

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 2011

Temperature (°C / °F)			Anomaly	Rank in the past 130 years				
Mean maximum	12.5	54.5	+1.3	14 th highest				
Mean minimum	1.9	35.4	-1.3	63 rd lowest				
Daily mean	7.2	45.0	0.0	39 th highest				
Highest maximum	18.4	65.1	on 25 th	Lowest maximum	4.4	39.9	on 3 rd	
Highest minimum	8.9	48.0	on 31 st	Lowest minimum	-5.6	21.9	on 8 th	
Mean grass minimum	-0.9	30.4	-0.8	Lowest grass minimum	-10.4	13.3	on 8 th	
Mean earth @30 cm	7.3	45.1	+0.2	Earth @100 cm	8.0	46.4		
Frost duration (hrs)	52.6			Rain duration (hrs)	12.7			
Rainfall total (mm / in)	11.4	0.45	25 %	11 th lowest				
Highest daily fall	5.5	0.22	on 18 th					
Number of: Dry days (<0.2mm)	26	Wet days (>0.9mm)	2	days ≥5mm	1			
Sunshine total (hrs)	142.7	Daily mean	4.60	128 %	Sunniest day	11.6	on 23 rd	
N ^o days with: Air frost	9	Ground frost	18	Snow falling	0	Snow lying	0	
Thunder	0	Hail ≥5mm	0	Small hail/ice	0	Fog @09	1	
Pressure MSL : Mean @09 GMT, mbar	1023.1	+7.2	Highest	1042.3	on 23 rd	Lowest	996.3	on 13 th
Relative humidity : Mean (%)	78.5	Lowest	31	on 14 th	Water vapour (g/kg), mean at 09 and 15 GMT	5.1	5.0	
Overall mean wind speed (mph)	6.0	Windiest day	13.2	on 10 th	Max gust	39	on 10 th	
Wind direction (days)	N 1	NE 15	E 1	SE 1	S 2	SW 8	W 1	NW 2
Least windy day (mph)	2.3	on 25 th	Calm; less than 0.5 mph (minutes)		1410			

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

Notes:

Very Dry.

Sunny.

Mean Temperature Near Average,

Temperature: The mean maximum is well above normal, and only 0.2° below inclusion in the warmest 10 % of March maxima. It is, however, only highest since 2009. Conversely, the mean minimum is well below average and is lowest since 1996. The resulting mean temperature is exactly equal to the current 30 year average. The mean daily temperature range of 10.6° is 2nd highest after 2003 in the past 36 years. The highest max is 1.7° above the median while the lowest max is close to its median, as is the highest min, but the lowest min is 1.7° below its median. Earth temperatures are a little above normal. The duration of air frost is 13.8 hours above average, and there were 2 more days with ground frost than average. **Rainfall:** This has been a very dry March, with 75% less rainfall than average. Although the total in 1997 was only 0.2 mm more than this month's, 1990 was the last year to have a drier March. The highest daily fall is lowest since 1999. There were 9 more dry days than average, but this was exceeded in 2003. Rainfall duration is 29.2 hours below average. There were two dry spells, both of 11 days, ending on the 11th and 29th. There is no thunder or hail to report this month. **Sunshine:** After one of the dullest winters in the past century, a sunny March was much appreciated. Although the total fell short of that in 2009, 2007 and 2003, it is nevertheless 31.9 hours above average. Overall there were 11 days with <3 hours, 10 with =>6 hours and 5 with =>9 hours. **Wind:** The mean wind speed is 1.7 mph below average and lowest since before 1988. **Commentary: From the 1st to the 8th:** Temperatures were mainly below normal, with daily anomalies for max between -5.0° on the 3rd and +1.2° on the 8th, and for min -8.9° on the 8th and +0.8° on the 1st. It was dry throughout. Sunshine was poor until the 5th, but both the 7th and 8th had over 90 % of the maximum. Winds were NE'y light or moderate, veering SW'yly on the 8th. **From the 9th to the 19th:** Temperatures were quite variable, with both warm and cold days and nights. Daily anomalies for max were between -5.1° on the 18th and +5.3° on the 15th, and for min -7.1° on the 14th and 19th, and +5.2° on the 13th. A little rain fell before the 18th, but only 1.0 mm in total, then the 18th was wet with 5.5 mm. Sunshine was generally close to normal, apart from dull days on the 16th and 18th, but the 19th was sunny with over 90 % of the maximum. SW'yly winds increased to strong on the 10th, backing moderate S'yly on the 12th, veering W'yly on the 13th, becoming E'yly on the 14th, backing N'yly by the 17th and becoming light S'yly on the 19th. **From the 20th to the 31st:** This was a mild spell especially by day, with daily anomalies for max between +1.0° on the 30th and +7.0° on the 23rd. Minima were more variable, with daily anomalies between -4.4° on the 25th and +4.8° on the 31st. Mostly dry, just wet on the 30th. Sunshine was variable, below normal after the 28th, but over 11 hours on the 23rd and 25th. Mostly light winds were SW'yly on the 20th, becoming NE'yly on the 22nd, veering SW'yly between the 28th and 30th and increasing fresh on the 31st.

