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 2024

Temperature (°C)		Anomaly	Rank in the past **143** years			
Mean maximum	13.0	+1.4	16th highest			
Mean minimum	5.1	+1.9	5th highest			
Daily mean	9.1	+1.7	4th highest			
Highest maximum	17.7	on 20th	Lowest maximum	8.0	on	2nd
Highest minimum	10.9	on 15th	Lowest minimum	-2.1	on	3rd
Mean grass minimum	1.9	+2.1	Lowest grass minimum	-6.1	on	3rd
Mean earth @30 cm	9.0	+1.7	Earth @100 cm	9.0	+1.3	
Frost duration (hrs)	17.5		Rain duration (hrs)	58.6		
Rainfall total (mm)	80.1	193 %	18th highest			
Highest daily fall	15.3	on 26th	Highest rate mm/hr	59	on	28th
Number of: Dry days (<0.2mm)	14	Wet days (>0.9mm) 12	days ≥5mm	6		
Sunshine total (hrs)	102.1	Daily mean 3.29	81 %	Sunniest day	10.1	on 30th
N° days with: Air frost	3	Ground frost 12	Snow falling 0	Snow lying 0		
Thunder	1	Hail ≥5mm 0	Small hail/ice 3	Fog @09 1	Nil sun 5	
Pressure MSL : Mean @09 GMT, mbar	1005.2	-10.4	Highest 1026.8	on 21st	Lowest 972.0	on 28th
Relative humidity : Mean (%)	83.3	Lowest 39	on 24th	Water vapour (g/kg), mean at 09 and 15 GMT	6.1,	5.8
Overall mean wind speed (mph)	7.3	Windiest day 13.9	on 28th	Max gust 54	on 28th	
Wind direction (days)	N 1	NE 5	E 1	SE 3	S 10	SW 7	W 3	NW 1
Least windy day (mph)	2.8	on 3rd	Calm; less than 0.5 mph (minutes) 425			

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

Notes: **Mild and Wet with Below Average Sunshine**

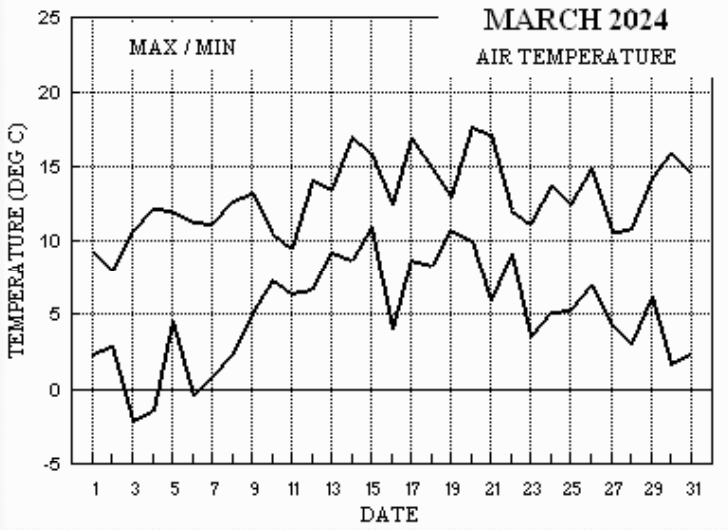
Temperature: The mean temperature of 9.1° this March is 0.7° below the record set in 2017, but is 2.6° above the long-term median. The mean maximum is 2.6° below the record set in 1938, while the mean minimum is 1.2° below the record set in 1981. The highest max is 1.0° above the median while the lowest max is 3.8° above its median. The highest min is 2.1° above the median while the lowest min is 1.9° above its median. The lowest grass min is 2.8° above average. The duration of air frost is less than half the average and the number of days with air frost is 3 blow average. The mean earth temperature at 30cm depth is equal highest with 2017 in the past 45 years, and at 1m depth is a new record highest for the past 35 years. Anomalies for daily max were generally above normal, over +6° on the 14th, 20th and 21st, and exceeded -1° on the 2nd, 11th and 27th, with extreme values of +6.6° on the 20th and -1.4° on the 11th. Anomalies for daily min were above +6° on the 13th, 15th, 19th and 20th, and exceeded -3° on the 3rd, 4th and 6th, with extreme values of +7.5° on the 19th and -4.1° on the 3rd. **Rainfall:** This has been a wet March with almost twice the average rainfall, however, the total is 43.5mm less than fell in March 2023, and in this millennium March has been wetter in 2 other years. In this March it was notably wet over a 3 day period to the 28th when 39.0 mm fell, that is 94% of the climatological average for the whole month. There were 3 fewer dry days than average, and no dry spells. There was a thunderstorm with small hail (ice pellets) on the 23rd, and ice pellets also fell on the 1st and 28th, and the rain rate briefly reached the violent category on the latter day. There was no snow this March, (average 2.4 days), 2021 being the last year to also have none. Rainfall accumulation compared with normal was 7 mm in surplus on the 1st, decreasing to zero by the 8th, increasing to 13 mm surplus on the 11th, decreasing to 5 mm on the 25th, increasing to 41 mm on the 28th, decreasing to 38 mm by the 31st. **Sunshine:** The total of 102.1 hours this March is 19% below average, but in this millennium March has been duller in 8 years, the last in 2023 which had 36.9 fewer hours than in this March. The period 9th to the 22nd was particularly dull, with no day having more then 39% of the maximum, and 8 days having <20%, including the 4 days to the 13th when there was no sunshine. The sunniest days, having over 75% of the maximum were the 3rd, 8th and 30th. Sunshine accumulation was close to normal until the 9th, then reached a deficit of 16 hours by the 13th, increasing to 29 hours by the 22nd, decreasing to 23 hours by the 31st. Overall there were 17 days with <3 hours and 6 with =>6 hours. **Wind:** The overall mean speed of 7.3 mph is 0.3 mph below average, but the highest gust of 54 mph on the 28th is 8 mph above average. Daily mean speeds were mostly light or moderate, but were fresh on the 1st, 4th, 14th, 15th, 23rd, 24th, 27th and 29th, and increased to very strong on the 28th. Daily mean direction was between N and E from the 5th to 10th and on 31st, between E and S on the 1st, 2nd, 4th, 25th to 27th and 30th, between W and N on the 11th, otherwise between S and W. **Pressure:** The mean pressure at 09 GMT is 3rd lowest for March in this millennium, and the absolute lowest of 972.0 mbar is lowest for the month since 2008, and before that, 1986. The absolute highest is lowest since 2001. **Humidity:** The overall mean relative humidity is highest for March since 2001. and the mean water vapour content is highest for March in the past 29 years.

