

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 2012

Temperature (°C / °F)				Anomaly	Rank in the past 131 years			
Mean maximum	8.8	47.8	+0.8		34 th highest			
Mean minimum	1.9	35.4	-0.2		60 th highest			
Daily mean	5.4	41.7	+0.4		46 th highest			
Highest maximum	13.3	55.9	on 22		Lowest maximum	-1.7	28.9	on 12
Highest minimum	9.1	48.4	on 29		Lowest minimum	-5.3	22.5	on 13
Mean grass minimum	-1.5	29.3	-0.9		Lowest grass minimum	-10.4	13.3	on 13
Mean earth @30 cm	5.6	42.1	-1.0		Earth @100 cm	8.2	46.8	
Frost duration (hrs)	110.7				Rain duration (hrs)	88.1		
Rainfall total (mm / in)	103.1	4.06	165 %		12 th highest			
Highest daily fall	21.3	0.84	on 19					
Number of: Dry days (<0.2mm)	9	Wet days (>0.9mm)	16		days ≥5mm	9		
Sunshine total (hrs)	79.2	Daily mean	2.55	144 %	Sunniest day	7.3	on 8	
N° days with: Air frost	10	Ground frost	18	Snow falling	2	Snow lying	0	
Thunder	0	Hail ≥5mm	0	Small hail/ice	1	Fog @09	1	Nil sun 8
Pressure MSL : Mean @09 GMT, mbar	1008.0	-7.7	Highest	1031.6	on 11	Lowest	974.2	on 14
Relative humidity : Mean (%)	86.8	Lowest	63	on 7	Water vapour (g/kg), mean at 09 and 15 GMT 5.1, 5.4			
Overall mean wind speed (mph)	8.1	Windiest day	14.7	on 29	Max gust	44	on 14	
Wind direction (days)	N 0	NE 2	E 1	SE 1	S 2	SW 15	W 5	NW 5
Least windy day (mph)	2.3	on 12	Calm; less than 0.5 mph (minutes)			184		

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

Notes:

Very Wet with Near Average Mean Temperature and Quite Sunny.

This December was cool, relatively dry and sunny until the 13th, then milder, wetter and duller until the month's end.

