

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

JANUARY 2012

Temperature (°C / °F)			Anomaly	Rank in the past 131 years			
Mean maximum	9.7	49.5	+1.9	9 th highest			
Mean minimum	2.3	36.1	+0.5	32 nd highest			
Daily mean	6.0	42.8	+1.2	17 th highest			
Highest maximum	13.0	55.4	on 21 st	Lowest maximum	3.4	38.1	on 31 st
Highest minimum	11.2	52.2	on 1 st	Lowest minimum	-5.9	21.4	on 17 th
Mean grass minimum	-1.3	29.7	-0.2	Lowest grass minimum	-10.6	12.9	on 17 th
Mean earth @30 cm	6.5	43.7	+1.1	Earth @100 cm	8.9	48.0	
Frost duration (hrs)	107.9			Rain duration (hrs)	30.0		
Rainfall total (mm / in)	37.2	1.46	60 %	39 th lowest			
Highest daily fall	6.7	0.26	on 24 th				
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	7	days ≥5mm	3		
Sunshine total (hrs) 93.3	Daily mean 3.01	149 %		Sunniest day 7.8	16 th		
N ^o days with: Air frost 10	Ground frost 16	Snow falling 2	Snow lying 0				
Thunder 0	Hail ≥5mm 0	Small hail/ice 0	Fog @09 1	Nil sun 6			
Pressure MSL : Mean @09 GMT, mbar 1021.2	+4.5	Highest 1034.4	on 13 th	Lowest 994.1	on 3 rd		
Relative humidity : Mean (%) 82.0	Lowest 46	on 22 nd	Water vapour (g/kg), mean at 09 & 15 GMT 4.8,	4.8			
Overall mean wind speed (mph) 7.6	Windiest day 17.6	on 5 th	Max gust 54	on 3 rd			
Wind direction (days) N 1 NE 3 E 3 SE 0 S 1 SW 12 W 10 NW 1							
Least windy day (mph) 2.4	on 17 th	Calm; less than 0.5 mph (minutes) 716					

