

# 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

APRIL 2014

Temperature (°C / °F)			Anomaly	Rank in the past 133 years				
Mean maximum	15.7	60.3	+1.7	11th highest				
Mean minimum	5.5	41.9	+1.1	6th highest				
Daily mean	10.6	51.1	+1.4	9th highest				
Highest maximum	19.1	66.4	on 30 <sup>th</sup>	Lowest maximum	12.7	54.9	on 25 <sup>th</sup>	
Highest minimum	12.0	53.6	on 7 <sup>th</sup>	Lowest minimum	-0.5	31.1	on 16 <sup>th</sup>	
Mean grass minimum	2.0	35.6	+1.3	Lowest grass minimum	-4.9	23.2	on 19 <sup>th</sup>	
Mean earth @30 cm	11.4	52.5	+1.5	Earth @100 cm	10.3	50.5		
Frost duration (hrs)	0.3			Rain duration (hrs)	45.2			
Rainfall total (mm / in)	78.5	3.09	162 %	14 <sup>th</sup> highest				
Highest daily fall	15.5	0.61	on 21 <sup>st</sup>					
Number of: Dry days (<0.2mm)	18	Wet days (>0.9mm)	12	days ≥5mm	5			
Sunshine total (hrs)	141.0	Daily mean	4.70	88 %	Sunniest day	13.5	on 15 <sup>th</sup>	
N° days with: Air frost	2	Ground frost	14	Snow falling	0	Snow lying	0	
Thunder	5	Hail ≥5mm	0	Small hail/ice	0	Fog @09	1	
Nil sun	2							
Pressure MSL : Mean @09 GMT, mbar	1015.1	+0.1	Highest	1031.2	on 15 <sup>th</sup>	Lowest	998.3	on 3 <sup>rd</sup>
Relative humidity : Mean (%)	77.4	Lowest	24	on 16 <sup>th</sup>	Water vapour (g/kg), mean at 09 and 15 GMT		6.3,	6.1
Overall mean wind speed (mph)	5.9	Windiest day	11.5	on 6 <sup>th</sup>	Max gust	33	on 26 <sup>th</sup>	
Wind direction (days)	N 5	NE 5	E 3	SE 0	S 4	SW 6	W 5	NW 2
Least windy day (mph)	2.8	on 1 <sup>st</sup>	Calm; less than 0.5 mph (minutes)			542		

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

Notes:

**Very Mild. Wet. Sunshine Below Average**

**Temperature:** This has been a very mild April, ranking 9<sup>th</sup> warmest since 1883, although three other Aprils in the past 8 years have been milder. The highest maximum is 1.6° below the median while the lowest max is 4.9° above the median and 2<sup>nd</sup> highest after 2011 in the past 102 years. The highest min is 2.1° above the median and is 7<sup>th</sup> highest in the same period, while the lowest min is 1.4° above its median. Daily anomalies for maximum temperature were +ve for 26 of the 30 days, with the highest values around +6° on the 2<sup>nd</sup> and 3<sup>rd</sup>. Of the 4 days with -ve anomalies, the largest was -2.4° on the 25<sup>th</sup>. Anomalies for daily min showed greater variability, with 12 negative and 18 positive, and also a larger range, from over +8° on the 6<sup>th</sup> and 7<sup>th</sup> to -4° on the 16<sup>th</sup> and 19<sup>th</sup>. A maximum temperature of 18.9° on the 2<sup>nd</sup> and 3<sup>rd</sup> was not surpassed until 19.1° on the 30<sup>th</sup>. Slight air frost occurred on the 16<sup>th</sup> and 19<sup>th</sup>, and there was a ground frost every day except one between the 9<sup>th</sup> and 21<sup>st</sup>. The number of days with ground frost equals the average. The mean earth temperature at 30cm and 1 m depth are about 1° above average. **Rainfall:** Quite a high total for April, 162 % of average, and although much less rain fell than in April 2012, it is the 2<sup>nd</sup> wettest April in the past 10 years. Rainfall was unevenly distributed through the month, with all but 3 days in the first 19 being dry, with a 12 day dry spell ending on the 19<sup>th</sup>, after which it turned very wet. Rainfall accumulation, which showed a 20 mm deficit on the 19<sup>th</sup> ended up as a 30 mm surplus by the 29<sup>th</sup>. The 20<sup>th</sup> and 21<sup>st</sup> were particularly wet, producing 27.3 mm over the two days. Much of the rain was thundery in nature, and there were thunderstorms on the 20<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup>, 27<sup>th</sup> and 29<sup>th</sup>. The associated rainfall rates reached 79 mm/hr on the 20<sup>th</sup>, and 169 mm/hr at 1118 GMT on the 29<sup>th</sup>, with 14.3 mm falling in under two hours. Overall there was 1 more dry day, and 3 more days with 10 mm or more, compared with average. Snow has fallen in 56 % of Aprils on average, but there was none this year. **Sunshine:** Although it was sunny at times during the month, April started dull with a deficit of 35 hours by the 7<sup>th</sup>. It then became largely sunny until the 19<sup>th</sup>, by which time there was a surplus of 10 hours, but it then became mainly dull for the rest of the month, by which time there was an accumulated deficit of 20 hours. The period 13<sup>th</sup> to 16<sup>th</sup> inclusive was outstanding, with over 90 % of the maximum each day, and a daily average of 13.1 hours. Overall there were 14 days with <3 hours, 11 with =>6 hours, 5 with =>9 hours and 4 with =>12 hours. **Wind:** The mean wind speed is 1.1 mph below average and the highest gust is 8 mph below average, both lowest since 2011. **Humidity:** The mean water vapour content at 1500 GMT is the highest in April in the past 17 years.

