		
	950		47	44		
	900	34·0	42	39		
	850					
	800	65·4	43	20		
	750		39	10		
	700	100·9	35	-2		
	650		29	-7		
	600	141·0	23	06		
	550		15	-1		
	500	187·2	07	-8		
	450		-1	-12		
	400	241·7	-11	-20		
	350		-23	-33		
	300	308·5	-38	-49		
	250		-58			
	200	375·3	-65			
	170		-62			
	150	456·2	-61			
	130		-60			
	110		-56			
	100	543·0	-53			
	90		-51			
	80		-49			
	70		-50			
	60	654·7	-47			
	Inversion. 856 mbs 38°F - 800 mbs 43°F.					
	Tropopause	I 221 mbs -72°F 37,400ft.				
LEUCHARS	Time 09h G.M.T.					
	M.S.L. 1019·7 mb					
	Surf 1020·5 mb					
	Freezing 706 mb					
	Surf	00·2	58	52	Calm	
	1000	05·7	54	50	221	05
	950		46	43	195	05
	900	34·3	46	40	217	08
	850					
	800	66·1	43	18	231	16
	750		38	09	231	14
	700	101·5	31	+03	248	15
	650		28	-26	259	19
	600	141·5	23	-25	260	23
	550		17	-23	263	25
	500	187·7	08	-23	269	28
	450		+4	-27	269	31
	400	241·9	-18	-31	261	28
	350		-27	-38	264	33
	300	307·3	-44		276	35
	250		-58		270	40
	200	374·1	-72		274	39
	170		-65		278	36
	150	454·6	-65		280	27
	130		-61		276	21
	110		-61		276	14
	100	540·8	-60		272	12
	90		-55		266	11
	80		-52		261	09
	70		-52			
	60					
	Isothermal. 958 mbs - 880 mbs 46° 850 mbs - 815 mbs 45°					
	Tropopause	I 209 mbs -75°F 38,300ft.				
ALDERGROVE	Time 09h G.M.T.					
	M.S.L. 1020 mb					
	Surf 1010·4 mb					
	Freezing 650 mb					
	Surf	02·6	60	55	150	10
	1000	05·4				
	950		53	49	159	12
	900	34·3	46	42	178	10
	850					
	800	66·1	47	24	206	15
	750		43	17	205	17
	700	101·9	36	09	211	18
	650		32	02	216	21
	600	142·3	27	-07	227	18
	550		20	-02	236	23
	500	189·0	11	-10	235	25
	450		02	-17	229	33
	400	244·0	-07	-23	218	37
	350		-19	-31	236	27
	300	311·5	-32	-41	254	28
	250		-50		257	33
	200	379·6	-71		240	45
	170		-62		259	27
	150	546·8	-57			
	130		-55			
	110		-53			
	100					
	90					
	80					
	70					
	60					
	Inversion. 850 mbs -819 mbs 42 - 48°F. 691 - 679 mbs 35°F 606 - 589 mbs 27°F.					
	Tropopause	I 198 mbs -72°F 40,100ft.				
LIVERPOOL	Time 09h G.M.T.					
	M.S.L. 1020·3 mb					
	Surf 1018·9 mb					
	Freezing 673 mb					
	Surf	00·6	61	52	160	08
	1000	05·7	57	47	165	15
	950		53	43	170	15
	900	34·5	45	40	175	09
	850					
	800	66·5	45	24	183	10
	750		41	13	209	08
	700	102·1	35	06	228	09
	650		29	-02	246	11
	600	142·3	24	-12	247	13
	550		19	-15	254	16
	500	188·7	08	-20	254	17
	450		-01	-27	251	19
	400	243·2	-13	-36	246	19
	350		-24	-44	254	16
	300	309·8	-41		266	15
	250		-59		299	21
	200	376·1	-72		296	20
	170		-65		273	21
	150		-65		276	22
	130		-65		276	18
	110		-61		282	09
	100	542·3	-57		255	06
	90		-58		246	14
	80		-57		266	14
	70		-57		283	10
	60		-57			
	(68 mbs)					
	Inversion. 862 mbs 44° - 822 mbs 47°. 590 mbs 23° 580 mbs 24°F. Isothermal. 926 - 864 mbs. 56°F.					
	Tropopause	I 208 mbs -75°F 38,800ft.				
DOWNHAM MARKET	Time 09h G.M.T.					
	M.S.L. 1021·8 mb					
	Surf 1017·4 mb					
	Freezing 645 mb					
	Surf	01·2	61	50	050	09
	1000	06·0	58	47		
	950		53	38	091	12
	900	35·0	53	26	115	09
	850					
	800	67·2	49	08	201	19
	750		44	10	220	07
	700	103·1	39	-01	230	06
	650		33	-10	248	07
	600	143·5	28	-18	261	09
	550		22	-26	278	09
	500	190·3	13	-26	291	13
	450		03	-34	272	13
	400	245·3	-08	-45	252	16
	350					
	300					
	250					
	200					
	170					
	150					
	130					
	110					
	100					
	90					
	80					
	70					
	60					
	For Winds See Page Three					
	Inversion. 500 mbs 53°F - 881 mbs 55°F Isothermal. 976 - 900 mbs 53°F.					
	Tropopause	N.R.				
LARKHILL	Time 09h G.M.T.					
	M.S.L. 1019·0 mb					
	Surf 1003·3 mb					
	Freezing 633 mb					
	Surf	04·4	63	49	080	12
	1000	05·2	62	48		
	950		56	39	093	15
	900	34·3	56	47	60	13
	850					
	800	66·7	50	43	197	09
	750		44	40	202	14
	700	102·8		33	207	14
	650		35	28	237	14
	600	143·6	27	17	235	13
	550		20	18	223	10
	500	190·3	12	-03	234	13
	450		04	-13	240	13
	400	245·4	-06	-22	246	13
	350		-18	-33	246	14
	300	313·1	-33	-47	242	14
	250		-50		241	14
	200	401·6	-65		274	12
	170		-67		280	09
	150	462·0	-63		278	12
	130		-64		280	16
	110		-63		268	14
	100	547·8	-63		276	14
	90		-63		278	13
	80		-63		265	10
	70		-63		234	14
	60	655·9	-61		266	15
			-57			
	Tropopause	II 194 mbs -67°F 40,700ft.				
CAMBORNE	Time 09h G.M.T.					
	M.S.L. 1016·1 mb					
	Surf 1005·7 mb					
	Freezing 660 mb					
	Surf	02·9	66	52	110	20
	1000	04·5	65	51	106	24
	950		68	49	109	16
	900	34·1	61	45	120	09
	850					
	800	66·5	49	36	157	06
	750		43	34	180	09
	700	102·4	39	28	189	10
	650		30	23	212	09
	600	142·8	24	15	193	11
	550		15	06	185	13
	500	189·1	11	15	196	11
	450		01	-21	185	06
	400	243·8	-12	-34	225	08
	350		-26	-47	222	08
	300	310·3	-40	60	013	02
	250		-55		254	05
	200	397·8	-68		031	09
	170		-66		302	06
	150		-67		272	12
	130		-67		276	14
	110		-69		263	12
	100	542·8	-66		251	11
	90		-65		238	12
	80		-65		247	09
	70		-66			
	60					
	Inversion 982 mbs 63°F 962 mbs 70°F. Isothermal. 550 - 530 mbs 15°F					
	Tropopause	II 192 mbs -70°F 40,700ft.				
Valentia						
	Tropopause					

Monday 30th. July 1951.

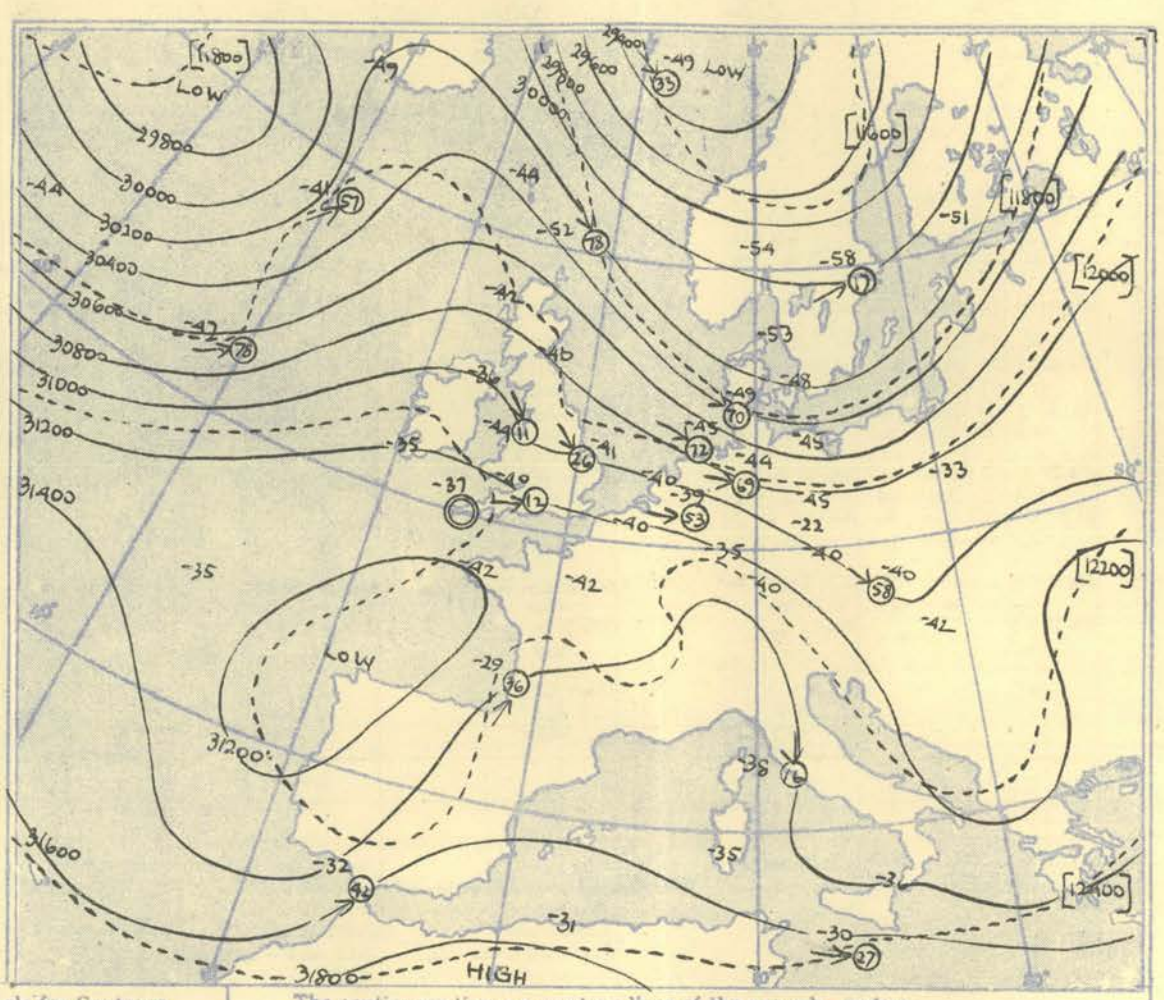
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



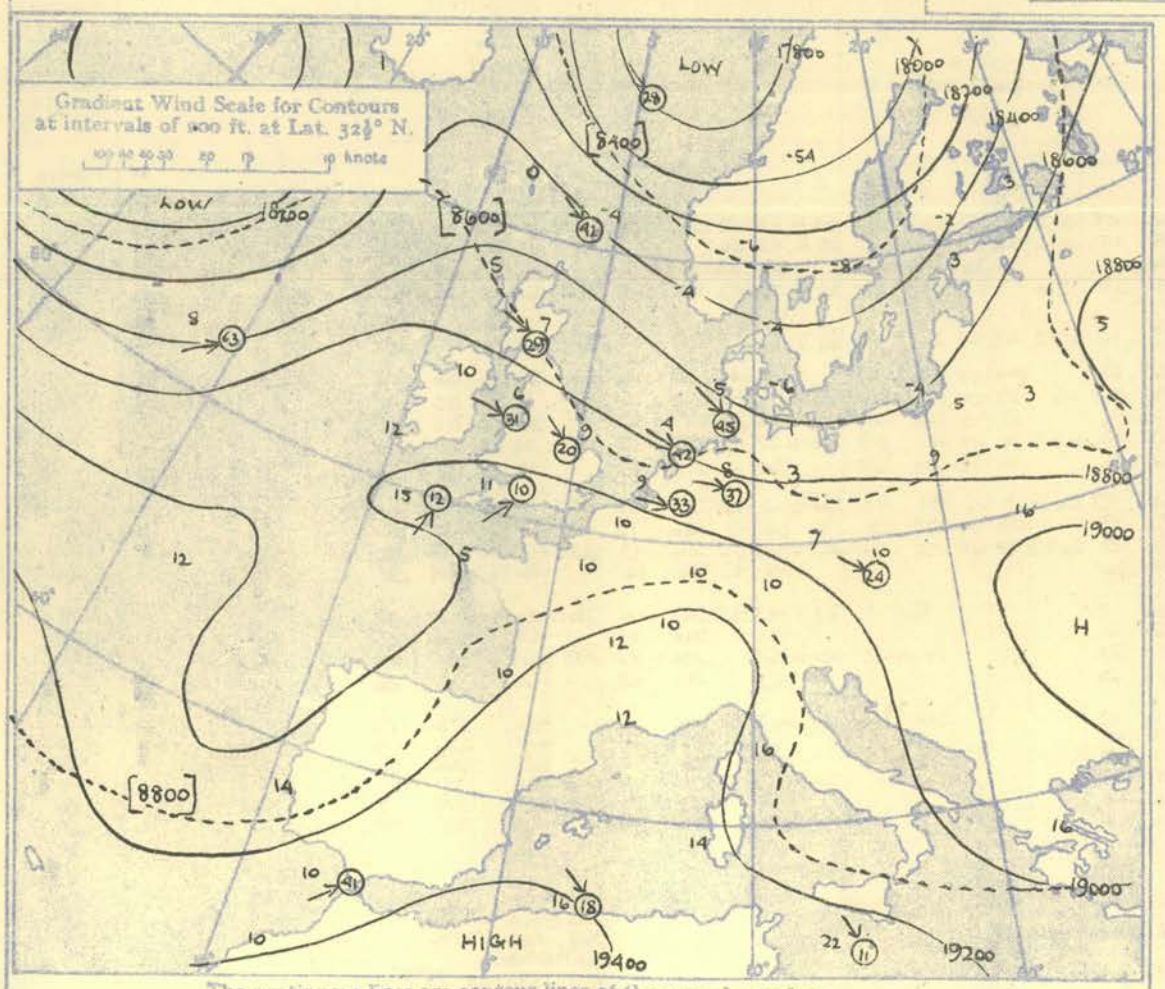
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

