

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

JUNE 2014

Temperature (°C / °F)			Anomaly	Rank in the past 133 years			
Mean maximum	21.5	70.7	+1.0	28 th highest			
Mean minimum	10.6	51.1	+0.1	27 th highest			
Daily mean	16.0	60.8	+0.5	24 th highest			
Highest maximum	24.8	76.6	on 23 rd	Lowest maximum	15.9	60.6	on 4 th
Highest minimum	14.0	57.2	on 14 th	Lowest minimum	5.0	41.0	on 6 th
Mean grass minimum	7.4	45.3	-0.2	Lowest grass minimum	2.1	35.8	on 6 th
Mean earth @30 cm	18.4	65.1	+1.6	Earth @100 cm	16.1	61.0	
Frost duration (hrs)	0.0			Rain duration (hrs)	20.5		
Rainfall total (mm / in)	63.9	2.52	130%	37 th highest			
Highest daily fall	38.2	1.50	on 13 th				
Number of: Dry days (<0.2mm)	22	Wet days (>0.9mm)	8	days ≥5mm	3		
Sunshine total (hrs) 224.9	Daily mean 7.5	117%	Sunniest day 14.7		on 10 th		
N ^o days with: Air frost 0	Ground frost 0	Snow falling 0	Snow lying 0				
Thunder 4	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun 0			
Pressure MSL : Mean @09 GMT, mbar 1019.3	+2.2	Highest 1029.4	on 12 th	Lowest 1002.8	on 4 th		
Relative humidity : Mean (%) 71.3	Lowest 31	on 6 th	Water vapour (g/kg), mean at 09 and 15 GMT 8.1,		7.5		
Overall mean wind speed (mph) 5.2	Windiest day 8.6	on 17 th	Max gust 28	on 10 th			
Wind direction (days) N 8 NE 2 E 2 SE 2 S 0 SW 13 W 1 NW 2							
Least windy day (mph) 2.6	on 12 th	Calm; less than 0.5 mph (minutes) 906					

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

Notes:

Warm with Above Average Sunshine and Long Dry Episodes but Above Average Rainfall

Temperature: The mean this June is firmly in the warm category, being 0.9° above the long-term median. The mean maximum is similarly 1.4° above its median, but is 3.2° below the record set in 1976, and has been exceeded in 6 out of the 14 Junes this millennium, the last one in 2010. Daily maxima were near or below normal from the 1st to the 5th, and 15th to 20th, and again from the 25th onwards. The period 6th to 14th was generally warm, with daily anomalies near +5° on the 6th and the 9th. Daily minima were mostly near or above normal, apart from cool nights on the 6th and 30th which had anomalies near -5°. The highest max is 2.2° below the median and is lowest since 1991, also it is the first June since that year where the temperature has failed to reach 25°. The lowest max is 1.1° above the median while the highest min is 0.8° below the median and is lowest since 1995. The lowest min is 0.3° above its median. The lowest grass min is highest since 2008, and 7 Junes this millennium have had at least one ground frost, but there were none this month. The mean earth temperature at 30cm depth is highest since before 1980, and at 1 m depth, highest since before 1990. **Rainfall:** Although much of the month was dry the total rainfall is 30 % above average, entirely due to the torrential downpour on the 13th/14th, when a prolonged thunderstorm produced 38.2 mm, or 78 % of an average June's total in just under 6 hours. Had this fall not occurred, the total for the month would have been only close to half the average. Rainfall rates during that storm reached 252 mm/hr on 13th at 2335 GMT, and 119 mm/hr on the 14th at 0202 GMT, and there was an hourly total of 15.7 mm up to 2400 GMT on the 13th. There was local flooding and reports of lightning damage to property. This daily fall is highest for June since 1994, and ranks 6th highest for the month in the past 111 years. Up to the 7th rainfall was about average, there was then a prolonged dry spell to the 25th punctuated only by the event on the 13th. Two showery days towards the end of the month added another 12.5 mm to the total. Rainfall duration is 67 % of average. There were two dry spells, one of 5 days ended on the 12th and another of 12 days started on the 14th. **Sunshine:** This has been quite a sunny June, with the highest total since 2010, and before that 2006. After a rather dull start sunshine accumulation was above average from the 5th to the 14th, then near average to the 20th, above again to the 25th, then below for a rather dull end to the month. Overall there were 4 days with <3 hours, 19 with =>6 hours, 12 with =>9 hours and 5 with =>12 hours. **Wind:** This has been a quiet month windwise. The mean speed on the windiest day and the month's highest gust are both lowest for June in the past 27 years.

