

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 2012

Temperature (°C / °F)				Anomaly	Rank in the past 131 years				
Mean maximum	13.9	57.0	-1.3	37 th lowest					
Mean minimum	6.8	44.2	-0.4	43 rd highest					
Daily mean	10.4	50.7	-0.8	61 st lowest					
Highest maximum	17.5	63.5	on 2 nd	Lowest maximum	8.8	47.8	on 27 th		
Highest minimum	12.9	55.2	on 1 st	Lowest minimum	-1.1	30.0	on 14 th		
Mean grass minimum	4.3	39.7	+0.2	Lowest grass minimum	-5.3	22.5	on 28 th		
Mean earth @30 cm	13.2	55.8	+0.1	Earth @100 cm	14.2	57.6			
Frost duration (hrs)	1.9				Rain duration (hrs)	80.0			
Rainfall total (mm / in)	117.4	4.62	163%	15 th highest					
Highest daily fall	19.4	0.76	on 5 th						
Number of: Dry days (<0.2mm)	7	Wet days (>0.9mm)	17	days ≥5mm	8				
Sunshine total (hrs) 86.1	Daily mean 2.78	77 %		Sunniest day	9.6	on 14 th			
N° days with: Air frost 2	Ground frost 9	Snow falling 1		Snow lying	0				
Thunder 2	Hail ≥5mm 1	Small hail/ice 0		Fog @09	3		Nil sun 7		
Pressure MSL : Mean @09 GMT, mbar	1010.7	-3.6	Highest	1025.0	on 23 rd	Lowest	977.6	on 31 st	
Relative humidity : Mean (%)	86.7	Lowest	47	on 16 th		Water vapour (g/kg), mean at 09 and 15 GMT 7.0, 7.0			
Overall mean wind speed (mph)	6.3	Windiest day	11.9	on 26 th		Max gust	36 on 5 th		
Wind direction (days)	N 4	NE 8	E 1	SE 1	S 4	SW 12	W 0	NW 1	
Least windy day (mph)	2.2	on 7 th		Calm; less than 0.5 mph (minutes)		526			

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

Notes:

Dull and Wet with Temperatures Below Average.