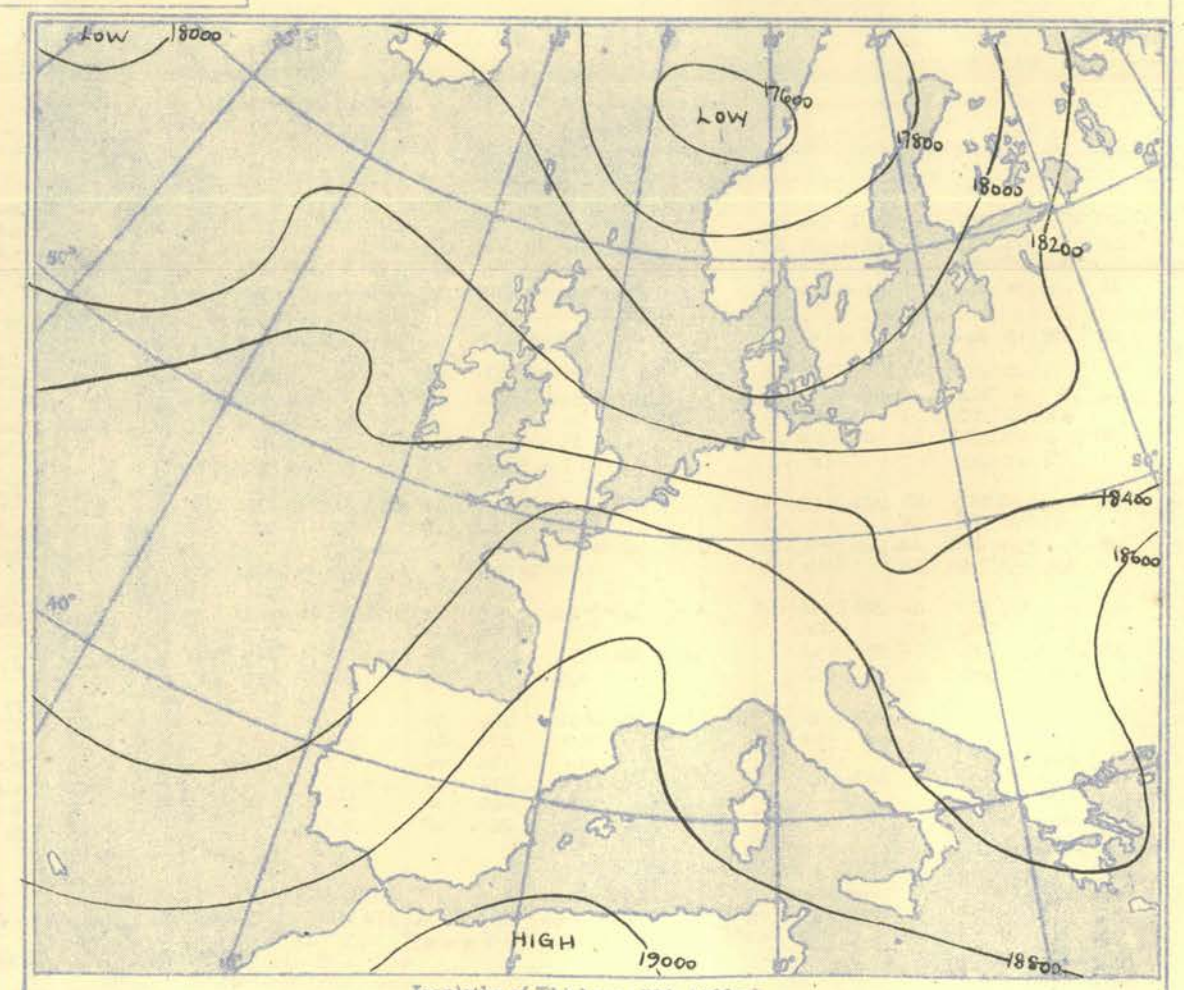
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

Pressure	48·1N 17·0W	47·7N 12·3W	52·12N 02·12W																Time M.S.L. Surf Freezing Pressure
Time	13h	14h	14h																
M.S.L.	1017 mb	1016 mb	1016.5 mb	mb	mb	mb	mb	mb	mb										
Surf	1013 mb	1013 mb	1015 mb	mb	mb	mb	mb	mb	mb										
Freezing	625 mb	635 mb	649 mb	mb	mb	mb	mb	mb	mb										
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Height ft./100	°F. Temp.	°F. Dew	Pressure mb
Surf		62	61		62	62	002															Surf
1000	046	62	61	045			04·7															1000
950		52	52		61	33																950
900		51	51		55	43	34·1	55	39													900
850		52	33		51	47		53	38													850
800		50	49		50	44	66·3	48	34													800
750		45	-07		46	36																750
700	101·8	40	05	102·2	39	23	102·1	39	18													700
650		35	-14		35	21																650
600		28	23		27		142·7	27	16													600
550		20			21																	550
500	1893	14		1897	13		1893	11														500
450																						450
400							2493	-11														400
350																						350
300							311·2	-39														300
250																						250
200	Cloud.			Cloud.			Inversion															200
170	2/8 Sc 960-950mb			2/8 Sc 950-940 mb			997 mb 65°															170
	7/8 Sc 930-900mb			2/8 Ac 490-480mb			980 66°															
	3/8 Cs NR. Inversion 900 mb 51° 850 52° Surf wind VR. 17-21 kts																					

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

Place	Leuchars		Lympne		Dawnham		Shoeburyness		Morton Hall		Lympne		Ronaldsway		Dawnham						Place
Time	03h		09h		09h		09h		10h		19h		21h		22/15h						Time
Type	Pilar.				Radar.																Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	290	02	060	14			050	16	150	06	090	10	Calm		120	05					Surf.
1,000			070	18			070	19	110	07	090	19	150	07							1,000
2,000			080	20			100	19	140	10	120	16	190	13							2,000
3,000			100	11			100	13	110	15	150	21	190	18							3,000
4,000	214	10	090	05			110	09	180	08	160	17	190	19							4,000
5,000	234	11	130	04			210	05	120	06	180	14	200	19							5,000
6,000	241	12	220	07			210	08	170	06	180	15	200	23	210	14					6,000
8,000	246	18	230	13			210	09	180	10	230	15	210	23	220	14					8,000
10,000	261	17	230	11			220	11	220	12	240	20	210	24	230	16					10,000
14,000	277	20	310	20			240	13	250	12					230	21					14,000
18,000	292	29					220	09	250	20					220	24					18,000
24,000	295	36					270	15	260	20					230	30					24,000
30,000	285	15			259	17	250	14	260	19					240	34					30,000
40,000					272	21	270	18							240	23					40,000
50,000					292	19	270	19							250	23					50,000
					263	15	260	15							240	09	60·000				
					(56·000)		(54·000)								190	07	70·000				
															080	11	80·000				
															120	17	85·000				

NEPHOSCOPE OBSERVATIONS

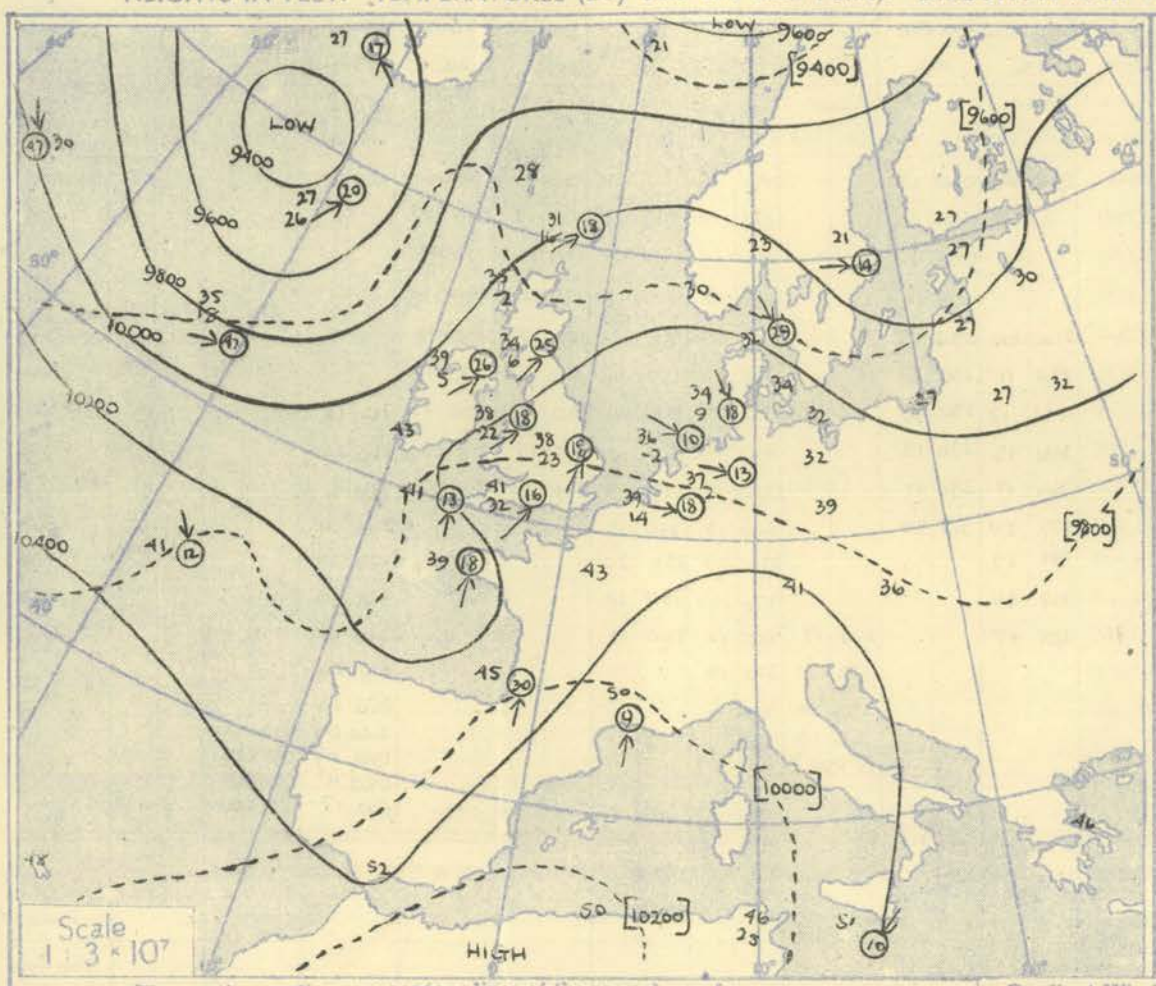
Place											Place
Time Type											Time Type
Dir. Vel.											Dir. Vel.

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

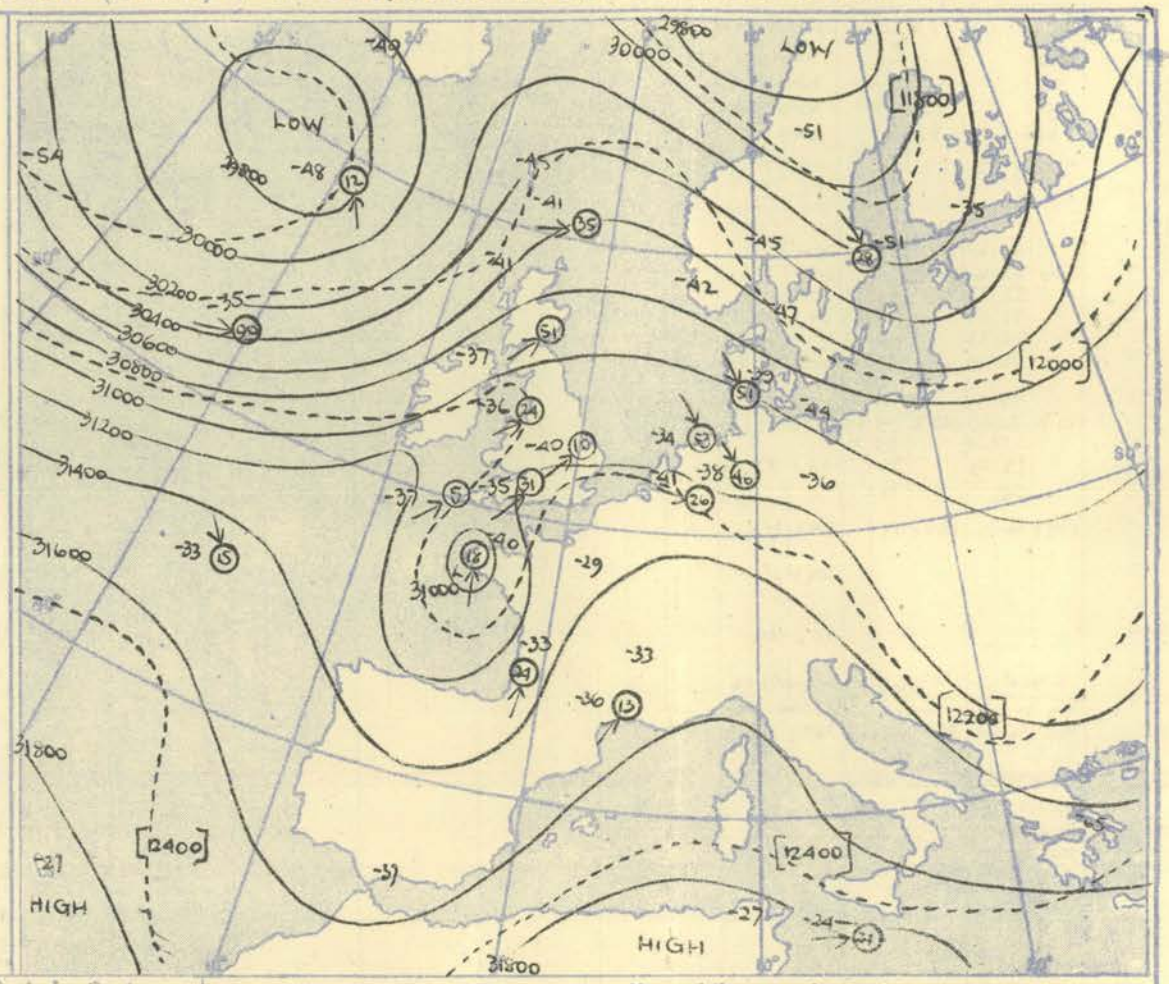
Ship	Weather Explorer	Weather Explorer	Weather Explorer	Weather Explorer	Weather Watcher	Weather Watcher	Weather Watcher	Weather Watcher			Ship
Lat/Long	59·2°N 18·5°W	59·2°N 18·5°W	58·9°N 19·3°W	59·1°N 19·2°W	52·6°N 20°W	52·7°N 19·7°W	52·5°N 20·1°W	52·7°N 19·8°W			Lat/Long
Time	03hrs G.M.T.	09hrs G.M.T.	15hrs G.M.T.	21 hrs G.M.T.	03hrs G.M.T.	09hrs G.M.T.	15hrs G.M.T.	21hrs G.M.T.		G.M.T.	Time
M.S.L.	1006 mb	999 mb	996 mb	995 mb	1011 mb	1010 mb	1005 mb	1005 mb		mb	M.S.L.
Surf	1006 mb	999 mb	996 mb	995 mb	1011 mb	1010 mb	1003 mb	1005 mb		mb	Surf
Freezing	717 mb	718 mb	750 mb	750 mb	660 mb	650 mb	670 mb	760 mb		mb	Freezing
Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. ° Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. ° Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. ° Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. ° Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. ° Vel. knots	Pressure mb
Surf	—	56	24	160 34	—	55	54	175 15	—	55	52	170 10	—	58	55	220 20	—	60	54	260 28	Surf
1000	1·7	56	54	152 43	-4·				-1·1	-1·5			3·1	57	54	276 18	2·8	57	55	283 23	2·3	59	53		1·4	56	53		1000
950		51	50	159 43		52	51	200 18		51	50	176 18		53	51	184 08		53	50	275 24		54	48	255 26		51	44	270 32	950
900	30·5	46	41	178 49	28·5	47	47	211 21	27·7	47	47	185 22	27·4	48	47	183 08	32·0	47	44	273 26	31·8	47	44	256 29	31·3	50	42	262 37	30·2	47	40	271 39	900
850		45	43	186 39		43	42	206 26		43	43	190 25		43	41	184 10		47	47	270 29		42	41	256 30		44	38	262 41		41	35	270 38	850
800	62·3	41	40	191 37	60·2	39	34	195 31	59·3	37	37	186 20	59·1	38	37	182 07	62·9	44	42	245 26	62·5	38	37	255 31	62·0	38	34	260 43	61·8	37	30	263 38	800
750		35	34	210 29		37	21	192 33		32	32	188 20		32	31	181 08		41	08	213 44		36	16	255 31		39	27	258 47		31	25	262 38	750
700	57·1	32	32	223 19	55·5	30	23	184 30	54·4	27	26	197 20	54·2	27	25	183 08	57·6	37	-3	217 58	58·3	32	15	241 41	58·6	35	18	255 47	56·9	30	26	266 40	700
650		27	27	186 14		25	15	182 27		21	20	202 15		22	19	189 10		31	-15	221 51		32	-7	250 54		30	07	247 49		26	14	267 47	650
600	137·9	21	21	208 22	135·4	13	08	184 27	134·0	15	13	198 17	133·8	13	11	188 15	137·9	26	-28	230 82	139·2	26	-23	249 58	138·8	29	02	250 54	136·9	21	05	263 56	600
550		14	07	213 34		11	00	191 28		07	03	191 16		08	03	180 10		19	-36	234 88		19	-31	243 53		19	-8	252 52		12	-3	253 51	550
500	184·0	07	03	214 38	181·1	00	-11	193 27	179·4	-2	-7	175 21	179·2	-1	-7	177 09	186·4	08	-45	238 63	185·4	08	-40	237 54	185·1	08	-27	247 52	182·7	09	-19	253 53	500
450	-2	-5	197	38		-1·0	-19	193 30		-13	-18	187 16		-10	-17	185 21		-9	-46	236 60		-3	-38	244 63		-3	-27	253 60		-3	-27	253 60	450
400	233·4	-13	-17	196 42	234·5	-22	-30	191 42	232·5	-24	-30	186 15	232·6	-23	-32	188 11	240·6	-17	-57	242 62	239·8	-15	-47	237 63	239·4	-15	-46	252 66	236·2	-24	-40	253 62	400
350	-26	-31	196	47	-35	-44	192	36	-37	-43	185	17	-34	-44	227	16	-32	-55	240	63	-25	-53	258	84	-26	-52	256	85	-24	-36	251	82	350
300	304·6	-41		212 57	298·5	-51		192 41	297·4	-48		178 12	297·7	-49		240 24	306·2	-47		239 78	306·1	-40	-53	262 108	305·9	-35	-56	253 90	301·5	-45		251 84	300
250	-53			209 21	-55			191 35	-40			218 19	-48			229 20	-60			248 91						-51		250 105	-50			256 100	250
200	339·2	-61		200 61	337·9	-63		178 24	338·8	-59		208 16	337·0	-60		221 13	339·2	-80		257 66					339·6	-53		247 91	339·4	-46		256 69	200
170	-54			202 39	-45			186 28	-39			222 22	-42			230 15	-63			262 56						-50		260 52	-45				170
																													(194)				
150	-53			215 35	-46			189 23	-40			239 19	-45			242 12	-61			257 47						-51		265 27					150
130	-54			235 32	-48			190 15	-42			224 20	-44			248 11	-63									-51		261 23					130
110	-56			236 27	-48			191 12	-42			247 19	-46			252 10										-51		266 18					110
100	340·7	-56		238 24	340·7	-49		196 15	342·1	-41		252 16	340·7	-46		264 11									345·7	-51		272 15					100
90	-54			239 19	-47			210 16	-40			222 09	-46			257 09										-50		272 15					90
80	-54			242 16	-47			210 12	-41			196 05	-46			220 08										-48		268 12					80
70	-54			244 15	-44			210 08	-40			156 06														-49		267 07					70
60	-54			247 13	-44				-40																	-47							60
	Isothermal Surf-1000 mb 56° 900-850 mb 46° 850-838 mb 45° 717-700 mb 32° Inversion 1000 mb 56° 991 mb 51°		Isothermal 810-785 mb 39°		Inversion 995 mb 55°-975 mb 56°		Inversion 895 mb 46°-872 mb 48° Isothermal 612-585 mb 25°		Isothermal 800-770 mb 38° Inversion 700 mb 32-681 mb 32°														
Tropopause	II 220 mb -71° 37100'	I 269 mb -56° 32200' I 200 mb -53° 38790'	I 294 mb -49° 30200'	II 279 mb -56° 31300'	I 228 mb -65° 36500'	NR.	I 225 mb -58° 37000'	II 273 mb -49° 32000'			Tropopause

