

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 2013

Temperature (°C / °F)			Anomaly	Rank in the past 132 years			
Mean maximum	7.0	44.6	-4.2	2 nd lowest			
Mean minimum	0.1	32.2	-3.1	11 th lowest			
Daily mean	3.6	38.5	-3.6	7 th lowest			
Highest maximum	16.0	60.8	on 5 th	Lowest maximum	1.0	33.8	on 24 th
Highest minimum	7.8	46.0	on 8 th	Lowest minimum	-5.3	22.5	on 31 st
Mean grass minimum	-3.1	26.4	-3.0	Lowest grass minimum	-12.0	10.4	on 3 st
Mean earth @30 cm	5.4	41.7	-1.7	Earth @100 cm	6.3	43.3	
Frost duration (hrs)	126.4			Rain duration (hrs)	86.1		
Rainfall total (mm / in)	71.4	2.81	156 %	22 nd highest			
Highest daily fall	11.8	0.46	on 15 th				
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	10	days ≥5mm	6		
Sunshine total (hrs) 63.1	Daily mean 2.04	57 %		Sunniest day 10.1	on 5 th		
N ^o days with: Air frost 17	Ground frost 23	Snow falling 10		Snow lying 1			
Thunder 2	Hail ≥5mm 0	Small hail/ice 5		Fog @09 0	Nil sun 13		
Pressure MSL : Mean @09 GMT, mbar 1008.9	-7.0	Highest 1030.3	on 1 st	Lowest 987.8	on 17 th		
Relative humidity : Mean (%) 78.5	Lowest 33	on 29 th		Water vapour (g/kg), mean at 09 and 15 GMT 4.0, 3.9			
Overall mean wind speed (mph) 7.5	Windiest day 16.6		on 11 th		Max gust 48	on 11 th	
Wind direction (days) N 3 NE 19 E 4 SE 1 S 1 SW 2 W 1 NW 0							
Least windy day (mph) 2.8	on 18 th		Calm; less than 0.5 mph (minutes) 498				

