



## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 1<sup>st</sup> JANUARY, 1928.

No. 5. 24,146

U.A.S. 3198

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 25, 1911, and October 2nd, 1906, 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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:-

— No speed given.

— 5 m.p.h.

— 15 " "

— 25 " "

— 25-35 m.p.h.

— 35-45 " "

— 45-55 " "

— 55-65 " "

— 65-75 " "

— 75-85 " "

— 85-95 " "

— 95-105 " "

— 105-115 " "

— 115-125 " "

— 125-135 " "

— 135-145 " "

— 145-155 " "

— 155-165 " "

— 165-175 " "

— 175-185 " "

— 185-195 " "

— 195-205 " "

— 205-215 " "

— 215-225 " "

— 225-235 " "

— 235-245 " "

— 245-255 " "

— 255-265 " "

— 265-275 " "

— 275-285 " "

— 285-295 " "

— 295-305 " "

— 305-315 " "

— 315-325 " "

— 325-335 " "

— 335-345 " "

— 345-355 " "

— 355-365 " "

— 365-375 " "

— 375-385 " "

— 385-395 " "

— 395-405 " "

— 405-415 " "

— 415-425 " "

— 425-435 " "

— 435-445 " "

— 445-455 " "

— 455-465 " "

— 465-475 " "

— 475-485 " "

— 485-495 " "

— 495-505 " "

— 505-515 " "

— 515-525 " "

— 525-535 " "

— 535-545 " "

— 545-555 " "

— 555-565 " "

— 565-575 " "

— 575-585 " "

— 585-595 " "

— 595-605 " "

— 605-615 " "

— 615-625 " "

— 625-635 " "

— 635-645 " "

— 645-655 " "

— 655-665 " "

— 665-675 " "

— 675-685 " "

— 685-695 " "

— 695-705 " "

— 705-715 " "

— 715-725 " "

— 725-735 " "

— 735-745 " "

— 745-755 " "

— 755-765 " "

— 765-775 " "

— 775-785 " "

— 785-795 " "

— 795-805 " "

— 805-815 " "

— 815-825 " "

— 825-835 " "

— 835-845 " "

— 845-855 " "

— 855-865 " "

— 865-875 " "

— 875-885 " "

— 885-895 " "

— 895-905 " "

— 905-915 " "

— 915-925 " "

— 925-935 " "

— 935-945 " "

— 945-955 " "

— 955-965 " "

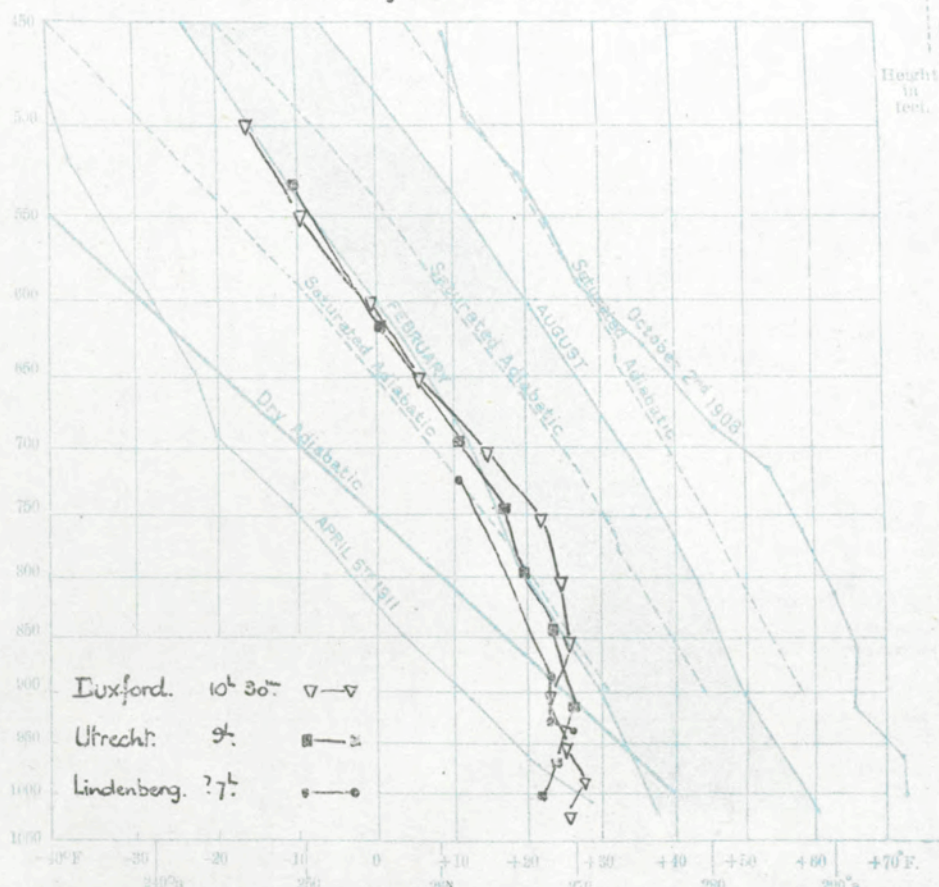
— 965-975 " "

— 975-985 " "

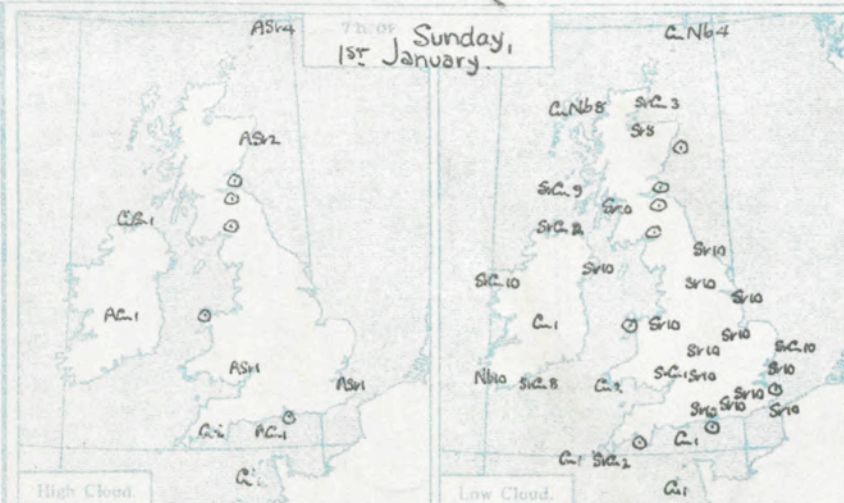
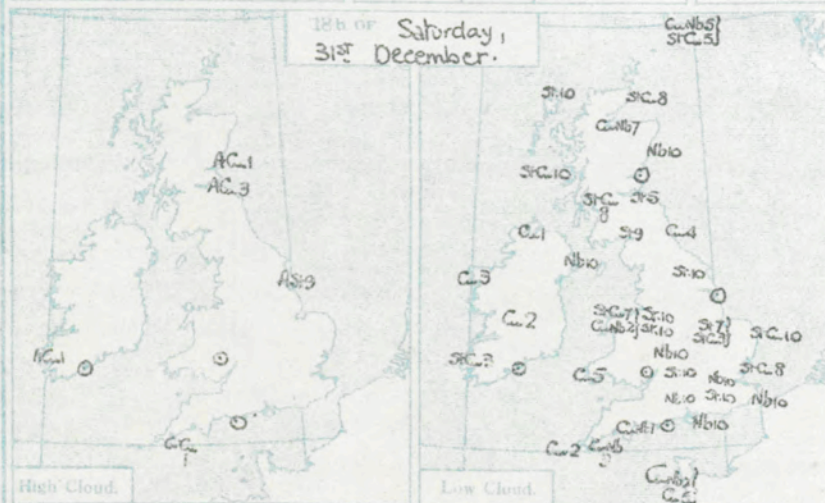
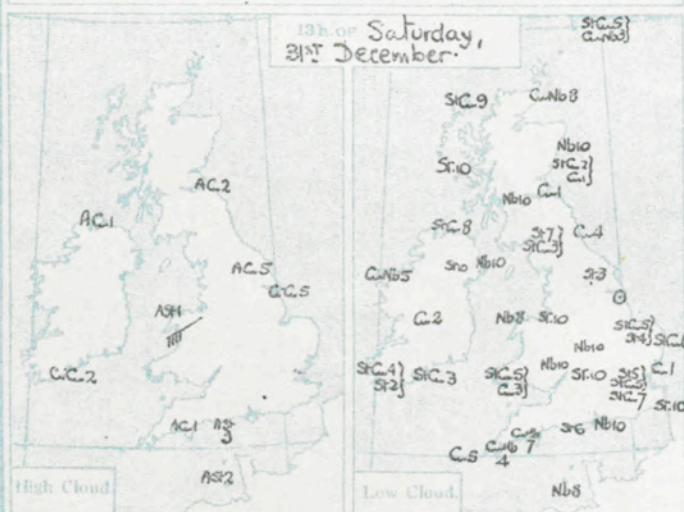
— 985-995 " "

— 995-1000 " "

## UPPER AIR TEMPERATURES.

SATURDAY, 31<sup>st</sup> DECEMBER, 1928.

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury-ness	Lympne	Lympne	Cattewater	Calshot	Place
Time		12 <sup>h</sup> 31 <sup>m</sup>						12 <sup>h</sup> 31 <sup>m</sup>	12 <sup>h</sup> 31 <sup>m</sup>			12 <sup>h</sup> 31 <sup>m</sup>	10 <sup>h</sup> 31 <sup>m</sup>	13 <sup>h</sup> 31 <sup>m</sup>		11 <sup>h</sup> 31 <sup>m</sup>	12 <sup>h</sup> 31 <sup>m</sup>	12 <sup>h</sup> 31 <sup>m</sup>		
Type													6.	6.			6.	6.		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.		115	4					180	1	180	8		135	5	130	7	140	7	160	8
1000		150	15					155	22	185	11		145	13	180	12	150	10	165	11
2000		150	23					155	24	170	13		235	12	220	10	195	8	235	11
3000								150	20	155	17		255	12	260	16	145	10	275	16
4000								180	20	175	17		280	15	260	17	165	9	285	13
5000																				
6000								240	36											
8000																				
10000																				
12000																				
Neph.								240	36											
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot		Place
Time						12 <sup>h</sup> 31 <sup>m</sup>		16 <sup>h</sup> 31 <sup>m</sup>							16 <sup>h</sup> 31 <sup>m</sup>					
Type																				
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.						145	8								140	13				
1000						270	15								140	17				
2000																				
3000																				
4000																				
5000																				
6000																				
8000																				
10000																				
12000								AC												
Neph.								220	36											
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	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.																				

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
	mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%
Duxford. 10 <sup>h</sup> 30 <sup>m</sup> 31-12-27.	1023	M.S.L.	—	—	—												
	1019	100	22	22	100												
	988	1050	27	25	78												
	950	1940	25	24	88												
	900	3340	22	20	75												
	850	4320	25	23	78												
	800	5370	23	22	89												
	750	6420	21	19	78												
	700	7800	13	11	—												
	650	11640	5	3	—												
	600	13600	—	—	—												
	550	15750	—	—	—												
	500	18080	—	—	—												
	Fr. at 10 7.5°F. 7.0°F.																
	Haze top 850mb.																
Utrecht. 31-12-27.	1025	M.S.L.	—	—	—												
	999	670	21	—	75												
	961	1650	23	—	45												
	901	3280	25	—	25												
	847	4920	25	—	25												
	795	6560	19	—	25												
	741	8200	16	—	25												
	687	9840	10	—	25												
	631	11420	0	—	35												
	575	13400	—	—	35												
	Inversion begins 1022mb																
	Temp. at base 18°F.																
	Am't of inversion 5.4°F.																
	Depth of inversion 2570 feet																
Lindenberg. 31-12-27.	1028.5	M.S.L.	—	—	—												
	930	2670	25	—	70												
	918	2950	23	—	70												
	882	3940	23	—	70												
	713	9200	10	—	70												

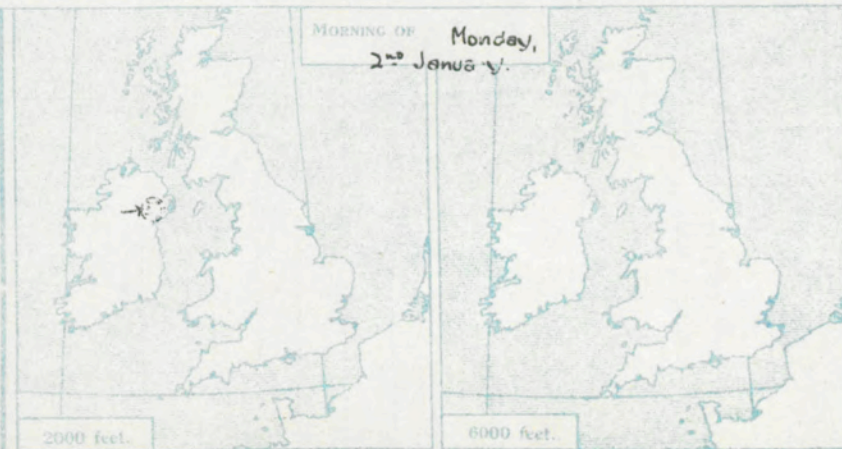
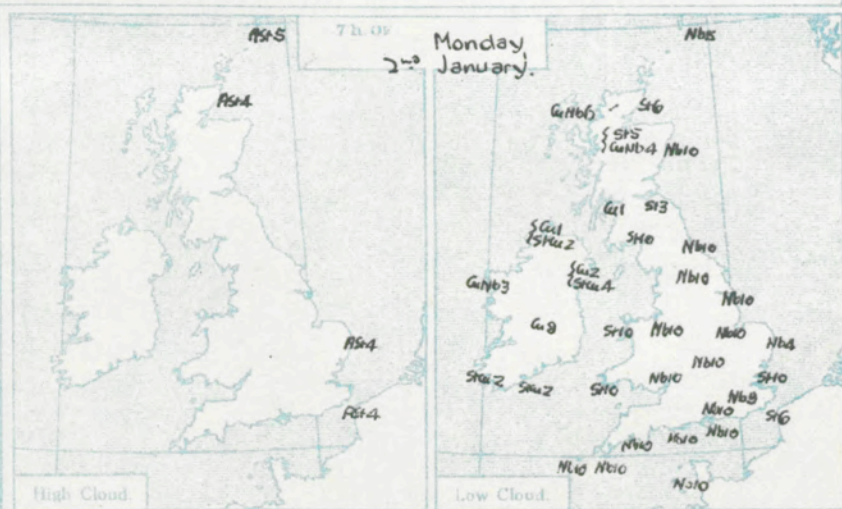
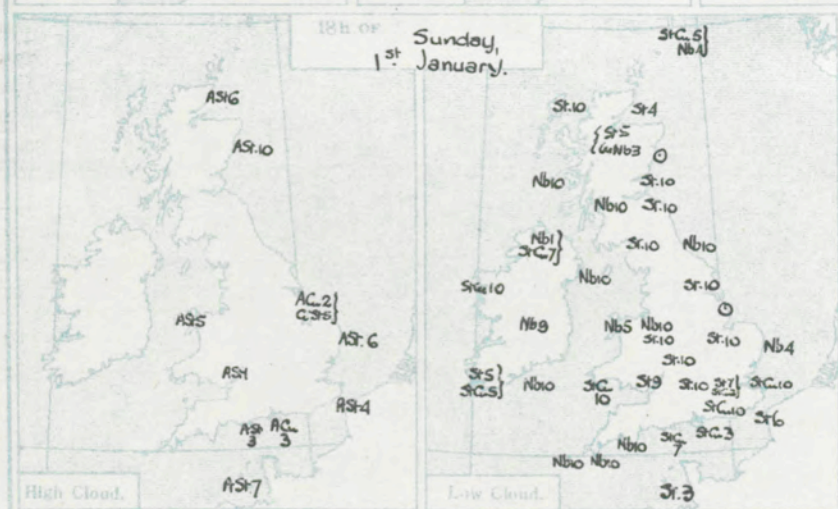
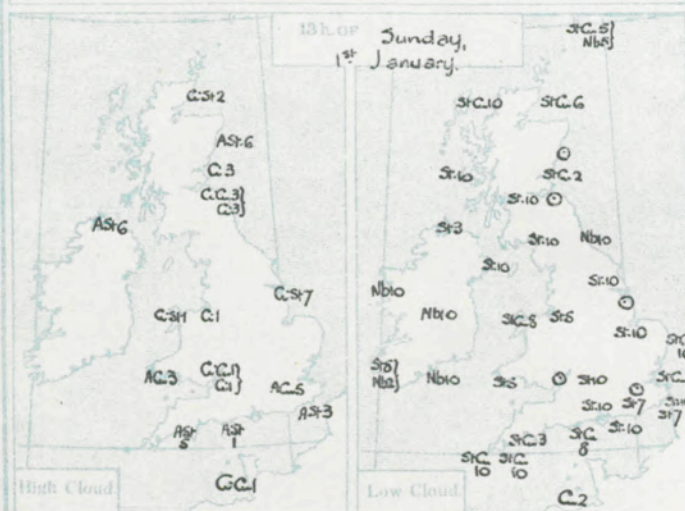
## UPPER WINDS ABROAD.

Place	Frankfurt	Rabat	Utrecht	Zara	Leghorn	Recheport
Time	8 <sup>h</sup> 31 <sup>m</sup>	9 <sup>h</sup> 31 <sup>m</sup>	8 <sup>h</sup> 31 <sup>m</sup>	13 <sup>h</sup> 31 <sup>m</sup>	12 <sup>h</sup> 31 <sup>m</sup>	18 <sup>h</sup> 31 <sup>m</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	112	17	330	11	—	—
3,280	123	25	330	9	40	5
4,920	147	22	320	16	130	28
6,560					130	35
8,200					140	37
9,840					150	38
11,480					160	7
13,120						
14,760						
16,400						
18,040						
19,680						
Place	Perpignan	Rabat	Padua	Florence	Rome	Malta
Time	18 <sup>h</sup> 31 <sup>m</sup>	7 <sup>h</sup> 1 <sup>m</sup>	7 <sup>h</sup> 1 <sup>m</sup>	7 <sup>h</sup> 1 <sup>m</sup>	7 <sup>h</sup> 1 <sup>m</sup>	6 <sup>h</sup> 1 <sup>m</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	—	—	300	13	70	9
3,280	320	52			60	16
4,920	—	—			70	18
6,560	320	43			70	4
8,200	320	27			70	4
9,840	320	27			70	4
11,480					70	4
13,120					70	4
14,760					70	4
16,400					70	4
18,040					70	4
19,680					70	4



U.A.S. 3199.

### On Charts.





DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.										
DATE.	TIME.	PLACE.	WIND DIRECTION.	WIND VELOCITY.	WIND DIRECTION.	WIND VELOCITY.	WIND DIRECTION.	WIND VELOCITY.	WIND DIRECTION.	WIND VELOCITY.
1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075
2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086
2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097
2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108
2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119
2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130
2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141
2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152
2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163
2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174
2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185
2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196
2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207
2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218
2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229
2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240
2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251
2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262
2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273
2274	2275	2276	2277	2278	2279	2280</				

[illegible]

### UPPER AIR TEMPERATURES AND HUMIDITIES.

UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
			Dry.	Wet.					Dry.	Wet.							
															°F.	°F.	
	mb.	Feet. M.S.L.	—	—	—		mb.	Feet. M.S.L.	—	—	—		mb.	Feet. M.S.L.	—	—	—
		M.S.L.	—	—	—			M.S.L.	—	—	—			M.S.L.	—	—	—

## UPPER WINDS ABROAD.

Place.	Clenmont Marignone				Malta		Indian		Paduca		Naples	
Time.	13 <sup>h</sup>	1 <sup>st</sup>	13 <sup>h</sup>	1 <sup>st</sup>	13 <sup>h</sup> .	1 <sup>st</sup>	Th. 2 <sup>nd</sup>		Th. 2 <sup>nd</sup>		Th. 2 <sup>nd</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	10	14	360	16	150	6	100	4	-	-	70	19
3,280	320	14	360	40	(3,000)		70	7	340	20	300	29
4,920					270	14	-	-	-	-		
6,560					(6,000)		-	-	10	21		
8,240					250	7	40	10				
13,120					(10,000)							
16,400					310	?						
19,680					(16,000)							

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 3<sup>RD</sup> JANUARY, 1928.

No. 6. 24,148.

U.A.S. 3,200.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

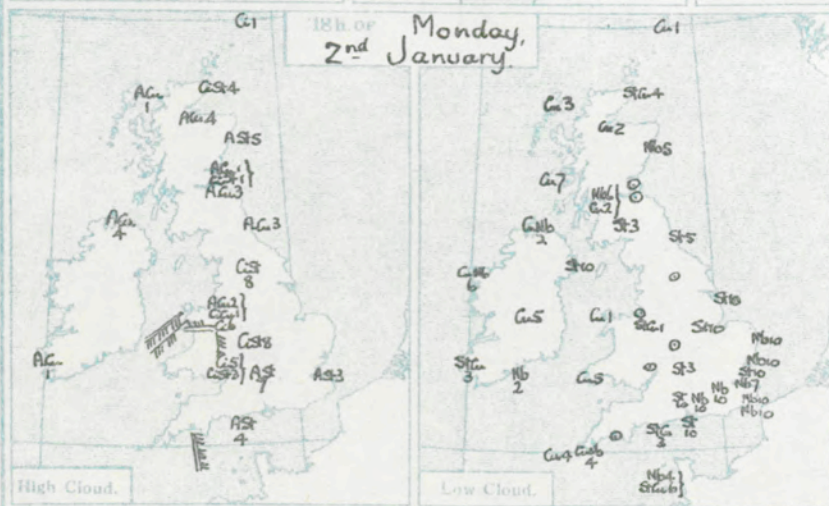
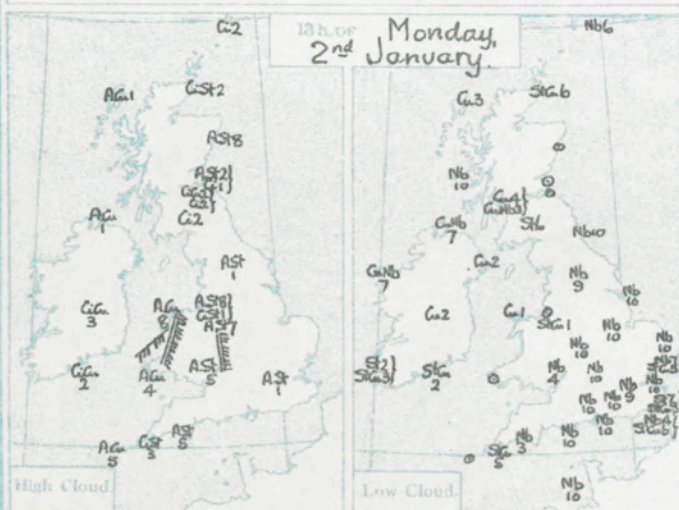
and so on.

## In Tables.

Directions are given in degrees, velocities in m.p.h.

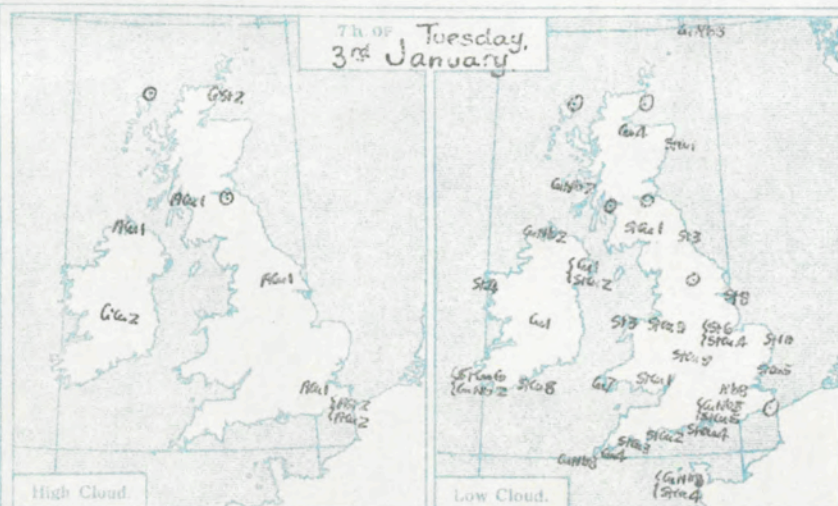
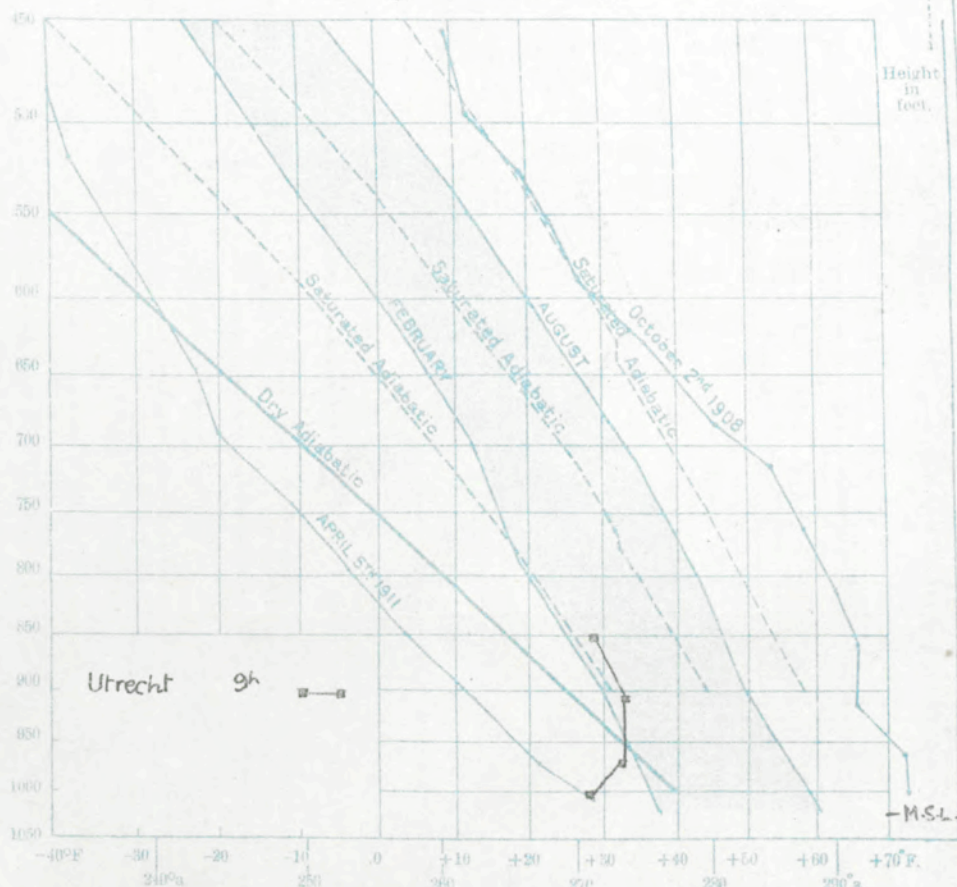
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.

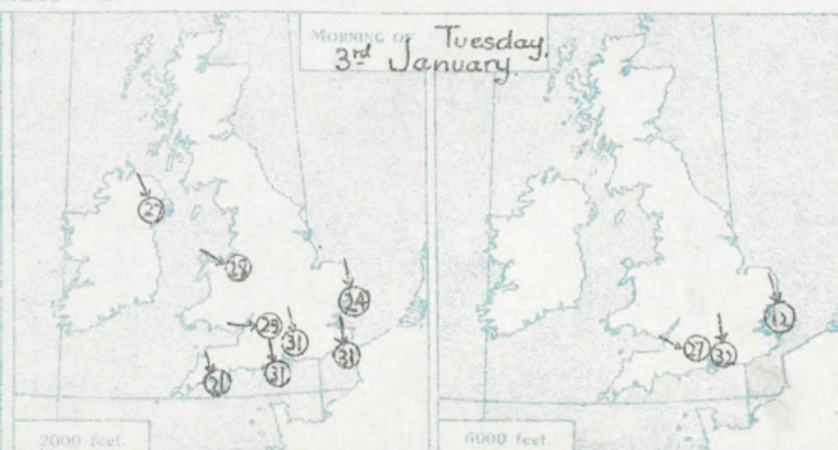
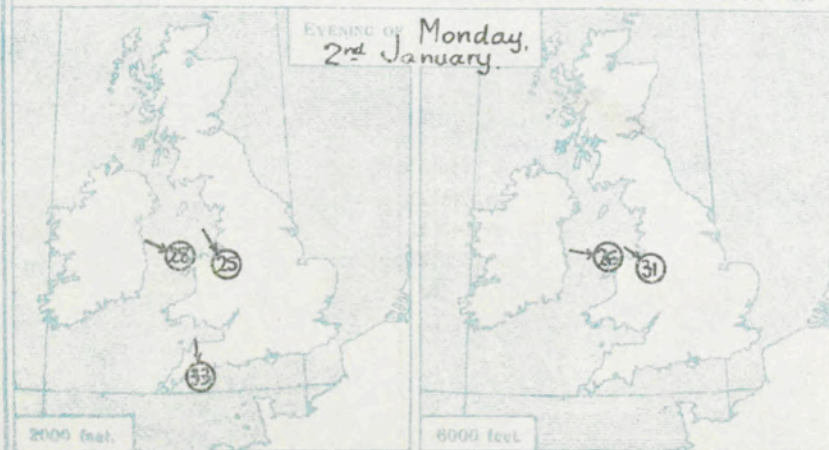


## UPPER AIR TEMPERATURES.

Monday, 2nd January, 1928.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place	
Time		12 <sup>h</sup> 2 <sup>nd</sup>	12 <sup>h</sup> 2 <sup>nd</sup>	9 <sup>h</sup> 2 <sup>nd</sup>	12 <sup>h</sup> 2 <sup>nd</sup>	12 <sup>h</sup> 2 <sup>nd</sup>	13 <sup>h</sup> 2 <sup>nd</sup>											13 <sup>h</sup> 2 <sup>nd</sup>		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.		235 12	225 11	280 12	225 10	230 19	295 10											325 16			Surf.
1000		250 33	240 24	285 27	260 29	290 25	300 30											350 26			1000
2000		260 42	260 28	305 28	275 36	295 25	305 28											270 30			2000
3000		265 40	265 22	295 21	275 37	295 19	305 27											340 28			3000
4000		265 31		275 14	275 39	300 22	300 27														4000
5000		260 25		275 14	270 39	285 26	300 18														5000
6000					265 38	285 26															6000
8000					260 35	280 25															8000
10000				10 <sup>h</sup>	(7,000ft)	(7,000ft)															10000
12000				C. St.	210 63	210 63	13 <sup>h</sup>														12000
Neph.				190 100		190 120	170 90														Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place		
Time				16 <sup>h</sup> 2 <sup>nd</sup>		17 <sup>h</sup> 2 <sup>nd</sup>											16 <sup>h</sup> 2 <sup>nd</sup>			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.				270 17		305 7											340 18				Surf.
1000				285 27		295 29											345 27				1000
2000				300 28		310 25											350 33				2000
3000				305 27	15 <sup>h</sup>	310 21															3000
4000				295 24	C. St.	310 21															4000
5000				295 23	170 70	305 24															5000
6000				295 26	180 42	305 31															6000
8000				290 33	180 42	300 25															8000
10000				220 60	170 40	300 25															10000
12000				220 60	260 35																12000
Neph.				230 90													170 85				Neph.
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place	
Time					6 <sup>h</sup> 3 <sup>rd</sup>		6 <sup>h</sup> 3 <sup>rd</sup>		9 <sup>h</sup> 3 <sup>rd</sup>		8 <sup>h</sup> 3 <sup>rd</sup>	8 <sup>h</sup> 3 <sup>rd</sup>				6 <sup>h</sup> 3 <sup>rd</sup>		8 <sup>h</sup> 3 <sup>rd</sup>	8 <sup>h</sup> 3 <sup>rd</sup>	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.					280 5		280 13		300 4		290 5	280 3				325 10		250 4	285 10		Surf.
1000					305 17		305 23		335 22		295 27	325 33				340 32		335 18	325 27		1000
2000					320 27		315 28		350 24		275 29	320 31				350 31		355 21	345 31		2000
3000					325 25				345 13		285 32	340 33				345 21		335 27	345 31		3000
4000					325 26				335 11		290 29	345 35				330 23			345 33		4000
5000									335 12		300 27	340 32									5000
6000											305 28										6000
8000											305 25										8000
10000																					10000
12000																					12000
Neph.																					Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%
1022	M.S.L.	—	—	—	—	M.S.L.	—	—	—	—	M.S.L.	—	—	—
999	670	27	—	75	—	—	—	—	—	—	—	—	—	—
961	1650	32	—	45	—	—	—	—	—	—	—	—	—	—
903	3280	32	—	?	—	—	—	—	—	—	—	—	—	—
848	4920	28	—	?	—	—	—	—	—	—	—	—	—	—

## UPPER WINDS ABROAD.

Place.	Abeville	Toulouse	Clermont	Algiers	Utrecht	Malta
Time	10h 2nd	10h 2nd	10h 2nd	13h 2nd	18h 2nd	17h 2nd
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	—	—	—	330 20	—	40 11
3,280	220 41	130 11	120 3	320 23	230 36	(3,000ft)
4,920	—	—	—	300 25	—	50 11
6,560	200 43	—	180 4	—	200 45	(5,000ft)
8,940	200 20	220 7	160 7	—	190 45	50 4
13,120	—	—	—	—	—	(7,000ft)
16,400	—	—	—	—	—	—
19,680	—	—	—	—	—	—
Place	Kabile	Quaker	Algiers	Oran	Colombo	Bechar
Time	7h 3rd	7h 3rd	7h 3rd	6h 3rd	6h 3rd	—
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	340 23	330 14	250 14	230 11	—	—
3,280	340 23	350 23	260 3	270 17	—	—
4,920	340 22	300 24	310 4	—	250 14	—
6,560	330 23	280 ?	—	—	320 19	—
8,940	—	—	—	—	300 ?	—
13,120	—	—	—	—	—	—
16,400	—	—	—	—	—	—
19,680	—	—	—	—	—	—





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, WEDNESDAY, 4<sup>TH</sup> JANUARY, 1928.

No. 8. 24,149.

U.A.S. 3,201.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 24, 1911, and October 2nd, 1905, 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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

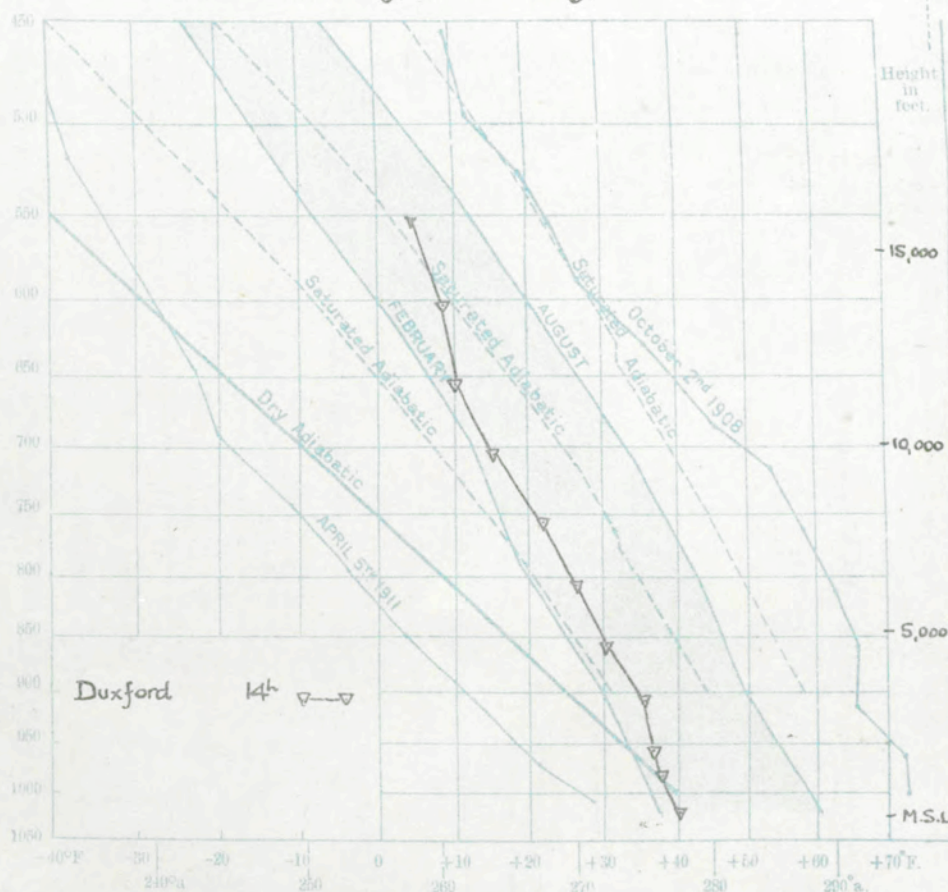
and so on.

## In Tables.

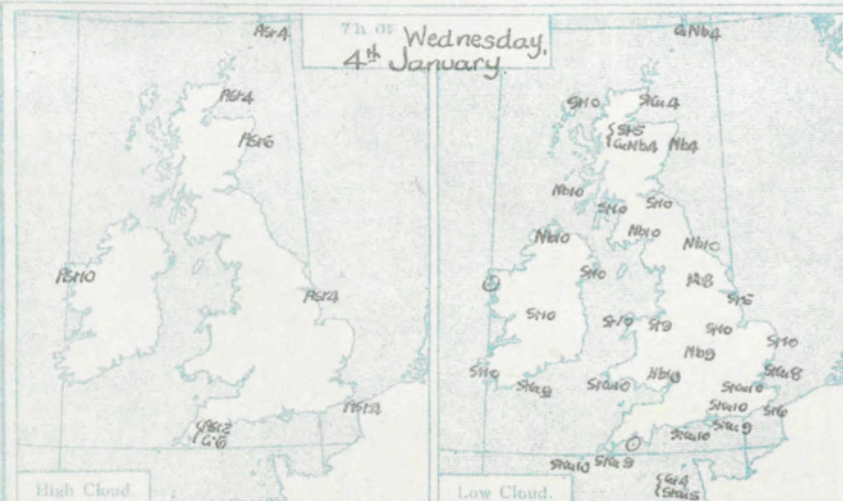
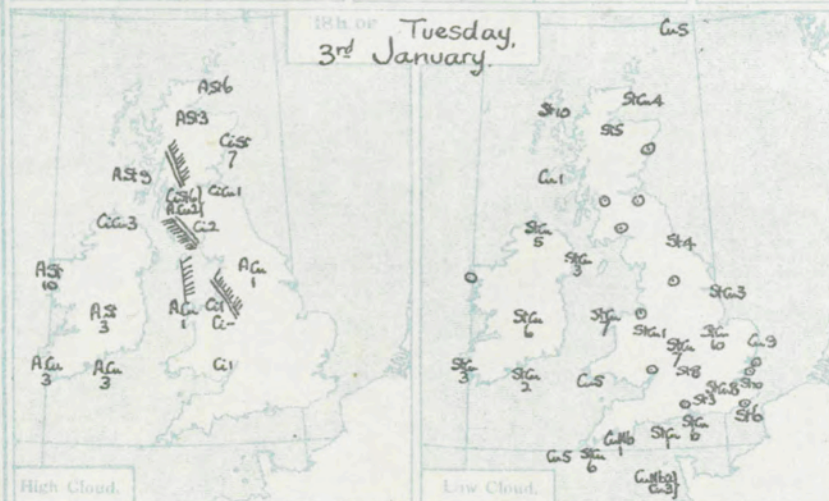
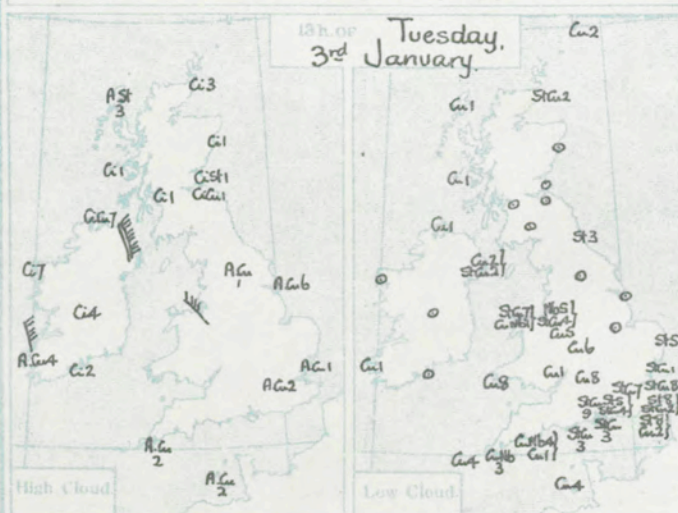
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro-type clouds (double lines) and 3 miles for alto-type clouds (single line).

## UPPER AIR TEMPERATURES.

Tuesday, 3<sup>rd</sup> January, 1928.

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Cranwell	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Valentia	Cattenwater	Calshot	Place	
Time		13 <sup>h</sup> 3 <sup>rd</sup>	12 <sup>h</sup> 3 <sup>rd</sup>	10 <sup>h</sup> 3 <sup>rd</sup>	12 <sup>h</sup> 3 <sup>rd</sup>	12 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	12 <sup>h</sup> 3 <sup>rd</sup>	12 <sup>h</sup> 3 <sup>rd</sup>	8 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>				13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	Time	
Type		b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	d.	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.		270 4	255 4	310 22	225 3	335 16	310 6	320 9	330 9	280 10	340 8				335 13	360 11		340 3	325 15	Surf.	
1000		275 5	310 10	325 23	330 15	340 19	335 13	5 19	5 18	335 20	355 21				350 18	345 17		345 5	340 22	1000	
2000		270 4	340 10	340 20	340 21	340 16	320 15	5 21	5 20	340 19	350 26				5 19			(500 ft)	355 31	2000	
3000		270 3	325 10	345 17	340 24	345 15	320 21	10 24	5 15						360 18				345 27	3000	
4000		245 5	310 10	340 17	345 19	350 19		10 23	10 8						360 18				350 23	4000	
5000		235 11	305 14		345 12	345 18													355 23	5000	
6000		315 10	310 7		350 13	340 19														6000	
8000		325 13	325 12		360 14	355 16														8000	
10000		350 66	330 80		345 21	355 19														10000	
12000		(18,000 ft)	(16,000 ft)		345 49	(9,000 ft)	A.C.											A.C.		12000	
Neph.							310 36											340 54		Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Eskdale-muir	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattenwater	Calshot	Place			
Time		16 <sup>h</sup> 3 <sup>rd</sup>	17 <sup>h</sup> 3 <sup>rd</sup>	16 <sup>h</sup> 3 <sup>rd</sup>	18 <sup>h</sup> 3 <sup>rd</sup>	17 <sup>h</sup> 3 <sup>rd</sup>	16 <sup>h</sup> 3 <sup>rd</sup>	17 <sup>h</sup> 3 <sup>rd</sup>		16 <sup>h</sup> 3 <sup>rd</sup>					16 <sup>h</sup> 3 <sup>rd</sup>	16 <sup>h</sup> 3 <sup>rd</sup>	17 <sup>h</sup> 3 <sup>rd</sup>		Time		
Type		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.	Feet		
Surf.		255 6	205 6	335 6		295 6	325 11	315 5		330 8					345 13		25 8	355 10	Surf.		
1000		240 12	260 15	355 10		305 17	355 23	360 19		345 23					365 19		35 16	355 19	1000		
2000		315 10	275 13	5 9		325 16	355 21	305 19							15 19		40 15		2000		
3000		320 12	290 13	5 12		305 10	355 22	305 18							15 23				3000		
4000		285 12	285 13	350 15											20 15				4000		
5000		280 12	285 14	340 15											20 13				5000		
6000		280 16													20 17				6000		
8000																			8000		
10000		16 <sup>h</sup>	14 <sup>h</sup> 30 <sup>m</sup>	16 <sup>h</sup>		16 <sup>h</sup>													10000		
12000		Ci	Ci	A.C.	Ci	Ci													12000		
Neph.		340 90	350 90	350 75	310 105	320 100													Neph.		
Place	Aberdeen	Leuchars	Renfrew	Birchm-Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattenwater	Calshot	Place		
Time				6 <sup>h</sup> 4 <sup>h</sup>			6 <sup>h</sup> 4 <sup>h</sup>	8 <sup>h</sup> 4 <sup>h</sup>	8 <sup>h</sup> 4 <sup>h</sup>			8 <sup>h</sup> 4 <sup>h</sup>	7 <sup>h</sup> 4 <sup>h</sup>			6 <sup>h</sup> 4 <sup>h</sup>	8 <sup>h</sup> 4 <sup>h</sup>		Time		
Type																			Type		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.				235 20			245 10	240 24	230 11			230 15	225 14			245 15		230 14	Surf.		
1000				245 27			255 31	265 44	260 37			255 31	250 35			265 37		250 33	1000		
2000							255 36	285 41	270 41			265 46				275 37		270 31	2000		
3000									270 43			270 40				270 39		265 31	3000		
4000									265 40									265 33	4000		
5000																			5000		
6000																			6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.																			Neph.		