Monday 30th. July 1951.

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



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

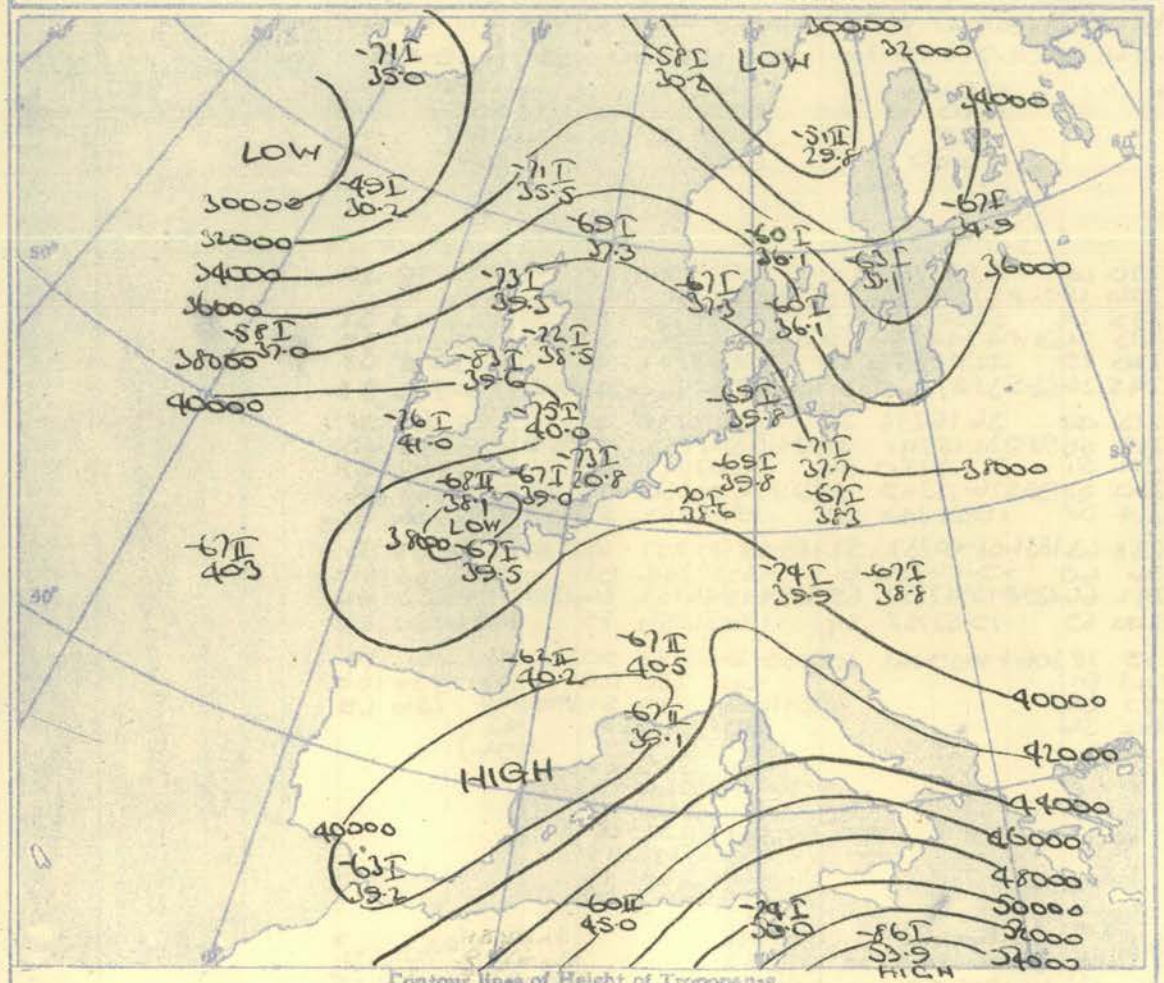


The continuous lines are contour lines of the 300 mb. surface
The dotted lines are isopleths of the thickness of the layer 500 – 300 mb.

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

100 60 40 30 20 15 10 knots

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



Contour lines of Height of Tropopause.
Temperature of Tropopause.

NOTES ON THE AEROLOGICAL SITUATION.

The ridge from the Atlantic moved steadily across the British Isles. A further cold trough followed this ridge and gradually extended southeast to join the existing trough over the Bay of Biscay.

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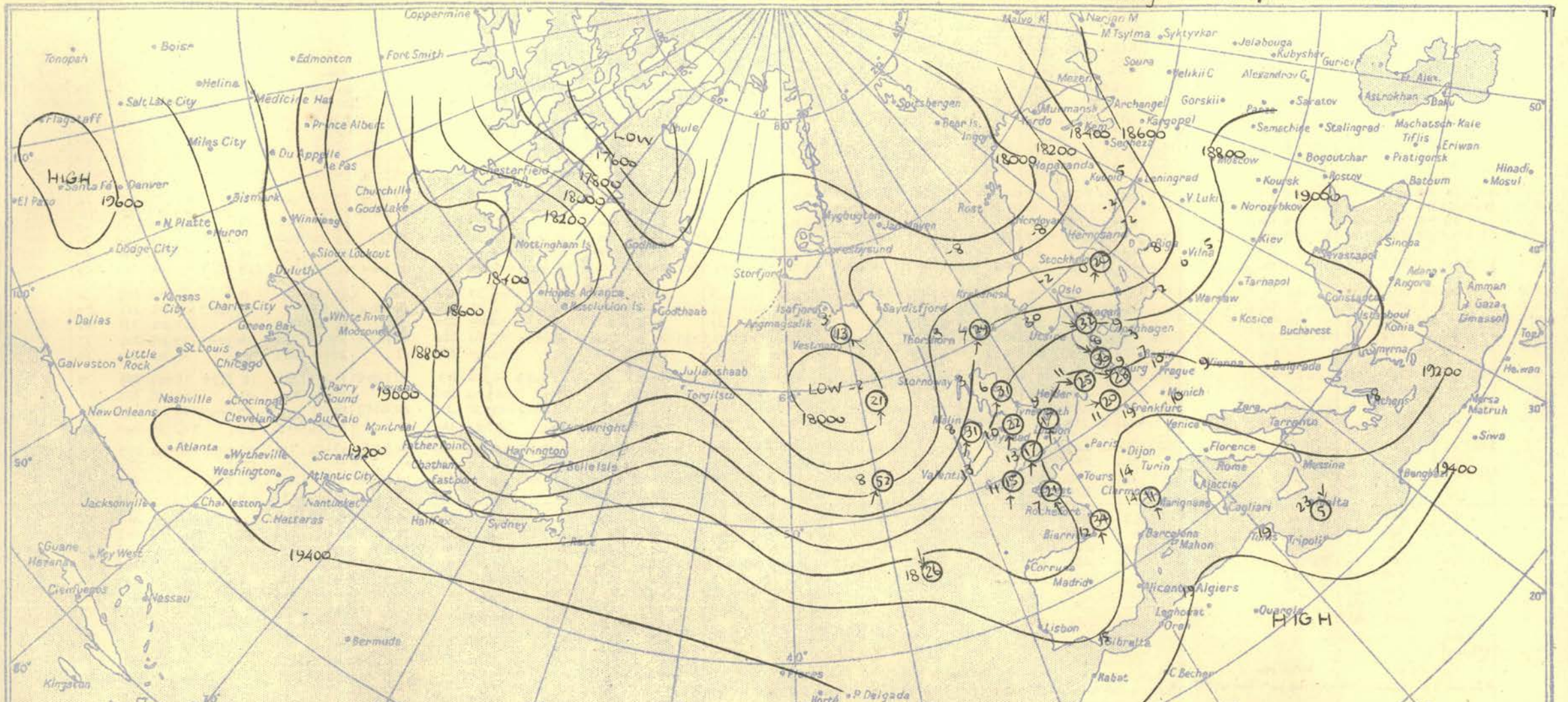
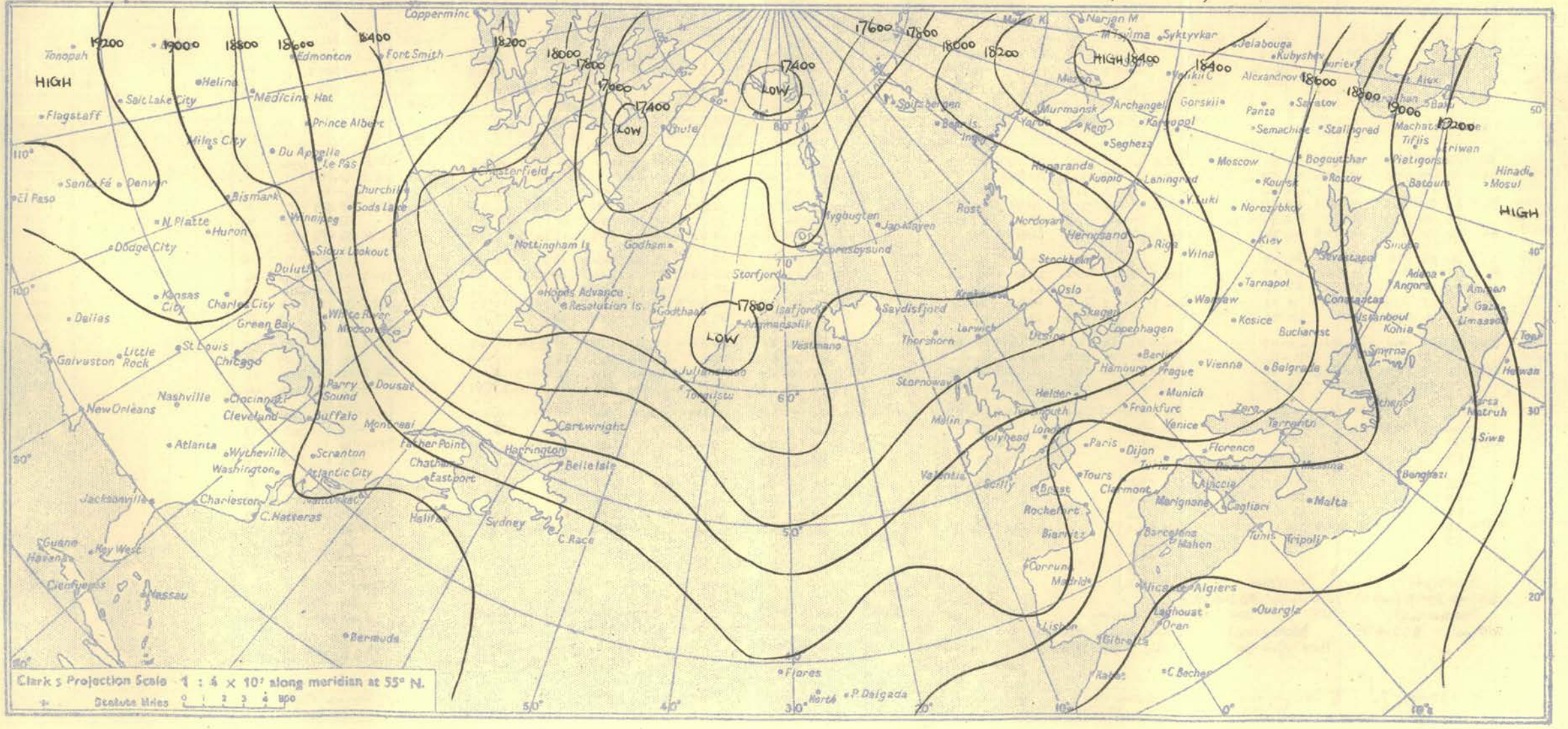
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Monday 30th JULY 1951.



