

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

MARCH 2015

Temperature (°C / °F)			Anomaly	Rank in the past 134 years			
Mean maximum	11.4	52.5	+0.2	39 th highest			
Mean minimum	3.0	37.4	-0.2	37 th highest			
Daily mean	7.2	45.0	0.0	41 st highest			
Highest maximum	14.7	58.5	on 7 th	Lowest maximum	7.1	44.8	on 15 th
Highest minimum	8.6	47.5	on 29 th	Lowest minimum	-2.7	27.1	on 5 th
Mean grass minimum	-1.1	30.0	-1.0	Lowest grass minimum	-8.0	17.6	on 5 th
Mean earth @30 cm	7.1	44.8	0.0	Earth @100 cm	7.3	45.1	
Frost duration (hrs)	24.2			Rain duration (hrs)	28.3		
Rainfall total (mm / in)	23.0	0.91	50 %	37 th lowest			
Highest daily fall	5.3	0.21	on 25 th				
Number of: Dry days (<0.2mm)	21	Wet days (>0.9mm)	8	days ≥5mm	2		
Sunshine total (hrs)	141.2	Daily mean	4.55	127 %	Sunniest day	10.6	on 18 th
N° days with: Air frost	5	Ground frost	21	Snow falling	0	Snow lying	0
Thunder	0	Hail ≥5mm	1	Small hail/ice	3	Fog @09	0
				Fog @09	0	Nil sun 3	
Pressure MSL : Mean @09 GMT, mbar	1021.3	+5.4	Highest	1040.8	on 5 th	Lowest	994.8
							on 29 th
Relative humidity : Mean (%)	73.3	Lowest	24	on 12 th	Water vapour (g/kg), mean at 09 and 15 GMT		
					4.7,	4.4	
Overall mean wind speed (mph)	8.2	Windiest day	17.5	on 31 st	Max gust	60	on 31 st
Wind direction (days)	N 5	NE 5	E 0	SE 2	S 1	SW 12	W 3
						NW 3	
Least windy day (mph)	3.5	on 17 th	Calm; less than 0.5 mph (minutes)				255

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

Notes:

Dry and Sunny with Average Temperatures.

Temperature: A feature of this March is the comparative lack of extremes, the temperature on most days being close to normal. Exceptions were the maximum on the 7th, anomaly +4.2°, and the 15th, anomaly -4.0°, also the minimum on the 29th and 31st, anomalies +5.3° and +4.4° respectively, and on the 18th and 25th, anomalies -4.5° and -6.1° resp. The mean this month exactly equals the current 30 year climatological average. However, as the result of the warming climate, it is 0.8° above the long-term median. Both the mean maximum and mean minimum are close to average. In this millennium 9 Marches have been warmer and 6 cooler than this year's. Both 2012 and 2002 were in the very mild category, while 2013 was in the very cold one. The month's highest max, 14.7°, is on the low side, being 2.0° below the median. In the past 112 years, 20° has been reached or surpassed in 17 Marches, the last in 2014. The lowest max is 2.6° above the median and the highest min is 0.2° below its median. The lowest min is 1.4° above the median and 2nd highest since 2000. The mean grass min is 1.0° below average, but the lowest grass min is 1.4 above the 36 year average. Down in the ground temperatures at 30 cm depth are average, but at 1 m depth 0.4° below average. The duration of air frost is 15.7 hours below average, but the number of days with ground frost is 4 more than average. **Rainfall:** This has been quite a dry March with only half the average amount of rain falling, but 4 other Marches this millennium have been drier. This month's wettest day with 5.3 mm has the lowest total since 1999. The number of dry days is 4 more than average and the duration of measurable rain 13 hours less than average. There were two dry spells, the first of 13 days ended on the 14th and the second of 6 days on the 22nd. A violent rain shower with small hail on the 1st gave the month's highest rainfall rate of 104 mm/hr. Small hail also fell on the 16th and 26th, and large hail on the 31st, but there was no thunder or snow. There has been snowfall in March in 25 of the past 40 years. **Sunshine:** This has been quite a sunny month, but not quite as sunny as last March. Since 2000, 6 Marches have been sunnier and 9 duller than this one. The month got off to a good start with 7 of the first 10 days having >60% of the maximum, and 2 over 80%, but the period 11th to 21st had only 1 day with >80% and 7 with <30% of the max. The remainder of the month was a little sunnier, with 4 days having >50% of the max but also 4 days with <30%. Worthy of note was the 5 day period 15th to 19th when 10.6 hours was recorded on the month's sunniest day, the 18th, but only 0.8 hours over the other 4 days. Overall there were 9 days with <3 hours, 12 with =>6 hours and 4 with =>9 hours. **Wind:** The mean wind speed is 0.6 mph above average and it is the windiest March since 2008. The highest gust of 60 mph on the 31st is 14 mph above average and highest for March since 1995. Wind directions were mostly SW'ly up to the 9th and again after the 23rd, but were N'ly in between. Daily mean speeds were fresh or strong up to the 4th and strong or very strong after the 27th, otherwise mainly light or moderate.