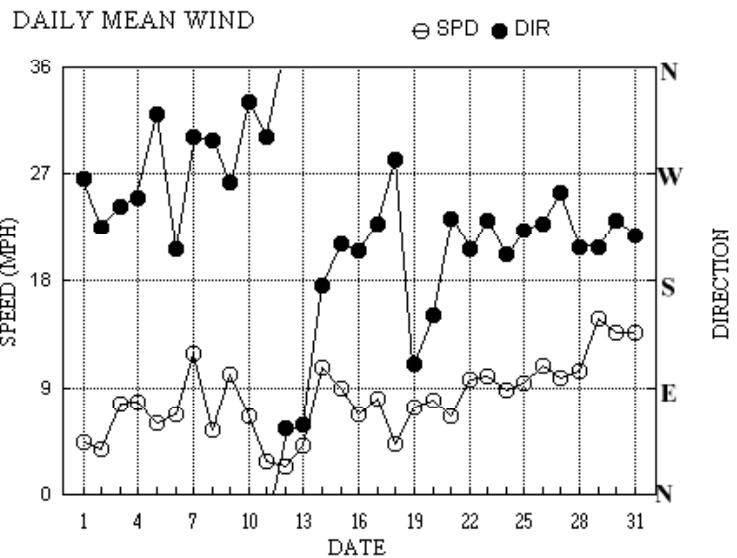
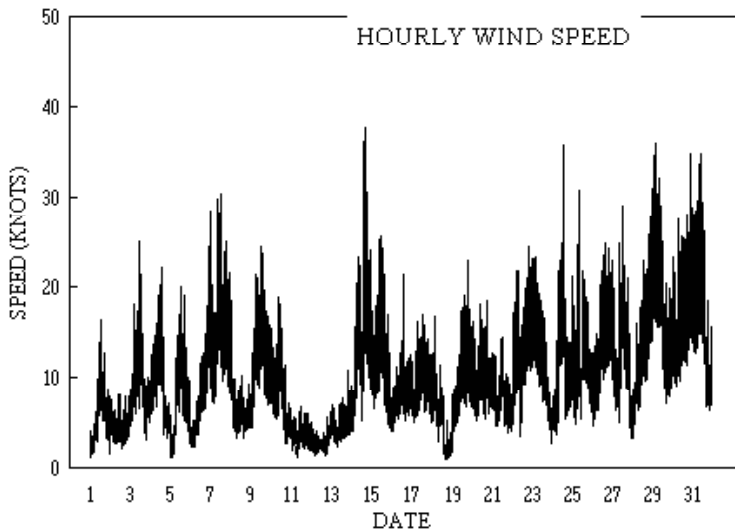
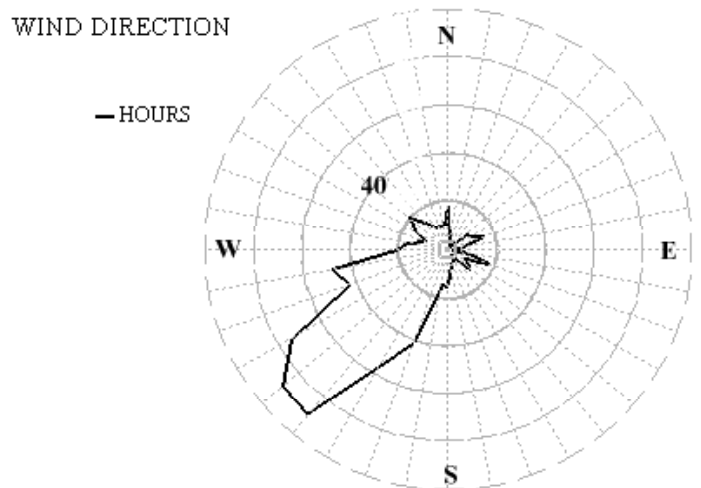
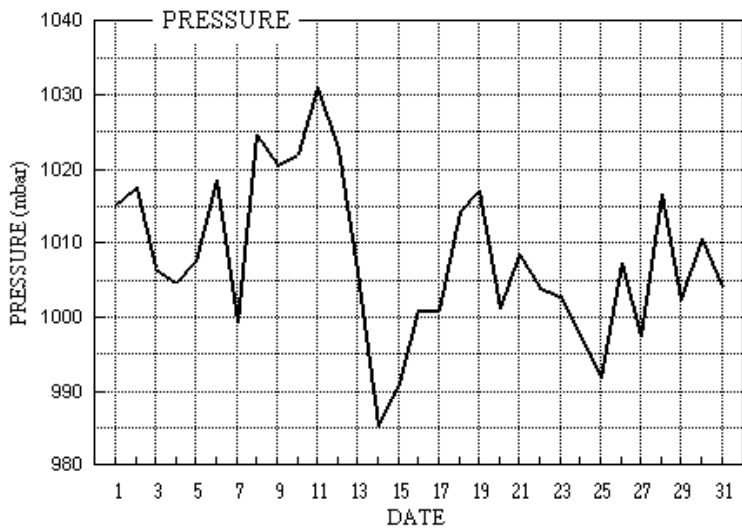
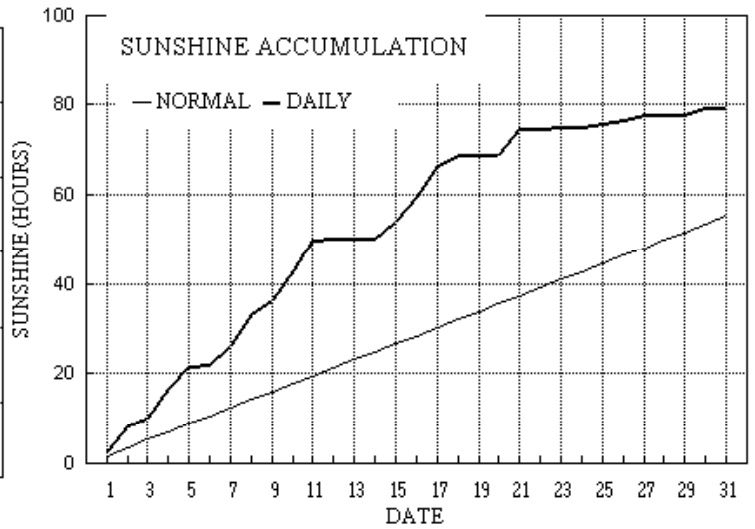
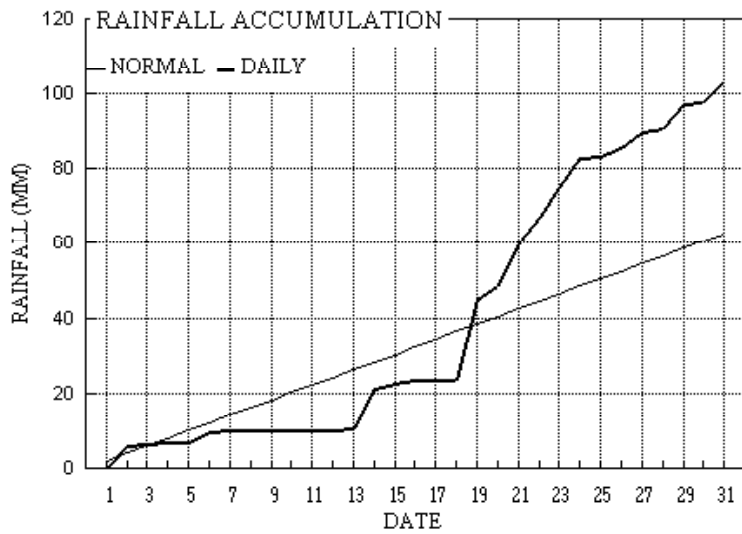
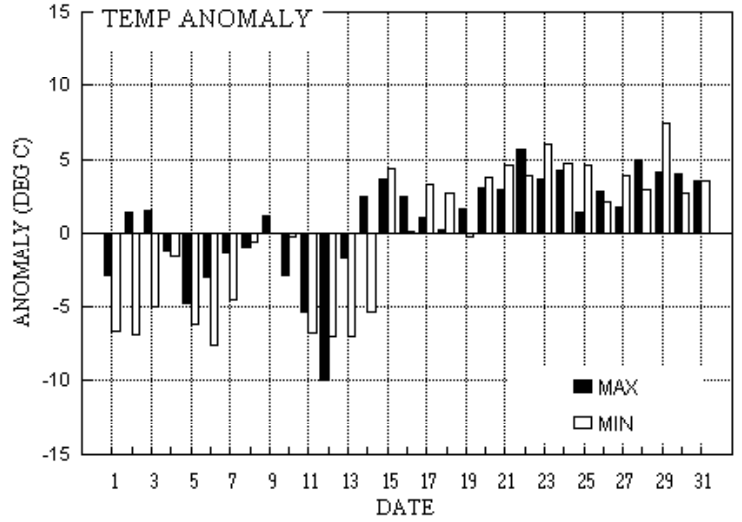
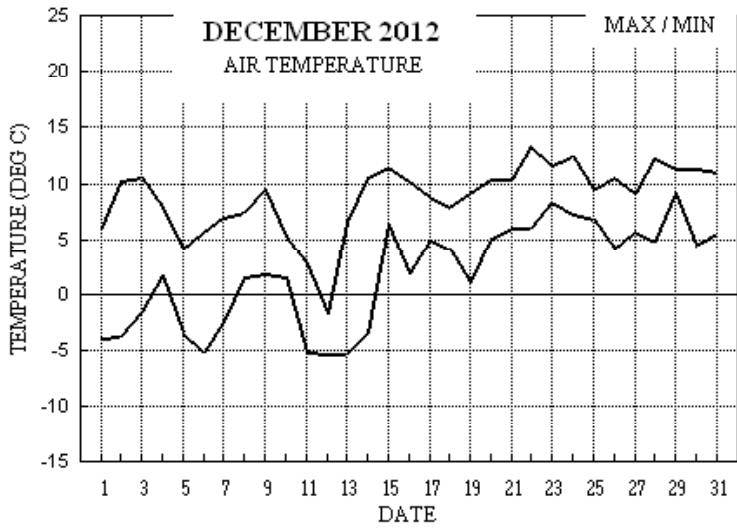
Temperature: The mean this December is slightly above the current 30 year average and is 0.7° above the long-term median. Compared to more recent times, in the past 10 years 3 have been milder, 3 almost the same and 4 colder than this month. The highest max is 0.2° above the median while the lowest max is 3.1° below its median and is 8th lowest in 101 years, making the 12th the coldest December day since 1991. The highest min is 0.2° below the median and the lowest min is exactly on the median. Earth temperatures are well below normal. The number of days with air frost is close to average, and there were just 12.7 more frost hours than average. **Rainfall:** The rainfall this December is 65 % above average, making this the wettest December since 2009, and before that 2002. The majority of the dry weather occurred in the first half of the month. The period 19th to the 24th was particularly wet, giving a total for the 6 days of 58.8 mm, more than half the month's total. Surprisingly, for such a wet month there was a 5 day dry spell which ended on the 12th. The number of dry days is 6 fewer than average and there were 4 more days than average with 5 mm or more. The duration of measurable rain is 31.8 hours above normal. Snow fell on the 5th, giving a thin covering early in the morning, though this had thawed before 0900 hours. There was also sleet on the 7th. Small hail fell on the 16th, but there was no thunder this month. **Sunshine:** Quite a high total for December, but it has been bettered 4 times since 2000, the last was in 2008. Most of the sunny days occurred before mid-month and