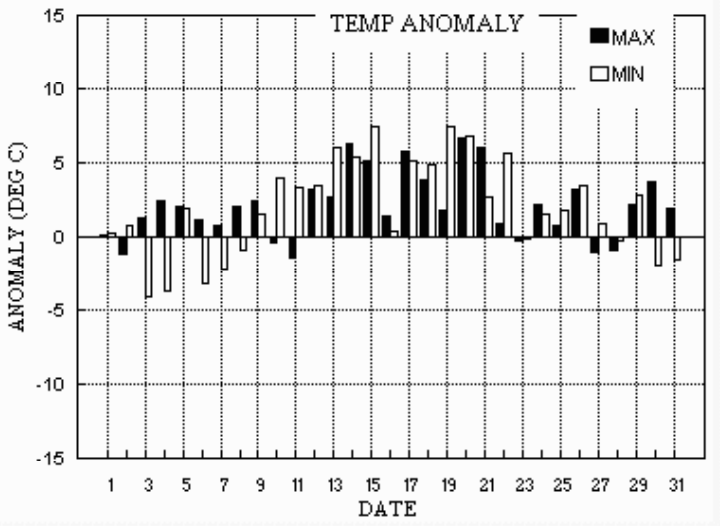
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

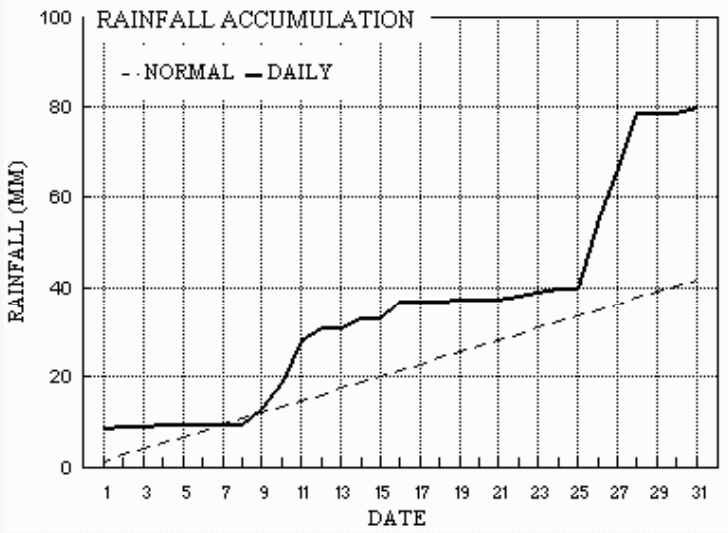
From the 1st to the 10th				From the 11th to the 20th				From the 21st to the 31st			
+1.1°	-0.5°	140%	92%	+3.5°	+5.0°	138%	45%	+1.7°	+1.3°	290%	104%

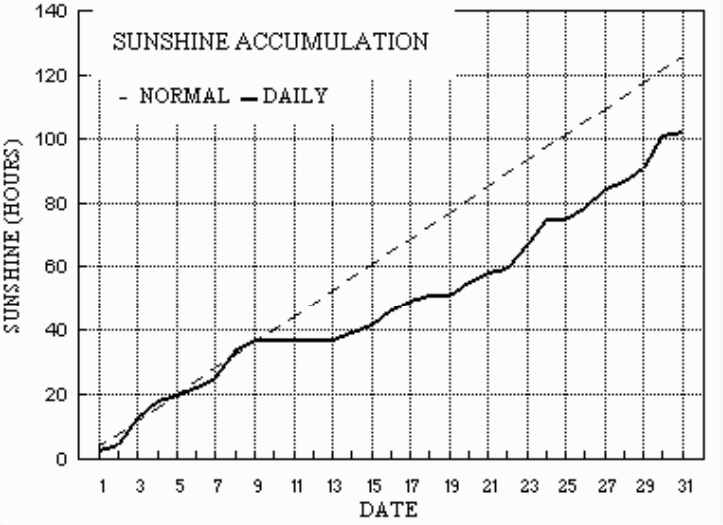
B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

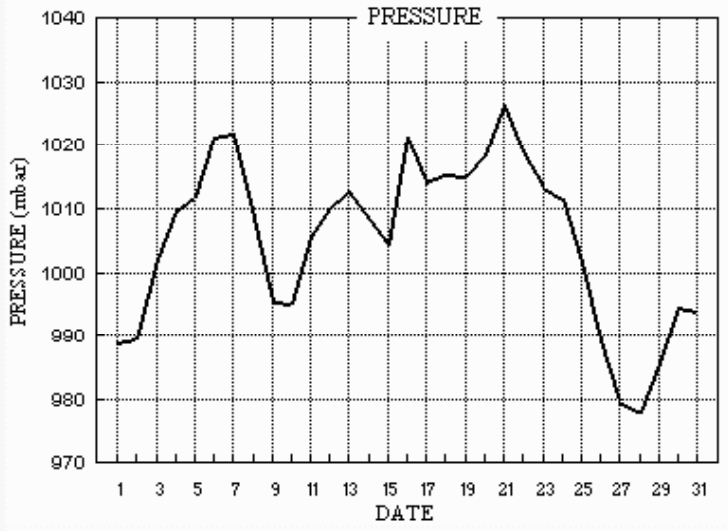
Wokingham climatological graphs for March 2024

