

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 2015

Temperature (°C / °F)			Anomaly	Rank in the past 134 years			
Mean maximum	8.5	47.3	+0.7	38 th highest			
Mean minimum	0.8	33.4	-1.0	51 st lowest			
Daily mean	4.7	40.5	-0.1	53 rd highest			
Highest maximum	14.8	58.6	on 9 th	Lowest maximum	3.6	38.5	on 18 th
Highest minimum	10.3	50.5	on 10 th	Lowest minimum	-7.2	19.0	on 23 rd
Mean grass minimum	-1.4	29.5	-0.3	Lowest grass minimum	-11.8	10.8	on 23 rd
Mean earth @30 cm	5.5	41.9	+0.1	Earth @100 cm	7.7	45.9	
Frost duration (hrs)	76.9			Rain duration (hrs)	51.4		
Rainfall total (mm / in)	62.0	2.44	100 %	59 th highest			
Highest daily fall	9.8	0.39	on 14 th				
Number of: Dry days (<0.2mm)	10	Wet days (>0.9mm)	12	days ≥5mm	5		
Sunshine total (hrs)	84.9	Daily mean	2.74	136 %	Sunniest day	7.8	on 24 th
N° days with: Air frost	13	Ground frost	19	Snow falling	6	Snow lying	1
Thunder	1	Hail ≥5mm	1	Small hail/ice	1	Fog @09	1
Nil sun	8						
Pressure MSL : Mean @09 GMT, mbar	1014.1	-2.6	Highest	1037.7	on 4 th	Lowest	975.0
on 30 th							
Relative humidity : Mean (%)	83.0	Lowest	45	on 10 th	Water vapour (g/kg), mean at 09 and 15 GMT		
4.7, 4.4							
Overall mean wind speed (mph)	8.5	Windiest day	16.9	on 9 th	Max gust	56	on 9 th
Wind direction (days)	N 0	NE 2	E 1	SE 1	S 3	SW 17	W 3
NW 4							
Least windy day (mph)	2.2	on 22 nd	Calm; less than 0.5 mph (minutes)				478

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

Notes:

Mean Temperature and Rainfall Near Average. Sunny. Windy at times.

Temperature: The anomalies for the mean maximum and mean minimum of +0.7° and -1.0° respectively suggest a larger than average mean daily temperature range, and in fact the 7.7° is the highest for any January in the past 40 years. The mean daily temperature is close to average, and is lowest only since 2013. During the first half of the month there were many mild days, with anomalies for daily maximum over +4° on the 1st, 7th, 9th, 10th and 12th, reaching +7.2° on the 9th. Anomalies for daily minimum also exceeded +4° on the 2nd, 6th, 9th, 10th and 13th, reaching +8.6° on the 10th, though an anomaly of -6.7° on the 1st was an exception. Interestingly, the temperature range on the 1st of 17.5° is the highest January value since 1982. The second half of the month contained a cold snap from the 18th to the 24th, with anomalies for daily maximum exceeding -3° from the 18th to the 21st, and for daily minimum exceeding -5° from the 20th to the 24th, the greatest anomaly being -9.1° on the 23rd. The air minimum of -7.2° on that day is the month's lowest temperature, and also the lowest value for any day since the 12th February 2012. The highest max is 2.3° above the median and is 2nd highest after 1998 in 112 years. The lowest max is 2.8° above the median and the highest min is 2.0° above its median. The lowest min is the exception at 1.3° below the median. Earth temperature at both 30 cm and 1 m depth is close to normal. The duration of air frost is 20.4 hours below average although the number of days with frost is 2 more than average. **Rainfall:** By a quirk of statistics the rainfall this month is exactly equal to the climatological average, although it is 4.6 mm below the 133 year median. In recent years, January 2014 had over twice this month's total, and in 2006 there was less than one third of this year's. Most of this January's rain fell in the first half, the accumulation reaching a surplus of 22 mm by the 14th. However, the 14 day period to the 28th was much drier, with a total of only 4.1 mm falling on two days, and 2.2 mm over the rest, reducing the surplus to around zero by the 28th. Snow, mostly accompanied by rain, fell on 6 days, but there was lying snow at 0900 hours on just the 31st, and that barely 1 cm of slushy snow. A thunderstorm with hail occurred on the 13th, and there was a significant heavy shower of snow pellets, ice pellets and snowflakes near 1545 hours on the 29th that produced a temporary covering, around 10 % of which survived overnight, and which caused some black ice on untreated roads. The highest daily fall is 3.2 mm below average, and there were 5 fewer dry days than average. **Sunshine:** This has been a sunny month with 22.5 hours more than the climatological average. However, compared with the average for the years since the current electronic sunshine recorder has been in use the difference is only +11.3 hours, and 4 Januarys this millennium have been sunnier. Sunshine was poor up to the 12th, with 6 days having nil and only 2 with >50 % of maximum. The period 13th to 24th was better with only one nil sun and 6 days with >50 % of maximum, but the final 7 days of the month were rather dull again. Overall there were 15 days with <3 hours and 4 with =>6 hours. **Wind:** The month's mean speed is highest for January since 2008, and the highest gust is highest since 2007.