there was only one sunny day after the 17th, also the total for the final 10 days was only 4.4 hours. Overall there were 20 days with <3 hours and 5 with =>6 hours. **Wind:** The mean speed is 0.8 mph above average, but the highest gust is 5 mph below average. **Pressure:** The month's lowest pressure is lowest for December since 1989. **Commentary: From the 1st to the 18th :** Temperatures were mostly below normal until the 13th, then slightly above. Anomalies for daily max ranged from -10.0° on the 12th to +3.7° on the 15th. For daily min, anomalies exceeded -6° on the 1st, 2nd, 5th, 6th and 11th to 13th. From the 1st to the 13th only the 2nd and 6th were wet days, and 7 days were dry. The total for the period of 23.8 mm, just 23 % of the total for the month, was helped by 10.5 mm on the 14th. It was quite sunny up to the 11th, by which date a surplus of 30 hours above normal had been reached. Just 0.3 hours over the next 3 days reduced this a little, but above normal sunshine resumed again and lifted the surplus to over 35 hours by the 18th. Light or moderate winds were generally W'ly until the 11th, temporarily increasing fresh on the 7th and 9th, falling very light on the 11th, increasing fresh S'ly on the 14th, then light or moderate SW'ly until the 18th. **From the 19th to the 31st:** Temperatures were exclusively above normal throughout, with anomalies for daily max between +5.6° on the 22nd and +1.4° on the 25th. Anomalies for daily min were between +7.5° on the 29th and 0.0° on the 19th. Rainfall was copious and persistent, with no dry days, and a 3 day total of 36.3 mm to the 21st. The total for this period was 79.3 mm or 77 % of the month's total. Sunshine was very poor, all days except the 21st having less than 17% of the maximum, and 8 days having 1 % or less. Light or moderate winds were E'ly on the 19th, veering SW'ly on the 21st, becoming fresh from the 24th on, temporarily strong on the 29th.