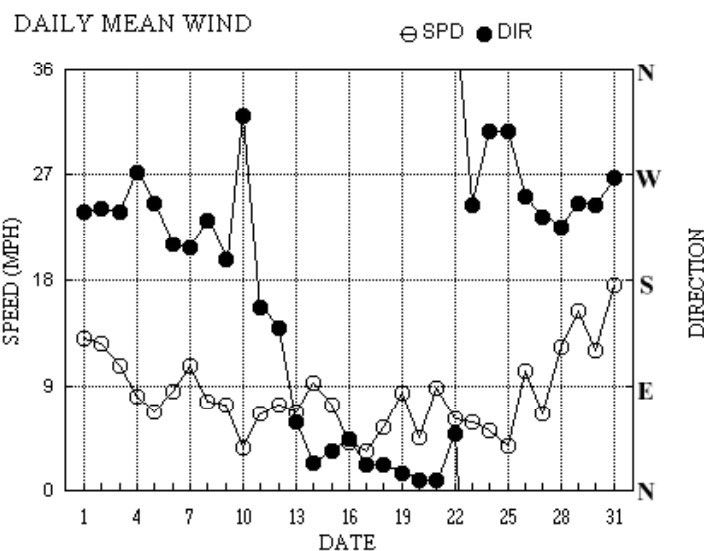
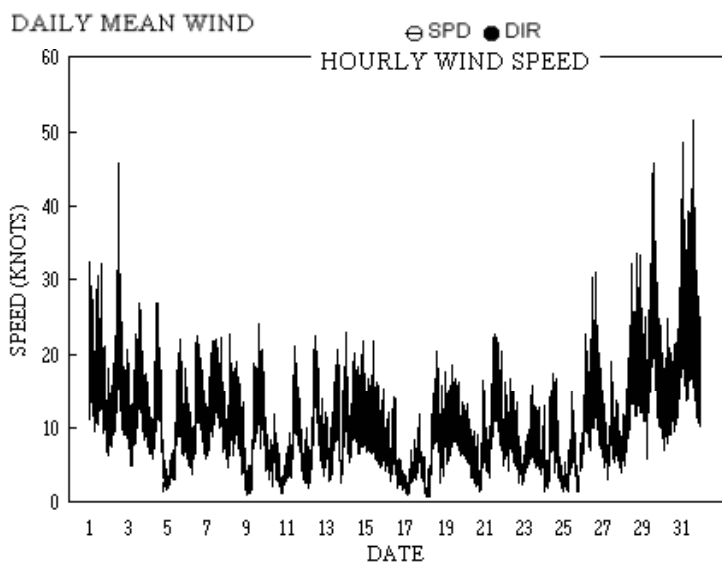
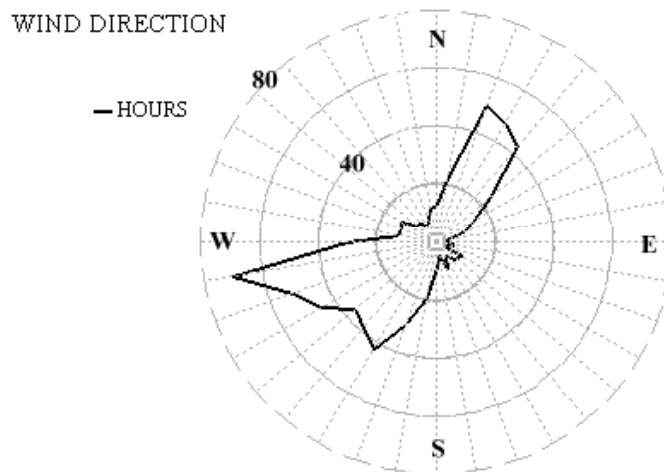
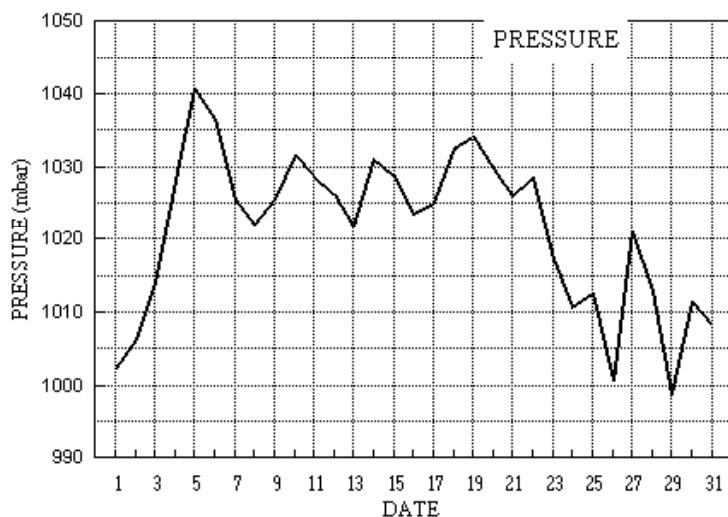
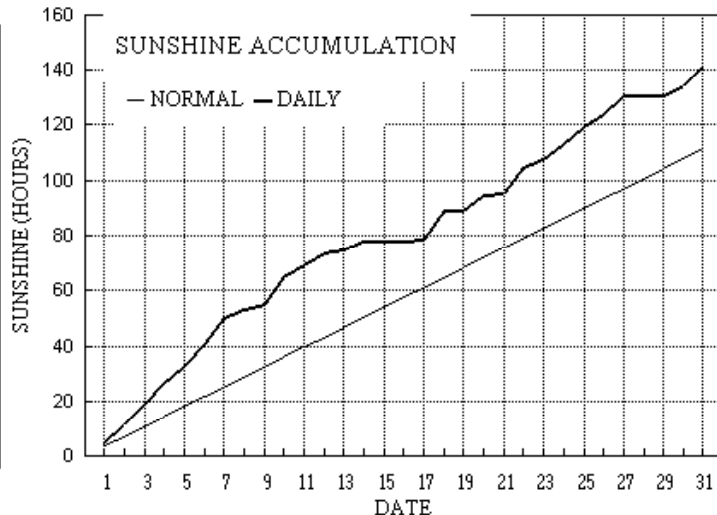
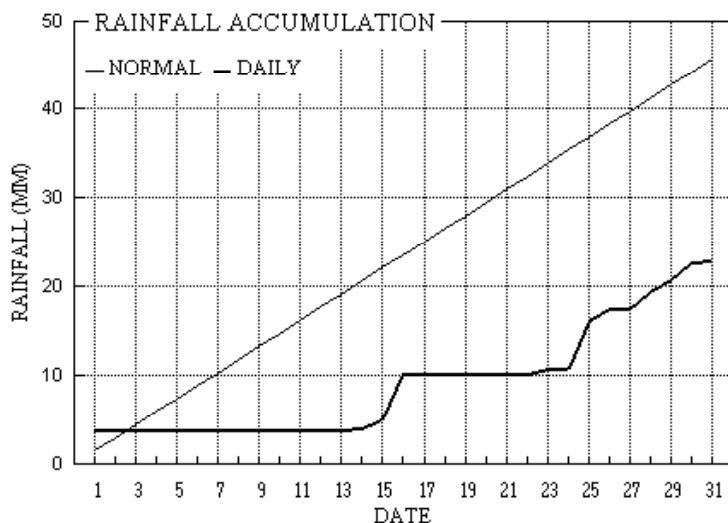