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

Notes: **Mild, Dry, Very Sunny, Windy at First**

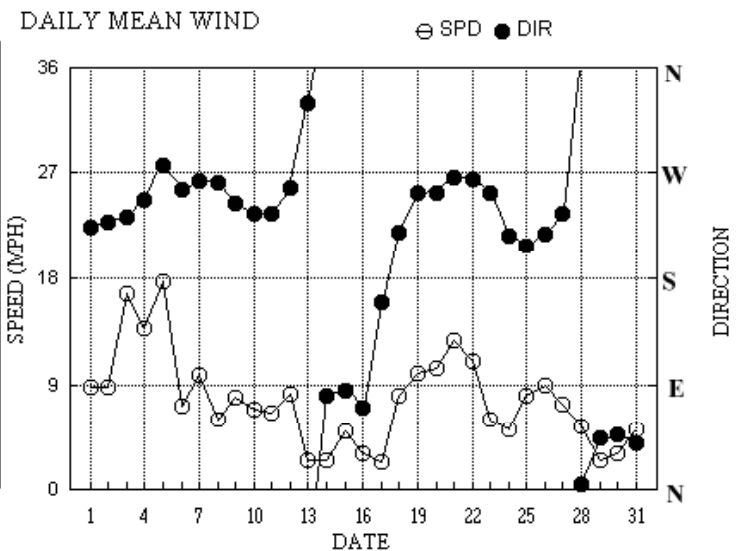
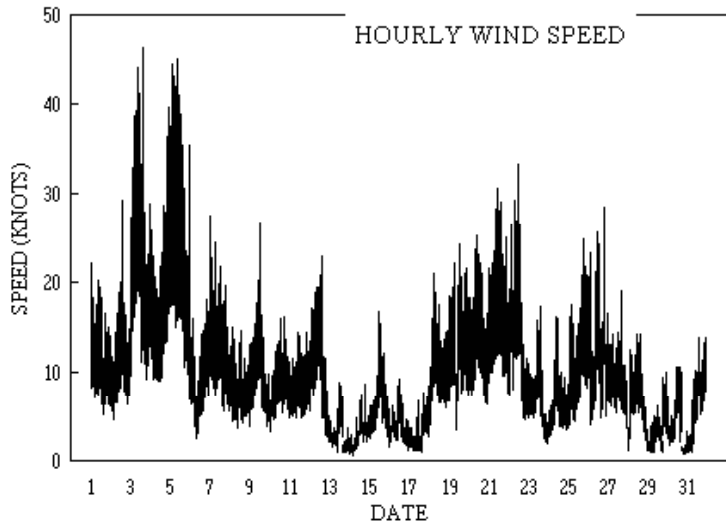
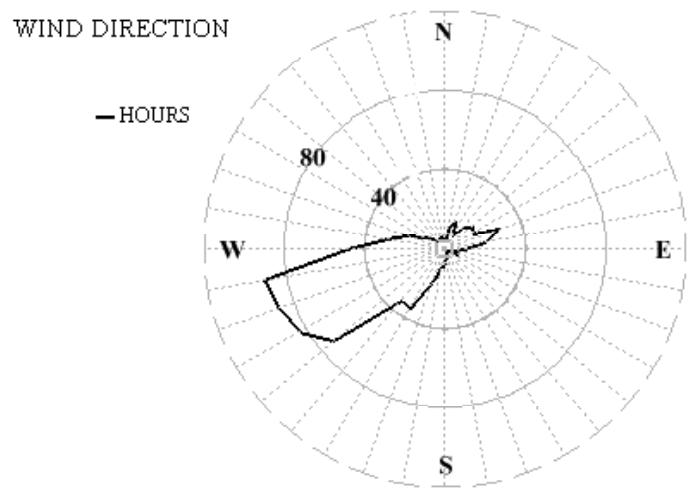
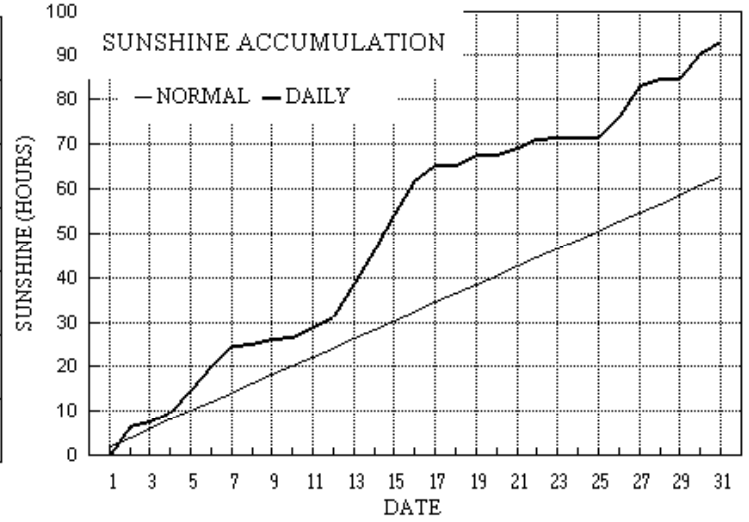
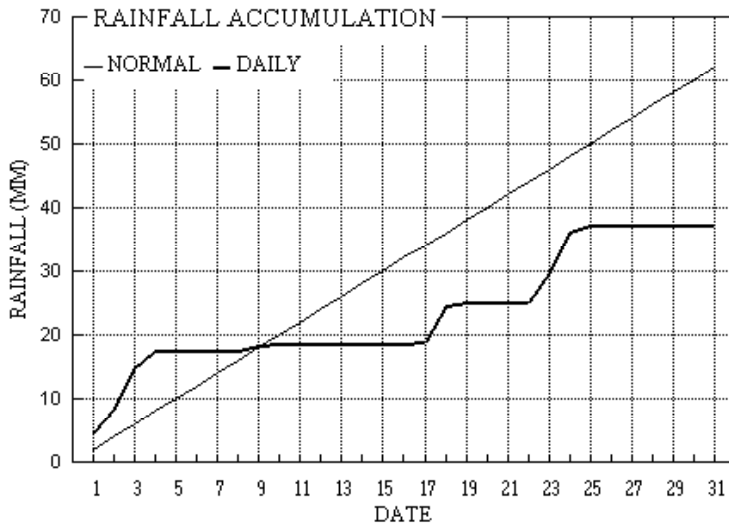
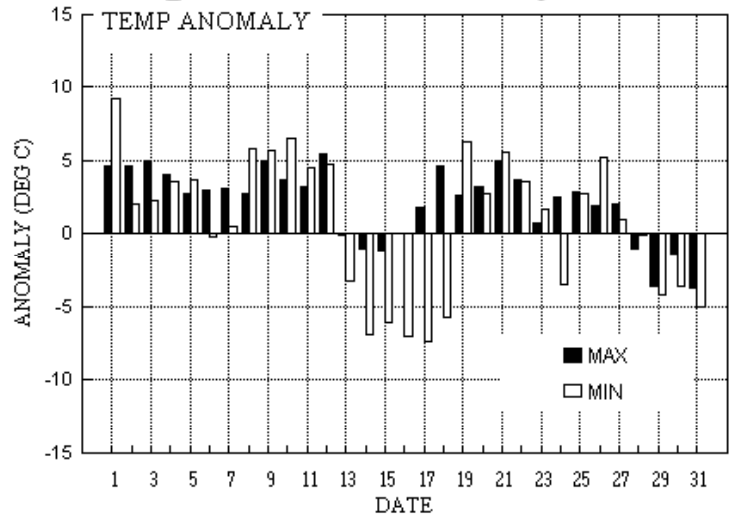
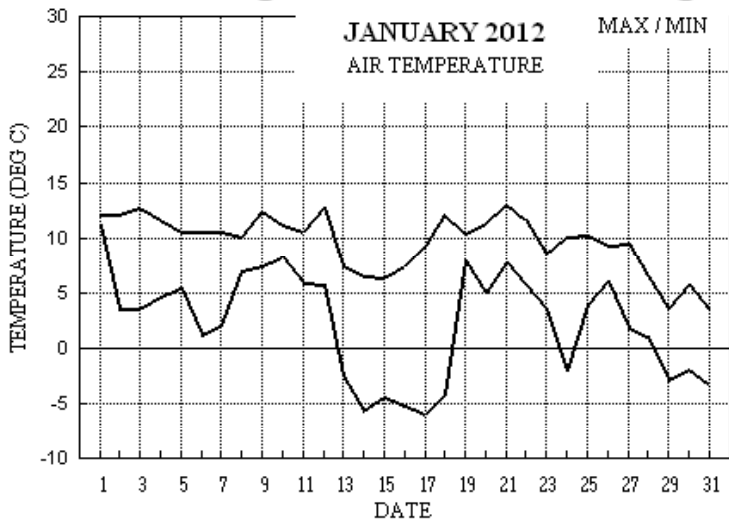
A characteristic of this January has been less cloud than usual, resulting in near record sunshine and a larger than average mean diurnal temperature range. **Temperature:** While the mean max ranks 9th highest, the mean min is only 32nd highest, with the resulting mean diurnal range 1.3° above normal and equal highest with 2009 since 1934. The highest max is 0.6° above the median and the lowest max is 2.6° above its median. The highest min is 3.0° above the median and is 3rd highest in the past 100 years. The lowest min exactly equals the median. The mean earth temperatures at 30 cm and 1 m depth are both well above average. The duration of air frost is 9.5 hours above average, but the number of days with air frost is 1 fewer than average. **Rainfall:** This has been quite a dry January, though the total fall is only just inside the dry category. In recent years, drier Januaries occurred in 2006, 2005 and 2000. The highest daily fall ranks 11th lowest in 109 years, but is lowest only since 2005. There were 4 more dry days than average, and the duration of measurable rain is only 55 % of normal. Thunder and hail were absent, but snow fell on the 30th and 31st, though in negligible amounts. A 6 day dry spell ended on the 16th, and another was unbroken at the end of the month after 6 days. **Sunshine:** This has been a very sunny January, certainly one of the 10 sunniest in the past 105 years, but the total is 12.4 hours less than the record set in 2003. The 4 day period 13th to 16th was outstanding with over 90 % of the maximum each day, but in marked contrast the 8 day period starting on the 18th had a mean of only 9 % of the maximum. Overall there were 19 days with <3 hours and 7 with =>6 hours. The number of days with nil sun is 5 fewer than average. **Wind:** The mean wind speed on the 5th is highest for any day since the 18th January 2007. However, the highest gust on that occasion was 74 mph, compared with a maximum of only 54 mph this month. **Commentary: From the 1st to the 12th:** It was mild throughout, with anomalies for daily max between +5.4° on the 12th and +2.7° on the 5th, while anomalies for daily min ranged from +9.3° on the 1st to -0.2° on the 6th. Wet until the 4th, with 17.6 mm in total, then just 1.0 mm over the next 8 days. Above normal sunshine on the 2nd, 5th, 6th and 7th, enough to give a surplus of 15 hours by the 12th. Moderate SW'ly winds on the 1st increased strong on the 3rd, became very strong on the 5th, dropping light or moderate by the 8th. **From the 13th to the 21st:** Temperatures by day were near normal until the 17th, then above, but there were cold nights up to the 18th. Anomalies for daily max were between -1.1° on the 15th to +5.0° on the 21st, and anomalies for min between -7.4° on the 17th and +5.6° on the 21st. Mainly dry, apart from 5.8 mm on the 18th. Very sunny until the 16th, with a total of 30.6 hours over 4 days, then dull with only 7.2 hours over the next 5 days. Light or moderate winds veered NW'ly on the 13th then E'ly on the 14th, veering W'ly between the 16th and 19th, and increasing fresh on the 20th. **From the 22nd and the 31st:** Temperatures were above normal until the 27th then below, ending the month on a cold note. Anomalies for daily max ranged from +3.6° on the 22nd to -3.7° on the 31st, while anomalies for min were between +5.2° on the 26th and -5.0° on the 31st. Rain on just the 23rd to 25th, giving a total of 12.1 mm. A few snow flakes fell on the 30th and 31st. Sunshine was above normal on the 26th, 27th and 30th, but 3 other days had nil. A fresh W'ly wind on the 22nd dropped light or moderate SW'ly by the 24th, becoming light NE'ly after the 27th.

