

WOKINGHAM

METEOROLOGICAL

DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat/Long 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL.

Monthly Means and Totals

OCTOBER 2013

Temperature (°C / °F)			Anomaly	Rank in the past 132 years			
Mean maximum	16.5	61.7	+1.3	12 th highest			
Mean minimum	9.6	49.3	+2.4	4 th highest			
Daily mean	13.0	55.4	+1.8	8 th highest			
Highest maximum	21.0	69.8	on 2 nd	Lowest maximum	11.1	52.0	on 13 th
Highest minimum	15.9	60.6	on 4 th	Lowest minimum	1.6	34.9	on 30 th
Mean grass minimum	6.8	44.2	+2.7	Lowest grass minimum	-3.1	26.4	on 30 th
Mean earth @30 cm	14.4	57.9	+1.3	Earth @100 cm	15.0	59.0	
Frost duration (hrs)	0.0			Rain duration (hrs)	58.4		
Rainfall total (mm / in)	86.4	3.40	120 %	34 th highest			
Highest daily fall	25.6	1.01	on 27 th				
Number of: Dry days (<0.2mm)	11	Wet days (>0.9mm)	15	days ≥5mm	5		
Sunshine total (hrs) 98.3	Daily mean 3.17	88 %	Sunniest day 10.4		on 6 th		
N° days with: Air frost 0	Ground frost 4	Snow falling 0	Snow lying 0				
Thunder 2	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun 3			
Pressure MSL : Mean @09 GMT, mbar 1011.3	-3.0	Highest 1026.5	on 6 th	Lowest 977.8	on 28 th		
Relative humidity : Mean (%) 83.5	Lowest 48	on 6 th	Water vapour (g/kg), mean at 09 and 15 GMT 8.2,		7.9		
Overall mean wind speed (mph) 7.6	Windiest day 13.6	on 11 th	Max gust 64	on 28 th			
Wind direction (days) N 1 NE 1 E 1 SE 4 S 5 SW 14 W 4 NW 1							
Least windy day (mph) 2.8	on 5 th	Calm; less than 0.5 mph (minutes) 441					

Anomaly = departure from 1981 to 2010 average (degrees C, percent and mbar).

Notes:

Very Mild and Wet with Sunshine Below Average. Quite Windy at Times.

Temperature: Temperatures were well above the climatological average this month, with the mean minimum 4th highest in 132 years, although the mean maximum is only 12th highest in that period. The resulting mean temperature is highest only since 2011, and is 1.1° below the record, set in 2006. Temperatures were mild from the 1st to the 8th, and from the 16th to the 27th, while from the 9th to the 15th and after the 27th, it was near normal or cool. The distribution of daily max temperature shows that 22 days were above normal and 9 below. Daily anomalies ranged from +4.2° on the 4th to -4.9° on the 13th. For daily min, 25 days were above normal and 6 below, with daily anomalies between +8.8° on the 2nd, also over +7° on the 4th and 26th, and between -3° and -4° on the 6th, 16th, 24th and 30th. The month's highest max is 0.8° above the median and the lowest max is 1.9° above its median. The month's highest min is 2.8° above the median and is 3rd highest in 101 years, and only 0.1° below the record, while the lowest min is 2.6° above the median. There was no air frost for the first October since 2006, although 15 of the last 38 Octobers have also had none. **Rainfall:** This October's rain total is in the wet category, but it was much wetter in the same month last year, and also wetter in 4 other October's this millennium. The month's wettest day on the 27th had the most rainfall for an October day since 2000, but the 25.6 mm ranks only 21st highest in the past 110 years. The duration of measurable rain is 5.6 hours above normal. The month got off to a dry start, with little rain before the 11th, and a 6 day dry spell up to the 9th. From the 11th to the 22nd rainfall was a little above average, and the deficit in accumulation which stood at 21 mm on the 10th had decreased to zero by the 22nd. A drier spell from the 22nd to the 31st was punctuated on the 27th by the month's wettest day, leading to a surplus of around 15 mm on the 31st. Overall there were 5 fewer dry days than average. No hail was recorded, but there were 2 days with thunder, both having rainfall rates in the violent category, 111 mm/hr on the 20th and 133 mm/hr from the 22nd. **Sunshine:** It was a rather dull month overall, though there was a scattering of sunny days, notably the 6th, 24th and 29th, the former having over 90 % of the maximum. Sunshine accumulation was below average up to the 5th, then near or slightly above until the 11th, then rather below until the 22nd, after which it was generally above average, though the last day was sunless. Other less sunny October's in recent years include 2000, 2001, 2004 and 2012. Overall there were 15 days with <3 hours, 6 with =>6 hours and 1 =>9 hours. **Wind:** This has been quite a windy month, with the mean wind speed 1.3 mph above average, highest for October since 1998. Daily mean speeds were above 9 mph on the 10th and 11th, also from the 21st to the 28th with the exception of the 24th. Surprisingly the month's windiest day on the 11th, mean speed 13.6 mph, was not the day with the highest wind speeds, the 28th, when a gust of 64 mph was recorded, the highest for an October day since 66 mph in 2000, and 2nd highest since before 1988. The extreme wind on the 28th was relatively short lived, the main strength lasting just over half an hour, but the peak 10 minute mean of 35 mph at 0623 hours is only 4 mph short of a gale, a rarity at a lowland inland location. Directions were E'ly on the 1st, gradually veering to W'ly by the 5th, veering to N'ly between the 8th and 10th, then backing SE'ly between the 13th and 18th, veering S'ly on the 19th, remaining S or SW until the 31st, except for a SE'ly on the 24th.

