



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 1ST OCTOBER, 1929.

No. 24785.

U.A.S. 3837.

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 "

— 16-20 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

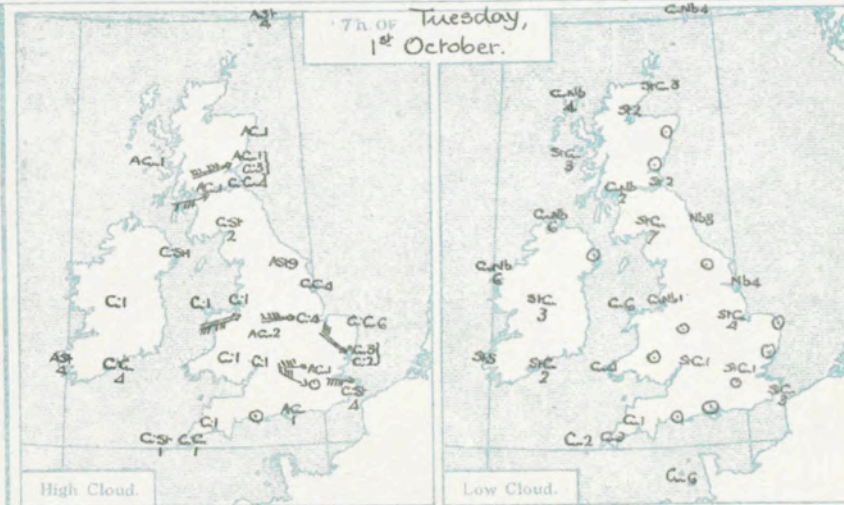
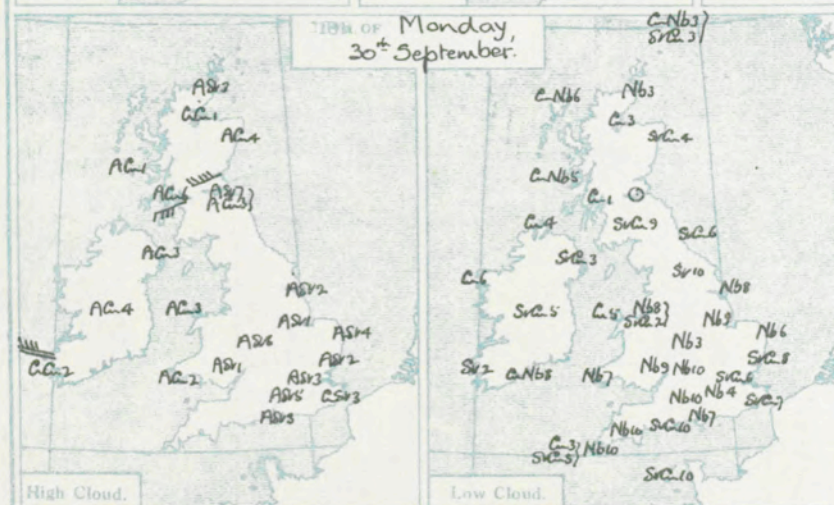
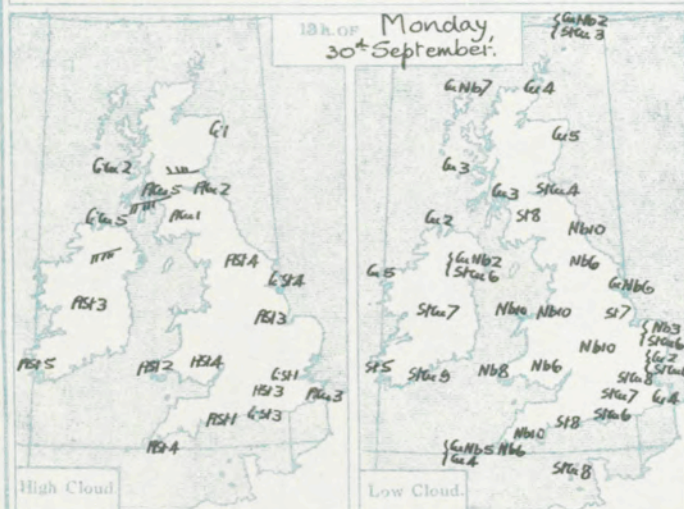
— and so on.

In Tables.

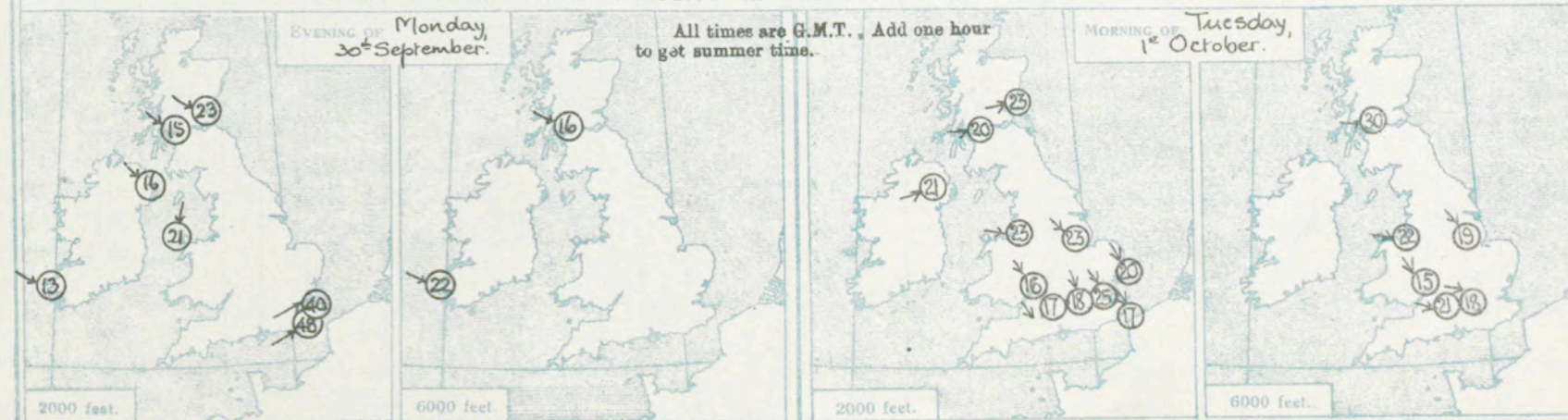
Directions are given in degrees, velocities in m.p.h.

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

DIRECTION (degrees from N)																						Cattle-water		Calshot		Place
Place	Albion	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Croydon	Manston	Lympne	Cattle-water	Calshot	Place						
Time	10h. 30'	10h. 30'	10h. 30'	10h. 30'	8h. 30'	8h. 30'	11h. 30'	12h. 30'	11h. 30'	10h. 30'	12h. 30'	12h. 30'	12h. 30'	12h. 30'	10h. 30'	12h. 30'	13h. 30'									
Type	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.			b.						
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
Surf.	310	3	250	5	275	7	330	8	195	21	235	15	220	22	255	12	235	12	210	12						
1000	315	10	260	7	270	14	320	15	210	51	265	21	225	22	220	22	240	11	235	15						
2000	320	13	260	11	270	16	310	13	210	49	270	28	230	22	230	27	215	13	240	22						
3000	330	19	265	15	280	17	300	16	230	30	260	32	230	22	230	26			255	30						
4000	275	18	275	17	255	21	30	18	240	17	255	28	230	19	235	31			255	33						
5000	275	20			250	17			240	33	250	27	240	29	240	27			250	47						
6000					250	24			245	29			250	34					250	36						
8000					260	31																				
10000	10h.				255	40			10h.		10h.															
12000	C.				245	46			C.		C.															
Neph.	270	100							270	75	270	60			260	65	270	75								
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympne	Cattle-water	Calshot	Place							
Time	10h. 30'	10h. 30'	10h. 30'	10h. 30'				10h. 30'	10h. 30'						10h. 30'	10h. 30'										
Type	b.	b.	b.	b.				b.	b.						b.	b.										
Feet	Dir.	Vel.	Dir.	Vel.				Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.							
Surf.	295	8	285	7	325	6	360	21							205	17	220	15								
1000	295	26	295	15	315	14	360	21							225	27	290	11								
2000	285	23	300	15	305	16	40	2							290	13	290	13								
3000	290	22	300	17	300	16	5	25							290	17	290	17								
4000	285	24	290	19	285	18	340	21							290	22	290	22								
5000			285	20			315	13							285	25	285	25								
6000	10h.		290	16											285	22	285	22								
8000	250	75	275	19											285	22	285	22								
10000	10h.		260	35	10h.										10h.		10h.									
12000	AC		255	30	AC										C.		C.									
Neph.	250	54	250	45	260	48									280	45										
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympne	Cattle-water	Calshot	Place						
Time		7h. 1st	7h. 1st	6h. 1st			6h. 1st	6h. 1st			6h. 1st	6h. 1st	6h. 1st	6h. 1st		6h. 1st	6h. 1st									
Type		b.	b.	b.			b.	b.			b.	b.	b.	b.		b.	b.									
Feet	Dir.	Vel.	Dir.	Vel.			Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
Surf.		240	8	235	10	190	6																			
1000		245	29	265	27	255	18																			
2000		265	23	275	20	255	21																			
3000		280	28	280	19	265	26																			
4000		285	36	275	23	275	19																			
5000		290	33	270	34	275	22																			
6000				275	30																					
8000				270	26																					
10000				265	33																					
12000		C.		AC																						
Neph.		260	60	260	42																					

UPPER AIR TEMPERATURES AND HUMIDITIES

[illegible]

UPPER WINDS ABROAD.

Place.	Milan	Ancona.	Lombard	Lyons.	St Cyr	Strasbourg
Time.	12h 30'	13h 30'	13h 30'	10h 30'	18h 30 th	18h 30 th
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	90	2	-	220	11	-
3,280	-	-	270	11	170	8
4,920	-	-	10	8	240	11
6,560	-	-	-	-	-	-
8,200	-	-	-	-	260	18
9,840	-	-	-	-	250	31
15,120	250	18	340	11	-	-
16,400	310	27	-	-	-	-
19,680	-	-	-	-	-	-

Place.	Tours	Lyons	Utrecht	Cheb	Olomouc	Malta
Time.	18h 35 th	18h 31 st	7h 18 th	7h 15 th	7h 15 th	6h 12 th
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	-	-	160	13
3,280	230	20	130	4	230	13
4,920	-	-	-	-	250	16
6,560	240	38	260	4	250	23
8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	90	2	-	-	220	11	-	-
3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

Place.	Tours	Lyons	Utrecht	Cheb	Olomouc	Malta
Time.	18h 35 th	18h 31 st	7h 18 th	7h 15 th	7h 15 th	6h 12 th
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
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6,560	240	38	260	4	250	23
8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	90	2	-	-	220	11	-	-
3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
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3,280	230	20	130	4	230	13
4,920	-	-	-	-	250	16
6,560	240	38	260	4	250	23
8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	90	2	-	-	220	11	-	-
3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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6,560	240	38	260	4	250	23
8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	90	2	-	-	220	11	-	-
3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
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3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

Place.	Tours	Lyons	Utrecht	Cheb	Olomouc	Malta
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8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
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4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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8,200	240	41	320	3	260	20
9,840	-	-	-	-	-	-
15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

Place.	London	Paris	Brussels	Amsterdam	Antwerp	Brussels	Paris	London
Time.	12h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'	13h 30'
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1,640	90	2	-	-	220	11	-	-
3,280	-	-	270	11	230	11	170	8
4,920	-	-	10	8	230	11	-	-
6,560	-	-	-	-	250	15	70	2
8,200	-	-	-	-	-	-	350	15
9,840	-	-	-	-	-	-	-	-
15,120	250	18	340	11	-	-	-	-
16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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15,120	-	-	-	-	-	-
16,400	-	-	-	-	-	-
19,680	-	-	-	-	-	-

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16,400	310	27	-	-	-	-	-	-
19,680	-	-	-	-	-	-	-	-

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Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	-	-	-	-	160	13
3,280	230	20	130	4		



AIR MINISTRY.

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UPPER AIR SUPPLEMENT, WEDNESDAY, 2nd OCTOBER, 1929.
 No. 24,786.
 U.A.S. 3,838.

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The curves for April 24th, 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.

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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.

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On Charts.

Movements are indicated thus:—

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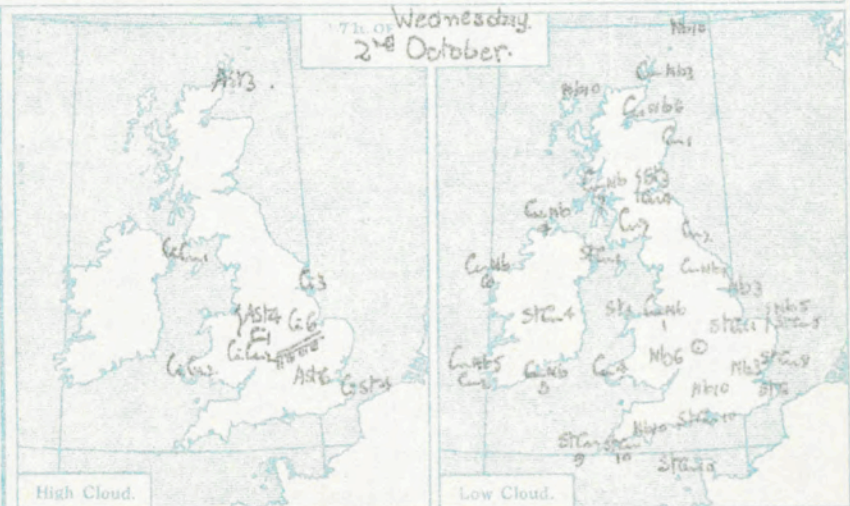
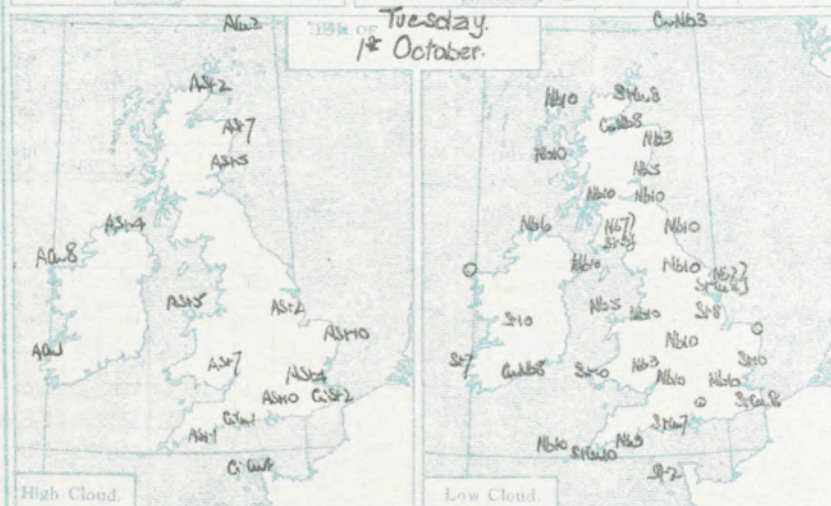
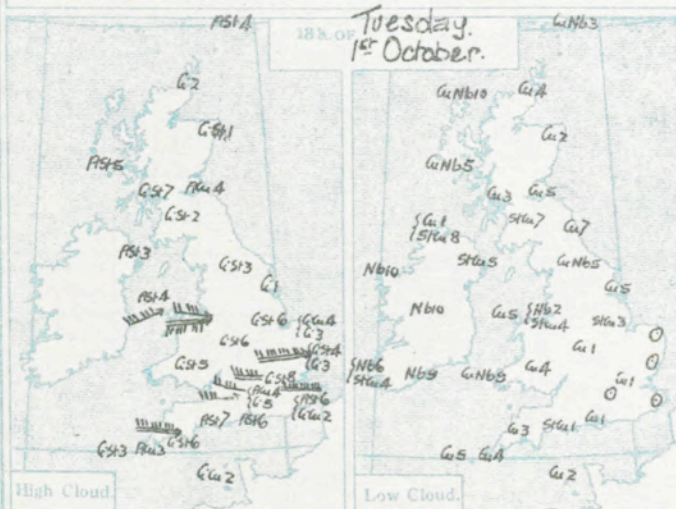
— 56-65 "

— and so on.

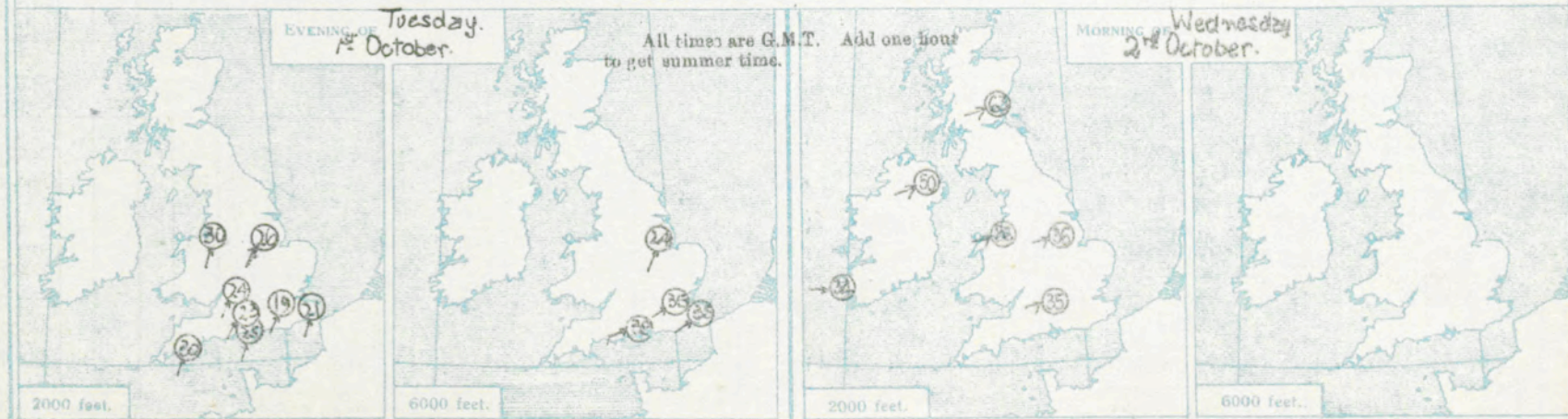
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Directions are given in degrees, velocities in m.p.h. Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

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0 Indicates absence of cloud.

DIPECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.

DIPECTION (degrees from N.) & MEAN VELOCITY (m.p.h.) of																				
Place	Holyhead	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Cardington	Cardington	Upper Heyford	Worthy Down	South Farnboro	Croydon	Croydon	Manston	Lymington	Calshot	Place	
Time	8h 15'	13h 15'	13h 15'	12h 15'	12h 15'	12h 15'	11h 15'	12h 15'	8h 15'	10h 15'	12h 15'	12h 15'	12h 15'	12h 15'	10h 15'	12h 15'	12h 15'	12h 15'	Time	
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type	
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet	
Surf.	240	3	240	8	205	13	185	12	190	13	160	5	245	8	205	6	280	7	Surf.	
1000	255	15	235	18	210	21	185	28	190	23	205	11	265	11	235	8	210	13	1000	
2000	250	13	230	23	205	24	195	27	195	25	215	12	265	16	230	7	325	14	2000	
3000	250	13	230	26	210	22	200	29	200	27	230	20	275	12	270	6	330	16	3000	
4000	250	17	230	29	215	22	195	28	185	25	235	25	275	16	280	13	320	15	4000	
5000	255	17			215	20	190	28			10h	6	270	18	290	15	315	18	5000	
6000	265	33			215	27	210	25			270	50	270	20	285	17	280	21	6000	
8000	275	32	Aldergrove	225	35	215	28				13h	6							8000	
10000	270	33		235	40	235	32				270	80							10000	
12000	(8,000)	10h	ASV	14,000	13h	Alu	Alu				13h	6							12000	
Neph.	270	69	270	95	225	38	225	39	280	63	280	54							Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place	
Time					16h 15'	17h 15'		1h		17h 15'	17h 15'		17h 15'		17h 15'	17h 15'	17h 15'	17h 15'	Time	
Type																			Type	
Feet																			Feet	
Surf.					170	10	175	8			190	10	190	9		180	9	215	Surf.	
1000					175	21	135	19			195	17	195	22		200	18	205	1000	
2000					190	30	200	26			200	23	210	19		205	19	205	2000	
3000					195	41	200	31			200	30	215	17		210	19	205	3000	
4000							210	32			205	32	210	24		220	19	215	4000	
5000							215	25			230	43	230	30		230	22	230	5000	
6000							200	24					240	35		235	35		6000	
8000																			8000	
10000																			10000	
12000																			12000	
Neph.							270	60											Neph.	
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place
Time		7h 25'		7h 25'		6h 25'	6h 25'				7h 25'		7h 25'							Time
Type																				Type
Feet																				Feet
Surf.		225	20		225	21		170	1	240	9		265	23		225	14			Surf.
1000		235	55		240	34		250	18	250	30		270	22		245	33			1000
2000		245	63		255	50		265	26	265	36		270	34		260	35			2000
3000		255	60		260	62		270	55	270	46		270	45						3000
4000					260	70		275	53	270	47									4000
5000					265	87														5000
6000																				6000
8000																				8000
10000																				10000
12000																				12000
Neph.								250	115											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.	M.S.L.	Dry.	Wet.	mb.	Feet.	M.S.L.	Dry.	Wet.	mb.	Feet.	M.S.L.	Dry.	Wet.
1010	1010	0	54	51	1010	1010	0	52	58	1010	1010	0	57	58
975	1100	43	44	44	975	1120	52	46	63	975	1120	52	46	63
950	1200	45	42	42	950	1200	50	43	60	950	1200	50	43	60
900	1370	33	35	35	900	1370	42	38	55	900	1370	42	38	55
850	1480	34	32	32	850	1480	38	34	51	850	1480	38	34	51
800	1630	31	25	25	800	1630	35	31	47	800	1630	35	31	47
750	1800	26	22	22	750	1800	30	28	43	750	1800	30	28	43
700	1990	21	18	18	700	1990	25	23	39	700	1990	25	23	39
650	2200	17	13	13	650	2200	16	16	35	650	2200	16	16	35
600	2430	13	7	7	600	2430	11	11	31	600	2430	11	11	31
550	2680	9	-	-	550	2680	7	-	27	550	2680	7	-	27
500	2950	-2	-	-	500	2950	3	-	23	500	2950	3	-	23
450	3240	-14	-	-	450	3240	-1	-	19	450	3240	-1	-	19
F.W. 710 300 to 670 mb. Some Cls not reached.														
DUXFORD. 11/10/29. 14:45. Inversions: 770 - 374.														
1010	1010	0	54	51	1010	1010	0	52	58	1010	1010	0	57	58
985	1070	34	50	50	985	1070	34	50	50	985	1070	34	50	50
951	1150	48	46	46	951	1150	48	46	46	951	1150	48	46	46
925	1240	43	43	43	925	1240	43	43	43	925	1240	43	43	43
841	1420	37	40	40	841	1420	37	40	40	841	1420	37	40	40
791	1550	34	40	40	791	1550	34	40	40	791	1550	34	40	40
743	1680	30	40	40	743	1680	30	40	40	743	1680	30	40	40
687	1840	25	40	40	687	1840	25	40	40	687	1840	25	40	40
613	2020	18	40	40	613	2020	18	40	40	613	2020	18	40	40
539	2200	9	40	40	539	2200	9	40	40	539	2200	9	40	40
Inversions: 770 - 374.														
DUXFORD. 8h 11/10/29. Isothermal: Base 820 mb. Temp at base 40°F. Amount? Depth 1000 feet.														
1010	1010	0	54	51	1010	1010	0	52	58	1010	1010	0	57	58
985	1070	34	50	50	985	1070	34	50	50	985	1070	34	50	50
951	1150	48	46	46	951	1150	48	46	46	951	1150	48	46	46
925	1240	43	43	43	925	1240	43	43	43	925	1240	43	43	43
841	1420	37	40	40	841	1420	37	40	40	841	1420	37	40	40
791	1550	34	40	40	791	1550	34	40	40	791	1550	34	40	40
743	1680	30	40	40	743	1680	30	40	40	743	1680	30	40	40
687	1840	25	40	40	687	1840	25	40	40	687	1840	25	40	40
613	2020	18	40	40	613	2020	18	40	40	613	2020	18	40	40
539	2200	9	40	40	539	2200	9	40	40	539	2200	9	40	40

UPPER WINDS ABROAD.

Place.	Paris		Helder		Warsaw.		Vainory		LeHavre		Malta	
Time.	13 ^h	15 ^m	13 ^h	15 ^m	13 ^h	15 ^m	13 ^h	15 ^m	18 ^h	15 ^m	17 ^h	15 ^m
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	240	14	-	-	230	17	160	7	-	-	3,000	
3,280			310	11	230	26	230	6	210	23	310	19
4,920			310	9	230	31	230	8	-	-	7,000	
6,560			230	20	230	20	270	11	250	31	290	17
9,840							230	11	250	30	10,000	
13,120											300	16
16,400											13,000	
19,680											240	14

Place.	Turin		La Puy		Prague		Kosice		Malta			
Time.	18 ^h	15 ^m	18 ^h	15 ^m	7 ^h	20 ^m	7 ^h	20 ^m	6 ^h	25 ^m		
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.		
1,640	-	-	-	-	200	15	160	6			3,000	17
3,280	140	2	240	13	150	26	230	16			310	10
4,920	-	-	240	23	270	39	250	19				
6,560	-	-	240	14			270	16				
9,840	240	29									10,000	17
13,120											310	15
16,400											16,000	17
19,680											330	12



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 3rd OCTOBER, 1929.No. 24,787.
U.A.S. 3,839.

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 " — 16-20 " — 21-25 m.p.h. — 26-35 " — 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 " — 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 " — 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 " — 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 " — 2756-2765 " — 2766-2775 " — 2776-2785 " — 2786-2795 " — 2796-2805 " — 2806-2815 " — 2816-2825 " — 2826-2835 " — 2836-2845 " — 2846-2855 " — 2856-2865 " — 2866-2875 " — 2876-2885 " — 2886-2895 " — 2896-2905 " — 2906-2915 " — 2916-2925 " — 2926-2935 " — 2936-2945 " — 2946-2955 " — 2956-2965 " — 2966-2975 " — 2976-2985 " — 2986-2995 " — 2996-3005 " — 3006-3015 " — 3016-3025 " — 3026-3035 " — 3036-3045 " — 3046-3055 " — 3056-3065 " — 3066-3075 " — 3076-3085 " — 3086-3095 " — 3096-3105 " — 3106-3115 " — 3116-3125 " — 3126-3135 " — 3136-3145 " — 3146-3155 " — 3156-3165 " — 3166-3175 " — 3176-3185 " — 3186-3195 " — 3196-3205 " — 3206-3215 " — 3216-3225 " — 3226-3235 " — 3236-3245 " — 3246-3255 " — 3256-3265 " — 3266-3275 " — 3276-3285 " — 3286-3295 " — 3296-3305 " — 3306-3315 " — 3316-3325 " — 3326-3335 " — 3336-3345 " — 3346-3355 " — 3356-3365 " — 3366-3375 " — 3376-3385 " — 3386-3395 " — 3396-3405 " — 3406-3415 " — 3416-3425 " — 3426-3435 " — 3436-3445 " — 3446-3455 " — 3456-3465 " — 3466-3475 " — 3476-3485 " — 3486-3495 " — 3496-3505 " — 3506-3515 " — 3516-3525 " — 3526-3535 " — 3536-3545 " — 3546-3555 " — 3556-3565 " — 3566-3575 " — 3576-3585 " — 3586-3595 " — 3596-3605 " — 3606-3615 " — 3616-3625 " — 3626-3635 " — 3636-3645 " — 3646-3655 " — 3656-3665 " — 3666-3675 " — 3676-3685 " — 3686-3695 " — 3696-3705 " — 3706-3715 " — 3716-3725 " — 3726-3735 " — 3736-3745 " — 3746-3755 " — 3756-3765 " — 3766-3775 " — 3776-3785 " — 3786-3795 " — 3796-3805 " — 3806-3815 " — 3816-3825 " — 3826-3835 " — 3836-3845 " — 3846-3855 " — 3856-3865 " — 3866-3875 " — 3876-3885 " — 3886-3895 " — 3896-3905 " — 3906-3915 " — 3916-3925 " — 3926-3935 " — 3936-3945 " — 3946-3955 " — 3956-3965 " — 3966-3975 " — 3976-3985 " — 3986-3995 " — 3996-4005 " — 4006-4015 " — 4016-4025 " — 4026-4035 " — 4036-4045 " — 4046-4055 " — 4056-4065 " — 4066-4075 " — 4076-4085 " — 4086-4095 " — 4096-4105 " — 4106-4115 " — 4116-4125 " — 4126-4135 " — 4136-4145 " — 4146-4155 " — 4156-4165 " — 4166-4175 " — 4176-4185 " — 4186-4195 " — 4196-4205 " — 4206-4215 " — 4216-4225 " — 4226-4235 " — 4236-4245 " — 4246-4255 " — 4256-4265 " — 4266-4275 " — 4276-4285 " — 4286-4295 " — 4296-4305 " — 4306-4315 " — 4316-4325 " — 4326-4335 " — 4336-4345 " — 4346-4355 " — 4356-4365 " — 4366-4375 " — 4376-4385 " — 4386-4395 " — 4396-4405 " — 4406-4415 " — 4416-4425 " — 4426-4435 " — 4436-4445 " — 4446-4455 " — 4456-4465 " — 4466-4475 " — 4476-4485 " — 4486-4495 " — 4496-4505 " — 4506-4515 " — 4516-4525 " — 4526-4535 " — 4536-4545 " — 4546-4555 " — 4556-4565 " — 4566-4575 " — 4576-4585 " — 4586-4595 " — 4596-4605 " — 4606-4615 " — 4616-4625 " — 4626-4635 " — 4636-4645 " — 4646-4655 " — 4656-4665 " — 4666-4675 " — 4676-4685 " — 4686-4695 " — 4696-4705 " — 4706-4715 " — 4716-4725 " — 4726-4735 " — 4736-4745 " — 4746-4755 " — 4756-4765 " — 4766-4775 " — 4776-4785 " — 4786-4795 " — 4796-4805 " — 4806-4815 " — 4816-4825 " — 4826-4835 " — 4836-4845 " — 4846-4855 " — 4856-4865 " — 4866-4875 " — 4876-4885 " — 4886-4895 " — 4896-4905 " — 4906-4915 " — 4916-4925 " — 4926-4935 " — 4936-4945 " — 4946-4955 " — 4956-4965 " — 4966-4975 " — 4976-4985 " — 4986-4995 " — 4996-5005 " — 5006-5015 " — 5016-5025 " — 5026-5035 " — 5036-5045 " — 5046-5055 " — 5056-5065 " — 5066-5075 " — 5076-5085 " — 5086-5095 " — 5096-5105 " — 5106-5115 " — 5116-5125 " — 5126-5135 " — 5136-5145 " — 5146-5155 " — 5156-5165 " — 5166-5175 " — 5176-5185 " — 5186-5195 " — 5196-5205 " — 5206-5215 " — 5216-5225 " — 5226-5235 " — 5236-5245 " — 5246-5255 " — 5256-5265 " — 5266-5275 " — 5276-5285 " — 5286-5295 " — 5296-5305 " — 5306-5315 " — 5316-5325 " — 5326-5335 " — 5336-5345 " — 5346-5355 " — 5356-5365 " — 5366-5375 " — 5376-5385 " — 5386-5395 " — 5396-5405 " — 5406-5415 " — 5416-5425 " — 5426-5435 " — 5436-5445 " — 5446-5455 " — 5456-5465 " — 5466-5475 " — 5476-5485 " — 5486-5495 " — 5496-5505 " — 5506-5515 " — 5516-5525 " — 5526-5535 " — 5536-5545 " — 5546-5555 " — 5556-5565 " — 5566-5575 " — 5576-5585 " — 5586-5595 " — 5596-5605 " — 5606-5615 " — 5616-5625 " — 5626-5635 " — 5636-5645 " — 5646-5655 " — 5656-5665 " — 5666-5675 " — 5676-5685 " — 5686-5695 " — 5696-5705 " — 5706-5715 " — 5716-5725 " — 5726-5735 " — 5736-5745 " — 5746-5755 " — 5756-5765 " — 5766-5775 " — 5776-5785 " — 5786-5795 " — 5796-5805 " — 5806-5815 " — 5816-5825 " — 5826-5835 " — 5836-5845 " — 5846-5855 " — 5856-5865 " — 5866-5875 " — 5876-5885 " — 5886-5895 " — 5896-5905 " — 5906-5915 " — 5916-5925 " — 5926-5935 " — 5936-5945 " — 5946-5955 " — 5956-5965 " — 5966-5975 " — 5976-5985 " — 5986-5995 " — 5996-6005 " — 6006-6015 " — 6016-6025 " — 6026-6035 " — 6036-6045 " — 6046-6055 " — 6056-6065 " — 6066-6075 " — 6076-6085 " — 6086-6095 " — 6096-6105 " — 6106-6115 " — 6116-6125 " — 6126-6135 " — 6136-6145 " — 6146-6155 " — 6156-6165 " — 6166-6175 " — 6176-6185 " — 6186-6195 " — 6196-6205 " — 6206-6215 " — 6216-6225 " — 6226-6235 " — 6236-6245 " — 6246-6255 " — 6256-6265 " — 6266-6275 " — 6276-6285 " — 6286-6295 " — 6296-6305 " — 6306-6315 " — 6316-6325 " — 6326-6335 " — 6336-6345 " — 6346-6355 " — 6356-6365 " — 6366-6375 " — 6376-6385 " — 6386-6395 " — 6396-6405 " — 6406-6415 " — 6416-6425 " — 6426-6435 " — 6436-6445 " — 6446-6455 " — 6456-6465 " — 6466-6475 " — 6476-6485 " — 6486-6495 " — 6496-6505 " — 6506-6515 " — 6516-6525 " — 6526-6535 " — 6536-6545 " — 6546-6555 " — 6556-6565 " — 6566-6575 " — 6576-6585 " — 6586-6595 " — 6596-6605 " — 6606-6615 " — 6616-6625 " — 6626-6635 " — 6636-6645 " — 6646-6655 " — 6656-6665 " — 6666-6675 " — 6676-6685 " — 6686-6695 " — 6696-6705 " — 6706-6715 " — 6716-6725 " — 6726-6735 " — 6736-6745 " — 6746-6755 " — 6756-6765 " — 6766-6775 " — 6776-6785 " — 6786-6795 " — 6796-6805 " — 6806-6815 " — 6816-6825 " — 6826-6835 " — 6836-6845 " — 6846-6855 " — 6856-6865 " — 6866-6875 " — 6876-6885 " — 6886-6895 " — 6896-6905 " — 6906-6915 " — 6916-6925 " — 6926-6935 " — 6936-6945 " — 6946-6955 " — 6956-6965 " — 6966-6975 " — 6976-6985 " — 6986-6995 " — 6996-7005 " — 7006-7015 " — 7016-7025 " — 7026-7035 " — 7036-7045 " — 7046-7055 " — 7056-7065 " — 7066-7075 " — 7076-7085 " — 7086-7095 " — 7096-7105 " — 7106-7115 " — 7116-7125 " — 7126-7135 " — 7136-7145 " — 7146-7155 " — 7156-7165 " — 7166-7175 " — 7176-7185 " — 7186-7195 " — 7196-7205 " — 7206-7215 " — 7216-7225 " — 7226-7235 " — 7236-7245 " — 7246-7255 " — 7256-7265 " — 7266-7275 " — 7276-7285 " — 7286-7295 " — 7296-7305 " — 7306-7315 " — 7316-7325 " — 7326-7335 " — 7336-7345 " — 7346-7355 " — 7356-7365 " — 7366-7375 " — 7376-7385 " — 7386-7395 " — 7396-7405 " — 7406-7415 " — 7416-7425 " — 7426-7435 " — 7436-7445 " — 7446-7455 " — 7456-7465 " — 7466-7475 " — 7476-7485 " — 7486-7495 " — 7496-7505 " — 7506-7515 " — 7516-7525 " — 7526-7535 " — 7536-7545 " — 7546-7555 " — 7556-7565 " — 7566-7575 " — 7576-7585 " — 7586-7595 " — 7596-7605 " — 7606-7615 " — 7616-7625 " — 7626-7635 " — 7636-7645 " — 7646-7655 " — 7656-7665 " — 7666-7675 " — 7676-7685 " — 7686-7695 " — 7696-7705 " — 7706-7715 " — 7716-7725 " — 7726-7735 " — 7736-7745 " — 7746-7755 " — 7756-7765 " — 7766-7775 " — 7776-7785 " — 7786-7795 " — 7796-7805 " — 7806-7815 " — 7816-7825 " — 7826-7835 " — 7836-7845 " — 7846-7855 " — 7856-7865 " — 7866-7875 " — 7876-7885 " — 7886-7895 " — 7896-7905 " — 7906-7915 " — 7916-7925 " — 7926-7935 " — 7936-7945 " — 7946-7955 " — 7956-7965 " — 7966-7975 " — 7976-7985 " — 7986-7995 " — 7996-8005 " — 8006-8015 " — 8016-8025 " — 8026-8035 " — 8036-8045 " — 8046-8055 " — 8056-8065 " — 8066-8075 " — 8076-8085 " — 8086-8095 " — 8096-8105 " — 8106-8115 " — 8116-8125 " — 8126-8135 " — 8136-8145 " — 8146-8155 " — 8156-8165 " — 8166-8175 " — 8176-8185 " — 8186-8195 " — 8196-8205 " — 8206-8215 " — 8216-8225 " — 8226-8235 " — 8236-8245 " — 8246-8255 " — 8256-8265 " — 8266-8275 " — 8276-8285 " — 8286-8295 " — 8296-8305 " — 8306-8315 " — 8316-8325 " — 8326-8335 " — 8336-8345 " — 8346-8355 " — 8356-8365 " — 8366-8375 " — 8376-8385 " — 8386-8395 " — 8396-8405 " — 8406-8415 " — 8416-8425 " — 8426-8435 " — 8436-8445 " — 8446-8455 " — 8456-8465 " — 8466-8475 " — 8476-8485 " — 8486-8495 " — 8496-8505 " — 8506-8515 " — 8516-8525 " — 8526-8535 " — 8536-8545 " — 8546-8555 " — 8556-8565 " — 8566-8575 " — 8576-8585 " — 8586-8595 " — 8596-8605 " — 8606-8615 " — 8616-8625 " — 8626-8635 " — 8636-8645 " — 8646-8655 " — 8656-8665 " — 8666-8675 " — 8676-8685 " — 8686-8695 " — 8696-8705 " — 8706-8715 " — 8716-8725 " — 8726-8735 " — 8736-8745 " — 8746-8755 " — 8756-8765 " — 8766-8775 " — 8776-8785 " — 8786-8795 " — 8796-8805 " — 8806-8815 " — 8816-8825 " — 8826-8835 " — 8836-8845 " — 8846-8855 " — 8856-8865 " — 8866-8875 " — 8876-8885 " — 8886-8895 " — 8896-8905 " — 8906-8915 " — 8916-8925 " — 8926-8935 " — 8936-8945 " — 8946-8955 " — 8956-8965 " — 8966-8975 " — 8976-8985 " — 8986-8995 " — 8996-9005 " — 9006-9015 " — 9016-9025 " — 9026-9035 " — 9036-9045 " — 9046-9055 " — 9056-9065 " — 9066-9075 " — 9076-9085 " — 9086-9095 " — 9096-9105 " — 9106-9115 " — 9116-9125 " — 9126-9135 " — 9136-9145 " — 9146-9155 " — 9156-9165 " — 9166-9175 " — 9176-9185 " — 9186-9195 " — 9196-9205 " — 9206-9215 " — 9216-9225 " — 9226-9235 " — 9236-9245 " — 9246-9255 " — 9256-9265 " — 9266-9275 " — 9276-9285 " — 9286-9295 " — 9296-9305 " — 9306-9315 " — 9316-9325 " — 9326-9335 " — 9336-9345 " — 9346-9355 " — 9356-9365 " — 9366-9375 " — 9376-9385 " — 9386-9395 " — 9396-9405 " — 9406-9415 " — 9416-9425 " — 9426-9435 " — 9436-9445 " — 9446-9455 " — 9456-9465 " — 9466-9475 " — 9476-9485 " — 9486-9495 " — 9496-9505 " — 9506-9515 " — 9516-9525 " — 9526-9535 " — 9536-9545 " — 9546-9555 " — 9556-9565 " — 9566-9575 " — 9576-9585 " — 9586-9595 " — 9596-9605 " — 9606-9615 " — 9616-9625 " — 9626-9635 " — 9636-9645 " — 9646-9655 " — 9656-9665 " — 9666-9675 " — 9676-9685 " — 9686-9695 " — 9696-9705 " — 9706-9715 " — 9716-9725 " — 9726-9735 " — 9736-9745 " — 9746

DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																																			
Place.	Height.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Upper Heyford.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Croydon.	Manston.	Lymington.	Cattewater.	Calshot.	Place.	Time.	Type.	Feet.												
Time.	8h. 2nd.	13h. 2nd.	13h. 2nd.	12h. 2nd.	12h. 2nd.	12h. 2nd.	11h. 2nd.	9h. 2nd.	11h. 2nd.	13h. 2nd.	12h. 2nd.	12h. 2nd.	13h. 2nd.	12h. 2nd.	10h. 2nd.	12h. 2nd.	12h. 2nd.	12h. 2nd.	12h. 2nd.																
Type.			b.	b.		b.	b.					b.				b.	b.																		
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.	235	21	235	23	235	20	245	23	260	20	230	24	230	12	230	16	270	22	255	22	255	19	255	18	270	20	245	16	240	13	260	14	Surf.		
1000	240	27	245	23	230	47	245	48	235	29	260	30	255	35	240	14	255	23	255	39	260	28	265	18	255	17	260	23	230	23	260	25	1000		
2000	250	37	250	63	230	48	235	43	235	28	235	35	255	40	265	20	270	23	265	20	265	23	275	31	270	40	255	31			265	15	2000		
3000	265	43	235	77	260	46	255	55	240	29	260	38	265	55	275	35	270	49	255	39	265	43	270	20	260	36			270	38	255	40	260	49	3000
4000	270	35			255	65	255	47			260	33			275	49			255	48	270	32	265	21	255	33			270	45	255	47		4000	
5000	270	35									275	52			280	52			260	44			255	36	260	32			265	43	255	63		5000	
6000	265	39																																6000	
8000																																		8000	
10000																																		10000	
12000																																		12000	
Neph.																																		Neph.	
Place.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Cardington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Shoeburyness.	Manston.	Lymington.	Cattewater.	Calshot.	Place.	Time.	Type.	Feet.													
Time.	7h. 2nd.	18h. 2nd.	7h. 2nd.	7h. 2nd.	7h. 2nd.	7h. 2nd.	2nd.	7h. 2nd.	2nd.	7h. 2nd.	7h. 2nd.	7h. 2nd.	7h. 2nd.		7h. 2nd.	7h. 2nd.	2nd.	7h. 2nd.																	
Type.		b.									b.				b.	b.																			
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.	235	20	230	20	215	17	240	22	220	15	230	18			245	16			245	18	235	10	230	6	240	11			240	14	240	16	230	15	Surf.
1000	235	39	240	35	230	28	230	33	240	27	235	30			250	32			245	21	230	27	255	14	230	24			210	28	240	27	240	33	1000
2000	240	54	240	37	240	39	235	29	245	33	235	41			255	48			245	33	240	31	250	26	260	25			250	24	250	28	240	34	2000
3000			240	44	230	45			255	34	240	43	16h. Ci		255	46			250	33	245	27	245	29	255	30			250	26	255	26	245	35	3000
4000			245	51					260	41			16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			255	29	4000
5000			255	47					265	37			16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	5000
6000									240	57			16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	6000
8000									18h. Ci				16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	8000
10000									250	115			16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	10000
12000									18h. Ci				16h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	12000
Neph.									250	60			18h. Ci		255	47			255	37	250	28	240	28	255	31			270	28			265	35	Neph.
Place.	Aberdeen.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Cardington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Shoeburyness.	Manston.	Lymington.	Cattewater.	Calshot.	Place.	Time.	Type.	Feet.												
Time.		7h. 3rd.	7h. 3rd.	6h. 3rd.		6h. 3rd.	6h. 3rd.			7h. 3rd.								7h. 3rd.																	
Type.		b.	b.	b.		b.	b.			b.								b.																	
Feet.		Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet.													
Surf.		230	25	235	28	215	23			240	10	225	8									270	10	Surf.											
1000		230	55	225	29	230	39			245	25	235	31									280	15	1000											
2000		235	60	225	44	250	52			255	32	250	37									300	19	2000											
3000						260	49			260	39	260	36											3000											
4000						265	61			260	50	260	40											4000											
5000						260	63			260	57	260	49											5000											
6000						260	66			260	63	255	66											6000											
8000						7h. Ci				7h. Ci														8000											
10000						230	130			7h. AC														10000											
12000						230	120			7h. AC														12000											
Neph.						240	50			240	78													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.	
			Dry.	Wet.	%				Dry.	Wet.	%				
DOVERFORD. 8h. 30. 2/4/29.	mb.	Feet.	°F.	°F.	%		mb.	Feet.	°F.	°F.	%		mb.	Feet.	
	1001	M.S.L.	58	34	84								1001	M.S.L.	
	987	100	58	34	76								986	100	
	961	1110	53	43	70								910	3280	
	950	1430	53	41	70								887	4920	
	800	2300	47	42	70								807	6560	
	850	4460	43	35	69								759	8200	
	800	6080	37	34	77								714	9840	
	750	7730	34	32	84										
	700	9600	27	27	96										
	650	11530	21	19	75										
	600	13600	16	10											
	550	15820	8	4											
500	18200	3	4												
ACW 9.0. 7100 to 6000 mb. Some Ci. not reached.															
Helder. 13h. 2. 10. 23.		M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	
	1000		-	-	-				-	-	-				
	977	680	57	-	65										
	943	1660	51	-	75										
	898	3280	46	-	75										
	836	4920	43	-	35										
	785	6560	36	-	45										
	737	8200	32	-	65										
	Inversions:														
	Base 10 mb. 58.8° F.														
	Amount 0° F. Depth 330 ft.														
	Base 855 mb. 42.1° F.														
	Amount 2° F. Depth 350 ft.														
Base 76 mb. 35° F.															
Amount 0° F. Depth 350 ft.															
UPPER WINDS ABROAD.															
Place.	Paris.		Helder.		Kosice.		Rome.		Colais.		Malta.				
Time.	1st.	2nd.	1st.	2nd.	1st.	2nd.	1st.	2nd.	1st.	2nd.	1st.	2nd.			
	Feet.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.			
1,840	260	45	270	37	180	6	270	6	240	39	3,000				
3,280	230	32	270	42	170	2	-	-	260	56	300	9			
4,920					230	12	250	7	260	56	7,000				
6,560					250	17	-	-	250	48	30	14			
9,840					230	23	320	7			19,000				
13,120					320	28					330	15			
16,400											13,000				
19,680											320	13			
Place.	Rome.		Palermo.		Melilla.		Algiers.		Madrid.		Barcelona.				
Time.	18h. 2nd.	18h. 2nd.	7h. 3rd.	4h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.	7h. 3rd.			
1,840	-	-	-	-	30	11	200	11	-	-	230	16			
3,280	-	-	360	6	160	9	220	7	240	27	230	27			
4,920	230	5	270	3	220	11	200	14	240	27	250	23			
6,560	-	-	-	-			230	23	240	23	250	16			
9,840	340	10	340	13			240	17	250	20	230	16			
13,120	320	19							250	20	230	18			
16,400											280	19			
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, FRIDAY 4th OCTOBER, 1929.