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			
+3.8°	+3.9°	93%	132%	+1.9°	-1.8°	32%	204%	+0.8°	+0.3°	55%	115%

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

Wokingham Climatological Graphs for January 2012



Month: January 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	12.2	11.2	4.7	9.2	8.4	9.5	0.0	0.0	1006.8	0	0	0	0	224	7.5	7.6	219	22	0001	235	11	00	3.1	
2	12.2	3.5	3.7	-1.4	8.4	9.6	6.6	0.0	1007.4	0	1	0	0	229	7.4	7.6	262	30	1524	245	10	13	4.0	
3	12.7	3.6	6.5	-0.1	7.6	9.6	1.4	0.0	997.3	0	1	0	0	233	13.8	14.5	254	47	1533	222	20	08	3.2	
4	11.7	4.7	2.7	0.9	7.6	9.6	1.7	0.0	1020.4	0	0	0	0	247	11.7	11.9	247	40	2211	252	18	22	3.3	
5	10.6	5.4	tr	6.3	7.5	9.5	5.2	0.0	1000.2	0	0	0	0	277	14.7	15.3	278	45	0826	257	19	05	0.0	
6	10.6	1.3	tr	-4.3	7.4	9.5	5.3	0.0	1026.7	0	1	0	0	256	5.5	6.2	226	18	1951	244	10	23	0.1	
7	10.5	2.0	0.0	5.7	7.3	9.4	4.7	0.0	1022.5	0	0	0	0	264	8.3	8.5	252	28	0101	252	12	01	0.0	
8	10.1	7.0	tr	2.0	7.3	9.4	0.4	0.0	1027.4	0	0	0	0	262	4.9	5.2	270	15	0210	292	7	13	0.0	
9	12.5	7.4	0.8	1.5	7.5	9.3	0.9	0.0	1029.0	0	0	0	0	244	6.8	6.8	267	27	1258	257	10	12	0.9	
10	11.2	8.3	0.2	5.2	7.9	9.3	0.4	0.0	1033.7	0	0	0	0	235	5.9	6.0	250	16	1847	243	8	18	0.5	
11	10.5	5.9	0.0	0.5	8.1	9.4	2.5	0.0	1033.9	0	0	0	0	235	5.6	5.8	225	15	2044	265	8	12	0.0	
12	12.8	5.7	tr	2.4	7.9	9.5	2.2	0.0	1026.6	0	0	0	0	258	5.7	7.2	304	23	1423	255	11	12	0.0	
13	7.4	-2.5	0.0	-7.9	7.5	9.5	7.5	12.6	1033.7	1	1	0	0	329	0.6	2.2	34	9	1215	21	4	14	0.0	
14	6.6	-5.7	0.0	-10.3	6.3	9.4	7.6	17.3	1031.5	1	1	0	0	81	1.6	2.1	97	9	1953	73	3	13	0.0	
15	6.4	-4.4	0.0	-8.3	5.4	9.3	7.7	11.3	1024.9	1	1	0	0	85	4.2	4.4	107	17	1238	104	8	12	0.0	
16	7.5	-5.1	0.0	-10.5	4.8	9.0	7.8	16.6	1025.2	1	1	0	0	70	2.5	2.7	99	9	1238	92	4	12	0.0	
17	9.3	-5.9	0.3	-10.6	4.1	8.7	3.4	12.2	1028.6	1	1	0	0	160	0.7	2.1	153	8	1840	179	4	19	1.7	
18	12.2	-4.3	5.8	-6.5	3.9	8.4	0.0	0.0	1023.5	1	1	0	0	219	6.6	6.9	205	21	0740	208	10	07	4.8	
19	10.4	8.0	0.4	8.0	5.2	8.1	2.5	0.0	1017.8	0	0	0	0	253	8.3	8.7	265	25	1414	265	11	13	0.3	
20	11.3	4.9	0.0	0.6	5.9	8.1	0.0	0.0	1020.1	0	0	0	0	253	8.9	9.0	251	25	1001	255	12	11	0.0	
21	13.0	7.8	tr	5.7	6.2	8.1	1.3	0.0	1012.1	0	0	0	0	266	10.8	11.0	268	31	1145	263	14	11	0.0	
22	11.6	5.8	0.0	0.8	6.5	8.2	2.1	0.0	1012.2	0	0	0	0	265	9.1	9.5	276	33	1156	249	14	08	0.0	
23	8.5	3.6	4.5	-1.7	6.4	8.3	0.3	0.9	1019.5	0	1	0	0	253	5.0	5.2	267	18	1452	280	8	14	2.7	
24	10.1	-2.0	6.7	-7.5	5.9	8.3	0.0	4.3	1020.3	1	1	0	0	217	4.0	4.4	194	16	1038	187	8	10	3.1	
25	10.3	3.8	0.9	5.7	6.2	8.3	0.0	0.0	1017.1	0	0	0	0	208	6.5	7.0	205	25	1817	188	10	20	2.2	
26	9.3	6.0	tr	4.8	6.8	8.2	4.7	0.0	1007.4	0	0	0	0	218	7.1	7.7	251	29	2011	227	12	19	0.1	
27	9.4	1.9	tr	-2.6	6.5	8.3	6.9	0.0	1019.8	0	1	0	0	235	6.3	6.4	240	19	1651	236	9	16	0.0	
28	6.5	1.0	tr	-4.4	6.0	8.3	1.5	1.0	1028.4	0	1	0	0	5	4.5	4.7	8	15	1132	2	7	11	0.0	
29	3.6	-2.8	tr	-8.1	5.7	8.3	0.0	5.3	1032.0	1	1	0	0	44	1.3	2.2	71	10	2245	68	5	20	0.0	
30	5.8	-1.9	tr	-6.9	5.6	8.2	6.1	9.8	1027.2	1	1	1	0	47	2.2	2.6	64	11	1401	48	6	13	0.0	
31	3.4	-3.3	tr	-9.1	5.1	8.1	2.6	16.6	1025.4	1	1	1	0	40	4.2	4.4	56	14	1422	37	8	23	0.0	
Total			37.2				93.3	107.9																30.0
Mean	9.7	2.3		-1.3	6.5	8.9	3.01	3.5	1021.2					248	4.6	6.6								
Anom	+1.9	+0.5	60%	-0.2	+1.1	+1.4	149%			+4.5														
Daily mean		6.0																						
Anom		+1.2																						

Number of days with:

Air frost = 10 Ground frost = 16 Nil sun = 6
Snow falling = 2 Snow lying = 0 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 0 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 January 2012