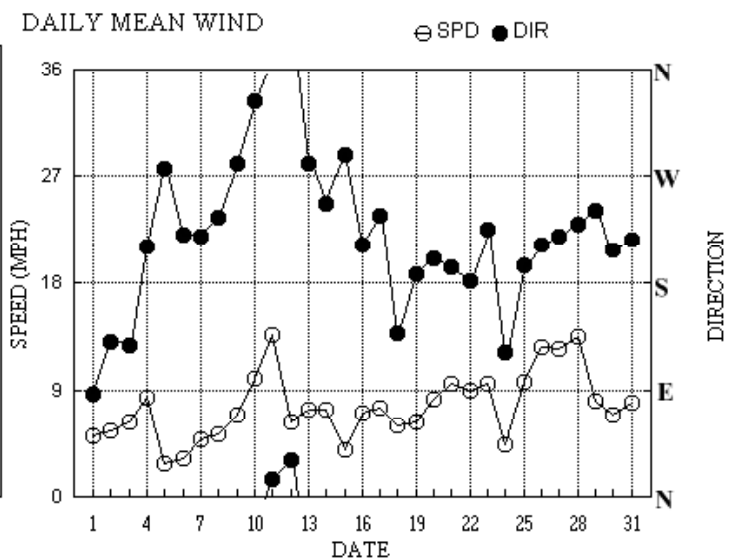
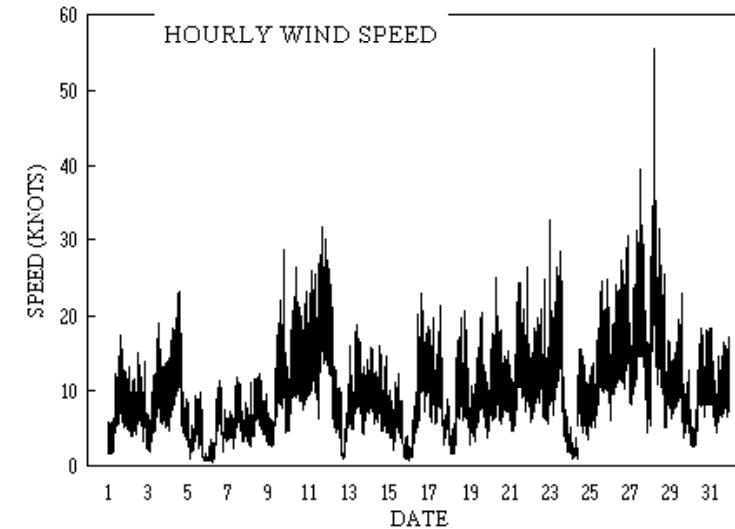
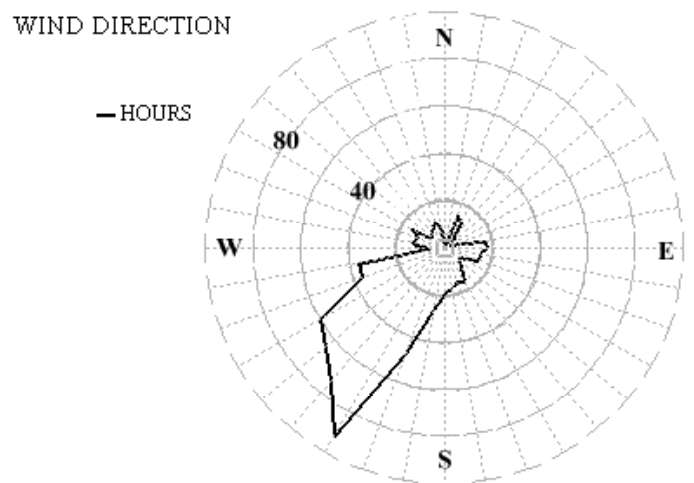
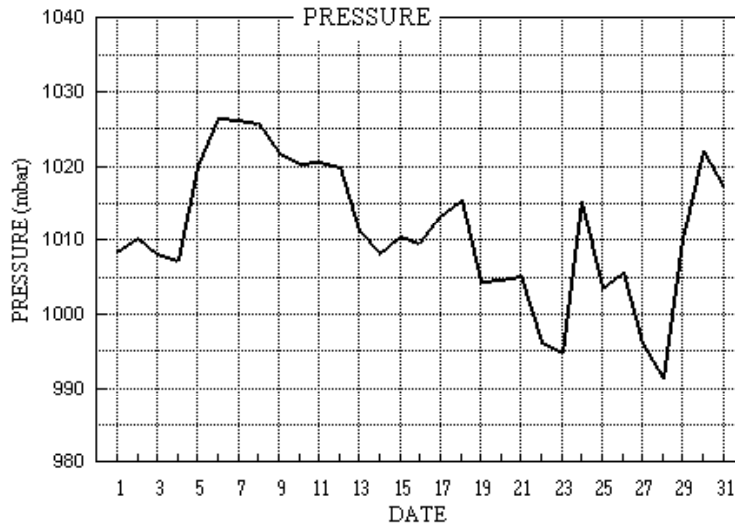
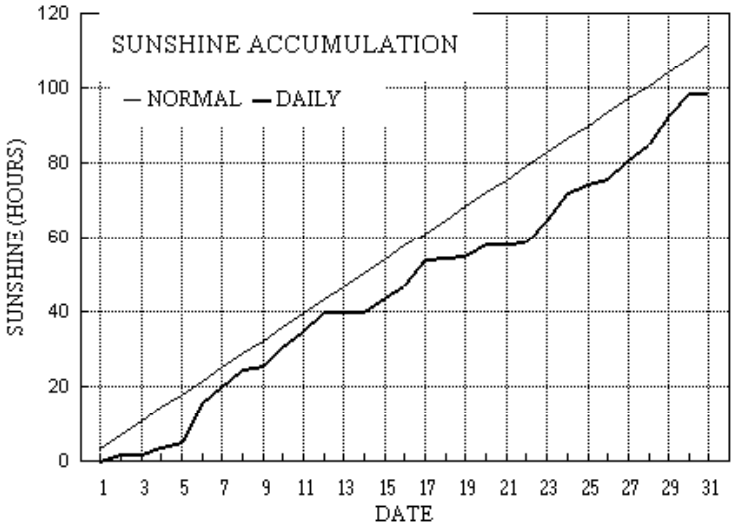
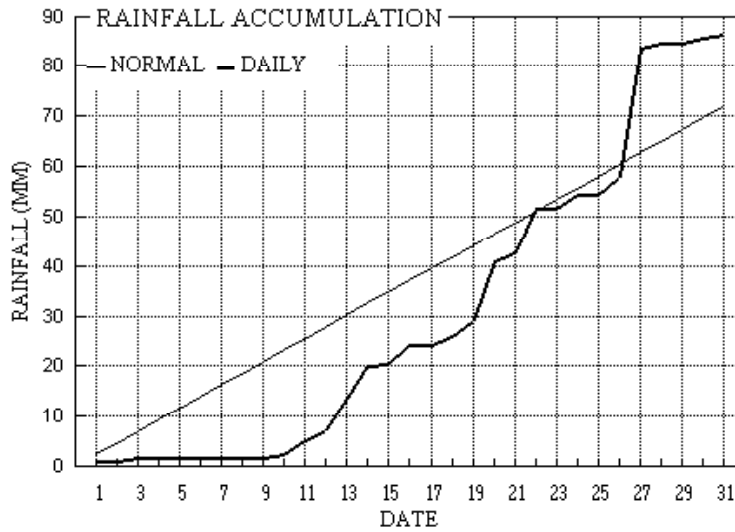
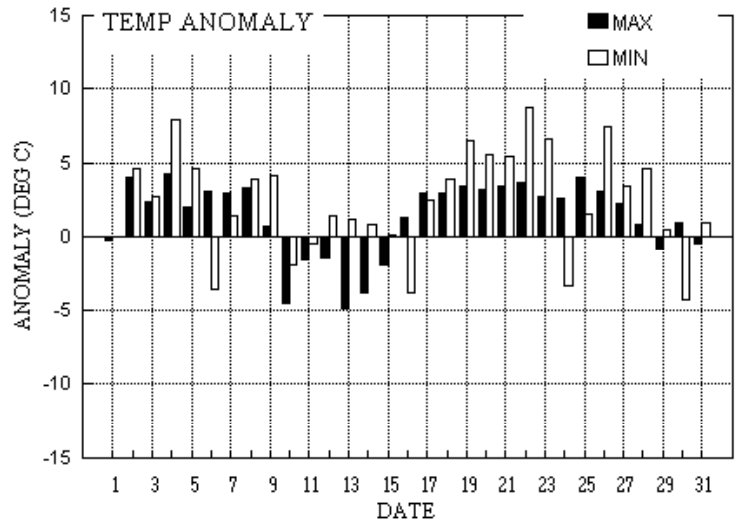
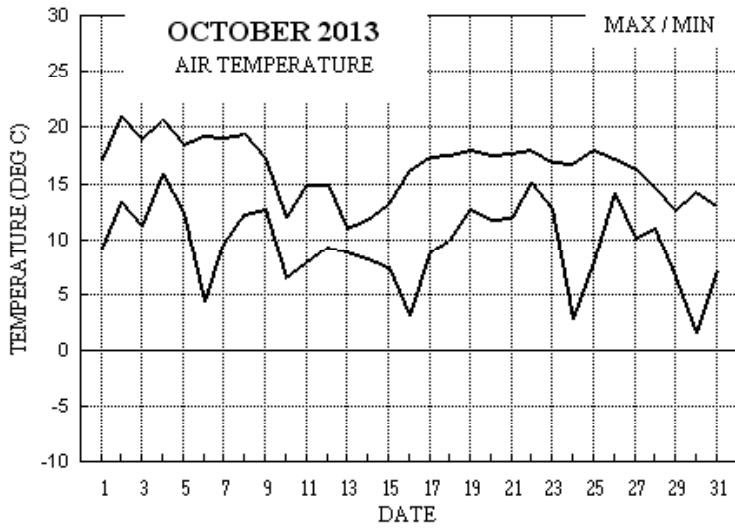
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+1.8°	+2.4°	9%	86%	0.0°	+1.8°	168%	75%	+2.0°	+2.9	177%	103%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for October 2013