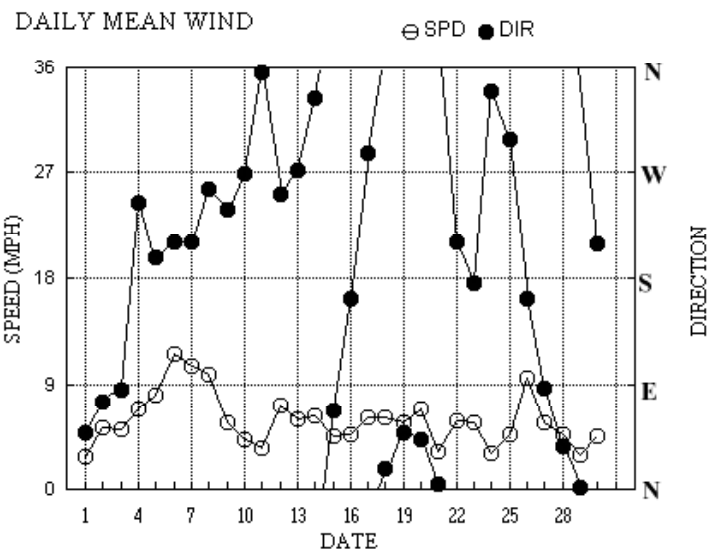
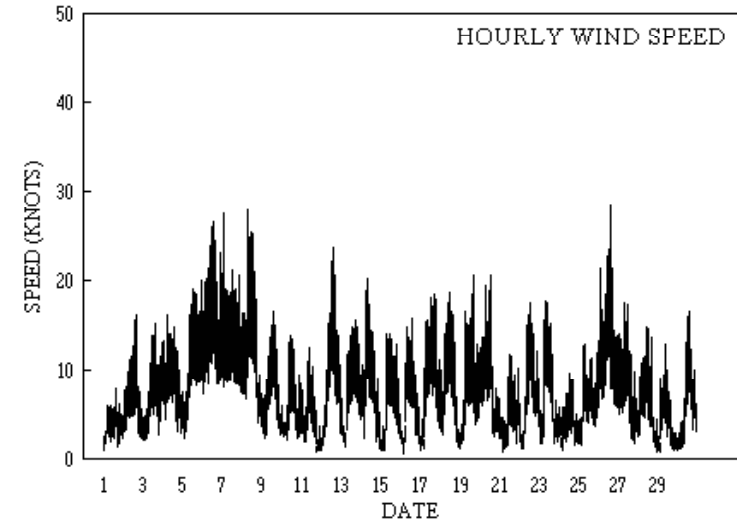
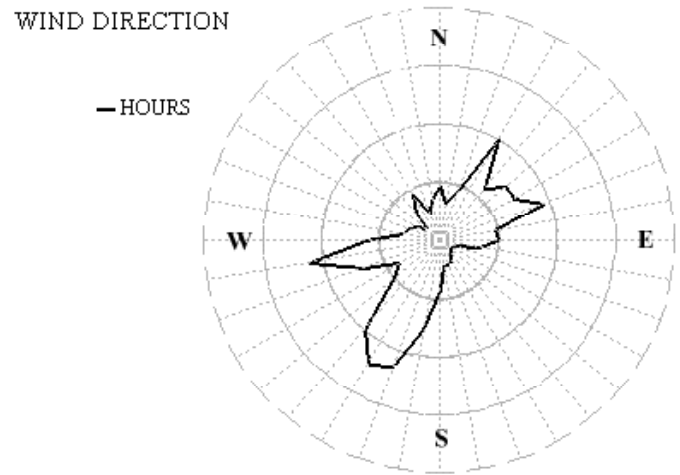
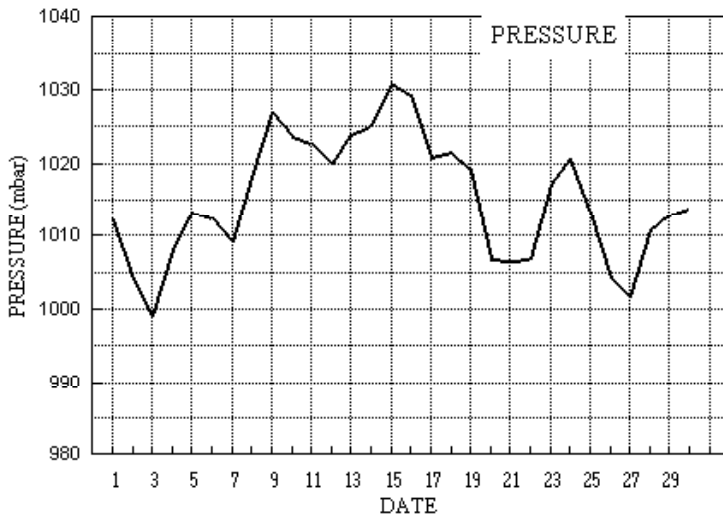
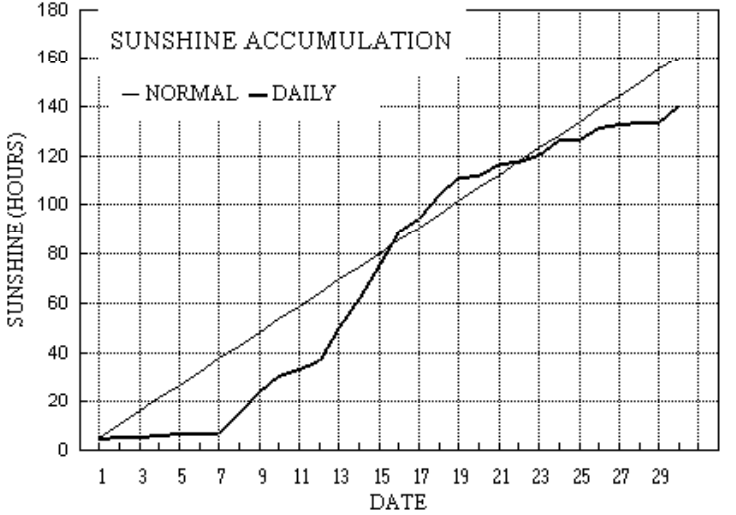
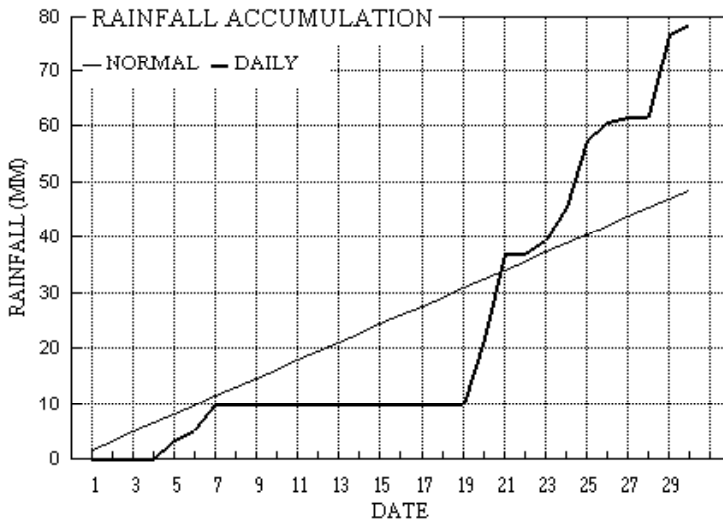
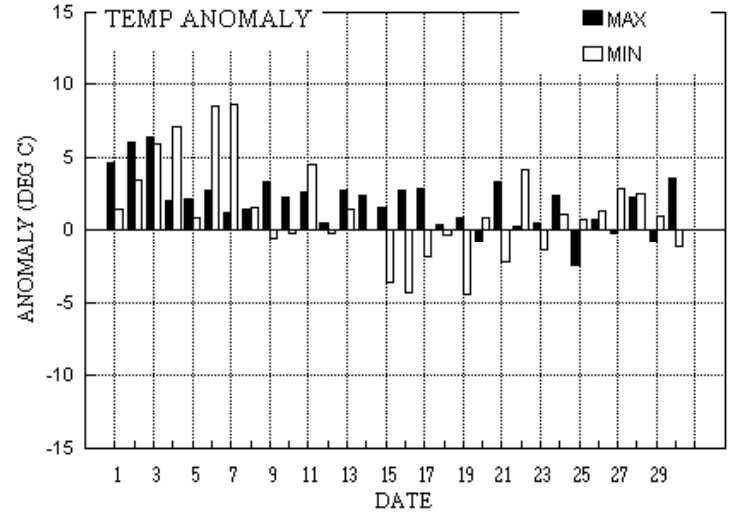
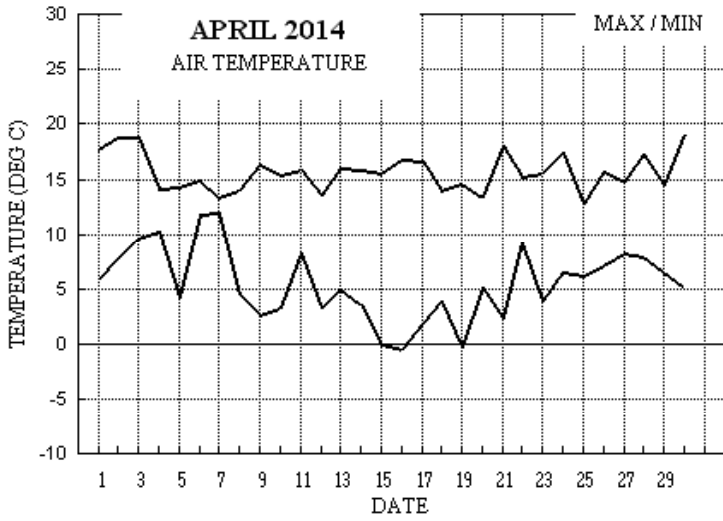
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 <sup>st</sup> to the 10 <sup>th</sup>				From the 11 <sup>th</sup> to the 20 <sup>th</sup>				From the 21 <sup>st</sup> to the 30 <sup>th</sup>			
+3.2°	+3.7°	62%	58%	+1.6°	-0.8°	74%	151%	+1.0°	+0.9°	352%	54%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