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	NChshs	Date	Remarks
1	84	7	22	08	15	11.4	9.3	87	7.3	1006.8	8	006	02	2	2	3	1	4	7	2	83815	83365	87072	1	1Ac62 COTRA Cu hum
2	84	1	24	08	17	3.8	1.5	85	4.3	1007.4	3	027	02	0	0	1	8	4	6	3	81815			2	1Sc40 1Ac60 1Ci70 Cu fra Cb top W
3	67	8	22	21	42	12.0	9.5	85	7.5	997.3	8	023	60	6	2	8	5	4	/	/	87615	88625		3	
4	72	6	24	09	19	5.4	1.3	75	4.1	1020.4	2	024	02	1	1	2	0	9	4	1	82365	86075		4	1Ci70 COTRA Ac len Ci flo
5	75	3	28	13	45	9.8	2.7	61	4.7	1000.2	3	018	25	8	1	2	8	5	0	1	81828			5	1Sc50 2Ci75 COTRA Cu med jpSW
6	72	7	24	02	06	2.0	0.1	87	3.8	1026.7	2	020	02	1	1	1	5	7	0	1	81656	87080		6	COTRA glaze slt
7	70	5	27	08	18	8.7	1.8	62	4.3	1022.5	2	034	02	2	2	5	5	6	0	1	81640	85645		7	1Ci75
8	82	7	30	06	11	8.4	2.1	65	4.4	1027.4	3	020	02	2	2	8	5	6	/	/	87630			8	
9	81	7	24	08	15	9.8	7.1	84	6.2	1029.0	2	012	02	2	2	7	8	4	/	/	81815	87650		9	Cu fra
10	50	7	23	06	11	9.0	8.0	93	6.5	1033.7	3	007	20	5	2	7	5	3	/	1	81708	83620	86625	10	2St12 /Ci78 COTRA vv15k exNW
11	81	4	21	05	11	6.3	4.2	86	5.0	1033.9	2	009	01	1	1	1	5	7	3	1	81656	83080		11	1Ac60 2Ci72 COTRA
12	75	7	24	10	19	8.3	6.6	89	6.0	1026.6	5	005	02	2	2	7	6	3	/	/	81708	87710		12	
13	59	3	22	02	03	-1.3	-1.7	97	3.3	1033.7	2	012	10	0	0	1	6	4	0	1	81710	83078		13	COTRA Absent vv&clد est
14	56	1	06	02	03	-4.4	-4.9	96	2.6	1031.5	1	001	10	0	0	0	0	9	0	1	81080			14	COTRA Hoar thk Gnd frzn
15	65	1	08	04	08	-0.3	-1.4	92	3.4	1024.9	3	001	02	0	0	1	5	6	0	0	81635			15	Hoar mod Gnd frzn
16	35	4	08	02	04	-2.5	-3.0	97	3.0	1025.2	2	011	10	0	0	0	0	9	0	1	84080			16	COTRA Hoar thk Gnd frzn
17	57	7	02	01	03	-4.3	-4.9	95	2.6	1028.6	2	018	10	2	2	0	0	9	0	1	81170	87075		17	COTRA Hoar mod. Gnd frzn
18	35	8	21	08	19	9.2	8.5	95	6.8	1023.5	6	007	21	6	5	8	7	2	/	/	81704	85706	88710	18	
19	50	8	36	02	21	8.0	7.2	94	6.2	1017.8	3	006	61	6	6	7	7	2	2	/	82705	87708	88515	19	CF 0828
20	68	8	25	09	22	7.8	3.6	75	4.9	1020.1	8	010	03	2	2	7	5	5	2	/	82625	87635	88458	20	
21	80	7	26	12	26	11.3	7.5	78	6.4	1012.1	6	007	01	2	2	7	5	4	/	1	86618	87635		21	/Ci75 COTRA
22	80	7	25	14	29	9.0	4.9	75	5.4	1012.2	6	017	03	1	1	6	8	4	0	1	81818	85645		22	2Sc30 3Ci75 COTRA Cu fra
23	72	7	24	06	10	4.7	1.8	82	4.3	1019.5	1	011	02	2	2	1	5	7	7	/	81656	87358		23	
24	35	8	19	06	12	3.8	3.2	96	4.7	1020.3	8	014	63	6	6	7	5	2	2	/	82705	86625	88530	24	RR 0825-47
25	65	7	20	06	13	8.3	6.8	90	6.1	1017.1	7	001	20	5	2	7	5	4	/	/	81710	87618		25	
26	80	7	20	05	11	6.4	4.8	90	5.3	1007.4	1	007	01	6	2	1	6	4	8	/	81710	84458	86362	26	1Sc50 Ac cas vir. Cld edge W
27	75	0	23	07	11	3.1	1.2	87	4.1	1019.8	2	021	02	0	0	0	0	9	0	0				27	Hoar slt
28	60	5	01	06	10	3.3	1.5	88	4.1	1028.4	2	021	05	6	2	5	5	3	0	0	81708	85635		28	
29	08	8	29	02	03	1.0	0.7	98	3.9	1032.0	4	000	46	4	2	8	6	0	/	/	88701			29	
30	25	2	06	02	04	-0.9	-1.5	95	3.4	1027.2	2	002	10	1	1	2	5	7	3	1	82650			30	1Ac58 1Ci75 Hoar slt
31	20	0	06	03	06	-1.5	-2.1	96	3.2	1025.4	3	012	10	0	0	0	0	9	0	0				31	Hoar slt. Gnd frzn

Mean vis = 18.8 km

Mean cloud = 5.4 67%

Mean wind speed = 6.5 kn

Mean gust = 14 kn

Mean TT = 5.0 °C

Mean Td = 2.8 °C

Mean RH = 86.3 %

Mean r = 4.8 g/kg

Mean PPP = 1021.2 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.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for January 2012