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: OCTOBER 2013

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs
1	17.1	9.1	1.0	4.7	15.8	15.8	0.3	0.0	1008.3	0 0 0 0	0 0 0 0	0 0 0 0	86 4.2 4.4	127 18 1613	106 7	16 1.3	
2	21.0	13.4	0.0	13.3	15.7	15.8	1.5	0.0	1010.2	0 0 0 0	0 0 0 0	0 0 0 0	130 4.3 4.8	135 15 1318	152 7	13 0.0	
3	19.0	11.2	0.9	6.9	16.0	15.8	0.1	0.0	1008.1	0 0 0 0	0 0 0 0	0 0 0 0	127 4.6 5.5	148 19 1320	161 8	15 1.0	
4	20.7	15.9	tr	14.3	16.2	15.8	2.0	0.0	1007.2	0 0 0 0	0 0 0 0	0 0 0 0	211 6.6 7.2	239 23 1412	227 12	12 0.0	
5	18.5	12.5	tr	9.3	16.3	15.8	1.5	0.0	1019.8	0 0 0 0	0 0 0 0	0 0 0 0	276 1.8 2.4	302 10 1405	313 4	14 0.0	
6	19.3	4.4	tr	-0.2	15.9	15.8	10.4	0.0	1026.4	0 1 0 0	0 0 0 0	0 0 0 0	221 2.6 2.9	229 12 1312	243 6	13 0.0	
7	19.1	9.7	tr	4.0	15.4	15.8	4.3	0.0	1026.3	0 0 0 0	0 0 0 0	0 0 0 0	219 4.1 4.2	215 12 1035	235 6	10 0.0	
8	19.5	12.3	tr	6.2	15.7	15.8	4.4	0.0	1025.8	0 0 0 0	0 0 0 0	0 0 0 0	236 4.5 4.6	264 13 1414	239 6	10 0.0	
9	17.2	12.7	0.0	6.5	15.8	15.7	1.2	0.0	1021.7	0 0 0 0	0 0 0 0	0 0 0 0	281 5.3 6.0	334 29 1809	331 12	18 0.0	
10	12.0	6.6	0.4	2.9	15.1	15.7	5.2	0.0	1020.3	0 0 0 0	0 0 0 0	0 0 0 0	333 8.5 8.7	340 27 0904	325 11	07 0.4	
11	14.9	7.9	2.9	6.0	14.3	15.6	3.8	0.0	1020.5	0 0 0 0	0 0 0 0	0 0 0 0	14 11.3 11.8	24 32 1747	22 16	17 5.5	
12	14.9	9.3	2.0	8.0	14.3	15.5	5.4	0.0	1020.0	0 0 0 0	0 0 0 0	0 0 0 0	31 3.6 5.5	11 26 0019	16 13	01 1.9	
13	11.1	8.8	6.5	5.4	14.3	15.3	0.0	0.0	1011.2	0 0 0 0	0 0 0 0	0 0 0 0	281 5.8 6.4	327 19 0951	313 8	09 5.8	
14	11.8	8.3	6.5	7.3	13.8	15.2	0.1	0.0	1008.1	0 0 0 0	0 0 0 0	0 0 0 0	247 6.0 6.3	248 16 1338	219 8	14 2.0	
15	13.2	7.4	0.4	3.4	13.5	15.1	3.4	0.0	1010.5	0 0 0 0	0 0 0 0	0 0 0 0	288 2.6 3.4	345 12 1200	297 6	10 1.0	
16	16.1	3.1	3.8	-1.0	13.1	14.9	3.3	0.0	1009.5	0 1 0 0	0 0 0 0	0 0 0 0	212 3.5 6.1	261 23 1427	247 11	16 3.1	
17	17.5	8.8	tr	7.0	13.0	14.8	6.8	0.0	1013.4	0 0 0 0	0 0 0 0	0 0 0 0	237 6.3 6.5	250 22 1301	231 10	00 0.0	
18	17.6	10.0	1.6	5.8	13.4	14.6	0.5	0.0	1015.4	0 0 0 0	0 0 0 0	0 0 0 0	137 4.7 5.2	127 21 1936	132 9	20 1.1	
19	18.0	12.7	3.0	12.3	13.8	14.5	0.5	0.0	1004.5	0 0 0 0	0 0 0 0	0 0 0 0	187 4.9 5.5	186 21 1518	202 10	14 1.9	
20	17.6	11.9	11.8	8.0	14.0	14.5	3.2	0.0	1004.7	0 0 0 0	1 0 0 0	0 0 0 0	201 6.9 7.1	214 25 0710	196 9	11 4.6	
21	17.8	12.0	1.9	9.9	14.0	14.5	0.0	0.0	1005.1	0 0 0 0	0 0 0 0	0 0 0 0	193 8.2 8.3	180 27 2115	201 12	11 4.8	
22	18.0	15.1	9.1	14.4	14.3	14.5	0.5	0.0	996.3	0 0 0 0	1 0 0 0	0 0 0 0	181 7.6 7.8	218 25 1928	194 11	15 5.2	
23	17.0	12.8	tr	11.4	14.5	14.5	6.2	0.0	994.8	0 0 0 0	0 0 0 0	0 0 0 0	225 7.5 8.2	189 33 0124	252 13	13 0.0	
24	16.8	2.8	2.7	-0.8	13.8	14.5	7.5	0.0	1015.3	0 1 0 0	0 0 0 0	0 0 0 0	121 2.9 3.8	155 16 1218	162 7	12 3.0	
25	18.0	7.9	0.1	9.8	13.7	14.5	2.0	0.0	1003.5	0 0 0 0	0 0 0 0	0 0 0 0	194 6.7 8.4	210 25 2149	207 11	13 0.4	
26	17.2	14.1	3.4	11.2	14.0	14.4	1.8	0.0	1005.5	0 0 0 0	0 0 0 0	0 0 0 0	212 10.8 10.9	192 31 2129	206 14	21 1.9	
27	16.3	10.1	25.6	7.8	14.2	14.4	5.1	0.0	996.1	0 0 0 0	0 0 0 0	0 0 0 0	220 10.5 10.8	241 40 1321	231 16	13 9.5	
28	14.6	11.0	0.9	9.0	14.0	14.4	4.0	0.0	991.2	0 0 0 0	0 0 0 0	0 0 0 0	230 11.1 11.7	258 56 0614	252 22	06 0.4	
29	12.6	6.5	tr	2.6	13.5	14.4	7.3	0.0	1010.1	0 0 0 0	0 0 0 0	0 0 0 0	242 6.7 7.0	289 23 1438	271 9	12 0.0	
30	14.3	1.6	1.3	-3.1	12.6	14.3	6.0	0.0	1022.0	0 1 0 0	0 0 0 0	0 0 0 0	207 5.9 6.0	202 19 2319	216 9	11 2.5	
31	13.0	7.1	0.6	9.0	12.5	14.2	0.0	0.0	1017.0	0 0 0 0	0 0 0 0	0 0 0 0	216 6.7 6.9	197 19 0109	200 10	01 1.1	
Total			86.4				98.3	0.0									58.4
Mean	16.5	9.6		6.8	14.4	15.0	3.17	0.0	1011.3					219 3.5 6.6			
Anom	+1.3	+2.4	120%	+2.7	+1.3	+0.3	88%										-3.0
Daily mean		13.0															
Anom		+1.8															

Number of days with:

Air frost = 0 Ground frost = 4 Nil sun = 3
 Snow falling = 0 Snow lying = 0 Thunder = 2
 Hail=>5mm = 0 Hail<5mm or ice = 0 Fog at 09GMT = 0

Abbreviations.

Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT
 Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).
 Grass min = Lowest overnight temperature at grass tip level.
 Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.
 pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.
 Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.
 Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
 Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
 Sp = 24 hour mean wind speed in knots.
 Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.
 High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.
 30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.
 Anom = Departure from 1981-2010 climatological average.
 All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for OCTOBER 2013