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity
	mb.	Feet.	°F.	%		mb.	Feet.	°F.	%		mb.	Feet.	°F.	%
Duxford 14 <sup>h</sup> 3.1.28.	1015	M.S.L.	—	—										
	1011	100	40	38										
	975	1080	38	36										
	950	1780	37	35										
	900	3200	35	33										
	850	4710	30	26										
	800	6290	26	25										
	750	7960	22	16										
	700	9730	15	14										
	650	11620	10	8										
	600	13640	8	6										
	550	15830	4	3										
	Fr. Cu. 4/10 850-800 mb.													
	A.C. 2/10 700-650 mb.													
	Haze top 600 mb.													
	M.S.L.	—	—	—		M.S.L.	—	—	—		M.S.L.	—	—	—

## UPPER WINDS ABROAD.

Place.	Prague	Olomouc	Kasice	Bizerta	Toulouse	Malta
Time	13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	13 <sup>h</sup> 3 <sup>rd</sup>	16 <sup>h</sup> 3 <sup>rd</sup>	18 <sup>h</sup> 3 <sup>rd</sup>	17 <sup>h</sup> 3 <sup>rd</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	130	18	140	23	180	5
3,280	140	18	140	37	180	13
4,920	150	34	150	19	190	26
6,560	150	31	140	51	180	34
8,200					290	4
9,840					270	4
11,480					290	9
13,120						
14,760						
16,400						
18,040						
19,680						
Place	Barcelona	Gibraltar	Tunis	Algiers		Malta
Time	7 <sup>h</sup> 4 <sup>h</sup>	7 <sup>h</sup> 4 <sup>h</sup>	7 <sup>h</sup> 4 <sup>h</sup>	6 <sup>h</sup> 4 <sup>h</sup>		6 <sup>h</sup> 4 <sup>h</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	50	27	340	12	170	16
3,280	60	47	340	23	110	14
4,920			360	29	110	11
6,560			30	34		
8,200					170	23
9,840					180	23
11,480						
13,120						
14,760						
16,400						
18,040						
19,680						





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, THURSDAY, 5<sup>TH</sup> JANUARY, 1928.

No. B. 24,150.

U.A.S. 3,202.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

— 66-75 "

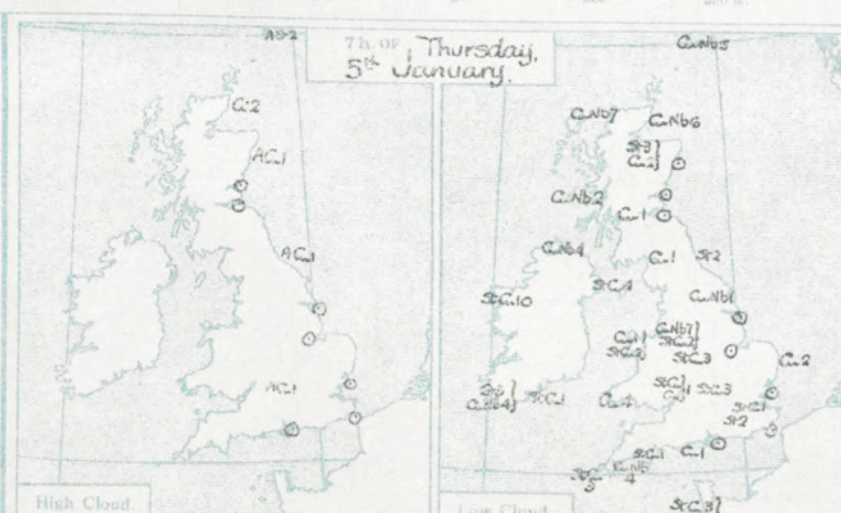
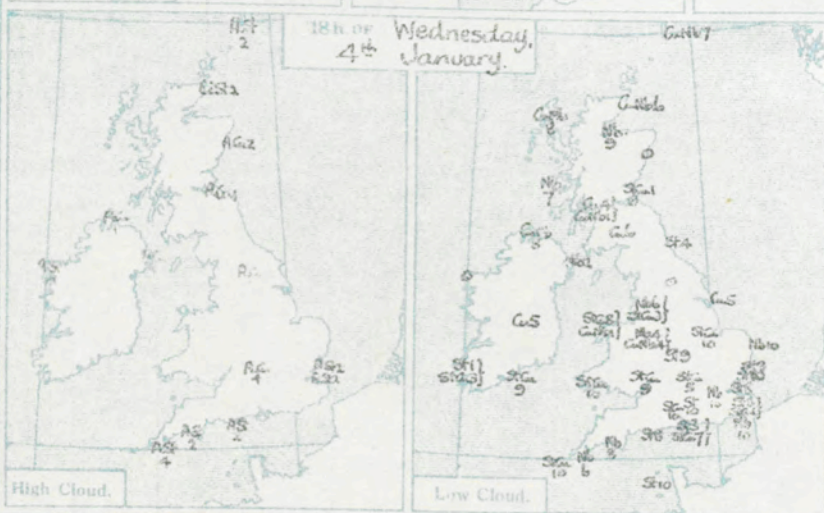
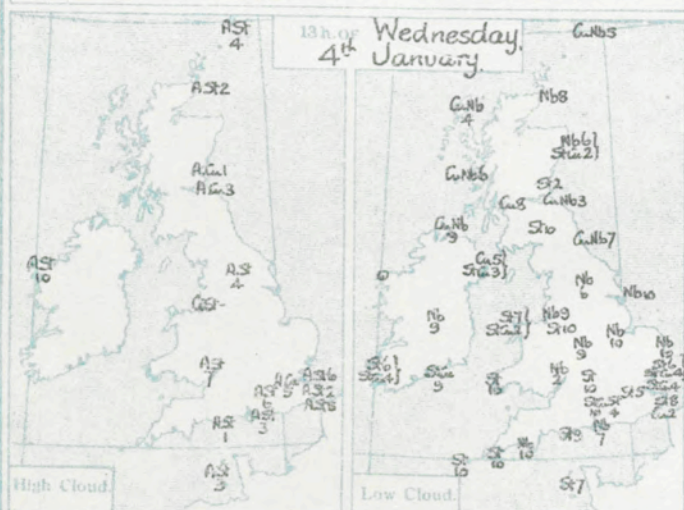
— and so on.

#### In Tables.

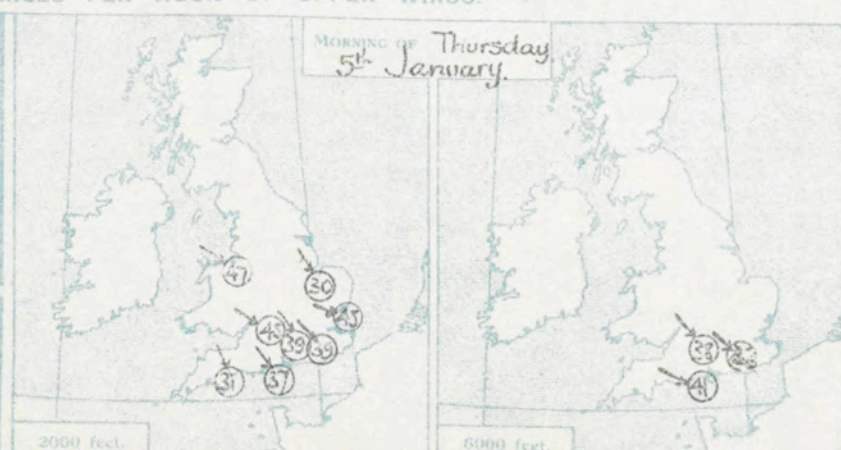
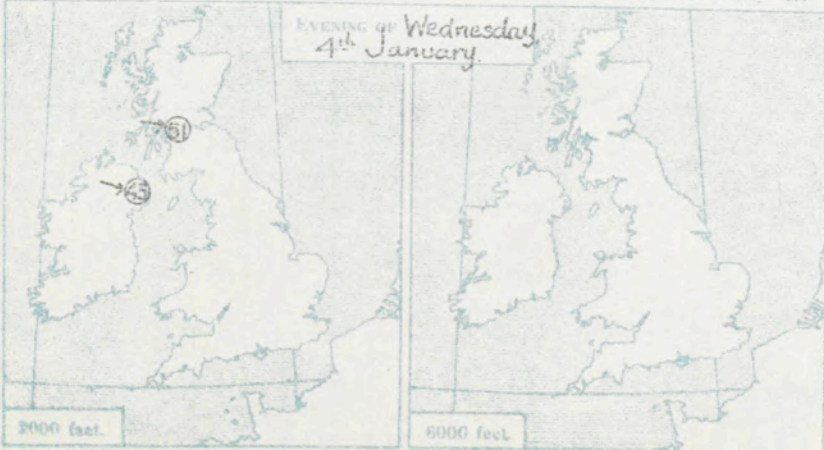
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury-ness	Lympne		Cattewater	Calshot	Place			
Time.							13 <sup>h</sup> 4 <sup>h</sup>	12 <sup>h</sup> 4 <sup>h</sup>	9 <sup>h</sup> 4 <sup>h</sup>			13 <sup>h</sup> 4 <sup>h</sup>	13 <sup>h</sup> 4 <sup>h</sup>	10 <sup>h</sup> 4 <sup>h</sup>					13 <sup>h</sup> 4 <sup>h</sup>	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.							240	10	240	25	230	21			240	18	225	18			240	25	Surf.
1000							255	37	255	59	245	30			245	38	240	39	245	46			1000
2000									265	52							245	41	260	50			2000
3000																	250	42					3000
4000																							4000
5000																							5000
6000																							6000
8000																							8000
10000																							10000
12000																							12000
Neph.									300	80													Neph.
Place.	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot		Place.			
Time.		16 <sup>h</sup> 4 <sup>h</sup>	17 <sup>h</sup> 4 <sup>h</sup>				15 <sup>h</sup> 4 <sup>h</sup>													Time.			
Type.		b.																		Type.			
Feet																				Feet			
Surf.		275 19	260 20				230 27													Surf.			
1000		280 41	285 29				250 48													1000			
2000		285 51	290 45																	2000			
3000		290 53																		3000			
4000																				4000			
5000																				5000			
6000																				6000			
8000																				8000			
10000																				10000			
12000																				12000			
Neph																				Neph.			
Place.	Aberdeen	Leuchars	Renfrew	Bircham Newland	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place.			
Time.				6 <sup>h</sup> 5 <sup>h</sup>	7 <sup>h</sup> 5 <sup>h</sup>		7 <sup>h</sup> 5 <sup>h</sup>		9 <sup>h</sup> 5 <sup>h</sup>		8 <sup>h</sup> 5 <sup>h</sup>	8 <sup>h</sup> 5 <sup>h</sup>	7 <sup>h</sup> 5 <sup>h</sup>					8 <sup>h</sup> 5 <sup>h</sup>	8 <sup>h</sup> 5 <sup>h</sup>	Time.			
Type.				b.																Type.			
Feet																				Feet			
Surf.					305 20	270 13		280 25		285 23		275 11	265 8	260 11				325 12	270 12	Surf.			
1000					320 29	255 23		290 44		290 44		300 36	295 32	290 33				330 17	305 29	1000			
2000					325 30			305 47		305 45		315 45	305 42	305 39				335 31	320 37	2000			
3000								310 51		305 46		320 43	315 46	305 41				335 38	325 42	3000			
4000												330 43	320 42					340 38	325 45	4000			
5000												325 38	315 38					(3700')	300 41	5000			
6000												325 39								6000			
8000												325 53								8000			
10000												325 42								10000			
12000																				12000			
Neph.																				Neph.			

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%
Utrecht 9 <sup>h</sup> 4.1.28.	1020	M.S.L.	—	—		M.S.L.	—	—	—		M.S.L.	—	—	—
	996	670	36	85										
	959	1650	34	85										
	900	3280	27	85										
	845	4920	27	35										
	793	6560	21	45										
	744	8200	16	45										
	696	9840	9	45										
	611	13120	9	85										
	536	16400	1	65										
	Inversion of 1.8°F at 903 mb. In 1380 ft. Temp. at base, 26.4°F.													
	and of 4.2°F at 689 mb. In 990 ft. Temp. at base, 8.8°F.													

## UPPER WINDS ABROAD.

Place.	Rennes	Rochefort	La Ruy.	Breslav	Zanz	Malta
Time	10 <sup>h</sup> 4 <sup>m</sup>	10 <sup>h</sup> 4 <sup>m</sup>	10 <sup>h</sup> 4 <sup>m</sup>	13 <sup>h</sup> 4 <sup>m</sup>	13 <sup>h</sup> 4 <sup>m</sup>	17 <sup>h</sup> 4 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	—	—	—	—	340 15	90 17
3,280	300 1	350 11	170 9	135 29	320 10	(2,000 ft)
4,920	—	—	—	248 16	280 9	100 17
6,560	280 10	360 11	300 7			(3,000 ft)
9,840	290 15	360 10	260 14			100 8
13,120						(5,000 ft)
16,400						
19,680						
Place.	Messina	Tours	Nancy	Rochefort	Tunis	Malta
Time	13 <sup>h</sup> 4 <sup>m</sup>	18 <sup>h</sup> 4 <sup>m</sup>	18 <sup>h</sup> 4 <sup>m</sup>	5 <sup>h</sup> 7 <sup>m</sup>	6 <sup>h</sup> 5 <sup>m</sup>	7 <sup>h</sup> 5 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	180 5	250 25	280 35	25 45	70 16	(2,000 ft)
3,280	160 9	280 31	280 49		120 9	(3,000 ft)
4,920					120 5	120 5
6,560						(3,000 ft)
9,840						170 3
13,120						
16,400						
19,680						





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, FRIDAY, 6<sup>th</sup> JANUARY, 1928.No. 24151.  
U.A.S. 3203.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0—5 m.p.h.

— 6—15 "

— 16—25 "

— 26—35 m.p.h.

— 36—45 "

— 46—55 "

— 56—65 "

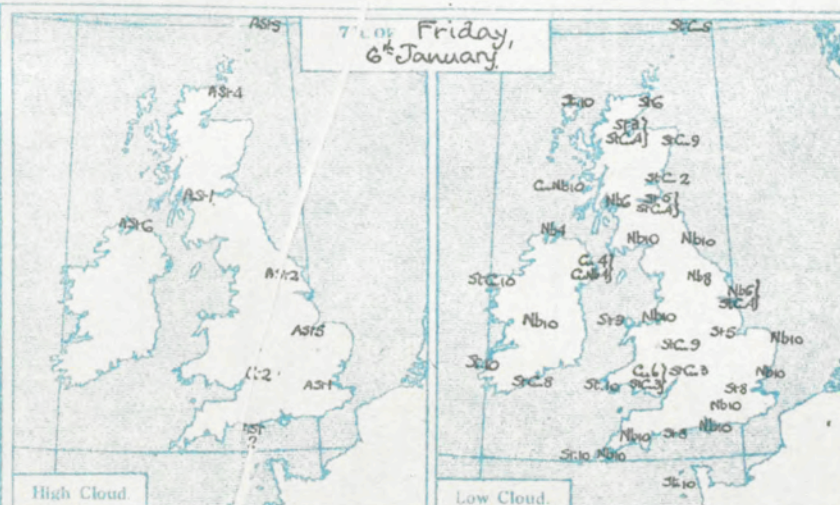
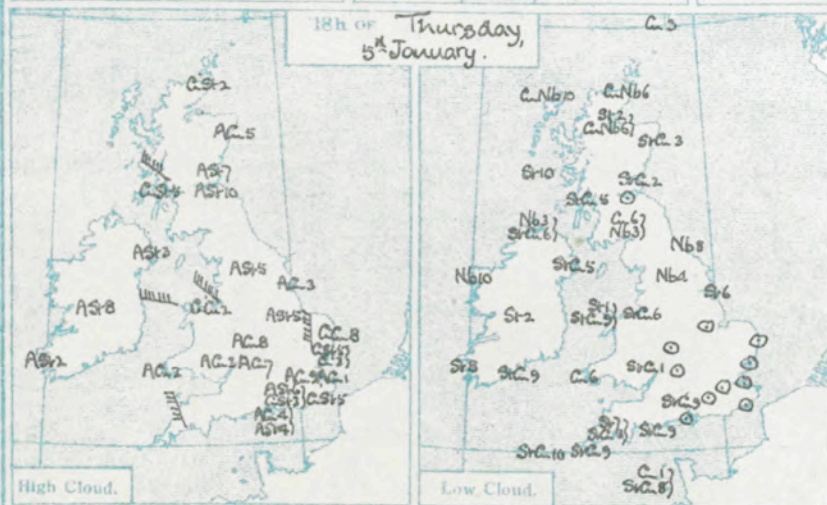
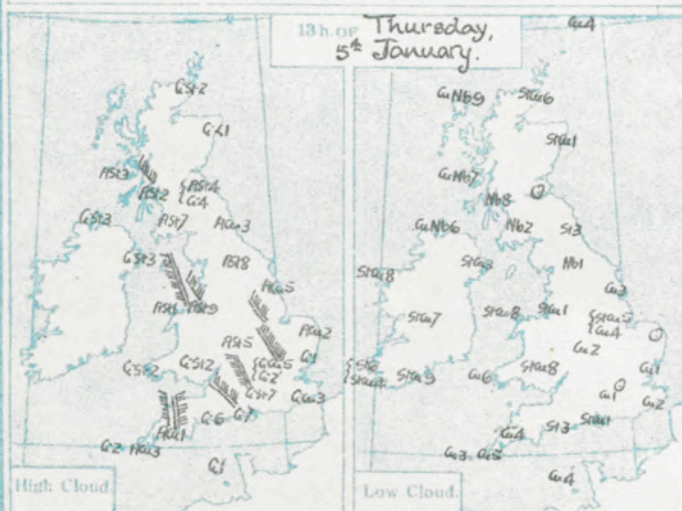
and so on.

## In Tables.

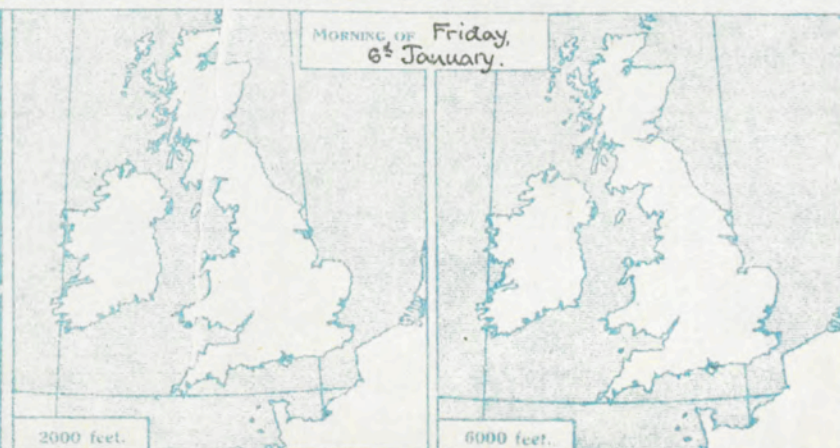
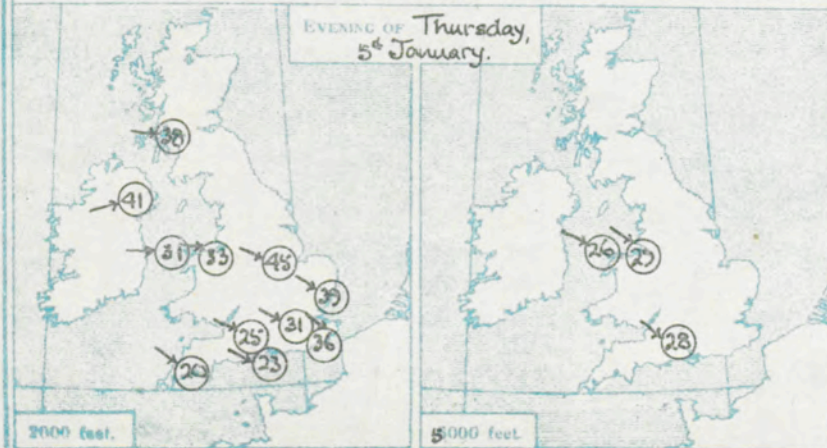
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.



⊙ Indicates absence of cloud.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Cranwell	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Croydon	Bircham Newton	Lympne	Lympne	Catte-water	Calshot	Time
Time	7h. 5"	13h. 5"	12h. 5"	9h. 5"	12h. 5"	11h. 5"	12h. 5"	11h. 5"	12h. 5"	12h. 5"	12h. 5"	13h. 5"	12h. 5"	10h. 5"	8h. 5"	10h. 5"	12h. 5"	13h. 5"	12h. 5"	
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.	270 17	270 20	305 14	295 27	255 10	285 23	275 20	280 19	285 23	280 22	295 18	280 15	270 14	275 13	295 20	275 18	300 23	320 20	280 20	Surf.
1000	290 38	285 37	300 32	300 33	275 31	285 31	285 33	285 40	300 33	290 35	330 ?	295 33	285 26	290 30	300 25	305 27	310 27	315 20	270 19	1000
2000	300 53	295 44	290 26	310 27	295 39	305 21	300 41	295 47	315 41	300 42	315 35	300 26	290 26	305 29	310 47	320 42	310 43	215 20	300 20	2000
3000	305 60	300 49		315 39	305 49		305 42		325 39	300 52	320 46		310 46		320 57			325 19	315 34	3000
4000					305 57		310 45				320 33				320 58			330 25	310 35	4000
5000					295 47		140 150				315 27							335 25	315 41	5000
6000					295 65		12h.				315 31								310 44	6000
8000							2.0 130	12h.			215 40								310 39	8000
10000			12h.								310 37								310 59	10000
12000			Ac.				Ac.	C.			C.							Ac.	300 61	12000
Neph.			310 69				320 72	310 75			330 115		320 120					350 72	310 80	Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot		Place
Time		16h. 5"	7h. 5"	16h. 5"		7h. 5"	16h. 5"	7h. 5"		16h. 5"		7h. 5"			16h. 5"		16h. 5"	7h. 5"		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.	Dir. Vel.		Feet
Surf.		245 17	235 13	295 16		240 5	265 13	280 14		260 10		295 11			285 17		285 10	255 12		Surf.
1000		270 28	245 35	265 25		270 27	280 43	285 29		285 25		270 30			295 30		305 15	280 21		1000
2000		280 38	255 41	275 31		285 33	295 45	305 39		300 25		295 31			305 36		315 20	300 23		2000
3000		290 36		285 28		295 33	295 43	310 38		305 26		305 25			310 46		315 32	305 25		3000
4000				290 29		295 29				310 29							310 25			4000
5000				300 26		300 25				315 28										5000
6000						16h.														6000
8000						310 105														8000
10000		16h.	16h. 45m.	15h. 40m.		18h.		16h.									16h.			10000
12000		Ac.	C.	Ac.		Ac.		Ac.									Ac.			12000
Neph.		310 60	200 100	280 75		310 66		350 61									340 57			Neph.
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot	Place
Time																				Time
Type																				Type
Feet																				Feet
Surf.																				Surf.
1000																				1000
2000																				2000
3000																				3000
4000																				4000
5000																				5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.																				Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.		Relative Humidity
			Dry.	Wet.					Dry.	Wet.	
			°F.	°F.	%				°F.	°F.	%
Duxford. 10h. 5/1/28.	mb.	Feet.	—	—	—	Duxford. 14h. 15m. 5/1/28.	mb.	Feet.	°F.	°F.	%
	1020	M.S.L.	—	—	—		1021	M.S.L.	—	—	—
	1016	100	40.8	38.5	84		1017	100	43	39.5	74
	978	1090	38	26	83		984	1090	38	27	—
	950	1850	35	33	83		950	2000	35	37	—
	900	3280	34	32	82		900	3420	34	30	65
	850	4780	22	20	—		850	4950	31	30	51
	800	6320	17	15	—		800	6510	26	25	30
	750	7980	14	12	—		750	8170	17	10	—
	700	9720	7	5	—		700	9800	13	11	—
	650	11580	—	—	—		650	11800	2	—	—
	600	13570	-3	-5	—		600	13780	-9	-8	—
	550	15700	-12	-14	—		550	15900	-13	-10	—
	Haze top	850mb.	—	—	—		500	18240	-14	-13	—
							Ast.	210 750mb-700mb.			
Helder. 9h. 5/1/28.	M.S.L.	—	—	—	—	Utrecht. 9h. 5/1/28.	M.S.L.	—	—	—	—
	984	690	37.4	—	88		987	670	37.4	—	88
	948	1650	33.8	—	85		957	1650	33.8	—	85
	897	3280	30.2	—	85		892	3280	28.4	—	75
	836	4920	23.0	—	65		838	4920	23.0	—	65
	784	6560	17.6	—	45		785	6560	17.6	—	45
	735	8200	12	—	55		726	8200	10.0	—	45
	688	9840	9	—	65		691	9840	5.0	—	45
	603	13120	-2	—	55		604	13120	-3.4	—	25
							627	16400	-20.0	—	25

## UPPER WINDS ABROAD.

Place.	Fes.		Taza.		Agadir		Bizerta		Nancy		Malta.	
Time.	8h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	8h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	8h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	8h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	8h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	10h. 5 <sup>4</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	-	-	80	7	70	9	310	11	290	2	(3000ft)	
3,280	70	45	60	7	60	11	270	7	310	31	260	2
4,920	80	45	60	11	100	9	250	7	300	40	(4000ft)	
6,560	90	54	80	14	100	17					190	18
9,840	100	50	80	14							(6000ft)	
13,120											260	28
16,400											(13000ft)	
19,680											220	33

Place.	Perpignan	Strasbourg	Algiers	Marrakech	Malta.						
Time.	18h. 5 <sup>4</sup>	18h. 5 <sup>4</sup>	6h. 6 <sup>4</sup>	6h. 6 <sup>4</sup>	7h. 6 <sup>4</sup>						
1,840	300	27	260	16	90	23	190	14		(3000ft)	
3,280	300	45	300	35	80	27	200	24		290	15
4,920	-	-	-	-	70	29	210	26		(5000ft)	
6,560	320	35	300	35	60	34				260	23
9,840					30	23				(10,000ft)	
13,120										270	30
16,400										(16,000ft)	
19,680										270	62

Meteorological Office, Air Ministry,		G. C. SIMPSON, F.R.S.,	
Kingsway, London. W.1.2.		Director.	





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 7<sup>TH</sup> JANUARY, 1928.

No. B. 24,152.

U.A.S. 3,204.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 25, 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.

## UPPER WINDS.

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.

h = balloon with tail.

d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

— 66-75 "

— 76-85 "

— 86-95 "

— 96-105 "

— 106-115 "

— 116-125 "

— 126-135 "

— 136-145 "

— 146-155 "

— 156-165 "

— 166-175 "

— 176-185 "

— 186-195 "

— 196-205 "

— 206-215 "

— 216-225 "

— 226-235 "

— 236-245 "

— 246-255 "

— 256-265 "

— 266-275 "

— 276-285 "

— 286-295 "

— 296-305 "

— 306-315 "

— 316-325 "

— 326-335 "

— 336-345 "

— 346-355 "

— 356-365 "

— 366-375 "

— 376-385 "

— 386-395 "

— 396-405 "

— 406-415 "

— 416-425 "

— 426-435 "

— 436-445 "

— 446-455 "

— 456-465 "

— 466-475 "

— 476-485 "

— 486-495 "

— 496-505 "

— 506-515 "

— 516-525 "

— 526-535 "

— 536-545 "

— 546-555 "

— 556-565 "

— 566-575 "

— 576-585 "

— 586-595 "

— 596-605 "

— 606-615 "

— 616-625 "

— 626-635 "

— 636-645 "

— 646-655 "

— 656-665 "

— 666-675 "

— 676-685 "

— 686-695 "

— 696-705 "

— 706-715 "

— 716-725 "

— 726-735 "

— 736-745 "

— 746-755 "

— 756-765 "

— 766-775 "

— 776-785 "

— 786-795 "

— 796-805 "

— 806-815 "

— 816-825 "

— 826-835 "

— 836-845 "

— 846-855 "

— 856-865 "

— 866-875 "

— 876-885 "

— 886-895 "

— 896-905 "

— 906-915 "

— 916-925 "

— 926-935 "

— 936-945 "

— 946-955 "

— 956-965 "

— 966-975 "

— 976-985 "

— 986-995 "

— 996-1005 "

— 1006-1015 "

— 1016-1025 "

— 1026-1035 "

— 1036-1045 "

— 1046-1055 "

— 1056-1065 "

— 1066-1075 "

— 1076-1085 "

— 1086-1095 "

— 1096-1105 "

— 1106-1115 "

— 1116-1125 "

— 1126-1135 "

— 1136-1145 "

— 1146-1155 "

— 1156-1165 "

— 1166-1175 "

— 1176-1185 "

— 1186-1195 "

— 1196-1205 "

— 1206-1215 "

— 1216-1225 "

— 1226-1235 "

— 1236-1245 "

— 1246-1255 "

— 1256-1265 "

— 1266-1275 "

— 1276-1285 "

— 1286-1295 "

— 1296-1305 "

— 1306-1315 "

— 1316-1325 "

— 1326-1335 "

— 1336-1345 "

— 1346-1355 "

— 1356-1365 "

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— 1646-1655 "

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— 1716-1725 "

— 1726-1735 "

— 1736-1745 "

— 1746-1755 "

— 1756-1765 "

— 1766-1775 "

— 1776-1785 "

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— 1796-1805 "

— 1806-1815 "

— 1816-1825 "

— 1826-1835 "

— 1836-1845 "

— 1846-1855 "

— 1856-1865 "

— 1866-1875 "

— 1876-1885 "

— 1886-1895 "

— 1896-1905 "

— 1906-1915 "

— 1916-1925 "

— 1926-1935 "

— 1936-1945 "

— 1946-1955 "

— 1956-1965 "

— 1966-1975 "

— 1976-1985 "

— 1986-1995 "

— 1996-2005 "

— 2006-2015 "

— 2016-2025 "

— 2026-2035 "

— 2036-2045 "

— 2046-2055 "

— 2056-2065 "

— 2066-2075 "

— 2076-2085 "

— 2086-2095 "

— 2096-2105 "

— 2106-2115 "

— 2116-2125 "

— 2126-2135 "

— 2136-2145 "

— 2146-2155 "

— 2156-2165 "

— 2166-2175 "

— 2176-2185 "

— 2186-2195 "

— 2196-2205 "

— 2206-2215 "

— 2216-2225 "

— 2226-2235 "

— 2236-2245 "

— 2246-2255 "

— 2256-2265 "

— 2266-2275 "

— 2276-2285 "

— 2286-2295 "

— 2296-2305 "

— 2306-2315 "

— 2316-2325 "

— 2326-2335 "

— 2336-2345 "

— 2346-2355 "

— 2356-2365 "

— 2366-2375 "

— 2376-2385 "

— 2386-2395 "

— 2396-2405 "

— 2406-2415 "

— 2416-2425 "

— 2426-2435 "

— 2436-2445 "

— 2446-2455 "

— 2456-2465 "

— 2466-2475 "

— 2476-2485 "

— 2486-2495 "

— 2496-2505 "

— 2506-2515 "

— 2516-2525 "

— 2526-2535 "

— 2536-2545 "

— 2546-2555 "

— 2556-2565 "

— 2566-2575 "

— 2576-2585 "

— 2586-2595 "

— 2596-2605 "

— 2606-2615 "

— 2616-2625 "

— 2626-2635 "

— 2636-2645 "

— 2646-2655 "

— 2656-2665 "

— 2666-2675 "

— 2676-2685 "

— 2686-2695 "

— 2696-2705 "

— 2706-2715 "

— 2716-2725 "

— 2726-2735 "

— 2736-2745 "

— 2746-2755 "



Place	Aberdeen	Leuchars	Renfrew	Sealand	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Cranwell	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Bircham Newton	Catte-water	Calshot	Place			
Time		13h. 6"	13h. 6"	10h. 6"	12h. 6"	9h. 6"	13h. 6"	12h. 6"	13h. 6"	? 6"	13h. 6"						12h. 6"			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.			275	25	335	20	275	33	310	30	275	38	230	40	280	48	265	36	250	34	265	37	Surf.
1000			340	22	335	37	270	61	305	38	270	53	230	61	255	57	270	58	255	72	275	53	1000
2000					335	39			315	59					260	62	275	64	260	97			2000
3000					335	52																	3000
4000																							4000
5000																							5000
6000																							6000
8000																							8000
10000																							10000
12000																							12000
Neph.											280	90											Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell		Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot		Place			
Time	16h. 6"	16h. 6"	17h. 6"	16h. 6"		17h. 6"	16h. 6"			16h. 6"							16h. 6"	15h. 6"		Time			
Type																	b			Type			
Feet Surf.	350	12	290	15	285	11	300	20			310	20	305	46							225	30	Feet Surf.
1000	345	25	310	32	310	35	320	37			320	45	305	61							300	37	1000
2000	345	49	315	36	320	19	325	41			325	39	315	90							305	59	2000
3000	345	55	325	32	330	28	325	20															3000
4000	345	50	330	27	325	29																	4000
5000	345	51	335	26	315	38																	5000
6000			330	54																			6000
8000																							8000
10000					14h. 13m.																		10000
12000					C.																		12000
Neph.					300	125																	Neph.
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot	Place			
Time							6h. 7"	7h. 7"	7h. 7"		8h. 7"												

[illegible]

UPPER WINDS ABROAD.												
Place.	Florence.		Ancona.		Rome.		Taranto.		Zara.		Malta.	
Time.	12h.	6 <sup>th</sup> .	12h.	6 <sup>th</sup> .	12h.	6 <sup>th</sup> .	12h.	6 <sup>th</sup> .	12h.	6 <sup>th</sup> .	17h. 6 <sup>th</sup> .	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	-	-	-	-	-	-	-	-	240	5	(3000ft)	
5,280	110	3	330	7	320	15	250	13	-	-	310	27
4,920	90	4	-	-	-	-	260	35	130	19	(3000ft)	
6,560	50	5	300	12	300	6					280	36
9,840			290	34	300	23					(3000ft)	
13,120											280	48
16,400												
19,680												
Place.	Perpignan.		Qabes.		Helsingfors.		Ulrecht.				Malta.	
Time.	12h.	6 <sup>th</sup> .	6h.	7 <sup>th</sup> .	7h.	7 <sup>th</sup> .	8h.	7 <sup>th</sup> .			7h. 7 <sup>th</sup> .	
1,840	-	-	10	31	340	13	250	22			(1000ft)	
3,280	280	56			320	13	260	25			300 25	
4,920	-	-					270	26			(3000ft)	
6,560	220	38									300 28	
9,840	350	36									(3000ft)	
13,120											290 32	
16,400												
19,680												
Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S., Kingway, London. W.C.2. Director.												

Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S.,  
Kingway, London, W.12. Director.





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, SUNDAY, 8<sup>th</sup> JANUARY, 1928.

No. D. 24153.

U.A.S. 3205.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 8th, 1911, and October 2nd, 1905, 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 Table Page.

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

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

#### On Charts.

Movements are indicated thus:—

—•— No speed given.

—•— 0-5 m.p.h.

—•— 6-15 " "

—•— 16-25 " "

—•— 26-35 m.p.h.

—•— 36-45 " "

—•— 46-55 " "

—•— 56-65 " "

—•— 66-75 " "

—•— 76-85 " "

—•— 86-95 " "

—•— 96-105 " "

—•— 106-115 " "

—•— 116-125 " "

—•— 126-135 " "

—•— 136-145 " "

—•— 146-155 " "

—•— 156-165 " "

—•— 166-175 " "

—•— 176-185 " "

—•— 186-195 " "

—•— 196-205 " "

—•— 206-215 " "

—•— 216-225 " "

—•— 226-235 " "

—•— 236-245 " "

—•— 246-255 " "

—•— 256-265 " "

—•— 266-275 " "

—•— 276-285 " "

—•— 286-295 " "

—•— 296-305 " "

—•— 306-315 " "

—•— 316-325 " "

—•— 326-335 " "

—•— 336-345 " "

—•— 346-355 " "

—•— 356-365 " "

—•— 366-375 " "

—•— 376-385 " "

—•— 386-395 " "

—•— 396-405 " "

—•— 406-415 " "

—•— 416-425 " "

—•— 426-435 " "

—•— 436-445 " "

—•— 446-455 " "

—•— 456-465 " "

—•— 466-475 " "

—•— 476-485 " "

—•— 486-495 " "

—•— 496-505 " "

—•— 506-515 " "

—•— 516-525 " "

—•— 526-535 " "

—•— 536-545 " "

—•— 546-555 " "

—•— 556-565 " "

—•— 566-575 " "

—•— 576-585 " "

—•— 586-595 " "

—•— 596-605 " "

—•— 606-615 " "

—•— 616-625 " "

—•— 626-635 " "

—•— 636-645 " "

—•— 646-655 " "

—•— 656-665 " "

—•— 666-675 " "

—•— 676-685 " "

—•— 686-695 " "

—•— 696-705 " "

—•— 706-715 " "

—•— 716-725 " "

—•— 726-735 " "

—•— 736-745 " "

—•— 746-755 " "

—•— 756-765 " "

—•— 766-775 " "

—•— 776-785 " "

—•— 786-795 " "

—•— 796-805 " "

—•— 806-815 " "

—•— 816-825 " "

—•— 826-835 " "

—•— 836-845 " "

—•— 846-855 " "

—•— 856-865 " "

—•— 866-875 " "

—•— 876-885 " "

—•— 886-895 " "

—•— 896-905 " "

—•— 906-915 " "

—•— 916-925 " "

—•— 926-935 " "

—•— 936-945 " "

—•— 946-955 " "

—•— 956-965 " "

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—•— 986-995 " "

—•— 996-1005 " "

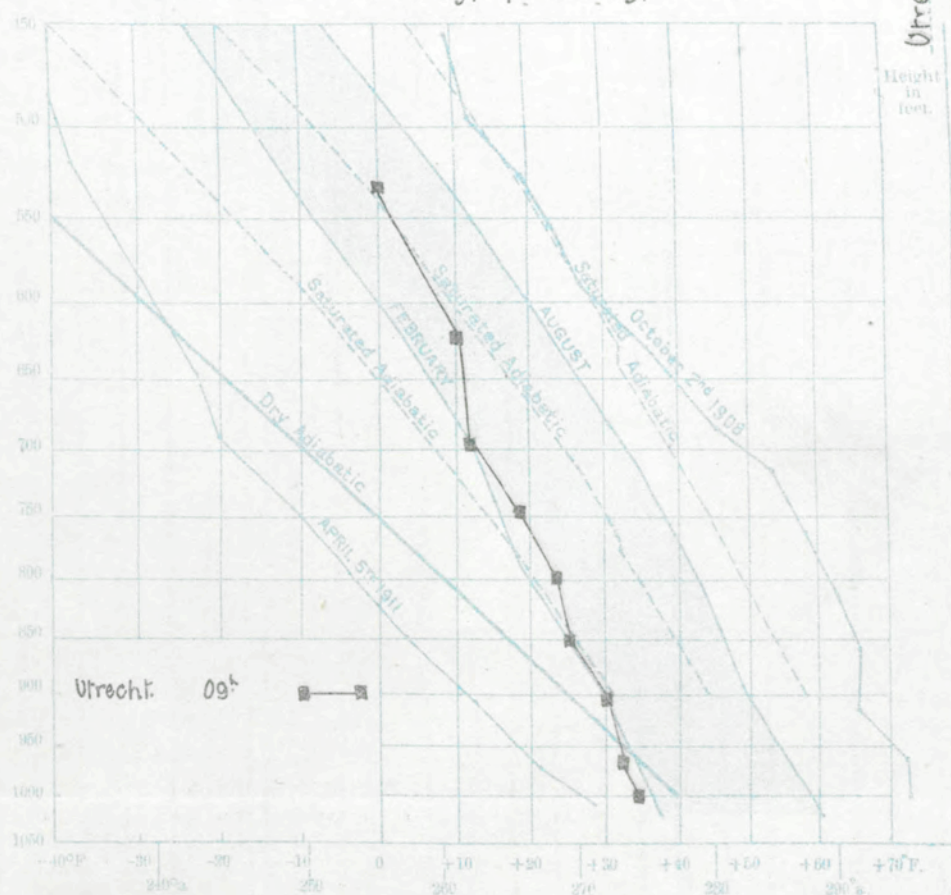
#### In Tables.

Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an aerol height of 5 miles for alto type clouds (double lines) and 3 miles for alto type clouds (single line).

### UPPER AIR TEMPERATURES.

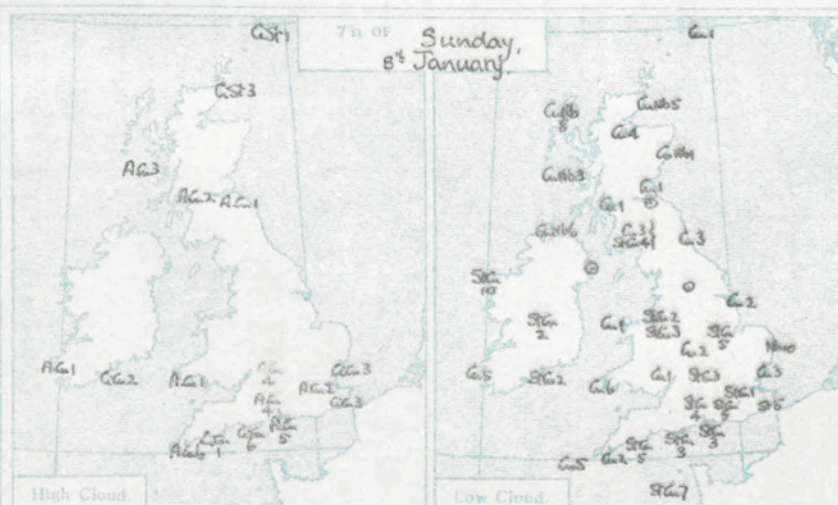
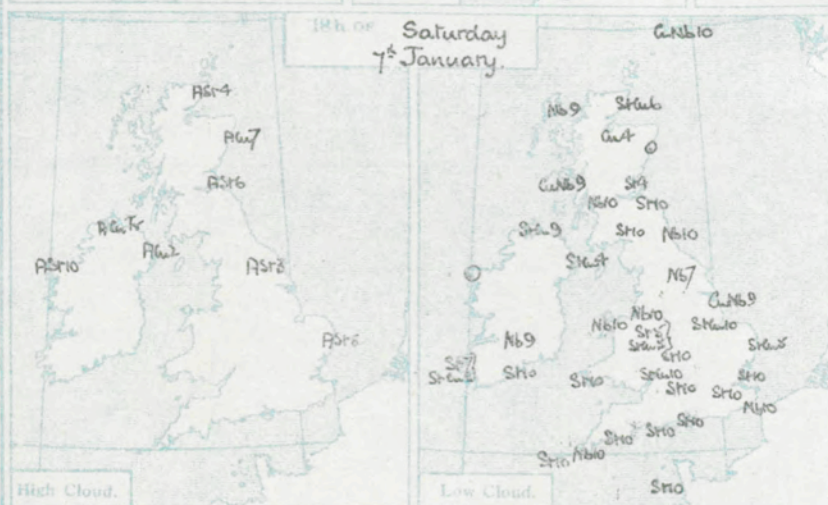
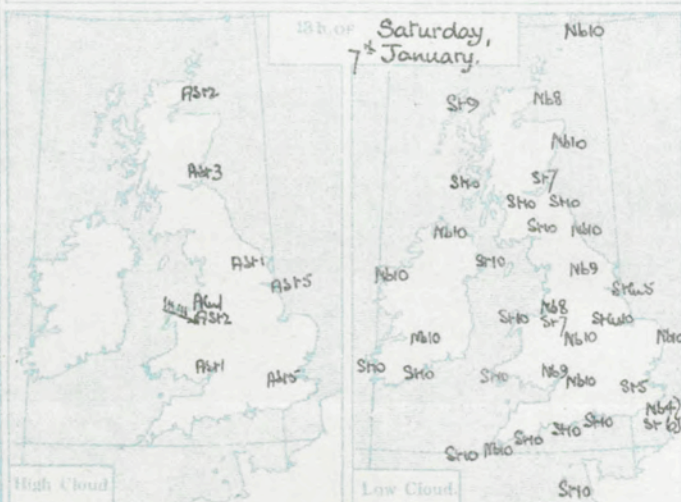
Saturday, 7<sup>th</sup> January, 1928.



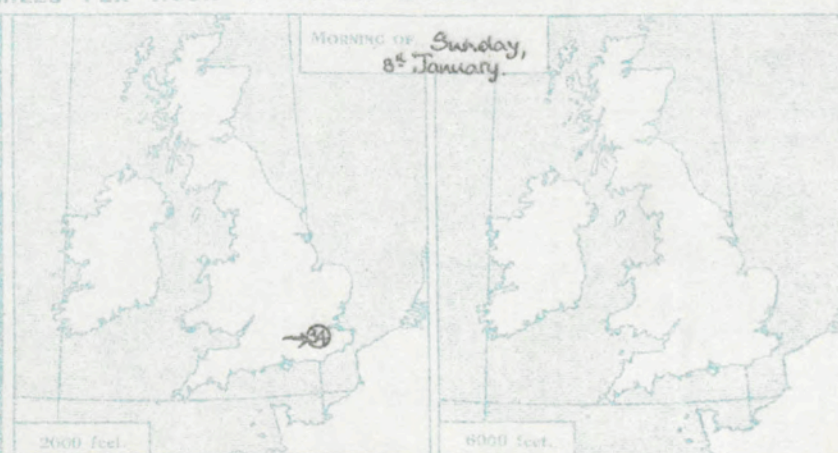
Utrecht.

Height in feet.