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

Notes: **Very Cold, Wet, Very Dull, Snow at times.**

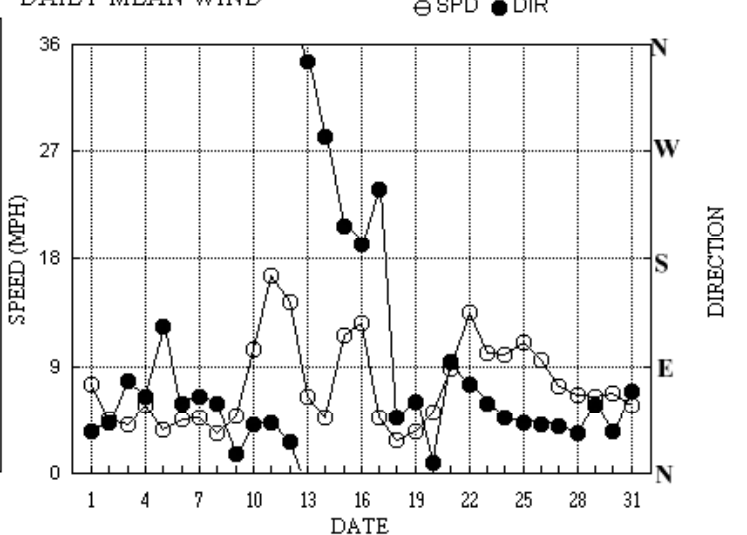
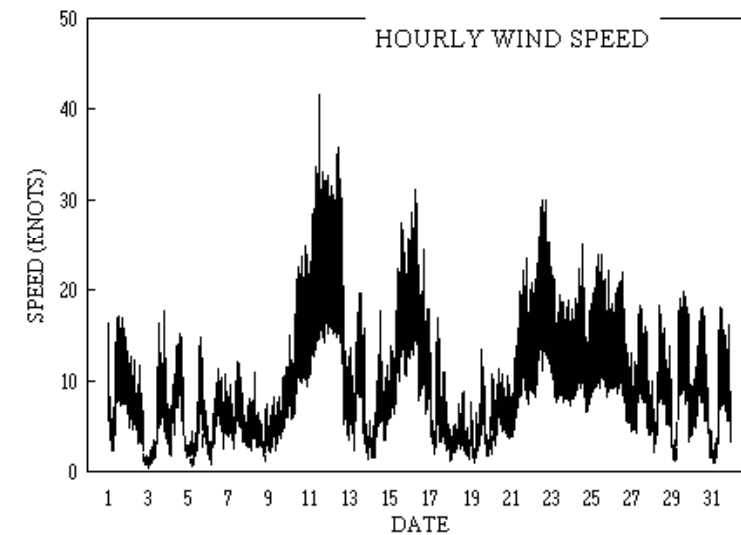
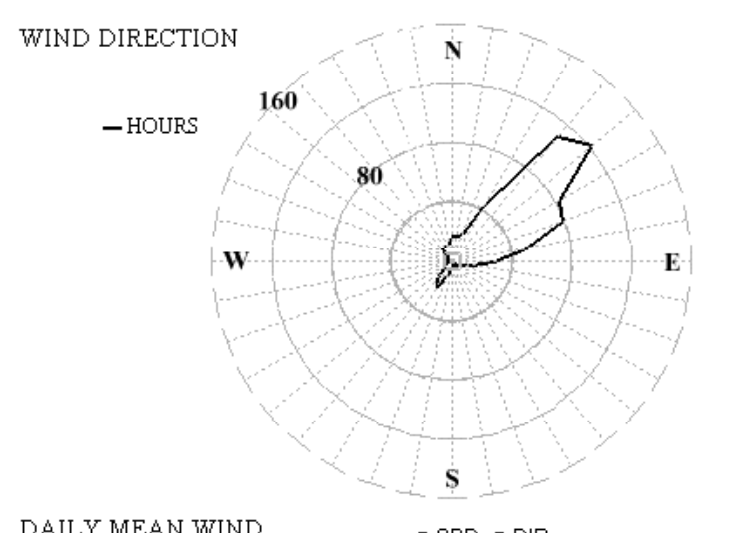
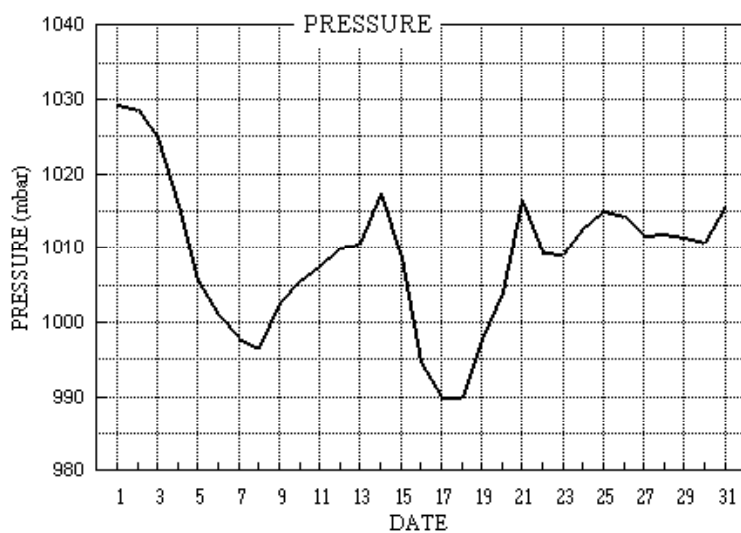
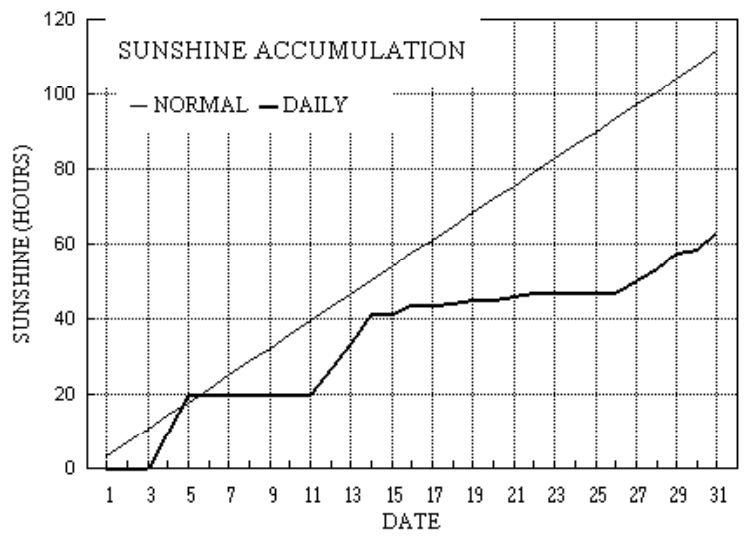
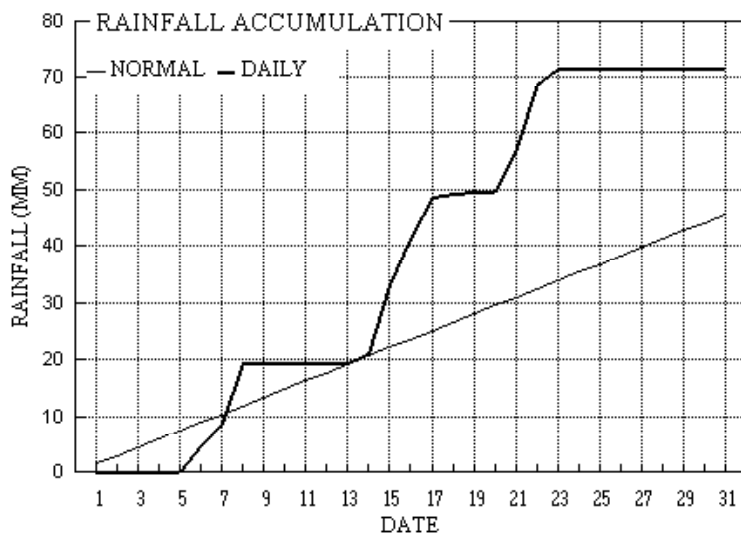
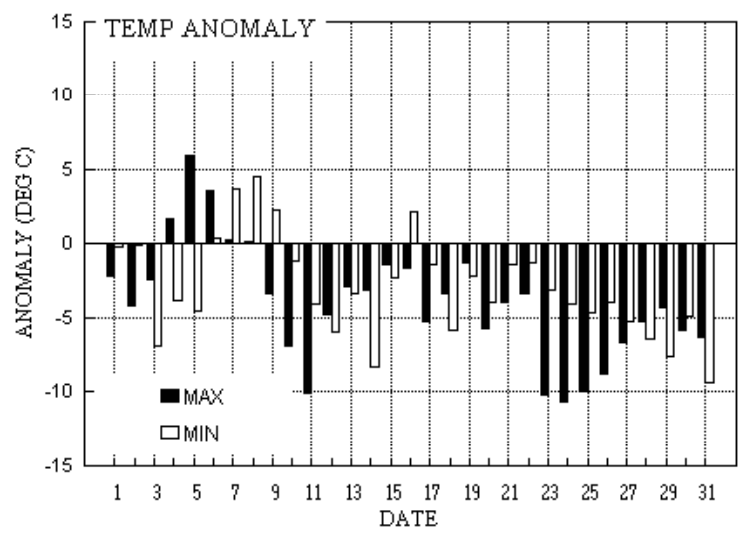
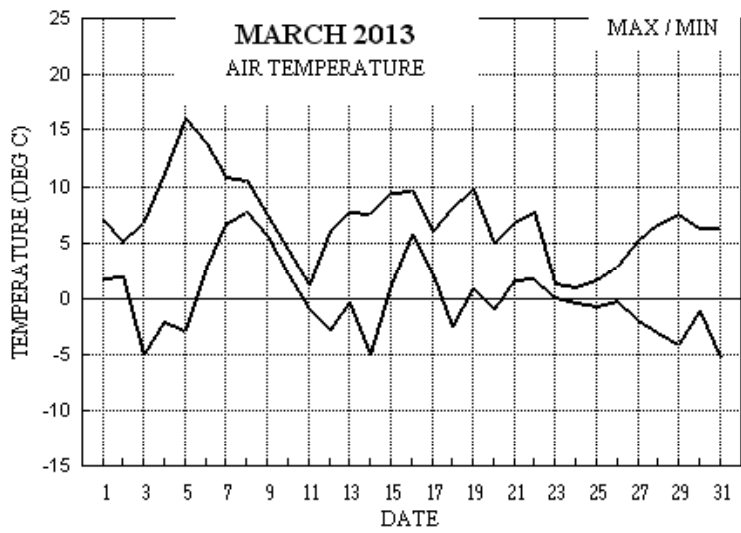
This March we have seen an almost relentless extension of winter into the spring period. **Temperature:** The combination of persistent cold northeasterly wind and cloudy skies resulted in the lowest mean for March since 1962. For the mean max the result was even more dramatic, 7.0°, a value last seen in this month in 1916, and only 1888 with 6.8° had a lower value in the past 132 years. The mean min of 0.1° this March is lowest since 1962, though 1970 was close with 0.2°. The highest max occurred on the 5th and is 0.7° below the median. The lowest max is 3.5° below the median and is lowest since 1979. The highest min is 1.0° below the median and the lowest min is 1.2° below its median. There were 11 more days with air frost than average, and most since 1962. The duration of air frost is 85.8 hours above average and most since before 1982. Earth temperatures are over 1.5° below normal. **Rainfall:** At 56 % above average this is the wettest March since 2008, but despite this there were 2 more dry days than average, and 3 dry spells, two of 5 days ending on the 5th and 13th, and one unbroken at the end of the month after 8 days. There were 6 falls of over 5 mm, 3 more than average and most since 2001. The duration of measurable rain is 43.3 hours above average and also most since 2001. The highest rainfall rate was 39 mm/hr on the 7th. Snow, much of it very slight, fell on 10 days, 7 more than average, but the only significant fall was on the 23rd, resulting on a temporary covering 2cm deep at 0900 hours on that day. Thunder occurred on the 18th and 19th. Freezing