

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 2023

Temperature (°C)	Anomaly	Rank in the past 142 years
Mean maximum	11.4	-0.2 47th highest
Mean minimum	4.5	+1.3 9th highest
Daily mean	7.9	+0.5 24th highest
Highest maximum	16.8	on 30th Lowest maximum 3.0 on 8th
Highest minimum	9.8	on 30th Lowest minimum -3.0 on 11th
Mean grass minimum	2.6	+2.8 Lowest grass minimum -7.3 on 11th
Mean earth @30 cm	7.8	+0.5 Earth @100 cm 7.8 +0.1
Frost duration (hrs)	22.9	Rain duration (hrs) 101.6
Rainfall total (mm)	123.6	299 % 2nd highest
Highest daily fall	34.1	on 31st Highest rate mm/hr 131 on 31st
Number of: Dry days (<0.2mm) 8	Wet days (>0.9mm) 20	days ≥5mm 10
Sunshine total (hrs) 65.2	Daily mean 2.10 52 %	Sunniest day 9.0 on 2nd
N° days with: Air frost 4	Ground frost 7	Snow falling 2 Snow lying 1
Thunder 0	Hail ≥5mm 0	Small hail/ice 1 Fog @09 0 Nil sun 7
Pressure MSL : Mean @09 GMT, mbar 1008.7	-6.9 Highest 1033.1 on 1st	Lowest 980.9 on 10th
Relative humidity : Mean (%) 82.8	Lowest 38 on 27th	Water vapour (g/kg), mean at 09 and 15 GMT 5.6, 5.5
Overall mean wind speed (mph) 7.9	Windiest day 16.8 on 13th	Max gust 43 on 13th
Wind direction (days) N 2 NE 5 E 0 SE 2 S 5 SW 11 W 4 NW 2		
Least windy day (mph) 2.6 on 7th	Calm; less than 0.5 mph (minutes) n/a	

Anomaly = departure from 1991 to 2020 average (degrees C, percent and mbar).

Notes:

Very Dull with Near Record High Rainfall and Above Average Mean Temperature

Temperature: This was the most unremarkable feature of a remarkable month. Generally cool until the 11th, then milder, with no ground frost after the 15th. While the daily mean is 0.5° above the current 30 year climatological average, and 1.4° above the 142 year median, in this millennium 8 Marches have been milder. The generally cloudy nature of the month is responsible for the mean maximum being below average while the mean minimum is well above, the resulting daily mean temperature range being equal lowest with 2006 and 2013 since 2001. The highest max is 0.1° above the long-term median while the lowest max is 1.7° below its median. The highest and lowest min are both 1.0° above their respective medians. The mean grass min is highest since 1981, but the lowest value is lowest since 2018. Earth temperature at 30cm depth is 0.5° above average but is close to average at 1 m depth. The number of days with air frost is 2 less than average, and the duration of air frost is 15.2 hours below average, but there were 9 fewer days with ground frost than average. Anomalies for daily max ranged from +4.7° on the 17th to -7.6° on the 8th, and for daily min, +6.4° on the 22nd to -6.2° on the 11th. **Rainfall:** In what is, on average, Wokingham's driest month of the year, 2023 has seen the wettest March since 1947, and the 2nd wettest in 142 years, with a total almost 3 times the average. The 34.1 mm of rain that fell on the 31st is also close to a record for the month, being 2nd highest in the past 120 years after 36.1 mm in 1964. Although the first 5 days this month were dry, only 3 of the remaining 26 were also dry, and none at all were after the 19th, the total of 8 being 9 below average and lowest for March since 1979. The 10 days with =>5 mm is 7 above average and most for March since 1981. The duration of measurable rain is 55 hours above the average of 46 hours. Thunder was absent, but the rainfall rate reached the violent category on the 23rd, 24th and 31st, and small ice pellets fell on the 24th. Snow fell on the 8th and 10th, giving a 3 cm cover at 09 GMT on the 8th, but which thawed completely later that day. Daily accumulation compared with normal was in deficit until the 7th, becoming a surplus of 12 mm by the 9th, increasing to 22 mm by the 23rd, ending the month 78 mm in surplus.

