

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION. No. 5422.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrt.)

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

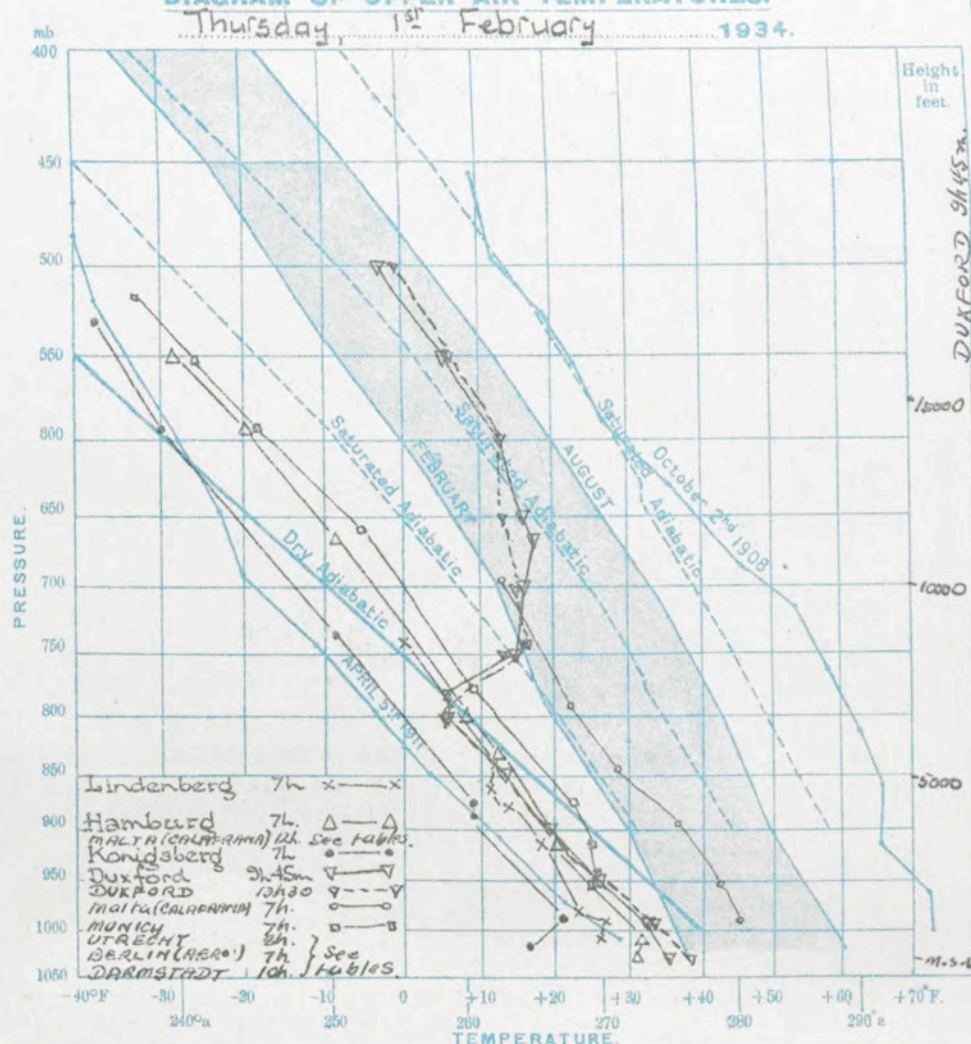


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 1st February 1934.

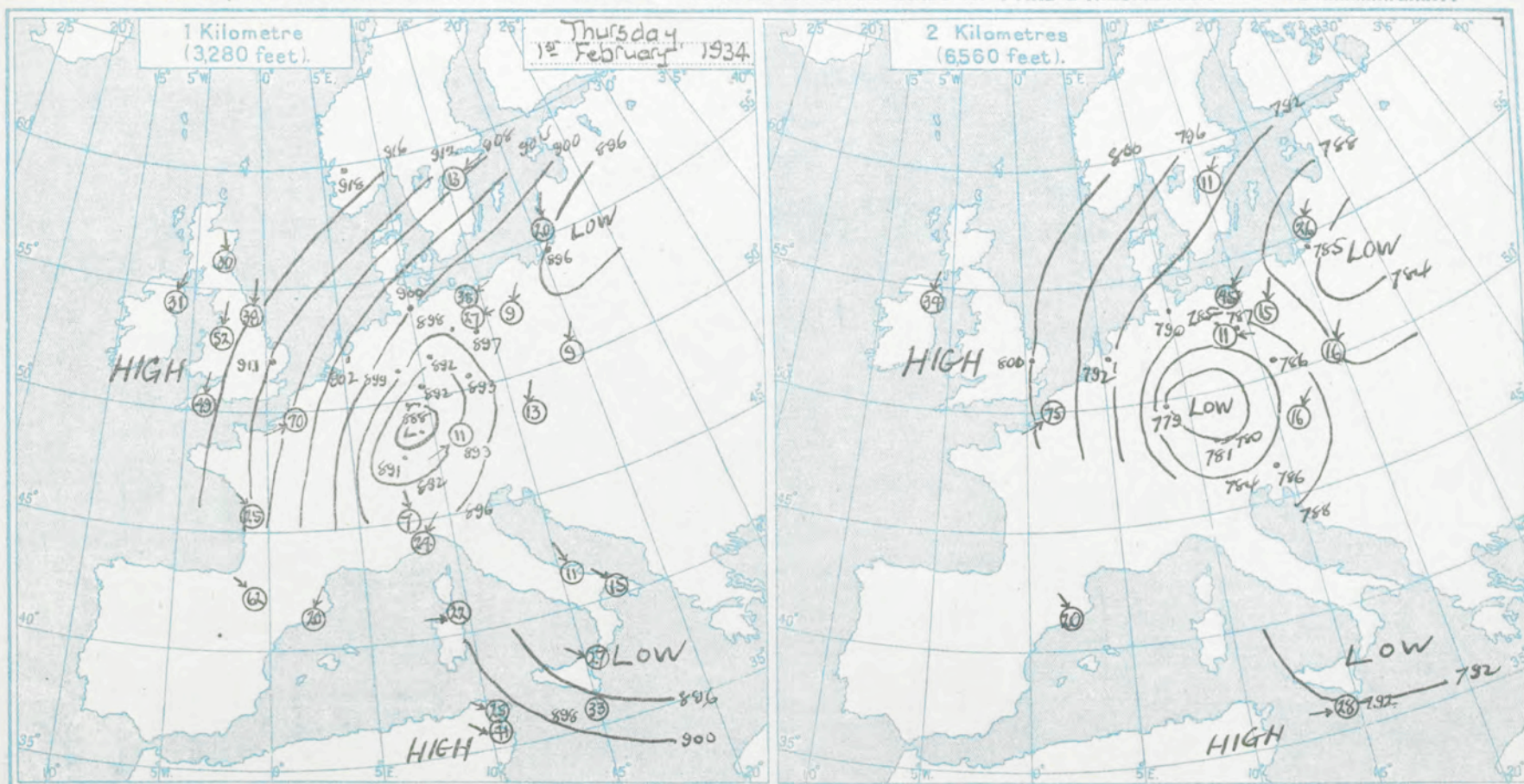
Pressure.				Height above M.S.L.				Temp.				Relative Humidity				Pressure.				Height above M.S.L.				Temp.				Relative Humidity				Pressure.				Height above M.S.L.				Temp.				Relative Humidity																			
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%																								
Lindenberg 7h.								Hamburg 7h.								Königsberg 7h.								Duxford 9h 45m.								DUXFORD 12h 30.								UTRECHT 8h.																							
10196	M.S.L.	—	—	10229	M.S.L.	—	—	1020	M.S.L.	—	—	1034	M.S.L.	—	—	1035	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—																								
1003	348	26	93	1021	61	31	73	1010	92	17	79	1035	100	38	58	999	670	30	85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
992	660	27	89	1003	660	32	60	990	660	21	70	993	1050	32.3	61	994	1050	33	66	962	1650	27	85	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
980	1970	24	36	912	2950	20	77	888	3610	9	75	950	2210	26.6	—	950	2250	26.5	100	902	3280	16	95	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
910	2950	19	38	844	4920	12	77	873	3940	9	58	900	3610	19.8	87	900	3620	19.5	—	846	4920	12	85	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
875	3940	14	38	800	6230	8	59	735	8200	-9	50	850	5680	13.5	—	850	5100	12.5	—	792	6560	5	75	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
858	4600	11	98	665	10330	-9	48	590	13450	-30	42	800	6400	6.3	—	800	6610	6	—	741	8200	0	65	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
846	4920	12	97	597	13450	-20	57	534	15700	-38	42	750	8250	14.0	—	750	8260	12.7	—	693	5840	-6	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
790	6560	6	86	550	15430	-29	52	—	—	—	—	700	10000	16.6	—	700	10000	14.4	—	605	13120	-8	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
747	7880	0	94	—	—	—	—	—	—	—	—	650	11890	12.4	—	650	11890	12.4	—	INVERSION.				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												600	13910	12.4	—	600	13910	12.3	—	(12)				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												550	16020	5.0	—	550	16090	5.5	—	Basepress. 653.573mb				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												500	18470	-2.5	—	500	18450	-1	—	n. temp. -9° -11°F				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												Haze top in cloud layer				Haze top in cloud layer				Rise 4°F 4°F				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																								
												Inversion 750 mb. 6.3°F				5h. Cu. base				Depth 1050' 1576ft.				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												664 mb. 17.6°F				St. Cu. top. 270								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												Cloud. Str. 40 310-1800				870-780 mb.								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
												Alu. with false Cu 310 not reached.				A. Cu. 40 550-500mb								—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																									
MALTA (CALIFORNIA) 7h.								MUNICH 7h.								BERLIN (AERO) 7h.								DARMSTADT 10h.																																							
990	M.S.L.	—	—	957	M.S.L.	—	—	1014	M.S.L.	—	—	991	M.S.L.	—	—	985	M.S.L.	—	—	985	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—																								
953	1640	43	85	945	1970	26	75	1000	660	27	97	987	1370	29	96	950	1640	44	75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
898	3280	37	95	914	2620	25	75	972	1210	25	98	885	3610	24	96	894	3280	38	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
843	4920	14	55	876	3940	23	60	857	1640	25	79	827	5240	14	82	839	4920	30	95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
792	6560	23	?	775	6900	9	88	870	4270	16	76	790	6560	14	64	778	6560	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
743	8200	16	—	658	10830	-6	80	830	5570	12	76	754	7880	12	59	690	9640	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
696	9540	13	85	591	13120	-15	72	729	8540	-1	69	706	9540	3	60	593	13120	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
				550	14930	-26	68	627	12130	-15	79	641	12130	-5	53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
				520	16730	-33	68	557	15700	-26	79	577	14460	-17	52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
								542	15760	-27	81	515	16730	-32	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										
								526	16400	-30	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																										

Meteorological Office, Air Ministry.
Kingsway, London, W.C.1

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DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 1st February 1934.

Place	Croydon	Croydon	Boscombe Down	Calshot	Lympne	Croydon	Enoch Newton	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place	
Time	7h	10h	9h	8h	11h	0h	8h	7h		8h	9h	7h	8h	7h	7h	9h		7h	6h	Time	
Type		b			b		b				b		b			b				Type	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	10	22	25	25	10	25	10	26	30	30	330	20	40	30	15	15					Surf.
1000	25	19	25	39	15	33	25	36	25	43	340	25	40	46	30	28					1000
2000			30	37			30	56	30	44	360	39	40	57							2000
3000			40	37				35	42												3000
4000								40	34												4000
5000																					5000
6000																					6000
8000																					8000
10000																					10000
12000																					12000
Neph.																					Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Alder-grove	Valentia	Place	
Time	12h	12h	12h	12h	12h		12h	13h	12h	12h	12h	12h		13h	12h	12h		12h		Time	
Type	b	b						b			b	b			b					Type	
Surf.	45	26	35	20	35	26	35	43		25	26	25	16	35	25	25	30	25	30	30	Surf.
1000	30	36	35	28	30	31	25	19	25	57	35	33	40	28	35	27	30	45	35	26	1000
2000	30	66	35	27	30	28	35	27		35	35	35	30	40	28	30	34	50	24	40	2000
3000			35	43	40	39				45	26	40	35	30	28	50	20	35	31		3000
4000			40	43						40	46										4000
5000																					5000
6000																					6000
8000																					8000
10000																					10000
12000																					12000
Neph.																					Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Alder-grove	Malta	Place	
Time	14h	17h	16h	14h	16h			16h	14h	14h	16h	14h		14h	14h	16h		14h	14h	Time	
Type	b	b	b	b	b			b		b	b	b		b	b	b		b		Type	
Surf.	40	25	35	14	30	18	20	25	30	33				10	6	275	2	120	1	Caltn	Surf.
1000	45	30	40	24	30	14	35	36	40	34				35	14	290	3	Caltn		1000	
2000	40	30	50	38	30	14	35	37	45	35				35	23	340	6			2000	
3000	45	31	55	56			40	42	40	40				35	20	345	11			3000	
4000			40	36			40	37	45	57				35	26					4000	
5000							40	54	45	63				35	45					5000	
6000							40	58						45	36					6000	
8000							45	60													8000
10000																					10000
12000																					12000
Neph.																					Neph.

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UPPER AIR SECTION.

No. 5423.

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Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

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where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

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UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

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On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Friday, 2nd February 1934.

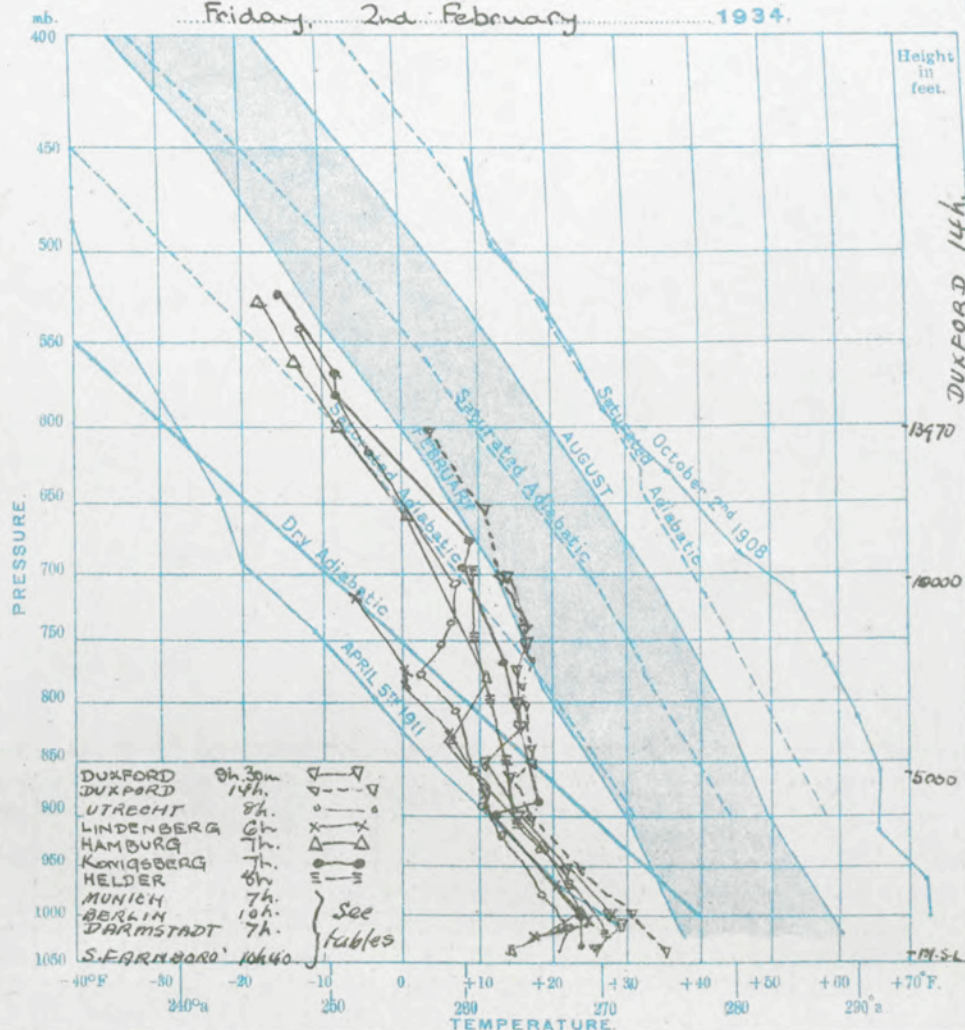


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 2nd February 1934.

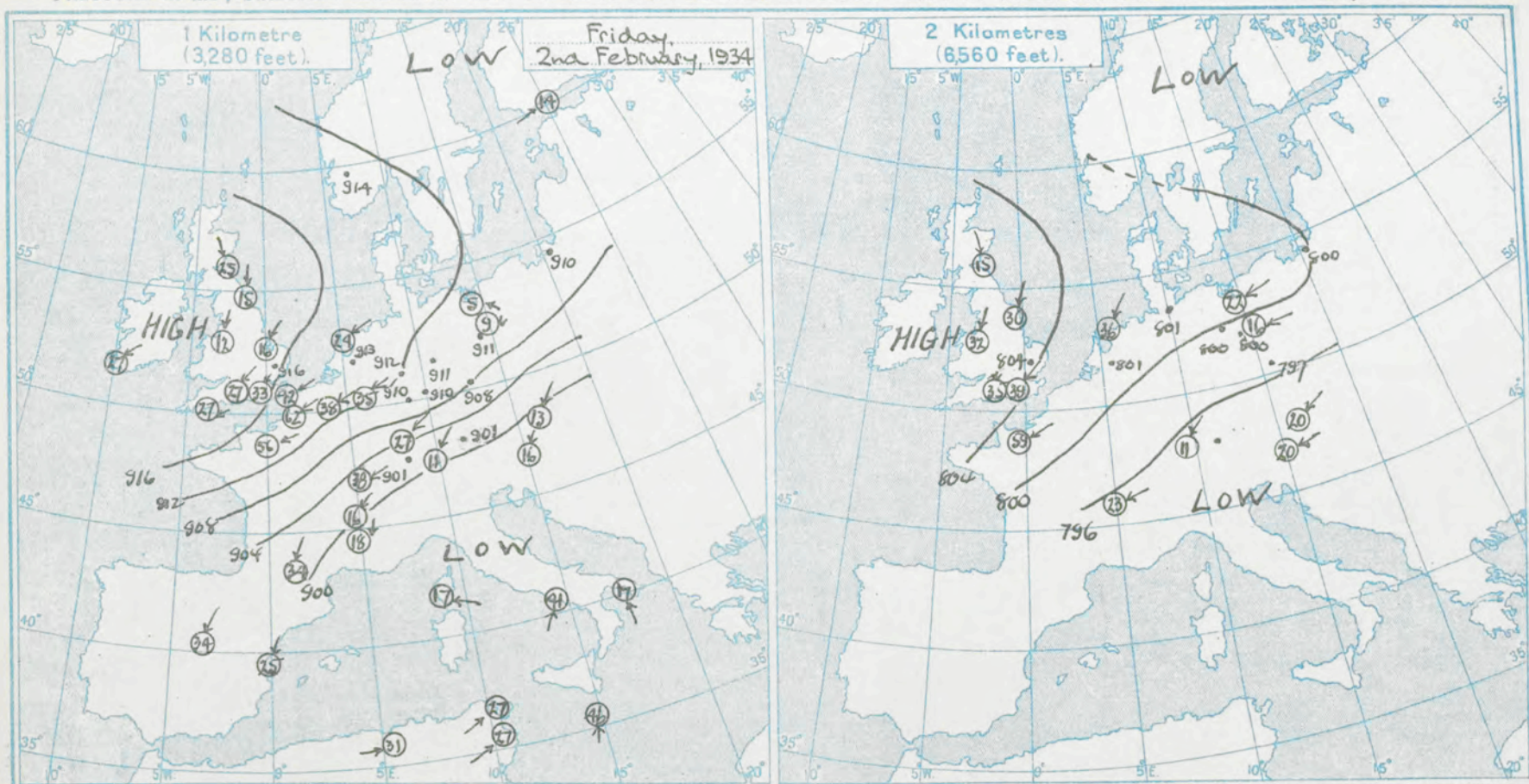
Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.				
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%				
Doxford 9h. 30m.				DUXFORD 14h.				Lindenberg 6h.				Königsberg 7h.				UTRECHT 8h.				MUNICH 7h.				BERLIN 10h.											
1040	M.S.L.	—	—	1038	M.S.L.	—	—	1020	M.S.L.	—	—	1031	M.S.L.	—	—	1012	M.S.L.	—	—	964	M.S.L.	—	—	1030	M.S.L.	—	—	1030	M.S.L.	—	—				
1036.5	100	27.0	99	1034.5	100	28.7	65	1000	3280	26	78	1000	3280	25	82	974	1650	19	75	901	3280	10	86	1019	320	18	89	1019	320	18	89				
999	1050	28.6	78	996	1060	31.2	76	965	1640	21	79	965	1640	21	79	913	3280	14	65	881	3940	15	60	1005	660	21	86	1005	660	21	86				
950	2340	23.3	87	950	2300	24.4	84	930	3040	12	80	930	3040	12	80	85	4820	10	53	786	6900	9	37	934	1620	18	76	934	1620	18	76				
900	2700	16.5	—	900	3680	17.3	—	880	4270	11	69	880	4270	11	69	801	6560	7	55	774	7230	4	32	853	4420	15	69	853	4420	15	69				
850	5170	11.3	—	850	5150	14.6	—	825	5570	7	87	825	5570	7	87	740	8200	5	35	761	9560	6	31	789	7230	13	33	789	7230	13	33				
800	6760	6.3	—	800	6640	10.6	—	780	7230	1	48	780	7230	1	48	673	10840	4	35	734	8200	1	31	747	8200	14	34	747	8200	14	34				
750	8340	1.4	—	750	8330	16.5	—	772	7560	1	40	772	7560	1	40	615	13120	4	35	649	11480	10	24	660	11480	7	34	660	11480	7	34				
700	10100	4.5	—	700	11370	11.2	—	716	9200	-5	40	716	9200	-5	40	534	16400	-13	35	587	13800	22	28	586	11460	-1	37	586	11460	-1	37				
Fog near Towing. Haze top 500ft. well defined. haze top 850ft. Inversion Screen 2700 (1006mb) 850ft. 30°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.				Haze top 860mb. layers to 700mb. INVERSIONS: (1) 860mb. 14.8°F. (2) 850mb. 11.3°F. (3) 820mb. 17°F. (4) 770mb. 16°F. 740mb. 17.4°F.							
CLOUDS: C. and S. Cu. 850-860mb. A.Cu. to 700mb.				Hamburg 7h.				Helder 8h.				S. FARNBORO' 10h.				DARMSTADT 7h.																			
M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.							
1034	61	15	95	1013	680	28	75	1029	M.S.L.	—	—	1030	M.S.L.	—	—	1010	M.S.L.	—	—	968	M.S.L.	—	—	1030	M.S.L.	—	—	1030	M.S.L.	—	—				
995	980	24	79	964	1660	23	75	972	1980	19	75	972	1980	19	75	914	3280	15	83	858	4420	9	83	858	4420	9	83	858	4420	9	83				
928	2550	19	83	904	3280	16	65	848	4920	14	45	848	4920	14	45	793	6560	1	64	748	8200	-5	54	748	8200	-5	54	748	8200	-5	54				
828	5500	7	80	795	6560	12	35	744	8200	10	35	744	8200	10	35	673	10840	-12	44	625	12180	-17	42	625	12180	-17	42	625	12180	-17	42				
779	7230	12	50	697	5840	10	35	697	5840	10	35	697	5840	10	35	615	13120	-4	35	587	13800	-22	39	587	13800	-22	39	587	13800	-22	39				
658	11440	-1	40	561	15430	-13	32	561	15430	-13	32	561	15430	-13	32	561	15430	-13	32	561	15430	-13	32	561	15430	-13	32	561	15430	-13	32				
598	13800	-8	35	526	16730	-18	30	526	16730	-18	30	526	16730	-18	30	526	16730	-18	30	526	16730	-18	30	526	16730	-18	30	526	16730	-18	30				
				Inversion 767mb. Amount 2.1°F. Temp. at base 13°F. Thickness 492ft.																															

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Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 2nd February, 1934.

Place	Craydon	South Farnboro	Boscombe Down	Calshot	Lymington	Worthy Hill	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Birmingham Newton	Catterick	Leuchars	Renfrew	Croydon	Aldergrove	Malta	Place
Time	7h	8h	8h	7h	6h	7h	7h	7h	7h	8h	9h	7h	8h	7h	7h	9h	11h	7h	6h	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	25 10	360 5	15 10	360 14	70 18	15 10	20 8	330 1	30 13	45 15	215 1	305 3	45 10	- 0	250 10	225 4	30 16	295 2		Surf.
1000	45 22	45 26	40 25	50 31	55 32	35 21	45 20	50 10	45 17	50 21	295 2	350 10	45 15	330 11	310 16	310 15	50 25	295 11		1000
2000	50 32	55 26	60 27	55 33	55 37	50 31	50 23	50 12	40 25	65 32	340 5	15 12	40 15	345 10	15 10	325 28	60 37			2000
3000	50 33	60 27	55 27	65 31	55 42	55 33	45 23	35 16		70 27	355 11	10 12	35 17	10 15	350 25	335 29	60 35		180 46	3000
4000	50 35	60 31	50 31	65 30	55 36	65 33	50 25	30 17		65 33		25 12	35 15	20 10	345 18	330 33				4000
5000	55 24	45 32	50 31	50 39	55 39	55 30						45 19		50 15	345 18	330 31				5000
6000			35 35			45 39						30 32		30 30	350 15	330 24				6000
8000						55 41 (7000')								30 36	360 16	325 23				8000
10000													Manchester Aft. 10h			Aft. 10h				10000
12000																20 36				12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Worthy Down	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Mansfield	Croydon	Valentia	Place
Time	12h	12h	12h	12h	12h	10h	12h	13h	11h	12h	12h	12h	14h	13h	12h	12h	14h	11h	10h	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Surf.	20 18	15 10	40 14	10 16	45 23	5 12	45 15	Cal'm	350 7	55 14	210 4	300 2	445 15	220 3	175 10	265 4	45 15	25 15	40 10	Surf.
1000	35 23	45 24	40 25	30 20	45 23	45 27	55 20	355 6	10 10	50 13	230 9	335 9	50 22	285 8	310 14	295 14	50 22	25 13	50 13	1000
2000	40 22	40 31	45 33	45 18	50 25	50 22	45 27	20 7	25 13	40 17		360 4	45 21	300 6	340 6	325 15	45 21		60 18	2000
3000	40 25	45 33	50 28	45 24	45 26	45 28	35 19	45 9	40 15	35 25		15 11	40 22		15 5	345 16	40 22		50 27	3000
4000		40 30	40 40	55 27	35 24	45 24	30 17	45 15	40 14	45 25					325 8	25 9				4000
5000			35 33	55 24	40 34	45 36		20 23		55 14					335 14	355 11				5000
6000				55 34	60 31			45 27		45 34					350 15	10 16				6000
8000				55 46				35 27		45 44					15 25	20 26				8000
10000						Birmingham Newton 16h Aft.		30 54	16h Aft.						20 23	20 22	Renfrew 16h Aft.			10000
12000						70 63		30 54	16h Aft.					16h Aft.	15 23	20 24	40 36			12000
Neph.														350 30	12h 45	12h 40				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Lymington	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Boscombe Down	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place
Time	14h	17h	16h	17h	16h	10h	14h	16h	15h	17h		14h	13h	14h	14h	17h			14h	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Surf.	30 9	360 1	50 12	30 14	50 12	60 20	20 8	Cal'm	20 15	30 12		Cal'm	40 15	Cal'm	250 4	205 4				Surf.
1000	35 15	45 22	40 15	30 14	50 15	55 22	40 17	Cal'm	35 15	35 16		315 11	45 27	310 6	285 14	330 9			230 39	1000
2000	40 21	45 30	35 18	45 22	50 28	55 30	35 18	350 4	35 14	35 22		345 12	35 14	345 13	245 9	340 9				2000
3000	45 25	40 28	35 30	50 24	45 27	45 24	45 14	360 4	35 14	35 25			30 16		335 5	350 4			250 41	3000
4000	45 27		40 31		35 28	45 32	50 21	45 13	35 21							25 16				4000
5000	50 40		50 35		55 35	45 25		50 22	45 25							20 18			240 46	5000
6000	50 40		45 35					35 14	35 35											6000
8000								50 35	45 34											8000
10000								7000'	7000'											10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5424

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Saturday, 3rd February 1934

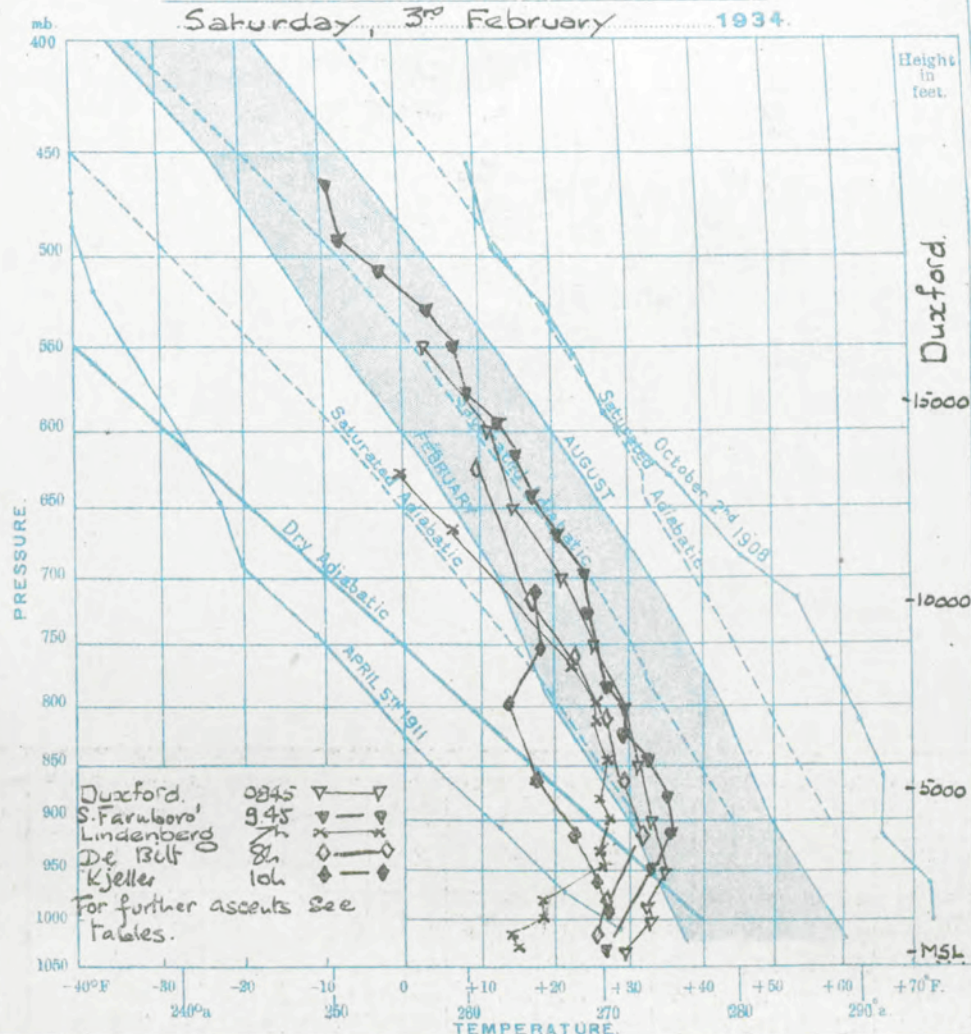
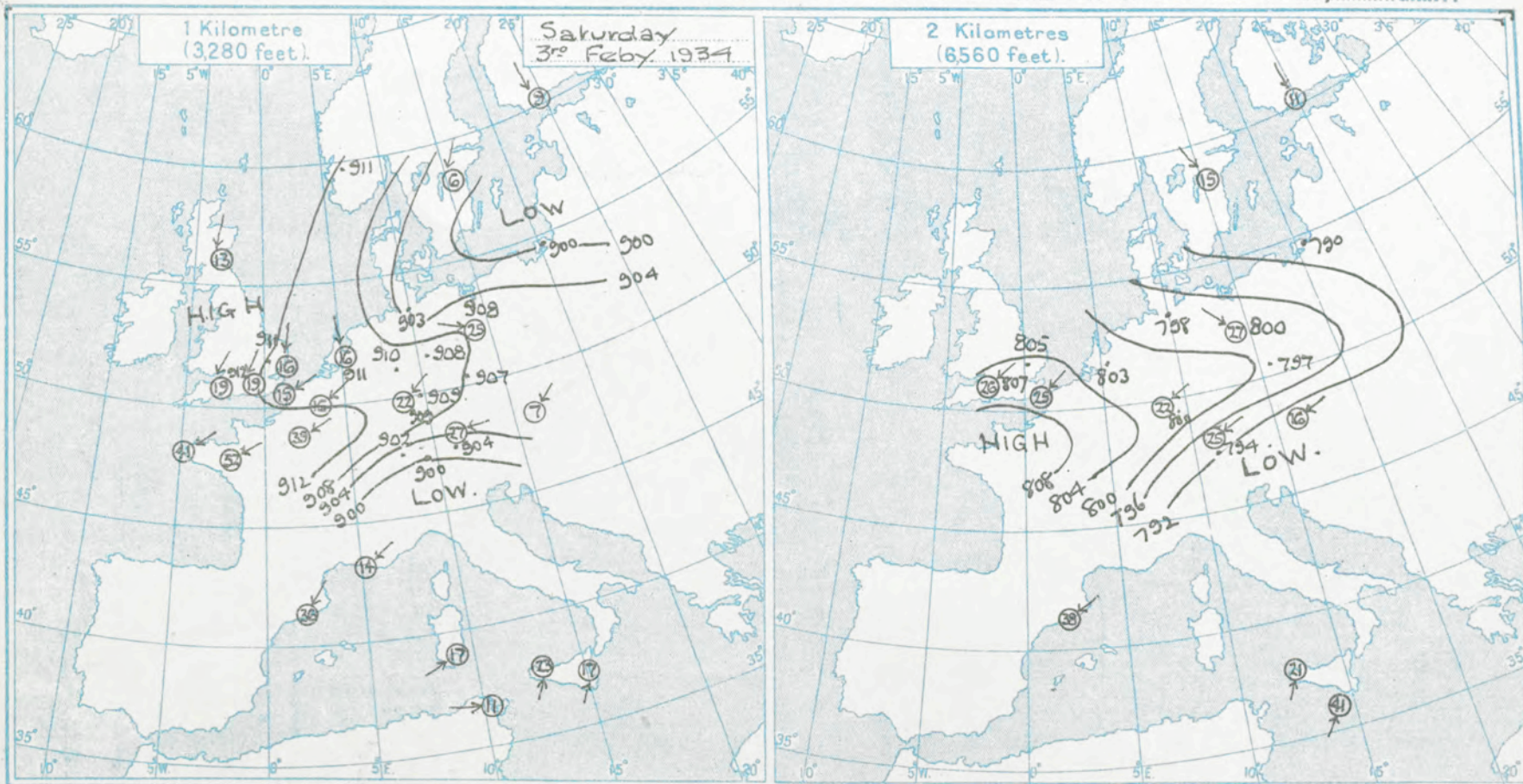


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 3rd February 1934

TEMPERATURES RECORDED ON

1934

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %	mb. Feet. °F. %
Duxford 0845	S. Farndon 3.45	Lindenberg 9.7	Filton 10h. 45m.	Königsberg 7h.	Friedrichshagen 7h.	Darmstadt 7h.	Hamburg 7h.																
1034 M.S.L.	1026 M.S.L.	1020.5 M.S.L.	1026.5 M.S.L.	1017 M.S.L.	1000 M.S.L.	1009 M.S.L.	1004 M.S.L.																
1030.5 100 300 98	1026.5 100 300 98	1020.5 100 300 98	1026.5 100 300 98	1017 92 27 93	1000 660 23 98	1009 445 10 78	1004 660 23 98																
992 1020 338 81	990 1020 338 81	990 1020 338 81	990 1020 338 81	985 3610 23 98	985 3610 23 98	985 3610 23 98	985 3610 23 98																
950 2210 364 78	950 2210 364 78	950 2210 364 78	950 2210 364 78	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
980 3640 337 100	980 3640 337 100	980 3640 337 100	980 3640 337 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
850 5150 315 100	850 5150 315 100	850 5150 315 100	850 5150 315 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
800 6720 300 -	800 6720 300 -	800 6720 300 -	800 6720 300 -	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
750 8400 265 -	750 8400 265 -	750 8400 265 -	750 8400 265 -	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
700 10200 217 100	700 10200 217 100	700 10200 217 100	700 10200 217 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
650 12100 165 100	650 12100 165 100	650 12100 165 100	650 12100 165 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
600 14120 115 100	600 14120 115 100	600 14120 115 100	600 14120 115 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
550 16310 37 100	550 16310 37 100	550 16310 37 100	550 16310 37 100	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
Rime formed in cloud 630-616 mb.	Rime formed in cloud 630-616 mb.	Rime formed in cloud 630-616 mb.	Rime formed in cloud 630-616 mb.	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
Thick haze to Sr. 970 mb.	Thick haze to Sr. 970 mb.	Thick haze to Sr. 970 mb.	Thick haze to Sr. 970 mb.	980 3700 32 98	980 3700 32 98	980 3700 32 98	980 3700 32 98																
Sr. 940 mb. Sr. 610	Sr. 940 mb. Sr. 610	Sr. 940 mb. Sr. 610	Sr.																				
946-940 mb	946-940 mb	946-940 mb	946-940 mb																				
Sr. 910 930 mb in layers to 700 mb.	Sr. 910 930 mb in layers to 700 mb.	Sr. 910 930 mb in layers to 700 mb.	Sr.																				
Qc. 910 630-616 mb	Qc. 910 630-616 mb	Qc. 910 630-616 mb	Qc.																				
Qc. 810 not reached	Qc. 810 not reached	Qc. 810 not reached	Qc.																				
Inversions	Inversions	Inversions	Inversions																				
(1) Screen 300°F	(1) Screen 300°F	(1) Screen 300°F	(1) Screen 300°F																				
(2) 920 fr. 340°F	(2) 920 fr. 340°F	(2) 920 fr. 340°F	(2) 920 fr. 340°F																				
(3) 970 mb. 336°F	(3) 970 mb. 336°F	(3) 970 mb. 336°F	(3) 970 mb. 336°F																				
(4) 914 mb. 366°F	(4) 914 mb. 366°F	(4) 914 mb. 366°F	(4) 914 mb. 366°F																				



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 3 rd February 1934.																						
Place	Croydon	Biggin Hill	Boscombe Down	Calshot	Lympne	Croydon	Felix-stowe	Lympne	Upper Heyford	Plymouth	Holyhead	Sealand	South Farn.	Catterick	Leuchars	Renfrew	Croydon	Alder-grove	Malta	Place		
Time	07 ^h	07 ^h	08 ^h	07 ^h	06 ^h	01 ^h	07 ^h	10 ^h	07 ^h	08 ^h			08 ^h	07 ^h	07 ^h		10 ^h		06 ^h	Time		
Type								b					b				b			Type		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet	
Surf.	Cal m	300	3	360	1	330	12	25	7	Cal m	285	7	335	6	305	5	350	6			Surf.	
1000	10	11	355	9	360	9	30	15	30	17	55	15	310	16	350	11	315	15	50	21	1000	
2000	20	21	20	15	20	12	50	16	40	19	65	16	340	13	15	12	350	17	70	18	2000	
3000	20	23	23	21	35	17	50	20	60	15	60	21	5	16	35	17	30	19	65	21	3000	
4000	30	22	35	23	35	22	50	23	40	21	80	27			35	24			45	27	4000	
5000			45	20	25	22			50	26	90	30			45	20			30	23	5000	
6000			45	19	60	26			40	25					50	22			30	22	6000	
8000					7000'				55	31					45	26					8000	
10000					50	26													7000'		10000	
12000					AKW 10'														210	41	12000	
Neph.					70	33									AG 10'						Neph.	
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew		Alder-grove	Valentia	Place		
Time.		12h 30m		12h 30m						12h 30m		12h 30m			12h 30m	12h 30m						
Type															b	b						
Surf.		255	4			290	8			280	5				285	5	220	3			Surf.	
1000		340	17			335	13			360	7				5	5	305	12			1000	
2000		360	17			10	20								350	12	340	9			2000	
3000		(1500')				35	19								5	13	320	9			3000	
4000						40	22										325	8			4000	
5000																	340	11			5000	
6000																	335	19			6000	
8000										13h							240	23			8000	
10000										AG							5	25			10000	
12000										40	48						5	24			12000	
Neph.										60	120										Neph.	
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove		Place		
Time.											12h 30m				12h 30m	12h 30m		12h 30m	12h 30m			
Type															b	b						
Surf.											15	4			105	2	280	8			Surf.	
1000											30	9			315	5	305	18			1000	
2000															315	9	325	11			2000	
3000															280	7	315	7			3000	
4000																					4000	
5000																					5000	
6000																					6000	
8000																					8000	
10000																					10000	
12000																					12000	
Neph.																					Neph.	

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5425.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrl.)