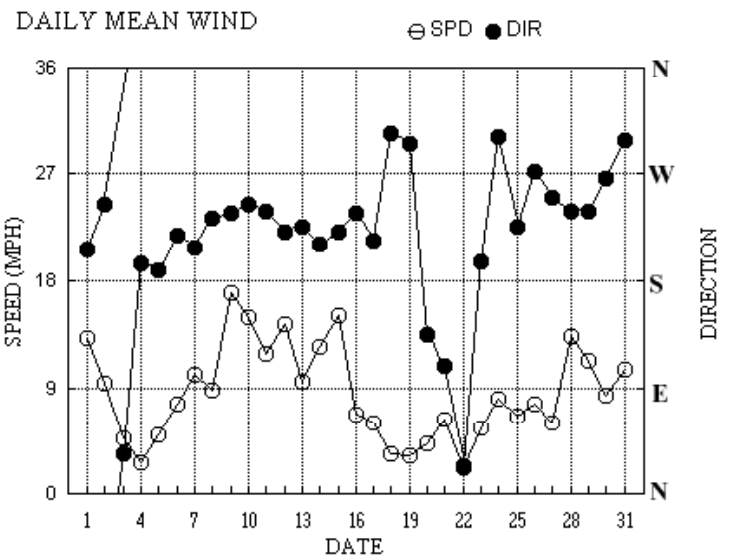
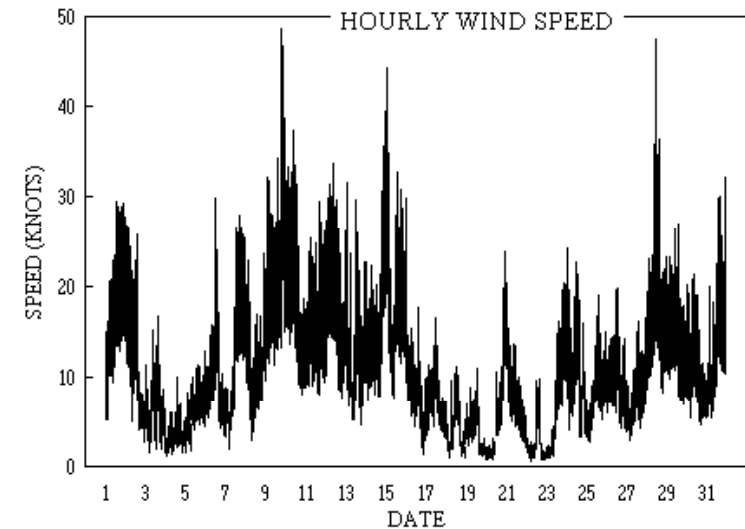
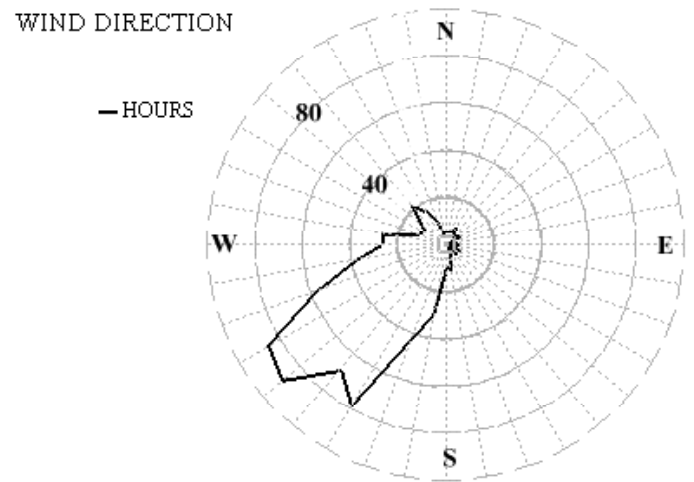
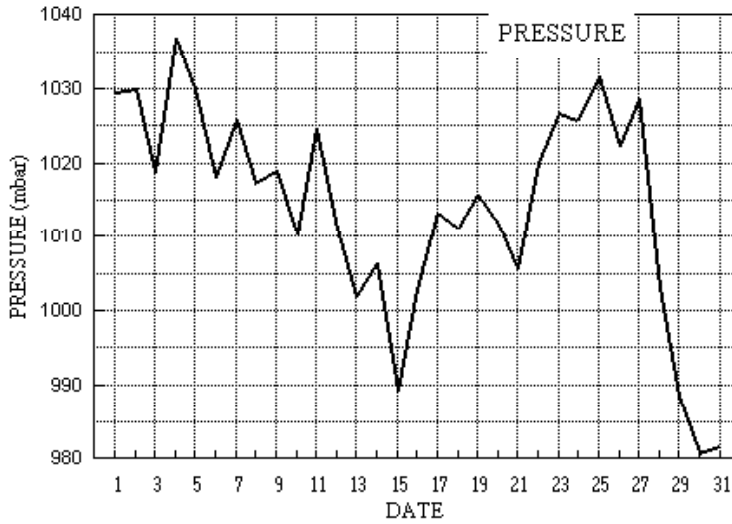
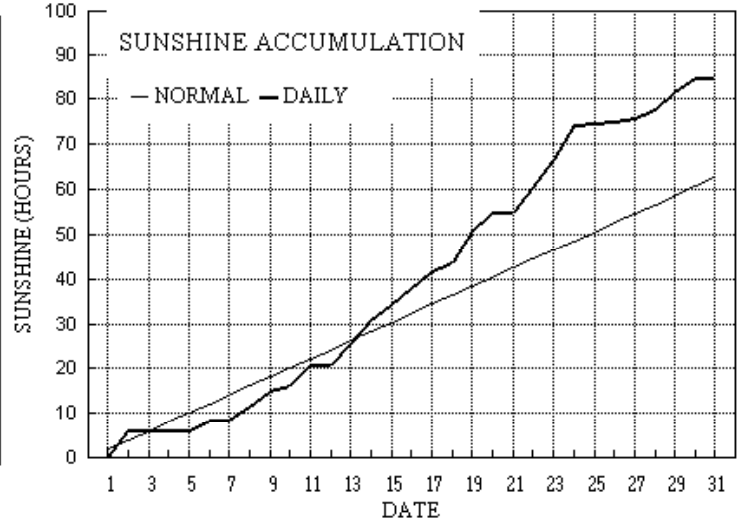
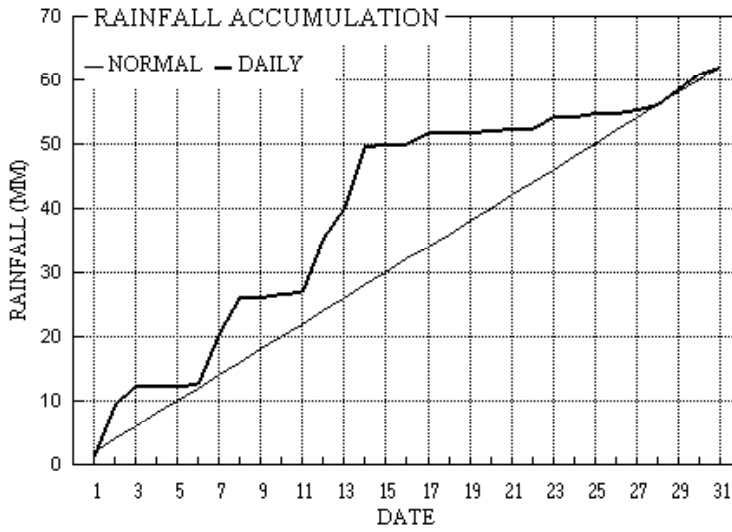