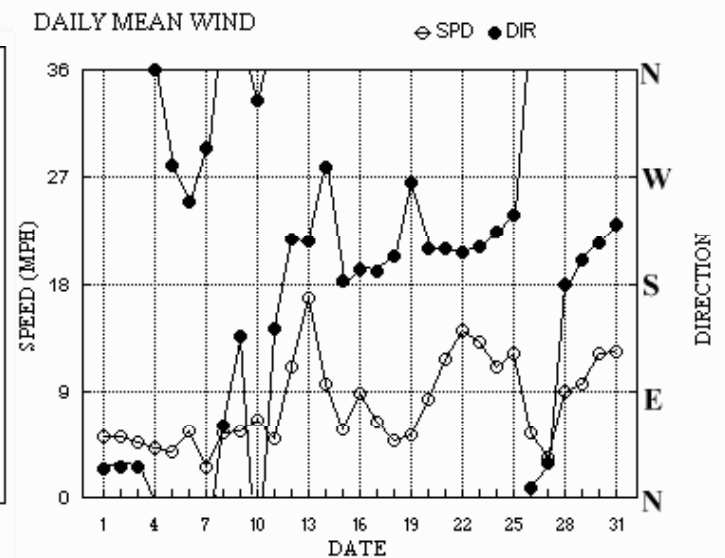
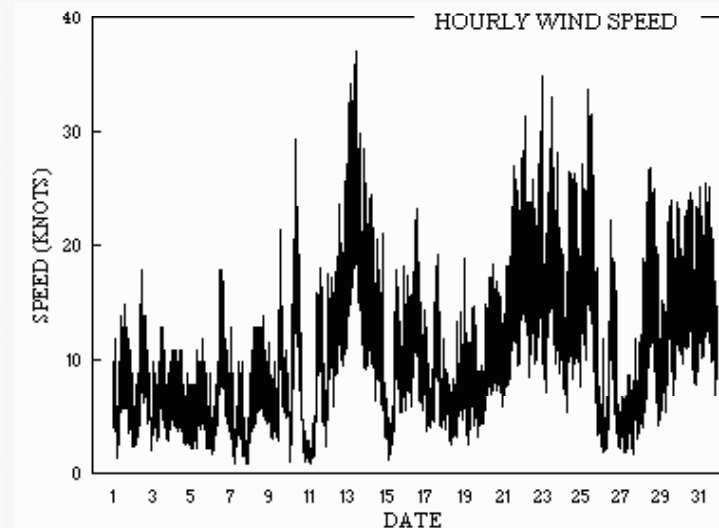
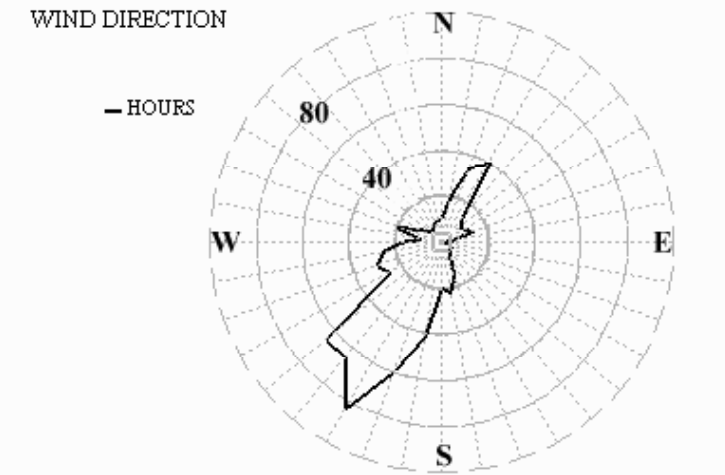
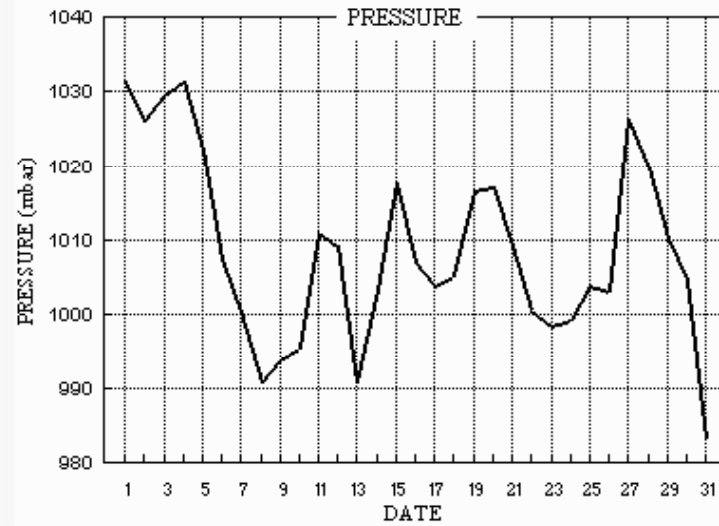
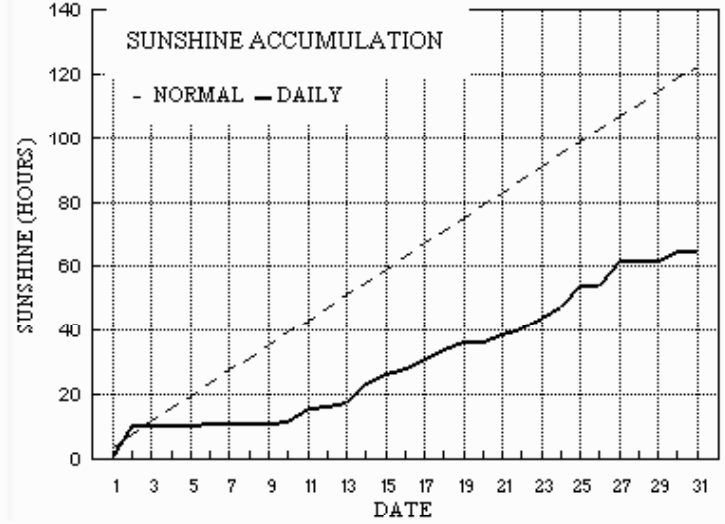
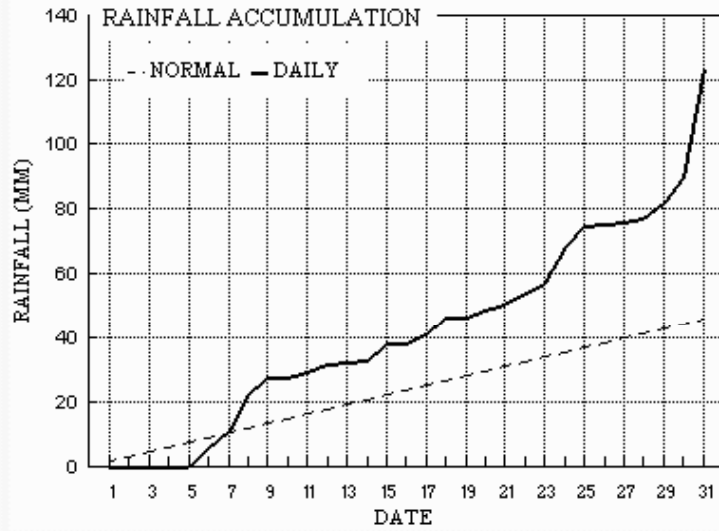
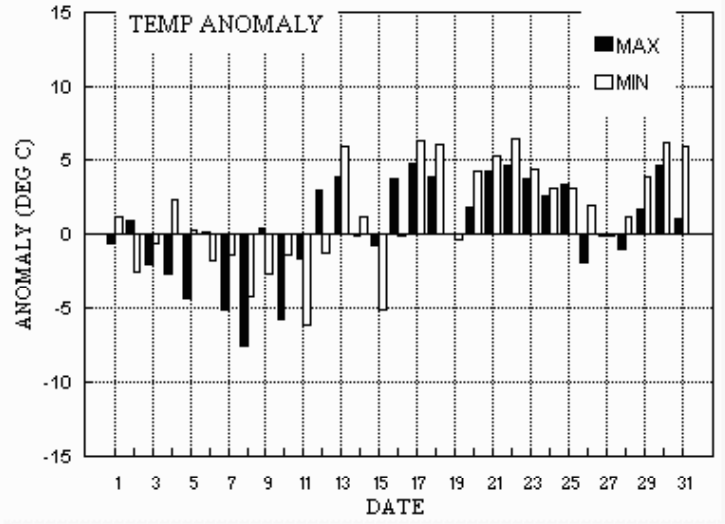
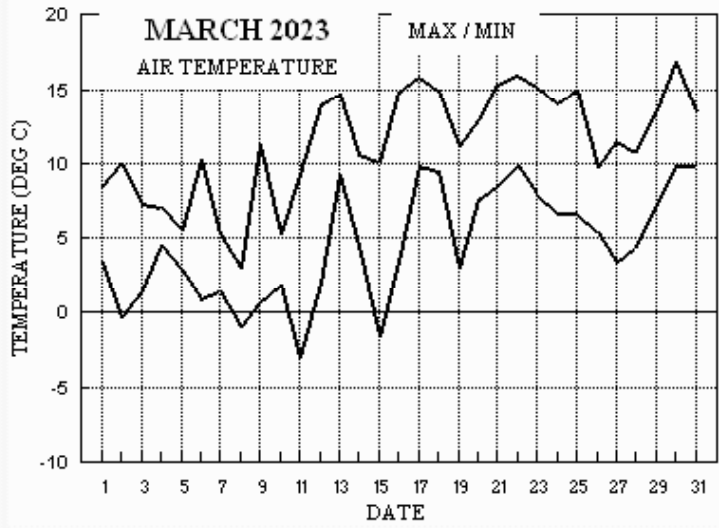
Sunshine: This has been one of the dullest Marches in over 100 years, the total of 65.2 hours being over 26 hours less than in either January or February this year. With just over half the March average this year, it is perhaps surprising to see that the Marches in 2001 and 2013 had even less sun. This year, March got off to a poor start, and apart from the month's sunniest day on the 2nd, which had 82% of the maximum, no day from the 3rd to the 10th had more than 7%, and 4 had zero. Also, the 27th with 58% of the maximum was the only other day to have >50%. Daily accumulation was close to normal on the 3rd, but was 35 hours in deficit by the 9th which increased to 60 hours by the 31st. **Wind:** The mean speed of 7.9 mph is slightly above average, as is the speed on the month's windiest day, but the highest gust is 3 mph above average. Daily mean direction was between N and E from the 1st to the 3rd, on 8th, 26th and 27th, between E and S on the 9th and 11th, between W and N on the 4th, 5th, 7th and 10th, otherwise was between S and W. Mean speeds were mainly light until the 8th, then moderate, increasing strong on 13th, then mainly moderate until 20th, then mainly fresh, except for light on 27th. NB. Wind estimated until the 8th due to instrument failure.