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

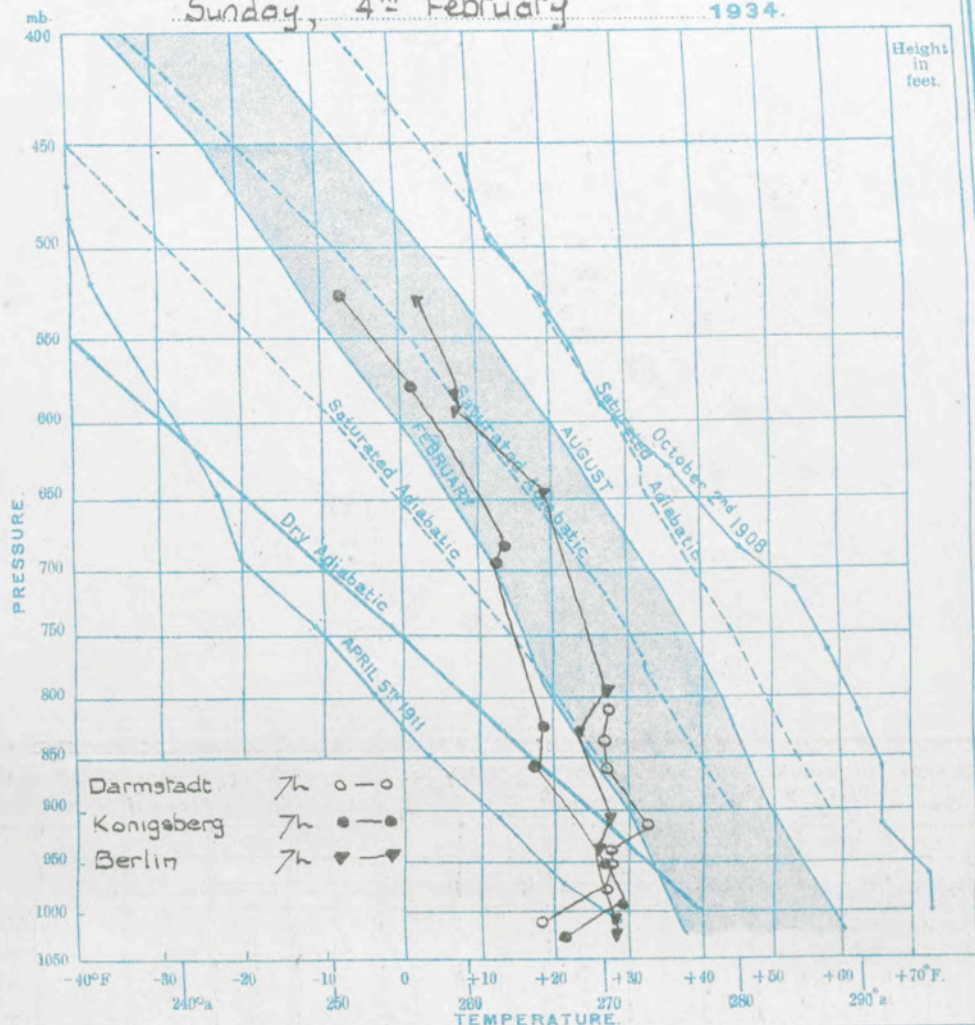
d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

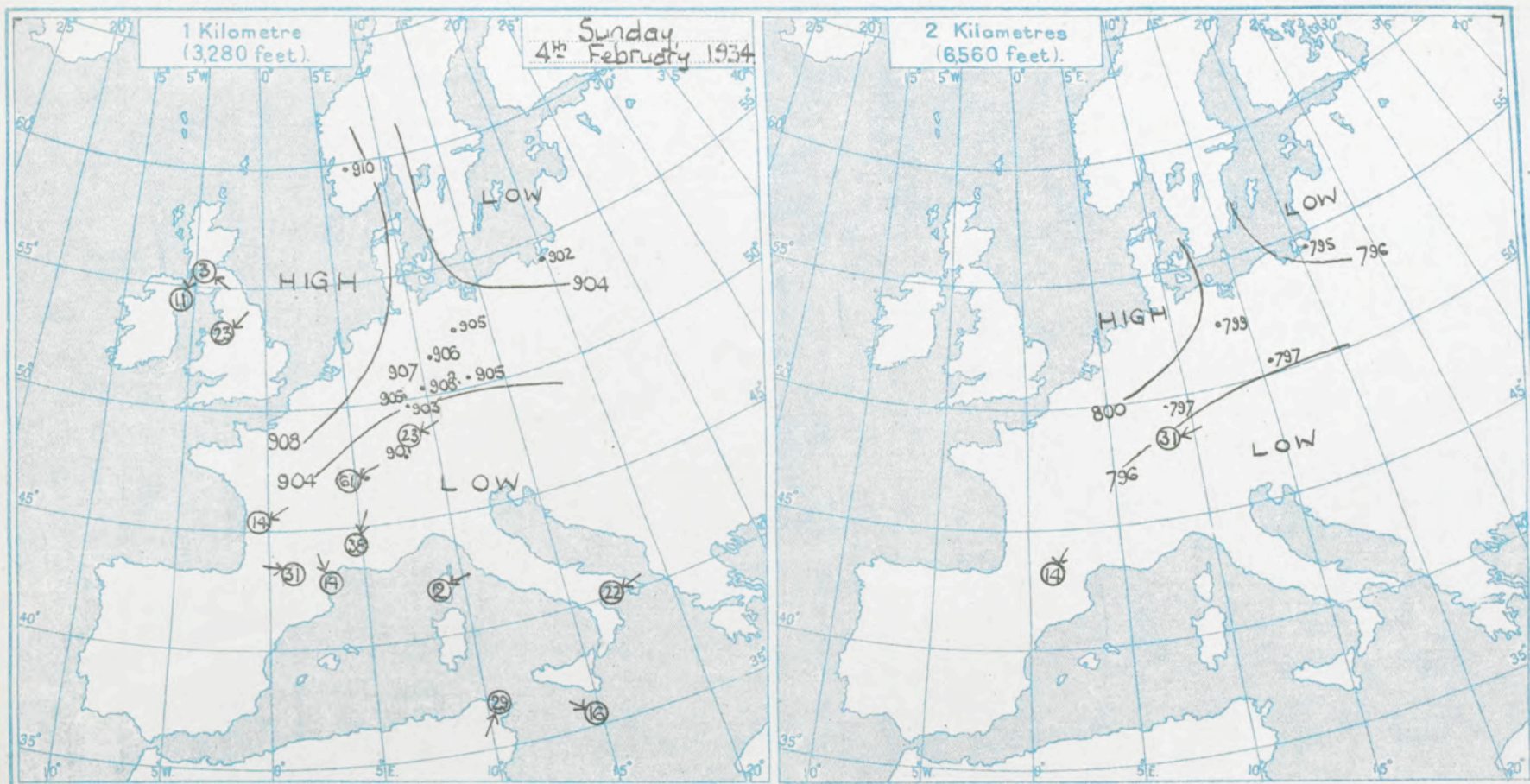
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Sunday, 4th February 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON 4th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.				
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%				
Darmstadt 7h				Königsberg 7h				Berlin 7h																							
M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—				
1004	445	18	71	1023	92	21	89	1022	184	28	90																				
973	1310	27	67	990	980	29	67	1010	330	28	88																				
950	1970	28	60	949	1970	27	61	938	2300	26	98																				
940	2300	28	58	857	4600	17	76	905	3280	27	86																				
913	2950	32	56	815	5900	19	51	825	4600	23	97																				
858	4600	27	77	692	10170	12	60	795	6400	27	37																				
829	5570	27	84	681	10800	13	61	649	11800	18	52																				
809	6230	28	80	573	14760	1	60	580	14760	7	56																				
				529	16730	-8	59	570	15100	7	52																				
								527	17060	2	46																				
M.S.L. — —				M.S.L. — —				M.S.L. — —				M.S.L. — —				M.S.L. — —				M.S.L. — —				M.S.L. — —				M.S.L. — —			
Meteorological Office, Air Ministry, Kingsway, London, W.C.1. G. C. SIMPSON, C.B., D.Sc., F.R.S., Director.																															



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 4th February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place		
Time		10h										7h				7h		7h	6h	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.		45	11									325	7			Calm		70	4	160	11	Surf.
1000		40	31									40	19			90	3	30	15	210	8	1000
2000												45	23			100	3	30	11	310	16	2000
3000												25	18			160	3	50	21			3000
4000																						4000
5000																						5000
6000																						6000
8000																						8000
10000																						10000
12000																						12000
Neph.																					Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Alder-grove	Valentia	Place		
Time		13h								12h	12h			12h	12h			12h		Time		
Type										b	b			b						Type		
Surf.		45	15							55	20	50	8		20	8	310	2	35	6	Surf.	
1000		45	36							60	23	60	9		15	17	335	4	60	9	1000	
2000										60	28	85	21				305	4	105	7	2000	
3000										70	34	50	19				360	5	110	7	3000	
4000										65	29						285	12			4000	
5000																					5000	
6000																					6000	
8000																					8000	
10000																					10000	
12000																					12000	
Neph.																					Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place		
Time																		17h	17h	Time		
Type																				Type		
Surf.																		50	2		Surf.	
1000																		65	7	190	30	1000
2000																		70	3	190	30	2000
3000																		295	1	190	46	3000
4000																						4000
5000																						5000
6000																						6000
8000																						8000
10000																						10000
12000																						12000
Neph.																					Neph.	

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 54

No. 5426

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t-t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Monday 5th February 1934

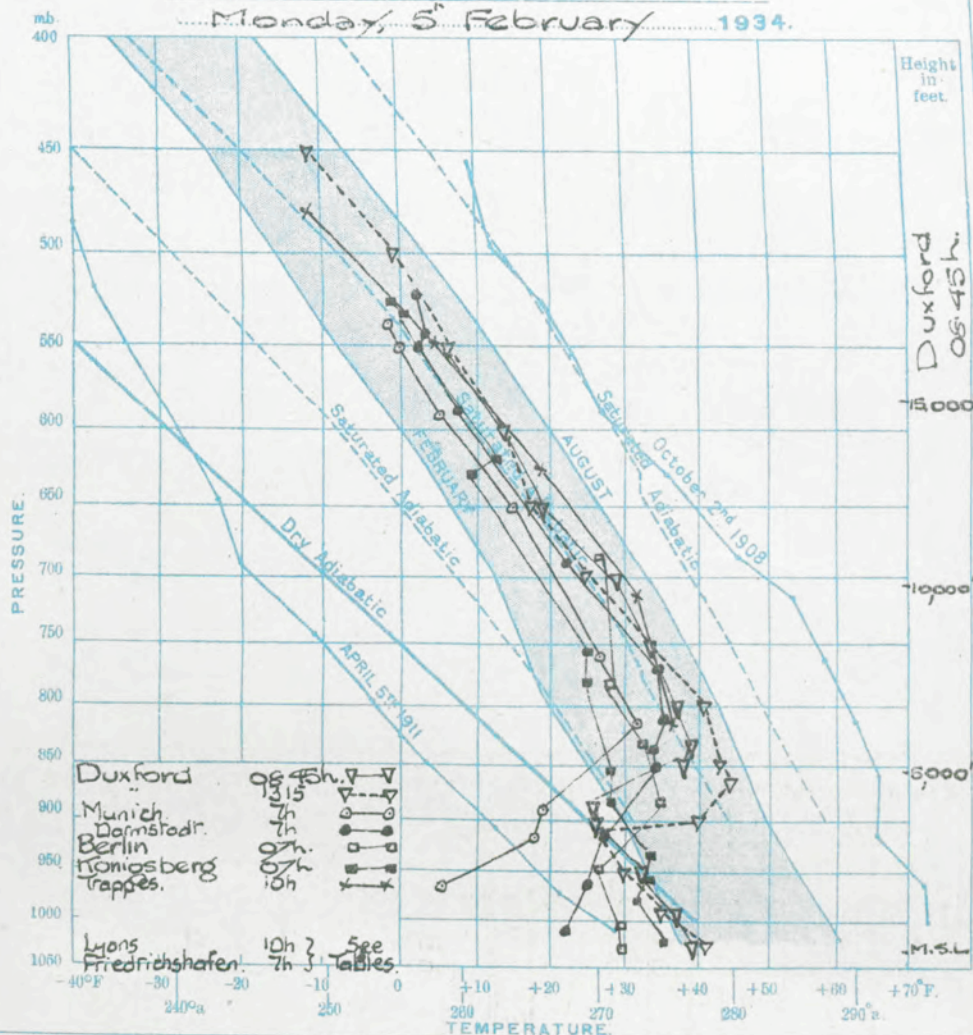


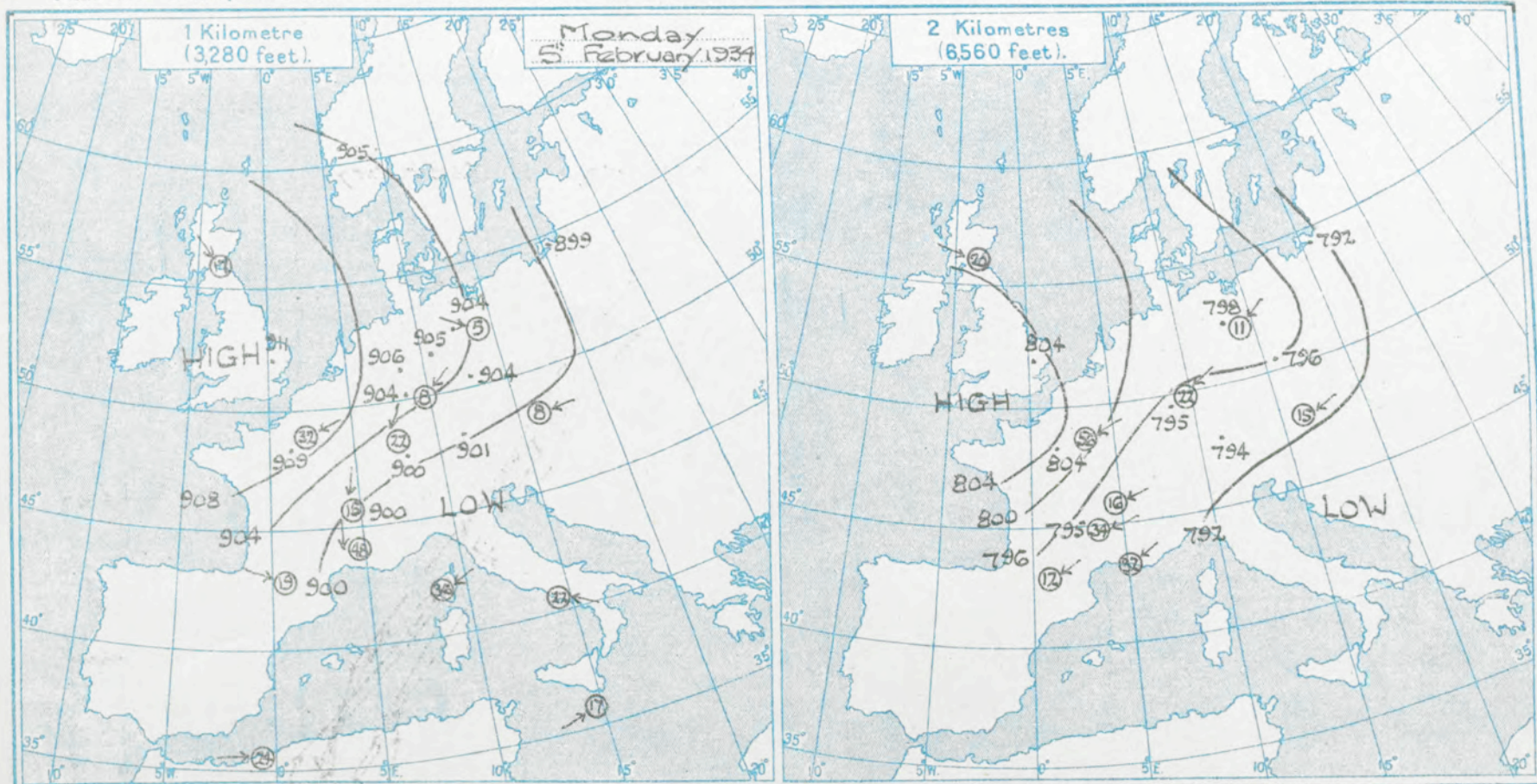
TABLE OF UPPER AIR TEMPERATURES RECORDED ON 5th February 1934

TABLE OF UPPER AIR TEMPERATURES RECORDED ON 5 FEBRUARY 1934.																							
Duxford 0845				Duxford 1315				Berlin (Aero) 01				Königsberg 02				Munich 7h				Friedrichshafen 7h			
Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.				
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%				
1031.3	M.S.L.	—	—	1031	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—	—	M.S.L.	—	—				
1027.8	100	38.8	95	1027.5	100	41.0	80	1020	184	30	96	1016	92	36	63	961	M.S.L.	—	—				
991	1060	37.3	80	990	1060	36.3	88	1000	660	30	96	979	980	32	98	961	1667	6	87				
950	2200	32.0	93	950	2170	30.1	—	940	2300	27	98	959	1640	34	73	907	2950	18	65				
900	3600	26.5	—	900	3580	40.0	43	877	3340	34	63	933	2300	34	62	891	3610	19	56				
850	5120	28.4	54	850	5110	43.7	35	825	5570	42.2	49	873	3540	28	68	887	6230	32	33				
800	6700	38.0	42	800	6710	41.0	46	773	7230	38	50	850	4920	28	54	754	7880	27	35				
750	8300	32.4	42	750	8410	34.0	74	684	10300	27	38	780	6300	28	48	657	11800	16	26				
700	10210	29.4	18	700	10220	25.6	80	625	12730	27	36	613	12790	9	40	586	14460	6	24				
650	12140	12.0	—	650	12140	17.8	—	—	—	—	—	754	7860	25	49	549	16400	0	21				
600	14160	12.6	—	600	14160	13.0	—	—	—	—	—	613	12790	9	40	534	16730	-1	19				
550	16350	6.4	—	550	16400	7.0	—	—	—	—	—	528	16730	1	32	—	—	—	—				
Thick haze in patches to approx 600 ft.				500	18780	0.5	—	—	—	—	—	523	17060	-1	34	—	—	—	—				
Inversion: 830 mb 26.5°F				450	21370	11.0	—	—	—	—	—	—	—	—	—	—	—	—	—				
Cloud: 834 " 30.0°F				Haze top not defined.				—	—	—	—	—	—	—	—	—	—	—	—				
St. 830 mb				Inversion: 906 mb 27.0°F				—	—	—	—	—	—	—	—	—	—	—	—				
St. 1010 344 mb				865 mb 45.5°F				—	—	—	—	—	—	—	—	—	—	—	—				
10830 mb				Cloud: 906 mb 27.0°F				—	—	—	—	—	—	—	—	—	—	—	—				
A.C.W. 710 not reached				St. 1010 360-305 mb				—	—	—	—	—	—	—	—	—	—	—	—				
				C.C. 210 not reached				—	—	—	—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—	—	—	—				
								—	—	—	—	—	—	—	—	—	—	—	—				
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Issued on 6th February 1954

Meteorological Office, Air Ministry,
Kingsway, London, W.C.2.

G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 5 th FEBRUARY 1934.																																							
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place																			
Time	10 ^h	08 ^h	08 ^h	08 ^h		08 ^h	07 ^h	07 ^h		06 ^h		07 ^h		07 ^h	07 ^h	08 ^h		07 ^h	06 ^h	Time																			
Type						b														Type																			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																		
Surf.	40	10	15	5	50	14	40	16		30	10	15	7	350	1				300	1	Surf.																		
1000	55	22	55	20	60	20	65	21		15	15	45	17	10	7				300	11	1000																		
2000					60	32				15	15			60	22				200	12	2000																		
3000										(1500)									250	18	3000																		
4000																			250	27	4000																		
5000																					5000																		
6000																					6000																		
8000																					8000																		
10000																					10000																		
12000																					12000																		
Neph																					Neph																		
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Aldergrove	Valentia	Place																			
Time	12h	13h	12h	12h	12h		12h	13h	12h	12h	12h	12h	13h	12h	12h	13h		12h		Time																			
Type	b				b		b	b				b		b	b	b				Type																			
Surf.	40	10	35	8	50	10	30	12	55	18		15	7	285	4	35	5	70	15	360	1	Surf.																	
1000	40	21	35	18	55	16	55	17	40	21		30	14	290	10	25	13	60	17	345	7	1000																	
2000			35	22	55	29			35	29				40	13	70	22	330	9	330	16	2000																	
3000														315	13	275	10	290	31	280	24	3000																	
4000														310	10	290	10					4000																	
5000														325	22	295	18					5000																	
6000														325	21	285	15					6000																	
8000														320	19	300	29					8000																	
10000														345	14	315	23					10000																	
12000														295	24	16h	C.					12000																	
Neph														275	18	350	15					Neph																	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Malta	Aldergrove	Valentia	Place																			
Time	12h	17h		17h	17h		17h	16h	17h	17h	17h	17h	16h	17h	17h	17h	17h	17h	18h	Time																			
Type								b		b	b	b		b		b				Type																			
Surf.	25	10	20	7			50	12	20	14		360	6	Cal	m	5	2	50	15	305	13	320	16	290	13	275	2	245	5	255	12	1000	250	8	40	8	Surf.		
1000	20	13	20	9			50	18	25	14		10	11	260	12	355	5	55	16	320	15	315	25	315	15	285	17	270	19	275	29	270	23	280	18	40	12	1000	
2000			25	11										315	18	355	7			320	17	315	25			315	18	280	29	290	34	3000		30	11	2000			
3000			(1500)											35	11												315	15	295	33			270	19	3000		30	20	3000
4000																										320	19	305	21			5000				4000			
5000																										325	14					270	24			5000			
6000																																					6000		
8000																																					8000		
10000																																					10000		
12000																																					12000		
Neph																																					Neph		

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5427

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

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$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Tuesday, 6th February 1934.

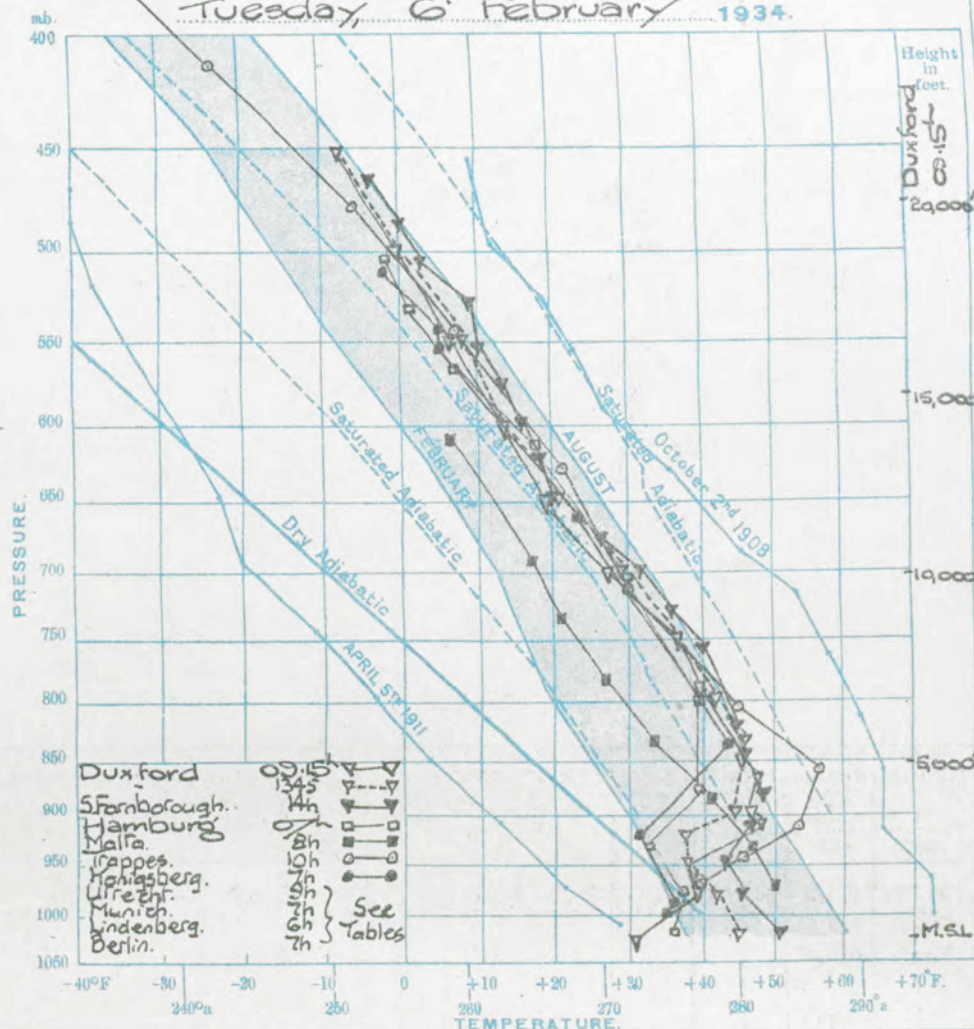
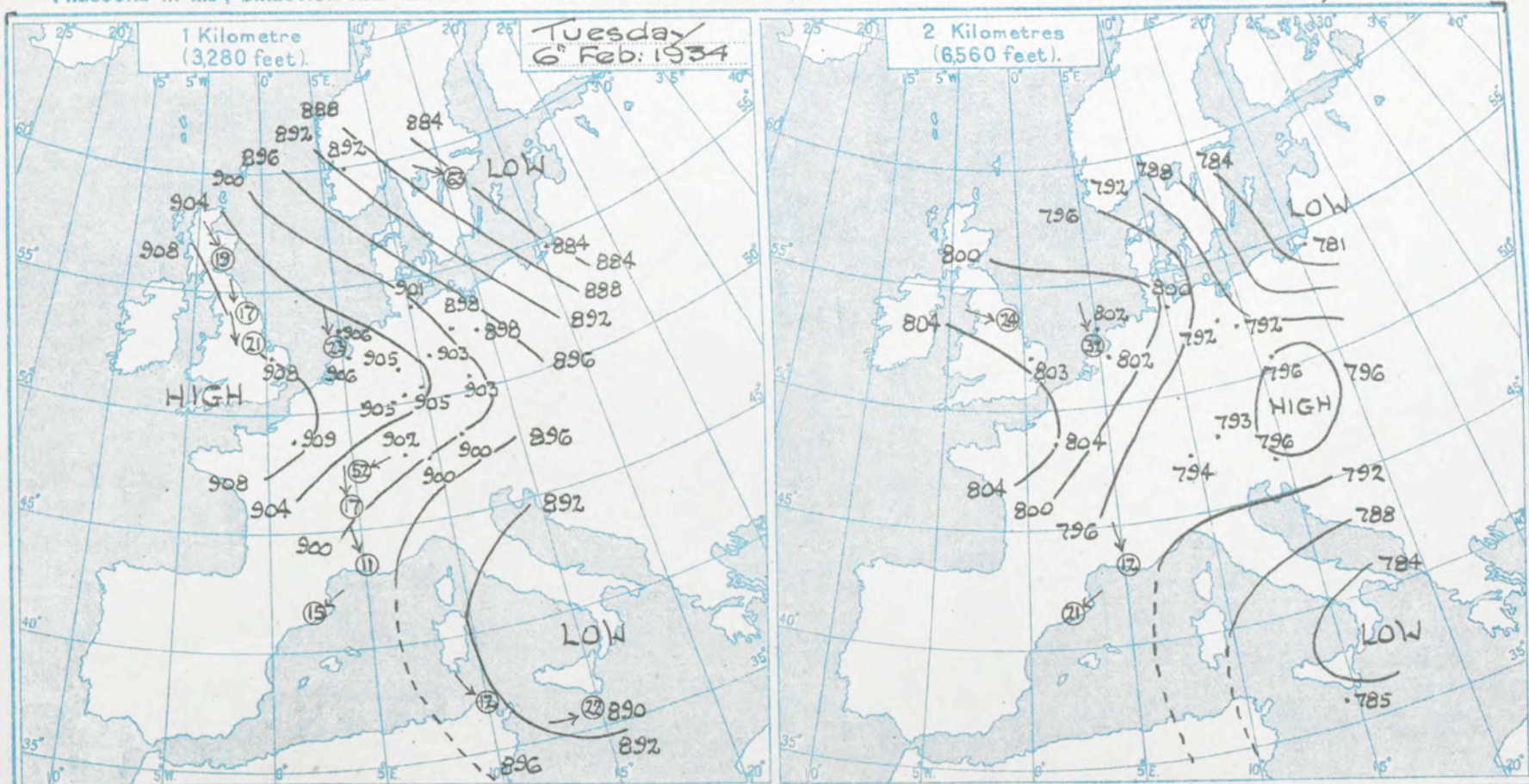


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 6th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford. 1029	M.S.L.	—	—	Duxford. 1028.5	M.S.L.	—	—	Hamburg. 978	M.S.L.	—	—	Trappes. 10h	M.S.L.	—	—	Munich. 7h	M.S.L.	—	—	Königsberg. 7h	M.S.L.	—	—	Friedrichshafen. 7h	M.S.L.	—	—	Stanborough. 14h	M.S.L.	—	—
1028.5	100	31.4	94	1025	100	45.6	77	1019	61	36	92	978	1214	39	—	961	1662	7	83	995	320	37	98	974	1312	23	84	1019.6	230	51	—
988	1070	33.5	75	987	1080	41.7	79	975	1310	37	80	944	2194	46	—	954	1970	7	88	995	320	37	98	974	1312	23	84	1019.6	230	51	—
950	2100	35.7	66	950	2100	38.5	82	930	2620	32	98	909	3180	54	—	942	2300	20	75	916	2620	31	98	870	4270	37	40	949	2140	43	—
905	3540	46.6	21	900	3530	45.0	15	876	4270	33	98	856	4920	57	—	919	2950	25	69	840	4600	44	40	847	4920	36	40	914	3140	48	—
850	5030	45.0	30	850	5080	46.0	13	800	6360	33	90	804	6360	46	—	807	3280	30	46	656	11140	23	65	827	5570	36	39	881	4130	49	—
800	6760	39.8	52	800	6650	41.6	17	768	9840	30	28	709	9840	30	—	889	3610	32	35	546	15430	5	30	775	7230	33	39	849	5160	46	—
750	8590	36.7	53	750	8410	36.3	27	615	13120	18	42	624	13120	21	—	853	4920	36	27	546	16030	5	39	775	7230	33	39	818	6190	45	—
700	10210	27.7	57	700	10250	29.0	53	565	13760	7	37	548	16400	—	—	726	9200	30	11	510	17320	2	50	775	7230	33	39	787	7210	40	—
650	12120	19.0	—	650	12800	20.3	58	530	17660	—	63	478	19680	—	—	632	12460	21	10	557	16030	11	9	775	7230	33	39	758	8200	40	—
600	14180	12.5	—	600	14210	12.5	—	503	18370	—	65	416	23000	—	—	557	16030	11	9	519	17720	7	9	775	7230	33	39	729	9240	36	—
550	16400	6.3	—	550	16400	8.3	—	361	26300	—	38	361	26300	—	—	519	17720	7	9	—	—	—	—	775	7230	33	39	702	10200	37	—
500	18780	1.0	—	500	18830	0.0	—	311	29500	—	36	311	29500	—	—	—	—	—	—	—	—	—	—	775	7230	33	39	675	11250	27	—
450	21400	—	—	450	21440	—	—	268	32800	—	69	268	32800	—	—	—	—	—	—	—	—	—	—	775	7230	33	39	650	12210	20	—
Fog to wall-defined haze top				Thick haze to well defined haze top 920 mb.				210	36100	—	78	210	36100	—	—	—	—	—	—	—	—	—	—	775	7230	33	39	624	13270	18	—
36 mb clearing later except in South.				Inversion: 920 mb. 38.0°F. 840 mb. 46.0°F.								Urrechr. 9h	M.S.L.	—	—	Malta. 8h	M.S.L.	—	—	Lindenberg. 6h	M.S.L.	—	—	Berlin. 7h	M.S.L.	—	—	Catterick. 1445	M.S.L.	—	—
Cloud: St. Cu. forming 9/10 at 364 mb. A. Cu. 9/10 not reached.				Cloud: 5-Cu. 3/10 920 mb. A. Cu. 4/10 not reached.				902	670	32	95	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
Inversion: Screen 374 mb. 31.4°F. 360 mb. 38.5°F. 304 " 47.0°F. 890 mb. 46.3°F. 864 " 47.4°F.				Helder 10h				902	670	32	95	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								906	3280	39	65	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								852	4920	45	35	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								802	6560	39	35	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								754	8200	34	35	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								737	8200	21	—	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								693	9840	18	—	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
								608	13120	7	—	964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
												964	1660	28	95	906	3280	39	65	852	4920	45	35	802	6560	39	35	754	8200	34	35
				</																											

Meteorological Office, Air Ministry, Kingsway, London, W.C.2.

G. C. SIMPSON, O.B., D.Sc., F.R.S., Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 6th February 1934.

Place	Craydon	South Farnboro	Boscombe Down	Calshot	Lympne	Croydon	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place
Time	00	10				10		07			09	07	07	07	07	08		07	08	Time
Type	b	b				b		b			b	b	b	b	b	b		b	b	Type
Surf.	290 3	320 6				275 5		265 8			310 9	325 12	235 15	300 6	260 10	245 17		250 4		Surf.
1000	360 5	345 17				325 11		320 20			305 13	315 22	305 22	300 12	265 23	270 27		230 14	260 21	1000
2000		5 17						340 13			305 15		310 24	325 23	300 22	275 35		310 21	260 21	2000
3000		35 15						360 21						330 17	310 13	230 26			230 22	3000
4000		25 13						340 22						330 21						4000
5000		20 14						330 25						325 30						5000
6000														306 24						6000
8000																				8000
10000																				10000
12000																				12000
Neph.								340 10												Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place
Time	12h	12h		12h	15h	12h		13h	12h	12h	12h	12h	12h	13h		12h		12h	15h	Time
Type	b	b		b	b	b		b	b	b	b	b	b	b	b	b		b	b	Type
Surf.	320 6	355 6		350 7	320 7	345 12		270 4	350 10	185 12	300 10	310 14	255 12	285 9		260 18		235 11	340 12	Surf.
1000	320 12	355 12		5 13	345 14	350 8		310 19	335 13	275 3	310 11	305 24	295 19	295 19		275 29		270 19	335 15	1000
2000	350 17	355 16			340 16	15 19		330 17	335 17			310 28	275 26	300 29		280 33		300 27	345 15	2000
3000		335 10			345 16	20 15			340 11				280 36	285 21						3000
4000		355 13			325 21	30 17			345 15				300 36	295 29						4000
5000		350 15				10 13							330 19							5000
6000		345 16											305 49							6000
8000													325 29	16h C	13h C	16h C				8000
10000													310 56	260 25	300 65	300 40				10000
12000													310 50	13h C	13h C	13h C	1500 C			12000
Neph.								310 50						260 35	300 27	280 50	300 30			Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place
Time	17h	17h	16h	17h	16h		16h	16h		17h	17h	17h	16h	17h	17h	17h		17h	17h	Time
Type	b	b		b	b		b	b		b	b	b	b	b	b	b		b	b	Type
Surf.	315 4	Cal	350 6	335 6	5 3		320 3	270 11		200 5	270 3	280 13	280 12	255 2	250 7	270 3		240 9		Surf.
1000	330 12	345 17	355 10	355 10	350 19		340 9	305 22		310 11	310 12	305 22	290 23	270 14	270 27	280 25		265 17		1000
2000	345 12	350 11	355 14	360 12	350 17		345 12			5 15	315 15	320 24	310 23	280 18	275 45	285 31		280 18		2000
3000		320 15	345 14	355 15	340 20		325 18			25 11	(1800)	320 27		300 23	280 56	285 42			280 11	3000
4000			345 12	340 11	335 19					55 11				310 40						4000
5000			345 20	350 11	340 25					50 10				320 32					330 9	5000
6000			340 14	335 15	335 20					5 6										6000
8000			315 18	325 15	325 18					55 7										8000
10000			320 13	(7000)						50 8										10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5428

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrt.)

and e is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Wednesday, 7 February 1934.