# Wokingham climatological graphs for April 2014



Month: APRIL 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	17.7	5.9	0.0	1.7	9.9	8.6	4.8	0.0	1012.1	0 0 0 0	0 0 0 0	0 0 0 1	48	1.1 2.4	6 8 1604	32 4	15 0.0	
2	18.9	7.7	tr	3.5	10.1	8.8	0.6	0.0	1003.9	0 0 0 0	0 0 0 0	0 0 0 0	75	4.4 4.5	60 16 1600	80 8	15 0.0	
3	18.9	9.6	tr	6.8	10.5	9.0	0.4	0.0	999.1	0 0 0 0	0 0 0 0	0 0 0 0	85	2.3 4.5	162 15 1617	139 7	15 0.0	
4	14.2	10.3	0.0	8.8	11.0	9.2	0.9	0.0	1007.9	0 0 0 0	0 0 0 0	0 0 0 0	244	5.7 5.9	250 16 0646	252 8	07 0.0	
5	14.3	4.2	3.4	-1.0	10.9	9.4	0.6	0.0	1013.4	0 1 0 0	0 0 0 0	0 0 0 0	198	6.9 7.0	198 20 2316	199 10	14 1.4	
6	14.9	11.9	2.0	11.9	11.2	9.6	0.0	0.0	1012.4	0 0 0 0	0 0 0 0	0 0 0 0	211	10.0 10.0	208 27 1331	219 14	13 4.3	
7	13.4	12.0	4.4	11.7	11.4	9.7	0.0	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0	210	8.5 9.1	196 28 0309	208 10	03 4.1	
8	14.0	4.5	0.0	1.1	11.1	9.9	8.4	0.0	1018.0	0 0 0 0	0 0 0 0	0 0 0 0	256	8.2 8.5	257 28 0807	270 12	13 0.0	
9	16.3	2.6	0.0	-1.5	10.7	10.0	8.8	0.0	1026.9	0 1 0 0	0 0 0 0	0 0 0 0	239	4.6 4.9	262 17 1441	245 8	15 0.0	
10	15.4	3.2	0.0	-1.0	11.0	10.0	6.6	0.0	1023.6	0 1 0 0	0 0 0 0	0 0 0 0	269	2.9 3.7	246 14 1218	302 6	16 0.0	
11	15.9	8.2	0.0	4.9	11.4	10.1	2.8	0.0	1022.7	0 0 0 0	0 0 0 0	0 0 0 0	356	2.4 3.0	31 13 1114	18 6	09 0.0	
12	13.6	3.3	0.0	-0.6	11.4	10.2	3.1	0.0	1020.0	0 1 0 0	0 0 0 0	0 0 0 0	252	6.0 6.2	270 24 1624	268 11	16 0.0	
13	16.0	4.9	0.0	-0.1	11.3	10.3	12.9	0.0	1023.8	0 1 0 0	0 0 0 0	0 0 0 0	272	4.8 5.2	243 16 1808	246 8	18 0.0	
14	15.9	3.5	0.0	-1.6	11.6	10.4	12.4	0.0	1025.1	0 1 0 0	0 0 0 0	0 0 0 0	334	4.1 5.4	315 21 0934	327 10	09 0.0	
15	15.6	0.0	0.0	-3.7	11.4	10.5	13.5	0.0	1031.0	0 1 0 0	0 0 0 0	0 0 0 0	67	3.8 4.0	56 14 1204	73 6	13 0.0	
16	16.8	-0.5	0.0	-3.6	11.5	10.5	13.4	0.1	1029.2	1 1 0 0	0 0 0 0	0 0 0 0	162	3.3 4.1	175 16 1408	159 7	08 0.0	
17	16.7	1.9	0.0	-1.6	11.4	10.6	5.9	0.0	1020.9	0 1 0 0	0 0 0 0	0 0 0 0	287	4.4 5.4	308 19 1746	311 9	16 0.0	
18	14.0	3.8	0.0	-0.4	11.6	10.7	9.6	0.0	1021.6	0 1 0 0	0 0 0 0	0 0 0 0	18	5.1 5.4	33 19 1236	26 9	12 0.0	
19	14.6	-0.3	tr	-4.9	11.4	10.7	6.5	0.2	1019.2	1 1 0 0	0 0 0 0	0 0 0 0	49	4.8 4.9	73 21 1702	48 8	08 0.0	
20	13.4	5.2	11.8	-0.1	11.4	10.8	0.8	0.0	1006.7	0 1 0 0	1 0 0 0	1 0 0 0	43	5.4 6.0	61 21 1513	31 9	08 4.3	
21	18.0	2.3	15.5	-1.4	11.0	10.8	5.3	0.0	1006.5	0 1 0 0	1 0 0 0	1 0 0 0	5	2.2 2.8	4 12 1410	354 5	14 7.6	
22	15.2	9.1	tr	9.4	11.7	10.8	0.3	0.0	1006.8	0 0 0 0	0 0 0 0	0 0 0 0	211	3.9 5.0	195 18 1423	209 9	15 0.0	
23	15.6	3.8	2.3	-0.1	11.8	10.9	2.9	0.0	1017.0	0 1 0 0	0 0 0 0	0 0 0 0	176	4.4 4.9	179 18 0935	179 9	09 3.0	
24	17.5	6.6	5.8	2.4	11.9	10.9	6.4	0.0	1020.6	0 0 0 0	0 0 0 0	0 0 0 0	340	0.7 2.6	351 10 1354	9 4	18 2.9	
25	12.7	6.2	12.3	1.5	12.4	11.0	0.1	0.0	1013.0	0 0 0 0	1 0 0 0	1 0 0 0	298	1.6 4.1	14 13 0841	248 6	17 9.1	
26	15.7	7.1	3.3	2.6	11.8	11.1	4.8	0.0	1004.3	0 0 0 0	0 0 0 0	0 0 0 0	163	7.5 8.2	234 29 1541	167 12	14 3.1	
27	14.8	8.3	1.0	5.9	11.9	11.2	1.1	0.0	1001.6	0 0 0 0	1 0 0 0	1 0 0 0	87	4.5 5.0	70 18 0918	86 8	12 0.6	
28	17.3	8.0	tr	2.9	12.1	11.2	0.8	0.0	1010.7	0 0 0 0	0 0 0 0	0 0 0 0	36	2.6 4.1	29 15 1244	32 7	13 0.0	
29	14.4	6.5	14.9	3.0	12.3	11.3	0.3	0.0	1012.9	0 0 0 0	0 0 0 0	0 0 0 0	2	1.1 2.6	168 13 1154	29 5	08 2.2	
30	19.1	5.1	1.8	2.5	12.2	11.3	7.0	0.0	1013.9	0 0 0 0	1 0 0 0	1 0 0 0	209	3.8 3.9	215 17 1509	216 9	14 2.6	
Total			78.5				141.0	0.3										45.2
Mean	15.7	5.5		2.0	11.4	10.3	4.70	0.0	1015.1					227	1.1 5.1			
Anom	+1.7	+1.1	162%	+1.3	+1.5	+1.1	88%			+0.1								
Daily mean		10.6																
Anom		+1.4																

Number of days with:

Air frost = 2      Ground frost = 14      Nil sun = 2  
Snow falling = 0      Snow lying = 0      Thunder = 5  
Hail=>5mm = 0      Hail<5mm or ice = 0      Fog at 09GMT = 1

Abbreviations.