No. 24,788.

U.A.S. 3840.

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 Table 2.

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 "

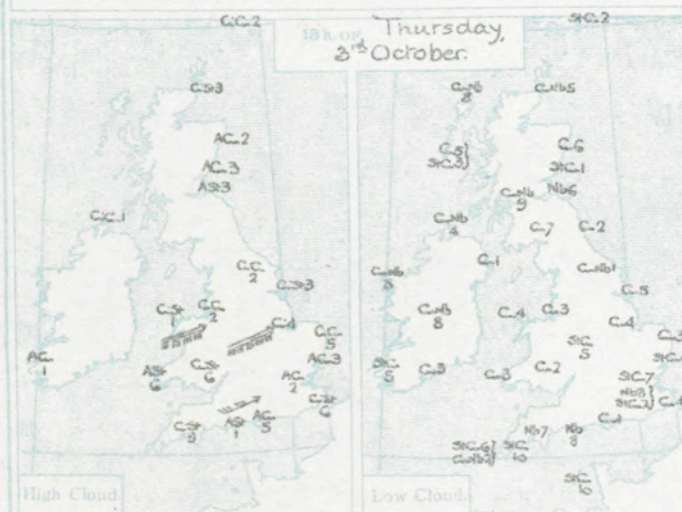
— and so on.

In Tables.

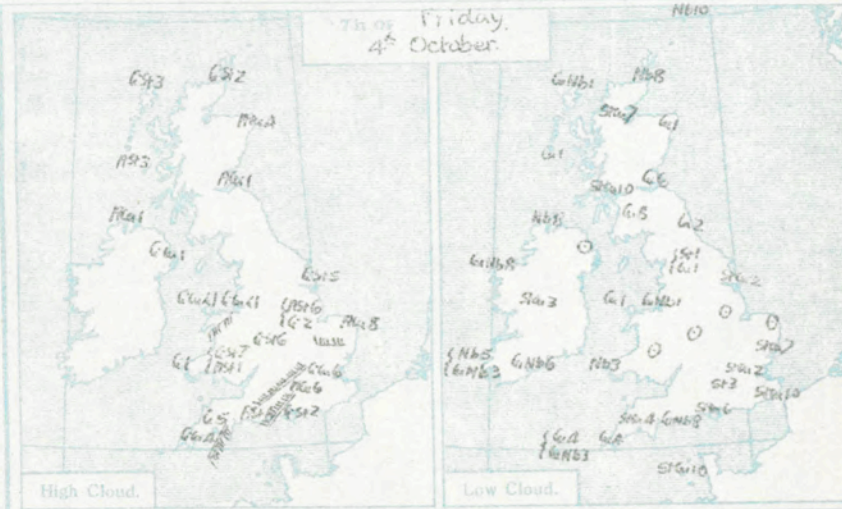
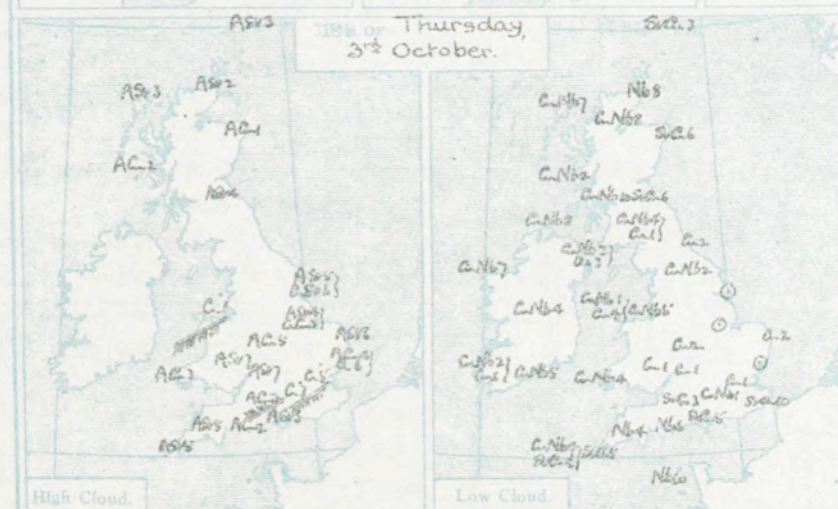
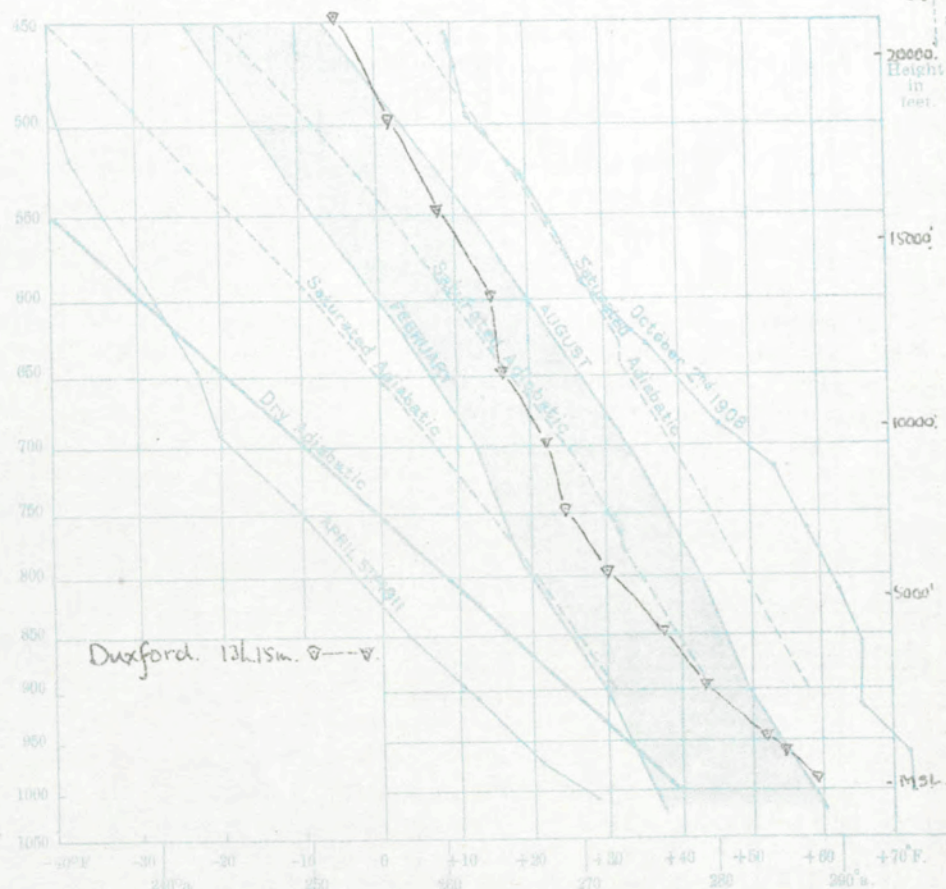
Directions are given in degrees, velocities in m.p.h.

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).

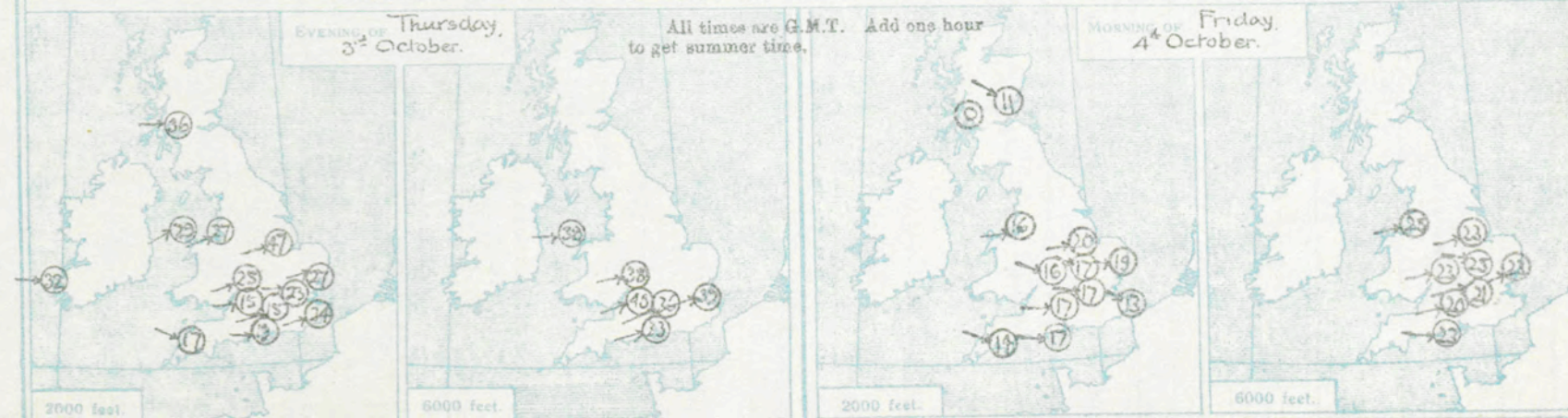
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

Thursday, 3rd October, 1929.

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





AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 5th OCTOBER, 1929.

No. B. 24789.

U.A.S. 3841.

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 "

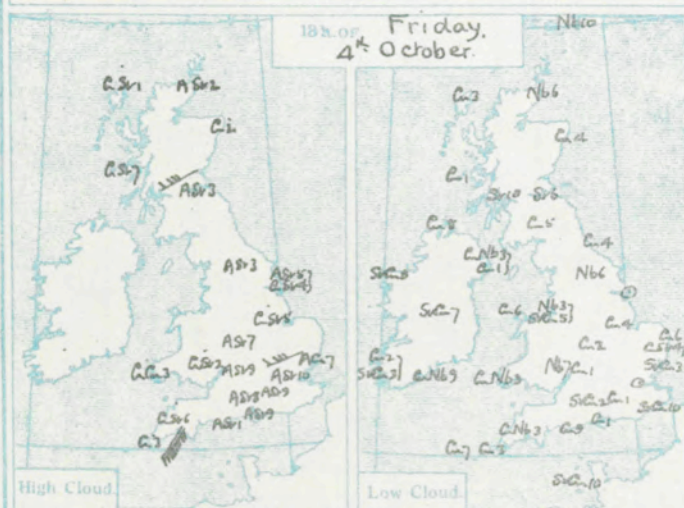
and so on.

In Tables.

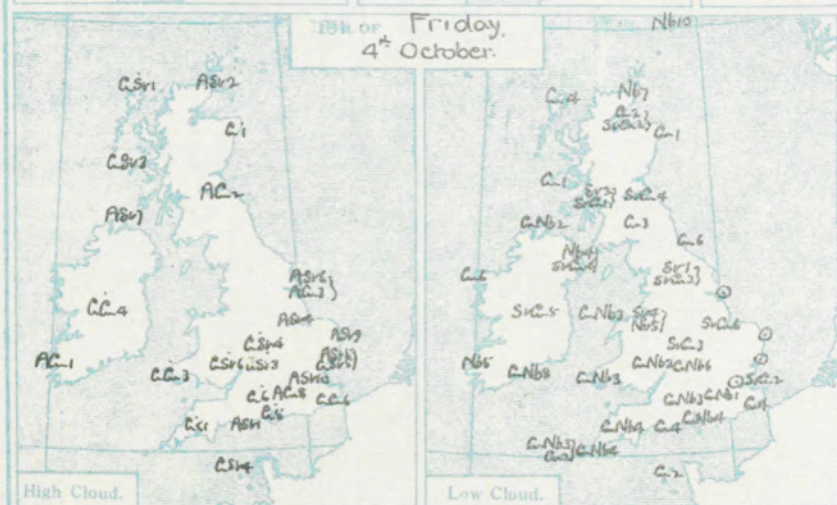
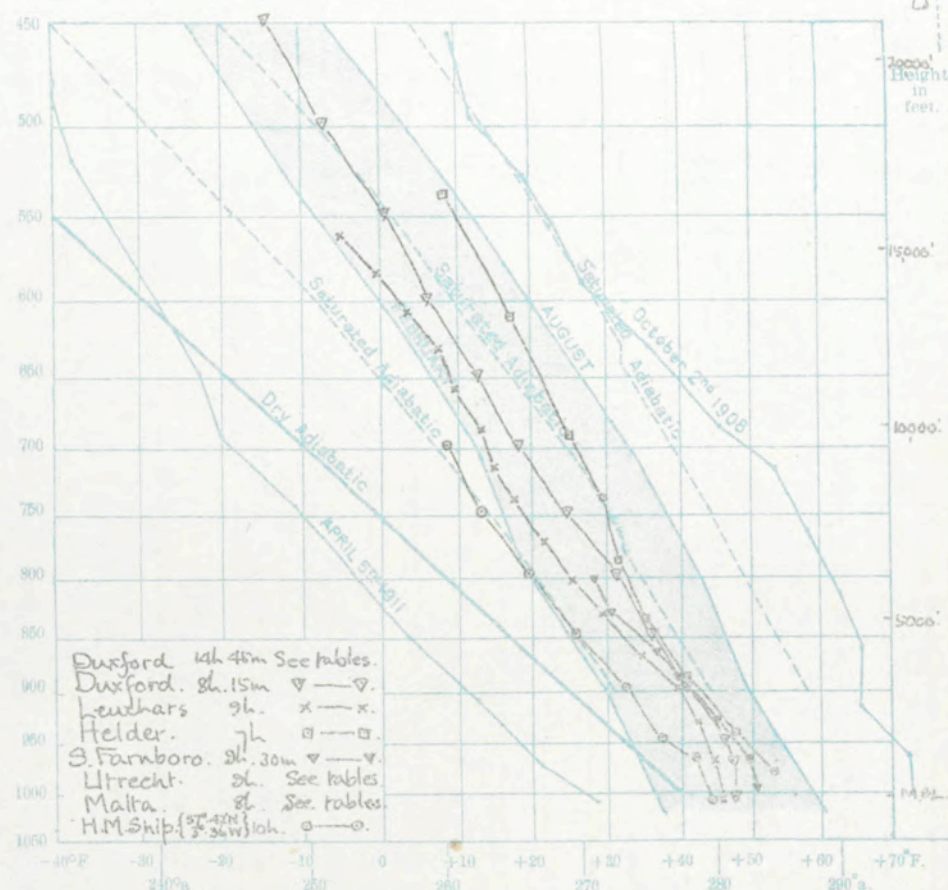
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 6 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

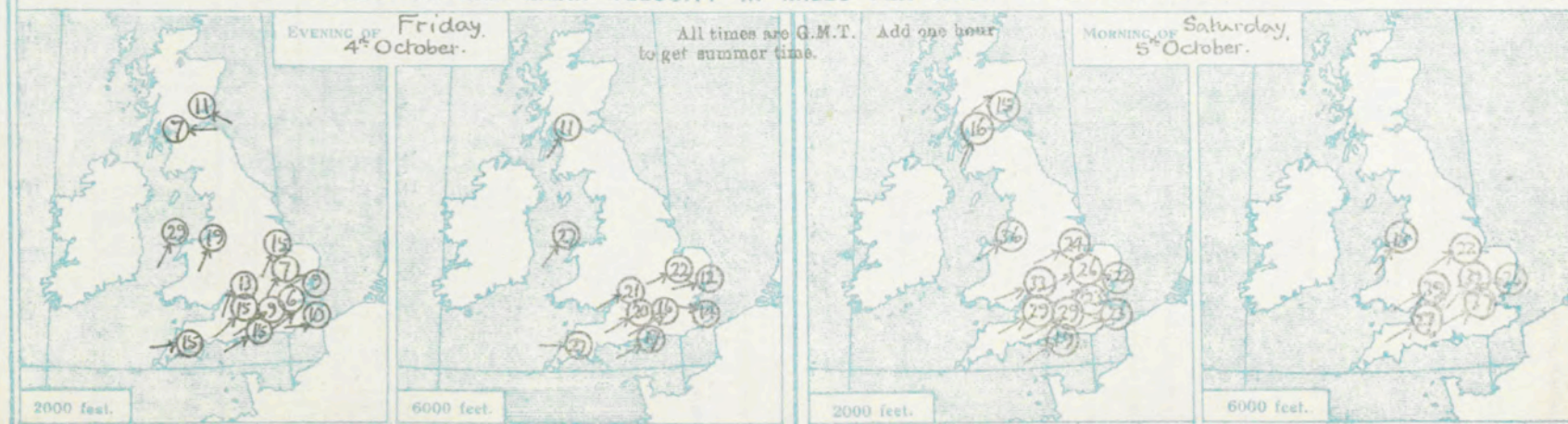
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

Friday, 4th October, 1929.

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



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																							
Place	Holyhead	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoebury	Manston	Lymington	Cattewater	Calshot	Flap			
Time	2h 4'	12h 4'	12h 4'	12h 4'	12h 4'	12h 4'	11h 4'	12h 4'	12h 4'		12h 4'	12h 4'	12h 4'	12h 4'	10h 4'	12h 4'	12h 4'			11h 4'			
Type	b.	b.	b.	b.	b.	b.	b.	b.	b.		b.	b.	b.	b.	b.	b.	b.	b.	b.	b.			
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
Surf.	235 10	130 1	115 6	215 4	270 15	210 10	200 8	245 7	200 2		200 8	230 3	285 3	235 3	250 10	— 0	175 2			80 2	Surf.		
1000	235 17	190 4	105 12	205 8	220 18	210 14	255 14	225 9	215 7		200 7	230 6	245 8	200 2	270 7	205 7	200 3			—	1000		
2000	235 19	250 3	105 9	195 11	220 21	220 11	255 13	240 9	230 11		220 6	250 10	240 7	235 5	255 8	205 9	225 5			225 4	2000		
3000	240 17	280 3	135 3	190 11	230 21	235 11	255 13	265 9	250 15		245 11	240 12	230 8	255 9	240 10	240 10	245 8			245 10	3000		
4000	245 16	300 5	135 5	245 13	220 21	245 13	250 13	265 11	260 17		275 15	270 13	235 13		245 14	225 10	260 14			235 13	4000		
5000	245 20	295 9		215 12	215 19	240 18	235 17	255 11	235 15		260 19	230 14	235 17		255 14	250 14	260 17			245 14	5000		
6000	240 27	285 7		210 14	220 19	220 14	240 17	240 17	255 17		275 19	270 20	235 17		245 15	245 15	255 17			240 15	6000		
8000	270 24	245 11		220 26		200 13	245 28	240 20	240 18		240 19	235 15	240 14		230 18	245 24	230 27			225 13	8000		
10000	240 25	235 4		220 23		10h.	235 34		13h.		235 27	235 27	230 19	3h.	270 24	244 27	220 41	12h.		225 21	10000		
12000	230 33	AC.				C.	235 34		13h.		215 41	245 56	225 23	AC.				C.		230 27	12000		
Neph.		230 36				220 120			240 45						240 60					220 110		Neph.	

UPPER AIR TEMPERATURES AND HUMIDITIES.															UPPER WINDS ABOARD.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 6th OCTOBER, 1929.

No. B. 24790

U.A.S. 3842.

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 24th, 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.

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 "

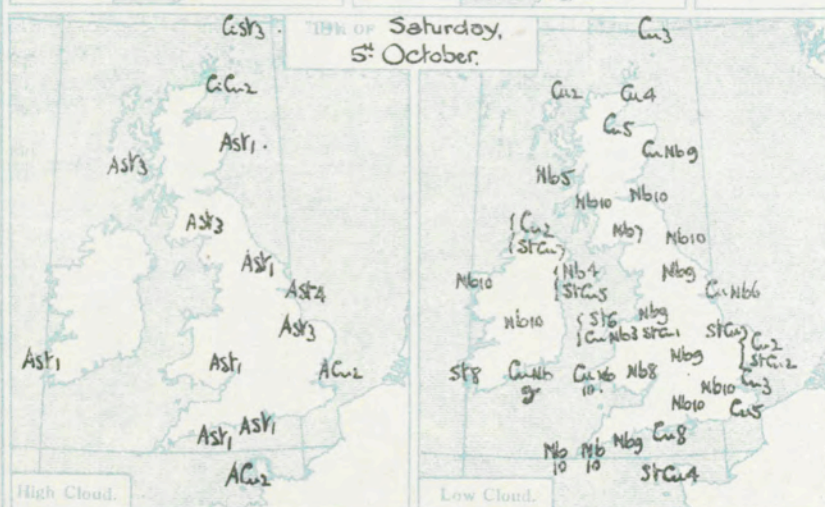
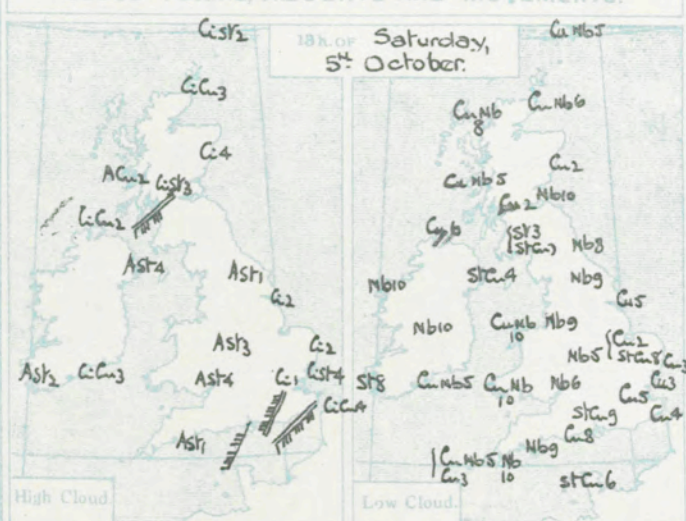
and so on.

In Tables.

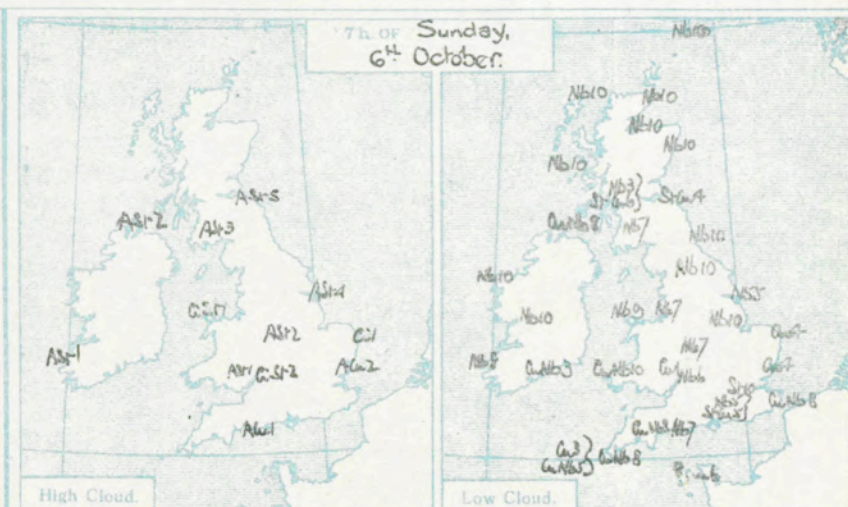
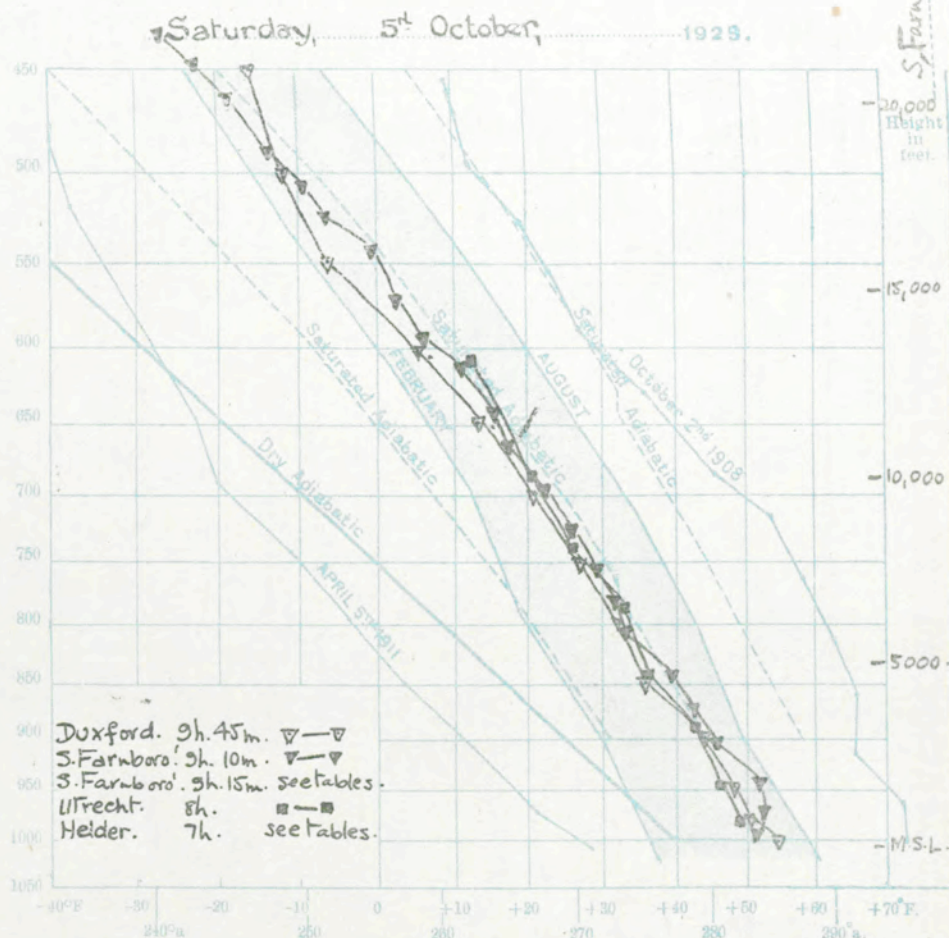
Directions are given in degrees, velocities in m.p.h.

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).

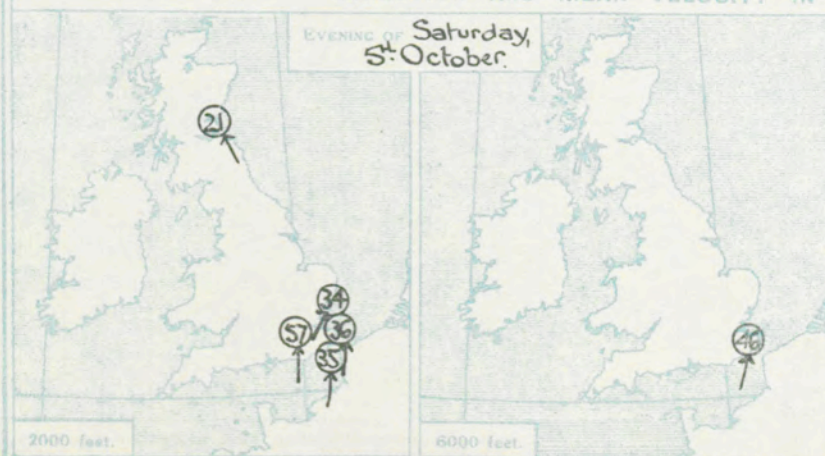
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.



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



Place	Aberdeen	Leuchars	Banffrew	Alder Grove	Folyhead	Sealand	Cranwell	Cardington	Poletove	Oxington	Upper Heyford	Worthy Down	South Farnboro	Croydon	Croydon	Manston	Lymington	Cattle-water	Calshot	Place																								
Time.		13h. 5 ^m .	14h. 5 ^m .	12h. 5 ^m .	9h. 5 ^m .	12h. 5 ^m .	11h. 5 ^m .	10h. 5 ^m .	11h. 5 ^m .	12h. 5 ^m .	12h. 5 ^m .	12h. 5 ^m .		10h. 5 ^m .	12h. 5 ^m .			12h. 5 ^m .		12h. 5 ^m .	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.	Feet																							
Surf.			145	G	125	15	180	10	175	5	150	12	190	13	205	13	195	12	200	25	185	18	185	26			180	11	195	24			200	15			205	29	Surf.					
1000			165	15	140	14	180	16	175	22	165	27	180	27	235	29	205	22	190	20	190	23	185	18			205	22	190	24			205	16			200	17	1000					
2000			175	17	155	18	195	18			185	32	185	22	230	26	215	19	190	23	195	32	195	23			213	30	195	27			210	27			195	15	2000					
3000			180	17	185	16	195	19					205	36	230	27	230	27	190	23	195	31	200	25			210	27					205	34					3000					
4000					190	17	205	18					215	35	225	28	235	29	195	38							210	28					215	28					4000					
5000					190	23	200	20					215	36	225	32	225	31																						5000				
6000							215	23									235	23																					6000					
8000					13h. G.		210	38									230	31																						8000				
10000					230	75	210	37																																	10000			
12000					10h. G.		210	29					10h. AG.												Kew.																12000			
Neph.					210	30							210	63														250	57	210	50	240	45			230	100	210	100			210	75	Neph.

Place.	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Oroydon	Shoebury ness	Manston	Lympne	Cattewater	Gaisbot		Place.
Time.	17h. 5 th			17h. 5 th				16h. 5 th					17h. 5 th		17h. 5 th	17h. 5 th		18h. 5 th		Time.
Type.															b.	b.				Type.
Feet Surf.	70 5			175 20				145 27					145 25		180 19	180 19		190 33		Feet Surf.
1000	95 16			170 38				205 29					175 38		180 37	180 31		195 33		1000
2000	130 21							225 34					180 57		185 36	185 35				2000
3000								225 38							195 44	190 40				3000
4000															195 33					4000
5000															205 34					5000
6000															200 46					6000
8000															205 40					8000
10000																				10000
12000															16h. C.	16h. C.				12000
Nep.															230 30	230 25				Nep.

[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	Place.	Paris	Abbeville	Prague	Vainory	Cologne	Malta												
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.									Dry.	Wet.										
S. Farnboro'. 9h. 10m. S. 10. 29.	mb.	Feet.	°F.	°F.	%	S. Farnboro'. 9h. 15m. S. 10. 29.	mb.	Feet.	°F.	°F.	%	Doxford. 9h. 45m. S. 10. 29.	mb.	Feet.	°F.	°F.	%	Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.										
	1006	M.S.L.	—	—	—		1006	M.S.L.	—	—	—		1006	M.S.L.	—	—	—										1006	M.S.L.	—	—	—	1006	M.S.L.	—	—	—
	9574	230	51	—	—		957	230	53	—	—		957	230	53	—	—										957	230	53	—	—	957	230	53	—	—
	9574	880	53	—	—		961	1270	51	—	—		961	1270	51	—	—										961	1270	51	—	—	961	1270	51	—	—
	9339	1900	52	—	—		926	2230	45	—	—		930	1550	43	45	73										930	1550	43	45	73	930	1550	43	45	73
	903	2900	46	—	—		893	3260	41	—	—		900	3000	45	39	62										900	3000	45	39	62	900	3000	45	39	62
	873	3980	43	—	—		861	4200	37	—	—		850	4550	37	33	68										850	4550	37	33	68	850	4550	37	33	68
	840	4900	40	—	—		826	5190	32	—	—		800	6150	33	28	58										800	6150	33	28	58	800	6150	33	28	58
	810	5870	34	—	—		800	6130	30	—	—		780	7850	22	23	50										780	7850	22	23	50	780	7850	22	23	50
	780	6890	30	—	—		771	7100	28	—	—		700	9650	21	18	67										700	9650	21	18	67	700	9650	21	18	67
	751	7880	20	—	—					—	—		650	11350	13	11	—										650	11350	13	11	—	650	11350	13	11	—
	721	8900	27	—	—					—	—		600	13580	6	5	—										600	13580	6	5	—	600	13580	6	5	—
	695	9890	23	—	—					—	—		550	15710	-6	-8	—										550	15710	-6	-8	—	550	15710	-6	-8	—
	669	10840	18	—	—					—	—		500	18120	-11	-13	—										500	18120	-11	-13	—	500	18120	-11	-13	—
	643	11880	16	—	—					—	—		450	20680	-16	-19	—										450	20680	-16	-19	—	450	20680	-16	-19	—
	618	12870	11	—	—					—	—		400	23240	-21	-24	—										400	23240	-21	-24	—	400	23240	-21	-24	—
	594	13860	7	—	—					—	—		350	25800	-26	-29	—										350	25800	-26	-29	—	350	25800	-26	-29	—
571	14840	3	—	—				—	—	300	28360	-31	-34	—	300	28360	-31	-34	—	300	28360	-31	-34	—												
547	15830	0	—	—				—	—	250	30920	-36	-39	—	250	30920	-36	-39	—	250	30920	-36	-39	—												
526	16810	-6	—	—				—	—	200	33480	-41	-44	—	200	33480	-41	-44	—	200	33480	-41	-44	—												
505	17810	-9	—	—				—	—	150	36040	-46	-49	—	150	36040	-46	-49	—	150	36040	-46	-49	—												
485	18790	-13	—	—				—	—	100	38600	-51	-54	—	100	38600	-51	-54	—	100	38600	-51	-54	—												
465	19770	-18	—	—				—	—	50	41160	-56	-59	—	50	41160	-56	-59	—	50	41160	-56	-59	—												
445	20800	-22	—	—				—	—	0	43720	-61	-64	—	0	43720	-61	-64	—	0	43720	-61	-64	—												
438	21130	-26	—	—				—	—																											
Bumpy upto 873 mase again at 722 mb.																																				
Helder. 7h. S. 10. 29.																																				
Inversion.																																				
Base 50°F Depth. 350'																																				
De Bilt. 8h. S. 10. 29.																																				
Inversion.																																				
Base 100°F Depth. 493°F.																																				
Amount 20°F.																																				
Depth 750 ft.																																				
M.S.L.																																				
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AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, MONDAY, 7TH OCTOBER, 1929.

No. B. 24791

U.A.S. 3,843

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 24th, 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.

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— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

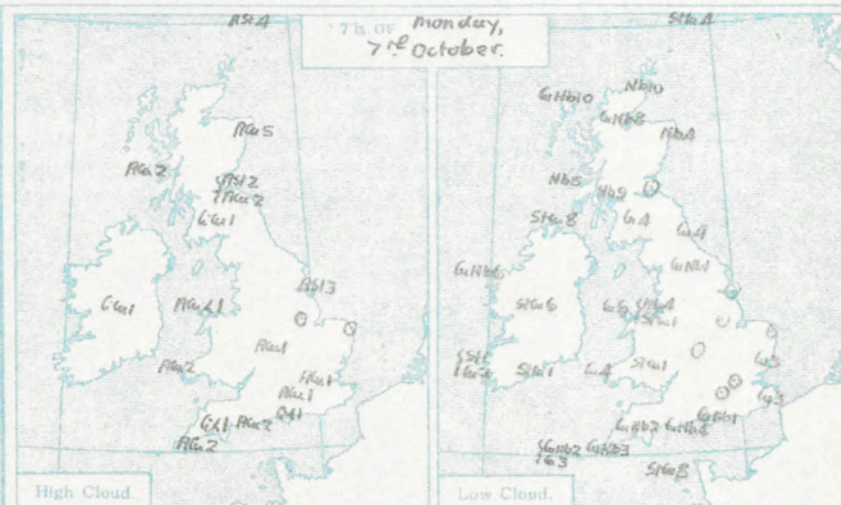
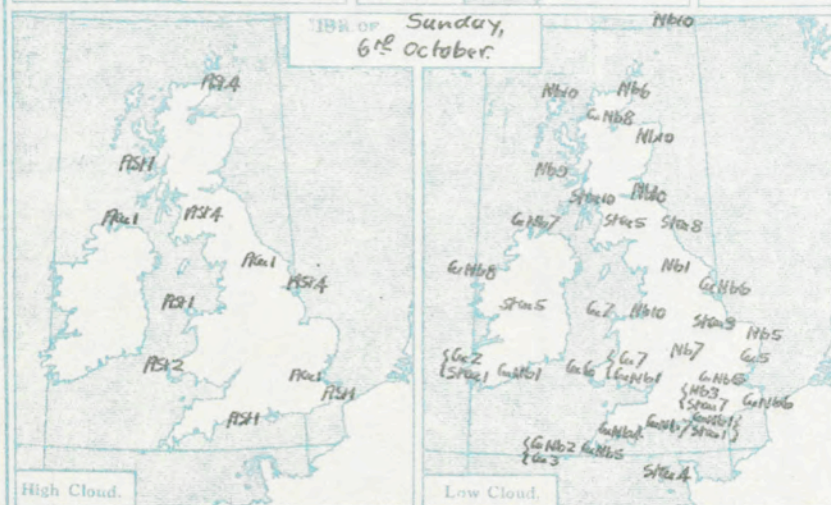
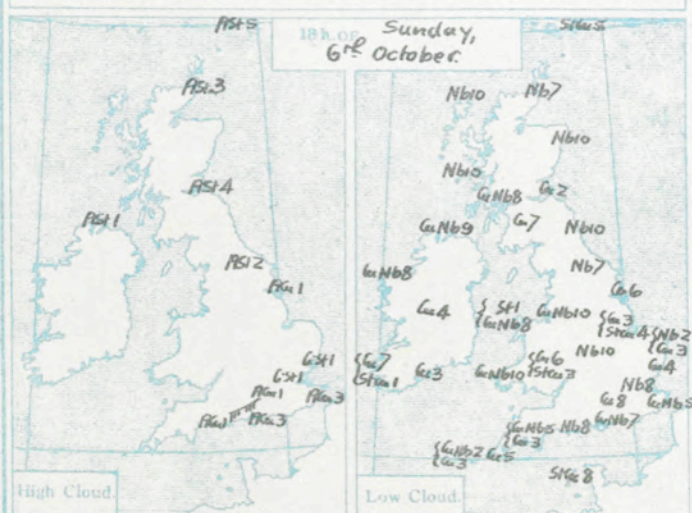
— 56-65 "

and so on.

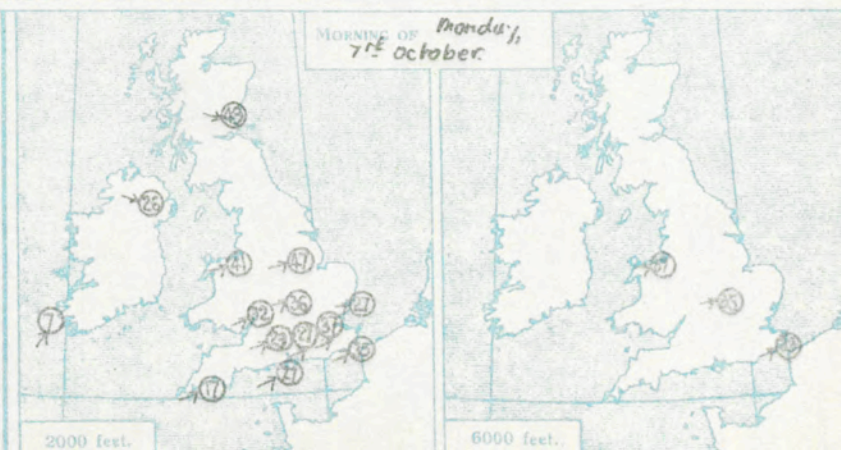
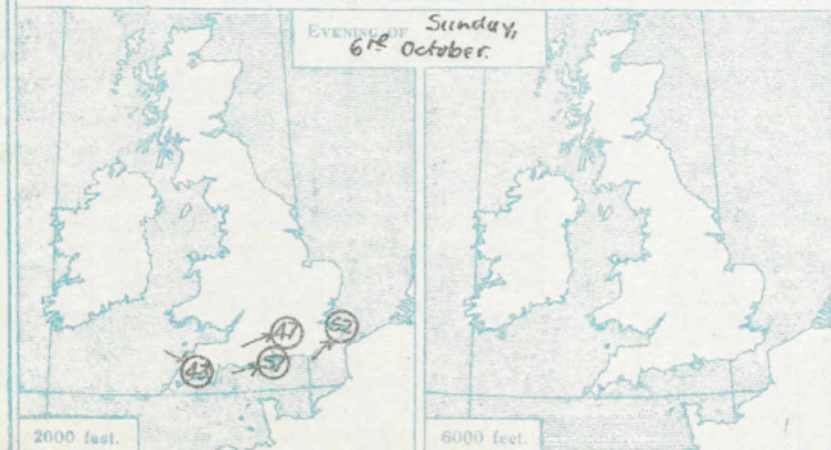
In Tables.