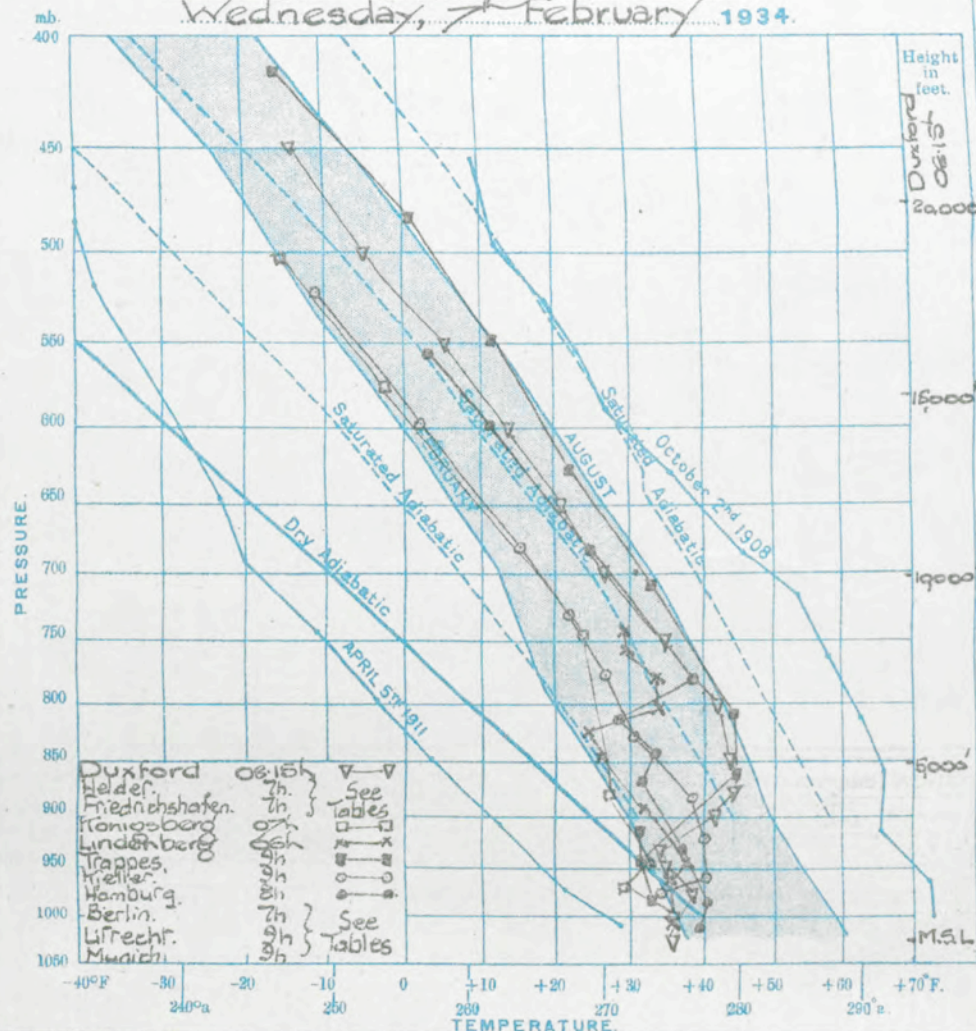
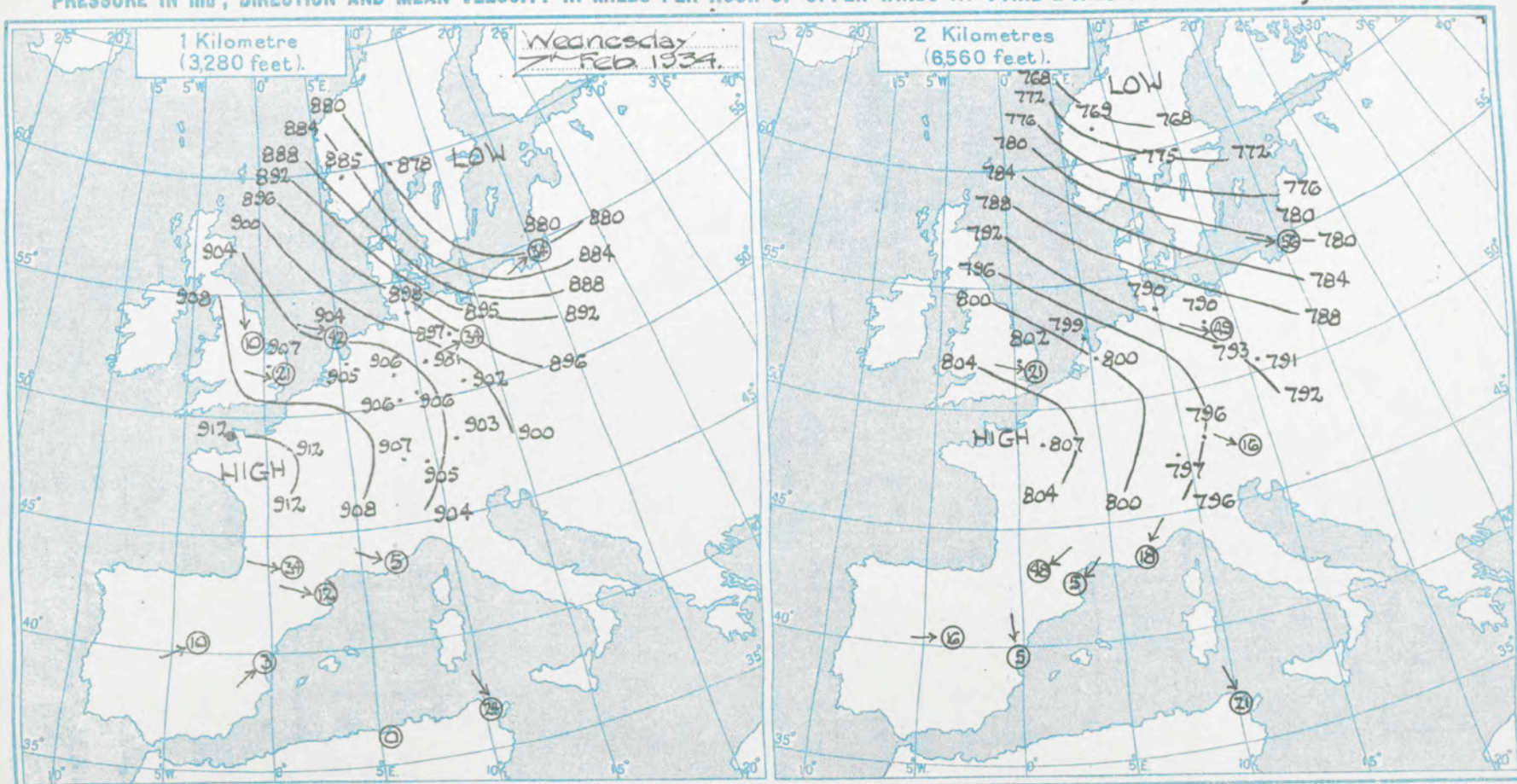


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 7th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford 08.15h				Hamburg 8h				Königsberg 07h				Lindenberg 06h				Berlin 7h				Munich 9h											
1027	M.S.L.	-	-	1015	M.S.L.	-	-	1000	M.S.L.	-	-	1003	M.S.L.	-	-	1012	M.S.L.	-	-	968	M.S.L.	-	-	M.S.L.							
1023	100	37	93	990	660	41	76	962	880	30	98	955	1640	36	96	955	1640	34	98	941	1662	15	89								
967	1080	37	81	940	1970	38	96	946	1640	32	95	940	2300	35	67	933	2300	36	76	915	2950	25	71								
950	2080	36	86	871	4270	32	98	880	3280	32	96	837	5240	25	94	837	5240	25	94	887	3940	27	59								
900	3500	41	61	846	4920	34	87	744	7860	23	43	840	4920	27	98	815	5570	31	62	859	4920	32	46								
850	5040	43	13	811	6230	29	96	573	14130	-2	50	825	5240	25	96	798	6230	31	66	825	5200	34	42								
800	6630	41	33	780	7230	39	56	507	17660	-15	57	808	6230	34	34	755	7560	31	48	724	9200	29	27								
750	8260	36	54	680	10500	26	32					778	7230	34	38	655	1480	18	48	630	10500	28	25								
700	10170	27	64	558	12800	12	38					755	7880	30	50	655	1480	18	48	630	10500	28	25								
650	12970	21	53	555	15760	4	37					740	8200	30	35	532	16730	-3	45	655	11800	24	24								
600	14130	13	11													532	16730	-3	45	655	11800	24	24								
550	16330	9	11																	612	13800	21	22								
500	18710	-30	11																	524	17330	3	18								
450	21230	-44	-																												
Inversion:-				Trappes. 9h				Lufrechr. 9h				Kjeller. 9h				Friedrichshafen 7h				Helder. 7h											
Screen 33.7°F				982	M.S.L.	34	-	1000	M.S.L.	37	85	955	1026	41	55	978	M.S.L.	21	98	996	M.S.L.	43	85								
800 ft. 41.0°F				948	2134	32	-	963	1620	36	95	920	2006	41	55	958	1970	20	98	961	1660	41	75								
940 mb 34.6°F				912	3280	37	-	905	3280	37	95	878	3280	39	55	942	2300	23	92	904	3280	39	75								
870 . 44.0°F				858	4920	45	-	851	4920	45	35	825	4920	31	55	930	2620	23	90	849	4920	41	65								
Bumpy near 450				807	6230	45	-	800	6560	39	25	775	6560	28	45	895	3610	37	31	799	6560	36	65								
Cloud:-				711	9840	34	-	707	9840	34	25	727	8200	23	45	830	5570	35	30	750	8200	34	35								
St. 530 mb				626	13120	23	-	622	13120	16	25	682	9840	16	35	815	5500	35	30	705	9840	28	25								
Str. 510-540 mb				550	16400	12	-					523	16400	-11	-	795	6560	32	30	622	13120	21	25								
A. 410-500				480	19600	1	-									782	7230	32	30												
to 450 mb				417	23000	-15	-									725	9200	26	30												
								Inversion.				Inversions				711	9840	26	29												
								Base pressure 928 mb.				Base pressure 978 810				670	11140	22	29												
								Temp. 32°F				Amount 14°F																			
								Thickness 1476 ft.				Amount 7°F 10°F																			

Meteorological Office, Air Ministry,
Kingsway, London, W.C.2.G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Croydon	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Croydon	Catterick	Leuchars	Renfrew	Aberdeen	Manchester	Malta	Place
Time	07h	08h	05h	07h		00h	07h	07h	07h	07h	05h	07h	10h	07h	07h	06h	07h	07h	06h	Time
Type	b	b	b	b		b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	250 12	270 3	Calm	260 4		270 4	255 3	270 16	265 3	300 6	275 18	265 17	260 10	270 10	240 13	255 16	260 12	195 14		Surf.
1000	300 17	300 13	340 12	270 11		300 11	300 21	285 35	230 15	300 13	275 21	220 33	235 20	270 20	255 24	260 27	285 13	230 23	40 13	1000
2000	315	253	20	275 13		315 13	305 20	320 24	305 21	335 17	275 20	300 32	235 19		260 31					2000
3000							285 21	355 10												3000
4000							295 19	340 18												4000
5000							300 21	315 13												5000
6000							255 21													6000
8000							7009													8000
10000							255 13													10000
12000																				12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Croydon	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place
Time	12h	13h	12h	12h	12h	10h	12h	13h	12h	12h	12h	12h	12h	13h	12h	13h		12h		Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		b		Type
Surf.	265 15	270 7	310 10	285 14	280 11	270 10	290 12	270 20	300 15	305 15	260 17	300 20	280 25	255 13	250 25	300 30		245 14		Surf.
1000	295 15	285 13	300 17	295 11	280 17	280 18	295 24	275 27	300 9	320 16	265 22	285 26	285 25	265 35		255 42		260 24		1000
2000	285 27	300 14	295 19		280 15	300 28	310 21	275 30	305 14		270 32	285 37		280 27		270 41				2000
3000							300 12							280 31		275 38				3000
4000							295 13									280 37				4000
5000																				5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Croydon	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place
Time	17h	17h	16h	17h	17h	24h	17h	15h	17h	17h		17h	17h	17h		17h		17h		Time
Type	b	b	b	b	b	b	b	b	b	b		b	b	b		b		b		Type
Surf.	240 6	250 8	270 15	270 13	270 11	240 16	280 10	270 20	255 7	295 15		280 16	275 18	255 9		270 26		250 25		Surf.
1000	285 15	270 17	285 19	280 16	275 15	265 17	280 21	270 10	275 14	310 16		275 31	280 29	265 27		240 45		255 32		1000
2000	280 18	285 16	295 19	290 18	265 13			225 28	280 24			275 30	285 32	270 28						2000
3000		315 27	310 19					270 34	280 24											3000
4000		300 22	295 19																	4000
5000		290 20	295 25																	5000
6000			295 32																	6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5429

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

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Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t-t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrl.)

and e' is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 3 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

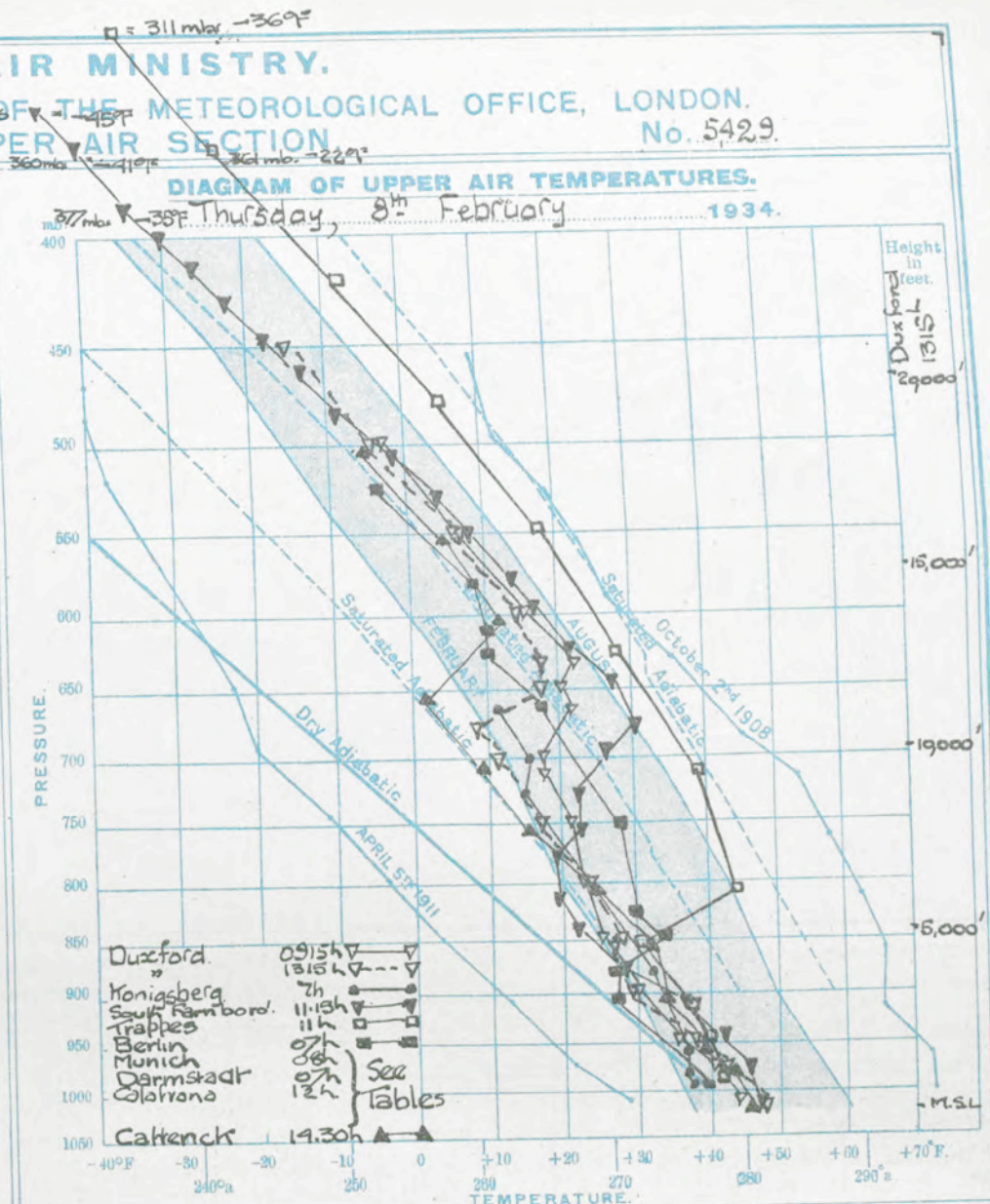
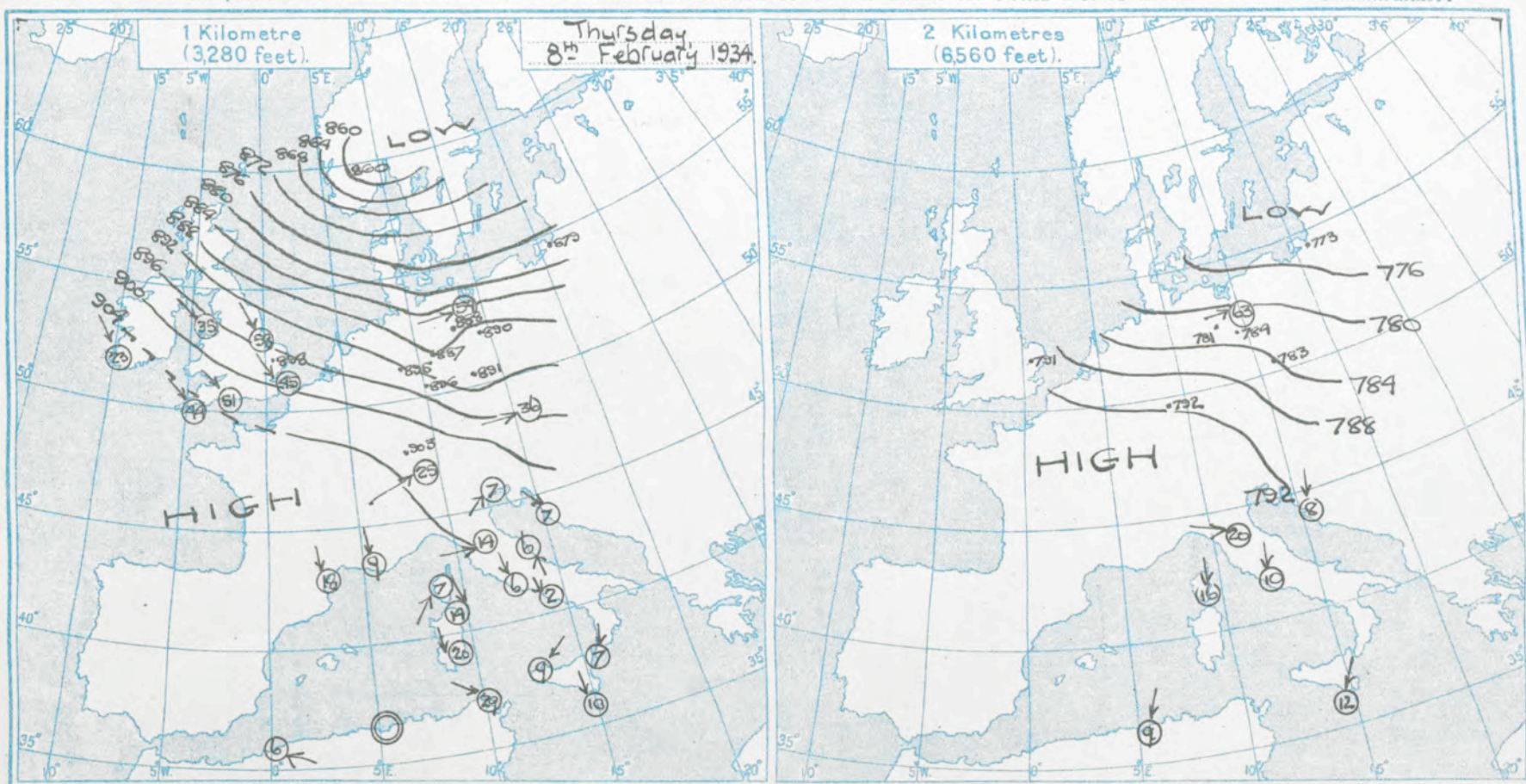


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 8TH February 1934.

TABLE OF UPPER AIR TEMPERATURES RECORDED ON 1903																															
Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity																
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%																
Duxford 0915				Duxford 1315				Königsberg 7h				Trappes 11h				Berlin 07h				Munich 06h				Darmstadt 07h				South 11.15pm			
1017	M.S.L.	-	-	1020	M.S.L.	-	-	M.S.L.	-	-	-	M.S.L.	-	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	
1013.5	100	43.7	72	1016.5	100	47.2	59	989	92	38	96	978	1214	41	-	993	164	39	62	958	1662	16	89	997	443	33	86	1018.7	230	46.0	
976	1030	40.0	77	979	1080	41.0	63	978	330	37	85	944	2234	33	-	902	2380	27	98	980	1370	16	85	935	2300	30	87	978	1220	46.0	
950	1800	36.5	79	950	1300	37.0	66	958	980	37	90	910	3260	36	-	883	3280	27	98	933	2300	18	67	874	2320	28	98	944	1250	41.0	
900	3210	29.7	-	900	3310	33.3	99	879	3280	37	90	835	4230	30	-	848	4600	23	98	832	3610	33	53	858	4600	21	98	909	3200	36.0	
850	4710	25.0	78	850	4800	27.0	83	728	7880	15	90	804	6860	43	-	818	5570	23	43	860	4600	43	47	803	6230	37	37	877	4180	28.0	
800	6280	22.0	51	800	6300	22.0	85	702	8850	16	50	709	9840	33	-	750	7560	28	44	844	5340	41	41	732	6540	30	37	844	5090	21.0	
750	7950	21.0	58	750	8040	17.4	-	662	10500	11	45	624	13120	28	-	663	10830	18	45	733	8850	32	31	708	9200	28	26	819	6000	13.0	
700	9720	17.6	-	700	9800	10.5	-					847	16400	18	-	614	12790	10	62	715	9200	32	30	652	11460	22	20	783	6380	13.0	
650	11630	20.0	61	650	11700	16.0	-					478	19660	3	-	605	13120	10	44	636	12460	15	27	584	14460	8	17	754	7980	21.0	
600	13690	16.0	-	600	13730	13.2	-					416	23000	-3	-	562	13800	9	44	612	13480	18	26	578	14760	18	16	726	3000	21.0	
550	15890	6.5	-	550	15930	5.5	-					361	26300	-22	-	520	16780	-4	45	565	15430	12	23	557	15760	15	13	638	3930	25.0	
500	18250	-3.0	-	500	18290	-5.5	-					311	28380	-36	-	520	17390	-5	22	525	17390	-5	22	545	16090	-20	15	672	10960	30.0	
Haze top 855 mb.				450 20860 16.2																											
Small C. and Str Cu.																															
210, 885-840 mb,																															
1010 in South.																															
C. Cu. 210 not reached																															
Inversions:				Inversions:-				Lindenberg 6h				Catterick 1430h								Malta				Calatrana 12h							
(i) 710 mb.	17.2°F			860 mb.	28.6°F			M.S.L.	-	-	-	1018 M.S.L.	-	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	M.S.L.	-	-	
650 mb.	21.0°F			850 "	27.0°F			993	348	37	94	10120	175	46	65										993	680	55	65	467	13040	13.0
(ii) 650 mb.	20.0°F			680 "	8.0°F			820	5240	22	98	974	1150	420	69										960	1640	49	83	447	21400	13.0
635 mb.	21.2°F			630 "	17.4°F			796	6230	32	40	960	1820	39.5	92										903	3280	41	45	425	22080	23.0
												900	3270	33.0	100										850	4320	40	45	411	23050	27.0
												850	4770	31.0	-										799	6560	39	58	394	24020	31.0
												800	6320	22.3	-										750	8200	34	65	377	25080	35.0
												750	8000	14.5	-										705	9840	23	85	360	26080	41.0
												700	9760	9.0	-																
												650	11600	1.3	-																
												600	13620	10.5	-																
												550	15820	4.0	-																
												500	18200	-6.0	-																
												Inversion read on descent 630 mb at 670 mb only																			
												Cloud: Str cu only over hills 1330-1850 mbs.																			



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 8th February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Upper Heyford	Biggin Hill	Felixstowe	Oranwell	Croydon	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Bircham Newton	Valentia	Malta	Place
Time	7h	8h	8h	7h	9h	7h	8h	7h	10h	6h	9h	7h	8h	7h		8h	8h	10h	6h	Time
Type																				Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	250 20	270 18	280 29	260 19	295 25	255 16	295 18	290 26	290 18	270 22	295 35	300 32	280 34	270 34		300 20	285 30	335 14	3000'	Surf.
1000	265 36	280 36	285 37	275 37	295 30	270 26	300 39	275 52	305 25	295 31	300 38	300 47	295 43	280 33		305 39	290 46	330 23	350 10	1000
2000	270 38	300 45	295 50	295 46	300 29	295 54	300 44	285 55	310 27	305 35	300 35	300 50	300 61	285 44		305 48	295 70	325 23	7000'	2000
3000			300 51		310 33		305 45	295 58		305 44	300 35	305 51						320 23	20 12	3000
4000			300 64		310 41							310 45							40 9	4000
5000												310 51								5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.		280 60			300 90							290 90								Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Oranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Alder Grove	Valentia	Place
Time	12h	12h	12h	12h	12h		12h	13h	12h	12h	12h	12h	12h	13h	12h	12h		12h		Time
Type																				Type
Surf.	285 25	300 15	320 23	315 26	320 18		280 22	275 26	285 27	325 23	280 34	290 36	315 38	285 25	285 30	285 25		285 17		Surf.
1000	305 47	305 39	310 40	320 19	320 17		285 35	280 39	285 28	330 29	280 39	285 47	305 37	280 47	285 37	300 35		285 32		1000
2000	305 45	295 41	308 30	315 15			280 42	275 49	300 25	325 29	315 35	305 48		300 43	300 44	300 40		300 30		2000
3000	305 42		310 39	315 24			285 42		305 37	325 28		310 59		305 54		305 44		305 37		3000
4000	305 31		310 29						305 47			315 56				305 45		315 47		4000
5000			310 42						320 65			320 51						320 56		5000
6000			315 26						330 51									320 54		6000
8000																				8000
10000																				10000
12000																				12000
Neph.		310 150		300 90	310 75							280 60				280 75				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Croydon	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder Grove	Malta	Place
Time	17h	17h	17h	17h	17h		24h	16h		17h	17h	17h	17h	18h	17h	17h		17h		Time
Type																				Type
Surf.	305 14	300 10	320 12	290 11	315 13		240 10	285 18		310 18	295 21	290 17	300 17	280 13	280 20	280 12		295 14		Surf.
1000	310 24	310 26	315 19	320 23	315 24		260 13	300 28		330 15	305 29	305 45	315 33	290 32	290 24	285 26		300 29		1000
2000	310 23	320 28	325 20	330 22	315 29		285 27	300 32		340 17	315 29	310 41	315 35	305 37	308 29	290 31		315 40		2000
3000	315 20	325 28	335 23	345 17	315 30		295 29			360 24	325 35	325 33		315 40	320 30	300 31		325 29	270 5	3000
4000			340 23	335 19	320 41					360 29	330 40	325 37		325 47	325 27	310 37		315 28		4000
5000										380 30		325 45						315 41	360 7	5000
6000										325 35								315 51		6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5430.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title, Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).
and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Friday, 9th February 1934.

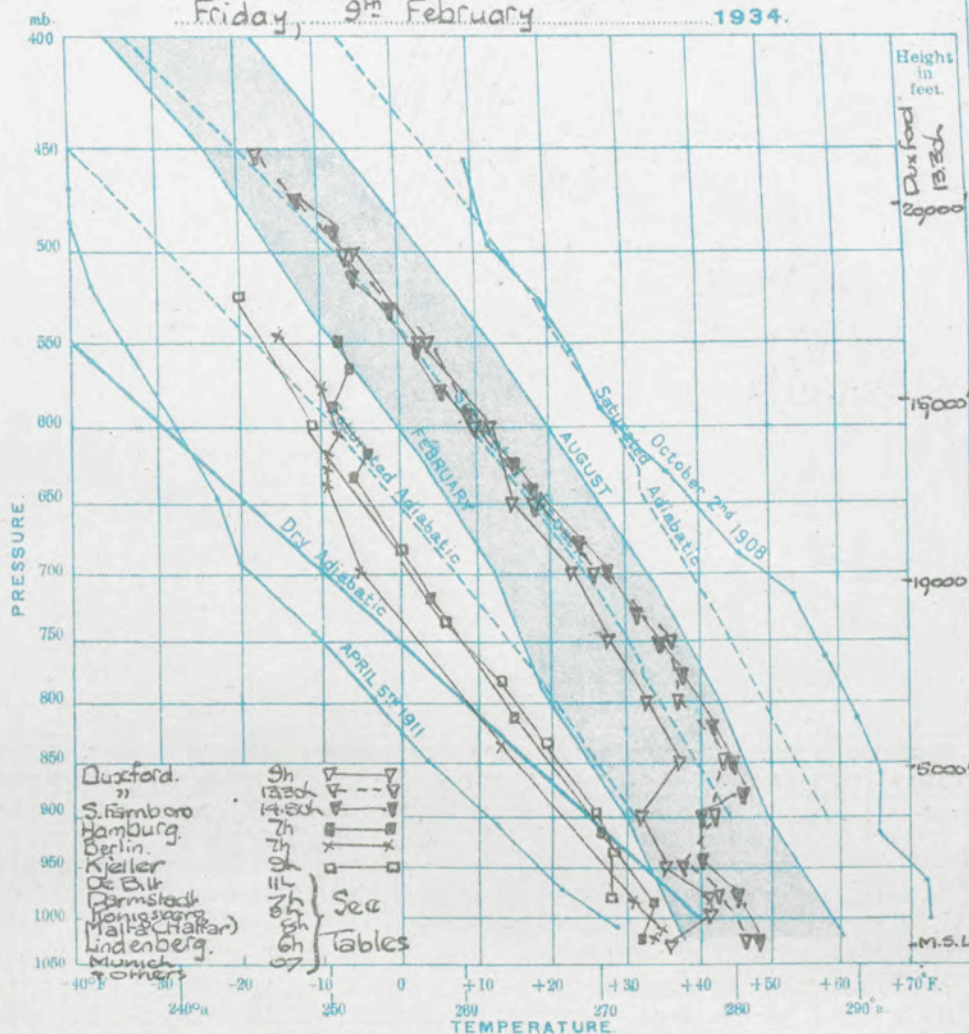
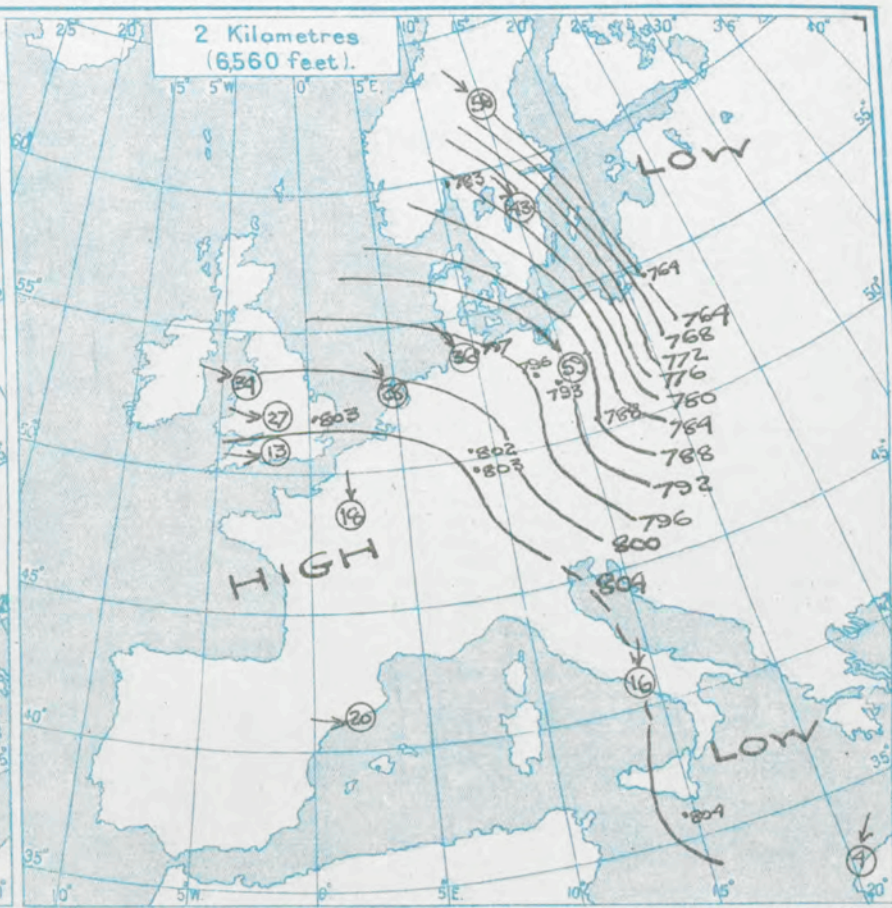
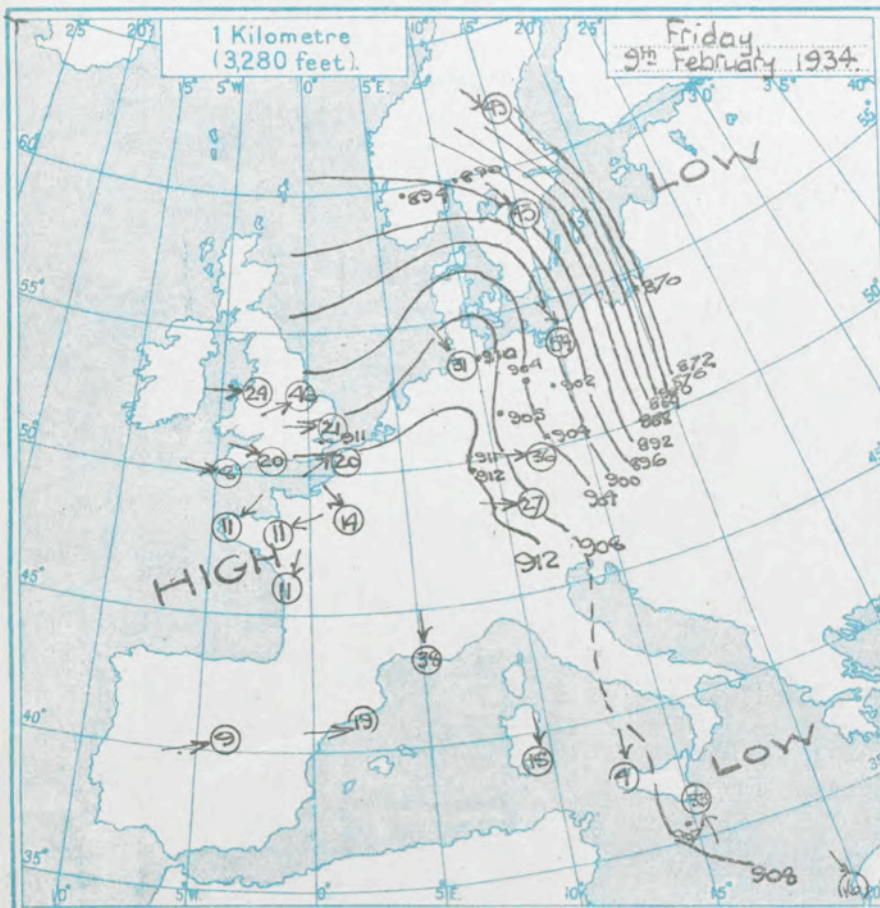


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 9th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford 9h				Duxford 1330				Hamburg 7h				Berlin 7h				Kjeller 08h				Munich 07h				S. Farn 1450				Malta 08h			
1032	M.S.L.	-	-	1030	M.S.L.	-	-	1023	M.S.L.	-	-	1018	M.S.L.	-	-	971	M.S.L.	-	-	972	M.S.L.	-	-	1022.8	M.S.L.	-	-	931	M.S.L.	-	-
1028.5	100	358	86	1026.5	100	467	86	984	980	34	65	1012	320	35	82	935	2006	27	65	972	1662	34	81	1022.3	230	48	-	931	880	34	65
991	1080	406	64	983	1080	417	69	910	3280	27	35	979	1310	31	87	930	3260	25	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
950	2110	365	66	950	2170	375	79	908	6230	15	28	835	5240	13	88	835	4320	12	55	972	1662	34	81	944	2370	39	-	935	1660	48	85
900	3610	316	63	900	3600	412	62	897	9200	4	26	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
850	5150	275	55	850	5150	424	28	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
800	6730	337	54	800	6740	373	55	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
750	8420	283	51	750	8450	305	61	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
700	10220	235	60	700	10250	250	61	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
650	12130	185	-	650	12170	178	-	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
600	14150	120	-	600	14130	100	-	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
550	16350	30	-	550	16400	10	-	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
500	18710	-55	-	500	18760	-83	-	829	12460	-6	27	835	5240	13	88	835	4320	12	55	972	1480	44	-	944	2370	39	-	935	1660	48	85
Inversions				Haze top 962 mls				Well defined				Haze top 935 mls				Clouds 846 3/10				Inversions				Haze top 910 mls				ACu 3/10 not reached			
(i) Screen 358°F.				Haze top 962 mls				Well defined				Haze top 935 mls				Clouds 846 3/10				Inversions				Haze top 910 mls				ACu 3/10 not reached			
(ii) 980 mb. 410°F.				Haze top 962 mls				Well defined				Haze top 935 mls				Clouds 846 3/10				Inversions				Haze top 910 mls				ACu 3/10 not reached			
(iii) 900 mb. 316°F.				Haze top 962 mls				Well defined				Haze top 935 mls				Clouds 846 3/10				Inversions				Haze top 910 mls				ACu 3/10 not reached			
(iv) 846 mb. 375°F.				Haze top 962 mls				Well defined				Haze top 935 mls				Clouds 846 3/10				Inversions				Haze top 910 mls				ACu 3/10 not reached			
Cloud.				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
Cu 110, 910 mb.				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
ACu 3/10 not reached				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
Haze top approx. 500 ft. 910 mb.				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
Thick layer 750 mb.				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
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				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3/10 not reached			
				in haze top in W				Inversions				Haze top 910 mls				ACu 3/10 not reached				Inversions				Haze top 910 mls				ACu 3			



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 9th February 1934.

Place	Craydon	South Farnboro	Boscombe Down	Calshot	Lympne	Upper Heyford	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Worthy Down	Birchington	Croydon	Lympne	Malta	Place	
Time	7h	8h	8h	7h	6h	7h	7h	7h	7h	6h	9h	7h	8h		11h	9h	10h	10h	6h	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.	120	6	Cal	190	2	255	5	310	11	260	8	230	4	245	11	240	5	Cal	190	2	Surf.
1000	315	15	275	13	270	13	305	10	315	17	295	14	305	17	260	33	265	19	315	7	1000
2000	300	17	260	16	265	18	275	13	320	19	295	19	300	15	265	42	275	21	315	9	2000
3000	295	20	265	21	260	21	270	15	325	27	285	19	285	21	265	46	275	23	280	8	3000
4000	280	20	280	27	265	23	270	19	330	27	275	23	275	23	255	46	280	24			4000
5000	280	23	300	18	275	22	275	16					270	33	275	24					5000
6000					265	13							305	34							6000
8000					190	21							310	33							8000
10000					(7000)								330	27							10000
12000																					12000
Neph.																					Neph.
280																					280
260																					260
260																					260
260																					260
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AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5431.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for those months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

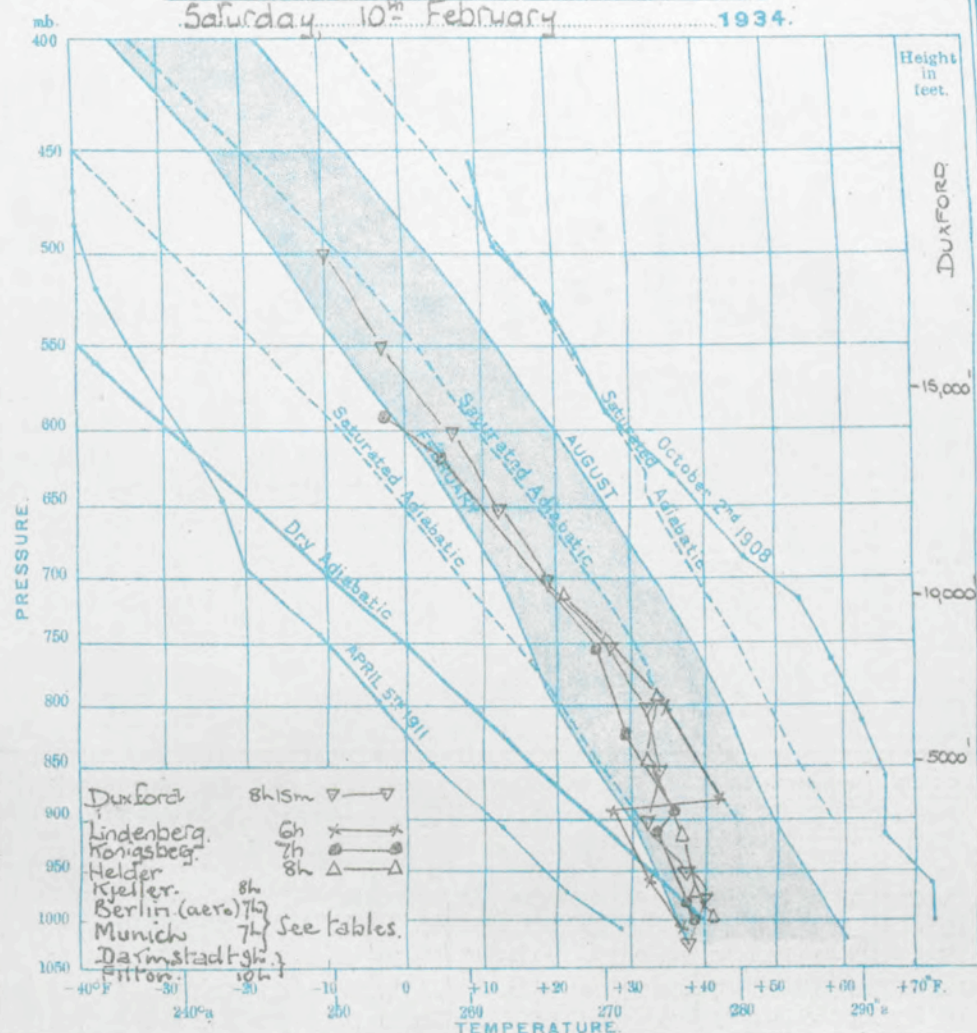
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

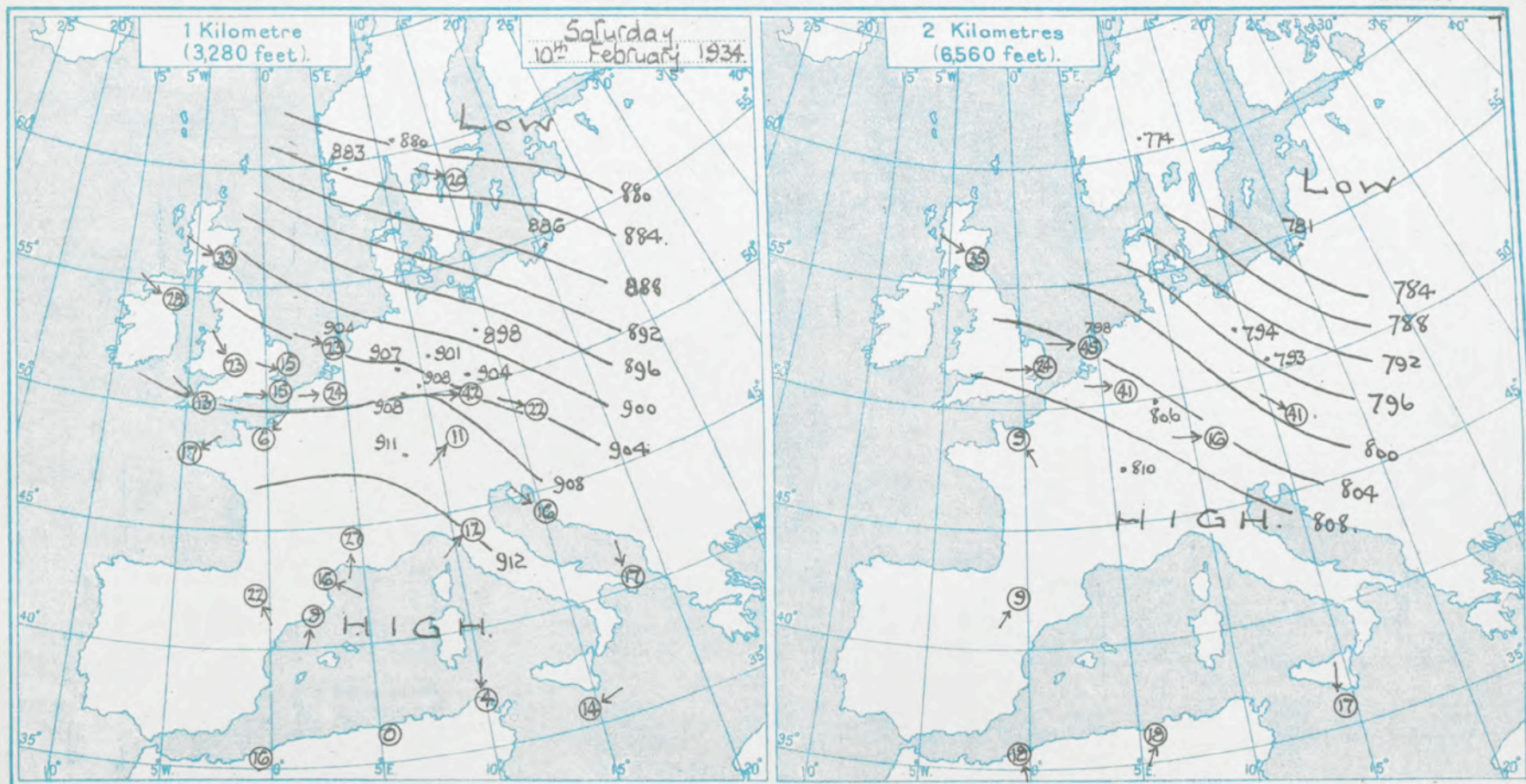
DIAGRAM OF UPPER AIR TEMPERATURES.

Saturday, 10th February

1934.