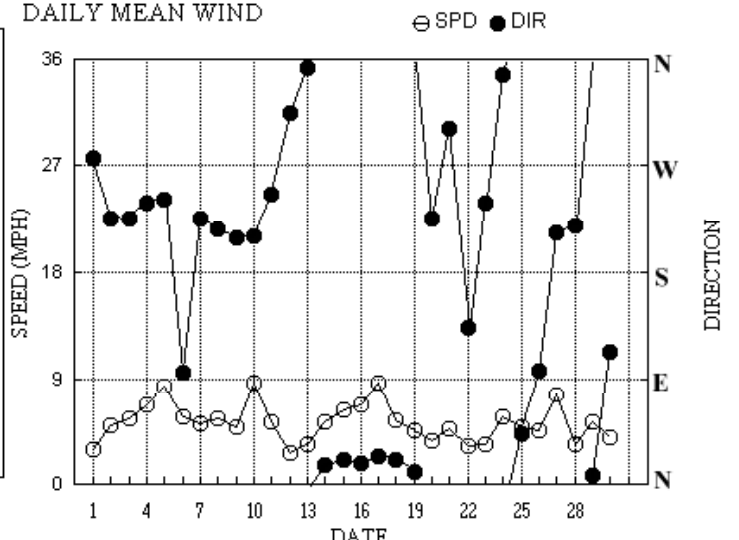
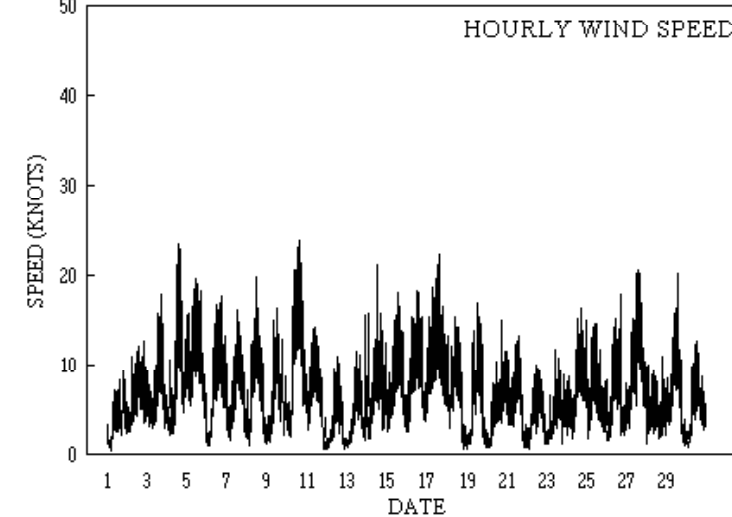
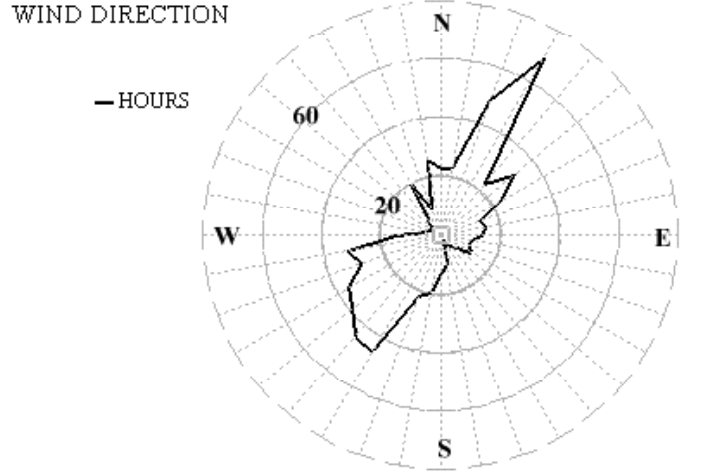
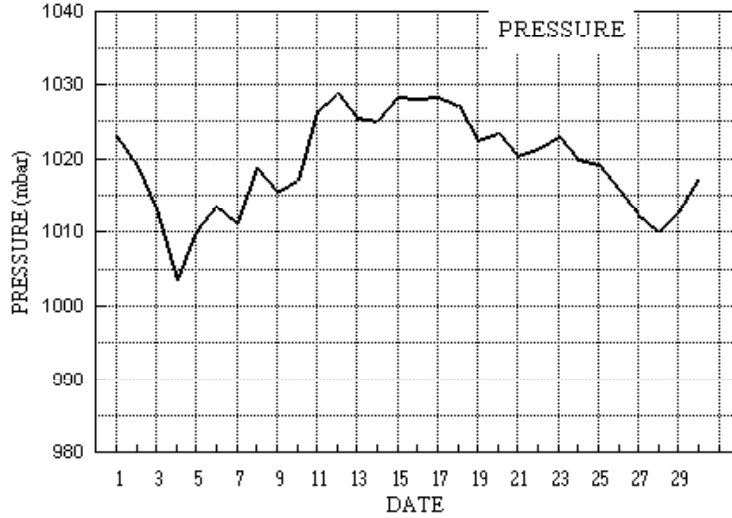
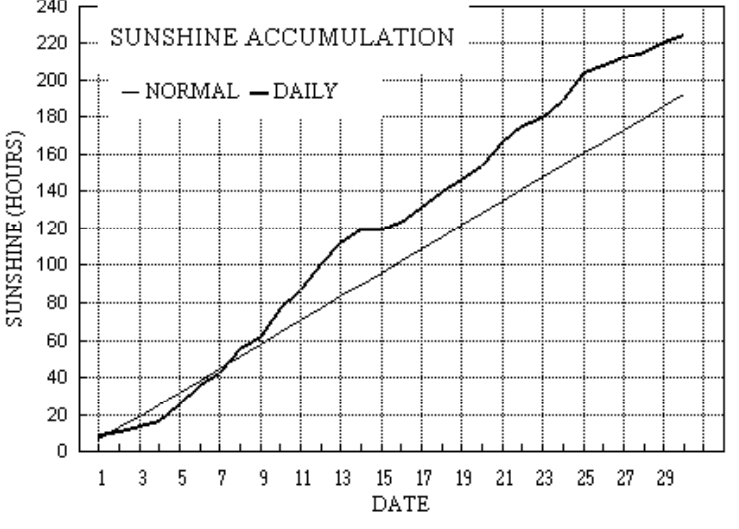
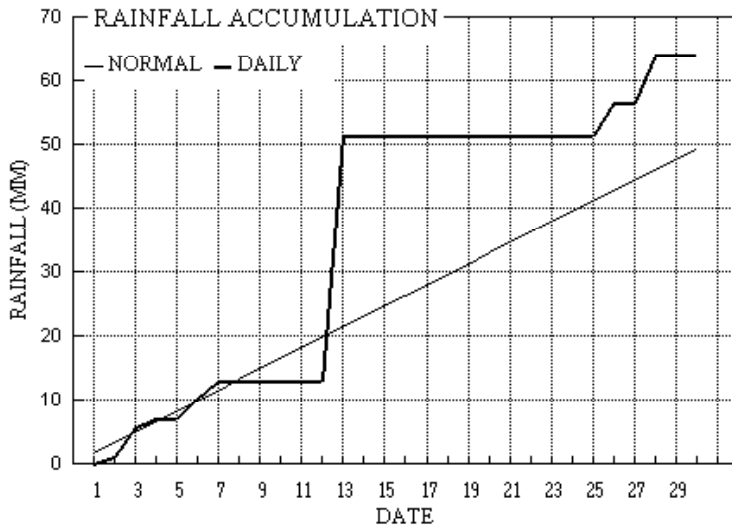