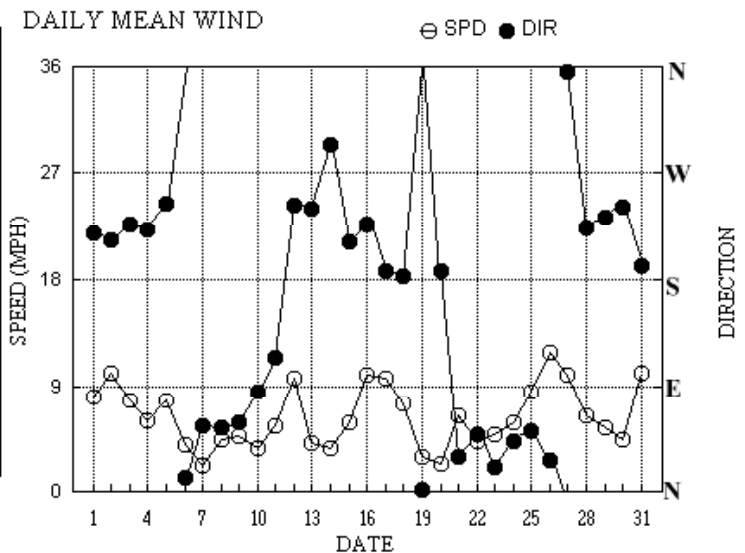
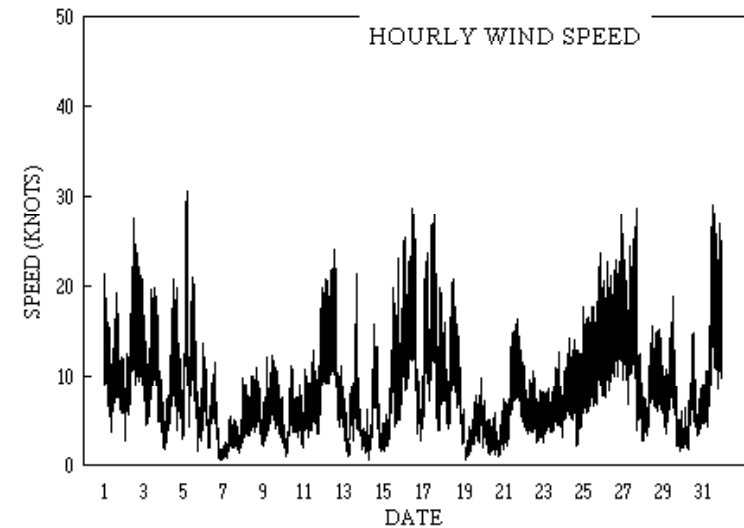
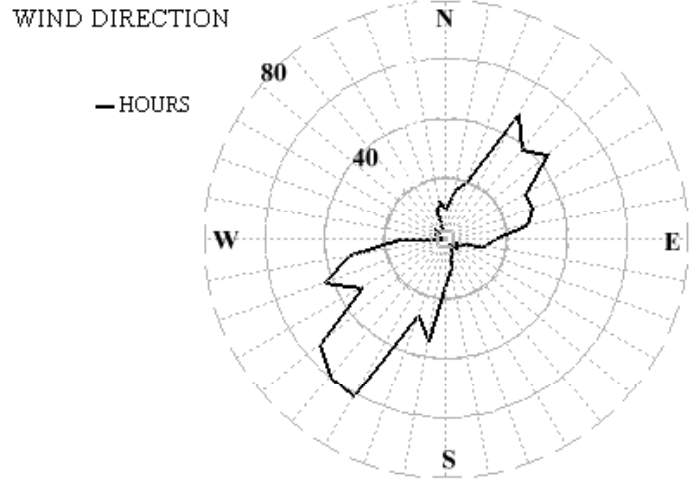
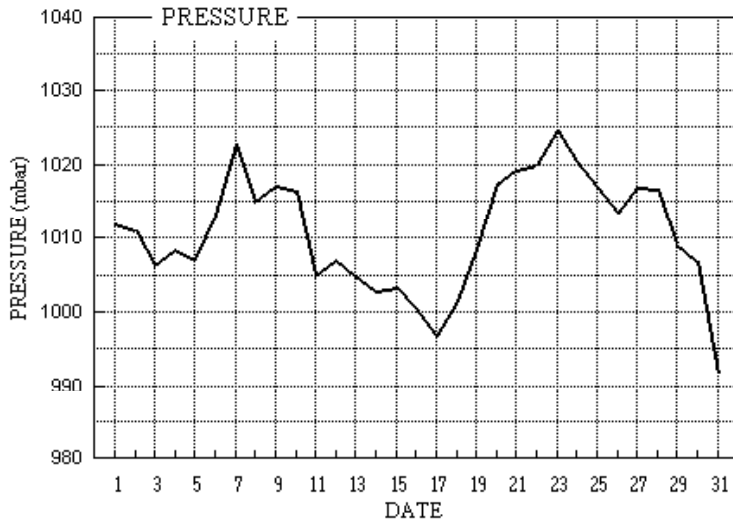
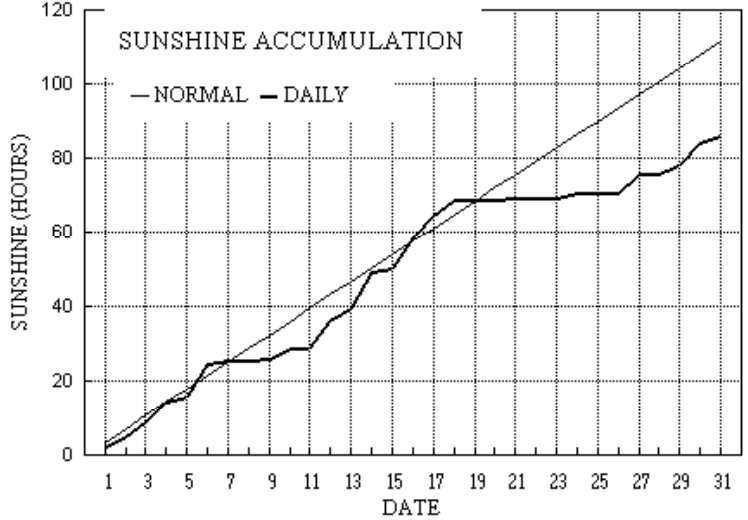
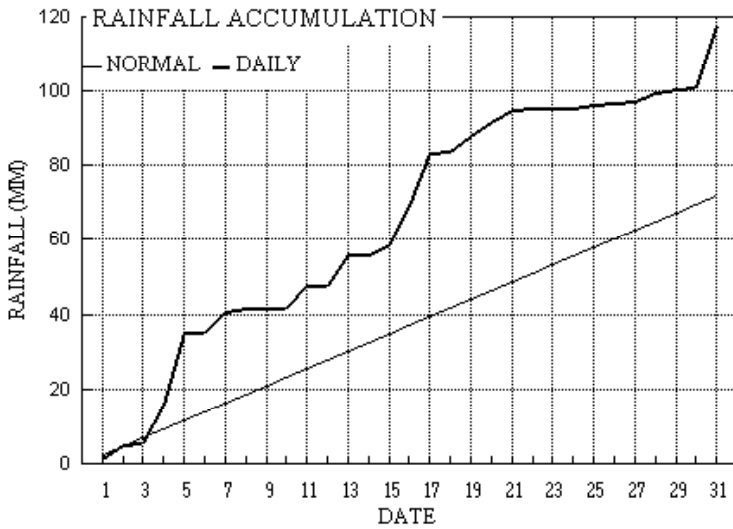
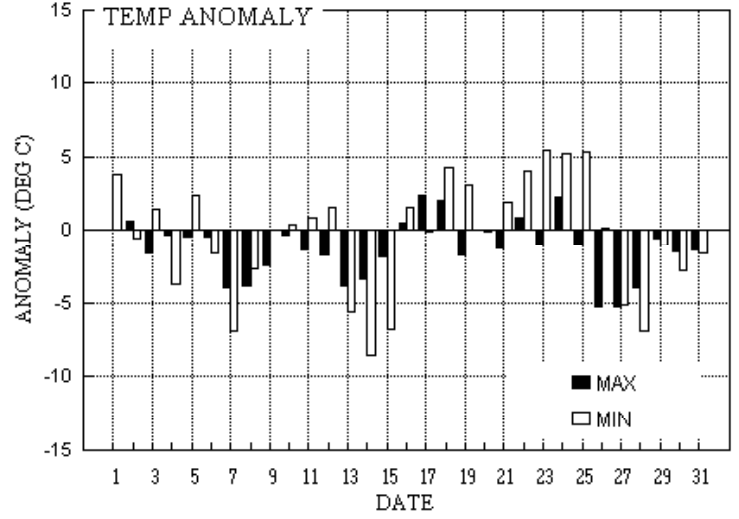
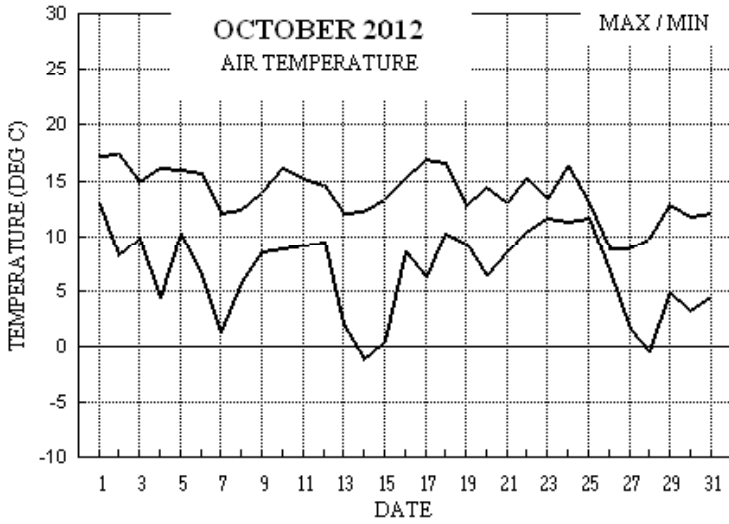
Temperature: In terms of the mean maximum, this is the coldest October since 1993. However, the mean minimum is lowest only since 2008, and the resulting overall daily mean temperature is also lowest since 2008. The month's highest maximum is 2.7° below the median and is equal lowest with 2004 since 1982. The lowest maximum is 0.5 below the median and is lowest since 2008. Both the highest and lowest minimum are close to their respective medians. The mean daily temperature range of 7.1° is lowest since 2004. Earth temperatures were near or slightly below average. The first air frost since 16th April occurred on the 14th after 180 frost-free days, 8 days less than average. The duration of air frost at just under 2 hours can be compared with 2010 when there was 24.3 hours. **Rainfall:** This has been a wet October with 63 % more rain than average and the wettest since 2000. The total is only 4.4 mm outside the very wet category, and this is the 9th October since 1976 to have over 100 mm. The number of dry days is fewest since before 1976, and the 5 days with =>10mm is equal highest with 1987 since before 1976. The amount that fell on the wettest day is 3.1 mm above the median. Rainfall duration is 27.5 hours above average and highest since 2000. Thunder occurred on the 13th and 17th, and 5 mm dia. hail on the 13th. Sleet fell briefly on the 27th. Rainfall rate reached 170 mm/hr on the 17th and 89 mm/hr on the 31st. **Sunshine:** This has