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NChs	hshs	NChs	Date	Remarks
1	45	7	07	04	13	14.1	12.4	89	8.9	1008.3	0	002	21	6	2	6	5	6	7	2	85635	85650	1	/Ac58 /Ci72	
2	30	8	11	05	11	15.0	13.9	93	9.9	1010.2	2	017	20	5	2	8	7	2	/	/	83704	88705	2		
3	50	8	07	06	12	15.9	15.1	95	10.7	1008.1	7	014	10	2	2	7	6	3	7	/	87706	88360	3		
4	78	7	21	10	18	17.8	15.2	84	10.8	1007.2	2	019	02	8	2	7	8	4	/	/	81812	85815	87635	4	
5	65	6	32	04	09	15.9	13.5	85	9.5	1019.8	2	022	80	8	2	6	8	4	/	1	81812	85630	5	2Sc50 /Ci75 vv40k ex p Rainbow part	
6	59	5	23	01	03	12.3	11.7	96	8.4	1026.4	1	005	10	1	1	0	0	9	0	1	85080		6	COTRA	
7	50	7	24	05	08	13.8	13.4	98	9.4	1026.3	0	005	28	4	2	7	6	1	/	1	81702	87703	7	/Ci80 COTRA	
8	62	5	24	07	12	15.5	13.4	88	9.4	1025.8	1	010	03	1	1	5	6	4	0	0	85710		8	1Sc50	
9	59	7	25	07	11	14.2	12.3	88	8.8	1021.7	7	006	05	2	2	6	8	4	3	8	85810	85275	9	2Sc45 2Ac68 Cu hum/medSE Cs edgeNW	
10	86	1	33	10	23	8.6	1.3	60	4.1	1020.3	1	017	03	0	0	1	8	5	0	0	81828		10	1Sc40	
11	82	1	03	10	26	11.9	6.9	71	6.1	1020.5	1	033	01	8	1	1	1	5	3	2	81820		11	1Ac62 1Ci70 Cu hum Cu con topSE	
12	65	6	08	05	13	10.1	8.6	90	6.9	1020.0	2	027	01	6	1	3	2	4	3	1	83815	84075	12	1Ac65 COTRA Cu med	
13	30	8	31	09	18	11.1	10.1	93	7.7	1011.2	7	008	63	6	2	7	7	3	2	/	83706	87710	88520	13	
14	63	8	24	07	13	9.3	7.7	89	6.5	1008.1	0	004	21	6	2	8	5	4	/	/	83710	87713	88635	14	
15	59	7	29	06	11	9.0	7.4	90	6.4	1010.5	2	009	05	1	1	7	6	3	/	/	83708	87712	15		
16	35	8	08	05	09	8.8	8.5	98	6.9	1009.5	8	026	63	6	2	2	7	2	2	/	82705	88556	16		
17	78	4	25	05	12	13.9	12.1	89	8.8	1013.4	2	016	03	8	1	1	8	4	0	1	81812	84075	17	1Sc40 COTRA Cu fra Parhelia	
18	50	7	11	03	06	13.6	12.9	96	9.2	1015.4	7	002	10	4	2	3	8	2	3	1	81705	85365	87075	18	1Sc25 1Cu35 2Sc45 COTRA Cu med
19	58	7	19	04	08	16.1	15.0	93	10.7	1004.5	0	005	20	5	2	7	5	4	3	/	86615	87630	19	/Ac65	
20	70	6	19	08	14	14.1	11.4	83	8.4	1004.7	2	013	25	8	2	1	8	4	6	3	81712	86070	20	1Cu25 1Sc30 1Ac65 Cb tops W&E	
21	58	8	18	08	18	15.2	14.0	92	10.0	1005.1	8	013	63	6	6	7	5	3	7	/	81708	83712	85650	21	3Sc30 8Ac60
22	62	8	19	08	17	16.1	14.5	90	10.4	996.3	7	011	61	6	6	5	8	4	7	/	81710	83625	85358	22	2Cu15 8As65 Cu med
23	62	6	23	12	25	14.3	12.1	86	8.9	994.8	2	040	15	8	2	6	8	4	/	/	81715	85818	23	3Sc40 Cu med jpNNW	
24	63	3	15	01	04	7.9	7.4	96	6.4	1015.3	0	011	02	0	0	0	0	9	0	1	83078		24	COTRA	
25	75	7	19	07	13	15.7	14.7	94	10.5	1003.5	3	016	20	6	5	3	8	4	7	2	81710	83468	86072	25	2Cu12 2Sc40 /Ac68 COTRA U/a cont
26	75	3	22	12	24	16.1	11.7	75	8.6	1005.5	1	010	25	8	1	3	8	4	0	0	81818	83635	26	Cu fra	
27	68	1	22	13	23	13.1	9.4	78	7.4	996.1	1	015	02	6	1	1	1	4	3	0	81815		27	1Ac62 Cu fra	
28	89	6	24	11	34	11.3	6.7	73	6.2	991.2	1	122	15	6	1	5	8	4	6	3	81818	85645	28	1Ac60 1Ci70 Cu fra/med Cb top N Gust 56kt at 0614	
29	80	1	25	07	14	9.2	6.2	82	5.9	1010.1	2	032	02	0	0	1	5	7	3	0	81650		29	1Ac58	
30	75	2	21	05	08	7.1	6.3	95	5.9	1022.0	1	011	02	0	0	1	5	7	0	1	81650		30	2Ci80 COTRA	
31	61	8	21	05	09	11.8	10.5	92	7.9	1017.0	0	003	60	6	2	8	5	3	/	/	83708	88645	31		

Mean vis = 17.7 km

Mean cloud = 5.7 71%

Mean wind speed = 6.8 kn

Mean gust = 14 kn

Mean TT = 12.9 °C

Mean TdTd = 10.8 °C

Mean RH = 87.8 %

Mean r = 8.2 g/kg

Mean PPP = 1011.3 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

dd = Direction from which wind is blowing, tens of degrees true

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)-

covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for OCTOBER 2013

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppwwW1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	58	8	10	05	15	16.3	12.7	79	9.1	1008.5	5	000	05	2	2	8	6	4	/ /	88712	1				
2	80	7	18	06	14	20.3	13.7	66	9.7	1010.0	8	002	03	1	1	2	8	5	0	2	81825	86070	2	1Sc45 2Sc56 COTRA Cu med Halo 22° part	
3	80	7	16	09	16	19.0	15.8	82	11.2	1005.6	7	004	01	6	2	7	8	4	/	1	82712	84818	86630	3	/Ci75 COTRA
4	89	4	22	11	23	20.2	13.3	64	9.5	1010.2	0	008	01	8	1	2	2	5	0	1	82828	83078		4	COTRA Cu med
5	84	7	33	03	10	17.6	11.0	65	8.1	1022.0	2	010	02	2	2	7	8	6	/ /		81830	87650		5	Absent v&cld est
6	88	6	27	05	11	17.4	9.0	58	7.0	1025.1	6	008	02	2	2	1	4	6	0	1	81640	86080		6	COTRA Parhelia
7	82	7	22	04	09	18.2	12.3	68	8.7	1024.3	7	015	03	2	2	6	8	5	/	1	83825	84630	86080	7	COTRA Cu hum
8	84	8	26	04	13	18.5	13.8	74	9.7	1024.4	5	005	02	6	2	8	5	5	/ /		85620	88625		8	
9	88	7	29	08	22	14.4	6.6	59	6.0	1017.4	7	015	01	2	2	2	8	6	7	/ /	81832	87367		9	2Sc45 2As64 Cu hum Ac edgeNW
10	80	7	34	07	21	11.3	2.4	54	4.5	1020.6	6	003	15	2	2	7	8	6	/ /		82835	87650		10	Cu med jpN
11	62	8	02	13	25	12.6	10.2	85	7.7	1018.1	6	015	61	6	6	7	5	3	2	/	82708	83712	87615	11	8Ns50
12	75	7	01	04	10	13.8	5.5	57	5.6	1019.0	7	013	02	1	1	2	8	6	3	8	82835	87275		12	1Sc50 1Ac68 COTRA Cu med Halo 22° part
13	62	7	31	06	15	10.4	9.3	93	7.3	1009.4	7	007	60	6	2	7	8	3	/ /		82708	85812	87640	13	Cu med
14	50	7	26	07	15	9.4	6.8	84	6.2	1006.8	6	011	81	8	2	7	9	4	7	2	82715	83920	86650	14	/Ac60 /Ci75
15	67	5	29	04	07	12.9	8.3	73	6.8	1011.3	3	002	01	2	2	5	8	4	0	0	82818	84630		15	Cu med
16	80	1	25	11	23	15.2	12.8	86	9.2	1006.2	3	001	01	6	1	1	2	5	0	0	81825			16	Cu med
17	72	6	25	07	19	17.5	10.7	64	7.9	1014.6	0	001	03	8	1	1	8	5	0	6	81828	86275		17	1Sc45 COTRA Cu med Parhelia
18	75	7	15	09	20	16.9	10.9	68	8.1	1012.0	7	017	02	2	2	1	8	5	7	2	81825	83365	87070	18	1Sc45 1Ac62 Cu med
19	75	7	21	11	20	17.4	12.8	75	9.3	1003.4	6	008	03	6	2	2	2	4	3	2	82818	87070		19	2Ac66 Cu med
20	60	7	23	07	18	12.8	11.4	91	8.4	1004.2	4	000	80	9	8	7	9	3	/ /		83708	86915		20	/Sc30
21	82	7	20	11	20	17.3	13.3	77	9.5	1004.3	6	006	02	2	2	7	8	4	/ /		81818	85822	87630	21	Cu hum
22	75	5	19	11	21	17.7	13.9	78	10.0	994.7	5	013	15	2	2	4	2	4	0	1	84818			22	2Ci70 Cu con jpN&E
23	80	2	26	11	25	15.1	7.2	59	6.4	1003.0	2	036	01	1	1	1	1	6	0	2	81835			23	2Ci75 COTRA Cu hum
24	82	7	13	06	13	16.2	10.7	70	8.0	1013.0	7	013	03	1	1	1	8	5	8	1	81825	83365	87072	24	1Sc35 1Ac62 COTRA Cu med Ac cas vir Parhelia
25	75	6	20	11	25	17.3	12.2	72	8.9	1004.1	7	007	15	2	2	2	8	5	3	1	82825	85075		25	1Sc35 1Ac68 COTRA Cu med jpW
26	65	5	22	13	26	16.1	12.2	78	8.9	1004.0	8	008	15	8	2	5	8	4	0	0	83815	83645		26	Cu med jpNW&N
27	62	7	23	15	32	15.0	8.6	66	7.1	997.2	0	002	25	8	1	3	8	6	3	6	81830	83650	86270	27	1Ac68 Cu ned jpNW
28	80	2	23	09	22	11.7	7.4	75	6.5	997.6	2	032	25	8	1	1	9	5	6	3	81820	81930		28	1Sc50 1Ac59 2Ci70 jpE
29	75	3	26	06	23	10.1	3.0	61	4.7	1013.7	2	018	25	8	1	2	9	6	6	0	82930	81835		29	1Ac60 jpS vv70k ex S U/a cont Shallow Cb
30	88	4	20	08	16	13.6	7.5	66	6.4	1019.4	7	016	02	1	1	3	8	5	0	1	81825	83650		30	2Ci80 COTRA Cu med
31	68	8	23	07	15	12.8	9.3	79	7.1	1015.9	6	007	02	2	2	1	6	4	7	/	81715	88463		31	1Ac62