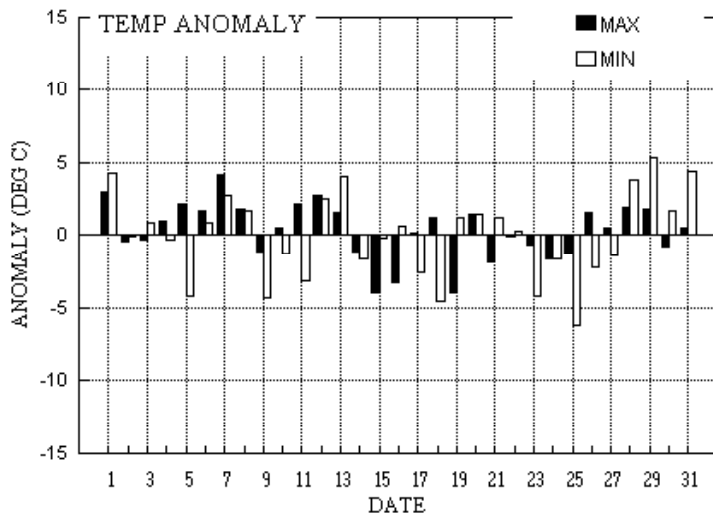
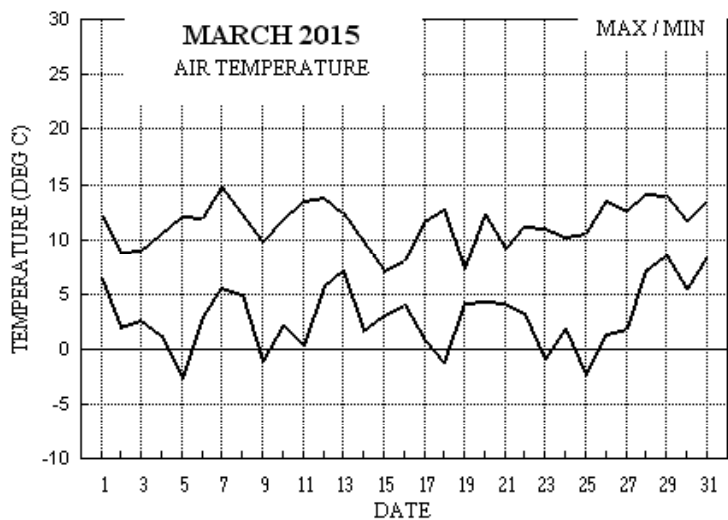
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+1.2°	+0.1°	27%	181%	-0.3°	-0.2°	41%	84%	0.0°	+0.1°	82%	117%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for March 2015