rain fell between 0530 and 0630 hours on the 18th. **Sunshine:** The has been a very dull March, probably one of the dullest for over a century, although in recent years 2001 fared worse. Sunshine was very poor or absent from the 1st to the 3rd, 6th to the 11th and 15th to the 26th. The daily mean is 0.54 hours less than in February, when on average it is 0.83 hours more. Overall there were 22 days with <3 hours, 5 days with =>6 hours and 2 with =>9 hours. **Commentary: From the 1st to the 8th :** This is the only part of the month to have any mild weather, albeit only 2 days. Daily max temperatures started 2° to 4° below normal until the 3rd, then climbed up to 6° above normal on the 5th, dropping back to normal by the 7th. Daily min temperatures ranged from 7° below normal on the 3rd to 4° above on the 8th. Dry until the 5th, then wet, with 19.4 mm in 3 days to the 8th. Apart from the two sunniest days of the month on the 4th and 5th, the rest were almost sunless. Winds were mainly light NE'ly. **From the 9th to the 31st :** This period was cold throughout. Daily max temperatures were over 10° below normal on the 11th, 23rd and 24th, and came up to around 1° below normal on the 15th, 16th and 19th. Daily min temperatures ranged from 8° to 9° below normal on the 14th, 29th and 31st, coming up to between 1° and 2° below normal on the 10th, 17th, 21st and 22nd. There were 2 wet episodes, from the 14th to the 17th, 29.3 mm, and from the 21st to the 23rd, 21.8 mm., and 14 of the 23 days were dry. Sunshine was above average from the 12th to the 14th and near average from the 27th onwards, otherwise there was little to be had. Light NE'ly winds on the 9th increased to strong by the 11th, decreased to moderate N'ly on the 13th, then light W'ly on the 14th, increasing fresh S'ly on the 15th, becoming light NE'ly by the 18th and continued moderate or fresh NE'ly until 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			
-0.8°	-0.6°	136%	56%	-3.9°	-3.5°	204%	70%	-6.8°	-4.7°	136%	45%