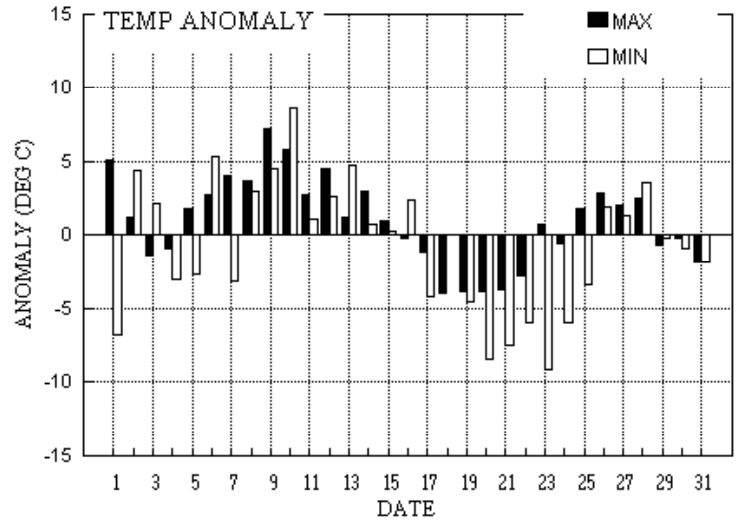
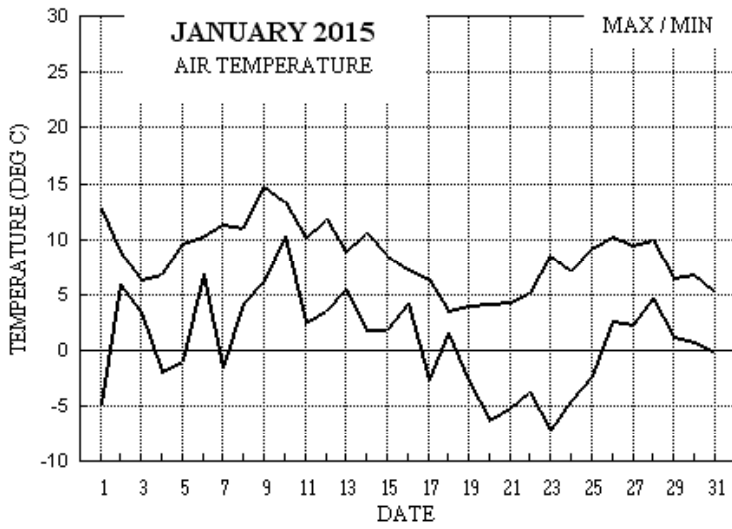
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+2.9°	+1.2°	135%	79%	-0.0°	-0.6°	130%	193%	0.0°	-2.5°	45%	134%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for January 2015