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			
-2.7°	-1.1°	206 %	30 %	+1.8°	+1.1°	199 %	60 %	+2.1°	+3.7°	507 %	64 %

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

Wokingham climatological graphs for March 2023



Month: MARCH 2023

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs	
1	8.4	3.3	tr	1.8	5.4	7.1	1.5	0.0	1031.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	24	4.4	4.5	30	15	1358	25	7	13	0.8	
2	10.0	-0.4	0.0	-5.0	5.7	7.0	9.0	1.1	1026.1	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	27	4.4	4.5	60	18	1030	35	8	11	0.0	
3	7.3	1.4	0.0	-3.9	5.7	6.9	0.0	0.0	1029.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	26	4.1	4.2	40	13	1203	45	6	11	0.0	
4	7.1	4.5	0.0	3.7	5.9	6.9	0.0	0.0	1031.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	360	3.3	3.6	20	11	0700	30	5	01	0.0	
5	5.5	2.8	tr	1.9	6.0	6.9	0.1	0.0	1022.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	280	3.2	3.4	270	12	1401	275	5	14	0.1	
6	10.2	0.9	5.6	-3.2	5.9	6.9	0.8	0.0	1007.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	250	4.8	4.9	250	18	1205	250	8	11	4.3	
7	5.2	1.5	5.6	1.5	6.3	6.9	0.2	4.1	1000.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	294	1.4	2.3	260	13	0030	255	6	00	6.6	
8	3.0	-1.0	10.8	-4.8	6.1	7.0	0.0	1.7	990.9	1 1 1 1	0 0 0 0	0 0 0 0	0 0 0 0	61	4.6	4.7	70	14	1625	75	6	15	15.0	
9	11.2	0.7	5.6	1.2	5.5	7.0	0.0	0.0	993.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	137	2.5	5.0	202	21	1349	206	11	13	6.9	
10	5.2	1.8	tr	2.2	6.4	6.9	0.5	3.0	995.4	0 0 1 0	0 0 0 0	0 0 0 0	0 0 0 0	334	4.4	5.7	351	30	0942	353	13	09	0.2	
11	9.2	-3.0	1.8	-7.3	5.9	6.9	3.9	8.3	1010.9	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	142	3.5	4.4	156	18	1422	166	9	14	4.2	
12	13.9	2.0	2.0	3.9	6.1	6.9	0.6	0.0	1009.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	218	9.3	9.6	224	26	2142	228	13	13	1.2	
13	14.7	9.2	1.0	9.5	7.2	6.9	1.5	0.0	990.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	216	14.5	14.6	227	37	1102	221	19	11	0.7	
14	10.6	4.5	0.6	2.0	7.9	7.1	5.8	0.0	1003.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	278	7.2	8.4	281	26	0035	270	12	03	0.7	
15	10.1	-1.6	5.1	-6.0	7.4	7.3	2.6	4.7	1017.7	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	182	4.7	5.0	178	18	2226	191	9	12	7.2	
16	14.8	3.4	0.1	5.5	7.3	7.4	2.0	0.0	1006.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	192	7.6	7.7	182	23	1400	190	11	15	0.3	
17	15.8	9.8	2.8	7.1	8.3	7.5	3.1	0.0	1003.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	191	5.2	5.6	211	19	1539	208	9	14	3.1	
18	14.9	9.4	5.5	7.0	8.8	7.7	2.8	0.0	1005.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	203	3.2	4.3	252	14	1947	230	7	19	4.3	
19	11.1	3.0	tr	-1.4	9.2	7.9	2.2	0.0	1016.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	265	4.0	4.7	324	19	0023	301	7	00	0.0	
20	12.9	7.5	2.4	6.0	9.0	8.1	0.0	0.0	1017.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	210	7.1	7.2	244	18	1147	219	9	12	2.9	
21	15.3	8.5	1.8	8.3	9.3	8.3	2.6	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	209	10.0	10.1	201	28	2215	204	14	23	2.5	
22	15.9	9.8	3.3	8.0	9.7	8.4	1.9	0.0	1000.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	206	12.2	12.3	206	31	0340	216	15	23	1.6	
23	15.2	7.9	3.0	4.8	9.8	8.6	3.1	0.0	998.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	211	11.2	11.4	231	35	0017	212	16	13	3.2	
24	14.1	6.7	11.1	4.3	9.8	8.8	3.9	0.0	999.2	0 0 0 0	0 0 1 0	0 0 0 0	0 0 0 0	224	9.4	9.6	193	27	1047	222	14	10	3.6	
25	14.9	6.6	6.8	4.7	9.5	8.9	6.0	0.0	1003.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	238	9.9	10.5	254	34	0916	250	15	10	7.9	
26	9.7	5.4	0.2	3.4	9.8	9.0	0.3	0.0	1003.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	9	2.9	4.8	15	22	1357	16	10	12	1.4	
27	11.5	3.3	0.5	1.6	9.5	9.1	7.4	0.0	1026.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	30	0.6	3.0	185	12	1854	193	5	19	0.7	
28	10.7	4.4	1.5	1.5	9.4	9.1	0.0	0.0	1019.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	179	7.5	7.8	178	27	1417	185	13	14	2.1	
29	13.6	7.2	4.4	6.9	9.3	9.1	0.0	0.0	1010.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	200	8.3	8.4	211	24	1547	206	12	21	1.4	
30	16.8	9.8	8.0	7.2	9.7	9.1	3.3	0.0	1004.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	214	10.2	10.6	213	25	1422	223	14	12	6.6	
31	13.4	9.8	34.1	9.5	10.4	9.2	0.1	0.0	983.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	230	9.3	10.8	239	26	0956	196	14	03	12.1	
Total			123.6				65.2	22.9																101.6
Mean	11.4	4.5		2.6	7.8	7.8	2.10	0.7	1008.7					218	4	6.9								
Anom	-0.2	+1.3	299%	+2.8	+0.5	+0.1	52%		-6.9															

Daily mean 7.9 Pressure, abs highest = 1033.1 on 1
 Anom +0.5 Pressure, abs lowest = 980.9 on 10

Number of days with:

Air frost = 4 Ground frost = 7 Nil sun = 7
 Snow falling = 2 Snow lying = 1 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 1 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.

Maximum daily rain rate in mm/hr

All temperatures in degrees Celsius.