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





Place	Aberdeen	Leuchars	Renfrew							Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne					Catte-water	Calshot	Place	
Time		12 <sup>b</sup> 7 <sup>k</sup>									08 <sup>b</sup> 7 <sup>k</sup>	12 <sup>b</sup> 7 <sup>k</sup>										10 <sup>b</sup> 7 <sup>k</sup>						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.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.			235	10							230	22	215	10									215	18					Surf.
1000			245	23							225	46	240	29									220	38					1000
2000			245	27									250	45															2000
3000													270	41															3000
4000													270	43															4000
5000																													5000
6000													10 <sup>b</sup>																6000
8000													11 <sup>b</sup>																8000
10000													12 <sup>b</sup>																10000
12000													13 <sup>b</sup>																12000
Neph.													290	60															Neph.
Place.	Leuchars.	Renfrew.	Aldergrove	Holyhead							Sealand.	Cranwell	Felix-stowe	Valentia.	Worthy Down	South Farnboro	Croydon.	Kew.	Shoebury-ness.	Lympne.						Catte-water.	Calshot.	Place.	
Time.			17 <sup>b</sup> 7 <sup>k</sup>								17 <sup>b</sup> 7 <sup>k</sup>																	Time.	
Type.																													Type.
Feet Surf.					200	11						220	10																Feet Surf.
1000					235	25						235	21																1000
2000					245	38																							2000
3000					250	50																							3000
4000					255	55																							4000
5000																													5000
6000																													6000
8000																													8000
10000																													10000
12000																													

[illegible]

Place.	Dijon		Nancy		Naples		Palermo		Taranto		Malta	
Time.	10 <sup>h</sup>	7 <sup>h</sup>	10 <sup>h</sup>	7 <sup>h</sup>	10 <sup>h</sup>	7 <sup>h</sup>	10 <sup>h</sup>	7 <sup>h</sup>	10 <sup>h</sup>	7 <sup>h</sup>	10 <sup>h</sup>	7 <sup>h</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	240	9	-	-	40	3	330	4	320	34	1,000'	
3,280	250	14	260	18	30	4	20	7	320	18	300	22
4,920	-	-	-	-	320	6			340	24	2,000'	
6,560	-	-	-	33	25						300	27
9,840	310	14	310	27								
13,120												
16,400												
19,680												

Place.	Turin		Milan		Florence		Zara		Setif		Tripoli	
Time.	10 <sup>h</sup>	7 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>
1,640	220	6	60	8	110	5	150	9	360	4	80	13
3,280	160	2	20	59	80	9	240	9	340	14	330	11
4,920	-	-					310	10	330	22	-	-
6,560	220	9							290	40	340	11
9,840												
13,120												
16,400												
19,680												

Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S.,  
 Kingway, London W41 2. Director

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, Monday, 9th January 1928.

No. B. 24154

U.A.S. 3,206

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:-

— No speed given.

— 0-5 m.p.h.

— 5-15 " "

— 15-25 " "

— 25-35 m.p.h.

— 35-45 " "

— 45-55 " "

— 55-65 " "

— 65-75 " "

— 75-85 " "

— 85-95 " "

— 95-105 " "

— 105-115 " "

— 115-125 " "

— 125-135 " "

— 135-145 " "

— 145-155 " "

— 155-165 " "

— 165-175 " "

— 175-185 " "

— 185-195 " "

— 195-205 " "

— 205-215 " "

— 215-225 " "

— 225-235 " "

— 235-245 " "

— 245-255 " "

— 255-265 " "

— 265-275 " "

— 275-285 " "

— 285-295 " "

— 295-305 " "

— 305-315 " "

— 315-325 " "

— 325-335 " "

— 335-345 " "

— 345-355 " "

— 355-365 " "

— 365-375 " "

— 375-385 " "

— 385-395 " "

— 395-405 " "

— 405-415 " "

— 415-425 " "

— 425-435 " "

— 435-445 " "

— 445-455 " "

— 455-465 " "

— 465-475 " "

— 475-485 " "

— 485-495 " "

— 495-505 " "

— 505-515 " "

— 515-525 " "

— 525-535 " "

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— 545-555 " "

— 555-565 " "

— 565-575 " "

— 575-585 " "

— 585-595 " "

— 595-605 " "

— 605-615 " "

— 615-625 " "

— 625-635 " "

— 635-645 " "

— 645-655 " "

— 655-665 " "

— 665-675 " "

— 675-685 " "

— 685-695 " "

— 695-705 " "

— 705-715 " "

— 715-725 " "

— 725-735 " "

— 735-745 " "

— 745-755 " "

— 755-765 " "

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— 785-795 " "

— 795-805 " "

— 805-815 " "

— 815-825 " "

— 825-835 " "

— 835-845 " "

— 845-855 " "

— 855-865 " "

— 865-875 " "

— 875-885 " "

— 885-895 " "

— 895-905 " "

— 905-915 " "

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— 955-965 " "

— 965-975 " "

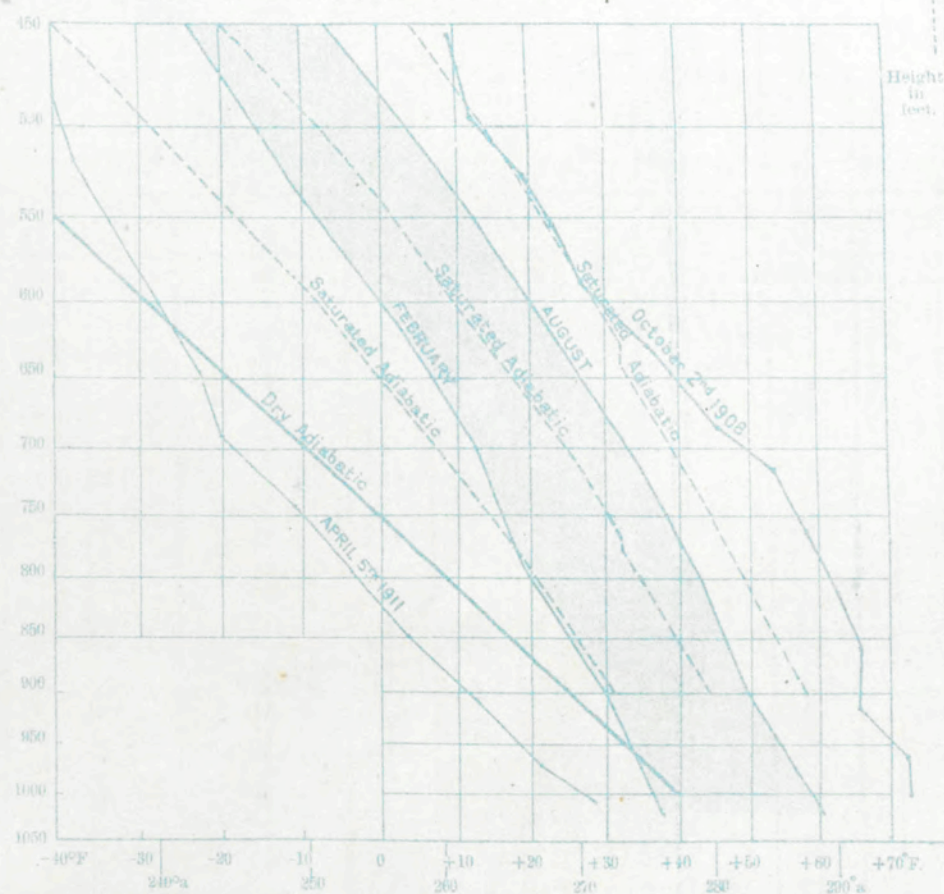
— 975-985 " "

— 985-995 " "

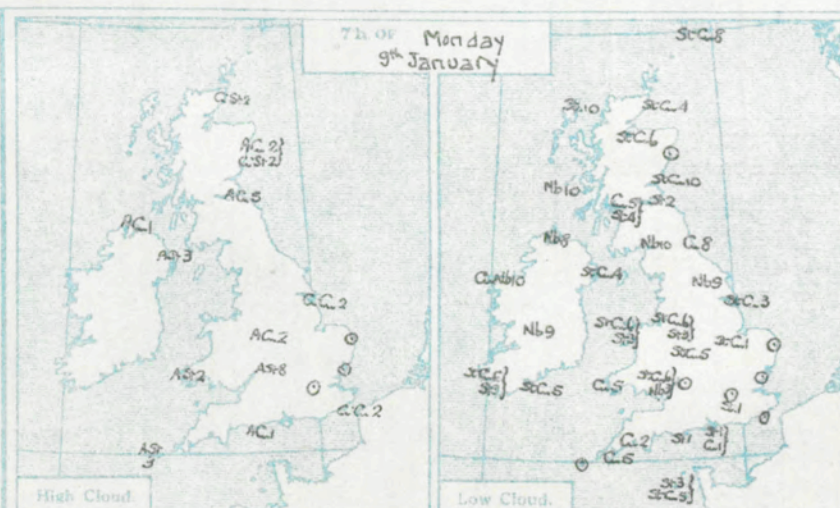
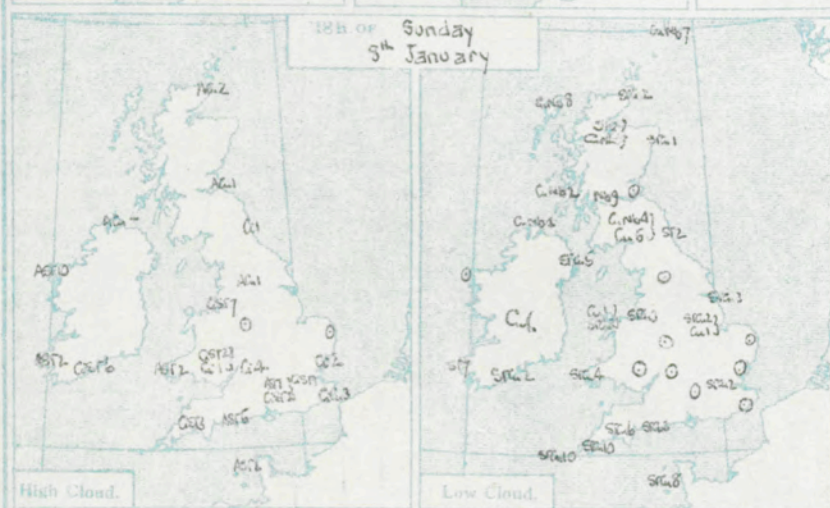
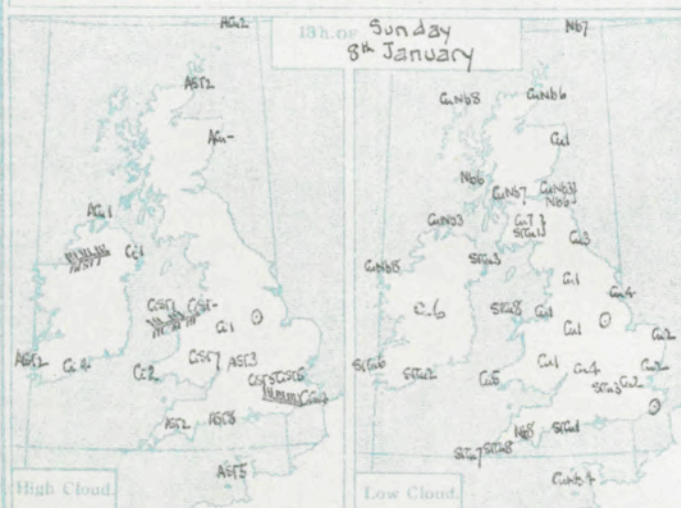
— 995-1000 " "

## UPPER AIR TEMPERATURES.

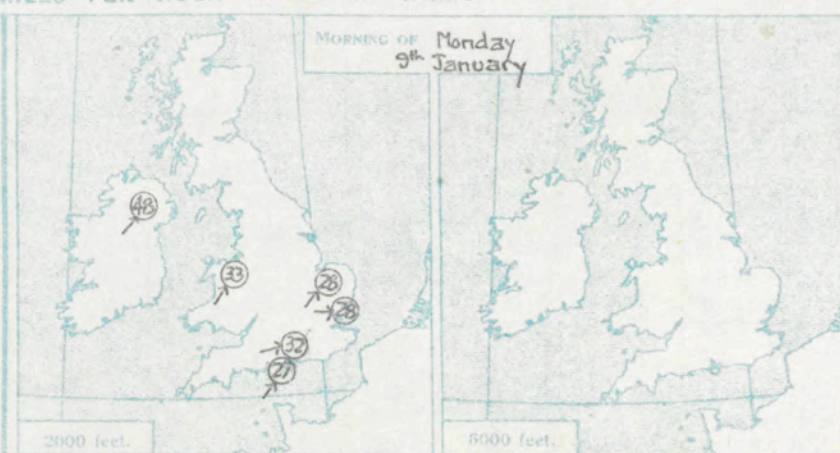
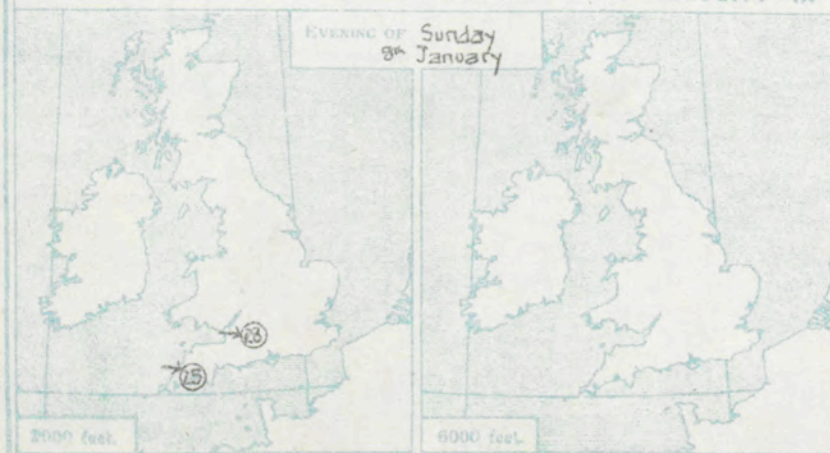
Sunday, 8th January 1928.



## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





Place	Aberdeen	Leuchars	Renfrew		Alder Grove	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon	Kew	Shoebury-ness.	Lympne.		Cattle-water.	Calshot.	Places						
Time.							12 <sup>h</sup> 8 <sup>m</sup>						12 <sup>h</sup> 8 <sup>m</sup>		12 <sup>h</sup> 8 <sup>m</sup>				12 <sup>h</sup> 8 <sup>m</sup>		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.			240	25			220	16					255	12	250	14			270	14	260	17	250	16	Surf.	
1000			245	39			235	33					270	25	270	21			275	23	275	17	255	27	1000	
2000			245	54			250	39					275	36	280	33			285	31	285	26	265	38	2000	
3600			245	69									285	38	280	35			285	33	300	27	270	32	3600	
4000													285	40	285	40			295	43	290	27	265	32	4000	
5000							9 <sup>h</sup>	10 <sup>m</sup>											295	37			265	38	5000	
6000							Ci												10 <sup>h</sup>	CiCu		10 <sup>h</sup>	255	40	6000	
8000							230	130											280	100		Ci			8000	
10000							13 <sup>h</sup>												13 <sup>h</sup>			280	100	10 <sup>h</sup>		10000
12000							Ci												Ci			CiCu		CiCu		12000
Neph.							260	160					250	90					280	100		280	110	280	75	Neph.

[illegible][illegible]

## UPPER WINDS ABROAD.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity		
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.		Dry.	Wet.
	mb.	Feet. M.S.L.	—	—	—		mb.	Feet. M.S.L.	—	—	—		mb.	Feet. M.S.L.	—	—	—		
		M.S.L.	—	—	—			M.S.L.	—	—	—			M.S.L.	—	—	—		

Place.	Toulouse	Clermont	Milan	Leghorn	Messina	Malta
Time.	10 <sup>h</sup> 8 <sup>m</sup>	10 <sup>h</sup> 8 <sup>m</sup>	13 <sup>h</sup> 8 <sup>m</sup>	13 <sup>h</sup> 8 <sup>m</sup>	18 <sup>h</sup> 8 <sup>m</sup>	17 <sup>h</sup> 8 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	-	-	230	9	270	16
3,280	320	10	280	17	250	14
4,920					210	9
6,500					200	18
8,840					180	18
13,120						
18,400						
19,680						

Place.	Perpignan	Florence	De Bilt	Messina	Cracow	Malta
Time.	18 <sup>h</sup> 8 <sup>m</sup>	18 <sup>h</sup> 8 <sup>m</sup>	7 <sup>h</sup> 9 <sup>m</sup>	7 <sup>h</sup> 9 <sup>m</sup>	7 <sup>h</sup> 9 <sup>m</sup>	7 <sup>h</sup> 9 <sup>m</sup>
1,840	-	-	210	4	270	27
3,280	340	18	220	5	270	35
4,920	-	-	-	-	270	36
6,560	310	18	240	20	280	28
9,840	30	14			290	35
13,120					300	26
16,400					270	8
19,680					-	-
					280	4

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

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





# AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 10<sup>th</sup> JANUARY, 1928.

No. 5. 24,155

U.A.S. 3,207.

**DIAGRAM OF UPPER AIR TEMPERATURE.**

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, 1906, 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.

**UPPER WINDS.**

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.

h = balloon with tail. d = double theodolite ascent.

**CLOUD MOVEMENTS (Nephoscope readings)**

On Charts.

Movements are indicated thus:-

— No speed given. — 20-25 m.p.h.  
 — 0-5 m.p.h. — 25-30 " "  
 — 5-10 " — 30-35 " "  
 — 10-15 " — 35-40 " "  
 — 15-20 " — 40-45 " "  
 — 20-25 " — 45-50 " "  
 — 25-30 " — 50-55 " "  
 — 30-35 " — 55-60 " "  
 — 35-40 " — 60-65 " "  
 — 40-45 " — 65-70 " "  
 — 45-50 " — 70-75 " "  
 — 50-55 " — 75-80 " "  
 — 55-60 " — 80-85 " "  
 — 60-65 " — 85-90 " "  
 — 65-70 " — 90-95 " "  
 — 70-75 " — 95-100 " "  
 — 75-80 " — 100-110 " "  
 — 80-85 " — 110-120 " "  
 — 85-90 " — 120-130 " "  
 — 90-95 " — 130-140 " "  
 — 95-100 " — 140-150 " "  
 — 100-110 " — 150-160 " "  
 — 110-120 " — 160-170 " "  
 — 120-130 " — 170-180 " "  
 — 130-140 " — 180-190 " "  
 — 140-150 " — 190-200 " "  
 — 150-160 " — 200-210 " "  
 — 160-170 " — 210-220 " "  
 — 170-180 " — 220-230 " "  
 — 180-190 " — 230-240 " "  
 — 190-200 " — 240-250 " "  
 — 200-210 " — 250-260 " "  
 — 210-220 " — 260-270 " "  
 — 220-230 " — 270-280 " "  
 — 230-240 " — 280-290 " "  
 — 240-250 " — 290-300 " "  
 — 250-260 " — 300-310 " "  
 — 260-270 " — 310-320 " "  
 — 270-280 " — 320-330 " "  
 — 280-290 " — 330-340 " "  
 — 290-300 " — 340-350 " "  
 — 300-310 " — 350-360 " "  
 — 310-320 " — 360-370 " "  
 — 320-330 " — 370-380 " "  
 — 330-340 " — 380-390 " "  
 — 340-350 " — 390-400 " "  
 — 350-360 " — 400-410 " "  
 — 360-370 " — 410-420 " "  
 — 370-380 " — 420-430 " "  
 — 380-390 " — 430-440 " "  
 — 390-400 " — 440-450 " "  
 — 400-410 " — 450-460 " "  
 — 410-420 " — 460-470 " "  
 — 420-430 " — 470-480 " "  
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 — 450-460 " — 500-510 " "  
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 — 530-540 " — 580-590 " "  
 — 540-550 " — 590-600 " "  
 — 550-560 " — 600-610 " "  
 — 560-570 " — 610-620 " "  
 — 570-580 " — 620-630 " "  
 — 580-590 " — 630-640 " "  
 — 590-600 " — 640-650 " "  
 — 600-610 " — 650-660 " "  
 — 610-620 " — 660-670 " "  
 — 620-630 " — 670-680 " "  
 — 630-640 " — 680-690 " "  
 — 640-650 " — 690-700 " "  
 — 650-660 " — 700-710 " "  
 — 660-670 " — 710-720 " "  
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 — 840-850 " — 890-900 " "  
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 — 1090-1100 " — 1140-1150 " "  
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 — 1110-1120 " — 1160-1170 " "  
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 — 1130-1140 " — 1180-1190 " "  
 — 1140-1150 " — 1190-1200 " "  
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 — 1160-1170 " — 1210-1220 " "  
 — 1170-1180 " — 1220-1230 " "  
 — 1180-1190 " — 1230-1240 " "  
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 — 2100-2110 " — 2150-2160 " "  
 — 2110-2120 " — 2160-2170 " "  
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 — 2140-2150 " — 2190-2200 " "  
 — 2150-2160 " — 2200-2210 " "  
 — 2160-2170 " — 2210-2220 " "  
 — 2170-2180 " — 2220-2230 " "  
 — 2180-2190 " — 2230-2240 " "  
 — 2190-2200 " — 2240-2250 " "  
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 — 3000-3010 " — 3050-3060 " "  
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 — 3100-3110 " — 3150-3160 " "  
 — 3110-3120 " — 3160-3170 " "  
 — 3120-3130 " — 3170-3180 " "  
 — 3130-3140 " — 3180-3190 " "  
 — 3140-3150 " — 3190-3200 " "  
 — 3150-3160 " — 3200-3210 " "  
 — 3160-3170 " — 3210-3220 " "  
 — 3170-3180 " — 3220-3230 " "  
 — 3180-3190 " — 3230-3240 " "  
 — 3190-3200 " — 3240-3250 " "  
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 — 4000-4010 " — 4050-4060 " "  
 — 4010-4020 " — 4060-4070 " "<



Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Tolyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon.	Croyden.	Shoebury-ness.	Lympne.	Lympne	Catte-water.	Calshot.	Calshot.	Place.
Time.		12 <sup>h</sup> 9 <sup>t</sup>	13 <sup>h</sup> 9 <sup>t</sup>	9 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	13 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>		12 <sup>h</sup> 9 <sup>t</sup>	13 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	10 <sup>h</sup> 9 <sup>t</sup>		12 <sup>h</sup> 9 <sup>t</sup>	10 <sup>h</sup> 9 <sup>t</sup>	13 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	12 <sup>h</sup> 9 <sup>t</sup>	Time.
Type		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.		235 25	260 25	210 23	250 16	245 18	250 20	180 16	240 11		220 16	220 15	210 9	210 9		225 16	245 8	245 20	325 17	Surf.	
1000		235 33	275 44	210 51	265 41	255 31	245 37	215 35	245 31		230 28	215 31	225 26			225 20	250 24	275 29	335 33	1000	
2000		240 51	285 44	215 50	275 43	265 32	255 39	235 37	245 33		240 35	240 32					245 28		340 37	2000	
3000					275 42		265 37	250 36	250 37			250 41					250 30		345 34	3000	
4000					275 42		260 35	245 48	255 39								250 37		345 38	4000	
5000					270 42		10 <sup>h</sup> C		255 39										300 39	5000	
6000							13 <sup>h</sup> C												360 39	6000	
8000							13 <sup>h</sup> C												355 39	8000	
10000					13 <sup>h</sup> Ci		250 80		10 <sup>h</sup> Ci										(7.00ft)	10000	
12000					280 90		250 85		270 90												12000
Neph.																					Neph.
Place.	Leuchars.	Renfrew.	Aldergrove	Holyhead		Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon.	Kew.	Shoebury-ness.	Lympne.		Catte-water.	Calshot.	Calshot.	Place.	
Time.		17 <sup>h</sup> 9 <sup>t</sup>	17 <sup>h</sup> 9 <sup>t</sup>	16 <sup>h</sup> 9 <sup>t</sup>		17 <sup>h</sup> 9 <sup>t</sup>	17 <sup>h</sup> 9 <sup>t</sup>	16 <sup>h</sup> 9 <sup>t</sup>									16 <sup>h</sup> 9 <sup>t</sup>	17 <sup>h</sup> 9 <sup>t</sup>	24 <sup>h</sup> 9 <sup>t</sup>	Time.	
Type.																				Type.	
Foot Surf.			230 20	260 20		270 15	240 16	220 17										275 18	340 21	240 9	Foot Surf.
1000			240 35	270 24		270 31	250 26	235 35										300 19	325 23	265 23	1000
2000			255 39	275 32		275 41	265 27	250 41										310 20	(Scoop)	265 25	2000
3000			260 41					255 44												265 27	3000
4000																				270 31	4000
5000																				270 33	5000
6000																					6000
8000																					8000
10000																					10000
12000			A.Cu																		

[illegible]

Place.	Ta3a		Rome		Florence		Messina		Nîmes		Malta	
Time	10 <sup>h</sup> 9 <sup>st</sup>		13 <sup>h</sup> 9 <sup>st</sup>		13 <sup>h</sup> 9 <sup>st</sup>		13 <sup>h</sup> 9 <sup>st</sup>		18 <sup>h</sup> 9 <sup>st</sup>		16 <sup>h</sup> 9 <sup>st</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	300	9	180	13	140	2	-	-	-	-	130	5
3,280	300	9	190	10	220	6	250	2	10	27	(3,000ft)	
4,920	320	14	160	11	210	10	-	-	20	38	150	16
6,560	320	11					250	7	50	41	(7,000ft)	
9,840							-	-			140	33
13,120							220	9			(10,000ft)	
16,400												
19,680												

Place.	Shesburg		Tunis		Florence		Laghorn		Rome		Zara	
Time	18 <sup>h</sup> 9 <sup>st</sup>		6 <sup>h</sup> 10 <sup>st</sup>		7 <sup>h</sup> 10 <sup>st</sup>		7 <sup>h</sup> 10 <sup>st</sup>		7 <sup>h</sup> 10 <sup>st</sup>		7 <sup>h</sup> 10 <sup>st</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	210	14	80	30	-	-	110	9	120	3	-	-
3,280	250	14	10	4	70	15	110	13	70	6	150	2
4,920	270	16	80	10	110	7			120	9	-	-
6,560											120	7
9,840												
13,120												
16,400												
19,680												

Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S.,  
Kingway, London, W.C.2. Director.





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, WEDNESDAY, 11<sup>th</sup> JANUARY, 1928.

No. B. 24,156.

U.A.S. 3,208.

### DIAGRAM OF UPPER AIR TEMPERATURE

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 25th, 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 line shows diabatic change for saturated air rising under specified conditions. See Table Page.

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

#### UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

#### CLOUD MOVEMENTS (Nephoscope readings)

##### On Charts.

Movements are indicated thus:—

— No speed given.

— 5 m.p.h.

— 15 " "

— 25 " "

— 25-35 m.p.h.

— 35-45 " "

— 45-55 " "

— 55-65 " "

— 65-75 " "

— 75-85 " "

— 85-95 " "

— 95-105 " "

— 105-115 " "

— 115-125 " "

— 125-135 " "

— 135-145 " "

— 145-155 " "

— 155-165 " "

— 165-175 " "

— 175-185 " "

— 185-195 " "

— 195-205 " "

— 205-215 " "

— 215-225 " "

— 225-235 " "

— 235-245 " "

— 245-255 " "

— 255-265 " "

— 265-275 " "

— 275-285 " "

— 285-295 " "

— 295-305 " "

— 305-315 " "

— 315-325 " "

— 325-335 " "

— 335-345 " "

— 345-355 " "

— 355-365 " "

— 365-375 " "

— 375-385 " "

— 385-395 " "

— 395-405 " "

— 405-415 " "

— 415-425 " "

— 425-435 " "

— 435-445 " "

— 445-455 " "

— 455-465 " "

— 465-475 " "

— 475-485 " "

— 485-495 " "

— 495-505 " "

— 505-515 " "

— 515-525 " "

— 525-535 " "

— 535-545 " "

— 545-555 " "

— 555-565 " "

— 565-575 " "

— 575-585 " "

— 585-595 " "

— 595-605 " "

— 605-615 " "

— 615-625 " "

— 625-635 " "

— 635-645 " "

— 645-655 " "

— 655-665 " "

— 665-675 " "

— 675-685 " "

— 685-695 " "

— 695-705 " "

— 705-715 " "

— 715-725 " "

— 725-735 " "

— 735-745 " "

— 745-755 " "

— 755-765 " "

— 765-775 " "

— 775-785 " "

— 785-795 " "

— 795-805 " "

— 805-815 " "

— 815-825 " "

— 825-835 " "

— 835-845 " "

— 845-855 " "

— 855-865 " "

— 865-875 " "

— 875-885 " "

— 885-895 " "

— 895-905 " "

— 905-915 " "

— 915-925 " "

— 925-935 " "

— 935-945 " "

— 945-955 " "

— 955-965 " "

— 965-975 " "

— 975-985 " "

— 985-995 " "

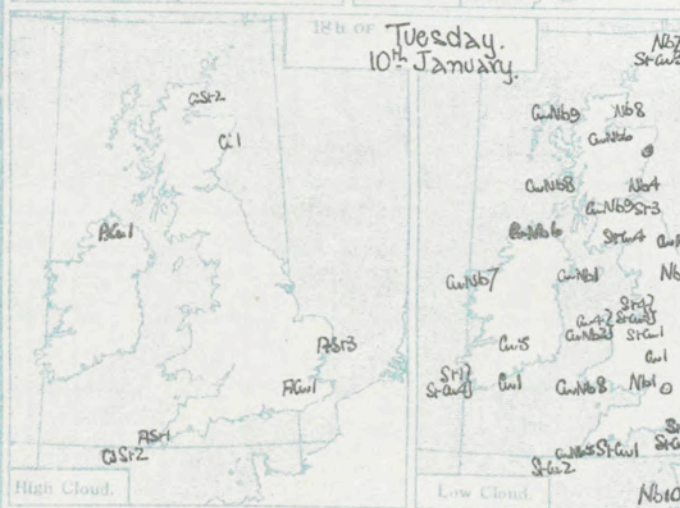
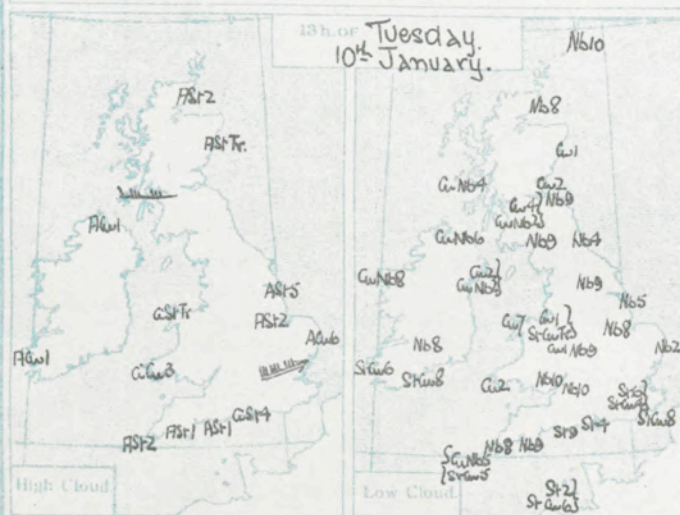
— 995-1000 " "

##### In Tables.

Directions are given in degrees, velocities in m.p.h.

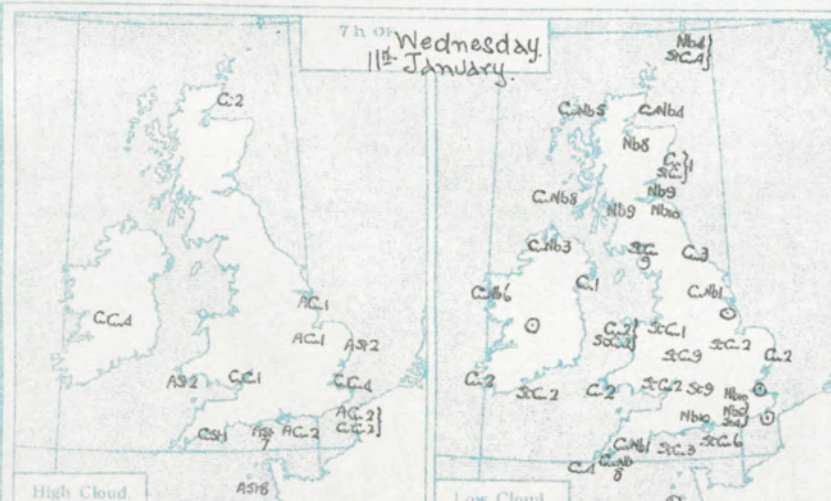
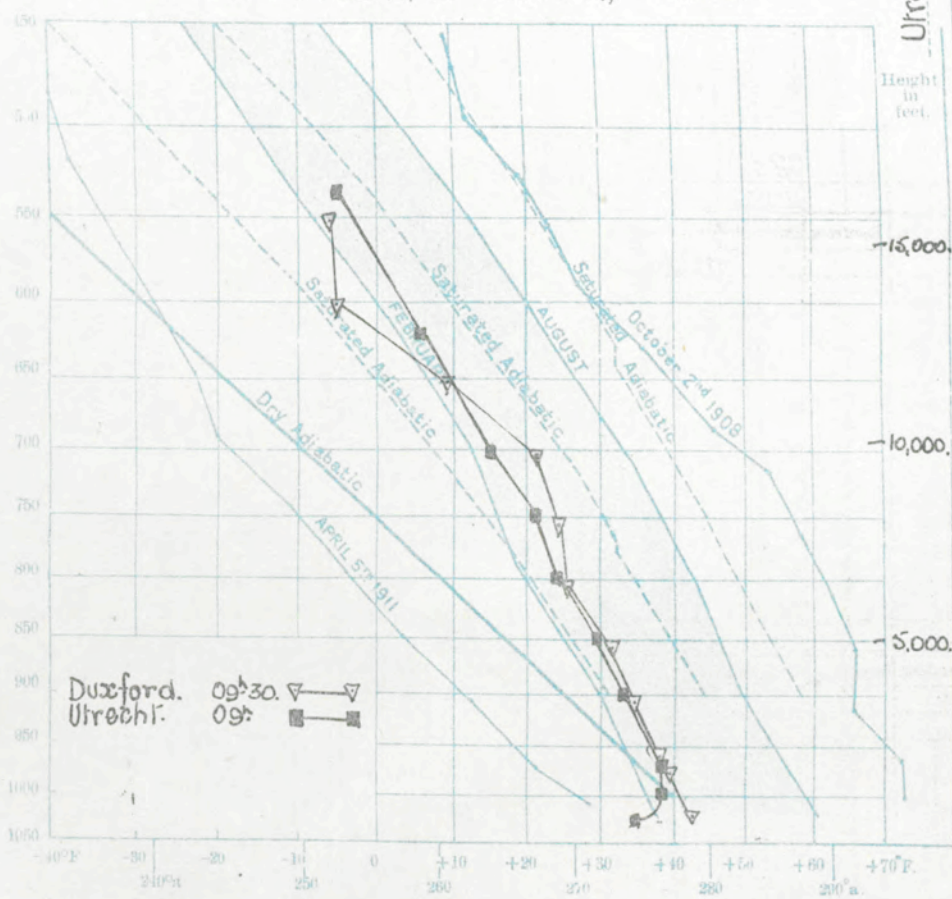
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.

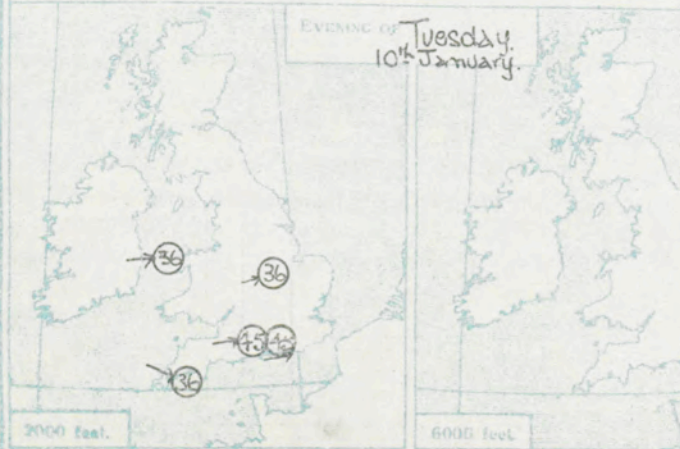


### UPPER AIR TEMPERATURES.

## TUESDAY, 10<sup>th</sup> JANUARY, 1928.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Bircham Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Cranwell	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Catte- water	Calshot	Place		
Time		12 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	12 <sup>h</sup> 10 <sup>m</sup>	12 <sup>h</sup> 10 <sup>m</sup>	12 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	08 <sup>h</sup> 10 <sup>m</sup>	12 <sup>h</sup> 10 <sup>m</sup>	12 <sup>h</sup> 10 <sup>m</sup>								12 <sup>h</sup> 10 <sup>m</sup>	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.			235 34	265 25	185 25	235 18	265 30	270 25	180 17	185 24	205 36									205 38	Surf.
1000			235 53	265 38	200 39	260 41	255 37	265 45	220 48	215 43	240 57									210 53	1000
2000				265 48	200 42	265 52	260 51	265 59	230 61	220 53	230 54									220 62	2000
3000				275 49		270 52			225 71												3000
4000						270 62			235 63												4000
5000						265 57			248 46	13 <sup>h</sup>											5000
6000							9 <sup>h</sup> Flu	260 60	245 25	6 <sup>h</sup>											6000
8000							11 <sup>h</sup> C.		08 <sup>h</sup> 15 <sup>m</sup> C. C.	250 90											8000
10000									260 75	10 <sup>h</sup>											10000
12000				Flu.					Flu	6 <sup>h</sup>											12000
Neph.				270 72				240 150	240 54	240 60											Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Catte- water	Calshot	Place			
Time				16 <sup>h</sup> 10 <sup>m</sup>		17 <sup>h</sup> 10 <sup>m</sup>	16 <sup>h</sup> 10 <sup>m</sup>			18 <sup>h</sup> 10 <sup>m</sup>	17 <sup>h</sup> 10 <sup>m</sup>					16 <sup>h</sup> 10 <sup>m</sup>	23 <sup>h</sup> 10 <sup>m</sup>	Time			
Type																b			Type		
Feet				260 32		265 16	260 20			255 10	260 10						280 18	250 14	Feet		
1000				265 33		270 34	265 28			270 35	265 30						300 28	255 34	1000		
2000				270 36		-	265 36			275 45	275 45						300 36	260 37	2000		
3000						270 45	265 42			280 42	280 48							265 37	3000		
4000						270 52	260 53				270 45								4000		
5000											250 48								5000		
6000																			6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.																			Neph.		
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Catte- water	Calshot	Place		
Time					6 <sup>h</sup> 11 <sup>m</sup>		6 <sup>h</sup> 11 <sup>m</sup>	8 <sup>h</sup> 11 <sup>m</sup>					7 <sup>h</sup> 11 <sup>m</sup>					7 <sup>h</sup> 11 <sup>m</sup>	Time		
Type																			Type		
Feet					225 16		250 4	235 13					260 28					205 10	Feet		
1000					260 40		265 20	255 35					315 33					225 27	1000		
2000					270 45		275 24	270 42					265 35					230 29	2000		
3000					275 55		270 31											235 29	3000		
4000							275 38											235 31	4000		
5000							270 43												5000		
6000							270 41												6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.																			Neph.		

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.			Station.	Pressure	Height above M.S.L.	Temp.			Station.	Pressure	Height above M.S.L.	Temp.			Station.	Pressure	Height above M.S.L.	Temp.		
			Dry.	Wet.	Relative Humidity				Dry.	Wet.	Relative Humidity				Dry.	Wet.	Relative Humidity				Dry.	Wet.	Relative Humidity
Duxford. 09-30 10/1/27.	mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%
	1008.5	M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-
	1005	100	42.6	41	80																		
	999	1090	40	39	80																		
	990	1600	34.0	33	84																		
	980	2040	33.0	32	84																		
	9850	4570	32	31.5	95																		
	9800	6130	23	26	81																		
	750	7810	24	23	89																		
	700	9610	22	20	77																		
	650	11500	10	8	.																		
	600	13490	-5	.	.																		
	550	15640	-6	.	.																		
	Cu	910	900	to	850 mb																		
	Cu	710	750	to	700 mb.																		
	Sky	clouding over rapidly																					
	Ts	or	700 mb.																				
Ureocht. 09- 10/4/27.	M.S.L.	-	-	-	45			M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-
	989	670	39	-	45																		
	953	1650	30	-	45																		
	896	3280	34	-	35																		
	843	4920	30	-	25																		
	791	6560	25	-	25																		
	741	8200	21	-	25																		
	696	9840	16	-	25																		
	611	13120	7	-	15																		
	535	16400	-4	-	15																		
	Inversion begins 1012 mbs																						
	Temp at base 35°F.																						
	Amount 5+ ft.																						
	Depth 1000 feet.																						

## UPPER WINDS ABROAD.

Place.	Milan.	Florence	Zara	Usson.	Leghorn	Genoa						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	-	-	60	9	-	-	230	45	170	6	-	0
3,280	290	4	110	6	122	21			90	16	240	11
4,920			110	8	-	-			-	-		
6,560					140	22			50	11		
9,840					140	12						
13,120												
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 11 <sup>m</sup>	7 <sup>h</sup> 11 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
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6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
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9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
3,280	340	14	10	11	230	20	260	36	270	40	(4,000')	
4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta						
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	60	7	-	-	-	-	250	34	270	36	250	24
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4,920			-	-	210	21			270	44	230	20
6,560			350	25	250	25					(3,000')	
9,840			30	25							260	10
13,120											(5,000')	
16,400												
19,680												

Place.	Lyons	Portiguan	Strasbourg	Tours	DeBilt	Malta
Time.	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13 <sup>h</sup> 10 <sup>m</sup>	13	

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 12<sup>th</sup> JANUARY, 1928.

No. 24,157.

U.A.S. 3,209.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

n = balloon with tail. d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

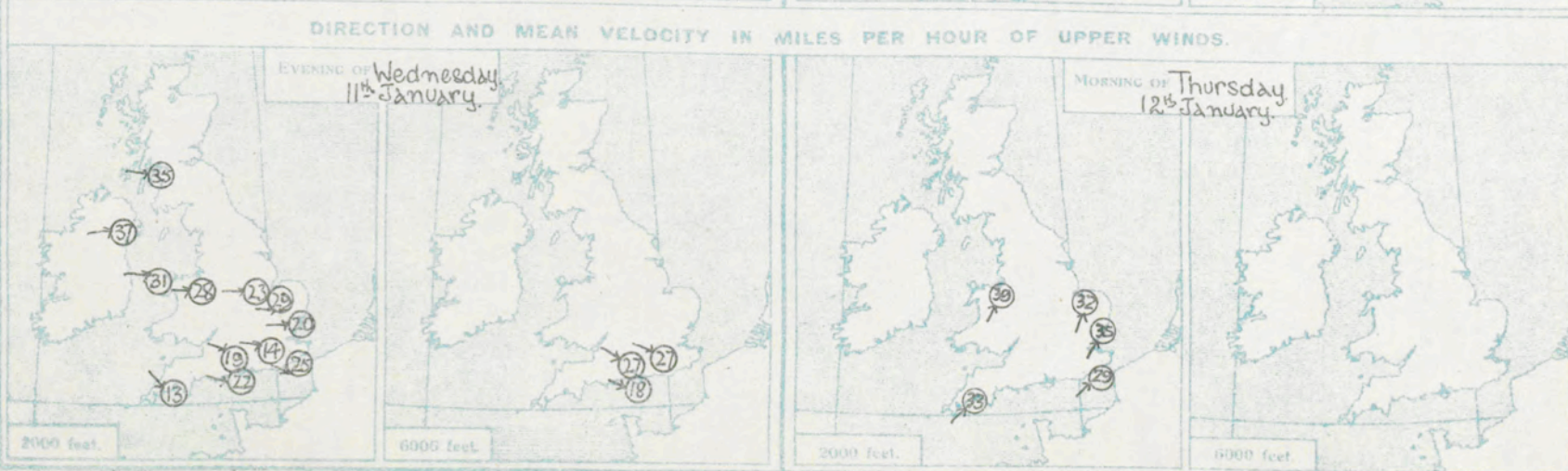
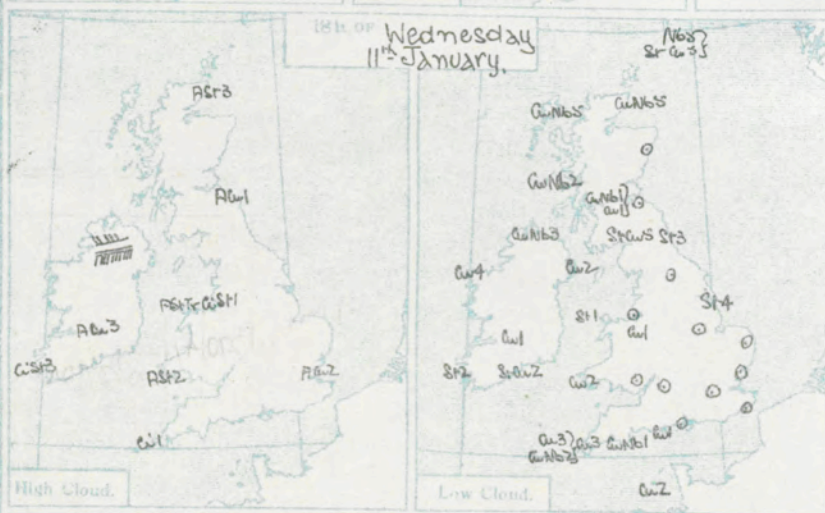
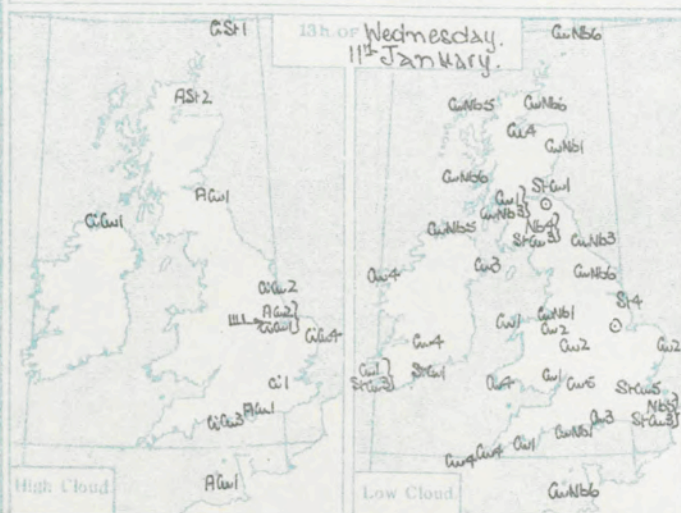
and so on.