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for March 2013



Month: MARCH 2013

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	7.0	1.8	tr	-1.7	4.5	5.8	0.0	0.0	1029.3	0	1	0	0	0	35	6.3	6.5	32	17	1429	32	10	14	0.0	
2	5.1	2.0	0.0	1.1	4.8	5.9	0.1	4.7	1028.5	0	0	0	0	0	43	3.6	3.9	65	13	0409	38	7	00	0.0	
3	6.9	-5.0	0.0	-10.5	4.6	5.9	0.0	8.9	1024.8	1	1	0	0	0	78	3.1	3.5	79	18	2033	78	7	20	0.0	
4	11.2	-2.1	0.0	-8.9	4.4	5.9	9.9	6.6	1015.6	1	1	0	0	0	64	4.9	4.9	67	15	1318	61	9	13	0.0	
5	16.0	-2.8	tr	-7.7	4.4	5.9	10.1	8.2	1005.7	1	1	0	0	0	123	2.3	3.1	176	15	1443	154	8	14	0.0	
6	13.9	2.8	4.8	-1.9	4.7	5.9	0.0	0.0	1001.0	0	1	0	0	0	59	3.8	3.9	65	12	1108	61	6	11	9.0	
7	10.8	6.7	3.7	4.9	5.5	5.9	0.0	0.0	997.8	0	0	0	0	0	65	4.0	4.1	67	12	1055	66	6	11	5.0	
8	10.6	7.8	10.9	8.3	6.2	6.0	0.0	0.0	996.4	0	0	0	0	0	58	2.9	3.0	80	11	0844	64	4	05	12.2	
9	7.5	5.5	0.1	5.9	6.7	6.2	0.0	0.0	1002.5	0	0	0	0	0	16	4.0	4.2	28	12	2053	27	7	21	0.5	
10	4.3	2.2	tr	1.9	6.8	6.4	0.0	0.0	1005.5	0	0	1	0	0	41	8.9	9.0	39	25	1950	49	11	14	0.0	
11	1.2	-0.9	tr	-1.8	6.3	6.5	0.0	14.8	1007.4	1	1	1	0	0	42	14.3	14.4	47	42	1303	46	17	15	0.0	
12	6.1	-2.8	tr	-5.2	5.6	6.6	6.9	8.7	1010.0	1	1	1	0	0	26	12.1	12.4	31	36	1121	28	17	02	0.0	
13	7.8	-0.3	0.0	-5.9	5.4	6.6	6.3	3.4	1010.6	1	1	0	0	0	345	5.2	5.5	6	20	1201	351	9	10	0.0	
14	7.6	-5.0	1.6	-11.5	5.1	6.5	8.1	8.3	1017.3	1	1	0	0	0	282	2.9	4.1	315	18	1344	221	6	22	1.1	
15	9.5	1.2	11.8	-3.0	5.0	6.5	0.2	0.0	1008.7	0	1	0	0	0	208	10.0	10.1	209	28	1433	206	14	15	13.0	
16	9.6	5.8	8.4	5.0	5.6	6.4	2.0	0.0	994.6	0	0	0	0	1	192	10.6	10.9	174	31	0730	186	15	08	5.0	
17	6.1	2.2	7.5	-1.5	6.0	6.4	0.0	1.3	989.8	0	1	0	0	1	239	1.9	4.1	250	18	0005	247	8	00	5.1	
18	8.0	-2.5	0.6	-7.6	5.8	6.4	0.4	7.8	990.0	1	1	0	0	1	47	1.7	2.4	146	9	1604	117	4	16	2.1	
19	9.8	0.9	0.2	-1.4	5.9	6.5	1.1	0.0	997.6	0	1	0	0	1	60	2.1	3.0	63	14	1432	78	6	15	0.7	
20	5.0	-1.0	tr	-7.1	5.9	6.5	0.0	1.3	1004.0	1	1	0	0	0	9	3.8	4.4	352	12	1104	11	6	11	0.0	
21	6.9	1.7	7.7	-2.0	5.8	6.5	0.8	0.0	1016.5	0	1	0	0	0	94	7.5	7.6	92	24	1955	106	11	15	10.2	
22	7.7	1.8	11.5	1.9	5.9	6.5	0.9	0.0	1009.4	0	0	0	0	1	74	11.7	11.7	67	30	1917	68	15	17	14.3	
23	1.3	0.2	2.6	0.0	6.0	6.6	0.0	0.0	1009.2	0	0	1	1	0	59	8.7	8.8	70	23	0100	71	11	01	7.6	
24	1.0	-0.4	tr	-0.2	5.4	6.6	0.0	12.4	1012.6	1	1	1	0	0	47	8.6	8.6	55	25	1359	53	11	14	0.3	
25	1.7	-0.7	tr	-0.7	5.1	6.5	0.1	1.5	1015.0	1	1	1	0	0	43	9.5	9.5	56	24	0910	55	11	12	0.0	
26	3.0	-0.2	tr	-2.0	4.9	6.5	0.0	0.8	1014.2	1	1	1	0	0	41	8.2	8.2	58	22	1305	53	10	12	0.0	
27	5.2	-1.9	tr	-6.8	4.8	6.4	3.1	9.1	1011.8	1	1	1	0	0	40	6.2	6.3	36	19	1031	47	9	10	0.0	
28	6.6	-3.0	tr	-9.1	4.9	6.3	3.6	6.5	1011.9	1	1	1	0	0	33	5.6	5.7	53	18	1006	48	9	12	0.0	
29	7.6	-4.1	0.0	-10.8	4.9	6.2	4.0	8.8	1011.5	1	1	0	0	0	57	5.3	5.6	47	20	1511	69	10	13	0.0	
30	6.3	-1.1	tr	-7.3	5.0	6.2	1.0	4.7	1010.8	1	1	1	0	0	35	5.8	5.8	34	18	1458	28	9	09	0.0	
31	6.4	-5.3	tr	-12.0	5.0	6.2	4.5	8.6	1015.6	1	1	0	0	0	69	4.8	5.0	65	18	1152	58	9	12	0.0	
Total			71.4				63.1	126.4																	86.1
Mean	7.0	0.1		-3.1	5.4	6.3	2.04	4.1	1008.9						51	4.2	6.5								
Anom	-4.2	-3.1	156%	-3.0	-1.7	-1.2	57%																		-7.0
Daily mean		3.6																							
Anom		-3.6																							