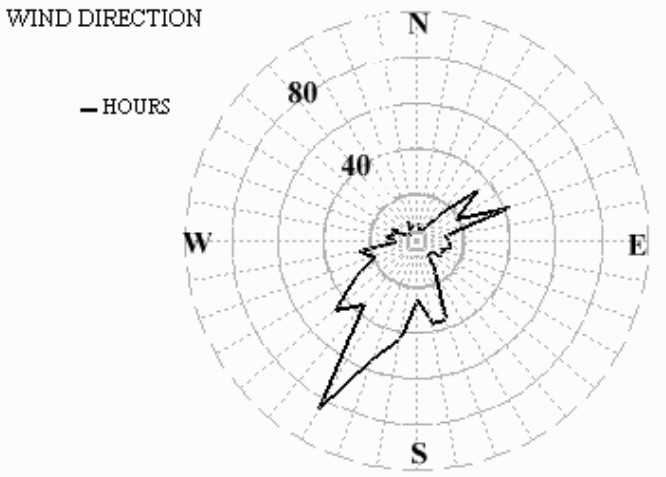


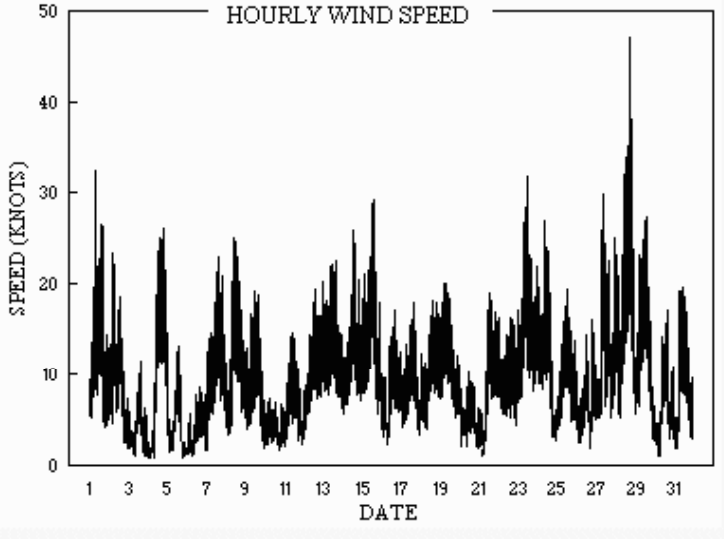


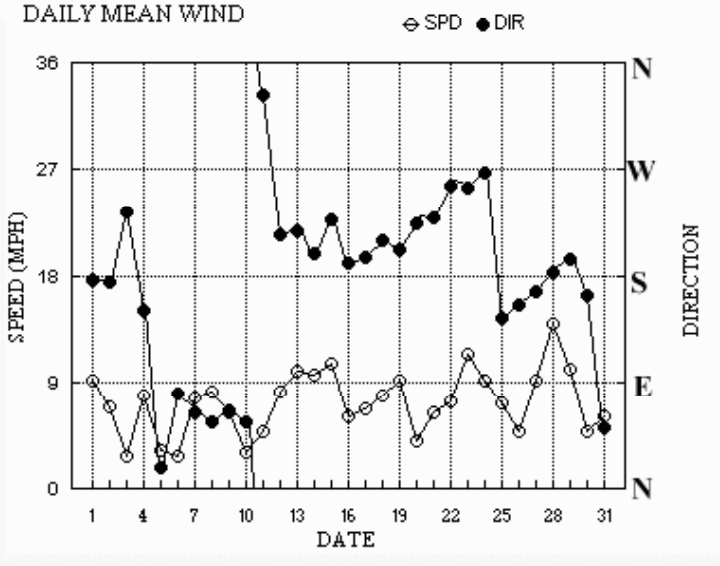












Daily meteorological data. Emmbrook, WOKINGHAM, Berkshire.