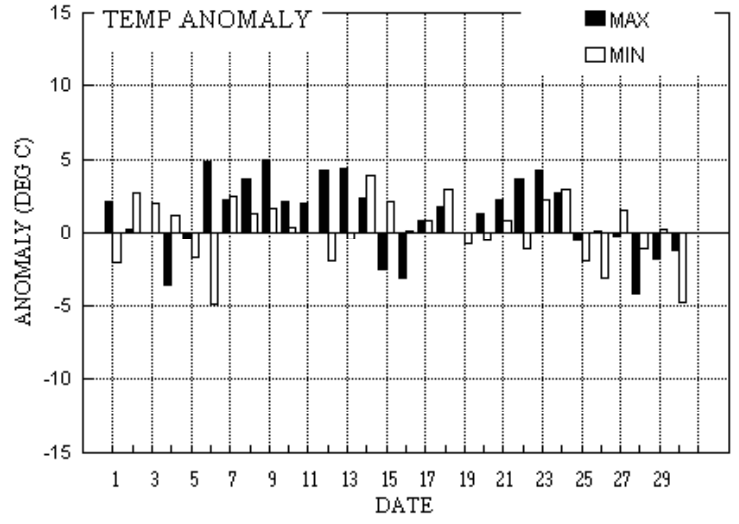
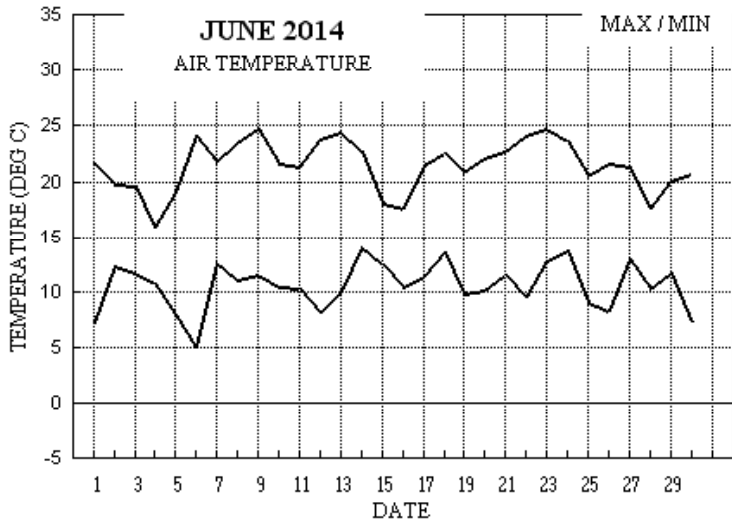
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
+1.6°	+0.3°	79%	120%	+1.2°	+0.6°	232%	120%	+0.5°	-0.4°	79%	111%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for June 2014