Mean vis = 31.2 km

Mean cloud = 6.0 75%

Mean wind speed = 8.0 kn

Mean gust = 18 kn

Mean TT = 15.3 °C

Mean TdTd = 10.1 °C

Mean RH = 71.8 %

Mean r = 7.9 g/kg

Mean PPP = 1011.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

dd = Direction from which wind is blowing, tens of degrees true

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)-

covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Wokingham		Hour	01-Oct	02-Oct	03-Oct	04-Oct	05-Oct	06-Oct	07-Oct	08-Oct	09-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct
Sunshine		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013		4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		6	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.10	0.00	0.24	0.05	0.00	0.00	0.00	0.00	0.00
		7	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.09	0.97	0.92	0.25	0.00	0.00	0.06	0.00
		8	0.14	0.00	0.00	0.00	0.52	1.00	0.12	0.97	0.07	1.00	1.00	0.65	0.00	0.00	0.18	0.00
		9	0.19	0.00	0.00	0.00	0.11	1.00	0.84	1.00	0.75	1.00	1.00	1.00	0.00	0.00	0.00	0.00
		10	0.00	0.02	0.00	0.08	0.01	1.00	0.59	1.00	0.03	0.93	0.61	0.81	0.00	0.00	0.55	0.00
		11	0.00	0.37	0.00	0.15	0.04	0.91	0.58	0.05	0.14	0.39	0.20	0.44	0.00	0.00	0.55	0.00
		12	0.00	0.38	0.00	0.15	0.14	0.86	0.60	0.07	0.15	0.12	0.00	0.54	0.00	0.02	0.00	0.00
		13	0.00	0.10	0.00	0.04	0.00	0.93	0.87	0.00	0.00	0.00	0.00	0.97	0.00	0.03	0.00	0.52
		14	0.00	0.55	0.00	0.74	0.00	0.79	0.68	0.00	0.00	0.01	0.00	0.71	0.00	0.00	0.58	0.94
		15	0.00	0.03	0.00	0.31	0.36	1.00	0.00	0.00	0.00	0.11	0.00	0.03	0.00	0.00	0.53	1.00
		16	0.00	0.00	0.05	0.53	0.12	1.00	0.00	0.03	0.00	0.44	0.00	0.00	0.00	0.00	0.92	0.81
		17	0.00	0.00	0.09	0.00	0.21	0.39	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot			0.32	1.46	0.14	2.00	1.51	10.39	4.29	4.42	1.22	5.20	3.76	5.41	0.00	0.05	3.38	3.27
		Hour	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	Mean
		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
		7	0.85	0.00	0.00	0.02	0.00	0.00	0.00	0.89	0.00	0.20	0.78	0.21	0.72	0.68	0.00	0.28
		8	1.00	0.34	0.00	0.94	0.00	0.00	0.07	1.00	0.00	0.50	1.00	0.74	1.00	1.00	0.00	0.43
		9	0.83	0.00	0.01	0.91	0.00	0.00	0.26	1.00	0.62	0.64	1.00	0.10	0.99	1.00	0.00	0.46
		10	0.45	0.00	0.00	0.42	0.00	0.00	0.59	1.00	0.34	0.10	1.00	0.70	0.96	1.00	0.00	0.39
		11	0.73	0.00	0.00	0.27	0.00	0.00	0.93	1.00	0.11	0.08	0.34	0.56	0.82	0.41	0.00	0.29
		12	0.13	0.01	0.00	0.00	0.00	0.00	0.84	0.82	0.03	0.01	0.40	0.46	0.38	0.32	0.00	0.21
		13	0.15	0.18	0.05	0.00	0.00	0.02	1.00	0.89	0.46	0.06	0.51	0.11	0.48	0.49	0.00	0.25
		14	0.81	0.00	0.31	0.01	0.00	0.06	1.00	0.57	0.37	0.06	0.10	0.42	0.59	0.49	0.00	0.32
		15	1.00	0.00	0.01	0.15	0.00	0.44	0.96	0.31	0.04	0.08	0.00	0.59	0.81	0.36	0.00	0.26
		16	0.88	0.00	0.13	0.46	0.00	0.00	0.53	0.00	0.00	0.07	0.00	0.16	0.54	0.26	0.00	0.22
		17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
		18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot			6.83	0.52	0.52	3.16	0.00	0.52	6.18	7.47	1.97	1.79	5.12	4.04	7.29	6.00	0.00	98.26