Month: MARCH 2015

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs						
1	12.1	6.4	3.8	2.8	6.3	6.7	5.3	0.0	1002.2	0 0 0 0	0 0 1 0	0 0 1 0	239	11.1	11.3	258	33	0147	249	15	10	0.6	
2	8.8	2.0	tr	-2.0	6.3	6.7	6.8	0.0	1006.2	0 1 0 0	0 0 0 0	0 0 0 0	242	10.6	10.9	256	46	1121	262	17	11	0.0	
3	9.0	2.7	0.0	-1.3	6.0	6.8	7.2	0.0	1014.0	0 1 0 0	0 0 0 0	0 0 0 0	239	8.8	9.3	268	27	1206	254	14	12	0.0	
4	10.5	1.2	0.0	-3.5	5.8	6.8	7.4	1.5	1028.1	0 1 0 0	0 0 0 0	0 0 0 0	272	5.7	6.9	280	27	1106	291	13	11	0.0	
5	12.1	-2.7	0.0	-8.0	5.5	6.8	6.5	7.8	1040.7	1 1 0 0	0 0 0 0	0 0 0 0	246	5.4	5.8	253	22	1435	253	10	14	0.0	
6	12.0	3.0	0.0	-2.7	5.7	6.8	7.6	0.0	1036.5	0 1 0 0	0 0 0 0	0 0 0 0	210	7.2	7.4	227	23	1144	213	12	13	0.0	
7	14.7	5.6	0.0	1.9	6.0	6.8	9.6	0.0	1025.4	0 0 0 0	0 0 0 0	0 0 0 0	207	9.1	9.2	200	23	1628	211	12	11	0.0	
8	12.3	4.9	tr	-0.6	6.5	6.8	3.1	0.0	1022.0	0 1 0 0	0 0 0 0	0 0 0 0	231	5.4	6.6	221	23	0446	232	10	05	0.1	
9	9.8	-1.1	0.1	-5.9	6.5	6.9	1.6	5.3	1025.5	1 1 0 0	0 0 0 0	0 0 0 0	198	5.2	6.3	212	24	1430	198	11	15	0.0	
10	11.8	2.2	0.0	-2.6	6.5	7.0	9.7	0.0	1031.5	0 1 0 0	0 0 0 0	0 0 0 0	321	1.2	3.2	5	12	0949	359	6	10	0.0	
11	13.6	0.3	tr	-3.2	6.4	7.0	4.7	0.0	1028.8	0 1 0 0	0 0 0 0	0 0 0 0	157	4.8	5.7	152	21	1123	155	10	11	0.0	
12	13.8	5.8	tr	3.8	6.8	7.1	4.3	0.0	1026.2	0 0 0 0	0 0 0 0	0 0 0 0	139	6.1	6.4	131	23	1109	155	13	11	0.0	
13	12.4	7.2	0.0	5.5	7.2	7.1	1.2	0.0	1021.6	0 0 0 0	0 0 0 0	0 0 0 0	59	4.9	5.8	64	21	1435	65	10	14	0.0	
14	9.8	1.7	0.1	-3.0	7.2	7.2	3.1	0.0	1031.0	0 1 0 0	0 0 0 0	0 0 0 0	23	7.8	8.0	24	23	0040	23	10	18	0.3	
15	7.1	3.1	1.1	-1.0	7.1	7.3	0.0	0.0	1028.8	0 1 0 0	0 0 0 0	0 0 0 0	34	6.3	6.4	31	22	1055	41	8	10	3.6	
16	8.1	4.0	5.1	3.6	6.9	7.4	0.0	0.0	1023.5	0 0 0 0	0 0 1 0	0 0 0 0	44	2.5	3.5	56	14	1057	58	6	10	6.5	
17	11.6	0.8	0.0	-2.8	6.9	7.4	0.8	0.0	1025.0	0 1 0 0	0 0 0 0	0 0 0 0	22	2.8	3.0	357	12	1737	9	6	18	0.0	
18	12.7	-1.3	0.0	-6.1	7.2	7.4	10.6	4.0	1032.5	1 1 0 0	0 0 0 0	0 0 0 0	22	4.5	4.7	26	21	1424	16	10	16	0.0	
19	7.3	4.2	0.0	-1.7	7.3	7.5	0.0	0.0	1034.2	0 1 0 0	0 0 0 0	0 0 0 0	14	7.2	7.2	24	19	0917	15	9	14	0.0	
20	12.3	4.3	0.0	4.4	7.4	7.5	5.0	0.0	1029.7	0 0 0 0	0 0 0 0	0 0 0 0	9	3.2	4.0	329	17	2334	338	7	23	0.0	
21	9.1	4.2	tr	-2.0	7.6	7.6	1.1	0.0	1025.8	0 1 0 0	0 0 0 0	0 0 0 0	9	7.4	7.6	28	23	1430	15	11	13	0.0	
22	11.2	3.2	0.0	-1.4	7.5	7.6	9.3	0.1	1028.4	0 1 0 0	0 0 0 0	0 0 0 0	48	4.3	5.3	34	17	0705	35	8	09	0.0	
23	11.0	-0.9	0.7	-6.6	7.7	7.7	3.0	0.9	1017.3	1 1 0 0	0 0 0 0	0 0 0 0	244	4.6	5.1	245	16	1043	248	8	10	1.8	
24	10.2	1.9	tr	-2.3	8.0	7.7	5.2	0.0	1010.8	0 1 0 0	0 0 0 0	0 0 0 0	308	4.0	4.4	291	18	1257	264	7	13	0.0	
25	10.6	-2.3	5.3	-7.7	7.7	7.8	6.3	4.6	1012.5	1 1 0 0	0 0 0 0	0 0 0 0	307	0.9	3.3	21	15	1143	352	7	11	5.1	
26	13.6	1.4	1.3	-4.6	7.5	7.8	4.4	0.0	1000.6	0 1 0 0	0 0 1 0	0 0 0 0	251	6.3	8.9	266	31	1527	289	13	12	0.4	
27	12.6	1.8	0.1	-3.9	7.6	7.9	6.8	0.0	1020.9	0 1 0 0	0 0 0 0	0 0 0 0	234	5.2	5.7	272	19	1048	269	8	11	0.7	
28	14.1	7.1	1.8	3.3	7.9	7.9	0.1	0.0	1012.9	0 0 0 0	0 0 0 0	0 0 0 0	226	10.1	10.7	246	34	1851	226	16	11	3.3	
29	14.0	8.6	1.5	6.9	8.4	7.9	0.2	0.0	998.8	0 0 0 0	0 0 0 0	0 0 0 0	246	13.0	13.3	247	46	1418	254	21	14	1.9	
30	11.7	5.4	1.9	1.2	8.6	8.0	3.5	0.0	1011.5	0 0 0 0	0 0 0 0	0 0 0 0	244	9.7	10.4	231	33	2348	233	17	23	3.8	
31	13.5	8.4	0.2	6.4	8.8	8.1	6.8	0.0	1008.1	0 0 0 0	0 1 0 0	0 1 0 0	268	14.9	15.2	263	52	1401	254	19	02	0.2	
Total			23.0				141.2	24.2															
Mean	11.4	3.0		-1.1	7.1	7.3	4.55	0.8	1021.3					253	2.8	7.1							28.3
Anom	+0.2	-0.2	50%	-1.0	-0.0	-0.2	127%		+5.4														
Daily mean		7.2																					
Anom		+0.0																					

Number of days with:

Air frost = 5 Ground frost = 21 Nil sun = 3
Snow falling = 0 Snow lying = 0 Thunder = 0
Hail=>5mm = 1 Hail<5mm or ice = 3 Fog at 09GMT = 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 MARCH 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	Nh	Cl	h	Cr	N	Ch	shs	N	Ch	shs	Date	Remarks		
1	70	2	24	11	22	8.0	2.9	70	4.7	1002.2	2	014	25	8	1	1	1	5	3	0				1	2Ac57 Cu fra		
2	80	7	24	09	23	4.0	0.4	77	3.9	1006.2	2	025	25	8	1	7	8	4	/	/	81818	83645	86656	2	Cu fra jpS vv70k ex p		
3	88	5	25	08	19	5.8	2.4	79	4.5	1014.0	3	015	25	8	2	3	8	4	3	0	81812	83618		3	1Sc56 4Ac62 Cu fra		
4	75	0	26	10	19	5.4	-0.3	67	3.7	1028.1	2	028	02	0	0	0	0	9	0	0				4			
5	61	6	25	03	06	3.7	0.8	82	3.9	1040.7	3	004	02	1	1	0	0	9	0	1			86078	5	COTRA Hoar slt. Gnd frzn		
6	80	7	20	05	10	6.3	2.5	77	4.4	1036.5	0	007	03	2	2	7	5	6	/	1			87630	6	/Ci72		
7	61	7	21	11	22	10.0	4.7	70	5.2	1025.4	0	001	03	2	2	1	6	4	0	2			81715	87072	7		
8	63	6	22	10	18	8.7	5.6	81	5.6	1022.0	5	002	03	1	1	6	5	4	/	1			86613	8	2Ci75 COTRA		
9	58	7	16	10	17	6.7	5.2	90	5.4	1025.5	7	022	05	2	2	1	6	4	3	1			81710	86363	85075	9	COTRA
10	62	6	29	03	08	6.7	3.8	82	4.9	1031.5	1	024	02	2	2	0	0	9	0	1			81072	86075	10	COTRA Halo 22° part	
11	64	6	14	08	17	5.8	2.4	79	4.4	1028.8	8	005	01	1	1	4	0	8	3	1			84357	83075	11	COTRA	
12	58	8	14	07	16	9.3	3.3	66	4.7	1026.2	8	005	05	2	2	0	0	9	0	7			88275	12	COTRA		
13	62	8	04	05	12	8.0	2.2	66	4.4	1021.6	1	013	14	2	2	1	5	7	7	/			81650	88460	13	2Ac58 jpW	
14	63	2	03	09	19	6.7	-0.3	61	3.7	1031.0	1	008	03	1	1	2	8	5	0	0			81825	14	2Sc40 Cu hum		
15	59	8	03	07	17	5.4	2.7	83	4.5	1028.8	0	000	50	5	2	8	5	4	/	/			83715	86620	88630	15	
16	30	8	06	04	08	5.9	5.0	94	5.3	1023.5	7	004	61	6	6	8	5	3	/	/			83706	86709	88650	16	/Sc20
17	13	8	03	03	06	6.0	5.7	98	5.6	1025.0	2	015	28	4	2	8	6	2	/	/			88704	17			
18	20	3	36	05	07	4.2	3.7	96	4.8	1032.5	2	019	10	4	1	2	6	2	0	1			82705	18	2Ci80 COTRA		
19	50	8	01	07	14	5.6	3.0	83	4.6	1034.2	1	007	05	2	2	8	6	4	/	/			88710	19			
20	56	8	01	05	10	4.6	2.8	88	4.6	1029.7	0	001	05	2	2	8	6	3	/	/			88707	20			
21	72	7	36	07	15	7.4	2.4	70	4.5	1025.8	1	014	03	1	1	7	8	5	/	/			81820	87633	21	Cu hum	
22	80	5	04	08	16	6.3	-0.9	60	3.5	1028.4	8	001	01	2	2	5	5	5	0	1			81625	85630	22	1Ci75	
23	62	5	25	06	12	6.6	1.8	71	4.3	1017.3	8	006	01	2	2	5	8	4	/	/			81818	85630	23	Cu fra/hum	
24	72	1	34	08	14	6.6	2.7	76	4.6	1010.8	1	002	01	1	1	1	8	4	7	2			81815	24	1Sc50 1Ac60 1Ci72 COTRA Cu hum		
25	58	1	33	04	07	4.3	1.4	82	4.2	1012.5	2	010	05	0	0	1	1	4	0	0			81812	25	Cu fra		
26	40	8	20	08	16	6.5	5.6	94	5.7	1000.6	6	013	51	6	5	8	5	3	/	/			82706	87707	88615	26	
27	81	7	25	06	09	7.3	1.5	67	4.2	1020.9	1	013	02	2	2	1	5	7	0	8			81656	87275	27	Halo 22° part	
28	65	8	22	10	18	11.5	10.2	91	7.7	1012.9	6	018	02	2	2	8	6	3	/	/			83706	88708	28		
29	57	8	24	11	25	11.1	9.9	93	7.7	998.8	7	040	61	6	6	7	5	3	2	/			83708	87615	88525	29	
30	82	2	29	09	25	8.8	-1.3	49	3.4	1011.5	2	036	03	1	1	2	1	6	3	1			82835	30	1Ac68 1Ci75 Cu hum		
31	86	3	29	17	36	11.2	1.3	51	4.2	1008.1	2	055	03	1	1	3	2	6	0	0			83838	31	Cu med		