Month: MARCH 2024

Date	Max	Min	Rain	Grass	30cm	100cm	Sun	Frost	pp09	Af	Sf	Th	Ic	Vec mean			Max gust			High hr			Rain
	C	C	mm	Min	C	C	hrs	hrs	mbar	Gf	Sl	Ha	Fg	ddd	ff	sp	ddd	gg	HHhh	ddd	ff	HH	hrs
1	9.2	2.4	8.7	-1.1	8.2	8.6	3.0	0.0	988.9	0 1 0 0		0 0 1 0		176	6.6	7.9	166	33	0712	158	15	06	5.1
2	8.0	2.9	0.5	-0.6	7.8	8.6	1.8	0.2	989.6	0 1 0 0		0 0 0 0		174	5.0	6.0	137	23	0540	156	10	06	0.3
3	10.7	-2.1	0.0	-6.1	7.4	8.6	8.5	8.8	1002.0	1 1 0 0		0 0 0 0		233	1.7	2.4	277	12	1406	253	6	14	0.0
4	12.2	-1.5	0.5	-5.6	7.0	8.5	5.3	6.9	1009.8	1 1 0 0		0 0 0 0		151	6.2	6.8	164	26	1932	154	14	19	2.2
5	12.0	4.5	tr	0.9	7.2	8.4	1.6	0.0	1011.8	0 0 0 0		0 0 0 0		19	1.8	2.9	354	13	1453	351	6	11	0.0
6	11.3	-0.5	0.0	-4.1	7.3	8.3	2.2	1.6	1021.4	1 1 0 0		0 0 0 1		81	1.4	2.5	55	9	1637	62	4	16	0.0
7	11.1	0.8	0.0	-4.3	7.3	8.2	3.1	0.0	1021.8	0 1 0 0		0 0 0 0		64	6.6	6.7	64	23	1436	71	11	16	0.0
8	12.7	2.4	tr	-3.9	7.2	8.2	9.0	0.0	1008.5	0 1 0 0		0 0 0 0		57	7.0	7.1	57	25	1020	61	11	10	0.2
9	13.2	5.0	3.1	0.2	7.3	8.2	2.7	0.0	995.4	0 0 0 0		0 0 0 0		66	5.3	5.5	69	19	1239	65	8	17	4.5
10	10.5	7.3	6.0	4.0	7.8	8.2	0.0	0.0	995.0	0 0 0 0		0 0 0 0		56	2.1	2.7	94	8	0704	96	3	05	10.3
11	9.5	6.5	9.1	6.8	8.3	8.2	0.0	0.0	1005.5	0 0 0 0		0 0 0 0		332	3.6	4.2	346	15	0907	350	6	09	5.2
12	14.1	6.7	3.3	3.5	8.4	8.3	0.0	0.0	1009.9	0 0 0 0		0 0 0 0		215	6.6	7.1	240	20	1444	225	10	12	3.4
13	13.5	9.3	0.0	9.4	8.8	8.4	0.0	0.0	1012.6	0 0 0 0		0 0 0 0		217	8.6	8.7	212	23	1515	221	11	11	0.0
14	17.0	8.7	1.8	6.8	9.1	8.5	2.5	0.0	1008.1	0 0 0 0		0 0 0 0		198	8.3	8.4	229	26	1337	214	13	13	1.3
15	15.9	10.9	0.1	8.8	9.5	8.7	2.1	0.0	1004.4	0 0 0 0		0 0 0 0		227	8.2	9.2	219	29	1403	225	15	13	0.3
16	12.4	4.0	3.6	-1.2	9.9	8.9	4.7	0.0	1021.3	0 1 0 0		0 0 0 0		190	4.4	5.3	179	17	1612	186	8	14	4.0
17	16.9	8.7	0.1	7.6	9.9	9.0	3.0	0.0	1014.2	0 0 0 0		0 0 0 0		195	5.1	5.9	230	18	1606	222	8	13	0.4
18	14.9	8.3	tr	4.8	10.2	9.2	2.1	0.0	1015.4	0 0 0 0		0 0 0 0		210	6.7	6.8	194	18	1606	207	10	16	0.1
19	12.9	10.8	0.5	8.6	10.4	9.3	0.0	0.0	1015.0	0 0 0 0		0 0 0 0		202	7.9	8.0	216	20	0726	204	11	05	1.1
20	17.7	10.0	0.0	8.4	10.6	9.5	4.0	0.0	1018.4	0 0 0 0		0 0 0 0		224	1.9	3.5	177	11	0042	188	6	00	0.0
21	17.1	5.9	tr	1.3	11.0	9.6	2.7	0.0	1026.4	0 0 0 0		0 0 0 0		228	4.6	5.6	222	19	1332	235	10	15	0.0
22	12.1	9.1	0.7	7.0	11.1	9.8	1.5	0.0	1018.9	0 0 0 0		0 0 0 0		256	5.6	6.4	305	16	1517	222	8	01	0.8
23	11.2	3.5	1.1	-0.7	10.4	10.0	7.6	0.0	1013.4	0 1 0 0		1 0 1 0		254	9.7	9.9	250	32	1252	260	14	10	0.5
24	13.7	5.2	0.8	2.1	9.8	10.0	7.6	0.0	1011.5	0 0 0 0		0 0 0 0		267	7.2	7.9	296	27	0919	294	12	09	1.6
25	12.4	5.3	0.0	-0.6	9.6	9.9	0.2	0.0	1001.8	0 1 0 0		0 0 0 0		144	5.7	6.4	171	20	1244	160	9	12	0.0
26	14.8	6.9	15.3	4.7	9.6	9.8	3.1	0.0	989.1	0 0 0 0		0 0 0 0		155	2.0	4.2	232	16	2036	235	8	21	8.9
27	10.6	4.3	11.0	0.8	9.9	9.8	6.0	0.0	979.6	0 0 0 0		0 0 0 0		167	6.7	7.9	164	30	1036	183	14	10	4.1
28	10.8	3.0	12.7	0.0	9.6	9.8	2.5	0.0	977.7	0 0 0 0		0 0 1 0		183	11.0	12.1	183	47	1841	195	21	18	3.6
29	14.2	6.2	tr	4.1	9.3	9.8	4.3	0.0	985.6	0 0 0 0		0 0 0 0		194	8.6	8.8	206	27	1534	201	14	15	0.2
30	15.9	1.7	0.0	-1.7	9.5	9.7	10.1	0.0	994.6	0 1 0 0		0 0 0 0		163	3.4	4.3	168	17	1623	172	8	16	0.0
31	14.4	2.4	1.2	-1.8	9.6	9.7	0.9	0.0	993.8	0 1 0 0		0 0 0 0		51	4.9	5.3	64	20	1146	68	9	08	0.5
Total			80.1				102.1	17.5															58.6
Mean	13.0	5.1		1.9	9.0	9.0	3.29	0.6	1005.2					195	3.1	6.3							
Anom	+1.4	+1.9	193%	+2.1	+1.7	+1.3	81%		-10.4														

Daily mean 9.1 Pressure, abs highest = 1026.8 on 21

Anom +1.7 Pressure, abs lowest = 972.0 on 28

Number of days with:

Air frost = 3 Ground frost = 12 Nil sun = 5

Snow falling = 0 Snow lying = 0 Thunder = 1

Hail=>5mm = 0 Hail<5mm or ice = 3 Fog at 09GMT = 1

Abbreviations.