OCTOBER 2013	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	13.91	17.2	1236	9.5	414	81.8	95.3	509	68.7	1955	10.76	8.07	9.5	845	6.9	129	1008.51	1009.6	2004	1007.7	445	0.0
2	16.12	21.1	1422	12.7	2356	85.6	95.0	2358	64.5	1452	13.62	9.71	11.7	1152	7.7	11	1010.06	1012.0	2057	1008.2	535	0.9
3	16.36	19.1	1506	11.3	132	91.8	97.0	435	81.0	1516	15.02	10.68	12.2	2223	8.0	132	1007.73	1011.6	19	1004.4	1148	0.6
4	17.53	20.9	1150	14.9	2352	81.8	92.6	11	61.7	1521	14.30	10.16	11.5	314	8.9	1615	1009.13	1014.8	2357	1004.2	424	0.4
5	14.59	18.6	1201	8.6	2357	83.3	95.1	2359	58.6	1401	11.63	8.44	10.0	844	6.5	2357	1020.53	1025.2	2341	1014.6	8	0.0
6	11.83	19.4	1303	4.9	624	82.4	97.6	752	48.1	1304	8.52	6.86	9.5	936	5.1	625	1025.71	1026.5	1024	1024.7	1533	0.0
7	14.14	19.2	1436	9.6	149	87.4	98.1	809	64.5	1439	11.94	8.59	10.7	1142	7.0	149	1025.40	1026.5	815	1024.2	1558	0.0
8	15.82	19.6	1219	12.2	624	85.6	95.7	706	66.7	1220	13.33	9.38	10.2	1705	8.3	624	1024.84	1025.8	832	1023.9	1606	0.0
9	12.78	17.3	1206	7.0	2357	74.4	93.3	120	54.4	1911	8.11	6.86	9.1	837	4.2	1933	1019.91	1024.4	35	1016.1	1720	0.0
10	8.84	11.8	1153	6.5	648	62.4	75.7	128	51.0	1155	1.97	4.34	4.7	2056	4.0	702	1019.75	1021.3	1844	1017.3	1	0.0
11	11.57	15.0	1109	7.8	150	77.9	89.4	1333	55.0	1106	7.79	6.58	8.0	1343	4.5	0	1018.34	1020.8	943	1015.7	409	1.6
12	11.35	15.0	1325	8.9	1838	80.7	94.3	652	53.0	1332	7.98	6.65	8.3	507	5.2	1450	1018.20	1020.4	1147	1015.4	427	1.4
13	10.09	11.5	808	8.7	2159	91.8	94.6	625	86.6	245	8.81	7.05	7.9	808	6.4	2357	1011.11	1016.4	0	1008.9	2357	6.6
14	9.25	11.9	1346	8.3	2308	89.4	94.0	1951	77.1	1354	7.58	6.50	6.9	1342	6.1	1458	1007.67	1009.0	11	1006.3	1444	5.2
15	8.73	13.3	1519	3.9	2357	88.6	96.0	2335	71.1	1521	6.89	6.19	7.0	1114	4.8	2313	1011.29	1015.4	2342	1008.7	1	0.0
16	10.13	16.2	1419	3.3	51	89.9	98.2	626	68.1	1619	8.43	6.99	10.8	1408	4.6	51	1009.87	1015.5	53	1005.2	1343	2.9
17	13.61	17.7	1455	10.9	332	83.2	94.9	2325	60.9	1527	10.69	7.97	9.4	938	7.1	1715	1013.81	1016.4	2109	1010.2	0	0.7
18	13.90	17.7	1307	9.9	611	86.6	96.9	811	67.5	1505	11.62	8.49	9.8	1231	7.3	611	1013.02	1016.7	144	1006.8	2353	1.1
19	14.71	18.0	1416	12.3	2319	89.0	94.6	206	73.4	1432	12.90	9.32	11.1	956	8.2	2104	1004.89	1006.9	20	1003.1	1417	0.7
20	13.71	17.7	1113	11.8	1755	87.7	94.1	36	71.6	1132	11.70	8.59	9.6	1043	7.7	739	1004.90	1007.4	2303	1003.1	544	10.0
21	15.69	17.9	1352	13.1	0	85.3	93.2	443	75.3	1357	13.19	9.48	10.4	1037	8.5	0	1004.89	1007.5	34	1001.4	2358	1.4
22	15.77	18.1	1418	12.8	2105	86.3	92.2	2342	77.8	1526	13.48	9.75	10.6	1202	8.4	2055	996.08	1001.6	4	991.8	2357	4.9
23	12.98	17.1	1241	5.6	2351	81.1	94.8	2357	53.9	1357	9.64	7.65	9.5	24	5.3	2351	999.75	1012.2	2359	990.3	248	3.6
24	10.57	17.0	1219	3.2	626	86.8	97.2	823	64.7	1221	8.31	6.94	9.2	1042	4.6	626	1012.87	1015.6	813	1008.1	2359	0.3
25	15.44	18.1	1408	12.5	0	83.9	95.3	631	69.1	1411	12.66	9.17	10.9	1007	8.4	0	1004.34	1008.3	0	1001.6	624	1.9
26	15.19	17.3	1125	13.2	2357	80.3	90.5	2307	72.4	930	11.80	8.66	9.5	1039	8.0	1842	1003.53	1006.1	1	998.2	2256	1.1
27	13.16	16.4	1339	10.0	647	79.0	94.8	2240	57.7	1204	9.47	7.49	9.1	2359	6.5	1214	996.07	998.8	1755	988.5	2359	12.2
28	11.73	16.0	313	7.5	1811	80.4	95.6	125	57.9	1257	8.39	7.14	10.8	249	5.4	2209	992.88	1002.9	2359	977.8	536	10.9
29	8.40	12.7	1419	4.8	2353	78.0	90.0	649	52.1	1423	4.62	5.29	6.4	941	4.5	1426	1011.35	1018.8	2353	1002.8	1	0.1
30	9.23	14.4	1407	1.6	646	81.6	96.1	755	62.7	1320	6.08	5.88	7.9	2359	4.0	643	1019.97	1022.2	948	1017.8	2358	0.6
31	12.29	13.1	352	11.6	842	87.5	93.4	251	77.4	1551	10.26	7.73	8.6	342	6.8	1553	1016.22	1018.0	0	1013.5	2359	1.3
Total																						70.4
Mean	12.88	16.64		9.00		83.6	94.05		65.30		10.05	7.83	9.38		6.41		1011.05	1014.67		1007.12		
Max	17.53	21.08		14.90		91.8	98.20		86.60		15.02	10.68	12.16		8.90		1025.71	1026.54		1024.69		
Min	8.40	11.51		1.59		62.4	75.70		48.05		1.97	4.34	4.71		3.99		992.88	998.84		977.83		

Wokingham Automatic Weather Station
 AWS samples taken every 0.5 seconds
 x and n refer to maximum and minimum respectively

Readings taken at Wokingham Climatological Station, Emmbrook, Berkshire
Lat 51.425 N, Long 0.853 W, NGR (SU) 798701
Altitude 45 m ASL.

Tmn = 00 to 24 GMT mean air temperature at 1.2 m, deg C
 RHmn = 00-24 GMT mean relative humidity at 1.2 m, percent
 TDmn = 00-24 GMT mean dew point at 1.2 m, deg C
 rmn = 00-24 GMT mean humidity mixing ratio, g/kg
 pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar
 Rtot = 00-24 GMT rainfall total from AWS tipping bucket raingauge, mm
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system

Appendix 1.

Explanation and definition of some of the terms used in the Wokingham Weather Reports.

Average: Generally refers to the 30 year climatological average, currently 1981 to 2010. This will be next updated in 2010. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

For sunshine, there was a change in instrument used to detect sunshine amount in July 1999, and the data produced by the new instrument is not strictly comparable with that obtained prior to July 1999, making the climatological average based on the old instrument of little use. In general, the new instrument produces higher values in the winter half year, and lower ones in the summer half, than the old type of instrument, due to a combination of faster reaction and higher sensitivity than the old type. Thus the average used in this case is for a theoretical equivalent average for the 1981 to 2010 climatological period for this new instrument, based on comparisons with Met Office published tables of departure from the climatological average sunshine in the months since 2000 for their area 'Southern England'. Users of the Wokingham Monthly Weather reports should be aware of this, and regard the anomalies for sunshine published therein as a guide only, until such time has elapsed since the introduction of the new instrument that a genuine average becomes available.

Mean: The mean of the data under discussion, often the monthly mean of daily data. The mean is obtained by summation of the individual values and dividing by the number of values. The term 'daily mean' in respect of temperature is defined as "half (max+min)". A true daily 24 hour (00 to 24 GMT) mean temperature is available from the AWS, and is currently published on page 7 of the Wokingham Monthly Weather Report on the Wokingham Weather Web Site, page1. <http://www.woksat.info/wwp1.html>

Anomaly : When a value is given for anomaly, this will have the following meanings:

- a): The departure of a mean from the current climatological average.
- b): The departure of a value from the a long-term average for a particular day.

When the word anomaly is used in respect to temperature, any values given are in degrees C. In respect to rainfall, percent. In respect of sunshine, percent. In respect to wind, mph. In respect to pressure, millibars/hpa.

Categories : Reference may be made in the reports to 'categories'. Each category has a strict statistical range, as outlined below.

Temperature: The terms mild/cold are used in the winter half year, and warm/cool in the summer half.

The term normal is defined as being when the individual mean (monthly, seasonal or annual) value is within 20% of the median of all ranked values for that month/season/year.

Mild/warm: The value lies between 10% and 30% below the highest value in the ranked series.

Very mild/very warm: The value lies within 10% of the highest value in the ranked series.

Cold/cool: The value lies between 10% and 30% above the lowest value in the ranked series.

Very cold/very cool. The value lies within 10% of the lowest value in the ranked series.

Sunshine: The terms for sunshine are very sunny, sunny, normal, dull and very dull.

The definition for sunshine follow the same rules as for temperature.

Rainfall: The terms for rainfall are very dry, dry, normal, wet and very wet.

The term normal follows the same rule as for temperature and sunshine.

The term wet is used for values lying between 10% and 30% below the highest value in the ranked series.

the term very wet is used for values lying within 10% of the highest value in the ranked series.

The term dry is used for values lying between 10% and 30% of the lowest value in the ranked series.