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

Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, &lt;.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 =&gt;5mm. Ic = Hail &lt;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 APRIL 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	N	Ch	shs	N	Ch	shs	Date	Remarks
1	02	9	13	02	05	8.6	8.3	98	6.8	1012.1	3	009	43	4	4	9	/	/	/	/						1		
2	50	7	06	06	11	14.2	9.7	74	7.5	1003.9	7	010	15	2	2	7	0	9	8	2	81358	83362	85365			2	2Ci70 Ac cas jpNW	
3	25	8	03	05	09	12.9	9.8	82	7.6	999.1	8	003	05	2	2	8	0	9	7	/	86362	88364				3		
4	70	7	26	08	12	11.8	6.9	72	6.2	1007.9	2	017	01	2	2	1	8	4	0	2	81818	87075				4	1Sc35 Cu hum	
5	61	7	20	08	13	12.1	8.5	78	6.9	1013.4	2	002	02	2	2	6	8	4	3	1	81815	86645	85075			5	1Ac65 Cu fra	
6	70	8	21	09	22	13.1	11.4	89	8.3	1012.4	3	003	02	6	2	8	7	3	/	/	86708	88712				6		
7	56	8	19	10	19	12.7	11.2	91	8.3	1009.1	6	010	61	6	5	6	7	3	2	/	81710	86712	88550			7		
8	80	2	26	12	28	9.8	3.5	65	4.8	1018.0	2	027	03	1	1	2	2	5	0	1	82825					8	1Ci75 Cu med	
9	68	2	27	07	12	11.3	6.4	72	5.9	1026.9	1	005	03	0	0	1	1	5	8	1	81820					9	1Ac65 2Ci78 COTRA Cu fra Ac flo vir	
10	80	4	25	03	06	10.9	5.1	68	5.4	1023.6	8	005	02	0	0	1	5	6	0	1	81640	84075				10	1Ci70 COTRA	
11	80	7	01	05	09	11.5	4.5	62	5.2	1022.7	1	010	02	2	2	7	5	7	/	/	87650					11		
12	84	7	25	08	14	10.5	4.4	66	5.2	1020.0	2	002	03	2	2	1	1	5	7	1	81825	85365	87075			12	1Ac63 Cu hum	
13	80	2	31	07	12	10.6	2.5	57	4.5	1023.8	1	011	03	0	0	2	1	5	0	1	82828					13	1Ci75 Cu hum	
14	81	1	33	09	18	11.0	2.7	56	4.5	1025.1	1	010	03	0	0	1	1	6	0	1	81830					14	1Ci78 Cu hum	
15	84	3	07	06	14	10.4	3.5	62	4.8	1031.0	1	005	02	0	0	0	0	9	0	1	83080					15	COTRA	
16	63	4	15	07	14	10.2	3.3	62	4.7	1029.2	8	004	03	0	0	1	5	0	1	1	81625	84080				16	COTRA	
17	60	3	27	08	16	12.9	4.4	56	5.1	1020.9	7	010	05	1	1	1	0	9	3	2	81363	83075				17	COTRA	
18	77	1	02	07	16	9.5	1.4	57	4.2	1021.6	1	011	03	0	0	1	1	6	0	0	81830					18	Cu hum	
19	80	4	05	07	17	9.8	2.0	58	4.3	1019.2	7	005	03	1	1	4	8	6	0	0	84830					19	1Sc35 Cu hum	
20	45	8	04	07	20	10.3	7.7	84	6.6	1006.7	6	018	05	2	2	8	5	4	/	/	87712	88615				20		
21	50	5	03	01	04	10.9	10.1	95	7.7	1006.5	7	001	10	1	1	5	0	8	7	0	81357	83358				21		
22	56	8	23	04	07	10.6	9.9	95	7.6	1006.8	3	015	10	5	4	8	5	3	/	/	83706	86712	88615			22		
23	64	6	18	08	16	14.8	8.5	66	6.9	1017.0	2	008	03	2	2	1	8	5	5	1	81822	85360				23	1Sc35 1Ac59 /Ac65 /Ci80 COTRA Cu hum	
24	59	8	02	03	05	10.0	8.6	91	6.9	1020.6	0	004	05	2	2	8	6	3	/	/	83707	88710				24		
25	45	8	36	05	13	8.7	8.0	95	6.6	1013.0	7	003	61	9	6	8	7	2	/	/	83704	87706	88710			25		
26	70	7	18	08	16	12.6	8.0	73	6.7	1004.3	2	003	03	2	2	5	8	4	0	1	84818	87072				26	1Sc35 COTRA Cu med Halo 22°	
27	70	6	08	06	14	10.8	9.1	89	7.3	1001.6	3	009	80	8	2	6	8	4	6	/	81712	84815				27	2Sc56 1Ac60 Cu med	
28	40	8	03	06	11	11.1	9.3	89	7.3	1010.7	2	014	05	2	2	8	6	3	/	/	86707	88710				28		
29	30	8	03	05	10	10.6	9.9	95	7.5	1012.9	2	004	10	4	2	8	6	2	/	/	82703	86705	88710			29		
30	11	7	25	02	04	10.3	10.1	98	7.6	1013.6	8	001	28	4	4	7	6	1	/	/	83702	87704				30		

Mean vis = 17.0 km

Mean cloud = 5.7 72%

Mean wind speed = 6.3 kn

Mean gust = 13 kn

Mean TT = 11.2 °C

Mean TdTd = 7.0 °C

Mean RH = 76.5 %

Mean r = 6.3 g/kg

Mean PPP = 1015.1 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 APRIL 2014

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	72	6	04	03	06	15.8	8.8	63	7.0	1009.2	7	022	03	1	1	1	1	5	0	1	81828	86078					1	1Ci70 COTRA Ci cas Cu hum U/a cont+parhelion	
2	59	8	13	05	11	18.8	8.5	51	7.0	1001.1	8	013	05	2	2	8	0	9	7	/	82362	88465					2		
3	60	7	10	07	14	17.4	9.3	59	7.4	998.7	7	002	05	2	2	7	8	6	7	/	86835	84645					3	/Ac62 Cu hum	
4	84	8	26	07	15	13.6	6.0	60	5.8	1009.5	1	007	02	2	2	8	8	6	/	/	82838	88638					4	Cu hum	
5	80	8	20	09	18	13.8	10.6	81	7.9	1013.3	7	004	20	5	2	8	5	4	/	/	87612	88618					5		
6	59	8	21	12	26	13.9	11.3	84	8.3	1012.5	5	001	51	5	2	8	5	4	/	/	87710	88618					6	Vis 15k exNW	
7	70	8	20	09	19	13.2	11.7	91	8.6	1005.2	7	020	51	6	5	8	5	3	/	/	87708	88615					7		
8	82	3	29	09	23	12.4	2.1	49	4.4	1021.0	2	011	02	1	1	3	8	6	0	1	81835						8	2Cu040 1Sc060 1Ci250 Cu med	
9	75	6	23	08	17	15.7	5.4	50	5.5	1024.7	6	013	03	1	1	5	5	6	0	1	85640						9	2Ci78	
10	81	7	30	05	14	14.3	4.0	50	5.0	1021.1	6	012	03	1	1	7	8	6	/	/	81840	87645					10	Cu hum	
11	80	5	34	04	09	15.7	1.9	39	4.3	1021.7	6	006	01	2	2	4	4	7	0	1	81850	84650					11	2Ci80 COTRA Cu hum	
12	82	7	26	10	21	12.8	3.8	54	5.0	1017.8	7	010	02	2	2	1	5	6	7	/	81635	85460					12	3Ac62 /Ac65	
13	83	1	28	08	14	15.4	3.9	46	5.0	1021.4	8	014	02	0	0	1	1	6	0	0	81845						13		
14	81	2	01	06	14	15.0	0.4	37	3.8	1025.0	5	002	02	0	0	2	4	7	0	0	82850						14	1Sc56 Cu hum	
15	82	2	06	06	14	15.2	0.3	36	3.8	1029.3	7	014	02	0	0	1	1	7	0	1	81850						15	2Ci80 COTRA Cu hum	
16	73	1	19	05	16	16.6	1.9	37	4.3	1025.5	7	018	02	0	0	0	0	9	0	1	81081						16	COTRA	
17	68	8	28	07	18	14.8	6.7	58	6.0	1018.3	6	006	03	2	2	2	8	6	2	/	82832	88468					17	1Sc40 Cu hum	
18	84	5	04	07	15	12.5	1.1	45	4.1	1020.9	8	004	02	1	1	4	8	6	0	0	81845	85650					18	Cu hum	
19	82	6	06	07	16	13.4	3.3	50	4.8	1016.5	8	011	02	2	2	6	8	6	0	0	84840	83650					19	Cu med	
20	18	8	08	10	18	11.8	10.9	94	8.2	1002.7	5	013	65	6	6	8	9	3	/	/	83708	88915					20		
21	65	7	36	04	12	15.8	8.9	64	7.1	1004.4	8	011	25	8	1	1	9	7	8	1	81956	87075					21	2Ac58 1Ac62 COTRA jpN U/a cont Parhelion	
22	68	7	20	09	18	14.2	8.0	66	6.7	1009.3	2	009	25	8	2	7	8	5	/	/	82825	87656					22	2Sc50 Cu med	
23	64	8	19	07	13	14.7	8.3	65	6.7	1017.1	0	001	61	6	2	4	8	5	2	/	83825	88458					23	2Sc40 Cu med	
24	84	7	28	02	10	16.4	4.8	46	5.3	1017.2	8	018	02	2	2	1	8	6	0	1	81845	87075					24	1Sc56 COTRA Cu med U/a cont+parhelia	
25	35	8	26	05	11	9.5	8.8	95	7.0	1009.8	6	013	65	6	6	7	7	2	2	/	85705	87707	88515				25		
26	60	6	17	13	24	14.4	4.4	51	5.2	1002.7	8	012	15	8	2	5	9	6	/	/	82930	83840					26	2Sc50 2Ci75 jp S-NW vv40k ex p	
27	65	7	09	06	14	12.5	9.1	79	7.2	1003.4	1	010	80	8	2	7	8	4	/	/	81815	86650					27	2Cu020 Cu med	
28	68	7	04	05	11	15.7	9.0	64	7.2	1010.7	7	001	02	8	2	4	8	6	6	3	82830	83656					28	3Ac62 /Ci72 Cu con	
29	59	7	32	04	07	13.7	11.4	86	8.4	1011.5	7	011	25	8	2	2	2	6	6	1	82830	87070					29	2Ac62 1Ac65 Cu con. jp SE	
30	80	7	22	09	16	17.6	5.1	44	5.4	1011.7	7	008	02	2	2	1	2	6	0	1	81848	87078					30	COTRA Cu med U/a cont	