been the dullest October since 2000. The accumulation was about normal until the 18th, then a succession of dull days caused a deficit of 20 hours by the 27th. Overall there were 20 days with <3 hours, (5 more than normal and most since 1991), 6 with =>6 hours and 2 with =>9 hours. **Commentary: From the 1st to the 15th:** Temperatures were generally below normal in this period, with daily anomalies for maxima between +0.6° in the 2nd, the only day with a +ve anomaly, and -4.0° on the 7th. 6 days had minima above normal, with anomalies up to +3.9° on the 1st, but the rest were negative, down to -8.5° on the 14th and -6.9° on the 7th. Rainfall was plentiful with only 5 dry days scattered throughout, and a 48 hour total of 29.9mm on the 4th/5th. Sunshine was near normal up to the 6th and again after the 11th, otherwise below. SW'ly winds were moderate or fresh up to the 5th, then light NE'ly until the 10th, becoming light or moderate SW'ly after the 11th. **From the 16th to the 31st:** Daily maxima were near normal until the 25th, then below, with daily anomalies between +2.3° on the 17th and 24th, and -5.2° on the 26th and 27th. Night-time temperatures were near or above normal until the 25th, then mainly below, with anomalies between +5.4° on the 23rd and 25th, and -6.8° on the 28th. Wet at first, with 24.8 mm in 48 hours on 16th/17th, but then somewhat drier until another wet day on the 31st. Sunshine was above normal until the 18th, followed by an 8 day period with a total of 1.8 hours including 5 days with nil, the final 5 days being about normal. Fresh SW'ly winds on the 16th became light and variable on the 19th, then light or moderate NE'ly on the 21st, increasing fresh on the 26th, becoming light SW'ly on the 28th and increasing fresh S'ly on the 31st.