The term very dry is used for values lying within 10% of the lowest value in the ranked series.

Long-term : Mention may be made in the reports to the 'long-term' . The long-term record comprises a temperature/rainfall/sunshine data series compiled from the records of various station in the Wokingham area in the years prior to the establishment of a weather station at Emmbrook in 1976.

In the case of monthly max, min and mean temperature and of rainfall total the 'long-term' goes from the present back to 1882. For extremes of temperature, highest max and lowest min are back to 1904, and for lowest max and highest min, to 1913.

Rank : The word rank refers to the position of a value for a particular month/season/year in the ranked values of the entire series. The central value in the ranked series is known as the median. This value may be different from the 'average' if the population of values is skewed. Also, as the median considers all values in the series, and the average refers to a 30 year climatological period, during periods of climatic change, the median will also be expected to differ from the average.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

The year number given when discussing 'winter' is usually the year in which the majority of the period lies, i.e. January/February

Annual or Year : The calendar year, 1st January to 31st December.

The climatological day : runs from 09 to 09 GMT. The max temperature and rainfall read at 0900 are attributed to the previous day, as is the duration of measurable rain calculated up to 0900 GMT. The min temperature and grass min read at 0900 are attributed to the day of reading . Pressure is read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 readings. Sunshine data, wind data, rainfall rates and 24 hour data from the AWS use the normal 00 to 24 GMT day.

Frost: An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is -0.1°C or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is -0.1°C or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below 0.0°C , and the day runs from midnight to midnight.

Snow : A day with snow falling is triggered if snow falls at any time in the 24 hours from midnight on that day. A day with snow lying is entered if there is at least 50 % cover of snow at the 0900 GMT observation.

Hail : A day of hail is recorded if hailstones of 5 mm diameter or more are observed or recorded on the hail pad on a 24 hour period starting at midnight.

A day of small hail is recorded if hailstones less than 5 mm diameter are observed or recorded in a 24 hour period starting at midnight. Note, various types of other ice meteors such as ice pellets, snow grains, and some types of snow pellets are included in this category.

Fog: A day of fog is recorded if the horizontal visibility at 0900 GMT is below 1000 m.

Thunder: A day of thunder is recorded if thunder is heard in the 24 hour period from midnight on that day.

Rainfall : Rainfall is given in mm and tenths. "tr" (trace) is entered when: a) precipitation has occurred but there is no water in the gauge. b) There is water in the gauge but it is less than 0.05 mm.

Dry Spell : A dry spell, for the purposes of the Wokingham climatological data and reports, is defined as a period of 5 or more consecutive dry days. A dry day is defined as one where the 24 hour precipitation measured at 09 GMT is not greater than 0.1 mm.

Wind: The following abbreviations may be used to denote wind directions :

Degrees are from true north

N = North = 360° and 22.5° either side.

NE = NorthEast = 045° and 22.5° either side.

E = East = 090° and 22.5° either side.

SE = SouthEast = 135° and 22.5° either side.

S = South = 180° and 22.5° either side.

SW = SouthWest = 225° and 22.5° either side.

W = West = 270° and 22.5° either side.

NW = NorthWest = 315° and 22.5° either side.

Wind – terms for speed used in monthly reports: When the following terms are used in the monthly reports, they will be based on the following unofficial criteria, (the day runs from 00 to 24 GMT) :

Term	Daily mean speed, knots		Highest hourly mean speed, knots		24 hour maximum gust, knots
Very light	3 or less	and	4 or less	and	8 or less
Light	3 to 6	or	4 to 8	or	8 to 16
Moderate	6 to 9	or	8 to 12	or	16 to 24
Fresh	9 to 12	or	12 to 16	or	24 to 32
Strong	12 to 15	or	16 to 20	or	32 to 40
Very strong	15 to 18	or	20 to 24	or	40 to 48
Near gale	18 to 21	or	24 to 28	or	48 to 56
Gale	21 to 24	or	28 to 32	or	56 to 64
Severe gale	24 to 27	or	32 to 36	or	64 to 72

B.J.Burton. 3 August 2009
 Updated 8 Sept 2009,
 4 Nov 2011

Appendix 2.

Explanation and decode for code figures used in the Wokingham 0900 and 1500 GMT observations

VV : Visibility.

Code figures 00 to 50 are in km and tenths e.g. 01 = 0.1 km = 100 m, 33 = 3.3 km, 50 = 5.0 km

Code figures 60 to 80. Subtract 50 to obtain visibility in km. e.g. 56 = 6 km, 65 = 15 km, 77 = 27 km.

Code figures 81 to 89. Subtract 50 and add 5 for every one above 80. e.g. 83 = 45 km, 86 = 60 km.

Code figure 89 = visibility above 70 km.

N : Total cloud amount in okta (eighths of sky covered). 9 = sky obscured (e.g. by fog or snow)

dd : Wind direction in tens of degrees from true north. Wind is measured at a height of 10 m, and the direction is the mean over a period of 10 minutes ending at the observation time.

ff : Wind speed in knots, measured at 10 m, and is the mean over a period of 10 minutes ending at observation time.

gg : Wind gust in knots at 10 m. The highest gust in the 60 minutes up to observation time.

TT : Air temperature at 1.2m, degrees C and tenths.

TdTd : Dew point temperature at 1.2m, degrees C and tenths.

RH : Relative humidity at 1.2m, %.

r : Humidity mixing ratio (amount of water vapour per kg of air), grams and tenths.

PPP : Air pressure reduced to MSL, millibars and tenths.

a : Characteristic of pressure tendency during the past 3 hours.

Code figures 0 to 3, pressure higher than 3 hours ago, 5 to 8, pressure lower than 3 hours ago

Code figure 0 = Increasing then decreasing, pressure the same as or higher than 3 hours ago

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

3 = Decreasing or steady then increasing, or increasing then increasing more rapidly

4 = Steady, pressure the same as 3 hours ago

5 = Decreasing then increasing, pressure lower than 3 hours ago

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

8 = Steady or increasing then decreasing, or decreasing then decreasing more rapidly

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

04 = Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes.

05 = Haze, visibility reduced by extremely small dry particles (RH less than appx. 95 %)

06 = Widespread dust in suspension, not raised by the wind near the station at the time of the observation

07 = Dust or sand raised by the wind at or near the station at the time of the observation, but no well-developed dust whirls or sand whirls, and no duststorm or sandstorm seen: In marine environments, blowing spray at the station.

08 = Well-developed dust or sand whirls seen at or near the station during the preceding hour or at the time of the observation, but no duststorm or sandstorm.

09 = Duststorm or sandstorm within sight at the time of the observation, or at the station during the preceding hour

10 = Mist
11 = Patches of shallow fog not deeper than 2 metres on land
12 = More or less continuous shallow fog not deeper than 2 metres on land
13 = Lightning visible, no thunder heard
14 = Precipitation within sight, not reaching the ground
15 = Precipitation within sight, reaching the ground more than 5 km from the station
16 = Precipitation within sight, reaching the ground, near to but not at the station
17 = Thunderstorm, but no precipitation at the time of the observation
18 = Squalls at or within sight of the station at the time of the observation or during the preceding hour
19 = Funnel cloud(s) at or within sight of the station at the time of the observation or during the preceding hour

20 = Drizzle (not freezing) at the station during the preceding hour but not at the time of the observation
21 = Rain (not freezing) at the station during the preceding hour but not at the time of the observation
22 = Snow at the station during the preceding hour but not at the time of the observation
23 = Rain and snow or ice pellets at the station during the preceding hour but not at the time of the observation
24 = Freezing drizzle or freezing rain at the station during the preceding hour but not at the time of the observation
25 = Shower(s) of rain at the station during the preceding hour but not at the time of the observation
26 = Shower(s) of snow or rain and snow at the station during the preceding hour but not at the time of the observation
27 = Shower(s) of hail or rain and hail at the station during the preceding hour but not at the time of the observation
28 = Fog or ice fog at the station during the preceding hour but not at the time of the observation
29 = Thunderstorm, with or without precipitation at the station during the preceding hour but not at the time of the observation