Mean vis = 25.2 km  
 Mean cloud = 6.2 77%  
 Mean wind speed = 6.9 kn  
 Mean gust = 15 kn  
 Mean TT = 14.6 °C  
 Mean TdTd = 6.3 °C  
 Mean RH = 59.8 %  
 Mean r = 6.1 g/kg  
 Mean PPP = 1013.8 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  2014	Hour	01-Apr	02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr	08-Apr	09-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr
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	0.40	0.28	0.00	0.00	0.00	0.25	0.46	0.68	0.61
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.63	0.00	0.84	1.00	1.00	1.00	1.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.35	1.00	1.00	1.00	1.00
8	0.00	0.51	0.00	0.09	0.61	0.00	0.00	0.89	1.00	1.00	1.00	0.00	0.53	0.95	1.00	1.00	1.00
9	0.00	0.13	0.00	0.26	0.00	0.00	0.00	0.55	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
10	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.39	0.87	1.00	0.12	0.30	1.00	1.00	1.00	1.00	1.00
11	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.25	1.00	0.92	0.77	0.00	1.00	1.00	1.00	1.00	1.00
12	0.42	0.00	0.02	0.00	0.00	0.00	0.00	0.67	0.49	0.55	0.26	0.00	1.00	0.91	1.00	1.00	1.00
13	1.00	0.00	0.34	0.00	0.00	0.00	0.00	0.78	0.56	0.32	0.28	0.00	0.95	0.86	1.00	1.00	1.00
14	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.32	0.13	0.22	0.02	1.00	0.71	1.00	1.00	1.00
15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.10	0.00	0.44	0.00	1.00	0.72	1.00	1.00	1.00
16	1.00	0.00	0.00	0.19	0.00	0.00	0.00	0.71	0.38	0.00	0.17	0.58	1.00	0.98	1.00	1.00	1.00
17	0.73	0.00	0.00	0.11	0.00	0.00	0.00	0.56	0.54	0.09	0.48	0.23	1.00	0.98	1.00	1.00	1.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.21	0.00	0.00	0.23	0.76	0.79	0.86	0.78	0.78
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
<b>Tot</b>	<b>4.76</b>	<b>0.64</b>	<b>0.36</b>	<b>0.88</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>8.43</b>	<b>8.76</b>	<b>6.65</b>	<b>2.76</b>	<b>3.07</b>	<b>12.91</b>	<b>12.42</b>	<b>13.54</b>	<b>13.39</b>	

Hour	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr	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	0.00	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	0.44	0.59	0.00	0.00	0.54	0.00	0.29	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.17
6	0.91	1.00	0.25	0.00	1.00	0.00	0.47	0.15	0.00	0.19	0.00	0.00	0.00	0.00	0.38
7	0.79	1.00	1.00	0.00	0.90	0.00	0.93	0.00	0.00	0.20	0.01	0.00	0.00	0.00	0.41
8	1.00	1.00	0.89	0.00	0.49	0.00	1.00	0.00	0.00	0.48	0.25	0.00	0.00	0.02	0.46
9	1.00	0.90	0.47	0.00	0.13	0.00	0.17	0.00	0.00	0.12	0.31	0.01	0.00	1.00	0.37
10	1.00	0.85	0.72	0.00	0.10	0.00	0.00	0.92	0.00	0.34	0.13	0.22	0.00	0.92	0.40
11	0.49	0.63	0.25	0.00	0.95	0.00	0.00	0.66	0.00	0.37	0.00	0.09	0.00	0.94	0.38
12	0.00	0.62	0.09	0.00	0.26	0.00	0.00	0.00	0.00	0.17	0.02	0.05	0.00	0.94	0.28
13	0.00	0.41	0.03	0.00	0.23	0.07	0.00	0.75	0.00	0.29	0.00	0.00	0.00	0.41	0.31
14	0.00	0.57	0.24	0.00	0.13	0.04	0.00	0.92	0.00	0.51	0.00	0.02	0.02	0.63	0.29
15	0.00	0.30	0.45	0.00	0.54	0.19	0.00	0.83	0.00	0.00	0.33	0.11	0.23	1.00	0.32
16	0.20	0.59	0.70	0.00	0.00	0.00	0.00	0.39	0.00	0.86	0.05	0.00	0.06	0.88	0.36
17	0.06	0.47	0.56	0.11	0.00	0.00	0.00	0.80	0.00	0.69	0.00	0.12	0.00	0.00	0.32
18	0.00	0.70	0.88	0.70	0.00	0.00	0.00	0.45	0.02	0.57	0.00	0.16	0.00	0.24	0.25
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.02	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
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
<b>Tot</b>	<b>5.89</b>	<b>9.64</b>	<b>6.53</b>	<b>0.82</b>	<b>5.26</b>	<b>0.31</b>	<b>2.85</b>	<b>6.42</b>	<b>0.02</b>	<b>4.84</b>	<b>1.10</b>	<b>0.78</b>	<b>0.31</b>	<b>7.01</b>	<b>140.96</b>