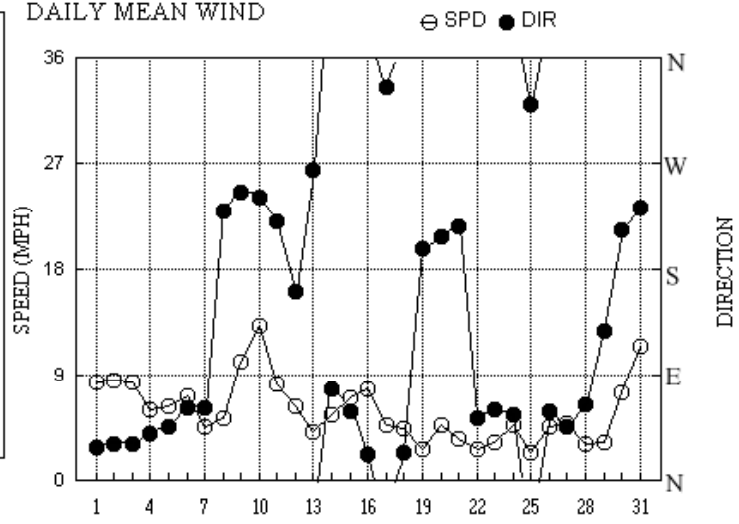
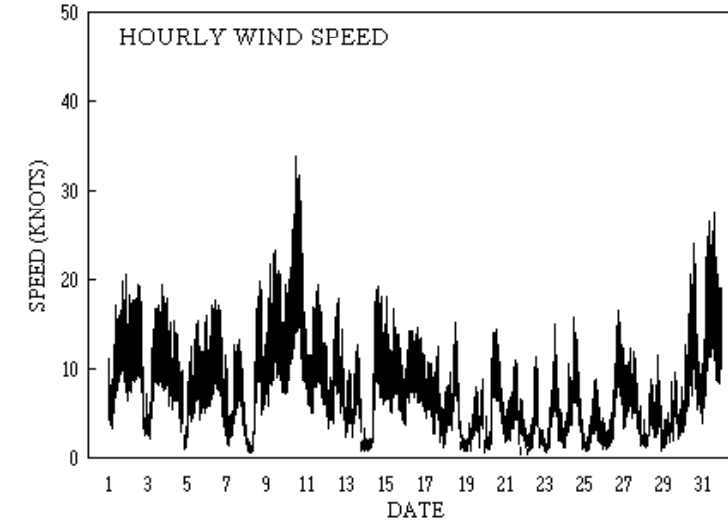
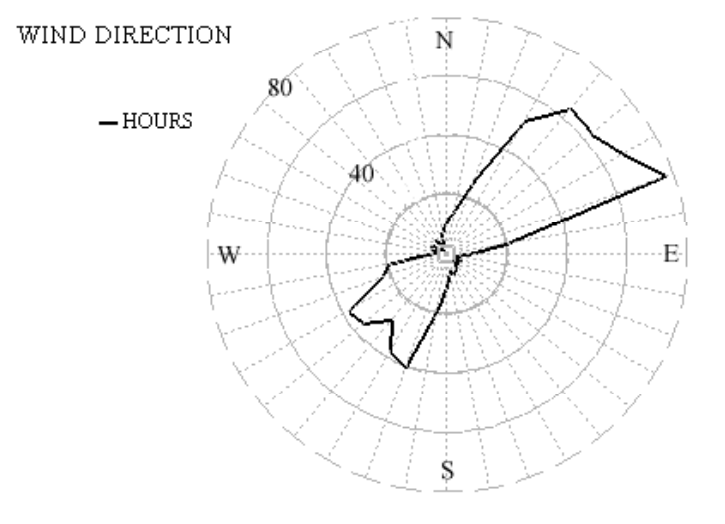
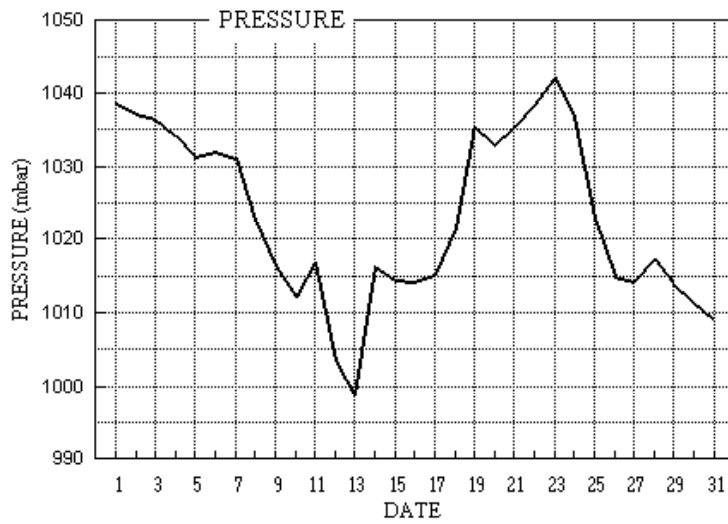
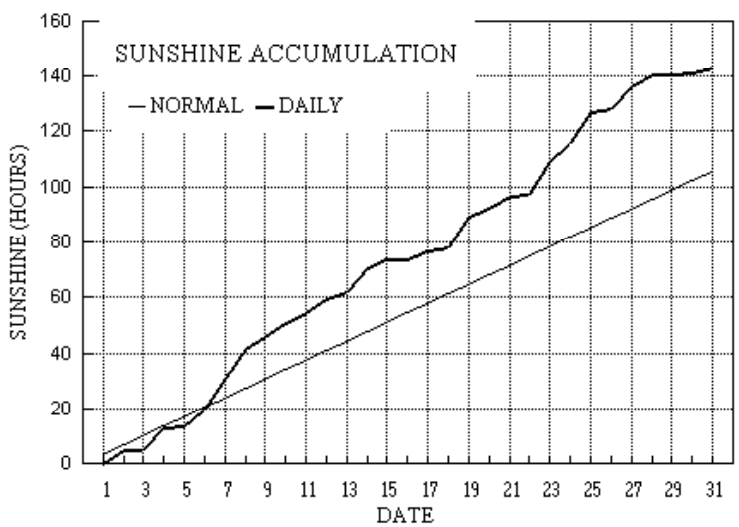
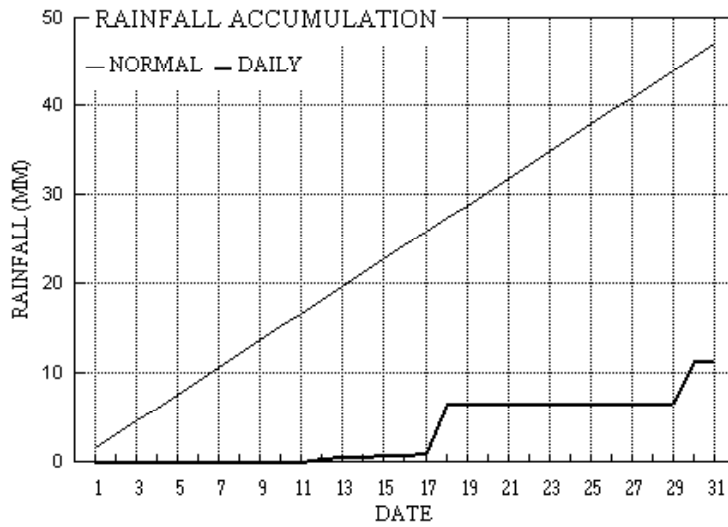
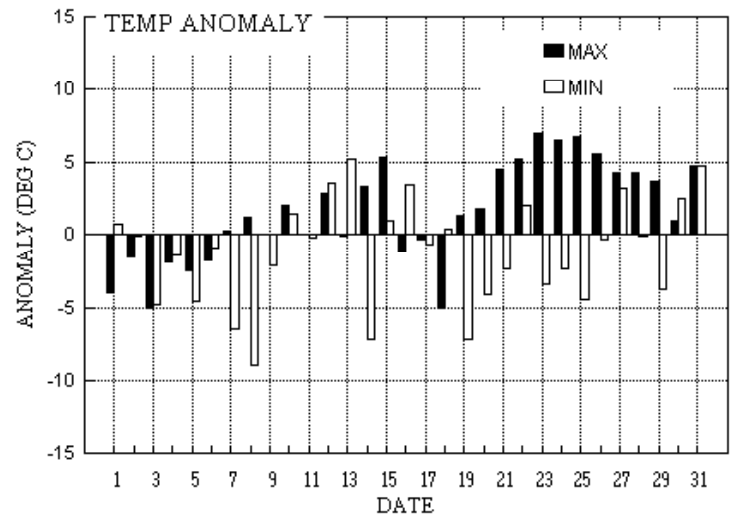