Month: JUNE 2014

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	21.7	7.1	tr	3.5	15.6	14.1	9.4	0.0	1023.0	0 0 0 0	0 0 0 0	0 0 0 0	276	0.7	2.5	250	9	1914	242	5	19	0.0	
2	19.8	12.3	1.0	10.9	16.5	14.2	2.3	0.0	1019.0	0 0 0 0	0 0 0 0	0 0 0 0	226	4.2	4.4	209	13	2001	242	6	11	1.2	
3	19.6	11.7	4.6	8.5	16.7	14.3	2.2	0.0	1013.2	0 0 0 0	0 0 0 0	0 0 0 0	226	4.5	4.8	247	18	1738	244	8	17	4.3	
4	15.9	10.7	1.5	10.6	16.8	14.5	2.7	0.0	1003.5	0 0 0 0	0 0 0 0	0 0 0 0	239	5.5	5.8	259	24	1433	262	12	14	1.8	
5	19.0	8.0	0.0	4.1	16.4	14.7	9.3	0.0	1010.1	0 0 0 0	0 0 0 0	0 0 0 0	242	6.9	7.3	247	20	1129	261	10	09	0.0	
6	24.2	5.0	3.3	2.1	16.6	14.8	10.8	0.0	1013.5	0 0 0 0	0 0 0 0	0 0 0 0	95	4.6	4.9	77	18	1801	100	9	17	1.2	
7	21.8	12.6	2.7	10.1	17.3	14.8	6.1	0.0	1011.3	0 0 0 0	1 0 0 0	0 0 0 0	225	2.6	4.4	238	17	1257	242	8	12	0.9	
8	23.5	11.1	0.0	7.5	17.6	15.0	13.0	0.0	1018.8	0 0 0 0	0 0 0 0	0 0 0 0	216	3.6	4.8	208	20	1235	212	9	12	0.0	
9	24.7	11.6	tr	8.2	18.2	15.1	6.8	0.0	1015.5	0 0 0 0	0 0 0 0	0 0 0 0	209	2.5	4.2	213	17	1253	213	8	12	0.0	
10	21.6	10.4	0.0	6.2	18.6	15.4	14.7	0.0	1017.0	0 0 0 0	0 0 0 0	0 0 0 0	211	7.3	7.5	235	24	1539	214	12	14	0.0	
11	21.3	10.3	0.0	6.5	18.5	15.6	9.7	0.0	1026.1	0 0 0 0	0 0 0 0	0 0 0 0	246	3.7	4.6	242	14	1123	237	7	10	0.0	
12	23.8	8.1	0.0	4.6	18.3	15.8	14.0	0.0	1028.8	0 0 0 0	0 0 0 0	0 0 0 0	315	1.3	2.3	324	11	1318	312	5	15	0.0	
13	24.4	9.9	38.2	6.6	18.8	16.0	11.7	0.0	1025.5	0 0 0 0	1 0 0 0	0 0 0 0	353	2.5	3.0	359	16	2337	16	6	17	5.8	
14	22.8	14.0	0.1	13.6	19.1	16.2	7.4	0.0	1025.0	0 0 0 0	1 0 0 0	0 0 0 0	16	3.8	4.6	29	21	1215	359	7	11	0.1	
15	18.1	12.4	tr	9.6	19.3	16.4	0.1	0.0	1028.3	0 0 0 0	0 0 0 0	0 0 0 0	21	5.4	5.5	28	18	1440	19	8	15	0.0	
16	17.6	10.4	tr	6.5	18.8	16.6	3.0	0.0	1028.2	0 0 0 0	0 0 0 0	0 0 0 0	18	5.8	5.8	14	18	1219	18	9	13	0.0	
17	21.5	11.4	tr	7.5	18.3	16.7	9.1	0.0	1028.4	0 0 0 0	0 0 0 0	0 0 0 0	23	7.5	7.5	28	23	1552	22	11	13	0.0	
18	22.6	13.6	0.0	10.2	18.7	16.7	7.7	0.0	1027.2	0 0 0 0	0 0 0 0	0 0 0 0	21	4.6	4.7	10	16	1057	9	8	10	0.0	
19	20.9	9.8	0.0	6.9	18.9	16.7	7.2	0.0	1022.4	0 0 0 0	0 0 0 0	0 0 0 0	10	2.8	3.9	7	17	1418	13	9	14	0.0	
20	22.1	10.2	0.0	6.2	18.7	16.8	6.7	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	225	1.3	3.2	210	15	1930	211	7	19	0.0	
21	22.7	11.5	0.0	8.0	19.2	16.8	13.4	0.0	1020.3	0 0 0 0	0 0 0 0	0 0 0 0	302	2.9	4.1	312	14	1626	345	6	16	0.0	
22	24.1	9.5	0.0	6.2	19.3	16.9	7.9	0.0	1021.4	0 0 0 0	0 0 0 0	0 0 0 0	133	0.8	2.8	153	10	1141	218	5	17	0.0	
23	24.8	12.8	tr	9.5	19.5	17.0	5.4	0.0	1022.9	0 0 0 0	0 0 0 0	0 0 0 0	239	1.6	2.9	306	12	1121	226	5	16	0.0	
24	23.7	13.7	0.0	9.0	19.9	17.1	9.2	0.0	1020.0	0 0 0 0	0 0 0 0	0 0 0 0	346	4.2	4.9	19	17	1908	23	8	19	0.0	
25	20.6	9.0	0.0	3.9	20.0	17.3	14.2	0.0	1019.2	0 0 0 0	0 0 0 0	0 0 0 0	43	3.9	4.2	29	15	0034	46	7	10	0.0	
26	21.7	8.2	5.0	3.7	19.9	17.5	4.0	0.0	1015.6	0 0 0 0	0 0 0 0	0 0 0 0	96	3.1	3.9	198	18	1705	109	6	15	2.4	
27	21.4	13.0	0.1	11.5	19.8	17.6	4.4	0.0	1012.5	0 0 0 0	0 0 0 0	0 0 0 0	214	6.0	6.5	236	21	1446	222	11	14	0.1	
28	17.6	10.3	7.4	6.3	19.4	17.7	3.1	0.0	1010.0	0 0 0 0	1 0 0 0	0 0 0 0	219	0.5	2.9	27	11	1926	216	4	00	2.7	
29	20.1	11.7	tr	11.4	19.0	17.7	5.5	0.0	1012.7	0 0 0 0	0 0 0 0	0 0 0 0	7	4.1	4.6	19	21	1432	15	9	14	0.0	
30	20.7	7.1	tr	3.3	19.0	17.7	3.9	0.0	1017.3	0 0 0 0	0 0 0 0	0 0 0 0	113	2.7	3.5	188	13	1333	189	7	13	0.0	
Total			63.9				224.9	0.0															20.5
Mean	21.5	10.6		7.4	18.4	16.1	7.50	0.0	1019.3					295	0.6	4.5							
Anom	+1.0	+0.1	130%	-0.2	+1.6	+1.5	117%																+2.2
Daily mean		16.0																					
Anom		+0.5																					

Total

Mean

Anom

Daily mean

Anom

Number of days with:

Air frost = 0

Snow falling = 0

Hail=>5mm = 0

Abbreviations.

Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT

Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).

Grass min = Lowest overnight temperature at grass tip level.

Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.

pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.

Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.

Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.

Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.

Sp = 24 hour mean wind speed in knots.

Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.

High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.