Directions are given in degrees, velocities in m.p.h. Speeds of high cloud are computed for an average height of 6 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 (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L.—BRITISH.																													
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card- ington.	Felix- stowe.	Valentia	Upper Heyford.	Worthy Down.	South Farnboro	Croydon	Shoebury ness.	Manston.	Lympna.	Catte- water.	Calshot.	Place.									
Time.	13h. 6 th		11h. 6 th						12h. 6 th				12h. 6 th		11h. 6 th		12h. 6 th		12h. 6 th		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.			120	15	135	11											200	24	200	25	Surf.								
1000			135	21	155	13											200	43	200	37	1000								
2000			180	13	175	14											205	36	210	38	2000								
3000			170	11	165	12											215	38			3000								
4000			135	11	165	15											225	28			4000								
5000			145	11	165	8															5000								
6000					175	15															6000								
8000					155	19															8000								
10000					150	17															10000								
12000					155	21															12000								
Neph.						310	110														Neph.								
Place.	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card- ington.	Felix- stowe.	Valentia	Upper Heyford.	Worthy Down.	South Farnboro	Croydon	Shoebury ness.	Manston.	Lympna.	Catte- water.	Calshot.	Place.										
Time.												17h. 6 th			17h. 6 th		18h. 6 th	18h. 6 th											
Type.															b														
Feet												250	25				290	29	260	21									
Surf.												245	60				300	31	260	42									
1000												255	47				305	43	265	57									
2000																	300	60											
3000																													
4000																													
5000																													
6000																													
8000																													
10000																													
12000																													
Neph.							280	60				250	118							Neph.									
Place.	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card- ington.	Felix- stowe.	Valentia	Upper Heyford.	Worthy Down.	South Farnboro	Croydon	Shoebury ness.	Manston.	Lympna.	Catte- water.	Calshot.	Place.									
Time.		7h. 7 th		6h. 7 th		6h. 7 th	6h. 7 th	6h. 7 th	7h. 7 th	7h. 7 th	6h. 7 th	6h. 7 th	7h. 7 th	7h. 7 th	6h. 7 th		6h. 7 th	7h. 7 th											

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. 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.	%	
		M.S.L.	-	-	-			M.S.L.	-	-	-			M.S.L.	-	-	-	

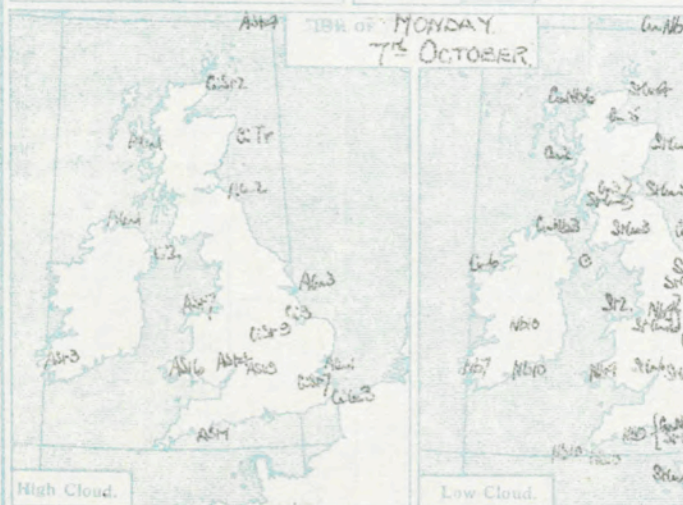
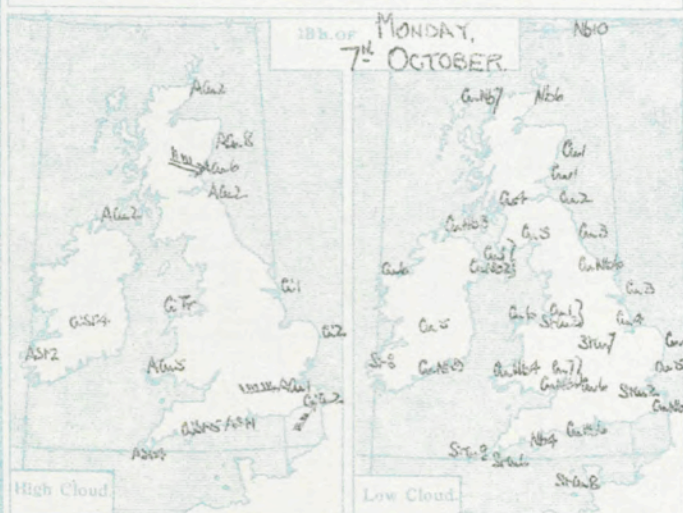
UPPER WINDS ABROAD.													
Place.		Compiegne											
Time.		10h. 6 th											
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	
1,640	190	25											
3,280	210	47											
4,920	210	38											
6,560													
8,240													
13,120													
16,400													
19,680													

Place.		Paris		Perpignan		Cologne		Prague		Lemberg		Malta	
Time.		7h	7 th	7h	7 th	7h	7 th	7h	7 th	7h	7 th	7h	7 th
1,640	250	25	330	11	248	20	260	15	200	23	200	00ft	
3,280	240	31	10	7	248	25	300	16	220	25	130	39	
4,920			20	4	248	27	290	26	220	31			
6,560					236	38	290	19	220	33			
8,240							230	23	310	21			
13,120									220	20			
16,400													
19,680													

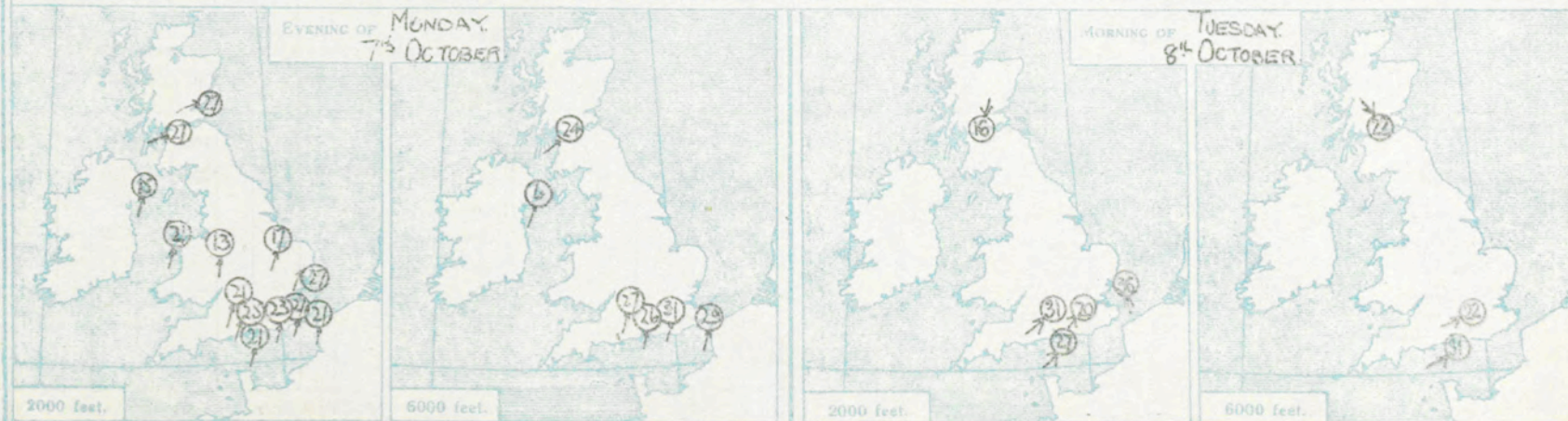
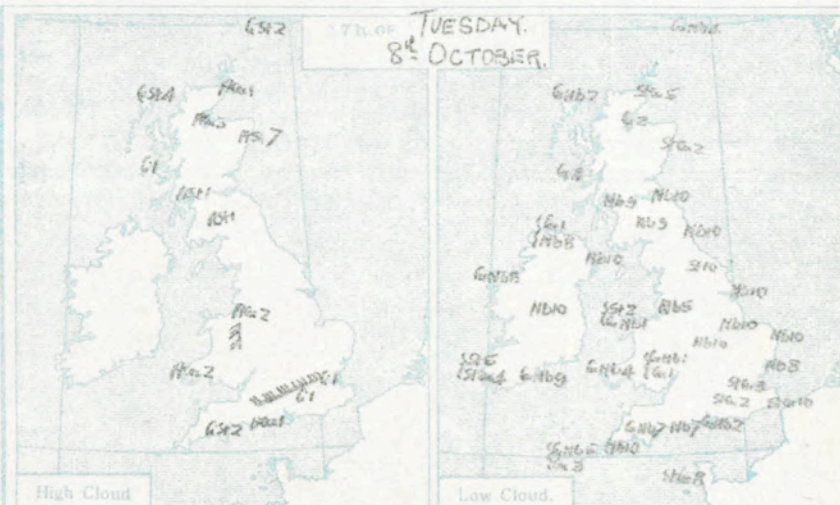
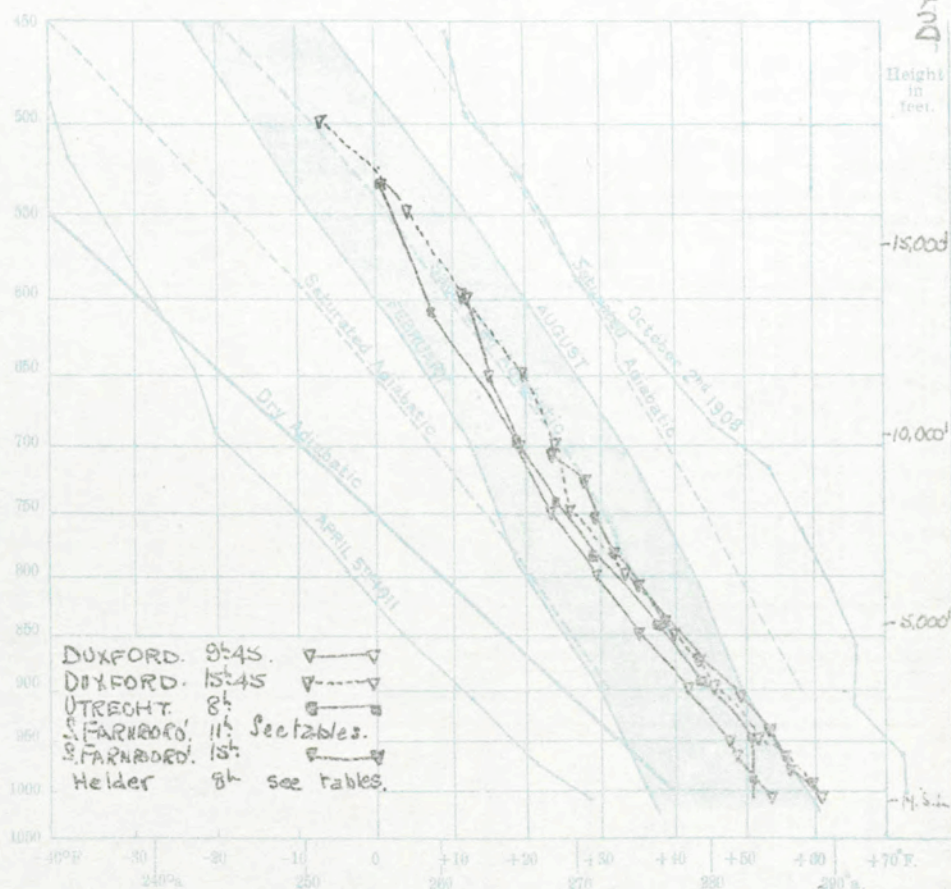
METEOROLOGICAL OFFICE, AIR MINISTRY, KINGSWAY, LONDON, W.O.1.													
G. C. SIMMONS, C.B., D.Sc., F.R.S., Director.													

24792

U.A.S. 3844.



MONDAY, 7th OCTOBER, 1929.



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

Place	Bentley	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felix-stowe	Gadding-ton	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Chesham	Manston	Lympne	Canishot	Calshot	Place																				
Time	8 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	11 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	13 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	13 ^h 7 ^m	10 ^h 7 ^m	12 ^h 7 ^m	12 ^h 7 ^m	10 ^h 7 ^m	12 ^h 7 ^m	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.	260	26	265	25	250	20	215	10	220	14	230	12	235	17	240	15	235	17	100	11	205	12	210	13	240	15	215	20	235	15	220	15	225	18	230	13	225	19	240	10
1000	275	34	260	60	265	24	215	14	220	21	225	19	240	22	240	18	230	23	125	22	215	16	210	23	235	17	220	19	230	18	225	18	225	22	230	13	225	19	240	1000
2000	285	40	260	67	260	33	245	12	225	18	235	24	235	23	230	19	230	18	145	24	225	16	215	22	235	17	235	19	240	15	225	19	235	24	245	19	220	19	240	2000
3000			265	30	260	25	235	13	225	20	235	25	245	24	245	21	235	23			225	21	220	19	235	20	240	15	235	23	235	21	240	26	240	28	220	21	240	3000
4000					270	33	255	13	225	18	235	19			245	27	230	22			225	27			245	28			240	29	240	25	235	21	240	32	240	4000		
5000							260	21			230	18					230	28							10 ^h 6 ^m			240	25	235	23	240	25	235	21	240	37	240	5000	
6000							245	15			230	24					230	28							220	40			240	27	240	21	245	34	240	42	240	6000		
8000			10 ^h 10 ^m				225	22			7,000'	240	34												Biggin Hill			240	27	240	21	245	34	240	36	240	8000			
10000			310	33																					Kew			240	27	240	21	245	34	240	36	240	10000			
12000			13 ^h 7 ^m	10 ^h 10 ^m			10 ^h 6 ^m	10 ^h 6 ^m																				13 ^h 7 ^m	13 ^h 7 ^m	10 ^h 10 ^m								12000		
Neph.			290	50	290	18			260	80	280	50																290	70	290	57	210	45					Neph.		
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Holyhead	Upper Heyford	Worthy Down	South Farnboro	Croydon	Felpham	Manston	Lympne	Catto-water	Canishot	Calshot	Place																				
Time	18 ^h 7 ^m	17 ^h 7 ^m	17 ^h 7 ^m	15 ^h 7 ^m	17 ^h 7 ^m		17 ^h 7 ^m	17 ^h 7 ^m	9 ^h 7 ^m	17 ^h 7 ^m	17 ^h 7 ^m	17 ^h 7 ^m	17 ^h 7 ^m	9 ^h 7 ^m	17 ^h 7 ^m	17 ^h 7 ^m			17 ^h 7 ^m	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.	Feet																			
Surf.	230	8	225	15	160	4	205	9	225	2	200	5	205	13	195	17	250	12	170	2	175	6	180	8	170	8	245	13	190	10	205	7			170	12		Foot Surf.		
1000	240	22	230	25	185	15	205	18	185	12	195	18	215	18	205	25	250	21	175	13	185	18	190	13	195	23	260	23	215	21	215	15			190	17		1000		
2000	240	27	235	27	200	15	215	21	175	13	200	17	215	20	205	27	250	20	190	21	195	25	200	23	205	27	260	27	210	24	205	21			190	21		2000		
3000	240	27	240	27	215	15	215	23	180	19	210	22	230	22	205	27	245	15	195	27	205	23	210	20	205	26	265	27	210	29	185	33			185	23		3000		
4000			250	23	220	12	215	20	190	19	220	26	230	25	205	27			205	27	205	25	215	20	210	23	255	29	210	30	195	35			200	22		4000		
5000			240	25	230	7					220	31			205	27			205	27	200	26	210	20	215	27	255	25	215	26	205	30			205	23		5000		
6000			240	24	230	6									205	27			200	26	210	21			215	27	240	25	220	30	210	29				6000				
8000			250	28							7,000'	210	33		205	29			15 ^h 10 ^m						245	35			220	30	210	29						8000		
10000			245	31											16 ^h 05 ^m			16 ^h 05 ^m						255	28													10000		
12000					18 ^h 7 ^m				16 ^h 05 ^m	16 ^h 05 ^m					16 ^h 05 ^m																							12000		
Neph.					240	80			280	65	270	70			250	55	230	60																				Neph.		
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shobury-ness	Manston	Lympne	Catto-water	Canishot	Place																				
Time		8 ^h 8 ^m				7 ^h 8 ^m			6 ^h 8 ^m				7 ^h 8 ^m	8 ^h 8 ^m						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.				270	2								210	7	205	8					230	16	Foot Surf.																	
1000				5	7								225	24	220	22					230	28	1000																	
2000				10	16								230	31	230	20					230	27	2000																	
3000				10	19								235	34	240	28					235	33	3000																	
4000				5	18										235	27					235	35	4000																	
5000				250	24										235	26					235	37	5000																	
6000				340	22										235	22					240	31	6000																	
8000				330	13																235	30	8000																	
10000				320	11																7,000'		10000																	
12000									7 ^h 8 ^m														12000																	
Neph.									180	50													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.																
DUXFORD. 5-45. 7/4/29	mb. 6007 967 950 930 920 880 750 700 693 600 Haze top 890 mb. some C. not reached.	Feet. M.S.L. 100 110 1580 3020 4670 6150 7820 8640 11500 13580	°F. 53 48 47 41 34 28 22 18 14 11	°F. 47.5 43.5 42.5 36 32 27 17.5 10 7	% 67 70 86 83 85 85 86 85 85 85	DUXFORD. 1545. 7/4/29	mb. 6007 967 930 900 880 800 750 700 650 600 550 500	Feet. M.S.L. 100 140 600 3100 4610 6210 7920 9720 11640 13700 15820 18270	°F. 60 57 51 45 35 33 25 23 19 11 4 -8	°F. 51.5 47.5 43 38 33 23 16 12.5 8 -8	% 52 52 86 86 88 88 88 88 88 88 88	DUXFORD. 8 th 7/4/29	1008 984 949 893 840 789 740 695 609 533	M.S.L. 676 600 3280 4820 6560 8200 9840 13120 16400	- 50 50 43 37 28 23 18 7 7	- - - - - - - - -	Inversion: Base 1005 mb temp at base, 50°F; anemist, 1.8°F. depth 100 ft	HELDER 8 th 7/4/29	1004 980 945 891 837 785 736 682 607	M.S.L. 680 1660 3280 4920 6560 8200 9840 13120	- 52 46 39 34 28 23 16 7	- - - - - - - -	Isothermal Layer Inversion. 760 mb amount of Temp at base 26°F depth 130 ft	S. FARNBORD. 11 th 7/4/29	mb. 6007 967 930 900 880 800 750 700 650 600 550 500	Feet. M.S.L. 100 140 600 3100 4610 6210 7920 9720 11640 13700 15820 18270	°F. 60 58 54 46 41 34 26 20 16 10 8	°F. 58 54 50 46 41 34 26 20 16 10 8	% 52 52 86 86 88 88 88 88 88 88 88	S. FARNBORD. 1 st 7/4/29	mb. 6007 967 930 900 880 800 750 700 650 600 550 500	Feet. M.S.L. 100 140 600 3100 4610 6210 7920 9720 11640 13700 15820 18270	°F. 60 58 54 46 41 34 26 20 16 10 8	°F. 58 54 50 46 41 34 26 20 16 10 8	% 52 52 86 86 88 88 88 88 88 88 88

UPPER WINDS ABROAD.

OVER WINDS ABOARD.													
Place.	Catalis.		Holder		Prague		Lemberg		Kehavre		Nancy		
Time.	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	13 ^h 7 ^m	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	
1,840	230	13	240	27	280	6	210	14	-	-	190	8	
3,280	230	21	240	47	250	9	220	16	190	27	190	10	
4,920					230	4	230	18	200	27			
6,560					230	13	230	24	220	27			
9,840					230	24	250	22					
13,120					210	29	250	23					
16,400					220	32							
19,680					220	45							
Place.	Padua		Rome		Cologne		Brussels		Cheb		Malta		
Time.	8 ^h 7 ^m	18 ^h 7 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m	7 ^h 8 ^m		
1,840	-	-	160	16	180	29	190	46	-	-	3000'		
3,280	100	17	240	16			200	41	210	8	220	16	
4,920	-	-							220	23	5000'		
6,560	110	17							220	20	210	25	
9,840											7000'		
13,120											190	43	
16,400													
19,680													

Meteorological Office, Air Ministry,
Kingsway, London, W.21. G. C. SIMPSON, C.B., D.Sc., F.R.S.,
Director.



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

UPPER AIR SUPPLEMENT, WEDNESDAY, 9th OCTOBER, 1929.

No. 24,793
U.A.S. 3,845.

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 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:—

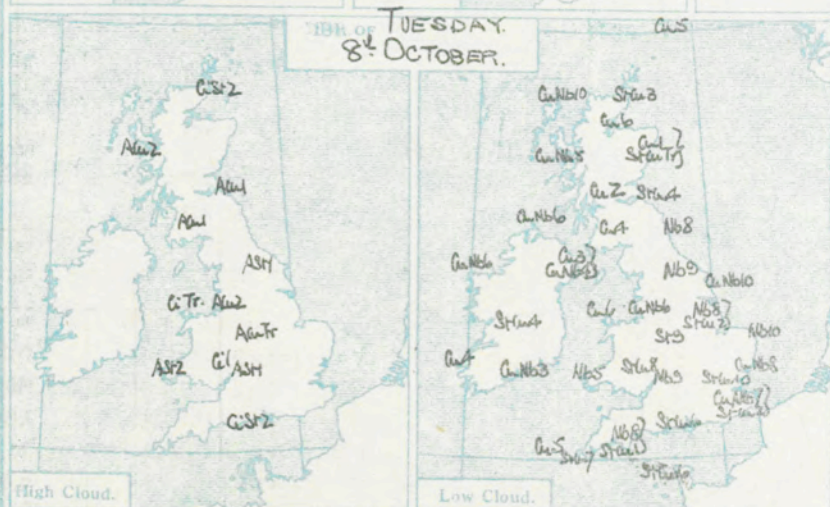
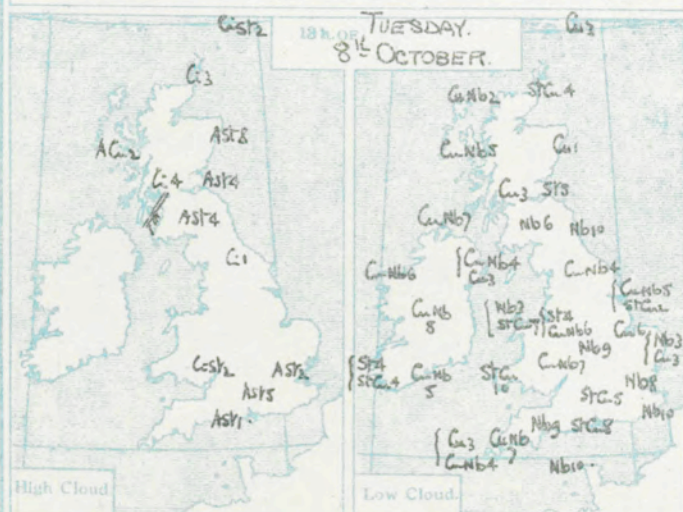
- | | |
|-------------------|----------------|
| — No speed given. | — 20-35 m.p.h. |
| — 0-5 m.p.h. | — 36-45 " |
| — 6-15 " | — 46-55 " |
| — 16-20 " | — 56-65 " |
| | — and so on. |

In Tables.

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

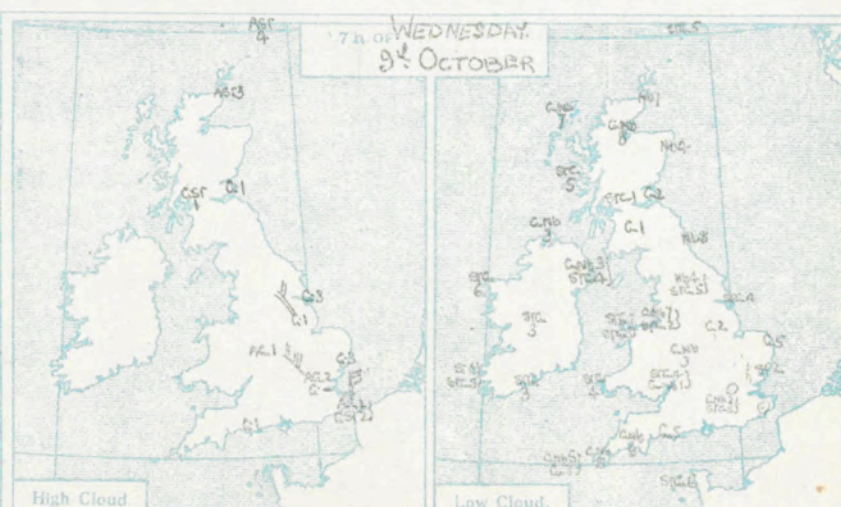
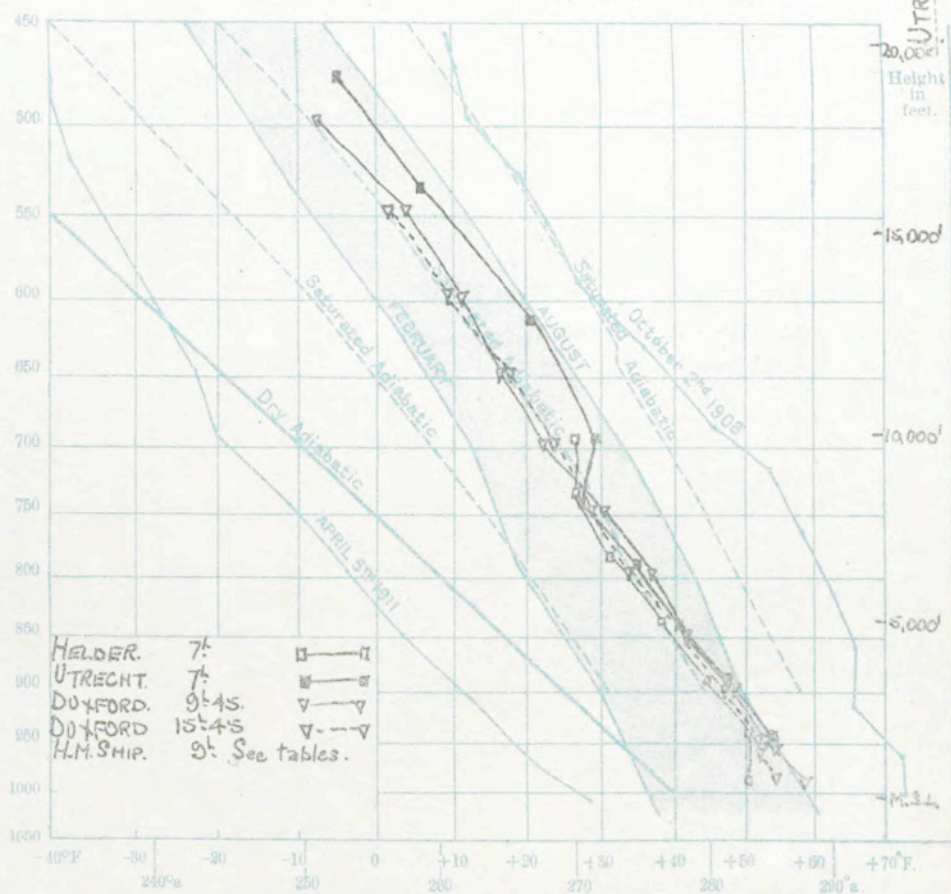
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

CLOUD FORMS, AMOUNTS AND MOVEMENTS.

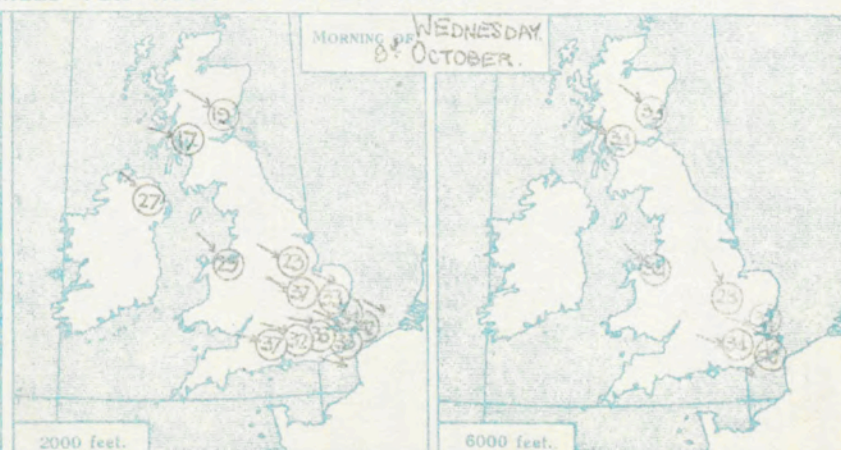
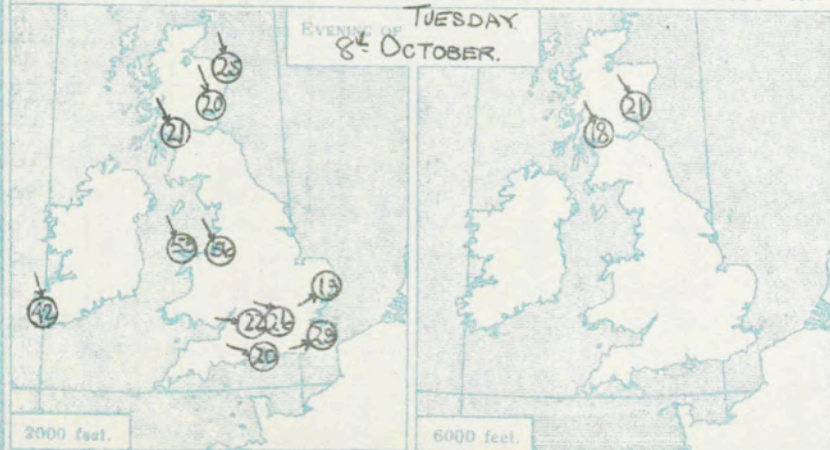


UPPER AIR TEMPERATURES.

TUESDAY, 8th OCTOBER, 1929.



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



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

[illegible]

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. 9:45. 8.10.29.	mb. 988	Feet. 100	°F. 53	°F. 56			mb. 988	Feet. 100	°F. 53	°F. 56			mb. 988	Feet. 100	°F. 53	°F. 56			
	989	1160	55	52	83		989	1160	40	38	83		989	1160	55	52	83		
	990	2770	43	47	87		990	2770	33	36	87		990	2770	43	47	87		
	880	4320	42	40	90		880	4300	27	25	90		880	4300	42	40	90		
	800	5950	37	35	81		800	5870	22	22	81		800	5870	37	35	81		
	750	7680	31	31	100		750	7500	16	16	100		750	7500	31	31	100		
	700	9500	23	22	89		700	9250	8	8	89		700	9250	23	22	89		
	650	11400	17	14			650	11010	-2	0			650	11010	17	14			
	600	13440	11	8									600	13310	10	10			
	550	15670	4	2									550	15480	2	2			
	500	18000	7	8									500	17800	2	2			
	F.C. 70, 880 to 810 mb. Some Cst not reached. Haze top 900 mb.							F.C. 70, 880 to 860 mb.							F.C. 70, 880 to 820 mb. Cst not reached. Haze top not reached. Time formed at 730 to 700 mb.				
	H.M. Surf. Long. 30° 6' W. Lat. 51° 30' N.							H.M. Surf. Long. 30° 6' W. Lat. 51° 30' N.							H.M. Surf. Long. 30° 6' W. Lat. 51° 30' N.				
	Cu 880 to 860 mb.							Cu 880 to 860 mb.							Cu 880 to 860 mb.				

UPPER WINDS ABROAD.

Place.	Helder	Rosen	Prague	Cracow	Antibes	Malta						
Time.	12 ^h 8 ^m	13 ^h 8 ^m	13 ^h 8 ^m	13 ^h 8 ^m	18 ^h 8 ^m	17 ^h 8 ^m						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.		
1,640	130	53	160	13	160	3	180	17	-	-	2,000	
3,280	200	31	190	24	170	18	190	24	360	4	240	9
4,920			170	25	170	16	180	31	-	-	7,000	
6,560			210	26	220	25	190	29	200	9	270	12
9,840					210	30	190	29			10,000	
13,120					220	22	210	21			290	24
16,400					220	36	280	?			13,000	
19,680					230	38	200	50			290	30

Place.	Algiers	Posen	Madrid	Prague	Zaragoza	Malta						
Time.	4 ^h 9 ^m	7 ^h 9 ^m	7 ^h 9 ^m	7 ^h 9 ^m	7 ^h 9 ^m	6 ^h 9 ^m						
1,640	260	11	190	38	-	-	230	17	310	25	3,000	
3,280	260	20	190	33	290	11	230	38	220	26	320	22
4,920	310	20	190	37	290	9	250	30	-	-	5,000	
6,560	310	11			260	14	270	29	-	-	320	25
9,840					270	20			-	-	6,000	
13,120									310	23	330	31
16,400												
19,680												

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



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 10th OCTOBER, 1923.No. 24,794.
U.A.S. 3,846.

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.

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.

— 6-16 "

— 16-36 "

— 26-36 m.p.h.

— 36-46 "

— 46-56 "

— 56-66 "

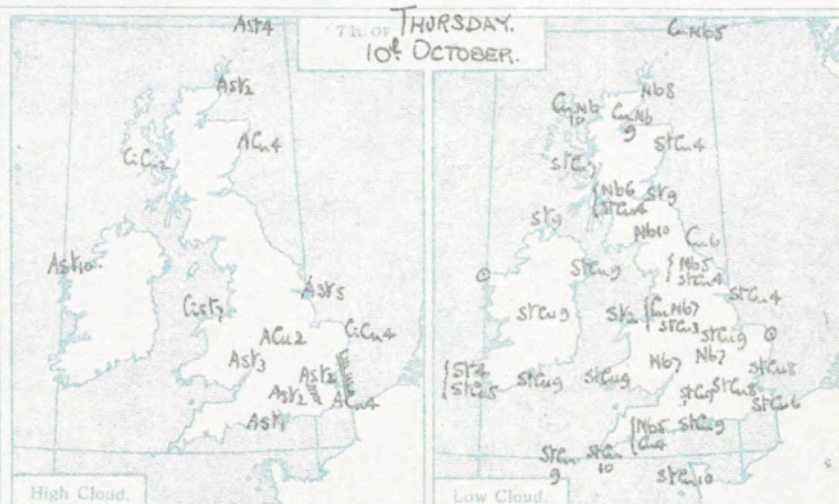
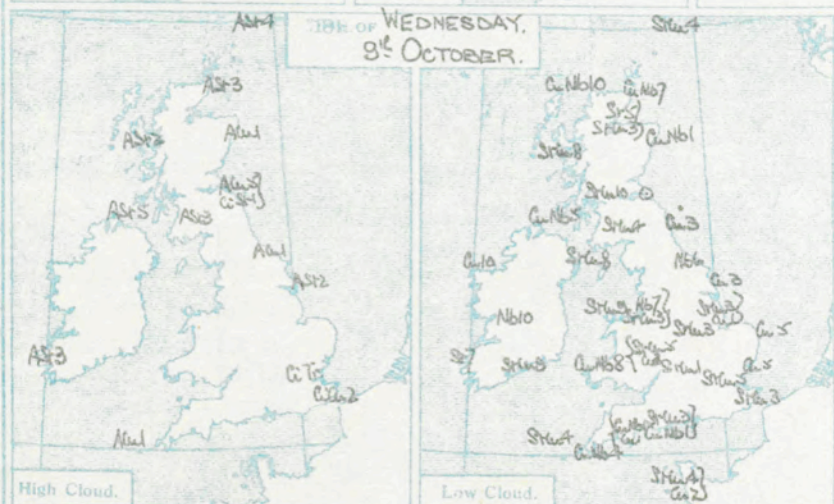
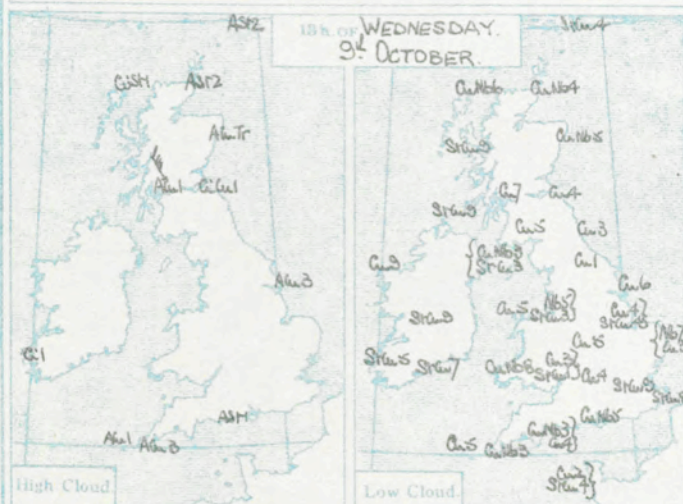
and so on.

In Tables.

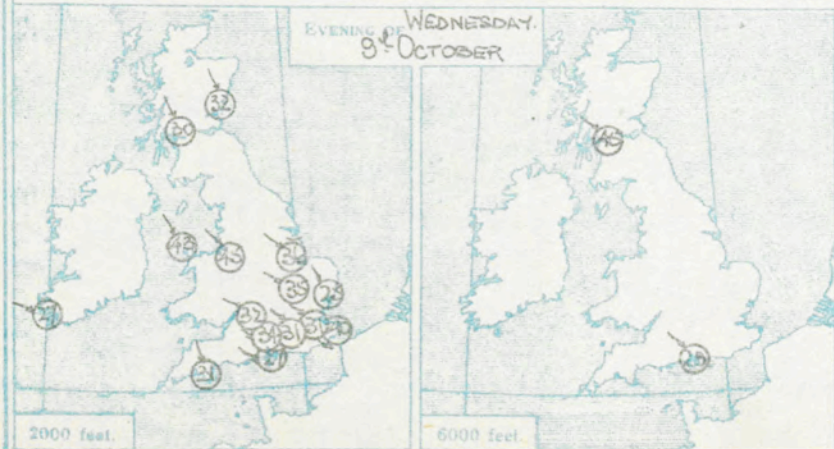
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 2 miles for alto type clouds (single line).

CLOUD FORMS, AMOUNTS AND MOVEMENTS.



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



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

[illegible]

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 x 29	mb. 1014 1010 974 935 900 855 800 750 700 650 600 550	Feet. M.S.L. 100 1100 1780 3220 4740 6330 8000 9790 11630 13630 15800	°F. 48.5 44 36 32 27 20 13 3 3.5 0 -3.5	°F. 44.5 39.5 35.5 32 26 20 13 3 0 -5.5	% 73 81 97 100 90 100	S. FARNBORD	mb. 1016 1007 981 945 910 878 847 816 786 758 730 704	Feet. M.S.L. 1016 220 950 1370 2890 3980 4580 5860 6840 7800 8720 9650	°F. 50 49 45 40 36 32 28 26 22 19 16	°F. 50 45 40 36 32 28 26 22 19 16	% 73 81 97 100 90 100	Cloud at 910, 863 and 832mb Bumpy at 910mb.	S. FARNBORD. 15:45	mb. 1021 1011 978 940 906 874 844 811 781 752 723 696	Feet. M.S.L. 1021 230 1260 2260 3240 4170 5200 6170 7130 8100 9110 10100	°F. 51 48 45 41 36 32 27 26 21 19 20	°F. 48 45 41 36 32 27 26 21 19 20	% 73 81 97 100 90 100	Cloud at 841 to 781mb Very bumpy at 900mb.	MALTA	mb. 1014 982 958 903 880 801 754 710	Feet. M.S.L. 1014 660 1640 3280 4320 6560 8200 9840	°F. 67 61 57 54 53 47 42	°F. 67 61 57 54 53 47 42	% 73 81 97 100 90 100
De Bilt 9 x 29	1003 980 943 889 835 784 736 691 645 593	M.S.L. 670 1650 3280 4920 6560 8200 9840 11480 13120 14760	- 48 -<																						

UPPER WINDS ABROAD.

Place.	Paris	Helder	Tours	Kosice	Posen	Malta
Time	13 ^h 9 ^m	13 ^h 9 ^m	13 ^h 9 ^m	13 ^h 8 ^m	18 ^h 9 ^m	17 ^h 9 ^m
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	270	20	220	34	260	20
3,380	280	29	290	37	300	29
4,920					300	29
6,500					190	26
9,840					180	16
13,120					270	43
16,400					270	33
19,680					260	30
						7,000'
						350
						20

Place.	Prague	Messina	Madrid	Cracow	Toronto	Malta
Time	7 ^h 10 ^m	7 ^h 10 ^m	7 ^h 10 ^m	7 ^h 10 ^m	7 ^h 10 ^m	6 ^h 10 ^m
1,640	250	17	-	-	260	41
3,380	290	43	340	19	40	20
4,920	290	34	-	-	40	9
6,500	290	29	360	17	30	16
9,840	270	29	-	-	30	18
13,120	270	23	300	24	10	16
16,400						
19,680						
						4,000'
						320
						21

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

G. O. SIMPSON, C.B., D.S.O., F.R.N.

No. B. 24795.

U.A.B. 3,847.

S. Farnboro'. 10h. 35m. $\nabla \rightarrow \nabla$.
 S. Farnboro'. 10h. See tables. $\square \rightarrow \square$.
 Utrecht. sh $\square \rightarrow \square$.

Thursday, 10th October.

High Cloud

Low Cloud

THURSDAY,
10th October.

High Cloud.

Low Cloud.

Friday, 11th October.

TR. OF

High Cloud

Low Cloud

DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. — BRITISH.																														
Place.	Holyhead.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Card-ington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Lympne.	Manston.	Lympne.	Cattewater.	Calshot.	Place.										
Time.	9h 10 ⁴ .	12h. 10 ⁴ .	13h. 10 ⁴ .	13h. 10 ⁴ .	12h. 10 ⁴ .	12h. 10 ⁴ .	11h. 10 ⁴ .	12h. 10 ⁴ .	12h. 10 ⁴ .	13h. 10 ⁴ .	12h. 10 ⁴ .	13h. 10 ⁴ .	12h. 10 ⁴ .	12h. 10 ⁴ .	10h. 10 ⁴ .	12h. 10 ⁴ .	12h. 10 ⁴ .	13h. 10 ⁴ .	12h. 10 ⁴ .	Time.										
Type.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	Type.										
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet.			
Surf.	245	18	240	20	215	17	225	23	250	20	270	13	265	20	265	21	275	18	230	24	240	16	260	13	265	14	265	11	265	18
1000	260	25	245	45	235	27	230	40	250	31	265	25	260	23	265	32	285	24	240	38	250	21	260	23	270	19	280	23	270	19
2000	270	33	255	51					265	31	270	26	275	33	275	32	300	30	245	40			280	23	270	25	285	17	295	33
3000									275	36	270	33	290	39	280	36	300	37					285	34			300	31	285	37
4000									270	45	10h.						300	23									305	35	280	33
5000									270	61	AC	39					300	30									310	32	295	41
6000									275	33	13h.						295	33									320	40		
8000	Aberdeen.								280	43	C.						295	43									320	43		
10000	13h.	10h.	10h.						330	70							310	33					10h.				13h.	13h.		
12000	AC	AC	AC						AC								325	30					6h.				AC	AC		
Neph.	280	39	260	39	290	51			310	54							320	25									350	85		
Place.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Card-ington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Shoebury ness.	Manston.	Lympne.	Cattewater.	Calshot.	Place.											
Time.					17h. 10 ⁴ .	17h. 10 ⁴ .	17h. 10 ⁴ .			17h. 10 ⁴ .	17h. 10 ⁴ .	17h. 10 ⁴ .	17h. 10 ⁴ .		17h. 10 ⁴ .	17h. 10 ⁴ .	17h. 10 ⁴ .	17h. 10 ⁴ .	Time.											
Type.							b.				b.				b.	b.	b.			Type.										
Feet																				Feet										
Surf.					255	15	235	17	235	19			240	15	220	10	245	13	255	17			260	9	250	14	275	17	255	10
1000					245	33	245	37	245	25			250	26	245	25	245	24	260	23			265	21	255	21	285	24	250	28
2000					255	43	255	42	260	29			255	37	265	27														

[illegible]

UPPER WINDS ABROAD.													
Place.		Cracow		Turin.		Toulouse.		Brest		Antibes		Malta.	
Time.		13h 10'		13h 10'		10h 10'		10h 10'		18h 10"		7h 10'	
#feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	
1,640		25	-	-	-	-	340	14	-	-	(3000ft)		
3,280	280	21	180	7	240	9	320	23	270	7	310	41	
4,920	290	26	290	7	330	13	300	23	280	9	(5000ft)		
6,560			-	-	-	-			330	4	310	25	
9,840			360	27	320	18					(group)		
13,120											300	13	
16,400													
19,680													

Place.		LeHarve		Lyons		Toulouse		Turin		Prague		Malta	
Time.		18h 10"		18h 10"		5h 11"		7h 11"		7h 11"		6h 11"	
1,640	270	25	-	-	-	-	140	3	250	22	1000ft		
3,280	280	27	350	24	350	4	160	2	290	27	300	17	
4,920			-	-	310	14	160	12	290	27	300	15	
6,560			360	16	320	20					350	12	
9,840			360	34							5000ft		
13,120											350	17	
16,400													
19,680													

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

G. C. SIKES, O.B.E., D.S.O. &c.
Director



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 12TH OCTOBER, 1929.

No. B. 24,796

U.A.S. 3848.

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 24th, 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 increased 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 table 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.

— 10-15 "

— 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 "

— 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 "

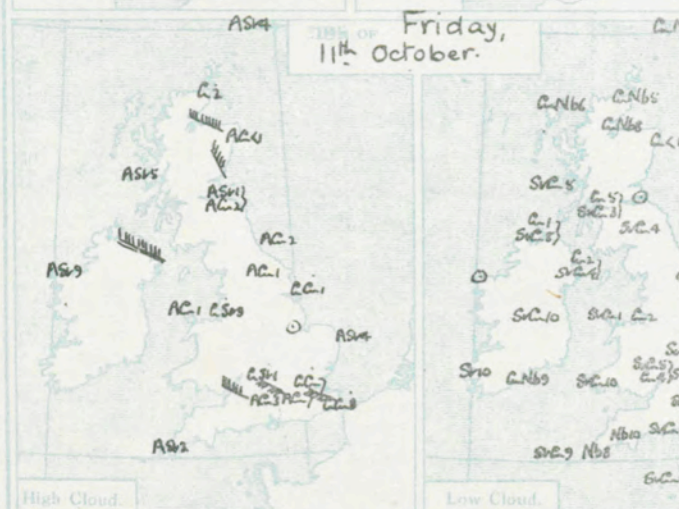
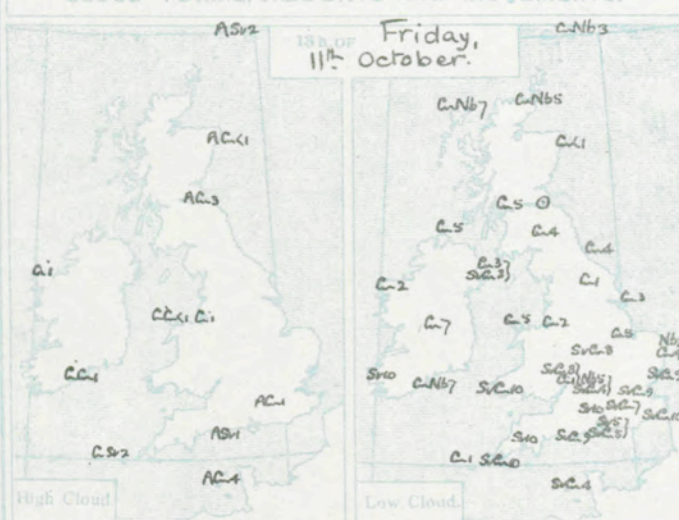
— 995-1000 "

In Tables.