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	59	8	19	05	16	10.1	8.9	92	7.2	1001.7	7	030	63	6	6	4	5	3	2	/	81708	83645	88550			1	1Sc20	
2	80	2	24	09	24	6.9	0.9	65	4.1	1010.7	2	015	15	0	0	1	9	5	6	3	81925					2	1Cu30 1Ac62 2Ci70 jpW vv60k ex W	
3	62	3	25	14	34	8.9	3.8	70	5.0	1000.9	3	030	15	8	6	3	8	5	0	0	82820					3	1Sc45 Cu med jpNW	
4	58	8	23	11	24	7.6	4.2	79	5.1	1015.8	8	042	80	8	2	7	8	5	2	/	81715	83820	86630			4	8As62	
5	80	3	31	19	36	9.6	1.2	56	4.1	1007.3	3	049	02	1	1	3	8	6	0	1	83838					5	1Sc50 1Ci78 Cu med	
6	70	4	24	05	12	8.3	2.6	67	4.5	1025.6	7	020	01	1	1	1	8	5	7	0	81825	84358				6	1Sc56 Cu hum	
7	72	5	27	06	18	9.4	1.4	57	4.1	1023.6	3	006	02	1	1	1	8	6	0	1	81835	84080				7	1Sc40 COTRA Cu hum	
8	82	7	26	04	15	9.9	4.9	71	5.3	1027.6	1	001	02	2	2	7	8	5	/	/	81820	85625	87630			8	/Sc50 Cu hum	
9	78	7	25	08	17	11.3	7.3	76	6.2	1029.7	2	005	02	2	2	7	5	4	/	/	81716	85620	87630			9		
10	84	7	24	06	14	10.7	7.8	82	6.4	1033.0	5	002	02	2	2	7	8	4	/	/	83815	87635				10	Cu hum	
11	70	8	26	05	12	10.4	7.9	84	6.5	1032.9	7	009	02	2	2	8	6	4	/	/	88710					11		
12	88	4	33	09	23	10.5	4.5	66	5.1	1026.9	3	006	01	8	1	2	8	5	0	1	81822	83075				12	1Sc50 COTRA Cu med	
13	78	5	02	04	09	5.8	-0.2	66	3.7	1033.3	5	006	02	1	1	1	1	5	0	1	81825	85080				13	Absent, vv&cld est	
14	62	1	07	04	08	4.9	-0.5	68	3.6	1028.3	6	019	02	0	0	1	5	6	0	0	81635					14	Hoar silt in shade	
15	70	1	10	07	14	5.4	-1.8	60	3.3	1023.1	8	014	01	0	0	1	8	6	0	0	81830					15	1Sc35 Cu hum/fra	
16	67	3	07	04	08	5.6	-2.9	54	3.0	1025.1	6	007	02	1	1	0	0	9	0	1	83080					16	COTRA Hoar silt in shade	
17	56	7	31	01	03	4.1	0.6	78	3.9	1027.1	6	013	05	2	2	1	5	5	7	1	81620	83365	85075			17	2Ac68 COTRA	
18	75	8	24	07	13	11.9	10.6	92	7.8	1022.8	5	002	01	2	2	7	5	3	3	8	81708	85712				18	4Sc20 /Ac68 /Cs72 COTRA	
19	75	6	26	10	25	9.2	4.4	72	5.1	1019.1	2	001	15	8	1	3	8	5	6	8	81820	83640				19	1Ac57 1Cc70 2Cs75 Cu med jpW vv70k ex W Cs edge S	
20	68	8	26	09	22	9.6	5.1	74	5.4	1019.1	7	008	02	2	2	6	8	5	7	/	81820	86635	88465			20	/Ac60 Cu fra/hum	
21	70	7	29	11	25	10.4	2.7	59	4.6	1011.3	3	002	01	8	2	5	8	5	0	1	82828	84640	87075			21	COTRA Cu hum	
22	70	7	29	14	27	11.2	0.5	48	3.9	1013.9	3	014	02	2	2	5	8	6	0	1	82840	84645	86075			22	Cu hum	
23	75	7	28	09	18	8.2	2.3	66	4.4	1019.0	5	003	15	2	2	6	8	5	7	/	81820	83635	87357			23	4Sc50 Cu med. jpW&S	
24	65	8	24	04	08	9.7	9.0	96	7.1	1016.7	5	007	20	6	5	8	5	3	/	/	82706	87709	88615			24		
25	75	7	20	09	16	10.2	6.9	80	6.1	1013.7	6	020	02	2	2	7	5	4	/	/	85615	87620				25		
26	86	1	25	06	25	6.1	1.6	73	4.3	1009.6	2	021	25	8	1	1	8	6	0	3	81830					26	1Sc50 1Ci70 Cu med Cb topNW	
27	82	2	23	07	14	7.6	-0.1	58	3.7	1020.0	6	009	15	0	0	1	9	5	6	3	81925	81835				27	1Ac58 1Ac62 2Ci70 COTRA jpSW Parhelia	
28	81	5	01	05	10	6.0	1.5	73	4.2	1030.0	2	003	01	2	2	3	8	5	0	1	82820	83078				28	2Sc35 COTRA Cu med	
29	57	8	02	02	05	3.5	2.4	93	4.5	1030.1	7	010	05	2	2	7	5	3	2	/	82706	87615	88462			29		
30	75	5	04	04	11	3.4	-3.6	60	2.8	1024.9	6	015	02	1	1	5	8	6	0	0	81832	85645				30	Cu hum	
31	50	7	04	08	15	2.5	-0.8	79	3.5	1027.1	3	005	05	1	1	7	5	4	/	/	81712	86615	87645			31		