## In Tables.

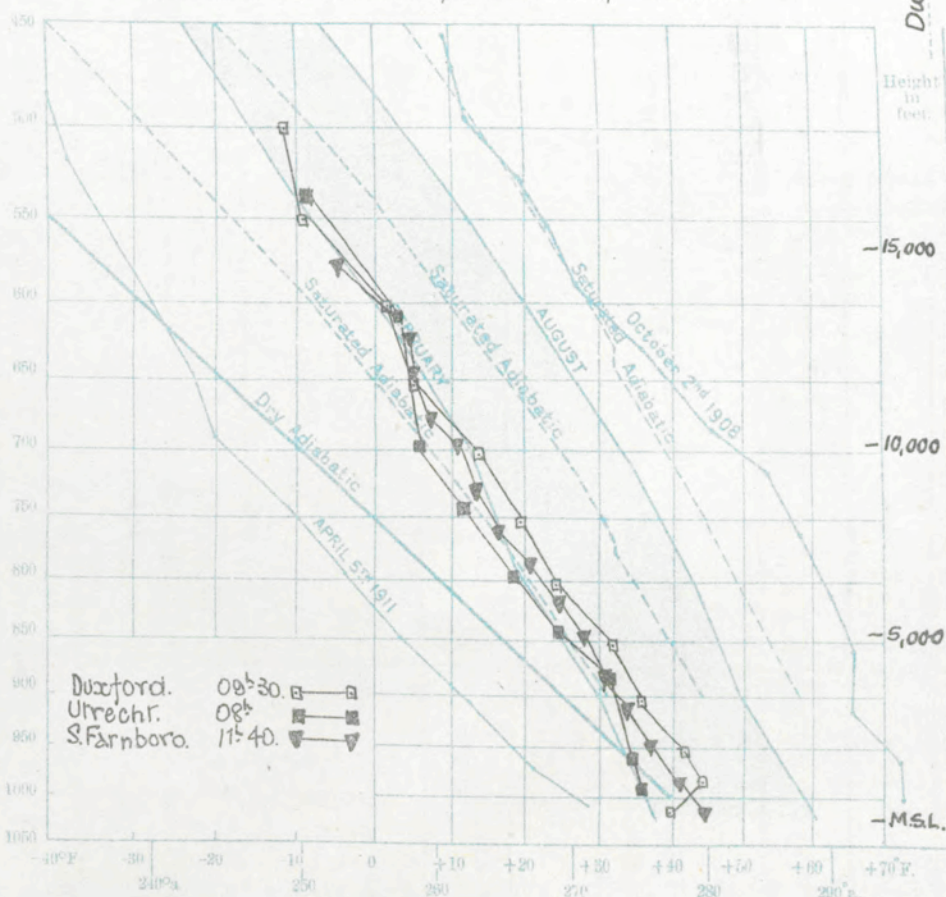
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single lines).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## UPPER AIR TEMPERATURES.

WEDNESDAY, 11<sup>th</sup> JANUARY, 1928.

Duxford

Height in feet.

-15,000

-10,000

-5,000

-M.S.L.

Duxford. 08<sup>h</sup> 30. Urrechr. 08<sup>h</sup>. S. Farnboro. 11<sup>h</sup> 40.Duxford. 08<sup>h</sup> 30. Urrechr. 08<sup>h</sup>. S. Farnboro. 11<sup>h</sup> 40.



# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	South Farnboro	Leuchars	Biggin Hill	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Croydon	Catter- water	Lymington	Lymington	Catter- water	Calshot	Calshot	Place																		
Time	13: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	09: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	10: 11 <sup>4</sup>	12: 11 <sup>4</sup>	11: 11 <sup>4</sup>	12: 11 <sup>4</sup>	13: 11 <sup>4</sup>	10: 11 <sup>4</sup>	08: 11 <sup>4</sup>	12: 11 <sup>4</sup>	12: 11 <sup>4</sup>	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.	Feet																		
Surf.	285	8	255	23	240	8	285	27	220	15	270	20	285	15	260	16	235	11	250	18	260	8	235	9	235	8	230	7	310	12	305	13	205	10	295	12	275	12	Surf.
1000	280	12	255	15	265	14	270	29	255	28	275	24	275	29	255	28	285	24	265	26	275	23	270	19	265	17	270	17	320	14	270	22	225	23	320	25	280	14	1000
2000			265	34	270	15	285	29	285	41	285	33	280	31	270	37	270	29	275	35	295	23	270	26	265	20	285	23	330	19	260	21	245	34	310	29	285	17	2000
3000			275	39	270	20	290	25	285	41	290	35	285	27	280	39	275	31	275	30	295	20	260	31	280	22	275	27	330	28	260	27	245	33	305	27	280	19	3000
4000			285	39	270	23	290	29	285	29	285	23	280	30			275	19					270	27	280	25									280	23	4000		
5000			290	39	270	24	285	34	285	29	285	29	280	32	275	32	280	18	285	18			260	24	290	29									265	29	5000		
6000					280	32	285	34		285	29	310	65	275	31	280	30							255	28	275	37								255	38	6000		
8000					275	31	285	35		275	31	310	65	270	31	280	30							250	44	255	20								255	38	8000		
10000					260	46	10 <sup>4</sup>			280	35	310	65	280	35	12:50								230	46							10 <sup>4</sup>		255	44	10000			
12000					265	21	6.5			(9,000)	10 <sup>4</sup>																					6.5		245	38	12000			
Neph.				(14,000)	270	95									260	69																	260	75	(13,000)		Neph.		
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lymington	Catter- water	Calshot	Calshot	Calshot	Calshot	Place																			
Time		16: 11 <sup>4</sup>	17: 11 <sup>4</sup>	16: 11 <sup>4</sup>		17: 11 <sup>4</sup>	14: 11 <sup>4</sup>	16: 11 <sup>4</sup>	17: 11 <sup>4</sup>		15: 11 <sup>4</sup>			16: 11 <sup>4</sup>		16: 11 <sup>4</sup>	17: 11 <sup>4</sup>	23: 11 <sup>4</sup>	23: 11 <sup>4</sup>	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.		225	12	210	8	270	24			265	10	270	16	265	10	260	8	280	4			285	6					305	10			335	10	275	8	265	3	Surf.	
1000		270	30	250	32	280	28			275	27	280	22	285	17	270	25	305	16			300	13					310	19			315	13	280	22	290	19	1000	
2000		280	35	265	37	280	31			285	28	285	23	280	20	280	29	305	19			290	14					310	25			320	13	285	22	275	14	2000	
3000		280	49	270	35	280	27			290	27	290	31			295	33	310	23			295	14					300	17			320	12	295	21	275	13	3000	
4000		280	48	270	35					290	31	285	32			290	31	310	28			295	21					290	23					290	19	295	17	4000	
5000										280	40							310	25															280	18	290	18	5000	
6000																		305	27															285	18	280	15	6000	
8000																		295	26															280	20	275	19	8000	
10000																		275	35															(7,000)	285	30	10000		
12000																		260	32																280	29	12000		
Neph.				260	105													(16,000)															260	45				Neph.	
Place	Aberdeen	Leuchars	Renfrew	Bircham Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lymington	Catter- water	Calshot	Calshot	Place																			
Time				6h. 12 <sup>4</sup>			6h. 12 <sup>4</sup>		9h. 12 <sup>4</sup>							6h. 12 <sup>4</sup>	8h. 12 <sup>4</sup>	7h. 12 <sup>4</sup>	7h. 12 <sup>4</sup>	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.					225	16			210	11							250	10			Surf.																		
1000					220	23			235	37							245	25			1000																		
2000					210	32			225	35							245	29			2000																		
3000									245	39							240	26			3000																		
4000									235	40							245	30			4000																		
5000									240	39											5000																		
6000																					6000																		
8000																					8000																		
10000																					10000																		
12000																					12000																		
Neph.																					Neph.																		

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
	mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%
Dorford. 08:30. 11/1/28.	102.5	M.S.L.	—	—	—	S. Farnboro. 11:40. 11/1/28.	1014	M.S.L.	—	—	—		tab.	Feet	—	—	—
	1009	100	40	38	84		976	230	45	—	—			M.S.L.	—	—	—
	973	1090	44	42	85		942	1030	41	—	—						
	956	1720	42	40	84		907	1960	37	—	—						
	900	3180	37	30	44		897	3000	34	—	—						
	850	4690	33	26	41		876	3940	31	—	—						
	800	6270	25	20	?		842	4910	28	—	—						
	750	7930	20	15	43		812	5840	25	—	—						
	700	9700	14	8	—		782	6820	21	—	—						
	650	11580	6	4	—		753	7800	17	—	—						
	600	13580	2	-1	—		724	8800	14	—	—						
	550	15760	-9	-10	—		687	10130	11	—	—						
	500	18000	-11	-12	—		674	10800	8	—	—						
	Haze top	700 mbs.					645	11600	5	—	—						
							620	12700	—	—	—						
							596		—	—	—						
							572		-4	—	—						
Utrecht. 08: 11/1/28.	988	M.S.L.	—	—	—		M.S.L.	—	—	—	—		M.S.L.	—	—	—	—
	952	670	36	—	85												
	875	1650	34	—	65												
	839	3280	32	—	35												
	788	4920	25	—	35												
	759	6560	19	—	45												
	692	8200	12	—	55												
	605	9840	7	—	45												
	531	13120	3	—	35												
		16400	-8	—	25												





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, FRIDAY, 13<sup>th</sup> JANUARY, 1928.

No. B. 24,158.

U.A.S. 3,210.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:-

— No speed given.

— 5 m.p.h.

— 10 m.p.h.

— 15 m.p.h.

— 20 m.p.h.

— 25-35 m.p.h.

— 35-45 "

— 45-55 "

— 55-65 "

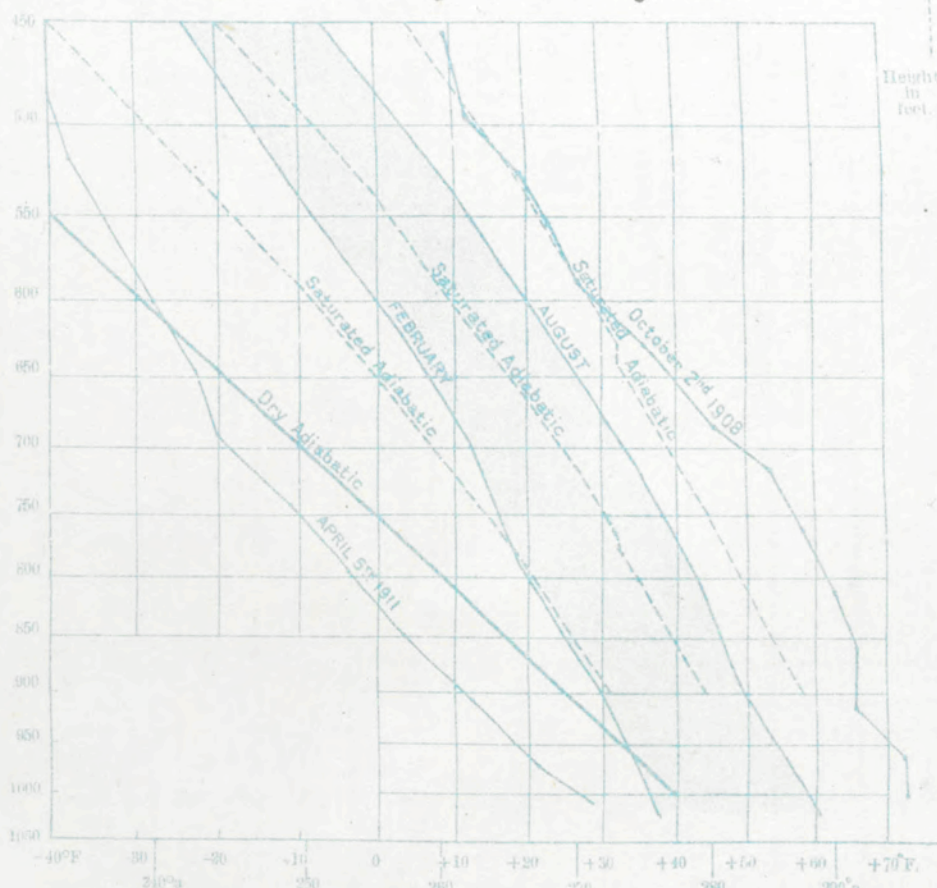
— and so on.

## In Tables.

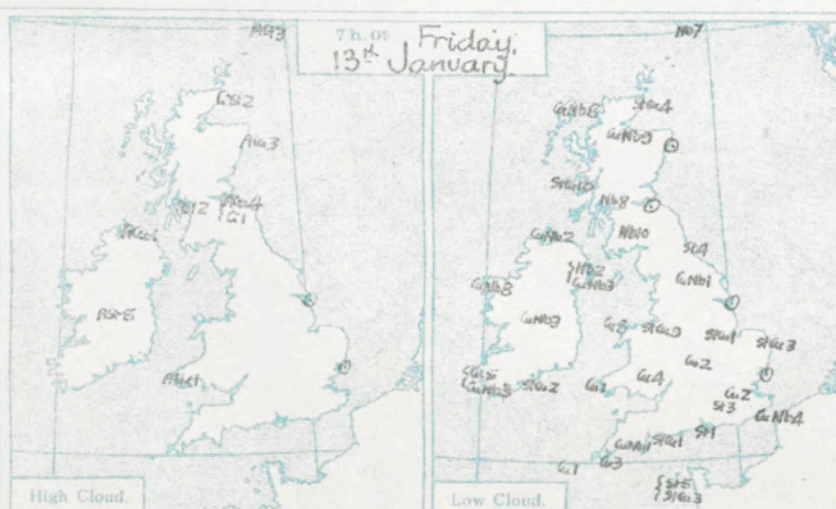
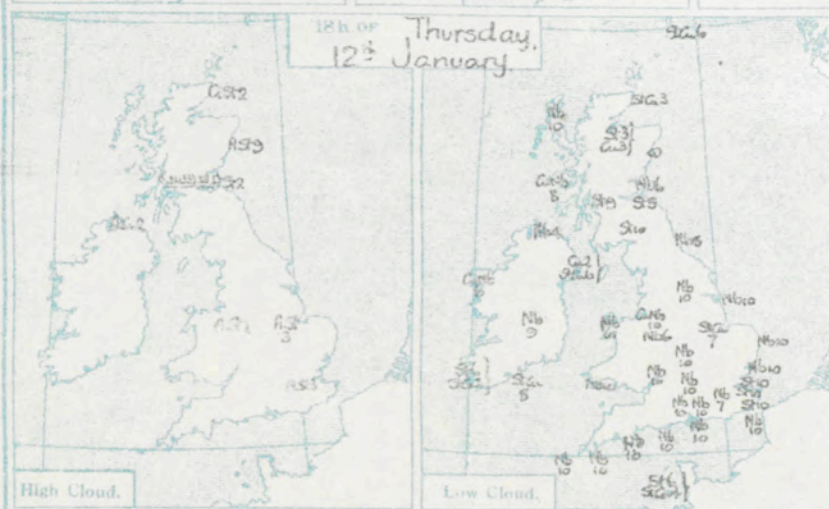
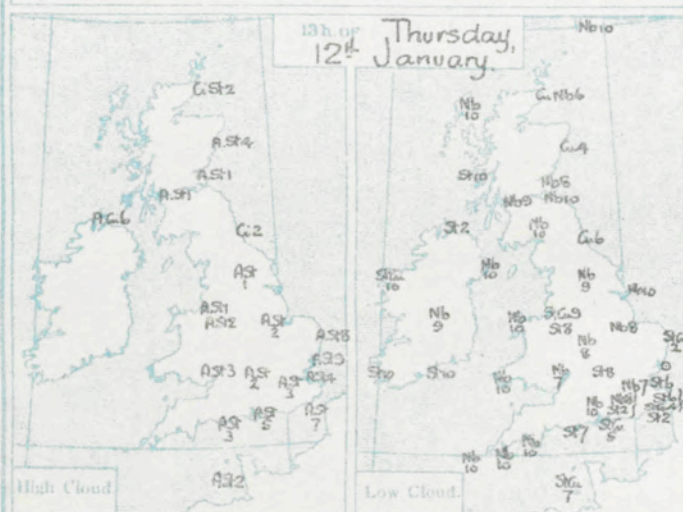
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

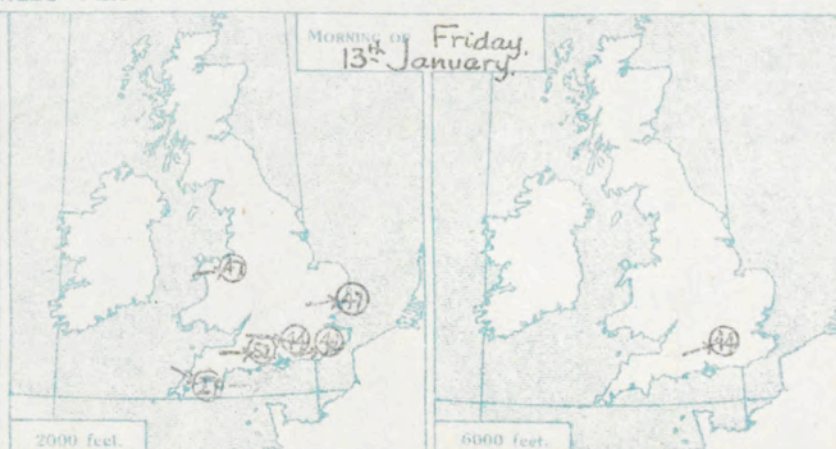
## UPPER AIR TEMPERATURES.

Thursday, 12<sup>th</sup> January, 1928.

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe.	Bircham Newbn	Worthy Down.	South Farnboro	Croydon	Kew.	Shoebury-ness.	Lympne.	Guernsey	Catte-water.	Calshot.	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.									170 10	220 16	210 20	195 20	190 8	180 13	190 14	200 24	210 16			200 30	Surf.
1000									210 33	215 41	225 29	210 62	220 35	215 33	210 42	215 45	220 28			205 42	1000
2000									230 38	225 39	230 46		230 41	230 44		225 43	240 27			210 47	2000
3000										240 45	235 47		230 39	240 48		235 44	240 39			210 48	3000
4000										245 46	240 43			245 43		240 48					4000
5000																					5000
6000																					6000
8000																					8000
10000																					10000
12000																					12000
Neph.																					Neph.
Place.	Leuchars.	Renfrew.	Aldergrove	Holyhead		Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down	South Farnboro	Croydon.	Kew.	Shoebury-ness.	Lympne.		Catte-water.	Calshot.		Place.	
Time.			17 <sup>h</sup> 12 <sup>m</sup>				16 <sup>h</sup> 12 <sup>m</sup>													Time.	
Type.																				Type.	
Feet Surf.			200 16				205 31													Feet Surf.	
1000			220 35				220 37													1000	
2000			285 52				225 52													2000	
3000			285 54																	3000	
4000			235 53																	4000	
5000																				5000	
6000																				6000	
8000	15 <sup>h</sup> 40 <sup>m</sup>																			8000	
10000	Ci																			10000	
12000																				12000	
Neph.	270 105																			Neph.	
Place.	Aberdeen	Leuchars.	Renfrew.		Aldergrove	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down	South Farnboro	Croydon	Kew.	Shoebury-ness.	Lympne.		Catte-water.	Calshot.	Place.	
Time.							6h. 13 <sup>m</sup>		8h. 13 <sup>m</sup>		8h. 13 <sup>m</sup>	8h. 13 <sup>m</sup>	7h. 13 <sup>m</sup>					8h. 13 <sup>m</sup>	6h. 13 <sup>m</sup>	Time.	
Type.																		b.		Type.	
Feet Surf.							250 15		250 16		255 9	255 12	245 14					295 16	245 15	Feet Surf.	
1000							270 47		2												

[illegible]

Place.	Calais	Messina	Benghazi	Lindenberg	Palermo	Taranto
Time.	10 <sup>h</sup> 12 <sup>m</sup>	13 <sup>h</sup> 12 <sup>m</sup>	13 <sup>h</sup> 12 <sup>m</sup>	13 <sup>h</sup> 12 <sup>m</sup>	13 <sup>h</sup> 12 <sup>m</sup>	13 <sup>h</sup> 12 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	230	43	-	-	290	7
3,280	240	33	40	7	290	9
4,920	250	31	-	-	281	25
6,560	250	27	-	-	281	25
9,840	250	31	110	1	250	17
13,120	270	38	-	-	293	27
16,400			-	-	(9,200 ft)	
19,680			40	14		

Place.	Halle	Quabes	Bizerta	Turin	Helsinki	Malta
Time.	13 <sup>h</sup> 12 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	25	350	7	290	?
3,280	293	22	20	14	320	26
4,920	293	18	350	8	290	25
6,560	(360°)	320	?		300	23
9,840					300	23
13,120					320	7
16,400						
19,680						

Place.	Halle	Quabes	Bizerta	Turin	Helsinki	Malta
Time.	13 <sup>h</sup> 12 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	25	350	7	290	?
3,280	293	22	20	14	320	26
4,920	293	18	350	8	290	25
6,560	(360°)	320	?		300	23
9,840					300	23
13,120					320	7
16,400						
19,680						

Place.	Halle	Quabes	Bizerta	Turin	Helsinki	Malta
Time.	13 <sup>h</sup> 12 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	25	350	7	290	?
3,280	293	22	20	14	320	26
4,920	293	18	350	8	290	25
6,560	(360°)	320	?		300	23
9,840					300	23
13,120					320	7
16,400						
19,680						

Place.	Halle	Quabes	Bizerta	Turin	Helsinki	Malta
Time.	13 <sup>h</sup> 12 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	25	350	7	290	?
3,280	293	22	20	14	320	26
4,920	293	18	350	8	290	25
6,560	(360°)	320	?		300	23
9,840					300	23
13,120					320	7
16,400						
19,680						

Place.	Halle	Quabes	Bizerta	Turin	Helsinki	Malta
Time.	13 <sup>h</sup> 12 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>	7 <sup>h</sup> 13 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	25	350	7	290	?
3,280	293	22	20	14	320	26
4,920	293	18	350	8	290	25
6,560	(360°)	320	?		300	23
9,840					300	23
13,120					320	7
16,400						
19,680						





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 14<sup>TH</sup> JANUARY, 1928.

No. 5. 24,159.

U.A.S. 3,211.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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

h = balloon with tail. d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15

— 16-25

— 26-35 m.p.h.

— 36-45

— 46-55

— 56-65

— 66-75

— 76-85

— 86-95

— 96-105

— 106-115

— 116-125

— 126-135

— 136-145

— 146-155

— 156-165

— 166-175

— 176-185

— 186-195

— 196-205

— 206-215

— 216-225

— 226-235

— 236-245

— 246-255

— 256-265

— 266-275

— 276-285

— 286-295

— 296-305

— 306-315

— 316-325

— 326-335

— 336-345

— 346-355

— 356-365

— 366-375

— 376-385

— 386-395

— 396-405

— 406-415

— 416-425

— 426-435

— 436-445

— 446-455

— 456-465

— 466-475

— 476-485

— 486-495

— 496-505

— 506-515

— 516-525

— 526-535

— 536-545

— 546-555

— 556-565

— 566-575

— 576-585

— 586-595

— 596-605

— 606-615

— 616-625

— 626-635

— 636-645

— 646-655

— 656-665

— 666-675

— 676-685

— 686-695

— 696-705

— 706-715

— 716-725

— 726-735

— 736-745

— 746-755

— 756-765

— 766-775

— 776-785

— 786-795

— 796-805

— 806-815

— 816-825

— 826-835

— 836-845

— 846-855

— 856-865

— 866-875

— 876-885

— 886-895

— 896-905

— 906-915

— 916-925

— 926-935

— 936-945

— 946-955

— 956-965

— 966-975

— 976-985

— 986-995

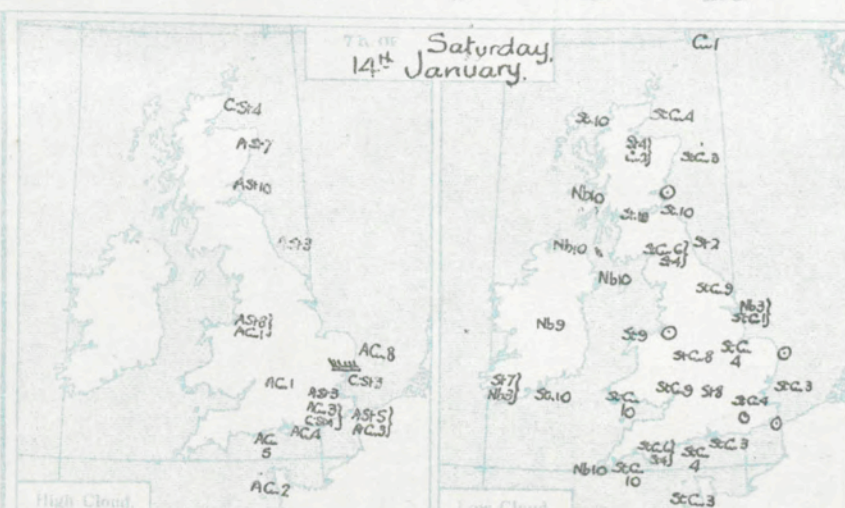
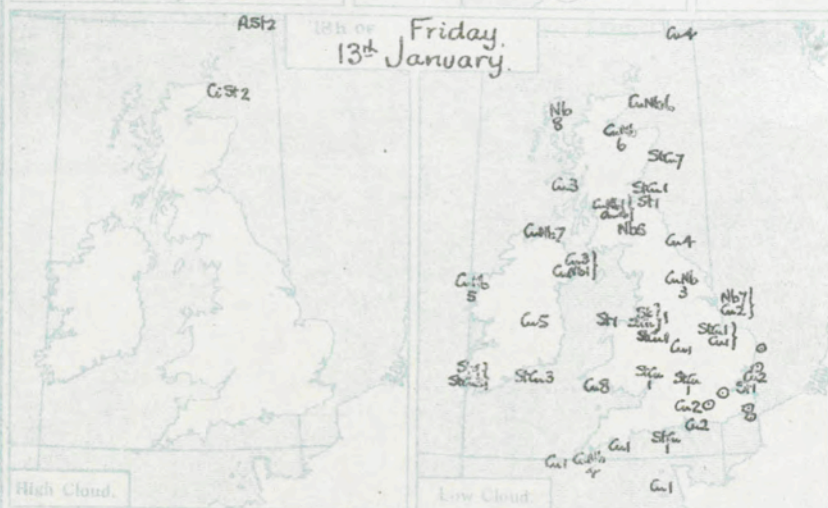
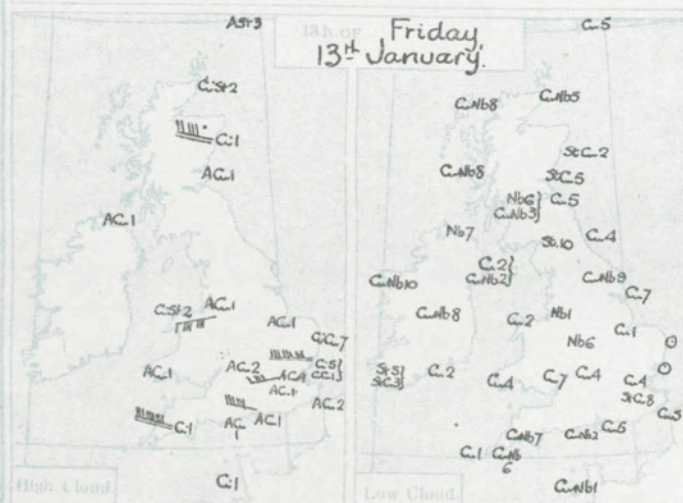
— 996-1005

## In Tables.

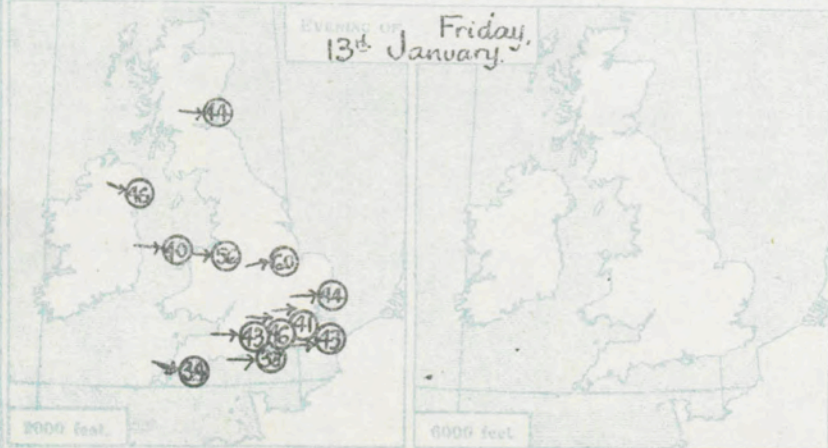
Directions are given in degrees, velocities in m.p.h.

Speeds of high clouds are computed for an average height of 5 miles for alto type clouds (double lines) and 3 miles for alto type clouds (single line).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Bircham Newton	Worthy Down	Cranwell	Croydon	Kew	Croydon	Lymington	Lymington	Cattewater	Calshot	Calshot	Place
Time	13 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	9 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	10 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	11 <sup>h</sup> 13 <sup>m</sup>	12 <sup>h</sup> 13 <sup>m</sup>	10 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	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.	Feet
Surf.			245 25	250 27	250 22	235 16	260 38	260 18	240 23	260 17	235 20	250 16	240 27	275 13		245 13	245 17	250 12	235 25	240 22	Surf.
1000			250 40	265 42	255 43	260 40	260 37	250 26	250 67	260 45	245 40	265 31	250 53	260 31		265 29	260 23	270 25	290 30	210 35	1000
2000			250 56		260 35	255 44	270 43	265 27	260 66	275 41	265 45	270 34	265 76	265 40				270 51	300 29	260 37	2000
3000										280 41	270 57	275 43							300 39	265 41	3000
4000								10 <sup>h</sup> A.Cu		10 <sup>h</sup> G.Cu	275 46										4000
5000								250 66		270 50								10 <sup>h</sup> C.			5000
6000								230 95		270 56								290 75			6000
8000								13 <sup>h</sup> A.Cu		13 <sup>h</sup> C.								13 <sup>h</sup> C.		13 <sup>h</sup>	8000
10000					10 <sup>h</sup>			250 66												A.Cu	10000
12000		Ci			CiCu										A.Cu					A.Cu	12000
Neph.	290 50				250 75					270 90					260 39				290 90	290 60	Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lymington	Cattewater	Calshot	Calshot	Place			
Time	17 <sup>h</sup> 13 <sup>m</sup>	16 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>	16 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>	16 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>		17 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>			16 <sup>h</sup> 13 <sup>m</sup>	16 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>	23 <sup>h</sup> 13 <sup>m</sup>	Time			
Type														b.	b.			Type			
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.	240 20	285 25	250 19	260 28			275 20	245 20	250 18		265 17	260 15	250 18		250 10	285 20	250 10	245 17	Surf.		
1000	265 31	285 39	275 45	265 27			270 41	260 45	260 39		275 33	270 39	260 29		265 31	290 27	255 25	265 33	1000		
2000	280 44		295 46	275 40			275 56	265 60	270 44		280 43	275 46	270 41		275 43	300 34	270 38	275 37	2000		
3000	290 43		305 38				280 69	225 66	275 45		285 43	285 44	270 39			305 34	275 38	285 37	3000		
4000									275 52		280 52	285 37					250 48	285 35	4000		
5000																		230 43	5000		
6000																			6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.																			Neph.		
Place	Aberdeen	Leuchars	Renfrew	Bircham Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lymington	Cattewater	Calshot	Place		
Time				6 <sup>h</sup> 14 <sup>m</sup>			6 <sup>h</sup> 14 <sup>m</sup>	7 <sup>h</sup> 14 <sup>m</sup>	8 <sup>h</sup> 14 <sup>m</sup>		8 <sup>h</sup> 14 <sup>m</sup>	8 <sup>h</sup> 14 <sup>m</sup>	7 <sup>h</sup> 14 <sup>m</sup>			6 <sup>h</sup> 14 <sup>m</sup>		7 <sup>h</sup> 14 <sup>m</sup>	Time		
Type											b								Type		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet		
Surf.				250 20			155 7	230 8	240 11		155 5	230 8	245 7			230 12		215 8	Surf.		
1000				265 35			205 17	260 32	270 35		235 23	250 26	265 25			270 25		235 29	1000		
2000				270 35			235 32	275 31	275 33		240 33	250 29	270 30			275 26		235 30	2000		
3000				280 32			240 36	270 32	290 33		240 30	250 29	275 31			275 26		235 38	3000		
4000				300 27			250 37	275 30	290 33				270 39						4000		
5000							250 34		260 31										5000		
6000																			6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.									270 65										Neph.		

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.	
Duxford 9 <sup>h</sup> 45 <sup>m</sup> 13.1.28.	mb. 1003	Feet. M.S.L.	°F. —	°F. —	% —	Duxford 14 <sup>h</sup> 15 <sup>m</sup> 13.1.28.	mb. 1003	Feet. M.S.L.	°F. —	°F. —	% —	S. Farnborough 14 <sup>h</sup> 15 <sup>m</sup> 13.1.28.	mb. 1006	Feet. M.S.L.	°F. —	°F. —	% —
	999	100	45	43	85		999	100	47	43	73		998	230	47	—	—
	994	1090	41	39	84		994	1090	45	42	78		976	810	16.5	—	—
	950	1490	40	38	84		950	1480	45	40	69		941	1780	41	—	—
	900	2900	35	33	83		900	2920	39	36	77		907	2790	36.5	—	—
	850	4410	29	27	81		850	4450	33	30	74		875	3730	32	—	—
	800	6000	24	22	78		800	6040	29	26	73		842	4700	28	—	—
	750	7580	19	17	65		750	7730	25	22	70		812	5650	27	—	—
	700	9440	13	11	—		700	9510	16	14	—		781	6660	23	—	—
	650	11300	6	4	—		650	11390	8	4	—		752	7630	18.5	—	—
	600	13300	0	-2	—		600	13400	2	1	—		724	8600	15	—	—
	550	15470	-8	-10	—		550	15550	-8	—	—		696	9600	14	—	—
	Haze top	5,000 ft.					Haze top	7,000 mb.					Cloud 907	-842 mb.			
	St. Q. 9/10	800 mb.					Fr. Q. 9/10	850-800 mb.					Very bonny up to	842 mb.			
Lindenberg 7 <sup>h</sup> 13.1.28.	1008	M.S.L.	—	—	—	Utrecht 9 <sup>h</sup> 13.1.28.	1003	M.S.L.	—	—	—		M.S.L.	—	—	—	—
	994	348	37	—	84		979	670	45	—	95						
	927	2218	32.7	—	76		943	1650	41	—	85						
	890	3280	35.2	—	70		887	3280	39	—	65						
	858	4270	33.4	—	64		833	4920	30	—	65						
	847	4600	35.6	—	58		783	6560	25	—	65						
	816	5570	32	—	52		735	8200	19	—	36						
							688	9340	18	—	15						
							604	13120	7	—	15						
							529	16400	-4	—	15						

## UPPER WINDS ABROAD.

Place	Calais	Utrecht	Turin	Loghorn	Tunis	Malta
Time	10 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	13 <sup>h</sup> 13 <sup>m</sup>	17 <sup>h</sup> 13 <sup>m</sup>	16 <sup>h</sup> 13 <sup>m</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	260 54	260 34	200 4	-	310 18	320 7
3,280	260 51	260 40	-	280 7	310 21	(1,000 ft.)
4,920	260 49	260 51	200 4	-	310 20	310 7
6,560	260 39	-	-	270 17	-	(2,000 ft.)
8,200	-	-	-	210 9	-	310 10
13,120	-	-	270 16	-	-	(3,000 ft.)
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-
Place	Oran	Lindenberg	De Bilt	Rome	Naples	Turin
Time	6 <sup>h</sup> 14 <sup>m</sup>	6 <sup>h</sup> 14 <sup>m</sup>	8 <sup>h</sup> 14 <sup>m</sup>	7 <sup>h</sup> 14 <sup>m</sup>	7 <sup>h</sup> 14 <sup>m</sup>	7 <sup>h</sup> 14 <sup>m</sup>
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	230 9	248 52	300 24	230 3	-	20 4
3,280	210 13	259 54	250 28	230 5	250 14	20 1
4,920	200 16	253 54	270 31	-	270 14	-
6,560	220 31	-	-	250 4	320 12	-
8,200	-	-	-	-	-	-
13,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 15<sup>th</sup> JANUARY, 1928.

No. B. 24,160.

U.A.S. 3,212.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 6th, 1911, and October 2nd, 1906, 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 Table Page.

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

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-10 " "

— 11-20 " "

— 21-35 m.p.h.

— 36-45 " "

— 46-55 " "

— 56-65 " "

— 66-75 " "

— 76-85 " "

— 86-95 " "

— 96-105 " "

— 106-115 " "

— 116-125 " "

— 126-135 " "

— 136-145 " "

— 146-155 " "

— 156-165 " "

— 166-175 " "

— 176-185 " "

— 186-195 " "

— 196-205 " "

— 206-215 " "

— 216-225 " "

— 226-235 " "

— 236-245 " "

— 246-255 " "

— 256-265 " "

— 266-275 " "

— 276-285 " "

— 286-295 " "

— 296-305 " "

— 306-315 " "

— 316-325 " "

— 326-335 " "

— 336-345 " "

— 346-355 " "

— 356-365 " "

— 366-375 " "

— 376-385 " "

— 386-395 " "

— 396-405 " "

— 406-415 " "

— 416-425 " "

— 426-435 " "

— 436-445 " "

— 446-455 " "

— 456-465 " "

— 466-475 " "

— 476-485 " "

— 486-495 " "

— 496-505 " "

— 506-515 " "

— 516-525 " "

— 526-535 " "

— 536-545 " "

— 546-555 " "

— 556-565 " "

— 566-575 " "

— 576-585 " "

— 586-595 " "

— 596-605 " "

— 606-615 " "

— 616-625 " "

— 626-635 " "

— 636-645 " "

— 646-655 " "

— 656-665 " "

— 666-675 " "

— 676-685 " "

— 686-695 " "

— 696-705 " "

— 706-715 " "

— 716-725 " "

— 726-735 " "

— 736-745 " "

— 746-755 " "

— 756-765 " "

— 766-775 " "

— 776-785 " "

— 786-795 " "

— 796-805 " "

— 806-815 " "

— 816-825 " "

— 826-835 " "

— 836-845 " "

— 846-855 " "

— 856-865 " "

— 866-875 " "

— 876-885 " "

— 886-895 " "

— 896-905 " "

— 906-915 " "

— 916-925 " "

— 926-935 " "

— 936-945 " "

— 946-955 " "

— 956-965 " "

— 966-975 " "

— 976-985 " "

— 986-995 " "

— 996-1005 " "

— 1006-1015 " "

— 1016-1025 " "

— 1026-1035 " "

— 1036-1045 " "

— 1046-1055 " "

— 1056-1065 " "

— 1066-1075 " "

— 1076-1085 " "

— 1086-1095 " "

— 1096-1105 " "

— 1106-1115 " "

— 1116-1125 " "

— 1126-1135 " "

— 1136-1145 " "

— 1146-1155 " "

— 1156-1165 " "

— 1166-1175 " "

— 1176-1185 " "

— 1186-1195 " "

— 1196-1205 " "

— 1206-1215 " "

— 1216-1225 " "

— 1226-1235 " "

— 1236-1245 " "

— 1246-1255 " "

— 1256-1265 " "

— 1266-1275 " "

— 1276-1285 " "

— 1286-1295 " "

— 1296-1305 " "

— 1306-1315 " "

— 1316-1325 " "

— 1326-1335 " "

— 1336-1345 " "

— 1346-1355 " "

— 1356-1365 " "

— 1366-1375 " "

— 1376-1385 " "

— 1386-1395 " "

— 1396-1405 " "

— 1406-1415 " "

— 1416-1425 " "

— 1426-1435 " "

— 1436-1445 " "

— 1446-1455 " "

— 1456-1465 " "

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— 1556-1565 " "

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— 1586-1595 " "

— 1596-1605 " "

— 1606-1615 " "

— 1616-1625 " "

— 1626-1635 " "

— 1636-1645 " "

— 1646-1655 " "

— 1656-1665 " "

— 1666-1675 " "

— 1676-1685 " "

— 1686-1695 " "

— 1696-1705 " "

— 1706-1715 " "

— 1716-1725 " "

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— 1736-1745 " "

— 1746-1755 " "

— 1756-1765 " "

— 1766-1775 " "

— 1776-1785 " "

— 1786-1795 " "

— 1796-1805 " "

— 1806-1815 " "

— 1816-1825 " "

— 1826-1835 " "

— 1836-1845 " "

— 1846-1855 " "

— 1856-1865 " "

— 1866-1875 " "

— 1876-1885 " "

— 1886-1895 " "

— 1896-1905 " "

— 1906-1915 " "

— 1916-1925 " "

— 1926-1935 " "

— 1936-1945 " "

— 1946-1955 " "

— 1956-1965 " "

— 1966-1975 " "

— 1976-1985 " "

— 1986-1995 " "

— 1996-2005 " "

— 2006-2015 " "

— 2016-2025 " "

— 2026-2035 " "

— 2036-2045 " "

— 2046-2055 " "

— 2056-2065 " "

— 2066-2075 " "

— 2076-2085 " "

— 2086-2095 " "

— 2096-2105 " "

— 2106-2115 " "

— 2116-2125 " "

— 2126-2135 " "

— 2136-2145 " "

— 2146-2155 " "

— 2156-2165 " "

— 2166-2175 " "

— 2176-2185 " "

— 2186-2195 " "

— 2196-2205 " "

— 2206-2215 " "

— 2216-2225 " "

— 2226-2235 " "

— 2236-2245 " "

— 2246-2255 " "

— 2256-2265 " "

— 2266-2275 " "

— 2276-2285 " "

— 2286-2295 " "

— 2296-2305 " "

— 2306-2315 " "

— 2316-2325 " "



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Birkham Heath	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury ness	Lympne	Catte- water	Calshot	Place						
Time.				12h. 14 <sup>h</sup>			13h. 14 <sup>h</sup>	12h. 14 <sup>h</sup>	12h. 14 <sup>h</sup>	12			10h. 14 <sup>h</sup>	13h. 14 <sup>h</sup>	11h. 14 <sup>h</sup>	10h. 14 <sup>h</sup>		10h. 14 <sup>h</sup>	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.	Feet						
Surf.					205	15			180	13	180	15	185	9	200	15	210	10	240	10	210	17	Surf.		
1000					235	35			210	27	220	29	235	31	230	34	210	40	235	26	250	25	205	27	1000
2000					235	39			225	41	230	30	235	33	235	36			245	30	250	27			2000
3000					240	37					240	28	240	32	240	39			240	36					3000
4000					245	31					240	25	245	33	255	33			245	30					4000
5000					270	32													245	32					5000
6000									12h. 30m.				245	42					250	38					6000
8000									G				255	44					250	34					8000
10000							13h		270	50			(7,000')												10000
12000							G		G				270	54											12000
Neph.					190	60			270	85															Neph.
Place.	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lympne		Catte- water	Calshot	Place.						
Time.			16h. 14 <sup>h</sup>			17h. 14 <sup>h</sup>												24h. 14 <sup>h</sup>	Time.						
Type.			b																Type.						
Feet																			Feet						
Surf.			220	13			255	10										220	8	Surf.					
1000			240	35			270	32										250	29	1000					
2000			250	38														260	30	2000					
3000			250	41														260	31	3000					
4000			250	41														255	43	4000					
5000			255	42			16h													5000					
6000			255	39			G													6000					
8000			250	40			240	51												8000					
10000			(7,000')																	10000					
12000							G													12000					
Neph.						250	70													Neph.					
Place.	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lympne		Catte- water	Calshot	Place.					
Time.												8h. 15 <sup>h</sup>				7h. 15 <sup>h</sup>			7h. 15 <sup>h</sup>	Time.					
Type.																				Type.					
Feet																				Feet					
Surf.												220	12						130	12	Surf.				
1000												250	36						245	32	1000				
2000												260	40						250	37	2000				
3000												255	42						255	37	3000				
4000												255	39						255	31	4000				
5000																					5000				
6000																					6000				
8000																					8000				
10000																					10000				
12000																					12000				
Neph.																				Neph.					

## UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

## UPPER WINDS ABROAD.

Place.	Calais	Rome	Messina	Gijon	Bonghasi	Malta.
Time.	10h. 14 <sup>h</sup>	13h. 14 <sup>h</sup>	13h. 14 <sup>h</sup>	10h. 14 <sup>h</sup>	13h. 14 <sup>h</sup>	17h. 14 <sup>h</sup>
Feet.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
1,840	260 38	200 4	340 16	240 16	- -	(3,000)
9,280	260 39	340 9	340 23	250 13	330 7	310 26
4,920					340 6	(7,000)
6,560					- -	290 24
9,840					300 12	(10,000)
13,120						310 11
16,400						(16,000)
19,680						270 36
Place.	Setif	Nîmes.	Toulouse	Taranto	Zara.	Malta
Time.	17h. 14 <sup>h</sup>	18h. 14 <sup>h</sup>	18h. 14 <sup>h</sup>	07h. 15 <sup>h</sup>	07h. 15 <sup>h</sup>	06h. 5 <sup>h</sup>
Feet.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
1,840	- -	- -	- -	270 19	- -	(3,000)
9,280	310 16	310 25	280 20	- -	310 11	320 27
4,920	- -	- -	280 27	320 13	- -	(7,000)
6,560	290 13	330 34	300 29		- -	300 26
9,840	310 7	280 20			360 33	(10,000)
13,120	- -					320 16
16,400	270 23					(16,000)
19,680						350 3

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





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, MONDAY, 16<sup>TH</sup> JANUARY, 1928.

 No. B. 24,161  
 U.A.S. 3213

### DIAGRAM OF UPPER AIR TEMPERATURE.

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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

— and so on.