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



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Monday 30th July 1951.

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

15h G.M.T.

Station	Pressure	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	VALENTIA
	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.
	M.S.L.	1017·6 mb	1014·7 mb	1016·8 mb	1015·8 mb	1016·6 mb	1017·7 mb	1016·0 mb	1014·0 mb	1014·4 mb
	Surf	1007·6 mb	1013·1 mb	1016·0 mb	1006·3 mb	1019·6 mb	1013·5 mb	1000·6 mb	1003·8 mb	1013 mb
	Freezing	707 mb	679 mb	684 mb	650 mb	650 mb	655 mb	644 mb	630 mb	615 mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	54	50	195	12	004	60	53			002	66	54	250	05	026	67	57	180	12
1000	048	53	49	200	21	040	59	52			047	63	52	225	11	043	66	56		
950		49	43	206	20		55	46				54	45	225	11		58	50	192	15
900	335	42	38	216	16	330	49	42			336	47	38	212	17	335	50	42	209	19
850		37	32	221	15		42	32				46	32	214	25		48	30	215	23
800	649	40	28	228	16	646	35	18			654	45	20	231	26	656	46	21	220	24
750		36	20	235	16		40	11				41	15	226	25		44	10	217	25
700	1001	31	16	244	18	1000	35	-08			1011	34	06	229	25	013	39	05	220	27
650		27	00	248	19		28	-16				28	01	230	24		32	-04	204	28
600	1407	23	03	252	22	1401	21	-03			1412	23	-07	229	27	1416	26	-10	227	27
550		13	06	254	25		12	04				15	-10	235	30		18	-01	223	14
500	1862	07	01	253	29	1860	03	-06			1873	06	-11	239	31	1881	08	-09	219	31
450		-01	-07	264	28		-09	-19				-04	-17	234	34		-01	-06	235	33
400	2407	-13	-21	263	27	2397	-18	-31			2416	-12	-19	238	42	2428	-10	-24		
350		-26	-32	259	33		-29	-46				-24	-31	239	41		-22	-36		
300	3041	-41		264	35	3056	-41				3083	-36	-44	242	51	3099	-37	-50		
250		-59		255	72		-55					-56		231	54		-55			
200	3939	-65		262	47	3927	-73				3955	-71		240	51	3964	-83			
170		-57		262	38		-63					-61		247	38		-66			
150		-57		268	30		-62					-62		247	33		-68			
130		-54		258	28		-58					-61		244	25		-64			
110		-51		261	29		-60				5427	-59		260	21					
100	5432	-50		269	16	5395	-61					-58		251	22					
90		-48		269	13		-60					-56		241	15					
80		-47		261	09		-61					-56		234	13					
70		-43		241	04							-53		301	10					
60		-40		208	03							-48		162	05					
		-38										-47		116	03					
		(55 mb)										-45								
		Inversion 822 mb 38°-800 mb 40°		Inversion 803 mb 34°-744 mb 41°								Inversion 863 mb 43°-843 mb 47° Isothermal 843 mb - 830 mb 47°					Isothermal 890 - 846 mb 48°			
Tropopause	I 224 mb -69° 37.300			I 200 mb -73° 39.300							I 210 mb -72° 38.500					I 200 mb -83° 39,636				

Station	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	VALENTIA Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	74	48	150	15	012	72	49	140	03	044	75	58	100	12	029	73	58	110	22	003	65	39	195	12
1000	047	70	47	153	21	051	70	46			045	74	59			040	72	57			039	63	57	197	14
950		62	42	155	20		60	42	116	15		66	55	120	12		63	51	104	22		56	50	203	19
900	341	54	37	160	16	344	54	44	143	11	343	61	50	140	10	337	63	50	100	18	330	52	46	202	21
850		46	31	181	12		53	27	186	10		56	47	173	11		57	48	097	15		52	35	206	24
800	661	48	02	194	11	667	48	30	212	13	669	48	45	183	18	664	51	41	114	09	653	51	13	221	26
750		44	08	216	15		43	30	228	15		49	32	204	16		45	35	157	11		47	06	228	26
700	020	38	22	226	18	026	38	23	234	18	030	41	32	225	16	024	41	33	175	13	013	43	05	227	27
650		32	26	236	21		31	22	242	19		33	29	222	15		35	20	186	14		37	02	227	23
600	424	27	22	235	22	431	28	06	240	18	436	25	22	220	16	431	27	11	202	16	421	29	08	222	27
550		19	20	234	21		20	02	221	15		20	14	230	17		20	01	208	16		21	06	227	29
500	889	10	15	212	22	897	09	21	207	17	903	13	04	213	17	898	11	03	217	15	890	13	08	229	29
450		02	25	217	22		02	24	224	22		03	06	202	19		02	16	211	09		04	23	235	34
400	438	08	40	244	24	441	12	32	232	22	453	09	20	215	20	447	09	27	212	09	442	04	30	238	38
350		22	50	226	30		24	44	236	18		21	31	221	28		21	38	195	03		18	39	240	35
300	3109	36	59	223	24	3106	40	60	234	10	3125	35	45	232	31	3119	37	54	218	05	3117	34	54	259	42
250		54		241	22		56		241	19		54		236	34		55		296	08		53		272	61
200	3983	74		245	28	3991	72		264	23	4001	65		236	14	3992	69		277	08	3992	71		253	38
170		62		248	27		67		266	19		63		241	13		67		235	11		62		249	43
150		65		249	24		72		263	17		62		246	17		68		246	12		66		247	34
130		64		232	26		69		256	18		63		260	26		65		244	17		66		242	30
110		61		243	15		69		262	20		62					69		242	14		62		243	20
100	5442	59		243	21	5422	65		274	18		61				5443	66		238	13	5452	65		245	18
90		58		260	19		62		272	19	(105 mb)						63		241	14		60		245	15
80		57		246	07		62		262	07							60		236	10		59		245	14
70		54		242	05		59		257	07							59					57		245	14
60		53					55		190	05															
		(5) mb					55		186	06															
		Inversion 850 mb 46°-832 mb 49° Isothermal 832 - 808 mb 49°					Inversion 876 mb 51°-837 mb 54°					Inversion 781 mb 47°-754 mb 49° Isothermal 718 - 891 mb 61° 521 - 504 - 19°					Isothermal 950 - 900 mb 63°					Inversion 832 mb 50°-800 mb 51° 871 - 51° - 850 - 52° 440 - 03° - 432 - 09°			
Tropopause	I 198 mb -75° 40.000					II 208 mb -71° 38.900					I 210 mb -67° 39.000					II 217 mb -68° 38.100					I 190 mb -76° 41.000				

21h G.M.T.

Station	Pressure	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	
	Time	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	21h G.M.T.	G.M.T.
	M.S.L.	1014·7 mb	1011·2 mb	1014·1 mb	1012·0 mb	1013·9 mb	1016·2 mb	1014·2 mb	1011·5 mb	mb
	Surf	1004·7 mb	1009·6 mb	1013·3 mb	1002·5 mb	1011·9 mb	1011·8 mb	998·8 mb	1001·2 mb	mb
	Freezing	713 mb	740 mb	678 mb	671 mb	669 mb	668 mb	650 mb	645 mb	mb

Pressure mb	LERWICK Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	STORNOWAY Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LEUCHARS Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	ALDERGROVE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	027	52	50	160	08	004	56	51			002	60	54	180	07	026	60	52		
1000	039	51	49	150	19	031	58	52			039	61	55	176	09	033	63	50	161	17
950		48	45	158	18		54	46				58	50	211	12		62	53		
900	325	43	39	168	15	321	48	40			331	51	46	211	18	327	54	50		
850		40	29	188	16		42	36				44	41	193	25		47	42		
800	641	40	15	210	19	638	41	26			648	39	32	197	26	646	44	34		
750		36	08	218	18		34	18				35	17	215	24		42	17		
700	994	30	-04	218	19	990	29	05			1002	34	06	232	24	1004	37	08		
650		25	-06	218	22		22	15				29	-01	223	21		29	11		
600	1392	17	05	223	26	1388	19	13			1403	22	-12	212	25	1407	24	10		
550		08	-01	236	28		10	02				14	-04	216	28		16	11		
500	1847	00	-06	248	29	1844	00	-05			1864	05	-12	223	31	1870	10	01		
450		-09	-15	241	27		-11	-16				-05	-21	227	36		01	-20		
400	2383	-20	-27	234	28	2378	-22	-26			2405	-18	-23	232	42	2417	-11	-18		
350		-30	-40	239	36		-33	-37				-27	-36	236	50		-21	-31		
300	3039	-47		239	44	3032	-46				3069	-40	-48	239	58	3088	-36	-45		
250		-66		244	56		-63					-59					-54			
200	3896	-67				3902	-54				3934	-72				3964	-68			
170		-59					-54					-63					-59			
150		-59					-53					-62					-58			
130		-60					-54					-64					-57			
110		-58					-53					-62								
100	5374	-58				5404	-53				5400	-60				5445	-54			
90		-55					-52					-61								
80												-60								
70												-59								
60												-58								
		Inversion 853 mb 39°-821 mb 43° Isothermal 870 mb - 853 mb 39°		Inversion 1010 mb 56°-995 mb 59° 825 - 39°-800 - 41° Isothermal 730 - 707 mb 30°								Inversion 1013 mb 60°-986 mb 63° 760 - 34°-730 - 37°					Inversion 1003 mb 60°-958 mb 63° 815 - 43°-800 - 44° Isothermal 800 mb - 770 mb 44°			
Tropopause	I 233 mb -72° 35.700			II 250 mb -63° 34.300							I 202 mb -73° 39.600					II 225 mb -65° 37.100				

Station	LIVERPOOL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	DOWNHAM MARKET Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	LARKHILL Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots	CAMBORNE Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots		Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	006	67	49	140	18	012	65	53	090	03	044	68	63			029	63	60	090	12						
1000	039	63	50	161	17	045	64	54			040					032	65	60								
950		64	49	175	16		61	55	148	17		65	60				64	61	126	12						
900	334	58	38	194	14	339	59	51	178	16	337	61	56			328	59	59	145	11						
850		52	36	205	17		55	39	198	13		58	51				51	54	141	10						
800	657	47	38	228	19	663	48	39	225	13	663	52	45			654	53	48	185	09						
750		43	31	237	22		43	30	246	15		46	39				47	37	191	14						
700	1015	36	29	236	26	1022	37	28	243	18	1025	40	35			1015	40	33	193	16						
650		30	23	237	27		29	25	238	20		32	31				33	26	201	19						
600	1418	24	03	237	22	1425	22	19	228	21	1431	25	22			1421	24	4	208	21						
550		16	01	237	22		13	11	220	23		17	14				19	11	209	18						
500	1881	08	-06	238	26	1886	08	02	223	21	1896	11	05			1887	11	01	239	15						
450		-01	-25	230	25		-01	-11	230	23		02	-04				01	13	227	11						
400	2425	-14	-38	239	27	2431	-13	-32	241	24	2445	-08	-16			2435	-10	-26	216	04						
350		-25	-35	239	31		-26	-34	239	26		-22	-34				-23	-41	288	06						
300	3030	-40	-47	239	40	3035	-40	-47	236	31	3116	-38	-50			3105	-37	-52	324	11						
250		-60		239	40		-57		241	33		-56					-57		305	12						
200	3952	-79		239	39	3963	-71		243	26	3991	-67				3974	-70		252	10						
170		-69		235	34		-67		251	20		-67					-65		239	18						
150		-70		244	32		-68		252	21		-64					-68		244	21						
130		-69		240	22		-69		251	20		-67					-71		246	19						
110		-69		251	21		-67		248	18		-63					-66		242	19						
100	5394	-65		231	18	5410	-67		248	16	5449	-62				5423	-66		246	16						
90		-64					-66										-65		236	12						
80		(33 mb)															-68		230	07						
70																	-72									
60																	(73 mb)									
		Inversion 1003 mb 60°-958 mb 63° 815 - 43°-800 - 44° Isothermal 800 mb - 770 mb 44°		Inversion 1002 mb 67°-1000 mb 69° Isothermal 790 - 765 mb 45°		Isothermal 869 - 950 mb 61°		Inversion 999 mb 68°-987 mb 69° Isothermal 878 - 840 mb 58°		Inversion 975 mb 63°-950 mb 69° Isothermal 893 - 855 mb 58° 585 - 567 - 21°														
Tropopause	II 197 mb - 80° 39.800					III 211 mb -70° 38.500					I 200 mb -67° 39.900					I 210 mb -72° 38.800										

HMSO Pr 233, MO, Dunstable

No. 11611 **DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON.** Tuesday 31st July 1951

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

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	Valentia
Pressure: Time	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.	03hrs G.M.T.
M.S.L.	1012·2 mb	1007·2 mb	1011·2 mb	1009·1 mb	1010·9 mb	1012·6 mb	1010·6 mb	1010·1 mb	1010·4 mb
Surf	1002·2 mb	1005·6 mb	1010·4 mb	999·6 mb	1008·9 mb	1008·3 mb	994·9 mb	999·7 mb	1008 mb
Freezing	692	750	693	687	675	652	645	645	–

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surface	02·7	51	51	190	05
1000	03·3			01·5	35
950		51	47	190	23
900	32·1	48	42	198	23
850		42	38	208	22
800	63·7	35	31	209	27
750		31	08	210	24
700	98·5	33	-18	212	25
650		26	-23	215	26
600	118·9	15	-21	213	27
550		11	+05	213	27
500	164·6	02	-3	220	30
450		-8	-13	222	33
400	238·4	-19	-23	216	38
350		-30	-35	227	51
300	304·1	-45		229	63
250		-67		236	78
200	390·5	-65		231	54
170		-58		232	41
150		-55		238	33
130		-57		241	27
110		-56			
100	533·3	-56			
90		-56			
80		-56			
70		-58			
60		-59			
	(53)	-54			
Tropopause	I 223 mb -69° 36700′	I 230 mb -65° 35700′	II 255 mb -76° 39600′	II 240 mb -67° 38400′	I 202 mb -76° 39400′	I 187 mb -77° 41100′	I 203 mb -70° 39400′	I 200 mb -79° 39700′	–

Inversion 970 mb 50° – 950 mb 51°; 785 mb 34 – 761 mb 37°; Isothermal 1002 – 985 mb 51°; 950 – 927 mb 51°; 761 – 746 mb 37°