Number of days with:

Air frost = 17 Ground frost = 23 Nil sun = 13
Snow falling = 10 Snow lying = 1 Thunder = 2
Hail=>5mm = 0 Hail<5mm or ice = 5 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 2013

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	56	8	02	04	08	4.5	3.8	95	4.9	1029.3	1	006	58	6	5	8	7	3	/	/	86706	88708					1	
2	83	8	03	06	11	2.6	-1.8	72	3.3	1028.5	7	001	02	5	2	8	5	4	/	/	81715	88620					2	
3	45	8	36	02	04	0.0	-0.8	94	3.5	1024.8	0	000	10	2	2	8	5	5	/	/	82620	88625					3	
4	40	6	08	06	11	3.2	1.9	91	4.3	1015.6	8	007	05	2	2	2	6	4	0	1	82710	86080					4	COTRA Hoar slt in shade
5	20	0	04	02	03	3.0	2.2	95	4.5	1005.7	0	001	10	0	0	0	0	9	0	0							5	Hoar slt in shade
6	50	7	05	05	08	8.3	5.2	81	5.5	1001.0	0	004	05	6	2	2	5	7	7	/	81650	86358	87362				6	2Sc56
7	14	8	07	05	10	7.9	7.5	97	6.5	997.8	4	000	63	6	6	6	7	2	2	/	86704	88540					7	
8	20	8	08	05	11	9.3	9.1	98	7.3	996.4	3	013	60	6	4	7	7	2	2	/	82703	87705	88515				8	
9	28	8	36	03	06	5.8	5.4	97	5.6	1002.5	1	015	10	2	2	8	6	2	/	/	82704	87705	88708				9	
10	68	8	04	08	18	3.0	0.7	85	4.0	1005.5	2	006	02	2	2	8	5	4	/	/	87612	88620					10	
11	82	8	05	15	32	0.3	-5.6	65	2.5	1007.4	2	006	02	8	2	1	8	5	3	7	81825	83362	88265				11	1Sc40 COTRA Cu hum Halo 22 part
12	84	6	03	16	35	0.2	-8.1	53	2.1	1010.0	1	015	03	2	2	2	1	6	3	1	82832	85072					12	1Ac65 COTRA Cu hum U/a cont
13	84	3	34	08	14	3.4	-2.9	63	3.1	1010.6	2	009	03	0	0	1	8	5	3	1	81825						13	1Sc50 1Ac62 2Ci75 COTRA Parhelion
14	59	1	33	05	09	1.2	-1.3	83	3.4	1017.3	2	009	05	0	0	0	0	9	0	1	81080						14	COTRA Hoar mod in shade Gnd frzn
15	80	7	21	09	18	6.5	4.0	84	5.1	1008.7	7	012	21	6	2	8	5	4	3	2	81615	86618	87070				15	/Ac65 COTRA
16	59	8	19	14	30	6.3	4.2	86	5.2	994.6	6	013	63	6	6	7	5	4	2	/	82715	87620	88530				16	
17	60	8	15	07	15	5.9	4.9	93	5.5	989.8	7	018	60	6	2	8	5	3	/	/	83708	86712	88650				17	/Sc25
18	15	7	05	02	05	1.0	0.8	98	4.1	990.0	2	003	21	6	2	7	5	1	/	/	81702	83704	85615				18	7Sc35
19	50	8	12	01	06	3.6	2.4	92	4.6	997.6	2	009	05	5	2	8	6	3	/	/	86706	88708					19	
20	14	8	35	05	08	3.7	3.0	95	4.7	1004.0	3	023	10	2	2	8	6	2	/	/	88703						20	
21	62	7	10	08	14	3.9	0.2	76	3.8	1016.5	0	000	03	2	2	5	8	4	3	8	81815	84645	86275				21	2Sc35 3Ac60 Cu hum
22	58	8	08	11	23	3.3	0.4	81	3.9	1009.4	7	003	05	6	2	4	5	6	7	/	81640	84645	86357				22	8As62
23	15	8	06	09	17	0.7	0.2	97	3.9	1009.2	2	013	71	7	7	6	7	2	2	/	83705	88510					23	Snly 2cm 90% Thaw
24	57	8	05	08	19	0.0	-1.7	88	3.3	1012.6	3	006	22	7	2	8	5	4	/	/	86612	88615					24	Snly 5% 1cm
25	65	8	05	11	22	0.8	-4.3	69	2.7	1015.0	0	003	22	7	2	8	5	5	/	/	86625	88650					25	
26	62	8	05	09	20	0.7	-4.7	67	2.7	1014.2	1	004	02	2	2	8	5	5	/	/	83628	86635	88650				26	
27	61	2	05	07	16	2.9	-3.9	61	2.8	1011.8	0	000	03	1	1	1	1	5	3	0	81828						27	2Ac57 Cu hum
28	59	1	02	07	11	3.0	-1.8	71	3.3	1011.9	2	005	05	0	0	1	1	5	0	0	81820						28	Cu fra/hum
29	68	1	06	08	16	3.6	-3.0	62	3.0	1011.5	7	011	01	1	1	1	8	5	0	0	81825						29	1Sc45 Cu fra
30	80	6	04	06	14	3.1	-3.3	63	3.0	1010.8	2	006	01	2	2	6	8	5	0	0	81825	86645					30	Cu med
31	78	2	06	08	13	3.9	-2.1	65	3.2	1015.6	0	001	03	0	0	1	8	5	0	1	81825						31	1Sc45 2Ci80 COTRA Cu med Hoar slt in shade

