

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

DECEMBER 2011

Temperature (°C / °F)			Anomaly	Rank in the past 130 years			
Mean maximum	9.8	49.6	+1.8	9 th highest			
Mean minimum	3.3	37.9	+1.2	26 th highest			
Daily mean	6.5	43.7	+1.5	18 th highest			
Highest maximum	13.1	55.6	on 21 st	Lowest maximum	4.6	40.3	on 16 th
Highest minimum	9.9	49.8	on 26 th	Lowest minimum	-3.8	25.2	on 10 th
Mean grass minimum	-0.3	31.5	+0.3	Lowest grass minimum	-9.5	14.9	on 10 th
Mean earth @30 cm	7.4	45.3	+0.8	Earth @100 cm	10.2	50.4	
Frost duration (hrs)	22.8			Rain duration (hrs)	58.7		
Rainfall total (mm / in)	74.8	2.94	119 %	37 th highest			
Highest daily fall	27.2	1.07	on 12 th				
Number of: Dry days (<0.2mm)	13	Wet days (>0.9mm)	13	days ≥5mm	4		
Sunshine total (hrs) 77.4	Daily mean 2.50	140 %	Sunniest day 6.5		on 10 th		
N ^o days with: Air frost 6	Ground frost 17	Snow falling 1	Snow lying 0				
Thunder 0	Hail ≥5mm 0	Small hail/ice 1	Fog @09 0	Nil sun 7			
Pressure MSL : Mean @09 GMT, mbar 1012.7	-3.0	Highest 1035.2	on 27 th	Lowest 980.6	on 16 th		
Relative humidity : Mean (%) 81.5	Lowest 45	on 7 th	Water vapour (g/kg), mean at 09 and 15 GMT 5.0, 5.1				
Overall mean wind speed (mph) 8.9	Windiest day 13.9	on 13 th	Max gust 46	on 8 th			
Wind direction (days) N 0 NE 0 E 0 SE 0 S 1 SW 23 W 6 NW 1							
Least windy day (mph) 5.2	on 10 th	Calm; less than 0.5 mph (minutes) 72					

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

Notes:

Mild, Wet, Very Sunny and Quite Windy.