Mean vis = 24.7 km

Mean cloud = 5.5 68%

Mean wind speed = 7.3 kn

Mean gust = 17 kn

Mean TT = 8.0 °C

Mean TdTd = 3.0 °C

Mean RH = 71.4 %

Mean r = 4.8 g/kg

Mean PPP = 1021.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Wokingham	Hour	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	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	0.00	0.39	0.00	0.07	0.00	0.40	0.02	0.00	0.00	0.14	0.05	0.00	0.49	0.53	0.57	0.54
	9	0.00	0.98	0.00	0.84	0.41	1.00	0.09	0.00	0.00	0.00	0.95	0.00	1.00	1.00	1.00	1.00
	10	0.00	1.00	0.00	0.36	0.84	1.00	0.04	0.00	0.20	0.00	1.00	0.38	1.00	1.00	1.00	1.00
	11	0.00	1.00	0.00	0.47	0.97	1.00	1.00	0.01	0.26	0.01	0.52	0.21	1.00	1.00	1.00	1.00
	12	0.00	1.00	0.00	0.00	0.99	1.00	1.00	0.24	0.40	0.22	0.00	0.70	1.00	1.00	1.00	1.00
	13	0.00	1.00	0.48	0.00	0.72	0.78	1.00	0.13	0.00	0.00	0.00	0.31	1.00	1.00	1.00	1.00
	14	0.00	1.00	0.84	0.00	0.86	0.05	1.00	0.00	0.00	0.00	0.00	0.49	1.00	1.00	1.00	1.00
	15	0.00	0.19	0.10	0.00	0.39	0.12	0.54	0.00	0.00	0.00	0.00	0.13	0.97	1.00	1.00	1.00
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.04	0.16	0.28
	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		0.00	6.56	1.42	1.74	5.18	5.33	4.70	0.39	0.86	0.37	2.53	2.24	7.46	7.57	7.73	7.81

Hour	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	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	0.19	0.00	0.00	0.00	0.00	0.11	0.31	0.00	0.00	0.00	0.77	0.01	0.00	0.64	0.44	0.18
9	1.00	0.00	0.00	0.00	0.42	0.11	0.00	0.00	0.00	0.21	1.00	0.75	0.00	0.31	0.66	0.41
10	0.50	0.00	0.11	0.00	0.33	0.22	0.00	0.00	0.00	0.71	1.00	0.15	0.00	0.85	0.00	0.41
11	0.00	0.00	0.00	0.00	0.21	0.73	0.00	0.00	0.00	0.91	1.00	0.00	0.00	0.89	0.57	0.44
12	0.37	0.00	0.55	0.00	0.02	0.03	0.00	0.00	0.00	0.59	1.00	0.17	0.00	0.99	0.51	0.44
13	0.95	0.00	0.99	0.00	0.12	0.06	0.00	0.00	0.00	0.31	1.00	0.06	0.00	0.88	0.40	0.43
14	0.20	0.00	0.50	0.00	0.13	0.53	0.00	0.00	0.00	0.64	0.94	0.17	0.00	0.40	0.06	0.38
15	0.18	0.00	0.04	0.00	0.09	0.29	0.00	0.00	0.00	0.94	0.20	0.19	0.00	0.81	0.00	0.26
16	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.32	0.00	0.05
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	3.40	0.00	2.54	0.00	1.32	2.07	0.32	0.00	0.00	4.71	6.93	1.50	0.00	6.08	2.64	93.41