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			
-1.3°	-0.7°	181%	81%	-0.9°	-1.0°	216%	111%	-1.6°	+0.5°	100%	45%

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for October 2012



Month: OCTOBER 2012

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 HH	Rain hrs
1	17.3	12.9	1.5	13.0	14.3	15.3	2.5	0.0	1012.0	0 0 0 0	0 0 0 0	0 0 0 0	219	6.8 7.0	202 22 0054	211 10 00	1.2
2	17.5	8.2	3.5	4.7	14.5	15.2	2.9	0.0	1011.1	0 0 0 0	0 0 0 0	0 0 0 0	213	8.7 8.7	235 28 1240	220 13 12	2.7
3	15.0	9.8	0.4	6.8	14.6	15.1	3.6	0.0	1006.3	0 0 0 0	0 0 0 0	0 0 0 0	227	6.6 6.8	219 20 1429	224 10 14	0.2
4	16.2	4.3	10.5	-0.5	14.3	15.1	5.6	0.0	1008.5	0 1 0 0	0 0 0 0	0 0 0 0	222	4.9 5.3	228 21 1117	235 10 11	6.1
5	16.0	10.3	19.4	10.0	14.2	15.0	1.1	0.0	1007.1	0 0 0 0	0 0 0 0	0 0 0 0	244	4.2 6.7	256 31 0432	247 14 04	13.3
6	15.7	6.4	0.0	4.4	14.3	15.0	9.1	0.0	1013.1	0 0 0 0	0 0 0 0	0 0 0 0	12	2.9 3.5	25 14 0000	25 8 00	0.0
7	12.2	1.3	5.3	-2.7	13.9	14.9	1.0	0.0	1022.7	0 1 0 0	0 0 0 1	56	0.9 1.9	76 10 2357	85 4 23	2.5	
8	12.4	5.8	1.1	1.4	13.6	14.8	0.0	0.0	1014.9	0 0 0 0	0 0 0 0	0 0 0 0	54	3.4 3.8	24 11 1635	28 5 17	2.7
9	14.0	8.6	tr	4.5	13.6	14.7	0.3	0.0	1017.2	0 0 0 0	0 0 0 0	0 0 0 0	58	3.7 4.1	59 12 1112	72 6 11	0.0
10	16.2	8.9	0.0	8.3	13.8	14.6	2.6	0.0	1016.3	0 0 0 0	0 0 0 0	0 0 0 0	85	2.9 3.2	82 11 1020	88 5 10	0.0
11	15.2	9.1	6.1	6.4	14.0	14.5	0.0	0.0	1005.0	0 0 0 0	0 0 0 0	0 0 0 0	114	2.5 4.9	230 20 2258	243 9 23	4.0
12	14.6	9.4	0.0	8.3	14.1	14.5	7.6	0.0	1007.0	0 0 0 0	0 0 0 0	0 0 0 0	243	8.1 8.4	225 24 1259	246 11 14	0.0
13	12.2	2.0	8.3	-2.3	13.7	14.5	3.3	0.0	1004.8	0 1 0 0	1 1 0 0	240	3.0 3.6	258 22 1532	262 7 17	1.9	
14	12.3	-1.1	0.0	-4.9	13.0	14.5	9.6	1.5	1002.9	1 1 0 0	0 0 0 0	294	1.8 3.2	336 16 1241	343 7 12	0.0	
15	13.3	0.5	2.5	-2.8	12.3	14.3	0.8	0.0	1003.2	0 1 0 0	0 0 0 0	212	4.7 5.1	213 23 1709	224 9 17	2.2	
16	15.2	8.5	10.4	7.3	12.5	14.2	8.5	0.0	1000.4	0 0 0 0	0 0 0 0	227	7.4 8.6	254 29 1135	248 13 12	3.9	
17	16.9	6.2	14.4	2.5	12.3	14.0	6.3	0.0	996.6	0 0 0 0	1 0 0 0	187	7.0 8.4	213 28 1303	215 13 11	4.3	
18	16.7	10.3	0.1	7.0	12.7	13.9	3.9	0.0	1001.4	0 0 0 0	0 0 0 0	183	6.4 6.5	191 21 1223	190 10 11	0.1	
19	12.8	9.3	4.6	7.4	12.9	13.8	0.0	0.0	1008.3	0 0 0 0	0 0 0 0	1	1.2 2.5	294 10 2139	300 5 22	4.2	
20	14.5	6.3	3.6	3.0	12.8	13.7	0.1	0.0	1017.3	0 0 0 0	0 0 0 1	187	1.0 2.1	239 7 0105	220 4 01	2.8	
21	13.1	8.5	3.1	6.2	12.9	13.7	0.2	0.0	1019.1	0 0 0 0	0 0 0 0	29	5.5 5.6	27 17 1744	27 8 17	5.9	
22	15.2	10.4	0.4	11.0	13.0	13.7	0.0	0.0	1019.8	0 0 0 0	0 0 0 1	48	3.7 3.7	25 11 0101	36 5 00	2.5	
23	13.3	11.6	tr	12.2	13.4	13.7	0.0	0.0	1024.6	0 0 0 0	0 0 0 0	21	4.1 4.2	19 13 2027	25 6 17	0.0	
24	16.4	11.4	0.2	12.3	13.5	13.7	1.5	0.0	1020.4	0 0 0 0	0 0 0 0	42	4.9 5.0	38 14 0826	57 7 13	1.6	
25	13.0	11.7	1.0	6.9	13.6	13.7	0.0	0.0	1016.8	0 0 0 0	0 0 0 0	51	7.3 7.4	61 24 2041	46 10 19	2.2	
26	8.9	6.9	0.3	7.0	13.5	13.7	0.0	0.0	1013.4	0 0 0 0	0 0 0 0	26	10.1 10.3	17 28 2131	14 13 21	0.8	
27	8.8	1.6	0.4	-1.0	12.7	13.8	5.0	0.0	1016.8	0 1 1 0	0 0 0 0	355	8.3 8.6	354 29 1608	6 12 02	0.4	
28	9.8	-0.5	2.5	-5.3	11.6	13.7	0.2	0.4	1016.7	1 1 0 0	0 0 0 0	224	5.5 5.6	216 16 1146	226 7 11	5.6	
29	12.9	4.9	0.9	5.3	11.4	13.5	2.3	0.0	1009.1	0 0 0 0	0 0 0 0	233	4.3 4.7	234 19 1208	240 8 11	0.8	
30	11.8	3.2	0.3	-2.0	11.5	13.3	6.0	0.0	1006.8	0 1 0 0	0 0 0 0	241	3.5 3.8	267 15 1315	262 7 13	0.7	
31	12.1	4.5	16.6	-1.5	11.0	13.1	2.1	0.0	991.6	0 1 0 0	0 0 0 0	191	8.6 8.7	191 29 1236	193 13 13	7.4	
Total			117.4				86.1	1.9									80.0
Mean	13.9	6.8		4.3	13.2	14.2	2.78	0.1	1010.7					224 1.0 5.5			
Anom	-1.3	-0.4	163%	+0.2	+0.1	-0.5	77%										-3.6
Daily mean		10.4															
Anom		-0.8															