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

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

Grass min = Lowest overnight temperature at grass tip level.

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

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

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

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

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

Sp = 24 hour mean wind speed in knots.

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

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

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

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 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	58	7	20	08	19	4.6	3.4	92	5.0	989.2	6	026	21	6	6	5	5	4	2	3	82710	85615	86530		/Ac63 /Ci68 CbSW jpNE
2	70	5	20	08	14	3.8	2.2	89	4.5	989.6	3	020	15	8	2	3	8	4	7	2	83812	84070		2	1Sc25 1Ac58 1Ac65 Cu fra/med jpE
3	25	5	29	02	03	0.5	0.4	99	3.9	1002.0	2	021	40	1	1	1	6	0	0	2	81701	85072		3	COTRA jfNW Hoar thk in shade
4	57	3	13	03	09	4.4	4.1	98	5.1	1009.8	0	002	40	0	0	1	8	5	7	4	81820	83070		4	1Sc35 1Ac63 COTRA Cu hum jfNW Hoar slt in shade
5	56	8	02	03	05	7.4	7.1	98	6.3	1011.8	2	020	10	4	2	8	5	2	/	/	87704			5	/Sc50
6	02	9	04	01	04	3.7	3.6	99	4.8	1021.4	2	014	47	4	2	9	/	/	/	/				6	vv 250m
7	50	7	06	05	14	7.0	5.6	91	5.6	1021.8	8	007	05	2	2	7	5	3	3	0	83708	86611		7	/Ac62
8	56	2	07	09	20	6.7	4.2	84	5.1	1008.5	8	013	05	1	1	1	1	4	0	1	81815			8	2Ci80 COTRA Cu fra/hum
9	88	6	09	08	16	8.8	5.0	77	5.5	995.4	0	005	03	6	1	3	8	4	7	0	81815	83650	86358	9	1Sc40 Cu hum
10	56	8	07	03	06	8.3	8.0	98	6.8	995.0	2	019	21	6	2	8	5	2	/	/	87704	88615		10	
11	25	8	35	06	14	6.7	6.1	96	5.9	1005.5	2	024	50	5	2	8	7	2	/	/	87704	88706		11	
12	50	8	19	08	13	9.3	8.8	97	7.1	1009.9	6	014	63	6	6	7	7	3	2	/	87706	88520		12	
13	65	8	22	08	17	11.4	9.7	89	7.4	1012.6	3	004	20	5	2	8	5	4	/	/	81712	87616	88626	13	
14	65	8	19	08	15	11.2	8.8	85	7.0	1008.1	6	003	03	2	2	4	6	4	2	/	84710	88462		14	
15	59	7	22	11	22	12.8	10.3	85	7.8	1004.4	3	014	81	0	2	7	8	3	3	1	81706	85808	86640	15	/Ac58 /Ci72 Cu med
16	84	5	20	02	05	8.7	4.3	74	5.1	1021.3	2	022	03	1	1	1	5	5	5	1	81625	85081		16	1Ac57 1Ac68 COTRA
17	50	8	17	05	11	11.4	10.9	97	8.1	1014.2	6	011	63	6	6	7	7	3	2	/	87707	88525		17	
18	75	7	21	05	11	11.7	8.9	83	7.1	1015.4	1	006	03	1	1	7	5	4	/	/	83710	87626		18	
19	50	8	20	09	19	11.3	9.9	91	7.5	1015.0	2	016	50	5	2	8	5	3	/	/	87707	88612		19	
20	58	8	19	03	06	11.1	9.5	90	7.3	1018.4	1	013	05	6	2	5	5	6	7	/	85630	86360	88463	20	
21	60	7	21	05	09	10.6	8.7	88	6.9	1026.4	1	009	05	2	2	7	6	2	/	8	87705	87271		21	COTRA
22	30	8	23	06	11	9.9	9.1	95	7.1	1018.9	6	003	51	5	2	8	7	2	/	/	87704	88705		22	
23	82	1	26	14	27	7.9	1.5	64	4.2	1013.4	8	011	03	0	0	1	1	5	3	1	81827			23	1Ac61 1Ci72 Cu fra/hum
24	86	5	28	11	21	8.8	2.8	66	4.6	1011.5	1	010	03	1	1	5	8	5	0	1	82825	85628		24	1Ci75 Cu hum
25	75	8	16	08	14	7.9	5.5	85	5.7	1001.8	7	015	21	6	2	7	5	3	2	/	81708	87650	88458	25	1Sc35
26	70	6	11	05	08	11.1	5.4	68	5.7	989.1	7	009	01	2	2	2	0	8	7	1	81357	86071		26	2Ac62 COTRA
27	84	5	18	13	26	8.6	3.4	70	5.0	979.6	2	001	03	1	1	1	1	5	3	2	81825	85070		27	1Ac66 Cu hum
28	86	5	16	10	17	8.0	4.8	80	5.5	977.7	1	008	03	8	1	5	1	5	0	1	85820			28	1Ci70 Cu hum
29	62	7	19	10	21	9.4	7.5	88	6.6	985.7	3	010	80	8	2	7	8	3	/	/	85809	83620	85635	29	Cu med
30	60	5	20	03	06	9.1	8.2	94	6.9	994.6	2	013	05	2	2	1	2	4	0	8	81810	85270		30	Cu fra/med Halo 22° part
31	62	8	07	08	19	9.9	7.3	84	6.5	993.8	8	010	01	2	2	8	5	4	/	/	83613	85618	88627	31	