TABLE OF UPPER AIR TEMPERATURES RECORDED ON 10th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford 0815				Filton 104				Lindenberg 6h				Helder 8h				Kjeller 8h				Darmstadt 9h											
1026	M.S.L.	—	—	1028	M.S.L.	—	—	1003	M.S.L.	—	—	1023	M.S.L.	—	—	1008	M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—
1022.5	100	38.0	85	1020	200	45.5	78	955	1640	33	98	998	680	41	75	957	1026	36	65												
985	1080	40.0	78	983	1180	42.0	85	955	1640	33	98	998	680	41	75	957	1026	36	65												
950	2050	37.2	83	950	2100	39.0	84	880	3610	27	98	904	3280	36	85	880	3280	30	65	1008	445	30	94								
900	3480	31.5	—	900	3510	33.0	81	875	3940	42	98	849	4920	32	65	825	4920	25	65	998	980	30	91								
850	4980	33.0	76	850	5000	28.0	90	800	6230	36	98	798	2560	34	35	825	4920	25	65	970	1640	32	85								
800	6560	32.3	57	800	6620	30.0	73					749	8200	27	25	825	4920	25	65	955	1970	30	84								
750	8250	27.3	73	750	8300	28.0	73					703	9840	21	25	825	4920	25	65	935	2620	36	69								
700	10050	19.8	69	700	10100	20.0	77									726	8200	10	55	896	3610	41	56								
650	11910	12.0	—	650	11970	12.0	—									680	9840	3	55	806	6560	36	47								
600	13950	6.6	—	600	14000	07.5	—									594	13120	-11	—	760	8200	32	42								
550	16110	-2.3	—	550	16200	03.0	—									517	16400	-24	—	682	10830	18	39								
500	18470	-11.0	—	500	18560	-13	—													584	14760	8	41								
Well defined haze				450	21300	-20	—													533	17060	-6	43								
Top 600 ft.				Inversion 830mb 29°F																											
St. Cl. 610 905-865mb				770mb 31°F																											
Inversion's				St. 310 1000mb. Tops 900mb.																											
St. Cl. 810 890-830mb																															
① Screen. 38.0°F																															
500 ft. 40.8°F																															
② 865mb. 28.6°F																															
830mb. 34.6°F																															
Rime formed in cloud 905-865mb.																															
				Berlin (aero) 7h				Königsberg 7h				Munich 7h																			
				1013 M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.							
				1004 330 39 89				999 92 39 95				967 1662 25 72																			
				916 2950 27 98				985 330 38 98				959 1970 25 72																			
				865 4270 37 43				907 2620 33 98				932 2620 37 56																			
				822 5570 36 44				907 2620 33 98				894 3940 37 47																			
				733 8540 25 47				820 5240 39 85				872 4600 39 44																			
				650 11800 12 47				753 7560 26 60				819 6230 37 41																			
				597 13800 3 51				616 12460 5 65				654 11800 19 39																			
				548 16090 -4 51				587 15100 -2 77				592 14460 10 37																			
												550 16400 1 40																			
												519 17720 -4 41																			
Metecological Office, Air Ministry. KIPPERNA, London W.7. G. C. SIMPSON, O.B., D.Sc., F.R.S.																															



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 10th February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Felix-stowe	Lympne	Croydon	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place			
Time	7h	8h	8h	9h	6h	10h	7h	7h	6h	6h	9h	7h		7h	7h	10h		7h	6h	Time			
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.	250	10	250	6	245	10	260	2	255	11	225	7	235	11	210	6	55	5	280	11	250	5	Surf.
1000	275	18	270	23	265	16	270	26	250	12	270	17	270	21	260	32	250	19	270	11	285	13	1000
2000	285	20	280	19	295	17	300	27	260	15	295	17	295	21	285	34	290	36	290	11	290	11	2000
3000			285	15	310	13	305	15	265	15	315	20	280	15			310	23	300	13	305	12	3000
4000			(2500')						280	22			310	23	300	13			305	12			4000
5000									265	30									275	24			5000
6000									275	24									265	31			6000
8000									265	31									265	31			8000
10000									265	31									265	31			10000
12000									265	31									265	31			12000
Neph.																							Neph.
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Alder-grove	Valentia	Place			
Time.	12h	12h	12h	12h	12h		13h	12h	12h		12h	12h		13h	12h	12h		12h		Time.			
Type	b	b		b			b	b			b	b		b	b	b		b		Type			
Surf.	255	12	270	5	270	10	235	9	240	10			260	5	265	15	260	11			Surf.		
1000	270	13	285	10	275	12	265	14	260	15			285	17	275	26	265	11			1000		
2000	320	14	320	15	295	14	300	13	300	16			305	15	285	28	295	17			2000		
3000	295	11	330	12	330	16			315	10			310	15			315	15			3000		
4000	305	10			345	10			350	6											4000		
5000																					5000		
6000																					6000		
8000																					8000		
10000																					10000		
12000																					12000		
Neph.																					Neph.		
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place			
Time.		17h			17h		17h	17h		17h	18h	17h	17h	17h	17h			17h	17h	Time.			
Type.								b		b	b	b	b		b					Type.			
Surf.		265	3				260	4		260	2	270	6		270	3	250	25			Surf.		
1000		285	10				285	9		290	16	285	21		300	6	275	10			1000		
2000		305	15				305	11		310	19	280	23		320	9	290	14			2000		
3000							330	11		320	15	290	24		340	9	285	22			3000		
4000							360	11		315	17	295	23		340	11	285	22			4000		
5000																					5000		
6000																					6000		
8000																					8000		
10000																					10000		
12000																					12000		
Neph.																					Neph.		

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5432.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for those months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t-t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrt.)

and e' is the saturation vapour pressure at temperature l'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

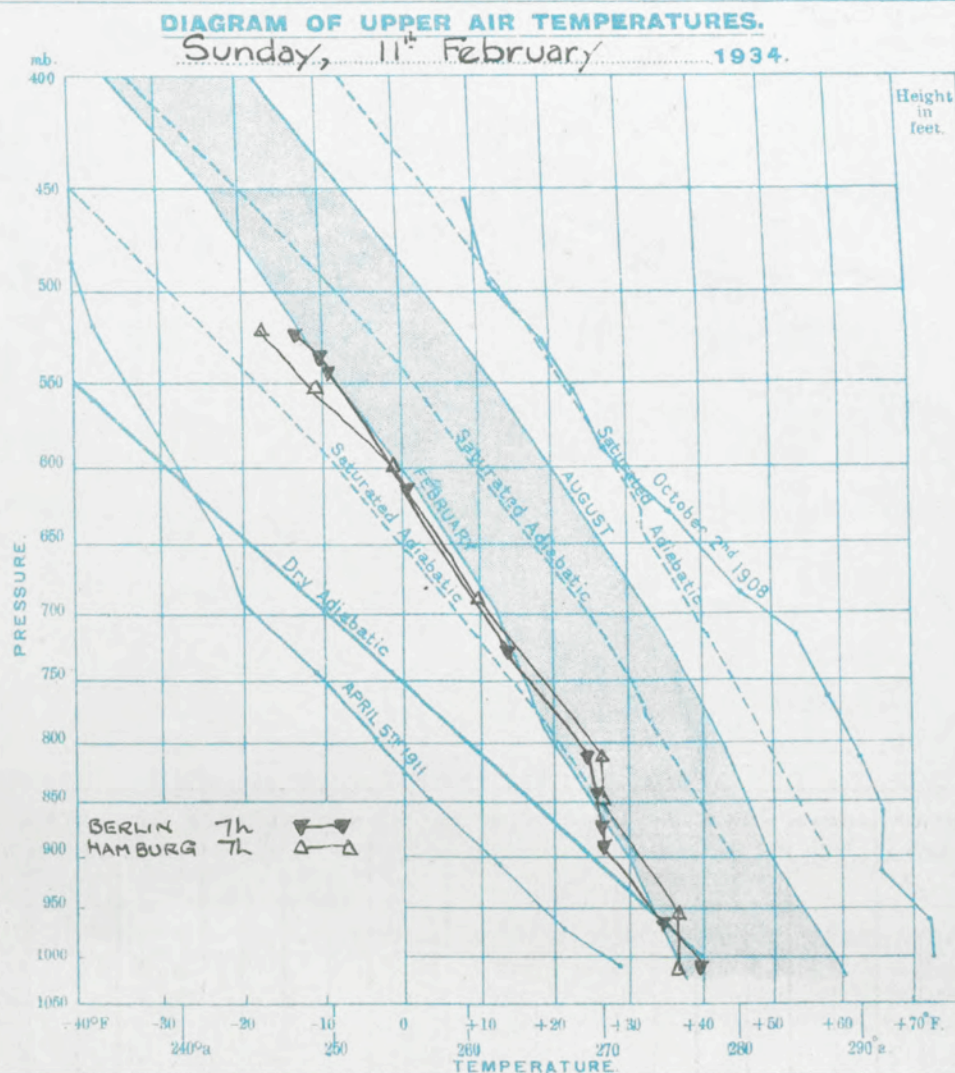


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 11th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
Hamburg Th	M.S.L.	—	—
1021	61	33	91
959	1640	38	62
852	4920	27	98
814	5900	27	69
684	10170	10	54
599	13800	-1	50
553	15760	-9	42
527	17060	-17	42

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
Berlin Th	M.S.L.	—	—
1021	184	40	82
966	1640	35	90
893	2610	27	96
875	2940	27	98
846	4920	26	98
815	5900	25	98
731	8540	14	66
615	13170	-1	67
545	16030	-9	62
535	16480	-10	61
526	16730	-13	60

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	—	—	—

Meteorological Office, Air Ministry.
Kingsway, London, W.C.1.

G. C. SIMPSON, O.B., D.Sc., F.R.S.,
Director

В. М. Давыдович: ЦРП на Мех. в Космосе и ВРД

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5433

No. 5433

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—A† British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Monday, 12th February 1934.

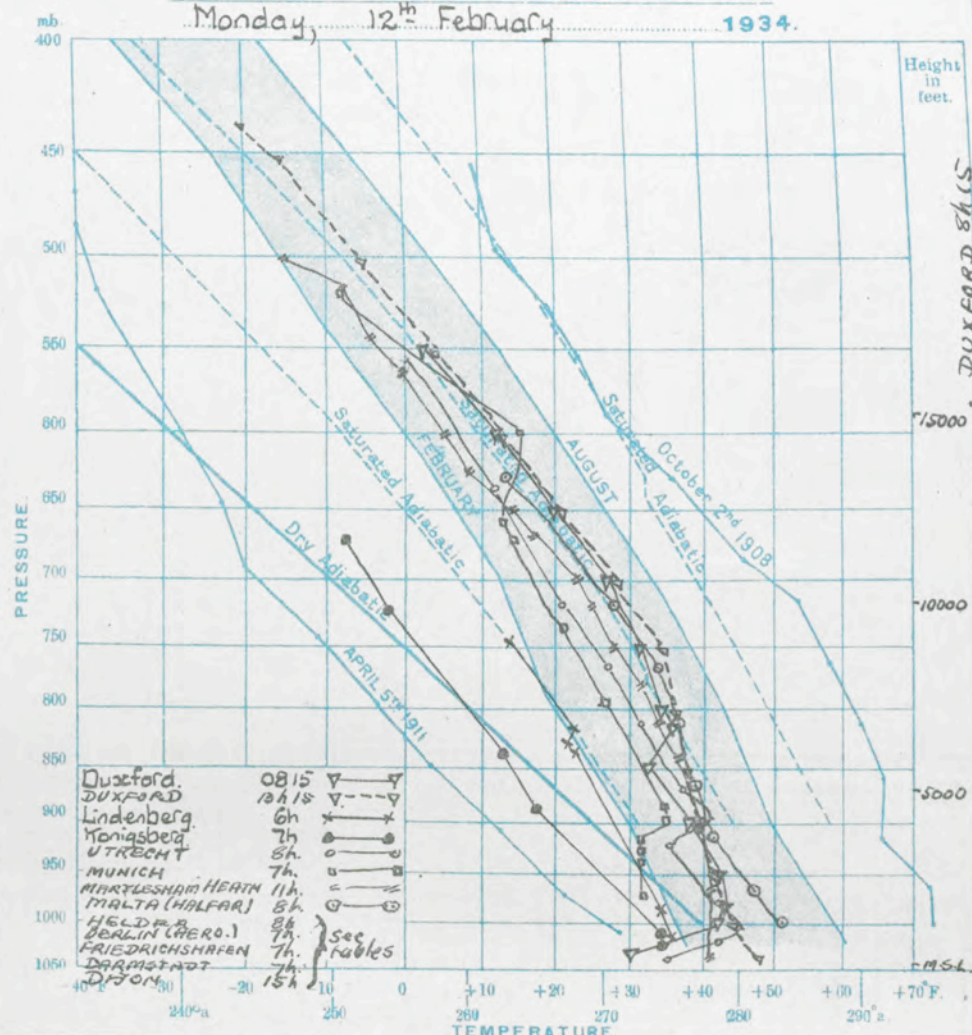
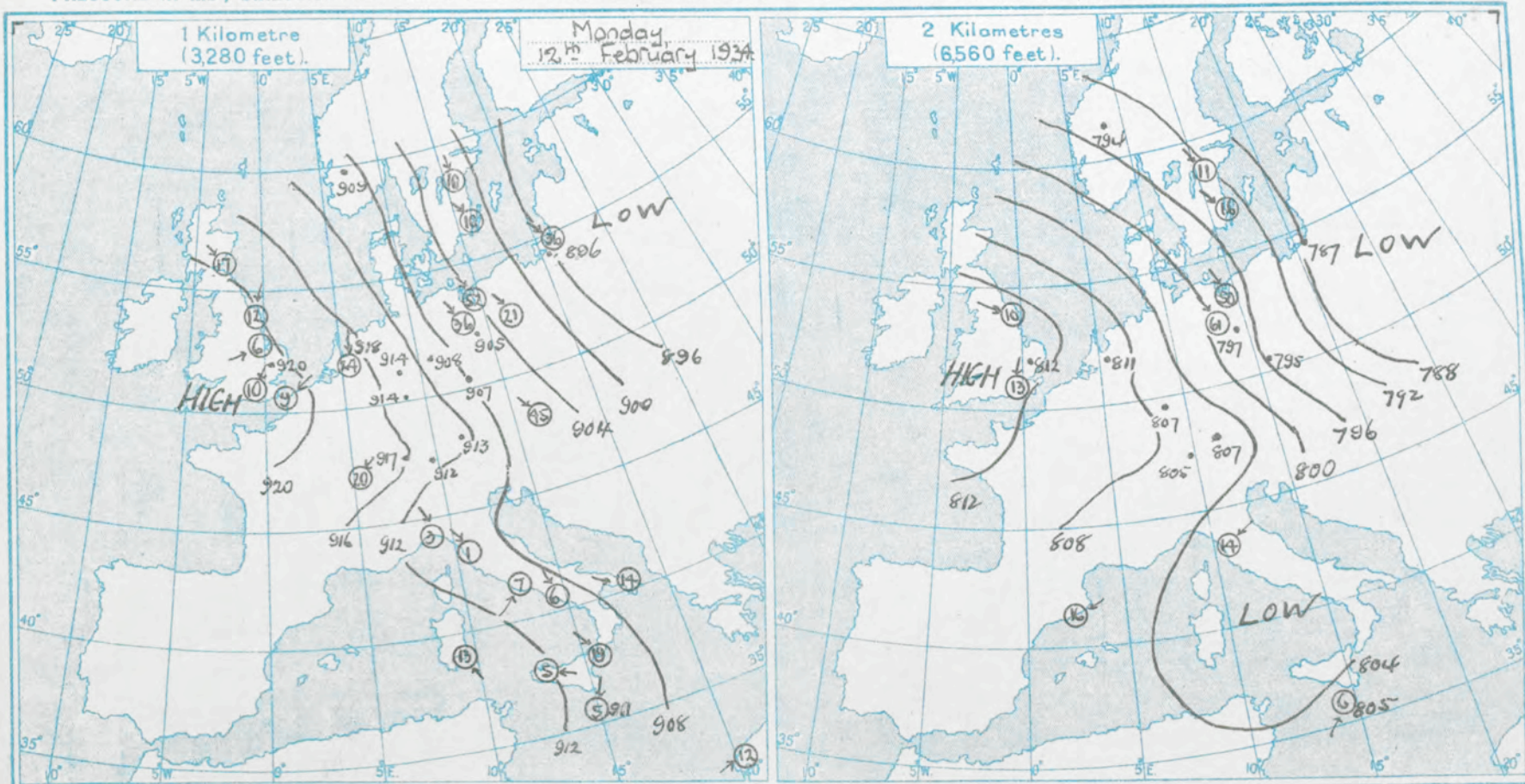


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 12th February 1934

METEOROLOGICAL OFFICE, AIR MINISTRY, KINGSWAY, LONDON, W.C.2											
SURFACE AIR TEMPERATURES RECORDED ON 1934											
Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford 0815				DUXFORD 1815				Lindenberg 6h			
1041	M.S.L.	-	-	1041	M.S.L.	-	-	1010	M.S.L.	-	-
1037.5	100	30.2	38	1038.5	100	48	73	980	348	37	95
1000	1060	42.7	84	1000	1080	44.2	85	980	1310	35	90
950	2450	43.0	71	950	2500	42	70	842	5240	23	98
900	3880	38.6	69	900	3520	36.5	76	830	5570	22	58
850	5400	33.0	74	850	5950	37.4	39	827	5900	23	58
800	6990	34.7	53	800	7040	35.3	60	815	-	23	58
750	8680	31.5	54	750	8770	34	51	745	8200	14	72
700	10300	27.5	57	700	10570	27.8	45				
650	12400	19.9	-	650	12490	20.5	-				
600	14440	12.0	-	600	14510	12.2	-				
550	16640	3.0	-	550	16720	3.2	-				
Fog with isolated dead patches to well defined haze Top 990 mb.				500 19110 -6 - 450 21700 -18.5 - 430 22710 -19.8 - Thick haze to St. 990 mb.							
Inversions				500 19110 -6 - 450 21700 -18.5 - 430 22710 -19.8 - Thick fog in South with clear patches.							
(i) Screen 3070°F 980 mb 43.5°F				Cloud - St. cl. 40 in St.				Königsberg 7h			
(ii) 850 mb 33.0°F 810 mb 36.5°F								1013			
								1005			
								882			
								830			
								722			
								670			
Warsaw 11h.								BERLIN (HARO.) 7h			
-	M.S.L.	-	-	-	M.S.L.	-	-	1021	M.S.L.	-	-
982	1017	34	65					1008	330	35	-
966	2007	32	75					973	3610	18	-
900	3280	25	78					953	5240	13	-
844	4920	18	85					900	8850	-2	-
781	6560	10	65					670	10500	-8	-
741	8200	3	65								
692	9840	-2	55								
604	13120	-24	55								
								MUNICH 7h			
								1021			
								992			
								932			
								903			
								858			
								875			
								791			
								728			
								667			
								653			
								593			
								553			
								519			
								HELDER 8h			
								1012			
								978			
								917			
								859			
								811			
								761			
								715			
								DIJON 15h			
								982			
								944			
								913			
								889			
								858			
								809			
								712			
								609			
								TRAPPES 15h			
								990			
								970			
								866			
								814			
								718			
								632			
								553			
								442			
								366			
								316			
								272			
Meteorological Office, Air Ministry, Kingsway, London, W.C.2											
G. C. SIMPSON, O.B., D.Sc., F.R.S., Director.											

Meteorological Office, Air Ministry,
Kingsway, London, W.C.2.

G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 12 th February 1934.																					
Place	Croydon	South Farnboro	Boscombe Down	Brixton Hinton	Lymington	Worthy Down	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place	
Time	7h			10h	6h	7h	7h	7h			9h	7h		7h	6h	8h		7h	6h	Time	
Type				b				b			b					b				Type	
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet	
Surf.	Calm			245 3	10 3	Calm	315 2	260 6			200 7	160 3		Calm	250 15	220 8		Calm	3000'	Surf.	
1000	Calm			25 8	45 17	30 8	30 15	355 13			195 11	300 6		275 8	265 26	245 15		215 13	30 5	1000	
2000				140 5	70 13	30 15	80 4	120 3						340 17	280 24	250 15			7000'	2000	
3000				-	45 9	30 10	335 5	250 6						15 12	310 17				200 6	3000	
4000				-	35 15	65 11	5 9	270 3						275 2	290 21				10000'	4000	
5000				245 12		55 11	345 13	320 15						295 5					220 9	5000	
6000				25 18		5 13	350 16	?	9					285 10					16000'	6000	
8000				355 16			350 23	355 20						325 12					230 17	8000	
10000				15 33			345 25							330 7					20000'	10000	
12000				(25 36)															250 22	12000	
Neph.				(55 23)																Neph.	
				(16000')																	
			</																		

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5,434.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

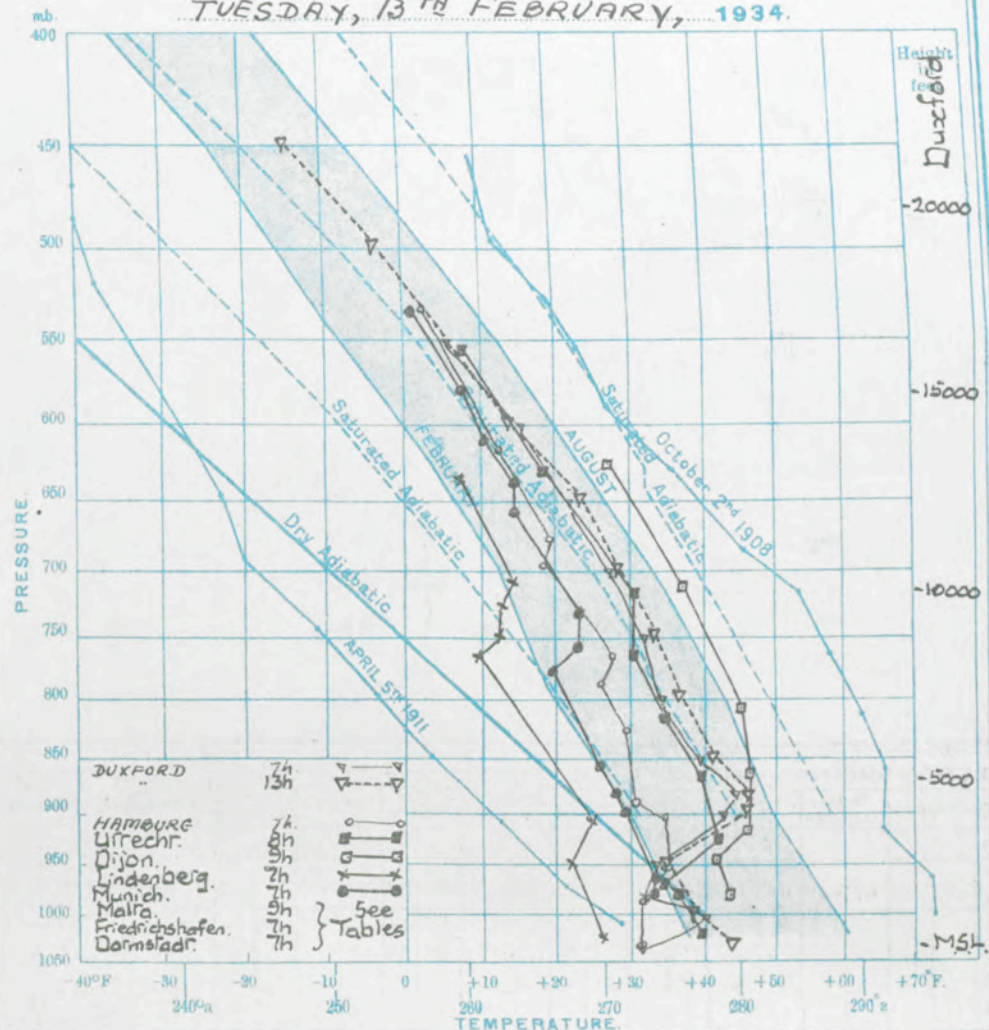
d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

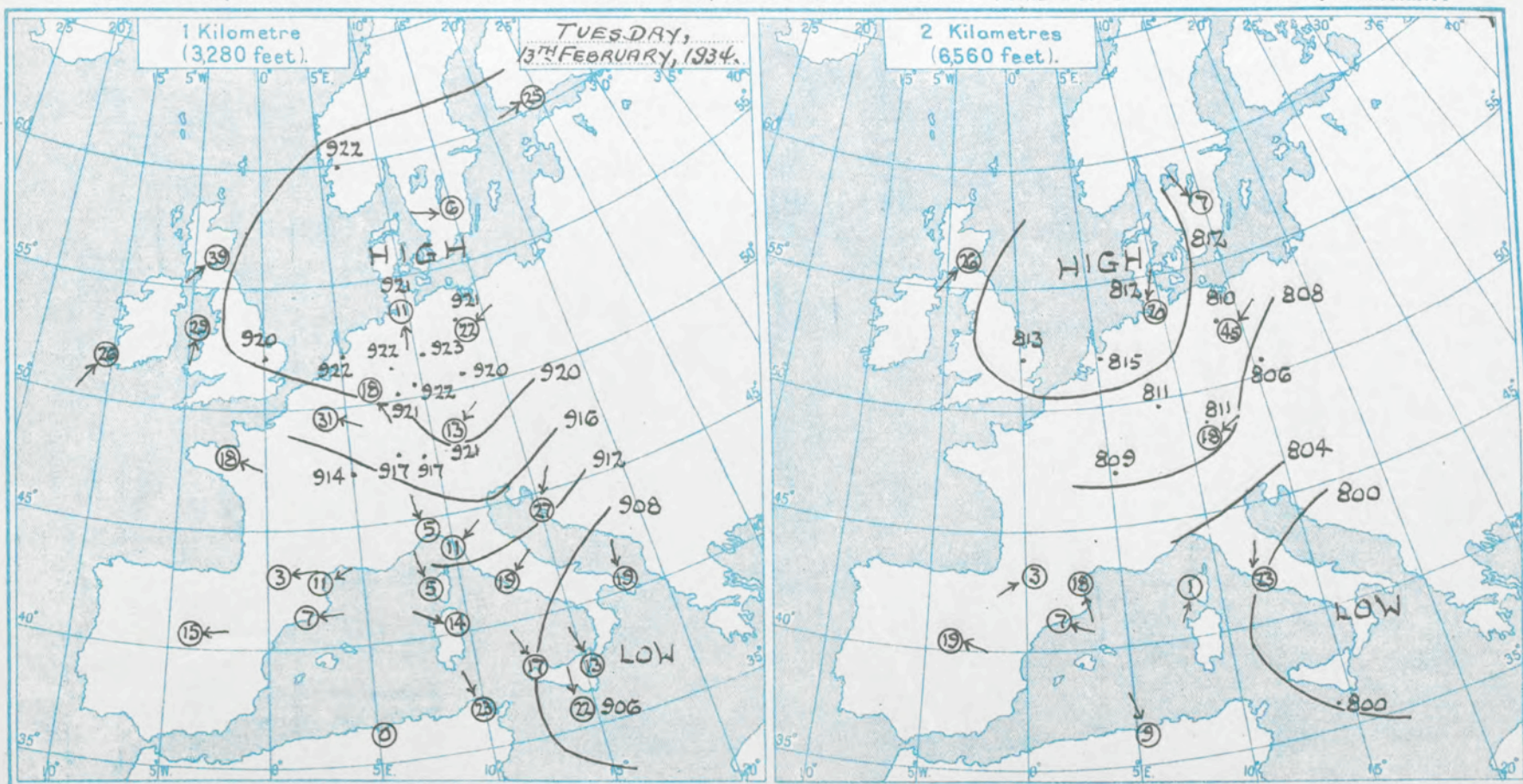
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

TUESDAY, 13TH FEBRUARY, 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON TUESDAY, 13TH FEBRUARY, 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity				
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%				
DUXFORD 7h.				Duxford 13h.				HAMBURG 7h.				Dijon 9h.				Lindenberg 7h.				Munich 7h.				Helder 13h.											
M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.											
1042	—	—	—	1042	—	—	—	1045	—	—	—	983	—	—	—	1031	—	—	—	979	—	—	—	1018	—	—	—	—	—	—	—				
1038.5	100	30.5	100	1038.5	100	43.7	85	1042	61	31	84	983	1385	43	65	1031	348	26	85	979	1662	32	96	1018	680	41	85	—	—	—	—				
1001	1060	39.7	72	1001	1080	38.5	98	984	1810	31	44	948	2365	41	65	950	2620	22	85	968	2300	33	76	980	1660	37	65	—	—	—	—				
950	2450	32.5	99	950	2510	34.0	100	951	2620	34	34	914	3280	45	45	904	3940	25	32	898	3940	29	60	922	3280	43	45	—	—	—	—				
900	3640	27.2	20	900	3980	25.8	36	890	4270	30	32	860	4920	46	35	760	8540	9	70	885	4270	28	65	867	4920	41	35	—	—	—	—				
850	5400	24.3	14	850	5500	24.5	29	826	6230	29	56	809	6560	45	25	750	8850	12	72	856	5240	26	49	815	6560	36	35	—	—	—	—				
800	7000	23.6	59	800	7090	23.0	54	784	7660	26	48	713	9840	37	15	726	9530	12	72	856	5240	26	49	766	8200	32	25	—	—	—	—				
750	8400	21.4	31	750	8800	23.0	51	764	8200	27	58	626	13120	27	15	710	10170	14	68	776	7560	19	32	719	9840	30	25	—	—	—	—				
700	10500	21.4	45	700	10610	21.5	55	694	10830	19	44	626	13120	27	15	710	10170	14	68	776	7560	19	32	719	9840	30	25	—	—	—	—				
650	12430	21.6	50	650	12520	23.0	51	676	11480	19	34	626	13120	27	15	710	10170	14	68	776	7560	19	32	719	9840	30	25	—	—	—	—				
600	14470	15	—	600	14520	13.5	—	676	11480	19	34	626	13120	27	15	710	10170	14	68	776	7560	19	32	719	9840	30	25	—	—	—	—				
550	16680	5	—	550	17770	5.3	—	530	16090	12	24	626	13120	27	15	710	10170	14	68	776	7560	19	32	719	9840	30	25	—	—	—	—				
St. not defined.				500	19170	4.0	—																												
Fog in patches to 200 feet.				450	21760	1.0	—																												
Bumpy at 700 mb.				Haze low not defined.																															
INVERSIONS—				Cloud.																															
(1) Screen 30.5°F.				500 mb. 980 to																															
900 mb. 39.7°F.				950 mb.																															
(2) 1928 mb. 32°F.				Inversion																															
890 mb. 43.5°F.				950 mb. 340°F.																															
CLOUDS.				890 mb. 460°F.																															
S.C. 196 950-928 mb.																																			
A.C. 340 not reached.																																			



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 13 TH FEBRUARY, 1934.																						
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Bircham Newton	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew	Valentia	Alder-grove	Malta	Place		
Time.			10h.	8h.	6h.	8h.	7h.				9h.				7h.		10h.	7h.	6h.	Time		
Type						b.					b									Type		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet	
Surf.			95 6	30 8	85 12	130 5	100 10				315 3				Calm		130 14	160 5			Surf.	
1000			105 18	105 31	85 23	135 12	105 16				195 7				245 24		155 14	145 14	340 21		1000	
2000			115 27	105 33	90 19	140 13					185 29				245 31		170 21				2000	
3000											195 29				235 39		195 26		350 22		3000	
4000											160 26				230 29		180 24				4000	
5000											195 25				225 26		180 24		350 21		5000	
6000															220 26						6000	
8000																					8000	
10000																					10000	
12000																					12000	
Neph.																					Neph.	
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew		Alder-grove	Valentia	Place		
Time.	12h	12h	12h	12h	12h		12h	13h		13h	12h	12h	12h		12h	12h		12h		Time		
Type			b	b	b		b	b		b	b		b		b	b				Type		
Surf.	125 16	100 5	100 10	90 18	95 15		90 9	135 5		105 20	20 10	150 16	170 15		250 5	90 3		175 13		Surf.		
1000	120 20	110 14	105 17	105 25	100 24		115 14	150 14		95 29	200 19	155 26	170 15		235 19	190 7		185 20		1000		
2000			120 23		100 23			155 18			180 21		165 17							2000		
3000											190 27		170 27							3000		
4000											190 22									4000		
5000											190 23									5000		
6000											190 34									6000		
8000																				8000		
10000																				10000		
12000																				12000		
Neph.																				Neph.		
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Croydon	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place		
Time.	17h	17h	17h	17h	17h	24h	17h	16h		17h	16h	17h	17h		17h	17h	17h	17h	18h	Time		
Type.			b		b			b					b		b	b				Type		
Surf.	70 8	85 5	85 8	90 15	75 19	105 4	60 11	135 5		70 20	285 4	155 14	160 7		Calm	200 4		180 5	135 9	Surf.		
1000	75 22	80 17	90 18	75 21	105 28	120 22	105 19	145 11		90 40	120 6	150 24	130 14		230 18	220 16	50 33	195 15	130 14	1000		
2000																				2000		
3000			85 19			140 30	135 31	145 20		115 33	135 11	150 33			220 23	235 20	40 29	200 18	135 11	3000		
4000			(4400)			150 29		160 22		135 18	160 21				225 35	240 22		205 17	155 8	4000		
5000						160 21		155 29		115 22	180 24								180 20	5000		
6000								145 41		120 28	180 23									6000		
8000								145 51		140 19	195 23									8000		
10000											200 25									10000		
12000																				12000		
Neph.																				Neph.		

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5435

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t_0) B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

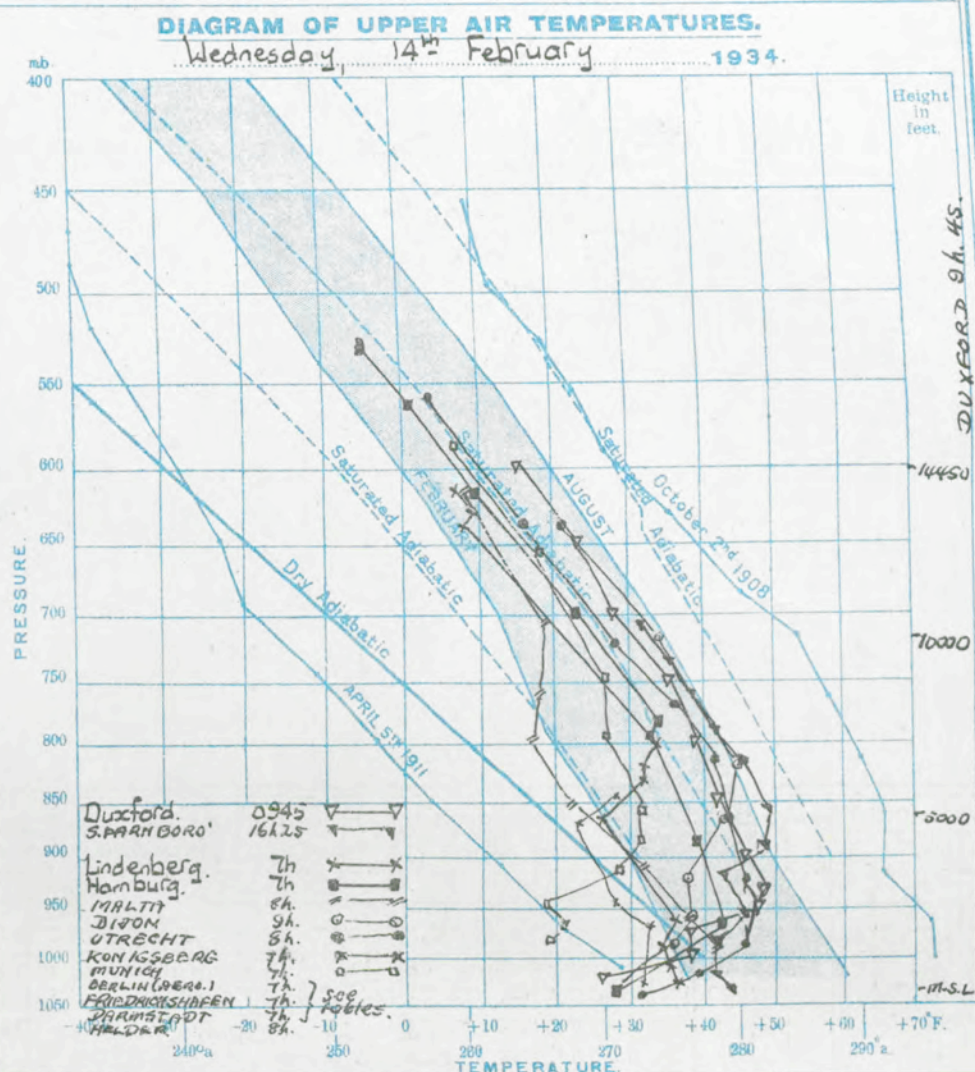
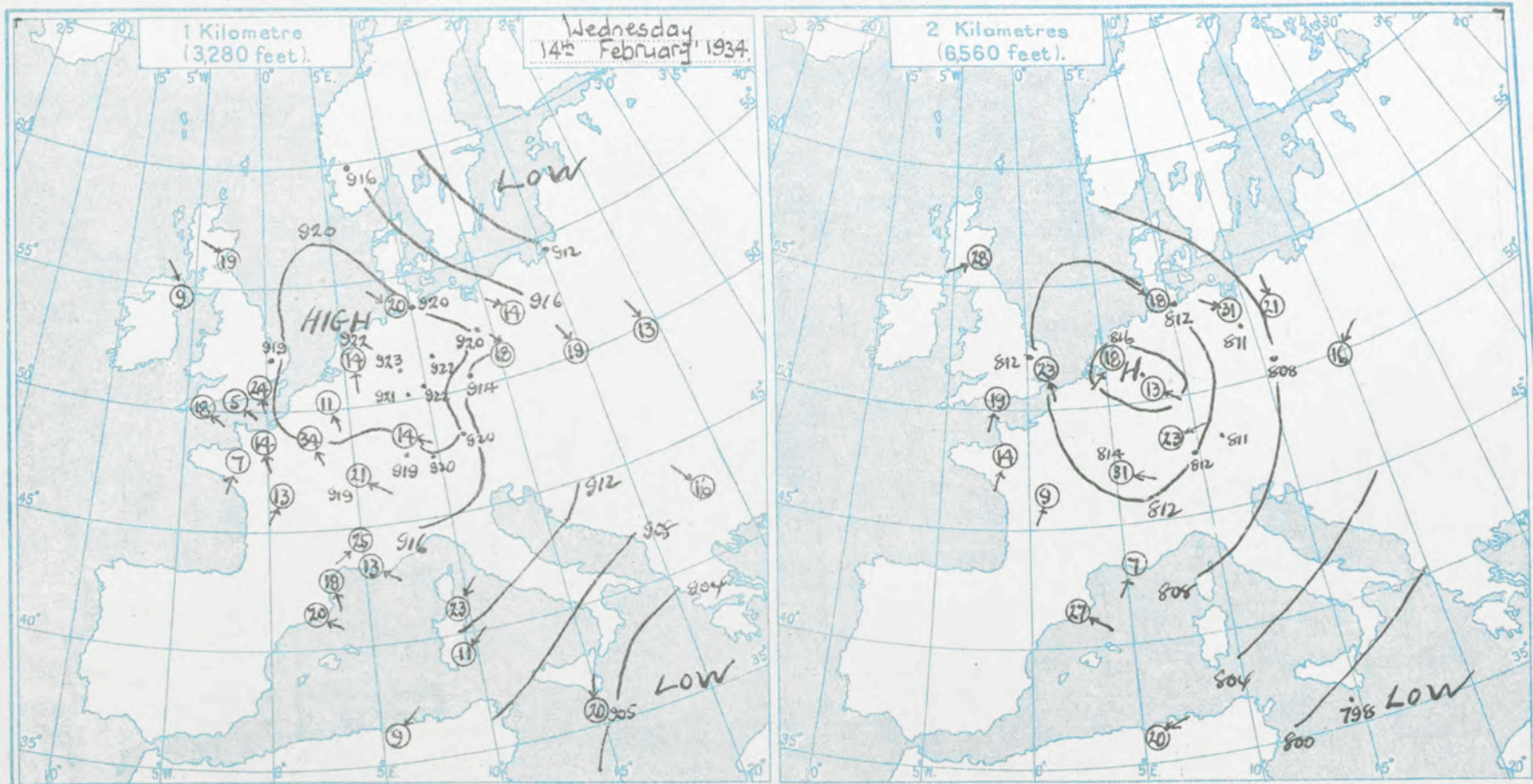


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 14th February 1934.

[illegible]



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 14th February 1934.																					
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Valentia	Croydon	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Worthy Down	Aldergrove	Malta	Place	
Time	7h		7h	7h	6h	7h	7h	10h	10h	7h	9h	7h	8h	7h	7h	8h	9h	7h	6h	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.	Calm						Calm		Calm												Surf.
1000	190 7		110 10	115 13	165 17	150 7	175 18	20 5	135 3	85 12	45 9	Calm	15 3	Calm	245 10	310 4	30 5	110 3	10 23	1000	
2000	155 13		60 3	25 4	175 17	150 7	165 11	360 6		100 5		330 11	310 9	255 7	265 25	250 11	125 7	315 2	360 19	2000	
3000	160 24		165 4	120 5	175 17	155 23	170 13	355 7		110 18		345 12			285 19	295 11	50 4	325 11	10 20	3000	
4000	165 31		155 10	150 17	155 29	170 31	175 19								285 23		165 13			4000	
5000	160 30		140 13	175 25			165 23								245 27					5000	
6000				200 19			165 23								250 28					6000	
8000																				8000	
10000																				10000	
12000							10h C													12000	
Neph.							290 30													Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew		Aldergrove	Malta	Place	
Time	12h	14h	12h	12h	13h		12h		15h	12h	12h	12h		13h	12h	12h		12h	14h	Time	
Type																				Type	
Surf.	Calm	275 2	210 3	40 1	175 4		110 3		330 7	110 10	10 8	390 5		Calm	265 5	240 10		250 4	150 8	Surf.	
1000	230 7	305 4	360 3	75 5	165 7		155 7		330 8	90 4	10 4	375 9		305 4	280 16	270 13		285 5	205 9	1000	
2000		270 4	10 4	75 3	165 12		140 9		265 4	135 9					335 3	285 19		355 9	160 12	2000	
3000		280 11		225 2	180 20		145 15		295 12	180 13					45 9	315 20		350 19	165 23	3000	
4000		290 19			200 20		145 22		310 9	225 13					10 12	330 19		325 10	160 26	4000	
5000		275 13			245 15		185 19		285 13	235 15					350 13			295 15		5000	
6000		270 14			275 16		225 24		275 16	225 13					335 14			275 14		6000	
8000		260 14			225 18		255 23		280 19	215 22								280 21		8000	
10000		(4000')					240 27		67000'	215 27								265 24		10000	
12000							245 38													12000	
Neph.							(16000')								260 60					Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Malta	Aldergrove	Valentia	Place	
Time		14h	17h	17h	17h		17h				16h	17h	17h	17h	17h	17h	17h	17h	18h	Time	
Type																				Type	
Surf.		290 2	335 4	Calm	Calm		Calm				315 7	330 4	330 7	Calm	270 5	280 4		Calm	90 8	Surf.	
1000		305 10	340 11	325 9	340 7		330 9				335 7	320 14	315 8	Calm	295 19	300 13	10 26	300 5	65 9	1000	
2000		315 10	290 7	315 12	330 8		345 5				345 8			Calm	305 19	320 15		340 16	30 7	2000	
3000		310 20	305 17	315 21	330 16		215 3				(1800')				320 12			360 20	355 17	3000	
4000		325 15	310 15	315 19	315 14		215 3								325 11			30 13		4000	
5000		270 14	265 13		245 19										320 11			10 7		5000	
6000		290 15	265 11		300 19													325 11		6000	
8000					260 16													320 18		8000	
10000					(7000')													305 33		10000	
12000																		285 35		12000	
Neph.																		290 24		Neph.	