30 = Slight or moderate duststorm or sandstorm has decreased during the preceding hour
31 = Slight or moderate duststorm or sandstorm with no appreciable change during the past hour
32 = Slight or moderate duststorm or sandstorm has begun or increased during the past hour
33 = Severe duststorm or sandstorm has decreased during the preceding hour
34 = Severe duststorm or sandstorm with no appreciable change during the past hour
35 = Severe duststorm or sandstorm has begun or increased during the past hour
36 = Slight or moderate drifting snow generally below eye level
37 = Heavy drifting snow generally below eye level
38 = Slight or moderate blowing snow generally above eye level
39 = Heavy blowing snow generally above eye level

40 = Fog or ice fog at a distance at the time of the observation, but not at the station during the preceding hour, the fog extending to a level above that of the observer.
41 = Fog or ice fog in patches
42 = Fog or ice fog, sky visible has become thinner during the past hour
43 = Fog or ice fog, sky invisible has become thinner during the past hour
44 = Fog or ice fog, sky visible no appreciable change during the past hour
45 = Fog or ice fog, sky invisible no appreciable change during the past hour
46 = Fog or ice fog, sky visible has begun or become thicker during the past hour
47 = Fog or ice fog, sky invisible has begun or become thicker during the past hour
48 = Fog, depositing rime, sky visible
49 = Fog depositing rime, sky invisible

50 = Drizzle, not freezing, intermittent slight at time of observation
51 = Drizzle, not freezing, continuous slight at time of observation
52 = Drizzle, not freezing, intermittent moderate at time of observation
53 = Drizzle, not freezing, continuous moderate at time of observation
54 = Drizzle, not freezing, intermittent heavy at time of observation
55 = Drizzle, not freezing, continuous heavy at time of observation
56 = Drizzle, freezing, slight
57 = Drizzle, freezing, moderate or heavy (dense)
58 = Drizzle and rain, slight
59 = Drizzle and rain, moderate or heavy

60 = Rain, not freezing, intermittent slight at time of observation
61 = Rain, not freezing, continuous slight at time of observation
62 = Rain, not freezing, intermittent moderate at time of observation
63 = Rain, not freezing, continuous moderate at time of observation
64 = Rain, not freezing, intermittent heavy at time of observation
65 = Rain, not freezing, continuous heavy at time of observation
66 = Rain, freezing, slight
67 = Rain, freezing, moderate or heavy
68 = Rain or drizzle and snow, slight
69 = Rain or drizzle and snow, moderate or heavy

70 = Intermittent fall of snowflakes slight at time of observation
71 = Continuous fall of snowflakes slight at time of observation
72 = Intermittent fall of snowflakes moderate at time of observation
73 = Continuous fall of snowflakes moderate at time of observation
74 = Intermittent fall of snowflakes heavy at time of observation
75 = Continuous fall of snowflakes heavy at time of observation
76 = Diamond dust (with or without fog)
77 = Snow grains (with or without fog)
78 = Isolated star-like snow crystals (with or without fog)
79 = Ice pellets

80 = Rain shower(s), slight
81 = Rain shower(s), moderate or heavy
82 = Rain shower(s), violent
83 = Shower(s) of rain and snow mixed, slight
84 = Shower(s) of rain and snow mixed, moderate or heavy
85 = Snow shower(s), slight
86 = Snow shower(s), moderate or heavy
87 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, slight
88 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, moderate or heavy
89 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, slight
90 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, moderate or heavy

91 = Slight rain at time of observation, thunderstorm during the past hour but not at time of observation
92 = Moderate or heavy rain at time of observation, thunderstorm during the past hour but not at time of observation
93 = Slight snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
94 = Moderate or heavy snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
95 = Thunderstorm, slight or moderate, without hail but with rain and or snow at time of observation
96 = Thunderstorm, slight or moderate, with hail at time of observation
97 = Thunderstorm, heavy, without hail but with rain and or snow at time of observation
98 = Thunderstorm combined with duststorm or sandstorm at time of observation
99 = Thunderstorm, heavy, with hail at time of observation

Hail includes large hail, small hail and snow pellets.

W1, W2 : Past weather (for 0900 and 1500 GMT observations, the period covered is 3 hours)

Code figures:

- 0 = Cloud covering half or less of the sky throughout the period
- 1 = Cloud covering more than half the sky during only part of the period
- 2 = Cloud covering more than half the sky throughout the period
- 3 = Sandstorm, duststorm or blowing snow
- 4 = Fog or ice fog or thick haze (visibility less than 1000 m)
- 5 = Drizzle
- 6 = Rain
- 7 = Snow or rain and snow mixed
- 8 = Shower(s)
- 9 = Thunderstorm(s) with or without precipitation

Nh : Amount of low cloud, or medium cloud if no low cloud present, okta

Cl : Type of low cloud

- 0 = No low cloud
- 1 = Cumulus with little vertical extent and seemingly flattened, or ragged Cumulus other than bad weather, or both
- 2 = Cumulus of moderate or strong vertical extent, either accompanied or not by other Cumulus or Stratocumulus all having their bases at the same level
- 3 = Cumulonimbus whose summits, at least partially, lack sharp outline, but are neither clearly fibrous (cirriform), nor in the form of an anvil; Cumulus, Stratocumulus or Stratus may also be present
- 4 = Stratocumulus formed by the spreading out of Cumulus; Cumulus may also be present
- 6 = Stratus in a more or less continuous sheet or layer, or ragged shreds, or both, but no Stratus fractus of bad weather
- 7 = Stratus fractus of bad weather or Cumulus fractus of bad weather or both (pannus), usually below Altostratus or Nimbostratus
- 8 = Cumulus and Stratocumulus other than that formed by the spreading out of Cumulus, the bases of the Cumulus and Stratocumulus are not at the same level.
- 9 = Cumulonimbus, the upper part of which is clearly fibrous (cirriform), often in the form of an anvil, either accompanied or not by any other type(s) of low cloud
- / = Types of low cloud invisible due to darkness, fog, blowing dust or sand or other similar phenomena.

'Bad weather' denotes the conditions which generally exist during precipitation and a short time before and after.

Cm : Type of medium cloud.

- 0 = No medium cloud.
- 1 = Altostratus, the greater part of which is semi-transparent; through this part the sun or moon may be weakly visible, as through ground glass
- 2 = Altostratus, the greater part of which is sufficiently dense to hide the sun or moon, or Nimbostratus
- 3 = Altocumulus, the greater part of which is semi-transparent; the various elements of the cloud change only slowly and are all at a single level
- 4 = Altocumulus in patches (often in the form of almonds or fishes), the greater part of which is semi-transparent ; the clouds occur at one or more levels and the elements are continually changing in appearance
- 5 = Altocumulus in bands semi-transparent, of Altocumulus in one or more fairly continuous layers (semi-transparent or opaque), progressively invading the sky; these Altocumulus clouds generally thicken as a whole
- 6 = Altocumulus resulting from the spreading out of Cumulus (or Cumulonimbus)
- 7 = Altocumulus in two or more layers, usually opaque in places, and not progressively invading the sky; or opaque layer of Altocumulus not progressively invading the sky; or Altocumulus together with Altostratus or Nimbostratus
- 8 = Altocumulus with sproutings in the form of small towers or battlements, or Altocumulus having the appearance of cumuliform tufts
- 9 = Altocumulus of a chaotic sky, generally at several levels
- / = Types of medium cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

Ch : Type of high cloud

0 = No high cloud

1 = Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.

2 = Dense cirrus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus with sproutings in the form of small turrets or battlements, or Cirrus having the appearance of cumuliform tufts

3 = Dense Cirrus, often in the form of an anvil, being the remains of the upper part of Cumulonimbus, or where the rest of the Cumulonimbus is below the horizon

4 = Cirrus in the form of hooks or filaments, or both, progressively invading the sky; they generally become denser as a whole

5 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, but the continuous veil does not reach 45 degrees above the horizon.

6 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole; the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered

7 = Veil of Cirrostratus covering the celestial dome.

8 = Cirrostratus not progressively invading the sky and not completely covering the celestial dome

9 = Cirrocumulus alone, or accompanied by Cirrus or Cirrostratus, or both, but Cirrocumulus is predominant.

/ = Types of high cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

/ = Cloud type not visible owing to darkness, fog, duststorm, or other analogous phenomena.

hshs = Height of cloud above station level reported by type C

00 to 50 = Height in hundreds of feet

51 to 55 Not used

56 to 80 = Subtract 50 to obtain cloud height in thousands of feet

81 to 88 = Height of cloud between 35000 and 70000 ft in 5000 ft steps.