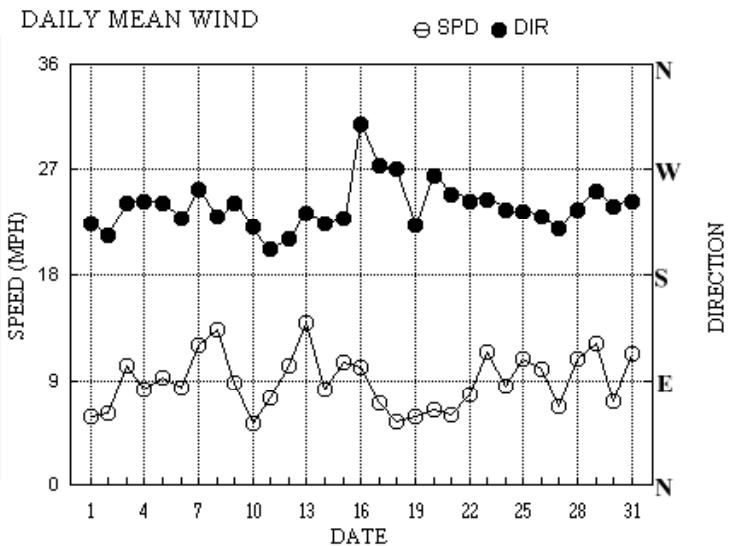
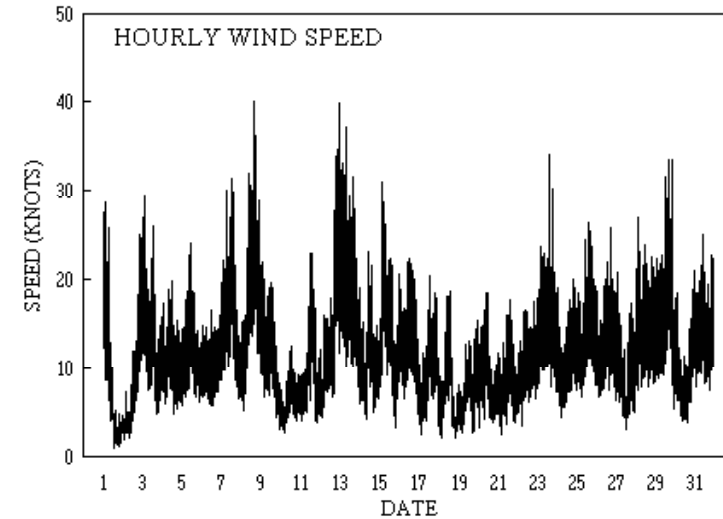
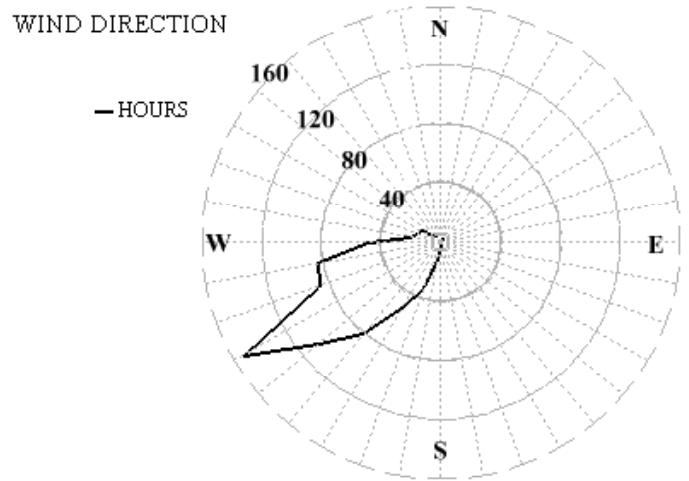
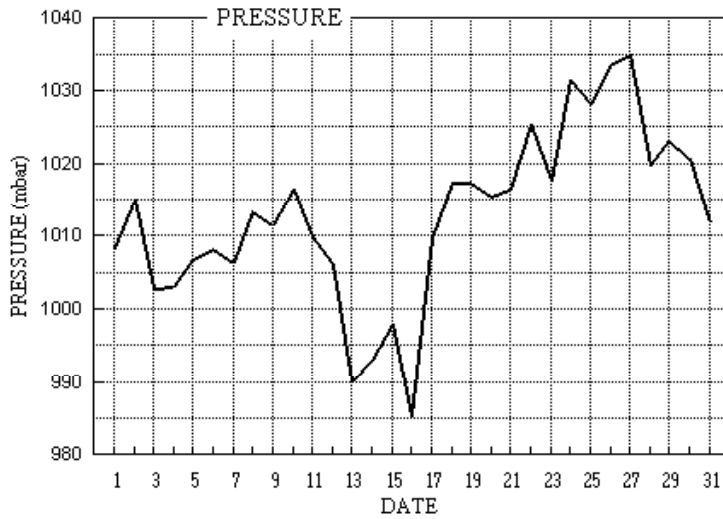
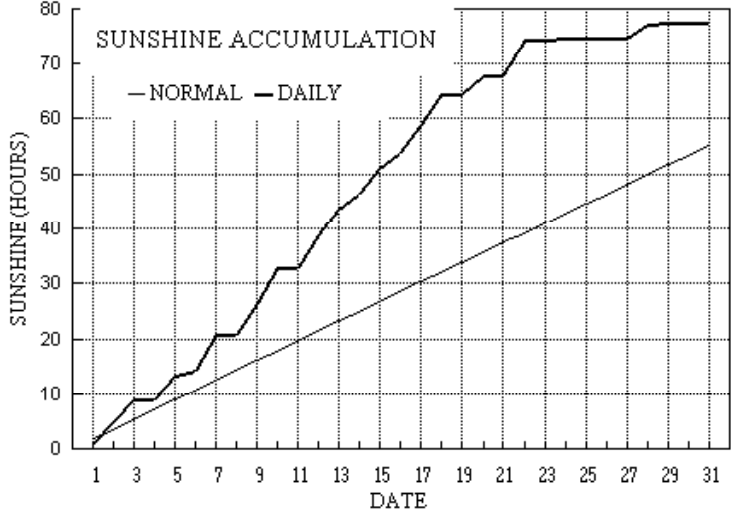
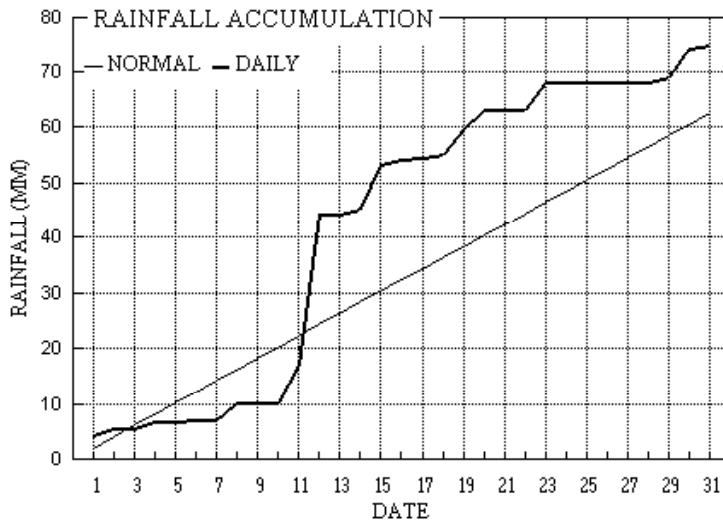
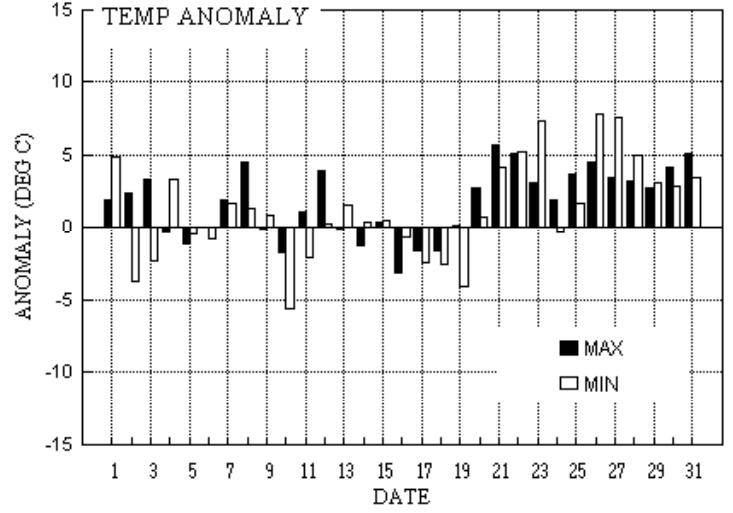
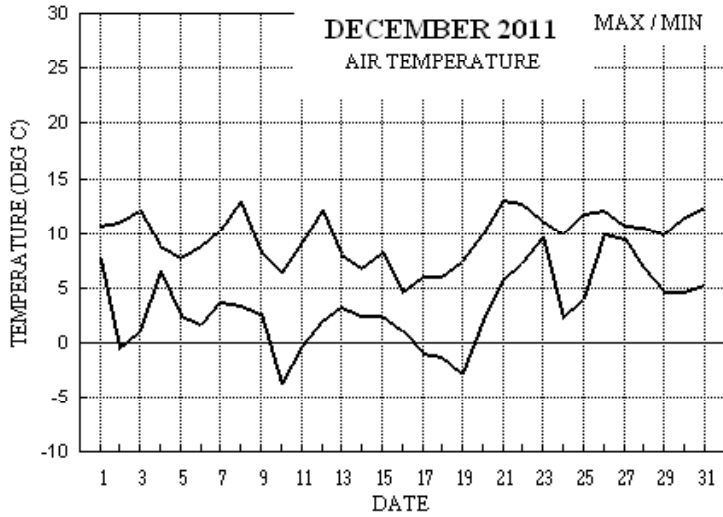
Temperature: This has been a mild December with very few cold days and included a prolonged mild spell from the 20th, a marked contrast to last December with its snow and prolonged cold. The mean max is highest since 1994, but the mean min is 1.2° lower than that of 2006. The resulting mean temperature is highest since 2006 and 0.5° below that value. There were a scattering of days with below normal temperature, with the 16th and 18th being most significant, though the 16th, which was the coldest, was only 3.2° below normal. Overnight temperatures however did fall well below normal on the 10th and 19th, with an anomaly of -5.6° for the former. The highest max is close to the median, but the lowest max is 3.2° above the median, 6th highest in 99 years and highest since 1974. The highest min is 0.6° above the median while the lowest min is 1.4° above its median. The lowest grass min is highest since 2006. Earth temperatures at both 30cm and 1 m depth are also highest since 2006. Air frost duration is just 23 % of the average of 97.6 hours, but the number of ground frosts was about normal. **Rainfall:** At 19 % above the climatological average, the total is just sufficient to put it into the wet category. 36 % of the total fell on one rainfall day, the 12th/13th, attributed to the 12th, giving the highest daily fall for December since 1995, and 6th highest in 108 years. Rainfall rate reached 106 mm/hr during this fall, at 0030 hours on the 13th, but the 8th also had a violent rain shower with a rate of 81 mm/hr at 1841 hours. Sleet fell between 0600 and 0900 on the 16th but did not lay, and small hail fell on the 18th. There was no other wintry precipitation and