April 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	10.57	17.8	1559	5.7	359	88.0	98.2	955	53.6	1610	8.45	6.89	9.0	1310	5.5	359	1010.03	1012.2	855	1007.4	2351
2	13.22	19.0	1426	7.8	16	77.3	95.1	120	47.1	1508	9.05	7.22	8.7	1417	6.2	16	1003.01	1007.6	4	999.6	1624
3	13.26	19.0	1331	9.5	516	79.0	92.7	632	57.4	1448	9.54	7.48	8.9	1300	6.8	516	999.91	1003.0	2359	998.3	1408
4	11.62	14.3	1128	5.8	2337	74.5	93.4	2356	56.5	1345	7.07	6.29	7.5	8	5.2	2325	1008.34	1012.7	2358	1002.9	0
5	10.87	14.4	1603	4.2	253	87.4	96.8	525	74.0	1013	8.80	7.10	8.4	2357	4.8	253	1013.28	1013.9	1223	1012.6	1748
6	13.04	15.0	1404	12.0	636	89.1	93.5	404	77.7	1405	11.29	8.30	8.6	1007	8.0	2354	1012.45	1013.4	16	1011.2	508
7	11.67	13.5	1435	6.8	2359	89.8	92.7	1420	84.8	2119	10.07	7.74	9.0	1435	5.4	2359	1008.49	1013.0	0	1004.0	1704
8	8.88	14.1	1442	4.5	539	67.5	89.5	123	38.1	1350	2.71	4.60	5.5	131	3.5	1350	1019.24	1026.5	2359	1010.8	0
9	9.92	16.4	1316	2.6	518	71.9	96.8	700	45.1	1314	4.60	5.21	6.4	1439	4.3	533	1025.69	1027.0	823	1024.1	1726
10	10.41	15.6	1223	3.3	517	66.6	95.9	636	42.1	1221	3.94	4.98	6.0	736	4.3	1150	1022.52	1024.8	20	1020.4	1750
11	10.85	16.0	1450	4.5	2357	63.6	92.0	2359	33.4	1448	3.79	4.94	6.0	1113	3.6	1448	1021.71	1023.0	1013	1020.5	333
12	9.41	13.8	1053	3.5	130	73.7	94.4	157	49.9	1425	4.64	5.25	6.3	2238	4.5	130	1019.44	1021.2	25	1017.6	1505
13	10.60	16.1	1605	4.9	555	69.2	97.0	643	43.5	1406	4.62	5.24	6.4	711	4.0	1035	1021.89	1024.0	833	1019.9	38
14	9.91	16.1	1423	3.6	504	62.4	94.4	512	32.9	1428	2.39	4.46	5.3	524	3.5	1432	1025.08	1029.1	2359	1022.3	44
15	8.29	15.7	1443	0.3	452	66.7	95.9	611	32.1	1537	1.63	4.20	5.5	1256	3.3	1537	1029.80	1031.2	849	1028.3	1812
16	8.69	16.9	1444	-0.1	508	61.6	96.1	617	23.8	1730	0.44	3.91	5.5	1117	2.3	1841	1027.15	1030.1	32	1023.9	2337
17	10.27	16.8	1128	2.0	529	66.6	92.6	612	33.4	1049	3.84	5.00	6.3	753	3.7	1048	1020.10	1024.1	1	1017.5	1529
18	8.36	14.1	1348	2.1	2357	64.0	89.9	2358	36.1	1212	1.46	4.19	5.4	51	3.2	1223	1020.81	1021.9	1033	1019.0	16
19	7.66	14.8	1600	0.2	427	68.8	95.6	447	41.3	1158	1.78	4.30	5.5	1557	3.6	403	1017.83	1020.9	3	1014.3	2354
20	8.94	13.5	1234	5.4	51	91.6	97.5	2340	83.4	847	7.64	6.60	9.0	1234	4.7	4	1006.37	1014.4	0	1001.9	1419
21	10.56	18.1	1340	2.5	505	84.5	98.5	722	44.7	1214	7.65	6.64	8.4	928	4.5	509	1005.57	1006.7	752	1004.1	1518
22	11.11	15.3	1516	8.3	2358	85.8	97.0	608	62.0	1556	8.67	7.00	8.1	934	6.2	1607	1008.52	1015.2	2359	1004.5	312
23	10.91	15.7	1144	3.9	517	82.1	97.5	619	48.5	1157	7.66	6.52	8.0	759	4.8	517	1017.28	1019.8	2336	1015.1	0
24	11.60	17.6	1552	6.7	533	79.3	97.1	607	43.9	1455	7.72	6.51	7.3	1004	5.0	1459	1018.44	1020.8	840	1015.6	2359
25	8.80	10.1	1825	6.4	217	95.1	96.7	2334	92.4	1	8.08	6.71	7.3	1825	5.6	217	1011.49	1015.9	39	1007.8	2359
26	10.94	15.9	1435	7.0	8	76.9	96.6	15	46.6	1418	6.76	6.20	7.8	739	5.0	1510	1003.75	1007.8	4	1001.3	2359
27	10.66	14.9	1547	8.2	335	84.9	95.8	830	62.0	1300	8.14	6.79	8.2	839	5.7	1	1003.10	1007.8	2345	1000.1	327
28	11.49	17.5	1547	7.0	2359	82.9	95.5	2352	53.5	1554	8.53	6.92	8.2	1225	5.8	1629	1010.62	1013.6	2316	1007.6	6
29	10.17	14.5	1645	5.8	2349	92.2	97.5	623	76.8	1637	8.92	7.12	8.6	1504	5.5	2349	1012.43	1013.5	17	1011.2	1511
30	11.18	19.2	1311	5.1	349	78.5	98.4	916	38.0	1538	6.95	6.24	9.6	1057	4.6	1538	1012.48	1013.9	706	1011.2	1739
Total																					
Mean	10.46	15.72		4.99		77.4	95.35		51.81		6.23	6.02	7.35		4.78		1014.56	1017.63		1011.84	
Max	13.26	19.19		12.02		95.1	98.50		92.40		11.29	8.30	9.58		7.99		1029.80	1031.15		1028.26	
Min	7.66	10.09		-0.11		61.6	89.50		23.75		0.44	3.91	5.33		2.33		999.91	1002.99		998.35	

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

## Appendix 1.

Explanation and definition of some of the terms used in the Wokingham Weather Reports.

**Average:** Generally refers to the 30 year climatological average, currently 1981 to 2010. This will be next updated in 2010. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

For sunshine, there was a change in instrument used to detect sunshine amount in July 1999, and the data produced by the new instrument is not strictly comparable with that obtained prior to July 1999, making the climatological average based on the old instrument of little use. In general, the new instrument produces higher values in the winter half year, and lower ones in the summer half, than the old type of instrument, due to a combination of faster reaction and higher sensitivity than the old type. Thus the average used in this case is for a theoretical equivalent average for the 1981 to 2010 climatological period for this new instrument, based on comparisons with Met Office published tables of departure from the climatological average sunshine in the months since 2000 for their area 'Southern England'. Users of the Wokingham Monthly Weather reports should be aware of this, and regard the anomalies for sunshine published therein as a guide only, until such time has elapsed since the introduction of the new instrument that a genuine average becomes available.

**Mean:** The mean of the data under discussion, often the monthly mean of daily data. The mean is obtained by summation of the individual values and dividing by the number of values. The term 'daily mean' in respect of temperature is defined as "half (max+min)". A true daily 24 hour (00 to 24 GMT) mean temperature is available from the AWS, and is currently published on page 7 of the Wokingham Monthly Weather Report on the Wokingham Weather Web Site, page1. <http://www.woksat.info/wwp1.html>

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

- a): The departure of a mean from the current climatological average.
- b): The departure of a value from the a long-term average for a particular day.

When the word anomaly is used in respect to temperature, any values given are in degrees C. In respect to rainfall, percent. In respect of sunshine, percent. In respect to wind, mph. In respect to pressure, millibars/hpa.

**Categories :** Reference may be made in the reports to 'categories'. Each category has a strict statistical range, as outlined below.

Temperature: The terms mild/cold are used in the winter half year, and warm/cool in the summer half.

The term normal is defined as being when the individual mean (monthly, seasonal or annual) value is within 20% of the median of all ranked values for that month/season/year.

Mild/warm: The value lies between 10% and 30% below the highest value in the ranked series.

Very mild/very warm: The value lies within 10% of the highest value in the ranked series.

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

Very cold/very cool. The value lies within 10% of the lowest value in the ranked series.

Sunshine: The terms for sunshine are very sunny, sunny, normal, dull and very dull.

The definition for sunshine follow the same rules as for temperature.

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

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

The term wet is used for values lying between 10% and 30% below the highest value in the ranked series.

the term very wet is used for values lying within 10% of the highest value in the ranked series.

The term dry is used for values lying between 10% and 30% of the lowest value in the ranked series.

The term very dry is used for values lying within 10% of the lowest value in the ranked series.

**Long-term :** Mention may be made in the reports to the 'long-term' . The long-term record comprises a temperature/rainfall/sunshine data series compiled from the records of various station in the Wokingham area in the years prior to the establishment of a weather station at Emmbrook in 1976.

In the case of monthly max, min and mean temperature and of rainfall total the 'long-term' goes from the present back to 1882. For extremes of temperature, highest max and lowest min are back to 1904, and for lowest max and highest min, to 1913.



**Rank :** The word rank refers to the position of a value for a particular month/season/year in the ranked values of the entire series. The central value in the ranked series is known as the median. This value may be different from the 'average' if the population of values is skewed. Also, as the median considers all values in the series, and the average refers to a 30 year climatological period, during periods of climatic change, the median will also be expected to differ from the average.