Mean vis = 18.5 km
Mean cloud = 6.4 80%
Mean wind speed = 6.7 kn
Mean gust = 14 kn
Mean TT = 8.5 °C
Mean TdTd = 6.3 °C
Mean RH = 86.9 %
Mean r = 6.1 g/kg
Mean PPP = 1005.2 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

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MARCH 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	82	6	21	10	27	8.5	1.2	60	4.2	991.1	3	001	15	1	1	2	4	6	6	3	82840	85068		1	1Sc50 1Ac65 Cu med/con Cb top N jpSE to W
2	81	6	19	09	19	7.2	2.5	72	4.6	991.3	1	006	25	8	1	6	8	5	0	1	84822	83645		2	1Ci79 Cu med jpSW
3	86	5	26	05	12	8.9	1.1	58	4.1	1004.2	2	009	02	1	1	4	4	6	4	2	82832	83650		3	1Ac66 2Ci72 Cu med
4	84	8	15	12	22	9.4	0.3	53	3.9	1006.8	7	017	03	2	2	1	1	6	7	/	81830	88460		4	1Ac59 Cu hum
5	70	6	36	07	13	9.4	4.8	73	5.3	1014.5	3	007	25	8	2	6	8	6	0	0	84830	83650		5	Cu med jpS vv45k ex S
6	58	5	29	03	06	9.7	4.5	70	5.2	1021.6	6	005	05	2	2	5	8	5	0	0	81825	84656		6	2Sc45 Cu med
7	58	7	07	09	23	10.7	4.6	66	5.2	1017.6	7	026	05	6	2	7	8	5	/	/	81827	86656		7	Cu hum
8	59	6	07	11	20	10.9	3.2	59	4.8	1003.3	7	024	05	1	1	1	1	6	0	1	81835	86075		8	COTRA Cu hum
9	75	7	08	07	16	12.0	6.1	67	5.9	992.8	6	011	03	2	2	3	8	6	7	8	81832	83645	87270	9	2Ac62 3Ac65 Cu hum
10	59	8	05	04	06	9.3	8.1	92	6.8	995.7	3	002	61	6	6	6	8	3	2	/	82808	85650	88556	10	2Sc35 Cu med
11	58	8	33	06	10	9.2	5.6	78	5.6	1009.0	2	015	05	2	2	8	8	4	/	/	82815	88650		11	2Sc35 Cu hum
12	62	7	24	11	20	13.9	11.8	87	8.6	1010.4	1	006	20	5	6	7	5	4	/	/	87710	87620		12	jpW
13	82	8	22	07	20	13.1	8.8	75	7.0	1012.0	6	005	02	2	2	7	5	5	/	8	85620	86630		13	/Cs75
14	80	7	20	12	25	14.7	8.2	65	6.8	1004.8	7	015	15	1	1	6	8	5	7	/	81828	86645	87357	14	Cu hum jpS
15	70	7	22	10	29	14.0	9.0	72	7.2	1004.7	4	000	25	8	1	5	4	5	6	3	83820	83650	86357	15	/Ci70 Cu med
16	86	8	20	08	14	11.6	3.9	59	5.0	1020.6	6	007	03	2	2	8	5	6	/	/	88630			16	
17	88	4	22	08	15	15.3	10.1	71	7.6	1012.9	7	010	01	1	1	4	4	5	0	5	82822	83640		17	1Cs78 Cs edge S
18	86	7	20	10	16	14.0	9.8	76	7.5	1014.3	8	008	02	8	2	3	4	5	4	8	83823	87270		18	1Sc40 1Ac67 Cu med Ac len
19	82	8	20	07	16	12.6	10.0	84	7.6	1016.0	1	001	02	5	2	8	5	4	/	/	87610	88650		19	
20	81	7	27	03	08	16.7	7.4	54	6.3	1017.8	5	003	02	2	2	4	4	6	4	1	82835	83640	87072	20	1Ac63 Cu hum Halo 22° part
21	82	6	24	10	19	16.2	9.2	63	7.1	1024.4	8	020	02	2	2	1	8	5	7	1	81828	85367		21	1Sc50 2Ac63 2Ci72 Cu hum
22	81	7	29	08	16	11.1	2.7	56	4.6	1016.9	7	017	01	2	2	1	4	6	7	9	81835	83365	86173	22	1Sc50 Cu hum Ac/Cc edge NW
23	62	5	26	09	19	9.3	4.3	71	5.2	1010.6	7	011	15	9	1	4	9	5	0	3	81920	83825		23	3Ci68 jpN vv60k ex N
24	86	4	27	09	24	13.2	0.6	42	4.0	1011.1	8	004	02	1	1	4	4	6	0	4	84848			24	1Sc56 1Ci75 Cu hum Ci edge W
25	84	8	17	08	17	11.3	2.1	53	4.5	997.0	7	023	02	2	2	2	1	6	7	/	82838	87360	88468	25	Cu hum
26	64	8	15	06	12	12.0	5.4	64	5.7	985.4	6	019	60	6	2	7	8	6	2	/	83832	86640	88550	26	Cu hum
27	86	6	18	13	19	10.2	3.5	63	5.0	979.7	5	011	03	6	1	3	2	5	0	1	83825	85073		27	Cu med
28	70	7	18	15	29	10.5	6.5	76	6.2	976.2	6	009	25	8	6	7	2	5	/	/	81820	87825		28	Cu med
29	65	5	21	13	24	13.3	5.0	57	5.5	987.8	2	013	15	8	1	5	8	5	0	0	83828	83650		29	Cu med jpN
30	84	2	22	07	16	14.5	2.1	43	4.5	994.5	5	005	02	0	0	1	1	6	0	1	81845			30	2Ci75 Cu hum
31	62	7	04	09	17	12.9	8.4	74	7.0	991.0	7	019	02	2	2	7	8	4	/	/	83815	85625	87635	31	Cu hum