no thunder. The duration of measurable rain is slightly above normal. **Sunshine:** This has been a very sunny December overall, though the total is lower than in the recent years of 2008, 2007 and 2005. The rate of sunshine accumulation was above normal until the 18th, by which time a surplus of over 30 hours had build up, but there was a dull end to the month with an average of only 0.3 hours per day for the last 9 days. Overall there were 18 days with <3 hours and 3 with =>6 hours. **Humidity:** The mean relative humidity at both 0900 and 1500 hours is lowest for the month for over 15 years. **Wind:** This is the windiest December since 1999, and the windiest month since Nov 2009. The mean speed on the calmest day is highest since 19th April 1994. **Commentary: From the 1st to the 19th:** Temperatures fluctuated around normal for both max and min, with daily anomalies for max between +4.5° on the 8th and -3.2° on the 16th, and anomalies for min between +4.8° on the 1st and -5.6° on the 10th. Rainfall was dominated by the high total of 27.2 mm on the 12th, but there were also falls of 8.1 mm on the 15th and 7.0 mm on the 11th. There were 6 dry days in all, 5 of them before the 11th. Sunshine was variable with less than 10 % of the maximum on the 4th, 8th, 11th and 19th, and over 80 % on the 7th and 10th, and an average of 57 % for the 7 days up to the 18th. Winds were generally SW'ly moderate or fresh, but strong on the 8th, 12th and 13th, and light on the 10th and 19th, temporarily W'ly from the 16th to 18th. **From the 20th to the 31st:** Temperatures were almost exclusively above normal, with anomalies for daily max ranging from +5.7° on the 21st to +1.9° on the 24th, and anomalies for daily min between +7.8° on the 26th and -0.3° on the 24th. 7 of the 12 days in this period were dry, but the 23rd and 30th both had around 5 mm. Apart from the 22nd, which was sunny, most of this period was dull, with 9 days having <5 % of the maximum. Winds were mostly moderate or fresh SW'ly.