Mean vis = 18.0 km

Mean cloud = 5.6 71%

Mean wind speed = 7.5 kn

Mean gust = 16 kn

Mean TT = 6.9 °C

Mean TdTd = 3.0 °C

Mean RH = 77.2%

Mean r = 4.7 g/kg

Mean PPP = 1021.3 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 MARCH 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks														
1	70	5	21	12	25	11.0	1.3	51	4.2	999.6	8	032	03	1	1	2	1	6	7	1	82840	83363	1	1Ac59	2Ci72	Cu	hum							
2	86	2	26	12	31	7.4	-5.4	40	2.5	1011.5	2	026	02	0	0	2	2	7	6	3	82850		2	1Ac62	1Ci70	Cu	med	Cb	top	SW				
3	86	2	25	13	26	8.7	-3.1	43	3.0	1016.3	2	007	14	0	0	2	8	6	6	3	82845		3	1Sc56	1Ac62	1Ci65	Cu	con	jpN	Cb	top	W&S		
4	80	2	31	08	21	10.0	-0.7	47	3.5	1031.9	2	013	01	1	1	2	8	6	0	0	81845		4	2Sc56	Cu	med								
5	82	7	26	10	22	10.5	1.3	53	4.1	1038.2	5	009	03	2	2	6	8	6	0	2	82835	85638	86075	5	Cu	hum								
6	80	6	20	10	22	12.0	2.7	53	4.5	1031.9	6	017	03	1	1	1	1	6	0	1	81830	86080	6	COTRA	Cu	hum								
7	68	2	20	11	19	14.3	5.9	57	5.7	1023.6	6	015	02	0	0	0	0	9	0	1	82075		7	COTRA										
8	75	8	21	07	13	10.2	9.1	93	7.1	1022.5	7	001	21	6	5	8	5	3	/	/	82708	88650	8											
9	59	8	20	12	24	9.6	7.4	86	6.3	1021.7	8	026	20	5	2	6	5	3	7	/	84708	86612	88362	9										
10	81	4	34	02	06	10.6	-2.9	39	3.0	1030.8	6	010	02	1	1	1	1	7	0	2	81850	84072	10	Cu	hum	Ci	edge	ovhd	clr	N				
11	60	7	20	07	16	12.7	4.7	58	5.2	1026.3	6	012	05	2	2	2	5	7	7	1	82656	86359	11	/Ci72	COTRA									
12	80	8	14	09	18	13.1	-6.3	25	2.4	1022.4	7	022	02	2	2	1	0	9	4	7	81370	88272	12	COTRA	Halo	22°	part+pahelion	+cz	arc					
13	75	7	07	11	21	10.8	-2.5	39	3.1	1023.0	3	011	02	2	2	3	0	9	1	8	83467	87272	13	COTRA	Halo	22°	part	+	parhelion					
14	59	7	02	07	19	6.3	2.2	75	4.4	1030.5	4	000	20	5	2	7	5	4	/	/	82715	86622	87635	14										
15	58	8	05	06	16	6.2	2.1	75	4.4	1026.5	7	014	51	5	2	8	5	4	/	/	81718	86625	88630	15										
16	40	8	36	02	04	6.0	4.7	91	5.2	1022.0	8	008	63	6	6	7	7	2	2	/	82704	86708	88540	16	/Sc15									
17	40	7	03	03	07	11.2	5.2	67	5.4	1024.7	6	006	05	2	2	7	8	5	/	/	85822	84635	17											
18	58	1	02	10	21	11.7	2.7	54	4.5	1032.1	5	006	05	0	0	1	1	6	0	0	81835		18	Cu	hum									
19	58	8	02	09	17	7.2	4.0	80	5.0	1032.4	7	013	05	2	2	8	5	4	/	/	86613	88616	19											
20	58	0	32	02	05	11.4	3.9	60	4.9	1025.1	7	030	05	1	1	0	0	9	0	0			20											
21	72	7	01	11	23	7.8	0.2	59	3.8	1026.6	5	001	02	2	2	7	5	6	/	/	87635		21											
22	84	5	03	07	13	10.7	0.9	50	4.0	1023.8	7	024	03	1	1	1	5	6	0	1	81640	85080	22	COTRA										
23	70	7	25	05	13	9.9	-0.5	48	3.7	1014.1	7	018	02	2	2	7	8	6	/	/	81840	87645	23	Cu	hum									
24	80	5	33	07	13	10.2	-1.5	44	3.4	1008.5	8	010	15	8	1	2	9	6	6	3	81940	81845	24	2Ac62	2Ci70	jp	all	quads	vv60k	ex	SW&SE			
25	68	7	33	05	10	8.3	-0.9	52	3.6	1011.6	8	008	02	2	2	7	8	6	/	/	82840	87650	25	Cu	med									
26	84	3	29	13	25	13.4	3.6	51	4.9	1005.5	2	031	02	8	1	3	8	6	0	0	83842		26	1Sc50	Cu	med								
27	84	6	26	05	11	11.5	0.3	46	3.8	1020.1	8	003	02	2	2	5	5	7	3	1	85650		27	1Ac60	2Ci75	COTRA								
28	75	8	23	12	25	12.9	9.4	79	7.3	1008.3	7	027	02	6	2	8	5	4	/	/	82712	87615	88620	28										
29	70	8	26	20	46	13.9	6.2	60	6.0	995.8	3	001	15	6	2	3	8	6	0	7	82830	88272	29	2Sc45	jp	line	NW-NE							
30	80	8	24	12	19	10.1	0.0	49	3.8	1010.4	8	018	15	2	2	8	0	9	7	/	83358	86361	88465	30	jp	NW								
31	80	3	28	19	52	11.4	-2.8	37	3.1	1012.8	2	014	25	8	1	3	9	7	0	0	81950	83850	31	jp	SW									