Mean vis = 32.5 km
Mean cloud = 6.5 81%
Mean wind speed = 8.6 kn
Mean gust = 18 kn
Mean TT = 11.8 °C
Mean TdTd = 5.5 °C
Mean RH = 66.2 %
Mean r = 5.8 g/kg
Mean PPP = 1004.4 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
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Nh = Amount of low cloud present, oktas
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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

2024

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	0.07	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.01	0.33
7	0.00	0.00	0.39	0.90	0.00	0.00	0.29	0.31	0.89	0.00	0.00	0.00	0.00	0.32	0.14	1.00
8	0.12	0.00	0.97	1.00	0.00	0.00	0.58	1.00	0.59	0.00	0.00	0.00	0.00	0.00	0.01	1.00
9	0.43	0.00	0.97	0.68	0.00	0.00	0.03	1.00	0.01	0.00	0.00	0.00	0.00	0.00	0.09	1.00
10	0.04	0.03	1.00	0.34	0.03	0.00	0.00	1.00	0.05	0.00	0.00	0.00	0.00	0.00	0.02	1.00
11	0.09	0.00	1.00	0.93	0.00	0.25	0.00	1.00	0.49	0.00	0.00	0.00	0.00	0.64	0.43	0.39
12	0.62	0.39	1.00	0.98	0.55	0.30	0.00	1.00	0.41	0.00	0.00	0.00	0.00	0.98	0.54	0.00
13	0.63	0.10	0.99	0.34	0.59	1.00	0.00	1.00	0.03	0.00	0.00	0.00	0.00	0.55	0.52	0.00
14	0.67	0.67	0.52	0.02	0.12	0.21	0.00	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
15	0.36	0.25	0.26	0.00	0.13	0.00	0.76	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
16	0.00	0.29	0.85	0.00	0.00	0.40	1.00	0.67	0.04	0.00	0.00	0.00	0.00	0.00	0.07	0.00
17	0.00	0.08	0.49	0.00	0.14	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	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	**2.97**	**1.81**	**8.45**	**5.26**	**1.57**	**2.16**	**3.10**	**8.98**	**2.72**	**0.00**	**0.00**	**0.01**	**0.00**	**2.48**	**2.14**	**4.72**

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	0.00	0.00	0.00	0.00	0.78	0.78	0.00	0.00	0.71	0.44	0.32	0.05	0.00	0.12
7	0.00	0.24	0.00	0.00	0.47	0.00	1.00	1.00	0.00	0.00	1.00	0.86	0.00	0.88	0.51	0.33
8	0.00	0.06	0.00	0.00	0.28	0.00	1.00	0.54	0.00	0.68	0.94	0.83	0.14	1.00	0.20	0.35
9	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.35	0.00	0.68	0.55	0.24	0.34	0.67	0.00	0.26
10	0.00	0.00	0.00	0.24	0.00	0.00	0.82	0.50	0.00	1.00	0.12	0.00	0.27	0.67	0.00	0.23
11	0.00	0.17	0.00	0.63	0.00	0.00	0.08	0.54	0.10	0.69	0.00	0.00	0.31	0.85	0.00	0.28
12	0.00	0.12	0.00	0.54	0.00	0.00	0.32	0.34	0.10	0.03	0.00	0.00	0.32	0.94	0.00	0.31
13	0.09	0.00	0.00	0.39	0.46	0.00	0.00	0.65	0.00	0.00	0.56	0.03	0.55	0.71	0.12	0.30
14	0.96	0.00	0.00	0.62	0.65	0.00	0.79	0.56	0.00	0.00	0.49	0.06	0.63	1.00	0.08	0.29
15	0.85	0.07	0.00	0.46	0.73	0.32	0.76	0.74	0.00	0.00	0.57	0.05	0.64	1.00	0.00	0.29
16	1.00	0.39	0.00	0.72	0.08	0.17	0.72	0.64	0.00	0.00	0.49	0.00	0.46	1.00	0.00	0.29
17	0.10	1.00	0.00	0.38	0.00	0.85	0.38	0.83	0.00	0.00	0.52	0.00	0.24	1.00	0.00	0.21
18	0.00	0.02	0.00	0.00	0.00	0.17	0.04	0.14	0.00	0.00	0.00	0.00	0.04	0.34	0.00	0.02
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	**3.00**	**2.08**	**0.00**	**3.97**	**2.67**	**1.51**	**7.62**	**7.60**	**0.21**	**3.08**	**5.96**	**2.51**	**4.26**	**10.09**	**0.92**	**101.81**