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			
+1.1°	-0.1°	49%	185%	0.0°	-0.8°	262%	197%	+3.9°	+4.4°	54%	51%

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

Wokingham climatological graphs for December 2011



Month: DECEMBER 2011

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	10.8	7.6	4.4	7.8	9.7	12.2	0.9	0.0	1008.2	0	0	0	0	224	4.2	5.1	217	29	0210	186	13	00	5.4	
2	11.1	-0.5	1.3	-5.7	9.7	12.1	4.1	0.8	1015.0	1	1	0	0	213	5.2	5.3	205	25	2144	213	13	23	1.9	
3	12.2	1.1	tr	3.0	9.1	12.0	4.0	0.0	1002.7	0	0	0	0	241	8.4	8.8	230	30	0204	218	13	01	0.0	
4	8.8	6.6	1.0	-0.7	9.2	11.9	0.1	0.0	1003.0	0	1	0	0	243	6.9	7.1	238	20	1135	231	9	08	1.2	
5	7.8	2.4	0.0	-1.9	8.8	11.8	4.3	0.0	1006.9	0	1	0	0	241	7.9	8.0	242	24	1000	238	12	10	0.0	
6	8.8	1.7	0.5	-3.3	8.0	11.7	0.9	0.0	1008.1	0	1	0	0	228	7.2	7.2	218	19	2352	228	9	23	0.6	
7	10.3	3.7	0.0	1.3	7.8	11.4	6.4	0.0	1006.3	0	0	0	0	253	10.2	10.5	268	32	1319	267	15	13	0.0	
8	12.9	3.4	2.9	-1.9	7.5	11.2	0.0	0.0	1013.4	0	1	0	0	230	11.0	11.5	214	40	1625	229	18	17	1.5	
9	8.2	2.7	0.0	-2.5	7.9	11.0	5.8	0.8	1011.4	0	1	0	0	241	7.5	7.6	251	22	0145	256	11	00	0.0	
10	6.4	-3.8	tr	-9.5	7.1	10.9	6.5	9.0	1016.3	1	1	0	0	221	4.4	4.5	219	13	1326	235	7	13	0.0	
11	9.2	-0.4	7.0	-3.2	6.5	10.7	0.0	0.0	1009.9	1	1	0	0	202	6.2	6.4	189	23	1433	196	11	14	2.0	
12	12.2	2.0	27.2	-3.8	6.9	10.5	5.8	0.0	1006.1	0	1	0	0	211	8.5	8.9	197	40	2324	195	17	22	8.3	
13	8.1	3.3	tr	2.1	7.2	10.3	4.9	0.0	989.8	0	0	0	0	232	12.0	12.1	257	37	0704	232	15	15	0.0	
14	6.8	2.4	1.0	-3.0	7.1	10.1	2.7	0.0	992.9	0	1	0	0	224	6.7	7.1	262	23	1115	251	10	11	1.4	
15	8.2	2.5	8.1	-1.9	6.6	10.0	4.8	0.0	997.9	0	1	0	0	228	7.1	9.1	206	31	0403	246	15	06	9.7	
16	4.6	1.1	0.8	0.4	6.5	9.8	2.6	0.0	985.3	0	0	1	0	309	6.4	8.8	275	23	1251	289	11	10	1.7	
17	6.1	-0.9	0.3	-6.8	6.3	9.7	4.9	1.7	1009.6	1	1	0	0	274	5.4	6.1	282	21	1421	276	9	14	0.7	
18	6.0	-1.2	0.8	-7.6	5.8	9.5	5.7	6.5	1017.4	1	1	0	0	271	4.2	4.7	9	19	1547	256	9	11	0.4	
19	7.5	-2.8	4.6	-9.3	5.2	9.3	0.0	4.0	1017.3	1	1	0	0	222	4.6	5.1	266	16	2329	260	8	22	6.4	
20	10.0	2.0	3.3	-0.8	5.4	9.1	3.3	0.0	1015.5	0	1	0	0	265	4.9	5.6	300	19	1338	295	8	09	7.2	
21	13.1	5.7	tr	2.8	5.7	9.0	0.1	0.0	1016.4	0	0	0	0	248	4.8	5.2	270	18	1650	264	8	16	0.0	
22	12.8	7.3	0.0	1.5	6.6	8.9	6.5	0.0	1025.2	0	0	0	0	243	6.6	6.7	220	18	2009	231	9	20	0.0	
23	11.2	9.7	4.8	5.4	7.0	8.9	0.0	0.0	1017.5	0	0	0	0	244	8.2	9.9	319	34	1605	251	13	15	3.9	
24	10.0	2.3	tr	-2.5	7.1	9.0	0.3	0.0	1031.4	0	1	0	0	236	7.0	7.4	217	20	2012	232	10	22	0.0	
25	11.8	4.0	0.0	3.2	6.9	9.1	0.1	0.0	1028.1	0	0	0	0	234	9.3	9.4	239	27	1510	231	13	17	0.0	
26	12.2	9.9	tr	8.9	7.6	9.1	0.0	0.0	1033.5	0	0	0	0	230	8.6	8.6	204	26	1730	231	11	13	0.0	
27	10.8	9.5	tr	8.5	8.1	9.2	0.0	0.0	1034.9	0	0	0	0	219	5.5	5.8	244	21	0338	238	8	00	0.0	
28	10.5	6.8	tr	3.0	8.1	9.3	2.5	0.0	1019.7	0	0	0	0	235	9.0	9.4	219	27	0436	223	12	05	0.0	
29	10.0	4.7	1.0	1.0	7.7	9.4	0.1	0.0	1023.3	0	0	0	0	252	10.1	10.5	287	34	2002	259	15	17	0.3	
30	11.5	4.6	5.3	-0.5	7.5	9.5	0.1	0.0	1020.6	0	1	0	0	238	5.7	6.3	252	21	2318	256	10	23	5.2	
31	12.5	5.3	0.5	6.4	7.6	9.5	0.0	0.0	1011.6	0	0	0	0	243	9.6	9.8	244	25	1039	256	13	10	0.9	
Total			74.8				77.4	22.8																58.7
Mean	9.8	3.3		-0.3	7.4	10.2	2.50	0.7	1012.7					238	6.8	7.7								
Anom	+1.8	+1.2	119%	+0.3	+0.8	+0.9	140%																	-3.0
Daily mean		6.5																						
Anom		+1.5																						