30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for JUNE 2014

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	75	6	02	03	07	17.0	10.0	63	7.5	1023.0	8	006	03	1	1	1	2	6	0	4	81830	85077					1	COTRA Cu med U/a cont	
2	80	7	25	04	09	16.5	10.5	68	7.8	1019.0	8	004	03	2	2	3	8	5	8	1	83825	85072					2	1Sc40 2Ac58 2Ac68 Cu med Ac cas	
3	72	8	21	05	08	14.3	12.5	89	9.0	1013.2	8	003	21	6	5	8	8	4	/	/	82810	83630	88635				3		
4	65	7	22	03	07	12.5	9.7	83	7.5	1003.5	7	011	25	8	6	7	8	4	/	/	81710	83812	86630				4	7Sc40 Cu med jPE vv30k ex p	
5	82	3	26	09	19	15.3	7.6	60	6.5	1010.1	1	010	03	1	1	3	2	6	0	1	83830						5	1Ci72 Cu med	
6	82	6	10	06	12	17.8	9.2	57	7.2	1013.5	8	008	01	2	2	2	0	9	7	1	82357	85078					6	1Ac63 2Ci72 COTRA U/a cont	
7	40	8	19	06	11	15.5	14.4	93	10.2	1011.3	3	027	92	9	8	8	9	6	/	/	82645	88957					7	T 0831	
8	88	1	21	06	12	20.5	10.8	54	8.0	1018.8	0	006	03	0	0	1	2	6	4	2	81835						8	1Ac60 1Ci75 Cu med	
9	62	6	17	06	14	19.9	14.1	69	10.0	1015.5	8	011	02	2	2	3	0	9	8	1	83860	85075					9	COTRA Ac cas	
10	84	1	22	09	17	18.8	10.1	57	7.6	1017.0	1	008	03	0	0	1	2	6	8	9	81832						10	1Ac65 1Cc70 Cu med Ac cas vir	
11	81	5	24	07	12	17.5	10.1	62	7.6	1026.1	1	011	03	1	1	5	2	5	0	0	85828						11	Cu med	
12	82	7	34	02	05	19.7	10.5	55	7.7	1028.8	0	000	03	1	1	1	2	6	0	1	81835	87080					12	COTRA Cu med U/a&L/a cont	
13	80	4	03	02	05	20.5	12.8	61	9.1	1025.5	8	003	03	0	0	1	1	6	8	9	81830						13	1Ac200 2Cc220 2Ci300 COTRA Cu hum Ac cas	
14	70	7	01	05	09	18.4	14.9	80	10.3	1025.0	2	006	03	1	1	5	8	4	3	/	85815	83360					14	1Sc50 Cu med/con	
15	82	8	02	06	12	15.2	11.0	76	8.0	1028.3	1	003	02	5	2	8	8	4	/	/	85817	88625					15	Cu hum	
16	82	7	02	07	15	15.5	9.3	66	7.1	1028.2	0	001	03	1	1	7	8	5	/	/	84825	83632	87645				16	Cu hum	
17	80	6	02	06	16	14.7	8.0	64	6.5	1028.4	2	001	01	2	2	6	5	5	/	1	86628						17	/Ci75	
18	86	8	01	04	10	16.8	12.6	76	8.9	1027.2	8	004	01	5	2	8	8	4	/	/	83818	86625	88635				18	Cu hum	
19	65	7	34	08	13	18.3	13.6	74	9.5	1022.4	6	004	03	1	1	7	5	4	/	1	81615	87618					19	/Sc40 /Ci80 COTRA	
20	86	7	04	03	05	16.0	8.1	60	6.6	1023.5	0	001	01	2	2	7	5	6	/	/	81640	87656					20		
21	84	1	34	03	08	17.5	9.9	61	7.5	1020.3	0	000	03	0	0	1	1	5	0	1	81828						21	1Ci81 COTRA Cu hum	
22	65	6	05	03	08	19.5	13.8	69	9.7	1021.4	1	002	03	2	2	1	8	5	3	1	81822	86080					22	1Sc56 2Ci75 COTRA Cu hum U/a cont+parhelion	
23	81	6	22	04	06	19.6	10.1	54	7.6	1022.9	8	004	01	2	2	6	0	9	3	/	86358						23		
24	59	6	07	02	06	18.2	13.1	72	9.3	1020.0	8	006	05	4	2	1	1	4	0	1	81818	86080					24	COTRA Cu hum	
25	88	6	04	07	14	17.2	7.0	51	6.2	1019.2	7	002	03	1	1	1	1	6	0	1	82838	84080					25	2Ci75 COTRA Cu hum	
26	86	7	08	05	13	17.3	8.4	56	6.8	1015.6	6	006	02	2	2	1	1	6	8	/	81835	87365					26	1Ac61 Cu hum Ac cas	
27	84	7	22	08	14	17.6	13.2	75	9.4	1012.5	1	004	03	2	2	2	2	5	7	8	82820	83362	87268				27	Cu med Halo 22°part	
28	65	7	19	03	09	16.0	11.0	72	8.2	1010.0	8	009	25	8	2	3	8	5	6	1	83820	86360					28	1Sc56 /Ci70 Cu con vv40k ex p	
29	81	4	34	07	12	15.4	8.6	63	6.9	1012.7	2	010	01	1	1	1	2	5	3	1	81825	83359					29	1Ci75 Cu med	
30	80	6	12	04	10	17.0	9.8	62	7.5	1017.3	8	001	03	1	1	1	8	5	3	1	81828	85075					30	1Sc35 1Ac58 COTRA Cu med	