MARCH 2024	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	4.87	9.2	1413	2.4	255	86.4	96.0	2348	53.1	1414	2.6	4.7	5.3	1215	3.8	1422	992.42	1001.3	1	988.7	851	9.9
2	4.35	8.0	1315	-0.2	2352	88.5	98.6	2357	63.7	1257	2.5	4.6	5.3	1428	3.7	2352	991.40	996.9	2354	987.4	539	5.6
3	3.08	10.7	1402	-1.8	651	86.4	99.7	916	51.5	1355	0.7	4.0	5.1	1207	3.3	652	1003.16	1009.2	2346	996.8	2	0.2
4	5.08	12.2	1309	-1.2	342	82.9	99.5	751	44.5	1310	2.0	4.4	5.8	1014	3.4	342	1008.34	1010.2	817	1006.1	1748	0.6
5	6.65	12.0	1348	1.4	2351	89.0	99.1	800	60.6	1349	4.8	5.3	6.3	942	4.1	2351	1013.1	1018.9	2359	1007.8	20	0
6	4.73	11.3	1407	-0.5	440	90.7	99.5	443	62.8	1340	3.2	4.8	6.2	1326	3.6	440	1021.40	1023.9	2241	1018.8	0	0.1
7	6.14	11.1	1530	0.5	133	85.8	98.8	224	62.7	1530	3.8	5.0	5.9	1245	3.8	133	1019.65	1023.7	108	1014.1	2353	0.1
8	6.51	12.7	1320	2.6	505	80.2	98.0	520	47.8	1330	3.0	4.7	5.3	1417	4.2	1330	1006.10	1014.2	0	998.2	2359	0.1
9	8.75	13.2	1308	5.1	16	81.3	95.6	2357	61.4	1311	5.6	5.7	6.6	1107	4.8	5	994.09	998.3	7	991.8	2247	0.6
10	8.27	10.5	1219	7.4	559	96.3	98.4	820	85.7	1308	7.7	6.6	7.2	1125	6.3	2354	995.52	1000.3	2357	992.1	29	6.6
11	7.57	9.5	1419	6.5	715	90.3	98.5	225	78.3	1424	6.0	5.8	6.3	1	5.4	2206	1007.08	1013.4	2306	1000.1	1	0.7
12	10.29	14.1	1454	6.7	522	92.6	97.2	954	86.4	1752	9.1	7.2	9.0	1453	5.4	218	1011.34	1013.2	113	1009.4	1219	10.3
13	11.59	13.5	1332	10.2	2237	84.5	92.6	837	73.6	1513	9.1	7.1	7.6	1	6.8	1930	1012.26	1013.1	57	1011.1	2356	0.1
14	11.65	17.0	1258	8.7	540	86.1	95.5	1857	58.0	1328	9.3	7.3	8.4	1953	6.4	627	1006.53	1011.2	0	1003.3	1944	1.5
15	12.03	15.9	1234	7.4	2323	83.2	93.0	530	64.9	1234	9.2	7.3	8.0	1345	4.9	2316	1005.76	1014.4	2358	1002.9	547	0.2
16	9.36	12.4	1302	4.0	646	74.9	94.2	2358	53.5	1332	5.0	5.4	7.0	2359	4.5	619	1019.43	1021.6	1029	1014.2	3	0.1
17	12.10	16.9	1539	9.8	2319	89.3	96.6	906	65.2	1542	10.3	7.7	8.8	1416	7.0	2319	1014.50	1018.4	0	1012.4	1641	3.1
18	11.31	14.9	1256	8.3	645	85.4	96.5	140	68.8	1257	8.9	7.0	7.8	1459	6.3	645	1014.70	1015.6	1057	1013.9	1800	0
19	11.57	12.9	1416	10.8	2326	87.6	95.9	2323	75.6	243	9.6	7.4	8.1	1215	6.2	250	1015.52	1017.5	2052	1013.3	555	0.3
20	12.54	17.7	1427	9.1	2359	82.4	97.3	345	54.9	1428	9.3	7.2	7.8	1148	6.5	1449	1018.67	1023.3	2359	1016.4	330	0.2
21	11.35	17.1	1532	6.0	629	85.8	98.1	714	63.2	1445	8.9	7.0	8.0	1421	5.5	629	1024.62	1026.8	1033	1022.0	2352	0.1
22	9.37	12.1	1546	4.9	2221	74.8	96.0	938	49.9	1707	4.9	5.4	7.5	1007	3.6	2141	1018.11	1022.0	4	1015.6	2355	0.6
23	6.66	11.2	1225	3.5	525	70.3	87.1	1345	48.3	1053	1.5	4.2	5.4	1459	3.6	1718	1012.56	1015.8	9	1010.1	2349	1.1
24	8.42	13.7	1522	5.2	605	66.1	88.3	2318	38.9	1620	2.1	4.4	5.0	1306	3.6	1620	1010.61	1011.9	1226	1008.0	2359	0
25	8.73	12.4	1242	5.8	0	72.7	91.5	611	52.3	1400	3.9	5.1	5.8	932	4.2	1752	999.54	1008.1	0	992.4	2359	0.7
26	9.33	14.8	1229	5.9	2309	79.0	96.9	1827	49.8	1241	5.6	5.8	7.2	1705	5.0	1322	987.16	992.6	1	982.5	2249	14
27	7.23	10.6	947	4.3	442	82.9	96.8	544	59.6	950	4.3	5.3	6.1	1315	4.6	1634	979.78	982.7	0	974.8	2354	2.7
28	7.74	10.8	1608	3.0	558	85.2	94.9	608	68.8	1803	5.3	5.7	6.8	1328	4.5	544	976.93	983.2	2359	972.0	212	17.4
29	9.62	14.2	1421	6.0	2359	80.1	94.6	2353	53.9	1358	6.2	6.0	7.4	1143	5.4	1401	987.24	992.8	2350	983.0	1	0.7
30	8.49	15.9	1345	2.0	600	74.3	98.8	824	39.0	1346	3.4	4.9	7.1	908	4.2	1649	994.74	997.0	2228	992.5	0	0
31	8.82	14.4	1343	2.8	319	87.4	98.3	658	68.4	1343	6.8	6.3	7.5	1327	4.4	309	992.89	996.6	0	989.8	2317	0
Total																						77.6
Mean	8.52	13.00		4.72		83.3	96.19		60.16		5.64	5.79	6.83		4.81		1005.00	1009.29		1001.34		
Max	12.54	17.74		10.78		96.3	99.70		86.40		10.31	7.73	9.05		7.02		1024.62	1026.80		1021.95		
Min	3.08	7.99		-1.79		66.1	87.10		38.86		0.71	4.03	4.99		3.32		976.93	982.73		972.04		

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

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

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

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

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 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.

B J Burton. 3 August 2009. Updated 4 May 2014.

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 of 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.