Number of days with:

Air frost = 6 Ground frost = 17 Nil sun = 7
Snow falling = 1 Snow lying = 0 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 1 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 December 2011

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	84	6	26	05	13	9.9	7.6	85	6.5	1008.2	1	020	25	8	6	6	8	4	3	1	81815	85656	85075	1	1Sc40 1Ac60 COTRA Cu med
2	68	0	21	02	05	1.1	1.0	99	4.1	1015.0	2	030	02	0	0	0	0	9	0	0				2	Hoar mod
3	82	7	25	08	18	10.6	8.1	85	6.8	1002.7	3	013	03	6	1	6	8	4	7	/	82818	85645		3	1Ac65 2Ac68 Cu fra/hum
4	84	8	23	10	19	7.5	3.6	76	4.9	1003.0	7	009	02	2	2	1	5	7	7	/	81650	88465		4	2Ac63
5	84	2	23	10	20	3.1	-0.9	75	3.6	1006.9	2	011	02	0	0	1	5	6	3	1	81640			5	1Ac68 2Ci72 COTRA Hoar slt
6	86	6	24	06	12	3.7	0.6	80	4.0	1008.1	2	009	03	1	1	1	5	7	1	2	81650	83466	85070	6	Hoar slt
7	84	3	26	11	22	7.1	1.6	68	4.3	1006.3	2	035	02	1	1	1	8	5	6	9	81822			7	1Sc35 1Ac60 2Cc72 COTRA Cu hum/fra
8	80	8	22	10	24	10.2	7.4	83	6.4	1013.4	7	030	03	2	2	6	5	4	7	/	85618	83362	88465	8	2Sc25
9	78	0	24	07	14	3.3	-0.5	76	3.7	1011.4	2	012	02	0	0	0	0	9	0	0				9	
10	80	2	22	05	08	-0.4	-1.4	93	3.4	1016.3	3	008	03	0	0	1	5	6	0	1	81640			10	2Ci75 COTRA Hoar mod Gnd frzn
11	86	8	20	06	12	6.4	4.2	86	5.1	1009.9	6	016	60	6	2	3	5	6	7	7	81640	83656	85365	11	4Ac59 8Cs70
12	83	1	23	08	14	3.3	1.8	90	4.3	1006.1	2	020	02	0	0	1	5	7	0	0	81650			12	Cu con top W Hoar slt
13	80	1	23	10	21	5.5	1.5	75	4.3	989.8	1	040	15	8	1	1	9	5	6	0	81920			13	1Ac58 jpS
14	86	6	23	05	10	2.8	0.8	87	4.1	992.9	2	019	02	2	2	1	5	5	7	3	81520	86068		14	1Ac62 2As65
15	86	1	25	13	24	5.0	0.5	72	4.0	997.9	2	048	02	1	1	1	5	5	3	3	81620			15	1Ac62 1Ci70 Cb tops SW-W
16	58	8	31	07	17	1.6	0.8	95	4.1	985.3	3	030	68	7	6	7	7	2	2	/	83705	87707	88512	16	
17	58	7	25	05	11	1.7	0.6	92	3.9	1009.6	2	014	60	6	1	7	5	4	/	/	81715	83640	87650	17	2Sc20
18	88	3	25	07	14	0.6	-1.2	88	3.5	1017.4	3	004	03	0	0	3	0	9	7	0	81359	83362		18	Hoar mod Gnd frzn Glaze slt
19	58	8	21	04	08	2.0	1.3	95	4.2	1017.3	7	010	10	2	2	1	5	6	2	/	81645	88459		19	Hoar slt. Gnd frzn Glaze slt
20	80	3	29	08	14	5.9	2.9	81	4.7	1015.5	2	030	02	1	1	1	8	5	3	1	81825	83075		20	1Sc35 1Ac68 COTRA Cu hum
21	45	7	26	06	11	10.0	9.5	97	7.3	1016.4	3	018	20	5	2	7	5	2	/	/	81705	83708	85712	21	7Sc50
22	75	7	26	09	17	9.9	7.5	85	6.3	1025.2	2	001	02	2	2	1	5	5	0	8	81625	87281		22	COTRA
23	68	7	21	11	22	10.5	7.6	82	6.5	1017.5	7	021	03	2	2	7	5	4	/	/	82712	87630		23	
24	68	7	24	06	10	4.0	1.4	83	4.1	1031.4	2	018	02	2	2	5	0	9	7	1	86365	86070		24	Ac op vir Parhelion
25	80	7	23	08	16	9.9	6.8	81	6.1	1028.1	1	005	02	2	2	7	5	4	/	/	81716	87620		25	
26	68	6	24	09	15	11.5	9.9	90	7.4	1033.5	3	006	02	2	2	6	5	3	0	0	82708	85650		26	2Sc25
27	84	7	23	05	11	9.7	4.7	71	5.2	1034.9	3	011	02	2	2	7	5	5	/	/	87625			27	
28	81	7	23	08	17	10.0	6.5	79	5.9	1019.7	5	003	01	6	2	1	8	5	3	1	81820	85363	86075	28	1Sc40 COTRA Cu hum
29	80	8	23	09	22	6.3	2.2	75	4.4	1023.3	6	016	60	6	2	8	5	5	/	/	81625	85630	87635	29	/Sc56
30	67	7	23	04	09	5.3	1.9	79	4.3	1020.6	1	007	03	2	2	1	5	6	7	1	81640	83362	85465	30	/Ci72 COTRA
31	88	7	26	09	22	11.3	9.3	87	7.3	1011.6	2	010	02	5	2	7	5	4	/	1	87610			31	/Ci75 COTRA