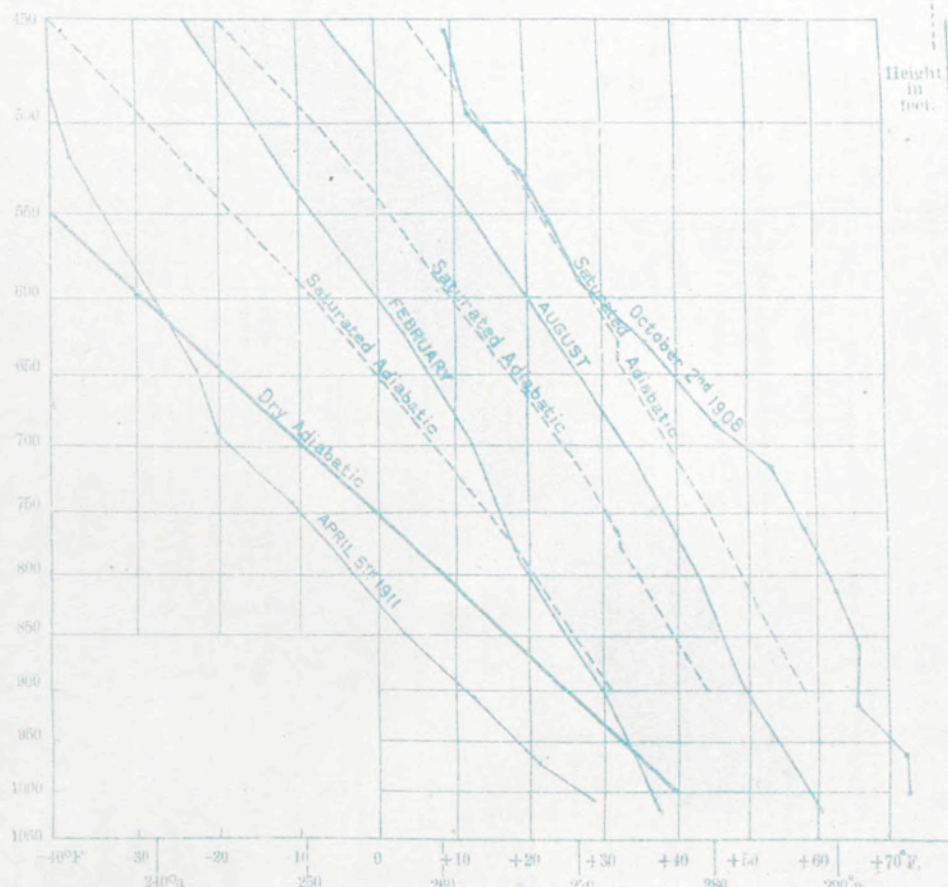
#### In Tables.

Directions are given in degrees, velocities in m.p.h.

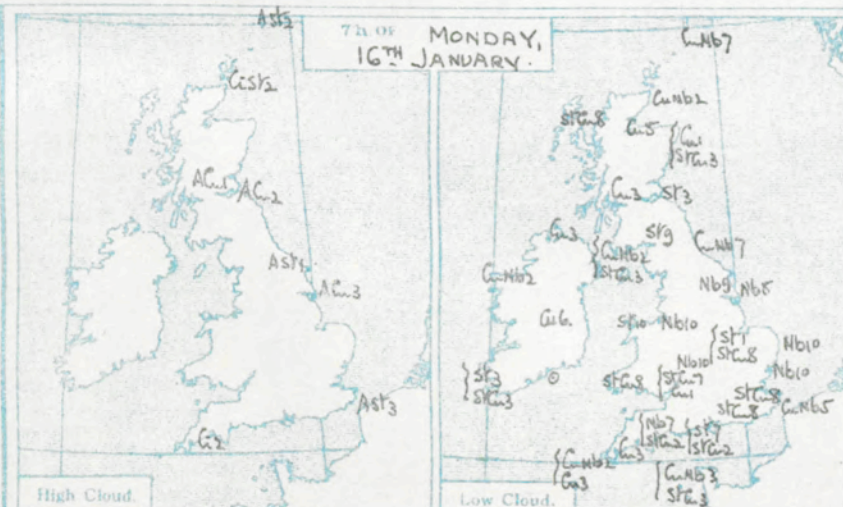
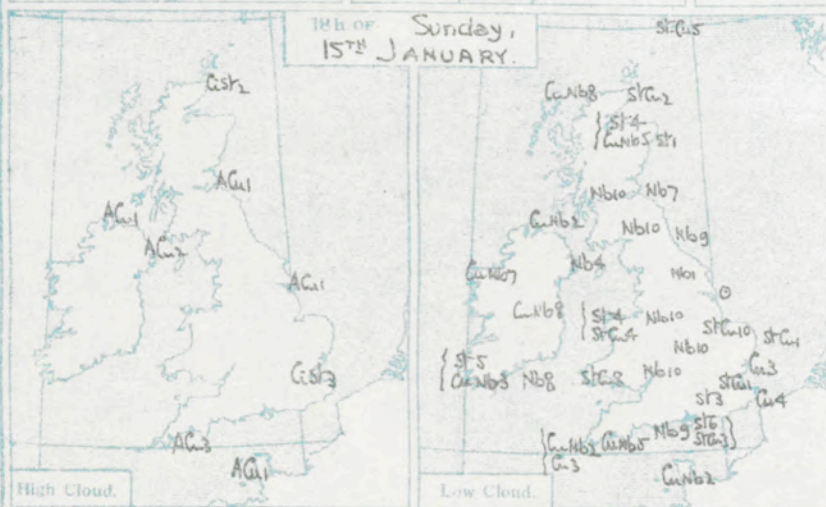
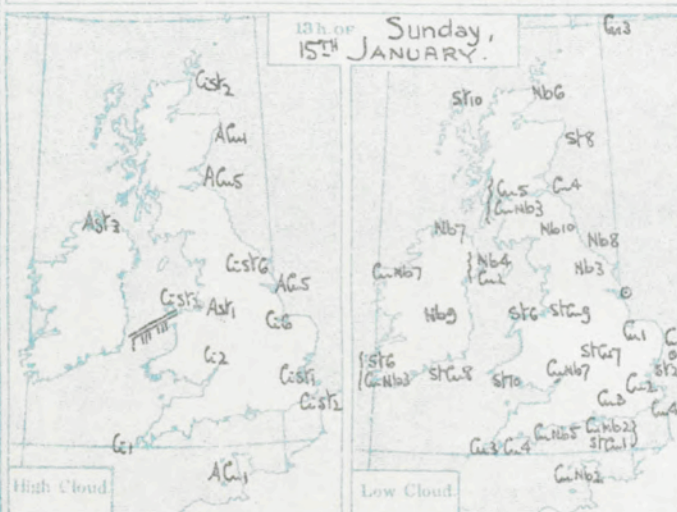
Speeds of high cloud are computed for an average height of 5 miles for alto type clouds (double lines) and 3 miles for alto type clouds (single line).

### UPPER AIR TEMPERATURES.

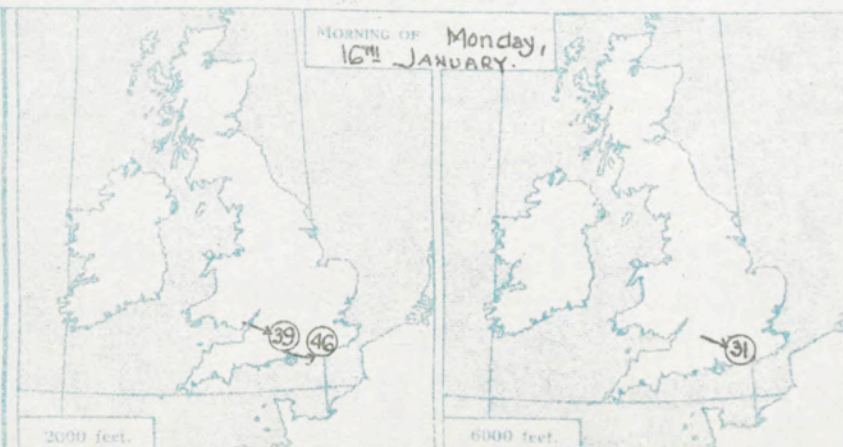
## SUNDAY, 15<sup>TH</sup> JANUARY, 1928.



### CLOUD FORMS, AMOUNTS AND MOVEMENTS.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





DIRECTION AND WIND VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS																											
Place	Aberdeen	Leuchars	Renfrew	Birchm. Newt.	Aldergrove	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon	Kew.	Shoebury ness.	Lympne.		Catte-water.	Calshot.		Place						
Time.				12h-15 <sup>th</sup>		13h-15 <sup>th</sup>						13h-15 <sup>th</sup>	14h-16 <sup>th</sup>			12h-15 <sup>th</sup>		9h-15 <sup>th</sup>	12h-15 <sup>th</sup>		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.				210	19		225	30				230	20	245	17		255	23		250	30	225	20	Surf.			
1000				230	27		230	66				235	24	235	40		245	51		260	31	245	26	1000			
2000				245	37							235	36	245	49		255	59		265	37	240	37	2000			
3000				250	41								250	48			255	60		275	37	245	36	3000			
4000				235	43								265	32			260	60		270	42	250	34	4000			
5000				250	50												260	43		270	35	255	37	5000			
6000				250	49															275	41	255	40	6000			
8000				245	47																	(7000')		8000			
10000																								10000			
12000																								12000			
Neph.							230	70	270	40														Neph.			
Place.	Leuchars.	Renfrew.	Aldergrove.	Holyhead		Sealand.	Cranwell.		Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon.	Kew.	Shoebury ness.	Lympne.		Catte-water.	Calshot.		Place.						
Time.																					Time.						
Type.																					Type.						
Feet																					Feet						
Surf.																					Surf.						
1000																					1000						
2000																					2000						
3000																					3000						
4000																					4000						
5000																					5000						
6000																					6000						
8000																					8000						
10000																					10000						
12000																					12000						
Neph.							240	75					300	45							Neph.						
Place.	Aberdeen.	Leuchars.	Renfrew.		Aldergrove.	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon.	Kew.	Shoebury ness.	Lympne.		Catte-water.	Calshot.		Place.						
Time.						6 <sup>h</sup> 16 <sup>th</sup>																					

UPPER AIR TEMPERATURES AND HUMIDITIES.																	
Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
		Feet.	°F.	°F.		%			Feet.	°F.		°F.	%			Feet.	
	mb.	M.S.L.	—	—	—		mb.	M.S.L.	—	—	—		mb.	M.S.L.	—	—	—
		M.S.L.	—	—	—			M.S.L.	—	—	—			M.S.L.	—	—	—

UPPER WINDS ABROAD.													
Place.	Colais		Abbeville		Rome		Messina		Naples		Malta.		
Time.	10h. 15 <sup>th</sup>	10h. 15 <sup>th</sup>	10h. 15 <sup>th</sup>	10h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	12h. 15 <sup>th</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	
1,840	260	33	260	29	120	3	310	18	-	-	(3,000)	20	
3,280	210	34	260	27	170	8	350	30	280	8	320	20	
4,820	260	35							270	4	(5,000)	18	
6,560									340	6	320	18	
9,840											(10,000)	18	
13,120											350	30	
16,400													
19,680													

Place.	Strasbourg		Tours.		Setif		Utrecht		Helsingfor		Malla	
Time.	18h. 15 <sup>th</sup>	18h. 15 <sup>th</sup>	18h. 15 <sup>th</sup>	18h. 15 <sup>th</sup>	18h. 15 <sup>th</sup>	18h. 15 <sup>th</sup>	8h. 16 <sup>th</sup>	8h. 16 <sup>th</sup>	7h. 16 <sup>th</sup>	7h. 16 <sup>th</sup>	6h. 16 <sup>th</sup>	6h. 16 <sup>th</sup>
1,840	250	20	-	-	-	-	220	41	80	18	290	20
3,280	270	24	270	3	320	16	230	47	110	18	(3,000)	20
4,820	270	15	280	9	320	11			60	7	270	18
6,560			280	9	-	-			360	2	(5,000)	18
9,840					350	19					300	12
13,120											(7,000)	12
16,400												
19,680												

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





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, TUESDAY, 17<sup>TH</sup> JANUARY, 1928.

No. 8. 24,62.

U.A.S. 3214.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 6th, 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 Little Page.

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

### UPPER WINDS.

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.

h = balloon with tail.

d = double theodolite ascent.

### CLOUD MOVEMENTS (Nephoscope readings)

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

— 66-75 "

— 76-85 "

— 86-95 "

— 96-105 "

— 106-115 "

— 116-125 "

— 126-135 "

— 136-145 "

— 146-155 "

— 156-165 "

— 166-175 "

— 176-185 "

— 186-195 "

— 196-205 "

— 206-215 "

— 216-225 "

— 226-235 "

— 236-245 "

— 246-255 "

— 256-265 "

— 266-275 "

— 276-285 "

— 286-295 "

— 296-305 "

— 306-315 "

— 316-325 "

— 326-335 "

— 336-345 "

— 346-355 "

— 356-365 "

— 366-375 "

— 376-385 "

— 386-395 "

— 396-405 "

— 406-415 "

— 416-425 "

— 426-435 "

— 436-445 "

— 446-455 "

— 456-465 "

— 466-475 "

— 476-485 "

— 486-495 "

— 496-505 "

— 506-515 "

— 516-525 "

— 526-535 "

— 536-545 "

— 546-555 "

— 556-565 "

— 566-575 "

— 576-585 "

— 586-595 "

— 596-605 "

— 606-615 "

— 616-625 "

— 626-635 "

— 636-645 "

— 646-655 "

— 656-665 "

— 666-675 "

— 676-685 "

— 686-695 "

— 696-705 "

— 706-715 "

— 716-725 "

— 726-735 "

— 736-745 "

— 746-755 "

— 756-765 "

— 766-775 "

— 776-785 "

— 786-795 "

— 796-805 "

— 806-815 "

— 816-825 "

— 826-835 "

— 836-845 "

— 846-855 "

— 856-865 "

— 866-875 "

— 876-885 "

— 886-895 "

— 896-905 "

— 906-915 "

— 916-925 "

— 926-935 "

— 936-945 "

— 946-955 "

— 956-965 "

— 966-975 "

— 976-985 "

— 986-995 "

— 996-1005 "

— 1006-1015 "

— 1016-1025 "

— 1026-1035 "

— 1036-1045 "

— 1046-1055 "

— 1056-1065 "

— 1066-1075 "

— 1076-1085 "

— 1086-1095 "

— 1096-1105 "

— 1106-1115 "

— 1116-1125 "

— 1126-1135 "

— 1136-1145 "

— 1146-1155 "

— 1156-1165 "

— 1166-1175 "

— 1176-1185 "

— 1186-1195 "

— 1196-1205 "

— 1206-1215 "

— 1216-1225 "

— 1226-1235 "

— 1236-1245 "

— 1246-1255 "

— 1256-1265 "

— 1266-1275 "

— 1276-1285 "

— 1286-1295 "

— 1296-1305 "

— 1306-1315 "

— 1316-1325 "

— 1326-1335 "

— 1336-1345 "

— 1346-1355 "

— 1356-1365 "

— 1366-1375 "

— 1376-1385 "

— 1386-1395 "

— 1396-1405 "

— 1406-1415 "

— 1416-1425 "

— 1426-1435 "

— 1436-1445 "

— 1446-1455 "

— 1456-1465 "

— 1466-1475 "

— 1476-1485 "

— 1486-1495 "

— 1496-1505 "

— 1506-1515 "

— 1516-1525 "

— 1526-1535 "

— 1536-1545 "

— 1546-1555 "

— 1556-1565 "

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— 1586-1595 "

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— 1606-1615 "

— 1616-1625 "

— 1626-1635 "

— 1636-1645 "

— 1646-1655 "

— 1656-1665 "

— 1666-1675 "

— 1676-1685 "

— 1686-1695 "

— 1696-1705 "

— 1706-1715 "

— 1716-1725 "

— 1726-1735 "

— 1736-1745 "

— 1746-1755 "

— 1756-1765 "

— 1766-1775 "

— 1776-1785 "

— 1786-1795 "

— 1796-1805 "

— 1806-1815 "

— 1816-1825 "

— 1826-1835 "

— 1836-1845 "

— 1846-1855 "

— 1856-1865 "

— 1866-1875 "

— 1876-1885 "

— 1886-1895 "

— 1896-1905 "

— 1906-1915 "

— 1916-1925 "

— 1926-1935 "

— 1936-1945 "

— 1946-1955 "

— 1956-1965 "

— 1966-1975 "

— 1976-1985 "

— 1986-1995 "

— 1996-2005 "

— 2006-2015 "

— 2016-2025 "

— 2026-2035 "

— 2036-2045 "

— 2046-2055 "

— 2056-2065 "

— 2066-2075 "

— 2076-2085 "

— 2086-2095 "

— 2096-2105 "

— 2106-2115 "

— 2116-2125 "

— 2126-2135 "

— 2136-2145 "

— 2146-2155 "

— 2156-2165 "

— 2166-2175 "

— 2176-2185 "

— 2186-2195 "

— 2196-2205 "

— 2206-2215 "

— 2216-2225 "

— 2226-2235 "

— 2236-2245 "

— 2246-2255 "

— 2256-2265 "

— 2266-2275 "

— 2276-2285 "

— 2286-2295 "

— 2296-2305 "

— 2306-2315 "

— 2316-2325 "

— 2326-2335 "

— 2336-2345 "

— 2346-2355 "



# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Bircham Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Lympne	Catte- water	Calshot	Calshot	Place
Time		13h. 16 <sup>h</sup>		12h. 16 <sup>h</sup>	12h. 16 <sup>h</sup>	9h. 16 <sup>h</sup>					12h. 16 <sup>h</sup>					10h. 16 <sup>h</sup>	12h. 16 <sup>h</sup>	12h. 16 <sup>h</sup>	12h. 16 <sup>h</sup>		Time
Type		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.		280 5			290 5	325 14	320 29				230 25					245 16	250 20	310 22	285 24		Surf.
1000		305 7			325 10	325 29	330 27				295 59					255 28	260 24	320 32	295 21		1000
2000		325 31				335 20	345 33									270 28		330 43	310 39		2000
3000		350 25				335 28	345 31												315 57		3000
4000						325 33	340 33														4000
5000						325 27	345 25														5000
6000						325 22															6000
8000						315 31															8000
10000						335 36															10000
12000						325 30															12000
Neph.							320 72														Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Catte- water	Calshot	Calshot	Place			
Time	16h. 16 <sup>h</sup>	16h. 16 <sup>h</sup>	17h. 16 <sup>h</sup>	16h. 16 <sup>h</sup>		17h. 16 <sup>h</sup>		16h. 16 <sup>h</sup>		16h. 16 <sup>h</sup>	18h. 16 <sup>h</sup>	17h. 16 <sup>h</sup>				16h. 16 <sup>h</sup>	16h. 16 <sup>h</sup>	24h. 16 <sup>h</sup>		Time	
Type		b.							b.											Type	
Feet	285 5	295 7	275 4	310 19		300 16		305 10		305 14	320 6	300 9				305 25	295 20	290 17		Feet	
Surf.	315 15	305 15	320 21	315 22		310 31		315 26		310 36	315 20	310 35				305 34	305 21	310 20		Surf.	
1000	345 14	345 11	325 20	330 19		315 31				220 33	320 32					320 42	320 31	300 14		1000	
2000		350 9	325 24	335 16		310 19				225 34	325 34					325 28	330 37	290 17		2000	
3000		360 13				315 23				330 31	330 36						330 39	290 16		3000	
4000		355 16																290 25		4000	
5000		350 16																300 38		5000	
6000		330 15																305 39		6000	
8000		310 23																		8000	
10000																				10000	
12000																				12000	
Neph.																				Neph.	
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Kew	Shoebury- ness	Lympne	Catte- water	Calshot	Calshot	Place		
Time					6 <sup>h</sup> 17 <sup>h</sup>		6 <sup>h</sup> 17 <sup>h</sup>	8 <sup>h</sup> 17 <sup>h</sup>	7 <sup>h</sup> 17 <sup>h</sup>	7 <sup>h</sup> 17 <sup>h</sup>	8 <sup>h</sup> 17 <sup>h</sup>	8 <sup>h</sup> 17 <sup>h</sup>	7 <sup>h</sup> 17 <sup>h</sup>		7 <sup>h</sup> 17 <sup>h</sup>			7 <sup>h</sup> 17 <sup>h</sup>		Time	
Type										b.										Type	
Feet					Cal'm		320 10	270 7	285 10	315 9	230 2	255 2	255 5						325 4		Feet
Surf.					15 17		315 15	325 22	315 21	325 19	335 7	345 14	325 17						315 17		Surf.
1000					30 14		315 23	330 21	315 19	315 19	330 11	325 17	325 19						315 19		1000
2000					35 13		325 21	325 27	330 18	310 21	305 16	320 17							305 17		2000
3000					15 10		340 19		330 16	310 23	300 19	305 23							310 16		3000
4000					340 11		330 18		325 20		295 15	305 18									4000
5000					350 13						235 18	340 17									5000
6000																					6000
8000					330 19						325 22										8000
10000					325 25						(7,000)										10000
12000																					12000
Neph.																				Neph.	

UPPER AIR TEMPERATURES AND HUMIDITIES.												UPPER WINDS ABROAD.											
Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
	mb.	Feet. M.S.L.	Dry. °F.	Wet. °F.	%		mb.	Feet. M.S.L.	Dry. °F.	Wet. °F.	%		mb.	Feet. M.S.L.	Dry. °F.	Wet. °F.	%		mb.	Feet. M.S.L.	Dry. °F.	Wet. °F.	%
Utrecht. 26. 16/128.	975	M.S.L.	-	-	-	Malta. 8h. 16/128.	992	M.S.L.	-	-	-	Lindenberg. 7h. 16/128.	1006	M.S.L.	-	-	-	Rosheek. 8h. 16/128.	1004	M.S.L.	-	-	-
	935	670	27	22	92		956	600	55	75	75		993	343	36	38	38		980	660	33	35	35
	883	3280	20	85	85		201	3280	46	76	76		981	660	38	38	38		969	980	37	37	37
	828	4920	25	85	85		898	4920	40	75	75		987	3280	28	28	28		920	2300	32	32	32
	777	6560	19	65	65		797	6560	34	75	75		833	4920	21	21	21		865	2950	29	29	29
	728	8200	14	65	65		748	8200	32	75	75												
	683	9940	5	55	55		702	9940	31	55	55												
	597	13120	-6	45	45			13120	28	45	45												
	521	16400	-18	35	35																		
												UPPER WINDS ABROAD.											
												Place. Halle. Metz. Marignone Lyons Strasbourg Benghazi											
												Time. 16h. 16h 16h 18h 16h 18h 16h 17h 17h											
												Feet. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel.											
												1,840 248 18 230 25 330 30 30 7 190 23 250 18											
												3,280 248 18 250 33 310 40 330 13 200 17 250 23											
												4,920 225 18 250 29 220 45 250 27 - -											
												6,560 236 22 - - - - 300 28											
												8,840 270 18 - - - - -											
												13,120 - - - - -											
												16,400 - - - - -											
												19,680 - - - - -											
												Place. Rabat Compiegne Algiers Oran Bizeta Malta											
												Time. 5h 17h 7h 17h 6h 17h 5h 17h 7h 17h 6h 17h											
												Feet. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel. Dir. Vel.											
												1,840 250 17 280 18 280 19 230 17 - - 290 28											
												3,280 270 23 280 18 290 24 270 23 290 34 (1,000)											
												4,920 270 13 280 23 - - 270 13 290 52 290 33											
												6,560 230 17 280 6 310 40 230 17 (2,000)											
												8,840 - - - - - 290 33											
												13,120 - - - - - (3,000)											
												16,400 - - - - -											
												19,680 - - - - -											
												Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S., Director											
												Kingsway, London, W.C.2.											





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, WEDNESDAY, 18<sup>th</sup> JANUARY, 1928.

No. 5, 24,163.

U.A.S. 3,215.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 8th, 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 normal change for dry air.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

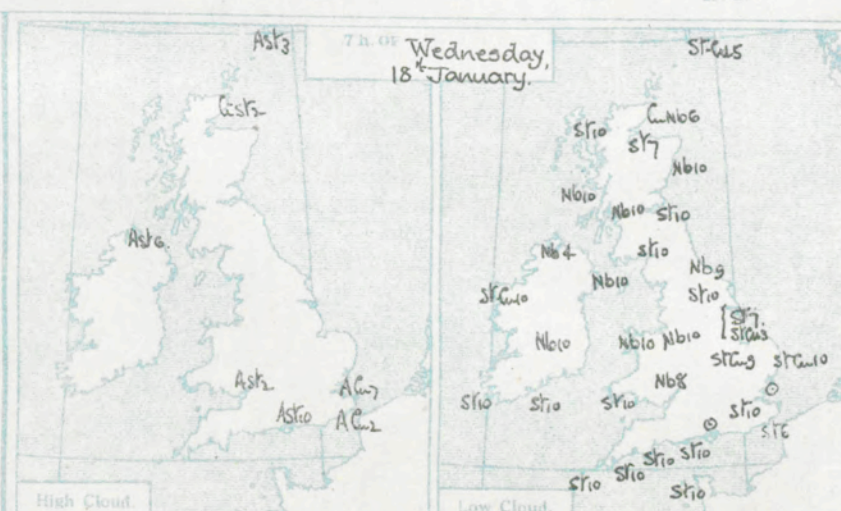
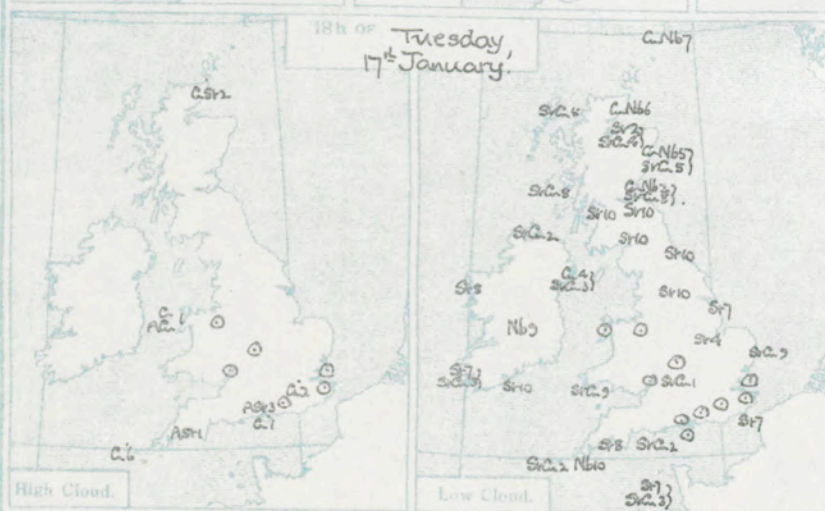
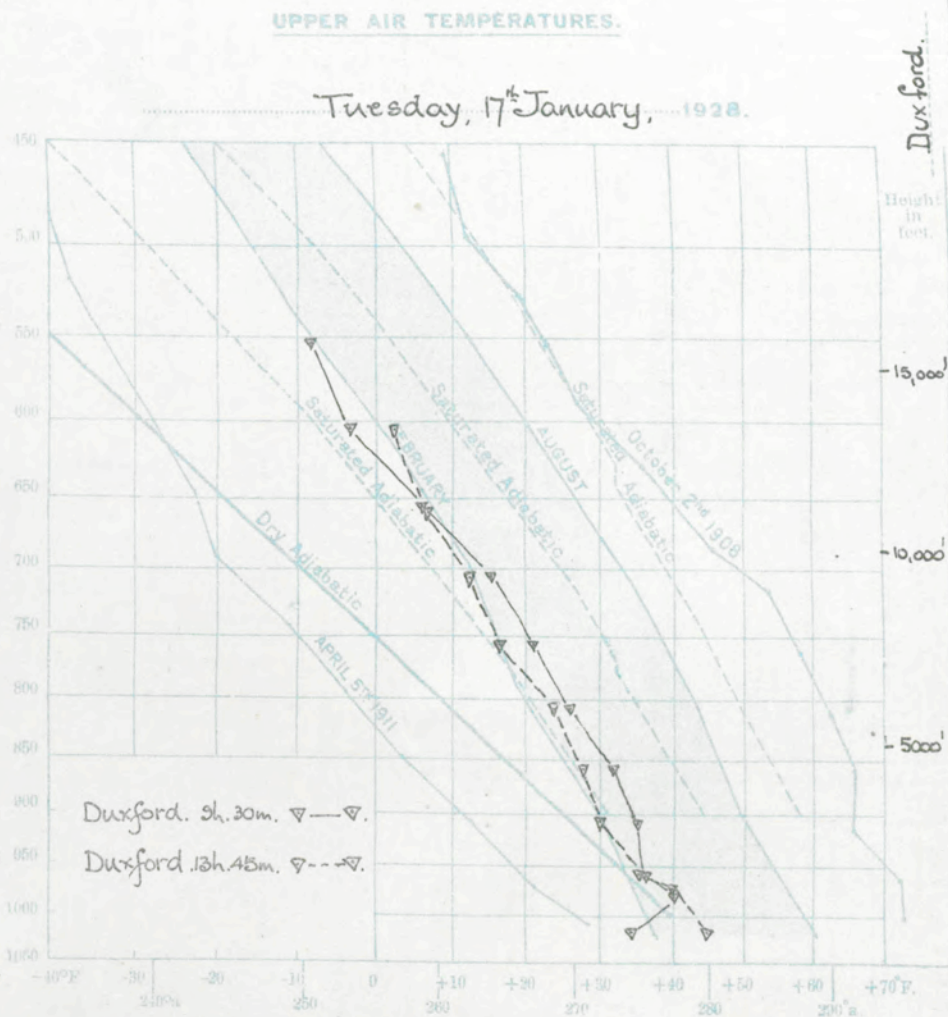
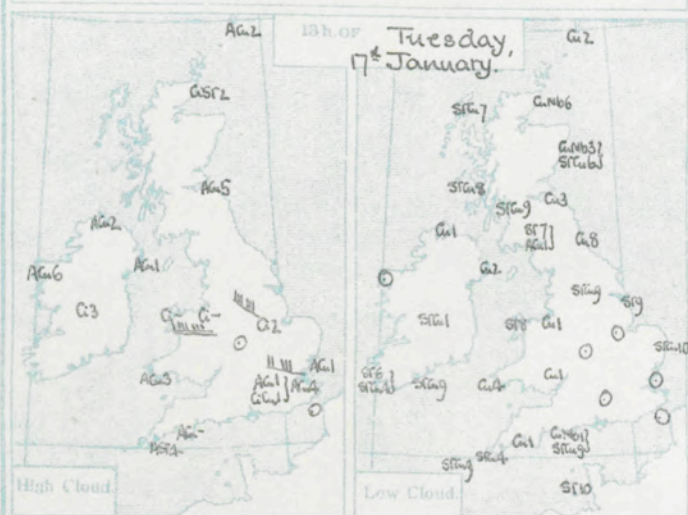
— and so on.

#### In Tables.

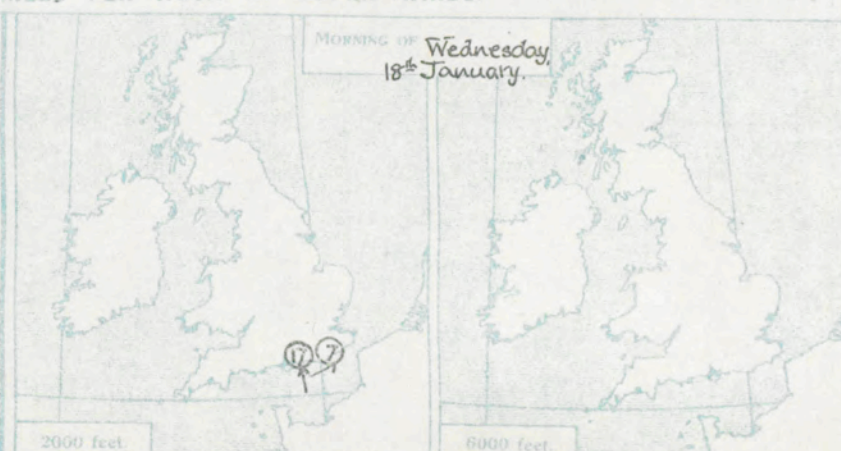
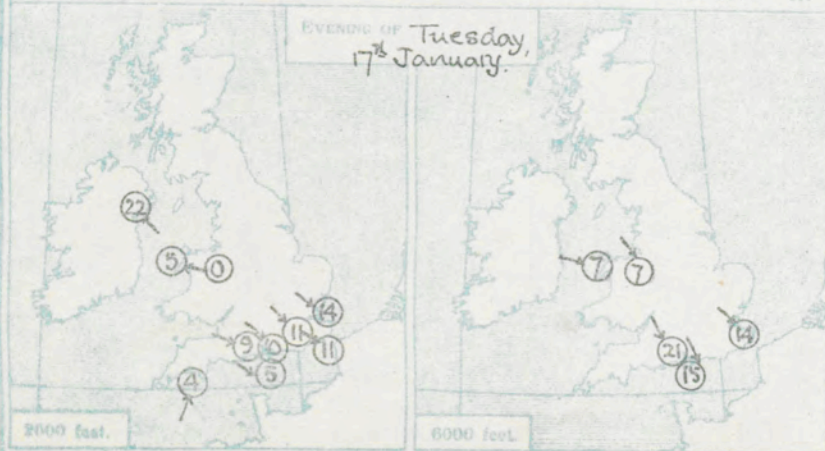
Directions are given in degrees, velocities in m.p.h.

Speeds of high clouds are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single lines).

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





Place	Biggin Hill.	Leuchars.	Renfrew.	Cranwell.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Felix-stowe.	Bircham Newton.	Worthy Down.	South Farnboro.	Croydon.	Croydon.	Shoebury-ness.	Lympne.	Lympne.	Catte-water.	Calahok.	Place.																			
Time.	10h. 7 <sup>m</sup>	11h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	10h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	5h. 7 <sup>m</sup>	13h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	13h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	10h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	10h. 7 <sup>m</sup>	13h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	12h. 7 <sup>m</sup>	Time.																			
Type.			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	2	65	10	65	6	270	12	—	0	—	0	315	5	290	7	285	9	—	0	Surf.																		
1000	220	16	55	18	80	19	295	18	100	10	330	7	310	8	320	15	310	18	290	9	320	16	310	11	315	17	315	11	120	7	340	5	1000						
2000	305	17			85	25			100	11	335	7	315	11	330	13	315	21	315	14	300	11	295	15	300	14	310	17	310	14	310	20	305	14	135	5	330	7	2000
3000	305	16			80	24							345	10	10h.	335	7	310	20			300	11	300	11	295	13	300	17	310	16			320	7	295	13	3000	
4000	310	18			80	25							335	11	Ac.	330	11	300	22			295	23	315	13	300	16	310	16					320	7	295	17	4000	
5000	320	15											325	9	300	54	320	17			320	19			315	15	315	19							295	22	5000		
6000	300	13											320	9	Ac.		320	14	315	11			305	22	315	15	315	17							310	23	6000		
8000	320	21											330	7	12h. 15m. (base)	300	70	Ac.			320	21			310	27	315	25									8000		
10000	305	34							8h. 10m. Ac.	3h. Ac.			320	50	12h. 45m. Ac.						9h. Ac.				12h. Ac.												10000		
12000	305	27																																			12000		
Neph.									300	33	290	48	270	70	320	36					310	48			330	30										Neph.			
Place.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Cranwell.	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro.	Croydon.	Kew.	Shoebury-ness.	Lympne.			Catte-water.	Calshot.	Place.																			
Time.			17h. 17 <sup>m</sup>	16h. 7 <sup>m</sup>	24h. 17 <sup>m</sup>	17h. 7 <sup>m</sup>		16h. 7 <sup>m</sup>		17h. 7 <sup>m</sup>	17h. 7 <sup>m</sup>	17h. 7 <sup>m</sup>		15h. 7 <sup>m</sup>	16h. 7 <sup>m</sup>			16h. 7 <sup>m</sup>	17h. 7 <sup>m</sup>	Time.																			
Type.										b				a	b.			b.		Type.																			
Feet			110	8	160	1	Calw	350	2			805	5		295	1	290	2	295	3			280	5	310	5			115	12	—	0			Feet				
1000			120	23	130	5	125	5	335	4		200	13		285	4	305	7	295	9																			

DUXFORD. 9h. 20m. 17/1/28.										DUXFORD. 13h. 45m. 17/1/28.									
Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity		
			Dry.	Wet.	%				Dry.	Wet.	%				Dry.	Wet.	%		
1009	mb.	Feet.	°F.	°F.	%	1009	mb.	Feet.	°F.	°F.	%	1009	mb.	Feet.	°F.	°F.	%		
1005	M.S.L.	M.S.L.	-	-	-	1005	M.S.L.	M.S.L.	-	-	-	1005	M.S.L.	M.S.L.	-	-	-		
999	100	34.5	35.5	91		999	100	45	43	85		999	100	45	43	85			
995	1080	40.0	38.0	84		995	1080	40	39	92		995	1080	40	39	92			
990	1600	32.0	24.0	0		990	1600	32	32	74		990	1600	32	32	74			
980	3010	35.0	23.0	41		980	3010	20	25	54		980	3010	20	25	54			
850	4530	32.0	26.0	48		850	4530	28	24	63		850	4530	28	24	63			
800	6100	22.0	25.0	26		800	6090	23	16	28		800	6090	23	16	28			
750	7730	21.0	20.0	87		750	7750	17	14			750	7750	17	14				
700	9370	15.0				700	9520	12	10			700	9520	12	10				
650	11460	6.0				650	11380	6	4			650	11380	6	4				
600	13410	4.0				600	13420	2				600	13420	2					
550	15560	8.0																	
Haze top 806mb.						Haze top 700mb.													
						St. C. 3/10, 950-925mb.													
						C. 5/10, 750-700mb.													

[illegible]

Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S.,  
Kingway, London, W.C.2. Director.





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 19<sup>th</sup> JANUARY, 1928.

No. 3. 24164.

U.A.S. 3216.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings)

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0—5 m.p.h.

— 6—15 "

— 16—25 "

— 26—35 m.p.h.

— 36—45 "

— 46—55 "

— 56—65 "

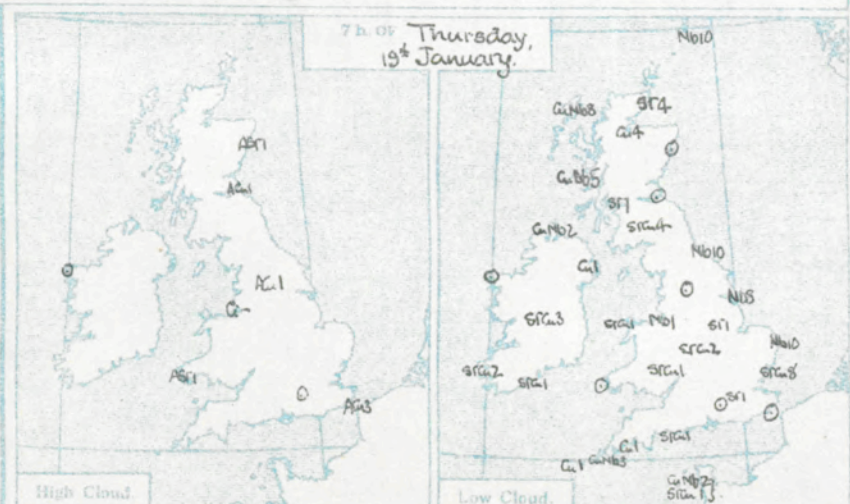
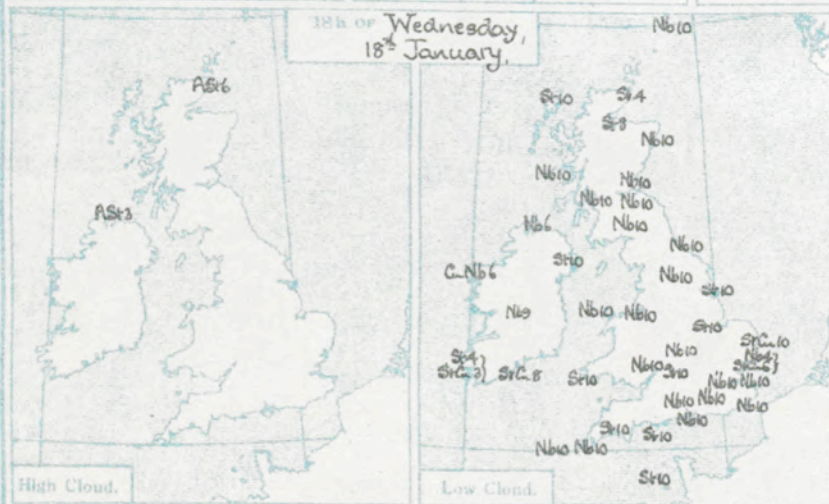
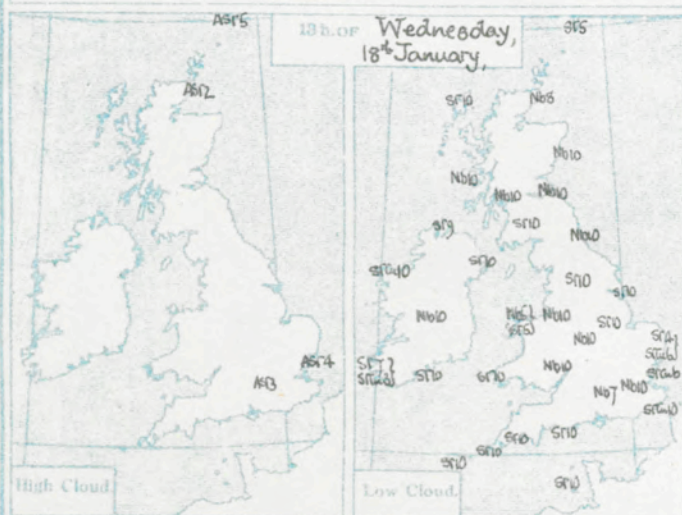
and so on.

## In Tables.

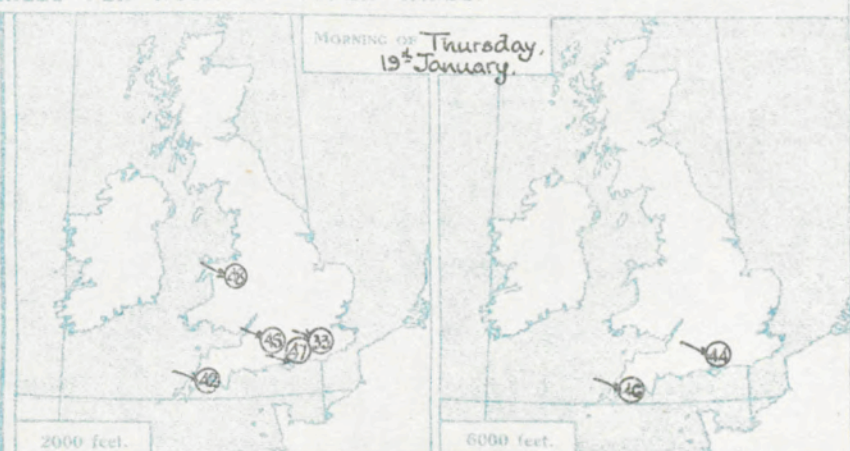
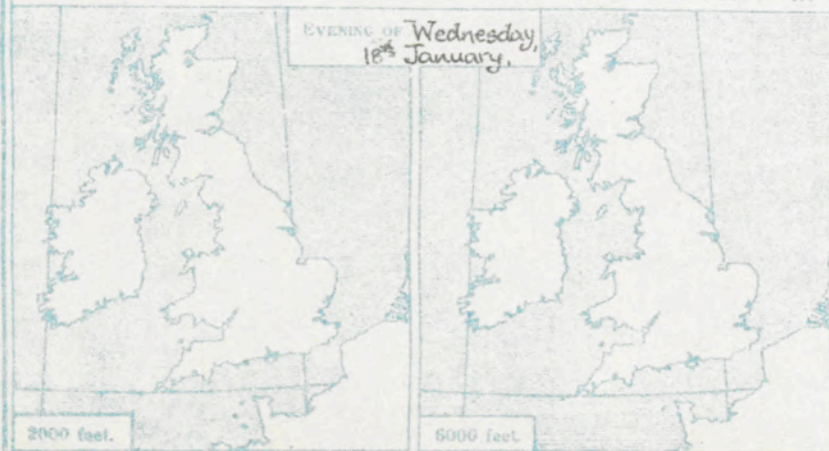
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single lines).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Felixstowe	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Lymington	Cattewater	Calshot	Place						
Time						9h. 18 <sup>h</sup>				8h. 18 <sup>h</sup>	12h. 18 <sup>h</sup>	9h. 18 <sup>h</sup>			12h. 18 <sup>h</sup>	10h. 18 <sup>h</sup>	12h. 18 <sup>h</sup>			Time						
Type															6.	6.	6.			Type						
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet					
Surf.							170	20			130	2	145	6	125	9			140	18	160	12	140	5		Surf.
1000							170	25			135	13	160	20	150	33			150	22	165	17	155	20		1000
2000											160	13	160	23					155	22	160	17	170	18		2000
3000											170	10	170	17					160	12	180	15	200	16		3000
4000											190	7	185	14					165	14	210	11	190	13		4000
5000											195	13							185	22	220	7	220	4		5000
6000																					260	8				6000
8000																					330	10				8000
10000																										10000
12000																										12000
Neph.																										Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot		Place						
Time																				Time						
Type																				Type						
Feet																				Feet						
Surf.																				Surf.						
1000																				1000						
2000																				2000						
3000																				3000						
4000																				4000						
5000																				5000						
6000																				6000						
8000																				8000						
10000																				10000						
12000																				12000						
Neph.																				Neph.						
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place						
Time							6h. 19 <sup>h</sup>				9h. 19 <sup>h</sup>	7h. 19 <sup>h</sup>	7h. 19 <sup>h</sup>					8h. 19 <sup>h</sup>		Time						
Type											6.							6.		Type						
Feet																				Feet						
Surf.							270	20			275	15	275	14	270	12			300	18	Surf.					
1000							280	29			300	41	295	31	295	34			310	31	1000					
2000							295	48			315	45	305	47	295	33			315	42	2000					
3000							310	47			Dist. nect haze layer	315	53						315	42	3000					
4000											315	46							315	52	4000					
5000											315	45							310	48	5000					
6000											310	44							310	46	6000					
8000											305	47									8000					
10000																					10000					
12000																					12000					
Neph.																				Neph.						