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°	-3.9°	49%	242%	-0.2°	-1.2°	193%	146%	+3.6°	+4.3°	243%	51%

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

Wokingham Climatological Graphs for December 2012



Month: DECEMBER 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	6.0	-3.9	0.0	-8.8	6.3	10.1	2.9	11.2	1015.3	1 1 0 0	0 0 0 0	0 0 0 1	267	3.0 3.8	300 17 1359	300 8 14	0.0	
2	10.2	-3.7	6.2	-10.1	5.8	9.9	5.7	9.6	1017.6	1 1 0 0	0 0 0 0	0 0 0 0	226	2.8 3.3	242 8 1056	259 5 12	6.2	
3	10.5	-1.6	0.5	-2.8	5.5	9.6	1.5	0.0	1006.5	1 1 0 0	0 0 0 0	0 0 0 0	243	5.9 6.7	273 25 1135	268 11 11	0.2	
4	7.9	1.7	0.2	-3.6	5.8	9.6	6.7	3.1	1004.6	0 1 0 0	0 0 0 0	0 0 0 0	250	6.4 6.7	269 22 1408	266 11 12	0.5	
5	4.2	-3.4	tr	-8.2	5.3	9.4	4.8	8.4	1007.4	1 1 1 0	0 0 0 0	0 0 0 0	321	4.5 5.3	323 20 1342	316 11 13	0.0	
6	5.7	-5.1	2.7	-10.4	4.8	9.2	0.5	11.0	1018.6	1 1 0 0	0 0 0 0	0 0 0 0	206	5.6 5.9	254 29 2356	236 13 23	2.5	
7	7.0	-2.5	0.6	-1.0	4.6	9.0	4.1	0.0	999.2	1 1 1 0	0 0 0 0	0 0 0 0	301	8.6 10.2	319 31 1200	303 14 12	0.5	
8	7.5	1.5	tr	-3.8	4.9	8.7	7.3	0.0	1024.5	0 1 0 0	0 0 0 0	0 0 0 0	298	3.0 4.7	353 19 0002	2 9 00	0.0	
9	9.4	1.9	tr	-4.3	4.9	8.6	2.8	0.0	1020.7	0 1 0 0	0 0 0 0	0 0 0 0	263	8.3 8.7	270 25 1323	268 13 13	0.0	
10	5.3	1.6	tr	-2.4	5.2	8.5	6.6	4.0	1022.1	0 1 0 0	0 0 0 0	0 0 0 0	330	5.4 5.8	344 19 1032	340 10 10	0.0	
11	2.8	-5.1	0.0	-10.2	4.6	8.1	7.0	18.7	1030.9	1 1 0 0	0 0 0 0	0 0 0 0	301	1.6 2.4	318 7 1214	352 4 12	0.0	
12	-1.7	-5.3	0.0	-8.9	4.0	8.0	0.3	24.0	1022.6	1 1 0 0	0 0 0 0	0 0 0 0	56	1.6 2.0	81 6 2358	73 3 23	0.0	
13	6.5	-5.3	0.4	-10.4	3.7	7.8	0.0	20.7	1006.0	1 1 0 0	0 0 0 0	0 0 0 0	59	3.5 3.6	69 11 2130	67 6 21	1.3	
14	10.6	-3.4	10.5	-0.7	3.5	7.6	0.0	0.0	985.2	1 1 0 0	0 0 0 0	0 0 0 0	176	5.5 9.3	222 38 1601	207 16 15	5.2	
15	11.5	6.3	1.5	2.8	4.3	7.4	3.9	0.0	991.0	0 0 0 0	0 0 0 0	0 0 0 0	211	7.7 7.8	210 26 1229	217 11 12	0.9	
16	10.3	1.9	1.2	-2.9	4.8	7.4	5.6	0.0	1001.0	0 1 0 0	0 0 1 0	0 0 0 0	205	5.7 5.9	213 22 1529	210 7 15	1.4	
17	8.9	4.9	tr	0.0	4.8	7.3	7.0	0.0	1001.0	0 0 0 0	0 0 0 0	0 0 0 0	229	6.8 6.9	255 17 1404	245 8 14	0.0	
18	7.9	4.2	0.0	-0.8	4.8	7.3	2.3	0.0	1014.2	0 1 0 0	0 0 0 0	0 0 0 0	282	2.9 3.7	304 17 0454	282 7 04	0.0	
19	9.1	1.0	21.3	-2.4	4.9	7.3	0.0	0.0	1017.2	0 1 0 0	0 0 0 0	0 0 0 0	110	6.3 6.4	148 23 2009	118 9 21	17.9	
20	10.4	5.1	3.6	5.4	5.3	7.3	0.0	0.0	1001.1	0 0 0 0	0 0 0 0	0 0 0 0	150	4.1 6.9	236 19 1801	240 8 18	5.4	
21	10.4	6.1	11.4	0.9	5.9	7.3	5.8	0.0	1008.5	0 0 0 0	0 0 0 0	0 0 0 0	233	5.5 5.7	252 15 1417	256 8 13	7.5	
22	13.3	6.0	7.2	0.3	5.8	7.4	0.0	0.0	1003.9	0 0 0 0	0 0 0 0	0 0 0 0	206	7.5 8.4	232 25 2129	228 12 21	7.8	
23	11.7	8.4	7.5	9.2	6.7	7.4	0.1	0.0	1002.8	0 0 0 0	0 0 0 0	0 0 0 0	231	8.6 8.7	225 24 0448	228 13 03	8.2	
24	12.4	7.3	7.8	6.4	7.2	7.6	0.1	0.0	997.6	0 0 0 0	0 0 0 0	0 0 0 0	202	6.5 7.6	204 36 1310	215 15 13	3.9	
25	9.5	6.9	0.5	4.5	7.3	7.7	0.9	0.0	991.7	0 0 0 0	0 0 0 0	0 0 0 0	222	7.4 8.1	202 31 0821	250 12 15	0.4	
26	10.6	4.2	2.6	-1.2	7.0	7.9	0.8	0.0	1007.2	0 1 0 0	0 0 0 0	0 0 0 0	229	9.1 9.4	221 25 1515	241 12 22	1.9	
27	9.2	5.8	4.1	2.4	6.8	7.9	1.2	0.0	997.5	0 0 0 0	0 0 0 0	0 0 0 0	254	7.1 8.5	326 29 1313	289 13 12	4.8	
28	12.2	4.8	1.0	0.2	6.7	8.0	0.0	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	208	8.7 9.0	211 31 2342	213 14 22	1.1	
29	11.4	9.1	6.2	9.2	7.2	8.0	0.0	0.0	1002.3	0 0 0 0	0 0 0 0	0 0 0 0	208	12.4 12.8	202 36 0319	207 19 03	4.0	
30	11.4	4.4	0.6	0.5	7.3	8.0	1.3	0.0	1010.5	0 0 0 0	0 0 0 0	0 0 0 0	231	11.8 11.9	228 35 2247	225 16 22	1.0	
31	11.0	5.5	5.5	5.4	7.1	8.1	0.0	0.0	1004.0	0 0 0 0	0 0 0 0	0 0 0 0	218	11.7 11.8	212 35 1137	215 16 08	5.5	
Total			103.1				79.2	110.7										88.1
Mean	8.8	1.9		-1.5	5.6	8.2	2.55	3.6	1008.0					229	4.6 7.0			
Anom	+0.8	-0.2	165%	-0.9	-1.0	-1.1	144%		-7.7									
Daily mean		5.4																
Anom		+0.4																