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5436.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

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$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrl.)

and e is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

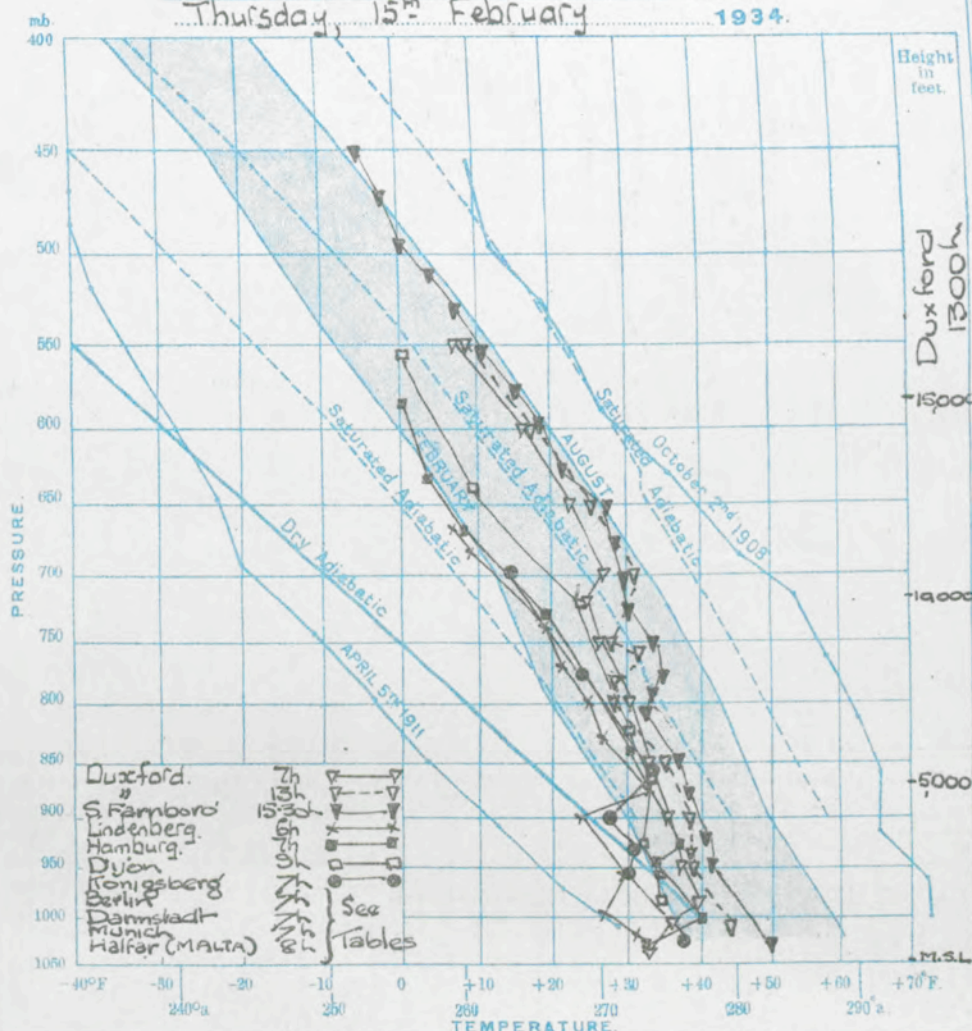
d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

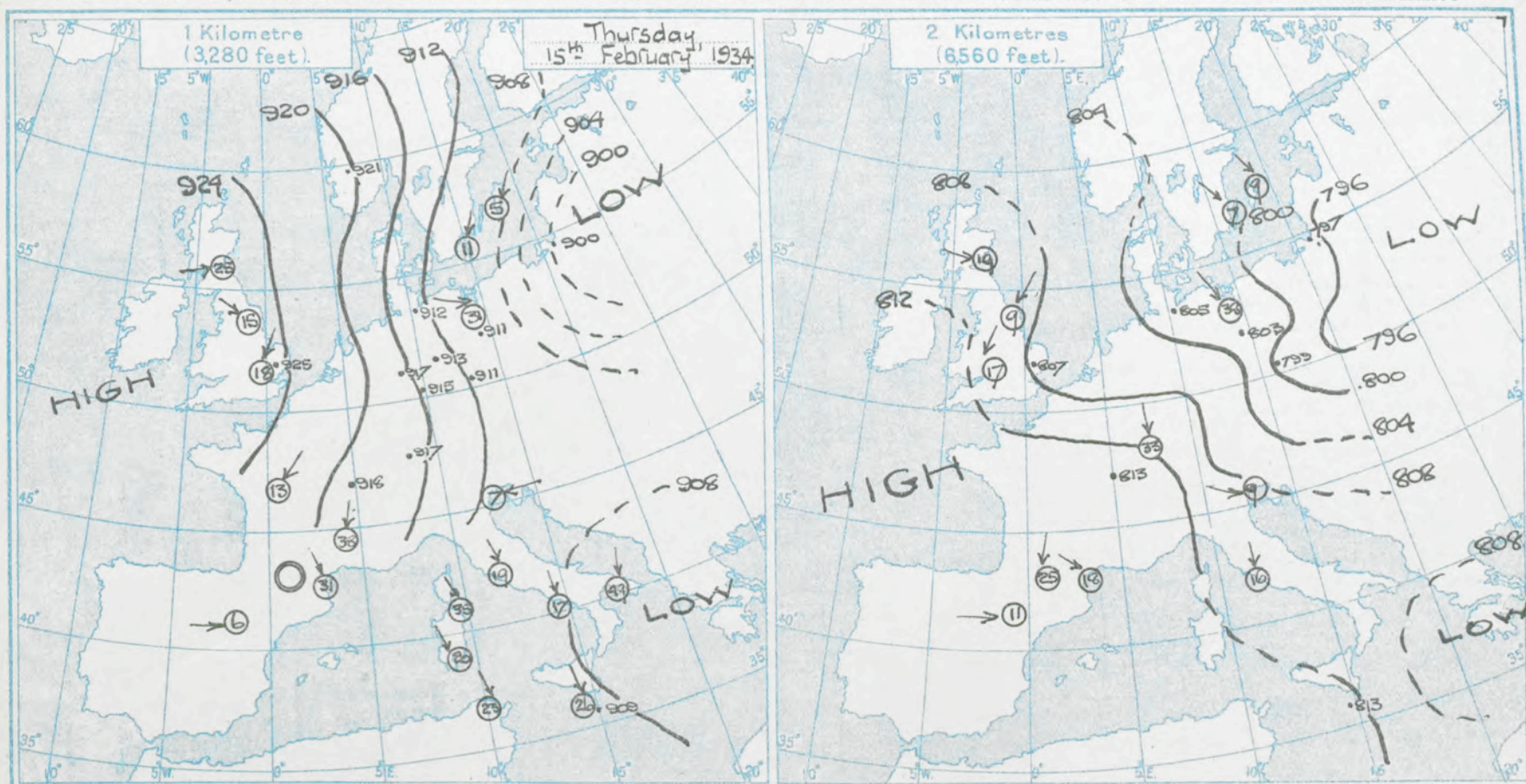
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Thursday, 15th February 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON 15th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford 7h				Duxford 13h				Lindenberg 6h				Dijon 07h				Berlin (Aero) 07h				Darmstadt 07h				S. Farn. 15.30h				Malta 08h			
1047 M.S.L.				1044 100 47 71				1016 M.S.L.				1026 M.S.L.				1016 445 30 73				1017 235 49 -				935 M.S.L.				935 880 43 55			
1043 100 33 97				1006 1085 43 91				986 1325 34 65				935 960 31 26				933 2620 37 53				949 2610 41 -				935 1260 39 55				935 1260 39 55			
1005 1060 36 100				950 2610 38 81				916 3280 32 75				979 1640 32 96				922 3280 36 57				914 2600 40 -				933 3280 32 55				933 3280 32 55			
950 2560 37 75				900 4080 38 81				864 4320 32 65				940 2620 31 98				910 3280 36 57				943 5600 36 -				801 6560 21 73				801 6560 21 73			
900 3590 36 83				850 5500 33 76				813 6640 30 55				910 3280 36 57				665 11460 8 37				767 7560 33 -				703 9840 17 -				703 9840 17 -			
850 5500 33 76				800 7080 36 73				779 7560 21 56				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
800 7080 36 73				750 8760 26 53				743 8540 19 57				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
750 8760 26 53				700 10570 17 47				732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
700 10570 17 47				650 12490 22 51				732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
650 12490 22 51				600 14520 16 5 -				732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
600 14520 16 5 -				550 16740 7 0 -				732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
550 16740 7 0 -								732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
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								732 6300 25 53				779 6300 25 53				665 11460 8 37				767 7560 33 -				619 13120 7 -				619 13120 7 -			
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DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 15th February 1934.

Place	Croydon	South Farnboro	Bircham-Newton	Calshot	Lympe		Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew	Valentia	Alder-grove	Malta.	Place			
Time.			10h					7h	10h		9h			7h	7h		10h		6h	Time			
Type			b					b			b									Type			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.			350	10				310	3	335	6			Calm	240	5		60	7		Surf.		
1000			15	17				20	13	40	12			80	9			165	5		1000		
2000			15	17				35	17	55	19			150	1			190	7		2000		
3000			10	21				30	18	45	23									10	28	3000	
4000			20	29				35	19	35	17			310	15	265	25			360	26	4000	
5000			15	27				35	19	40	17			340	9	265	23					5000	
6000			20	27				30	17					65	7	280	20					6000	
8000										35	17			15	9	285	19					8000	
10000										20	17			350	16	300	20					10000	
12000										5	30											12000	
Neph.															10h	C5r					Neph.		
															330	60							
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympe	Worthing Down	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place			
Time.			12h			12h		13h	12h	12h	12h	12h		12h	12h	12h	12h		13h	Time.			
Type			b					b						b	b	b				Type			
Surf.			10	2		26	7	345	3	350	3	75	2	30	1	310	2			CALM	Surf.		
1000			40	7		55	14	320	11	35	7	70	4	195	2	CALM				165	3	1000	
2000			60	24		55	20	340	14	55	13			230	5					180	5	2000	
3000			75	23				30	9	60	16			200	3					135	7	3000	
4000								350	10	45	10			35	5					125	22	4000	
5000								15	12	45	15			165	5					140	19	5000	
6000								25	15	45	19			70	3					145	18	6000	
8000			C: 16					7000	30	23				C: 16						135	16	8000	
10000			20	25				20	10					340	40					55	4	10000	
12000	C: 16	AC: 16						25	23					C: 13						210	12	12000	
Neph.	360	60	50	36						20	50			20	50					250	20	Neph.	
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympe	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester.	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place			
Time.	17h	17h	17h	17h				16h	17h	17h	16h	17h		15h	17h	17h			17h	Time.			
Type.																				Type.			
Surf.	195	3	Calm	100	1	50	3			Calm	25	2	150	5	Calm	Calm				225	2	Surf.	
1000	45	6	55	11	40	11	60	10		255	8	25	5	80	13	215	6	Calm		160	3	1000	
2000	30	7	30	16	65	18	70	13		275	7	33	7	195	10	225	3			90	2	2000	
3000	50	15	45	18	65	17	65	17		320	12	60	8	175	7	275	3					3000	
4000	45	23	55	20	40	11	50	19		335	12	75	10	130	8	300	6					4000	
5000	40	23			50	13	50	25				5	10			325	6					5000	
6000																	10	2					6000
8000																							8000
10000																							10000
12000																							12000
Neph.																						Neph.	
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AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5,437.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for those months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37(t - t') \quad B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

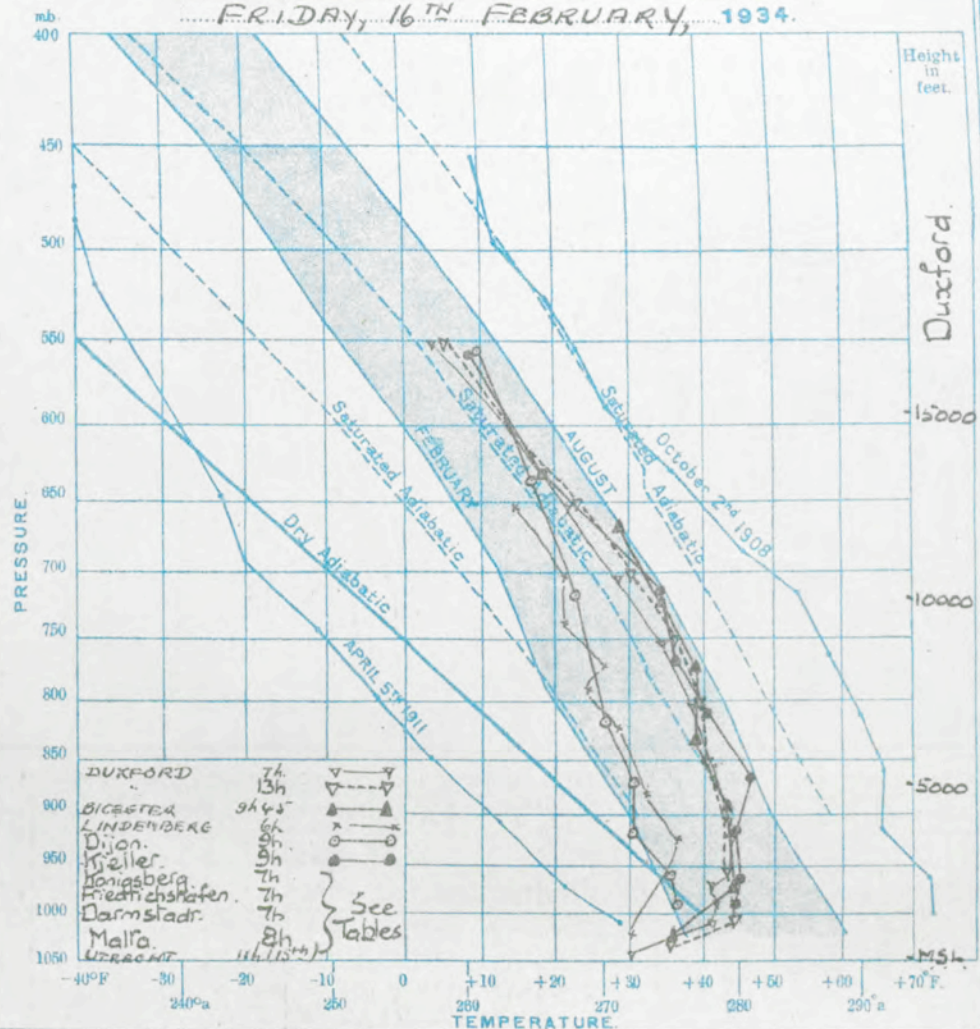
b = balloon with tail.

d = double theodolite ascent.

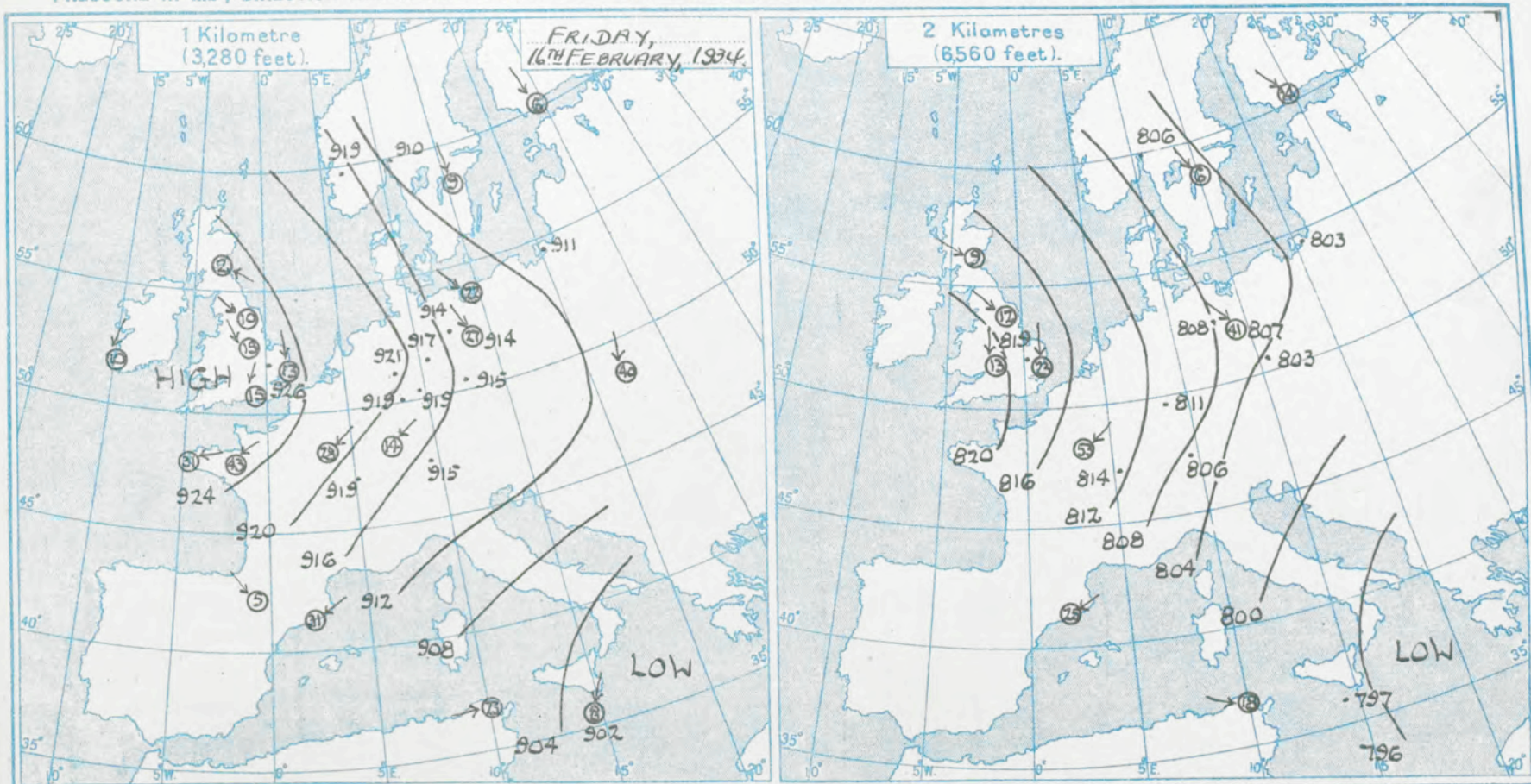
On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.FRIDAY, 16TH FEBRUARY, 1934.**TABLE OF UPPER AIR TEMPERATURES RECORDED ON FRIDAY, 16TH FEBRUARY, 1934.**

Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
DUXFORD 7h				Duxford 13h				LINDENBERG 6h				UTRECHT 11h (15h)				Malta 8h				Königsberg 7h				Darmstadt 7h				Lyons 16h			
1047	M.S.L.	—	—	1045	M.S.L.	—	—	1037.5	M.S.L.	—	—	1036	M.S.L.	—	—	928	M.S.L.	49	55	1029	M.S.L.	34	89	1020	M.S.L.	—	96	98.5	M.S.L.	39	—
1043.5	100	30.5	—	1041.5	100	36.3	76	1021	348	31	98	1019	670	39	95	928	880	49	55	944	2300	28	98	986	1310	35	86	950	1313	39	—
1005	1060	47	YY	1003	1100	45.5	85	972	1640	37	40	981	1650	36	95	951	1860	44	65	944	2300	28	98	986	1310	35	86	950	1313	39	—
950	2600	43.5	64	950	2580	43.2	63	930	2950	33	48	922	3250	34	55	902	3280	38	65	914	3280	31	70	908	3610	32	75	926	3280	30	—
900	4040	34.4	26	900	4000	43.5	24	870	6230	29	55	866	4920	30	45	848	4920	31	95	897	3610	30	65	857	5240	32	58	861	4920	28	—
850	5540	—	—	850	5520	40.7	28	824	4230	25	65	814	6560	28	35	797	6560	24	—	807	6560	23	55	845	5570	31	55	812	6560	27	—
800	7140	34.5	20	800	7180	40.0	40	768	4880	27	85	764	8200	25	35	757	8200	18	—	790	6500	26	48	813	6230	31	50	715	9840	27	—
750	8850	35	YY	750	8880	37.6	61	730	9200	22	80	714	9840	25	25	700	9840	13	—	770	8200	22	63	764	8200	25	59	628	13120	16	—
700	10640	24.4	53	700	10710	31.0	82	700	10140	22	68	681	13120	19	25	615	13120	3	—	684	10500	21	68	715	9840	19	78	550	16400	1	—
650	12600	23	YO	650	12640	24.5	84	650	12130	16	YO	554	16400	5	25	—	—	—	—	660	11480	18	68	706	10170	24	75	—	—	—	—
600	14630	14.3	—	600	14700	15.5	—	—	—	—	—	—	—	—	—	—	—	—	—	653	11800	19	55	659	11800	17	64	—	—	—	—
550	16440	4.5	—	550	16500	6.3	—	—	—	—	—	—	—	—	—	—	—	—	—	628	12790	18	51	613	13800	11	69	—	—	—	—
INVERSIONS—				INVERSIONS—				INVERSIONS—				INVERSIONS—				INVERSIONS—				INVERSIONS—				INVERSIONS—				INVERSIONS—			
(1) Screen 30.5°F. defined haze top 920mb. 42.5°F.				Thick haze to well defined haze top 960mb.				Base press. 955 860 758 672 580 490 400 310 220 130 40				Base temp. 34° 29° 26° 20° F				Rise 1° 2° 2° 1° F				Depth 920' 524' 555' 4600' feet				—				—			
(2) 364mb. 41.5°F. Ocu 210 in South approx. 550mb.				Inversion 930mb. 43.0°F. 890mb. 43.5°F.				BICESTER 9h45				Dijon 9h				Kjeller 9h				Friedrichshafen 7h				Berlin 7h				S. Farnboro' 1445			
1047.5	M.S.L.	27.0	37	1037.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37	1047.5	M.S.L.	27.0	37
999	1240	45	—	999	1240	45	—	999	1240	45	—	999	1240	45	—	999	1240	45	—	999	1240	45	—	999	1240	45	—	999	1240	45	—
962	2230	45	—	962	2230	45	—	962	2230	45	—	962	2230	45	—	962	2230	45	—	962	2230	45	—	962	2230	45	—	962	2230	45	—
894	4210	44	—	894	4210	44	—	894	4210	44	—	894	4210	44	—	894	4210	44	—	894	4210	44	—	894	4210	44	—	894	4210	44	—
831	6140	39	—	831	6140	39	—	831	6140	39	—	831	6140	39	—	831	6140	39	—	831	6140	39	—	831	6140	39	—	831	6140	39	—
772	8100	39	—	772	8100	39	—	772	8100	39	—	772	8100	39	—	772	8100	39	—	772	8100	39	—	772	8100	39	—	772	8100	39	—
718	10060	35	—	718	10060	35	—	718	10060	35	—	718	10060	35	—	718	10060	35	—	718	10060	35	—	718	10060	35	—	718	10060	35	—
667	11980	29	—	667	11980	29	—	667	11980	29	—	667	11980	29	—	667	11980	29	—	667	11980	29	—	667	11980	29	—	667	11980	29	—
Cloud—				Cloud—				Cloud—				Cloud—				Cloud—				Cloud—				Cloud—				Cloud—			
No to 600-550mb.				No to 600-550mb.				No to 600-550mb.				No to 600-550mb.				No to 600-550mb.				No to 600-550mb.				No to 600-550mb.				No to 600-550mb.			
A.C. No not reached.				A.C. No not reached.				A.C. No not reached.				A.C. No not reached.				A.C. No not reached.				A.C. No not reached.				A.C. No not reached.				A.C. No not reached.			
INVERSION				INVERSION				INVERSION				INVERSION				INVERSION				INVERSION				INVERSION				INVERSION			
Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.				Base pressure 1015mb.			
Amount 16°F.				Amount 16°F.				Amount 16°F.				Amount 16°F.				Amount 16°F.				Amount 16°F.				Amount 16°F.				Amount 16°F.			



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 16 th FEBRUARY, 1934.																							
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympe	Biggin Hill	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Valentia	Alder-grove	Malta	Place			
Time.					10h.	7h.	7h.	7h.	5h.		5h.			7h.	7h.	8h.	10h.	7h.		Time			
Type					b			b			b.					b				Type			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.					350 10	Calm	300 3	260 8	320 8		305 5			230 8	245 10	245 10	55 1	240 3			Surf.		
1000					355 19	330 9	345 12	330 18	335 19		255 5			260 14	280 27	280 24	Calm	280 4	30 5		1000		
2000					355 16	340 14	345 9	340 8	360 17		(1100')			305 20	300 16	285 26	35 9				2000		
3000						10 15	350 13	330 15	5 11					305 10	285 2		20 10		30 8		3000		
4000						15 20	355 19	310 20	345 14					285 6	280 3						4000		
5000						10 19	360 24	330 14	320 14					300 15	305 5				360 14		5000		
6000							355 23		360 13					320 12	290 9						6000		
8000							5 19								295 19						8000		
10000							(4000')								295 14						10000		
12000		740 G.	10h G.S.		10h G.	8h C.			10h G.					10h G.	320 15						12000		
Neph.		30 115	60 55		50 50	60 80			40 20					240 25							Neph		
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympe	Manston	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Worthy Down	Alder-grove	Valentia	Place.			
Time.		12h	12h		12h	14h	12h	13h	11h	12h	12h	12h		12h	12h	12h	14h	12h	13h	Time.			
Type			b		b			b		b				b	b	b	b			Type			
Surf.		345 5	340 7		360 8	320 7	350 9	260 5	325 6	310 7	Calm	305 9		Calm	305 10	255 12	360 12	225 3	270 3	Surf.			
1000.		360 9	330 11		5 18	350 17	350 14	320 14	340 15	35 8	Calm	310 13		290 11	270 22	275 18	10 14	240 9	205 3	1000			
2000		15 22	5 18		15 22	15 20	360 17	325 17	355 15	35 13				290 7	295 20	280 21	10 15		35 6	2000			
3000		5 14	15 15		10 22			315 15	355 12	5 13				315 17			5 23		40 12	3000			
4000			10 16		15 21			335 15	340 13	5 15				85 9	290 8		10 20		195 5	4000			
5000			5 14		15 21			10 8	350 9	355 16				185 7	285 8		360 17		135 2	5000			
6000			360 8		25 19			315 5	350 9					4000	290 13				70 4	6000			
8000			70 11		35 23			360 6	10 5					160 28	285 10			145 C.	16h C.	8000			
10000					50 28			(7000)	50 7					280 18	1400 11	Leuchars		180 25	170 40	10000			
12000						1345 C	16h C.		(3000)					345 56	1800 16h C.			13h C.	13h C.	12000			
Neph.					50 30	360 24								360 71	255 16	220 25		Calm	170 30	Neph.			
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympe	Shoeburyness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Malta	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place			
Time.	17h	16h	17h	17h	17h		17h	16h	15h	16h	16h	17h	17h		17h	17h	14h	17h	18h	Time.			
Type.		b		b				b	b	b					b	b				Type.			
Surf.	Calm	5 7	350 5	340 8	10 3		55 3	260 1	330 8	325 8	360 2	335 7			245 3	235 9	145 3	180 4	205 3	Surf.			
1000	20 13	5 14	355 12	5 10	25 11		5 7	320 16	325 13	30 5	265 7	300 13	90 13		265 16	270 17	240 3	225 5	180 2	1000			
2000	360 17	5 15	15 14	20 17	5 20		345 13	325 10	340 15	50 11			110 8		290 9	300 20	285 5	320 7	85 6	2000			
3000		360 20	10 21	25 17					345 15	65 10			150 5		295 4		265 7	315 10	185 14	3000			
4000		15 17	5 15	15 14					345 13	90 9					265 10		255 15		190 14	4000			
5000			355 9	360 15					360 11	90 11					265 19		245 17		170 8	5000			
6000			355 12	5 14					14000	14000					280 7		255 19		150 10	6000			
8000			15 10	15 10					60 15	100 16					280 7				175 10	8000			
10000			10 12	(7000)					75 17	105 20					265 16				140 10	10000			
12000			18h C.		18h C.				75 18	120 27					16h C.				130 9	12000			
Neph.			150 55		60 21				120 27	130 45					230 24					Neph.			

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5437

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.)

and e' is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

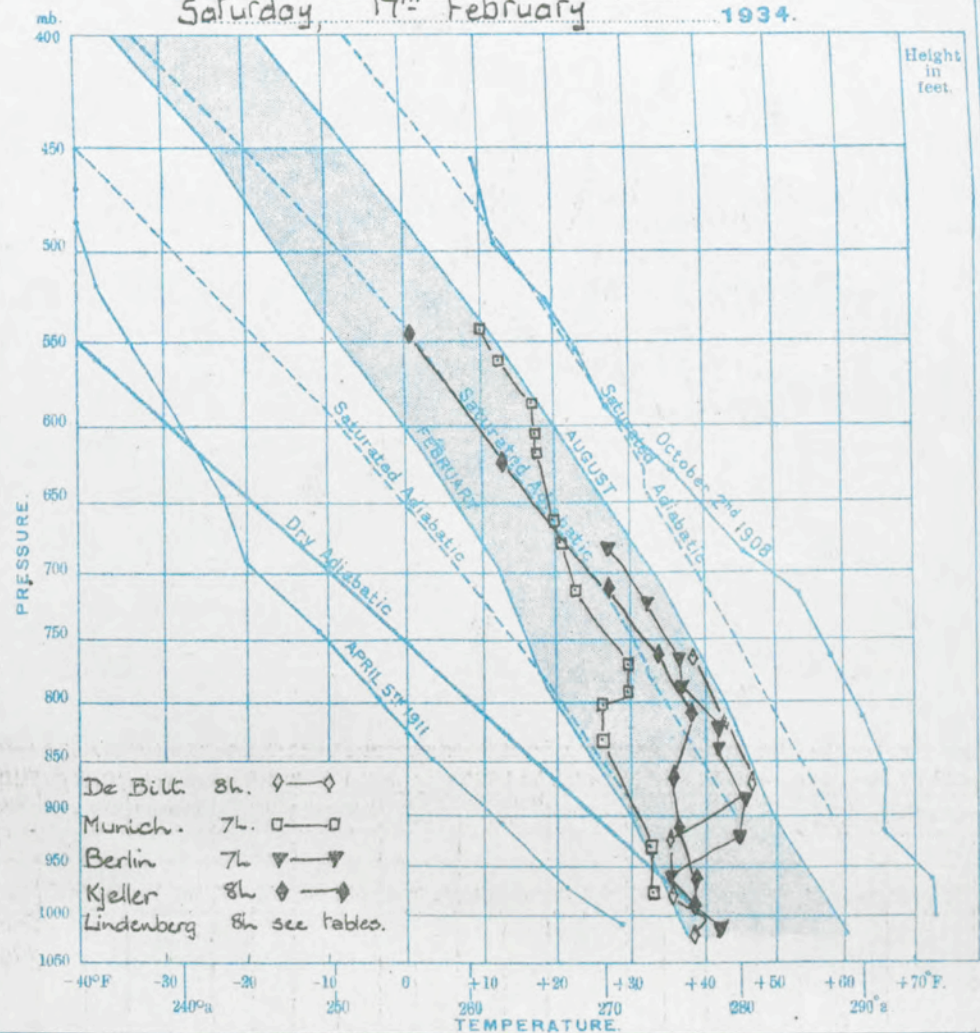
d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

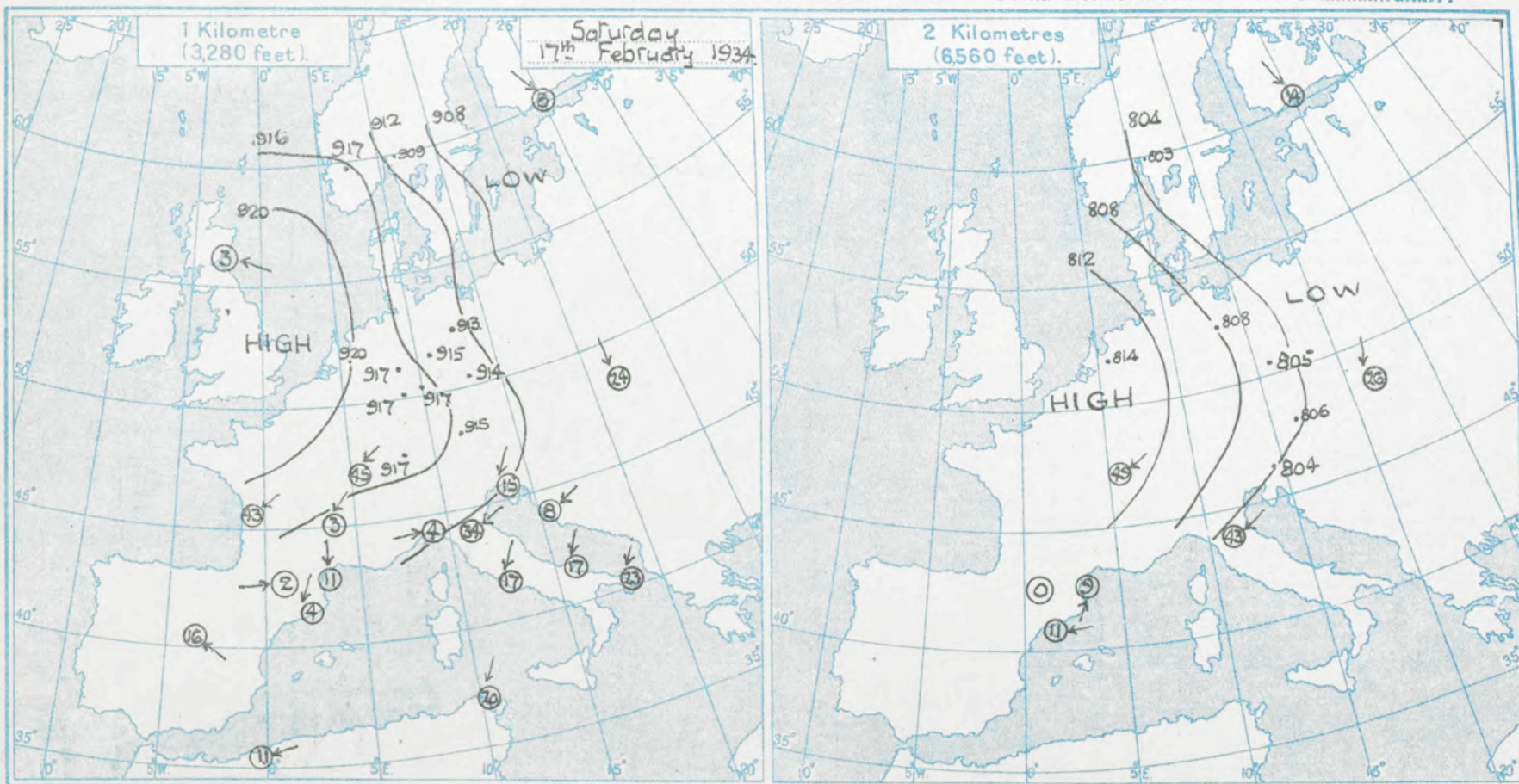
DIAGRAM OF UPPER AIR TEMPERATURES.

Saturday 17th February 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON 17th February 1934.

Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
DE BILT. 8h.				KJELLER. 8h.				LINDENBERG. 8h.				MUNICH. 7h.				BERLIN. 7h.															
1041.2	M.S.L.	—	—	1031.	M.S.L.	—	—	1034.2	M.S.L.	—	—	1038.1	M.S.L.	—	—	1034.2	M.S.L.	—	—												
1016	670	39	75	989	1026	39	75	1018	348	39	97	975	1662	33	93	1028	184	41	94												
978	1650	36	85	953	2006	39	75	995	980	38	98	932	2950	33	96	1016	330	42	94												
920	3280	36	75	909	3280	37	65	940	2620	35	98	838	5570	27	98	955	2300	35	96												
865	4920	46	35	854	4920	36	55	915	3280	46	58	800	6560	27	98	921	3280	45	66												
814	6560	43	25	803	6560	39	35	798	6900	34	60	792	7230	30	90	883	4270	46	62												
766	8200	39	25	754	8200	34	35	780	7560	36	29	771	7880	30	82	831	5900	42	47												
Inversion:—				624				650				714				815															
Press at base 927mb				549				673				673				784															
Temp at base 30°F				16400				606				606				766															
Amt. of Inver. 22°F				1				617				602				722															
Thickness of Inver. 723ft				15				14130				588				7880															
				15				15760				567				883															
								17060				543																			
M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.															