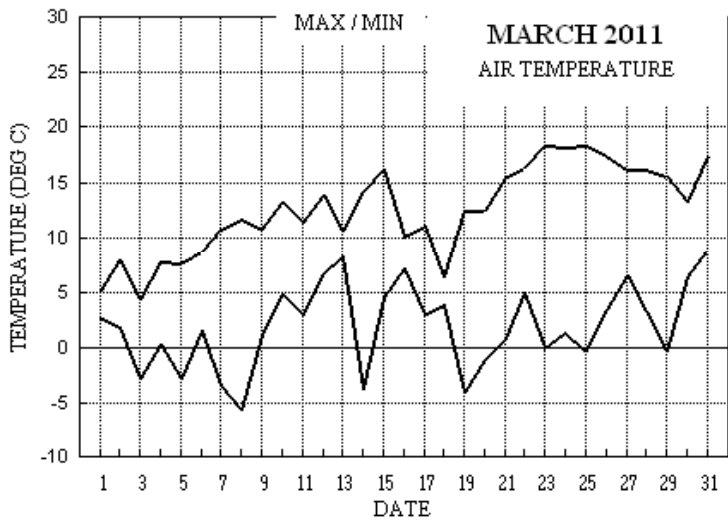
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th			From the 11 th to the 20 th				From the 21 st to the 31 st				
-1.3°	-2.7°	0 %	142%	+0.8°	-0.6°	48%	117%	+4.9°	-0.4°	27%	128%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for March 2011