Number of days with:

Air frost = 2 Ground frost = 9 Nil sun = 7
 Snow falling = 1 Snow lying = 0 Thunder = 2
 Hail=>5mm = 1 Hail<5mm or ice = 0 Fog at 09GMT = 3

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 2012

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	50	7	25	03	08	13.0	12.3	96	8.9	1012.0	1	005	21	6	5	7	5	2	/	/	82705	85708	87630			1	jpSE vv12k NW CF 0740	
2	70	7	21	09	17	14.5	11.0	79	8.1	1011.1	7	002	02	2	2	1	8	4	8	1	81815	83362	85075			2	1Sc50 1Ac58 2Ac65 COTRA Cu med Ac cas	
3	68	7	25	09	18	13.2	7.9	70	6.6	1006.3	3	014	15	1	1	3	2	5	7	/	83820	85359			3	/Ac62 Cu con jp NW&N		
4	82	1	24	07	13	10.6	8.1	84	6.7	1008.5	1	022	02	0	0	1	5	7	0	0	81656					4		
5	86	7	25	07	15	12.5	10.4	87	7.9	1007.1	2	034	02	2	2	7	8	6	7	/	81708	86656	87358			5	1Cu15 1Sc40	
6	84	1	35	04	07	9.1	7.8	92	6.5	1013.1	1	032	01	1	1	1	6	4	7	1	81712					6	1Ac65 1Ci78 COTRA Ac edge SSE	
7	02	9	31	02	06	7.1	6.9	98	6.1	1022.7	2	020	43	4	1	9	/	/	/	/						7		
8	45	8	08	04	07	10.8	10.3	97	7.7	1014.9	7	007	58	6	5	7	7	2	2	/	83704	87706	88525			8	R 0825-35	
9	59	7	04	04	10	10.0	9.3	96	7.3	1017.2	1	012	10	2	2	6	6	3	3	1	86708	85362				9	/Ci75 COTRA	
10	70	7	08	05	09	10.6	7.2	79	6.3	1016.3	0	005	01	2	2	7	5	6	/	/	81640	87645				10		
11	56	8	07	04	09	10.8	9.4	91	7.4	1005.0	7	011	05	2	2	8	6	3	/	/	88706					11		
12	80	2	26	11	21	10.7	5.3	69	5.5	1007.0	2	034	01	8	1	2	0	9	8	3	82858					12	1Ci70 Ac cas Cb top distant W	
13	80	5	26	04	08	8.3	7.4	94	6.4	1004.8	2	002	14	1	1	5	8	4	6	3	81812	84650				13	1Cu40 2Sc45 1Ac60 1Ci70 Cu fra/med Cb top S jpN	
14	35	1	23	02	03	4.8	4.5	98	5.3	1002.9	7	003	28	4	0	1	6	1	3	0	81702					14	1Ac65 jf NW Hoar in shade	
15	62	7	21	04	09	8.5	7.5	93	6.5	1003.2	7	001	03	2	2	5	5	4	7	/	83712	83656	87359			15	1Sc40	
16	72	1	23	11	23	11.6	6.1	69	5.9	1000.4	2	025	02	6	1	1	8	5	0	2	81820					16	1Sc40 1Ci72 Cu fra	
17	62	5	20	08	15	14.4	11.4	82	8.5	996.6	2	025	02	1	1	1	8	4	0	9	81815	85272				17	1Sc50 COTRA Cu fra/med	
18	68	6	17	05	10	13.0	11.4	90	8.5	1001.4	2	019	02	2	2	1	8	4	7	2	81818	83366	86072			18	1Sc50 2Ac60 COTRA Cu med	
19	11	8	02	03	04	11.0	10.6	98	8.0	1008.3	0	009	50	5	4	8	5	0	/	/	86701	87703	88640			19	vv 900 at 0820z	
20	08	7	22	03	05	8.8	8.6	99	6.9	1017.3	1	021	42	4	2	5	6	0	1	8	85701	83468	87272			20	COTRA vv1500 SW	
21	80	7	03	08	13	10.4	9.9	97	7.5	1019.1	0	002	02	2	2	3	5	3	7	/	81708	83635	86365			21	3Ac62	
22	03	9	04	03	09	13.0	12.8	99	9.1	1019.8	2	015	45	4	4	9	/	/	/	/						22	vv 350m	
23	12	8	03	03	07	11.8	11.6	99	8.3	1024.6	2	009	51	5	4	8	6	1	/	/	88702					23		
24	14	8	05	05	14	13.1	12.7	98	9.1	1020.4	3	003	51	5	4	8	6	1	/	/	83702	86703	88705			24	Fog till 0810	
25	22	8	06	06	15	12.8	12.2	96	8.8	1016.8	1	002	50	5	2	8	6	2	/	/	83704	86705	88708			25		
26	59	8	03	08	18	7.3	5.8	90	5.7	1013.4	8	001	61	6	2	2	7	4	2	/	82712	88520				26		
27	86	1	36	10	21	4.5	-0.3	71	3.7	1016.8	2	019	02	8	1	0	0	9	0	3	81070					27	Distant Cb top E	
28	82	7	23	06	11	5.0	2.3	83	4.5	1016.7	8	012	03	2	2	3	5	4	7	1	81615	83635	85365			28	2Ac60 7Ci75 COTRA	
29	84	6	22	07	14	9.7	7.3	85	6.4	1009.1	8	001	01	2	2	1	5	6	8	8	81640	83361	86272			29	2As65 COTRA Ac flo vir Halo 22° part	
30	82	6	25	04	08	6.9	6.4	97	6.0	1006.8	0	002	02	1	1	1	5	7	3	1	81650	86080				30	1Ac65 COTRA	
31	75	6	19	08	14	8.8	6.4	85	6.1	991.6	7	018	01	6	2	1	5	7	8	1	81656	84075				31	1Ac66 2Cc70 COTRA Ac flo vir	