Meteorological Office, Air Ministry,
Kingsway, London, W.C.1

G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 17th February 1934.																								
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place				
Time																					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.												350	1	325	4	255	2	250	3	200	2	Surf.		
1000												320	6	325	7	270	13	285	11	270	3	1000		
2000																255	8	300	15	270	3	2000		
3000																125	3	305	13			3000		
4000																90	3					4000		
5000																						5000		
6000																						6000		
8000																						8000		
10000																						10000		
12000																						12000		
Neph.																10h 00					160 35	Neph.		
310																45								
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place				
Time																					Time			
Type																					Type			
Surf.										200	1	305	4	160	3	255	5	250	3	290	10	230	5	Surf.
1000										105	3	315	5	300	11	280	13	275	13	275	21	230	6	1000
2000										55	11			320	11	290	19	295	16	255	15	310	6	2000
3000										35	17			305	20	295	15			240	13	10	3	3000
4000										35	13									225	11			4000
5000										70	12													5000
6000										45	17													6000
8000																								8000
10000										50	9													10000
12000										105	7													12000
Neph.																								Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place				
Time																					Time			
Type																					Type			
Surf.										120	2	340	4	295	5	300	7	-	0	260	5	260	5	Surf.
1000										30	4	5	11	345	12	340	8	-	0	270	10	285	13	1000
2000										10	6	40	11	5	15	15	13	340	10	300	13	300	19	2000
3000										40	13	25	12	30	13			335	15	315	20	310	17	3000
4000										50	15	330	21							310	19			4000
5000										35	17	320	15											5000
6000										35	17	310	17											6000
8000										35	15	290	23											8000
10000										35	20	285	25											10000
12000										50	10													12000
Neph.																								Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5,430.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fah.).

and e is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

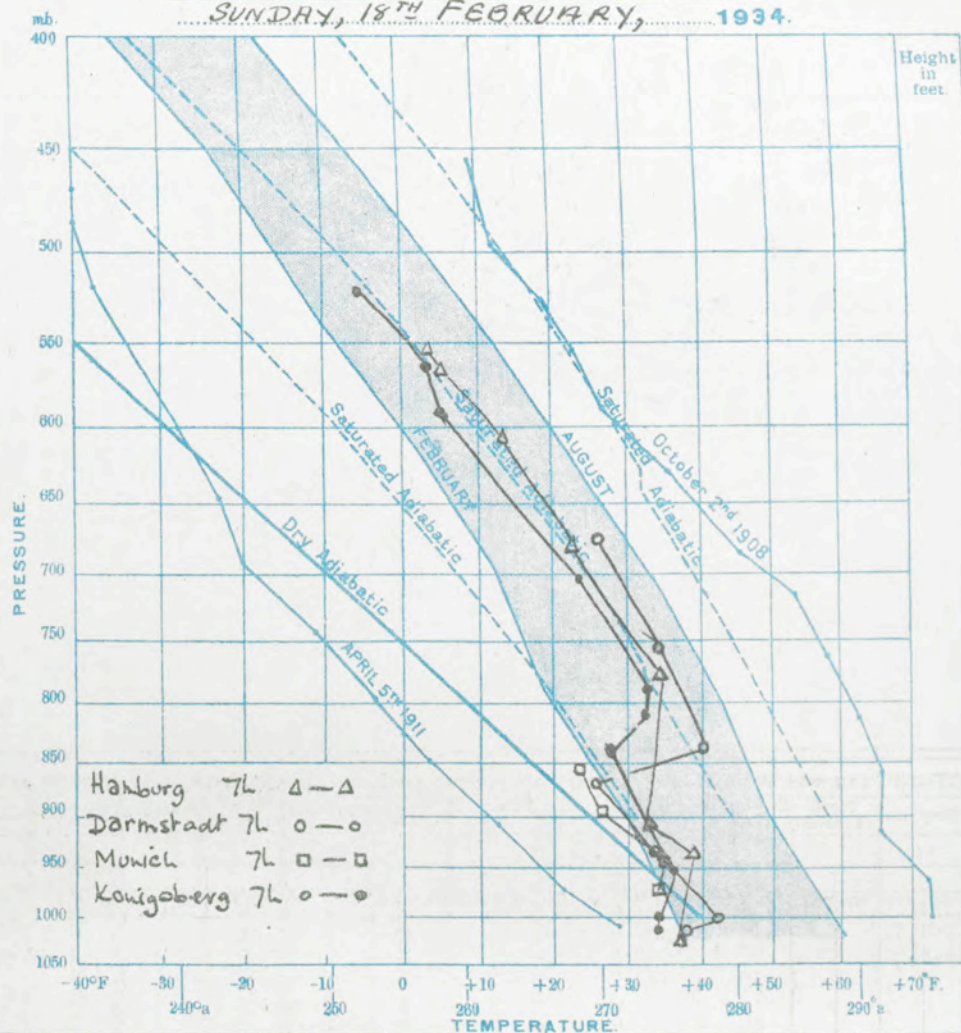
d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

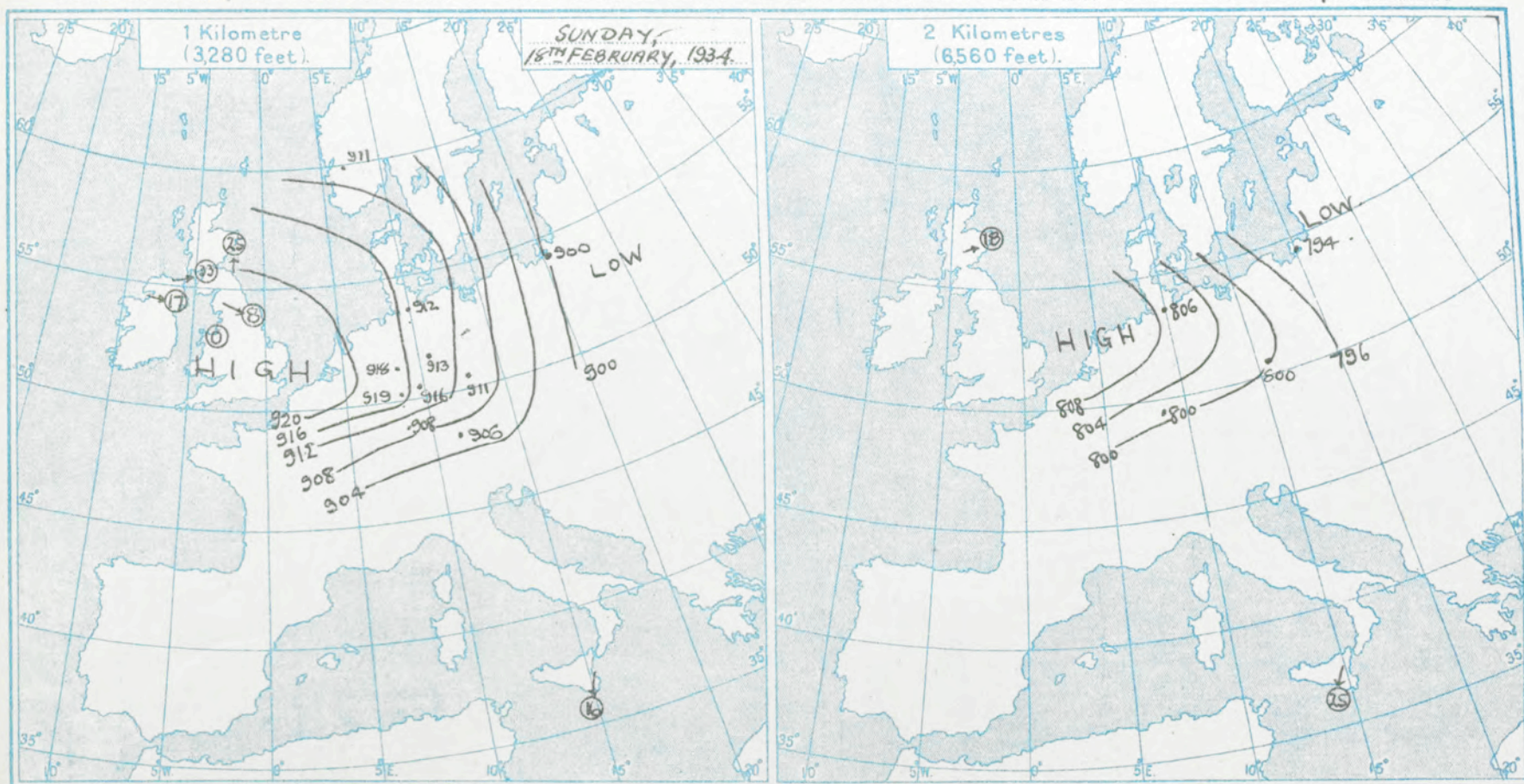
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

SUNDAY, 18TH FEBRUARY, 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON SUNDAY, 18TH FEBRUARY, 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Hamburg 7h				Munich 7h				Königsberg 7h				Darmstadt 7h																			
M.S.L.	—	—	—	1034	M.S.L.	—	—	1038	M.S.L.	—	—	1038	M.S.L.	—	—	M.S.L.				M.S.L.				M.S.L.				M.S.L.			
				1032	61	37	97	974	1662	33	26	1016	445	38	82																
				939	2620	39	80	949	2360	34	85	1000	360	41	79																
				912	3280	32	60	898	3940	27	98	951	1974	36	75																
				776	7560	34	33	855	5240	23	98	838	5240	28	70																
				670	11480	22	22					809	6230	32	57																
				604	14130	12	20					726	6560	22	54																
				569	15430	5	23					700	9840	23	42																
				558	16030	3	25					582	14460	5	37																
												563	15430	3	36																
												521	17320	-6	35																
M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.				M.S.L.			



DIRECTION (degrees from M.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 18th FEBRUARY, 1934.

Place	Croydon	South Farnboro	Boscombe Down	Croydon	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place
Time	6h.			04h.								7h.		7h.		8h.	8h.	7h.	6h.	Time
Type																				Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	70 2			55 5								Calm		275 2		250 8	265 3	200 5		Surf.
1000	75 9			25 6								Calm		300 11		265 21	280 15	270 17		1000
2000												Calm		310 9		260 23	255 13	215 16		2000
3000												Calm		305 8		255 33	180 25	270 17	10 16	3000
4000																	145 20	280 28		4000
5000																	210 19	280 30		5000
6000																	245 18			6000
8000																	265 29			8000
10000																	275 37			10000
12000																	(9000')			12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place
Time	11h.		12h.		12h.		13h.								12h.		17h.	12h.		Time
Type																				Type
Surf.	120 1		100 3		0 -		300 2								255 20			200 10		Surf.
1000	155 3		85 4		0 -		260 6								255 28			275 9		1000
2000			45 13				245 7								255 34			20 14		2000
3000															260 33			30 6		3000
4000																				4000
5000																		360 13		5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place
Time		16h.																17h.		Time
Type																				Type
Surf.		Calm																210 5		Surf.
1000		360 7																255 20		1000
2000																		285 35		2000
3000																		285 39		3000
4000																		290 25		4000
5000																				5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5439.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrenheit).

and e is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

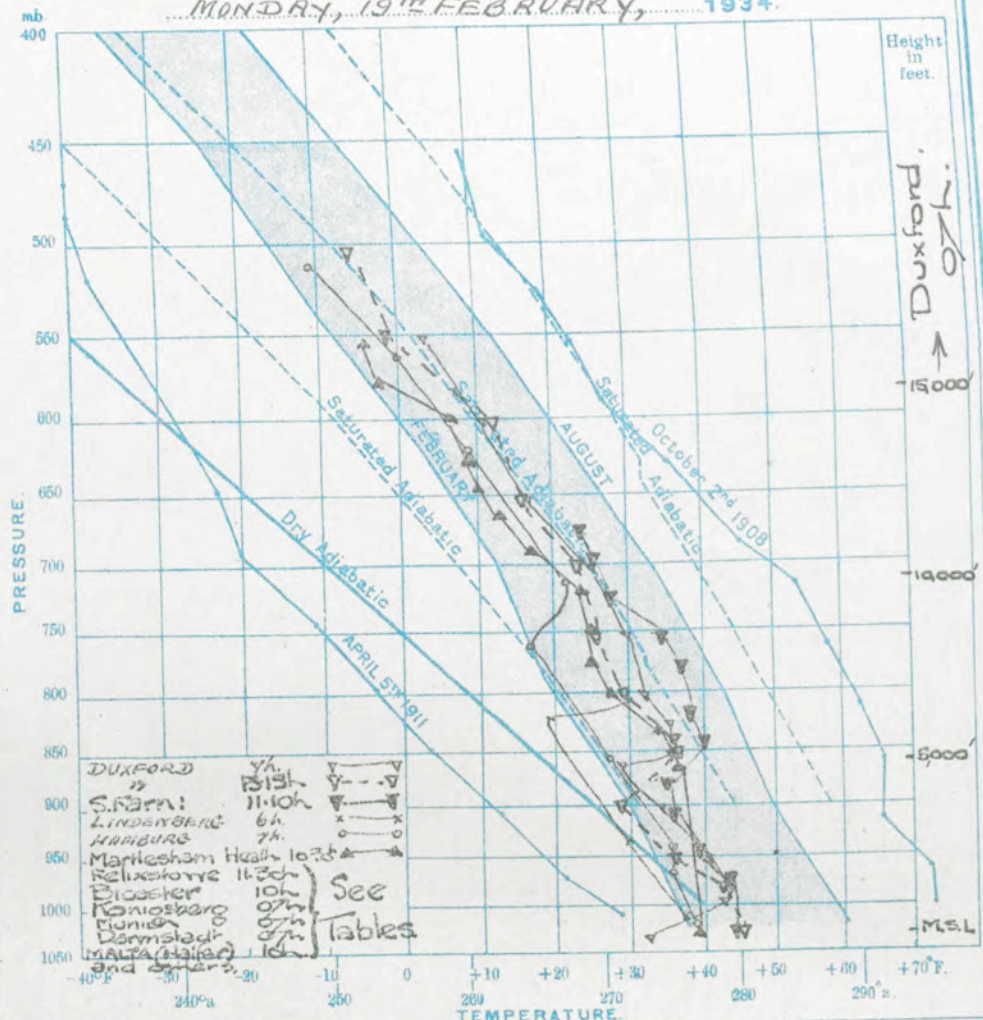
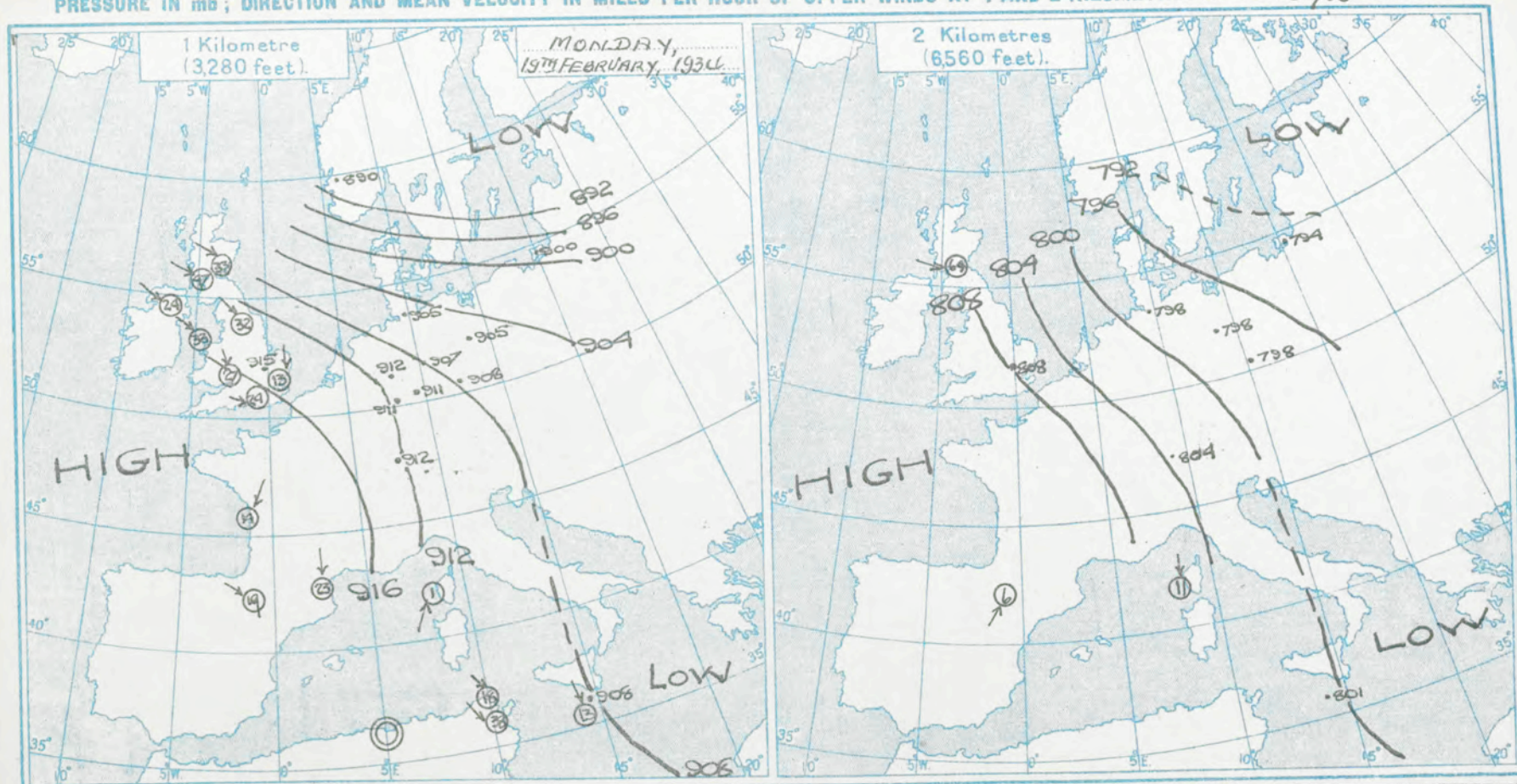
MONDAY, 19TH FEBRUARY, 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON MONDAY, 19TH FEBRUARY, 1934.

TABLE OF UPPER AIR TEMPERATURES RECORDED ON																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 19th FEBRUARY, 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Croydon	Felix-stowe	Cranwell	Upper Heyford	Valencia	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Biggin Hill	Alder-grove	Malta	Place
Time	6h.	8h.	7h.	7h.	6h.	6h.	7h.	7h.	7h.	10h.	9h.	7h.	7h.	7h.	7h.	8h.	7h.	7h.	6h.	Time
Type																				Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	230 1	275 3	210 2	265 5	300 11	240 9	290 4	290 4	255 5	55 3	305 16	300 15	300 12	265 8	255 15	225 10	245 3	260 8	330 10	1000
1000	230 24	330 19	325 14	515 5	330 20	245 16	320 29	285 24	305 21	25 8	310 19	315 25	310 24	295 27	280 34	260 15	320 22	295 19	330 10	2000
2000	285 23	245 21	355 16	360 14	340 20	285 24	340 16	305 34	320 25	20 14	315 21	320 24	305 29	305 27	290 30	285 33	345 27	305 23	340 13	3000
3000	290 24		345 14				355 13		325 24	20 11	320 14	305 33	285 25	310 32	295 33	240 44	350 26	300 24		4000
4000							355 11		335 31	330 11		310 31	305 21	315 31	300 54		345 25			5000
5000										285 12					300 64				30 19	6000
6000										290 13					305 64					8000
8000										310 15					(4000)					10000
10000										300 14										12000
12000		10h. C.								295 19										Neph.
Neph.		300 60																		
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Croydon	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Boscombe Down	Leuchars	Malta	Place
Time	12h	13h	12h	12h	12h	10h	11h	13h	12h	12h	12h	12h	12h	12h	12h	12h	12h	12h	12h	Time
Type																				Type
Surf.	300 10	285 5	305 7	285 16	310 3	280 12	290 2	290 14	300 13	Calim	305 19	300 20	300 21	280 15	265 23	265 15	325 4	285 28	330 13	1000
1000	330 17	340 9	340 17	295 29	325 15	320 24	315 20	290 24	300 13	306	305 21	295 22	290 19	290 16	285 25	275 23	330 9	285 31	330 10	2000
2000		320 19	335 16	300 27	315 23	320 29	320 19	290 26		20 11	305 23	300 27	300 19	285 34	210 40	275 33	330 19	285 37	330 10	3000
3000		290 15	335 14	310 19	315 15	320 28		275 31			305 21	290 24	300 26	285 28	290 26	285 38	325 12	290 36	330 13	4000
4000		295 21		300 26	310 17	320 26		300 24						290 24			315 19	300 37		5000
5000				300 42		300 24		315 35												6000
6000						320 35		320 35												8000
8000						(4000)														10000
10000																				12000
12000								Ac 16h				Ci 16h		Ci 16h		Ci 15h		Ci 16h		Neph.
Neph.								300 60				300 40		275 105		310 110		300 75		
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Alder-grove	Malta	Valencia	Place
Time	17h	17h	17h	17h	17h		17h	17h	17h	16h	16h	17h	17h	17h	17h	17h	17h	17h	16h	Time
Type																				Type
Surf.	300 11	310 8	300 9	210 13	320 8		255 3	230 21	315 15	10 15	285 15	285 27	230 21	265 11	275 15	270 20	340 10		30 18	Surf.
1000	310 15	315 15	300 16	320 18	325 13		230 14	300 23	320 17	285	14	290 23	295 27	285 28	275 20	285 18	285 36	295 23	320 11	1000
2000	310 20	315 19	315 10	330 17	315 16		295 15	305 29	315 26	240	13	305 22	310 30	295 35	280 34	290 35	290 35	295 37		2000
3000	305 23	310 24	320 26	305 12	295 23		300 20	305 22	305 26	325	17	315 23	315 29		285 36	295 36	295 47	300 41	330 13	3000
4000									325 28	320	21	315 30	315 30		295 43	300 48	295 45	305 33		4000
5000									320 31	315 23						300 52	300 54	310 31	340 13	5000
6000										295 18						305 51				6000
8000										305 27										8000
10000										305 25										10000
12000								Ac 15h	Ci 15h	290 28			Ci 18h		Ci 18h		Ci 17h			12000
Neph.								300 60	320 30	230 28		310 30			300 80		260 50			Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 54

No. 5441.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—A British stations pressure is observed directly from an aneroid barrometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t-t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is H , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS. (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

TUESDAY, 20TH FEBRUARY, 1934

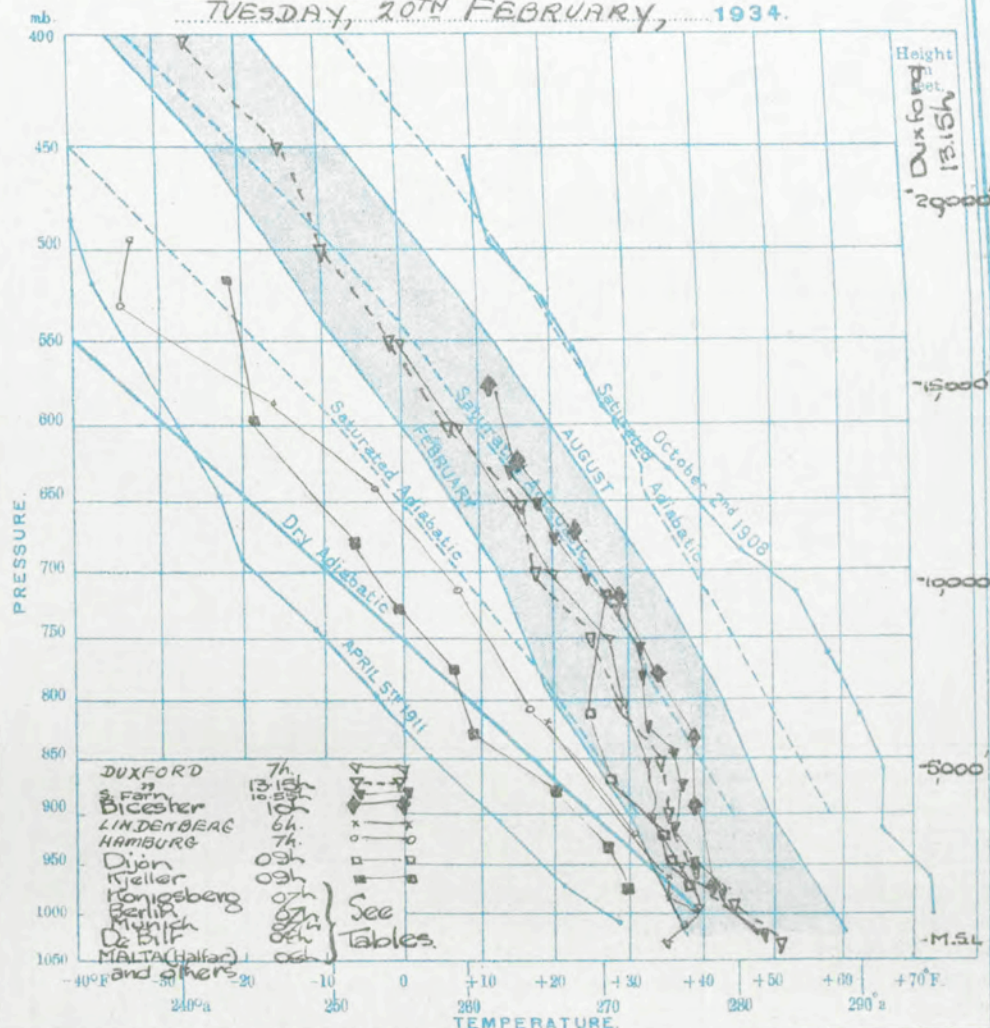


TABLE OF UPPER AIR TEMPERATURES RECORDED ON *TUESDAY, 20TH FEBRUARY, 1934*

DUXFORD 7h				Duxford 13.15				LINDENBERG 6h				HAMBURG 7h				Dijon osh				Hjeller osh				De Bilt osh				MALTA osh			
Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.				
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%				
1036	M.S.L.	-	-	1034	M.S.L.	-	-	1016	M.S.L.	-	-	1017	M.S.L.	-	-	1006	M.S.L.	-	-	1004	M.S.L.	-	-	1004	M.S.L.	-	-				
1032.5	100	33.7	91	1030.5	100	43.1	-	999	348	37	92	1014	61	36	29	974	1385	36	75	964	1026	27	53	1004	670	37	96				
994	1060	36	86	993	1100	42.0	-	998	980	34	95	920	2620	29	98	943	2365	33	83	923	2006	25	45	964	1650	33	85				
950	2290	35.2	84	980	2230	37.0	-	958	1640	34	98	804	6230	15	99	915	3265	32	83	883	3280	19	45	910	3280	34	75				
100	3700	31.7	78	900	3710	33.8	-	818	5570	16	92	712	7200	6	92	861	4920	25	83	828	4920	21	45	855	4920	21	65				
850	5200	30.6	64	830	5210	32.0	-	640	11500	-5	86	640	11500	-5	86	810	6560	23	85	776	6560	17	45	802	6560	21	65				
800	6770	28	66	800	6800	33.0	-	585	14130	-17	85	585	14130	-17	85	713	9840	25	75	726	8200	-12	45	732	8200	14	68				
780	8450	26	64	730	8480	23.2	-	531	16090	-36	83	531	16090	-36	83	679	9840	26	45	679	9840	16	45	703	9840	14	55				
700	10240	19	-	700	10260	16.5	-	492	18050	-34	82	492	18050	-34	82	590	13120	-20	-	590	13120	3	65	619	13120	3	65				
650	12120	12.7	-	660	12150	12.5	-	317	3280	34	-	317	3280	34	-	1006	811	43	-	971	1751	37	-	542	16400	-6	45				
600	14130	6.2	-	600	14150	4.5	-	818	6360	31	-	818	6360	31	-	915	3280	36	-	862	4920	26	-	732	8200	14	68				
550	16320	-1.3	-	550	16320	-3.5	-	716	9840	23	-	716	9840	23	-	812	6560	26	-	716	9840	19	-	633	13120	10	-				
Haze top 350 mb.				300	18576	-12.2	-	623	13120	14	-	623	13120	14	-	716	9840	19	-	633	13120	10	-	556	16400	-2	-				
Inversions:				480	21240	-17.6	-	553	16400	1	-	553	16400	1	-	556	16400	-2	-	556	16400	-2	-	556	16400	-2	-				
11 Jensen 33.4°F.				400	21976	-28.0	-	Inversion!				Inversion!																			
800 ft. 38.3°F.				Haze top 310 mb.				Press base 355 mb.				Press base 355 mb.																			
11 Jensen 31.3°F.				Clouds str cu 5/10				Am. Inv 51°F				Am. Inv 51°F																			
st. 6 to 10 in North approx. 930 mb.				825-910 mb.																											
Dicesker 10h				A cu 310 approx 450 mb.				Souk Farn 10.5h				Königsberg osh				Friedrichshagen osh				Berlin osh				Munich osh				Darmstadt osh			
1038	M.S.L.	-	-	1038	M.S.L.	-	-	1037	M.S.L.	-	-	1032	M.S.L.	-	-	1035	M.S.L.	-	-	1005	M.S.L.	-	-	1008	M.S.L.	-	-				
964	2230	33.0	-	964	2230	33.0	-	963	230	47	-	952	32	32	63	965	1312	36	68	1005	184	37	91	968	1662	34	64				
896	4170	37.0	-	896	4170	37.0	-	953	1330	41	-	840	4270	17	70	970	1640	33	67	967	1310	35	98	898	3610	28	63				
832	6120	37.0	-	832	6120	37.0	-	949	2340	37	-	680	9530	-6	53	958	1376	32	63	916	2620	27	98	836	5576	21	73				
772	8030	32.0	-	772	8030	32.0	-	914	3320	34	-	664	11130	-27	40	979	4276	23	73	898	3280	24	90	820	3300	19	97				
719	9970	28.0	-	719	9970	28.0	-	881	4230	36	-	510	16400	-36	40	868	4660	23	75	767	6360	11	90	756	8200	10	97				
667	11840	21.0	-	667	11840	21.0	-	849	5230	35	-	Holder 13h				804	6360	18	95	681	11140	-8	85	731	8850	17	35				
620	13720	14.0	-	620	13720	14.0	-	816	6250	31	-	1003	673	43	85	761	7230	25	80	575	14130	-18	80	703	9840	16	43				
573	15530	10.0	-	573	15530	10.0	-	767	7270	30	-	966	1659	37	85	Holder osh				517	16730	-32	80	638	11480	9	33				
Cloud:-				Cloud:-				Thin cloud 314 mb				Thin cloud 314 mb				Thin cloud 314 mb				Thin cloud 314 mb				Thin cloud 314 mb				Thin cloud 314 mb			
2400 to 3200 ft				2400 to 3200 ft				and bumpy 314 mb				and bumpy 314 mb				and bumpy 314 mb				and bumpy 314 mb				and bumpy 314 mb				and bumpy 314 mb			
Temp 32°F in cloud				Temp 32°F in cloud																											

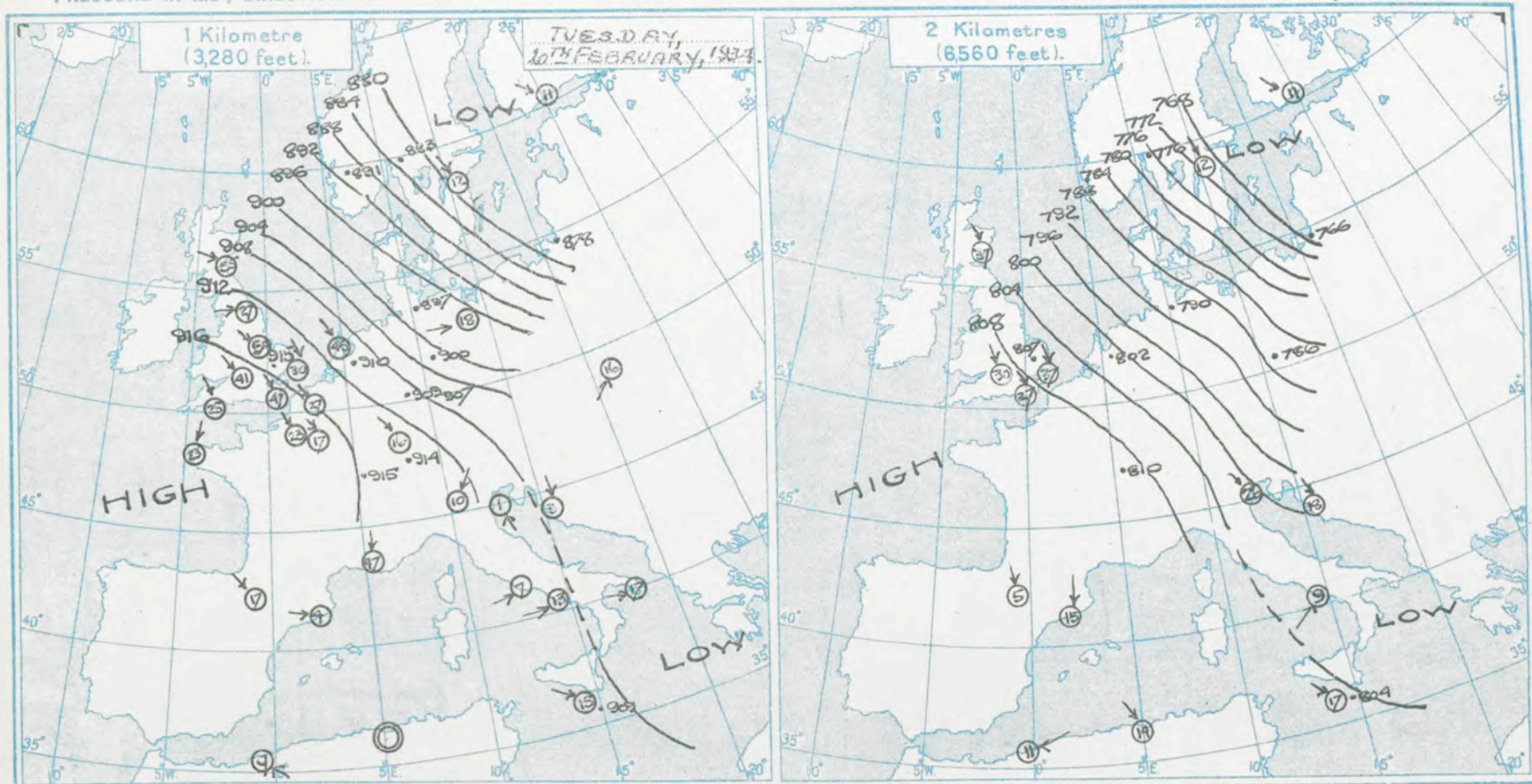
Meteorological Office, Air Ministry, Kingway, London, W.C.2

G. C. SIMPSON, C.B., D.Sc., F.R.S., Director

Issued on WEDNESDAY, 21ST FEBRUARY, 1934.

Meteorological Office, Air Ministry
Kingsway, London, W.C.2.

G. C. SIMPSON, O.B., D.Sc., F.R.S.,
Director



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 10th FEBRUARY, 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Biggin Hill	Felixstowe	Cranwell	Upper Heyford	Birmingham	Holyhead	Sealand	Manchester	Catterick	Leuchars	RAF	Croydon	Alder Grove	Malta	Place
Time	7h.	7h.	8h.	6h.	6h.	7h.	7h.	7h.	7h.	8h.	9h.	7h.	7h.	6h.	7h.	8h.	0h.	7h.	6h.	Time
Type	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	Type
Feet	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Surf.	Feet
1000	310 19	335 25	310 19	330 23	315 26	305 25	320 39	295 40	315 24	305 35	310 29	300 30	295 33	255 25	245 25	245 39	310 14	285 21		1000
2000	335 35	335 30	340 28	340 26	295 43	330 41	330 42	310 31	325 33	315 37	320 25	315 27		255 24	265 33	295 43	330 26	295 34	310 15	2000
3000	340 40	335 34	350 24	335 25	290 29	345 42	340 30	315 50	325 41		325 25			260 27	295 55	300 39				3000
4000	345 41		340 31	335 21	300 25	345 34	325 28	320 44	325 43					265 29	305 49					4000
5000	350 39		325 28		305 21	345 24	315 33	320 52	350 28						315 35					5000
6000			330 30			315 24	320 34		345 30						325 34					6000
8000						320 45			345 30											8000
10000									345 30											10000
12000									345 30											12000
Neph.									345 30											Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Worthy Down	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	RAF	Croydon	Alder Grove	Valencia	Place
Time	10h	13h	12h	12h	12h	9h	12h	13h	12h	12h	12h	12h	12h	12h	12h	12h	12h	12h	10h	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Surf.	270 10	295 16	320 14	320 14	325 15	270 7	345 13	220 13	220 13	310 15	260 20	235 28	220 26	300 20	260 12	260 20	305 12	280 8	90 1	Surf.
1000	320 26	305 16	325 13	325 13	325 17	325 23	320 21	225 25	225 17	335 7	300 24	300 26	220 31	305 33	220 44	270 34	305 15	220 19	45 6	1000
2000		(300 ft)	330 26	335 32	325 19	340 26	330 22	300 24	305 21	5 10	315 17	305 33	310 31	275 42	275 35	260 33	315 18		45 5	2000
3000		315 8	335 30	335 31	340 26	345 26					320 23	300 35		315 31	285 39					3000
4000		(1750 ft)	335 32	330 22		345 28					225 23	325 26		325 46	220 47					4000
5000			325 28	330 30							335 24	320 28								5000
6000			325 26	335 30							310 32	320 39								6000
8000				335 23							325 36									8000
10000				340 33							(7700)									10000
12000				345 32																12000
Neph.			330 50						330 55						310 57				330 25	Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	S. Farn	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	RAF	Alder Grove	Valencia	Malta	Place
Time	17h	17h	16h	17h	17h	14h	17h	17h	17h	17h	16h	17h	17h	17h	17h	17h	18h	18h	17h	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Surf.	265 12	235 13	235 10	235 10	300 9	300 14	275 11	285 18	300 11	320 12	260 20	285 17	230 37	280 19	270 25	270 20	260 20	325 5		Surf.
1000	265 21	300 17	285 20	235 16	305 18	315 14	235 27	300 45	300 18	325 11	285 29	300 30	230 32	285 34	280 39	280 35	285 31	330 5	310 25	1000
2000	300 23	300 21	300 15	305 17	320 23	330 13	305 29	305 38	300 23	335 13	295 27	305 32	300 30	285 54	285 39	285 46		340 5	310 27	2000
3000	300 25	315 21	305 16	320 15	315 28	320 13	310 27		305 23	345 18				285 63	285 42				310 25	3000
4000	315 38	320 24	320 14	345 25					325 29	345 15										4000
5000	320 34	(3700)	325 17	345 29					335 37	340 15										5000
6000				332 25					335 36	340 18										6000
8000				340 38					340 35	330 27										8000
10000				335 43					9000	330 31										10000
12000									330 33	330 32										12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 544

No. 5442

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

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These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Wednesday 21st February 1934

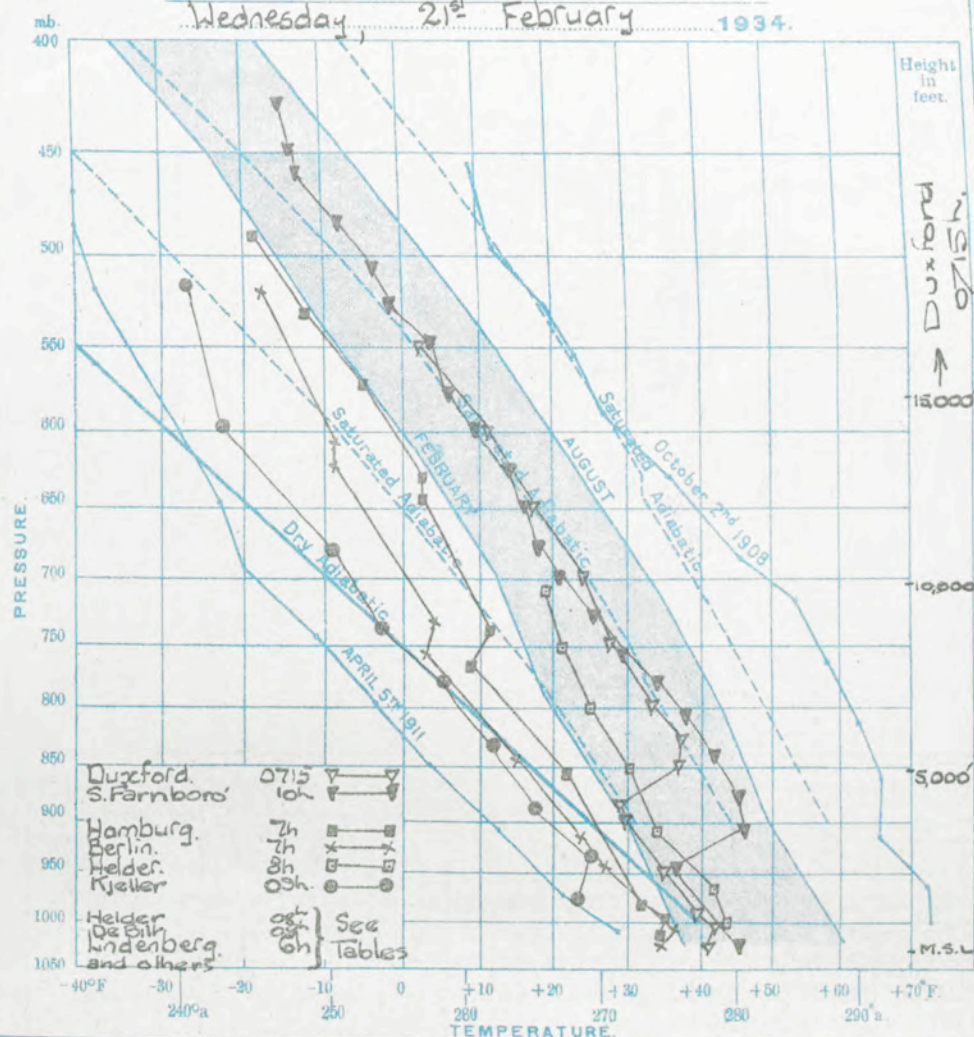
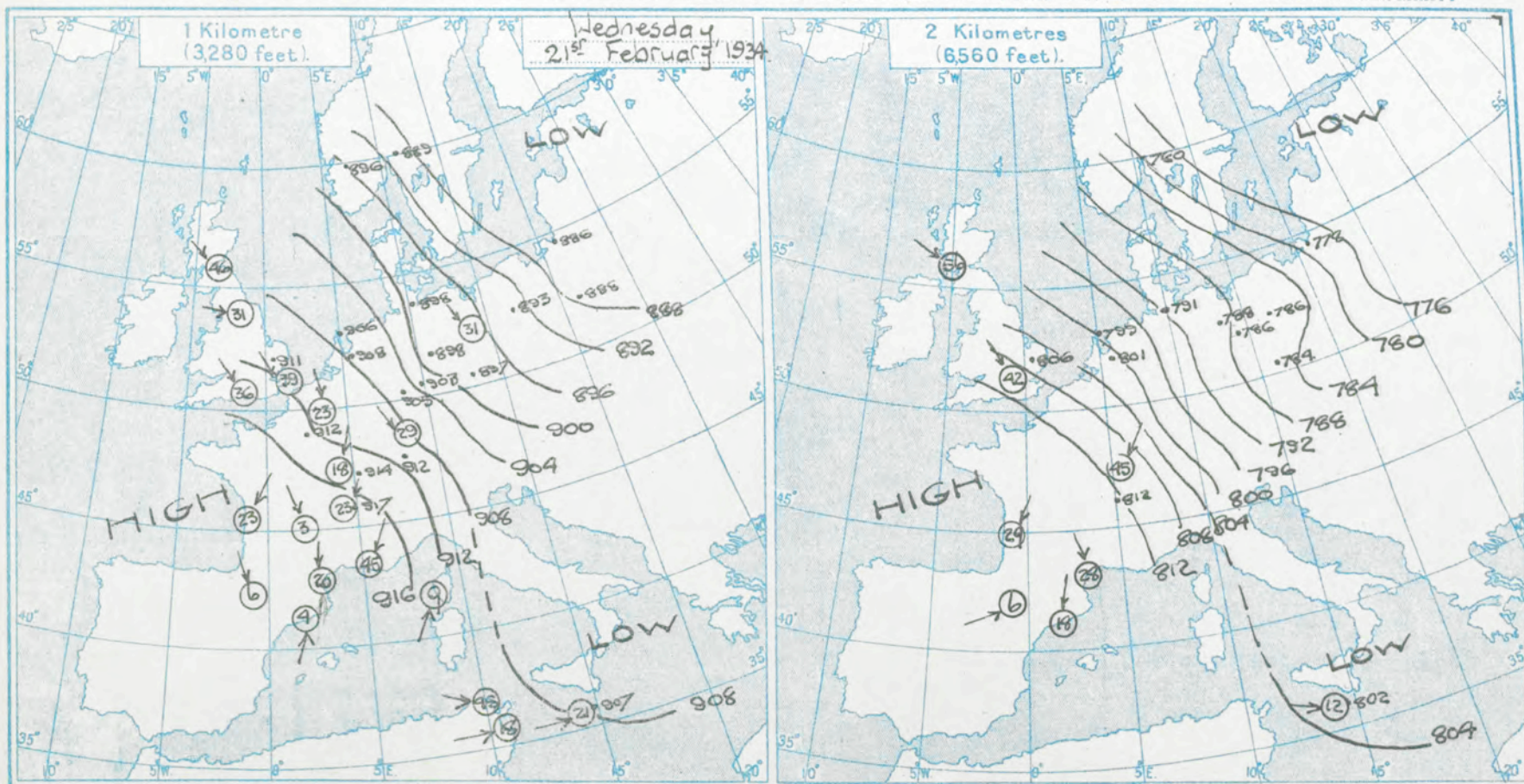