Inversion 1006 mb 55 – 987 mb 57°

Inversion 1010 mb 54 – 980 mb 61°; 623 mb 20 – 603 mb 22°; 435 mb 11 – 424 mb 4°

Inversion 1000 mb 57 – 982 mb 61°; 793 mb 43 – 782 mb 44°; 510 mb 34 – 494 mb 6°; Isothermal 494 – 479 mb 6°

Inversion 600 mb 21 – 590 mb 22°; Isothermal 1009 – 950 mb 6°

Isothermal 916 – 791 mb 51°; 515 – 500 mb 9°

Inversion 995 mb 62 – 960 mb 69°

Inversion 832 mb 52 – 800 mb 53°; Isothermal 970 – 914 mb 61°; 605 – 586 mb 26°

Station	LERWICK	STORNOWAY	LEUCHARS	ALDERGROVE	LIVERPOOL	DOWNHAM MARKET	LARKHILL	CAMBORNE	
Pressure: Time	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	09hrs G.M.T.	G.M.T.
M.S.L.	1010·0 mb	1005·1 mb	1008·7 mb	1001·4 mb	1008·4 mb	1010·5 mb	1009·8 mb	1010·6 mb	mb
Surf	1000·0 mb	1003·3 mb	1007·9 mb	991·3 mb	1006·4 mb	1006·1 mb	994·3 mb	1000·2 mb	mb
Freezing	718 mb	731 mb	697 mb	700 mb	665 mb	636 mb	641 mb	640 mb	mb

Pressure mb	Height ft./100	°Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surface	02·7	53	53	190	16
1000	02·7			01·3	37
950		50	50	180	36
900	31·5	52	48	182	37
850		46	43	184	36
800	63·4	43	34	185	32
750		37	30	194	29
700	98·5	29	19	201	28
650		22	11	207	25
600	138·7	16	17	218	24
550		10	03	220	27
500	184·7	03	-3	210	30
450		-6	-12	198	47
400	238·7	-13	-26	218	52
350		-24	-31	218	58
300	305·4	-38	-45	222	60
250		-55			
200	393·0	-61			
170		-57			
150					
130					
110					
100					
90					
80					
70					
60					
Tropopause	II 220 mb -65° 37400′	I 223 mb -59° 36900′	I 200 mb -71° 39300′	NR	I 188 mb -77° 40400′	I 209 mb -60° 38900′	I 195 mb -65° 40300′	II 198 mb -70°	

Inversion 950 mb 50° – 897 mb 52°; 717 mb 42 – 700 mb 43°; 682 mb 24 – 625 mb 22°

Inversion 1004 mb 56 – 953 mb 58°

Inversion 990 mb 56 – 950 mb 59°; 488 mb 4 – 466 mb 0°

Inversion 932 mb 51 – 900 mb 52°; 810 mb 42 – 754 mb 44°; 650 mb 25 – 635 mb 26°

Inversion 500 mb 9 – 491 mb 10°; Isothermal 988 – 919 mb 60°; 596 – 581 mb 21°

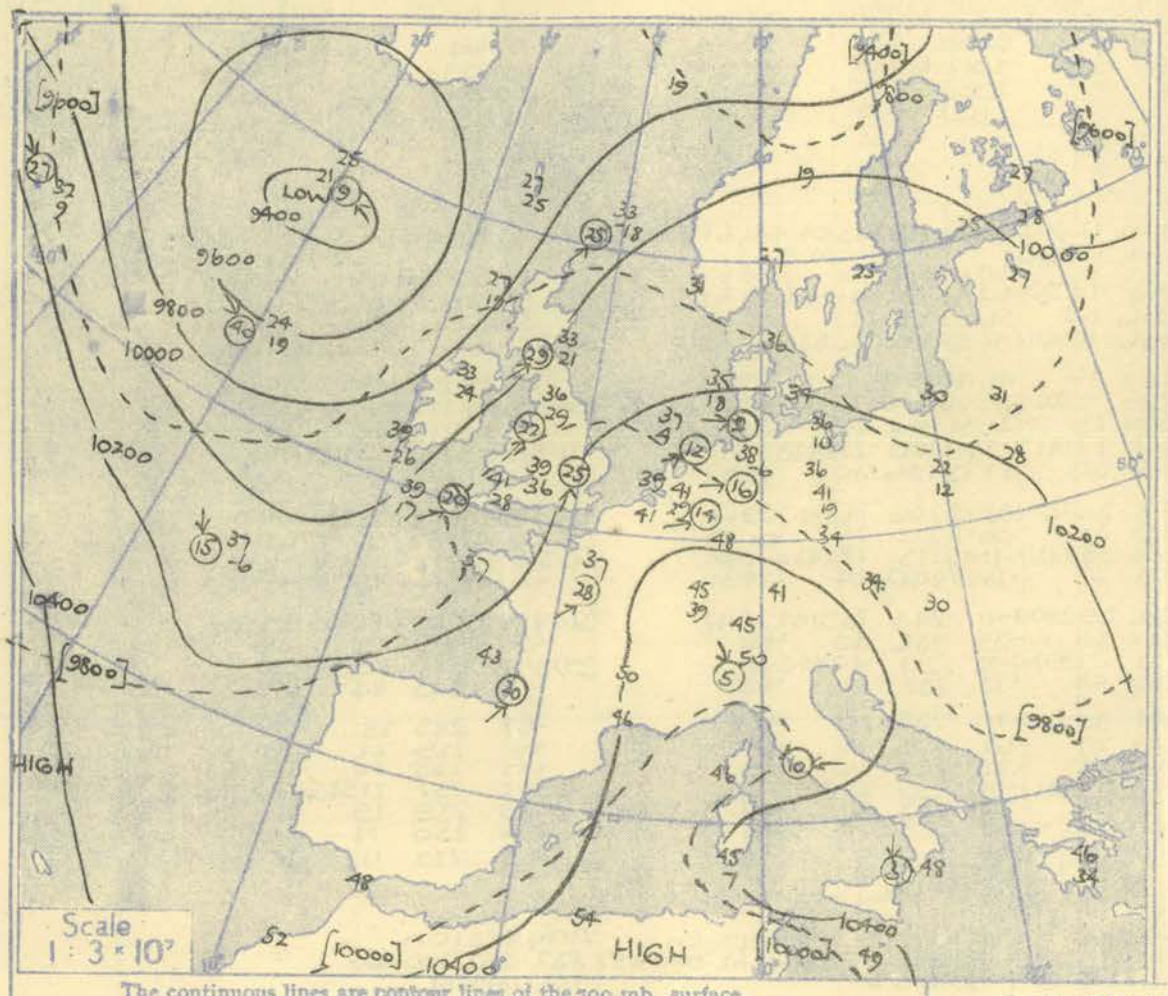
Inversion 944 mb -16 – 936 mb -23°; Isothermal 1006 – 900 mb 65°; 706 – 696 mb 41°

Inversion 888 mb 55 – 870 mb 66°

Inversion 860 mb 54 – 838 mb 55°; 289 mb -39 – 285 mb -38°; Isothermal 582 – 528 mb 60°; 678 – 663 mb 36°; 532 – 515 mb 18°

Tuesday 31st July 1951.

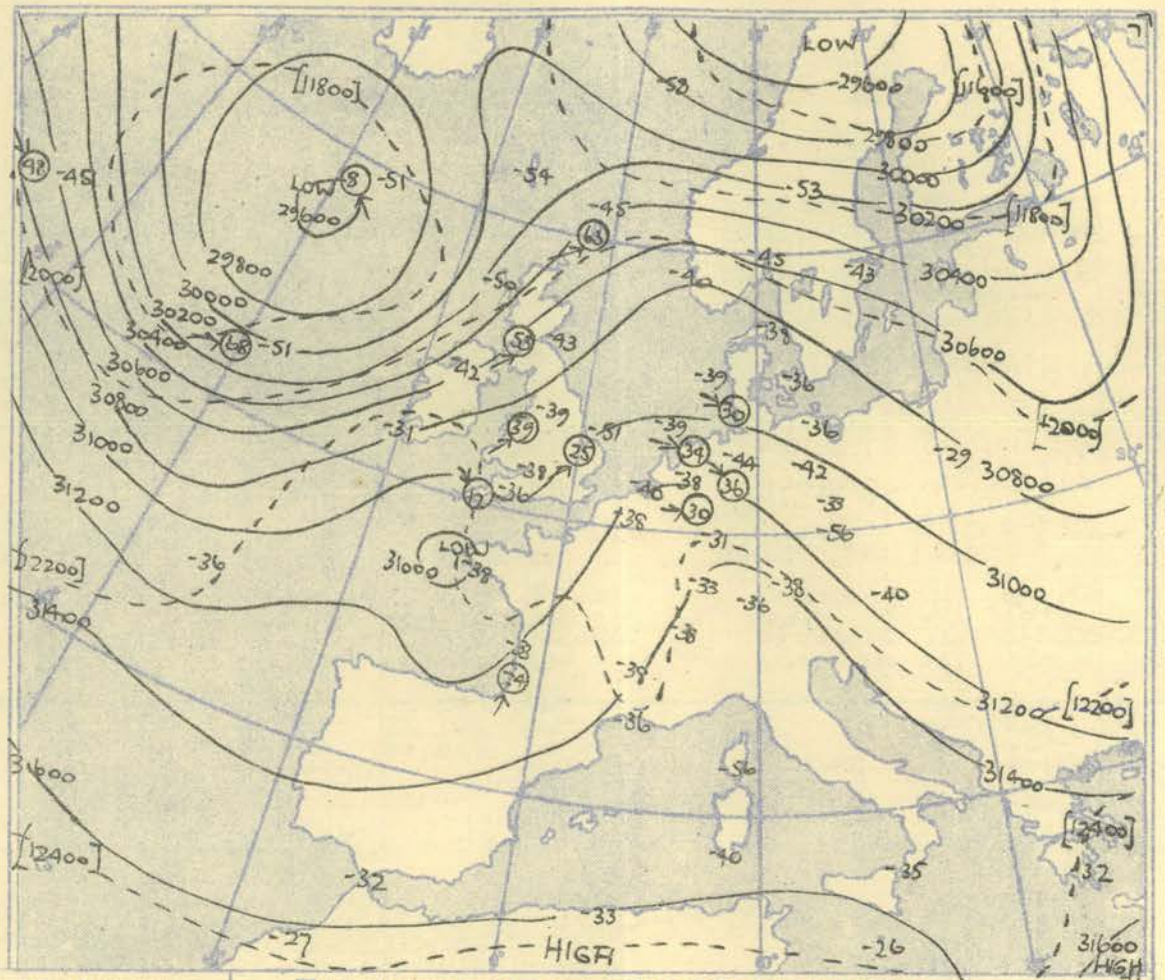
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (In knots) OF WINDS at the 700 mb., 500 mb. and 300 mb., levels at about 03 h. G.M.T.



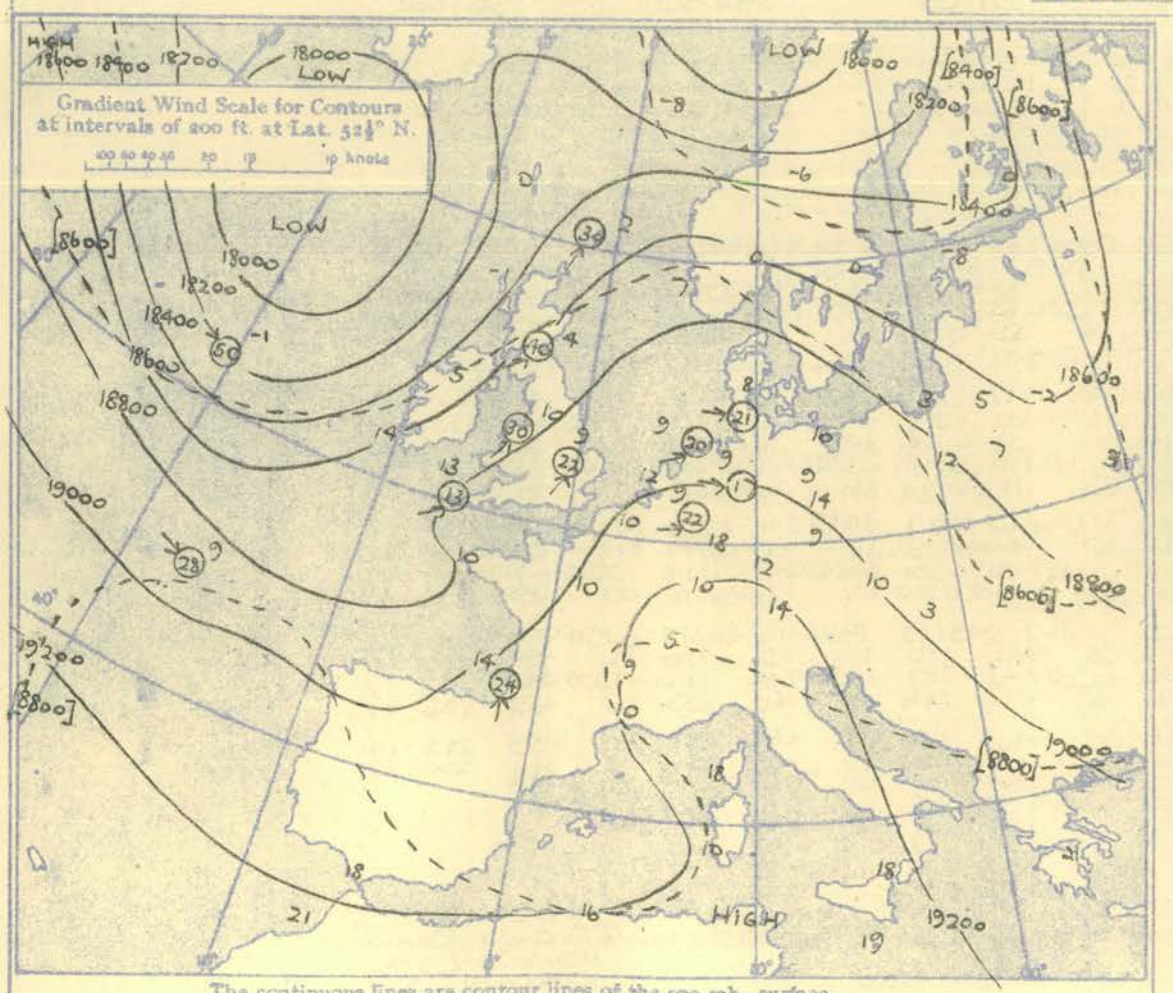
The continuous lines are contour lines of the 700 mb. surface.
The dotted lines are isopleths of the thickness of the layer 1000—700 mb.