**Month:** Calendar month.

**Season:** Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

The year number given when discussing 'winter' is usually the year in which the majority of the period lies, i.e. January/February

**Annual or Year :** The calendar year, 1<sup>st</sup> January to 31<sup>st</sup> December.

**The climatological day :** runs from 09 to 09 GMT. The max temperature and rainfall read at 0900 are attributed to the previous day, as is the duration of measurable rain calculated up to 0900 GMT. The min temperature and grass min read at 0900 are attributed to the day of reading. Pressure is read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 readings. Sunshine data, wind data, rainfall rates and 24 hour data from the AWS use the normal 00 to 24 GMT day.

**Frost:** An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is  $-0.1^{\circ}\text{C}$  or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is  $-0.1^{\circ}\text{C}$  or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below  $0.0^{\circ}\text{C}$ , and the day runs from midnight to midnight.

**Snow :** A day with snow falling is triggered if snow falls at any time in the 24 hours from midnight on that day. A day with snow lying is entered if there is at least 50 % cover of snow at the 0900 GMT observation.

**Hail :** A day of hail is recorded if hailstones of 5 mm diameter or more are observed or recorded on the hail pad on a 24 hour period starting at midnight.

A day of small hail is recorded if hailstones less than 5 mm diameter are observed or recorded in a 24 hour period starting at midnight. Note, various types of other ice meteors such as ice pellets, snow grains, and some types of snow pellets are included in this category.

**Fog:** A day of fog is recorded if the horizontal visibility at 0900 GMT is below 1000 m.

**Thunder:** A day of thunder is recorded if thunder is heard in the 24 hour period from midnight on that day.

**Rainfall :** Rainfall is given in mm and tenths. "tr" ( trace) is entered when: a) precipitation has occurred but there is no water in the gauge. b) There is water in the gauge but it is less than 0.05 mm.

**Dry Spell :** A dry spell, for the purposes of the Wokingham climatological data and reports, is defined as a period of 5 or more consecutive dry days. A dry day is defined as one where the 24 hour precipitation measured at 09 GMT is not greater than 0.1 mm.

**Wind:** The following abbreviations may be used to denote wind directions :

Degrees are from true north

N = North =  $360^{\circ}$  and  $22.5^{\circ}$  either side.

NE = NorthEast =  $045^{\circ}$  and  $22.5^{\circ}$  either side.

E = East =  $090^{\circ}$  and  $22.5^{\circ}$  either side.

SE = SouthEast =  $135^{\circ}$  and  $22.5^{\circ}$  either side.

S = South =  $180^{\circ}$  and  $22.5^{\circ}$  either side.

SW = SouthWest =  $225^{\circ}$  and  $22.5^{\circ}$  either side.

W = West =  $270^{\circ}$  and  $22.5^{\circ}$  either side.

NW = NorthWest =  $315^{\circ}$  and  $22.5^{\circ}$  either side.

**Wind – terms for speed used in monthly reports:** When the following terms are used in the monthly reports, they will be based on the following unofficial criteria, (the day runs from 00 to 24 GMT) :

Term	Daily mean speed, knots		Highest hourly mean speed, knots		24 hour maximum gust, knots
Very light	3 or less	and	4 or less	and	8 or less
Light	3 to 6	or	4 to 8	or	8 to 16
Moderate	6 to 9	or	8 to 12	or	16 to 24
Fresh	9 to 12	or	12 to 16	or	24 to 32
Strong	12 to 15	or	16 to 20	or	32 to 40
Very strong	15 to 18	or	20 to 24	or	40 to 48
Near gale	18 to 21	or	24 to 28	or	48 to 56
Gale	21 to 24	or	28 to 32	or	56 to 64
Severe gale	24 to 27	or	32 to 36	or	64 to 72

B.J.Burton. 3 August 2009  
 Updated 8 Sept 2009,  
 4 Nov 2011

## Appendix 2.

Explanation and decode for code figures used in the Wokingham 0900 and 1500 GMT observations

**VV** : Visibility.

Code figures 00 to 50 are in km and tenths e.g. 01 = 0.1 km = 100 m, 33 = 3.3 km, 50 = 5.0 km

Code figures 60 to 80. Subtract 50 to obtain visibility in km. e.g. 56 = 6 km, 65 = 15 km, 77 = 27 km.

Code figures 81 to 89. Subtract 50 and add 5 for every one above 80. e.g. 83 = 45 km, 86 = 60 km.

Code figure 89 = visibility above 70 km.

**N** : Total cloud amount in okta (eighths of sky covered). 9 = sky obscured (e.g. by fog or snow)

**dd** : Wind direction in tens of degrees from true north. Wind is measured at a height of 10 m, and the direction is the mean over a period of 10 minutes ending at the observation time.

**ff** : Wind speed in knots, measured at 10 m, and is the mean over a period of 10 minutes ending at observation time.

**gg** : Wind gust in knots at 10 m. The highest gust in the 60 minutes up to observation time.

**TT** : Air temperature at 1.2m, degrees C and tenths.

**TdTd** : Dew point temperature at 1.2m, degrees C and tenths.

**RH** : Relative humidity at 1.2m, %.

**r** : Humidity mixing ratio (amount of water vapour per kg of air), grams and tenths.

**PPP** : Air pressure reduced to MSL, millibars and tenths.

**a** : Characteristic of pressure tendency during the past 3 hours.

Code figures 0 to 3, pressure higher than 3 hours ago, 5 to 8, pressure lower than 3 hours ago

Code figure 0 = Increasing then decreasing, pressure the same as or higher than 3 hours ago

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

3 = Decreasing or steady then increasing, or increasing then increasing more rapidly

4 = Steady, pressure the same as 3 hours ago

5 = Decreasing then increasing, pressure lower than 3 hours ago

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

8 = Steady or increasing then decreasing, or decreasing then decreasing more rapidly

**ppp** : 3 hour pressure tendency in tenths of a millibar

**ww** : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

04 = Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes.

05 = Haze, visibility reduced by extremely small dry particles (RH less than appx. 95 %)

06 = Widespread dust in suspension, not raised by the wind near the station at the time of the observation

07 = Dust or sand raised by the wind at or near the station at the time of the observation, but no well-developed dust whirls or sand whirls, and no duststorm or sandstorm seen: In marine environments, blowing spray at the station.

08 = Well-developed dust or sand whirls seen at or near the station during the preceding hour or at the time of the observation, but no duststorm or sandstorm.

09 = Duststorm or sandstorm within sight at the time of the observation, or at the station during the preceding hour

10 = Mist  
11 = Patches of shallow fog not deeper than 2 metres on land  
12 = More or less continuous shallow fog not deeper than 2 metres on land  
13 = Lightning visible, no thunder heard  
14 = Precipitation within sight, not reaching the ground  
15 = Precipitation within sight, reaching the ground more than 5 km from the station  
16 = Precipitation within sight, reaching the ground, near to but not at the station  
17 = Thunderstorm, but no precipitation at the time of the observation  
18 = Squalls at or within sight of the station at the time of the observation or during the preceding hour  
19 = Funnel cloud(s) at or within sight of the station at the time of the observation or during the preceding hour

20 = Drizzle (not freezing) at the station during the preceding hour but not at the time of the observation  
21 = Rain (not freezing) at the station during the preceding hour but not at the time of the observation  
22 = Snow at the station during the preceding hour but not at the time of the observation  
23 = Rain and snow or ice pellets at the station during the preceding hour but not at the time of the observation  
24 = Freezing drizzle or freezing rain at the station during the preceding hour but not at the time of the observation  
25 = Shower(s) of rain at the station during the preceding hour but not at the time of the observation  
26 = Shower(s) of snow or rain and snow at the station during the preceding hour but not at the time of the observation  
27 = Shower(s) of hail or rain and hail at the station during the preceding hour but not at the time of the observation  
28 = Fog or ice fog at the station during the preceding hour but not at the time of the observation  
29 = Thunderstorm, with or without precipitation at the station during the preceding hour but not at the time of the observation