Mean vis = 25.4 km

Mean cloud = 5.6 70%

Mean wind speed = 9.0 kn

Mean gust = 19 kn

Mean TT = 10.4 °C

Mean TdTd = 1.7 °C

Mean RH = 56.8 %

Mean r = 4.4 g/kg

Mean PPP = 1020.3 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Wokingham Sunshine Hourly analysis 2015	Hour	01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.55	0.31	0.00	0.97	0.99	0.16	0.23	0.95	1.00	0.54	0.48	0.95	0.00	0.13	0.00	0.00	0.00
8	0.42	0.02	0.19	1.00	1.00	0.00	0.73	0.87	0.43	0.84	0.36	0.29	0.00	1.00	0.00	0.00	0.00
9	0.85	0.28	0.99	1.00	1.00	0.36	0.94	0.03	0.16	0.99	0.95	0.00	0.00	0.63	0.00	0.00	0.00
10	0.60	0.80	0.80	1.00	1.00	0.70	1.00	0.01	0.00	1.00	1.00	0.32	0.00	0.69	0.00	0.00	0.00
11	0.30	0.94	0.14	0.62	0.92	0.92	1.00	0.11	0.00	1.00	0.62	1.00	0.00	0.37	0.00	0.00	0.00
12	0.60	0.94	0.63	0.39	0.81	0.88	1.00	0.00	0.00	1.00	0.80	1.00	0.00	0.00	0.00	0.00	0.00
13	0.99	0.82	0.93	0.00	0.43	1.00	1.00	0.00	0.00	1.00	0.24	0.71	0.08	0.00	0.00	0.00	0.00
14	0.68	0.72	0.99	0.60	0.31	1.00	1.00	0.00	0.00	1.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
15	0.34	0.55	0.97	0.36	0.02	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
16	0.00	0.99	1.00	0.96	0.03	0.95	1.00	0.32	0.00	1.00	0.00	0.00	0.69	0.08	0.00	0.00	0.00
17	0.00	0.43	0.57	0.55	0.00	0.62	0.66	0.73	0.00	0.29	0.00	0.00	0.46	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	5.31	6.81	7.21	7.43	6.51	7.58	9.56	3.12	1.64	9.65	4.67	4.27	1.23	3.14	0.00	0.00	0.00

Hour	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.13	0.00	0.00	0.20	0.00	0.00	0.00	0.56	0.03	0.24	0.00	0.00	0.22	0.11	0.05
7	0.00	1.00	0.00	0.00	0.84	0.00	0.00	0.09	1.00	0.00	0.94	0.00	0.00	1.00	0.02	0.39
8	0.00	0.97	0.00	0.00	0.03	0.59	0.04	1.00	1.00	0.00	1.00	0.00	0.00	0.87	0.73	0.43
9	0.00	1.00	0.00	0.00	0.00	1.00	0.90	0.98	1.00	0.00	1.00	0.00	0.00	0.89	0.94	0.51
10	0.00	1.00	0.00	0.00	0.00	0.99	0.83	0.59	0.58	0.00	0.99	0.00	0.00	0.52	0.79	0.49
11	0.00	0.95	0.00	0.00	0.01	0.98	0.69	0.43	0.36	0.26	0.53	0.03	0.00	0.00	0.75	0.42
12	0.01	1.00	0.00	0.46	0.00	1.00	0.48	0.00	0.60	0.58	0.28	0.00	0.00	0.04	0.65	0.42
13	0.18	1.00	0.00	1.00	0.00	0.83	0.03	0.13	0.83	0.66	0.18	0.00	0.00	0.00	0.50	0.40
14	0.01	0.99	0.00	1.00	0.00	1.00	0.02	0.51	0.16	0.58	0.14	0.00	0.02	0.00	0.71	0.38
15	0.39	1.00	0.00	1.00	0.00	1.00	0.00	0.58	0.00	0.53	0.32	0.00	0.04	0.00	0.52	0.35
16	0.25	1.00	0.00	1.00	0.00	1.00	0.01	0.70	0.05	0.75	0.76	0.00	0.13	0.00	0.58	0.43
17	0.00	0.51	0.00	0.58	0.00	0.92	0.00	0.17	0.15	0.85	0.45	0.00	0.00	0.00	0.52	0.27
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.01
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	0.84	10.56	0.00	5.04	1.09	9.31	2.99	5.18	6.30	4.40	6.83	0.03	0.17	3.54	6.83	141.28