Month: MARCH 2011

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	5.2	2.8	tr	2.5	6.8	8.1	0.0	0.0	1038.6	0 0 0 0	0 0 0 0	0 0 0 0	28	7.1	7.3	58	21	2134	35	10	18	0.0	
2	7.9	1.9	0.0	1.8	6.6	8.1	5.1	3.2	1037.1	0 0 0 0	0 0 0 0	0 0 0 0	31	7.3	7.4	31	20	1302	24	10	13	0.0	
3	4.4	-2.9	0.0	-8.7	6.2	8.0	0.0	5.4	1036.4	1 1 0 0	0 0 0 0	0 0 0 0	30	7.1	7.2	28	20	1752	25	10	17	0.0	
4	7.7	0.3	0.0	-2.1	5.9	7.9	8.1	2.9	1034.2	0 1 0 0	0 0 0 0	0 0 0 0	40	5.1	5.2	53	16	0722	31	9	03	0.0	
5	7.6	-2.8	tr	-7.6	5.8	7.8	0.5	1.0	1031.3	1 1 0 0	0 0 0 0	0 0 0 0	45	5.3	5.4	67	16	2204	62	8	12	0.0	
6	8.7	1.5	0.0	2.5	6.0	7.7	6.3	0.0	1032.1	0 0 0 0	0 0 0 0	0 0 0 0	61	6.2	6.2	58	18	0904	59	9	09	0.0	
7	10.8	-3.4	0.0	-8.7	5.9	7.7	10.8	10.1	1031.1	1 1 0 0	0 0 0 0	0 0 0 0	62	3.8	3.9	56	13	1550	50	6	14	0.0	
8	11.7	-5.6	tr	-10.4	5.4	7.6	10.5	8.7	1022.7	1 1 0 0	0 0 0 0	0 0 0 0	230	4.3	4.5	209	20	1520	214	9	15	0.0	
9	10.8	1.1	tr	-2.1	5.4	7.6	4.8	0.0	1016.2	0 1 0 0	0 0 0 0	0 0 0 0	246	8.6	8.8	263	23	1101	266	11	11	0.0	
10	13.2	4.8	tr	0.9	5.9	7.5	4.7	0.0	1012.1	0 0 0 0	0 0 0 0	0 0 0 0	242	11.2	11.5	256	34	1210	255	16	12	0.0	
11	11.3	3.0	0.0	-2.2	6.3	7.4	3.7	0.0	1016.9	0 1 0 0	0 0 0 0	0 0 0 0	221	6.8	7.1	208	20	1504	215	9	15	0.0	
12	13.8	6.7	0.4	3.9	6.6	7.4	5.3	0.0	1003.5	0 0 0 0	0 0 0 0	0 0 0 0	161	5.0	5.5	189	18	1608	145	8	11	1.3	
13	10.6	8.3	0.2	7.8	7.1	7.5	2.4	0.8	998.8	0 0 0 0	0 0 0 0	0 0 0 0	265	1.6	3.5	310	13	1314	313	6	14	0.5	
14	14.1	-3.8	tr	-8.0	6.9	7.6	8.3	7.7	1016.2	1 1 0 0	0 0 0 0	0 0 0 0	77	4.4	4.9	97	19	1514	92	10	15	0.0	
15	16.2	4.5	0.1	6.6	7.1	7.7	3.5	0.0	1014.4	0 0 0 0	0 0 0 0	0 0 0 0	59	6.0	6.1	63	18	0139	61	9	10	0.1	
16	10.1	7.1	tr	7.4	7.9	7.8	0.0	0.0	1014.1	0 0 0 0	0 0 0 0	0 0 0 0	22	6.7	6.7	30	15	1552	30	8	08	0.0	
17	11.0	2.9	0.3	3.1	7.9	7.9	3.1	0.0	1015.1	0 0 0 0	0 0 0 0	0 0 0 0	335	2.9	4.1	325	13	1506	334	6	04	0.7	
18	6.3	3.8	5.5	-0.6	7.8	8.0	0.7	2.5	1021.5	0 1 0 0	0 0 0 0	0 0 0 0	24	3.5	3.8	38	15	1224	32	8	12	5.4	
19	12.4	-4.0	0.0	-9.6	7.2	8.1	11.1	8.3	1035.4	1 1 0 0	0 0 0 0	0 0 0 0	197	1.5	2.2	184	9	2153	179	5	21	0.0	
20	12.5	-1.1	0.0	-6.6	6.9	8.1	3.7	1.8	1032.9	1 1 0 0	0 0 0 0	0 0 0 0	208	3.8	4.1	212	15	1409	213	7	14	0.0	
21	15.4	0.8	0.0	-3.9	7.2	8.0	4.0	0.0	1035.2	0 1 0 0	0 0 0 0	0 0 0 0	217	2.8	3.0	244	11	1301	223	5	12	0.0	
22	16.3	5.0	0.0	3.2	7.8	8.0	0.9	0.0	1038.3	0 0 0 0	0 0 0 0	0 0 0 0	52	1.2	2.3	29	12	1438	21	5	12	0.0	
23	18.4	0.0	0.0	-4.6	8.1	8.1	11.6	0.0	1042.0	0 1 0 0	0 0 0 0	0 0 0 0	60	2.6	2.8	27	15	1344	52	6	11	0.0	
24	18.2	1.4	0.0	-4.0	8.2	8.2	7.0	0.0	1036.7	0 1 0 0	0 0 0 1	0 0 0 0	55	4.0	4.1	50	16	1219	58	7	14	0.0	
25	18.4	-0.4	0.0	-3.6	8.3	8.3	11.0	0.1	1022.9	1 1 0 0	0 0 0 0	0 0 0 0	320	0.5	2.0	304	9	1421	31	4	13	0.0	
26	17.4	3.4	tr	-0.3	8.6	8.4	1.3	0.0	1014.9	0 1 0 0	0 0 0 0	0 0 0 0	58	3.7	4.0	72	17	1714	68	8	18	0.0	
27	16.2	6.5	0.0	5.6	9.0	8.5	7.7	0.0	1014.2	0 0 0 0	0 0 0 0	0 0 0 0	46	4.2	4.2	65	13	0014	56	6	09	0.0	
28	16.1	3.3	tr	-0.8	9.3	8.6	4.5	0.0	1017.2	0 1 0 0	0 0 0 0	0 0 0 0	64	0.8	2.7	173	12	1810	48	5	09	0.0	
29	15.6	-0.3	0.1	-3.5	9.2	8.8	0.2	0.1	1013.9	1 1 0 0	0 0 0 0	0 0 0 0	128	1.6	2.8	154	10	1512	160	5	16	0.1	
30	13.2	6.3	4.7	8.1	9.5	8.9	0.3	0.0	1011.4	0 0 0 0	0 0 0 0	0 0 0 0	213	6.4	6.5	197	24	1355	207	11	14	4.4	
31	17.4	8.9	0.1	6.4	9.5	9.1	1.6	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0	232	9.4	9.9	252	28	1434	249	13	12	0.2	
Total			11.4				142.7	52.6															12.7
Mean	12.5	1.9		-0.9	7.3	8.0	4.60	1.7	1023.1					38	0.7	5.2							
Anom	+1.3	-1.3	25%		+0.2	+0.5	128%																+7.2
Daily mean		7.2																					
Anom		+0.0																					

Number of days with:

Air frost = 9 Ground frost = 18 Nil sun = 3
Snow falling = 0 Snow lying = 0 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 0 Fog at 09GMT = 1

Abbreviations.