Mean vis = 20.0 km

Mean cloud = 5.9 74%

Mean wind speed = 5.7 kn

Mean gust = 12 kn

Mean TT = 10.2 °C

Mean TdDd = 8.4 °C

Mean RH = 89.1 %

Mean r = 7.0 g/kg

Mean PPP = 1010.7 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

TdDd = 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 2012

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppwwW1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	81	3	23	08	16	17.1	11.3	69	8.3	1010.5	6	008	01	1	1	2	2	5	4	8	82824	1	1Ac57 2Cs70 1Ci75 Cu med Cs edge SE		
2	58	7	21	10	25	15.7	10.7	72	8.0	1008.4	7	017	15	2	2	5	8	5	7	2	82820	84640	87360	2	2Ac58 /Ci70 jpW vv 30k ex jp
3	84	7	22	09	20	14.3	6.4	59	6.0	1005.3	8	011	15	2	2	1	2	6	7	/	81832	83462	86364	3	Cu med jpN
4	86	7	24	06	17	14.3	7.9	65	6.6	1010.3	0	003	02	1	1	4	8	6	0	8	82830	83656	85275	4	Cu med
5	65	8	26	07	14	13.3	8.7	74	7.0	1009.8	2	012	60	6	2	3	5	6	2	/	81630	82640	88550	5	Absent vv&cl est
6	88	4	06	04	10	14.6	5.6	55	5.6	1014.0	0	001	02	1	1	1	4	6	3	1	81835	84078		6	1Sc38 1Ac68 COTRA Cu hum U/a cont Parhelion
7	62	7	03	02	05	11.1	9.6	90	7.3	1023.1	8	005	02	2	2	1	1	4	3	2	81815	87072		7	2Ac68 COTRA Cu hum U/a cont Parhelia
8	18	8	06	04	10	12.2	11.7	97	8.5	1012.0	7	013	20	6	5	8	7	2	/	/	83703	87705	88708	8	
9	70	8	05	04	11	12.7	8.6	76	6.9	1016.4	6	004	60	6	2	8	5	5	/	/	86625	88630		9	
10	75	7	10	03	07	13.9	7.8	67	6.6	1014.0	8	015	02	2	2	7	8	6	/	/	81835	87638		10	Cu hum
11	25	8	09	04	11	14.3	13.7	96	9.8	1000.1	7	024	62	6	5	8	7	2	/	/	82703	87704	88707	11	
12	88	2	24	11	22	12.9	2.8	50	4.6	1008.2	2	005	15	0	0	1	9	6	6	3	81930			12	1Cu35 1Ac62 2Ci70 jpN&W Parhelion
13	70	6	25	04	10	10.8	7.1	78	6.3	1003.8	8	006	25	8	2	4	9	5	6	3	82920	82825		13	1Sc50 2Ac60 1Ci68 jp W&E vv60k ex p Rainbow
14	86	2	33	07	13	11.8	2.5	53	4.6	1001.8	5	001	03	0	0	1	2	6	4	1	81838			14	1Ac68 2Ci75 COTRA Cu med
15	65	7	24	03	12	13.0	8.4	73	6.9	1001.6	8	004	15	8	2	3	8	5	3	1	82825	85369		15	2Sc40 /Ci75 Cu med jpN&W vv60k ex p
16	82	1	25	10	25	14.2	4.6	53	5.3	1003.4	1	008	02	0	0	1	8	6	0	0	81840			16	1Sc45 Cu hum
17	70	7	21	10	28	15.1	7.9	62	6.7	997.9	1	001	15	1	1	2	8	6	0	6	82830	87075		17	1Sc50 2Cs70 COTRA Cu med jpW U/a cont
18	81	6	19	08	18	15.3	9.7	69	7.5	1002.1	3	007	02	2	2	1	2	5	3	2	81825	86075		18	1Ac66 COTRA Cu con Halo 22° part
19	35	8	32	01	07	12.2	11.7	96	8.6	1007.9	2	001	63	6	5	7	7	2	2	/	85704	87706	88515	19	
20	83	7	19	02	06	13.5	10.2	81	7.7	1017.2	7	005	02	2	2	1	8	4	2	8	81818	86468	87272	20	1Sc50 Cu hum Cs edge NW
21	65	8	03	08	14	11.7	10.2	91	7.7	1017.5	7	009	60	6	2	8	5	4	/	/	83710	88612		21	vv25k NW
22	15	8	07	05	10	14.8	14.5	98	10.1	1020.5	1	008	20	5	2	8	6	2	/	/	87703	88708		22	
23	25	8	02	06	10	13.1	12.7	98	9.0	1023.8	7	009	20	5	2	8	6	2	/	/	87703	88706		23	
24	30	6	06	05	14	15.8	13.6	87	9.6	1017.8	7	016	05	2	2	2	6	4	0	1	82712	85075		24	
25	82	8	05	07	16	12.2	10.8	91	8.0	1014.8	6	013	01	5	2	8	5	4	/	/	85615	88618		25	
26	75	8	02	13	22	8.3	3.2	71	4.8	1011.1	6	011	02	6	2	8	8	5	/	/	83825	85635	88650	26	Cu med
27	65	6	35	08	21	7.9	1.2	63	4.1	1018.5	2	008	25	8	1	6	8	6	0	0	84830	83640		27	Cu med jpE&N vv40k ex p
28	70	8	22	07	13	8.6	6.5	86	6.0	1012.9	7	018	02	6	2	6	8	4	7	/	81815	85650	86359	28	2Sc35 8As65 Cu fra
29	75	7	26	06	13	12.0	7.3	73	6.4	1007.7	6	007	25	8	2	7	8	5	/	/	82820	83635	87650	29	Cu med jpE&W vv60k ex p
30	83	7	24	04	12	9.7	2.8	62	4.7	1003.3	7	019	02	2	2	3	8	6	0	8	81830	83640	87080	30	4Cs73 COTRA Cu hum Parhelion
31	78	7	20	14	28	11.3	7.7	78	6.7	986.2	7	029	25	8	2	7	8	5	7	1	85820	83640		31	/Ac62 /Ci75 Cu med