Number of days with:
 Air frost = 10 Ground frost = 18 Nil sun = 8
 Snow falling = 2 Snow lying = 0 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 1 Fog at 09GMT = 1

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 2012

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	08	2	28	02	06	-1.4	-1.6	98	3.4	1015.3	7	001	41	4	0	2	0	9	7	0	81359	1	2Ac62 vv3kW Ac vir Hoar/rime thk Gnd frzn Parheliion			
2	75	1	20	03	05	-1.6	-2.4	94	3.2	1017.6	2	011	03	0	0	1	5	6	0	0	81645	2	Hoar thk Gnd frzn			
3	70	7	25	08	18	10.1	9.0	93	7.1	1006.5	7	005	02	2	2	7	5	4	/	8	87612	3	/Cs70			
4	86	4	26	09	16	3.6	1.3	85	4.2	1004.6	2	009	02	1	1	1	5	7	6	3	81656	84070	4	1Ac62 Cb tops SW-W NE Hoar slt		
5	30	8	36	08	15	1.6	1.0	96	4.1	1007.4	3	036	50	7	5	8	7	3	/	/	83703	87705	88710	5	Gnd frzn Slnly Tr <0.5cm	
6	61	7	20	05	08	-2.3	-3.6	91	2.9	1018.6	5	001	03	2	2	5	0	9	2	8	82462	85465	87270	6	COTRA Hoar mod. Gnd frzn	
7	57	8	29	12	30	2.4	0.6	87	4.0	999.2	3	015	69	7	6	7	5	4	2	/	87612	88520		7	rs, s10%	
8	58	1	30	04	06	2.6	1.2	91	4.1	1024.5	2	025	05	1	1	1	5	6	0	1	81645			8	1Ci80 COTRA	
9	75	8	25	10	21	7.0	4.5	84	5.2	1020.7	7	007	20	5	2	8	5	4	/	/	81712	85615	87625	9	8Sc35	
10	82	0	32	07	14	2.5	-0.8	79	3.6	1022.1	2	018	02	0	0	0	0	9	0	0					10	Hoar slt
11	50	1	26	01	04	-3.0	-3.5	97	2.9	1030.9	2	008	10	0	0	0	0	9	0	1	81080				11	COTRA Hoar thk Gnd frzn
12	11	7	02	02	03	-4.8	-5.3	96	2.5	1022.6	7	010	28	4	2	7	5	0	/	/	83701	87650			12	Rime needles 7mm Gnd frzn
13	25	5	06	03	05	-3.4	-3.7	97	2.9	1006.0	7	014	10	1	1	5	5	3	0		85620				13	1Ac60 Hoar thk Gnd frzn
14	50	8	12	10	22	6.4	6.0	97	5.9	985.2	7	057	10	6	5	8	7	2	/	/	87705	88707			14	
15	70	6	21	09	18	7.5	5.8	89	5.8	991.0	2	028	02	1	1	1	5	7	3	3	81650	86075			15	1Ac68 1Ci70 Cb top S&SW
16	75	3	22	04	12	5.3	4.2	93	5.2	1001.0	2	017	02	1	1	1	5	7	0	3	81650	83070			16	COTRA Cb top SSW&NW
17	84	2	22	05	11	4.9	3.3	89	4.9	1001.0	2	020	25	8	1	1	8	5	6	3	81825				17	1Sc40 1Ac62 1Ci70 Cu con SW
18	80	1	29	03	08	5.1	2.7	85	4.6	1014.2	3	026	02	1	1	1	8	5	0	0	81820				18	1Sc40 Cu fra/hum
19	57	8	10	06	11	5.1	3.9	92	5.0	1017.2	7	010	05	2	2	1	5	6	2	/	81640	88559			19	1Sc56
20	58	8	10	05	14	9.0	8.6	97	7.0	1001.1	7	020	61	6	6	7	7	2	2	/	83705	87707	88515		20	
21	60	1	24	06	10	6.5	5.8	95	5.8	1008.5	2	027	10	1	1	1	6	3	3	0	81708				21	1Ac58
22	60	8	18	07	21	8.4	7.5	94	6.5	1003.9	6	036	58	6	5	7	5	4	2	/	83706	87610	88530		22	
23	75	7	24	08	19	11.4	8.3	81	6.8	1002.8	3	024	02	5	2	5	5	4	7	8	81715	85620	87362		23	/Cs75
24	60	8	20	12	22	11.6	10.5	93	8.0	997.6	7	036	21	6	2	8	5	4	/	/	81715	85618	88625		24	
25	62	7	21	09	31	7.2	5.4	89	5.7	991.7	7	015	80	8	2	5	9	4	6	3	81712	82915	83625		25	3Ac58 5Ci75 COTRA
26	75	5	21	09	14	6.6	4.6	87	5.3	1007.2	3	012	03	1	1	4	5	3	0	1	81708	84640			26	2Ci78 COTRA
27	50	7	22	07	15	7.4	6.2	92	6.0	997.5	5	023	81	8	2	7	2	4	6	1	82712	85820			27	4Ac62 /Ci70
28	40	8	19	07	11	9.1	8.5	96	6.9	1016.7	6	016	58	6	5	8	5	2	/	/	84705	86618	88625		28	Absent 28-29 vv&cld est
29	75	8	20	15	32	11.2	7.3	77	6.4	1002.3	6	029	02	5	2	7	5	4	/	/	82615	84618	88640		29	
30	70	3	24	11	28	5.5	2.1	79	4.4	1010.5	2	023	25	8	1	1	9	4	6	3	81712	81925	83070		30	jpS&W vv60k ex p
31	50	8	21	15	29	10.5	8.6	88	7.0	1004.0	6	021	58	6	5	8	5	4	/	/	86615	87620	88650		31	