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

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

Grass min = Lowest overnight temperature at grass tip level.

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

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

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

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

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

Sp = 24 hour mean wind speed in knots.

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

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

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

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for March 2011

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	63	8	03	08	14	4.0	0.7	79	3.9	1038.6	2	016	02	2	2	8	8	4	/	/	81815	85630	88635				1	Cu fra/hum	
2	59	8	03	09	18	3.0	0.4	83	3.8	1037.1	2	002	05	2	2	8	5	4	/	/	88612						2		
3	56	8	03	09	16	1.7	-0.2	87	3.6	1036.4	3	003	05	2	2	8	6	4	/	/	88710						3		
4	59	6	04	08	15	1.2	-2.4	77	3.1	1034.2	0	003	05	2	2	6	5	4	0	0	86615						4		
5	61	8	05	06	13	1.5	-0.8	84	3.5	1031.3	3	002	02	2	2	8	5	4	/	/	86710	88615					5		
6	67	7	06	09	17	4.4	-0.7	70	3.6	1032.1	2	009	02	2	2	8	5	5	/	/	87623						6		
7	59	0	06	05	09	3.1	0.8	85	3.9	1031.1	0	003	05	0	0	0	0	9	0	0	0						7	Hoar slt Gnd sfc frzn	
8	50	0	24	01	03	1.1	-1.0	86	3.5	1022.7	6	002	05	0	0	0	0	9	0	0	0						8	Hoar mod Gnd frzn	
9	75	6	25	10	22	8.5	3.2	69	4.7	1016.2	2	016	03	6	2	1	8	5	0	1	81820	86075					9	1Sc30 COTRA Cu fra	
10	65	7	24	12	23	8.7	5.4	79	5.6	1012.1	5	003	50	5	2	7	5	4	/	2	82615	85620	87635			10	/Ci75		
11	65	7	24	07	13	7.4	3.9	79	5.0	1016.9	3	007	15	2	2	1	8	4	3	1	81815	86080					11	1Sc35 1Ac65 COTRA Cu fra jpNE	
12	65	7	09	03	08	8.9	4.0	71	5.1	1003.5	7	019	01	2	2	1	5	6	0	1	81645	87075					12	2Ci70 COTRA Halo 22° part Parhelia	
13	23	8	20	03	06	8.9	7.9	94	6.7	998.8	2	015	58	6	5	8	7	2	/	/	86703	88704					13		
14	59	7	03	03	04	4.5	2.3	86	4.5	1016.2	2	023	05	1	1	0	0	9	0	1	82070	87075					14	COTRA Halo 22° part	
15	25	7	07	05	11	8.9	8.0	94	6.6	1014.4	4	000	10	4	2	7	6	2	/	/	85704	87706					15		
16	18	8	02	08	15	7.5	6.7	95	6.1	1014.1	8	001	10	2	2	8	6	2	/	/	88703						16		
17	57	8	33	05	09	3.8	2.5	91	4.5	1015.1	2	014	50	5	2	8	6	3	/	/	88706						17	Pptn v slt	
18	65	8	08	02	07	5.9	4.0	88	5.0	1021.5	1	004	60	6	2	3	5	4	2	/	83615	88520					18		
19	45	1	20	01	04	3.0	2.4	96	4.5	1035.4	2	019	10	0	0	0	0	9	0	1	81080						19	COTRA Hoar thk in shade	
20	58	7	19	04	08	7.4	4.6	83	5.1	1032.9	3	002	05	2	2	2	6	4	7	/	82710	83357	87360				20		
21	40	7	20	05	08	5.1	4.5	96	5.1	1035.2	2	010	10	2	2	7	5	6	/	/	83630	87635					21		
22	50	7	26	01	02	10.3	6.5	77	5.9	1038.3	2	017	05	2	2	7	5	6	/	/	87645						22		
23	50	0	05	04	08	9.9	7.4	85	6.2	1042.0	2	008	05	0	0	0	0	9	0	0	0						23		
24	05	8	05	04	08	6.9	6.7	99	5.9	1036.7	0	000	42	4	4	8	6	0	/	/	88701						24		
25	56	1	05	01	05	7.9	5.4	84	5.5	1022.9	7	011	05	0	0	0	0	9	0	1	81075						25		
26	28	7	05	02	04	9.1	6.5	84	6.0	1014.9	0	001	05	2	2	7	0	8	8	/	83357	87360					26	Ac cas	
27	35	8	06	07	12	7.7	4.9	83	5.4	1014.2	2	007	05	2	2	8	6	4	/	/	88710						27		
28	57	7	05	04	07	9.2	5.2	76	5.5	1017.2	2	011	05	2	2	7	5	6	/	/	87640						28		
29	56	7	05	02	04	6.3	3.8	84	5.0	1013.9	7	003	60	6	2	3	5	7	7	/	83656	85360	87362			29			
30	70	8	21	08	16	10.3	6.7	78	6.1	1011.4	5	003	03	2	2	7	8	4	7	/	82818	87640	88465			30	2Sc25 /Ac62 Cu hum/fra		
31	58	7	23	12	22	13.1	11.2	89	8.3	1009.1	3	004	50	5	2	7	5	4	/	1	82710	86713	87620			31	/Ci78 COTRA		