Mean vis = 26.7 km

Mean cloud = 6.5 81%

Mean wind speed = 6.5 kn

Mean gust = 15 kn

Mean TT = 12.8 °C

Mean TdTd = 8.3 °C

Mean RH = 75.3 %

Mean r = 7.0 g/kg

Mean PPP = 1009.7 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
2012		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	0.24	0.48	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
		7	0.00	0.00	0.63	1.00	0.00	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.33	1.00	0.04	0.43
		8	0.00	0.63	0.50	1.00	0.00	1.00	0.00	0.00	0.30	0.00	0.00	0.83	1.00	1.00	0.00	1.00
		9	0.00	0.77	0.15	1.00	0.27	1.00	0.00	0.00	0.00	0.48	0.00	1.00	0.12	1.00	0.00	1.00
		10	0.00	0.14	0.49	1.00	0.59	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.86	0.02	0.99
		11	0.00	0.31	0.63	0.49	0.18	1.00	0.00	0.00	0.00	1.00	0.00	0.99	0.12	0.79	0.00	0.82
		12	0.00	0.73	0.18	0.18	0.02	1.00	0.00	0.00	0.01	0.02	0.00	0.62	0.37	0.99	0.01	0.59
		13	0.34	0.17	0.31	0.26	0.00	0.76	0.00	0.00	0.00	0.06	0.00	0.46	0.42	0.83	0.00	0.91
		14	0.85	0.12	0.16	0.03	0.00	0.98	0.80	0.00	0.00	0.00	0.00	0.78	0.51	0.92	0.59	0.99
		15	0.64	0.00	0.03	0.08	0.00	1.00	0.10	0.00	0.00	0.00	0.00	1.00	0.19	0.89	0.10	1.00
		16	0.73	0.00	0.27	0.10	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.90	0.21	1.00	0.03	0.79
		17	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	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			2.55	2.88	3.58	5.62	1.06	9.10	0.97	0.00	0.33	2.55	0.00	7.58	3.27	9.56	0.80	8.53
		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	0.98	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.81	0.00	0.20
		8	1.00	0.25	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	1.00	0.09	0.00	1.00	0.82	0.37
		9	0.67	0.37	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.00	0.14	0.44	1.00	0.80	0.36
		10	0.60	0.45	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.96	1.00	0.45	0.37
		11	0.97	0.97	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.57	0.93	0.00	0.34
		12	0.55	0.22	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.13	0.89	0.00	0.23
		13	0.85	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.32	0.00	0.20
		14	0.62	0.44	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.24	0.00	0.00	0.05	0.00	0.28
		15	0.01	0.56	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.11	0.00	0.17	0.00	0.00	0.22
		16	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	0.16
		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	0.01
		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			6.25	3.91	0.00	0.14	0.16	0.00	0.00	1.46	0.00	0.00	4.99	0.23	2.28	6.00	2.06	85.84