Anomaly - Departure from the 1991 to 2020 climatological average

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for MARCH 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	63	6	03	06	11	5.2	2.7	84	4.5	1031.3	0	003	02	2	2	6	5	4	/ /	81612	85625	1	3Sc30	Wind est		
2	58	1	02	05	10	3.9	0.8	80	3.9	1026.1	3	003	05	1	1	1	5	5	0	0	81624		2	Wind est		
3	80	8	03	03	10	5.1	1.0	75	4.0	1029.5	2	011	02	2	2	8	5	5	/ /	88627		3	Wind est			
4	75	8	36	05	10	5.2	0.2	70	3.8	1031.4	0	006	02	2	2	8	5	5	/ /	81620	88628	4	Wind est			
5	62	8	29	05	09	3.0	-1.9	70	3.3	1022.3	7	007	02	2	2	8	5	5	/ /	88626		5	Wind est			
6	61	7	25	04	08	5.1	3.1	87	4.8	1007.5	6	011	02	6	2	6	5	4	7	/	81710	85645	87358	6	2Sc30	Wind est
7	59	8	26	03	06	2.5	1.6	94	4.3	1000.2	3	004	60	6	2	4	7	2	2	/	81705	88550		7	Wind est	
8	25	8	06	06	13	0.7	0.4	98	4.0	990.9	4	000	68	7	5	8	7	2	/ /	87705	88708		8	Wind est	Thaw. Sn ly 3cm	
9	15	8	10	04	08	3.0	2.9	99	4.7	993.9	8	007	51	6	5	8	7	2	/ /	87703	88704		9	Wind est		
10	58	8	35	13	24	2.0	0.8	92	4.1	995.4	2	088	61	7	6	8	7	3	2	/	87708	88520		10	Wind sensor OK.	Past slt sleet.
11	70	7	07	03	05	2.0	1.3	95	4.2	1010.9	0	006	02	2	2	3	5	6	7	1	83635	85358	85365	11	/Ci72	COTRA
12	59	7	22	08	13	9.2	7.2	87	6.3	1009.2	2	014	05	1	1	7	5	4	/ /	86712	87618		12			
13	58	7	22	17	34	12.1	8.0	76	6.8	990.9	7	013	60	6	2	7	5	5	/ /	86620	87645		13			
14	61	7	34	09	22	4.6	2.0	83	4.4	1003.3	2	061	60	6	2	7	5	4	/ /	86610	87625		14			
15	58	8	21	03	06	3.4	2.4	93	4.5	1017.7	1	007	05	1	1	0	0	9	0	7	88275			15	COTRA	Halo 22°
16	84	7	19	09	16	10.1	8.0	87	6.7	1006.8	7	005	01	6	2	7	5	4	/ /	83613	85635	87650	16			
17	60	8	17	04	08	10.9	10.0	94	7.7	1003.9	3	007	50	5	2	7	7	2	2	/	87705	88558		17		
18	57	8	16	03	06	9.6	8.8	95	7.1	1005.2	1	009	63	6	2	6	5	2	2	/	83705	85612	88540	18		
19	82	7	30	05	12	7.5	3.4	75	4.8	1016.5	2	020	03	1	1	7	8	4	/ /	81818	87630		19	Cu hum		
20	58	8	22	07	13	10.5	9.4	93	7.3	1017.1	0	001	50	5	2	8	6	2	/ /	87705	88707		20			
21	57	8	20	08	15	10.4	9.2	92	7.2	1009.1	7	002	50	5	1	8	5	3	/ /	87707	88620		21			
22	70	8	20	10	21	11.8	10.2	90	7.8	1000.6	3	005	21	6	2	6	8	4	3	7	84811	83630	88272	22	3Ac58	Cu med jp NW&N
23	62	5	21	15	25	12.0	7.5	74	6.5	998.4	3	004	25	8	1	5	8	4	0	0	83817	83630		23	Cu med	jpW
24	70	6	22	11	21	10.5	7.0	79	6.3	999.2	3	011	03	1	1	6	2	4	0	0	86818			24	Cu med	
25	75	4	25	17	29	10.8	5.3	69	5.6	1003.8	2	021	01	8	1	4	8	5	0	0	84825			25	1Sc45	Cu med
26	65	8	33	04	07	6.4	5.4	93	5.6	1003.1	2	025	61	6	6	6	5	3	2	/	82706	85625	88545	26	2Sc18	
27	86	5	03	02	05	6.2	0.1	65	3.8	1026.4	1	016	01	2	2	5	5	6	0	0	81645	85656		27		
28	61	8	18	08	18	8.2	6.7	90	6.0	1019.7	8	009	61	6	2	7	5	4	2	/	83611	86615	88545	28		
29	25	8	17	05	12	10.7	10.1	96	7.7	1010.3	8	014	58	5	2	8	6	2	/ /	87703	88704		29			
30	60	7	23	13	23	12.7	9.2	79	7.2	1004.7	2	015	80	8	2	7	8	4	/ /	85818	86640		30	Cu med		
31	56	8	21	12	21	10.6	9.2	91	7.4	983.2	7	009	58	6	5	7	5	3	2	/	85708	87612	88520	31		