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

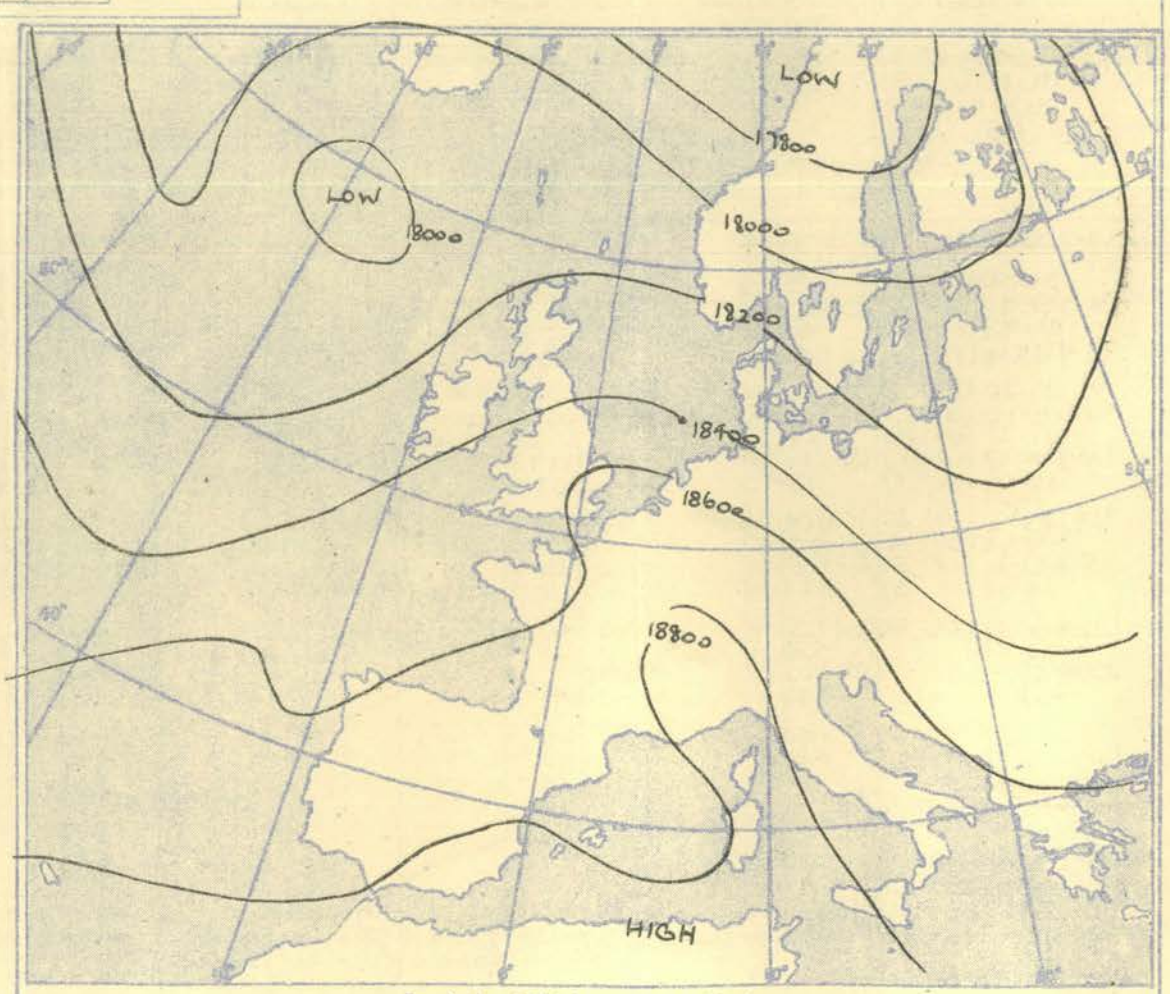
100 60 40 30 20 15 10 knots



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



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



Isopleths of Thickness 500-1000mb.

AIRCRAFT OBSERVATIONS OF TEMPERATURE AND HUMIDITY

No Flights Available

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

Place	Ronaldsway		Shoeburyness		Leuchars				Ronaldsway				Downham Market		Lerwick						Place
Time	08hrs		09hrs		09hrs		15hrs		14/15hrs		20hrs		21hrs		21hrs						Time
Type					Pilot		Pilot						Pilot		Radar wind						Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	Calm		230	07	Calm		080	02	250	12	230	05	200	05	180	11					Surf.
1,000	260	10	220	18	209	11	209	05	240	14	240	10	233	15	155	31					1,000
2,000	220	06	220	20	203	13	203	04	220	17	230	17	246	13	158	31					2,000
3,000	190	16	200	19	197	18	205	06	230	20	230	16	256	14	155	26					3,000
4,000	210	16	210	19	193	21	210	12	220	21	220	14	259	13	160	18					4,000
5,000	200	20	210	19	196	23	210	19	210	31	230	16	251	16	168	19					5,000
6,000			210	20	200	23	209	22	210	34	220	19	242	17	173	24					6,000
8,000			200	20	204	29	212	24	200 (7000')	34	240 (2000')	21	223	19	179	31					8,000
10,000			200	23	197	31	207	27					221	23	183	32					10,000
14,000			220	26	202	34	201	35					213	29	192	38					14,000
18,000			210	30	205	43	217	37					214	33	181	42					18,000
24,000			200	32	211	54	217	30					220	26	194	53					24,000
30,000			210	50	221	59	217	32					196	30							30,000
40,000			220	25	278	12	(25000')						190	17							40,000
50,000			230	22									(35000')								50,000
			230	24																	
			(53000')																		

NEPHOSCOPE OBSERVATIONS

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

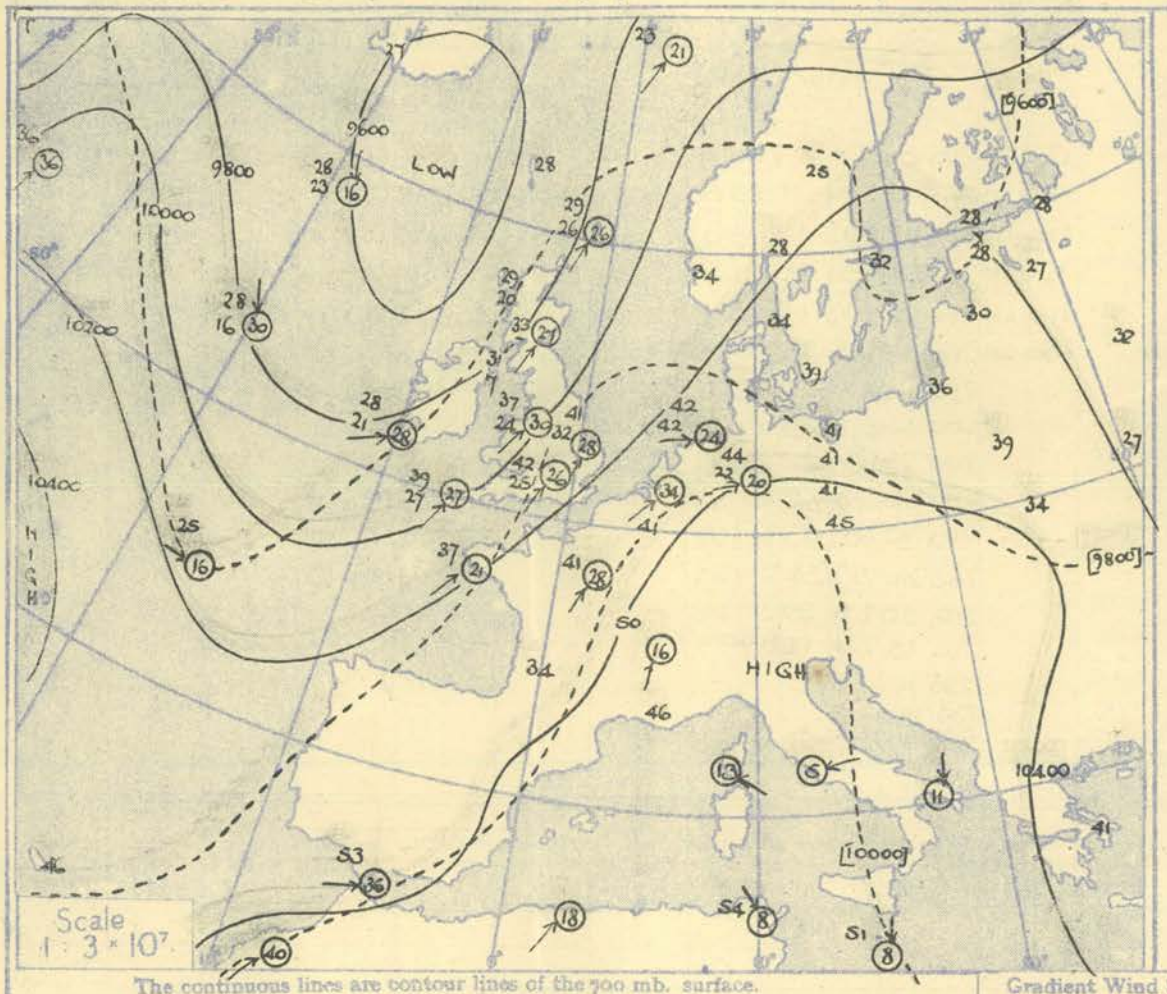
RADIO-SOUNDINGS OF TEMPERATURE, HUMIDITY AND WIND (Heights above M.S.L.) FROM SHIPS.

Ship	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER WATCHER	WEATHER EXPLORER	WEATHER EXPLORER	WEATHER EXPLORER	WEATHER EXPLORER			Ship
Lat/Long	52·5N. 20·0W.	52·6N. 19·8W.	52·5N. 19·8W.	52·5N. 19·6W.	59·1N. 19·1W.	59·1N. 19·2W.	59·1N. 19·2W.	59·0N. 19·1W.			Lat/Long
Pressure Time	03h. G.M.T.	09h. G.M.T.	15h. G.M.T.	21h. G.M.T.	03h G.M.T.	09h. G.M.T.	15h G.M.T.	21h. G.M.T.	G.M.T.		Time
Pressure M.S.L.	1004 mb	1005 mb	1008 mb	1012 mb	995 mb	997 mb	1001 mb	1004 mb	mb		Pressure M.S.L.
Pressure Surf	1004 mb	1005 mb	1008 mb	1012 mb	995 mb	997 mb	1001 mb	1004 mb	mb		Pressure Surf
Pressure Freezing	750 mb	760 mb	728 mb	700 mb	760 mb	760 mb	730 mb	725 mb	mb		Pressure Freezing

Pressure mb	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Height ft./100	°F. Temp.	°F. Dew	Wind Dir. °	Wind Vel. knots	Pressure mb
Surf		58	56	275	33		55	53	280	35		59	55	310	27		59	54	305	22		55	53	060	10		55	53	360	09		55	53	360	15		56	52	310	17		Surf
1000	01·2	58	55			01·4	57	52			02·3	58	56			03·2	57	53	310	22	-01·5					-08·0				-03·0	55	53			01·0	54	51			1000
950		52	49	277	33		52	48	270	26		52	49	310	26		51	47	315	22		51	50	083	12		49	49	009	11		52	50	359	12		50	48	321	22		950
900	30·1	47	43	280	36	30·3	47	44	271	33	31·2	46	43	314	27	32·0	46	42	318	21	27·3	47	46	098	11	27·9	44	43	008	09	29·2	48	46	001	13	29·7	45	45	323	23	900
850		42	37	282	40		41	37	273	36		42	36	323	28		42	36	307	24		42	39	098	10		40	39	008	09		44	41	002	15		41	41	326	24	850
800	61·7	37	32	284	42	61·9	36	33	275	36	62·8	37	29	327	30	63·7	39	26	313	26	58·9	37	34	092	08	59·4	35	32	008	09	60·9	39	36	001	18	61·2	38	36	328	24	800
750		32	29	283	40		31	28	277	36		33	21	330	31		36	26	321	25		31	27	055	08		30	27	007	12		35	31	359	17		35	28	330	24	750
700	96·8	24	19	280	40	96·9	27	23	280	37	98·0	28	16	330	30	99·1	32	21	322	33	93·9	25	21	100	09	94·3	24	19	007	12	96·1	28	23	355	16	96·4	29	25	332	24	700
650		24	07	278	51		20	14	281	38		22	08	322	36		28	09	324	34		18	12	107	07		18	10	008	13		22	14	352	15		23	13	336	25	650
600	136·4	16	05	271	52	136·4	15	09	284	36	137·6	18	01	319	36	139·2	23	-04	328	42	133·2	08	04	060	07	133·6	09	02	025	13	135·8	15	05	349	15	136·0	17	05	338	28	600
550		08	-07	271	42		06	-03	282	36		09	-06	317	42		16	-19	328	48		04	-04	354	06		02	-05	045	14		09	-04	348	18		09	-07	335	38	550
500	181·8	-01	-15	278	50	181·7	-03	-14	283	37	183·2	00	-12	314	43	185·4	06	-29	329	50	178·3	-04	-13	004	07	178·5	-05	-17	030	16	181·3	00	-16	347	21	181·6	01	-17	330	43	500
450		-10	-29	275	50		-14	-24	286	44		-12	-22	314	48		-05	-32	331	57		-14	-21	071	03		-16	-28	001	20		-10	-29	345	20		-09	-24	330	50	450
400	235·2	-22	-35	268	57	234·9	-22	-40	285	54	236·5	-22	-31	316	57	239·5	-17	-52	334	77	231·3	-25	-32	100	03	231·4	-26	-35	007	20	234·8	-21	-46	344	35	235·2	-21	-35	330	52	400
350		-37	-45	256	57		-32	-50	286	53		-36	-46	325	57		-30	-57	339	73		-37		100	08		-38	-48	013	17		-35	-58	350	41		-36	-48	330	20	350
300	300·0	-51		253	58	300·5	-44		263	48	301·5	-51		346	66	305·4	-45		343	91	296·0	-51		105	08	296·0	-50		018	16	300·0	-49		350	45	300·1	-49		330	68	300
250		-45		248	62		-42		264	46		-61		347	51		-62		348	89		-48		070	06		-52		020	16		-52		350	42		-57		330	60	250
200	388·9	-48		238	49	390·9	-39		249	42	389·2	-48		329	28	392·2	-52				385·0	-43		287	06	384·8	-40		353	09	388·7	-43		350	14	388·2	-47		330	27	200
170		-49		257	42		-41		257	36		-49		299	25		-54					-44					-42		312	10		-41		350	13		-46		330	25	170
150		-52		264	38		-44		257	38		-50		302	20		-54					-46					-46		283	09		-42		330	10		-48		330	19	150
130		-54		264	36		-43		250	42		-51		318	18		-52					-48					-47		281	09		-46		302	10						130
110		-54					-45		245	23		-50		285	18		-54					-49					-49		278	12		-45		352	19						110
100	539·6	-55				545·0	-44				540·8	-50		258	20	542·5	-55				537·8	-49				537·8	-49		276	09	542·5	-48		255	11						100
90		-56					-44					-50		246	26							-49					-48		271	07		-45		269	10						90
80		-55										-51		255	16							-50					-48		240	06		-44		268	08						80
70		-55										-47		L.V.								-49					-48		233	04		-47		242	07						70
60		-55										-46		L.V.								-50					-46		223	04		-43		167	08						60
												(050 mb)	-44									-42									(054 mb)	-44								
													-46																												
	Inversion 690mb. 22°-658mb. 25°		Inversion 620mb. 15°-608mb. 16°		Isothermal 658-640mb. 22°		Inversion 687mb. 30°-673mb. 31° 610mb. 22°-592mb. 24° Isothermal 869-862mb. 42° 787-764mb. 37°																		Inversion 1000mb. 55°-994mb. 56° Isothermal 1001-1000mb. 55° 793-685mb. 28° 620-600mb. 15° 505-500mb. 0°					Inversion 609mb. 16°-608mb. 17° Isothermal 613-600mb. 17°					
Tropopause	I 282mb. -56° 31,200		II 300mb. -44° 30,000'		I 253mb. -62° 34,000'		I 230mb. -67° 36,400'		I 285mb. -54° 30,700'		I 260mb. -52° 33,800		I 265mb. -58° 32,700'								I 256mb. -58° 33,400'										Tropopause

Tuesday 31st July, 1951.