## UPPER AIR TEMPERATURES AND HUMIDITIES.

TEMPERATURES AND HUMIDITIES.															
Station.	Pressure	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure	Height above M.S.L.	Relative Humidity
			Dry.	Wet.					Dry.	Wet.					
Duxford. 10h. 15m. 18/1/28.	mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%		mb.	Feet.	%
	1020	M.S.L.	—	—	—			M.S.L.	—	—	—			M.S.L.	—
	1016	100	34.8	34	95										
	980	1070	36	34	82										
	950	1890	35	33	83										
	900	3300	31	29	81										
	850	4800	28	26	81										
	800	6380	29	27	81										
	750	8070	30	28	83										
	700	9880	26	24	81										
	650	11730	20	18	78										
	600	13800	14	12	—										
	550	16000	8	6	—										
Inversion:-															
		850mb.	28° F.												
		750mb.	30° F.												
		Have top	980mb.												
	M.S.L.	—	—	—	—		M.S.L.	—	—	—	—		M.S.L.	—	—

## UPPER WINDS ABROAD.

Place.	Taga.		Genoa.		Leghorn.		Rome.		Lyons.		Malta.	
Time.	9h. 18 <sup>h</sup>		13h. 18 <sup>h</sup>		12h. 18 <sup>h</sup>		12h. 18 <sup>h</sup>		18h. 18 <sup>h</sup>		17h. 18 <sup>h</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	-	-	-	-	360	20	-	-	(local)	
3,280	310	9	30	30	20	12	10	10	350	9	320	7
4,920	310	11	-	-	-	-	-	-	350	23	(2000)	
6,560	-	-	-	-	30	29	320	7	350	38	310	28
9,840	60	20	-	-	360	34					(3000)	
13,120	60	14	340	44							310	35
16,400	60	25										
19,680												

Place.	Padua		Tunis		Quebec		Padua		Bizerta		Malta	
Time.	18h. 18 <sup>h</sup>		7h. 19 <sup>h</sup>		6h. 19 <sup>h</sup>		7h. 19 <sup>h</sup>		7h. 19 <sup>h</sup>		6h. 19 <sup>h</sup>	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	330	31	330	18	-	-	310	27	340	26
3,280	230	9	330	34	330	28	320	11	310	27	(1,000)	
4,920	-	-	330	47	340	34	350	9	320	34	340	34
6,560	250	11	330	47	310	34					(2,000)	
9,840			340	41							340	42
13,120											(3,000)	
16,400												
19,680												

Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S.,  
Kingsway, London, W.12. Director.





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, FRIDAY, 20<sup>th</sup> JANUARY, 1928.

 No. 5. 24,165.  
U.A.S. 3,217.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 2<sup>nd</sup>, 1911, and October 2<sup>nd</sup>, 1918, show extremes of temperature in the South of England.

The curves marked February and August show normal values for their 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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings)

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0–5 m.p.h.

— 6–15 "

— 16–25 "

— 26–35 m.p.h.

— 36–45 "

— 46–55 "

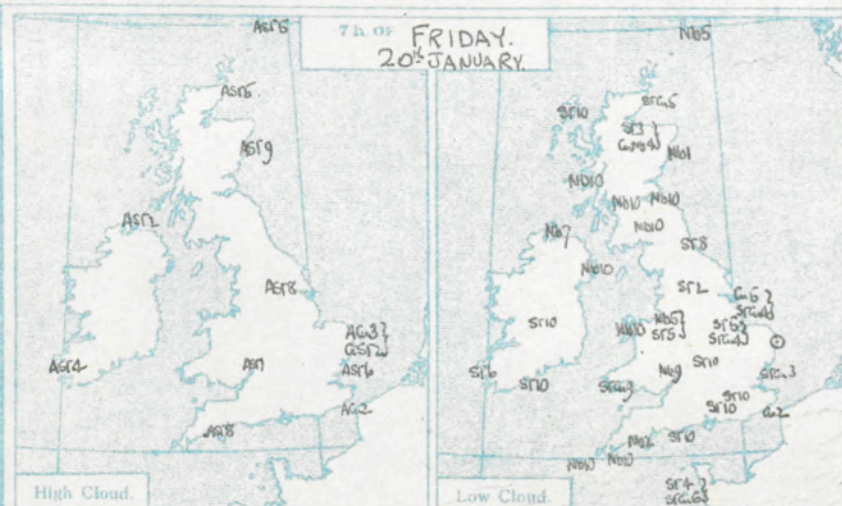
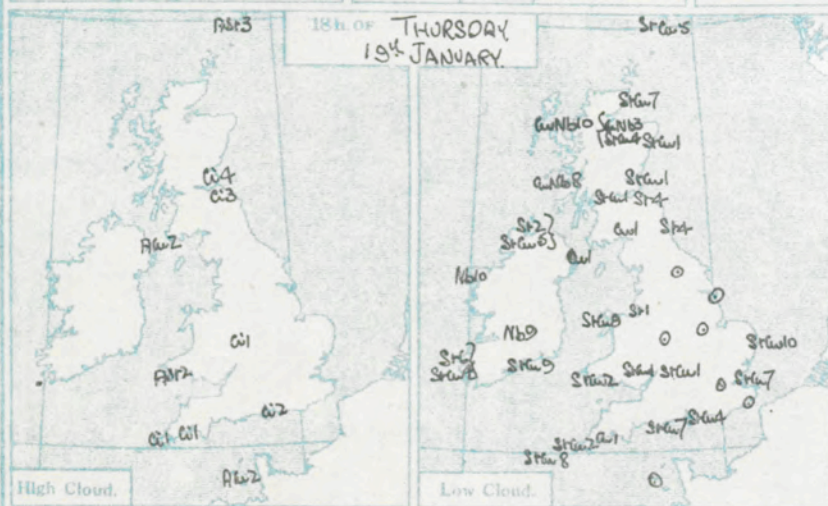
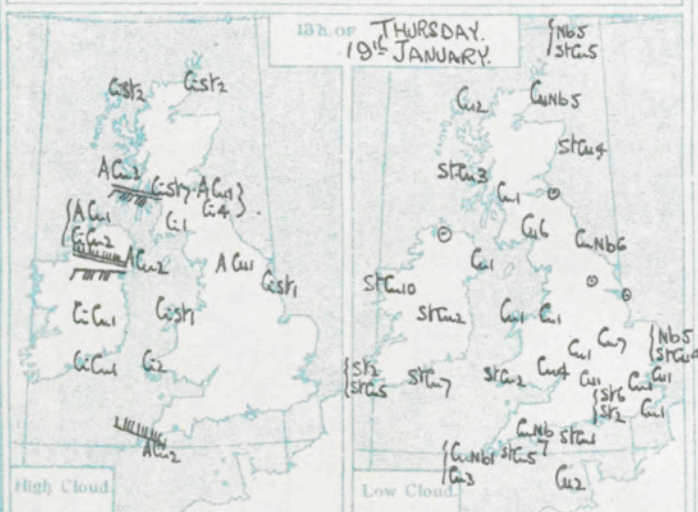
— 56–65 "

— and so on.

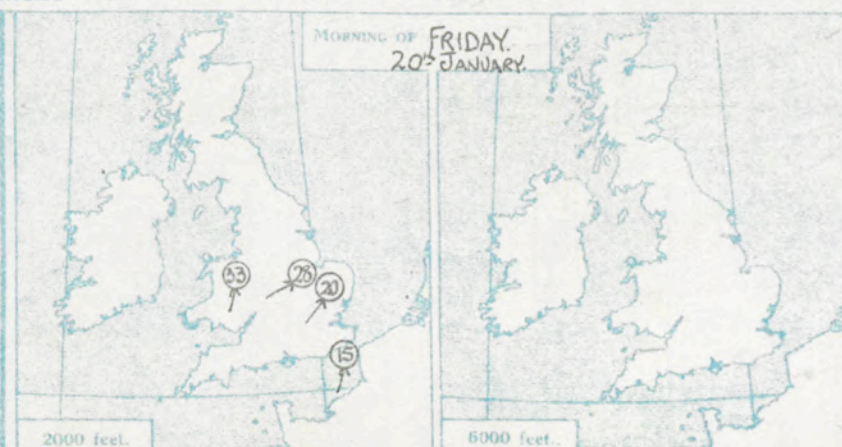
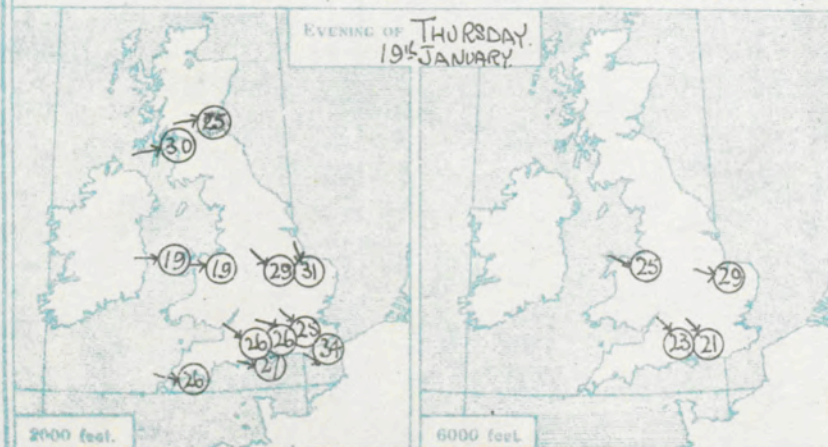
#### In Tables.

Directions are given in degrees, velocities in m.p.h. Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Cranwell	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury-ness	Lympne	Lympne	Cattewater	Calshot	Calshot	Place
Time	08 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	09 <sup>h</sup> 19 <sup>m</sup>	07 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	11 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	11 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	10 <sup>h</sup> 19 <sup>m</sup>	09 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	10 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	Time
Type		b.	b.				b.	b.	b.	b.	b.	b.	b.	b.	Shell-burst	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.	Dir. Vel.	Feet
Surf.	260 13	235 8	280 17	270 20	215 15	260 20	280 25	295 18	290 23	290 24	280 18	280 18	285 15	280 14	1,000	300 16	295 20	270 16	285 25	285 25	Surf.
1000	280 37	255 13	280 36	280 28	225 44	260 20	295 32	295 35	300 32	300 40	285 36	290 36	290 29	280 29	12,000	310 30	305 38	285 18	290 39	290 39	1000
2000	300 42	270 32	285 38	245 33	280 41	285 33	305 30	300 39	305 55		300 55	295 32	300 35	310 39	315 67	305 15	310 47	290 21	290 41	290 41	2000
3000	305 44	285 37	285 37	295 22	285 33	295 27	300 35		315 65		315 49		310 46				(1,500)	290 20	305 60	305 60	3000
4000		295 41	285 34	295 29		295 39	295 39		320 62		305 39				18,000				305 50	305 50	4000
5000		290 51	275 35	295 25			295 39								315 48						5000
6000			275 28	290 27			295 47														6000
8000			280 25	290 26																	8000
10000		10 <sup>h</sup>					10 <sup>h</sup>			10 <sup>h</sup>											10000
12000		A.G.	A.G.	(7,000)			C.			C.S.									13 <sup>h</sup>	10 <sup>h</sup>	12000
Neph.		320 39	310 70				320 105			300 140									280 108	310 125	Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Aldergrove	Sealand	Cranwell	Bircham Newton	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Calshot	Place	
Time	17 <sup>h</sup> 19 <sup>m</sup>	16 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>	16 <sup>h</sup> 19 <sup>m</sup>	12 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>	15 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>		16 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>			16 <sup>h</sup> 19 <sup>m</sup>		17 <sup>h</sup> 19 <sup>m</sup>	17 <sup>h</sup> 19 <sup>m</sup>	15 <sup>h</sup> 19 <sup>m</sup>	Time	
Type		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.	Dir. Vel.	Feet
Surf.	230 10	260 16	165 7	225 13	205 11	240 4	280 10	295 19		265 11	260 5	280 8			285 14		280 11	280 10	285 22	Surf.	
1000	245 21	260 31	210 25	245 19	255 31	260 20	295 23	305 31		290 29	290 24	290 27			300 29		285 23	295 22	295 26	1000	
2000	265 25	265 30		275 19	265 40	280 19	305 29	325 31		305 26	290 26	300 25			315 34		290 26	305 27	305 38	2000	
3000	270 33	270 32		280 25	270 43	290 21	320 34	345 31		310 25	310 31				325 44		305 25	305 27	310 33	3000	
4000	285 31	275 35		275 27	295 22			345 26		310 41	315 35						300 24		310 33	4000	
5000	280 34				310 25			325 27		320 38	330 27									5000	
6000					310 25			320 29		320 23	310 21									6000	
8000										320 51										8000	
10000		16 <sup>h</sup>			A.G.					345 55										10000	
12000		A.G.			16 <sup>h</sup> 30	290 120	16 <sup>h</sup>													12000	
Neph.		310 39			270 65	270 69	330 55													Neph.	
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Bircham Newton	Cattewater	Calshot	Place	
Time																				Time	
Type																				Type	
Feet																				Feet	
Surf.																				Surf.	
1000																				1000	
2000																				2000	
3000																				3000	
4000																				4000	
5000																				5000	
6000																				6000	
8000																				8000	
10000																				10000	
12000																				12000	
Neph.																				Neph.	

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity.	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity.	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity.
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.	
Doxford. 09 <sup>30</sup> . 19/12/28.	mb.	Feet.	°F.	°F.	%	Aldergrove. 12 <sup>h</sup> 19/12/28.	mb.	Feet.	°F.	°F.	%	Malta. 08 <sup>h</sup> 19/12/28.	mb.	Feet.	°F.	°F.	%
	1015	M.S.L.	—	—	—		1017.5	M.S.L.	—	—	—		989	M.S.L.	—	—	—
	1011	100	43.9	57	53		1009	238	40.8	38.7	53		989	660	53	75	
	997	1080	43.9	47	53		972	1200	40.8	38.7	53		989	1540	47	—	
	990	1800	40	39	53		986	1810	38.0	34.9	53		989	2580	47	—	
	850	3240	36	29	53		900	5280	28.9	28.9	53		989	4880	38.5	—	
	750	4750	31	23	53		850	4770	28.3	28.9	53		989	6560	29	—	
	800	6320	26	23	53		800	6320	27.1	28.0	53		989	8200	26	—	
	700	8000	20	14	53		750	8000	23.3	22.8	53		989	9840	20	—	
	650	9770	13	6	53		600	11640	2	2	53		616	1320	13	—	
	550	13620	2	—	53		550	15790	—4	—5	53						
	Haze top 987 mb.																
Some Cirrus.																	

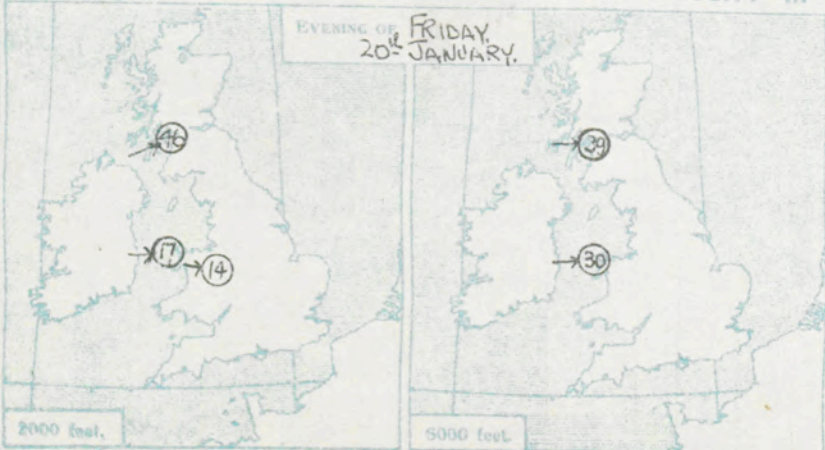
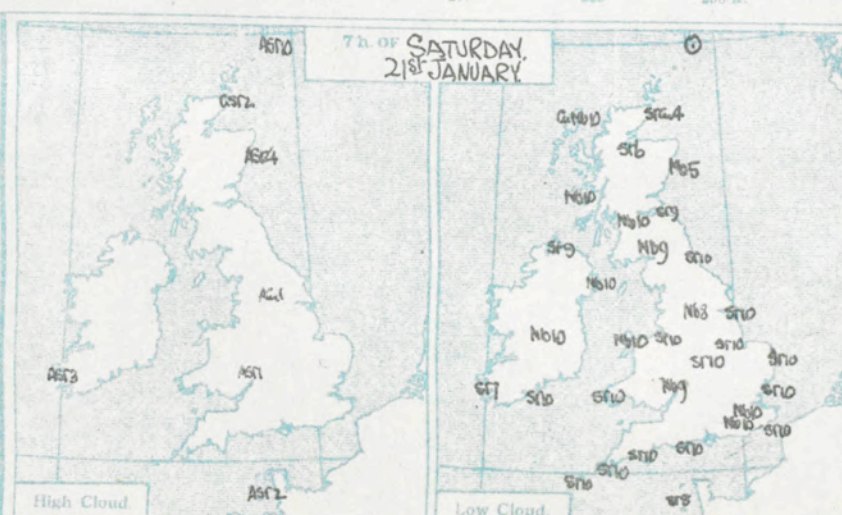
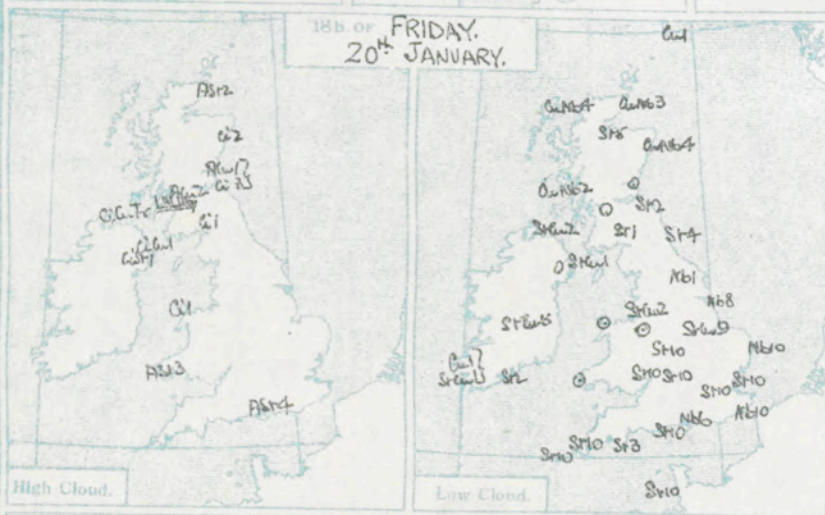
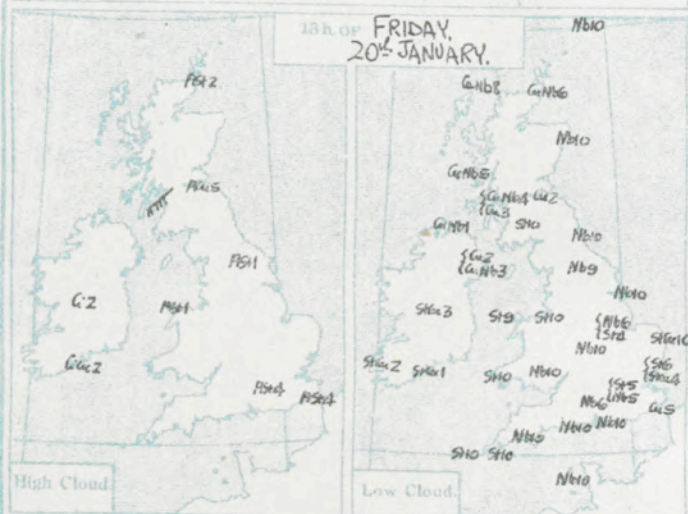


No. 24,166.

U.A.S. 3,218.

CLOUD MOVEMENTS (Nephoscope readings)

On Charts.

In Tables:<sup>a</sup>

© Indicates absence of cloud



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH

Place	Aberdeer	Leuchars	Renfrew	Renfrew	Aldergrove	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Felix-stowe.	Worthy Down.	South Farnboro	Croydon	Kew	Shoebury-ness.	Lympne.		Catte-water.	Calshot.	Place.	
Time.			13 <sup>h</sup> 20 <sup>m</sup>	12 <sup>h</sup> 20 <sup>m</sup>	12 <sup>h</sup> 20 <sup>m</sup>		13 <sup>h</sup> 20 <sup>m</sup>		08 <sup>h</sup> 20 <sup>m</sup>	10 <sup>h</sup> 20 <sup>m</sup>										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.					220 20	245 18	240 17		165 18	185 6											Surf.
1000					240 25	250 40	250 40		205 21	195 31											1000
2000					250 38		260 41		225 33	210 23											2000
3000					250 44		260 38			230 24											3000
4000										245 21											4000
5000										250 15											5000
6000										235 13											6000
8000										240 9											8000
10000					12 <sup>h</sup> 25	11 <sup>h</sup>			OK												10000
12000					ACm	Ci			Ci m. Cilw.												12000
Neph.					220 51	210 95			240 45	240 45											Neph.
Place.	Leuchars.	Renfrew.	Aldergrove	Holyhead	Eskdalemuir.	Holyhead.	Cranwell.	Sealand.	Valentia.	Worthy Down.	South Farnboro	Croydon.	Kew.	Shoebury-ness.	Lympne.		Catte-water.	Calshot.	Place.		
Time.		14 <sup>h</sup> 20 <sup>m</sup>	15 <sup>h</sup> 20 <sup>m</sup>	16 <sup>h</sup> 20 <sup>m</sup>	18 <sup>h</sup> 20 <sup>m</sup>	13 <sup>h</sup> 50 <sup>m</sup>	16 <sup>h</sup> 20 <sup>m</sup>	17 <sup>h</sup> 20 <sup>m</sup>											Time.		
Type.		b																	Type.		
Feet		245 18		245 8			220 18	220 6											Feet		
Surf.																			Surf.		
1000		250 36		260 19			225 31	265 9											1000		
2000		250 46		270 17				280 14											2000		
3000		260 40		285 16				285 22											3000		
4000		270 50		285 17				285 25											4000		
5000		270 51		270 21															5000		
6000		270 39		270 30															6000		
8000		270 38																	8000		
10000		(7.000)		18 <sup>h</sup> 15															10000		
12000		Ci	Ci.	Ci St.	Ci	ACm													12000		
Neph.		250 70	220 70	280 78	270 65	220 45													Neph.		
Place.	Aberdeen	Leuchars.	Renfrew.		Aldergrove	Holyhead	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro	Croydon	Kew.	Shoebury-ness.	Lympne.		Catte-water.	Calshot.	Place.	
Time.							6 <sup>h</sup> 21 <sup>m</sup>												Time.		
Type.																			Type.		
Feet							145 12												Feet		
Surf.																			Surf.		
1000							180 31												1000		
2000							190 45												2000		
3000																			3000		
4000																			4000		
5000																			5000		
6000																			6000		
8000																			8000		
10000																			10000		
12000																			12000		
Neph.																			Neph.		

## UPPER AIR TEMPERATURES AND HUMIDITIES

Station.	Pressure.	Height above M.S.L.	Temp.			Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.			Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.			Relative Humidity
			Dry.	Wet.	°F.					Dry.	Wet.	°F.					Dry.	Wet.	°F.	
	mb.	Feet. M.S.L.	—	—	—			mb.	Feet. M.S.L.	—	—	—			mb.	Feet. M.S.L.	—	—	—	
		M.S.L.	—	—	—				M.S.L.	—	—	—				M.S.L.	—	—	—	

## UPPER WINDS ABROAD

Place.	Paris	Lyons	Orleans	Utrecht	Kosice	Malta						
Time.	10 <sup>h</sup> 20 <sup>m</sup>	10 <sup>h</sup> 20 <sup>m</sup>	10 <sup>h</sup> 20 <sup>m</sup>	13 <sup>h</sup> 20 <sup>m</sup>	13 <sup>h</sup> 20 <sup>m</sup>	17 <sup>h</sup> 20 <sup>m</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	60	9	250	12	-	-	240	23	10	8	1,000	10
3,280	110	11	360	20	300	9	270	16	240	6	230	10
4,920	170	7	-	-	-	-	270	13	200	17	-	-
6,560	170	4	360	29	30	16	-	-	220	17	2,000	-
9,840	-	-	-	-	310	31	-	-	180	26	290	23
13,120	-	-	-	-	-	-	-	-	-	-	-	-
16,400	-	-	-	-	-	-	-	-	-	-	3,000	-
19,680	-	-	-	-	-	-	-	-	-	-	290	29
Place.	Toulouse	Trieste	Rome	Qabes	Serif.	Malta						
Time.	18 <sup>h</sup> 20 <sup>m</sup>	18 <sup>h</sup> 20 <sup>m</sup>	7 <sup>h</sup> 21 <sup>m</sup>	6 <sup>h</sup> 21 <sup>m</sup>	6 <sup>h</sup> 21 <sup>m</sup>	6 <sup>h</sup> 21 <sup>m</sup>						
1,640	-	-	300	9	70	14	340	29	260	18	120	5
3,280	310	11	-	-	-	-	340	32	270	18	(3,000)	7
4,920	-	-	50	28	250	12	10	27	260	12	70	7
6,560	310	11	-	-	-	-	-	-	-	-	(5,000)	-
9,840	360	27	50	36	-	-	-	-	-	-	230	7
13,120	70	36	-	-	20	34	-	-	-	-	(10,000)	-
16,400	-	-	-	-	-	-	-	-	-	-	260	7
19,680	-	-	-	-	-	-	-	-	-	-	(16,000)	-
											Colm.	-
											(20,000)	-

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

G. C. SIMPSON, F.R.S.,  
Director

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 22<sup>ND</sup> JANUARY, 1928.No. 24,167.  
U.A.S. 3219.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 8th, 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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

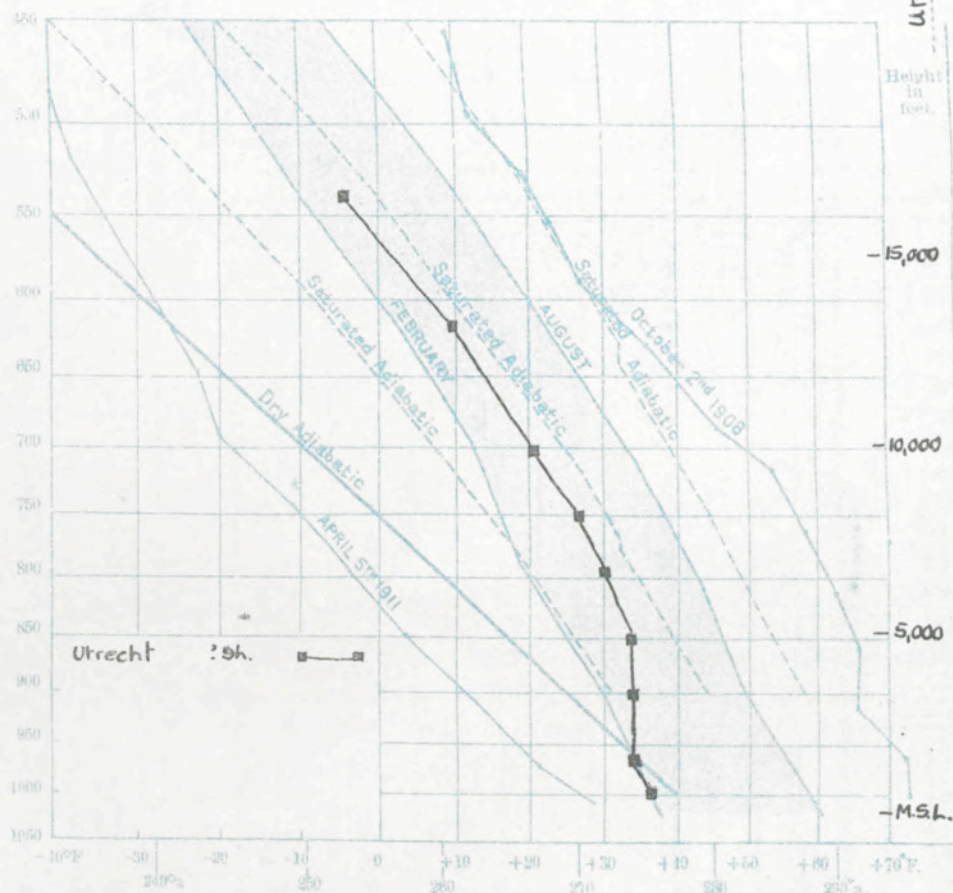
and so on.

## In Tables.

Directions are given in degrees, velocities in m.p.h.

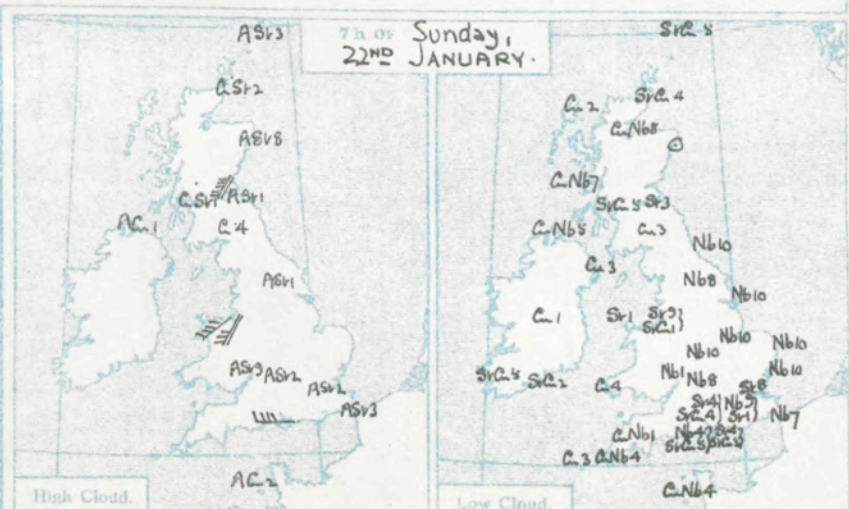
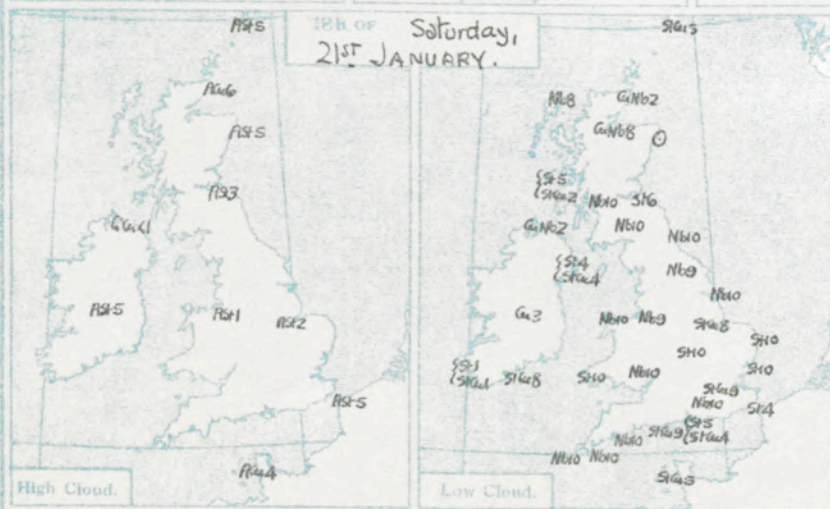
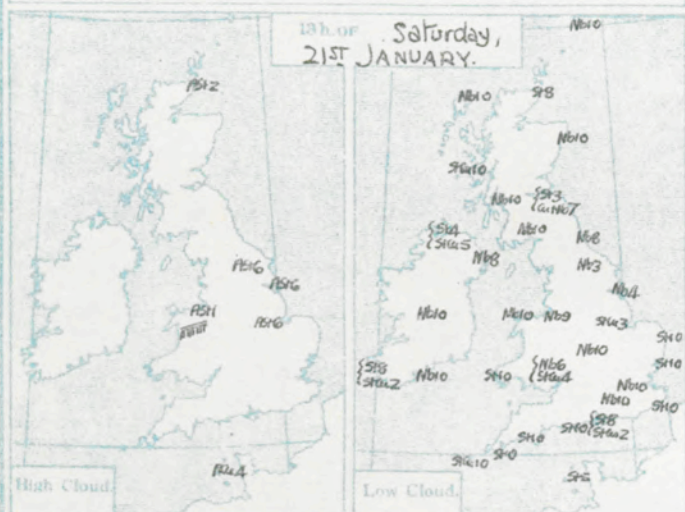
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

## UPPER AIR TEMPERATURES.

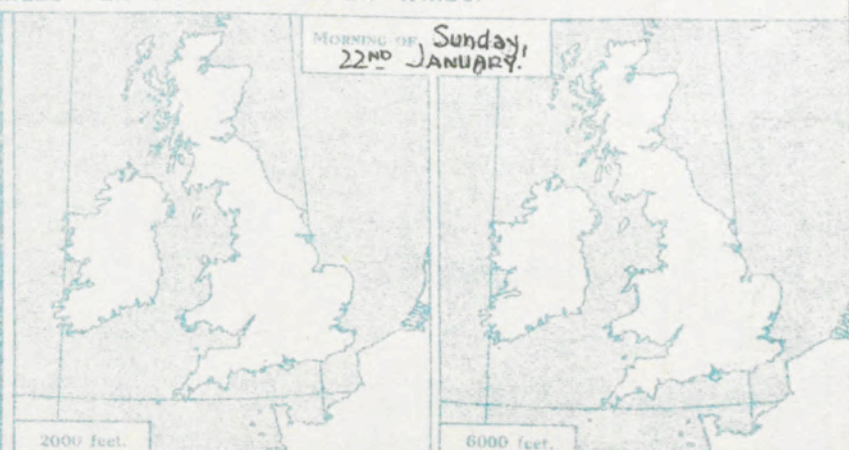
SATURDAY, 21<sup>ST</sup> JANUARY, 1928.

Utrecht

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





[illegible]

## UPPER WINDS ABROAD.

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





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, MONDAY, 23<sup>RD</sup> JANUARY, 1928.

No. 5. 24,168.

U.A.S. 3,220.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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, 1928, 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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 5 m.p.h.

— 10 " "

— 15 " "

— 25-35 m.p.h.

— 36-45 " "

— 46-55 " "

— 56-65 " "

— 66-75 " "

— 76-85 " "

— 86-95 " "

— 96-105 " "

— 106-115 " "

— 116-125 " "

— 126-135 " "

— 136-145 " "

— 146-155 " "

— 156-165 " "

— 166-175 " "

— 176-185 " "

— 186-195 " "

— 196-205 " "

— 206-215 " "

— 216-225 " "

— 226-235 " "

— 236-245 " "

— 246-255 " "

— 256-265 " "

— 266-275 " "

— 276-285 " "

— 286-295 " "

— 296-305 " "

— 306-315 " "

— 316-325 " "

— 326-335 " "

— 336-345 " "

— 346-355 " "

— 356-365 " "

— 366-375 " "

— 376-385 " "

— 386-395 " "

— 396-405 " "

— 406-415 " "

— 416-425 " "

— 426-435 " "

— 436-445 " "

— 446-455 " "

— 456-465 " "

— 466-475 " "

— 476-485 " "

— 486-495 " "

— 496-505 " "

— 506-515 " "

— 516-525 " "

— 526-535 " "

— 536-545 " "

— 546-555 " "

— 556-565 " "

— 566-575 " "

— 576-585 " "

— 586-595 " "

— 596-605 " "

— 606-615 " "

— 616-625 " "

— 626-635 " "

— 636-645 " "

— 646-655 " "

— 656-665 " "

— 666-675 " "

— 676-685 " "

— 686-695 " "

— 696-705 " "

— 706-715 " "

— 716-725 " "

— 726-735 " "

— 736-745 " "

— 746-755 " "

— 756-765 " "

— 766-775 " "

— 776-785 " "

— 786-795 " "

— 796-805 " "

— 806-815 " "

— 816-825 " "

— 826-835 " "

— 836-845 " "

— 846-855 " "

— 856-865 " "

— 866-875 " "

— 876-885 " "

— 886-895 " "

— 896-905 " "

— 906-915 " "

— 916-925 " "

— 926-935 " "

— 936-945 " "

— 946-955 " "

— 956-965 " "

— 966-975 " "

— 976-985 " "

— 986-995 " "

— 996-1005 " "

— 1006-1015 " "

— 1016-1025 " "

— 1026-1035 " "

— 1036-1045 " "

— 1046-1055 " "

— 1056-1065 " "

— 1066-1075 " "

— 1076-1085 " "

— 1086-1095 " "

— 1096-1105 " "

— 1106-1115 " "

— 1116-1125 " "

— 1126-1135 " "

— 1136-1145 " "

— 1146-1155 " "

— 1156-1165 " "

— 1166-1175 " "

— 1176-1185 " "

— 1186-1195 " "

— 1196-1205 " "

— 1206-1215 " "

— 1216-1225 " "

— 1226-1235 " "

— 1236-1245 " "

— 1246-1255 " "

— 1256-1265 " "

— 1266-1275 " "

— 1276-1285 " "

— 1286-1295 " "

— 1296-1305 " "

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— 1416-1425 " "

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— 1436-1445 " "

— 1446-1455 " "

— 1456-1465 " "

— 1466-1475 " "

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— 1496-1505 " "

— 1506-1515 " "

— 1516-1525 " "

— 1526-1535 " "

— 1536-1545 " "

— 1546-1555 " "

— 1556-1565 " "

— 1566-1575 " "

— 1576-1585 " "

— 1586-1595 " "

— 1596-1605 " "

— 1606-1615 " "

— 1616-1625 " "

— 1626-1635 " "

— 1636-1645 " "

— 1646-1655 " "

— 1656-1665 " "

— 1666-1675 " "

— 1676-1685 " "

— 1686-1695 " "

— 1696-1705 " "

— 1706-1715 " "

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— 1726-1735 " "

— 1736-1745 " "

— 1746-1755 " "

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— 1796-1805 " "

— 1806-1815 " "

— 1816-1825 " "

— 1826-1835 " "

— 1836-1845 " "

— 1846-1855 " "

— 1856-1865 " "

— 1866-1875 " "

— 1876-1885 " "

— 1886-1895 " "

— 1896-1905 " "

— 1906-1915 " "

— 1916-1925 " "

— 1926-1935 " "

— 1936-1945 " "

— 1946-1955 " "

— 1956-1965 " "

— 1966-1975 " "

— 1976-1985 " "

— 1986-1995 " "

— 1996-2005 " "

— 2006-2015 " "

— 2016-2025 " "

— 2026-2035 " "

— 2036-2045 " "

— 2046-2055 " "

— 2056-2065 " "

— 2066-2075 " "

— 2076-2085 " "

— 2086-2095 " "

— 2096-2105 " "

— 2106-2115 " "

— 2116-2125 " "

— 2126-2135 " "

— 2136-2145 " "

— 2146-2155 " "

— 2156-2165 " "

— 2166-2175 " "

— 2176-2185 " "

— 2186-2195 " "

— 2196-2205 " "

— 2206-2215 " "

— 2216-2225 " "

— 2226-2235 " "

— 2236-2245 " "

— 2246-2255 " "

— 2256-2265 " "

— 2266-2275 " "

— 2276-2285 " "

— 2286-2295 " "

— 2296-2305 " "

— 2306-2315 " "



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

DIRECTION AND WIND VELOCITY IN MILES PER HOUR OF SURFACE WINDS																										
Place	Aberdeen	Leuchars	Renfrew	Eskdalemuir	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot		Place					
Time.					12h. 22nd							13h. 22nd						13h. 22nd	12h. 22nd		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.					205	9						305	15					350	15	315	23	Surf.				
1000					265	25						310	24					330	22	310	29	1000				
2000					280	28						325	34							310	29	2000				
3000					290	29						340	38							320	33	3000				
4000					235	29						320	33							325	35	4000				
5000					295	24														330	35	5000				
6000					290	27																6000				
8000					300	27																8000				
10000	13h			3h. 10m	295	19						13h										10000				
12000	C			C	290	18						C										12000				
					(14000)																					
Neph.	200	55			160	70						310	80									Neph.				
Place.	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Catte-water	Calshot		Place.						
Time.											17h. 22nd	16h. 22nd			17h. 22nd			16h. 22nd		Time.						
Type.															b					Type.						
Feet											290	12	305	13			305	17		300	15	Feet				
Surf.																						Surf.				
1000											305	25	310	27			305	30		310	27	1000				
2000											310	35					315	45		315	29	2000				
3000											325	37								320	29	3000				
4000											325	38								325	30	4000				
5000											330	30								325	26	5000				
6000											325	25								330	35	6000				
8000											315	30										8000				
10000											315	29										10000				
12000													C		16h. 30m							12000				
Neph.						300	72					330	30	310	9		300	35				Neph.				
Place.	Aberdeen	Leuchars	Renfrew	Shoebury-ness	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Calshot	Catte-water	Calshot		Place.					
Time.				6h. 23rd			6h. 23rd	8h. 23rd				8h. 23rd	7h. 23rd			6h. 23rd	1h. 23rd	8h. 23rd	7h. 23rd		Time.					
Type.																	b.				Type.					
Feet																					Feet					
Surf.					270	8		170	18	220	7		Calm	225	4		305	10	270	14	220	20	250	5	Surf.	
1000					235	19		210	18	250	19		250	20	290	14		310	30	285	25	225	29	260	15	1000
2000					300	13		230	27	255	19		260	18	290	16		305	32	295	25	230	27	260	15	2000
3000					300	18		235	27	250	19		265	18	270	13		300	27	310	27			275	23	3000
4000					300	17		250	24	250	19		265	20	275	12		305	29	300	32			280	25	4000
5000								255	23									310	20							5000
6000								260	23																	6000
8000																										8000
10000																										10000
12000																										12000
Neph.																										Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

## UPPER WINDS ABROAD.

Place.	Utrecht	Messina	Florence	Padua	Ancona	Malta
Time.	10h. 22 <sup>nd</sup>	13h. 22 <sup>nd</sup>	13h. 22 <sup>nd</sup>	13h. 22 <sup>nd</sup>	13h. 22 <sup>nd</sup>	17h. 22 <sup>nd</sup>
Feet.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
1,840	210 39	- -	- -	- -	- -	20 11 (2,000')
3,280	- -	250 5	- -	- -	360 14	40 12 (3,000')
4,920	180 28	- -	- -	250 2	10 18	(3,000')
6,580	200 28	- -	220 8	300 35	20 28	20 10 (5,000')
9,840	- -	- -	240 5	- -	- -	- -
13,120	- -	360 19	250 5	- -	- -	- -
16,400	- -	- -	- -	- -	- -	- -
19,680	- -	310 29	- -	- -	- -	- -

Place.	Turin	Ancona	Rochefort	Oran	Colonel-Becquer	Malta
Time.	18h. 22 <sup>nd</sup>	18h. 22 <sup>nd</sup>	18h. 22 <sup>nd</sup>	6h. 23 <sup>rd</sup>	6h. 23 <sup>rd</sup>	6h. 23 <sup>rd</sup>
1,840	300 1	- -	- -	360 17	- -	(3,000')
3,280	20 4	340 18	320 19	60 11	40 9	330 4
4,920	20 11	360 21	320 19	60 16	60 11	(6,000')
6,560	- -	30 27	320 19	70 16	20 7	190 6 (10,000')
9,840	- -	- -	- -	10 9	20 18	(10,000')
13,120	- -	- -	- -	- -	20 21	190 3 (16,000')
16,400	- -	- -	- -	- -	- -	10 16
19,680	- -	- -	- -	- -	- -	- -

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

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 24<sup>TH</sup> JANUARY, 1928.

No. 2. 24,169.

U.A.S. 3,221.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 Table Page.

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

## UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Notations are indicated thus:-

— No speed given.

— 5 m.p.h.

— 10 " "

— 15 " "

— 20 " "

— 25 " "

— 30 " "

— 35 " "

— 40 " "

— 45 " "

— 50 " "

— 55 " "

— 60 " "

— 65 " "

— 70 " "

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— 670 " "

— 675 " "

— 680 " "

— 685 " "

— 690 " "

— 695 " "

— 700 " "

— 705 " "

— 710 " "

— 715 " "

— 720 " "

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— 730 " "

— 735 " "

— 740 " "

— 745 " "

— 750 " "

— 755 " "

— 760 " "

— 765 " "

— 770 " "

— 775 " "

— 780 " "

— 785 " "

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— 800 " "

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— 815 " "

— 820 " "

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— 845 " "

— 850 " "

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— 1100 " "

— 1105 " "

— 1110 " "

— 1115 " "

— 1120 " "

— 1125 " "

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— 1135 " "

— 1140 " "

— 1145 " "

— 1150 " "

— 1155 " "

— 1160 " "

— 1165 " "

— 1170 " "

— 1175 " "

— 1180 " "

— 1185 " "

— 1190 " "

— 1195 " "

— 1200 " "

— 1205 " "

— 1210 " "

— 1215 " "

— 1220 " "

— 1225 " "

— 1230 " "

— 1235 " "

— 1240 " "

— 1245 " "

— 1250 " "

— 1255 " "

— 1260 " "

— 1265 " "

— 1270 " "

— 1275 " "

— 1280 " "

— 1285 " "

— 1290 " "

— 1295 " "

— 1300 " "

— 1305 " "



# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Bircham Newton	Cranwell	Holyhead	Sealand	Cranwell	Felix-stowe	Felbstowe	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury-ness	Lympne	Lympne	Cattewater	Calshot	Place
Time				12 <sup>h</sup> 23 <sup>d</sup>	10 <sup>h</sup> 23 <sup>d</sup>		12 <sup>h</sup> 23 <sup>d</sup>	12 <sup>h</sup> 23 <sup>d</sup>	12 <sup>h</sup> 23 <sup>d</sup>	7 <sup>h</sup> 23 <sup>d</sup>	13 <sup>h</sup> 23 <sup>d</sup>	12 <sup>h</sup> 23 <sup>d</sup>	12 <sup>h</sup> 23 <sup>d</sup>	10 <sup>h</sup> 23 <sup>d</sup>		12 <sup>h</sup> 23 <sup>d</sup>	10 <sup>h</sup> 23 <sup>d</sup>		12 <sup>h</sup> 23 <sup>d</sup>	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.
Surf.																				
1000																				
2000																				
3000																				
4000																				
5000																				
6000																				
8000																				
10000																				
12000																				
Neph.																				Neph.

Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattewater	Calshot	Place
Time					17 <sup>h</sup> 23 <sup>d</sup>	15 <sup>h</sup> 23 <sup>d</sup>	17 <sup>h</sup> 23 <sup>d</sup>							17 <sup>h</sup> 23 <sup>d</sup>			Time
Type					b.												Type
Feet																	Feet
Surf.																	Surf.
1000																	1000
2000																	2000
3000																	3000
4000																	4000
5000																	5000
6000																	6000
8000																	8000
10000																	10000
12000																	12000
Neph.																	Neph.

Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattewater	Calshot	Place
Time						6h-24 <sup>h</sup>												Time
Type																		Type
Feet																		Feet
Surf.																		Surf.
1000																		1000
2000																		2000
3000																		3000
4000																		4000
5000																		5000
6000																		6000
8000																		8000
10000																		10000
12000																		12000
Neph.																		Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.	Relative Humidity
	mb.	Feet.	°F.	°C.		mb.	Feet.	°F.	°C.		mb.	Feet.	°F.	°C.
Duxford 10 <sup>h</sup> 23.1.28.	1021	M.S.L.	-	-	Duxford 14 <sup>h</sup> 23.1.28.	1017	M.S.L.	-	-	Malta 9 <sup>h</sup> 23.1.28.	1018	M.S.L.	-	-
	1017	100	39	37		1013	100	44	42		994	660	53	75
	980	1780	33	37		977	1090	42	40		958	1640	48	75
	950	1900	37	36		950	1840	41	39		902	3280	42	75
	900	3330	32	30		900	3280	38	36		848	4920	36	75
	850	4850	28	26		850	4800	34	33		796	6560	30	85
	800	6400	23	21		800	6400	30	29		748	8200	26	75
	750	8080	24	22		750	8080	28	26		702	9840	20	85
	700	9880	20	18		700	9880	23	20		618	13120	16	-
	650	11770	15	13		650	11780	20	18					
	600	13790	10	8		600	13820	15	14					
	550	15880	5	3		550	16040	8	6					
	500	18360	-1	-3										
	Haze top 980mb. S. 1/4													
	830-770mb. Same C.													
	Inversion 770mb. 23°F													
	M.S.L.													

## UPPER WINDS ABROAD.

Place.	Helder	Palermo	Florence	Compiegne	Rabat	Malta
Time.	13 <sup>h</sup> 23 <sup>d</sup>	13 <sup>h</sup> 23 <sup>d</sup>	13 <sup>h</sup> 23 <sup>d</sup>	13 <sup>h</sup> 23 <sup>d</sup>	15 <sup>h</sup> 23 <sup>d</sup>	17 <sup>h</sup> 23 <sup>d</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	330	17	160	2	270	7
3,280			230	5	140	7
4,920			220	6		
6,560					100	12
8,940					200	9
13,120						
16,400					300	11
19,680					340	23
Place.	Nancy	Toulouse	Helsinki	Bijerta	Setif	Malta
Time.	18 <sup>h</sup> 23 <sup>d</sup>	18 <sup>h</sup> 23 <sup>d</sup>	7 <sup>h</sup> 24 <sup>h</sup>	7 <sup>h</sup> 24 <sup>h</sup>	6 <sup>h</sup> 24 <sup>h</sup>	6 <sup>h</sup> 24 <sup>h</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	260	13	-	-	160	22
3,280	260	14	220	20	160	36
4,920					90	7
6,560	290	16	360	16	160	31
8,940			350	20	130	9
13,120						
16,400						
19,680						





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

## UPPER AIR SUPPLEMENT, WEDNESDAY 25<sup>th</sup> JANUARY, 1928.

No. B. 24,170.

U.A.S. 3,222.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 8th, 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.

### UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

### CLOUD MOVEMENTS (Nephoscope readings)

On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

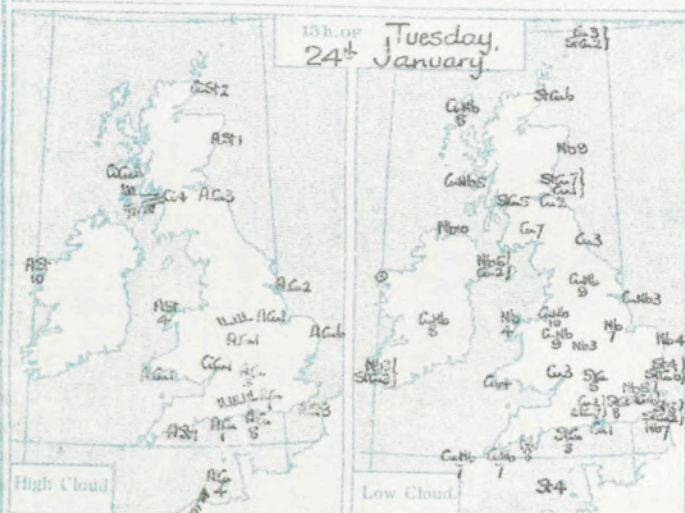
and so on.

In Tables.

Directions are given in degrees, velocities in m.p.h.

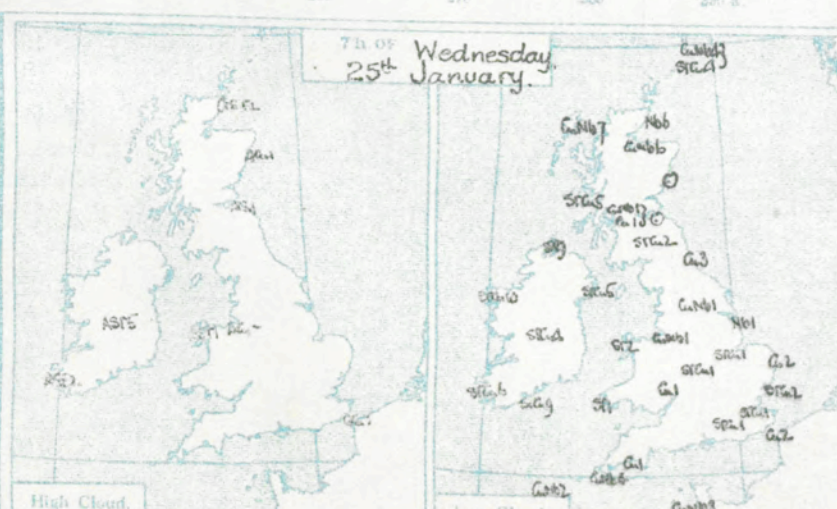
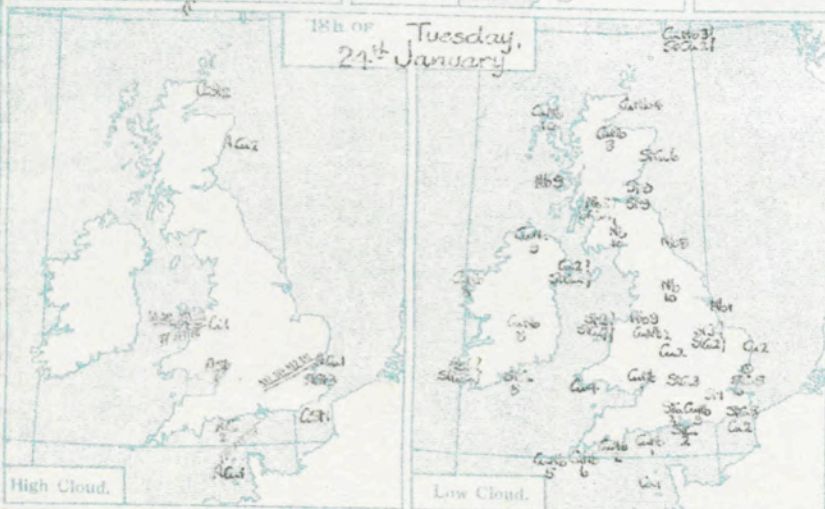
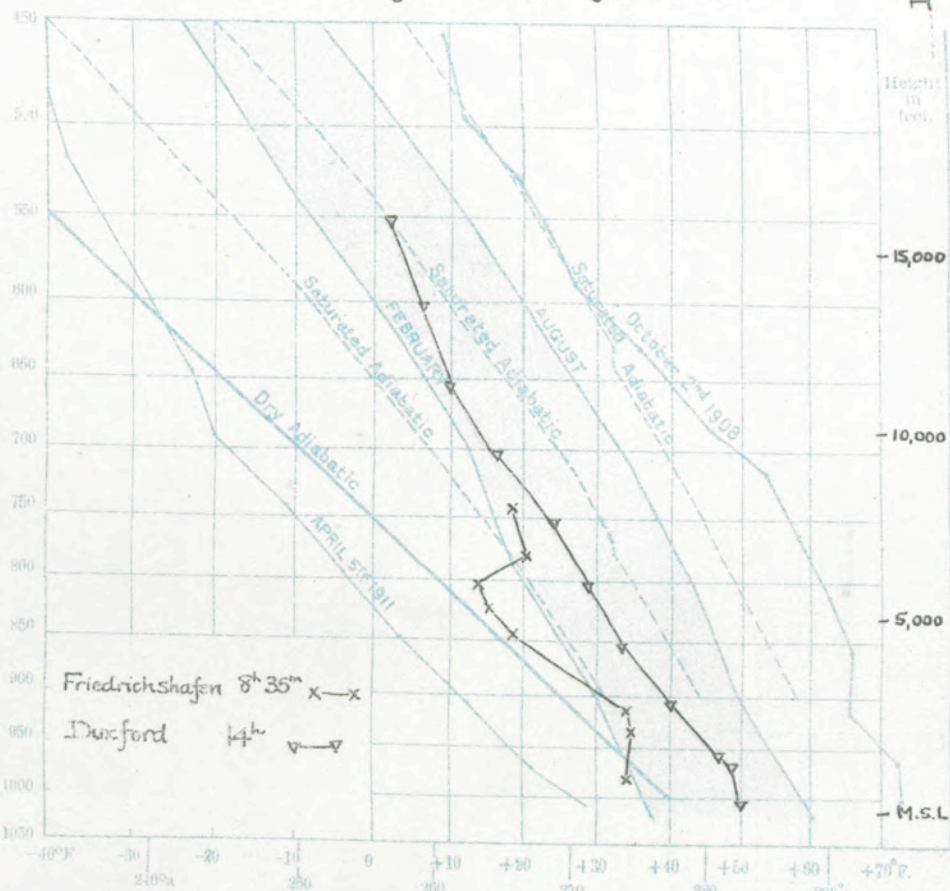
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single lines).

### CLOUD FORMS, AMOUNTS AND MOVEMENTS.

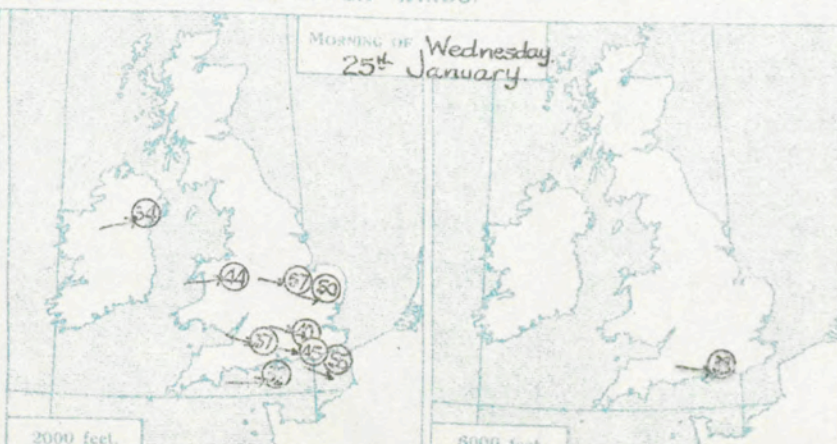
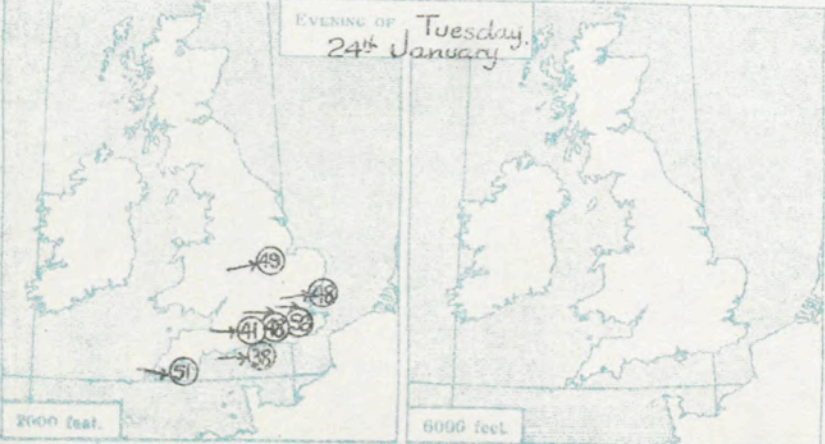


### UPPER AIR TEMPERATURES.

Tuesday, 24<sup>th</sup> January, 1928.



### DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Cranwell	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury ness	Lympne	Guernsey	Catte-water	Calshot	Calshot	Place		
Time.				12 <sup>h</sup> 24 <sup>h</sup>	9 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	10 <sup>h</sup> 24 <sup>h</sup>	13 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	12 <sup>h</sup> 24 <sup>h</sup>	11 <sup>h</sup> 24 <sup>h</sup>				13 <sup>h</sup> 24 <sup>h</sup>	13 <sup>h</sup> 24 <sup>h</sup>		Time.		
Type				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.					245 13	240 23	200 13	260 28	250 20	225 25	220 20	215 43	265 19	230 20	230 20	220 22					270 29	230 26	Surf.
1000					265 23	240 35	220 29	255 39	245 26	235 35	235 35	235 37	255 41	245 40	240 34	215 44					285 41	260 36	1000
2000					280 23	245 41		(1,200ft)	250 37	240 49			255 48	250 45	255 55	215 58					290 51	265 56	2000
3000					285 42	245 43			260 39	245 55			250 43		255 49						290 59	265 55	3000
4000					290 42				260 58													270 55	4000
5000					295 35																	5000	
6000					285 38				9 <sup>h</sup> Ci													6000	
8000					(8,000ft)				250 150	12 <sup>h</sup> A.Cu												8000	
10000					275 45				A.Cu	260 54				13 <sup>h</sup> A.Cu				12 <sup>h</sup> 30 <sup>m</sup> A.Cu				10000	
12000					(11,000ft)				250 60					A.Cu								12000	
Neph.					270 33								260 78					200 78				Neph.	
Place.	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lympne		Catte-water	Calshot	Calshot	Place.			
Time.				18 <sup>h</sup> 24 <sup>h</sup>			17 <sup>h</sup> 24 <sup>h</sup>	16 <sup>h</sup> 24 <sup>h</sup>	16 <sup>h</sup> 24 <sup>h</sup>		17 <sup>h</sup> 24 <sup>h</sup>	18 <sup>h</sup> 24 <sup>h</sup>	17 <sup>h</sup> 24 <sup>h</sup>				16 <sup>h</sup> 24 <sup>h</sup>	17 <sup>h</sup> 24 <sup>h</sup>	1 <sup>h</sup> 25 <sup>h</sup>	Time.			
Type.																	b.				Type.		
Feet				235 15			255 30	250 23	250 25		255 17	240 20	245 18					300 24	245 24	260 20	Feet		
Surf.				265 25			265 42	250 33	260 39		265 34	260 36	260 38					290 35	260 31	270 25	Surf.		
1000								255 49	265 48		275 41	265 48	270 56					290 51	270 38	275 28	1000		
2000							16 <sup>h</sup> Ci	255 48				270 62						295 57	275 58	280 28	2000		
3000								260 51										295 62	275 59	275 26	3000		
4000																					4000		
5000							270 110														5000		
6000							18 <sup>h</sup> A.Cu														6000		
8000							260 78			16 <sup>h</sup> C.St											8000		
10000																					10000		
12000																					12000		
Neph.									240 120												Neph.		
Place.	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury ness	Lympne	Bircham Norton	Catte-water	Calshot	Place.			
Time.					7 <sup>h</sup> 25 <sup>h</sup>		6 <sup>h</sup> 25 <sup>h</sup>	7 <sup>h</sup> 25 <sup>h</sup>			8 <sup>h</sup> 25 <sup>h</sup>	7 <sup>h</sup> 25 <sup>h</sup>	7 <sup>h</sup> 25 <sup>h</sup>				7 <sup>h</sup> 25 <sup>h</sup>		7 <sup>h</sup> 25 <sup>h</sup>	Time.			
Type.											b.										Type.		
Feet					200 16		260 15	240 19			240 12	250 17	240 17				255 28	240 27	260 20	Feet			
Surf.					240 31		265 34	260 46			270 39	265 38	265 36				265 38	265 35	265 29	Surf.			
1000					260 34		270 44	275 57			280 37	280 45	275 40				280 55	275 50	270 32	1000			
2000					265 39		280 41	280 54			280 44	280 48					280 54	280 50	280 33	2000			
3000							285 45	285 52				280 44						285 59	280 33	3000			
4000							280 60				285 41							285 53	280 37	4000			
5000											285 38									5000			
6000																				6000			
8000																				8000			
10000																				10000			
12000																				12000			
Neph.																				Neph.			

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity
mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%	mb.	Feet.	°F.	°F.	%
Duxford 14 <sup>h</sup>	1004	M.S.L.	—	—										
	1000	100	50	46										
	965	1100	48	46										
	950	1500	46	45										
	900	2350	40	38										
	850	4500	33	33										
	800	6090	28	26										
	750	7780	24	20										
	700	9570	16	15										
	650	11430	10	8										
	600	13480	5	4										
	550	15640	2	1										
	Hagetop	864 mb.												
	Auto 4/10	935-870 mb.												
	A.S. and C.S.	5/10 not reached.												
Friedrichshafen 8 <sup>h</sup> 35 <sup>m</sup>	1030	M.S.L.	—	—										
	980	1335	33.4	—										
	931	2643	34.7	—										
	909	3308	33.8	—										
	843	5240	18.3	—										
	821	5900	14.9	—										
	799	6560	13.1	—										
	779	7230	20.3	—										
	740	8540	18.5	—										
	St. Cu.	842-783 mb.												
	Fr. St.	920-863 mb.												

## UPPER WINDS ABROAD.

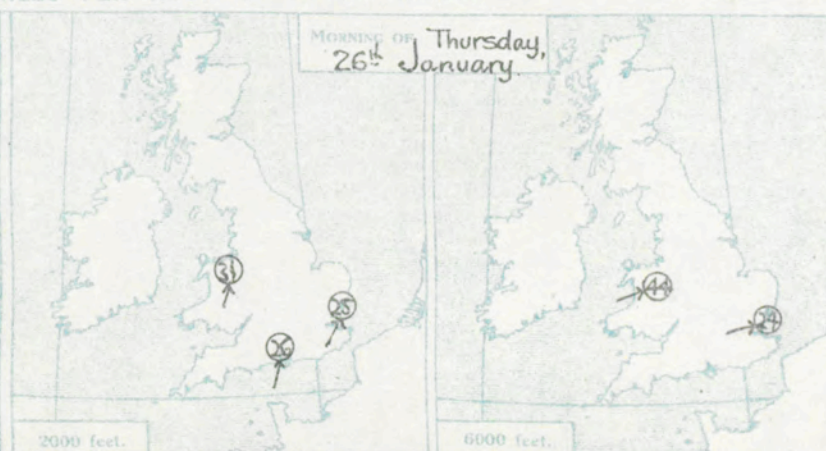
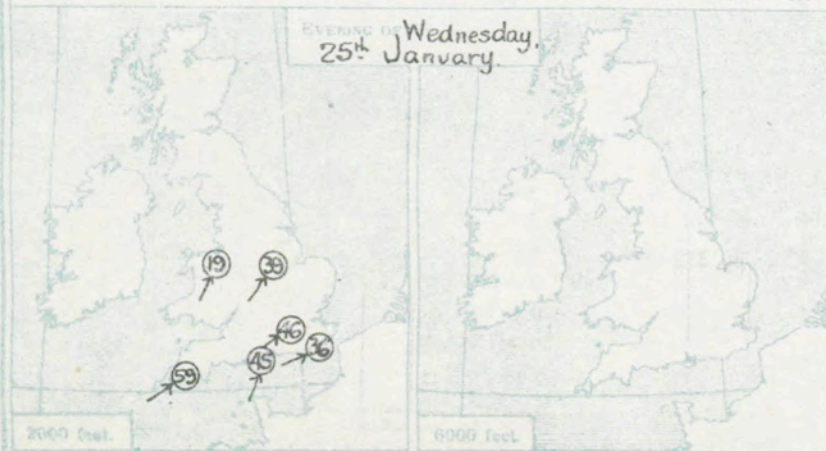
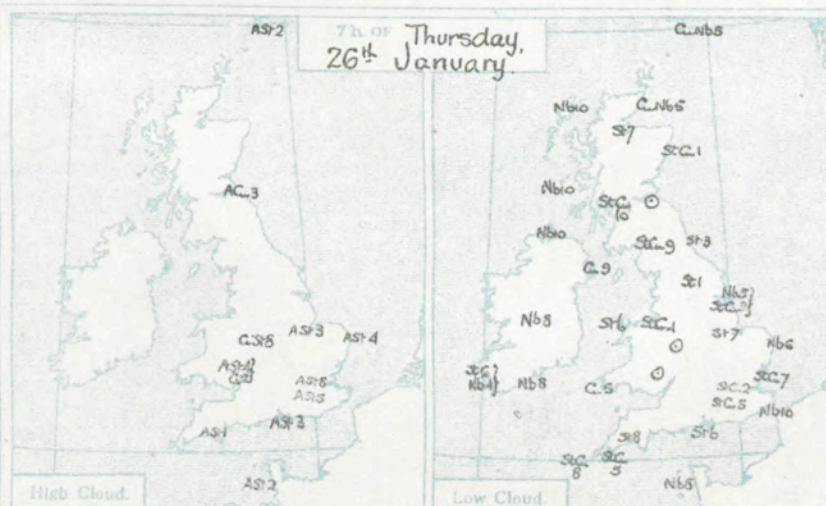
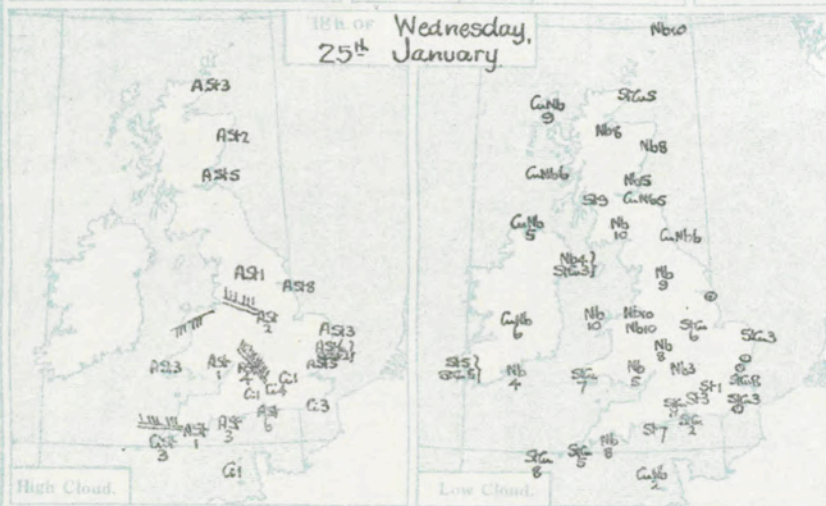
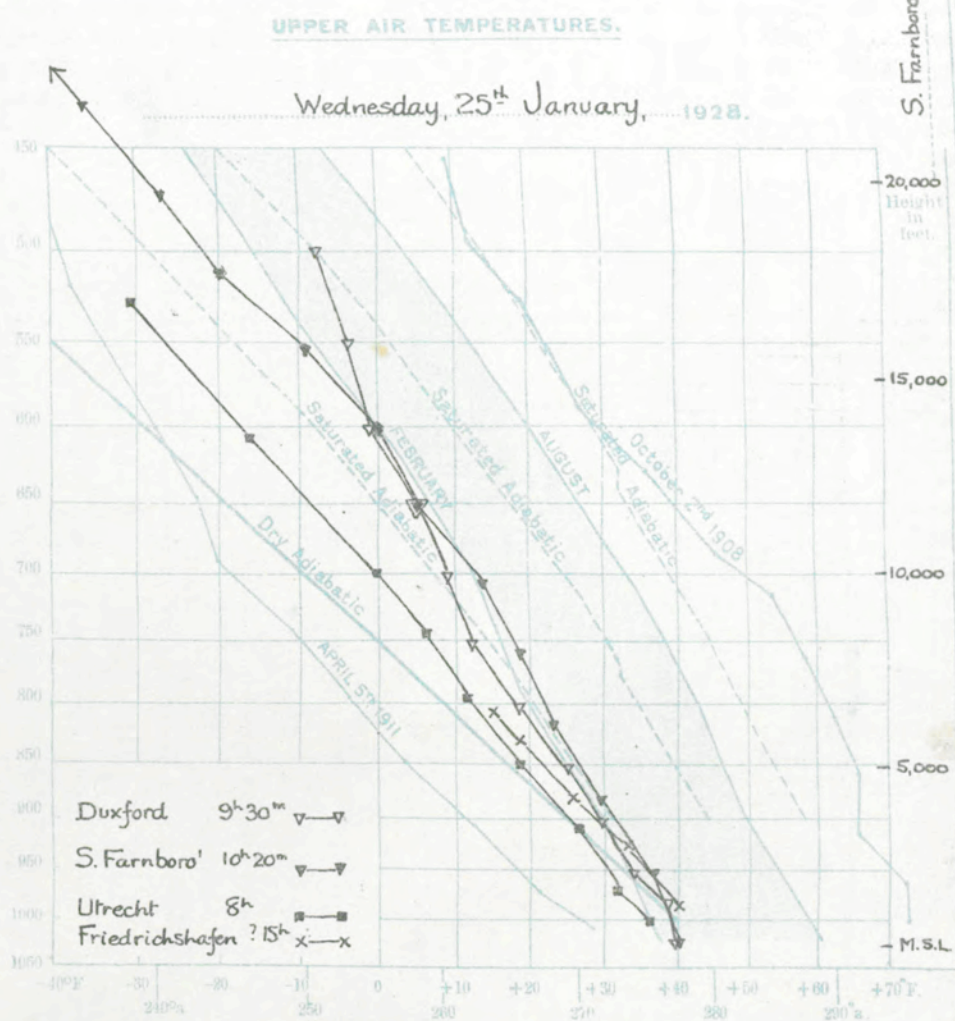
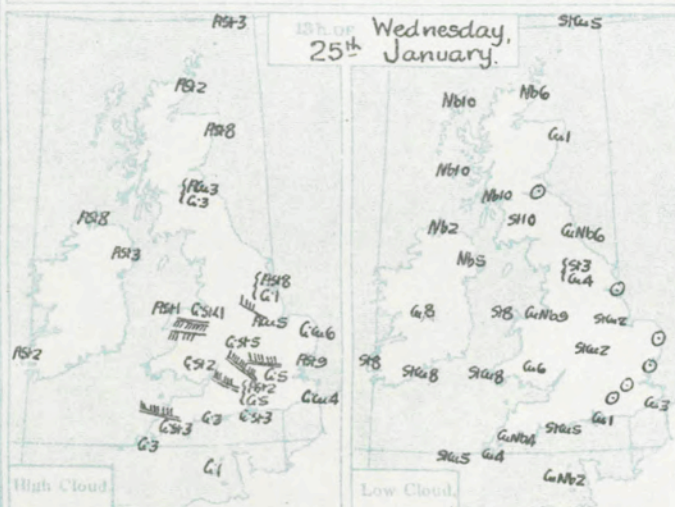
Place.	Madrid	Barcelona	Padua	Rome		Malta
Time.	13 <sup>h</sup> 24 <sup>h</sup>	13 <sup>h</sup> 24 <sup>h</sup>	13 <sup>h</sup> 24 <sup>h</sup>	13 <sup>h</sup> 24 <sup>h</sup>		17 <sup>h</sup> 24 <sup>h</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	—	—	320 3	—	—	50 16
3,280	110 14	360 3	230 3	320 3	—	(3,000ft)
4,920	210 9	290 2	—	—	—	330 7
6,560	200 23	340 7	—	—	300 11	(7,000ft)
8,200	200 27	340 4	260 19	—	—	70 6
13,120						(10,000ft)
16,400						310 5
19,680						(16,000ft)
						Callm
						(20,000ft)
Place.					Rabat	Oran
Time.					7 <sup>h</sup> 25 <sup>h</sup>	6 <sup>h</sup> 25 <sup>h</sup>
1,640					80 21	—
3,280					80 21	40 14
4,920					80 7	60 23
6,560						60 27
8,200						30 19
13,120						60 21
16,400						74.
19,680						C
						220 40



UPPER AIR SUPPLEMENT, THURSDAY, 26<sup>TH</sup> JANUARY, 1928.

No. 3, 24,171.

U.A.S. 3,223.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Biggin Hill	Felixstowe	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felixstowe	Bircham Newton	Worthy Down	South Farnboro	Croydon	Croydon	Lymington	Lymington	Cattewater	Cattewater	Calshot	Place	
Time	11h 25h	8h 25h	10h 25h	9h 25h	12h 25h	12h 25h	3h 25h	12h 25h	12h 25h	12h 25h	12h 25h	12h 25h	12h 25h	10h 25h	10h 25h	12h 25h	8h 25h	13h 25h	12h 25h	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.	235 15	245 17	205 14	220 24	175 27	215 27	200 7	225 16	245 20	245 15	220 12	215 15	240 18	240 16	255 15	255 17	270 16	240 26	235 21	Surf.	
1000	265 31	270 38	225 29	235 41	195 55	205 51	225 15	240 35	265 36	265 40	235 31	245 19	250 30	245 27	270 28	265 25	275 31	245 42	245 32	1000	
2000	270 34	280 48	235 30	240 37	210 57	215 70	13h	260 41	280 38	265 46	250 37	260 29	260 29	275 33	285 38	275 34	280 38	250 31	255 34	2000	
3000	275 46	280 44	240 41	245 ?			290 90	270 34	280 42	265 29	255 45	265 30	265 36	275 34	290 43	280 45	280 29		255 35	3000	
4000	275 36	280 48	245 43	250 40			300 90	270 34	285 31		260 42	270 34	270 34	290 35	295 43	285 34	290 38		255 37	4000	
5000	285 36	285 43	245 38								260 47	265 46	270 39		295 45	285 33			260 40	5000	
6000		285 44									260 52	275 52	270 45	Kew	285 52	285 48		300 90	265 44	6000	
8000				10h			280 60	320 70			10h	12h 30m				285 45		13h	260 52	8000	
10000				C				330 65			330 65	320 100		13h	13h	300 52		C	275 47	10000	
12000				290 100				330 65			13h	270 90	280 90	280 75		(9,000ft)		290 80	(11,000ft)	12000	
Neph.							300 42				300 65								250 80	Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felixstowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoeburyness	Lymington	Cattewater	Calshot	Place				
Time				16h 25h	17h 25h	15h 25h	16h 25h			18h 25h	17h 25h	15h 25h		16h 25h	16h 25h	17h 25h	Time				
Type				b.										b.	b.		Type				
Feet																	Feet				
Surf.				210 37	185 18	185 18	180 18				220 18			225 16	230 35	215 26	Surf.				
1000				210 66	210 31	215 29	220 38				215 43			230 31	235 45	220 43	1000				
2000					215 19	225 39					225 46			240 36	235 59	215 45	2000				
3000					16h	230 50										215 53	3000				
4000					Alu	14h											4000				
5000					240 60	14h											5000				
6000					270 90	15h 20m											6000				
8000					230 70	C											8000				
10000					17h 20m	300 55											10000				
12000					240 60	17h				C		C			16h	15h	12000				
Neph.						230 60				320 120		250 50			270 75	300 40	Neph.				
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felixstowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoeburyness	Lymington	Cattewater	Calshot	Place			
Time						6h 26h		6h 26h			8h 26h					8h 26h	7h 26h	Time			
Type																		Type			
Feet																		Feet			
Surf.						120 ?		130 18			180 10					215 28	210 18	Surf.			
1000						210 19		210 31			205 21					220 31	220 35	1000			
2000						220 31		220 25			220 26							2000			
3000						225 41		220 25			230 31							3000			
4000						235 43		225 25			235 29							4000			
5000						235 51		240 20			245 27							5000			
6000						245 44		250 24										6000			
8000								260 17										8000			
10000								(7000ft)										10000			
12000																		12000			
Neph.																		Neph.			

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station	Pressure	Height above M.S.L.	Temp.	Relative Humidity
	mb.	Feet.	°F.	%		mb.	Feet.	°F.	%		mb.	Feet.	°F.	%
Duxford 9h 30m 25.1.28.	1025	M.S.L.	40.5	38										
	1021	100	40.5	38										
	984	1080	39	38										
	950	2010	34	33										
	900	3440	30	29										
	850	4960	25	24										
	800	6500	18.5	17										
	750	8140	12	11										
	700	9880	9	8										
	650	11770	5	4										
	600	13730	-2	-3										
	550	15890	-4	-5										
	500	18230	-8	-9										
		Haze top	740 mb.											
Utrecht 8h 25.1.28	1022	M.S.L.	36	85										
	997	670	36	85										
	960	1650	32	85										
	903	3280	27	85										
	847	4920	19	85										
	793	6560	12	85										
	743	8200	7	75										
	696	9840	0	65										
	607	13120	-17	65										
	528	16400	-31	65										
Friedrichshafen 7h 15h 25.1.28.	1036	M.S.L.	40.3	63										
	985	1338	40.3	70										
	925	2978	33.8	87										
	880	4280	26.4	98										
	835	5608	19.4	97										
	804	6578	15.4											
		St. Cu. Cu.	830 mb.											
South Farnborough 10h 20m 25.1.28.														
	1019	230	41											
	949	2100	37											
	881	4050	30											
	818	6000	23											
	758	7940	19											
	702	9880	14											
	650	11800	5											
	600	13780	0											
	553	15760	-9											
	510	17690	-20											
	470	19570	-27											
	431	21590	-36											
	396	23510	-45											
	363	25410	-56											
	332	27300	-67											
	303	29200	-74											
	289	30170	-76											
	276	31110	-78											
		C. St. 37-303 mb.												
		Bumpy 332-317 mb.												

## UPPER WINDS ABROAD.

Place.	Utrecht	Olomouc	Prague	Barcelona	Rabat	Malta						
Time.	13h 25 <sup>th</sup>	13h 25 <sup>th</sup>	13h 25 <sup>th</sup>	13h 25 <sup>th</sup>	17h 25 <sup>th</sup>	17h 25 <sup>th</sup>						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,640	260	19	260	10	300	10	330	3	50	4		
3,280			270	28	270	32	290	11	160	2	(1,000ft)	
4,920			280	32	280	33	290	2	90	4	40	13
6,560					280	37	300	5			(2,000ft)	
8,240					260	48	-	-			30	13
13,120							310	13			(3,000ft)	
16,400												
19,680												

Place.	Algiers	Toulouse	Messina	Lindenberg	Cracow					
Time.	18h 25 <sup>th</sup>	18h 25 <sup>th</sup>	18h 25 <sup>th</sup>	6h 26 <sup>th</sup>	7h 26 <sup>th</sup>					
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.				
1,640	10	9	-	-	248	26	270	27		
3,280	20	7	330	7	360	11	259	29	270	20
4,920	100	4	-	-	-	-	259	29		
6,560	110	3	330	7	320	3	259	32		
8,240	250	6	20	16	-	-				
13,120	220	4			290	16				
16,400	20	4								
19,680	20	5								



No. 8. 24,172.

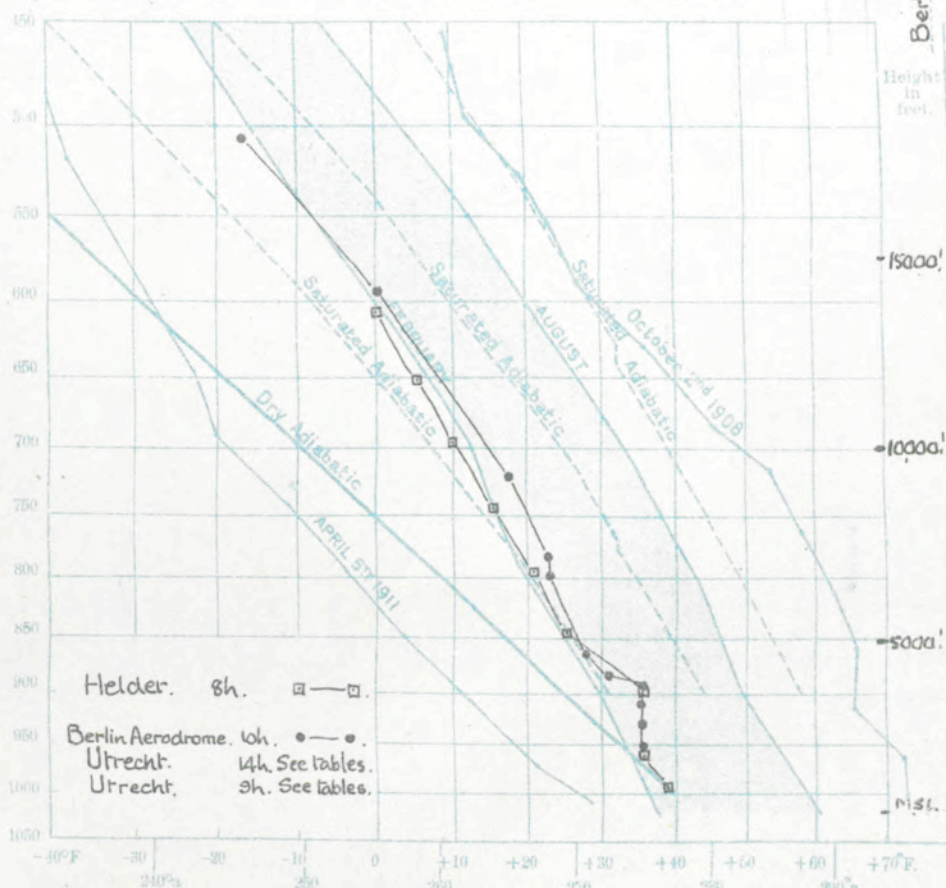
U.A.S. 3224.

### On Charts

*Table 1*

in Tables.\*

Thursday, 26<sup>th</sup> January. 1928.



Two maps of the British Isles showing bird sightings on Friday, 27th January. The left map is labeled 'High Cloud' and the right map is labeled 'Low Cloud'. Both maps show various bird species and counts across the country.

**High Cloud Map:**

- PS14
- 7h ov
- Friday, 27th January.
- PS14
- PS1
- PS2
- PS3
- PS4
- PS5
- PS6
- PS7
- PS8
- PS9
- PS10
- PS11
- PS12
- PS13
- PS14
- PS15
- PS16
- PS17
- PS18
- PS19
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- PS89
- PS90
- PS91
- PS92
- PS93
- PS94
- PS95
- PS96
- PS97
- PS98
- PS99
- PS100

**Low Cloud Map:**

- PS14
- 7h ov
- Friday, 27th January.
- PS14
- PS1
- PS2
- PS3
- PS4
- PS5
- PS6
- PS7
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- PS13
- PS14
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- PS97
- PS98
- PS99
- PS100

Two maps of Great Britain showing wind direction and speed for the evening of Thursday, 26th January. The left map is for 2000 feet and the right map is for 6000 feet. Both maps show wind directions indicated by arrows and speeds indicated by numbers in circles.

**2000 feet.**

Winds are generally from the west or southwest, with speeds ranging from 23 to 25. A speed of 22 is noted in the south.

**6000 feet.**

Winds are generally from the west or southwest, with speeds ranging from 21 to 29. A speed of 21 is noted in the south.

MORNING OF Friday, 27\* January.

2000 feet. 6000 feet.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Croydon	Shoebury-ness	Lympne	Burcham Newton	Cattewater	Calshot	Place	
Time				9h. 26 <sup>4</sup>	12h. 26 <sup>4</sup>	12h. 26 <sup>4</sup>	12h. 26 <sup>4</sup>	12h. 26 <sup>4</sup>					13h. 26 <sup>4</sup>	11h. 26 <sup>4</sup>	12h. 26 <sup>4</sup>		12h. 26 <sup>4</sup>		13h. 26 <sup>4</sup>	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.					170	26	-	0	225	15	185	20	160	16					205	28	Surf.
1000					185	40	220	27	240	31	180	32	195	30					200	51	1000
2000					195	39	245	40	245	36	190	38	205	44					205	58	2000
3000																					3000
4000																					4000
5000																					5000
6000																					6000
8000																					8000
10000																					10000
12000																					12000
Neph.																					Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead		Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattewater	Cattewater	Calshot		Place	
Time	16h. 26 <sup>4</sup>	17h. 26 <sup>4</sup>	16h. 26 <sup>4</sup>			17h. 26 <sup>4</sup>										17h. 26 <sup>4</sup>	17h. 26 <sup>4</sup>			Time	
Type	b															b				Type	
Feet																				Feet	
Surf.		225	14	205	10	275	20									300	17	295	20	Surf.	
1000		235	22	230	21	275	29									300	26	295	27	1000	
2000		235	23	250	25	275	23									305	36	305	28	2000	
3000		245	25	260	29	275	27													3000	
4000		250	22	270	32	275	23													4000	
5000		250	25	270	37	275	21													5000	
6000		250	29			275	21													6000	
8000						255	19													8000	
10000						16h.				16h.										10000	
12000						Ci				Ci										12000	
Neph						220	170			240	90									Neph.	
Place	Aberdeen	Leuchars	Renfrew	Burcham Newton	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place	
Time				6h. 27 <sup>4</sup>			6h. 27 <sup>4</sup>	8h. 27 <sup>4</sup>	8h. 27 <sup>4</sup>				7h. 27 <sup>4</sup>			6h. 27 <sup>4</sup>		8h. 27 <sup>4</sup>	7h. 27 <sup>4</sup>	Time	
Type																		b.		Type	
Feet																				Feet	
Surf.					245	5							210	8			230	15	345	12	Surf.
1000					265	18							265	24			245	25	350	27	1000
2000					280	20							275	25			245	21	350	51	2000
3000													280	25			280	17	350	37	3000
4000																					4000
5000																					5000
6000																					6000
8000																					8000
10000																					10000
12000																					12000
Neph.																					Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

## UPPER WINDS ABROAD.

Place.	Toulouse	Perpignan	Cracow	Olomouc	Rabat.	Perpignan
Time	10h. 26 <sup>d</sup> .	10h. 26 <sup>d</sup> .	12h. 26 <sup>d</sup> .	12h. 26 <sup>d</sup> .	15h. 26 <sup>d</sup> .	18h. 26 <sup>d</sup> .
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	-	-	200	39
3,280	230	3	140	11	-	-
4,920	-	-	-	-	190	18
6,560	100	4	130	38	30	14
8,200	50	17	140	18	70	2
13,120	-	-	-	-	190	15
16,400	-	-	-	-	240	23
19,680	-	-	-	-	10	9
					230	41
					360	14
					120	7
					260	39
					360	28
					360	21

Place.	Algiers	Cracow	Madrid	Setif	Malta.	Malta.
Time.	7h. 27 <sup>d</sup> .	7h. 27 <sup>d</sup> .	7h. 27 <sup>d</sup> .	6h. 27 <sup>d</sup> .	17h. 26 <sup>d</sup> .	6h. 27 <sup>d</sup> .
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	240	23	101	5	-	-
3,280	260	25	90	7	320	14
4,920	250	23	180	16	320	14
6,560	240	20	180	11	260	14
8,200	-	-	180	22	270	32
13,120	-	-	180	25	(1000ft)	(1000ft)
16,400	-	-	180	20	100	18
19,680	-	-	180	20	(3000ft)	(3000ft)
					110	22
					(5000ft)	(5000ft)
					110	24
					110	20

Meteorological Office, Air Min<sup>y</sup>, G. C. SIMPSON, F.R.S.,  
 Kingsway London W 19 Directors





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 28<sup>th</sup> JANUARY, 1928.

No. 24,173.

U.A.S. 3225.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 8th, 1911, and October 2nd, 1905, 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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings).

On charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 5-10 "

— 10-20 "

— 20-35 m.p.h.