Mean vis = 15.5 km

Mean cloud = 7.1 88%

Mean wind speed = 7.3 kn

Mean gust = 14 kn

Mean TT = 7.3 °C

Mean TdTd = 4.9 °C

Mean RH = 85.3 %

Mean r = 5.6 g/kg

Mean PPP = 1008.7 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

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MARCH 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hshs	NChshs	Date	Remarks
1	75	6	04	05	15	7.6	4.2	79	5.0	1027.2	7	024	80	8	2	6	8	4	0	0	82818	86640			1	Wind est Cu med vv40k ex p
2	67	1	03	07	14	9.6	0.8	54	3.9	1025.2	7	010	02	0	0	1	1	6	0	0	81833				2	Wind est Cu hum
3	88	8	03	05	10	6.5	1.2	69	4.1	1029.2	7	008	02	2	2	8	8	5	/	/	81820	88628			3	Wind est Cu hum
4	81	8	35	03	07	6.2	-0.3	63	3.6	1028.9	7	016	02	2	2	8	5	5	/	/	88628				4	Wind est
5	81	8	28	06	12	5.1	-1.4	63	3.4	1016.4	7	034	02	2	2	8	8	5	/	/	81826	85638	88645		5	Cu hum wind est
6	70	8	26	07	17	8.7	3.3	69	4.9	1003.8	7	021	25	8	2	7	8	5	7	/	82825	87640	88465		6	/Ac59 Cu med jpNW, SE&S Wind est
7	84	7	36	04	10	3.5	0.7	83	4.0	1001.1	2	006	21	6	2	7	8	4	/	/	82818	83640	87650		7	Wind est Cu med
8	58	8	07	06	12	1.8	1.4	97	4.3	989.2	8	015	61	7	6	7	7	2	2	/	87704	88515			8	Wins est Thaw. Sn ly 2cm 60%
9	62	8	20	08	18	11.0	9.3	89	7.4	989.7	7	026	02	5	2	8	5	4	/	/	87612	88618			9	Wind sensor OK.
10	86	7	34	06	15	4.5	-0.9	68	3.6	1006.8	1	033	01	2	2	4	8	5	0	6	82825	83645	85273		10	COTRA Cu med
11	83	8	16	10	19	7.6	-1.1	54	3.5	1008.7	7	014	03	2	2	6	5	6	7	/	81635	86650	88360		11	
12	73	8	23	10	23	12.2	7.7	74	6.6	1006.4	7	013	03	2	2	7	5	5	2	/	87620	88460			12	
13	60	7	22	14	28	13.2	7.2	67	6.4	989.0	8	015	02	2	2	7	8	5	/	/	85825	86645			13	
14	86	2	29	09	21	9.4	-1.9	45	3.3	1009.6	2	017	02	1	1	2	2	6	0	3	82848				14	1Ci65 Cb top N&NW
15	63	8	18	08	14	8.3	3.4	71	4.8	1015.4	7	019	60	6	2	5	8	5	2	/	83822	83635	88540		15	Cu med
16	83	8	19	09	23	13.1	8.2	72	6.8	1004.0	7	017	03	2	2	3	6	5	7	7	83620	83363	88270		16	Halo 22° part
17	86	3	20	10	18	15.2	8.4	64	6.9	1002.9	6	007	01	8	1	3	8	6	0	0	83830				17	1Sc40 Cu med
18	75	5	21	03	09	14.6	7.4	62	6.4	1005.8	0	000	15	6	1	3	8	5	6	2	82827	83070			18	2Sc50 1Ac60 Cu con E jpS vv70k ex p
19	86	7	26	05	13	10.5	3.8	63	4.9	1017.8	3	001	02	2	2	7	8	6	/	/	83830	87638			19	Cu hum
20	67	8	22	09	16	11.4	10.1	92	7.7	1015.9	7	009	60	6	2	8	5	3	/	/	87708	88612			20	
21	82	6	22	12	26	14.2	8.6	69	7.0	1007.8	5	005	15	2	2	6	8	5	0	0	83825	84645			21	Cu med jpN
22	75	8	21	11	23	13.4	8.5	72	6.9	999.6	5	005	03	2	2	1	1	5	2	7	81828	85462	88268		22	Cu hum
23	50	8	20	11	27	11.6	9.3	86	7.4	997.1	6	010	60	6	2	6	8	4	2	/	83815	85625	88550		23	Cu hum
24	57	7	23	11	26	8.1	6.1	87	5.9	998.2	5	005	80	8	2	7	9	5	/	/	87925				24	
25	84	6	24	13	27	13.0	4.2	55	5.1	1006.5	2	006	03	1	1	1	2	6	0	6	81835	83273	85076		25	Cbtop N
26	77	8	01	11	18	8.0	4.9	81	5.4	1010.8	2	045	02	6	2	8	5	4	/	/	88616				26	
27	88	3	33	02	07	9.5	-1.5	46	3.3	1026.1	8	005	02	0	0	3	4	7	0	0	81850	83650			27	Cu hum
28	80	8	18	10	27	8.7	3.5	70	4.9	1015.4	7	028	60	6	2	7	5	6	2	/	81645	86650	88457		28	
29	50	8	20	13	23	13.6	10.0	79	7.7	1006.5	8	023	50	5	2	8	5	3	/	/	83709	87615	88630		29	
30	63	7	21	12	25	15.1	9.7	70	7.5	1004.2	6	006	15	8	1	7	3	5	6	1	81920	83825			30	3Sc45 /Ac62 /Ci75 jpNW
31	50	8	26	13	24	11.1	9.7	91	7.6	989.4	2	033	65	6	2	8	5	3	/	/	82708	85611	88615		31	

Mean vis = 31.2 km

Mean cloud = 6.8 85%

Mean wind speed = 8.5 kn

Mean gust = 18 kn

Mean TT = 9.9 °C

Mean TdTd = 4.7 °C

Mean RH = 71.1 %

Mean r = 5.5 g/kg

Mean PPP = 1008.2 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 2023	Hour	01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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	0.00	0.00	0.00	0.38
	7	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.12	0.72	0.00
	8	0.21	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	1.00	0.00
	9	0.10	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.01	0.00	0.00	0.52	0.00
	10	0.22	0.87	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	1.00	0.00	0.11	0.88	0.00	0.29
	11	0.00	1.00	0.00	0.00	0.10	0.64	0.00	0.00	0.00	0.00	1.00	0.00	0.68	0.57	0.00	0.65
	12	0.00	1.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.55	0.06	0.31	0.51	0.00	0.34
	13	0.05	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.06	0.15	0.00	0.90	0.00	0.68
	14	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.00	0.01	0.95	0.00	0.07
	15	0.09	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.03	0.91	0.00	0.00
	16	0.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.28	0.60	0.00	0.00
	17	0.26	0.60	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.06	0.00	0.00	0.02	0.31	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		1.47	8.95	0.00	0.00	0.10	0.80	0.16	0.00	0.00	0.49	3.86	0.62	1.46	5.75	2.62	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	0.00	0.00
6	0.00	0.00	0.53	0.00	0.00	0.00	0.15	0.27	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.05
7	0.02	0.00	1.00	0.00	0.00	0.00	0.68	1.00	0.07	0.00	0.36	0.00	0.00	0.30	0.00	0.16
8	0.00	0.00	0.58	0.00	0.18	0.00	0.51	0.20	0.32	0.00	1.00	0.00	0.00	0.16	0.00	0.16
9	0.00	0.00	0.00	0.00	0.00	0.08	0.51	0.39	0.63	0.00	1.00	0.00	0.00	0.20	0.00	0.16
10	0.00	0.00	0.00	0.00	0.07	0.69	0.31	0.24	0.90	0.00	1.00	0.00	0.00	0.19	0.00	0.22
11	0.00	0.00	0.00	0.00	0.04	0.51	0.20	0.26	0.62	0.00	0.86	0.00	0.00	0.24	0.00	0.24
12	0.22	0.23	0.00	0.00	0.10	0.40	0.44	0.35	0.60	0.00	0.14	0.00	0.00	0.60	0.06	0.19
13	0.30	0.67	0.00	0.00	0.13	0.00	0.26	0.32	0.71	0.00	0.13	0.00	0.00	0.61	0.00	0.19
14	0.84	0.94	0.01	0.00	0.23	0.01	0.00	0.06	0.92	0.00	0.59	0.00	0.00	0.37	0.00	0.21
15	0.30	0.53	0.02	0.00	0.46	0.00	0.00	0.00	0.97	0.01	0.88	0.00	0.00	0.48	0.00	0.19
16	0.98	0.16	0.05	0.00	0.58	0.01	0.00	0.00	0.26	0.14	0.80	0.00	0.00	0.09	0.00	0.18
17	0.40	0.23	0.00	0.00	0.76	0.19	0.00	0.66	0.02	0.13	0.36	0.00	0.00	0.00	0.00	0.13
18	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.18	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	3.06	2.78	2.18	0.00	2.55	1.89	3.08	3.88	6.03	0.27	7.39	0.00	0.00	3.26	0.07	64.77