Mean vis = 35.5 km

Mean cloud = 5.3 67%

Mean wind speed = 7.5 kn

Mean gust = 15 kn

Mean TT = 6.1 °C

Mean TdTd = 3.5 °C

Mean RH = 83.5 %

Mean r = 5.0 g/kg

Mean PPP = 1012.7 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.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for December 2011

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	70	8	00	00	03	9.8	4.6	70	5.3	1007.0	7	014	21	6	2	8	8	5	/	/	81820	83640	88650	1	Cu med jpS vv35k NW	
2	72	6	21	05	12	5.7	3.4	85	4.8	1014.4	7	014	15	1	1	2	5	6	7	2	82635	86072	2	2Sc50 1Ac66 2As68 jpNW		
3	75	5	27	10	25	10.6	2.7	58	4.6	1004.5	3	007	02	1	1	5	8	6	0	0	81835	85640	3	Cu hum		
4	65	7	23	07	15	8.2	6.1	86	5.9	998.4	7	026	25	8	2	3	8	4	3	/	81815	83635	86367	4	Cu fra jpS vv30kNW	
5	84	3	25	08	19	6.7	-1.1	57	3.5	1007.1	6	005	01	1	1	1	1	6	7	1	81835	83362	5	1Ac65 1Ci70 Cu hum		
6	72	6	22	08	15	5.9	2.7	80	4.6	1008.3	8	008	03	2	2	3	8	4	7	1	81818	83650	85366	6	2Ac62 3Ci70 Cu fra/hum	
7	82	1	27	14	30	8.0	-2.2	48	3.3	1011.2	2	028	01	0	0	1	1	6	0	1	81840		7	1Ci80 COTRA Cu hum		
8	75	8	23	15	29	12.3	9.0	81	7.2	1004.9	7	042	60	6	2	7	8	4	7	/	85818	87640	8	/Ac62 vv50k ex W		
9	78	2	24	08	19	6.0	1.3	72	4.2	1010.8	6	008	01	1	1	2	8	5	0	0	81820		9	2Sc50 Cu med		
10	77	4	23	04	12	5.1	0.5	72	3.9	1015.9	6	005	02	1	1	2	5	7	4	1	82650	83075	10	1Ac65		
11	50	8	19	10	24	7.9	6.1	88	5.9	1004.0	7	030	58	6	5	8	5	3	/	/	82708	87712	88630	11		
12	82	7	21	08	16	7.4	2.3	70	4.5	1005.7	6	014	03	1	1	1	8	5	7	8	81820	85467	87272	12	1Sc45 1Ac65 Cu fra	
13	84	6	23	13	28	6.6	-0.4	61	3.8	992.3	0	011	02	1	1	1	1	5	6	3	81828	86068	13	1Ac62 Cu fra		
14	75	7	24	10	18	5.0	0.1	71	3.9	996.5	2	015	15	8	2	1	5	5	2	/	81620	87462	14	2Ns50 jpW		
15	88	2	25	10	23	6.7	1.9	71	4.4	1001.0	1	011	03	1	1	1	8	5	6	5	81820		15	1Sc40 1Ac58 1Ci70 2Cs75 Cu medN Cs edge SW		
16	88	6	26	08	22	4.2	-0.2	73	3.8	991.1	2	033	03	1	1	2	8	5	7	2	81820	85068	16	2Sc40 2Ac60 Cu fra/hum Parhelion		
17	84	2	27	08	20	5.3	0.6	72	4.0	1009.5	5	000	02	0	0	2	8	5	6	3	81820		17	1Sc40 1Ac62 1Ci70 Cu hum Cb tops N		
18	75	3	29	07	17	5.7	0.7	70	4.0	1016.4	5	001	15	0	0	2	3	5	3	9	81920		18	1Cu25 1Sc35 1Ac62 1Cc70 1Ci75 jpN vv50k exN		
19	58	8	21	07	14	5.6	4.8	94	5.3	1011.3	7	037	63	6	6	3	7	3	2	/	82706	88530	19	2Sc15		
20	81	8	27	05	12	7.3	2.2	70	4.4	1018.3	2	017	03	2	2	8	0	9	7	/	81359	87360	88465	20	Ac du vir	
21	84	7	26	07	16	12.6	10.2	85	7.7	1019.0	3	010	02	2	2	7	5	4	3	1	83615	87620	21	/Ac68 /Ci75		
22	75	1	25	07	15	11.2	6.7	73	6.0	1025.5	3	001	02	0	0	1	8	5	0	0	81820		22	1Sc28 Cu hum/fra		
23	60	8	21	10	21	10.7	9.2	91	7.3	1009.9	7	050	60	6	5	7	5	4	2	/	81712	87615	88530	23		
24	80	7	22	09	16	7.3	3.4	76	4.8	1028.9	7	019	02	2	2	1	8	4	7	/	81818	86363	24	1Sc56 1Ac62 /Ac66 Cu fra		
25	82	8	24	13	23	11.3	7.3	77	6.3	1027.9	5	008	02	2	2	8	5	5	/	/	88620		25			
26	67	7	23	08	20	11.1	8.3	83	6.7	1033.7	3	002	20	5	2	7	7	4	/	/	81813	87618	26	Cu hum		
27	80	7	22	05	12	10.2	4.8	69	5.2	1032.4	6	016	02	2	2	7	5	5	/	/	87627		27			
28	82	1	26	09	19	8.1	1.4	63	4.2	1020.1	3	006	01	1	1	1	8	5	3	1	81828		28	1Sc35 1Ac68 1Ci75 Cu hum		
29	75	7	25	14	29	9.7	4.3	69	5.2	1017.7	7	025	02	8	2	3	8	5	0	8	82822	87272	29	2Sc40 COTRA Cu hum		
30	45	8	19	05	08	6.8	5.6	92	5.6	1017.2	6	030	63	6	6	6	7	4	2	/	82710	85715	88525	30		
31	62	7	25	09	15	12.1	10.3	89	7.8	1010.5	8	006	20	5	2	7	5	4	/	/	81712	85615	87625	31		