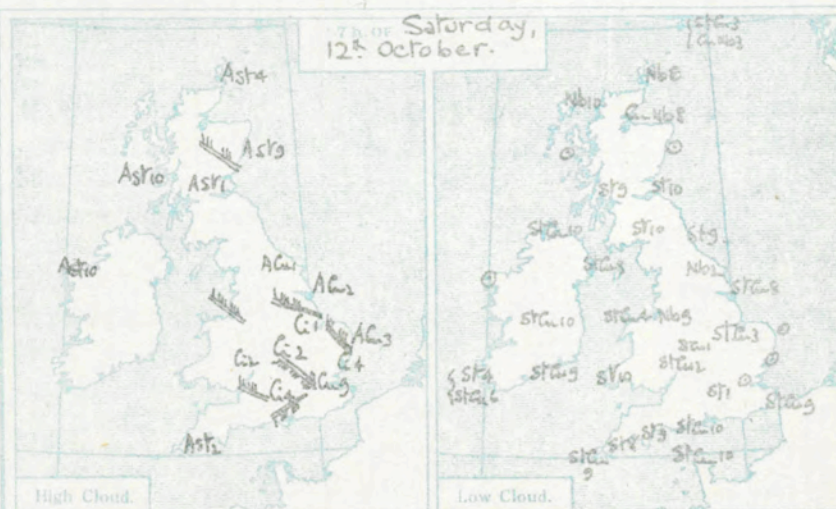
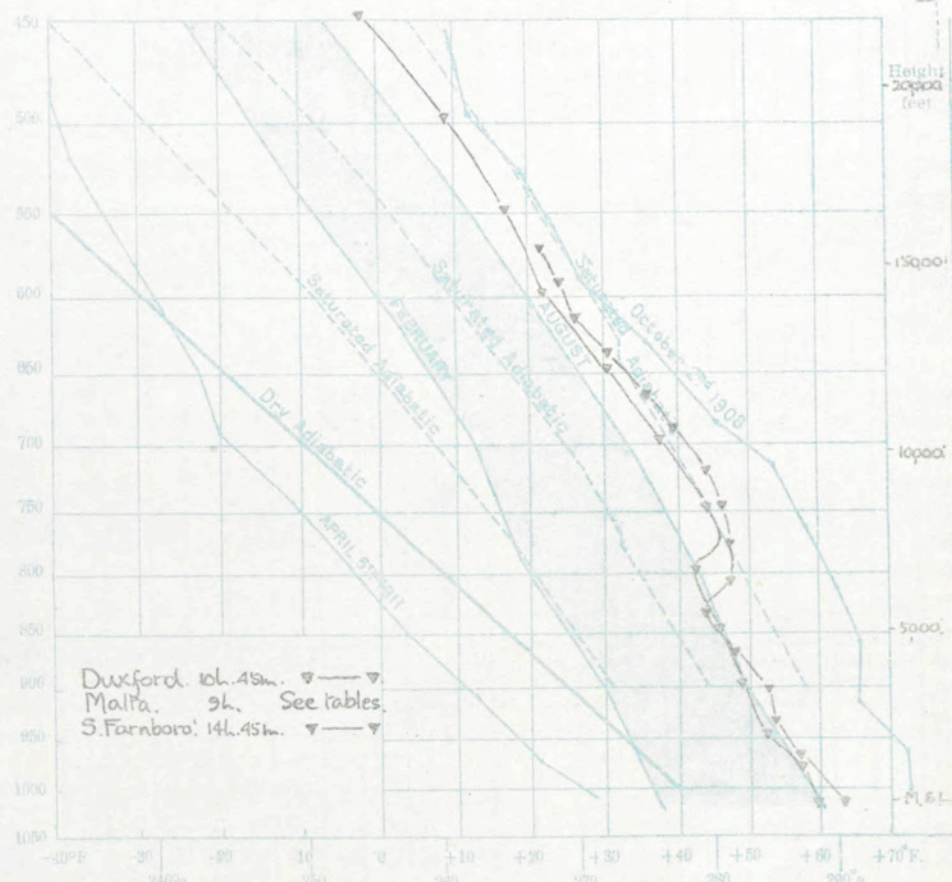
Directions are given in degrees, velocities in m.p.h.

Speeds of high clouds are computed for an average height of 6 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

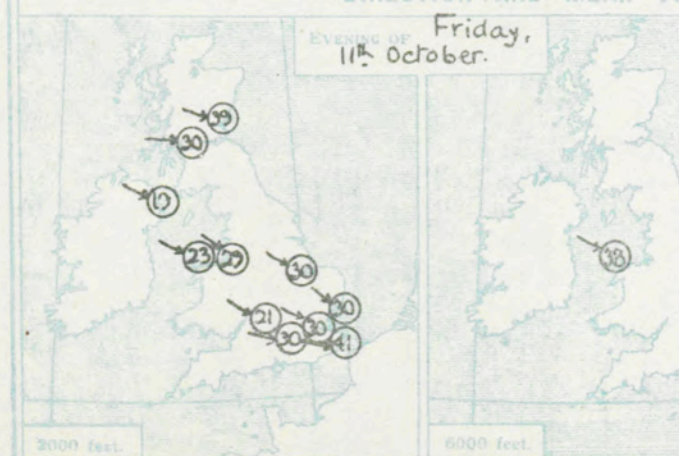
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

FRIDAY, 11TH OCTOBER, 1929.

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



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

Place	Reynolds	Lauchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Holyhead	Upper Heyford	Lydney	South Farnham	Croydon	Shoebury	Manston	Lympne	Cattewater	Calshot	Calshot	Place
Time	9h 11"	13h 11"	13h 11"	13h 11"	12h 11"	12h 11"	12h 11"	12h 11"		9h 11"	12h 11"	10h 11"	13h 11"	12h 11"		13h 11"	12h 11"	13h 11"	12h 11"	12h 11"	Time
Type	b		b		b		b		b			b				b	b	b	b	b	Type
Foot	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Foot
Surf.	265 18	260 20	275 22	275 26	300 15	290 21	280 18	250 19		295 15	245 17	270 12	260 20	255 19		270 19	270 15	280 13	260 17	260 17	Surf.
1000	270 28	270 33	275 35	285 26	290 23	285 27	275 28	265 31		305 26	255 21	280 29	265 31	260 20		280 34	275 28	290 24	270 25	270 25	1000
2000	280 36	275 47	280 42	290 25	290 36	290 27	290 31	275 32		295 29	280 30	290 39	270 47	275 33		290 39					2000
3000	290 46	280 49	285 40	295 31	275 31	280 39	285 45									295 34					3000
4000	285 42			295 32	275 45	295 33	275 36			295 39	275 45					290 25					4000
5000	290 50			295 32	285 51	290 44															5000
6000				285 44																	6000
8000				(good) 285 67																	8000
10000																					10000
12000																					12000
Neph.													16h. C.C.								Neph.
Place	Lauchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cranwell	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnham	Croydon	Shoebury	Manston	Lympne	Cattewater	Calshot	Calshot	Place	
Time	9h 11"	12h 11"	12h 11"	16h 11"	7h 11"	7h 11"	8h 12"	17h 11"		9h 11"	9h 11"	9h 11"	9h 11"		9h 11"	9h 11"	18h 11"	9h 11"	8h 12"	Time	
Type		b													b		b			Type	
Foot	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Foot
Surf.	275 15	245 19	280 8	305 10	280 13	285 13	260 6	315 12		285 8	270 12	255 11	255 18		265 10	255 9	270 16	270 14	270 10	Surf.	
1000	285 40	265 26	290 24	300 18	290 28	285 28	280 25	305 27		290 11	260 28	265 21	270 25		275 21	265 29	290 33	280 21	295 25	1000	
2000	290 39	280 30	295 19	290 23	295 29	295 30	295 32	300 30		290 21		280 30	295 30		290 33	280 41			310 25	2000	
3000	290 34		295 21	285 25	300 31	305 30	300 27	310 32		290 29		300 40	300 43		305 34	290 40			310 28	3000	
4000	300 33		295 22	290 35	310 32	300 34	305 27					300 44	305 41		310 35				310 34	4000	
5000				295 39		305 44						290 33			315 38				315 23	5000	
6000				295 38		305 46									320 42				310 28	6000	
8000								Aberdeen							290 44					8000	
10000	17h			15h 50m.				18h			17h	17h			17h					10000	
12000	Ac		C.C.	C.				Ac			Ac	Ac			Ac					12000	
Neph.	230 54		290 105	270 135				290 90		290 57	300 60				290 51					Neph.	
Place	Aberdeen	Lauchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnham	Croydon	Shoebury	Manston	Lympne	Cattewater	Calshot	Calshot	Place	
Time		7h 12"		7h 12"		7h 12"	6h 12"	6h 12"	6h 12"			6h 12"	7h 12"		6h 12"	6h 12"				Time	
Type												b			b	b				Type	
Foot		Dir. Vel.		Dir. Vel.		Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.			Dir. Vel.			Dir. Vel.	Dir. Vel.				Foot	
Surf.		225 10		225 11		310 2	250 2	265 10	255 9			235 6		255 8		285 5	315 5			Surf.	
1000		245 20		265 24		270 27	205 10	310 15	260 14			285 18		290 11		310 12	310 13			1000	
2000		255 33		270 29		280 38	310 22	315 17	310 18			305 17		315 16		320 12	315 23			2000	
3000		265 36		265 33		295 38	310 31	320 23	315 22			315 16				320 28	315 23			3000	
4000		260 35				305 37	315 37	315 27	325 29			330 18				320 27				4000	
5000							315 33	305 24	320 35							320 22				5000	
6000									315 31											6000	
8000																				8000	
10000																				10000	
12000		7h C				7h C.C.	7h C	7h C	7h C			7h C	7h C		7h C					12000	
Neph.		290 60				290 75	280 75	300 60	300 60			280 56	250 70			310 70				Neph.	

UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

UPPER WINDS ABROAD.

Place.	Vajmory.		Kosice.		Horta.		Tours		Grest.		Malta	
Time.	12h. 11'		12h. 11'		12h. 11'		12h. 11'		12h. 11'		12h. 11'	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	340	10	190	6	-	-	-	-	-	-	300	0 ft
3,280	340	13	280	7	180	4	290	16	290	15	330	29
4,920			250	13	170	8	-	-	-	-	700	0 ft
6,500			330	10	160	8	300	18	320	16	380	26
8,840			270	8					300	27	10,000	ft
13,120			300	11					300	34	320	20
16,400												
19,680												

Place.	Toulouse		Paris		Helder		Cologne		Tours		Malta	
Time.	17h. 11'		7h. 12'		7h. 12'		7h. 12'		7h. 12'		6h. 12'	
1,640	-	-	320	21	310	20	304	22	330	29	350	22
3,280	350	11	320	21			315	29	310	23	200	0 ft
4,920	-	-					315	36			240	28
6,560	320	11					315	43			300	0 ft
9,940	10	13									350	22
13,120												
16,400												
19,680												

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

G. O. BIRCHALL, C.B., D.S.O., D. H. A.
Director.

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

Place	Aberdeen	Louchars	Renfrew	Holyhead	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Croydon	South Farnboro	Croydon	Shoebury	Manston	Lympne	Catte-water	Calshot	Place
Time.		13h. 12 ^m	12h. 12 ^m	12h. 12 ^m	9h. 12 ^m	12h. 12 ^m	12h. 12 ^m	12h. 12 ^m	11h. 12 ^m	13h. 12 ^m	12h. 12 ^m	12h. 12 ^m	11h. 12 ^m	11h. 12 ^m	11h. 12 ^m	12h. 12 ^m	12h. 12 ^m	11h. 12 ^m		
Type		b	b					b	b			b			b	b				
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Surf.			240 15	245 22	255 12	260 20	285 14	270 15	250 12	270 4	200 11	260 7	260 13	285 5	265 10	290 8	295 11	295 5		
1000			255 21	250 35	265 21	275 27	285 27	260 16	255 17	275 11	205 18	255 7	260 10	265 11	285 11	290 13	305 15	285 13		
2000			265 35	265 46	265 21	280 29	280 24	270 26		295 18	215 20	280 9	285 11	280 8	280 13	300 7	295 19	290 14		
3000			270 45	270 45	265 22	265 23	220 23	285 31		315 17		285 20		295 13	295 15	305 11				
4000			275 43	270 44	265 17	260 23	255 27	280 33		320 20				295 13	320 15					
5000				270 43		260 47		230 46		320 26										
6000										305 33										
8000		66								7,070'										
10000	13h	330 45	13h							290 32										
12000	66	6	6					10 ^h 10 ^m		10 ^h 10 ^m										
Neph.	280 30	270 50	280 60					280 60		300 12										Neph.
Place.	Louchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury	Manston	Lympne	Catte-water	Calshot	Place.	
Time.	17h. 12 ^m		17h. 12 ^m	17h. 12 ^m	17h. 12 ^m		17h. 12 ^m	16h. 12 ^m				17h. 12 ^m	17h. 12 ^m		17h. 12 ^m	17h. 12 ^m	17h. 12 ^m	17h. 12 ^m		
Type							b								b	b				
Feet																				
Surf.	240 18		235 11	240 1	300 7		240 12	260 5				225 6	240 8			230 3	255 10	220 11		
1000	250 43		250 22	255 19	290 21		265 18	265 17				245 15	245 13			245 15	280 9	235 17		
2000	260 53		260 20	255 17	280 21		280 18	280 17				270 23	270 15			255 15	260 15	230 9		
3000	220 38		260 29	255 15	265 19		280 19	290 19				285 27	285 23				275 13	265 10		
4000				260 21	250 21		280 17	290 25				290 18	290 20							
5000													305 23							
6000	16h												300 18							
8000	66																			
10000	710 40																			
12000	6																			
Neph.	300 50																		Neph.	
Place.	Aberdeen	Louchars	Renfrew	Aldergrove	Holyhead	Sealand	Card-ington	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury	Manston	Lympne	Catte-water	Calshot	Place.
Time.							6h. 12 ^m						7h. 12 ^m	6h. 12 ^m				8h. 12 ^m		
Type																				
Feet																				
Surf.							245 6						- 0	- 0				40 3		
1000							265 10						155 7	- 0				175 11		
2000							255 15						200 6	265 5				210 18		
3000							255 20						230 9	255 17				215 21		
4000													230 15	235 21				205 25		
5000																				
6000																				
8000																				
10000																				
12000																				
Neph.																			Neph.	

UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

UPPER WINDS ABROAD.

Place.	Paris	Calais	Abbeville	Compiègne	Kosice	Melita						
Time.	13h. 12 ¹⁵	13h. 12 ¹⁵	13h. 12 ¹⁵	13h. 12 ¹⁵	13h. 12 ¹⁵	17h. 12 ¹⁵						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	310	9	260	14	290	13	290	7	310	9	3,000'	
3,280	330	14	280	15	290	18			300	16	330	30
4,920					310	26			320	25	5,000'	
6,560											240	30
9,840											2,000'	
13,120											350	42
16,400												
19,680												

Place.	Toulouse	Utrecht	Cracon	Genoa	Barcelona	Malta					
Time.	18h. 12 ¹⁵	18h. 12 ¹⁵	7h. 12 ¹⁵	7h. 12 ¹⁵	7h. 12 ¹⁵	6h. 12 ¹⁵					
1,840	-	-	270	19	290	31	-	-	120	9	(3000)
3,280	320	12	310	27	30	35	-	-	160	4	350 31
4,920	-	-	310	30	300	35	360	21	350	9	(3000)
6,560	-	-	320	36	290	25	360	26	340	14	10 31
9,840	20	23					20	44	30	18	(3000)
13,120	10	18							20	20	350 36
16,400									20	18	
19,680											

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



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, MONDAY, 14TH OCTOBER, 1929.

No. B. 24,798.

U.A.S. 3,850.

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 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.

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 "

→ 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 "

→ 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 "

→ 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 "

→ 2356-2365 "

→ 2366-2375 "

→ 2376-2385 "

→ 2386-2395 "

Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoebury ness	Manston	Lymington	Cattewater	Calshot	Place		
Time		12h. 13 ^h	11h. 13 ^h	12h. 13 ^h	12h. 13 ^h	12h. 13 ^h					12h. 13 ^h	12h. 13 ^h	13h. 13 ^h			12h. 13 ^h	12h. 13 ^h		12h. 13 ^h	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	10	235	15	190	12	225	15	275	12									Surf.	
1000			235	25	230	24	200	23	225	30	225	17									1000	
2000			245	37	230	25			230	29	225	18									2000	
3000			245	34	235	25			235	25	235	23									3000	
4000					235	27			235	28	235	33									4000	
5000					235	35															5000	
6000																					6000	
8000																					8000	
10000																					10000	
12000	13h. AC																				12000	
Neph.	260	54																			Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Cardington	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoebury ness	Manston	Lymington	Cattewater	Calshot	Place			
Time						14h. 14 ^h	17h. 13 ^h	22h. 13 ^h				16h. 13 ^h			17h. 13 ^h		18h. 13 ^h	24h. 13 ^h		Time		
Type							b.													Type		
Feet																				Feet		
Surf.						235	8	210	5	260	9				155	3		265	2	300	6	Surf.
1000						250	25	225	13	255	17				250	6		305	5	270	13	1000
2000						265	25	245	15	255	17				260	14		305	6			2000
3000						260	21	260	19	255	12				255	18						3000
4000						280	4	265	29													4000
5000																						5000
6000																						6000
8000																						8000
10000																						10000
12000																						12000
Neph.																					Neph.	
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Cardington	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoebury ness	Manston	Lymington	Cattewater	Calshot	Place		
Time				7h. 14 ^h		6h. 14 ^h	6h. 14 ^h	6h. 14 ^h	10h.													

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													
			Dry.		Wet.					Dry.		Wet.						Dry.		Wet.						Dry.		Wet.												
			°F.	°F.						°F.	°F.							°F.	°F.							°F.	°F.													
	mb.	Feet. M.S.L.	—	—	—			mb.	Feet. M.S.L.	—	—	—			mb.	Feet. M.S.L.	—	—	—					mb.	Feet. M.S.L.	—	—	—												
		M.S.L.	—	—	—				M.S.L.	—	—	—				M.S.L.	—	—	—						M.S.L.	—	—	—												

UPPER WINDS ABROAD.												
Place.	Abbeville		Perpignan		Padua.		Genoa.		Rome		Malta	
Time.	10h. 13 ^h	10h. 13 ^h	13h. 13 ^h	13h. 13 ^h	13h. 13 ^h	18h. 13 ^h	17h. 13 ^h					
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	220	11	-	-	-	-	350	13	(3000)			
3,280	270	4	50	16	360	13	-	360	23	360	28	
4,920			350	14	-	-	-	20	24	(5000)		
6,560			350	14	350	14	20	18		10	34	
8,240					20	26	360	31		(7000)		
13,120							20	23		350	15	
16,400												
19,680												

Place.	Milen		Algiers		Barcelona		Seville		Milen		Malta
Time.	18h. 13 ^h	6h. 14 ^h	7h. 14 ^h	7h. 14 ^h	7h. 14 ^h	7h. 14 ^h	6h. 14 ^h				
1,640	250	6	-	0	70	13	100	4	50	3	1,000'
3,280	-	-	50	7	50	14	110	8	-	-	360 16
4,920	90	9	40	14	40	14	160	9	360	3	3,000'
6,560	360	15	50	7	30	4	130	13	20	14	360 18
8,240			80	7	350	6	160	5			5,000
13,120			350	11	320	14					10 14
16,400					320	11					
19,680											

Meteorological Office, Air Ministry, Kingway, London, W.C.2		G. C. SIMPSON, C.B., D.Sc., F.R.S. Director	
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AIR MINISTRY. DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT. TUESDAY, 15th OCTOBER, 1929.

No. B. 24799.

U.A.S. 3,851.

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, 1909, 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 and balloon ascent, except where otherwise specified in the tables on the reverse side.

" " balloon with tail. " = double theodolite ascent.

CLOUD MOVEMENTS (Nephoscope readings).

On Charts.

Movements are indicated thus:-

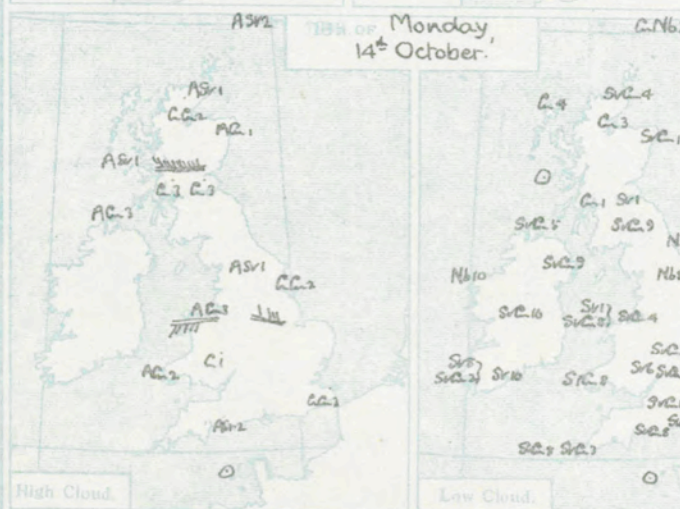
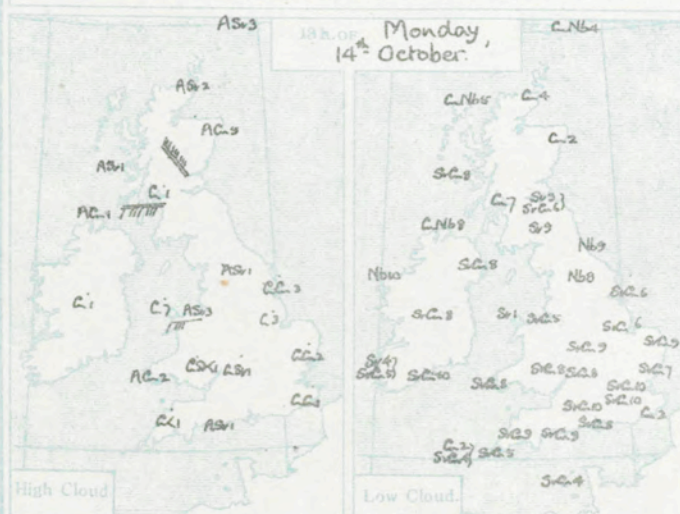
- No speed given.
- 0-5 m.p.h.
- 6-15 "
- 16-25 "
- 26-35 m.p.h.
- 36-45 "
- 46-55 "
- 56-65 "
- and so on.

In Tables.

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

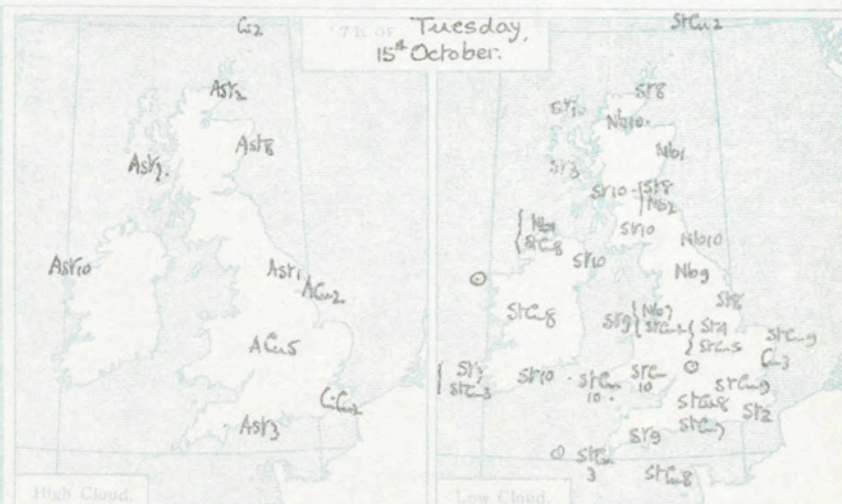
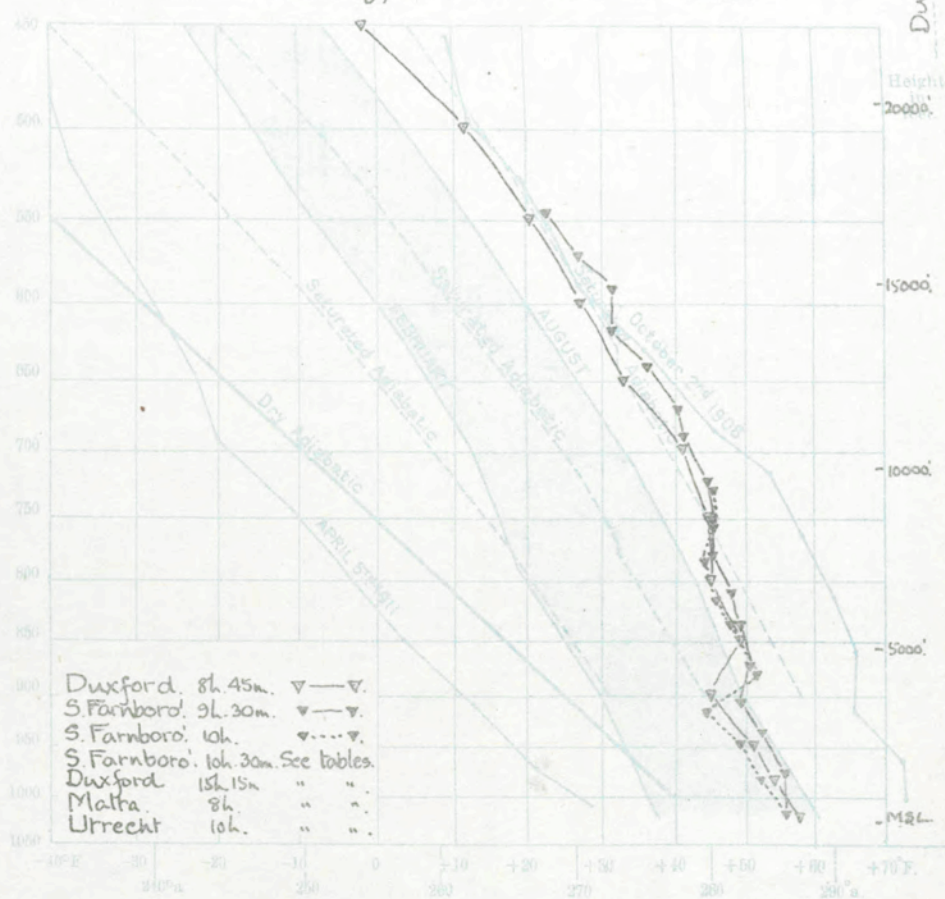
Speeds of high clouds are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

CLOUD FORMS, AMOUNTS AND MOVEMENTS.

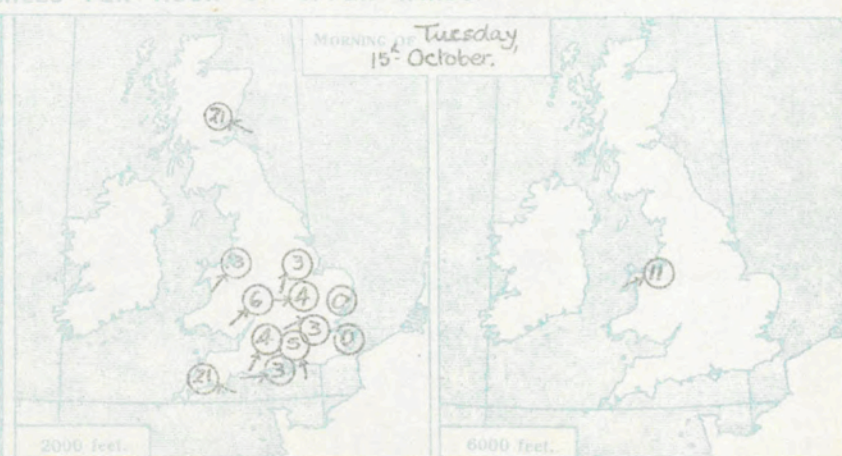
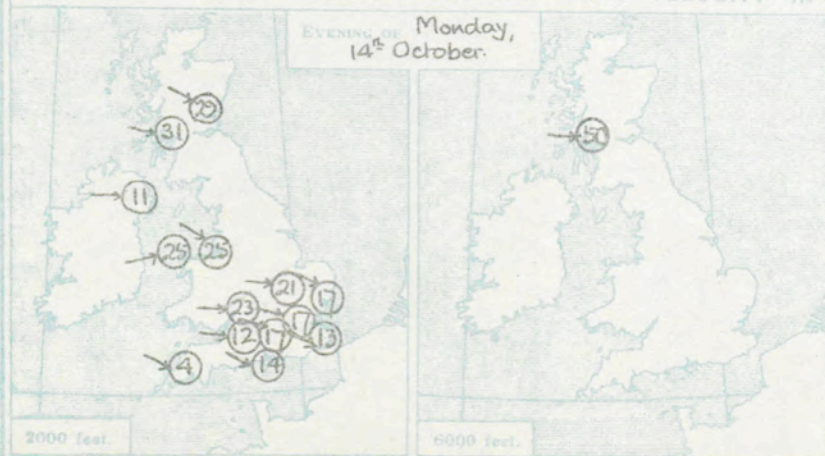


UPPER AIR TEMPERATURES.

Monday, 14th October, 1929.



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



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

Place	Holyhead	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Biggin Hill	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lympne	Cattewater	Cashot	Place																					
Time	9h. 14"	12h. 14"	13h. 14"	12h. 14"	12h. 14"	12h. 14"	12h. 14"	12h. 14"	12h. 14"	11h. 14"	12h. 14"	12h. 14"	12h. 14"	12h. 14"		12h. 14"	12h. 14"	12h. 14"	12h. 14"	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.	220	20	275	25	240	20	230	18	220	17	240	9	250	17	220	13	220	8	270	6	250	8	Surf.																		
1000	235	35	250	41	255	36	235	35	230	32	245	17	245	20	230	12	250	17	250	11	255	10	1000																		
2000	240	35	265	43					245	27	255	27	260	32	260	18	270	20	280	9	255	18	265	11	255	10	265	9	240	14	230	10	190	4	290	6	2000				
3000	245	35	270	46					240	26	255	38							285	19	305	10	265	22	270	11									3000						
4000	255	38							245	30									30	12														4000							
5000																			295	17														5000							
6000																			255	18														6000							
8000																			265	20														8000							
10000			13h.		13h.				230	65	13h.								285	15														10000							
12000			C.		C.				Ac.		Ac.																							12000							
Neph.			310	30	270	70			230	48	270	36																						Neph.							
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Biggin Hill	Upper Heyford	Worthy Down	South Farnborough	Croydon	Cranwell	Shoeburyness	Manston	Lympne	Cattewater	Cashot	Cashot	Place																				
Time	7h. 14"	16h. 14"	7h. 14"	16h. 14"	17h. 14"	7h. 14"	17h. 14"	7h. 14"	24h. 14"	17h. 14"	16h. 14"	7h. 14"	17h. 14"	24h. 14"	17h. 14"	17h. 14"	17h. 14"	16h. 14"	24h. 14"	Time																					
Type		b.					b.														Type																				
Feet	285	10	155	21	350	1	210	17	245	11	255	12	230	12	270	10	250	10	275	10	300	6	280	7	250	10	255	9	285	8	275	3	245	2	235	10	340	2	Feet		
1000	285	29	275	24	340	8	230	35	275	21	260	27	250	18	280	17	-	-	240	19	290	11	270	14	270	16	275	23	280	13	295	11	200	4	260	15	335	5	1000		
2000	290	29	280	31	275	11	250	25	300	25	265	27	280	21	285	17			320	16	265	23	275	12	280	17	280	7	310	16	290	11	295	13	285	4	295	14	325	7	2000
3000	290	26	280	39	270	18	275	23			275	31	280	18					350	7									340	10					300	7	315	11	3000		
4000	290	41	280	37			285	24											5	7																	4000				
5000			275	47					16h.										320	9																	5000				
6000			270	50					16h.																												6000				
8000			275	49					270	55																											8000				
10000	7h.		280	48			15h.		17h.																												10000				
12000	C.		275	70			C.		C.																												12000				
Neph.	270	110	260	80			240	65	270	50	280	45																									Neph.				
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lympne	Cattewater	Cashot	Place																					
Time		7h. 15"				6h. 15"	6h. 15"	6h. 15"	7h. 15"		6h. 15"	7h. 15"	7h. 15"	7h. 15"		7h. 15"	7h. 15"	7h. 15"	6h. 15"	Time																					
Type																			b		Type																				
Feet		40	8				135	4	255	4	265	11	265	2					100	10																Feet					
1000		115	9				220	11	80	1	265	16	360	1					270	4															1000						
2000		120	21				225	13	190	3	270	4	-	0					245	4															2000						
3000		190	15				190	12			180	9																							3000						
4000		240	10				175	15			165	8																							4000						
5000							275	8			260	7																							5000						
6000							255	11																												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.	Dry.	Wet.			Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	
S Farnboro' 3h. 30m. 14/10/29	mb.	Feet.	°F.	°F.	%			S. Farnboro' 10h. 14/10/29	mb.	Feet.	°F.	°F.	%		
1029	M.S.L.							1029	M.S.L.						
1021	230	57	-	-	-			1021	230	57	-	-	-		
974	1500	57	-	-	-			985	1230	53	-	-	-		
935	2520	53	-	-	-			949	2200	50	-	-	-		
905	3520	50	-	-	-			914	3210	45	-	-	-		
873	4520	51	-	-	-			880	4270	52	-	-	-		
840	5570	50	-	-	-			840	5510	49	-	-	-		
810	6540	49	-	-	-			815	6330	47	-	-	-		
780	7560	46	-	-	-			788	6900	45	-	-	-		
751	8600	44	-	-	-			754	8430	46	-	-	-		
722	9670	45	-	-	-			732	9210	46	-	-	-		
695	10690	42	-	-	-			Clouds from 321-366mb. Fairly bumpy up to cloud layer.							
669	11620	41	-	-	-										
643	12730	37	-	-	-										
618	13800	32	-	-	-										
594	14800	32	-	-	-										
571	15820	28	-	-	-										
547	16930	23	-	-	-										
Widespread layer thin S.C. at 905mb. Little C. no bumps.								Duxford 15h. 14/10/29	1028	M.S.L.	71	-	-	-	
								1024	100	60	55	-	-	-	
								988	1100	56	52.5	-	-	-	
								960	2150	51	49.5	-	-	-	
								900	3630	53	46.5	-	-	-	
								850	5200	50	42	-	-	-	
								800	6830	48	37	-	-	-	
								750	8600	47	32	-	-	-	
								700	10480	44	32	-	-	-	
								650	12480	36	27	-	-	-	
								600	14560	29	22	-	-	-	
								550	16780	22.5	17	-	-	-	
								500	19280	13	9	-	-	-	
								Inversion: 320mb. 48°F. 890mb. 53.5°F.							
								Utrecth 10h. 14/10/29	1030	M.S.L.	-	-	-	-	
								1004	1670	59	-	-	-	-	
								968	1650	55	-	-	-	-	
								912	3280	48	-	-	-	-	
								859	4920	48	-	-	-	-	
								808	5500	48	-	-	-	-	
								761	8200	45	-	-	-	-	
								716	9840	41	-	-	-	-	
								622	13120	32	-	-	-	-	
								556	16400	21	-	-	-	-	
								Duxford 8h. 14/10/29	1017	M.S.L.	-	-	-	-	
								992	660	60	-	-	-	-	
								958	1640	59	-	-	-	-	
								902	3280	48	-	-	-	-	
								850	4920	42	-	-	-	-	
								799	6560	40	-	-	-	-	
								750	8200	34	-	-	-	-	
								705	9840	29	-	-	-	-	
														</	

UPPER WINDS ABROAD.

Place.	Lyons.	Abbeville.	Toulouse.	Antibes.	Dijon.	Malta.						
Time.	8h. 14 ^s	10h. 14 ^s	10h. 14 ^s	18h. 14 ^s	18h. 14 ^s	7h. 14 ^s						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,840	-	-	-	-	-	(1000 ft)						
3,280	140	6	260	5	80	7	240	1				
4,920	-	-	-	-	-	-	-	(Good ft)				
6,560	340	5	230	?	30	7	70	11	0	(160 ft)		
9,840	-	-	-	-	-	-	20	20	40	9	50	2
13,120	40	6	240	4	350	14						
16,400	-	-	-	-	-	-						
19,680	350	7	310	9	310	26						

Place.	Lyons.	Toulouse.	Algiers.	Cracow.	Tunis.	Malta.						
Time.	17h. 12 ^s	17h. 14 ^s	5h. 15 ^s	7h. 15 ^s	6h. 15 ^s	6h. 15 ^s						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.						
1,840	-	-	-	-	-	-						
3,280	340	10	20	9	60	16	260	24	340	14	340	3
4,920	-	-	-	-	-	-	300	28	360	27	7,000	7
6,560	-	-	360	9	70	11	300	31	360	20	10	7
9,840	250	14	-	-	360	11					10,000	
13,120			30	7							10	16
16,400			-	-							16,000	
19,680			70	27							350	16

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

G. C. ELLIOTT, C.E., D.Sc., F.R.S.,
Director.



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, WEDNESDAY, 16th OCTOBER 1929.

No. B. 24,800

U.A.S. 3,852

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 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 "

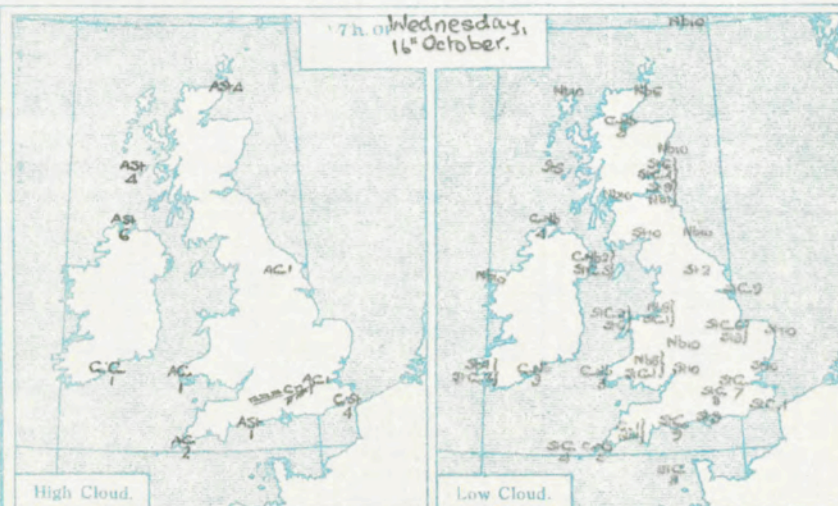
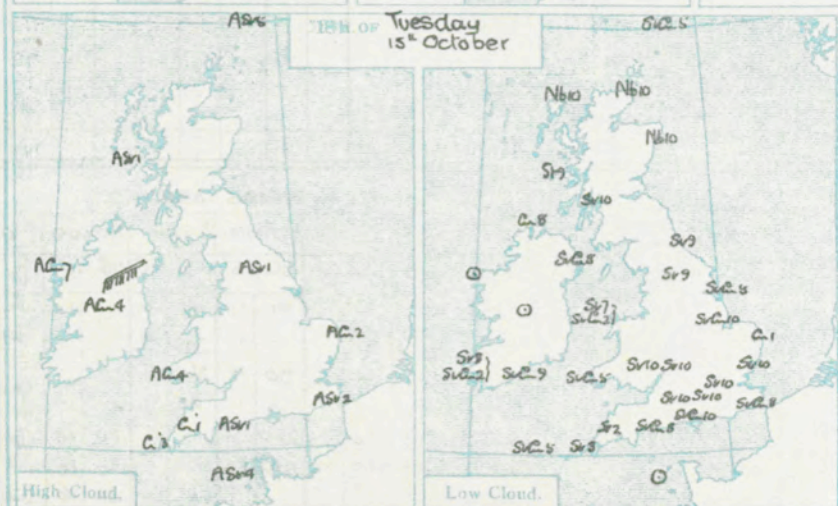
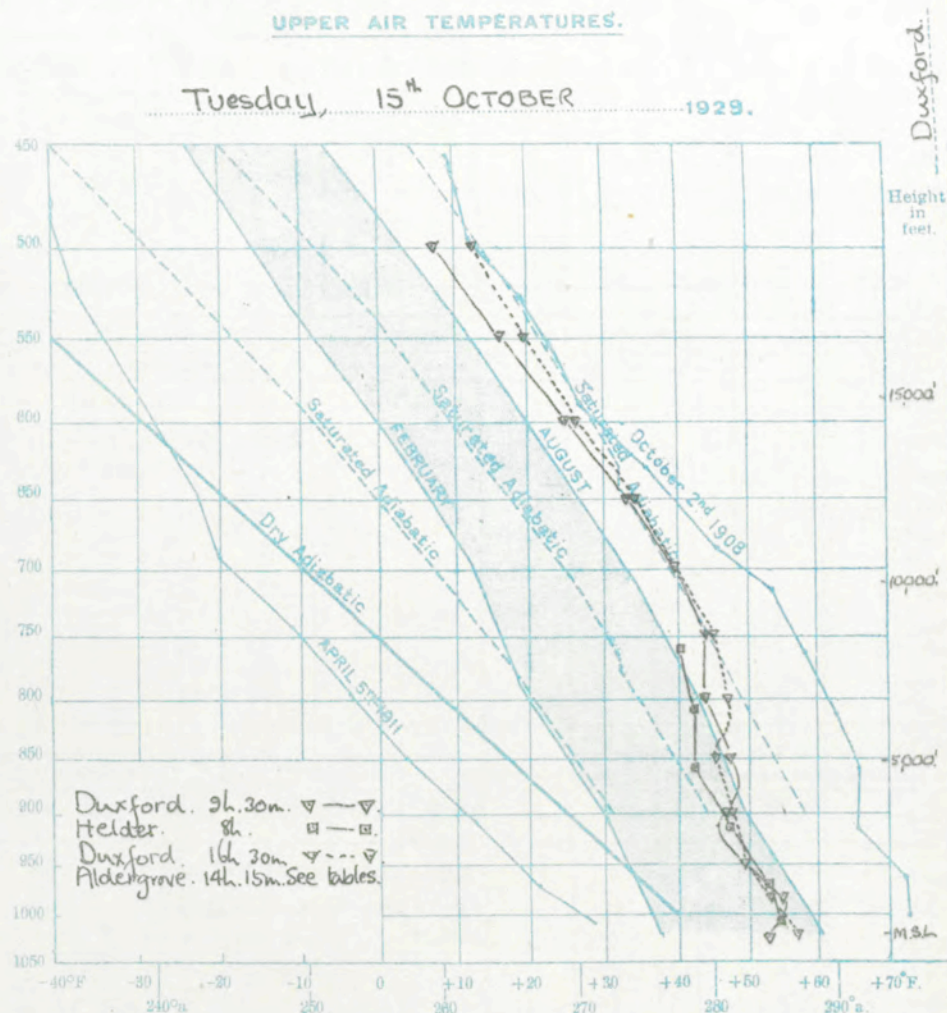
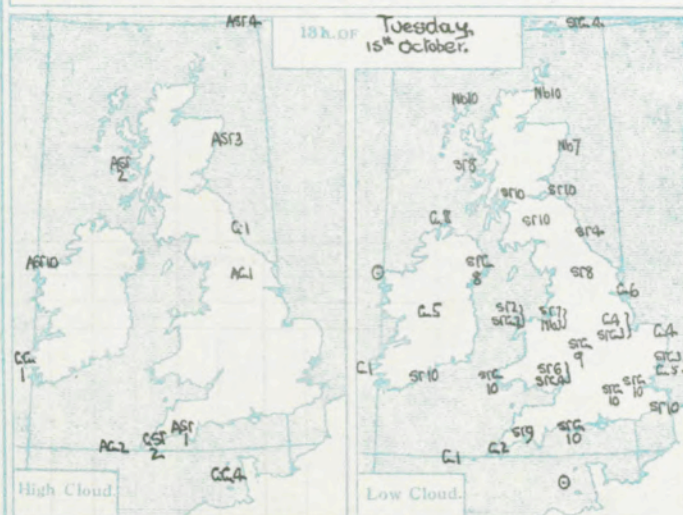
— and so on.

In Tables.