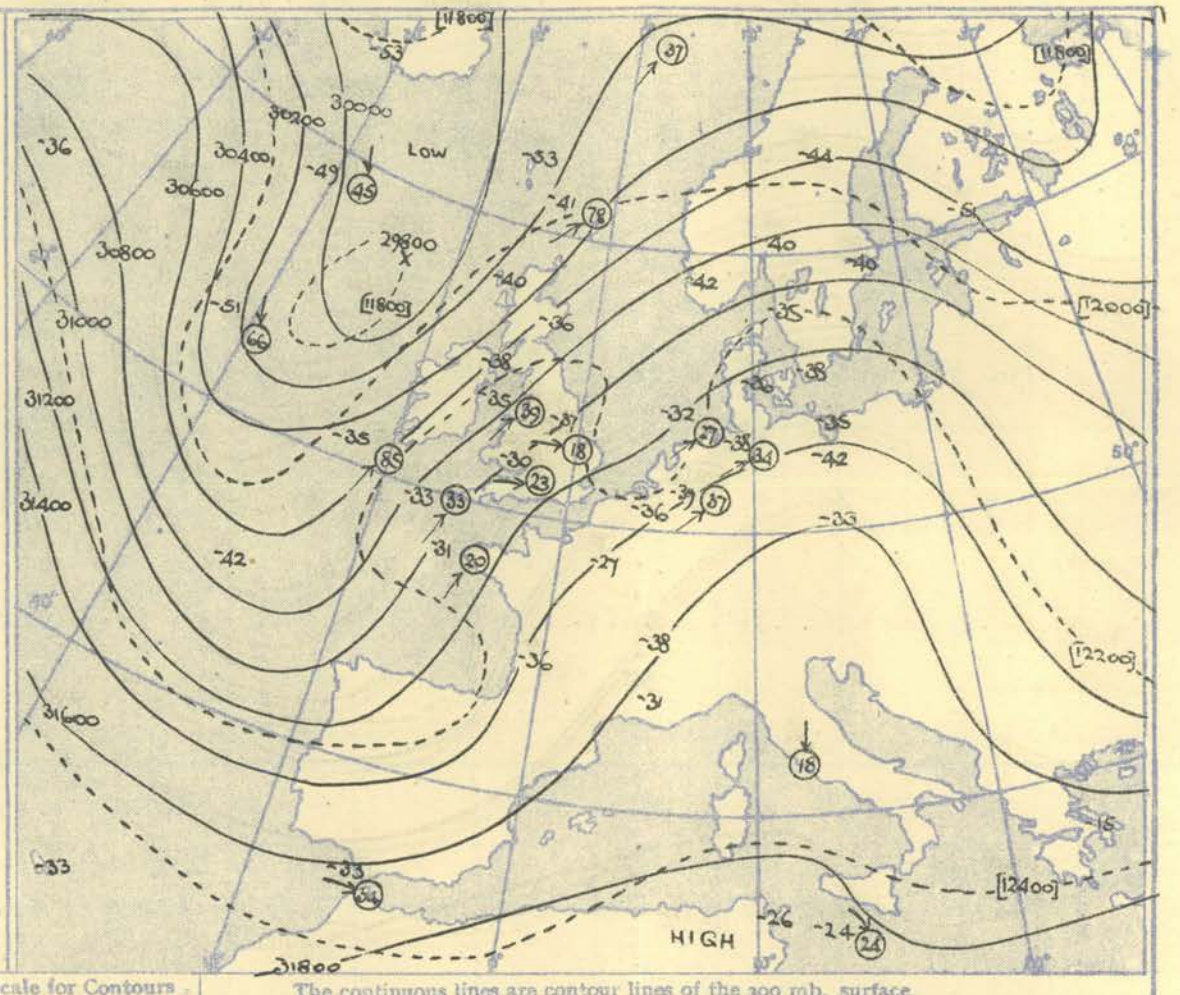
HEIGHTS IN FEET. TEMPERATURES (Dry bulb and Dew Point). DIRECTION AND VELOCITY (in knots) OF WINDS at the 700 mb. and 300 mb., levels at about 15 h. G.M.T.



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.

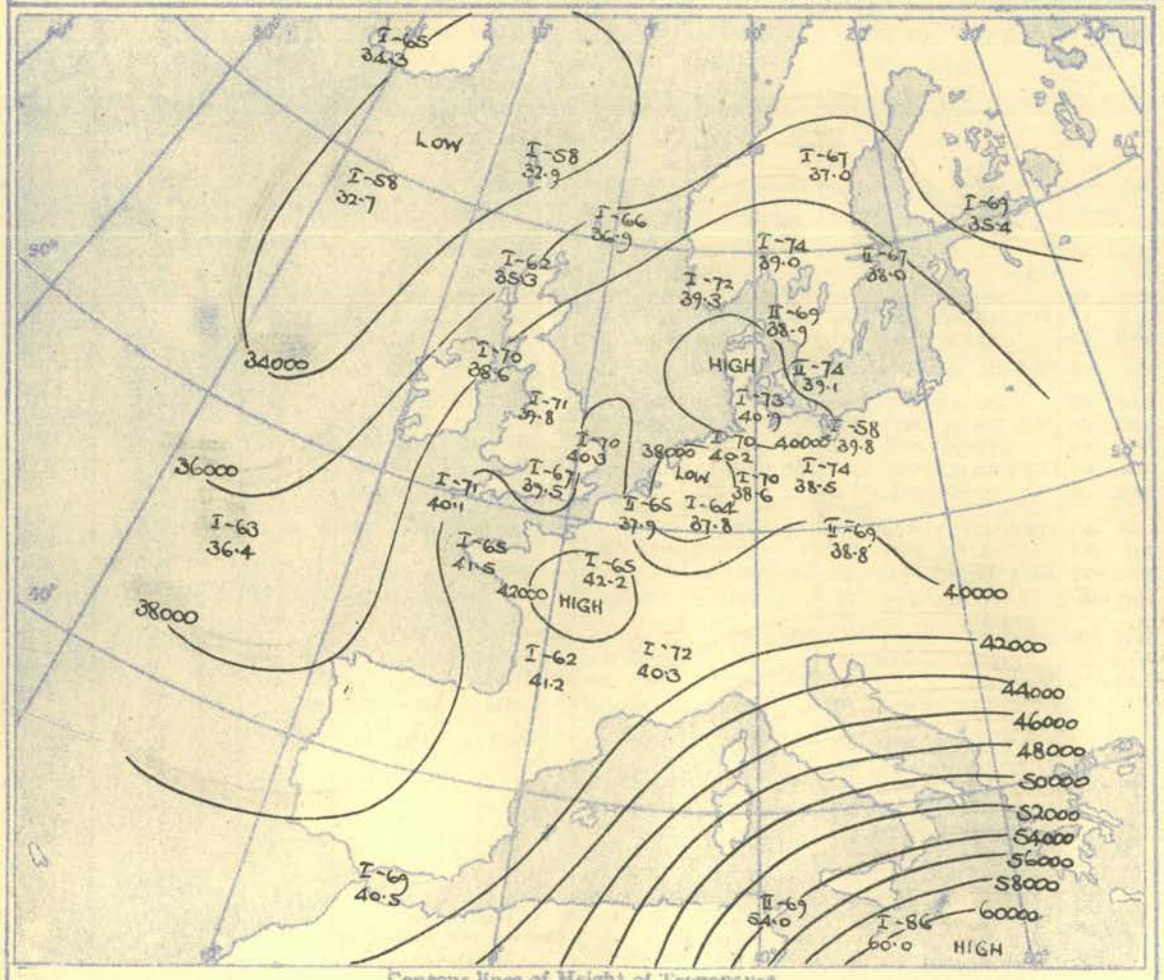
Gradient Wind Scale for Contours at intervals of 200 ft. at Lat. 52½° N

100 50 40 30 20 15 10 knots



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

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 over France moved slowly east to Germany whilst the cold trough to the west of the British Isles sharpened somewhat as a further warm ridge moved east across the western Atlantic.

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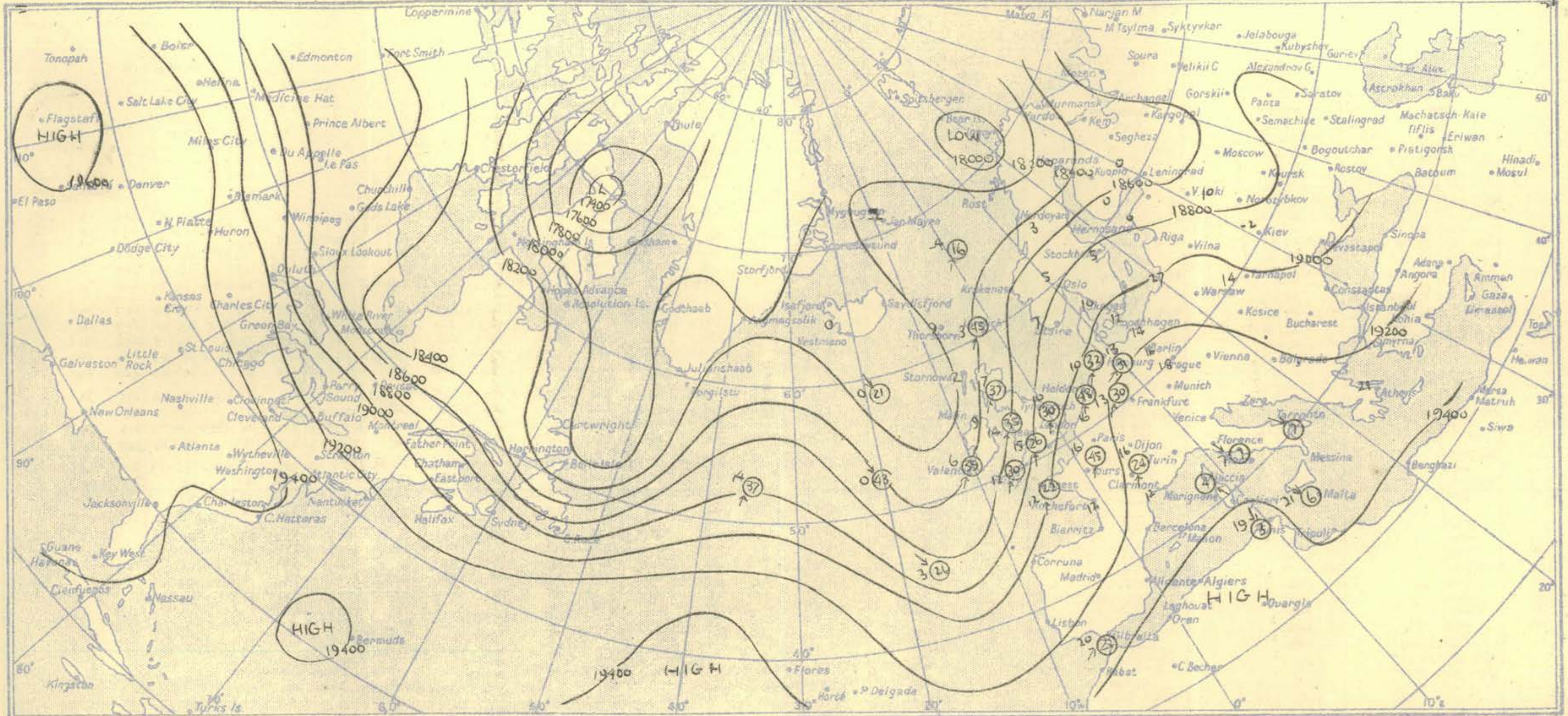
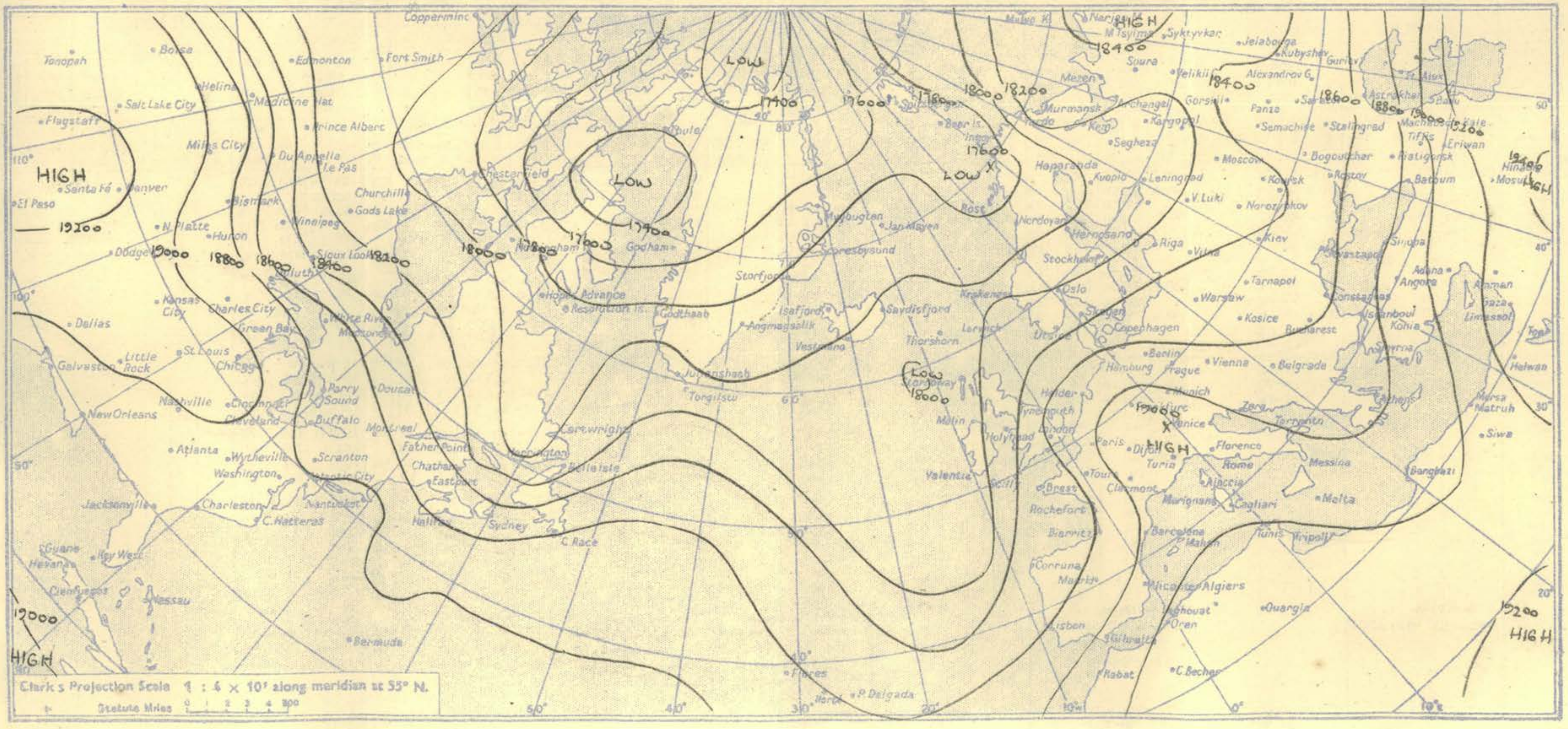
Meteorological Office, Air Ministry, Kingsway, London, W.C.2
NELSON K. JOHNSON, K.C.B., D.Sc., Director.