Month: JANUARY 2015

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	12.7	-4.8	1.3	1.8	4.0	8.3	0.0	0.0	1029.5	1	0	0	0	206	11.3	11.5	203	30	1418	217	16	20	1.4	
2	8.8	5.9	8.3	0.2	5.4	8.1	6.2	0.0	1029.9	0	0	0	0	245	7.7	8.1	234	28	0019	225	14	00	5.2	
3	6.3	3.4	2.8	-4.4	5.5	7.9	0.0	0.0	1018.8	0	1	0	0	33	1.3	4.1	1	17	1616	9	7	16	3.3	
4	6.8	-1.9	tr	-7.3	5.6	7.9	0.0	9.1	1036.7	1	1	0	0	195	1.7	2.3	237	10	1315	226	4	13	0.0	
5	9.7	-1.0	tr	1.5	5.4	7.9	0.0	0.0	1030.0	1	0	0	0	189	4.3	4.4	214	12	1533	194	6	18	0.0	
6	10.3	6.8	0.4	6.7	6.0	7.8	2.3	0.0	1018.0	0	0	0	0	218	4.7	6.6	221	30	1149	296	11	13	0.5	
7	11.4	-1.6	7.8	-6.2	5.9	7.8	0.0	1.6	1025.8	1	1	0	0	208	8.7	8.8	220	28	1704	209	13	18	4.3	
8	11.0	4.2	5.5	6.8	6.1	7.8	3.3	0.0	1017.4	0	0	0	0	232	7.2	7.6	228	24	2220	228	12	22	3.4	
9	14.8	6.2	0.2	2.0	6.4	7.8	3.3	0.0	1019.0	0	0	0	0	237	14.6	14.7	249	49	1928	250	22	19	0.3	
10	13.3	10.3	0.4	10.5	7.2	7.9	1.3	0.0	1010.3	0	0	0	0	245	12.4	12.9	244	38	1015	256	18	10	0.4	
11	10.1	2.5	0.2	-1.0	7.1	7.9	4.5	0.0	1024.6	0	1	0	0	239	10.2	10.3	263	30	1747	230	13	21	0.7	
12	11.9	3.6	8.5	5.0	6.8	8.0	0.0	0.0	1010.9	0	0	0	0	221	12.3	12.4	232	34	0915	223	17	09	8.5	
13	8.8	5.5	4.5	-0.3	7.4	8.1	4.6	0.0	1001.9	0	1	0	1	226	8.0	8.2	225	32	0109	211	13	00	1.3	
14	10.6	1.9	9.8	-0.5	7.0	8.1	5.4	0.0	1006.2	0	1	1	0	210	10.2	10.8	186	40	2336	195	18	23	7.7	
15	8.5	1.9	0.1	4.1	6.8	8.1	3.4	0.0	989.2	0	0	0	0	221	12.8	13.0	200	44	0125	202	20	01	0.1	
16	7.3	4.2	tr	-0.1	6.6	8.1	3.5	3.5	1002.8	0	1	0	0	237	5.1	5.8	233	30	0018	232	12	00	0.0	
17	6.3	-2.7	2.1	-9.0	6.0	8.1	3.9	7.9	1013.4	1	1	1	0	214	5.1	5.2	230	17	1206	233	9	11	3.9	
18	3.6	1.5	tr	-1.0	5.5	8.0	2.0	6.8	1011.3	0	1	1	0	304	1.9	2.9	352	11	1250	338	6	13	0.0	
19	4.0	-2.9	0.0	-8.1	5.2	7.9	7.1	6.1	1015.6	1	1	1	0	295	2.0	2.8	260	11	1327	267	5	13	0.0	
20	4.2	-6.3	0.3	-11.1	4.7	7.9	4.1	10.9	1011.8	1	1	0	0	134	2.7	3.7	162	24	2254	154	12	23	1.7	
21	4.3	-5.2	0.1	1.6	4.3	7.7	0.0	0.0	1005.5	1	0	0	0	109	4.6	5.5	169	21	0109	153	11	00	0.0	
22	5.2	-3.7	0.0	-8.7	4.6	7.5	5.3	15.3	1019.9	1	1	0	0	23	1.5	1.9	20	10	1615	37	4	13	0.0	
23	8.5	-7.2	2.0	-11.8	4.1	7.4	6.2	10.8	1026.6	1	1	0	0	196	4.8	4.9	198	21	2107	203	11	21	1.6	
24	7.1	-4.5	0.0	-1.6	3.9	7.3	7.8	0.0	1025.7	1	1	0	0	302	6.3	7.0	10	24	0142	328	10	13	0.0	
25	9.2	-2.3	0.6	-7.5	3.9	7.1	0.6	4.9	1031.6	1	1	0	0	226	5.6	5.8	250	19	1409	248	9	14	1.1	
26	10.2	2.7	tr	1.0	4.3	7.0	0.1	0.0	1022.3	0	0	0	0	272	5.4	6.6	322	20	1321	318	10	13	0.0	
27	9.4	2.3	0.3	-3.7	4.8	6.9	0.9	0.0	1028.6	0	1	0	0	250	5.0	5.2	203	17	2318	215	8	23	0.7	
28	10.0	4.6	0.8	5.2	5.1	6.9	1.8	0.0	1003.1	0	0	0	0	239	10.8	11.6	257	48	1144	253	17	11	0.3	
29	6.5	1.2	2.6	-1.7	5.1	6.9	3.9	0.0	988.4	0	1	1	0	238	9.5	9.8	304	27	1545	230	12	06	0.5	
30	6.9	0.8	2.5	-2.1	4.8	6.9	3.4	0.0	980.8	0	1	0	0	267	6.0	7.2	319	22	0908	314	11	09	2.4	
31	5.3	-0.1	0.9	-5.2	4.5	6.9	0.0	0.0	981.7	1	1	1	1	299	7.8	9.2	303	32	2248	323	13	16	2.1	
Total			62.0				84.9	76.9																51.4
Mean	8.5	0.8		-1.4	5.5	7.7	2.74	2.5	1014.1					233	5.6	7.4								
Anom	+0.7	-1.0	100%	-0.3	+0.1	+0.2	136%																	-2.6
Daily mean		4.7																						
Anom		-0.2																						

Number of days with:

Air frost = 13 Ground frost = 19 Nil sun = 8
 Snow falling = 6 Snow lying = 1 Thunder = 1
 Hail=>5mm = 1 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 JANUARY 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChs	shs	NChs	shs	Date	Remarks
1	57	8	20	10	20	8.4	7.1	91	6.2	1029.5	7	001	05	5	2	8	6	3	/	/	87708	88712			1	
2	80	5	25	05	12	6.3	2.3	75	4.4	1029.9	3	048	01	2	2	1	1	4	3	1	81815	85072			2	1Ac68 COTRA Cu fra
3	56	8	02	09	14	4.8	4.5	98	5.2	1018.8	5	055	61	6	6	7	5	3	2	/	83706	87625	88545		3	
4	02	9	20	03	06	-1.0	-1.0	100	3.4	1036.7	2	024	49	4	4	9	/	/	/	/					4	Rime slt.
5	50	7	19	05	10	6.8	6.5	98	5.9	1030.0	7	006	10	5	2	7	5	5	/	1	87625				5	/Ci75
6	40	8	19	08	14	8.4	7.6	95	6.4	1018.0	6	006	51	5	2	8	7	2	/	/	87705	88708			6	
7	62	7	19	06	11	4.2	3.5	95	4.8	1025.8	6	005	15	1	1	5	8	5	0	1	81828	84645	86078		7	COTRA Cu med jp NNW Rainbow
8	45	8	27	03	08	8.1	7.3	94	6.3	1017.4	3	002	65	6	2	1	7	3	2	/	81708	88540			8	
9	80	7	24	14	28	10.6	8.0	84	6.6	1019.0	0	000	02	5	2	1	1	4	7	2	81815	83465	87272		9	2Ac63 Cu fra
10	30	8	23	15	27	11.7	10.7	94	8.0	1010.3	5	007	58	5	2	8	5	4	/	/	87712	88620			10	
11	80	1	25	09	19	3.6	-1.0	72	3.5	1024.6	3	029	02	0	0	1	0	9	4	1	81368				11	1Ci72 Hoar slt
12	80	7	22	15	32	10.0	5.4	73	5.6	1010.9	7	022	02	5	2	7	8	5	/	/	82820	87640			12	Cu fra
13	82	3	22	05	09	5.5	3.5	87	4.9	1001.9	2	008	01	6	1	1	5	7	7	2	81656				13	2Ac62 2Ci70 Cld edge E
14	86	3	25	10	20	2.3	0.1	86	3.9	1006.2	3	027	02	8	1	1	1	4	6	3	81815	83068			14	1Ac65 Parhelion
15	68	4	22	08	16	6.9	2.3	73	4.6	989.2	2	011	01	1	1	3	0	8	7	8	83357				15	2Cs72 Cld edge SE
16	80	7	23	07	12	4.5	1.6	82	4.3	1002.8	3	021	02	2	2	3	5	6	7	/	81645	83656	87358		16	
17	70	7	18	04	10	1.6	-2.3	75	3.2	1013.4	7	001	15	1	1	7	5	6	7	2	82630	83645	87656		17	/Ac63 /Ci70 jpN Hoar mod. Gnd frzn
18	62	7	31	03	04	2.7	2.3	97	4.5	1011.3	3	010	21	6	2	7	5	3	/	/	81707	86615	87650		18	
19	75	2	28	02	06	0.7	-1.3	86	3.4	1015.6	4	000	01	1	1	2	5	5	0	0	82625				19	Hoar slt.
20	45	6	03	01	03	-5.1	-5.5	97	2.5	1011.8	3	006	10	2	2	2	0	9	3	1	82365	86078			20	COTRA Hoar thk. Gnd frzn
21	57	8	11	07	12	3.3	2.4	94	4.5	1005.5	3	018	51	6	5	8	7	3	/	/	86706	88709			21	
22	20	2	30	01	03	-2.1	-2.2	99	3.2	1019.9	3	024	10	4	0	2	5	6	0	0	82630				22	Hoar mod Gnd frzn
23	25	7	20	02	05	-4.4	-5.0	95	2.6	1026.6	1	004	10	1	1	0	0	9	0	1	81072	87075			23	COTRA Hoar mod Gnd frzn
24	80	2	29	06	13	2.9	-0.2	80	3.7	1025.7	2	030	03	0	0	0	0	9	0	1	82075				24	COTRA Hoar slt. lcy patches
25	65	7	22	05	10	2.7	0.6	86	3.9	1031.6	8	009	02	2	2	7	5	6	3	/	87635				25	/Ac60 Gnd frzn
26	68	8	26	06	14	9.1	7.8	92	6.5	1022.3	3	005	02	6	2	8	6	3	/	/	86708	88712			26	
27	80	7	25	06	11	4.6	2.3	85	4.4	1028.6	5	003	02	2	2	7	0	8	7	8	81357	83359	87361		27	/Cs75
28	56	8	22	11	24	9.4	8.7	95	7.0	1003.1	7	058	51	6	5	8	5	3	/	/	81707	87708	88612		28	
29	82	2	23	12	20	2.2	0.3	87	4.0	988.4	7	038	03	0	0	2	6	4	3	0	82712				29	1Ac58 Hoar slt
30	70	7	32	09	18	1.7	-0.1	88	3.9	980.8	2	049	03	1	1	7	6	3	/	/	87709				30	snly <10%<1cm
31	62	8	28	08	18	2.0	1.1	94	4.2	981.7	3	010	23	6	7	8	7	4	/	/	83710	88713			31	Snly 80% 1cm slushy

Mean vis = 17.9 km
 Mean cloud = 6.0 75%
 Mean wind speed = 6.9 kn
 Mean gust = 14 kn
 Mean TT = 4.3 °C
 Mean TdTd = 2.5 °C
 Mean RH = 88.6 %
 Mean r = 4.7 g/kg
 Mean PPP = 1014.1 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 JANUARY 2015