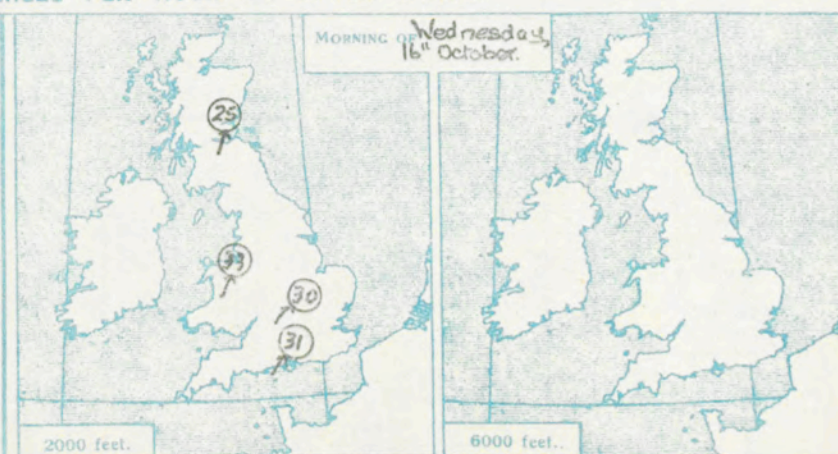
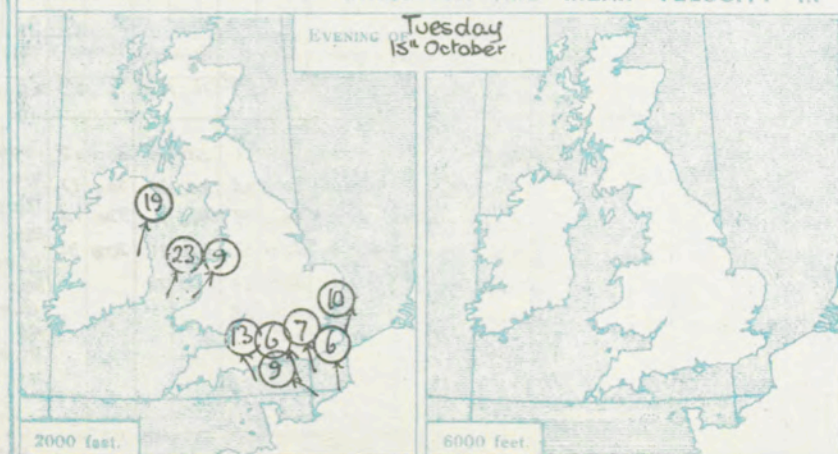
Directions are given in degrees, velocities in m.p.h.

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 (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																						
Place.	Aberdeen.	Leuchars.	Renfrew.	Holyhead.	Holyhead.	Sealand.	Cranwell.	Card-ington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Croydon.	Manston.	Lympne.	Lympne.	Calshot.	Place.		
Time.				9h. 15'	12h. 15'	12h. 15'	12h. 15'	12h. 15'	12h. 15'	13h. 15'	12h. 15'	12h. 15'	13h. 15'	12h. 15'	10h. 15'	13h. 15'	12h. 15'	10h. 15'	12h. 15'	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.					200 4	195 6	190 4	210 10	235 9	180 1	140 17	205 3	155 3	170 2	215 1	210 1	120 4	165 3	305 1	80 3	Surf.	
1000					205 22	205 25	205 11	205 11	220 9	235 9	150 27	205 7	170 7	200 6	275 4	315 3	170 6	195 6	210 6	105 6	1000	
2000					215 24		220 9	210 10	225 12	245 9	170 38	210 11	165 3	200 6		170 8		195 5	185 7	140 5	2000	
3000										230 6	185 42								140 6		3000	
4000											190 38								160 7		4000	
5000											195 28										5000	
6000											200 23										6000	
8000																					8000	
10000																					10000	
12000																					12000	
Neph.																					Neph.	
Place.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Card-ington.	Felix-stowe.	Cardington.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Shoebury ness.	Manston.	Lympne.	Cattewater.	Calshot.	Place.			
Time.			7h. 15'	16h. 15'	7h. 15'	24h. 15'	7h. 15'	7h. 15'	24h. 15'	7h. 15'	17h. 15'	16h. 15'	7h. 15'		17h. 15'	15h. 15'	7h. 15'	16h. 15'	Time.			
Type.																	b.		Type.			
Feet																			Feet			
Surf.			155 6	180 10	190 4	160 10	175 5	200 7	160 8	170 2	- 0	320 3	145 3		200 4	150 3	120 8	125 6	Surf.			
1000			170 16	190 21	210 9	175 19	180 9	210 6	175 17	170 10	130 9	165 6	155 7		185 7	160 8	120 17	115 9	1000			
2000			175 19	195 23	215 9	165 19	195 9	205 10			135 13	160 6	150 7		150 5	160 6		110 9	2000			
3000					210 8		245 8	210 12												3000		
4000																				4000		
5000																				5000		
6000																				6000		
8000																				8000		
10000																				10000		
12000																				12000		
Neph.			230 90																	Neph.		
Place.	Aberdeen.	Leuchars.	Renfrew.	Aldergrove.	Holyhead.	Sealand.	Cranwell.	Card-ington.	Felix-stowe.	Valentia.	Upper Heyford.	Worthy Down.	South Farnboro.	Croydon.	Shoebury ness.	Manston.	Lympne.	Cattewater.	Calshot.	Place.		
Time.		7h. 16 ¹²				6h. 16 ¹²	6h. 16 ¹²	7h. 16 ¹²	6h. 16 ¹²		6h. 16 ¹²		7h. 16 ¹²							Time.		
Type.																				Type.		
Feet																				Feet		
Surf.		150 10				140 12	165 9	170 12	195 3		150 9		180 5							Surf.		
1000		175 21				180 32	190 29	200 25	215 19		190 17		215 20							1000		
2000		190 25				205 33		230 30					225 31							2000		
3000								230 33												3000		
4000																				4000		
5000																				5000		
6000																				6000		
8000																				8000		
10000																				10000		
12000																				12000		
Neph.														250 90	240 54					Neph.		



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

UPPER AIR SUPPLEMENT, THURSDAY, 17th OCTOBER, 1929.

No. B. 24,801.

U.A.S. 3853.

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 24th, 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 given 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 table 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 "

— 20-30 m.p.h.

— 30-40 "

— 40-50 "

— 50-60 "

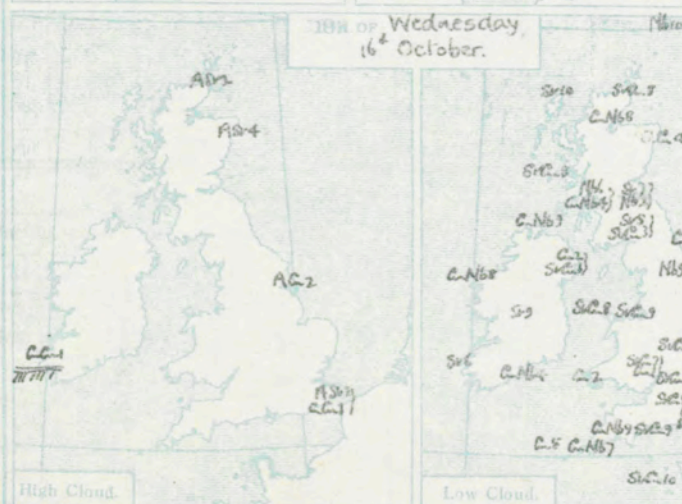
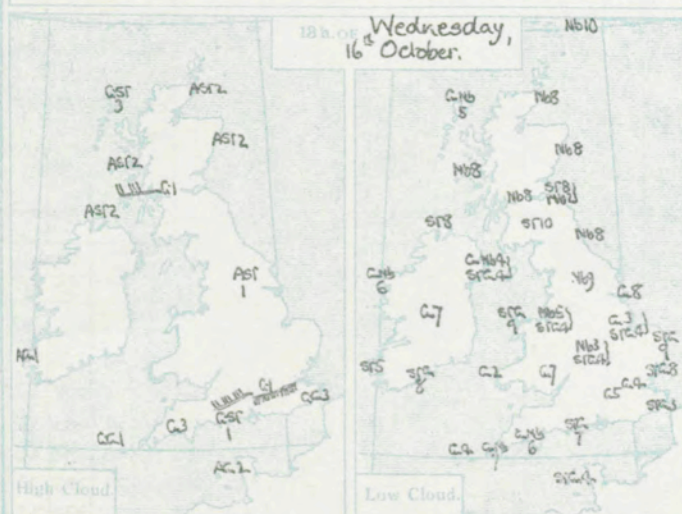
and so on.

in Tables.

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

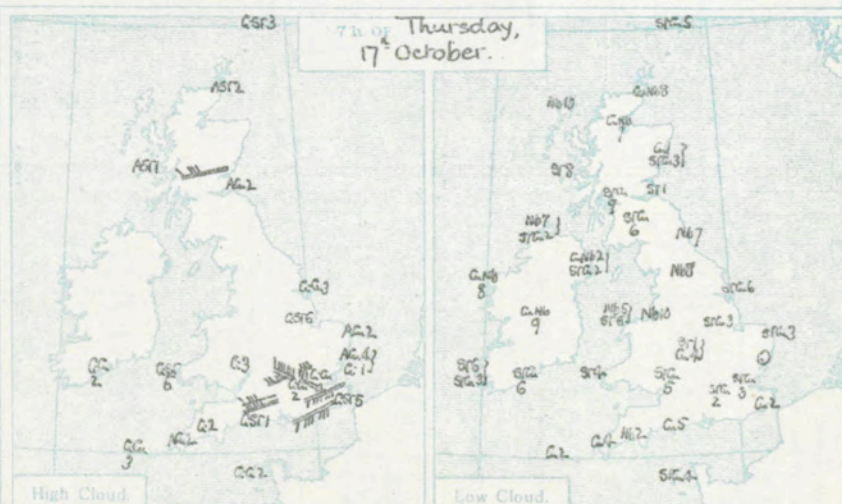
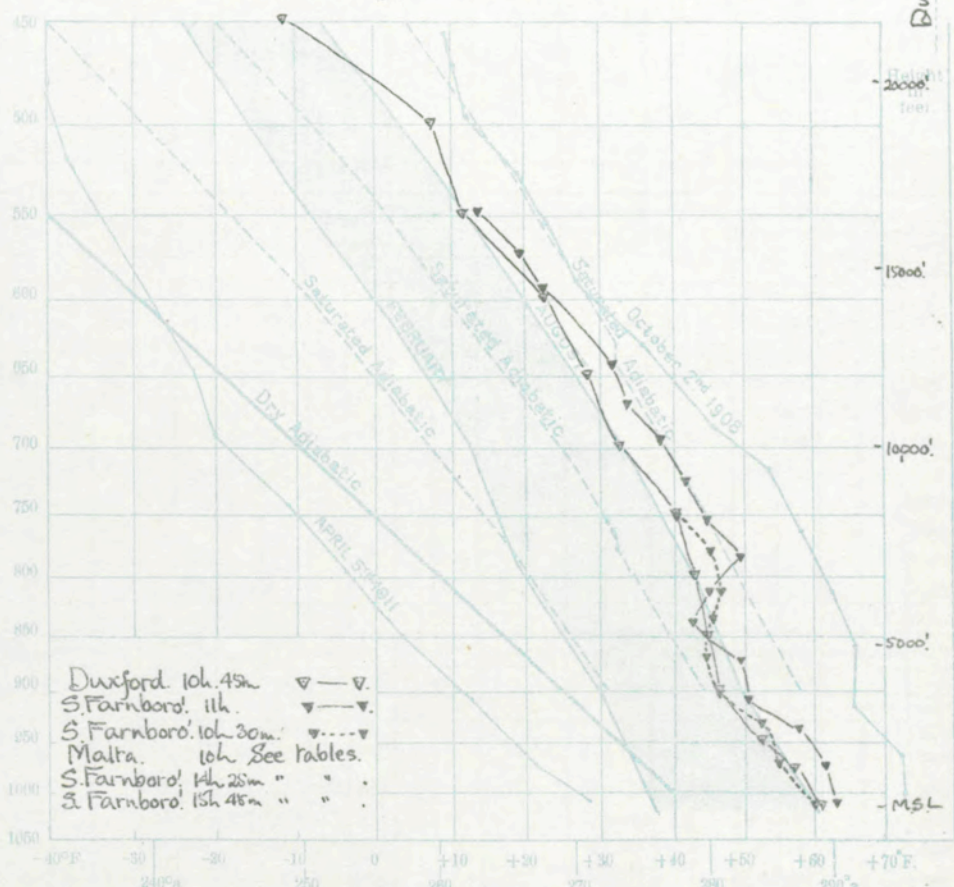
Speeds of high cloud are computed for an average height of 5 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

CLOUD FORMS, AMOUNTS AND MOVEMENTS.

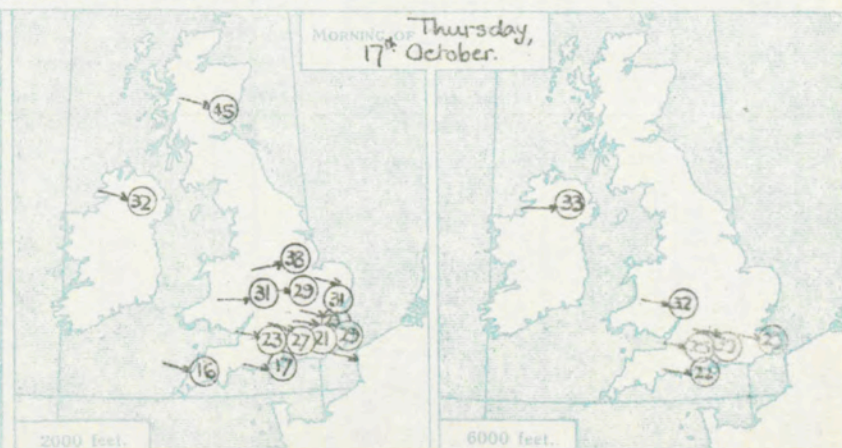
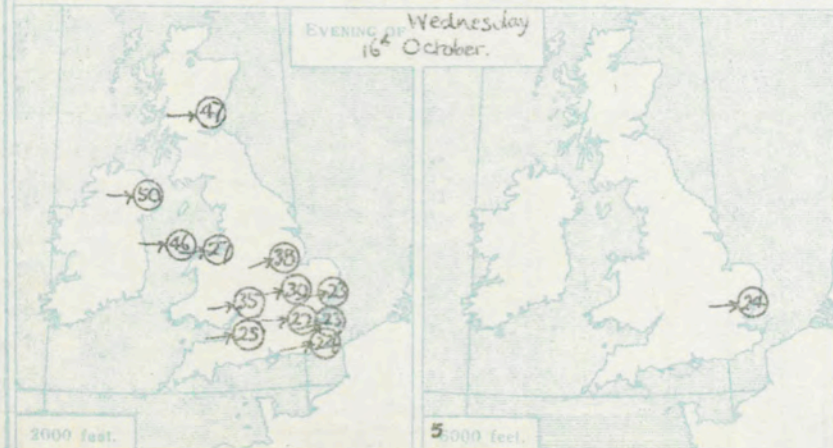


UPPER AIR TEMPERATURES.

Wednesday, 16th October, 1929.



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



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

Place	Aberdeen	Holyhead	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympne	Cattewater	Calshot	Place
Time.	2h. 16'	12h. 16'	12h. 16'	12h. 16'	12h. 16'	12h. 16'	12h. 16'	12h. 16'	12h. 16'		12h. 16'	12h. 16'	12h. 16'	12h. 16'		12h. 16'	12h. 16'	12h. 16'	12h. 16'	Time.
Type.		b	b	b	b	b	b	b	b			b	b	b		b	b	b	b	Type.
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.		215 25	250 27	250 23	235 25	230 15	235 22	220 26	185 12		235 25	240 17	265 14	250 20		250 14	245 12	285 25	285 20	Surf.
1000		220 41	255 52	255 43	235 44	235 38	220 32	235 35	220 22		225 39	245 24	240 17	250 24		240 18	240 17	295 33	250 17	1000
2000		240 45			250 43	240 49	235 29	240 18	240 22		240 43	260 29	260 25	255 27				295 28	260 17	2000
3000		245 47			260 40		240 36	260 17			250 38		265 27					295 25		3000
4000		250 53									255 37									4000
5000		245 48																		5000
6000		245 45																		6000
8000																				8000
10000			13h									13h	13h							10000
12000			C.									C.	C.							12000
Neph.			280 55									220 85	260 115							Neph.
Place.	Leuchars	Cranwell	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympne	Cattewater	Calshot	Card-ington	Place.
Time.	7h. 16'	1 st 17 th	7h. 16'	16h. 16'	18h. 16'	7h. 16'	7h. 16'	7h. 16'	18h. 16'	7h. 16'	7h. 16'		7h. 16'		16h. 16'	7h. 16'	18h. 16'	24h. 16'	24h. 16'	Time.
Type.															b	b				Type.
Feet	245 18	255 15	270 15	260 20	280 25	240 21	240 16	270 11	275 11	235 15	265 8		255 14		255 13	235 13	300 12	260 10	240 17	Feet
1000	250 38	270 28	270 29	275 20	285 39	245 40	245 26	265 22	280 20	240 24	270 23		265 22		250 23	245 25	295 18	285 21	250 24	1000
2000	265 47	285 33	270 50	275 46	270 27	255 38	260 30	260 23		260 35	270 25		270 29		260 23	265 24		295 22	295 29	2000
3000	270 55	290 38		280 44		260 43		260 27		275 32			270 34			270 34		295 23	315 32	3000
4000		295 36						270 29										295 28	305 36	4000
5000								270 24										290 27	290 30	5000
6000																		290 25	285 37	6000
8000																		285 31		8000
10000	16h								18h			16h								10000
12000	C.								C.			C.				250 95				12000
Neph.	250 60							270 70				260 105				240 75				Neph.
Place.	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympne	Cattewater	Calshot	Place.
Time.		7 th 17 th		6 th 17 th			6 th 17 th	6 th 17 th	6 th 17 th		6 th 17 th	6 th 17 th	7 th 17 th	7 th 17 th		7 th 17 th	6 th 17 th	7 th 17 th	6 th 17 th	Time.
Type.																b	b	b	b	Type.
Feet		255 20		250 8			235 16	225 18	235 11		225 6	240 6	220 7	205 15		295 8	235 10	260 10	255 12	Feet
1000		265 43		270 26			250 36	260 30	280 32		250 21	270 17	265 24	255 19		275 23	275 22	285 14	255 17	1000
2000		280 45		280 32			265 38	275 29	285 31		270 31	285 23	285 27	275 21		280 23	285 29	290 16	280 17	2000
3000		285 47		275 31			275 38	290 28	280 27		285 37	290 28	290 31	285 23		275 19	295 24	290 15	290 20	3000
4000		285 53		290 25			270 39	290 31	270 23		280 37	290 24	285 35	275 31		270 18	275 15	300 21	285 22	4000
5000				280 22				275 43			280 38	285 24	285 27	275 28			255 18		290 24	5000
6000				270 33							280 32	275 25	285 30				275 26		280 22	6000
8000											7 th 17 th	25 25	285 30							8000
10000											A.C.	220 38								10000
12000		C.									C.	C.		C.		A.C.	C.	C.		12000
Neph.		250 45										230 55		300 100	250 57	250 75	240 75			Neph.

UPPER AIR TEMPERATURES AND HUMIDITIES.

[illegible]

UPPER WINDS ABROAD

UPPER WINDS ABROAD.

Place.	Levy.	Perpignan.	Prague.	Cracow.	Rome.	Malta						
Time.	10h 16 ⁴	10h 16 ⁴	13h 16 ⁴	13h 16 ⁴	18h 16 ⁴	17h 16 ⁴						
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.		
1,840	--	--	--	100	4	300	9	--	--	3,000'		
3,280	--	0	220	25	210	6	280	13	140	3	280	4
4,920	--	--	300	31	--	--	290	12	--	--	5,000'	
6,560	250	8	310	6	270	9	300	16	310	3	20	15
9,840	300	54	--	--	280	14	--	--	--	--	6,000'	
13,120	--	--	--	--	280	27	--	--	10	16	40	7
16,400	--	--	--	--	--	--	--	--	--	--	7,000'	
19,680	--	--	--	--	--	--	--	--	--	--	360	20

Place.	Warsaw	Madrid	Seville	Badajoz	Catalo	Malta						
Time.	7L 17 ¹⁴	7L 17 ¹⁴	7L 17 ¹⁴	7L 17 ¹⁴	7L 17 ¹⁴	6L 17 ¹⁴						
1,640	220	16	--	--	10	13	200	9	280	14	3,000'	
3,280	230	16	80	3	160	9	250	7	250	23	50	16
4,920	240	16	50	7	120	8	150	9	250	23	5,000'	
6,560	260	22	80	9	90	11	160	7	--	--	30	11
9,840	--	--	140	4	90	6	40	7	--	--	6,000'	
13,120	--	--	90	4	--	--	--	--	--	--	30	18
16,400	--	--	--	--	--	--	--	--	--	--	8,000'	
19,680	--	--	--	--	--	--	--	--	--	--	30	24

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

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



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, FRIDAY, 18th OCTOBER, 1929.

No. B. 24,802.

U.A.S. 3,854

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 24th, 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 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.

— 6-10 "

— 11-15 "

— 16-20 "

— 20-35 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 "

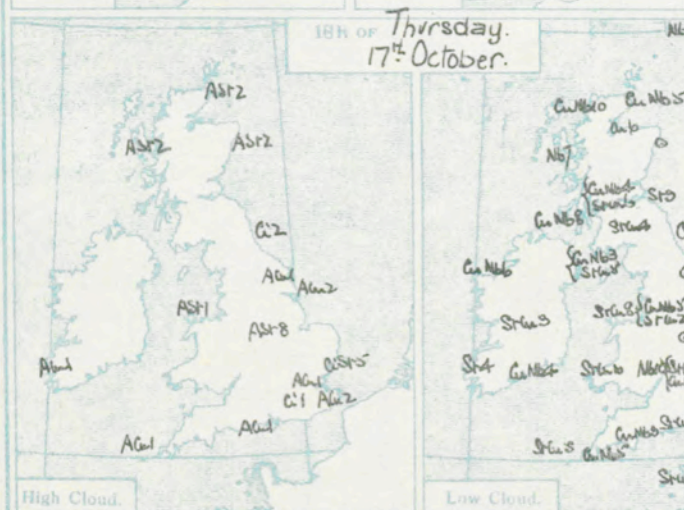
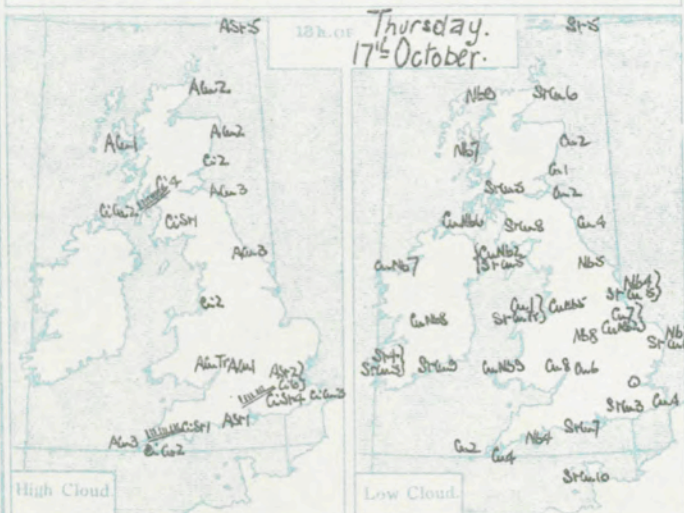
— 986-995 "

— 996-1005 "

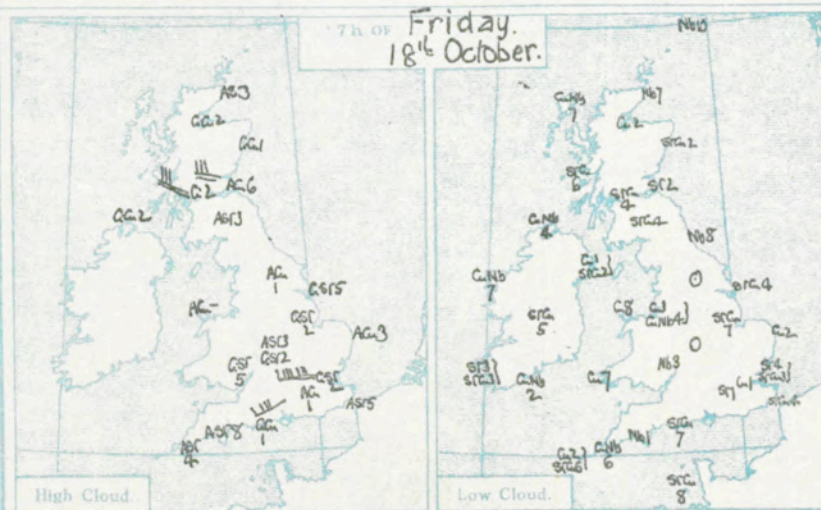
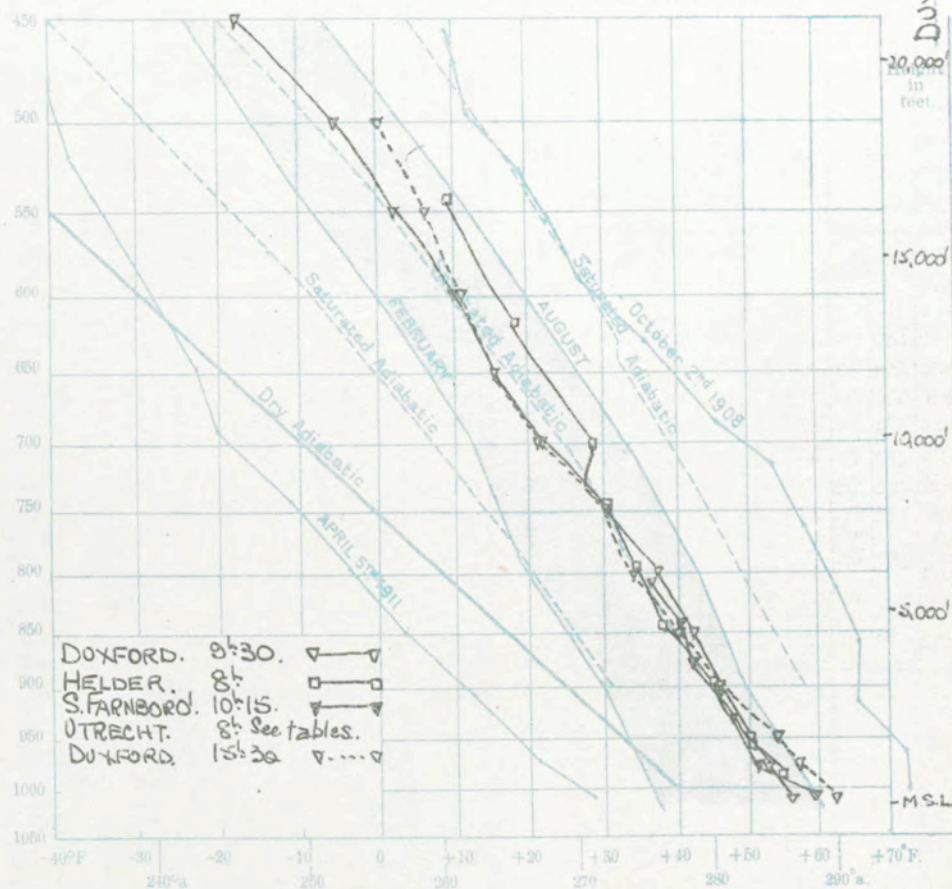
Directions are given in degrees, velocities in m.p.h.

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

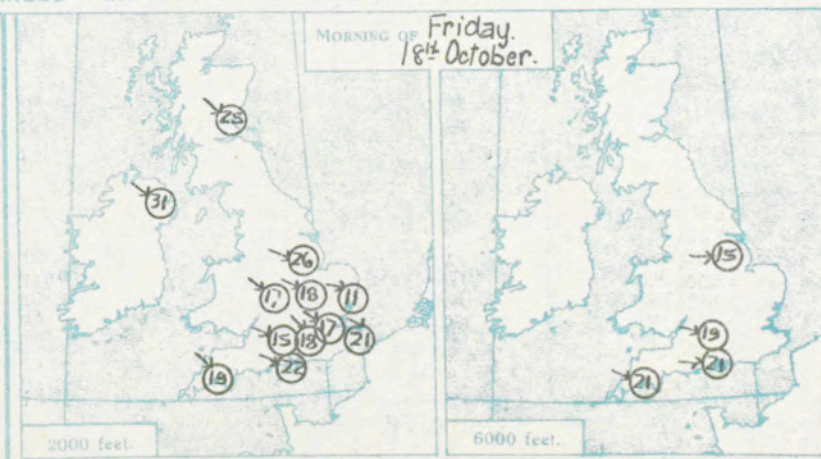
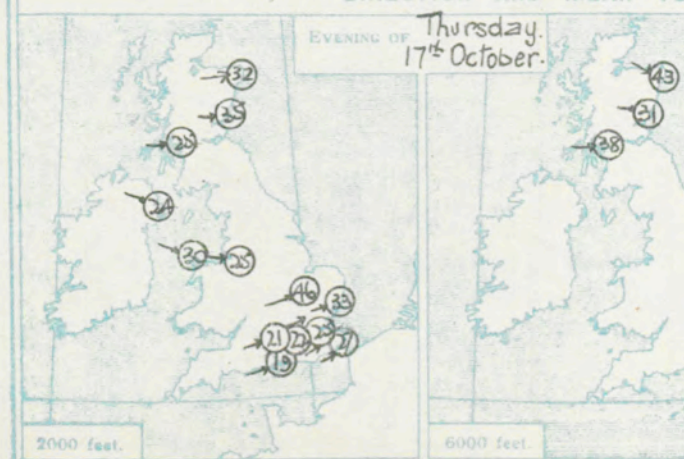
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

THURSDAY, 17th OCTOBER, 1929.

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



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																																									
Place	Holyhead	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Croydon	Upper Heyford	Worthy Down	South Farnborough	Croydon	Lymington	Manston	Lymington	Cattewater	Calshot	Place																					
Time	12:17	13:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	12:17	Time																					
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type																					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																		
Surf.	225	20	270	20	265	17	275	5	270	20	260	7	255	14	235	22	260	14	240	17	235	18	250	12	235	15	245	13	265	14	240	10	245	20	280	14	1000				
1000	240	30	265	38	270	36	280	18	280	24	245	22	250	24	240	22	255	21	240	23	240	20	240	13	245	13	235	18	250	17	255	20	280	14	255	14	240	13	2000		
2000			275	47	280	22	290	22	275	24	260	28	255	32	250	24	255	25	275	23	245	33	255	24	255	16	255	17	265	19	245	23	260	20			275	15	3000		
3000			280	39	280	28	290	27	275	29	265	35	260	32				280	23					265	23			275	25	270	17	265	21			270	16	4000			
4000			285	31	275	31	295	33	270	39	265	35	270	32				285	25					275	19			285	27	280	23							5000			
5000			285	29	275	18			240	37	265	30	270	33				280	31					275	25			285	23								6000				
6000									240	35	260	35	270	33				280	16									265	29								8000				
8000									7000'	260	39																		105	Ci							10000				
10000																													260	60							8000				
12000																													105	ACu							5000				
Neph.																													270	60							10000				
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cardington	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Fiberdeen	Place																					
Time	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	17:17	Time																					
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type																					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																		
Surf.	250	15	240	14	260	6	280	18	275	11	240	10	240	17	230	10							220	7	205	10	205	13	240	15	230	9	225	8			225	12	260	8	Surf.
1000	260	33	260	24	275	17	290	24	270	26	270	21	240	24	235	23							230	19	235	21	225	22	245	24	235	25	230	17			240	23	270	19	1000
2000	270	35	270	25	290	24	290	30	275	25	280	21	230	46	245	33							230	21	265	22	250	25	245	19	240	21	230	27			235	19	265	32	2000
3000	275	34	275	23	295	20			280	20	280	17	235	36	260	35							275	23	280	22			235	21	270	19	260	19			270	19	270	25	3000
4000	285	31	275	25	285	38			285	20	275	13											270	28					270	23	265	19	265	19			265	23	285	25	4000
5000	290	33	270	27					275	27	275	18											270	34					270	27	270	24					295	43	5000		
6000	280	31	265	25																			270	34					270	27	270	24					295	43	6000		
8000	280	29	270	38																									165	ACu							295	43	8000		
10000	280	29	270	40																									240	51							290	38	10000		
12000	165	Ci	165	Ci																									165	Ci									12000		
Neph.	280	35	240	65																									220	55	240	70							Neph.		
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place																					
Time	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	7:18	Time																					
Type																				Type																					
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																		
Surf.		250	7			150	6																																Surf.		
1000		300	21			290	17																																1000		
2000		315	25			310	31																																2000		
3000		320	15			310	26																																3000		
4000		310	5																																					4000	
5000		305	7																																					5000	
6000																																								6000	
8000																																								8000	
10000																																								10000	
12000																																								12000	
Neph.		280	30	300	25																																		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									
			Dry.	Wet.	%				Dry.	Wet.	%				Dry.	Wet.	%									
DUXFORD. 8:30. 17/4/29.	mb.	Feet.	°F.	°F.	%	DUXFORD. 10:15. 17/4/29.	mb.	Feet.	°F.	°F.	%	DUXFORD. 15:30. 17/4/29.	mb.	Feet.	°F.	°F.	%									
	1014	0	54	52	77		1014	0	54	52	77		1014	0	54	52	77									
	976	110	52	50	85		976	110	52	50	85		976	110	52	50	85									
	930	220	48	48	85		930	220	48	48	85		930	220	48	48	85									
	880	330	46	44	85		880	330	46	44	85		880	330	46	44	85									
	830	440	42	39	79		830	440	42	39	79		830	440	42	39	79									
	780	550	37	33	73		780	550	37	33	73		780	550	37	33	73									
	730	660	27	27	74		730	660	27	27	74		730	660	27	27	74									
	680	770	22	22	98		680	770	22	22	98		680	770	22	22	98									
	630	880	16	16			630	880	16	16			630	880	16	16										
	580	990	9	9			580	990	9	9			580	990	9	9										
	530	1100	2	2			530	1100	2	2			530	1100	2	2										
	480	1210	-6	-6			480	1210	-6	-6			480	1210	-6	-6										
	430	1320	-17	-17			430	1320	-17	-17			430	1320	-17	-17										
	380	1430					380	1430					380	1430												
	330	1540					330	1540					330	1540												
	280	1650					280	1650					280	1650												
	230	1760					230	1760					230	1760												
	180	1870					180	1870					180	1870												
	130	1980					130	1980					130	1980												
	80	2090					80	2090					80	2090												
	30	2200					30	2200					30	2200												
	-20	2310					-20	2310					-20	2310												
	-70	2420					-70	2420					-70	2420												
	-120	2530					-120	2530					-120	2530												
	-170	2640					-170	2640					-170	2640												
	-220	2750					-220	2750					-220	2750												
	-270	2860					-270	2860					-270	2860												
	-320	2970					-320	2970					-320	2970												
	-370	3080					-370	3080					-370	3080												
	-420	3190					-420	3190					-420	3190												
	-470	3300					-470	3300					-470	3300												
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	-570	3520					-570	3520					-570	3520												
	-620	3630					-620	3630					-620	3630												
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	-870	4180					-870	4180					-870	4180												
	-920	4290					-920	4290					-920	4290												
	-970	4400					-970	4400					-970	4400												
	-1020	4510					-1020	4510					-1020	4510												
	-1070	4620					-1070	4620					-1070	4620												
	-1120	4730					-1120	4730					-1120	4730												
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	-1320	5170					-1320	5170					-1320	5170												
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	-1570	5720					-1570	5720					-1570	5720												
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	-1670	5940					-1670	5940					-1670	5940												
	-1720	6050					-1720	6050					-1720	6050												
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	-2020	6710					-2020	6710					-2020	6710												
	-2070	6820					-2070	6820					-2070	6820												
	-2120	6930					-2120	6930					-2120	6930												
	-2170	7040					-2170	7040					-2170	7040												
	-2220	7150					-2220	7150					-2220	7150												
	-2270	7260					-2270	7260					-2270	7260												
	-2320	7370					-2320	7370					-2320	7370												
	-2370	7480					-2370	7480					-2370	7480												
	-2420	7590					-2420	7590					-2420	7590												
	-2470	7700					-2470	7700					-2470	7700												
	-2520	7810					-2520	7810					-2520	7810												
	-2570	7920					-2570	7920					-2570	7920												
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	-2670	8140					-2670	8140					-2670	8140												
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	-2770	8360					-2770	8360					-2770	8360												
	-2820	8470					-2820	8470					-2820	8470												
	-2870	8580					-2870	8580					-2870	8580												
	-2920	8690					-2920	8690					-2920	8690												
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	-3520	10010					-3520	10010					-3520	10010												
	-3570	10120					-3570	10120					-3570	10120												
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	-3670	10340					-3670	10340					-3670	10340												
	-3720	10450					-3720	10450					-3720	10450												
	-3770	10560					-3770	10560					-3770	10560												
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	-4170	11440					-4170	11440					-4170	11440												
	-4220	11550					-4220	11550					-4220	11550												
	-4270	11660					-4270	11660					-4270	11660												
	-4320	11770					-4320	11770					-4320	11770												
	-4370	11880					-4370	11880					-4370	11880												
	-4420	11990					-4420	11990					-4420	11990												
	-4470	12100					-4470	12100					-4470	12100												
	-452																									



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

UPPER AIR SUPPLEMENT, Saturday 19th October 1929.

No. B. 24803

U.A.S. 3655

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 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.

— 0-5 m.p.h.

— 5-15 "

— 15-25 "

— 25-35 m.p.h.

— 35-45 "

— 45-55 "

— 55-65 "

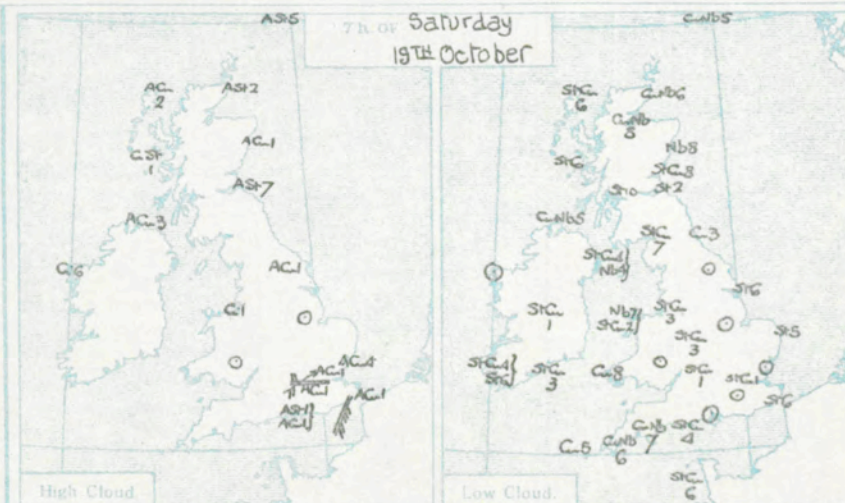
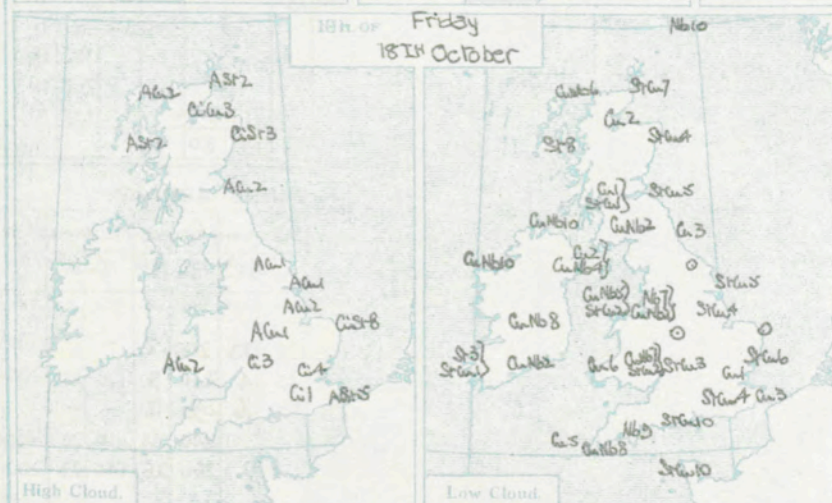
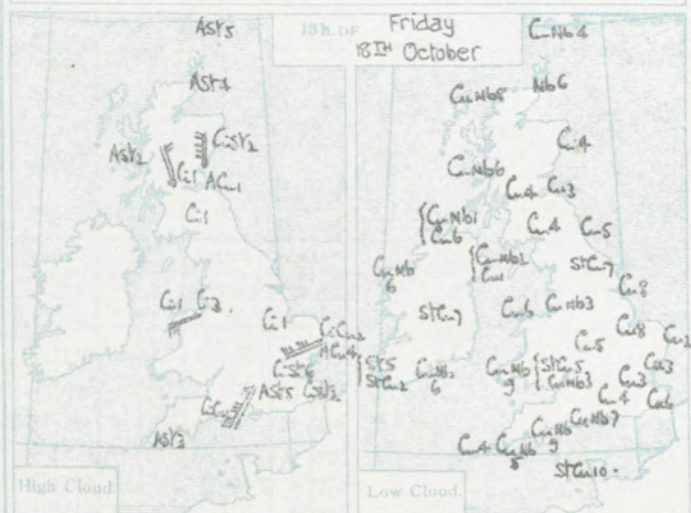
— and so on.

In Tables.

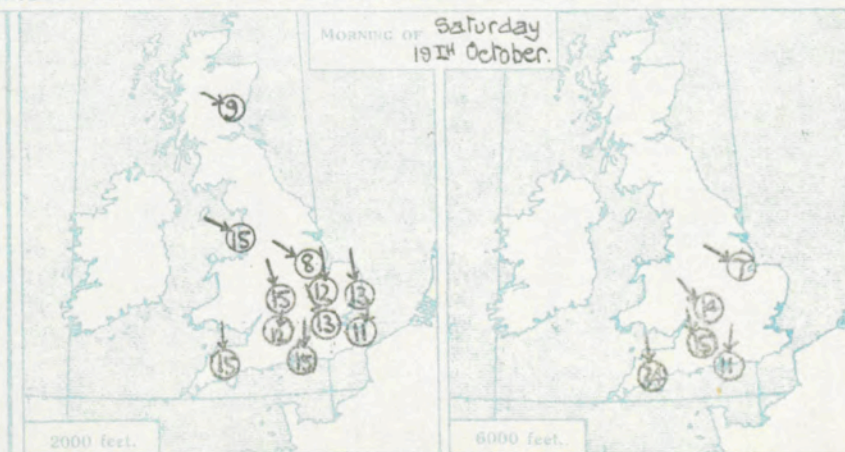
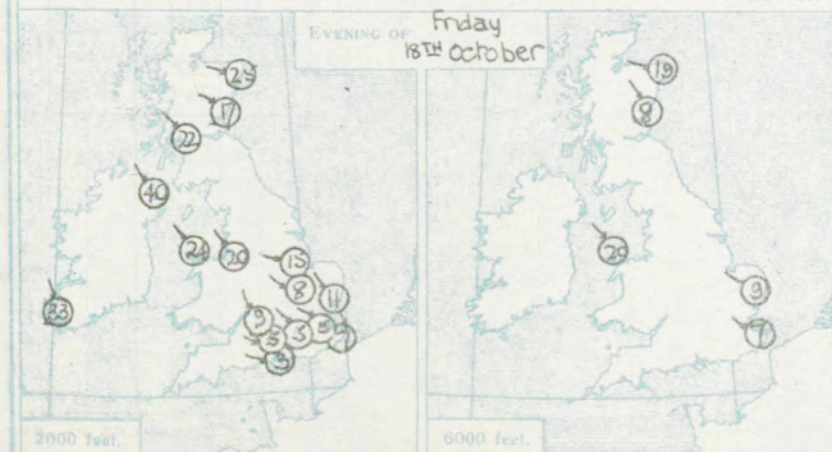
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 4 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 (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.

Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Croydon	Manston	Lympne	Cattewater	Calshot	Place	
Time	10h. 18 ^h	12h. 18 ^h	12h. 18 ^h	12h. 18 ^h	12h. 18 ^h	12h. 18 ^h	12h. 18 ^h	12h. 18 ^h	13h. 18 ^h	12h. 18 ^h	12h. 18 ^h	11h. 18 ^h	12h. 18 ^h	10h. 18 ^h	13h. 18 ^h	12h. 18 ^h	13h. 18 ^h	12h. 18 ^h	Time	
Type	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	b.	Type	
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet	
Surf.	275 11	295 8	280 10	300 15	310 19	305 9	270 12	290 10	295 3	350 24	285 8	315 3	305 5	290 5	270 12	290 6	320 7	335 17	295 8	
1000	285 23	285 14	295 19	300 21	315 18	305 15	275 15	280 10	290 ?	340 22	290 4	310 4	310 8	295 8	285 12	310 10	305 9	325 19	295 9	
2000	295 25	290 19	310 19	315 18	320 17	305 18	270 16	300 8	290 12	335 23	275 7	285 7	305 12	315 8	300 13	295 13	285 10	310 27	315 10	
3000	295 23	295 22	300 26	320 23	315 15	310 18		295 15	290 12	335 30	295 13	300 12	320 14	320 13	305 6	280 15	280 11		310 13	
4000	300 21		305 21	320 26	325 15			300 18	285 13	340 40		300 15	300 14	300 13	295 13	285 17	295 13		285 9	
5000	310 23		300 23	320 21	320 13			290 14				280 11	285 14	290 16	295 14	285 13	285 12		285 15	
6000		9h. C	315 14	315 27	(5200')			275 14				275 19	275 16	280 16	285 19	285 13	280 17		285 17	
8000		360 20	295 29	320 21					10h. C			255 19	270 17		285 19	285 18			285 11	
10000			300 21	(7000')					250 30			255 21	(7000')		240 21				250 19	
12000		13h. C	335 12	10h. C	10h. C	13h. C		10h. C	13h. C			13h. C	250 19		240 39	10h. AC				
Neph.		360 55	335 15	320 35	290 40	260 30		220 80	240 60			210 95	(11000')		240 105	240 48			Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Manston	Lympne	Cattewater	Calshot	Aberdeen	Place
Time	17h. 18 ^h	17h. 18 ^h	17h. 18 ^h	16h. 18 ^h	17h. 18 ^h	17h. 18 ^h	17h. 18 ^h	17h. 18 ^h	18h. 18 ^h	17h. 18 ^h	17h. 18 ^h	17h. 18 ^h	17h. 18 ^h	16h. 18 ^h	17h. 18 ^h	17h. 18 ^h	16h. 18 ^h	17h. 18 ^h	15h. 18 ^h	Time
Type														d.	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 8	335 7	290 6	320 13	330 10	?	?	305 6	290 2	340 16	315 8	240 2	Cal/m	270 3	305 14	Cal/m	345 5	305 12	260 8	300 10
1000	290 17	300 17	315 15	320 22	315 21	290 18	310 12	310 10	340 28	320 10	290 5	300 3	275 5	305 9	310 7	380 7	325 11	285 7	290 19	
2000	300 17	310 22	320 40	315 24	315 20	285 15	315 8	300 11	340 33	330 9	300 5	305 5	295 5	305 10	320 10	335 7		295 3	290 25	
3000	305 15	305 18		325 21	315 22	310 16	320 7	305 14	340 37	330 7	350 4	305 10	345 11	300 9	310 6	315 7		305 3	290 23	
4000	315 13			335 21	315 22	310 19	325 8	310 14	335 40	335 7	345 5	295 9	325 16	315 7	300 14	285 6			270 10	
5000	320 8			330 17				320 12	330 40	325 5	325 7		310 15	320 7	290 10	290 7			280 12	
6000	335 8			325 20				305 9						280 7		300 7			280 19	
8000	320 21			320 15				280 13						270 13		305 10			285 17	
10000	5 10							275 13											305 16	
12000	14. 000		16h. AC					16h. AC					16h. C		16h. C	16h. AC				
Neph.	350 15		290 36					240 45					270 70		240 70	240 30			Neph.	
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Cardington	Sealand	Cranwell	Cardington	Felix-stowe	Cranwell	Upper Heyford	Worthy Down	South Farnboro	Croydon	Calshot	Manston	Lympne	Cattewater	Calshot	Place
Time		6h. 19 ^h			0h. 19 ^h	6h. 19 ^h	6h. 19 ^h	6h. 19 ^h	7h. 19 ^h	0h. 19 ^h	6h. 19 ^h	6h. 19 ^h	6h. 19 ^h	7h. 19 ^h	0h. 19 ^h	6h. 19 ^h	6h. 19 ^h	7h. 19 ^h	6h. 19 ^h	Time
Type																				Type
Feet		Dir. Vel.				Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.		230 5				310 8	245 6	260 8	240 7	315 4	270 7	315 12	325 3	275 3	260 1	5 13	330 5	5 10	Cal/m	325 10
1000		290 11				335 18	290 14	315 11	335 14	340 13	320 16	325 15	10 15	345 13	335 10	25 18	345 10	5 15	355 13	5 17
2000		295 9				345 10	300 15	315 8	335 12	385 8	345 12	330 15	5 12	355 13	340 13	40 15	345 10	5 11	360 15	10 15
3000		350 16				330 9	300 13	310 10	325 11	335 7	310 5	335 14	355 13	345 12	335 14	45 11	350 11	70 3	355 17	360 14
4000		350 13				295 10		315 11	330 13		285 12	335 13	355 15	350 14			335 9	245 2	355 24	355 13
5000		345 11				295 11		305 12	330 13			325 13	345 15	345 10			340 13		300 28	345 11
6000						275 10		310 7				320 14	330 15						350 34	5 11
8000						315 8														10 13
10000																				325 11
12000																				275 5
Neph.														230 15	270 20			190 50		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.							
DUNFORD. 8 ^h 15.	mb. 1011	Feet. 1007	51.4	47.4	87	LEUCHARS. 10:30.	mb. 1007	Feet. 1007	51.4	47.4	87	DUNFORD. 15 ^h 45.	mb. 1008	Feet. 1008	51.4	47.5	87	S. FARNBORO. 10:45.	mb. 1012	Feet. 1012	51.4	47.4	87
	970	M.S.L. 100	49	43	82		970	M.S.L. 30	49	43	82		970	M.S.L. 100	49	43	82		1003	M.S.L. 200	52	46	82
	930	1100	46	43	78		930	1000	42	42	78		930	1100	48	44	73		967	1200	46	41	82
	890	1700	44	41	78		890	2000	38	38	78		890	1600	46	43	76		932	2200	41	37	82
	850	3130	38	36	88		850	3000	35	35	88		850	3070	40	37	77		898	3210	37	34	83
	810	4660	32	31	86		810	4000	28	28	86		810	4600	35	33	83		866	4200	34	31	83
	770	6230	28	26	81		770	5000	26	26	81		770	6200	26	26	100		835	5110	31	26	98
	730	7930	23	20	63		730	6000	23	23	63		730	7850	20	20	98		804	6100	30	24	12
	690	9700	14	13	13		690	7000	21	21	13		690	9630	14	12	12		775	7090	24	23	7
	650	11600	8	6	6		650	8000	17	17	6		650	11510	10	7	7		742	8180	23	19	-
	610	13600	3	3	3		610	9000	14	14	3		610	13520	1	0	0		723	8820	19	-	-
	570	15760	-3	-3	-		570	10000	9	9	-		570	15600	-9	-9	-						
	530	18120	-13	-13	-		530	11000	5	5	-		530	18030	-14	-14	-						
							607	12000	2	2	-		510	20000	-14	-14	-						
							583	13000	-5	-5	-		470	22000	-14	-14	-						
							559	14000	-10	-10	-		430	24000	-14	-14	-						
							539	15000	-14	-14	-		390	26000	-14	-14	-						
							519	16000	-19	-19	-		350	28000	-14	-14	-						
							499	17000	-23	-23	-		310	30000	-14	-14	-						
							479	18000	-28	-28	-		270	32000	-14	-14	-						
							459	19000	-32	-32	-		230	34000	-14	-14	-						
							439	20000	-37	-37	-		190	36000	-14	-14	-						
							419	21000	-41	-41	-		150	38000	-14	-14	-						
							399	22000	-46	-46	-		110	40000	-14	-14	-						
							379	23000	-51	-51	-		70	42000	-14	-14	-						
							359	24000	-56	-56	-		30	44000	-14	-14	-						
							339	25000	-61	-61	-		-10	46000	-14	-14	-						
							319	26000	-66	-66	-		-50	48000	-14	-14	-						
							299	27000	-71	-71	-		-90	50000	-14	-14	-						
							279	28000	-76	-76	-		-130	52000	-14	-14	-						
							259	29000	-81	-81	-		-170	54000	-14	-14	-						
							239	30000	-86	-86	-		-210	56000	-14	-14	-						
							219	31000	-91	-91	-		-250	58000	-14	-14	-						
							199	32000	-96	-96	-		-290	60000	-14	-14	-						
							179	33000	-101	-101	-		-330	62000	-14	-14	-						
							159	34000	-106	-106	-		-370	64000	-14	-14	-						
							139	35000	-111	-111	-		-410	66000	-14	-14	-						
							119	36000	-116	-116	-		-450	68000	-14	-14	-						
							99	37000	-121	-121	-		-490	70000	-14	-14	-						
							79	38000	-126	-126	-		-530	72000	-14	-14	-						
							59	39000	-131	-131	-		-570	74000	-14	-14	-						
							39	40000	-136	-136	-		-610	76000	-14	-14	-						
							19	41000	-141	-141	-		-650	78000	-14	-14	-						
							-1	42000	-146	-146	-		-690	80000	-14	-14	-						
							-21	43000	-151	-151	-		-730	82000	-14	-14	-						
							-41	44000	-156	-156	-		-770	84000	-14	-14	-						
							-61	45000	-161	-161	-		-810	86000	-14	-14	-						
							-81	46000	-166	-166	-		-850	88000	-14	-14	-						
							-101	47000	-171	-171	-		-890	90000	-14	-14	-						
							-121	48000	-176	-176	-		-930	92000	-14	-14	-						
							-141	49000	-181	-181	-		-970	94000	-14	-14	-						
							-161	50000	-186	-186	-		-1010	96000	-14	-14	-						
							-181	51000	-191	-191	-		-1050	98000	-14	-14	-						
							-201	52000	-196	-196	-		-1090	100000	-14	-14	-						
							-221	53000	-201	-201	-		-1130	102000	-14	-14	-						
							-241	54000	-206	-206	-		-1170	104000	-14	-14	-						
							-261	55000	-211	-211	-		-1210	106000	-14	-14	-						
							-281	56000	-216	-216	-		-1250	108000	-14	-14	-						
							-301	57000	-221	-221	-		-1290	110000	-14	-14	-						
							-321	58000	-226	-226	-		-1330	112000	-14	-14	-						
							-341	59000	-231	-231	-		-1370	114000	-14	-14	-						
							-361	60000	-236	-236	-		-1410	116000	-14	-14	-						
							-381	61000	-241	-241	-		-1450	118000	-14	-14	-						
							-401	62000	-246	-246	-		-1490	120000	-14	-14	-						
							-421	63000	-251	-251	-		-1530	122000	-14	-14	-						
							-441	64000	-256	-256	-		-1570	124000	-14	-14	-						
							-461	65000	-261	-261	-		-1610	126000	-14	-14	-						
							-481	66000	-266	-266	-		-1650	128000	-14	-14	-						
							-501	67000	-271	-271	-		-1690	130000	-14	-14	-						
							-521	68000	-276	-276	-		-1730	132000	-14	-14	-						
							-541	69000	-281	-281	-		-1770	134000	-14	-14	-						
							-561	70000	-286	-286	-		-1810	136000	-14	-14	-						
							-581	71000	-291	-291	-		-1850	138000	-14	-14	-						
							-601	72000	-296	-296	-		-1890	140000	-14	-14	-						
							-621	73000	-301	-301	-		-1930	142000	-14	-14	-						
							-641	74000	-306	-306	-		-1970	144000	-14	-14	-						
							-661	75000	-311	-311	-		-2010	146000	-14	-14	-						
							-681	76000	-316	-316	-		-2050	148000	-14	-14	-						
							-701	77000	-321	-321	-		-2090	150000	-14	-14	-						
							-721	78000	-326	-326	-		-2130	152000	-14	-14	-						
							-741	79000	-331	-331	-		-2170	154000	-14	-14	-						
							-761	80000	-336	-336	-		-2210	156000	-14	-14	-						
							-781	81000	-341	-341	-		-2250	158000	-14	-14	-						
							-801	82000	-346	-346	-		-2290	160000	-14	-14	-						
							-821	83000	-351	-351	-		-2330	162000	-14	-14	-						
							-841	84000	-356	-356	-		-2370	164000	-								



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 20TH OCTOBER, 1929.

No. B. 24,804

U.A.S. 3856

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 "

— 16-26 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

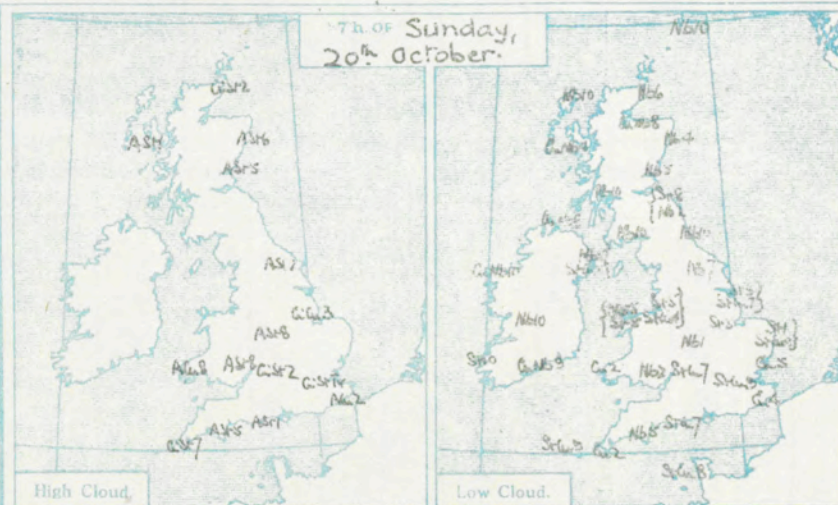
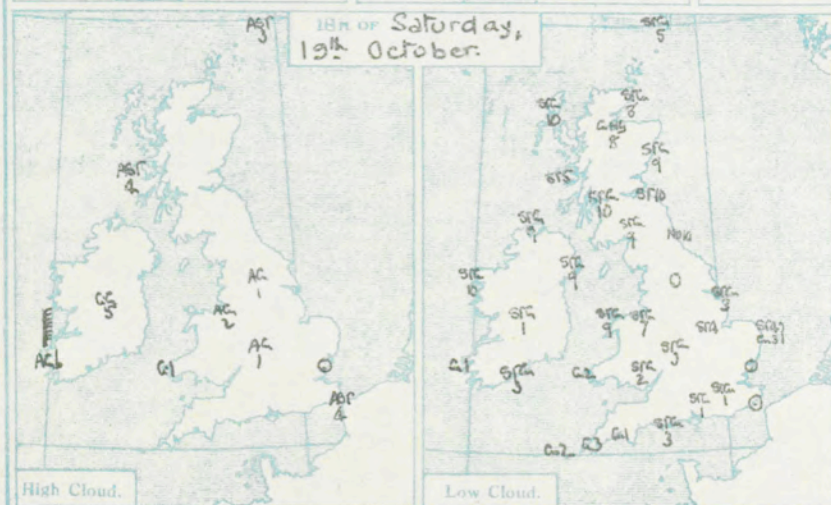
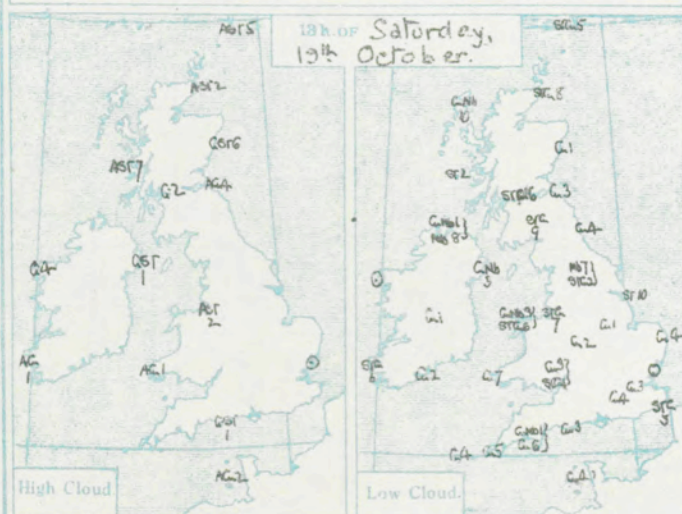
and so on.

In Tables.

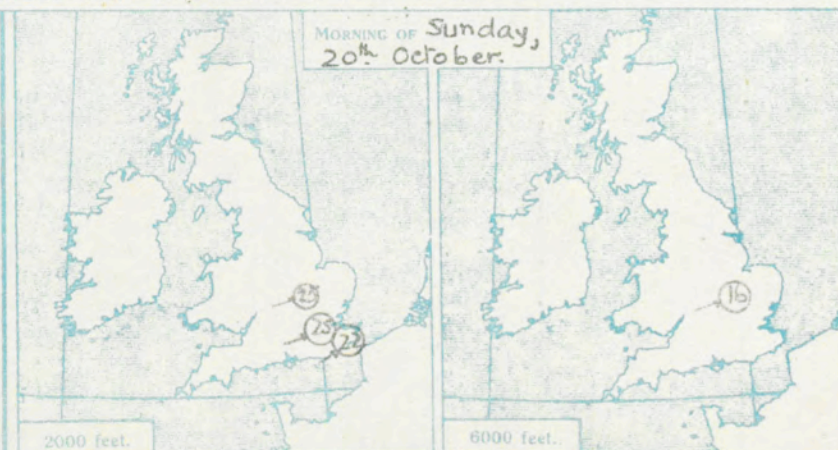
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 6 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

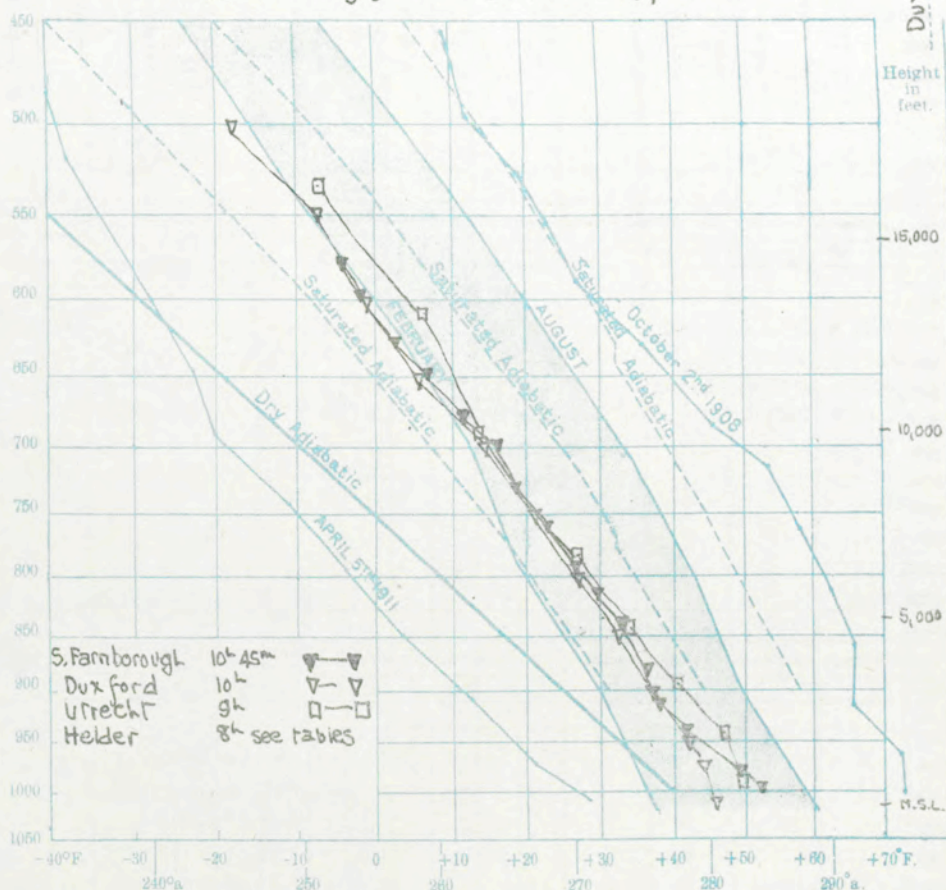
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



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



UPPER AIR TEMPERATURES.

Saturday, 19TH OCTOBER, 1929.

Duxford

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

Place	Sealand	Leuchars	Holyhead	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Lymington	Manston	Lymington	Cattenwater	Calshot	Place
Time	12-19 ^h	15-19 ^h	12-19 ^h	12-19 ^h	12-19 ^h	8h-19 ^h	12-19 ^h	12-19 ^h	12-19 ^h		12-19 ^h	12-19 ^h	12-19 ^h	10h-19 ^h	12-19 ^h	12-19 ^h	10h-19 ^h		12-19 ^h	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.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	135 4	270 3	305 10	305 7	300 21	Calshot	315 3	280 3	350 7		280 4	330 7	305 3	280 1	355 8	340 10	350 9		350 6	Surf.
1000	190 5	270 7	325 13	310 8	310 21	275 13	325 4	25 4	360 7		330 7	345 6	355 11	5 7	260 11	355 10	15 13		355 7	1000
2000		265 6		355 7	325 17	295 9	335 9	340 6	40 3		355 5	260 12	355 9	360 10	15 14	25 3	40 7		355 9	2000
3000		310 7		360 15		310 9	325 12	355 5	260 3		345 7	5 11	10 6	360 15		75 2	70 7		10 9	3000
4000		265 5				315 13	320 9		230 3		330 8					15 2			15 9	4000
5000						305 11	245 8		270 3		325 10					315 2			360 5	5000
6000						320 11	315 5		280 3		345 8					255 6			15 6	6000
8000							315 8		325 1		335 4					225 9			35 5	8000
10000							355 9		275 5							1800 ft			340 6	10000
12000		AC					5 27		265 9							1000 ft	10h-12			12000
Neph.		250 15					1500 ft										120 10			Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shobbury	Manston	Lymington	Cattenwater	Calshot	Place	
Time	17-19 ^h	17-19 ^h	17-19 ^h		17-19 ^h		17-19 ^h						17-19 ^h		16-19 ^h	17-19 ^h	17-19 ^h	24-19 ^h	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.	225 7	255 5	- 0		150 2		290 5						300 3		335 2	10 8	360 4	325 3	Surf.	
1000	230 13	270 13	310 5		255 5		315 8						320 10		365 9	5 11	360 13	305 8	1000	
2000	240 16	270 13	290 11		280 9		315 8						345 8		360 9	350 13	360 13	280 5	2000	
3000	250 11	265 12	270 12		290 11		335 8						345 7		325 4	285 4	5 8	280 5	3000	
4000	245 8	225 13			290 12		345 8						325 4		270 3	240 3	335 3	305 7	4000	
5000					285 13		345 10						340 7		295 3		360 5	315 4	5000	
6000							320 10						340 3		315 3		10 11	290 5	6000	
8000															340 5			305 7	8000	
10000															320 4				10000	
12000		1530 C													265 7				12000	
Neph.		330 55													14000 ft				Neph.	
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shobbury	Manston	Lymington	Cattenwater	Calshot	Place
Time								24-19 ^h	6-20 ^h					6-20 ^h						Time
Type																				Type
Feet																				Feet
Surf.								230 12	265 12					200 12	18000 ft		260 9			Surf.
1000								245 16	240 26					245 25	320 6		240 14			1000
2000								250 13	250 25					250 25			250 22			2000
3000								260 15	245 25					250 27			260 22			3000
4000								270 14	245 26								260 22			4000
5000								325 11	250 24								255 23			5000
6000								285 5	260 16											6000
8000								280 6	270 20											8000
10000									(2000)											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.	%		
S. Farnborough 10-45 19/12	1007	M.S.L.	-	-	-	Dunford 10- 19/x 129	1008	M.S.L.	-	-	-	Lab.	1008	M.S.L.	-	-	-		
	999	230	52	-	-		1004	100	46	43	52		32	32	999	230	51	-	-
	976	650	50	-	-		968	1100	43	42	32		32	976	650	50	-	-	
	942	1800	43	-	-		950	1600	42	39	5		31	942	1800	43	-	-	
	907	2840	39	-	-		900	3030	37	34	-		72	907	2840	39	-	-	
	875	3780	36	-	-		850	4570	32	28	-		60	875	3780	36	-	-	
	842	4800	33	-	-		800	6140	27	24	-		71	842	4800	33	-	-	
	812	5750	30	-	-		760	7820	21	17	-		61	812	5750	30	-	-	
	781	6750	27	-	-		700	9600	15	12	-		-	781	6750	27	-	-	
	753	7700	23	-	-		650	11480	15	5	-		-	753	7700	23	-	-	
	722	8780	19	-	-		600	13460	-	2	-		-	722	8780	19	-	-	
	697	9700	16	-	-		550	15610	-	8	-		-	697	9700	16	-	-	
	671	10650	12	-	-		500	17960	-	15	-		-	671	10650	12	-	-	
	645	11610	7	-	-		HAZE TOP 850 mb							645	11610	7	-	-	
	620	12610	3	-	-		Cloud N.W.							620	12610	3	-	-	
596	13590	-	-	-							596	13590	-	-	-				
572	14590	-	-	-							572	14590	-	-	-				
Clouds from 900-30700																			
Early bumps under clouds																			
no bumps above																			

UPPER WINDS ABROAD.

Place.	Cologne		Rocheport		Posen		Cracow		Calais		Malta	
Time.	18-19 ^h		10-19 ^h		13-19 ^h		18-19 ^h		18-19 ^h		17-19 ^h	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	338	9	-	-	140	16	150	24	260	11	3000	ft
3,280			310	34	150	21	210	17	360	8	200	16
4,920			300	44	150	16	200	28	20	7	10000	ft
6,560			290	26	150	20	220	41	30	3	250	24
8,940					150	29	230	28			6000	ft
13,120							230	28			240	23
16,400												
19,680												

Place.	Le Roy		Torhouse		Oranwell		Madrid		Malta	
Time.	18-20 ^h		18-20 ^h		7-20 ^h		7-20 ^h		6-10 ^h	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640					170	23	-	-		3,000
3,280	280	28	280	31			260	18		220 20
4,920	250	27	-	-			270	20		5,000
6,560			280	34			290	16		240 11
8,940			280	38			300	14		10,000
13,120							310	18		220 23
16,400										16,000
19,680										240 21

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

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



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT,

Monday 21st October 1929.

No. B. 24805

U.A.S. 3857

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.

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 "

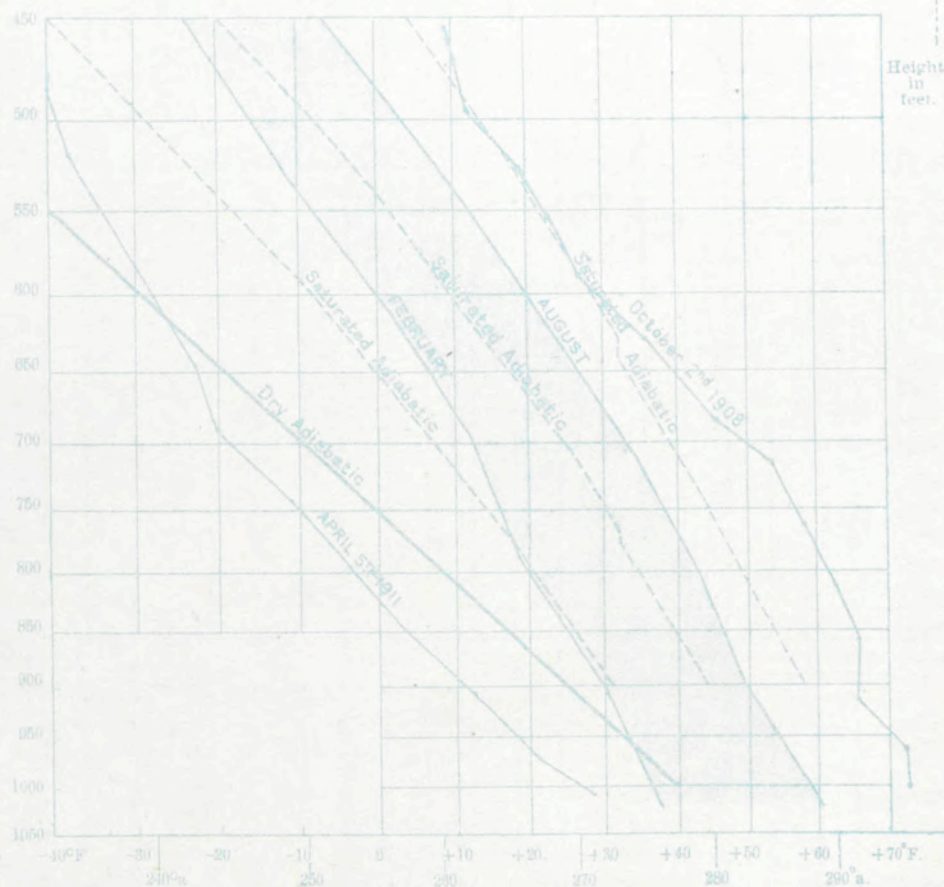
— and so on.

In Tables.

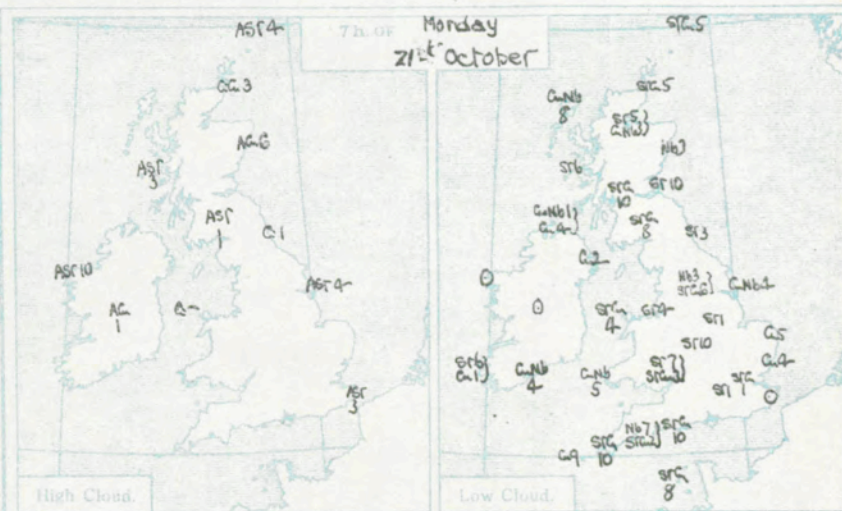
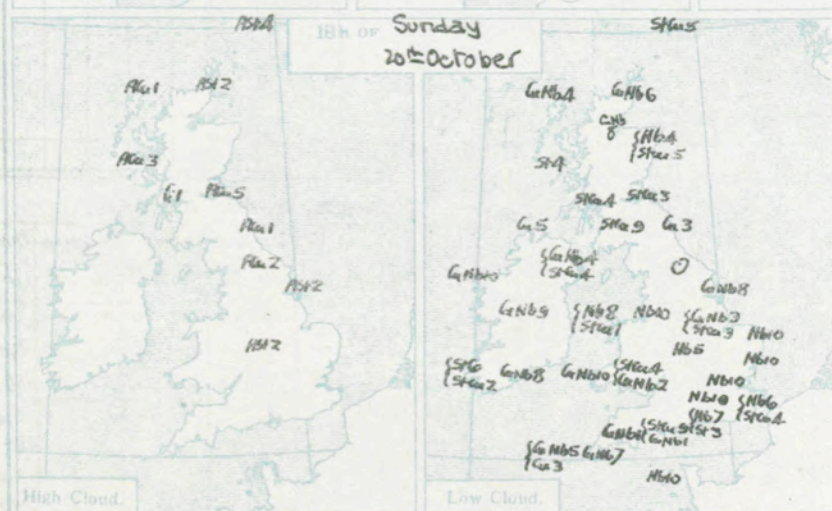
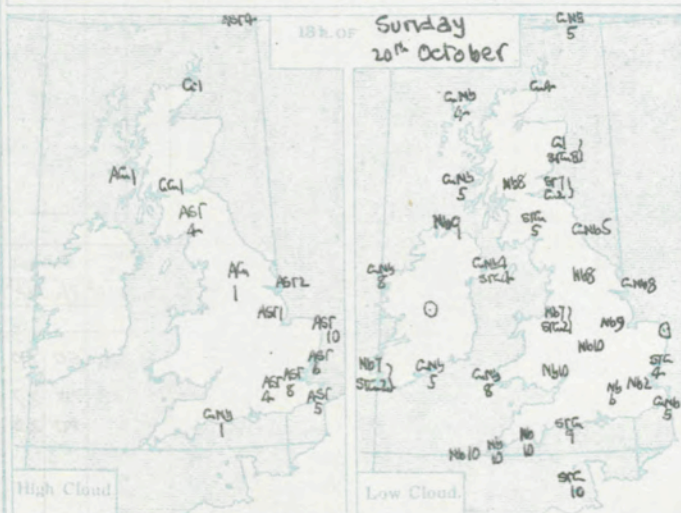
Directions are given in degrees, velocities in m.p.h.

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

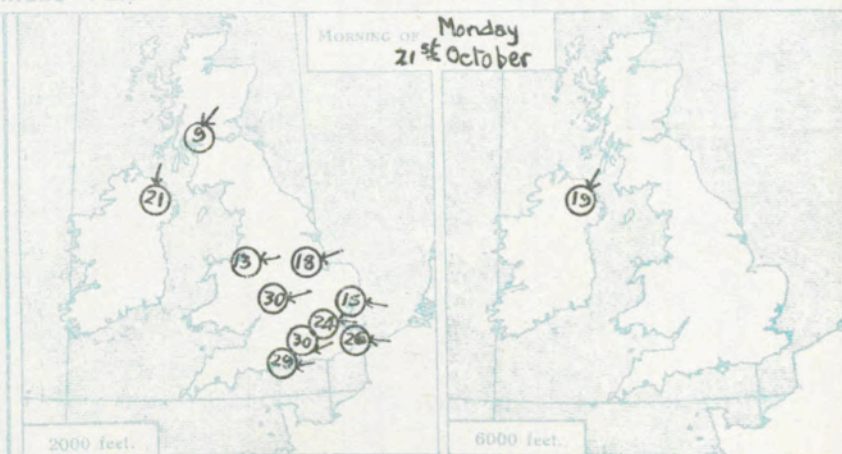
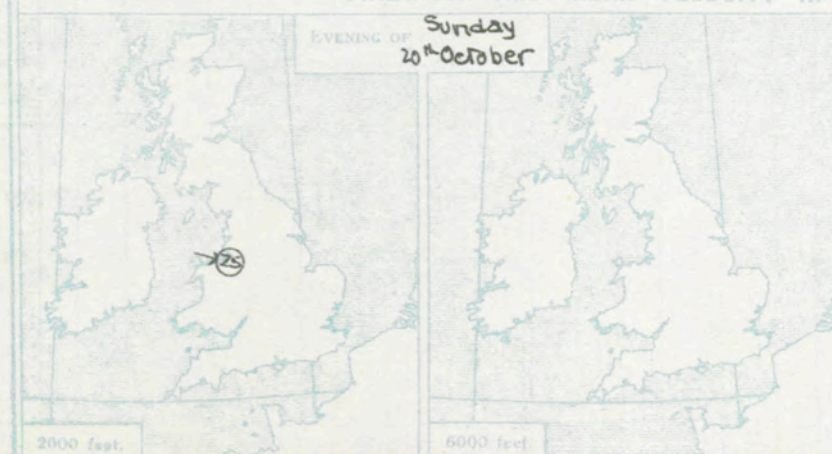
UPPER AIR TEMPERATURES.

Sunday 20th October 1929.

CLOUD FORMS, AMOUNTS AND MOVEMENTS.



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



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																												
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sesland	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Manston	Lympna	Cattewater	Calshot	Place								
Time	13 ^h 20 ^m		12 ^h 20 ^m						12 ^h 20 ^m				11 ^h 20 ^m		12 ^h 20 ^m		12 ^h 20 ^m				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	8	255	9									225	12			215	15	Surf.							
1000			275	7	280	13									230	23			205	23	1000							
2000			280	6	295	19									230	40			225	29	2000							
3000			285	5	300	22									230	39			225	30	3000							
4000			310	8	310	24									235	38			225	23	4000							
5000					320	25									240	39					5000							
6000																					6000							
8000																					8000							
10000																					10000							
12000																					12000							
Neph.																					Neph.							
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sesland	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Manston	Lympna	Cattewater	Calshot	Place									
Time					17 ^h 20 ^m		24 ^h 20 ^m		24 ^h 20 ^m								23 ^h 20 ^m				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.							270	8	90	10	105	19							295	9	Surf.							
1000							275	22	110	24	115	27							350	19	1000							
2000							295	25	125	35									355	21	2000							
3000							305	27											360	17	3000							
4000																			360	16	4000							
5000																					5000							
6000																					6000							
8000																					8000							
10000																					10000							
12000																					12000							
Neph.																					Neph.							
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sesland	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Manston	Lympna	Cattewater	Calshot	Place								
Time			7 ^h 21 ^m		6 ^h 21 ^m		6 ^h 21 ^m		6 ^h 21 ^m		7 ^h 21 ^m		6 ^h 21 ^m		7 ^h 21 ^m		6 ^h 21 ^m		7 ^h 21 ^m		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.			285	2	360	3			10	3	30	5	55	11	130	12			60	10	Surf.							
1000			25	8	10	25			65	15	80	16	85	23	110	14			65	21	1000							
2000			35	9	15	21			90	13	85	18			105	15			85	30	2000							
3000			25	9	30	17			90	19	95	19			115	17			85	24	3000							
4000			15	11	30	25			90	23	95	21			105	21			105	21	4000							
5000					360	15					95	18							100	30	5000							
6000					35	19													105	25	6000							
8000																			110	30	8000							
10000																					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.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%		mb.	Feet.	Dry.	Wet.	%				
		M.S.L.	°F.	°F.				M.S.L.	°F.	°F.				M.S.L.	°F.	°F.				M.S.L.	°F.	°F.					
																			</								



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 22nd OCTOBER, 1929.

No. 24,806.

U.A.S. 3,868.

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 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 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 and balloon ascent, except where otherwise specified in the table; 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 "

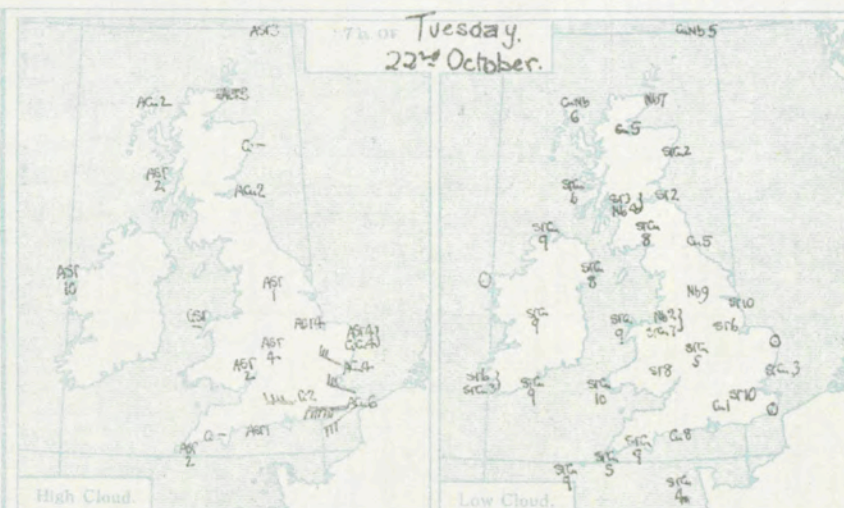
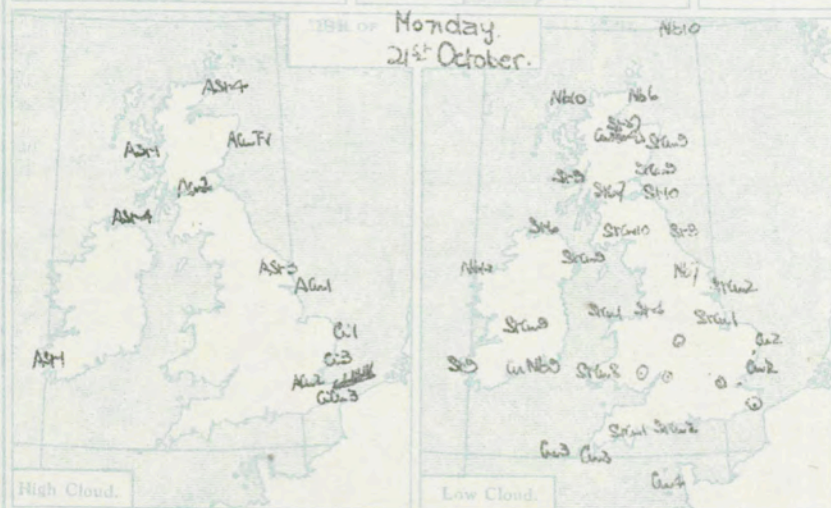
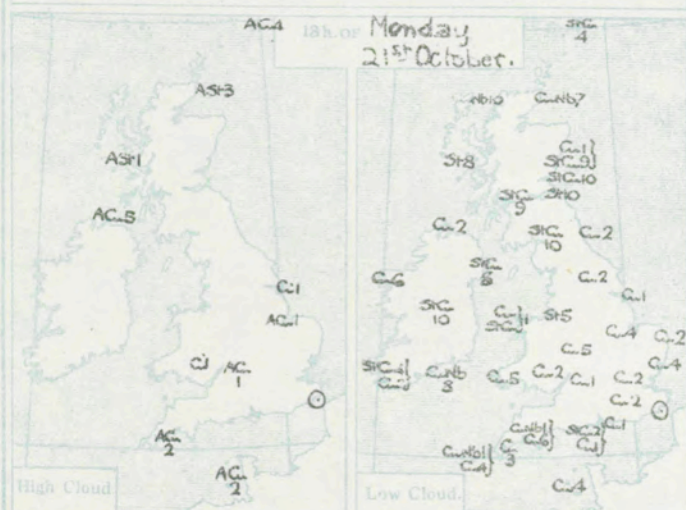
— 56-65 "

— and so on.

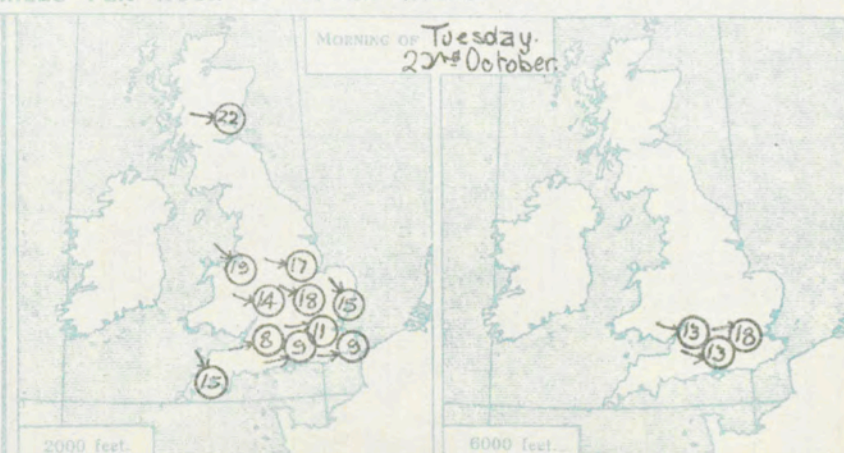
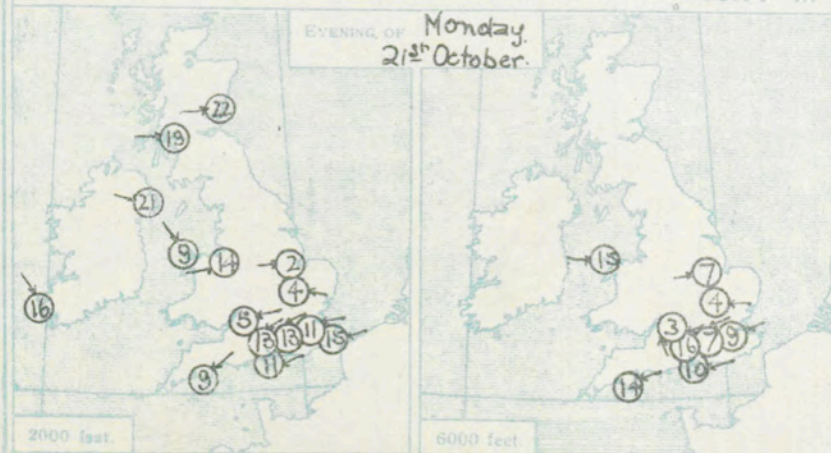
In Tables.