Mean vis = 8.6 km
 Mean cloud = 6.2 78%
 Mean wind speed = 5.4 kn
 Mean gust = 11 kn
 Mean TT = 6.4 °C
 Mean TdTd = 3.9 °C
 Mean RH = 84.2 %
 Mean r = 5.1 g/kg
 Mean PPP = 1023.1 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 March 2011

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	70	8	03	10	16	4.1	0.1	75	3.7	1038.5	8	004	02	2	2	8	8	5	/ /	85822	87628	88635	1	Cu hum	
2	57	2	02	09	19	6.9	1.1	67	4.0	1035.3	6	011	05	1	1	2	5	5	0	0	82622			2	
3	60	7	03	08	14	4.0	0.4	77	3.8	1034.9	7	014	05	2	2	7	5	4	/ /	87618			3		
4	60	7	03	08	14	4.0	0.4	77	3.8	1034.9	7	014	05	2	2	7	5	4	/ /	87618			4		
5	67	7	07	04	13	7.6	1.7	66	4.2	1030.0	7	010	03	2	2	6	8	5	3	1	81825	85635	85072	5	1Ac65 COTRA Cu hum
6	68	1	08	06	17	7.8	-0.3	56	3.6	1030.9	6	015	02	0	0	1	5	6	0	0	81630			6	
7	65	0	06	07	13	10.4	-2.7	40	3.1	1027.5	7	026	02	0	0	0	0	9	0	0				7	
8	58	0	22	08	18	11.4	1.0	49	4.1	1017.9	7	026	05	0	0	0	0	9	0	0				8	
9	80	7	25	09	21	10.4	2.1	56	4.4	1016.4	7	003	15	8	2	6	8	6	0	1	81835	85650		9	2Sc40 2Ci75 COTRA Cu med jpN
10	81	7	26	16	31	12.2	5.5	63	5.6	1010.8	5	003	25	8	2	7	8	5	/ /	82828	87650		10	Cu med jpSW	
11	86	7	23	09	17	10.8	2.7	57	4.5	1013.6	7	023	03	2	2	7	8	6	/ /	81835	87640		11	Cu hum	
12	65	7	18	07	15	11.6	3.9	59	5.1	998.9	7	017	03	2	2	3	0	9	8	8	81363	83465	87270	12	Ac cas
13	88	7	33	06	12	9.6	3.7	67	5.0	1002.7	2	018	02	2	2	6	8	5	3	1	85825	83630	86072	13	/Ac65 COTRA Cu hum/med
14	82	5	07	09	17	13.3	3.4	51	4.7	1015.3	5	005	03	2	2	1	1	6	3	1	81830	85072		14	1Ac67 COTRA Cu hum
15	40	7	06	07	14	13.6	8.1	69	6.7	1012.3	7	009	05	2	2	7	0	9	7	/	84357	87362		15	
16	35	8	01	06	12	9.7	6.7	81	6.1	1012.0	7	013	05	2	2	8	5	3	/ /	86708	88612		16		
17	59	7	31	04	11	10.2	4.2	66	5.2	1016.0	0	002	05	2	2	1	8	5	0	1	81825	87075		17	1Sc30 COTRA Cu hum
18	58	8	03	07	13	5.4	3.9	91	5.0	1023.3	2	007	61	6	6	7	8	4	2	/	83815	84630	88540	18	
19	75	1	16	03	08	11.1	-4.6	33	2.6	1034.0	7	014	02	0	0	0	0	9	0	1	81075			19	COTRA
20	60	7	23	07	15	12.3	4.6	59	5.2	1031.7	7	012	05	2	2	3	8	6	3	/	81830	83650	85360	20	Cu hum
21	83	6	22	03	10	15.1	6.4	56	5.7	1033.7	7	009	03	1	1	6	8	6	/	1	83835	85640		21	/Ci78 COTRA Cu med
22	65	6	04	04	11	14.7	3.9	48	5.0	1037.9	8	006	02	2	2	6	8	6	0	0	81840	86645		22	Cu hum
23	80	1	06	06	12	17.3	4.4	42	5.1	1038.7	7	022	02	0	0	1	1	7	0	0	81850			23	Cu hum
24	63	7	06	07	14	16.7	6.6	51	5.8	1031.6	7	028	03	1	1	0	0	9	0	1	87078			24	COTRA Halo 22° part Parhelia
25	58	1	22	03	09	17.8	5.7	45	5.4	1018.0	6	023	05	0	0	1	1	6	0	1	81848			25	1Ci78 COTRA Cu hum Sky turbid
26	40	5	05	05	10	16.3	7.8	57	6.7	1012.9	8	015	05	2	2	5	0	9	3	1	85360			26	/Ci75 COTRA Sky turbid
27	57	1	03	06	11	15.1	5.3	52	5.8	1012.2	7	013	05	0	0	1	1	6	0	0	81840			27	Cu hum Sky turbid
28	58	3	23	01	06	15.1	3.5	46	4.9	1015.7	8	013	05	1	1	3	8	6	0	0	83848			28	1Sc50 Cu med Sky turbid Wnd dir var
29	57	7	18	05	09	15.3	8.2	63	6.7	1011.2	7	017	05	8	2	4	8	5	7	/	84825	87362		29	1Sc35 Cu med
30	68	8	21	09	23	10.2	7.8	85	6.6	1009.7	6	011	02	6	2	8	5	4	/ /	87615	88625		30		
31	75	7	26	13	28	15.7	9.3	66	7.3	1013.1	1	018	15	2	2	7	8	5	/	1	82828	86645	86075	31	COTRA Cu med jp W&S