Mean vis = 16.3 km

Mean cloud = 5.3 67%

Mean wind speed = 7.2 kn

Mean gust = 15 kn

Mean TT = 4.9 °C

Mean TdTd = 3.4 °C

Mean RH = 90.4 %

Mean r = 5.1 g/kg

Mean PPP = 1008.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for DECEMBER 2012

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	82	4	31	08	15	5.2	1.6	77	4.2	1014.2	5	002	01	1	1	4	8	4	0	0	82818						1	2Sc30 1Sc50 Cu med	
2	81	6	22	02	05	3.8	-0.2	75	3.7	1016.9	6	008	03	1	1	5	0	9	7	2	82362	84364	85070			2	COTRA Parhelion		
3	84	5	25	07	19	7.3	2.7	72	4.6	1007.7	8	004	15	1	1	1	8	5	3	2	81825	84070			3	1Sc40 1Ac68 2Cc72 COTRA Cu hum U/a cont			
4	82	1	26	08	22	6.5	0.6	66	4.0	1004.0	6	006	02	0	0	1	8	5	6	3	81828					4	1Sc40 1Ac65 1Ci70 Cu hum Cb top S		
5	82	1	32	08	15	3.3	-1.9	69	3.3	1010.4	3	009	02	0	0	1	1	5	0	0	81825					5	Cu hum		
6	66	8	19	08	13	2.9	-0.9	76	3.6	1012.7	7	035	03	2	2	1	5	6	7	/	81645	88462			6	1Ac60			
7	84	3	29	09	20	6.1	1.5	72	4.3	1003.7	2	025	03	0	0	3	8	5	0	2	82825					7	1Sc40 1Sc56 1Ci70 Cu med		
8	80	5	29	05	11	5.8	1.1	72	4.0	1025.8	6	002	02	1	1	1	5	6	0	1	81640	85080			8	COTRA			
9	84	2	26	12	24	8.3	3.8	73	4.9	1016.6	7	015	01	1	1	1	8	5	0	1	81820					9	1Sc35 2Ci80 COTRA		
10	80	3	33	04	13	4.7	0.2	73	3.8	1024.3	2	011	02	1	1	3	8	5	0	0	81820					10	2Sc25 1Sc56 Cu med		
11	61	1	23	02	05	1.2	-1.0	85	3.5	1029.8	7	012	02	0	0	0	0	9	0	1	81080					11	COTRA Hoar mod in shade		
12	30	7	05	03	04	-1.8	-2.2	98	3.2	1017.9	7	024	10	2	2	6	5	6	/	1	81640	86645			12	/Ci78 Rime/hoar thk			
13	50	7	06	05	08	-0.1	-0.4	98	3.7	1003.2	7	019	10	2	2	7	5	5	/	/	87620					13	Hoar thk		
14	75	7	21	11	21	10.3	9.6	95	7.7	974.8	7	041	21	6	2	5	8	4	7	2	81712	83818			14	2Sc40 3Ac65 2Ci70 Cu con jpW			
15	62	7	21	09	24	9.4	7.0	85	6.3	992.5	3	004	80	8	2	7	9	5	6	3	83920	85825			15	/Sc40 /Ac65 /Ci70			
16	70	5	18	05	13	8.7	5.4	80	5.6	999.6	7	015	15	1	1	1	9	5	6	3	81920	85070			16	1Cu25 1Sc50 1Ac60 jpW-SW			
17	81	1	24	09	17	7.9	3.4	73	4.9	1003.0	2	007	02	0	0	1	8	5	4	2	81822					17	1Sc28 1Ac62 1Ci70 Cu hum		
18	67	7	33	03	08	7.6	4.2	79	5.1	1017.7	3	014	02	2	2	7	8	4	/	/	81818	87640			18	Cu hum			
19	64	8	11	09	18	6.4	4.5	88	5.2	1014.5	8	016	61	6	6	1	7	4	2	/	81712	88550			19	1Sc40			
20	57	8	14	07	16	9.8	9.1	95	7.3	996.9	7	020	51	6	5	8	5	3	/	/	83706	87709	88612		20	2Sc30			
21	81	6	25	06	15	8.6	5.2	79	5.5	1012.4	3	015	03	1	1	1	8	5	0	6	81820	86078			21	1Sc30 1Cs72 COTRA Cu hum			
22	65	8	24	09	17	13.1	12.3	95	9.0	1000.9	5	009	21	6	5	4	7	4	7	/	83710	86358	88465		22	2Sc30			
23	70	8	22	07	15	10.8	7.5	80	6.5	1005.2	3	005	15	8	2	4	8	5	7	/	82820	83640	87361		23	8As65 jpNW			
24	86	7	26	09	23	9.3	6.7	84	6.2	994.7	3	015	21	6	2	6	8	4	/	8	86815	85075			24	1Sc40 COTRA Cu med			
25	86	7	25	11	19	8.7	6.0	83	5.9	994.7	2	036	25	8	1	7	8	5	/	/	83820	87635			25	Cu med			
26	56	8	21	11	18	9.1	7.5	89	6.5	1002.6	7	043	58	6	5	7	5	4	2	/	82710	85615	87625		26	8Ns35			
27	82	5	29	12	20	7.5	2.8	72	7.6	1007.6	2	082	01	6	2	5	8	5	0	0	81825	85645			27	Absent 27-29 vv&cld est			
28	75	8	22	11	17	11.9	9.5	85	7.3	1014.4	7	016	15	2	2	8	5	4	/	/	83615	87625	88656		28				
29	75	8	24	08	18	8.9	7.6	91	6.6	999.8	3	009	58	6	5	7	5	4	/	/	82712	84625	87650		29				
30	65	7	24	12	26	9.1	4.3	72	5.2	1011.6	5	002	15	8	2	3	8	5	3	2	82828	86075			30	2Sc45 1Ac66 1Ci70 COTRA Cu hum jpNW Parhelion			
31	59	8	20	13	26	10.7	9.2	91	7.3	997.5	7	037	61	6	6	7	5	4	2	/	82712	86615	87622		31	8Ns40			