CONTOURS of the 500 mb. PRESSURE level at about 15 h. G.M.T. Tuesday 31st July 1951.



ISOPLETHS OF THICKNESS 500-1000 mb. at about 15 h. G.M.T. Tuesday 31st July 1951.



DAILY AEROLOGICAL RECORD OF THE METEOROLOGICAL OFFICE, LONDON. Tuesday 31st JULY 1951.

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

LERWICK

Pressure — Time 15h G.M.T.; M.S.L. 1009·1 mb; Surf 999·2 mb; Freezing 722 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53	180	12
1000	02·5				
950		51	51	176	36
900	31·4	51	51	181	34
850		49	43	182	32
800	636	43	41	188	29
750		36	32	196	25
700	99·0	29	26	201	26
650		25	18	220	31
600	138·9	16	07	224	37
550		10	06	203	40
500	184·7	03	00	194	46
450		-07	-10	193	55
400	238·6	-15	-19	205	65
350		-27	-32	215	69
300	304·9	-41		217	78
250		-58		222	78
200	392·0	-60		227	60
170		-55		212	31
150		-53		214	30
130		-51			
110		-51			
100	542·3	-51			
90		-48			
80		-48			
70		-48			
60		-43			

Isothermal. 950-877 mb 51° 678-662 27°

Tropopause: I 223 mb. -66° 36·900

STORNOWAY

Pressure — Time 15h G.M.T.; M.S.L. 1004·7 mb; Surf 1003·1 mb; Freezing 735 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	61	65		
1000	01·3	60	55		
950		54	49		
900	30·3	48	43		
850		43	38		
800	62·0	38	32		
750		33	26		
700	97·2	29	20		
650		25	14		
600	137·1	11	-11		
550		02	-15		
500	182·9	02	-15		
450		-08	-19		
400	236·7	-17	-24		
350		-26	-33		
300	303·1	-40	-46		
250		-58			
200	390·8	-51			
170		-48			
150		-49			
130		-50			
110		-50			
100	542·3	-47			
90		-46			
80		-44			
70		-45			
60		-45			
		-46			

Tropopause: I 240 mb -62° 35·200

LEUCHARS

Pressure — Time 15h G.M.T.; M.S.L. 1007·2 mb; Surf 1006·4 mb; Freezing 690 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	60	57		
1000	02·0	59	57		
950		58	56		
900	31·2	54	51		
850		50	50		
800	63·2	46	46		
750		40	38		
700	98·8	33	32		
650		27	27		
600	138·9	21	13		
550		13	-04		
500	188·0	07	-01		
450		00	-09		
400	239·5	-11	-19		
350		-22	-35		
300	306·5	-37	-51		
250		-55			
200	393·6	-76			
170		-62			
150		-59			
130		-58			
110		-58			
100	541·0	-60			
90		-59			
80		-58			
(85 mb)					

Inversion 974 mb 56°-950 mb 58° Isothermal 525-510 mb 09°

Tropopause: I 200 mb -76° 39·400

ALDERGROVE

Pressure — Time 15h G.M.T.; M.S.L. 1006·5 mb; Surf 997·2 mb; Freezing 740 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	67	56	240	10
1000	01·8				
950		59	50	235	16
900	31·1	51	43	226	16
850		45	39	220	17
800	62·9	40	36	225	17
750		33	29	226	22
700	98·1	31	17		
650		29	06		
600	138·2	22	-06		
550		14	-03		
500	184·3	09	04		
450		00	-04		
400	239·0	-09	-15		
350		-21	-28		
300	306·0	-38	-44		
250		-58			
200	393·0	-60			
170		-55			
150		-57			
130		-56			
110		-54			
100	542·8	-53			
90		-53			
80		-50			
70		-49			

Inversion 667 mb 28°-644 mb 29° Isothermal 734-700 mb 31°

Tropopause: I 206 mb -70° 38·600

LIVERPOOL

Pressure — Time 15h G.M.T.; M.S.L. 1008·0 mb; Surf 1006·0 mb; Freezing 652 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	68	59	250	05
1000	02·2	66	57		
950		61	55	250	10
900	31·5	55	49	250	15
850		51	46	246	18
800	63·7	47	41	227	21
750		41	33	210	27
700	99·5	37	24	216	30
650		32	09	218	32
600	140·0	27	-09	218	33
550		20	-40	218	33
500	186·7	14	-07	218	35
450		04	-06	223	35
400	241·9	-06	-15	217	39
350		-21	-30	216	40
300	309·2	-35	-44	220	39
250		-52		231	44
200	391·0	-71		231	44
170		-57		223	40
150		-59		219	36
130		-57		235	29
110		-57		225	26
100	544·9	-57		222	25
90		-57		222	23
80		-53		225	17
70		-50		216	15
60		-50		206	08

(53 mb) Isothermal 968-950 mb 61°

Tropopause: I 198 mb -71° 39·800

DOWNHAM MARKET

Pressure — Time 15h G.M.T.; M.S.L. 1009·4 mb; Surf 1005·1 mb; Freezing 640 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	70	65	230	07
1000	02·7	69	64		
950		61	60	223	17
900	32·2	58	58	228	20
850		57	53	228	21
800	64·9	56	44	221	31
750		49	36	220	29
700	101·3	41	32	219	28
650		33	21	210	30
600	141·9	26	14	213	35
550		19	04	215	36
500	188·5	10	-04	222	30
450		02	-12	223	26
400	243·3	-11	-26	221	26
350		-25	-38	234	10
300	309·3	-37	-48	267	13
250		-54		294	15
200	391·5	-69		249	18
170		-61		224	30
150		-62		228	28
130		-64		230	26
100		-62		229	21
90	544·3	-60		214	23
80		-59		223	18
70		-56		218	12

Inversion 886 mb 57°-850 mb 61°

Tropopause: I 195 mb -70° 40·300

LARKHILL

Pressure — Time 15h G.M.T.; M.S.L. 1010·2 mb; Surf 994·7 mb; Freezing 622 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	66	64	240	03
1000	02·9				
950		61	57	242	14
900	32·3	59	54	235	16
850		57	53	228	21
800	64·9	56	38	224	24
750		50	34	225	25
700	101·3	42	25	225	26
650		35	14	218	29
600	142·1	29	14	216	31
550		22	02	220	30
500	188·9	15	-14	225	26
450		05	-18	228	23
400	244·1	-05	-31	227	23
350		-16	-37	225	18
300	312·1	-30	-46	248	23
250		-48		253	17
200	400·8	-63		238	24
170		-58		221	29
150		-60		221	29
130		-59		222	25
100		-57		227	21
90	548·8	-57		220	20
80		-58		225	19
70		-53		218	18
60		-51		208	13
		-49		200	11
		-46		195	08

-41 Inversion 837 mb 56°-815 mb 58° Isothermal. 944 mb-913 mb 60°

Tropopause: I 206 mb -67° 39·800

CAMBORNE

Pressure — Time 15h G.M.T.; M.S.L. 1011·6 mb; Surf 1001·3 mb; Freezing 659 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	68	59	345	10
1000	03·2				
950		60	52	254	09
900	32·5	55	44	248	13
850		52	37	239	15
800	64·5	48	41	232	26
750		46	19	228	29
700	100·6	39	27	221	27
650		31	23	215	27
600	141·2	27	-06	214	29
550		21	-14	210	28
500	188·9	12	00	213	30
450		02	-09	214	31
400	242·8	-09	-18	210	36
350		-20	-33	212	33
300	310·2	-33	-43	217	33
250		-51		228	40
200	398·2	-70		242	33
170		-60		220	35
150		-62		222	37
130		-60		227	26
100		-60		227	20
90	545·6	-57		230	19
80		-53		223	15
70		-49		229	12
60		-54			

Inversion 789 mb 46°-760 mb 48° 621-600 mb 27°

Tropopause: I 197 mb -71° 40·100

VALENTIA

Pressure — Time 15h G.M.T.; M.S.L. 1009·6 mb; Surf 1008 mb; Freezing 740 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·3	64	57	245	13
1000	02·6	62	56	245	14
950		54	50	241	19
900	31·7	49	41	242	20
850		44	38	248	21
800	63·4	39	31	249	21
750		33	28	247	25
700	98·5	28	21	244	28
650		24	13	242	31
600	138·2	18	03	238	36
550		15	-04	229	34
500	184·3	06	-18	225	39
450		-01	-13	218	57
400	238·9	-19	-29	218	72
350		-20	-28	207	81
300	306·2	-35	-43	209	85
250		-53		215	94
200	394·5	-53		227	114
170		-49			
150		-53			
130		-52			
110		-53			
100	545·8	-54			
90		-53			
80		-53			
70		-52			
60		-51			

Tropopause: I 222 mb -63° 37·300

LERWICK

Pressure — Time 21h G.M.T.; M.S.L. 1007·4 mb; Surf 997·5 mb; Freezing 723 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·7	53	53		
1000	02·0				
950		51	51	For	
900	30·8	50	50	winds	
850		46	45		
800	62·7	41	40	see	
750		35	35		
700	98·1	30	30	page	
650		24	24		
600	139	17	17	3	
550		11	10		
500	183·7	04	02		
450					
400					
350					
300					
250					
200					
170					
150					
130					
110					
100					
90					
80					
70					
60					

Inversion 997 mb 53°-989 mb 54°

Tropopause: NIL.

STORNOWAY

Pressure — Time 21h G.M.T.; M.S.L. 1004·8 mb; Surf 1003·2 mb; Freezing 742 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·4	56	54		
1000	01·3	56	54		
950		53	50		
900	30·2	48	45		
850		43	39		
800	61·9	38	34		
750		33	29		
700	97·0	26	22		
650		22	15		
600	136·6	17	09		
550		07	02		
500	182·0	-02	-10		
450		-10	-19		
400	235·5	-19	-37		
350		-28	-42		
300	301·7	-40	-47		
250		-60			
200	389·3	-53			
170		-50			
150		-52			
130		-54			
110		-54			
100	539·9	-53			
90		-54			
80		-56			
70					
60					

Tropopause: I 230 mb -66° 35·900

LEUCHARS

Pressure — Time 21h G.M.T.; M.S.L. 1006·6 mb; Surf 1005·8 mb; Freezing 697 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·2	57	55	Calm	
1000	01·8	58	55	260	09
950		58	50	255	12
900	30·3	51	41	244	15
850		48	35	243	18
800	62·8	40	29	233	18
750		36	16	216	24
700	98·1	33	00	206	32
650		25	-06	202	32
600	138·0	18	-05	204	30
550		14	04	212	44
500	183·9	06	02		
450		-04	-08		
400	238·1	-13	-20		
350		-26	-34	202	71
300	304·5	-42		209	56
250		-58		215	64
200	390·9	-78		211	65
170		-58		223	46
150		-63		222	30
130		-59		219	30
110		-62		224	27
100	538·1	-63			

Inversion 1006 mb 57°-974 mb 61° Isothermal. 872-850 mb 48°

Tropopause: I 200 mb -78° 39·000

ALDERGROVE

Pressure — Time 21h G.M.T.; M.S.L. 1006·8 mb; Surf 999·3 mb; Freezing 740 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·6	62	55		
1000	01·8				
950		57	52		
900	30·9	50	46		
850		45	40		
800	62·7	39	32		
750		33	27		
700	97·9	27	20		
650		24	09		
600	137·7	18	-02		
550		08	-06		
500	183·7	02	-14		
450		-02	-08		
400	237·4	-13	-19		
350		-24	-33		
300	304·1	-39	-49		
250		-59			
200	391·5	-58			
170		-52			
150		-57			
130		-58			

Tropopause: I 226 mb -64° 36·500

LIVERPOOL

Pressure — Time 21h G.M.T.; M.S.L. 1009·4 mb; Surf 1007·4 mb; Freezing 674 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	00·6	62	52		
1000	02·6				
950		59	51		
900	31·8	52	44		
850		46	38		
800	63·7	40	33		
750		43	12		
700	99·3	37	03		
650		28	-01		
600	139·5	24	-03		
550		19	01		
500	185·9	10	02		
450		00	-07		
400	240·5	-11	-17		
350		-22	-32		
300	307·4	-37	-34		
250		-54			
200	394·7	-75			
170		-64			
150		-66			
130		-63			
110		-64			
100	540·5	-62			
90		-61			
80		-60			
70		-60			
60		-60			
(68 mb)					

Inversion 1007 mb 62°-990 mb 63° 796 39°-758 44° Isothermal. 608-597 mb 24° 582-563 21°

Tropopause: I 200 mb -75° 34·500

DOWNHAM MARKET

Pressure — Time 21h G.M.T.; M.S.L. 1010·1 mb; Surf 1005·8 mb; Freezing 662 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	01·2	67	64	300	03
1000	02·8	67	64		
950		63	60		
900	32·4	58	57		
850		51	50		
800	64·9	51	37	For	
750		44	35		
700	100·8	36	31	winds	
650		31	24		
600	141·1	25	15	see	
550		17	05		
500	187·5	09	-06	page	
450		00	-12		
400	242·1	-11	-21	3	
350		-25	-39		
300	308·5	-42			
250		-57			
200	395·0	-74			
170		-68			
150		-68			
130		-72			

Inversion 844 mb 50°-826 mb 54° Isothermal. 1006-984 mb 67° 684-674 34°

Tropopause: I 200 mb -74° 39·500

LARKHILL

Pressure — Time 21h G.M.T.; M.S.L. 1011·3 mb; Surf 995·7 mb; Freezing 656 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	04·4	64	59	Calm	
1000	03·1				
950		61	55	293	10
900	32·6	55	52	259	10
850		50	49	232	18
800	64·9	50	39	229	21
750		45	36	223	26
700	101·0	37	31	228	27
650		31	16	219	28
600	141·4	25	09	215	29
550		20	04	209	30
500	188·0	14	-09	206	30
450		02	-14	201	28
400	243·1	-07	-26	203	28
350		-20	-41	197	31
300	310·4	-35	-51	193	31
250		-51		202	24
200	398·3	-69		206	22
170		-64		217	33
150		-62		217	31
130		-64		222	24
100		-64		226	20
90	544·7	-59		227	21
80		-59		240	18
70		-59			

Inversion 832 mb 48°-811 mb 51° Isothermal 996-985 mb 64°

Tropopause: I 200 mb -69° 39·800

CAMBORNE

Pressure — Time 21h G.M.T.; M.S.L. 1012·9 mb; Surf 1002·8 mb; Freezing 679 mb

Pressure mb	Height ft./100	Temp. °F.	Dew °F.	Wind Dir. °	Wind Vel. knots
Surf	02·9	59	54	250	05
1000	03·5	60	55		
950		56	51	260	13
900	32·6	51	43	270	13
850		45	39	273	15
800	64·5	48	18	274	16
750		43	17	275	15
700	100·4	35	07	251	18
650		29	01	228	22
600	140·5	23	-08	220	30
550		17	-23	211	36
500	186·9	11	+03	211	37
450		01	-09	216	43
400	241·7	-10	-25	212	42
350		-21	-38	210	45
300	308·9	-35	-51	205	45
250		-53		204	46
200	396·7	-67		213	38
170		-62		216	34
150		-58		226	25
130		-62		220	24
100		-59		224	20
90	544·1	-59			
80		-59			
70	(96 mb)				

Inversion 1003 mb 59°-990 mb 61° 830-790 mb 49°

Tropopause: I 200 mb -67° 39·700