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	shs	NChs	Date	Remarks
1	58	8	20	13	30	9.8	8.3	90	6.7	1025.3	7	034	50	5	2	8	7	3	/	/	87707	88709				1	
2	78	3	26	09	26	7.9	0.0	57	3.7	1033.0	2	014	02	0	0	1	1	6	0	1	81835	83078				2	COTRA Cu hum
3	60	8	01	06	14	5.2	4.9	98	5.3	1018.4	3	036	51	5	2	8	5	3	/	/	82706	87708	88615			3	
4	17	8	25	03	05	2.2	2.1	99	4.3	1036.7	6	009	10	2	2	8	6	2	/	/	88704					4	
5	78	7	20	06	10	9.4	6.1	80	5.8	1026.7	7	021	02	2	2	7	5	5	/	/	87625					5	
6	88	2	30	08	23	7.7	2.5	70	4.5	1021.3	2	034	01	6	1	2	8	5	0	0	81825					6	2Sc35 Cu hum
7	65	8	21	12	22	8.7	4.6	75	5.2	1021.1	6	024	60	6	2	7	5	5	2	/	81625	87645	88460			7	
8	82	1	26	08	16	9.0	4.4	73	5.2	1023.2	2	033	02	1	1	1	1	5	0	1	81825	81075				8	Cu hum
9	59	8	23	13	35	12.6	7.6	72	6.5	1016.2	6	039	15	1	1	8	5	5	/	/	87620	88640				9	
10	81	7	28	10	30	8.1	-0.9	53	3.5	1017.4	2	039	01	2	2	2	8	6	0	1	81835	87075				10	2Sc45 Cu hum
11	75	8	22	10	20	7.4	2.3	70	4.4	1023.9	5	013	02	1	1	7	5	6	2	8	86630	85650				11	4As67 /Cs70
12	58	8	23	14	27	10.9	9.4	90	7.4	1008.0	6	013	58	6	5	8	5	4	/	/	82712	87715	88620			12	
13	86	1	24	11	26	6.2	3.4	82	4.9	1002.6	3	015	25	9	8	1	8	4	6	3	81818					13	1Sc50 1Ac62 1Ci70 Cu fra/med Cb topW
14	84	7	21	09	17	6.0	-1.3	59	3.5	1007.5	8	013	03	1	1	7	0	9	7	/	85362	87364				14	Ac du vir
15	80	2	24	12	33	6.1	0.4	67	4.0	991.2	3	016	25	8	1	2	8	6	0	8	81830					15	2Sc56 1Cs72 jpW
16	60	2	26	06	16	6.8	-0.5	60	3.7	1005.5	3	009	15	0	0	2	8	6	3	2	81830					16	2Sc50 1Ac68 1Ci72 Cu med jpN vv25k ex p
17	84	6	23	06	12	4.8	0.8	76	4.0	1011.8	5	006	03	1	1	1	0	9	4	8	81358	84270	86073			17	COTRA
18	70	3	33	04	10	2.6	-0.1	83	3.8	1012.5	3	003	02	1	1	3	5	4	0	0	83612					18	1Sc25
19	80	1	26	04	10	3.2	-2.1	68	3.2	1012.8	7	017	02	0	0	1	8	5	0	1	81820					19	1Sc56 1Ci80 Cu fra
20	65	7	12	03	08	2.6	-0.6	79	3.6	1008.8	7	020	50	6	2	7	5	6	/	/	82630	87635				20	
21	59	8	07	04	09	3.9	1.9	87	4.4	1007.6	3	007	05	5	2	8	5	3	/	/	86708	88612				21	
22	60	3	01	04	09	3.1	-2.5	67	3.1	1021.8	3	007	05	1	1	3	5	6	0	1	83630					22	1Ci75
23	58	7	20	07	16	4.8	0.8	75	4.0	1023.6	7	020	05	1	1	1	5	5	0	1	81620	87078				23	COTRA Parhelion
24	80	2	32	10	20	6.3	-0.4	62	3.6	1029.1	3	018	01	1	1	1	8	5	0	1	81828					24	1Sc35 2Ci80 COTRA Cu hum
25	80	7	24	06	19	8.3	3.4	71	4.7	1028.6	6	019	02	2	2	7	5	5	/	/	87625					25	
26	82	7	31	07	17	7.6	0.3	60	3.8	1024.5	2	013	02	2	2	1	8	6	3	8	81830	87270				26	1Sc40 2Ac68 Cu hum
27	78	7	26	05	16	8.4	3.2	70	4.7	1025.8	6	022	03	2	2	5	1	5	3	2	85822	87075				27	1Ac60 COTRA Cu hum
28	80	1	27	11	33	6.4	-3.0	51	3.1	1002.8	2	014	01	8	1	1	1	8	0	8	81840					28	1Cs72 Cu hum Cs edge S
29	60	7	25	11	23	4.6	0.5	75	4.1	978.3	7	053	25	8	2	6	9	5	/	2	81920	85650	87465			29	2Cu25 jpW
30	70	6	27	06	17	6.6	1.0	68	4.2	980.3	7	005	15	8	2	6	8	5	0	1	82828	85645				30	1Ci70 Cu med jpW vv40k ex p
31	83	7	32	15	30	5.1	-0.3	68	3.8	987.5	2	026	02	6	2	7	8	6	/	/	81830	87640				31	Cu hum

Mean vis = 25.9 km
 Mean cloud = 5.4 67%
 Mean wind speed = 8.2 kn
 Mean gust = 19 kn
 Mean TT = 6.5 °C
 Mean TdTd = 1.8 °C
 Mean RH = 72.7 %
 Mean r = 4.4 g/kg
 Mean PPP = 1014.0 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 Sunshine Hourly analysis 2015	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
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	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	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	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	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	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	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	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	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.44	0.00	0.00
9	0.00	0.72	0.00	0.00	0.00	0.05	0.00	0.00	0.35	0.01	1.00	0.00	0.74	1.00	0.00	0.00	0.00
10	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	1.00	0.00	1.00	0.95	0.21	0.00	0.00
11	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.27	1.00	0.00	0.71	1.00	0.32	0.02	0.00
12	0.00	1.00	0.00	0.00	0.00	0.01	0.00	0.62	0.35	0.11	0.98	0.00	0.15	1.00	0.90	1.00	0.00
13	0.00	1.00	0.00	0.00	0.00	0.64	0.00	1.00	0.65	0.92	0.01	0.00	0.65	0.99	0.47	1.00	0.00
14	0.00	1.00	0.00	0.00	0.00	0.55	0.00	0.96	0.00	0.04	0.00	0.00	0.62	0.00	0.68	1.00	0.00
15	0.00	0.49	0.00	0.00	0.00	1.00	0.00	0.77	0.00	0.00	0.00	0.00	0.78	0.00	0.62	0.53	0.00
16	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	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	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	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	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	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	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	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	0.00
Tot	0.00	6.21	0.00	0.00	0.00	2.28	0.00	3.35	3.32	1.35	4.50	0.00	4.64	5.37	3.35	3.55	