Mean vis = 14.5 km

Mean cloud = 6.2 77%

Mean wind speed = 7.1 kn

Mean gust = 14 kn

Mean TT = 3.4 °C

Mean TdTd = 0.3 °C

Mean RH = 81.2 %

Mean r = 4.0 g/kg

Mean PPP = 1008.9 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 2013

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks			
1	80	7	03	09	17	6.0	-0.6	62	3.6	1029.5	6	003	02	6	2	7	8	6	/	/	81830	87638	1	2Sc35	Cu hum				
2	82	7	02	04	08	4.6	-1.8	63	3.3	1026.6	6	016	01	2	2	7	5	5	/	/	87625		2						
3	70	7	08	04	09	6.6	1.7	71	4.2	1022.4	6	019	02	2	2	7	5	5	/	/	83625	87630	3						
4	58	6	06	09	14	10.0	0.9	53	4.1	1010.0	7	033	05	2	2	0	0	9	0	1	86078		4	COTRA	U/a cont				
5	75	1	17	08	15	15.4	4.3	47	5.2	1002.2	6	019	02	0	0	1	1	6	0	1	81848		5	1Ci78					
6	58	7	05	04	10	13.3	5.8	60	5.8	999.5	6	008	05	2	2	1	5	6	7	/	81645	87360	6	2Ac58					
7	25	8	07	05	11	9.8	8.6	92	7.1	994.7	7	015	21	6	2	8	5	2	/	/	82705	87707	87612	7					
8	30	8	04	03	05	10.2	9.9	98	7.7	998.4	3	004	61	6	6	7	7	2	2	/	85705	87707	88530	8					
9	50	8	36	04	07	6.6	5.4	91	5.6	1003.3	3	003	50	5	2	8	6	3	/	/	83708	88710	9						
10	65	7	05	11	22	2.6	-1.0	77	3.6	1006.4	3	003	26	8	2	7	8	4	/	/	81715	84818	87625	10	Cu med				
11	70	7	05	13	25	0.8	-7.9	52	2.1	1007.0	8	009	26	8	2	3	8	6	1	8	82830	86465	87268	11	2Sc45	Cu med Cs edge NNW jpNW&E vv50k ex p			
12	84	5	03	16	30	4.0	-7.0	45	2.3	1009.4	7	006	15	1	1	5	8	6	0	0	83845	83650	12	Cu hum	jp W-NW				
13	70	7	36	09	18	5.5	-5.5	45	2.5	1010.8	5	002	15	2	2	3	2	6	6	/	83845	86358	13	Cu med	jp all quads vv50k ex p				
14	84	3	28	05	12	6.2	-7.1	38	2.2	1015.8	6	014	14	1	1	3	2	7	6	1	83850		14	1Ac60	1Ci75	Cu med	jpW		
15	68	8	21	13	28	8.5	4.6	76	5.3	1004.5	7	023	60	8	6	7	8	5	2	/	84820	87630	88550	15					
16	75	6	18	11	18	8.7	4.1	73	5.2	993.4	7	016	25	8	2	5	8	5	0	1	83820	83070	16	2Sc50	COTRA	Cu med	jpW&S		
17	65	8	33	04	09	4.0	2.8	92	4.7	988.0	6	012	61	8	6	8	8	3	/	/	82707	84810	88625	17	Cu med				
18	65	7	36	03	06	7.4	3.0	74	4.8	990.5	3	003	15	8	2	6	9	4	6	1	81715	81920	83825	18	4Sc40	3Ac58	/Ci72	Cu con	jpE-S
19	70	2	08	05	14	7.4	1.7	67	4.4	997.4	7	010	15	1	1	1	9	5	6	3	81920	81825	19	1Sc50	1Ac58	1Ci70	Cu con	jpS	
20	40	8	35	05	11	4.2	2.0	85	4.4	1010.0	2	027	20	5	2	8	8	3	/	/	82708	86810	88618	20	Cu hum				
21	65	8	09	07	19	6.6	-0.7	60	3.6	1014.5	7	015	03	2	2	5	6	6	2	/	85630	88550	21						
22	50	8	06	12	22	4.8	1.2	78	4.2	1007.2	7	007	79	6	2	3	5	6	2	/	83640	88550	22						
23	45	8	05	08	19	1.0	0.4	96	3.9	1010.4	0	003	68	7	6	7	7	3	2	/	87707	88515	23	Thaw	Snly	80%	1cm		
24	62	8	05	11	24	-0.2	-3.0	81	3.0	1013.0	2	001	70	7	2	8	5	4	/	/	86612	88615	24	Snly	tr				
25	61	8	05	11	21	0.8	-4.3	69	2.8	1014.4	8	004	22	7	2	8	5	5	/	/	87625	88630	25						
26	63	8	05	08	21	1.3	-5.2	62	2.6	1013.5	6	005	14	2	2	8	5	6	/	/	85630	88635	26	Vir	W				
27	62	7	04	07	15	4.1	-5.2	51	2.6	1011.2	5	003	02	2	2	7	8	6	/	/	83838	85645	87656	27	Cu med				
28	63	7	04	07	14	4.0	-4.7	53	2.7	1012.6	1	002	02	8	2	7	8	6	/	/	82835	87645	28	Cu med					
29	80	6	06	10	18	7.6	-5.4	39	2.6	1008.9	7	015	02	2	2	6	8	6	/	/	81845	86648	29	Cu hum	Absent	vv&cld	est		
30	80	7	04	10	18	4.5	-2.7	59	3.1	1011.8	3	005	87	8	2	7	8	6	/	/	81835	83645	87650	30	Cu hum.	Sn pellets			
31	82	7	11	07	16	5.5	-5.7	44	2.5	1013.4	7	012	02	2	2	7	8	6	/	1	82842	87648	31	/Ci78	Cu hum				