MARCH 2023	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	5.38	8.4	1305	2.6	2359	84.2	93.6	454	68.5	1344	2.9	4.6	5.1	1504	4.1	2349	1029.15	1033.1	38	1025.6	2002	0.1
2	4.13	10.0	1442	-0.4	705	77.4	96.5	140	51.8	1451	0.3	3.8	4.2	1341	3.4	655	1026.23	1028.1	2311	1024.8	1529	0
3	5.08	7.3	1203	3.0	11	74.0	84.6	16	61.2	1204	0.8	3.9	4.2	1419	3.7	1148	1029.40	1031.2	2315	1027.9	14	0
4	5.23	7.1	1249	3.7	2349	68.8	76.0	339	60.6	1250	-0.1	3.7	4.0	1233	3.4	2358	1029.70	1031.5	953	1026.8	2348	0
5	3.91	5.5	1319	2.8	536	69.1	81.3	2309	56.5	1321	-1.3	3.4	4.0	2342	2.9	747	1019.16	1026.9	3	1011.8	2359	0
6	5.39	10.2	1324	0.8	207	82.7	93.4	711	61.6	1325	2.6	4.6	5.3	1102	3.6	207	1006.02	1011.9	0	1000.9	2354	0.2
7	2.57	5.8	13	-1.0	2256	89.3	98.5	2329	70.4	1344	0.9	4.1	5.1	5	3.5	2255	1000.31	1001.3	1811	997.8	2350	4.8
8	0.96	1.9	1444	-0.3	4	97.8	98.8	730	95.7	247	0.7	4.1	4.3	1444	3.7	4	991.19	998.0	3	988.2	1939	12.3
9	6.27	11.2	1333	1.5	306	96.7	99.1	753	88.1	1556	5.8	6.0	7.9	1330	4.2	306	990.36	994.8	522	981.5	2357	7.1
10	3.72	9.0	26	-1.6	2318	88.3	99.0	324	63.1	1528	1.9	4.5	7.2	26	3.3	1528	998.50	1010.8	2359	980.9	57	1.1
11	3.11	8.8	1146	-3.1	246	85.0	98.9	243	51.0	1317	0.4	4.0	6.0	2359	3.0	246	1009.23	1011.1	929	1006.2	2350	1.7
12	9.76	13.8	1318	6.4	0	88.3	97.8	4	62.9	1325	7.8	6.6	8.0	2353	5.7	617	1005.29	1009.3	849	996.0	2358	1.1
13	11.68	14.7	1207	9.7	2044	81.7	95.0	0	62.9	1213	8.6	7.1	8.1	19	6.5	1221	990.10	996.2	0	986.2	2002	0.9
14	6.22	10.6	1524	2.0	2355	71.3	94.8	2359	38.9	1530	1.1	4.2	7.2	31	3.0	1534	1004.51	1014.7	2357	986.7	1	1.3
15	4.38	8.4	1348	-1.6	603	87.8	98.9	530	58.1	1144	2.4	4.5	6.2	2356	3.3	603	1015.41	1017.9	1041	1010.4	2359	4.3
16	10.99	14.8	1329	7.5	0	83.3	96.7	206	62.0	1330	8.1	6.8	7.7	2341	6.2	1205	1005.61	1010.5	0	1002.7	2037	0.3
17	11.55	15.8	1505	9.6	2257	86.7	95.6	921	60.7	1505	9.3	7.3	8.7	1251	6.4	1543	1003.56	1004.8	2109	1002.7	418	1.9
18	10.46	14.9	1435	8.0	2259	88.1	95.9	915	57.3	1421	8.5	6.9	7.8	1239	5.9	1421	1006.14	1010.3	2356	1004.0	255	4.6
19	8.02	11.1	1601	3.0	611	77.1	96.4	642	60.9	1345	4.1	5.1	6.6	17	4.5	614	1016.39	1019.5	2123	1010.2	2	0.9
20	9.96	12.9	1252	7.8	103	89.6	95.7	1735	76.6	47	8.3	6.8	8.0	1345	5.0	10	1016.35	1018.7	2	1013.1	2359	1.5
21	11.10	15.3	1451	8.5	555	81.9	96.1	727	63.9	1452	8.0	6.7	7.7	1027	6.2	1724	1008.40	1013.2	0	1003.6	2354	0.6
22	11.47	15.9	1233	9.6	439	81.8	94.5	805	59.4	1226	8.4	6.9	7.9	1018	6.3	1346	999.35	1004.0	2	995.5	2156	2.7
23	10.54	15.2	1330	7.9	442	82.5	93.9	1835	58.6	1255	7.6	6.6	7.4	1514	5.7	428	996.67	998.7	1136	993.1	1850	4.6
24	8.77	14.1	1058	6.7	552	84.6	92.7	1326	55.9	1058	6.2	6.0	7.4	1337	5.4	1038	998.18	1000.1	2358	995.1	9	9.8
25	10.03	14.9	1415	6.6	18	73.7	93.5	2359	48.8	1438	5.4	5.6	6.4	1049	4.7	1511	1004.01	1006.9	1621	999.7	208	0.4
26	7.08	9.7	1143	5.4	634	85.0	96.8	137	64.5	1632	4.6	5.3	6.5	1159	4.2	1725	1008.35	1021.3	2359	1000.1	343	5.9
27	6.71	11.5	1306	3.3	607	64.2	86.6	615	38.1	1216	-0.0	3.7	4.6	14	2.9	1548	1025.24	1026.7	1009	1021.3	0	0
28	7.63	9.7	1416	4.9	0	81.1	95.8	2359	63.7	1411	4.5	5.3	6.8	2346	3.8	20	1018.05	1025.0	1	1013.8	2118	1.8
29	11.32	13.6	1451	9.0	0	92.2	96.4	921	79.0	1459	10.1	7.7	8.4	1058	6.8	439	1008.08	1013.9	0	1001.9	2356	3.7
30	12.30	16.8	1237	9.8	451	82.1	94.8	2314	61.5	1236	9.2	7.3	8.6	1332	6.7	446	1002.49	1005.4	1021	993.2	2359	2.9
31	10.45	13.4	1218	9.6	1605	92.1	95.3	2124	80.5	1233	9.2	7.4	8.1	1223	6.7	1527	989.26	999.0	2359	983.0	900	29.2
Total																						105.7
Mean	7.62	11.36		4.57		82.8	94.29		62.67		4.72	5.50	6.63		4.66		1008.09	1012.74		1002.73		
Max	12.30	16.82		9.77		97.8	99.10		95.70		10.07	7.69	8.68		6.79		1029.70	1033.13		1027.88		
Min	0.96	1.87		-3.15		64.2	76.00		38.05		-1.27	3.44	3.97		2.87		989.26	994.80		980.89		