	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	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	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	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	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	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	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	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	0.00
8	0.32	0.00	0.04	0.13	0.00	0.31	0.35	0.72	0.00	0.00	0.00	0.00	0.71	0.28	0.00	0.12	0.00
9	0.00	0.00	1.00	0.90	0.00	0.00	0.62	1.00	0.02	0.00	0.18	0.00	0.98	0.50	0.00	0.29	0.00
10	0.08	0.00	1.00	1.00	0.00	0.86	1.00	1.00	0.00	0.00	0.03	0.00	0.81	0.93	0.00	0.38	0.00
11	0.93	0.00	1.00	0.71	0.00	0.56	1.00	1.00	0.02	0.02	0.00	0.00	0.48	0.59	0.00	0.38	0.00
12	0.95	0.37	1.00	1.00	0.00	0.85	1.00	1.00	0.27	0.00	0.00	0.00	0.23	0.72	0.00	0.44	0.00
13	1.00	0.33	1.00	0.36	0.00	1.00	0.99	0.93	0.11	0.00	0.18	0.18	0.69	0.01	0.00	0.46	0.00
14	0.66	0.30	1.00	0.00	0.00	0.74	1.00	0.89	0.00	0.00	0.49	0.51	0.00	0.18	0.00	0.34	0.00
15	0.00	0.66	1.00	0.00	0.00	0.92	0.21	1.00	0.16	0.00	0.04	0.87	0.00	0.08	0.00	0.29	0.00
16	0.00	0.31	0.10	0.00	0.00	0.04	0.00	0.29	0.00	0.00	0.00	0.25	0.00	0.06	0.00	0.04	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	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	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	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	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	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	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	0.00
Tot	3.95	1.96	7.13	4.10	0.00	5.30	6.16	7.83	0.58	0.02	0.93	1.80	3.90	3.36	0.00	84.93	

JANUARY 2015	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
1	9.25	12.3	2352	5.4	4	89.9	93.8	2303	83.4	3	7.69	6.47	8.2	2349	4.6	3	1026.88	1032.3	13	1019.7	2325
2	7.80	12.7	210	3.2	2226	72.4	93.4	103	53.1	1341	2.98	4.82	8.4	207	3.6	1419	1029.52	1035.2	2027	1019.5	106
3	4.41	6.4	1300	2.1	0	93.6	98.7	1254	77.2	220	3.44	4.82	5.9	1300	4.0	2	1023.83	1033.1	3	1014.4	1251
4	0.81	3.2	2347	-1.9	549	99.2	100.2	832	93.5	0	0.70	3.92	4.6	2347	3.2	550	1035.25	1037.7	1106	1031.2	4
5	6.92	9.8	1301	2.9	22	88.9	99.4	29	75.4	2059	5.14	5.40	6.7	1134	4.5	18	1028.50	1034.3	0	1022.3	2358
6	6.62	10.4	1102	0.9	2203	84.3	95.3	917	66.5	1519	4.12	5.13	7.2	1144	3.7	2203	1021.36	1027.5	2346	1016.9	1139
7	5.87	9.9	2359	-1.6	616	87.0	99.0	627	67.1	1404	3.78	5.00	7.1	2359	3.3	616	1023.16	1027.2	1	1017.9	2330
8	8.61	11.5	327	6.0	1911	84.3	95.7	931	71.9	1424	6.08	5.84	7.8	316	4.6	1852	1021.24	1027.5	1902	1016.3	629
9	11.67	14.9	1911	8.4	0	82.0	94.1	719	67.1	1259	8.65	6.96	9.1	1859	5.3	0	1018.12	1023.5	0	1014.1	1844
10	9.00	13.3	1011	2.8	2357	72.8	94.3	916	45.2	1323	4.21	5.42	8.2	930	3.1	1559	1015.44	1020.3	1929	1009.7	708
11	5.78	8.6	1243	2.3	37	72.0	85.3	49	57.3	1255	1.05	4.08	5.1	2352	3.4	626	1022.35	1026.1	1056	1018.9	240
12	10.08	12.0	1207	7.5	0	83.4	95.0	2245	67.0	50	7.33	6.45	7.9	2311	4.5	52	1010.01	1019.2	4	1002.4	2323
13	6.54	11.4	1	2.3	2206	85.0	92.7	1906	73.3	2337	4.18	5.26	7.8	100	3.5	2347	1002.47	1004.3	1949	1000.1	1228
14	5.04	9.4	2358	1.7	717	77.3	89.1	700	58.3	1515	1.32	4.29	6.6	2358	3.4	135	1003.59	1009.0	1202	991.0	2358
15	7.17	10.7	243	4.0	2044	73.3	90.4	228	54.4	1430	2.62	4.81	7.3	239	3.3	2032	990.75	997.7	2359	985.8	250
16	3.97	7.4	1333	-1.9	2246	75.0	95.5	2109	55.9	1423	-0.24	3.77	4.7	1201	3.1	2242	1004.87	1013.9	2358	997.6	0
17	2.20	6.5	1244	-2.7	335	81.7	92.9	344	68.7	1251	-0.64	3.65	4.4	1243	2.8	329	1012.59	1014.3	126	1011.0	2353
18	1.43	3.9	107	-2.7	2150	92.6	99.0	2224	79.9	1331	0.33	3.91	4.7	1022	3.0	2150	1012.32	1015.6	2346	1009.9	401
19	0.81	4.1	1305	-3.8	2353	85.8	98.0	0	58.7	1246	-1.45	3.42	4.1	116	2.8	2353	1014.22	1016.1	201	1012.2	2340
20	-0.53	4.3	1252	-6.1	821	88.2	98.5	244	69.6	2044	-2.35	3.25	4.1	1224	2.3	821	1009.49	1012.3	34	1004.4	2353
21	3.18	4.4	1403	1.6	2357	91.6	95.2	627	85.7	1446	1.94	4.39	4.7	746	3.9	2357	1007.28	1014.1	2359	1003.2	338
22	-0.54	5.3	1327	-4.8	2356	89.7	99.3	849	59.1	1327	-2.16	3.23	4.1	1115	2.5	2356	1020.61	1026.2	2346	1014.1	0
23	0.26	8.0	2349	-6.9	624	88.6	97.4	313	71.6	1318	-1.50	3.53	6.3	2357	2.2	624	1024.11	1026.9	715	1017.5	2359
24	4.28	8.5	135	0.6	2353	77.2	96.8	134	57.7	1341	0.50	3.94	6.6	138	3.2	1813	1026.48	1032.7	2210	1016.8	42
25	4.20	8.4	1507	-2.3	544	83.5	97.6	618	68.1	1249	1.56	4.24	5.7	2355	3.0	544	1029.96	1032.7	334	1025.3	2356
26	7.70	10.3	1047	3.0	2359	79.7	93.5	1009	58.1	1438	4.31	5.20	6.9	1012	3.8	1445	1024.62	1029.1	2353	1021.3	629
27	5.74	8.9	1356	2.2	7	78.1	86.3	30	67.1	1430	2.17	4.38	5.0	1204	3.7	6	1026.45	1029.1	45	1019.5	2321
28	6.01	10.1	1006	1.4	2330	75.8	95.8	753	45.9	1549	1.84	4.54	7.1	927	2.6	1549	1005.80	1019.7	0	999.1	2356
29	2.34	6.6	1351	0.7	2106	83.2	91.0	1628	66.8	1330	-0.26	3.83	4.4	1350	3.3	1944	985.63	999.2	0	977.4	1535
30	3.26	7.0	1437	0.4	2348	78.3	88.9	832	60.5	1232	-0.22	3.86	4.4	1437	3.4	2324	979.40	981.3	1011	975.0	429
31	2.59	5.4	1431	-0.1	139	79.8	95.8	452	61.7	1642	-0.72	3.72	4.6	1249	3.0	2112	986.07	995.2	2348	980.2	321
Total																					
Mean	4.92	8.56		0.79		83.0	94.77		65.99		2.14	4.56	6.12		3.44		1014.27	1019.79		1008.54	
Max	11.67	14.91		8.44		99.2	100.20		93.50		8.65	6.96	9.08		5.26		1035.25	1037.71		1031.16	
Min	-0.54	3.15		-6.88		72.0	85.30		45.16		-2.35	3.23	4.08		2.15		979.40	981.29		975.01	