Mean vis = 18.7 km

Mean cloud = 6.7 84%

Mean wind speed = 7.8 kn

Mean gust = 16 kn

Mean TT = 5.9 °C

Mean TdTd = -0.4 °C

Mean RH = 66.2 %

Mean r = 3.9 g/kg

Mean PPP = 1008.1 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.

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
2013	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	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.27	0.00	0.00
	7	0.00	0.00	0.00	0.84	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.79	1.00	0.00	0.00
	8	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	1.00	1.00	0.01	0.00
	9	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.00	1.00	0.07	0.00
	10	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.64	0.92	0.09	0.00
	11	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.69	0.68	0.00	0.35
	12	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.43	0.73	0.00	0.30
	13	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.18	0.92	0.00	0.47
	14	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.26	0.63	0.02	0.48
	15	0.00	0.03	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.01	0.58	0.00	0.22
	16	0.00	0.02	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.35	0.00	0.23
	17	0.00	0.00	0.00	0.08	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.03	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	0.05	0.00	9.93	10.13	0.00	0.00	0.00	0.00	0.00	0.00	6.92	6.32	8.12	0.20	2.04

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	0.04	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.41	0.00	0.00	0.99	0.07
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.00	0.00	0.00	1.00	0.22
8	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.55	0.00	1.00	0.30
9	0.00	0.21	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.65	0.72	0.83	0.50	0.83	0.29
10	0.00	0.01	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.09	0.23	0.19
11	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.01	0.10	0.21	0.00	0.19	0.18
12	0.00	0.00	0.01	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.08	0.02	0.15
13	0.00	0.13	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.67	0.19	0.07	0.19
14	0.00	0.08	0.61	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.89	0.03	0.11	0.19
15	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.13	0.10	0.00	0.11
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.06	0.00	0.00	0.12
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.03
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	0.44	1.05	0.00	0.81	0.88	0.00	0.00	0.02	0.00	3.05	3.60	3.96	1.00	4.48	62.98