Mean vis = 27.1 km

Mean cloud = 5.7 71%

Mean wind speed = 7.8 kn

Mean gust = 16 kn

Mean TT = 7.1 °C

Mean TdTd = 4.1 °C

Mean RH = 81.4 %

Mean r = 5.4 g/kg

Mean PPP = 1007.3 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

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
2012	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	0.16	0.76	0.17	0.67	0.00	0.00	0.00	0.59	0.00	0.58	0.54	0.00	0.00	0.00	0.21	0.30
	9	0.90	1.00	0.00	1.00	0.00	0.10	0.00	1.00	0.00	1.00	1.00	0.23	0.00	0.00	0.95	1.00
	10	0.81	1.00	0.11	1.00	0.51	0.00	0.39	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00
	11	0.76	1.00	0.00	1.00	0.98	0.03	1.00	1.00	0.41	1.00	1.00	0.00	0.00	0.00	0.86	1.00
	12	0.20	1.00	0.49	1.00	0.83	0.37	1.00	1.00	1.00	0.97	1.00	0.00	0.00	0.00	0.62	1.00
	13	0.04	0.78	0.09	0.99	0.83	0.00	0.95	1.00	0.52	0.77	1.00	0.00	0.00	0.00	0.28	1.00
	14	0.03	0.14	0.50	1.00	0.89	0.00	0.22	1.00	0.63	0.71	1.00	0.00	0.00	0.00	0.01	0.33
	15	0.00	0.00	0.10	0.05	0.80	0.00	0.56	0.76	0.30	0.58	0.49	0.09	0.00	0.00	0.00	0.00
	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		2.90	5.69	1.46	6.71	4.84	0.49	4.12	7.35	2.84	6.62	7.03	0.33	0.00	0.00	3.93	5.63

	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	0.48	0.45	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.17
	9	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.80	0.00	0.40
	10	1.00	0.31	0.00	0.00	1.00	0.00	0.15	0.00	0.00	0.27	0.00	0.00	0.00	0.26	0.00	0.38
	11	1.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.14	0.00	0.08	0.00	0.00	0.23	0.00	0.39
	12	0.97	0.01	0.00	0.00	1.00	0.00	0.00	0.00	0.60	0.00	0.04	0.00	0.00	0.02	0.00	0.42
	13	1.00	0.48	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.00	0.53	0.00	0.00	0.00	0.00	0.36
	14	1.00	0.00	0.00	0.00	0.72	0.00	0.00	0.12	0.05	0.00	0.51	0.00	0.00	0.03	0.00	0.29
	15	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.14
	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		7.03	2.26	0.00	0.00	5.83	0.00	0.15	0.15	0.89	0.76	1.19	0.00	0.00	1.34	0.00	79.51