MARCH 2015	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	
1	7.73	12.2	1438	3.2	2346	70.5	89.1	1730	45.2	1452	2.54	4.63	6.5	0	3.8	2310	1000.16	1003.8	1126	996.6	0	
2	4.54	8.9	1354	1.8	338	68.0	90.0	341	36.2	1647	-1.40	3.48	4.2	835	2.2	1647	1008.84	1015.9	2351	1001.7	0	
3	5.14	9.1	1250	2.3	2351	67.6	85.5	641	38.9	1433	-0.69	3.62	4.7	855	2.7	1433	1016.39	1022.1	2356	1012.2	625	
4	4.56	10.6	1413	-0.9	2328	70.1	92.2	2349	44.0	1536	-0.86	3.50	4.0	1108	3.1	1537	1030.40	1039.7	2359	1022.0	1	
5	5.11	12.2	1315	-2.5	507	73.0	96.0	738	49.6	1431	0.22	3.79	5.1	1057	2.9	507	1039.08	1040.8	846	1037.4	2358	
6	7.78	12.2	1354	3.7	707	67.0	80.2	2356	50.1	1618	1.91	4.27	5.0	1333	3.7	619	1033.62	1037.5	0	1028.7	2359	
7	9.16	14.8	1428	5.6	3	73.8	93.6	2357	54.8	1429	4.56	5.20	6.0	1338	4.4	308	1024.79	1028.8	0	1021.9	2351	
8	8.19	12.4	1144	1.4	2359	84.8	95.7	111	71.5	1148	5.73	5.67	7.4	1529	3.9	2359	1023.30	1028.9	2345	1021.0	433	
9	5.80	9.8	1504	-1.1	630	92.1	99.0	715	83.5	2327	4.58	5.34	7.0	2122	3.4	305	1024.83	1028.8	27	1021.3	1655	
10	6.26	11.9	1357	1.1	2350	74.4	97.3	734	37.5	1537	1.50	4.20	5.6	10	3.0	1506	1030.12	1032.2	1052	1024.9	0	
11	7.46	13.7	1344	0.5	143	76.6	94.3	644	50.8	1247	3.33	4.79	5.9	2358	3.5	7	1028.34	1031.4	21	1026.1	1430	
12	9.89	13.9	1241	6.3	656	55.7	90.9	322	23.6	1422	0.19	3.98	6.0	130	2.2	1422	1024.58	1028.5	137	1020.8	2339	
13	8.22	12.5	1332	3.3	2332	57.7	85.2	2231	35.6	1434	0.07	3.79	4.5	1055	3.0	1434	1022.97	1029.0	2358	1020.1	443	
14	5.13	9.9	1129	1.4	434	65.8	78.3	2358	47.5	1130	-0.79	3.54	4.7	1507	2.9	338	1030.46	1031.2	1859	1028.9	6	
15	5.40	7.2	1301	4.2	506	82.4	93.1	505	66.8	1312	2.60	4.51	4.9	1704	4.0	1413	1027.71	1030.3	1	1025.5	2356	
16	4.91	8.2	1108	0.9	2332	92.1	98.5	2346	76.8	1117	3.73	4.91	5.7	926	3.9	2332	1023.31	1025.6	1	1021.8	1531	
17	6.42	11.7	1551	1.1	0	88.2	98.8	804	64.6	1559	4.46	5.17	6.3	1119	4.0	1	1025.23	1028.9	2358	1023.1	23	
18	5.50	12.8	1337	-1.1	620	79.4	99.0	633	47.5	1341	1.81	4.26	5.6	1001	3.4	620	1031.94	1034.2	2305	1028.8	0	
19	6.10	7.4	1504	5.0	601	80.4	85.6	732	75.9	1910	2.98	4.60	5.1	1458	4.3	55	1033.07	1034.4	929	1031.6	1630	
20	6.92	12.4	1553	4.2	938	77.3	89.4	833	49.3	1625	3.03	4.65	5.4	2257	4.3	1625	1027.21	1031.7	0	1023.0	2349	
21	6.76	9.2	1343	4.1	630	70.6	91.3	641	50.3	1319	1.66	4.23	5.1	733	3.4	1402	1026.14	1029.2	2346	1022.7	205	
22	5.90	11.3	1249	-0.2	2356	65.2	90.2	2359	42.7	1423	-0.42	3.64	4.6	1246	3.2	1040	1025.75	1029.2	35	1021.3	2359	
23	6.78	11.1	1239	-0.7	35	71.6	92.9	54	46.6	1357	1.69	4.31	5.7	2304	3.3	11	1015.89	1021.3	0	1011.9	2359	
24	5.93	10.3	1501	0.8	2358	72.8	94.9	617	39.9	1630	1.04	4.13	5.3	0	2.9	1630	1010.12	1012.0	59	1008.0	1610	
25	3.77	10.7	1404	-2.2	601	75.0	97.1	708	42.6	1410	-0.69	3.62	4.6	1030	3.0	1650	1011.46	1012.8	934	1008.6	2359	
26	7.77	13.7	1447	3.2	23	71.2	95.2	925	38.2	1707	2.40	4.62	7.0	1021	3.1	1707	1006.27	1016.1	2356	1000.4	825	
27	7.49	12.7	1602	1.8	614	64.6	85.4	632	38.6	1242	0.80	4.02	5.5	2359	3.1	1012	1019.73	1021.1	1024	1016.0	0	
28	10.82	14.2	1058	7.6	231	82.1	96.3	617	63.7	1751	7.78	6.60	7.8	909	5.2	2221	1011.32	1019.1	0	1005.9	2356	
29	10.53	14.1	1455	7.6	2355	77.8	95.4	738	58.9	1511	6.70	6.21	7.9	1207	4.9	2317	1000.19	1006.4	2	994.8	1340	
30	8.85	11.8	2244	5.4	600	67.1	94.4	2044	33.8	1135	2.66	4.80	7.8	2132	2.6	1101	1006.88	1012.9	1130	997.4	2351	
31	9.87	13.6	1329	5.0	2333	56.8	90.0	34	32.3	1331	1.30	4.30	7.6	32	3.0	1456	1009.47	1020.6	2354	997.2	135	
Total																						
Mean	6.93	11.50		2.35		73.3	92.09		49.59		2.08	4.46	5.75		3.42		1020.95	1025.31		1016.82		
Max	10.82	14.76		7.64		92.1	99.00		83.50		7.78	6.60	7.87		5.23		1039.08	1040.78		1037.39		
Min	3.77	7.21		-2.48		55.7	78.30		23.64		-1.40	3.48	3.97		2.15		1000.16	1003.79		994.76		

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 or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

/ = Cloud type not visible owing to darkness, fog, duststorm, or other analogous phenomena.

hshs = Height of cloud above station level reported by type C

00 to 50 = Height in hundreds of feet

51 to 55 Not used

56 to 80 = Subtract 50 to obtain cloud height in thousands of feet

81 to 88 = Height of cloud between 35000 and 70000 ft in 5000 ft steps.