Mean vis = 34.9 km

Mean cloud = 5.8 73%

Mean wind speed = 5.1 kn

Mean gust = 11 kn

Mean TT = 17.2 °C

Mean TdTd = 13.8 °C

Mean RH = 66.7 %

Mean r = 8.1 g/kg

Mean PPP = 1019.3 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)- covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for JUNE 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	Nh	Cl	hCr	Cl	NChshs	NChshs	NChshs	Date	Remarks			
1	81	7	21	03	07	21.4	6.9	39	6.1	1020.7	7	015	02	2	2	3	4	7	3	1	81850	83656	86075	1	1Ac69 COTRA Cu med U/a cont
2	81	8	23	07	11	17.9	11.3	65	8.2	1017.4	6	010	03	2	2	8	8	6	/	/	81830	86645	88650	2	Cu med
3	84	6	23	05	16	19.1	8.0	48	6.6	1010.9	7	013	15	1	1	3	8	6	6	1	82840			3	2Sc56 2Ac62 2Ci75 Cu med jpNE
4	86	6	26	12	24	14.0	7.3	64	6.4	1004.1	1	011	01	8	2	6	8	5	7	0	85828			4	1Sc40 1Ac62 2Ac65 Cu med
5	84	5	25	09	17	18.7	4.3	39	5.2	1011.2	1	005	02	1	1	5	8	7	0	0	84850			5	2Sc56 Cu med
6	82	7	11	06	16	24.0	10.7	43	8.0	1010.6	7	018	02	2	2	1	0	9	8	1	81363	87078		6	COTRA Ac cas L/a cont
7	83	5	24	07	15	21.2	11.1	53	8.2	1012.6	1	008	02	1	1	2	2	6	0	1	82840	84075		7	COTRA Cu med
8	84	4	20	08	16	23.5	10.8	45	8.0	1018.4	7	002	03	1	1	1	2	7	5	1	81850			8	2Ac63 2Ci75 COTRA Cu med
9	84	7	24	06	14	22.8	12.4	52	8.9	1014.1	7	008	03	1	1	1	1	6	8	1	81840	86362		9	2Ac59 /Ci75 Cu hum
10	80	2	21	13	23	20.5	8.2	45	6.7	1018.1	2	008	02	0	0	2	2	6	0	0	82840			10	Cu med
11	82	7	24	07	12	20.2	8.2	46	6.6	1027.0	2	006	02	2	2	6	4	6	0	1	81845	86650	87080	11	Cu hum
12	84	2	26	05	10	23.4	8.8	39	6.9	1027.1	6	012	01	1	1	1	4	7	0	1	81850			12	1Sc50 2Ci80 COTRA Cu hum
13	82	4	01	06	11	24.1	11.0	44	8.0	1023.5	7	010	02	1	1	2	8	7	0	1	82850	83080		13	1Sc50 Cu med
14	84	4	04	06	13	21.9	13.7	60	9.6	1024.7	8	002	02	8	1	4	8	6	3	0	84832			14	1Sc50 1Ac60 Cu med/con S
15	84	7	02	10	18	17.6	12.3	71	8.7	1027.7	6	003	02	2	2	7	8	5	/	/	82823	86630	87640	15	Cu hum
16	75	8	01	10	18	14.8	10.8	77	7.9	1027.7	5	000	25	8	2	8	8	5	/	/	82822	85630	88650	16	Cu med jp E&W vv50k ex p
17	83	7	02	09	17	21.0	7.7	42	6.4	1026.5	6	010	02	2	2	1	1	7	0	8	81850	87078		17	2Cs75 COTRA Cu hum U/a cont
18	84	3	36	06	13	21.4	9.8	48	7.4	1025.3	7	011	02	0	0	3	2	6	0	1	83844			18	1Ci75 COTRA Cu med
19	60	7	02	10	17	18.5	13.4	72	9.4	1022.6	3	002	05	2	2	7	8	5	/	/	83820	87645		19	Cu hum
20	80	6	26	03	07	20.7	9.6	49	7.4	1021.3	7	013	03	1	1	6	8	6	0	0	82845	85656		20	Cu med
21	83	2	35	07	13	21.9	10.0	47	7.6	1018.7	7	006	02	0	0	2	8	6	0	0	82845			21	1Sc56 Cu med
22	80	7	04	04	10	22.1	10.7	48	7.9	1020.8	0	000	02	2	2	6	8	6	/	1	81845	86656		22	/Ci75 Cu med
23	82	6	24	06	11	24.6	11.7	44	8.4	1021.0	8	009	15	2	1	2	6	6	/	/	81848	83358	85360	23	Cu con jpE
24	84	4	32	07	16	23.2	10.1	43	7.6	1017.6	7	019	02	1	1	2	8	6	0	1	82848	83080		24	1Sc56 COTRA Cu med
25	86	7	34	31	11	19.3	4.6	38	5.2	1017.3	6	009	03	1	1	2	1	7	0	8	82850	83270	86075	25	COTRA Halo 22°part+U/a cont+Parhelion
26	86	7	07	06	12	21.1	7.7	42	6.5	1013.3	7	013	03	2	2	1	4	7	7	/	81850	83362	85365	26	1Sc50 2Ac60 Cu hum
27	82	4	21	12	21	20.9	8.9	46	7.1	1011.1	6	012	01	1	1	2	2	6	3	1	82845			27	2Ac60 1Ci75 Cu con
28	70	7	14	04	08	14.5	12.3	87	8.9	1009.0	8	005	29	9	8	1	9	4	6	3	81710	83360	85365	28	1Cu18 1Cb20 /Ci70 jp NE-S vv40k ex p
29	84	7	01	09	21	17.4	8.4	55	6.8	1013.7	2	009	02	2	2	7	8	6	/	/	81840	83650	86657	29	Cu med
30	70	7	16	04	11	18.1	10.6	61	7.9	1016.8	0	001	25	8	2	5	8	6	7	/	81835	85656	87359	30	Cu con. jp E-S&NW