December 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	0.62	5.9	1345	-3.7	530	90.0	98.3	923	71.9	1606	-0.90	3.58	5.0	1251	2.8	531	1015.18	1016.8	2359	1013.8	1322	0.1
2	1.16	5.3	1334	-3.7	711	86.9	96.2	731	67.2	1337	-0.84	3.57	4.5	2359	2.7	711	1016.58	1018.1	1028	1013.5	2359	1.6
3	6.70	10.5	1031	1.8	2358	85.9	96.7	422	68.6	1436	4.45	5.33	7.3	744	3.7	2358	1007.39	1013.6	0	1004.3	2302	3.5
4	3.25	7.8	1241	-1.5	2351	82.2	95.2	2340	63.8	1352	0.41	3.95	4.5	1121	3.2	2100	1003.98	1005.3	1009	1003.0	2222	0.0
5	0.78	4.2	1255	-3.0	426	84.5	97.4	441	67.2	1755	-1.67	3.39	4.3	1056	2.8	2350	1009.13	1017.3	2358	1002.6	241	0.4
6	0.61	5.7	2320	-4.8	559	84.7	93.9	640	71.5	1242	-1.71	3.42	5.1	2341	2.4	559	1012.94	1018.7	837	998.1	2313	1.4
7	4.55	6.9	1336	2.0	714	77.4	89.2	0	63.0	1329	0.88	4.08	5.0	0	3.6	1822	1003.50	1016.4	2357	997.4	18	1.2
8	4.04	6.5	1331	1.3	820	81.7	92.5	830	69.2	1409	1.17	4.08	4.5	1223	3.7	1936	1023.99	1026.8	1742	1016.2	2	0.1
9	6.66	9.4	1302	2.8	2	78.2	88.0	4	65.6	2027	3.09	4.72	5.3	918	3.7	2251	1019.52	1024.7	0	1016.3	1513	0.0
10	2.55	5.3	1331	-1.8	2359	80.6	95.2	2344	68.7	1219	-0.52	3.62	4.0	120	3.1	2359	1023.38	1028.9	2354	1018.0	16	0.0
11	-1.53	2.8	1330	-4.6	755	93.8	97.9	2309	77.4	1416	-2.43	3.13	3.9	1151	2.6	755	1029.79	1031.6	1032	1027.7	2357	0.1
12	-3.62	-1.6	1519	-5.2	721	97.4	98.5	1902	96.1	838	-3.98	2.81	3.3	1519	2.4	721	1019.98	1027.7	0	1012.1	2358	0.0
13	-1.86	0.5	2354	-5.0	557	97.6	98.3	2351	96.9	556	-2.19	3.28	3.9	2359	2.6	557	1005.04	1012.1	0	999.4	2359	0.1
14	6.44	10.3	1456	0.3	13	91.6	98.5	123	75.2	1926	5.10	5.68	7.7	1456	3.8	13	984.52	999.4	0	974.2	1526	9.0
15	7.99	11.3	1214	5.4	2323	85.6	91.4	1926	74.8	1237	5.71	5.81	6.5	1119	5.0	2309	991.55	997.7	2359	984.7	4	1.2
16	6.37	10.3	1312	1.7	229	89.1	96.6	241	73.5	1328	4.66	5.36	5.9	1305	4.1	229	999.50	1001.8	1035	997.6	2	0.8
17	6.48	8.9	1325	4.8	840	84.5	93.1	14	68.0	1324	4.02	5.11	5.8	28	4.7	1429	1001.94	1006.3	2359	998.1	129	0.3
18	5.58	7.9	1420	1.8	2115	86.2	96.6	2329	76.8	635	3.41	4.83	5.3	1750	4.1	2116	1015.23	1020.3	2151	1006.2	3	0.0
19	5.40	7.6	1132	1.0	135	92.1	97.8	150	78.3	1135	4.20	5.13	6.0	2358	3.9	135	1015.47	1020.0	7	1008.4	2349	8.2
20	8.56	10.4	1009	6.8	26	94.8	97.5	951	88.7	1922	7.79	6.65	7.7	1009	5.8	2115	1001.45	1008.7	2	996.8	1542	10.4
21	7.38	10.2	1312	5.9	1928	90.3	96.0	815	73.9	1325	5.87	5.77	6.5	1031	5.2	1717	1010.01	1014.6	2242	1003.3	0	0.2
22	10.38	13.2	1520	6.4	0	94.3	97.2	1228	90.1	2216	9.51	7.52	9.1	1439	5.6	0	1004.35	1013.9	1	1000.6	1949	13.8
23	11.12	13.0	219	8.7	2317	84.7	93.5	0	75.1	1148	8.63	7.06	8.7	37	5.9	2125	1003.81	1007.1	2246	999.8	441	0.6
24	9.31	12.4	1052	7.2	629	91.1	97.6	809	82.9	1504	7.92	6.73	8.2	830	5.9	1550	998.36	1006.9	10	991.9	1344	7.4
25	7.54	9.3	1303	5.4	2340	85.4	94.2	355	72.4	2037	5.23	5.61	6.6	1221	4.6	2054	995.75	1003.4	2340	990.5	1123	4.8
26	7.55	10.5	1709	4.1	148	85.5	92.4	208	73.0	2143	5.25	5.59	7.1	1700	4.6	455	1004.16	1008.2	1020	999.6	1738	1.6
27	6.94	8.6	1201	4.9	2357	80.0	92.6	857	69.0	1727	3.69	4.98	6.0	859	4.3	2315	1006.40	1021.0	2348	997.2	841	1.6
28	9.46	12.2	1349	4.8	42	89.6	96.5	941	81.9	28	7.82	6.64	7.9	1138	4.4	0	1015.98	1021.4	58	1010.4	2356	3.0
29	9.51	12.2	307	5.4	2343	82.8	93.5	1326	70.2	311	6.70	6.18	7.4	1332	4.4	2339	1003.28	1010.8	4	997.6	1257	4.9
30	7.43	11.0	2239	4.4	517	76.5	81.6	520	70.5	1543	3.57	4.95	6.4	2329	4.1	218	1010.26	1013.0	1732	1004.4	4	0.3
31	10.24	11.4	243	8.3	2353	87.1	93.1	2155	74.5	245	8.17	6.81	7.5	1535	6.1	132	1002.59	1011.2	3	997.0	1516	3.8
Total																						80.4
Mean	5.41	8.38		2.00		86.8	94.74		74.70		3.32	5.01	6.02		4.06		1008.23	1014.31		1002.60		
Max	11.12	13.20		8.65		97.6	98.50		96.90		9.51	7.52	9.05		6.10		1029.79	1031.61		1027.65		
Min	-3.62	-1.61		-5.25		76.5	81.60		62.95		-3.98	2.81	3.28		2.44		984.52	997.74		974.20		

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.