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
 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

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 2020. 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 July 1999, in the type of instrument used to detect sunshine amount, 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, due to a combination of faster reaction and higher sensitivity than the old type. The average used in this case is based on a theoretical equivalent 1981 to 2010 average, drawn from comparison with the Met Office published tables of departure from 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 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 '(max + min) / 2'. A true daily 24 hour (00 to 24 GMT) mean temperature is available from the Automatic Weather Station (AWS), and is currently published on page 7 of the Wokingham Monthly Weather report, on the Wokingham Weather web site, page 1. <http://www.woksat.info/wwp1.html>

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

- a): The departure of a mean from the current climatological average.
- b): The departure of a value on a particular day from the average for that day, (this need not be a climatological average).

When the word anomaly is used in respect of temperature, any values given are in °C. In respect of rainfall or sunshine, percent. In respect of wind, mph. In respect of 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 cold/mild are used in the winter half year, and cool/warm in the summer half. The term 'normal' is used 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 of these terms follow the same rules as for temperature.

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

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

Wet: The value lies between 10 % and 30% of the highest value in the ranked series.

Very wet: The value lies within 10 % of the highest value in the ranked series.

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

Very dry: The value lies 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 records of various weather stations in the Wokingham area in the years prior to the establishment of the weather station at Emmbrook in 1976 together with data from this station.

In the case of monthly max, min and mean temperature and of rainfall total the series starts in 1882. For temperature extremes, the highest max and lowest min go back to 1904, and 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 series, and may be expressed relative to either the highest or lowest value in the series. The central value in the ranked series is known as the **median**. This value may be different from the average of the whole series if the population is skewed. It can also be different from the climatological average which only refers to a 30 year period.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

When discussing 'winter', if a single year is given this refers to the year in which the January/February fall.

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

The climatological day: runs from 0900 to 0900 GMT. The max temperature and rainfall read at 0900 hours are attributed to the previous day (thrown back), as is the duration of measurable rain. The min temperature and grass min read at 0900 hours are attributed to the day of reading. Pressure read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 GMT readings. Sunshine data, wind data, rainfall rate data and 24 hour data from the AWS use the normal 00-24 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% snow cover at the 0900 GMT observation.

Snow depth is the depth of undrifted snow. Snow that collects in the raingauge funnel is melted and the amount recorded as rainfall.

Hail: A day of hail is recorded if hailstones 5 mm or more in diameter are observed or recorded on the hail pad in 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. The term small hail also includes various other types of ice meteor such as ice pellets, snow grains and some types of snow pellets.

Fog: A day with 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. The appearance of lightning without thunder being heard does not qualify as a thunder day.

Trace of rainfall: A trace of rain, entered as 'tr' in the daily log, is recorded if rain is observed to fall but is of insufficient quantity to collect in the raingauge, or if the amount of rain in the gauge is less than 0.05 mm.

Dry spell: A dry spell is defined as a period of 5 or more consecutive dry days.

Dry day: A dry day is one with less than 0.2 mm of rainfall.

Rain day: A rain day is one with 0.2 mm or more of rainfall.

Wet day: A wet day is one having 1.0 mm or more of rainfall.

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 of 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.