January 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	10.60	12.5	44	6.0	2350	88.2	95.1	1631	78.4	1156	8.73	7.08	8.0	131	5.2	2350	1004.63	1008.5	121	1000.4	1655	4.7
2	5.15	7.5	1321	3.5	741	81.3	92.4	333	63.6	1315	2.14	4.45	5.3	24	3.9	1507	1008.72	1013.4	2046	1003.7	1	0.6
3	8.57	12.7	1125	5.0	2143	78.7	92.5	435	61.1	1708	5.02	5.63	8.1	1130	3.7	1950	1003.11	1010.5	0	994.1	1118	9.1
4	6.96	10.0	2354	4.6	516	75.4	89.3	1619	58.2	131	2.83	4.72	6.1	2118	3.4	133	1014.56	1021.5	1039	1003.6	2355	2.5
5	9.39	11.6	611	6.1	2313	66.0	79.6	707	50.5	1107	3.27	4.90	6.5	709	4.0	1605	1006.37	1019.1	2359	997.9	559	0.0
6	6.56	9.5	2233	1.2	849	77.4	89.5	854	63.1	1357	2.84	4.65	6.4	2356	3.5	752	1024.20	1028.1	1057	1019.0	0	0.0
7	9.06	10.7	401	6.9	1909	69.6	90.4	447	53.9	1352	3.63	4.95	6.8	436	4.0	1433	1022.51	1025.3	2233	1018.8	435	0.1
8	8.67	10.2	1249	7.5	2308	73.3	94.9	2329	62.9	1251	4.04	5.03	6.4	2243	4.3	336	1027.12	1028.8	2144	1024.7	109	0.0
9	9.99	12.5	1232	7.4	3	83.0	95.7	20	69.5	1315	7.21	6.20	6.5	2023	5.7	508	1029.99	1033.5	2355	1027.8	559	0.0
10	9.41	11.2	1234	7.5	2353	89.1	95.8	242	80.1	2134	7.68	6.39	7.2	1233	5.5	2353	1033.39	1034.2	952	1032.7	1422	0.9
11	8.13	10.5	1456	5.8	759	85.0	90.9	2357	80.8	1049	5.76	5.62	6.5	1456	4.8	510	1033.11	1034.3	1036	1030.9	0	0.0
12	7.93	12.8	1355	1.3	2347	80.9	93.2	153	63.4	1422	4.77	5.31	6.9	1328	3.6	2350	1028.33	1031.4	2325	1025.8	727	0.0
13	0.92	6.9	1322	-3.2	2357	88.9	97.7	908	64.1	1443	-0.83	3.53	5.0	1129	2.8	2357	1033.31	1034.4	1110	1031.2	3	0.1
14	-1.14	5.8	1350	-5.3	754	90.4	97.0	2255	62.3	1357	-2.61	3.11	4.4	1308	2.4	820	1029.88	1033.5	0	1026.7	2358	0.1
15	1.21	6.0	1341	-1.6	820	83.3	96.9	219	59.5	1359	-1.49	3.37	3.8	1011	3.0	2326	1024.35	1026.7	0	1022.8	1530	0.2
16	-0.65	6.6	1337	-4.5	412	83.9	97.0	843	48.7	1327	-3.33	2.94	4.0	1103	2.5	2314	1025.42	1027.9	2334	1023.4	131	0.1
17	-0.72	4.4	1420	-5.7	516	90.1	96.6	2319	76.0	1422	-2.19	3.24	4.2	1940	2.3	430	1027.60	1028.9	927	1026.7	2336	0.1
18	9.23	12.3	1528	0.6	0	93.7	97.1	234	89.2	1909	8.26	6.79	8.0	1410	3.7	0	1023.76	1027.1	47	1021.8	2357	0.3
19	9.12	11.8	627	5.4	2350	84.7	95.3	504	70.1	1513	6.62	6.12	8.1	707	4.0	2359	1019.06	1022.1	11	1016.4	621	4.8
20	7.85	10.2	1343	4.8	407	75.3	85.4	2359	69.0	13	3.74	4.96	6.4	2359	3.9	23	1019.90	1021.8	254	1016.8	2359	0.0
21	10.23	13.1	1115	6.3	2339	70.1	85.8	24	53.3	1546	4.90	5.48	6.9	217	3.8	2336	1013.36	1017.0	0	1010.6	1256	0.0
22	8.04	11.7	1319	4.7	2322	66.2	79.5	739	46.5	1413	1.96	4.38	5.5	1003	3.7	1555	1015.11	1019.0	2320	1011.8	837	0.0
23	4.93	8.5	1355	-0.7	2326	79.4	96.3	2344	64.1	1531	1.58	4.23	4.8	1348	3.4	2326	1019.50	1022.0	2359	1018.2	556	0.0
24	5.64	10.2	1630	-2.0	231	96.0	97.6	331	94.5	2352	5.04	5.60	7.3	1635	3.1	231	1019.23	1022.5	315	1016.5	1442	9.3
25	9.14	10.5	1515	8.1	829	86.5	95.7	102	78.3	1518	6.98	6.20	7.1	148	5.7	2047	1014.69	1018.5	20	1008.1	2358	0.0
26	6.30	9.4	305	1.8	2314	79.7	93.3	540	56.7	1315	2.94	4.77	6.4	329	3.6	1710	1009.01	1015.4	2339	1005.7	321	1.0
27	4.48	8.9	1250	1.5	2358	77.5	88.9	2359	54.2	1311	0.74	3.98	4.7	1109	3.6	1447	1019.36	1022.0	2358	1015.0	47	0.0
28	3.79	6.6	1511	-1.3	2356	84.2	95.5	2343	70.7	1529	1.32	4.11	4.5	1056	3.2	2356	1028.72	1032.8	2354	1021.9	0	0.0
29	1.28	3.7	1539	-2.1	126	94.5	98.0	1035	84.2	2358	0.49	3.88	4.5	1500	3.1	126	1030.84	1032.7	21	1028.4	2341	0.0
30	0.95	5.4	1332	-2.4	1938	81.7	95.5	903	50.5	1537	-2.00	3.25	4.1	1111	2.4	1537	1026.08	1028.4	1	1023.9	2354	0.0
31	-0.13	3.3	1327	-2.9	759	86.8	96.3	835	74.4	1329	-2.09	3.22	3.8	1141	2.8	2021	1026.42	1029.5	2348	1023.7	354	0.0
Total																						33.9
Mean	5.83	9.25		2.08		82.0	93.05		66.19		2.84	4.78	5.94		3.70		1021.34	1024.86		1017.71		
Max	10.60	13.07		8.10		96.0	98.00		94.50		8.73	7.08	8.10		5.75		1033.39	1034.39		1032.74		
Min	-1.14	3.25		-5.66		66.0	79.50		46.48		-3.33	2.94	3.79		2.30		1003.11	1008.48		994.10		

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.