— 35-45 "

— 45-55 "

— 55-65 "

— 65-75 "

— 75-85 "

— 85-95 "

— 95-105 "

— 105-115 "

— 115-125 "

— 125-135 "

— 135-145 "

— 145-155 "

— 155-165 "

— 165-175 "

— 175-185 "

— 185-195 "

— 195-205 "

— 205-215 "

— 215-225 "

— 225-235 "

— 235-245 "

— 245-255 "

— 255-265 "

— 265-275 "

— 275-285 "

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— 295-305 "

— 305-315 "

— 315-325 "

— 325-335 "

— 335-345 "

— 345-355 "

— 355-365 "

— 365-375 "

— 375-385 "

— 385-395 "

— 395-405 "

— 405-415 "

— 415-425 "

— 425-435 "

— 435-445 "

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— 465-475 "

— 475-485 "

— 485-495 "

— 495-505 "

— 505-515 "

— 515-525 "

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— 665-675 "

— 675-685 "

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— 715-725 "

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— 735-745 "

— 745-755 "

— 755-765 "

— 765-775 "

— 775-785 "

— 785-795 "

— 795-805 "

— 805-815 "

— 815-825 "

— 825-835 "

— 835-845 "

— 845-855 "

— 855-865 "

— 865-875 "

— 875-885 "

— 885-895 "

— 895-905 "

— 905-915 "

— 915-925 "

— 925-935 "

— 935-945 "

— 945-955 "

— 955-965 "

— 965-975 "

— 975-985 "

— 985-995 "

— 995-1005 "

— 1005-1015 "

— 1015-1025 "

— 1025-1035 "

— 1035-1045 "

— 1045-1055 "

— 1055-1065 "

— 1065-1075 "

— 1075-1085 "

— 1085-1095 "

— 1095-1105 "

— 1105-1115 "

— 1115-1125 "

— 1125-1135 "

— 1135-1145 "

— 1145-1155 "

— 1155-1165 "

— 1165-1175 "

— 1175-1185 "

— 1185-1195 "

— 1195-1205 "

— 1205-1215 "

— 1215-1225 "

— 1225-1235 "

— 1235-1245 "

— 1245-1255 "

— 1255-1265 "

— 1265-1275 "

— 1275-1285 "

— 1285-1295 "

— 1295-1305 "

— 1305-1315 "

— 1315-1325 "

— 1325-1335 "

— 1335-1345 "

— 1345-1355 "

— 1355-1365 "

— 1365-1375 "

— 1375-1385 "

— 1385-1395 "

— 1395-1405 "

— 1405-1415 "

— 1415-1425 "

— 1425-1435 "

— 1435-1445 "

— 1445-1455 "

— 1455-1465 "

— 1465-1475 "

— 1475-1485 "

— 1485-1495 "

— 1495-1505 "

— 1505-1515 "

— 1515-1525 "

— 1525-1535 "

— 1535-1545 "

— 1545-1555 "

— 1555-1565 "

— 1565-1575 "

— 1575-1585 "

— 1585-1595 "

— 1595-1605 "

— 1605-1615 "

— 1615-1625 "

— 1625-1635 "

— 1635-1645 "

— 1645-1655 "

— 1655-1665 "

— 1665-1675 "

— 1675-1685 "

— 1685-1695 "

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— 1725-1735 "

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— 1785-1795 "

— 1795-1805 "

— 1805-1815 "

— 1815-1825 "

— 1825-1835 "

— 1835-1845 "

— 1845-1855 "

— 1855-1865 "

— 1865-1875 "

— 1875-1885 "

— 1885-1895 "

— 1895-1905 "

— 1905-1915 "

— 1915-1925 "

— 1925-1935 "

— 1935-1945 "

— 1945-1955 "

— 1955-1965 "

— 1965-1975 "

— 1975-1985 "

— 1985-1995 "

— 1995-2005 "

— 2005-2015 "

— 2015-2025 "

— 2025-2035 "

— 2035-2045 "

— 2045-2055 "

— 2055-2065 "

— 2065-2075 "

— 2075-2085 "

— 2085-2095 "

— 2095-2105 "

— 2105-2115 "

— 2115-2125 "

— 2125-2135 "

— 2135-2145 "

— 2145-2155 "

— 2155-2165 "

— 2165-2175 "

— 2175-2185 "

— 2185-2195 "

— 2195-2205 "

— 2205-2215 "

— 2215-2225 "

— 2225-2235 "

— 2235-2245 "

— 2245-2255 "

— 2255-2265 "

— 2265-2275 "

— 2275-2285 "

— 2285-2295 "

— 2295-2305 "

— 2305-2315 "

— 2315-2325 "

— 2325-2335 "

— 2335-2345 "

— 2345-2355 "

— 2355-2365 "

— 2365-2375 "

— 2375-2385 "



# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	Aberdeen	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Worthy Down	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Lympne	Lympne	Cattewater	Calshot	Place
Time			12h. 27'	9h. 27'	12h. 27'	12h. 27'	12h. 27'	12h. 27'	12h. 27'	9h. 27'	12h. 27'	13h. 27'	12h. 27'	12h. 27'	10h. 27'	12h. 27'	12h. 27'	12h. 27'	Time
Type			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.	Feet
Surf.			275 15	320 23	260 ?	320 22	320 20	325 12	285 2	295 14	335 17	345 10	325 10	355 3	265 10	325 11	10 28	340 25	Surf.
1000			310 23	325 37	295 21	330 25	315 26	330 23	310 9	305 35	345 19	340 27	330 17	355 12	285 19	315 11	355 23	345 33	1000
2000			320 31	325 39	315 23	340 30	320 27		325 8	325 40				345 7	290 19			345 35	2000
3000			335 30	330 37	315 22	350 31	325 30							350 7	265 14				3000
4000			335 25			350 31								355 11	250 14				4000
5000			335 25			350 31								355 13					5000
6000			325 23			350 31								5 16					6000
8000			330 32			345 29								350 26					8000
10000			340 32			340 29													10000
12000			340 55			350 66													12000
Neph.															10h. 6				Neph.

Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne	Cattewater	Calshot	Place
Time	16h. 27'			16h. 27'	17h. 27'	15h. 27'			17h. 27'		17h. 27'			16h. 27'		16h. 27'	Time
Type	b								b		b			b			Type
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.		280 12		295 15		305 14	310 8		330 10		315 4		350 11		345 14	330 12	Surf.
1000		280 25		300 13		310 27	320 18		345 26		345 17		355 19		345 20	330 19	1000
2000		280 20		320 9		315 26	320 21		355 28				15 17		350 23	335 31	2000
3000		285 31		320 7		325 25	330 19		5 32						360 20	355 28	3000
4000		285 31		325 9		325 31	355 20		5 29						360 28	360 32	4000
5000		285 23		320 20		325 29	350 26		5 33							360 34	5000
6000		300 33		330 24		335 31			5 34							355 29	6000
8000		310 26		335 28		350 31										355 27	8000
10000		325 29	15h.	330 29		345 29											10000
12000		335 39	15h.	330 45		350 39											12000
Neph.			330 115														Neph.

Place.	Aberdeen.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Felix-stowe.	Valentia.	Worthy Down.	South Farnboro.	Croydon.	Kew.	Shoebury-ness.	Lympne.	Cattewater.	Calshot.	Place.
Time.						6h. 28 <sup>h</sup> .	8h. 28 <sup>h</sup> .			8h. 28 <sup>h</sup> .	8h. 28 <sup>h</sup> .	7h. 28 <sup>h</sup> .			7h. 28 <sup>h</sup> .		7h. 28 <sup>h</sup> .	Time.
Type.																		Type.
Feet Surf.						160 15	215 14			165 2	195 6	190 10			225 12		200 5	Feet Surf.
1000						180 21	230 30			210 27	220 29	225 31			230 33		210 24	1000
2000						225 30	240 28			235 32	235 25	245 26			245 33		280 27	2000
3000							240 26			245 30	245 26	245 23			265 30			3000
4000										250 24	245 27							4000
5000																		5000
6000																		6000
8000																		8000
10000																		10000
12000																		12000
Neph.																		Neph.

## UPPER AIR TEMPERATURES AND HUMIDITIES.

Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity	Station.	Pressure	Height above M.S.L.	Temp.	Relative Humidity			
	mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%
Duxford, 14h. 27/1/28.	1017	M.S.L.	-	-	92												
	1013	100	39	38	83												
	1010	300	38	36	81												
	1007	600	36	35	78												
	1004	900	35	34	75												
	1001	1200	34	33	72												
	998	1500	33	32	69												
	995	1800	32	31	66												
	992	2100	31	30	63												
	989	2400	30	29	60												
	986	2700	29	28	57												
	983	3000	28	27	54												
	980	3300	27	26	51												
	977	3600	26	25	48												
	974	3900	25	24	45												
	971	4200	24	23	42												
	968	4500	23	22	39												
	965	4800	22	21	36												
	962	5100	21	20	33												
	959	5400	20	19	30												
	956	5700	19	18	27												
	953	6000	18	17	24												
	950	6300	17	16	21												
	947	6600	16	15	18												
	944	6900	15	14	15												
	941	7200	14	13	12												
	938	7500	13	12	9												
	935	7800	12	11	6												
	932	8100	11	10	3												
	929	8400	10	9	0												
	926	8700	9	8	-3												
	923	9000	8	7	-6												
	920	9300	7	6	-9												
	917	9600	6	5	-12												
	914	9900	5	4	-15												
	911	10200	4	3	-18												
	908	10500	3	2	-21												
	905	10800	2	1	-24												
	902	11100	1	0	-27												
	900	11400	0	-1	-30												
	897	11700	-1	-2	-33												
	894	12000	-2	-3	-36												
	891	12300	-3	-4	-39												
	888	12600	-4	-5	-42												
	885	12900	-5	-6	-45												
	882	13200	-6	-7	-48												
	879	13500	-7	-8	-51												
	876	13800	-8	-9	-54												
	873	14100	-9	-10	-57												
	870	14400	-10	-11	-60												
	867	14700	-11	-12	-63												
	864	15000	-12	-13	-66												
	861	15300	-13	-14	-69												
	858	15600	-14	-15	-72												
	855	15900	-15	-16	-75												
	852	16200	-16	-17	-78												
	849	16500	-17	-18	-81												
	846	16800	-18	-19	-84												
	843	17100	-19	-20	-87												
	840	17400	-20	-21	-90												
	837	17700	-21	-22	-93												
	834	18000	-22	-23	-96												
	831	18300	-23	-24	-99												
	828	18600	-24	-25	-102												
	825	18900	-25	-26	-105												





# AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 29<sup>TH</sup> JANUARY, 1928.

No. 24,174

U.A.S. 3226.

### DIAGRAM OF UPPER AIR TEMPERATURE.

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 24, 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.

### UPPER WINDS.

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.

h = balloon with tail. d = double theodolite ascent.

### CLOUD MOVEMENTS (Nephoscope readings).

On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 " "

— 16-25 " "

— 26-35 m.p.h.

— 36-45 " "

— 46-55 " "

— 56-65 " "

— 66-75 " "

— 76-85 " "

— 86-95 " "

— 96-105 " "

— 106-115 " "

— 116-125 " "

— 126-135 " "

— 136-145 " "

— 146-155 " "

— 156-165 " "

— 166-175 " "

— 176-185 " "

— 186-195 " "

— 196-205 " "

— 206-215 " "

— 216-225 " "

— 226-235 " "

— 236-245 " "

— 246-255 " "

— 256-265 " "

— 266-275 " "

— 276-285 " "

— 286-295 " "

— 296-305 " "

— 306-315 " "

— 316-325 " "

— 326-335 " "

— 336-345 " "

— 346-355 " "

— 356-365 " "

— 366-375 " "

— 376-385 " "

— 386-395 " "

— 396-405 " "

— 406-415 " "

— 416-425 " "

— 426-435 " "

— 436-445 " "

— 446-455 " "

— 456-465 " "

— 466-475 " "

— 476-485 " "

— 486-495 " "

— 496-505 " "

— 506-515 " "

— 516-525 " "

— 526-535 " "

— 536-545 " "

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— 576-585 " "

— 586-595 " "

— 596-605 " "

— 606-615 " "

— 616-625 " "

— 626-635 " "

— 636-645 " "

— 646-655 " "

— 656-665 " "

— 666-675 " "

— 676-685 " "

— 686-695 " "

— 696-705 " "

— 706-715 " "

— 716-725 " "

— 726-735 " "

— 736-745 " "

— 746-755 " "

— 756-765 " "

— 766-775 " "

— 776-785 " "

— 786-795 " "

— 796-805 " "

— 806-815 " "

— 816-825 " "

— 826-835 " "

— 836-845 " "

— 846-855 " "

— 856-865 " "

— 866-875 " "

— 876-885 " "

— 886-895 " "

— 896-905 " "

— 906-915 " "

— 916-925 " "

— 926-935 " "

— 936-945 " "

— 946-955 " "

— 956-965 " "

— 966-975 " "

— 976-985 " "

— 986-995 " "

— 996-1005 " "

— 1006-1015 " "

— 1016-1025 " "

— 1026-1035 " "

— 1036-1045 " "

— 1046-1055 " "

— 1056-1065 " "

— 1066-1075 " "

— 1076-1085 " "

— 1086-1095 " "

— 1096-1105 " "

— 1106-1115 " "

— 1116-1125 " "

— 1126-1135 " "

— 1136-1145 " "

— 1146-1155 " "

— 1156-1165 " "

— 1166-1175 " "

— 1176-1185 " "

— 1186-1195 " "

— 1196-1205 " "

— 1206-1215 " "

— 1216-1225 " "

— 1226-1235 " "

— 1236-1245 " "

— 1246-1255 " "

— 1256-1265 " "

— 1266-1275 " "

— 1276-1285 " "

— 1286-1295 " "

— 1296-1305 " "

— 1306-1315 " "

— 1316-1325 " "

— 1326-1335 " "

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— 1346-1355 " "

— 1356-1365 " "

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— 1686-1695 " "

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— 1786-1795 " "

— 1796-1805 " "

— 1806-1815 " "

— 1816-1825 " "

— 1826-1835 " "

— 1836-1845 " "

— 1846-1855 " "

— 1856-1865 " "

— 1866-1875 " "

— 1876-1885 " "

— 1886-1895 " "

— 1896-1905 " "

— 1906-1915 " "

— 1916-1925 " "

— 1926-1935 " "

— 1936-1945 " "

— 1946-1955 " "

— 1956-1965 " "

— 1966-1975 " "

— 1976-1985 " "

— 1986-1995 " "

— 1996-2005 " "

— 2006-2015 " "

— 2016-2025 " "

— 2026-2035 " "

— 2036-2045 " "

— 2046-2055 " "

— 2056-2065 " "

— 2066-2075 " "

— 2076-2085 " "

— 2086-2095 " "

— 2096-2105 " "

— 2106-2115 " "

— 2116-2125 " "

— 2126-2135 " "

— 2136-2145 " "

— 2146-2155 " "

— 2156-2165 " "

— 2166-2175 " "

— 2176-2185 " "

— 2186-2195 " "

— 2196-2205 " "

— 2206-2215 " "

— 2216-2225 " "

— 2226-2235 " "

— 2236-2245 " "

— 2246-2255 " "

— 2256-2265 " "

— 2266-2275 " "

— 2276-2285 " "

— 2286-2295 " "

— 2296-2305 " "

— 2306-2315 " "

— 2316-2325 " "

— 2326-2335 " "

— 2336-2345 " "

— 2346-2355 " "

— 2356-2365 " "

— 2366-2375 " "

— 2376-23



[illegible][illegible]

Placc.	Larx. Geneva				Florence				Tours				Rochefort				Mazda			
Time.	18 <sup>h</sup> 28 <sup>m</sup>				18 <sup>h</sup> 28 <sup>m</sup>				18 <sup>h</sup> 28 <sup>m</sup>				18 <sup>h</sup> 28 <sup>m</sup>				17 <sup>h</sup> 28 <sup>m</sup>			
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	-	-	-	-	-	-	-	-	-	-	-	-	210	18	-	-	1000'	-	-	-
3,260	340	3	160	12	160	6	230	20	210	16	110	23	-	-	-	-	2000'	-	-	-
4,920	-	-	-	-	180	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6,560	20	1	-	-	190	9	250	20	220	14	110	38	-	-	-	-	5,000'	-	-	-
9,840	-	-	210	11	-	-	300	20	-	-	-	-	-	-	-	-	-	-	-	-
13,120	280	13	250	11	-	-	-	-	-	-	-	-	-	-	-	-	110	27	-	-
16,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Place.	Toulouse				Perpignan				Reme											
Time.	18 <sup>h</sup> 28 <sup>m</sup>				18 <sup>h</sup> 28 <sup>m</sup>				7 <sup>h</sup> 29 <sup>m</sup>											
1,840	-	-	-	-	160	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,260	280	11	40	3	140	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,920	-	-	-	-	120	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6,560	310	7	310	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9,840	260	4	200	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13,120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

G. C. SIMPSON, F.R.S.,  
Director





# AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, MONDAY, 30<sup>th</sup> JANUARY, 1928.

No. B. 24175

U.A.S. 3227

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 6th, 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.

### UPPER WINDS.

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.

### CLOUD MOVEMENTS (Nephoscope readings)

#### On Charts.

Movements are indicated thus:—

— No speed given.

— 0-5 m.p.h.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

— 66-75 "

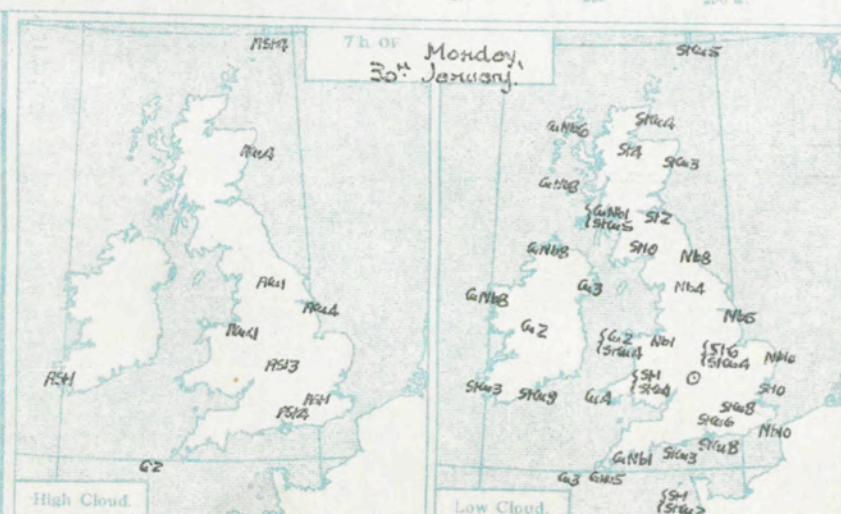
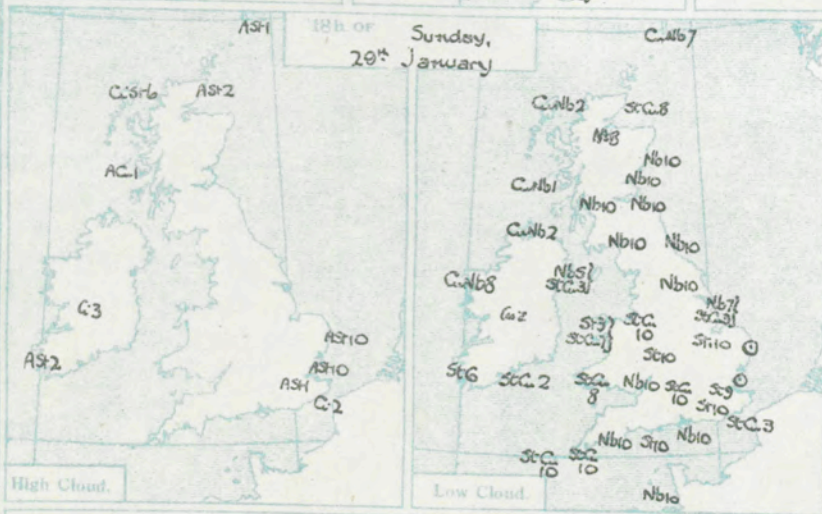
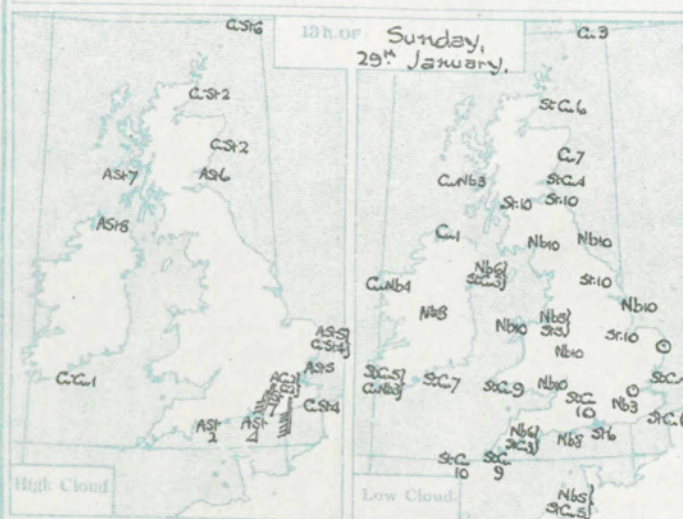
— and so on.

#### In Tables.

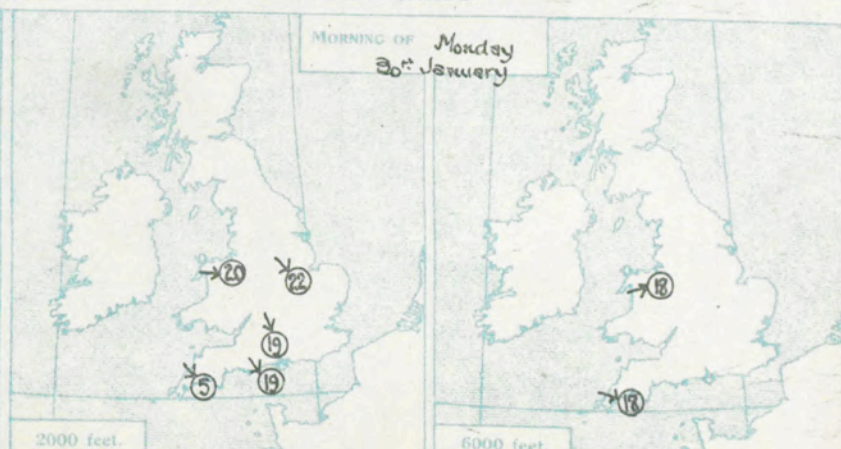
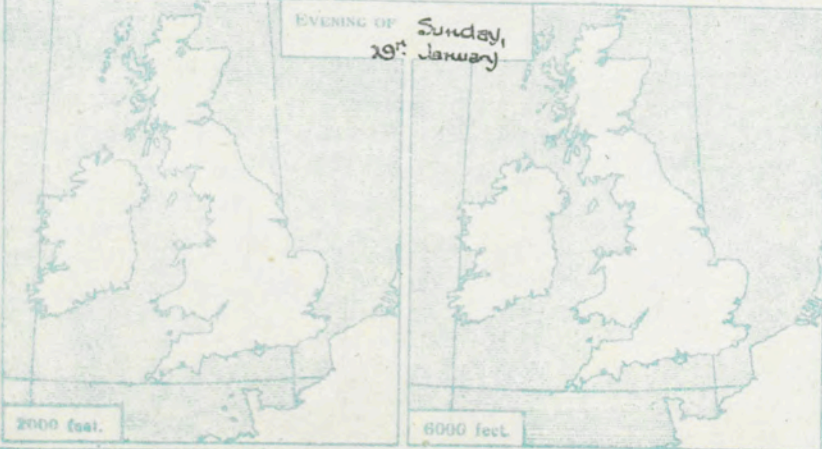
Directions are given in degrees, velocities in m.p.h.

Speeds of high clouds are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single lines).

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Valentia	Worthy Down	South Farnboro	Croydon	Kew	Shoebury-ness	Lympne		Cattewater	Calshot	Place		
Time.		13 <sup>h</sup> 29 <sup>m</sup>											11 <sup>h</sup> 25 <sup>m</sup>	13 <sup>h</sup> 26 <sup>m</sup>		13 <sup>h</sup> 23 <sup>m</sup>			12 <sup>h</sup> 26 <sup>m</sup>	Time.		
Type																6.				Type		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet	
Surf.	a		110	2									155	25			175	20		165	20	Surf.
1000			155	13									175	30			175	29		170	32	1000
2000			160	11									195	45			200	36		185	41	2000
3000			165	9									195	47			205	34				3000
4000													195	43								4000
5000													185	40								5000
6000																						6000
8000																						8000
10000													15 <sup>h</sup>									10000
12000													C.		25 <sup>h</sup>							12000
Neph.													180	60	190	35						Neph.

[illegible][illegible]

Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.	
	mb.	Feet. M.S.L.	°F.	°F.	%		mb.	Feet. M.S.L.	°F.	°F.	%		mb.	Feet. M.S.L.	°F.	°F.	%
		M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-

Place.			Perpignan		Tours		Abbeville		Nancy		Tours		Lyons	
Time.			10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	190	33	270	35	190	20	170	29	170	18		
3,280	200	58	190	36	270	45	200	21	180	52	180	41		
4,920	-	-	-	-	260	38	-	-	-	-	-	-		
6,560	280	41	180	34			230	19					170	46
9,840	180	59												
13,120														
16,400														
19,680														

Place.			Strasbourg		Toulouse		Paris		Essen		Algiers		Malta	
Time.			10 <sup>h</sup>	25 <sup>m</sup>	10 <sup>h</sup>	25 <sup>m</sup>	7 <sup>h</sup>	30 <sup>m</sup>	7 <sup>h</sup>	30 <sup>m</sup>	6 <sup>h</sup>	30 <sup>m</sup>	6 <sup>h</sup>	30 <sup>m</sup>
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	40	10	320	16	200	37	135	47	80	7	190	46		
3,280	120	14	320	11			203	41	100	16	1000'			
4,920	-	-	-	-			225	41	100	16	190	52		
6,560	140	34	180	11					110	23	2000'			
9,840											190	56		
13,120											3000'			
16,400														
19,680														

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

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





## AIR MINISTRY.

## DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 31<sup>st</sup> JANUARY, 1928.

No. 8. 24,176.

U.A.S. 3,228.

## DIAGRAM OF UPPER AIR TEMPERATURE.

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 15th, 1911, and October 2nd, 1905, 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.

## UPPER WINDS.

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.

## CLOUD MOVEMENTS (Nephoscope readings).

## On Charts.

Movements are indicated thus:—

— No speed given.

— 5 m.p.h.

— 10 m.p.h.

— 15 m.p.h.

— 20 m.p.h.

— 20-25 m.p.h.

— 25-30 m.p.h.

— 30-35 m.p.h.

— 35-40 m.p.h.

— 40-45 m.p.h.

— 45-50 m.p.h.

— 50-55 m.p.h.

— 55-60 m.p.h.

— 60-65 m.p.h.

— 65-70 m.p.h.

— 70-75 m.p.h.

— 75-80 m.p.h.

— 80-85 m.p.h.

— 85-90 m.p.h.

— 90-95 m.p.h.

— 95-100 m.p.h.

— 100-105 m.p.h.

— 105-110 m.p.h.

— 110-115 m.p.h.

— 115-120 m.p.h.

— 120-125 m.p.h.

— 125-130 m.p.h.

— 130-135 m.p.h.

— 135-140 m.p.h.

— 140-145 m.p.h.

— 145-150 m.p.h.

— 150-155 m.p.h.

— 155-160 m.p.h.

— 160-165 m.p.h.

— 165-170 m.p.h.

— 170-175 m.p.h.

— 175-180 m.p.h.

— 180-185 m.p.h.

— 185-190 m.p.h.

— 190-195 m.p.h.

— 195-200 m.p.h.

— 200-205 m.p.h.

— 205-210 m.p.h.

— 210-215 m.p.h.

— 215-220 m.p.h.

— 220-225 m.p.h.

— 225-230 m.p.h.

— 230-235 m.p.h.

— 235-240 m.p.h.

— 240-245 m.p.h.

— 245-250 m.p.h.

— 250-255 m.p.h.

— 255-260 m.p.h.

— 260-265 m.p.h.

— 265-270 m.p.h.

— 270-275 m.p.h.

— 275-280 m.p.h.

— 280-285 m.p.h.

— 285-290 m.p.h.

— 290-295 m.p.h.

— 295-300 m.p.h.

— 300-305 m.p.h.

— 305-310 m.p.h.

— 310-315 m.p.h.

— 315-320 m.p.h.

— 320-325 m.p.h.

— 325-330 m.p.h.

— 330-335 m.p.h.

— 335-340 m.p.h.

— 340-345 m.p.h.

— 345-350 m.p.h.

— 350-355 m.p.h.

— 355-360 m.p.h.

— 360-365 m.p.h.

— 365-370 m.p.h.

— 370-375 m.p.h.

— 375-380 m.p.h.

— 380-385 m.p.h.

— 385-390 m.p.h.

— 390-395 m.p.h.

— 395-400 m.p.h.

— 400-405 m.p.h.

— 405-410 m.p.h.

— 410-415 m.p.h.

— 415-420 m.p.h.

— 420-425 m.p.h.

— 425-430 m.p.h.

— 430-435 m.p.h.

— 435-440 m.p.h.

— 440-445 m.p.h.

— 445-450 m.p.h.

— 450-455 m.p.h.

— 455-460 m.p.h.

— 460-465 m.p.h.

— 465-470 m.p.h.

— 470-475 m.p.h.

— 475-480 m.p.h.

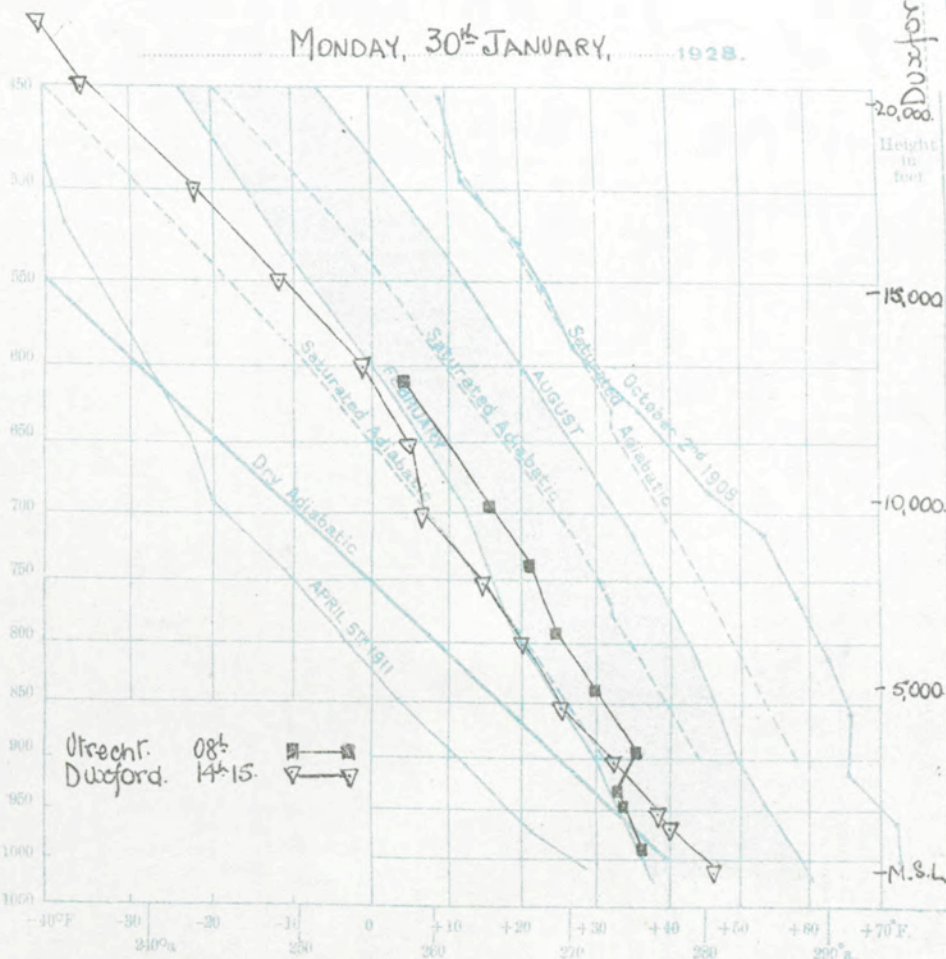
— 480-485 m.p.h.

— 485-490 m.p.h.

— 490-495 m.p.h.

— 495-500 m.p.h.

## UPPER AIR TEMPERATURES.

MONDAY, 30<sup>th</sup> JANUARY, 1928.

Duxford

20,000

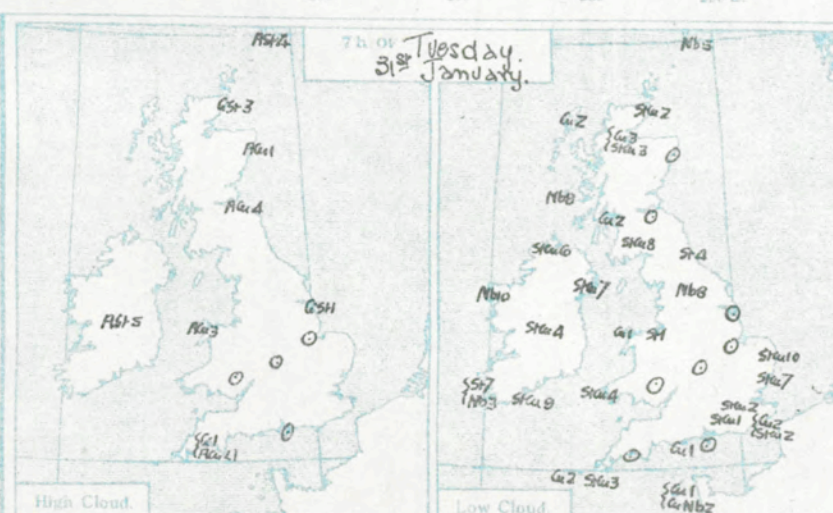
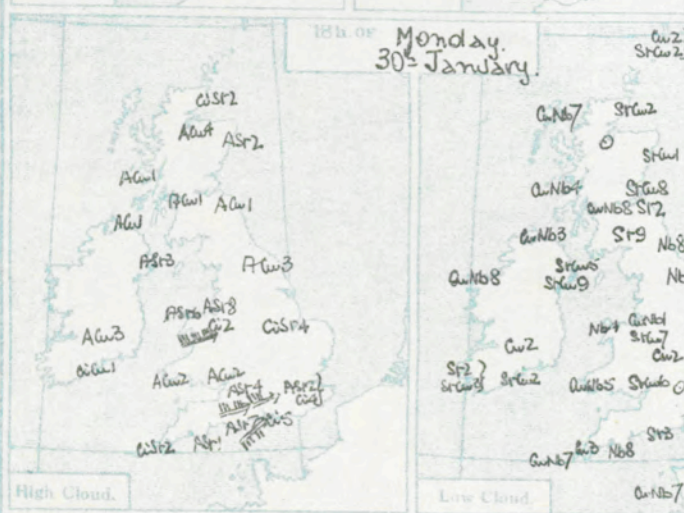
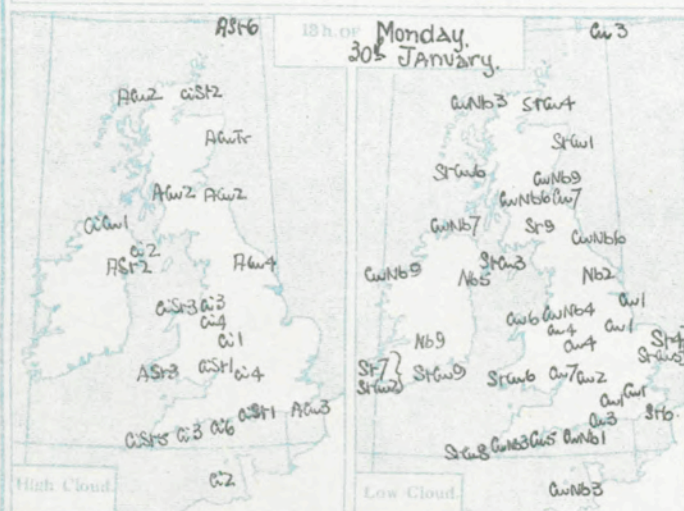
15,000

10,000

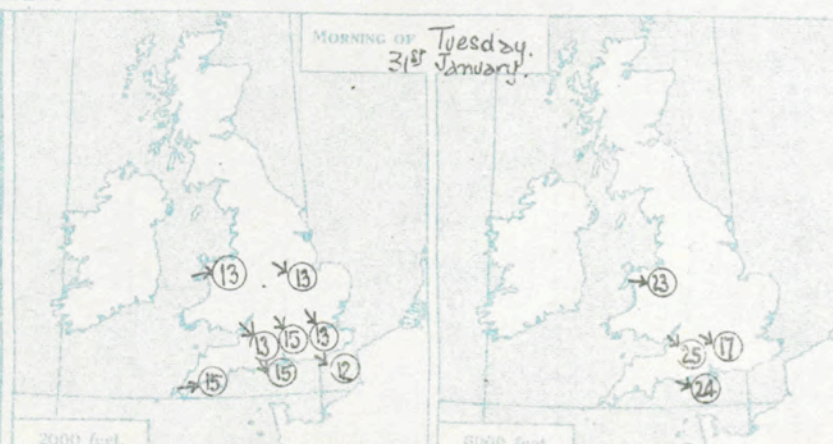
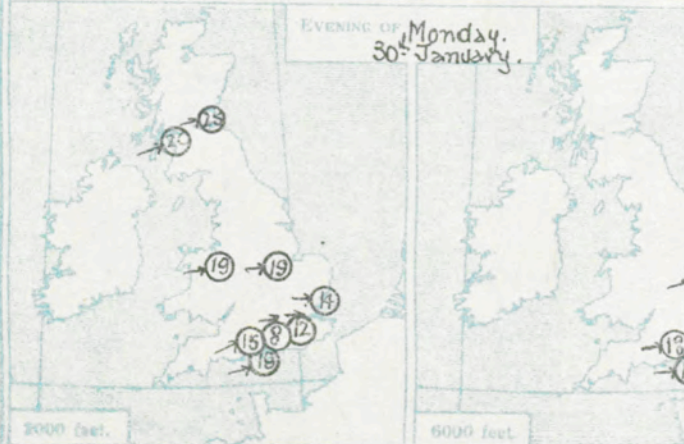
5,000

M.S.L.

## CLOUD FORMS, AMOUNTS AND MOVEMENTS.



## DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF UPPER WINDS.





# DIRECTION AND MEAN VELOCITY IN MILES PER HOUR OF SURFACE AND UPPER WINDS—BRITISH.

Place	South Farnboro	Leuchars	Renfrew	Holyhead	Aldergrove	Holyhead	Bircham- Newton	Cranwell	Felix- stowe	Worthy Down	Worthy Down	South Farnboro	Croydon	Croydon	Biggin Hill	Lympne	Biggin Hill	Catte- water	Calshot	Place																			
Time	09 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	11 <sup>h</sup> 30 <sup>m</sup>	09 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	08 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	11 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	10 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	08 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	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.			215	10	235	10	245	12			250	18	250	13	245	9	290	4	295	8	265	8	275	2	275	8	335	10	270	4	270	15	295	12	Surf.				
1000			285	26	245	20	245	19			250	20	255	17	265	17	315	15	315	17	275	14	295	10	290	10	300	17	305	15	335	15	330	17	265	15	275	13	1000
2000			245	29	245	17	255	15			260	21	230	17	265	20	330	15	325	17	280	14	295	14	325	13	310	15	345	16	335	20	275	15	275	10	2000		
3000			255	25	245	21	255	?			260	19	270	17	270	18	335	14	325	18			295	18	295	15	330	12	310	15	340	10	325	24	280	21	285	17	3000
4000			245	29	245	23					260	22	270	19	265	18	310	14	310	19			295	16			305	20	300	20	325	13	320	20			270	21	4000
5000					245	26	12 <sup>h</sup> 05				255	25	275	22	265	19	295	17					285	15			295	18	300	18	315	17	310	17	13 <sup>h</sup>		5000		
6000	09 <sup>h</sup>						Cu St.				245	25					310	15					285	15			295	15	285	17	280	16	280		Cu		6000		
8000	A.G.						260	55			255	25					300	16					270	17			280	16	270	17	245	17			270	30	8000		
10000	230	54			12 <sup>h</sup>		10 <sup>h</sup> 30				265	31			10 <sup>h</sup>		265	24					265	23			(7,000)		240	24			10 <sup>h</sup>				10000		
12000	Cu				A.G.		Cu		Cu						A.G.		245	25					240	31			185	70					Cu				12000		
Neph.	200	90			250	48	260	65	210	50					270	45																					Neph.		
Place	Leuchars	Renfrew	Renfrew	Holyhead	Sealand	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Biggin Hill	Shoebury- ness	Lympne			Catte- water	Calshot	Place																			
Time	17 <sup>h</sup> 30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	17 <sup>h</sup> 30 <sup>m</sup>	30 <sup>m</sup>	12 <sup>h</sup> 30 <sup>m</sup>	17 <sup>h</sup> 30 <sup>m</sup>	16 <sup>h</sup> 30 <sup>m</sup>	17 <sup>h</sup> 30 <sup>m</sup>		17 <sup>h</sup> 30 <sup>m</sup>	18 <sup>h</sup> 30 <sup>m</sup>	17 <sup>h</sup> 30 <sup>m</sup>	16 <sup>h</sup> 30 <sup>m</sup>		17 <sup>h</sup> 30 <sup>m</sup>				16 <sup>h</sup> 30 <sup>m</sup>	Time																			
Type		b			b					b									b		Type																		
Feet	220	10	215	10	220	9															Feet																		
Surf.							245	8	240	7	235	9	230	1							Surf.																		
1000			235	19	240	17	235	21	250	18	255	19	265	11							1000																		
2000			240	25	250	25	245	20	260	30	260	19	265	19							2000																		
3000					255	24	245	21	255	32	265	29	275	18							3000																		
4000						250	23		260	28	265	37	245	18							4000																		
5000						260	29		265	24	260	41	240	19							5000																		
6000									265	25			245	19							6000																		
8000																					8000																		
10000			13 <sup>h</sup>			14 <sup>h</sup> 35															10000																		
12000			Cu			Cu St.		Cu	Cu		Cu		Cu								12000																		
Neph.			240	45		240	50	260	65	250	90	280	45	220	75						Neph.																		
Place	Aberdeen	Leuchars	Renfrew		Aldergrove	Holyhead	Sealand	Cranwell	Felix- stowe	Valentia	Worthy Down	South Farnboro	Croydon	Biggin Hill	Shoebury- ness	Lympne		Catte- water	Calshot	Place																			
Time							6 <sup>h</sup> 31 <sup>m</sup>	7 <sup>h</sup> 31 <sup>m</sup>			8 <sup>h</sup> 31 <sup>m</sup>	8 <sup>h</sup> 31 <sup>m</sup>	7 <sup>h</sup> 31 <sup>m</sup>	6 <sup>h</sup> 31 <sup>m</sup>		7 <sup>h</sup> 31 <sup>m</sup>		8 <sup>h</sup> 31 <sup>m</sup>	7 <sup>h</sup> 31 <sup>m</sup>	Time																			
Type											b							b		Type																			
Feet							135	8	235	6											Feet																		
Surf.																					Surf.																		
1000							245	11	235	17			305	16	320	14	305	13	190	17	1000																		
2000							260	13	235	13			305	13	305	15	305	13			2000																		
3000							270	17	280	11			305	15	335	15	300	15			3000																		
4000							270	16	270	10			305	16	290	17	300	19			4000																		
5000							275	20					305	21	295	18					5000																		
6000							270	23					300	25	290	17					6000																		
8000							280	33					285	30	285	24					8000																		
10000							305	36					300	45							10000																		
12000																					12000																		
Neph.																					Neph.																		

UPPER AIR TEMPERATURES AND HUMIDITIES.												UPPER WINDS ABROAD.																					
Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Station.	Pressure.	Height above M.S.L.	Temp.		Relative Humidity	Place.	Metz.		Mannha.		Dlomoag.		Kosice.		Ofrecht.		Malta.				
	mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%	Time.	10 <sup>h</sup> 30 <sup>m</sup>	11 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	13 <sup>h</sup> 30 <sup>m</sup>	17 <sup>h</sup> 30 <sup>m</sup>						
Duxford. 14 <sup>h</sup> 15.	1004.2	100	46.5	45.5	92																												
	985	1090	40	38	84																												
	950	1510	38	36	83																												
	900	2930	32	30	81																												
	850	4440	26	24	79																												
	800	6000	20	18	76																												
	750	7680	15	13																													
	700	9420	7	5																													
	650	11290	4	2																													
	600	13280	-1	-4																													
	550	15400	-2	-14																													
	500	17710	-7	-24																													
	450	20200	-12	-38																													
	425	21420	-14	-42																													
	Haze top	900 mbs																															
	Cu 500	800 mb.																															
Utrecht. 08 <sup>h</sup> 30/128.	980	M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-																
	944	670	37.0		85																												
	867	1650	34		85																												
	833	3280	36		85																												
	781	4920	30		75																												
	733	6560	25		75																												
	689	8200	21		65																												
	603	9840	16		65																												
	528	13120	5		35																												
		16400	?		35																												
	Inversion at 933 mb																																
	3400 ft. Temp at base																																
	3377 ft. Depth 295 feet																																
																		Place.	Harve		Bordeaux		Dijon		Madrid		Kosice		Malta				
																		Time.	18 <sup>h</sup> 31 <sup>ST</sup>		18 <sup>h</sup> 31 <sup>ST</sup>		7 <sup>h</sup> 31 <sup>ST</sup>		7 <sup>h</sup> 31 <sup>ST</sup>		7 <sup>h</sup> 31 <sup>ST</sup>		6 <sup>h</sup> 31 <sup>ST</sup>				
																		1,640	-	-	-	-	203	7	-	-	190	6	190	16			
																		3,280	230	18	300	14	270	5	50	11	220	23	3000 ft				
																		4,920	-	-	-	-	203	5	350	56	210	46	230	28			
																		6,560	300	14	290	?	180	16	10	31			7000 ft				
																		9,840	270	14	280	16	180	22	10	43			190	37			
																		13,120											10000 ft				
																		16,400											210	44			
																		19,680											13,000 ft				
																		Meteorological Office, Air Ministry, G. C. SIMPSON, F.R.S., Kingway, London, W.C.2. Director.															