March 2013	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	4.20	7.0	1130	1.8	224	78.3	95.9	824	60.3	1627	0.59	3.93	5.5	1033	3.1	2213	1029.41	1030.3	2145	1028.5	547	0.3
2	2.12	5.1	1439	-3.1	2355	74.7	93.9	2347	62.0	1445	-2.00	3.23	3.6	1439	2.8	2353	1027.72	1030.1	42	1025.7	1759	0.0
3	1.33	6.9	1613	-5.0	451	84.6	95.6	511	64.3	1640	-1.14	3.50	4.4	1055	2.5	452	1023.27	1026.1	5	1019.6	2349	0.1
4	3.54	11.2	1423	-2.1	341	80.8	96.4	418	49.4	1428	0.20	3.86	4.7	1159	3.1	341	1013.03	1019.7	0	1007.4	2359	0.1
5	5.88	16.0	1358	-2.8	629	76.6	96.9	700	44.8	1311	1.48	4.34	6.0	1021	3.0	629	1004.19	1007.5	6	1001.9	2350	0.1
6	8.70	13.9	1422	2.9	310	76.8	91.0	2349	57.5	1435	4.68	5.38	6.1	1422	4.2	310	1000.31	1002.0	3	998.9	1636	0.2
7	8.42	10.8	1344	6.7	542	95.4	97.8	2341	89.9	19	7.72	6.65	7.7	1344	5.7	20	996.49	999.6	1	994.5	1458	7.5
8	9.21	10.6	1416	8.0	2321	98.0	98.5	727	97.4	1607	8.92	7.19	7.9	1416	6.6	2326	997.59	1001.0	2250	994.8	7	8.2
9	6.07	8.2	0	3.4	2349	93.6	98.4	127	84.6	2254	5.11	5.54	6.7	0	4.2	2321	1002.75	1005.4	2258	1000.4	337	0.1
10	2.32	4.3	1300	0.3	2355	80.9	88.4	643	73.9	1303	-0.64	3.66	4.3	10	3.0	2118	1006.08	1007.7	2156	1004.6	458	0.0
11	-0.43	1.2	1224	-2.7	2330	66.1	77.6	317	49.3	1651	-6.08	2.44	3.1	11	1.9	1651	1007.42	1008.6	2348	1006.5	320	0.0
12	0.90	6.1	1312	-2.8	43	61.4	76.8	2202	34.8	1309	-5.98	2.48	3.4	2136	1.8	1029	1009.53	1010.7	2122	1007.3	200	0.0
13	2.58	7.8	1402	-2.8	2352	64.9	90.9	2357	37.7	1410	-3.75	2.89	3.4	940	2.3	1425	1011.35	1015.3	2356	1009.5	519	0.0
14	1.71	7.6	1401	-5.0	622	66.1	95.8	740	34.0	1423	-4.82	2.67	3.5	921	2.0	1716	1015.86	1017.6	1013	1013.5	2358	0.1
15	5.97	9.5	1433	2.3	0	81.9	90.6	646	66.9	0	3.07	4.83	5.7	2223	3.0	0	1006.61	1013.6	0	1000.2	2353	8.2
16	6.37	9.6	1339	4.2	1837	84.6	90.8	1954	65.0	1340	3.94	5.12	5.8	1414	4.4	2359	994.65	1000.4	5	991.2	2036	10.6
17	3.18	6.1	858	-1.3	2353	91.3	97.5	2356	79.7	147	1.88	4.46	5.6	851	3.4	2353	990.13	993.4	100	987.8	1411	6.6
18	2.49	8.0	1426	-2.5	343	93.7	98.6	829	73.9	1459	1.54	4.39	5.8	1310	3.2	433	991.09	994.8	2359	989.5	257	1.0
19	4.05	9.8	1437	0.0	2322	87.8	96.6	2343	59.9	1511	2.09	4.48	5.4	1246	3.7	2322	997.51	999.8	2356	994.7	0	0.3
20	2.92	5.0	1251	-1.0	154	91.0	97.5	218	83.3	1339	1.57	4.28	5.0	1002	3.4	154	1007.46	1016.2	2239	999.7	104	0.1
21	3.99	6.9	1333	1.7	622	77.4	91.6	2359	57.9	1511	0.26	3.86	4.3	2324	3.5	1511	1015.10	1016.7	712	1012.2	2352	2.7
22	3.67	7.7	1122	1.8	609	84.9	94.2	529	65.7	1227	1.30	4.18	4.7	1057	3.8	855	1008.48	1012.4	2	1005.8	1723	5.8
23	1.15	3.1	0	0.2	751	94.7	96.8	807	89.9	0	0.38	3.91	4.3	13	3.7	751	1009.63	1012.0	2255	1006.7	235	9.5
24	0.06	0.9	2323	-0.7	1603	83.1	95.1	100	61.8	2322	-2.55	3.17	3.8	108	2.5	2305	1012.90	1014.5	2045	1011.2	332	0.4
25	0.60	1.7	1236	-0.2	626	67.7	74.6	2227	60.6	147	-4.69	2.68	2.9	2207	2.4	254	1014.44	1015.4	940	1013.8	251	0.2
26	0.73	2.4	1041	-0.2	338	66.3	74.3	2358	57.3	1305	-4.86	2.64	2.9	2358	2.4	1305	1013.54	1014.3	853	1012.5	2353	0.0
27	1.35	5.2	1317	-1.9	553	65.9	84.4	356	47.7	1555	-4.51	2.72	3.2	1316	2.4	1652	1011.77	1012.6	1952	1011.1	1352	0.0
28	1.66	6.6	1114	-3.0	523	66.7	92.3	634	49.3	1104	-4.12	2.81	3.6	927	2.3	2024	1012.63	1014.6	1957	1011.3	511	0.0
29	1.75	8.6	1427	-4.1	433	62.6	88.3	526	33.0	1429	-5.17	2.60	3.3	826	2.1	1416	1010.75	1013.9	4	1008.6	1605	0.0
30	2.08	7.3	1359	-1.9	2220	67.7	81.2	2254	44.1	1402	-3.43	2.95	3.6	1546	2.5	2148	1011.72	1015.6	2353	1008.9	111	0.0
31	1.26	7.4	1156	-5.3	505	67.1	94.3	635	37.9	1436	-4.71	2.68	3.5	843	2.2	1437	1014.30	1015.9	744	1012.4	2359	0.0
Total																						62.1
Mean	3.22	7.17		-0.47		78.5	91.37		60.44		-0.44	3.85	4.63		3.13		1008.64	1011.54		1006.15		
Max	9.21	16.01		7.96		98.0	98.60		97.40		8.92	7.19	7.85		6.58		1029.41	1030.33		1028.53		
Min	-0.43	0.92		-5.27		61.4	74.30		32.99		-6.08	2.44	2.90		1.81		990.13	993.44		987.81		

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

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system

Appendix 1.

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

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

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

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

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

a): The departure of a mean from the current climatological average.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

Frost: An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is -0.1°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 % cover of snow at the 0900 GMT observation.

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

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

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

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

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

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

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

Degrees are from true north

N = North = 360° and 22.5° either side.

NE = NorthEast = 045° and 22.5° either side.

E = East = 090° and 22.5° either side.

SE = SouthEast = 135° and 22.5° either side.

S = South = 180° and 22.5° either side.

SW = SouthWest = 225° and 22.5° either side.

W = West = 270° and 22.5° either side.

NW = NorthWest = 315° and 22.5° either side.

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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