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 (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																									
Place	Holyhead	Loughara	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farborough	Croydon	Croydon	Manston	Lymington	Cattewater	Calshot	Place	Time	Type	Feet	Surf.	
Time	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	12-21	Time	Type	Feet	Surf.	
Type	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	Type	Feet	Surf.		
Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Dir.	Vel.	Dir.	Vel.	
1000	45	13	270	10	240	7	305	11	45	8	185	3	110	5	20	8	90	17	345	11	60	17	55	15	
2000	65	13	260	13	240	11			40	3	135	5	110	7	30	10	85	15	300	14	50	23	45	9	
3000	70	11	240	12	250	12			20	3	145	6	90	7	105	10	85	17			55	17	65	15	
4000	70	11	250	11					20	3	105	3	145	6	120	14	30	3			75	13			
5000	40	16							85	9	70	9	160	6	115	15					70	15			
6000	35	19							25	11	25	11	145	4	105	15									
8000	35	29							10	16															
10000	35	31							20	14															
12000					105	Alu			15	100															
Neph.					280	36			20	26															
Place	Loughara	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Cardington	Valentia	Upper Heyford	Worthy Down	South Farborough	Croydon	Cranwell	Manston	Lymington	Cattewater	Calshot	Calshot	Place	Time	Type	Feet	Surf.	
Time	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	17-21	Time	Type	Feet	Surf.	
Type	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	Type	Feet	Surf.		
Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Dir.	Vel.	Dir.	Vel.	
1000	245	23	275	21	280	16	300	9	280	7	220	2	90	2	255	13	325	15	55	3	55	13	75	13	
2000	260	22	270	19	285	21	310	9	270	14	270	2	110	4	255	14	320	16	85	5	70	13	75	13	
3000	265	19			275	26	320	13	250	12	245	2	70	4	260	17			145	3	75	15	75	13	
4000	265	17					295	13	225	5	245	5	335	3	265	14			320	3	75	15	75	9	
5000					280	12					275	9	90	1	250	17			225	4	80	17	85	8	
6000					285	15					265	7	110	4	240	17			150	3	85	16	70	7	
8000					300	23													345	4					
10000					310	19																			
12000					330	27																			
Neph.									20	75															
Place	Aberdeen	Loughara	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place	Time	Type	Feet	Surf.	
Time	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	7h. 22	Time	Type	Feet	Surf.	
Type																					Type	Feet	Surf.		
Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Dir.	Vel.	Dir.	Vel.	
1000		265	10		255	8			270	7	250	8	235	8	265	4			205	5	-	0	-	0	
2000		275	17		285	21			315	21	280	17	275	18	270	15			270	13	270	9	260	9	
3000		285	22						315	19	295	17	290	18	325	15			290	14	260	8	275	9	
4000		300	31						305	23	315	18	290	20	290	14			310	19	260	7	275	9	
5000									305	16	295	15							315	11	305	8	290	9	
6000																									
8000																									
10000																									
12000																									
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.	Paris		Calais		Dreht		Cologne		Lyons		Strasbourg	
			Dry.	Wet.					Dry.	Wet.					Dry.	Wet.			Dry.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
Duxford. 21/10/20.	mb. 1009 1005 969 1100 1630 3030 4610 6200 7900 9730 11640 13700 15900 18300 20810 top 250 mb.	M.S.L. 100 100 415 425 45 40 35 30 30 26 22 13 5 -5 20810 top 250 mb.	°F. 51 °F. 48 °F. 47 °F. 45 °F. 42 °F. 38 °F. 35 °F. 30 °F. 24 °F. 22 °F. 18 °F. 11 °F. 5 °F. -5 °F. 76 mb.	°F. 48 °F. 45 °F. 42 °F. 38 °F. 35 °F. 30 °F. 24 °F. 22 °F. 18 °F. 11 °F. 5 °F. -5 °F. 76 mb.	% 80 79 73 60 45 58 64 .	S. Farnb. 21/10/20.	mb. 1008 1000 962 928 884 864 831 801 772 Haze top 804 mb.	M.S.L. 100 100 250 220 320 420 520 610 710 Haze top 804 mb.	°F. 51 °F. 50 °F. 45 °F. 40 °F. 37 °F. 33 °F. 37 °F. 32 °F. 32 °F. 28 804 mb.	°F. 48 °F. 45 °F. 40 °F. 37 °F. 33 °F. 37 °F. 32 °F. 32 °F. 28 804 mb.	% .<																			



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, WEDNESDAY, 23rd OCTOBER, 1929.No. 5. 24,807.
U.A.S. 3,859.

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 4th, 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 "

— 65-75 "

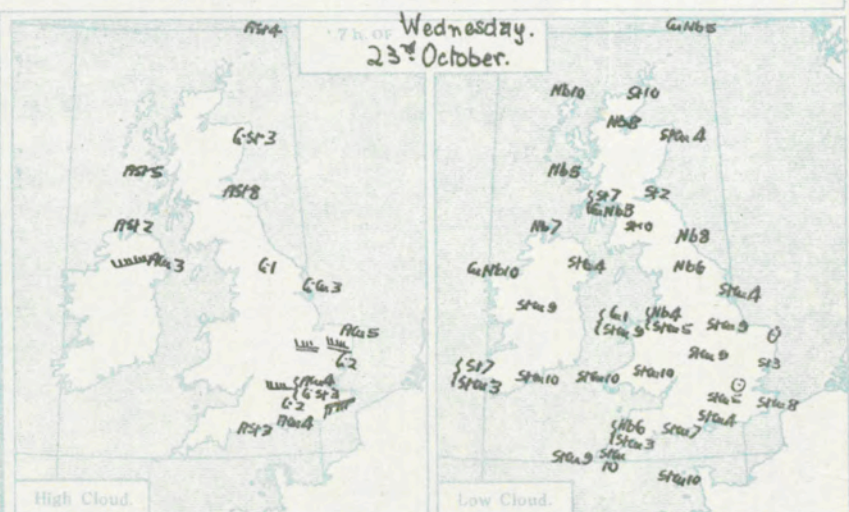
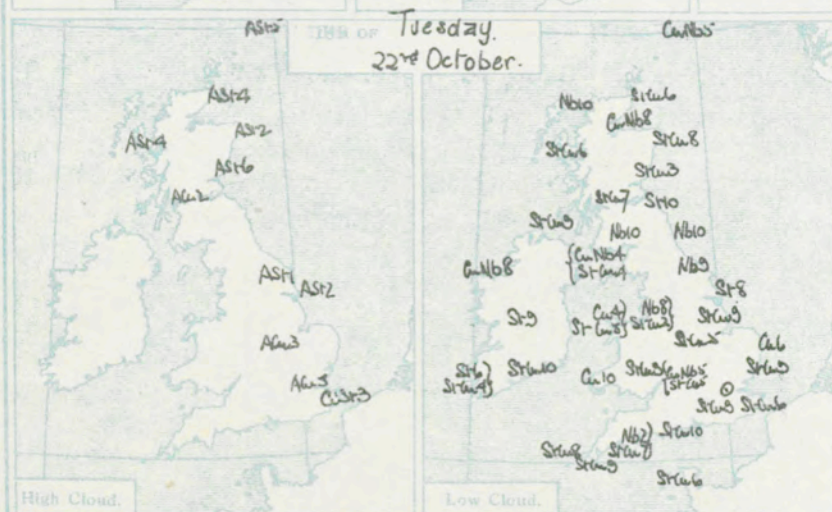
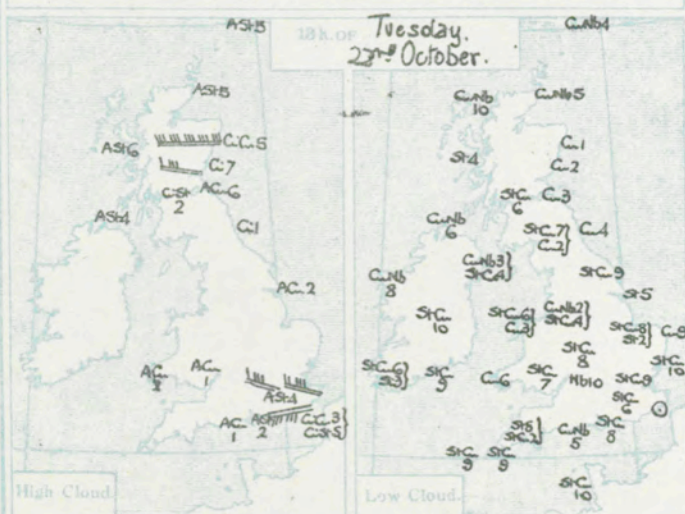
— and so on.

In Tables.

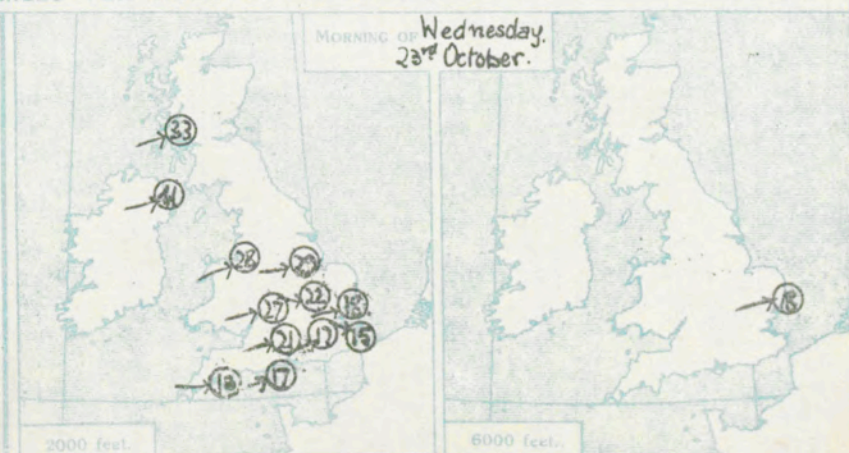
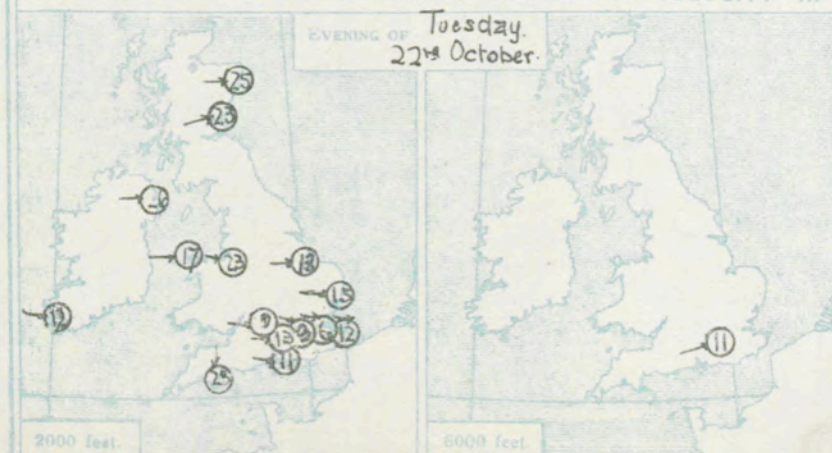
Directions are given in degrees, velocities in m.p.h.

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

Place	Raydon	Leuchars	Renfrew	Alder Grove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Lymington	Manston	Lymington	Cattewater	Calshot	Place
Time	10:22 nd	12:22 nd	12:22 nd	12:22 nd	9:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	12:22 nd	10:22 nd	12:22 nd	12:22 nd	13:22 nd	12:22 nd	Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	260 6	260 13	265 13	250 8	255 27	320 12	250 8	270 6	260 2	275 6	235 3	325 2	270 2	255 4	310 5	280 6	285 5	270 2	320 8	Surf.
1000	270 10	255 19	270 27	260 17	300 19	235 17	270 14	230 12	260 8	230 15	285 9	295 11	235 7	265 7	290 7	270 9	230 8	275 9	300 8	1000
2000	275 11	270 26	230 19	275 23	315 15	285 13	320 18	235 14	265 13	310 15	235 10	290 9	290 7	235 6	260 9	260 7	275 9		310 13	2000
3000	270 10	275 21		275 21	320 16	275 14	320 17	270 10	265 10	305 22	305 8	305 8	300 7	260 7	245 13	250 14	260 13		315 13	3000
4000	245 13			275 23	315 18		235 20	290 12	280 12	235 25		310 13	320 8	235 9	260 15	250 17	245 17		335 11	4000
5000	265 14				315 15		250 20						340 8	305 9	235 18	250 29	245 18			5000
6000	280 11						245 26							305 7		245 35	235 20			6000
8000	270 18	10: C																		8000
10000	265 15	280 55																		10000
12000	10: A	13: C							10: A											12000
Neph.	280 30	290 45							280 30											Neph.
Place	Leuchars	Aberdeen	Alder Grove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lymington	Cattewater	Calshot	Place	
Time	17:22 nd	16:22 nd	17:22 nd	17:22 nd	17:22 nd	17:22 nd	16:22 nd	17:22 nd	18:22 nd	17:22 nd	17:22 nd	17:22 nd	17:22 nd		16:22 nd	17:22 nd	17:22 nd	16:22 nd		Time
Type	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.	240 13	180 3	235 10	260 5	270 6	230 5	270 10	280 2	260 10	240 6	270 1	305 2	285 3		240 6	220 2	360 12	205 2		Surf.
1000	245 33	255 19	250 22	265 13	270 17	275 16	235 9	285 11	270 11	260 8	265 5	310 9	300 9		230 6	240 9	10 19	265 7		1000
2000	260 23	270 25	270 26	270 17	280 23	270 18	280 12	285 15	275 12	275 9	280 13	285 9	280 6		260 8	275 12	360 23	285 11		2000
3000	275 31	280 23	275 34	270 18	275 20	265 18	275 13	270 13			265 12	285 11			275 10	280 13	340 20	285 12		3000
4000	275 33	230 15	275 31		255 45	270 22	240 14	260 13				290 13			300 8		310 17			4000
5000		235 17										320 13			305 11		305 14			5000
6000												260 11			280 11					6000
8000															16: C					8000
10000															300 35					10000
12000	16: C		16: C																	12000
Neph.	260 70		280 70												300 27	240 30				Neph.
Place	Aberdeen	Leuchars	Renfrew	Alder Grove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Cranwell	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lymington	Cattewater	Calshot	Place
Time			6h.23 rd	6h.23 rd		6h.23 rd	8h.23 rd	6h.23 rd	7h.23 rd	6h.23 rd	7h.23 rd	7h.23 rd	8h.23 rd	7h.23 rd		6h.23 rd	6h.23 rd	7h.23 rd	6h.23 rd	Time
Type			b	b		b	b	b	b	b	b	b	b	b	b	b	b	b	b	Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.			225 17	215 15		200 4	210 8	230 11	255 6	240 8	245 12	235 3	235 3	210 12		245 5	300 5	255 16	270 8	Surf.
1000			230 27	230 31		250 15	245 26	265 23	275 15	265 21	265 23	255 21	250 21	250 15		290 12	315 13	265 17	260 16	1000
2000			245 33	250 41		255 28	265 29	270 22	275 18	270 24	265 27	250 21	245 18	265 17		275 17	290 18	270 16	260 17	2000
3000				250 36		255 39	265 25	225 10	275 17	235 23	270 29	240 14	265 19			265 22	275 17	285 18	255 17	3000
4000				260 28			270 22	270 14	275 17	275 22			275 22			250 28			275 20	4000
5000									270 17				280 22			230 28			290 23	5000
6000									275 18							260 24				6000
8000																				8000
10000																				10000
12000				7h. AC				7h. C	7h. C											12000
Neph.				250 72				290 40	290 50											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	Station	Pressure	Height above M.S.L.	Temp.	Relative Humidity
Feet	mb.	Feet	°F.	%	Feet	mb.	Feet	°F.	%	Feet	mb.	Feet	°F.	%	Feet	mb.	Feet	°F.	%
1000	1000	1000	48.5	85	1000	1000	1000	48.5	85	1000	1000	1000	48.5	85	1000	1000	1000	48.5	85
2000	995	2000	46.5	85	2000	995	2000	46.5	85	2000	995	2000	46.5	85	2000	995	2000	46.5	85
3000	990	3000	44.5	85	3000	990	3000	44.5	85	3000	990	3000	44.5	85	3000	990	3000	44.5	85
4000	985	4000	42.5	85	4000	985	4000	42.5	85	4000	985	4000	42.5	85	4000	985	4000	42.5	85
5000	980	5000	40.5	85	5000	980	5000	40.5	85	5000	980	5000	40.5	85	5000	980	5000	40.5	85
6000	975	6000	38.5	85	6000	975	6000	38.5	85	6000	975	6000	38.5	85	6000	975	6000	38.5	85
7000	970	7000	36.5	85	7000	970	7000	36.5	85	7000	970	7000	36.5	85	7000	970	7000	36.5	85
8000	965	8000	34.5	85	8000	965	8000	34.5	85	8000	965	8000	34.5	85	8000	965	8000	34.5	85
9000	960	9000	32.5	85	9000	960	9000	32.5	85	9000	960	9000	32.5	85	9000	960	9000	32.5	85
10000	955	10000	30.5	85	10000	955	10000	30.5	85	10000	955	10000	30.5	85	10000	955	10000	30.5	85
11000	950	11000	28.5	85	11000	950	11000	28.5	85	11000	950	11000	28.5	85	11000	950	11000	28.5	85
12000	945	12000	26.5	85	12000	945	12000	26.5	85	12000	945	12000	26.5	85	12000	945	12000	26.5	85
13000	940	13000	24.5	85	13000	940	13000	24.5	85	13000	940	13000	24.5	85	13000	940	13000	24.5	85
14000	935	14000	22.5	85	14000	935	14000	22.5	85	14000	935	14000	22.5	85	14000	935	14000	22.5	85
15000	930	15000	20.5	85	15000	930	15000	20.5	85	15000	930	15000	20.5	85	15000	930	15000	20.5	85
16000	925	16000	18.5	85	16000	925	16000	18.5	85	16000	925	16000	18.5	85	16000	925	16000	18.5	85
17000	920	17000	16.5	85	17000	920	17000	16.5	85	17000	920	17000	16.5	85	17000	920	17000	16.5	85
18000	915	18000	14.5	85	18000	915	18000	14.5	85	18000	915	18000	14.5	85	18000	915	18000	14.5	85
19000	910	19000	12.5	85	19000	910	19000	12.5	85	19000	910	19000	12.5	85	19000	910	19000	12.5	85
20000	905	20000	10.5	85	20000	905	20000	10.5	85	20000	905	20000	10.5	85	20000	905	20000	10.5	85
21000	900	21000	8.5	85	21000	900	21000	8.5	85	21000	900	21000	8.5	85	21000	900	21000	8.5	85
22000	895	22000	6.5	85	22000	895	22000	6.5	85	22000	895	22000	6.5	85	22000	895	22000	6.5	85
23000	890	23000	4.5	85	23000	890	23000	4.5	85	23000	890	23000	4.5	85	23000	890	23000	4.5	85
24000	885	24000	2.5	85	24000	885	24000	2.5	85	24000	885	24000	2.5	85	24000	885	24000	2.5	85
25000	880	25000	0.5	85	25000	880	25000	0.5	85	25000	880	25000	0.5	85	25000	880	25000	0.5	85

UPPER WINDS ABROAD.

Place.	Paris		Helder		Warsaw		Rome		Calais		Malta	
Time.	12:22 ¹⁰		12:22 ¹⁰		12:22 ¹⁰		12:22 ¹⁰		12:23 ¹⁰		12:22 ¹⁰	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	330	3	250	14	110	23	130	7	230	10	1000'	
3,280	230	9	240	14	180	14	-	-	260	16	200	25
4,920	240	14			190	23	200	16	260	20		
6,560					200	18	-	-	250	18	3,000'	
8,840					190	23	230	21			250	19
13,120												
16,400											5000'	
19,680											230	19

Place.	Dijon		Leuberg		Taranto		Paris		Madrid		Malta.	
Time.	12:23 ¹⁰		12:22 ¹⁰		7h-23 ¹⁰		7h-23 ¹⁰		7h-23 ¹⁰		6h-22 ¹⁰	
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,640	250	11	140	16	210	21	310	7	-	-	(3000')	
3,280	270	14	150	19	230	25	320	14	40	4	230	32
4,920			170	-					230	7	(5000')	
6,560									250	11	230	31
8,840											(6000')	
13,120											230	46



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 24th OCTOBER, 1929.No. 24,808.
U.A.S. 3,860.

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, 1903, 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 plus 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 "

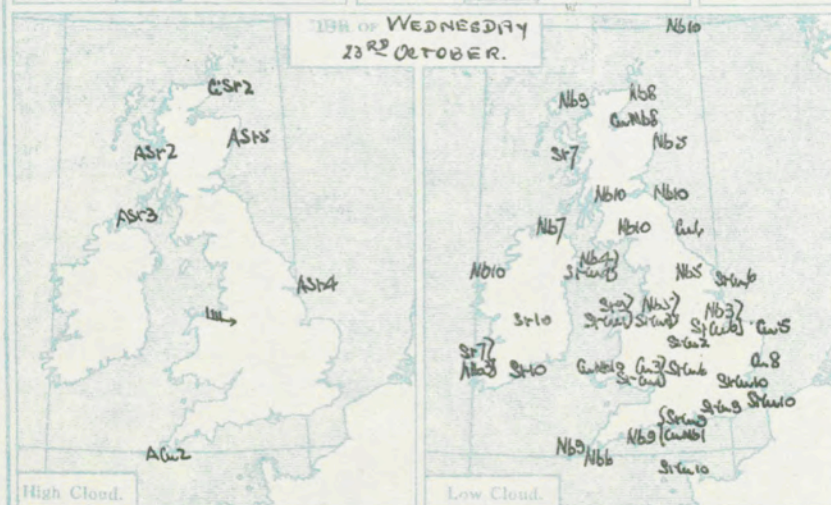
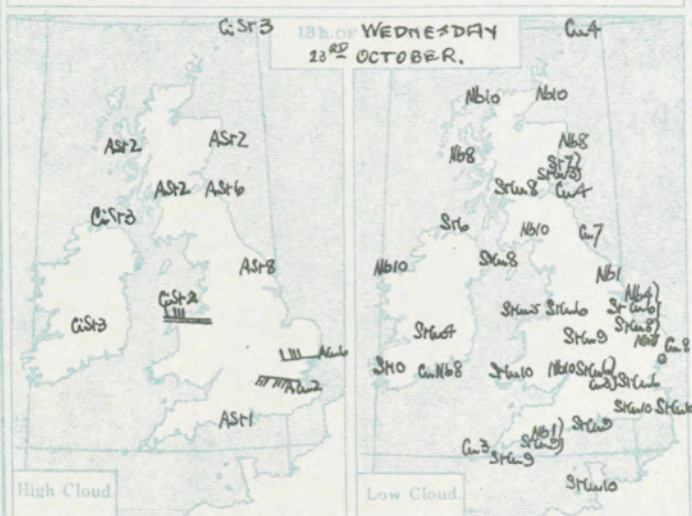
— and so on.

In Tables.

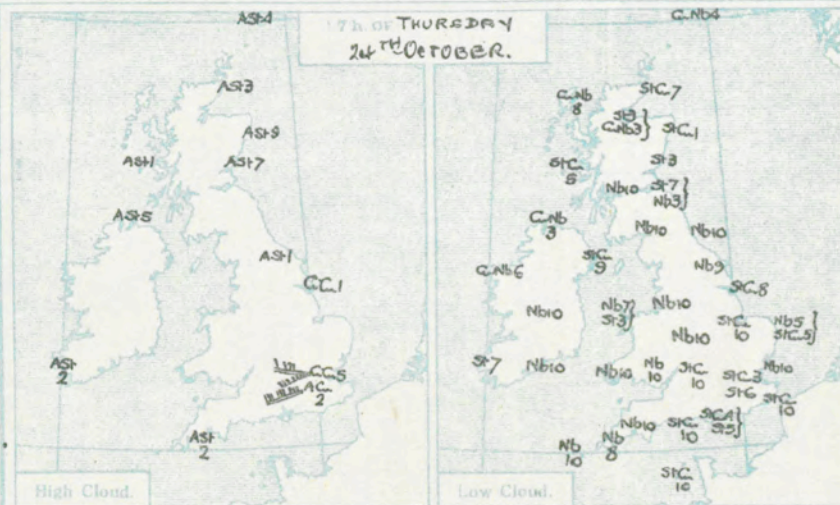
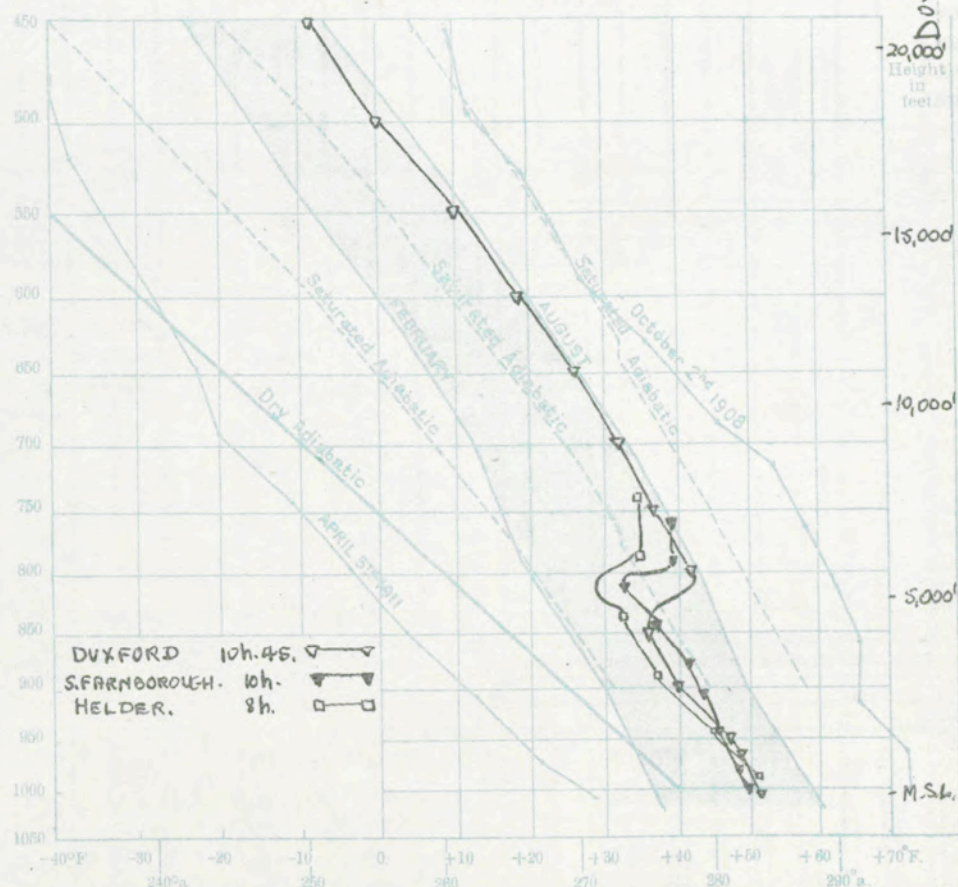
Directions are given in degrees, velocities in m.p.h.

Speeds of high cloud are computed for an average height of 6 miles for cirro type clouds (double lines) and 3 miles for alto type clouds (single line).

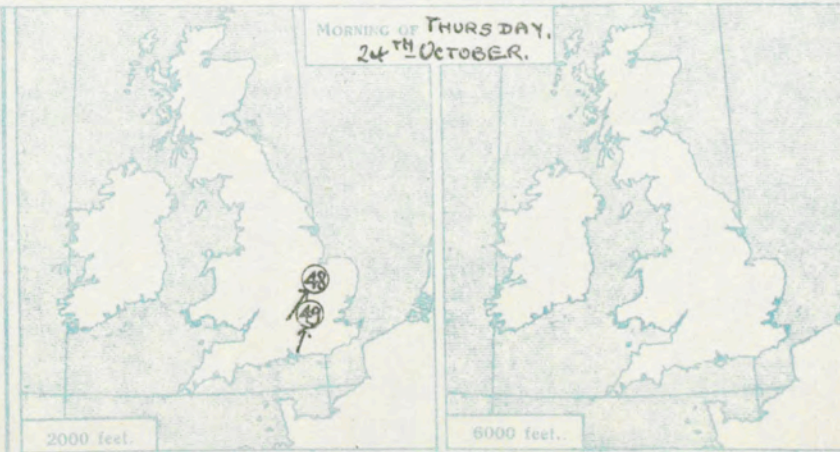
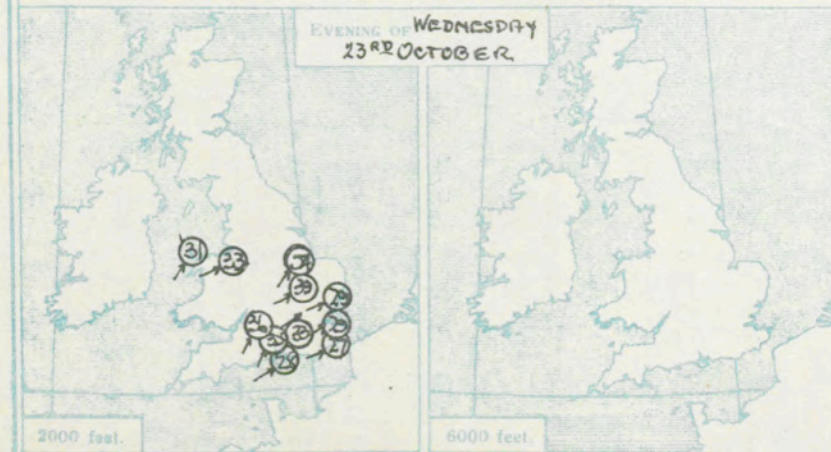
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

WEDNESDAY, 23rd OCTOBER, 1929.

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





AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, FRIDAY, 25th OCTOBER, 1929.

No. B. 24,809.

U.A.S. 3861.

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 24th, 1871, 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 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 balloons 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 "

— 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 "

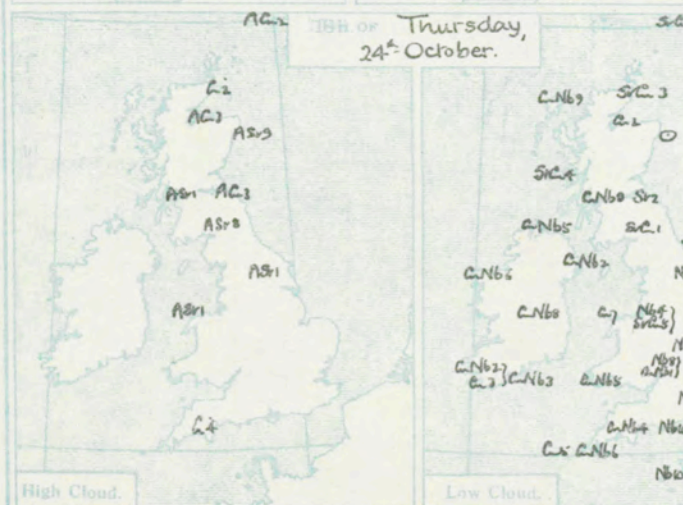
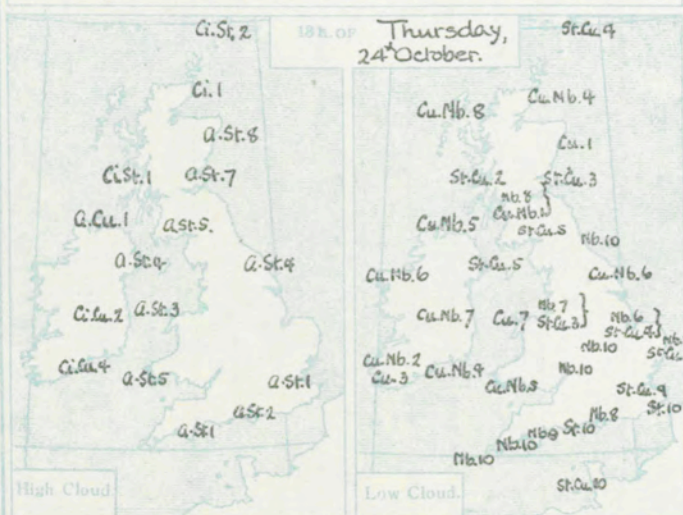
— 995-1000 "

In Tables.

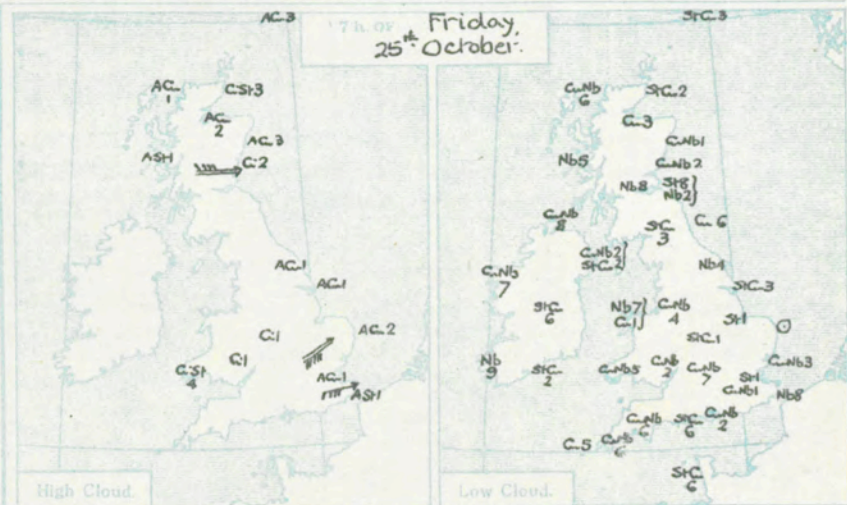
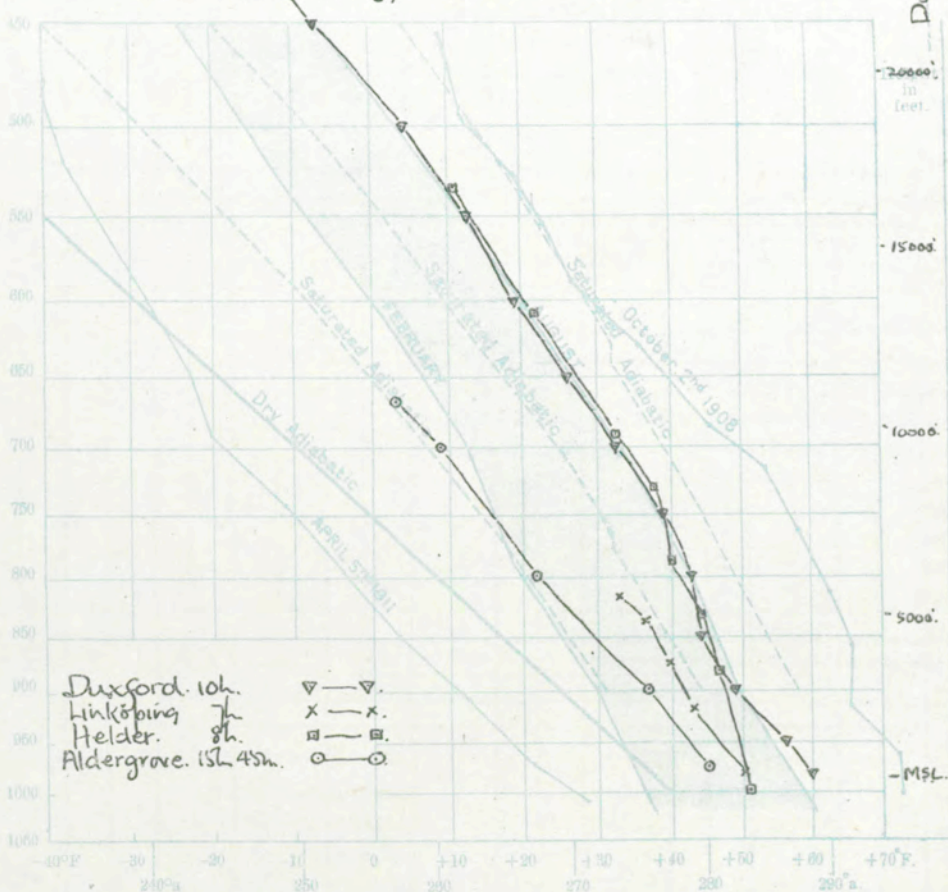
Directions are given in degrees, velocities in m.p.h.

Scales 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).

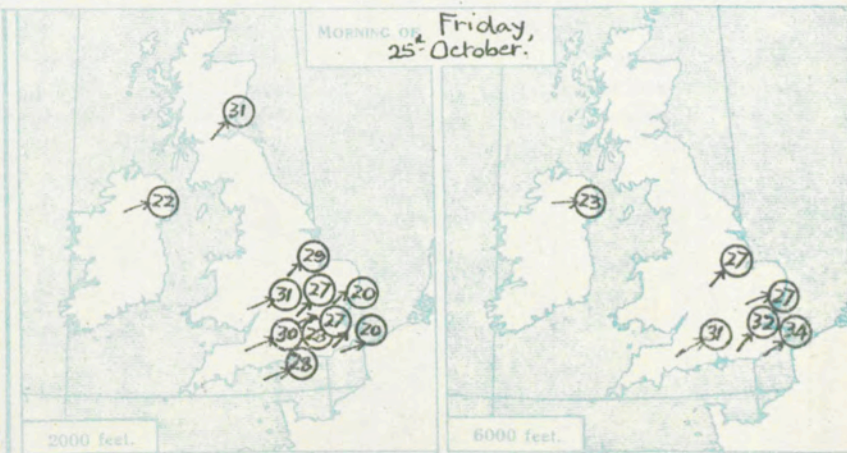
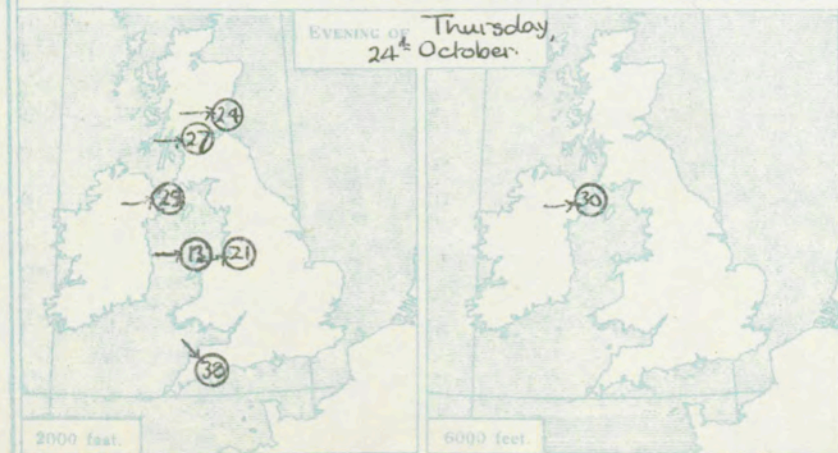
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

Thursday, 24th October, 1929.

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





AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SATURDAY, 26TH OCTOBER, 1929.

No. B. 24,810

U.A.S. 3,862

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 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 "

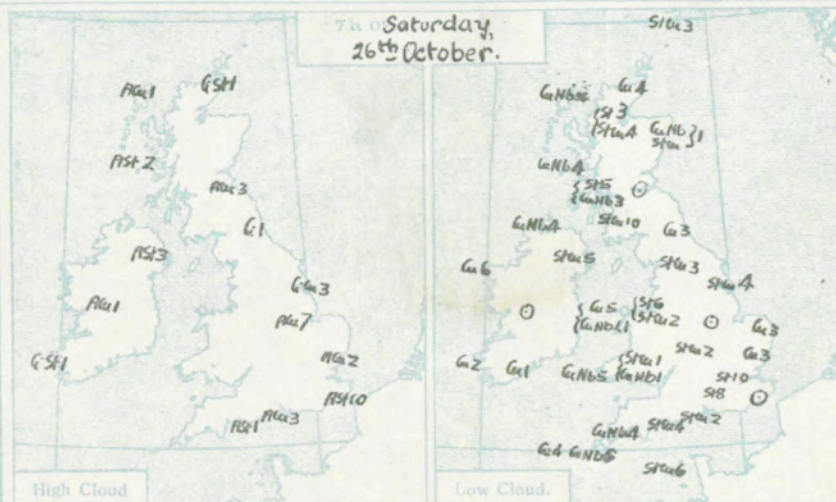
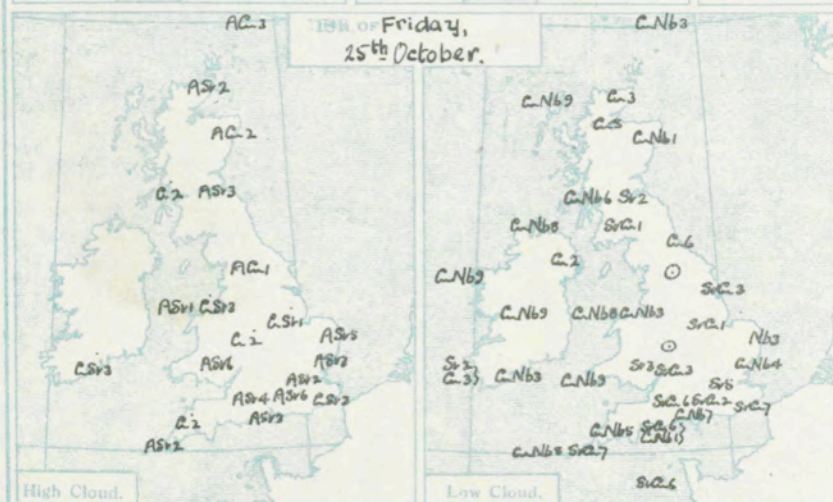
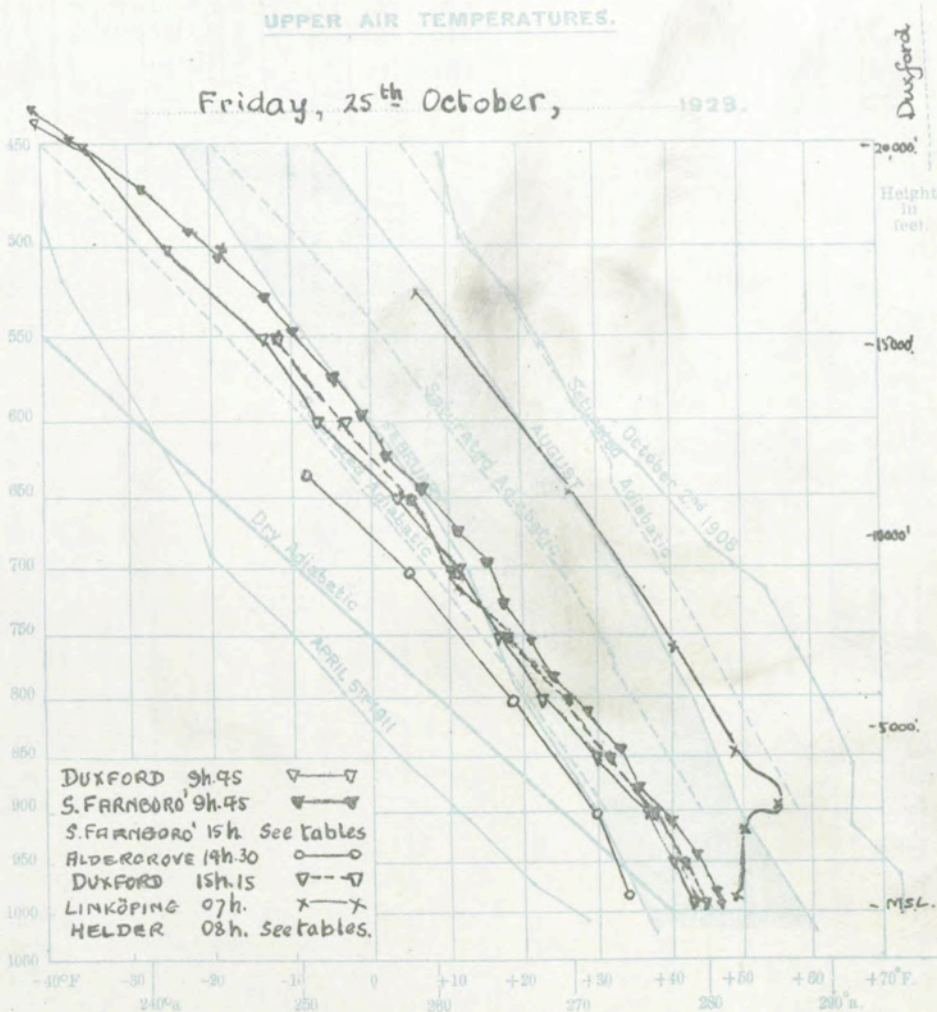
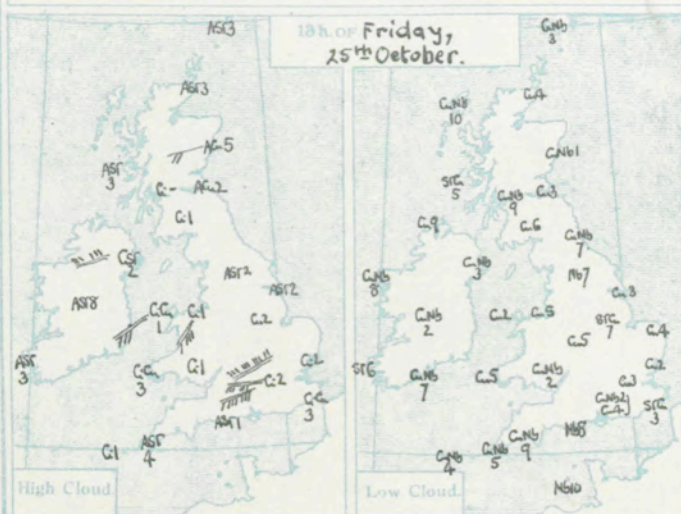
— and so on.

In Tables.