Wokingham Automatic Weather Station
 AWS samples taken every 0.5 seconds
 x and n refer to maximum and minimum respectively

Readings taken at Wokingham Climatological Station, Emmbrook, Berkshire
Lat 51.425 N, Long 0.853 W, NGR (SU) 798701
Altitude 45 m ASL.

Tmn = 00 to 24 GMT mean air temperature at 1.2 m, deg C
 RHmn = 00-24 GMT mean relative humidity at 1.2 m, percent
 Tdmn = 00-24 GMT mean dew point at 1.2 m, deg C
 rmn = 00-24 GMT mean humidity mixing ratio, g/kg
 pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system
 R tot = Rainfall from TBR, uncorrected

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

Average: Generally refers to the 30 year climatological average, currently 1981 to 2010. This will be next updated in 2020. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

For sunshine, there was a change, in July 1999, in the type of instrument used to detect sunshine amount, making the climatological average based on the old instrument of little use. In general, the new instrument produces higher values in the winter half year, and lower ones in the summer half, than the old type, due to a combination of faster reaction and higher sensitivity than the old type. The average used in this case is based on a theoretical equivalent 1981 to 2010 average, drawn from comparison with the Met Office published tables of departure from climatological average sunshine in the months since 2000 for their area 'Southern England'. Users of the Wokingham Monthly Weather reports should be aware of this, and regard anomalies for sunshine published therein as a guide only, until such time has elapsed since the introduction of the new instrument that a genuine average becomes available.

Mean: The mean of the data under discussion, often the monthly mean of daily data. The mean is obtained by summation of the individual values and dividing by the number of values. The term 'daily mean' in respect of temperature is defined as '(max + min) / 2'. A true daily 24 hour (00 to 24 GMT) mean temperature is available from the Automatic Weather Station (AWS), and is currently published on page 7 of the Wokingham Monthly Weather report, on the Wokingham Weather web site, page 1. <http://www.woksat.info/wwp1.html>

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

- a): The departure of a mean from the current climatological average.
- b): The departure of a value on a particular day from the average for that day, (this need not be a climatological average).

When the word anomaly is used in respect of temperature, any values given are in °C. In respect of rainfall or sunshine, percent. In respect of wind, mph. In respect of pressure, millibars (hpa).

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

Temperature: The terms cold/mild are used in the winter half year, and cool/warm in the summer half. The term 'normal' is used when the individual mean (monthly, seasonal or annual) value is within 20 % of the median of all ranked values for that month/season/year.

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

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

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

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

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

The definition of these terms follow the same rules as for temperature.

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

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

Wet: The value lies between 10 % and 30% of the highest value in the ranked series.

Very wet: The value lies within 10 % of the highest value in the ranked series.

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

Very dry: The value lies within 10 % of the lowest value in the ranked series.

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

In the case of monthly max, min and mean temperature and of rainfall total the series starts in 1882. For temperature extremes, the highest max and lowest min go back to 1904, and lowest max and highest min to 1913.

Rank: The word rank refers to the position of a value for a particular month/season/year in the ranked series, and may be expressed relative to either the highest or lowest value in the series. The central value in the ranked series is known as the **median**. This value may be different from the average of the whole series if the population is skewed. It can also be different from the climatological average which only refers to a 30 year period.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

When discussing 'winter', if a single year is given this refers to the year in which the January/February fall.

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

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

Frost: An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is -0.1°C or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is -0.1°C or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below 0.0°C , and the day runs from midnight to midnight.

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

Snow depth is the depth of undrifted snow. Snow that collects in the raingauge funnel is melted and the amount recorded as rainfall.

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

A day of small hail is recorded if hailstones less than 5 mm diameter are observed or recorded in a 24 hour period starting at midnight. The term small hail also includes various other types of ice meteor such as ice pellets, snow grains and some types of snow pellets.

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

Thunder: A day of thunder is recorded if thunder is heard in the 24 hour period from midnight on that day. The appearance of lightning without thunder being heard does not qualify as a thunder day.

Trace of rainfall: A trace of rain, entered as 'tr' in the daily log, is recorded if rain is observed to fall but is of insufficient quantity to collect in the raingauge, or if the amount of rain in the gauge is less than 0.05 mm.

Dry spell: A dry spell is defined as a period of 5 or more consecutive dry days.

Dry day: A dry day is one with less than 0.2 mm of rainfall.

Rain day: A rain day is one with 0.2 mm or more of rainfall.

Wet day: A wet day is one having 1.0 mm or more of rainfall.

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

/ = Types of high cloud invisible owing to darkness, fog, blowing dust of sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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