October 2012	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	17.3	1450	10.8	2350	87.0	96.1	733	67.1	1501	11.74	8.57	9.8	1205	7.2	2337	1011.74	1014.1	2	1010.1	1626	7.1
2	13.19	17.3	1221	8.2	222	84.0	95.3	231	63.2	1221	10.47	7.90	8.9	1120	6.3	209	1009.21	1012.4	119	1004.7	2313	3.3
3	11.74	15.0	1112	8.3	2356	77.5	92.0	2358	54.0	1423	7.76	6.61	8.1	8	5.5	1218	1005.55	1006.8	1134	1004.5	141	0.4
4	10.57	16.0	1315	4.6	331	79.9	97.2	442	57.2	1316	7.01	6.26	7.4	2358	5.1	331	1008.22	1010.6	1404	1004.8	256	3.9
5	11.97	16.2	418	7.9	2356	87.4	97.0	2329	60.4	1157	9.81	7.61	10.7	424	6.4	2356	1007.02	1011.0	1737	998.5	351	15.8
6	9.19	15.7	1338	3.7	2358	85.6	97.4	802	53.8	1459	6.65	6.08	7.2	1335	4.7	2358	1013.32	1018.3	2358	1008.4	212	5.8
7	6.60	11.6	1448	1.5	601	96.4	98.6	1016	90.1	1500	6.07	5.86	7.9	1448	4.1	601	1021.75	1023.8	1025	1018.3	0	0.1
8	10.86	12.3	1501	8.3	200	96.9	98.0	2258	95.1	548	10.38	7.82	8.6	1536	6.5	158	1014.48	1020.4	29	1011.4	1608	4.9
9	10.79	14.0	1309	8.6	506	87.9	98.2	302	72.1	1316	8.80	7.01	8.0	21	6.1	2301	1016.19	1017.5	932	1013.7	1	0.1
10	11.36	15.2	1149	8.9	619	76.8	91.9	601	55.9	1155	7.31	6.33	7.0	1316	5.8	1204	1014.62	1016.4	808	1010.6	2359	0.0
11	12.50	15.4	1806	9.0	413	91.6	97.1	1740	78.7	148	11.18	8.44	10.6	1806	6.2	400	1002.87	1010.7	0	997.8	1956	5.0
12	10.63	14.4	1210	7.5	2012	72.9	89.3	0	48.8	1159	5.79	5.79	8.2	0	4.5	1452	1006.32	1009.5	1811	1000.1	1	0.0
13	6.62	11.7	1124	2.2	628	89.2	97.7	803	70.8	1302	4.90	5.44	7.0	1342	4.3	628	1004.89	1007.2	16	1003.5	1521	7.9
14	5.55	12.5	1411	-0.6	632	84.3	99.1	708	49.7	1413	2.76	4.71	7.1	1051	3.6	632	1002.99	1004.3	123	1001.5	1327	0.2
15	8.54	13.3	1457	0.8	147	86.6	97.1	205	64.4	1608	6.31	6.08	7.7	2359	3.9	157	1002.09	1004.6	115	996.0	2359	1.1
16	10.71	15.1	1357	6.2	2159	74.8	93.6	2207	47.1	1306	6.14	5.96	8.3	112	4.7	1306	1000.92	1004.6	1832	994.4	104	1.2
17	12.93	16.7	1303	7.7	2	81.5	94.8	506	55.4	1403	9.63	7.57	9.1	514	6.0	2	996.99	1000.3	2	992.4	453	19.9
18	13.33	16.4	1201	10.3	702	83.3	94.8	707	64.0	1208	10.47	7.95	9.0	926	7.2	1211	1001.66	1006.6	2358	997.6	126	0.9
19	11.10	12.8	1251	9.4	631	96.6	97.8	857	92.7	0	10.60	7.97	8.9	1344	7.1	258	1008.01	1011.2	2346	1006.3	224	4.1
20	10.05	13.6	1413	6.2	651	94.9	98.9	838	80.1	1451	9.26	7.25	8.6	1148	5.8	652	1016.44	1019.2	2150	1010.6	0	3.0
21	10.55	12.0	1400	8.5	509	95.7	98.1	531	89.6	1413	9.90	7.53	8.1	2357	6.7	510	1018.19	1019.5	807	1017.1	1633	2.5
22	13.41	15.1	1424	11.1	2	98.0	98.7	919	97.0	17	13.12	9.31	10.3	1244	7.9	2	1020.24	1023.6	2358	1017.3	58	0.2
23	12.65	13.9	0	11.3	959	97.9	98.9	742	97.0	2332	12.36	8.81	9.6	5	8.1	959	1023.86	1025.0	1025	1022.6	2353	0.2
24	13.38	16.1	1421	11.8	1919	94.4	98.0	740	84.9	1532	12.50	8.93	10.2	1421	8.0	1919	1019.25	1022.7	0	1017.0	1708	0.0
25	11.79	13.8	31	8.7	2213	92.0	97.0	723	83.7	2358	10.54	7.92	9.1	102	5.9	2355	1016.13	1017.5	1	1014.7	1444	0.4
26	7.02	9.0	1	2.8	2357	78.2	90.4	842	65.8	1430	3.47	4.91	5.9	0	3.3	2357	1012.88	1015.6	11	1010.7	1525	0.9
27	4.13	8.9	1425	1.5	319	75.0	87.0	1738	58.1	1348	0.00	3.79	4.5	1556	3.2	216	1017.70	1021.9	2144	1012.3	53	0.4
28	5.52	9.1	1551	-0.4	232	88.5	93.8	251	82.1	922	3.76	5.04	6.2	1529	3.4	231	1015.26	1021.5	20	1010.8	2357	1.7
29	9.35	12.9	1425	6.2	2311	86.2	96.6	2352	68.6	1312	7.10	6.29	7.0	2004	5.6	506	1008.59	1010.9	11	1007.2	1552	0.8
30	6.81	11.5	1244	3.3	732	85.0	97.9	756	54.0	1307	4.26	5.20	6.3	1029	4.3	1307	1004.46	1007.9	13	998.8	2356	0.1
31	8.98	11.9	1239	4.7	126	83.2	91.5	1914	72.8	1247	6.27	6.11	7.3	1148	4.6	310	988.53	998.9	0	977.6	2359	9.6
Total																						101.5
Mean	10.18	13.75		6.42		86.7	95.80		70.14		7.95	6.81	8.15		5.54		1010.01	1013.37		1006.16		
Max	13.91	17.28		11.84		98.0	99.10		97.00		13.12	9.31	10.65		8.10		1023.86	1025.04		1022.57		
Min	4.13	8.92		-0.57		72.9	87.00		47.09		0.00	3.79	4.52		3.24		988.53	998.86		977.61		

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.