Mean vis = 19.2 km
 Mean cloud = 5.2 65%
 Mean wind speed = 6.8 kn
 Mean gust = 15 kn
 Mean TT = 11.5 °C
 Mean TdTd = 3.7 °C
 Mean RH = 60.3 %
 Mean r = 5.0 g/kg
 Mean PPP = 1021.7 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	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
2011	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.13	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.75	0.71	0.68	0.00	0.00	0.97	0.00	0.00
	8	0.00	0.00	0.00	0.31	0.00	0.00	1.00	1.00	0.96	0.96	0.58	0.73	0.00	0.97	0.00	0.00
	9	0.00	0.00	0.00	0.46	0.00	0.00	1.00	1.00	1.00	1.00	0.98	1.00	0.00	0.82	0.28	0.00
	10	0.00	0.00	0.00	0.79	0.00	0.02	1.00	1.00	0.42	0.42	0.53	1.00	0.00	0.34	1.00	0.00
	11	0.00	0.10	0.00	1.00	0.00	0.65	1.00	1.00	0.44	0.44	0.69	0.99	0.02	0.76	1.00	0.00
	12	0.00	0.63	0.00	1.00	0.00	0.99	1.00	1.00	0.22	0.22	0.01	1.00	0.00	1.00	1.00	0.00
	13	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.23	0.23	0.00	0.46	0.00	1.00	0.18	0.00
	14	0.00	1.00	0.00	1.00	0.44	1.00	1.00	1.00	0.21	0.21	0.05	0.09	0.00	1.00	0.01	0.00
	15	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.55	0.55	0.00	0.00	0.44	0.91	0.08	0.00
	16	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.01	0.01	0.00	0.00	1.00	0.27	0.00	0.00
	17	0.00	0.36	0.00	0.52	0.00	0.61	0.66	0.33	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		0.00	5.08	0.00	8.08	0.45	6.27	10.76	10.46	4.79	4.75	3.75	5.27	2.42	8.26	3.55	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	0.00	0.42	0.00	0.00	0.00	0.53	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.07
7	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
8	0.00	0.00	1.00	0.30	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.01	0.32
9	0.00	0.00	1.00	0.24	0.00	0.00	1.00	0.00	1.00	0.17	0.00	0.44	0.00	0.00	0.00	0.37
10	0.00	0.00	1.00	0.01	0.74	0.00	1.00	0.85	1.00	0.26	0.97	1.00	0.01	0.00	0.04	0.43
11	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.06	1.00	0.82	0.13	0.00	0.05	0.49
12	0.00	0.00	1.00	0.00	0.68	0.00	1.00	1.00	1.00	0.00	1.00	0.26	0.01	0.00	0.65	0.47
13	0.00	0.00	1.00	0.13	0.50	0.05	1.00	1.00	1.00	0.09	1.00	0.02	0.00	0.00	0.00	0.42
14	0.71	0.00	1.00	0.50	0.83	0.19	1.00	1.00	1.00	0.66	1.00	0.81	0.00	0.00	0.01	0.51
15	0.97	0.00	1.00	0.74	0.22	0.63	1.00	1.00	1.00	0.11	1.00	0.40	0.00	0.00	0.30	0.51
16	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.69	0.00	0.02	0.46	0.47
17	0.39	0.72	0.64	0.80	0.00	0.00	1.00	0.09	0.52	0.00	0.74	0.00	0.00	0.26	0.10	0.28
18	0.00	0.03	0.00	0.00	0.00	0.00	0.11	0.09	0.00	0.00	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	3.07	0.75	11.06	3.70	3.97	0.87	11.62	7.03	11.01	1.34	7.71	4.46	0.16	0.27	1.61	142.54