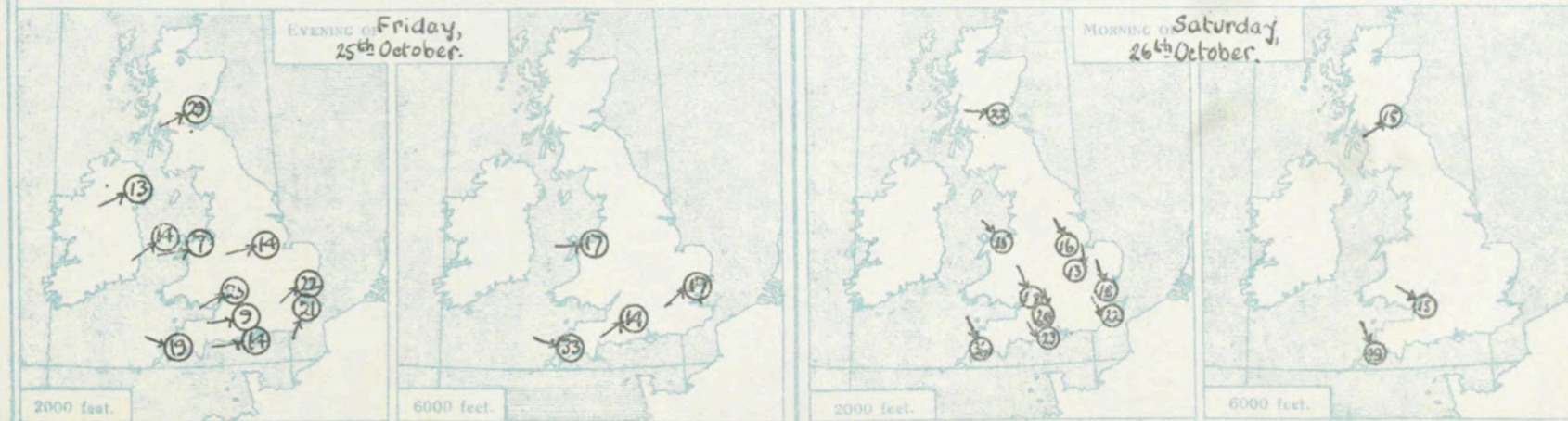
Directions are given in degrees, velocities in m.p.h.

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.





AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, SUNDAY, 27TH OCTOBER, 1929.

No. 24,811

U.A.S. 3863.

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 24th, 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.

— 6-15 "

— 16-25 "

— 26-35 m.p.h.

— 36-45 "

— 46-55 "

— 56-65 "

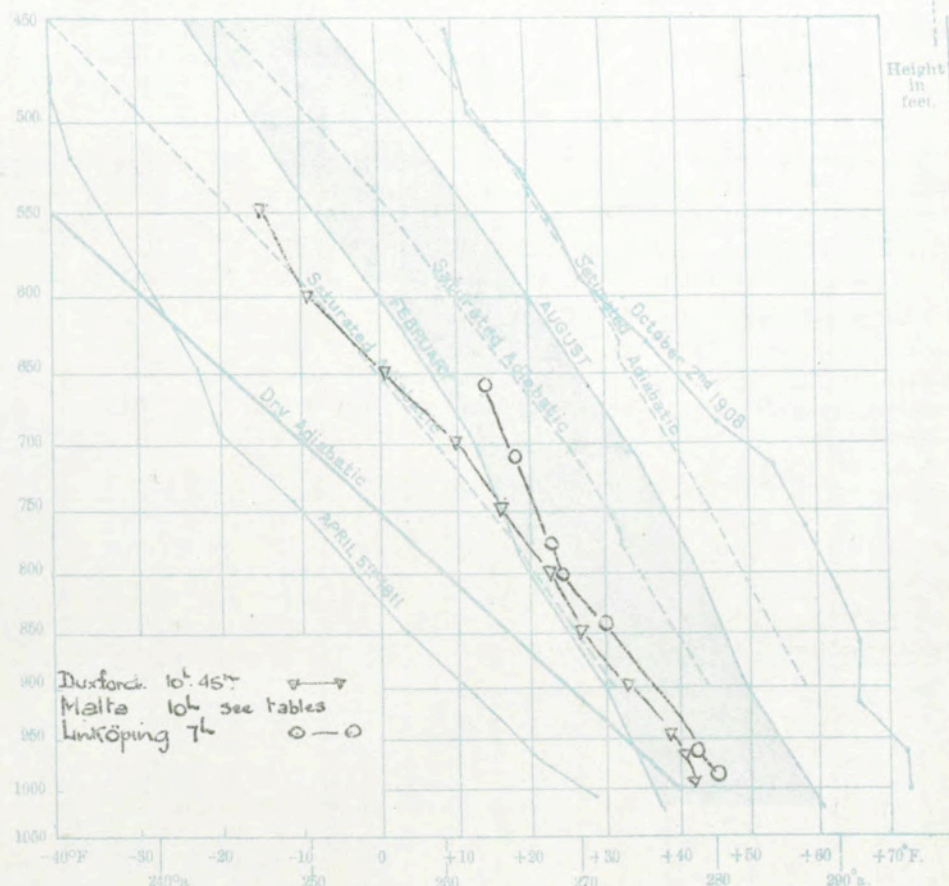
— and so on.

In Tables.

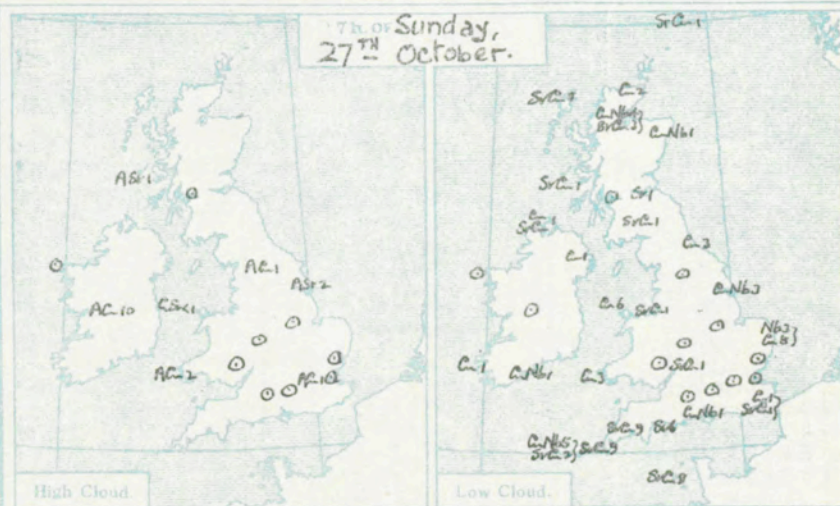
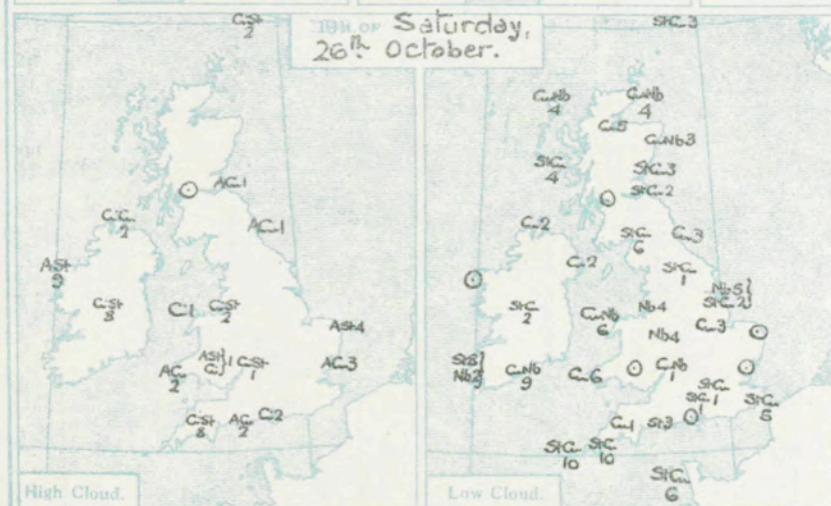
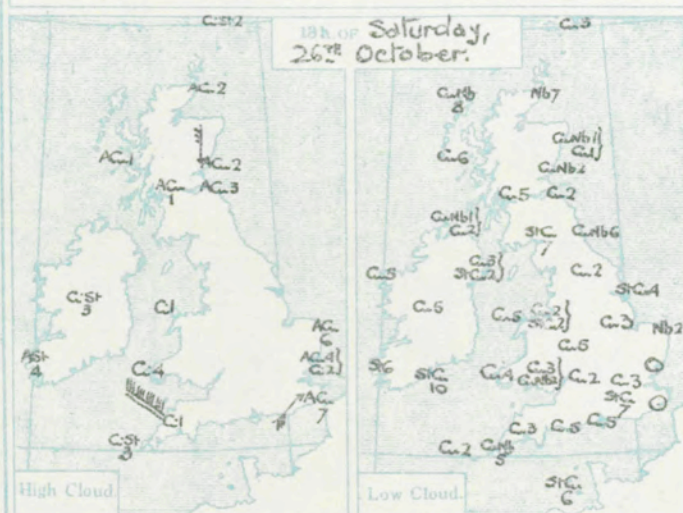
Directions are given in degrees, velocities in m.p.h.

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).

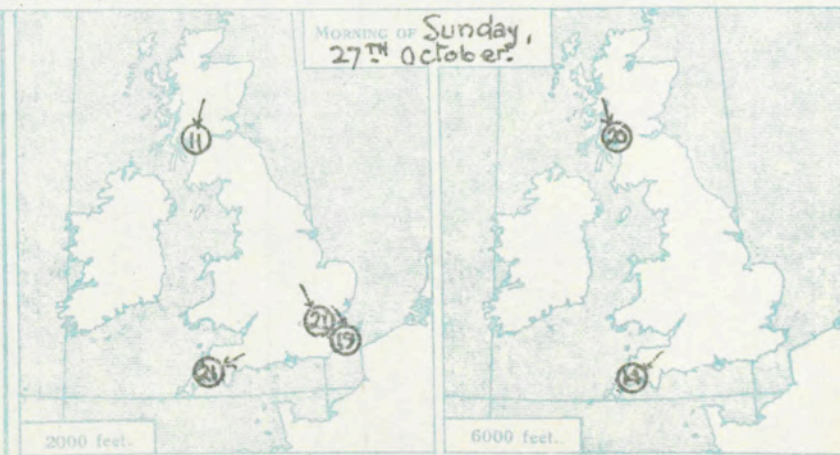
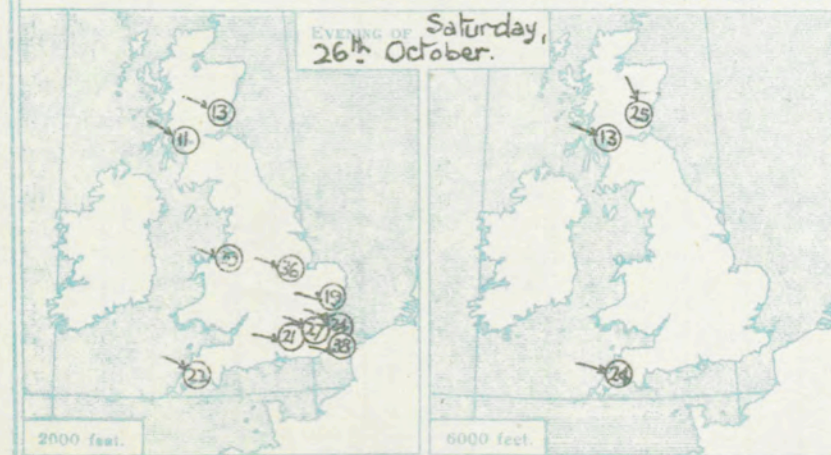
UPPER AIR TEMPERATURES.

Saturday, 26TH OCTOBER, 1929.

CLOUD FORMS, AMOUNTS AND MOVEMENTS.



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



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

Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place
Time		12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	12-26 ¹¹	13-26 ¹¹	12-26 ¹¹	12-26 ¹¹	13-26 ¹¹	12-26 ¹¹		12-26 ¹¹	12-26 ¹¹		12-26 ¹¹	Time
Type				b.	b.	b.		b.	b.			b.	b.	b.		b.	b.			Type
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Feet
Surf.		280 10	280 8	315 10	300 21	315 18	305 12	305 13	325 15	205 9	295 18	325 16	290 8	280 10		320 19	320 17		320 20	Surf.
1000		315 15	335 17	320 23	305 23	305 26	310 19	315 14	340 22	210 16	305 16	330 24	305 16	320 16		305 26	335 20		325 31	1000
2000		345 13	335 19	305 24	310 21	310 28	305 20	325 18	335 23	230 13	320 26	325 22	335 19	340 23		340 22	340 25		325 25	2000
3000		10 13		310 15	320 25	320 28	300 22	320 15	340 26	240 17	325 32	340 23	315 20			345 19	340 26		325 35	3000
4000		10 12				320 26		315 20	360 22	245 18						350 17	340 20			4000
5000		355 15				320 45		320 17	345 23	245 19							325 23			5000
6000		345 12							345 19	250 23							235 25			6000
8000		355 18								250 18										8000
10000		355 19															13 ¹¹	13 ¹¹		10000
12000		AC															AC	C		12000
Neph.		360 33															230 30	320 120		Neph.
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Cattewater	Place
Time	17-26 ¹¹	15-26 ¹¹			17-26 ¹¹	17-26 ¹¹		17-26 ¹¹					17-26 ¹¹	17-26 ¹¹		17-26 ¹¹	16-26 ¹¹			Time
Type															b.		b.			Type
Feet	Dir. Vel.	Dir. Vel.																		Feet
Surf.	340 8	300 10			325 8	290 12		295 7				305 10	280 11		305 11	310 10	290 12			Surf.
1000	340 15	325 13			285 27	285 35		305 15				300 17	305 21		305 24	315 21	320 18			1000
2000	325 13	320 11			285 29	305 36		315 19				305 21	305 27		310 24	315 33	320 22			2000
3000	340 15	315 9			295 57	310 32		325 24				315 22	305 31			315 33	320 23			3000
4000	355 18	330 14						330 29				325 23				320 33	325 24			4000
5000	355 20	320 13						335 26									320 22			5000
6000	350 25	310 13															315 24			6000
8000																	330 44			8000
10000	15		16 ¹¹			16 ¹¹											12,000		16 ¹¹	10000
12000	AC		C			C											330 51		C	12000
Neph.	10 30		300 10			260 35											15,000		320 120	Neph.
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Cardington	Felixstowe	Valentia	Upper Heyford	Worthy Down	South Farnborough	Croydon	Shoeburyness	Manston	Lymington	Cattewater	Calshot	Place
Time			18-27											18-27			18-27	18-27		Time
Type			b.														b.	b.		Type
Feet																				Feet
Surf.			240 1											275 2			330 10	50 20		Surf.
1000			355 10											345 17			340 18	55 22		1000
2000			20 11											345 21			315 19	60 21		2000
3000			25 13											335 21				60 17		3000
4000			20 17											335 23				45 18		4000
5000			10 12															40 19		5000
6000			345 20															50 14		6000
8000			355 45																	8000
10000			320 39																	10000
12000			330 35																	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	Station	Pressure	Height above M.S.L.	Temp.	Relative Humidity
	mb.	Feet.	°F.	%		mb.	Feet.	°F.	%		mb.	Feet.	°F.	%		mb.	Feet.	°F.	%
Duxford 10-45	1003	M.S.L.	-	-	1005	1005	M.S.L.	-	-										
	993	100	43	41	85														
	963	1100	42	39	77														
	950	1470	40	37	77														
	900	2900	34	30	65														
	850	4400	28	28	100														
	800	6000	24	20	63														
	750	7650	17	13	5														
	700	9400	10	8															
	650	11270	2	-2															
	600	13250	-8	-35															
	550	15380	-14	-45															
Haze tops 850 and 700 mb. Cloud Fr. at 740-800-850 mb.																			
Malta 10-26	1012	M.S.L.	-	-	1005	1005	M.S.L.	-	-	88									
	989	660	68	-	85														
	955	1640	61	-	75														
	900	3280	56	-	65														
	847	4910	52	-	65														
	798	6560	47	-	55														
	750	8200	37	-	45														
Linköping 7-26																			
	1005	M.S.L.	-	-	88														
	989	330	42	-	72														
	960	1310	38	-	66														
	945	4600	33	-	66														
	900	5900	25	-	66														
	771	6500	25	-	53														
	708	9200	19	-	63														
	657	1140	15	-	63														

UPPER WINDS ABROAD.

Place	Marigane	Lyons	Cologne	Tours	Genoa	Benghazi
Time	8-26	9-26	13-26	18-26	18-26	18-26
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
1,840	290 20		147 9		360 13	
3,280	290 36	220 36	248 5	220 34	30 19	170 16
4,920		230 36	203 7	330 41	160 14	
6,560		260 35				
9,940						
13,120						
16,400						
19,680						
Place	Paris	Madrid	Messina	Genoa	Turin	Malta
Time	10-27	7-27	7-27	7-27	7-27	6-27
Feet	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.	Dir. Vel.
1,840	180 7				170 23	310 21
3,280	210 9	270 20				300 27
4,920	220 9	300 29		360 26	340 6	300 27
6,560		300 44	300 9	340 23		280 33
9,940			270 9	10 48	180 6	
13,120						
16,400						
19,680						



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, MONDAY, 28TH OCTOBER, 1929.

No. 24,812.

U.A.S. 3864.

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 4th, 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.

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 "

— 16-20 "

— 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 "

— 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 "

— 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 "

— 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 "

— 2

[illegible]



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, TUESDAY, 29th OCTOBER 1929.

No. 24813,

U.A.S. 3865

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 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 yoke 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 "

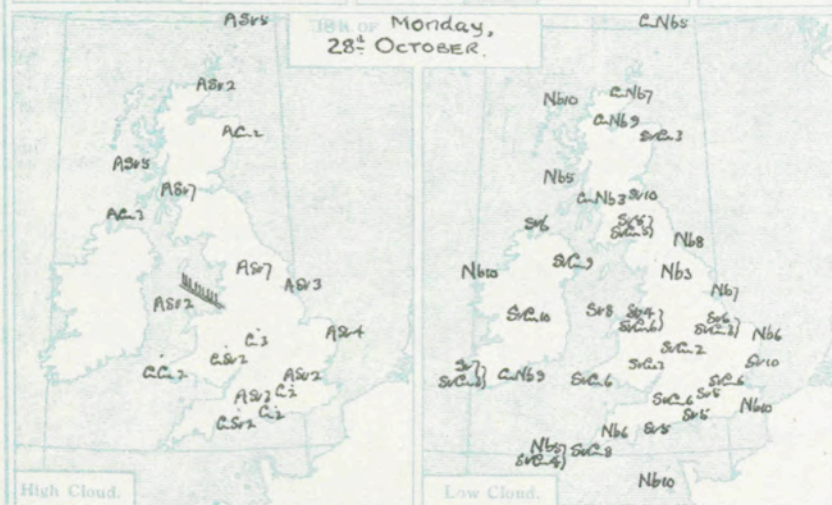
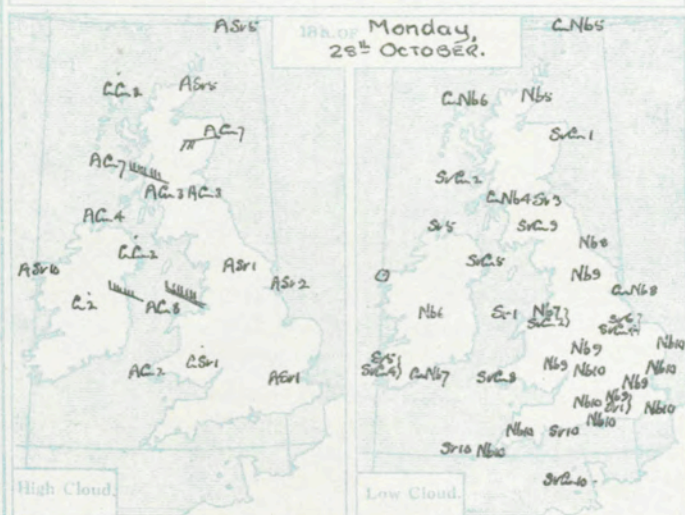
and so on.

In Tables.

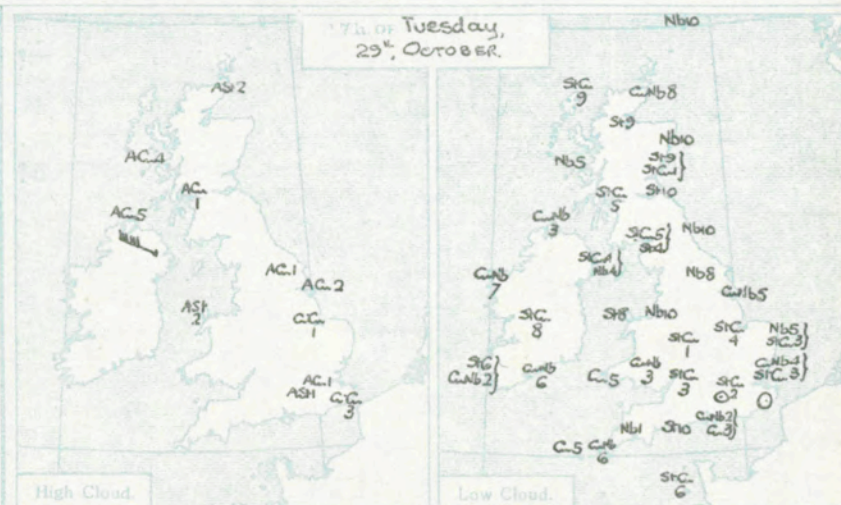
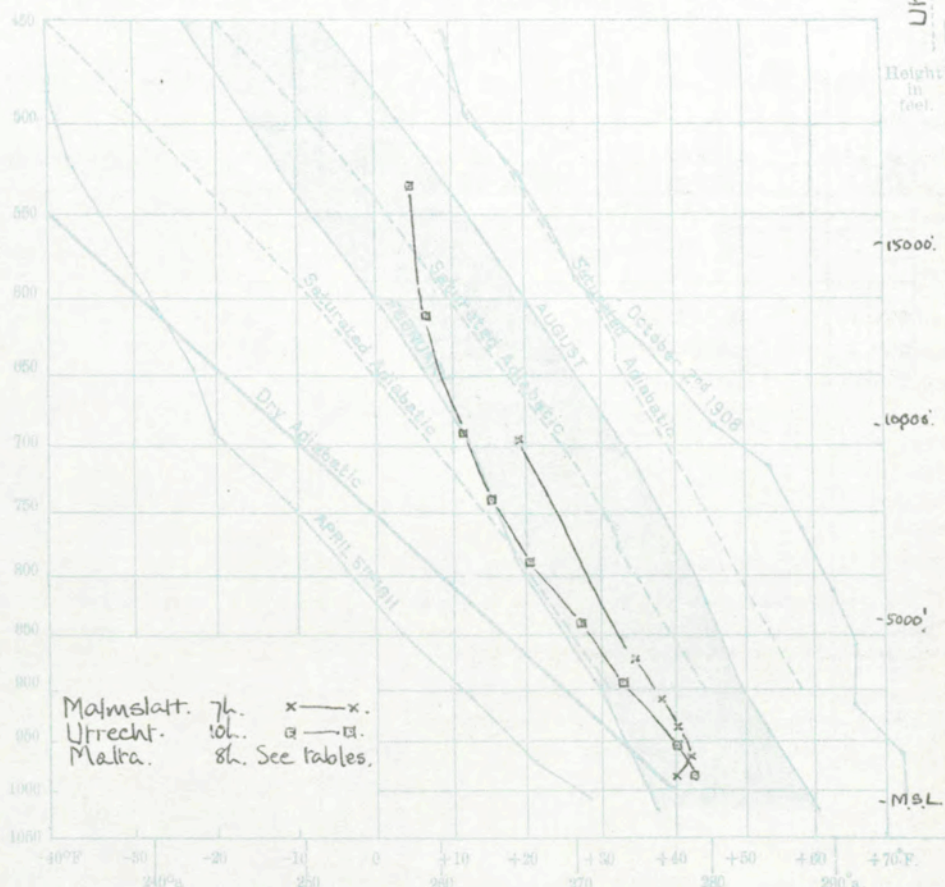
Directions are given in degrees, velocities in m.p.h.

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

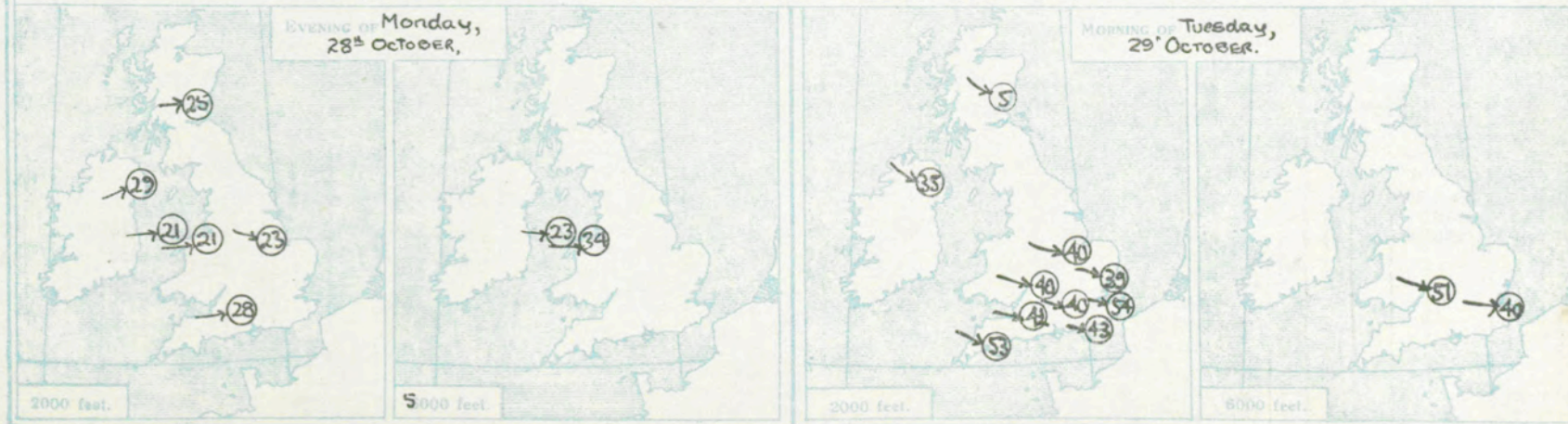
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

MONDAY, 28th OCTOBER 1929.

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



DIRECTION (degrees from N.) and MEAN VELOCITY (m.p.h.) of SURFACE and UPPER WINDS at specified heights above M.S.L. - BRITISH.																													
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Sealand	Holyhead	Holyhead	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympe	Plymouth	Calshot	Place									
Time	15h. 28 th		12h. 28 th	12h. 28 th	12h. 28 th	12h. 28 th	09h. 28 th			13h. 28 th										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.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet
Surf.	210	5			200	15	235	11	305	22	245	19	235	20														Surf.	
1000	265	17			265	26	255	23	290	28	290	26	245	37														1000	
2000	285	29					275	29	280	37	295	25	(800')															2000	
3000	295	38					280	30	270	38																		3000	
4000	295	38					280	39	270	55																		4000	
5000									285	47																		5000	
6000									285	59																		6000	
8000																												8000	
10000	13h.		13h.		13h.		13h.																					10000	
12000	A. Cu		A. Cu		A. St.		A. Cu																					12000	
Neph.	270	30	290	84	290	70	290	72																				Neph.	
Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympe	Plymouth	Calshot	Place										
Time	7h. 28 th		7h. 28 th	16h. 28 th	7h. 28 th	7h. 28 th					7h. 28 th									Time									
Type																				Type									
Feet																				Feet									
Surf.	235	8			210	9	230	4	320	2	265	10								Surf.									
1000	250	21			225	22	255	22	280	19	265	23								1000									
2000	265	25			245	29	260	21	270	21	295	23								2000									
3000					255	32	260	18	275	26	285	23								3000									
4000							275	18	285	31										4000									
5000							280	23	285	34										5000									
6000																				6000									
8000																				8000									
10000							16h													10000									
12000							CSt													12000									
Neph.							300	20												Neph.									
Place	Aberdeen	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Valentia	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury ness	Manston	Lympe	Plymouth	Calshot	Place									
Time		7h. 29 th		7h. 29 th			7h. 29 th	6h. 29 th	7h. 29 th		6h. 29 th	7h. 29 th	8h. 29 th	7h. 29 th		8h. 29 th	6h. 29 th	7h. 29 th		Time									
Type																				Type									
Feet																				Feet									
Surf.		Caln			270	14		260	18	245	20	255	18					260	17	285	15	285	28			Surf.			
1000		265	9		290	27		270	38	255	30	270	33					270	40	270	30	295	35			1000			
2000		305	5		300	35		280	40			280	39					280	54	280	43	295	53			2000			
3000		255	3		300	39						285	57					285	56	290	58					3000			
4000												285	53					255	46							4000			
5000												285	51					280	40							5000			
6000																										6000			
8000																										8000			
10000																										10000			
12000							7h. AC																			12000			
Neph.							300	60													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.	M.S.L.	Dry.	Wet.	mb.	Feet.	M.S.L.	Dry.	Wet.	mb.	Feet.	M.S.L.	Dry.	Wet.
Malta. 8h. 28/10/29.	1011	M.S.L.	66	85										
	388	660	66	85										
	382	1640	61	85										
	897	3280	55	85										
	844	4920	49	95										
	795	6560	43	85										
	748	8200	38	75										
	703	9840	31	95										
Malta. 10h. 28/10/29.	1000	M.S.L.	41	77										
	383	330	41	63										
	365	980	42.6	63										
	337	1640	41	58										
	308	2300	37.2	47										
	371	2610	34.9	50										
	697	8850	19.8	22										
Utrecht. 10h. 28/10/29.	1013	M.S.L.	43	75										
	389	670	43	65										
	353	1650	41	65										
	896	3280	34	85										
	844	4920	28	85										
	789	6560	21	85										
	740	8200	16	75										
	693	9840	12	35										
	608	13120	7	35										
	573	16400	5	85										
Inversion: 649mb														
Isothermal layer.														
Temp. at base 78°F.														
Depth. 1640ft.														

UPPER WINDS ABROAD.

Place	Helder	Utrecht	Warsaw	Turin	Genoa	Malta
Time	13h. 28	13h. 28	13h. 28	13h. 28	13h. 28	8h. 28
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	230	29	240	44	270	31
3,280					280	32
4,920					270	32
6,560					270	36
9,840					270	43
13,120						
16,400						
19,680						
Place	Clermont	Padua	Paris	Badajoz	Madrid	Cologne
Time	18h. 28	18h. 28	7h. 29	7h. 29	7h. 29	7h. 29
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	50	7	50	16	280	31
3,280	100	23	50	14	280	45
4,920	120	34			280	49
6,560					350	11
9,840					350	25
13,120						
16,400						
19,680						



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, WEDNESDAY, 30TH OCTOBER 1929.

No. B. 24,814

U.A.S. 3,866

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 "

— 66-75 "

— 76-85 "

— 86-95 "

— 96-105 "

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Place	Holyhead	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Card-ington	Upper Heyford	Worthy Down	South Farnboro	Croydon	Croydon	Manston	Lympne	Plymouth	Calshot	Calshot	Place																		
Time	05h. 29 th	13h. 29 th	12h. 24 th	12h. 24 th	12h. 24 th	13h. 24 th	12h. 24 th	12h. 24 th	10h. 24 th	10h. 24 th	12h. 24 th	12h. 24 th	13h. 24 th	12h. 24 th	10h. 24 th	13h. 24 th	13h. 24 th	12h. 24 th	12h. 24 th	12h. 24 th	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.	275	30	310	5	240	2	250	15	265	24	280	21	270	21	270	28	275	18	270	18	260	20	265	24	250	20	265	22	260	17	265	14	255	13	245	40	285	20	Surf.
1000	280	28	10	9	275	8	270	21	275	33	275	27	260	?	260	27	275	33	270	29	265	21	265	28	255	32	260	19	275	20	255	24	265	24	245	62	275	36	1000
2000	290	37	5	11																																	2000		
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Place	Leuchars	Renfrew	Aldergrove	Holyhead	Sealand	Cranwell	Card-ington	Felix-stowe	Card-ington	Upper Heyford	Worthy Down	South Farnboro	Croydon	Shoebury-ness	Manston	Lympne	Plymouth	Calshot	Calshot	Place																			
Time	17h. 29 th	17h. 29 th			17h. 29 th	17h. 29 th	17h. 29 th	17h. 29 th	24 th 29 th		17h. 29 th	17h. 29 th	17h. 29 th		17h. 29 th	17h. 29 th				17h. 29 th	24 th 29 th	Time																	
Type																					Type																		
Feet	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.	Feet																		
Surf.	350	3	360	2			270	11	270	15	255	17	255	12	270	12					270	10	255	13	Surf.														
1000	360	6	360	12			280	21	270	36	270	29	270	27	320	25					270	26	285	26	1000														
2000	355	15	20	16			290	31	275	37	280	37	275																										

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. Sh. 45m. 29/10/22	mb.	Feet.	°F.	°F.	%												
933	M.S.L.	—	—	—	—												
983	100	52	47	67													
953	1140	48	45	80													
950	1220	48	45	80													
900	2690	40.5	39.5	92													
850	4210	35	33	83													
800	5800	30	29	91													
750	7500	25	24	90													
700	9300	19	18														
650	11200	12	12														
600	13200	5	5														
550	15390	-2.5	-2.5														
500	17760	-11	-11														
Haze top 860mb. Fr. Sk. 5710 890-860mb.																	
Linkoping Th. 29/10/22	1000	M.S.L.	—	—	—												
987	330	35	—	—	99												
931	1970	34	—	—	90												
915	2200	34	—	—	78												
863	3610	30	—	—	66												
821	5240	23	—	—	71												
791	6230	19	—	—	66												
683	9840	7	—	—	90												
579	14130	-9	—	—	90												
Fr. Sk. 884-868mb. Tops up to 821mb. Very breezy up to 884mb.																	
S Farnboro: 10h. 29/10/22	mb.	Feet.	°F.	°F.	%												
937	M.S.L.	—	—	—	—												
988	230	53	—	—	—												
952	1240	49	—	—	—												
917	2300	45	—	—	—												
884	3230	40	—	—	—												
852	4220	37	—	—	—												
821	5200	34	—	—	—												
792	6140	31	—	—	—												
763	7100	27	—	—	—												
Fr. Sk. 884-868mb. Tops up to 821mb. Very breezy up to 884mb.																	
Duxford. 15h. 45m. 29/10/22	mb.	Feet.	°F.	°F.	%												
924	M.S.L.	—	—	—	—												
990	100	52.5	48	71													

Place.	Lyons.	Perpignan.	Marignane.	Dijon	Toulouse	Malta
Time.	9h. 25'	10h. 25'	9h. 29'	18h. 29H	17h. 29H	7h. 29H
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	-	-	-	-	260	23
3,280	250	30	300	27	290	38
4,920	260	34	280	27	-	-
6,560			280	27	310	36
9,840			280	38	260	52
13,120						
16,400						
19,680						

Place.	Clermont	Brest	Abbeville	Compegne	Cologne	Warsaw
Time.	18h. 29H	18h. 29H	7h. 30H	7h. 30H	7h. 30H	7h. 30H
Feet.	Dir.	Vel.	Dir.	Vel.	Dir.	Vel.
1,840	110	4	290	49	350	27
3,280	100	7	290	54	310	18
4,920					290	16
6,560					280	16
9,840						
13,120						
16,400						
19,680						

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

G. C. SIMPSON, O.R., D.Sc., P.R.S.
 Director.



AIR MINISTRY.

DAILY WEATHER REPORT OF THE METEOROLOGICAL OFFICE, LONDON.

UPPER AIR SUPPLEMENT, THURSDAY, 31ST OCTOBER, 1929.

No. B. 24815.

U.A.S. 3867.

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 24th 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 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 table 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 "

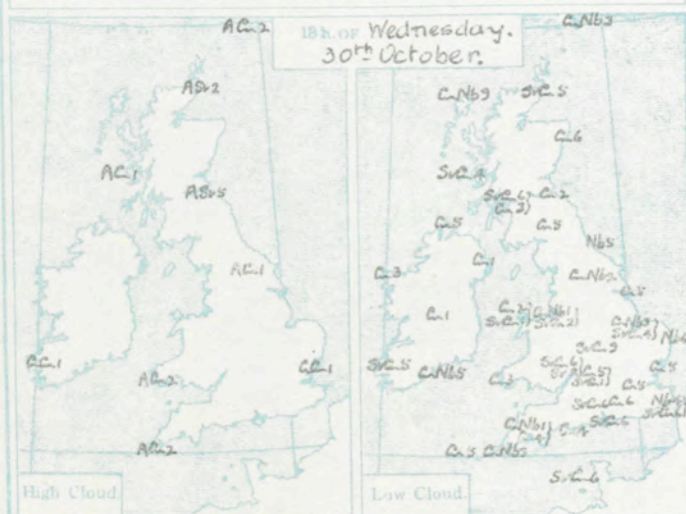
- 30-35 m.p.h.
- 36-45 "
- 46-55 "
- 56-65 "
- and so on.

In Tables.

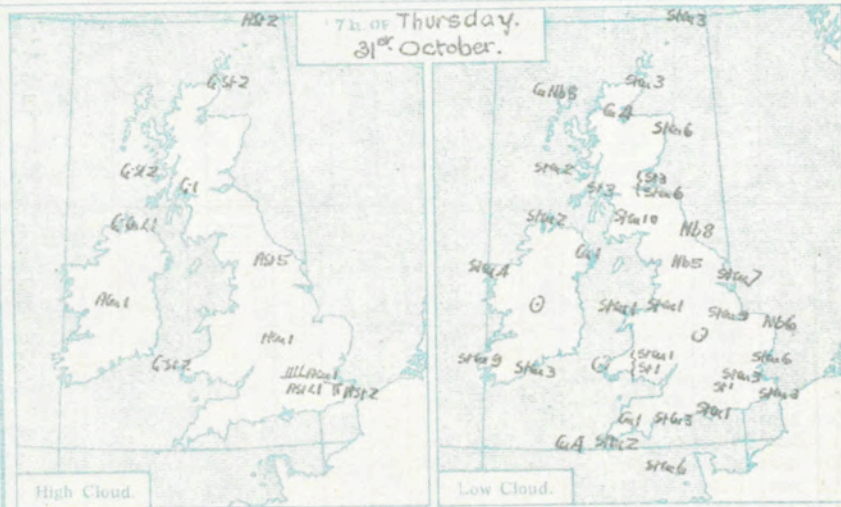
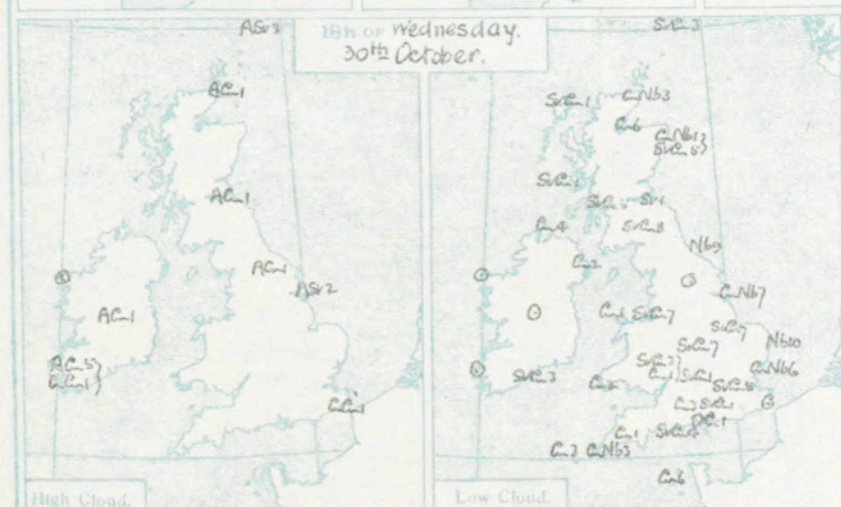
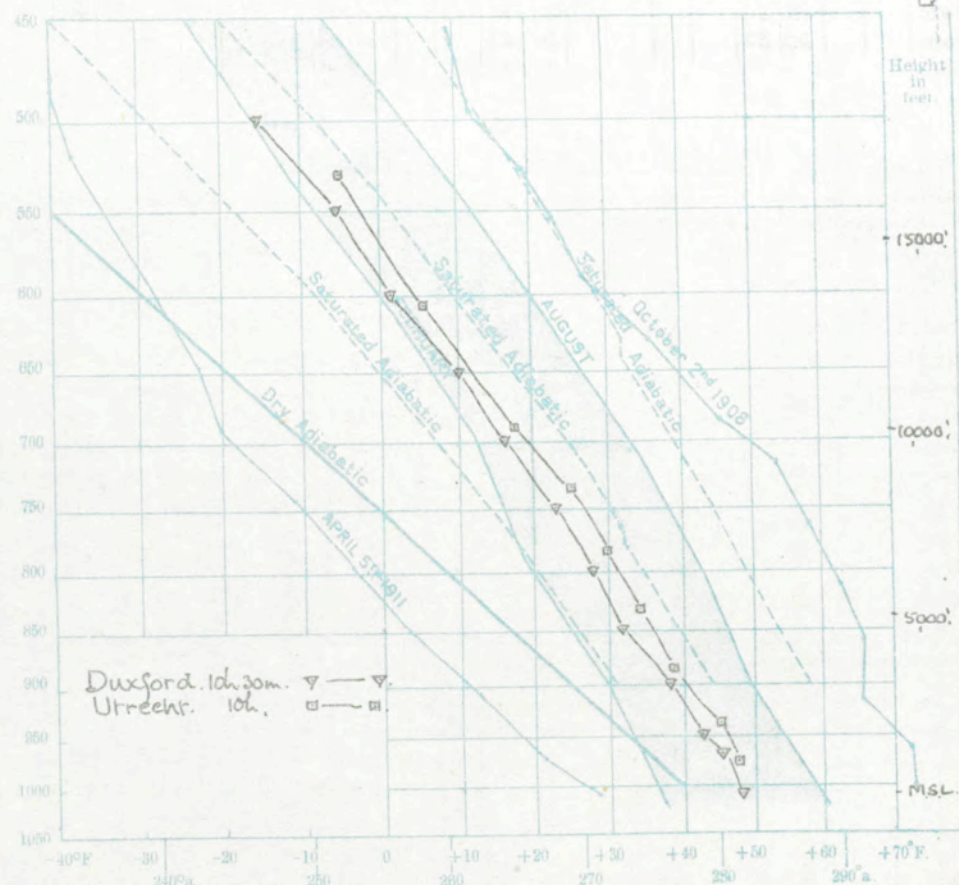
Directions are given in degrees, velocities in m.p.h.

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).

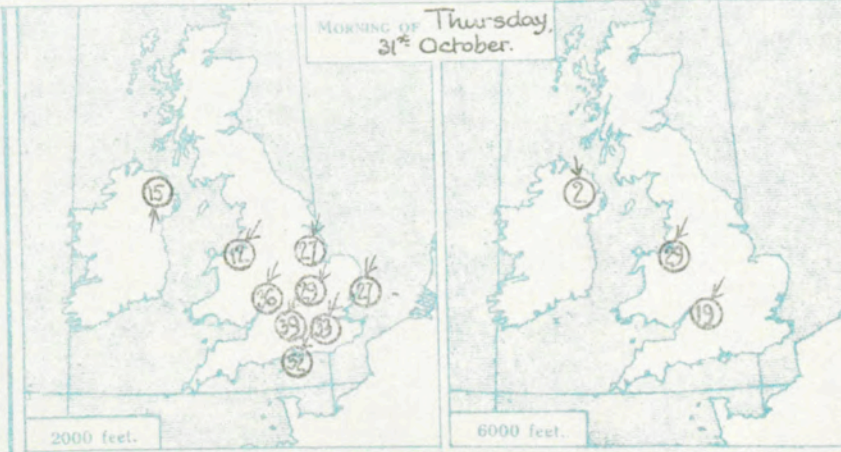
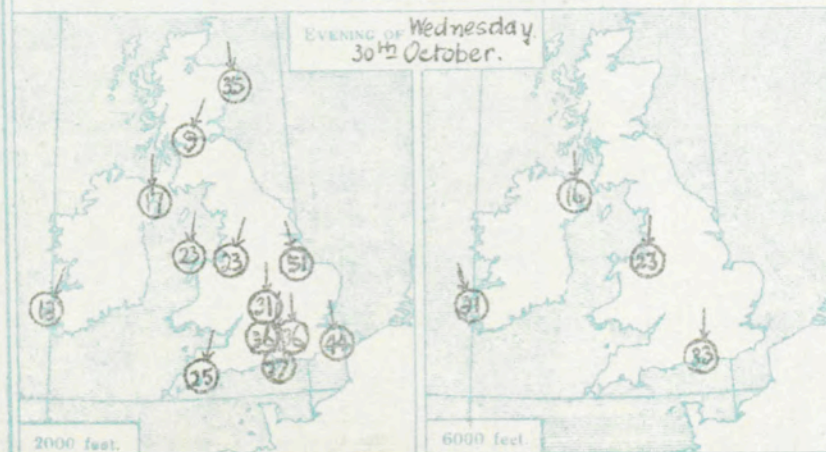
CLOUD FORMS, AMOUNTS AND MOVEMENTS.



UPPER AIR TEMPERATURES.

Wednesday, 30th October, 1929.

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



© Indicates absence of cloud.