30 = Slight or moderate duststorm or sandstorm has decreased during the preceding hour  
31 = Slight or moderate duststorm or sandstorm with no appreciable change during the past hour  
32 = Slight or moderate duststorm or sandstorm has begun or increased during the past hour  
33 = Severe duststorm or sandstorm has decreased during the preceding hour  
34 = Severe duststorm or sandstorm with no appreciable change during the past hour  
35 = Severe duststorm or sandstorm has begun or increased during the past hour  
36 = Slight or moderate drifting snow generally below eye level  
37 = Heavy drifting snow generally below eye level  
38 = Slight or moderate blowing snow generally above eye level  
39 = Heavy blowing snow generally above eye level

40 = Fog or ice fog at a distance at the time of the observation, but not at the station during the preceding hour, the fog extending to a level above that of the observer.  
41 = Fog or ice fog in patches  
42 = Fog or ice fog, sky visible has become thinner during the past hour  
43 = Fog or ice fog, sky invisible has become thinner during the past hour  
44 = Fog or ice fog, sky visible no appreciable change during the past hour  
45 = Fog or ice fog, sky invisible no appreciable change during the past hour  
46 = Fog or ice fog, sky visible has begun or become thicker during the past hour  
47 = Fog or ice fog, sky invisible has begun or become thicker during the past hour  
48 = Fog, depositing rime, sky visible  
49 = Fog depositing rime, sky invisible

50 = Drizzle, not freezing, intermittent slight at time of observation  
51 = Drizzle, not freezing, continuous slight at time of observation  
52 = Drizzle, not freezing, intermittent moderate at time of observation  
53 = Drizzle, not freezing, continuous moderate at time of observation  
54 = Drizzle, not freezing, intermittent heavy at time of observation  
55 = Drizzle, not freezing, continuous heavy at time of observation  
56 = Drizzle, freezing, slight  
57 = Drizzle, freezing, moderate or heavy (dense)  
58 = Drizzle and rain, slight  
59 = Drizzle and rain, moderate or heavy

60 = Rain, not freezing, intermittent slight at time of observation  
61 = Rain, not freezing, continuous slight at time of observation  
62 = Rain, not freezing, intermittent moderate at time of observation  
63 = Rain, not freezing, continuous moderate at time of observation  
64 = Rain, not freezing, intermittent heavy at time of observation  
65 = Rain, not freezing, continuous heavy at time of observation  
66 = Rain, freezing, slight  
67 = Rain, freezing, moderate or heavy  
68 = Rain or drizzle and snow, slight  
69 = Rain or drizzle and snow, moderate or heavy

70 = Intermittent fall of snowflakes slight at time of observation  
71 = Continuous fall of snowflakes slight at time of observation  
72 = Intermittent fall of snowflakes moderate at time of observation  
73 = Continuous fall of snowflakes moderate at time of observation  
74 = Intermittent fall of snowflakes heavy at time of observation  
75 = Continuous fall of snowflakes heavy at time of observation  
76 = Diamond dust (with or without fog)  
77 = Snow grains (with or without fog)  
78 = Isolated star-like snow crystals (with or without fog)  
79 = Ice pellets

80 = Rain shower(s), slight  
81 = Rain shower(s), moderate or heavy  
82 = Rain shower(s), violent  
83 = Shower(s) of rain and snow mixed, slight  
84 = Shower(s) of rain and snow mixed, moderate or heavy  
85 = Snow shower(s), slight  
86 = Snow shower(s), moderate or heavy  
87 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, slight  
88 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, moderate or heavy  
89 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, slight  
90 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, moderate or heavy

91 = Slight rain at time of observation, thunderstorm during the past hour but not at time of observation  
92 = Moderate or heavy rain at time of observation, thunderstorm during the past hour but not at time of observation  
93 = Slight snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation  
94 = Moderate or heavy snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation  
95 = Thunderstorm, slight or moderate, without hail but with rain and or snow at time of observation  
96 = Thunderstorm, slight or moderate, with hail at time of observation  
97 = Thunderstorm, heavy, without hail but with rain and or snow at time of observation  
98 = Thunderstorm combined with duststorm or sandstorm at time of observation  
99 = Thunderstorm, heavy, with hail at time of observation

Hail includes large hail, small hail and snow pellets.

**W1, W2 :** Past weather (for 0900 and 1500 GMT observations, the period covered is 3 hours)

Code figures:

- 0 = Cloud covering half or less of the sky throughout the period
- 1 = Cloud covering more than half the sky during only part of the period
- 2 = Cloud covering more than half the sky throughout the period
- 3 = Sandstorm, duststorm or blowing snow
- 4 = Fog or ice fog or thick haze (visibility less than 1000 m)
- 5 = Drizzle
- 6 = Rain
- 7 = Snow or rain and snow mixed
- 8 = Shower(s)
- 9 = Thunderstorm(s) with or without precipitation

**Nh :** Amount of low cloud, or medium cloud if no low cloud present, okta

**Cl :** Type of low cloud

- 0 = No low cloud
- 1 = Cumulus with little vertical extent and seemingly flattened, or ragged Cumulus other than bad weather, or both
- 2 = Cumulus of moderate or strong vertical extent, either accompanied or not by other Cumulus or Stratocumulus all having their bases at the same level
- 3 = Cumulonimbus whose summits, at least partially, lack sharp outline, but are neither clearly fibrous (cirriform), nor in the form of an anvil; Cumulus, Stratocumulus or Stratus may also be present
- 4 = Stratocumulus formed by the spreading out of Cumulus; Cumulus may also be present
- 6 = Stratus in a more or less continuous sheet or layer, or ragged shreds, or both, but no Stratus fractus of bad weather
- 7 = Stratus fractus of bad weather or Cumulus fractus of bad weather or both (pannus), usually below Altostratus or Nimbostratus
- 8 = Cumulus and Stratocumulus other than that formed by the spreading out of Cumulus, the bases of the Cumulus and Stratocumulus are not at the same level.
- 9 = Cumulonimbus, the upper part of which is clearly fibrous (cirriform), often in the form of an anvil, either accompanied or not by any other type(s) of low cloud
- / = Types of low cloud invisible due to darkness, fog, blowing dust or sand or other similar phenomena.

'Bad weather' denotes the conditions which generally exist during precipitation and a short time before and after.

**Cm :** Type of medium cloud.

- 0 = No medium cloud.
- 1 = Altostratus, the greater part of which is semi-transparent; through this part the sun or moon may be weakly visible, as through ground glass
- 2 = Altostratus, the greater part of which is sufficiently dense to hide the sun or moon, or Nimbostratus
- 3 = Altocumulus, the greater part of which is semi-transparent; the various elements of the cloud change only slowly and are all at a single level
- 4 = Altocumulus in patches (often in the form of almonds or fishes), the greater part of which is semi-transparent ; the clouds occur at one or more levels and the elements are continually changing in appearance
- 5 = Altocumulus in bands semi-transparent, of Altocumulus in one or more fairly continuous layers (semi-transparent or opaque), progressively invading the sky; these Altocumulus clouds generally thicken as a whole
- 6 = Altocumulus resulting from the spreading out of Cumulus (or Cumulonimbus)
- 7 = Altocumulus in two or more layers, usually opaque in places, and not progressively invading the sky; or opaque layer of Altocumulus not progressively invading the sky; or Altocumulus together with Altostratus or Nimbostratus
- 8 = Altocumulus with sproutings in the form of small towers or battlements, or Altocumulus having the appearance of cumuliform tufts
- 9 = Altocumulus of a chaotic sky, generally at several levels
- / = Types of medium cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

**Ch :** Type of high cloud

0 = No high cloud

1 = Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.

2 = Dense cirrus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus with sproutings in the form of small turrets or battlements, or Cirrus having the appearance of cumuliform tufts

3 = Dense Cirrus, often in the form of an anvil, being the remains of the upper part of Cumulonimbus, or where the rest of the Cumulonimbus is below the horizon

4 = Cirrus in the form of hooks or filaments, or both, progressively invading the sky; they generally become denser as a whole

5 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, but the continuous veil does not reach 45 degrees above the horizon.

6 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole; the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered

7 = Veil of Cirrostratus covering the celestial dome.

8 = Cirrostratus not progressively invading the sky and not completely covering the celestial dome

9 = Cirrocumulus alone, or accompanied by Cirrus or Cirrostratus, or both, but Cirrocumulus is predominant.

/ = Types of high cloud invisible owing to darkness, fog, blowing dust 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.