March 2011	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	3.60	5.2	1125	2.4	2342	81.0	91.9	453	68.6	1119	0.60	3.87	4.3	155	3.5	1721	1037.92	1039.3	2127	1034.7	15	0.1
2	3.03	7.7	1351	-1.7	2359	80.9	97.1	2229	61.5	1404	-0.03	3.70	4.3	1358	3.1	2359	1036.43	1038.3	0	1034.9	1615	0.0
3	1.43	4.4	1525	-2.8	135	86.1	97.9	139	72.6	1540	-0.71	3.53	4.0	1213	2.9	136	1035.66	1036.7	1035	1034.4	1641	0.1
4	2.43	7.7	1519	-2.1	2353	75.9	95.2	2357	53.1	1430	-1.58	3.32	3.9	1242	3.0	2353	1033.12	1034.7	3	1031.0	1641	0.0
5	3.47	7.7	1500	-2.1	18	83.1	96.7	251	62.8	1500	0.75	3.96	5.1	2125	3.0	18	1030.78	1032.0	45	1029.4	1600	0.0
6	4.09	8.5	1141	-0.1	2350	70.5	84.5	2358	51.7	1416	-0.89	3.49	4.3	1132	3.0	2347	1031.53	1032.7	1104	1030.6	1532	0.0
7	2.98	10.8	1419	-3.1	449	70.4	95.8	456	36.9	1535	-2.59	3.10	4.1	936	2.4	1951	1029.24	1031.9	12	1025.9	2354	0.1
8	3.44	11.7	1447	-5.2	606	75.2	96.1	736	46.2	1440	-0.99	3.56	4.5	1638	2.4	651	1020.60	1026.0	0	1016.1	2359	0.0
9	7.06	11.0	1344	3.6	130	70.4	88.8	648	47.4	1130	1.84	4.32	5.1	750	3.6	1130	1016.29	1017.9	2028	1014.1	511	0.0
10	8.80	13.4	1211	4.6	103	72.8	84.9	130	51.4	1635	4.05	5.08	6.2	1400	4.2	0	1012.61	1016.6	6	1010.2	1328	0.0
11	7.59	11.5	1413	3.1	642	75.4	90.3	423	52.8	1350	3.35	4.83	5.9	2012	3.9	636	1014.37	1017.0	903	1010.0	2358	0.0
12	9.38	13.7	1323	6.7	619	72.8	93.3	2359	49.5	1130	4.56	5.32	6.5	2344	4.4	1110	1001.98	1010.0	0	997.4	2357	0.1
13	7.46	10.7	1544	-0.8	2359	84.1	96.1	2349	53.9	1631	4.78	5.51	6.9	338	3.4	2359	1001.62	1010.3	2359	996.3	356	0.4
14	5.31	14.2	1421	-3.3	615	79.6	97.9	520	31.3	1215	1.41	4.30	5.8	2357	2.7	1216	1014.96	1017.0	1950	1010.2	0	0.1
15	9.68	15.9	1300	6.4	413	85.2	98.0	712	57.9	1300	7.14	6.27	7.2	1258	5.7	47	1014.11	1016.3	0	1012.0	1522	0.0
16	7.90	10.1	1310	4.1	2358	89.2	95.7	723	79.1	1521	6.22	5.90	6.6	1214	4.7	2359	1013.15	1014.6	0	1011.4	1723	0.0
17	5.99	11.2	1549	2.9	542	83.5	95.7	513	57.5	1710	3.25	4.78	5.5	1412	4.4	824	1015.68	1019.9	2357	1012.4	249	0.0
18	4.68	7.4	44	-1.5	2331	87.4	98.7	2335	72.5	336	2.71	4.59	5.3	1037	3.3	2331	1023.48	1030.9	2357	1019.7	29	5.4
19	3.82	11.9	1450	-3.7	553	73.0	99.3	328	32.2	1508	-1.59	3.33	5.0	934	2.6	1459	1033.83	1035.8	1045	1030.8	1	0.1
20	6.22	12.5	1459	-0.8	38	78.3	94.4	156	55.6	1603	2.46	4.47	5.5	1012	3.2	38	1032.87	1034.2	42	1031.4	1610	0.0
21	8.08	15.2	1458	1.0	236	80.9	98.6	600	53.2	1511	4.66	5.23	6.7	1234	3.8	236	1034.36	1035.9	2358	1033.1	101	0.0
22	10.07	16.3	1516	3.7	2358	74.5	93.4	2359	41.7	1513	5.34	5.42	6.8	1017	4.5	2358	1037.95	1040.5	2237	1035.7	4	0.0
23	8.98	18.2	1328	0.1	558	75.4	98.2	634	38.6	1252	4.10	4.99	6.7	1327	3.6	558	1039.73	1042.3	902	1037.5	1739	0.0
24	8.74	17.8	1346	1.6	449	77.0	98.7	903	38.3	1656	4.25	5.09	7.4	1038	3.5	1757	1033.58	1038.3	10	1027.5	2354	0.0
25	8.80	18.2	1421	-0.1	609	75.0	98.0	712	36.8	1530	3.88	5.02	6.6	1254	3.6	608	1020.52	1027.7	0	1016.0	2346	0.0
26	9.12	17.1	1428	3.5	208	79.6	96.1	309	53.5	1429	5.56	5.64	7.2	1432	4.5	205	1014.58	1016.3	45	1012.6	1523	0.0
27	9.37	16.0	1450	3.6	2347	75.2	90.8	2358	48.6	1511	4.92	5.38	6.4	1415	4.4	2346	1013.67	1015.2	2341	1012.0	1516	0.0
28	9.18	15.9	1446	2.3	2358	70.2	92.5	18	42.8	1447	3.63	4.91	5.8	936	4.0	2355	1016.09	1017.5	1002	1015.0	5	0.0
29	8.39	15.6	1455	-0.0	429	81.6	97.0	618	61.4	1457	5.23	5.63	7.3	1455	3.6	429	1012.98	1016.2	6	1010.6	1618	0.1
30	10.07	11.7	1016	8.8	1928	87.3	95.5	2337	76.1	941	8.05	6.69	7.3	2348	6.0	844	1010.84	1011.8	605	1009.4	1444	1.9
31	12.88	17.5	1231	9.0	304	82.9	95.6	357	59.5	1251	9.85	7.56	8.9	1026	6.7	1718	1011.97	1017.6	2352	1007.4	428	2.5
Total																						10.9
Mean	6.84	12.47		1.29		78.5	94.93		53.06		3.04	4.80	5.90		3.80		1022.47	1025.52		1019.66		
Max	12.88	18.19		8.98		89.2	99.30		79.10		9.85	7.56	8.87		6.68		1039.73	1042.27		1037.47		
Min	1.43	4.42		-5.16		70.2	84.50		31.32		-2.59	3.10	3.87		2.41		1001.62	1010.02		996.35		

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
 Rtot = 00-24 GMT rainfall total from AWS tipping bucket raingauge, mm
 Time = hours and minutes in GMT of extreme values

Appendix 1.

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

Average: Generally refers to the 30 year climatological average, currently 1971 to 2000. 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 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 1971 to 2000 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/wwwp1.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.