Mean vis = 30.2 km

Mean cloud = 5.6 71%

Mean wind speed = 8.4 kn

Mean gust = 18 kn

Mean TT = 8.1 °C

Mean Td = 3.8 °C

Mean RH = 74.7 %

Mean r = 5.1 g/kg

Mean PPP = 1012.0 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

Td = 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 Sunshine Hourly analysis	Hour	01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
2011	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	0.00
	7	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
	8	0.01	0.82	0.09	0.00	0.18	0.00	0.11	0.00	0.57	0.55	0.00	0.51	0.49	0.00	0.54	0.00
	9	0.31	1.00	0.08	0.00	1.00	0.08	0.65	0.00	1.00	1.00	0.00	1.00	1.00	0.36	0.98	0.00
	10	0.60	1.00	0.67	0.00	0.91	0.63	0.89	0.00	1.00	1.00	0.00	1.00	0.97	0.34	0.97	0.00
	11	0.01	0.35	0.93	0.00	0.89	0.12	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.46	0.21	0.14
	12	0.00	0.00	0.94	0.00	0.21	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.54	0.62	0.86
	13	0.01	0.76	0.80	0.00	0.52	0.00	1.00	0.00	0.41	0.88	0.00	1.00	0.67	0.72	0.86	0.60
	14	0.00	0.18	0.27	0.05	0.04	0.02	1.00	0.00	0.08	0.47	0.00	0.33	0.16	0.28	0.57	0.70
	15	0.00	0.00	0.19	0.00	0.59	0.06	0.74	0.00	0.69	0.64	0.00	0.00	0.00	0.00	0.00	0.33
	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	0.00
	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	0.00
	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		0.95	4.12	3.97	0.05	4.33	0.92	6.39	0.00	5.75	6.52	0.00	5.84	4.95	2.70	4.76	2.64

	Hour	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	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	0.00
	7	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
	8	0.04	0.44	0.00	0.22	0.00	0.42	0.00	0.03	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.16
	9	0.00	0.38	0.00	1.00	0.00	1.00	0.00	0.00	0.07	0.00	0.00	0.46	0.00	0.01	0.00	0.37
	10	0.33	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.00	0.43
	11	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.38
	12	1.00	0.96	0.00	0.06	0.00	1.00	0.00	0.09	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.36
	13	0.98	0.63	0.00	0.00	0.01	1.00	0.00	0.05	0.00	0.00	0.00	0.04	0.05	0.00	0.00	0.35
	14	0.91	0.91	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26
	15	0.68	0.38	0.00	0.00	0.00	0.04	0.00	0.16	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.17
	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	0.00
	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	0.00
	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		4.94	5.70	0.00	3.28	0.01	6.46	0.00	0.34	0.07	0.00	0.00	2.47	0.08	0.01	0.00	77.22