Mean vis = 41.7 km
 Mean cloud = 5.7 71%
 Mean wind speed = 7.9 kn
 Mean gust = 14 kn
 Mean TT = 20.3 °C
 Mean TdTd = 9.7 °C
 Mean RH = 51.7 %
 Mean r = 7.5 g/kg
 Mean PPP = 1018.4 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-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun	08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
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
2014	4	0.46	0.00	0.00	0.00	0.34	0.48	0.00	0.09	0.60	0.56	0.57	0.56	0.38	0.05	0.00	0.10
	5	1.00	0.00	0.00	0.00	0.19	0.09	0.00	0.83	0.86	0.94	1.00	1.00	0.99	0.57	0.00	0.99
	6	1.00	0.32	0.00	0.00	1.00	0.17	0.00	1.00	0.30	1.00	1.00	1.00	1.00	0.95	0.00	0.86
	7	1.00	0.82	0.00	0.50	1.00	0.86	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.00	0.81
	8	0.93	0.51	0.00	0.00	0.94	0.76	0.00	1.00	0.65	1.00	0.64	1.00	1.00	0.14	0.00	0.14
	9	0.56	0.39	0.00	0.00	0.49	0.98	0.00	0.86	0.62	0.84	0.90	0.59	0.91	0.16	0.01	0.00
	10	0.86	0.00	0.01	0.00	0.31	1.00	0.10	0.87	0.41	0.81	0.86	0.68	0.68	0.13	0.00	0.00
	11	1.00	0.00	0.25	0.00	0.34	0.76	0.39	0.94	0.78	0.88	0.56	0.92	0.96	0.01	0.01	0.00
	12	0.50	0.00	0.72	0.00	0.49	0.74	0.85	0.93	0.94	0.96	0.21	0.96	0.90	0.06	0.00	0.00
	13	0.09	0.22	0.25	0.00	0.80	1.00	0.89	0.98	0.91	0.94	0.32	0.75	0.84	0.67	0.00	0.00
	14	0.97	0.00	0.31	0.48	0.65	1.00	0.47	0.99	0.67	0.89	0.37	0.56	0.54	0.46	0.00	0.07
	15	0.96	0.00	0.50	0.10	0.32	1.00	0.37	0.93	0.00	0.99	0.14	1.00	0.66	0.54	0.00	0.00
	16	0.00	0.00	0.15	0.40	0.58	1.00	1.00	0.89	0.00	0.96	0.51	0.92	0.52	0.28	0.02	0.00
	17	0.00	0.00	0.00	0.67	0.81	0.92	0.42	1.00	0.00	0.84	0.09	1.00	0.98	0.70	0.00	0.00
	18	0.09	0.00	0.00	0.43	0.63	0.00	0.61	0.24	0.00	1.00	0.73	1.00	0.34	0.89	0.00	0.00
	19	0.00	0.00	0.00	0.15	0.38	0.00	0.89	0.35	0.00	1.00	0.71	1.00	0.00	0.82	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.00	0.07	0.10	0.10	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		9.42	2.26	2.20	2.73	9.28	10.77	6.06	12.98	6.76	14.68	9.72	14.03	11.70	7.42	0.05	2.99

Hour	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	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
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
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
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
4	0.00	0.00	0.54	0.00	0.57	0.48	0.00	0.00	0.53	0.21	0.00	0.24	0.00	0.21	0.23
5	0.00	0.00	0.98	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.01	0.00	0.00	0.42
6	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.09	0.80	0.00	0.00	0.48
7	0.02	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.08	0.00	0.19	0.00	0.90	0.54
8	0.25	0.00	0.53	0.00	1.00	1.00	0.70	0.77	1.00	0.79	0.00	0.26	0.89	0.91	0.56
9	0.57	0.03	0.05	0.46	0.98	0.92	0.97	0.91	1.00	0.98	0.00	0.00	0.83	0.71	0.52
10	0.79	0.45	0.00	0.37	0.99	0.59	1.00	0.50	0.99	0.56	0.00	0.00	0.74	0.25	0.46
11	0.90	0.46	0.00	0.40	0.73	0.71	1.00	0.25	0.86	0.10	0.00	0.00	0.88	0.24	0.48
12	0.99	0.48	0.13	0.87	0.25	0.21	0.41	0.66	0.96	0.00	0.00	0.00	0.33	0.58	0.47
13	1.00	0.71	0.04	0.83	0.42	0.00	0.00	0.79	0.86	0.00	0.28	0.00	0.21	0.00	0.46
14	1.00	0.87	0.02	0.42	0.55	0.08	0.20	0.89	0.79	0.39	0.86	0.00	0.35	0.00	0.49
15	1.00	0.86	0.44	0.66	0.94	0.23	0.04	0.95	0.61	0.12	0.62	0.12	0.07	0.00	0.47
16	0.58	0.74	0.17	0.80	1.00	0.09	0.39	0.74	1.00	0.00	0.35	0.75	0.07	0.00	0.46
17	0.61	0.94	0.65	0.87	0.98	0.29	0.21	0.96	0.70	0.00	0.77	0.53	0.38	0.00	0.51
18	0.81	0.99	0.79	0.79	1.00	0.18	0.44	1.00	0.96	0.15	0.69	0.21	0.72	0.00	0.49
19	0.60	1.00	0.82	0.22	0.91	0.09	0.02	0.82	0.68	0.58	0.78	0.00	0.03	0.10	0.40
20	0.00	0.16	0.00	0.00	0.07	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.03
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
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
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
Tot	9.13	7.68	7.16	6.70	13.39	7.86	5.37	9.24	14.19	3.96	4.44	3.13	5.51	3.89	224.68