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 21st February 1934

Pressure.				Height above M.S.L.				Temp.				Relative Humidity				Pressure.				Height above M.S.L.				Temp.				Relative Humidity				Pressure.				Height above M.S.L.				Temp.				Relative Humidity				Pressure.				Height above M.S.L.				Temp.				Relative Humidity																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Duxford 0715																S. Farm. 10 ^h																Hamburg 7 ^h																Berlin 7 ^h																Kjeller 08 ^h																Lyons 09 ^h																Le Bourget 08 ^h																MALTA 08 ^h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
1032	M.S.L.	-	-	1034	M.S.L.	-	-	1016	M.S.L.	-	-	1009	M.S.L.	-	-	972	M.S.L.	-	-	926	M.S.L.	-	-	886	M.S.L.	-	-	813	M.S.L.	-	-	751	M.S.L.	-	-	683	M.S.L.	-	-	613	M.S.L.	-	-	555	M.S.L.	-	-	500	M.S.L.	-	-	445	M.S.L.	-	-	390	M.S.L.	-	-	335	M.S.L.	-	-	280	M.S.L.	-	-	225	M.S.L.	-	-	170	M.S.L.	-	-	115	M.S.L.	-	-	60	M.S.L.	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1028.5	100	40.8	83	1025.5	230	44	-	1016	61	35	97	1005	184	34	83	972	1026	23	65	926	2006	25	65	886	3226	18	65	813	4926	12	63	751	6566	8	65	683	9840	14	65	613	13120	9	65	555	16400	0	65	500	19740	0	65	445	23220	0	65	390	26840	0	65	335	30460	0	65	280	34080	0	65	225	37700	0	65	170	41320	0	65	115	44940	0	65	60	48560	0	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
996	1000	39.4	87	990	2360	36	-	993	660	36	82	1005	330	36	81	936	2006	25	65	886	3226	18	65	813	4926	12	63	751	6566	8	65	683	9840	14	65	613	13120	9	65	555	16400	0	65	500	19740	0	65	445	23220	0	65	390	26840	0	65	335	30460	0	65	280	34080	0	65	225	37700	0	65	170	41320	0	65	115	44940	0	65	60	48560	0	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
990	2220	36.4	87	906	3570	45	-	985	1970	32	80	944	1970	27	50	885	3226	18	65	832	4926	12	63	780	6566	8	65	730	9840	14	65	681	13120	9	65	631	16400	0	65	581	19740	0	65	531	23220	0	65	481	26840	0	65	431	30460	0	65	381	34080	0	65	331	37700	0	65	281	41320	0	65	231	44940	0	65	181	48560	0	65	131	52180	0	65	81	55800	0	65	31	59420	0	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
850	3620	29.6	-	874	4600	44	-	853	4600	22	80	815	7620	24	80	832	4926	12	63	780	6566	8	65	730	9840	14	65	681	13120	9	65	631	16400	0	65	581	19740	0	65	531	23220	0	65	481	26840	0	65	431	30460	0	65	381	34080	0	65	331	37700	0	65	281	41320	0	65	231	44940	0	65	181	48560	0	65	131	52180	0	65	81	55800	0	65	31	59420	0	65																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
850	5140	37.5	58	841	5530	41	-	760	7260	9	50	844	4920	15	81	755	7660	3	81	735	8700	4	60	622	12460	-9	62	593	13120	-22	58	515	16400	-27	55	Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-																Inversion:-															



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 21st February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Croydon	Lympne	Croydon	Felixstowe	Cranwell	Upper Heyford	Lympne	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Biggin Hill	Alder-grove	Malla	Place																	
Time	7h	7h	7h	10h	6h	0h	8h	7h	6h	10h	9h	7h	7h	7h	7h	8h	7h	7h	6h	Time																	
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type																	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																
Surf.	260	8	275	7	250	2	285	12	275	7	250	16	270	12	280	17	225	12	300	7	3000'	Surf.															
1000	315	20	320	24	320	17	310	23	315	23	305	30	295	35	295	16	295	13	295	18	295	17	1000														
2000	330	27	320	29	320	25	325	30	335	31	315	30	300	41	305	41	315	24	325	19	305	19	2000														
3000			315	36	310	34																	3000														
4000			320	27	310	34																	4000														
5000			330	33	315	37																	5000														
6000			325	42	330	33																	6000														
8000			335	39	325	29																	8000														
10000																							10000														
12000																							12000														
Neph.																							Neph.														
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Manslow	Alder-grove	Valentia	Place																	
Time	12h	12h	12h	11h			12h	13h	12h	12h	12h	12h	12h	12h	12h	12h	14h	12h		Time																	
Type	b	b	b	b			b	b	b	b	b	b	b	b	b	b	b	b	b	Type																	
Surf.	265	15	265	7	260	8	315	5			265	11	260	18	315	17	335	12	275	14	260	20	260	20	300	17	265	12	270	10	Surf.						
1000	305	17	310	13	290	9	315	9			265	19	265	25	310	11	315	7	260	16	260	23	260	20	300	26	260	22	260	20	265	21	260	17	1000		
2000	310	21	310	12	300	10	315	17			300	21	300	20	295	19	295	8			260	23	260	20	300	22	260	38	260	35	315	18	265	25	2000		
3000					325	21	310	25													260	27	260	36	265	44								3000			
4000							310	23													260	27	260	36	265	44								4000			
5000							310	23													260	27	260	36	265	44								5000			
6000							310	21													260	27	260	36	265	44								6000			
8000							310	21													260	27	260	36	265	44								8000			
10000							310	21													260	27	260	36	265	44								10000			
12000							310	21													260	27	260	36	265	44								12000			
Neph.																																			Neph.		
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malla	Place																	
Time	17h	17h	17h	17h	17h		18h	17h	17h	17h	16h	17h	17h	17h	17h	17h		17h	17h	Time																	
Type	b	b	b	b	b		b	b	b	b	b	b	b	b	b	b		b	b	Type																	
Surf.	240	8	230	4	270	8	260	13	260	7			260	6	260	15	265	12	295	20	265	18	260	9	260	10	245	7			240	12	Surf.				
1000	275	14	275	11	275	12	265	9	265	11			265	17	275	18	295	11	330	11	260	17	265	26	265	23	260	17	260	27	260	23	245	23	260	12	1000
2000	295	15	265	13	295	14	305	3	260	14			260	13	260	26	275	11	295	7			265	23	265	23	260	25	270	30			260	31	260	14	2000
3000	260	17	320	16	320	21	320	19													260	13	260	4	265	23	265	23	275	31			260	30	260	17	3000
4000			325	23	320	18	315	19													265	13	260	4	265	23	265	23	275	31			260	30	260	17	4000
5000					300	18	310	18													265	13	260	4	265	23	265	23	275	31			260	30	260	17	5000
6000					300	18	305	19													265	13	260	4	265	23	265	23	275	31			260	30	260	17	6000
8000					310	14	310	15													265	13	260	4	265	23	265	23	275	31			260	30	260	17	8000
10000					310	15	315	15													265	13	260	4	265	23	265	23	275	31			260	30	260	17	10000
12000					310	15	315	15													265	13	260	4	265	23	265	23	275	31			260	30	260	17	12000
Neph.																																				Neph.	

AIR MINISTRY.
 RT OF THE METEOROLOGICAL OFFICE, LONDON.
 UPPER AIR SECTION. No. 5443

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') R/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrt.)

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of .1 and .2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

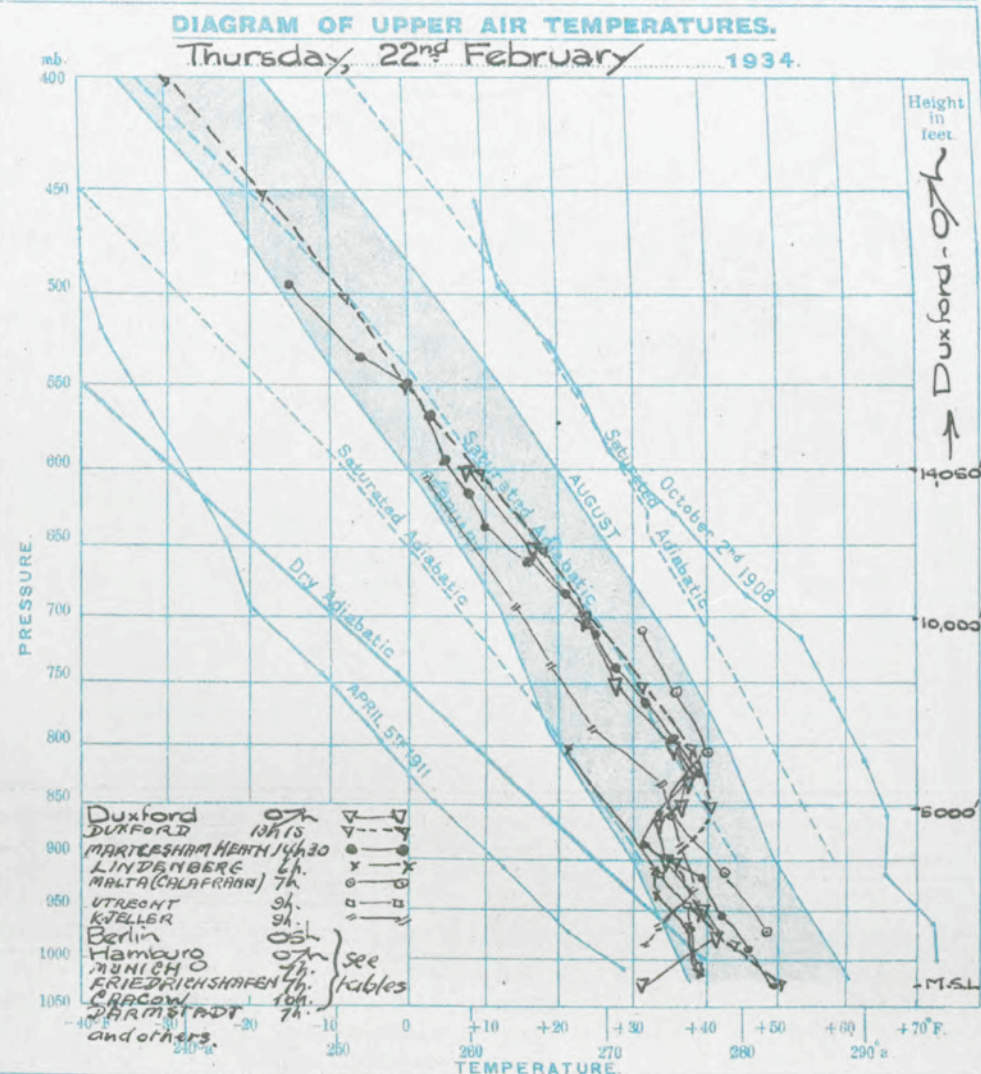
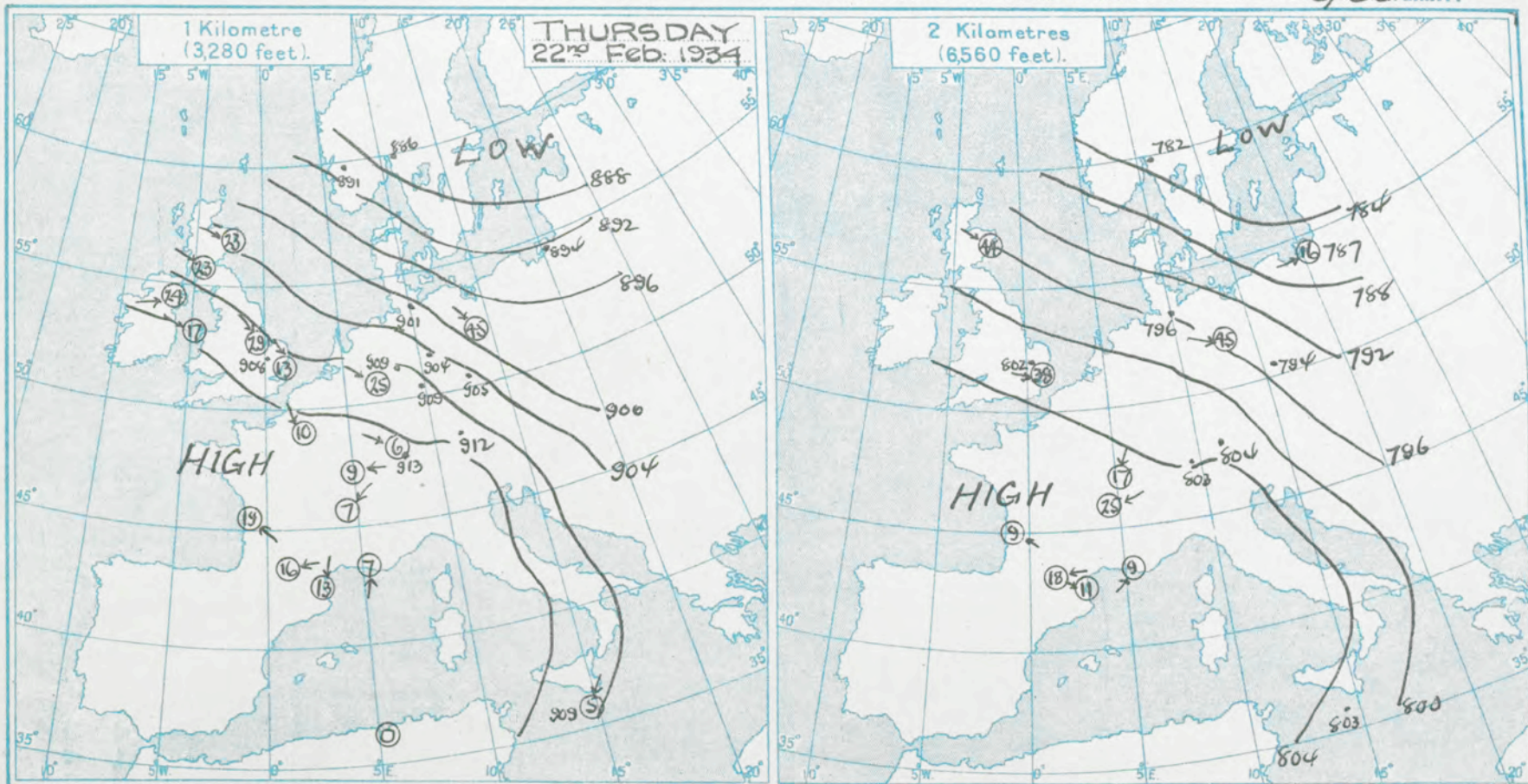


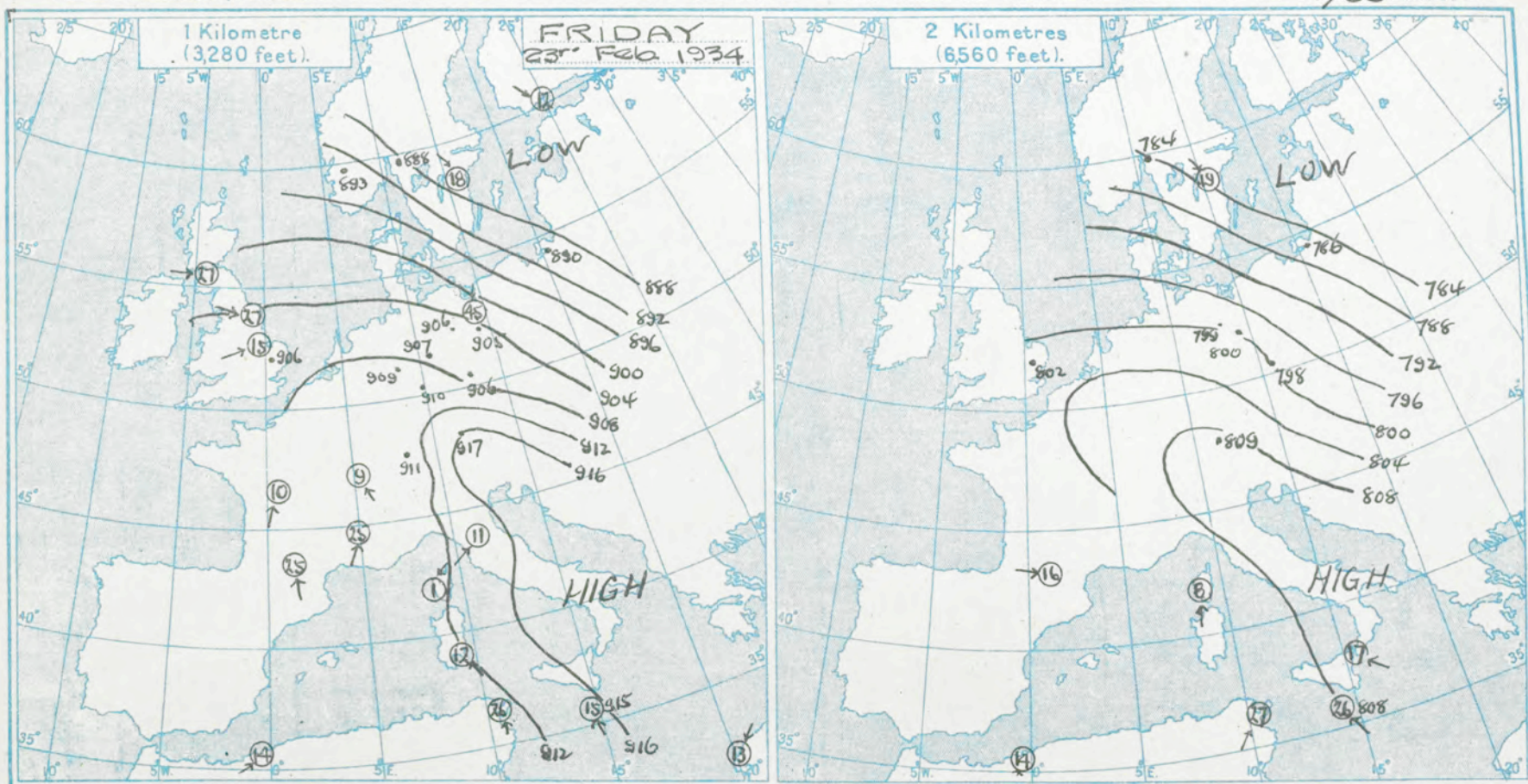
TABLE OF UPPER AIR TEMPERATURES RECORDED ON 22nd February 1934

TEMPERATURES RECORDED ON 1934											
Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Duxford <i>gh</i>				DUXFORD 13h15				Berlin 05h			
1025	M.S.L.	-	-	1029	M.S.L.	-	-	-	M.S.L.	-	-
1026	100	34.8	95	1025.8	100	50.3	62	1015	184	42	89
982	1070	40.8	76	988	1050	44	78	1002	330	43	89
930	2120	38.0	75	950	2110	39	94	956	1640	36	98
900	3350	35.8	91	900	3550	35	83				
850	5030	30.6	55	850	5040	40	36				
800	6650	24.7	53	800	6640	37.2	33				
750	8340	28.4	65	750	8330	31	40				
700	10130	22.7	46	700	10140	23.5	60				
650	12020	16.2	-	650	12100	17.5	-				
600	14050	8.0	-	600	14130	9	-				
Fog with Str. Cu.				550	16320	-6.3	-				
top of approx 800'				500	18400	-8	-				
Haze top 800' &				450	21280	-18	-				
850 mb.				400	24100	-30	-				
Inversions:-				Haze top 910 mb and 880 mb.							
Screen 31.8°F				INVERSION:-							
960 mb 41.0°F				880 mb. 33.5°F							
860 mb 33.3°F				850 mb. 40.0°F							
830 mb 37.0°F											
Cloud.				MALTA (GALAFRANA) 7h				UTRECHT 9h			
Cu 1/10 850 mb				1026.6 M.S.L. - -				1030 M.S.L. - -			
AC 3/10 not reached				1000? 660 50? -				1003 670 39 85			
				966 1640 44 45				967 1650 37 85			
				909 3250 43 75				909 3250 34 75			
				854 4920 26 55				854 4920 27 55			
				803 6560 40 35				901 6560 32 55			
				755 8200 36 45				953 8200 30 35			
				710 9840 31 48				904 9840 25 35			
								721 13120 10 45			
				MALTA (GALAFRANA) 7h				CRACOW 10h			
				8003 660 55 75				10172 M.S.L. - -			
				967 1640 50 55				1014 92 28 58			
				910 3250 43 46				982 980 27 80			
				852 4920 39 46				894 3250 14 58			
				804 6560 40 45				848 5240 25 94			
				754 8200 36 45				814 6230 36 40			
				711 9840 31 65				740 8540 5 46			
				625 13120 21 -				684 10140 5 48			
								612 12740 0 60			
								KONIGSBERG 7h			
								10172 M.S.L. - -			
								1009 445 40 50			
								950 2300 38 84			
								846 3610 32 83			
								848 5240 25 94			
								814 6230 36 40			
								744 6900 35 61			
								724 9200 26 51			
								672 11140 19 53			
								629 12740 4 56			
								611 13450 10 50			
								581 14460 6 47			
								521 18060 -4 42			
								DARMSTADT 7h			
								1025.5 M.S.L. - -			
								1025.5 90 50 -			
								989 1080 46 -			



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 22nd February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Bircham Newington	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place													
Time	00h					09h	07h	07h		07h		07h	07h	07h	07h	06h	06h	07h	07h	Time													
Type						b				b		b	b	b	b	b	b	b	b	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					260	20	273	8	240	8			260	2	258	8	170	5	250	15	245	17	258	15	230	15		Surf.			
1000	260	13					230	23	305	24	230	27			260	22	266	17	245	9	266	25	255	23	255	37	255	27	820	3	1000		
2000	260	13					300	28	300	21	300	36							270	11			270	36	275	32	275	24	30	5	2000		
3000	291	31					305	27	330	13	315	23							285	17			280	21	285	17	285	23	265	24	20	5	3000
4000	275	23																									295	38	285	24			4000
5000	275	27																									295	43	260	22			5000
6000																											300	44					6000
8000																																	8000
10000																																	10000
12000																																	12000
Neph.																																	Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Manston	Alder-grove	Valentia	Place													
Time	12h	12h	13h				12h	14h	11h	12h	12h	12h	12h	13h	12h	12h	16h	12h	13h	Time													
Type	b	b	b				b	b	b	b	b	b	b	b	b	b	b			Type													
Surf.	240	5	15	2	170	4																										Surf.	
1000	270	7	260	4	260	6																										1000	
2000	30	7	35	5																												2000	
3000			240	13																												3000	
4000			245	23																												4000	
5000			300	21																												5000	
6000			240	26																												6000	
8000			245	32																												8000	
10000			300	32																												10000	
12000																																	12000
Neph.																																	Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Man-chester	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place													
Time	17h	17h	15h	16h			17h	16h	15h	17h	16h	17h	17h	17h	17h	17h	17h	17h	18h	Time													
Type	b	b	b	b			b	b	b	b	b	b	b	b	b	b	b	b	b	Type													
Surf.	200	11	240	3	240	4	220	3																								Surf.	
1000	255	8	275	6	250	8	245	4																							1000		
2000	310	6	350	4	270	5	310	9																							2000		
3000	300	14	305	13	245	15	290	9																							3000		
4000	300	19	300	20	240	14	245	13																							4000		
5000	305	20	300	21	245	20	245	14																							5000		
6000	305	25	300	22	245	19	300	13																							6000		
8000	300	24			240	19	305	11																							8000		
10000	(4000)				245	16																										10000	
12000					300	17																										12000	
Neph.																																	Neph.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 23rd February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place
Time																				
Type																				
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.																				
1000																				
2000																				
3000																				
4000																				
5000																				
6000																				
8000																				
10000																				
12000																				
Neph.																				
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Valentia	Place
Time																				
Type																				
Surf.																				
1000																				
2000																				
3000																				
4000																				
5000																				
6000																				
8000																				
10000																				
12000																				
Neph.																				
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place
Time																				
Type																				
Surf.																				
1000																				
2000																				
3000																				
4000																				
5000																				
6000																				
8000																				
10000																				
12000																				
Neph.																				

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No. 5445

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Taole.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro-type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

24th February

1934

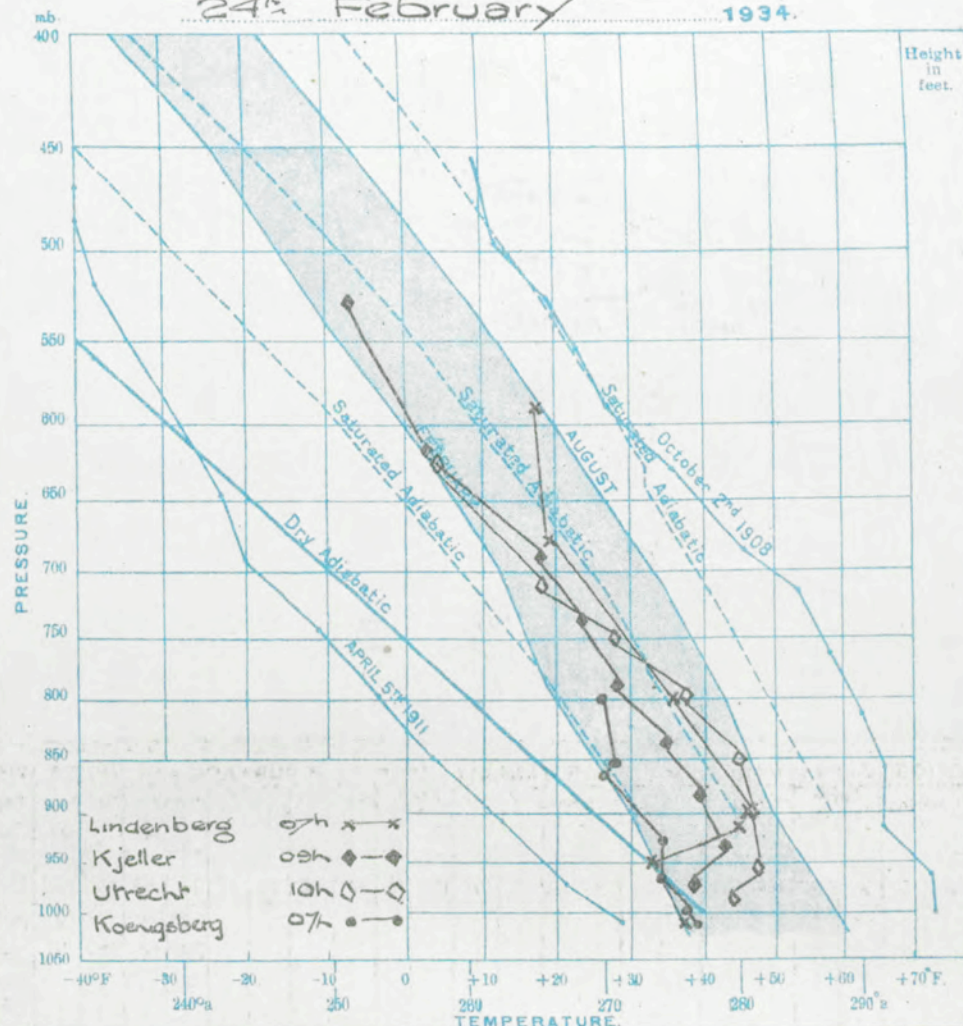
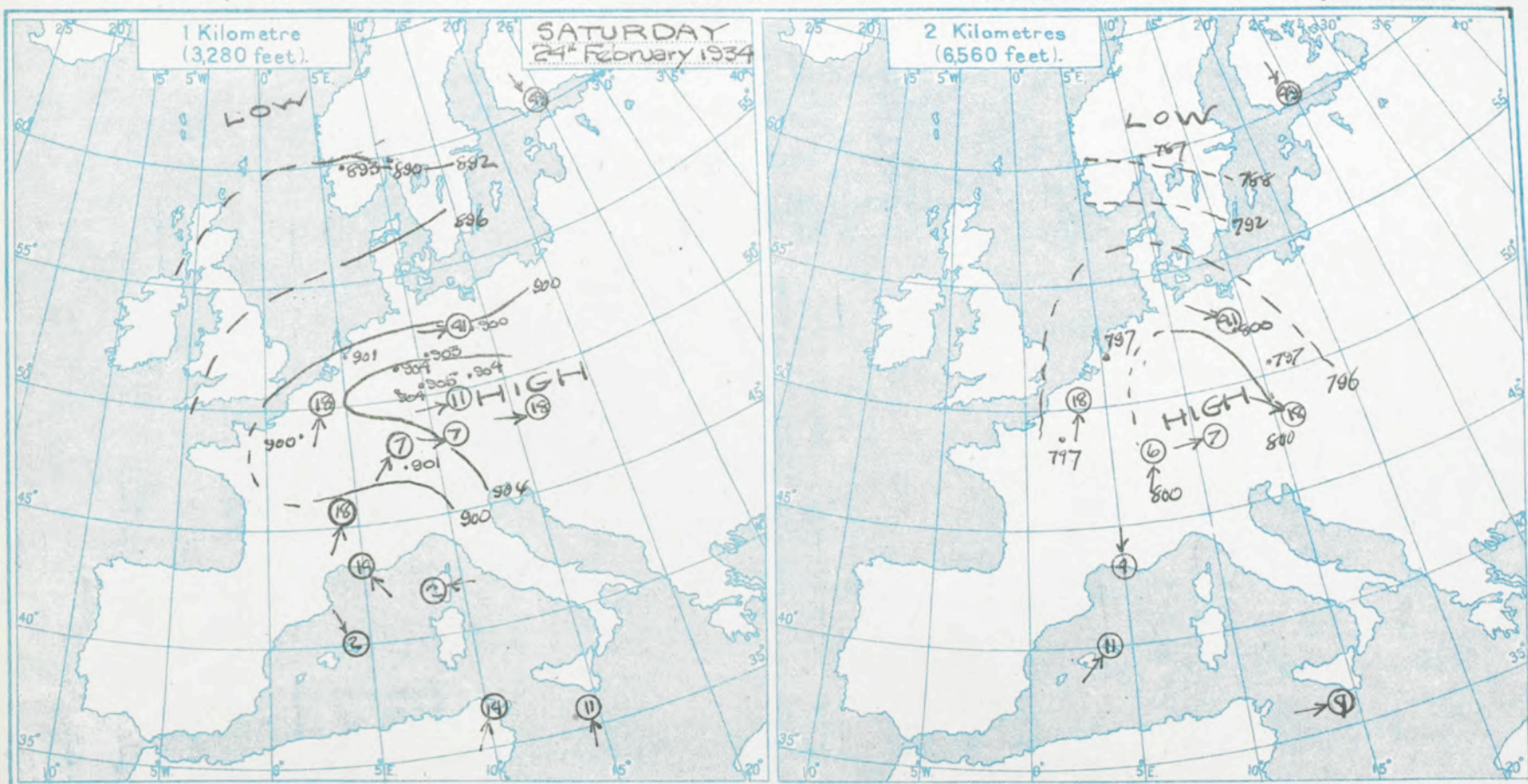


TABLE OF UPPER AIR TEMPERATURES RECORDED ON 24th February 1934

Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	%
M.S.L.	-	-	-
M.S.L.	-	-	-
Lindenberg 97	M.S.L.	-	-
1006	348	37	84
950	1970	32	98
912	2560	44	30
900	3260	48	30
800	6560	35	35
673	10500	19	48
588	14460	13	46
564	15760	?	38
Berlin Th.	M.S.L.	-	-
1014	184	39	84
930	330	38	84
944	1940	24	98
906	2950	19	100
767	7560	24	93
645	10830	16	42
605	13450	4	41
563	15430	-5	43
550	16040	-1	40
524	17060	-Y	40
Königsberg Th.	M.S.L.	-	-
1009	92	38	94
1000	330	34	93
960	1310	33	98
930	2300	33	98
860	4340	24	98
852	4600	28	98
799	6230	26	96
Darmstadt Th.?	M.S.L.	-	-
1000	445	30	88
964	1640	34	88
946	2360	38	88
921	2950	43	74
893	3610	44	64
845	5240	40	60
813	6230	39	54
746	8540	28	56
683	10830	19	54
636	12460	14	52
577	15100	0	44
558	15760	-3	44
551	16090	-2	44
523	17390	-8	46
Paris Le Bourget 10h.	M.S.L.	-	-
991	811	34	95
986	1491	34	85
900	3280	32	95
847	4930	37	-
797	6560	32	-
703	9200	24	-
619	12840	4	-
541	13120	4	-
Inversions -	(1) 61		
Base 931	900 mb.		
Rise 2°	7°F.		
Friedrichshafen Th.?	M.S.L.	-	-
977	1312	31	94
960	1640	30	94
950	1970	34	64
921	2950	35	54
895	3610	36	60
880	3940	36	55
849	4920	33	44
830	5540	33	44
780	7230	29	43
730	8660	24	42
719	9200	23	40
661	11460	15	40
591	14480	5	40
Utrecht 10h.	M.S.L.	-	-
992	670	43	68
958	1650	46	48
901	3280	46	25
848	4920	43	28
797	6560	36	25
744	8200	28	35
703	9840	19	35
614	13120	5	35
Munich Th.	M.S.L.	-	-
963	1662	30	44
939	2300	34	59
896	3610	41	51
848	5240	37	41
814	6230	34	40
749	6560	34	39
682	8850	26	32
681	10830	23	30
625	13120	11	32
574	15100	1	35
571	15760	1	34
539	16300	-2	30
516	17720	-6	30
Keller 9h.	M.S.L.	-	-
940	1026	37	95
936	2006	41	88
840	3280	39	45
839	4920	34	45
784	6560	28	45
740	8200	23	85
692	9840	16	85
609	13120	3	65
533	16400	-8	55
Inversion -	Base 903 mb.		
Rise 9°F.			

Meteorological Office, Air Ministry,
Kingway, London, W.C.1
S. C. SIMMONS, O.B., D.Sc., F.R.S.
Director



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 24th February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place	
Time.										07h	05h	05h	05h	07h	07h	07h		07h	06h	Time	
Type										b	b	b	b	b	b	b		b	b	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	205 13	140 9	200 2	105 1	210 10	210 12		190 13		Surf.	
1000										235 10	210 36	205 14	210 13	225 3	225 30	213 35		215 28		1000	
2000										265 13		230 27	230 12		240 37					2000	
3000												270 17							190 11	3000	
4000												260 17								4000	
5000												225 31							130 11	5000	
6000																			7000	6000	
8000																			270 9	8000	
10000																				10000	
12000															25h 15	260 50				12000	
Neph.																				Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Valentia	Place	
Time.		13h								12h	12h	12h	12h		12h			12h	13h	Time	
Type		b								b	b	b	b		b					Type	
Surf.		220 6								220 15	195 14	160 11	185 18		215 15			270 6	265 9	Surf.	
1000		250 19								240 14	205 41	215 19	205 21		230 24			245 16	300 14	1000	
2000		255 35								260 14	225 43	230 26	235 26		235 36				295 23	2000	
3000												240 44	245 22						290 29	3000	
4000																				4000	
5000																				5000	
6000																				6000	
8000																				8000	
10000																				10000	
12000		13h C								14h C										12000	
Neph.		230 35						180 90				13h C	240 50							Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place	
Time.	17h	17h		17h				16h b			16h	17h		18h	17h	17h		17h	17h	Time	
Type				b							b	b		b	b	b		b	b	Type	
Surf.	200 12	205 8		215 12				200 10			275 10	235 4		180 10	250 10	240 12		245 5		Surf.	
1000	210 25	220 23		235 13				220 26			285 16	250 19		205 31	255 14	255 23		265 20		1000	
2000	235 25	235 31		240 24				245 23			280 18	255 24		215 37	265 20	260 27		270 23		2000	
3000	245 26			245 17				270 25			270 22			230 55	275 25	265 29		270 29	190 15	3000	
4000	245 27			250 25				280 17			265 23			235 51		265 29		270 21		4000	
5000								260 23								260 29				5000	
6000								235 35								260 33				6000	
8000								225 30								250 27			310 9	8000	
10000								7000 ft.								245 33			290 18	10000	
12000																			310 21	12000	
Neph.																				Neph.	

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION.

No. 5446

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for those months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahrt.)

and e' is the saturation vapour pressure at temperature t' .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

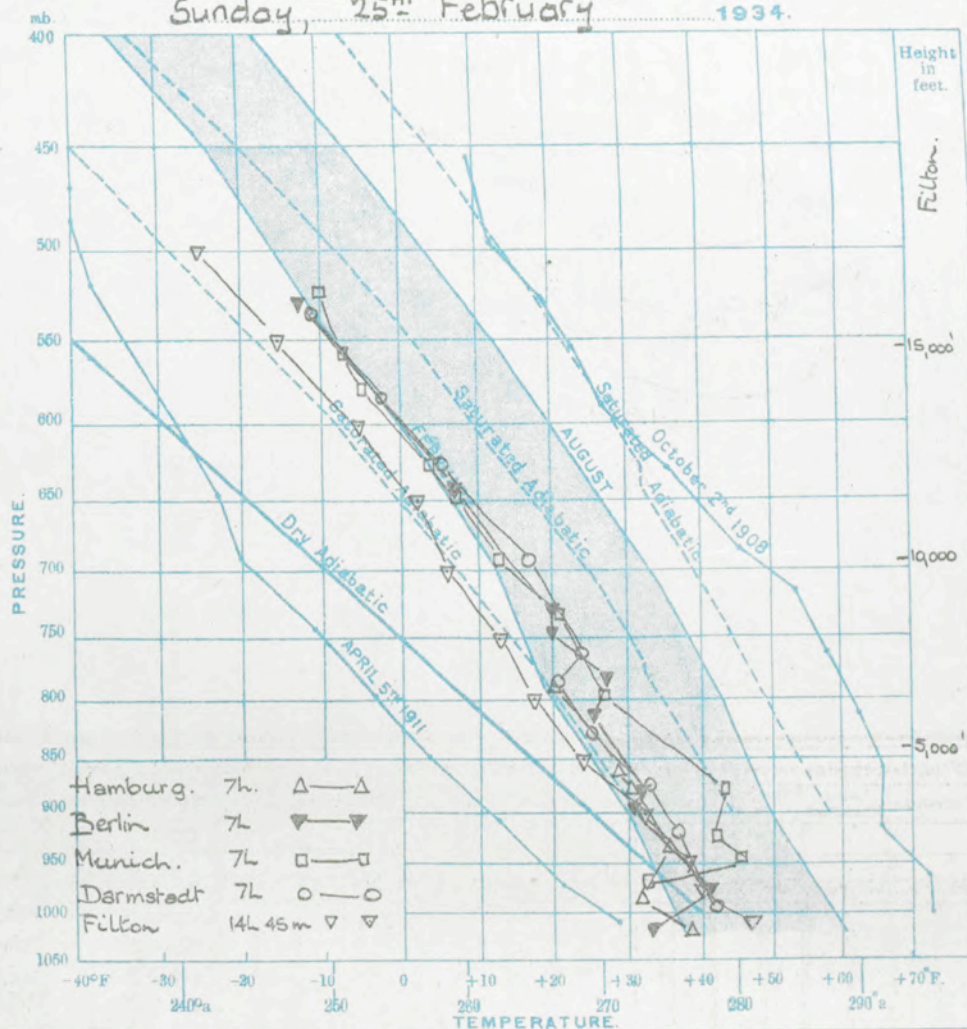
d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

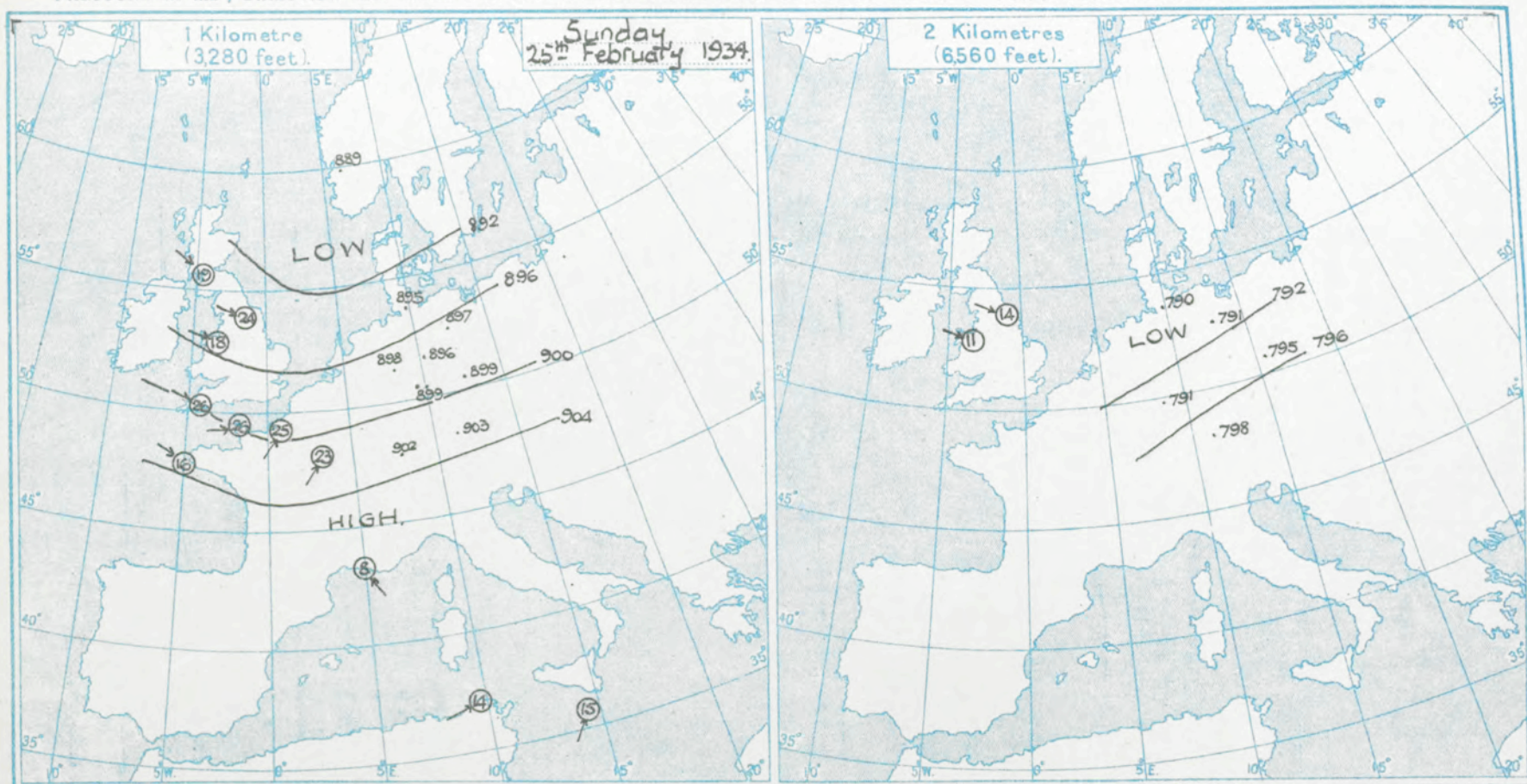
Sunday, 25th February 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON 25th February 1934.

Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity.
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%
Hamburg 7h.				Berlin 7L.				Munich 7L.				Darmstadt 7L.																			
1012.6	M.S.L.	—	—	1015.0	M.S.L.	—	—	1021.2	M.S.L.	—	—	1016.5	M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—
1010	61	40	89	1010	184	35	90	958	1662	34	80	996	445	43	81																
988	660	43	80	978	980	43	78	944	1970	37	72	919	2620	38	80																
930	2300	37	88	895	3280	32	92	822	2620	43	65	871	4270	34	82																
869	3940	32	98	852	3610	33	79	872	4270	45	63	820	6900	27	82																
855	6230	30	86	810	5900	27	73	795	6900	29	79	777	7230	25	90																
790	6560	21	98	780	6900	29	59	733	8200	22	78	759	7880	25	91																
				743	8200	21	61	630	10170	14	85	696	9840	18	82																
				729	8540	21	49	642	12130	9	69	628	12460	6	88																
				642	12130	9	42	624	12790	5	81	580	14460	-1	69																
				530	16400	-11	53	571	14760	-4	88	531	16730	-10	74																
								560	15400	-6	98																				
								522	17660	-9	85																				
Filton 14L 45m.																															
1010.5	M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—		M.S.L.	—	—
1003.5	200	49	60																												
967	1190	42	76																												
950	1680	40	77																												
900	3100	33	81																												
850	4600	25.5	89																												
800	6160	19	-																												
750	7810	14	-																												
700	9590	7.5	-																												
650	11440	3	-																												
600	13360	-5	-																												
550	15560	-14	-																												
500	17870	-24	-																												
Fr. Cu. tr. 300mb. Cu. base 850mb. tops 800-700mb. As 4/p not reached.																															
Meteorological Office, Air Ministry, Kingsway, London, W.C.2																															
G. C. SIMPSON, C.B., D.Sc., F.R.S., Director																															

Fr. Cl. fr. 300 mb.
Cu. base 850 mb.
tops 800-700 mb.
As 4/10 not recd.

Meteorological Office, Air Ministry,
Kingsway, London, W.C.2.

G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 25th February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place	
Time.							7h			7h		7h		7h		7h		7h	6h	Time	
Type										b		b		b		b				Type	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.							175 10			300 3		300 4		215 2		270 5		305 8	3000'	Surf.	
1000							195 19			325 19		310 18		290 5		310 19		325 19	200 15	1000	
2000										325 24		315 19		290 23		320 25			7000'	2000	
3000										320 26		315 18		285 24		330 19			730 7	3000	
4000												315 15		290 21		330 21			10000'	4000	
5000												315 13		295 16		315 25			270 14	5000	
6000												305 11		285 14					12000'	6000	
8000												300 12		270 9					250 15	8000	
10000												(7000)		245 16						10000	
12000														245 27						12000	
Neph.																				Neph.	
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place	
Time.	11h.							13h.			12h.		12h.		12h.			12h.		Time	
Type											b.		b.		b.					Type	
Surf.	200 16							310 14			330 18		305 8		295 10			320 8		Surf.	
1000	215 20							325 19			335 21		325 10		300 17			325 13		1000	
2000	240 12							340 22			350 23		330 19		325 15			335 16		2000	
3000											360 19				345 9					3000	
4000											255 26				5 19					4000	
5000											350 19									5000	
6000											340 19									6000	
8000																				8000	
10000																				10000	
12000																				12000	
Neph.							16h C.													Neph.	
							210 65														
Place.	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Malta	Place	
Time.																			17h.	Time	
Type																				Type	
Surf.																				Surf.	
1000																				1000	
2000																				2000	
3000																			190 9	3000	
4000																				4000	
5000																			180 15	5000	
6000																				6000	
8000																				8000	
10000																			210 13 (7,000)	10000	
12000																				12000	
Neph.							230 35				360 24									Neph.	

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.
UPPER AIR SECTION. No.544

No. 5447

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e'' = e' - 0.37 (t - t') B/1000$$

where e'' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.).

and e' is the saturation vapour pressure at temperature t'

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

d = double theodolite ascent.

On the maps the pressures in mb, at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

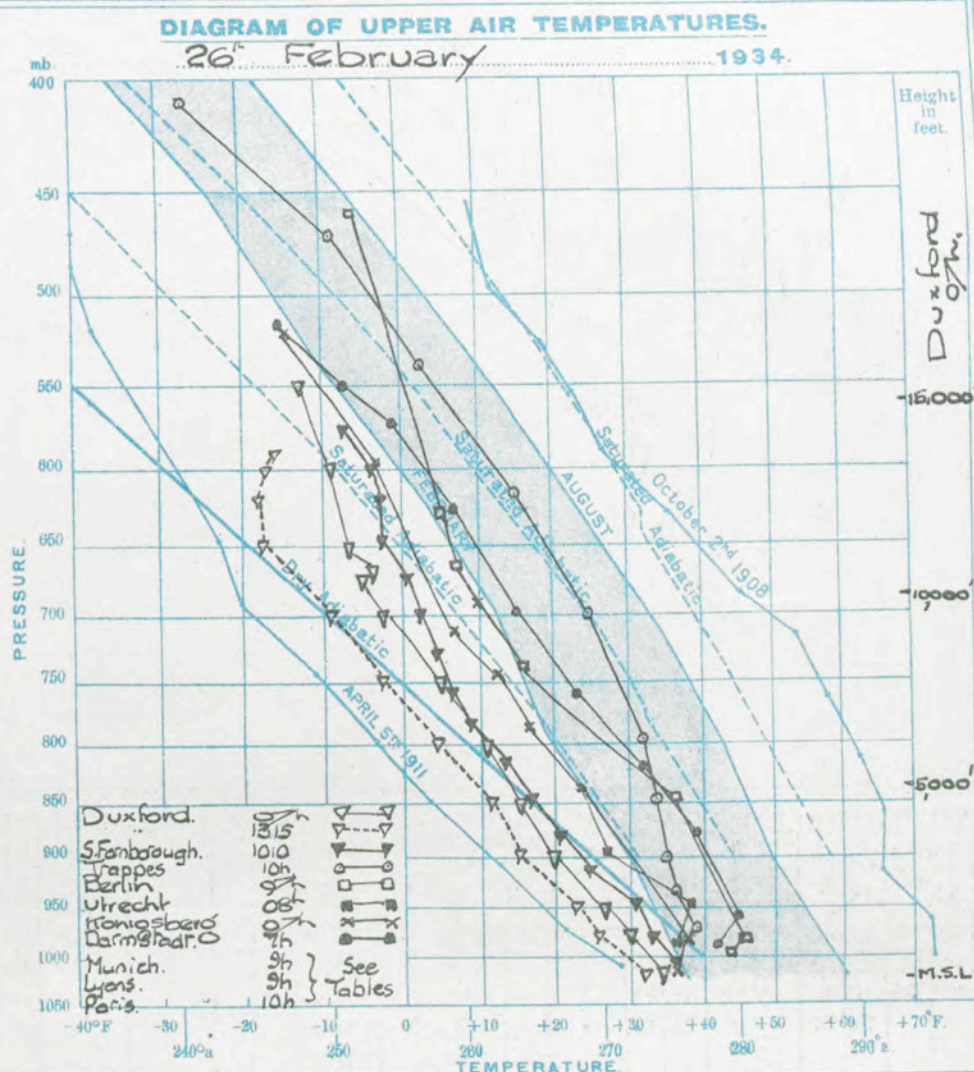
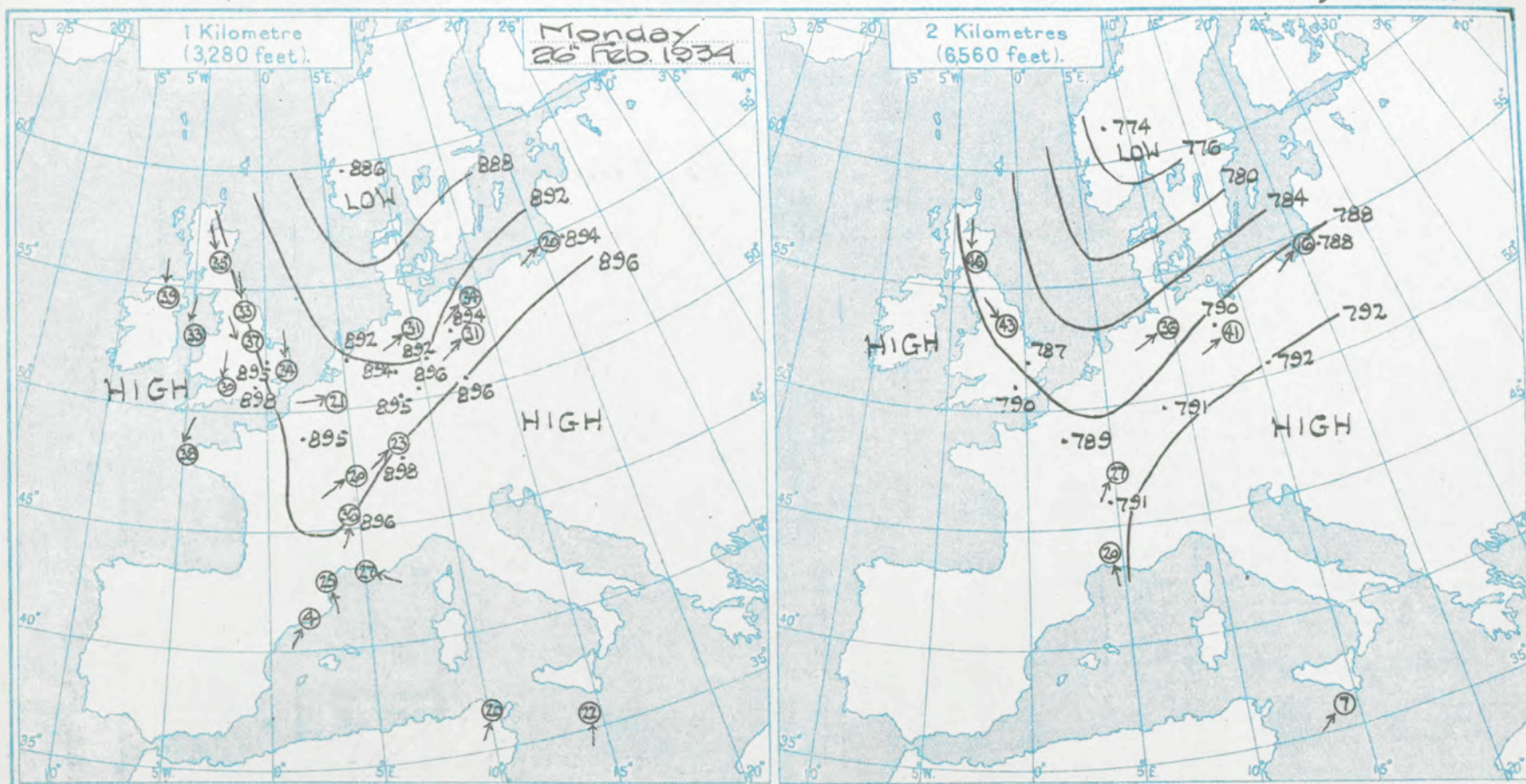
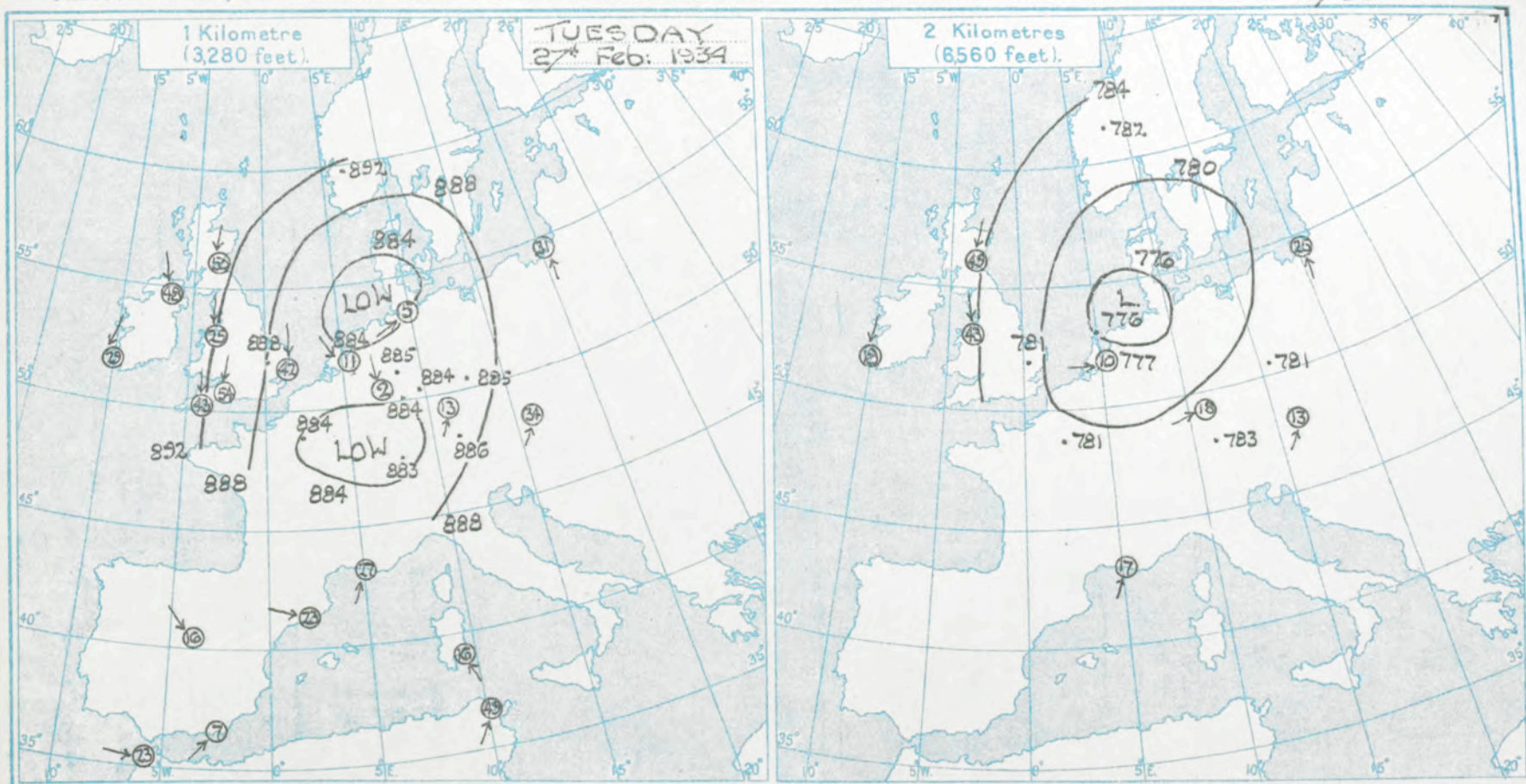
TABLE OF UPPER AIR TEMPERATURES RECORDED ON 26th February 1934

TABLE OF SURFACE AIR TEMPERATURES RECORDED ON																																
Duxford 9h				Duxford 1315				Berlin 07				Utrecht 08				Königsberg 9				Sfarnbore 1010				Munich 9h				Sfarnbore 16h				
Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Pressure	Height above M.S.L.	Temp.	Relative Humidity	
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	
1016.0	M.S.L.	-	-	1017	M.S.L.	-	-	1010.4	M.S.L.	-	-	1010	M.S.L.	-	-	1011.9	M.S.L.	-	-	1009.4	M.S.L.	-	-	-	M.S.L.	-	-	1016.6	M.S.L.	-	-	
1012.5	100	34.5	77	1013.5	100	33.3	91	1004	184	-	86	983	670	37	95	1008	92	37	89	1009.4	230	37	-	-	M.S.L.	-	-	1008	230	34	-	
973	1060	30.0	88	977	1070	27.3	94	988	660	43	88	943	1650	34	95	977	980	36	88	981	920	34	-	989	6200	32	40	972	1160	30	-	
950	1740	27.2	91	955	1800	23.6	87	974	960	46	72	892	3280	28	95	786	6560	17	94	947	1900	31	-	709	9530	19	53	937	2120	25	-	
900	3150	26.0	93	900	3180	16.7	-	844	4600	37	72	837	4920	23	95	747	7680	12	87	913	2840	25	-	659	11480	12	65	902	3110	19	-	
850	4610	15.6	-	850	4640	12.0	-	733	8200	15	84	703	9200	7	92	879	3830	21	-	879	3830	21	-	539	14130	0	72	870	4040	14	-	
800	6160	10.6	-	800	6160	5.7	-	784	8540	8	78	630	9640	10	87	847	4720	18	-	847	4720	18	-	573	14760	0	0	840	4200	9	-	
750	7770	4.3	-	750	7770	-2.0	-	660	11140	4	78	576	13600	-2	72	816	5730	14	-	816	5730	14	-	529	16730	-7	53	809	5220	5	-	
700	9430	-2.3	-	700	9460	-3.0	-	626	12130	4	73	514	17660	-14	72	785	6580	9	-	785	6580	9	-	520	17390	-16	49	780	6750	0	-	
680	11300	-7.0	-	680	11250	-17.2	-	460	15100	-6	70	-	-	-	-	756	7650	7	-	756	7650	7	-	511	17720	-7	41	752	7640	-4	-	
600	13250	-7.5	-	600	13180	-16.7	-	-	-	-	-	-	-	-	-	724	8610	6	-	724	8610	6	-	-	-	-	-	724	8550	-7	-	
550	15360	-12.0	-	550	15230	-15.3	-	-	-	-	-	-	-	-	-	700	9550	3	-	700	9550	3	-	-	-	-	-	638	9410	-9	-	
Haze top not defined				Haze top not defined				-	-	-	-	-	-	-	-	673	10500	1	-	673	10500	1	-	-	-	-	-	673	10300	-13	-	
Cloud:- St Cir				St Cir. base Cu. top 610, 880 - 850 mb.				-	-	-	-	-	-	-	-	648	11460	-2	-	648	11460	-2	-	-	-	-	-	649	11160	-15	-	
On 195 with ragged base 300				Inversion				-	-	-	-	-	-	-	-	623	12400	-2	-	623	12400	-2	-	-	-	-	-	625	12670	-13	-	
- 728 mbs. Snow falling 300 mbs				620 mb. - 17.4°F.				-	-	-	-	-	-	-	-	599	13370	-3	-	599	13370	-3	-	-	-	-	-	602	12960	-15	-	
St Cir 910 685 - 675 mbs				530 mb. - 15.5°F.				-	-	-	-	-	-	-	-	575	14360	-7	-	575	14360	-7	-	-	-	-	-	581	13800	-17	-	
Inversion:								-	-	-	-	-	-	-	-	Fr. Cu. base 847 mb.				Fr. Cu. base 847 mb.			-	-	-	-	560	14660	-18	-		
675 mbs - 5.3°F								-	-	-	-	-	-	-	-	Thin Str. 756 mb.				Thin Str. 756 mb.			-	-	-	-	540	13510	-22	-		
665 - 4.3°F								-	-	-	-	-	-	-	-	Fairly bumper up to 913 and 648 mb.				Fairly bumper up to 913 and 648 mb.			-	-	-	-	520	16400	-20	-		
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DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place
Time	07h	07h	06h	07h		10h	07h	07h			08h	07h	08h	07h	07h	07h		07h	07h	Time
Type	b	b	b	b		b	b	b			b	b	b	b	b	b		b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	10 18	350 6	360 15	360 15		10 10	345 10	325 17			20 27	350 9	355 20	335 16	310 10	350 8		345 11		Surf.
1000	355 36	10 23	10 23	10 24		10 25	355 25	340 26			15 31	350 17	5 27	325 32	330 29	355 24		360 24		1000
2000		25 35	15 30	20 31		20 30	360 30	330 44			15 31	360 21	360 25	340 36	330 39	360 25		5 42	200 30	2000
3000			25 27			20 30	360 34	345 37			15 33		355 35	355 23	350 35	360 41		360 39	180 22	3000
4000			5 25			15 37		345 34						355 36	350 45	360 45				4000
5000			355 28			37		345 38						345 32	355 51	360 52				5000
6000														320 43	360 46	360 60				6000
8000																				8000
10000																				10000
12000																				12000
Neph.		AC 10																		Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Valencia	Place
Time	10h	12h	12h	12h	12h		13h	13h	12h		12h	12h	12h	13h	12h	12h		13h		Time
Type	b	b	b	b	b		b	b	b		b	b	b	b	b	b		b		Type
Surf.	350 20	360 15	360 19	360 20	350 21		335 18	320 25	350 20		15 30	350 21	360 23	335 26	315 15	340 14		340 13		Surf.
1000	360 26	360 24	360 25	5 24	355 26		335 15	335 34	345 35		15 31	340 29	340 22	335 37	345 29	345 24		350 27		1000
2000		360 30	360 33	360 29	345 21			340 31	340 35		10 31	340 30		330 39	345 33	340 29		355 37		2000
3000			5 22					345 36	345 31		10 41	355 26		335 56	345 37	340 26				3000
4000									350 26			360 29		345 36	345 41	345 25				4000
5000												355 28			350 42	345 27				5000
6000												355 31			350 40					6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lymington	Shoeburyness	Felixstowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Aberdeen	Aldergrove	Malta	Place
Time	17h		17h	16h	17h		17h	16h		17h	16h	17h		17h	17h	17h		17h	17h	Time
Type				b				b		b	b	b			b	b				Type
Surf.	355 15		355 15	5 18	350 15		335 19	310 17		15 21	20 30	10 14		335 18	330 12	360 15		350 18	3000	Surf.
1000	10 12		350 20	5 26	350 25		335 32	330 29		10 23	10 29	5 21		335 32	345 15	355 28		360 15	180 35	1000
2000	360 19		355 27	25 25	350 33			335 23		360 29	5 32	360 25		340 39	350 40	345 35			5000	2000
3000	360 26		360 29	10 30	350 34			340 32		360 32	5 41	350 23		340 50	355 44	350 36			180 30	3000
4000			10 28	15 19				340 45		360	5 39	350 22			355 50	355 35			7000	4000
5000			20 21	10 27				350 36			355 25	345 14			10 36	360 40			190 26	5000
6000			15 33								355 42	345 13			10 45					8000
8000															5 72					8000
10000															25 58					10000
12000															(9000)					12000
Neph.			360 42																	Neph.



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 27 February 1934.

Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Croydon	Felix-stowe	Bircham Newton	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Alder-grove	Abenden	Valentia	Place
Time	07h	07h	07h	07h	06h	10h	07h	10h		07h		07h	07h	07h	07h	06h	07h		10h	Time
Type								b		b		b	b	b	b	b	b			Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	310 15	300 14	340 24	330 20	330 24	330 19	320 12	20 15		345 15		325 18	260 14	340 27	330 15	325 6	355 5		45 5	Surf.
1000	340 19	325 36	345 29	345 33	340 23	335 30	350 35	10 27		355 35		330 31	325 17	345 42	345 39	335 20	5 20		40 12	1000
2000			360 47	355 41	335 24		350 40	10 31		5 41		335 35	355 27	355 50	360 41	355 22	10 27		35 23	2000
3000			10 54				360 42	10 28		360 43		5 25			10 50	5 23	355 44		20 29	3000
4000			10 52				5 40	20 40		5 49		15 35			15 39	15 27	355 35		15 21	4000
5000												360 45			15 44	35 32			350 6	5000
6000												350 43			20 49	55 25			15 14	6000
8000												355 36				35 35			20 34	8000
10000												ACu 10 34							10 44	10000
12000												ACu 07								12000
Neph.												20 51								Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Marston	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place
Time	12h	12h	12h	12h		15h				12h	12h	12h		13h	12h	12h	12h	12h		Time
Type		b								b	b	b		b	b	b		b		Type
Surf.	325 15	335 16	345 24	345 30		345 20				340 35	355 25	325 21		350 26	340 10	355 14	3000'	360 18		Surf.
1000	335 16	350 36	340 27	355 27		355 32				340 35	355 35	325 23		355 54	355 21	355 17	230 9	360 20		1000
2000		350 33	350 36	5 31		355 30				345 27	355 33	340 31		355 54	360 23	350 21	7000'	360 27		2000
3000			355 36	5 36		350 25				350 39	5 35	360 31		350 28	5 31	355 14	280 11	350 23		3000
4000						350 31				10 49	10 29					360 20	10000'	355 23		4000
5000										10 51		16h ACu				360 27	300 18			5000
6000										10 43		10 48								6000
8000												13h ACu								8000
10000												10 51								10000
12000												13h C			16h ACu					12000
Neph.												360 80			10 57					Neph.
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury ness.	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester	Catterick	Leuchars	Renfrew	Malta	Alder-grove	Valentia	Place
Time	17h		17h	17h			17h			17h	16h	17h		17h	17h	17h	17h	17h	18h	Time
Type											b	b		b	b	b				Type
Surf.	290 13		330 21	320 20			340 8			10 30	345 23	320 20		330 14	325 10	355 8	3000'	340 8	340 10	Surf.
1000	320 20		330 30	335 25			340 20			345 23	350 35	335 27		335 41	345 25	10 18	190 21	355 19	340 11	1000
2000			330 35	340 30			345 21			345 37	350 25	335 28			360 27	10 21	5000'	5 23	345 16	2000
3000			345 38	350 42			345 21			345 39	360 35	345 31			10 33	15 21	200 21	10 25	355 27	3000
4000							350 21			5 23	360 25	355 30				25 19	7000'	10 23	345 44	4000
5000							340 19			20 19	10 13	10 35				35 19	210 17	5 23	345 37	5000
6000							355 16			20 21	15 14					35 23		360 18	340 24	6000
8000										20 17	360 13					35 13				8000
10000										(7000)		(7000)								10000
12000																				12000
Neph.																				Neph.

AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SECTION.

No. 5449.

UPPER AIR TEMPERATURES.

Notes on the diagram.—Pressure and temperature are plotted on logarithmic scales so that all changes of temperature according to the dry adiabatic law are represented by parallel straight lines.

The curves for April 5th, 1911, and October 2nd, 1908, show extremes of temperature in the South of England.

The curves marked February and August show normal values for these months.

The broken lines show adiabatic changes for saturated air rising under specified conditions. See Title Page.

The sloping straight line shows the adiabatic change for dry air.

Notes on the Table.—At British stations pressure is observed directly from an aneroid barometer, or indirectly from an altimeter graduated according to a given specification. Heights in feet are deduced from the pressures and temperatures. Relative humidity, when given, is generally obtained from simultaneous readings of the ventilated dry and wet-bulb thermometers. It is computed from vapour pressure, which is derived from the formula

$$e' = e - 0.37 (t - t') B/1000$$

where e' is the vapour pressure of the air of which the pressure is B , and dry and wet-bulb temperatures are t and t' (Fahr.)

and e is the saturation vapour pressure at temperature t .

UPPER WINDS (see reverse).

All observations of upper winds from British Stations are obtained by single theodolite pilot balloon ascent, except where otherwise specified in the tables on the reverse side.

b = balloon with tail.

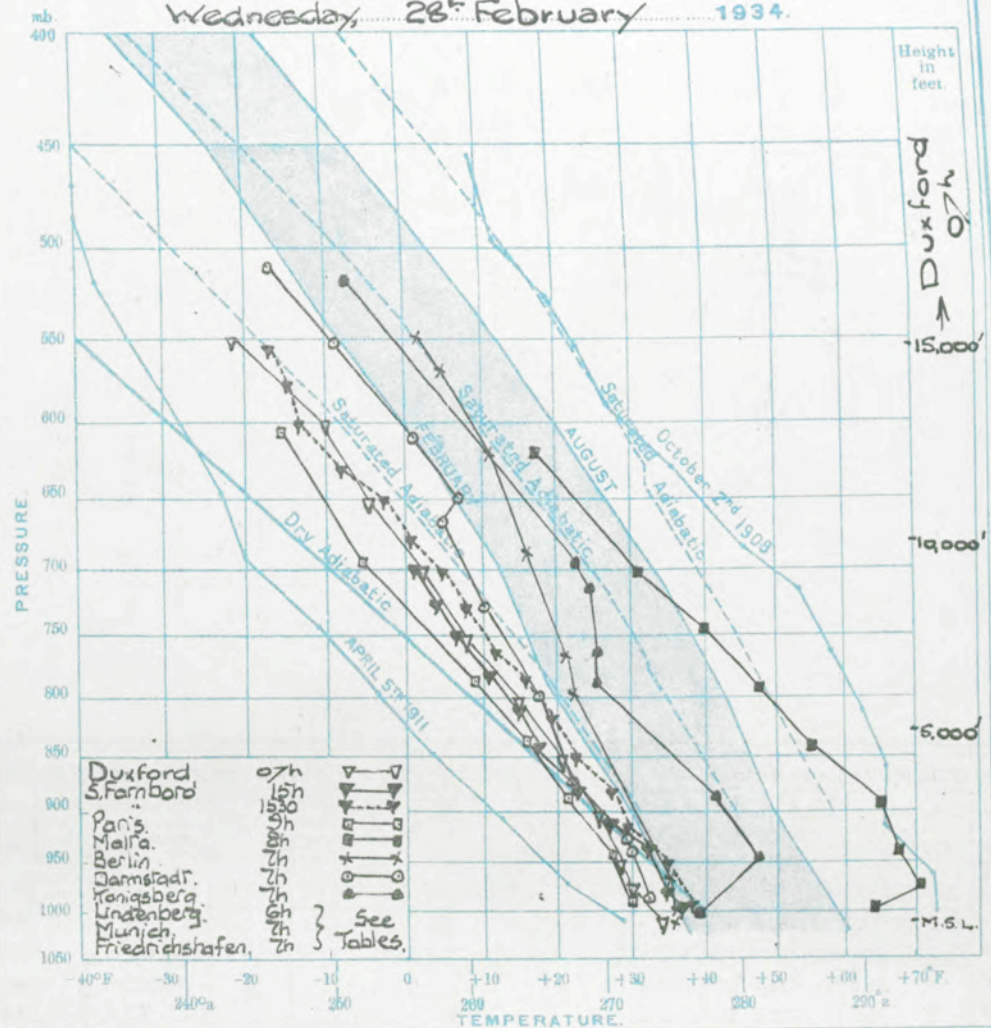
d = double theodolite ascent.

On the maps the pressures in mb. at heights of 1 and 2 km. (3,280 and 6,560 ft.) are written against the positions of the stations for which the information is available. The figure within the station circle represents wind velocity in miles per hour.

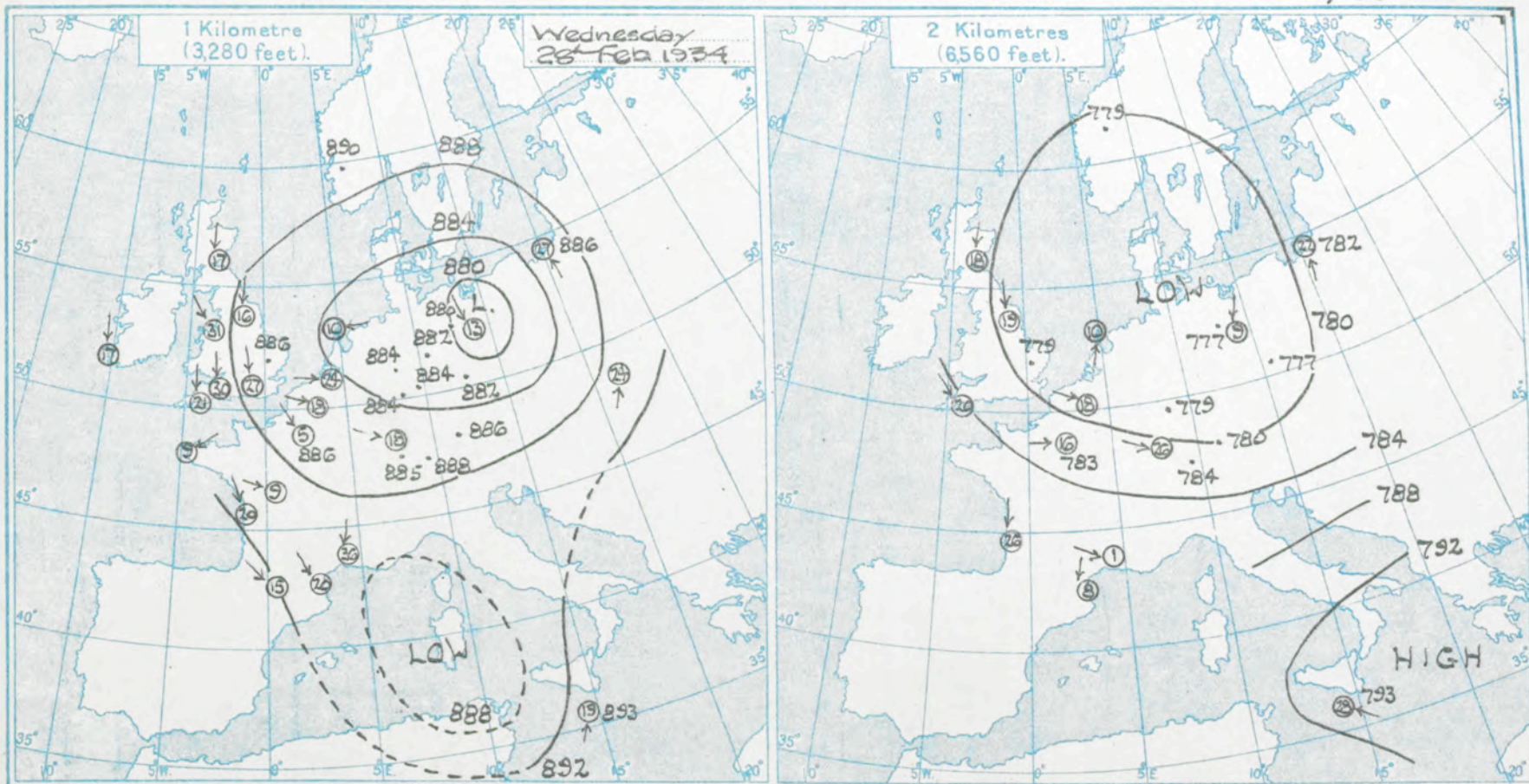
CLOUD MOVEMENTS (see reverse).

These are shown in the tables, together with the form of cloud observed by nephoscope, against the word "Neph." Speeds of high cloud are computed for an average height of 5 miles for cirro type cloud, and 3 miles for alto-type cloud.

DIAGRAM OF UPPER AIR TEMPERATURES.

Wednesday, 28th February 1934.TABLE OF UPPER AIR TEMPERATURES RECORDED ON 28th February 1934.

Pressure.				Height above M.S.L.				Temp.				Relative Humidity.				Pressure.				Height above M.S.L.				Temp.				Relative Humidity.				Pressure.				Height above M.S.L.				Temp.				Relative Humidity.				Pressure.				Height above M.S.L.				Temp.				Relative Humidity.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%	mb.	Feet.	°F.	%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Duxford 07h				S Farnboro 15h				Malta 8h				Berlin 7h				Munich 7h				Friedrichshafen 7h				S Farnboro 1530																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1004.0	M.S.L.	-	-	1006.1	M.S.L.	-	-	972	880	71	65	1005	184	37	34	943	1661	32	91	956	1312	31	86	997.6	230	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1000.3	100	34	81	997.6	810	35	-	939	1860	68	25	998	330	37	38	878	360	27	80	930	1970	27	84	949	1520	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
950	1450	28	100	941	1760	32	-	893	3280	66	15	-	920	35	97	850	4600	27	81	888	3280	22	87	914	2560	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
900	2840	25	100	907	2750	28	-	841	4920	26	25	965	1310	36	98	804	5300	23	98	821	5240	14	98	881	3480	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
850	4320	20.3	100	875	3660	23	-	793	6560	48	15	795	6230	22	99	726	8540	14	97	809	5570	16	98	849	4410	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
800	5900	14.2	-	842	4610	18	-	745	8200	40	35	763	7560	21	97	680	10170	10	95	796	5900	15	90	818	5350	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
750	7510	8.0	-	812	5570	11	-	701	9840	31	95	685	10170	17	94	651	11140	9	71	784	6560	15	90	787	6310	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
700	9220	2.2	-	781	6540	7	-	618	13120	18	-	615	12750	11	94	613	12460	2	58	720	6900	14	93	756	7290	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
650	11090	5.5	-	752	7480	7	-	Inversion.				568	14760	5	89	585	13800	3	58	759	7230	14	92	729	6770	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
600	13030	10.6	-	724	8420	4	-	Base pressure 996 mb				547	15760	2	87	538	15760	11	49	749	7560	13	93	702	920	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
550	15110	22.0	-	696	9410	2	-	Amount. 70°F.								511	17060	17	51					675	10160	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. 28 th February 1934.																						
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Valentia	Alder-grove	Malta	Place		
Time	07h	07h	06h	07h						07h	09h	07h	06h	06h	07h	07h	10h	07h	06h	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.	300 7	310 11	330 14	315 14																	Surf.	
1000	335 12	330 22	330 23	340 19																	1000	
2000		350 30	345 31	355 24																	2000	
3000		350 27	355 30	360 21																	3000	
4000				355 21																	4000	
5000																					5000	
6000																					6000	
8000																					8000	
10000																					10000	
12000																					12000	
Neph.																					Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Monst.	Alder-grove	Valentia	Place		
Time		13h	12h	12h		12h	12h	13h	12h	12h	12h	12h	12h	13h	12h	12h	15h	12h		Time		
Type		b	b					b		b	b	b	b	b	b	b		b		Type		
Surf.		345 7	330 20	330 24		340 22	315 5	325 14	335 15	335 18	360 17	320 17	350 12	340 14	255 2	290 7	215 12	340 8		Surf.		
1000		335 22	345 32	340 17		345 24	345 13	345 25	340 20	340 16	350 23	320 22	330 11	340 21	345 9	280 10	315 15	345 15		1000		
2000		345 28	340 29	350 23		345 29	360 13	355 30	340 25	345 17	350 21	320 20	340 11	345 27	330 11	325 10	300 14	350 23		2000		
3000			340 46	350 21		355 34	5 15	350 21	345 39	340 18	345 22	305 20	340 13	5 20	335 13	345 11		355 23		3000		
4000			350 29				360 15			340 18		300 20				20 6		355 25		4000		
5000			350 33				360 15					330 17				35 11		350 16		5000		
6000			350 37				355 16					330 11				60 7		350 24		6000		
8000							5 21					360 13				10 11				8000		
10000												(7000)				10 25				10000		
12000			13h C													10 31	15h C		16h C		12000	
Neph.			360 36													360 56	350 45		330 115		Neph.	
Place	Croydon	South Farnboro	Boscombe Down	Calshot	Lympne	Shoebury-ness	Felix-stowe	Cranwell	Upper Heyford	Plymouth	Holyhead	Sealand	Manchester.	Catterick	Leuchars	Renfrew	Aberdeen	Alder-grove	Valentia	Place		
Time	24h	17h	17h	17h					17h	17h	16h	17h	17h	17h	17h	17h		17h	18h	Time		
Type		b								b	b	b	b	b	b	b				Type		
Surf.	335 4	70 5	330 12	315 17					330 8	315 12	355 7	310 12	350 14	320 5	320 2	305 4		320 7	325 6	Surf.		
1000	350 7	15 12	335 19	330 21					335 19	315 16	350 10	325 17	350 12	335 16	345 6	295 7		335 17	330 13	1000		
2000		340 18	335 20	335 26					340 23	320 17	345 14	355 15	5 9	345 14	325 4	295 5		335 17	335 19	2000		
3000		340 23	325 17	335 23					345 21	315 22	340 20	15 16	10 11	350 23	310 7	315 6		335 19	330 20	3000		
4000			320 19	340 21						305 22	360 21	40 11		350 20	300 9	330 7		340 21		4000		
5000			320 22	335 21						310 19	360 28	15 20			315 8	325 7		335 16		5000		
6000				335 23						315 16	5 23	10 15			20 7	305 11		340 14		6000		
8000				330 19						325 14	355 25	10 15				330 11		360 18		8000		
10000										(7000)	5 29					(7000)		355 19		10000		
12000											360 51									12000		
Neph.																				Neph.		