December 2011	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	9.26	11.9	551	4.8	2354	83.4	97.1	2359	64.1	1225	6.47	6.06	7.7	144	4.9	1012	1006.95	1009.0	1050	1005.4	2147	5.4
2	4.41	9.4	2359	-0.4	734	91.5	98.9	840	76.0	2008	3.09	4.77	6.5	2359	3.6	734	1012.27	1016.2	1103	1006.3	2359	0.3
3	9.74	12.1	1234	6.6	1859	79.2	94.1	532	54.6	1338	6.17	5.99	7.7	537	4.5	1407	1003.67	1006.3	0	1000.8	510	1.1
4	7.11	8.8	1149	3.7	2323	82.2	91.1	1343	72.1	800	4.27	5.23	6.2	1359	4.0	2358	1001.41	1004.4	0	997.4	1644	0.9
5	3.92	7.5	1342	2.0	2314	75.6	86.8	2316	53.7	1333	-0.07	3.80	4.6	1147	3.4	1333	1006.59	1007.9	2248	1003.1	0	0.1
6	4.54	7.1	2337	1.7	215	82.9	90.6	414	72.4	1138	1.87	4.38	5.4	2357	3.8	126	1007.61	1009.3	1208	1005.2	2359	0.3
7	6.94	9.0	1310	3.4	2312	67.3	88.6	337	44.8	1338	1.06	4.19	5.9	354	3.1	1437	1009.85	1020.6	2319	1002.1	403	0.5
8	8.84	12.8	1659	3.6	3	79.9	90.6	1325	63.6	2151	5.55	5.75	7.6	1841	3.8	3	1010.53	1020.5	19	1001.6	1756	2.7
9	4.21	7.8	1254	-1.2	2338	72.2	90.3	2350	60.3	1211	-0.42	3.70	4.3	1537	3.0	2337	1011.27	1014.9	2358	1007.1	1	0.0
10	1.49	6.1	1250	-3.6	612	84.7	96.5	623	64.9	1248	-0.91	3.56	4.2	2306	2.7	612	1015.87	1017.0	1027	1014.5	53	0.2
11	6.52	9.3	1232	2.4	126	87.4	94.9	2228	80.0	1253	4.56	5.32	6.5	1843	3.9	119	1006.85	1015.4	0	1000.1	2103	6.4
12	6.03	11.3	2357	2.0	525	85.2	94.4	338	66.6	1407	3.65	5.04	7.8	2358	4.0	753	1001.87	1007.7	1018	986.1	2350	11.7
13	7.04	12.2	108	3.5	2137	73.9	93.3	49	56.9	1516	2.62	4.84	8.3	108	3.4	1914	990.35	994.9	2029	983.2	348	12.8
14	4.18	6.0	51	2.3	849	79.5	88.8	1717	70.3	1507	0.93	4.13	4.5	251	3.8	1051	994.50	997.5	1547	990.5	511	0.7
15	5.41	7.8	1227	3.1	38	78.1	94.7	2357	69.2	1004	1.87	4.41	4.9	2358	3.9	910	996.41	1001.4	1517	985.5	2359	4.2
16	3.05	4.6	1314	1.1	719	86.1	95.6	150	70.4	1444	0.89	4.15	5.0	40	3.7	1443	989.46	1003.7	2359	980.6	252	4.6
17	2.68	6.0	1336	-1.0	443	84.2	96.4	544	69.4	1313	0.20	3.87	4.6	1145	3.3	435	1009.59	1014.7	2350	1003.6	0	0.5
18	1.46	6.0	1349	-2.6	2331	86.1	97.1	2338	69.5	1440	-0.68	3.60	4.2	1349	3.0	2331	1017.21	1019.8	2244	1014.6	0	0.8
19	3.49	7.6	2350	-2.6	17	94.5	97.5	128	82.1	2359	2.68	4.67	6.0	2040	3.0	17	1014.26	1019.6	0	1009.1	1758	4.1
20	6.54	8.2	1158	4.6	748	79.5	93.3	2358	67.5	1412	3.21	4.76	5.4	2358	4.3	1412	1015.98	1020.0	1912	1010.5	11	1.5
21	10.21	13.1	1350	5.7	21	90.7	97.3	451	82.9	2026	8.72	6.98	8.0	1148	5.3	3	1018.35	1023.6	2341	1014.1	453	1.3
22	10.15	12.5	1308	7.2	630	84.9	94.7	706	70.8	1425	7.68	6.44	7.1	2221	5.7	630	1025.17	1026.2	1029	1023.4	2	0.0
23	8.86	11.2	1145	4.3	2310	83.3	91.8	1531	72.5	2252	6.18	5.94	7.4	1321	3.8	2349	1017.92	1024.1	0	1008.8	1523	4.5
24	5.78	9.0	2355	2.4	538	78.4	84.0	641	70.9	354	2.31	4.45	5.7	2355	3.5	421	1028.62	1031.7	1037	1023.8	0	0.0
25	10.50	11.8	2214	8.8	0	81.2	85.2	2333	75.5	1409	7.42	6.31	7.1	2349	5.6	1	1028.67	1031.9	2352	1026.5	445	0.0
26	11.00	12.2	1201	9.5	1954	83.0	91.1	757	68.5	2358	8.19	6.65	7.5	1123	5.0	2359	1033.30	1034.4	1954	1031.7	37	0.0
27	9.43	10.5	1358	6.7	2310	72.3	89.0	2333	66.2	1139	4.67	5.19	5.7	2355	5.0	1139	1032.39	1035.2	911	1025.7	2359	0.0
28	8.31	10.8	458	5.0	2313	74.1	87.7	717	57.0	1329	3.92	5.06	6.8	719	3.8	2358	1021.52	1025.7	0	1019.2	732	0.0
29	7.31	10.0	1218	4.6	256	72.3	84.5	1822	63.1	1219	2.64	4.58	5.9	1822	3.7	244	1020.81	1026.7	240	1015.2	1710	1.0
30	7.09	11.3	2357	4.6	708	83.4	96.6	2018	67.9	214	4.41	5.29	7.8	2158	4.0	226	1017.01	1021.5	1001	1010.3	2233	4.8
31	11.74	12.5	2022	11.0	330	88.5	92.7	0	84.4	1103	9.91	7.58	8.1	2331	7.2	905	1010.25	1011.7	844	1007.4	2357	0.3
Total																						70.7
Mean	6.69	9.55		3.32		81.5	92.43		68.00		3.65	5.05	6.26		4.06		1012.14	1016.57		1006.88		
Max	11.74	13.14		10.98		94.5	98.90		84.40		9.91	7.58	8.34		7.19		1033.30	1035.15		1031.66		
Min	1.46	4.57		-3.59		67.3	84.00		44.84		-0.91	3.56	4.16		2.75		989.46	994.91		980.60		

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

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.