JUNE 2014	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	15.56	21.8	1529	7.3	431	68.5	97.2	554	35.7	1427	9.06	7.12	8.6	657	5.6	1428	1021.94	1024.0	42	1019.6	1827
2	15.39	20.0	1342	11.8	2359	75.0	89.7	2357	53.2	1344	10.88	8.03	8.9	1342	7.3	1301	1018.12	1020.3	0	1015.8	2353
3	14.49	19.7	1309	11.7	2	77.8	94.2	642	45.5	1503	10.37	7.83	9.2	950	6.2	1501	1012.04	1016.0	9	1007.7	2359
4	11.60	14.4	1430	8.0	2106	81.4	94.1	521	57.7	1713	8.41	6.94	8.3	1237	5.2	1848	1004.84	1007.9	0	1002.8	1202
5	13.61	19.2	1424	7.3	2352	66.5	92.7	21	32.8	1426	6.89	6.21	7.5	929	4.3	1408	1010.60	1014.3	2323	1006.1	6
6	15.82	24.3	1454	5.3	417	65.8	96.4	453	30.6	1549	8.53	6.95	9.3	1206	5.3	417	1012.41	1014.4	532	1009.8	1647
7	16.57	21.9	1653	12.1	2355	77.0	94.8	934	41.8	1638	12.11	8.81	12.2	1057	6.6	1639	1011.95	1016.6	2355	1007.6	718
8	17.77	23.6	1439	11.2	415	66.4	96.4	535	37.3	1342	10.58	7.89	9.3	1613	6.3	1146	1018.27	1019.3	2133	1016.3	16
9	18.23	24.9	1341	11.8	434	69.5	90.5	440	41.6	1350	12.24	8.84	11.7	1106	7.4	2133	1015.55	1018.7	4	1013.6	1607
10	16.62	21.8	1304	10.6	419	65.2	94.6	511	39.0	1305	9.50	7.34	8.7	934	6.2	1900	1017.90	1022.9	2357	1014.2	159
11	15.88	21.5	1606	10.4	147	69.0	94.4	438	40.3	1521	9.57	7.31	8.5	623	6.0	1521	1026.22	1029.2	2325	1022.8	0
12	16.95	24.0	1508	8.5	347	66.4	96.6	518	35.9	1448	9.60	7.32	9.1	828	6.0	1238	1027.81	1029.4	730	1026.0	1944
13	18.35	24.6	1334	10.1	343	68.5	96.6	524	37.2	1406	11.69	8.46	11.0	2322	6.5	1359	1024.40	1026.6	22	1022.3	1740
14	17.43	22.9	1413	12.8	2307	79.8	95.9	522	55.1	1454	13.73	9.65	11.8	1353	7.6	2359	1025.09	1027.9	2355	1023.6	4
15	15.18	18.2	1558	12.1	2339	75.3	89.4	2349	62.2	1621	10.80	7.91	9.4	1034	7.1	400	1027.97	1028.9	2218	1027.2	1616
16	14.13	17.7	1420	10.3	411	75.0	92.7	414	57.4	1249	9.65	7.33	8.4	1545	6.4	2332	1028.02	1028.8	41	1027.2	1423
17	16.07	21.6	1542	12.3	134	63.3	82.8	2156	36.1	1522	8.72	6.90	8.3	2221	5.5	1527	1027.45	1028.7	727	1026.0	1634
18	16.92	22.7	1642	11.4	2337	71.1	94.3	2359	41.9	1552	11.21	8.15	9.7	959	6.7	1552	1026.03	1027.7	648	1023.9	1937
19	15.27	21.1	1239	9.9	349	81.4	96.7	505	62.2	1558	11.95	8.62	10.9	1239	7.1	2348	1022.93	1024.6	1	1022.0	1335
20	16.45	22.2	1611	10.2	235	66.8	94.7	315	40.9	1424	9.70	7.40	8.6	1141	6.2	1049	1022.08	1024.1	36	1019.7	1834
21	17.05	22.8	1505	11.3	2356	64.0	92.2	2359	38.8	1738	9.78	7.46	10.2	1145	6.2	1739	1019.69	1021.2	19	1018.2	1722
22	17.59	24.2	1514	9.6	400	68.3	96.5	438	38.9	1121	11.03	8.12	10.5	920	6.7	1121	1021.16	1023.0	2359	1020.1	0
23	18.94	25.0	1455	12.8	254	63.5	90.7	307	36.5	1134	11.26	8.23	10.3	2049	6.3	1134	1021.78	1023.6	635	1019.8	1748
24	18.18	23.9	1539	13.6	311	70.9	94.6	630	38.8	1538	12.28	8.82	10.6	1143	6.9	1502	1019.25	1021.2	6	1016.9	1741
25	15.33	20.8	1318	9.4	355	63.0	93.4	447	34.3	1454	7.65	6.49	8.5	0	4.8	1503	1018.03	1019.5	103	1016.1	1826
26	15.25	21.8	1423	8.3	347	72.4	95.3	2309	36.1	1201	9.61	7.48	9.9	1850	5.1	957	1014.88	1017.2	0	1012.6	1601
27	16.46	21.5	1454	12.9	2353	74.5	95.7	431	42.1	1449	11.56	8.49	10.8	1333	6.6	1439	1011.97	1013.5	907	1010.5	1809
28	13.92	17.7	1744	10.3	321	85.0	95.5	517	62.8	1648	11.37	8.37	9.6	1444	7.1	1643	1010.04	1012.0	5	1008.3	1653
29	14.63	20.2	1349	10.9	2359	71.8	93.3	27	40.5	1153	9.17	7.22	8.5	43	5.3	1209	1013.27	1016.8	2358	1010.3	0
30	14.30	20.8	1223	7.3	407	77.3	96.7	519	44.5	1212	9.98	7.60	9.2	728	6.1	407	1017.15	1018.8	2347	1016.4	1624
Total																					
Mean	16.00	21.55		10.38		71.3	93.95		43.26		10.30	7.78	9.58		6.21		1018.96	1021.24		1016.79	
Max	18.94	24.99		13.60		85.0	97.20		62.79		13.73	9.65	12.19		7.58		1028.02	1029.43		1027.25	
Min	11.60	14.35		5.29		63.0	82.80		30.63		6.89	6.21	7.49		4.26		1004.84	1007.94		1002.82	

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.