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 **OCTOBER 2022**

Temperature (°C)		Anomaly	Rank in the past **141** years		
Mean maximum	18.0	+2.5	2nd highest		
Mean minimum	8.9	+1.4	9th highest		
Daily mean	13.5	+2.0	4th highest		
Highest maximum	21.5	on 29th	Lowest maximum	15.7	on 11th
Highest minimum	15.4	on 5th	Lowest minimum	0.9	on 11th
Mean grass minimum	6.3	+2.0	Lowest grass minimum	-1.8	on 11th
Mean earth @30 cm	13.9	+0.5	Earth @100 cm	14.8	+0.1
Frost duration (hrs)	0.0		Rain duration (hrs)	37.8	
Rainfall total (mm)	72.2	99 %	58th highest		
Highest daily fall	18.9	on 23rd	Highest rate mm/hr	134	on 23rd

Number of: Dry days (<0.2mm) 13 Wet days (>0.9mm) 14 days ≥5mm 5

Sunshine total (hrs) 164.9 Daily mean 5.32 144 % Sunniest day 10.3 on 6th

Nº days with: Air frost 0 Ground frost 3 Snow falling 0 Snow lying 0

Thunder 1 Hail ≥5mm 0 Small hail/ice 0 Fog @09 2 Nil sun 0

Pressure MSL : Mean @09 GMT, mbar 1014.9 +0.4 Highest 1029.5 on 6th Lowest 992.0 on 24th

Relative humidity : Mean (%) 85.9 Lowest 44 on 9th Water vapour (g/kg), mean at 09 and 15 GMT 8.3, 8.0

Overall mean wind speed (mph) 6.1 Windiest day 12.4 on 5th Max gust 38 on 5th

Wind direction (days) N 1 NE 1 E 1 SE 2 S 14 SW 11 W 1 NW 0

Least windy day (mph) 1.7 on 11th Calm; less than 0.5 mph (minutes) 1255

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

Notes: **Very Mild and Very Sunny with Average Rainfall**

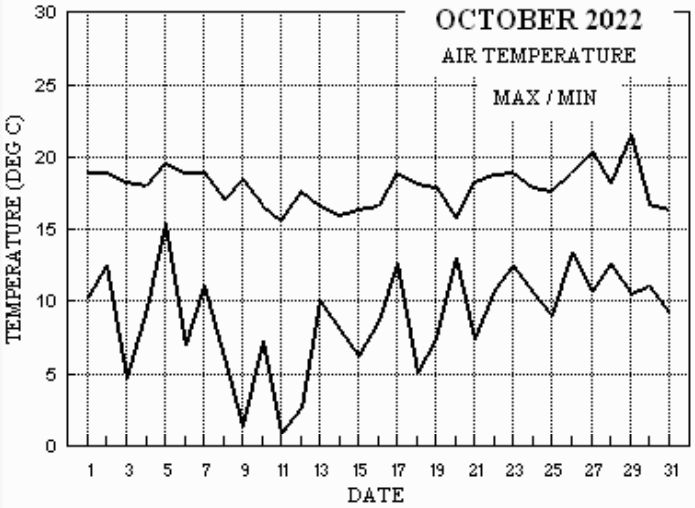
Temperature: In terms of the daily mean it is the mildest October since 2006, and the 4th mildest on record, the 3 milder ones have all occurred in this millennium. The mean maximum is 2nd highest since 1882 with only 1921 having a higher value. It is notable that this is the 9th consecutive month having above average mean temperature. The highest max is 1.3° above the median while the lowest max is 6.2° above its median and a new record, 1.8° above the previous highest in 2006. The highest min is 2.2° above the median and the lowest min is 1.9° above its median. The lowest grass min is 2.6° above average. It is worth noting that in 2018 the lowest was -8.0°, 3.6° below average, and there were 12 ground frosts that October, compared with 3 this year. Looking at the daily maximum values this October we see a remarkable run of above normal temperatures, only one day , the 11th, having a below normal value. Anomalies for daily max were over +4° on the 17th, 22nd, 23rd and 26th to 29th, with extreme values of +8.1° on the 29th and -0.5° on the 11th. Anomalies for daily min were more variable, over +5° on the 5th, 17th, 20th, 23rd, 26th and 28th, and exceeding -5° on the 9th, 11th and 12th, with extreme values of +7.3° on the 5th and -7.2° on the 11th. **Rainfall:** This October's rain total is within 1% of the current 30 year average, and shows a return to normality after 3 very wet Octobers, 2 having over 100 mm, including 2020, the wettest October in the past 47 years, with 171.2 mm, nearly 100 mm above this October's total. The duration of measurable rain was only 72 % of average, indicating that much of the month's rain was convective in nature, often giving short heavy bursts. This is borne out by the rainfall rate values exceeding the violent threshold that occurred on the 5th, 16th, 21st and 23rd. There was a significant thunderstorm on the 23rd when the rainfall rate reached 134 mm/hr at 1552 GMT accompanied by a wind squall to 36 mph, and a fall of temperature of 2° in 6 minutes. Half, 36.2 mm, of this month's rain fell over 3 days to the 23rd. Up to the 20th there were 10 dry days, but only 3 after that. Daily accumulation compared with normal was 25 mm in deficit by the 15th, and still 21 mm on the 20th, changing to a surplus of 8 mm by the 23rd, ending the month just 1 mm in deficit. **Sunshine:** This has been a very sunny October, 44 % more sun than average and sunniest since 1999. It is the first October in the past 43 years to not have a single sunless day, the average being 4.7 days, and in 2020 there were 8. The period 6th to 11th was particularly sunny, 4 of the 6 days having over 80% of the maximum. Throughout the month there were only 4 days with <20% of the maximum, and there were 16 with >50%. Daily accumulation compared with normal was 2 hours in surplus on the 5th, increasing to 35 hours by the 11th, 42 hours by the 19th, ending the month 50 hours in surplus. Overall there were 5 days with <3 hours and 13 with =>6 hours. Wind**:** The mean speed this October is 0.2 mph below average, and lowest since 2018. The month's highest gust is 5 mph below average and lowest since 2016. The duration of calm is also most since 2016. Daily mean directions were S'ly for much of the month, except for W'ly on 1st and 2nd, SW'ly from 4th to 8th and on 24th, N'ly on 10th E'ly on 18th and 19th and SE'ly on 23rd. Daily mean speeds were light or moderate except for fresh on the 7th and 26th, strong on the 8th, and very light on the 11th and 13th. .

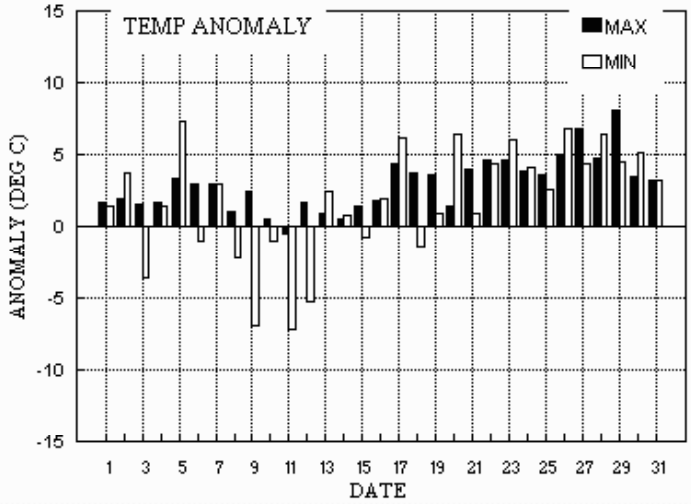
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

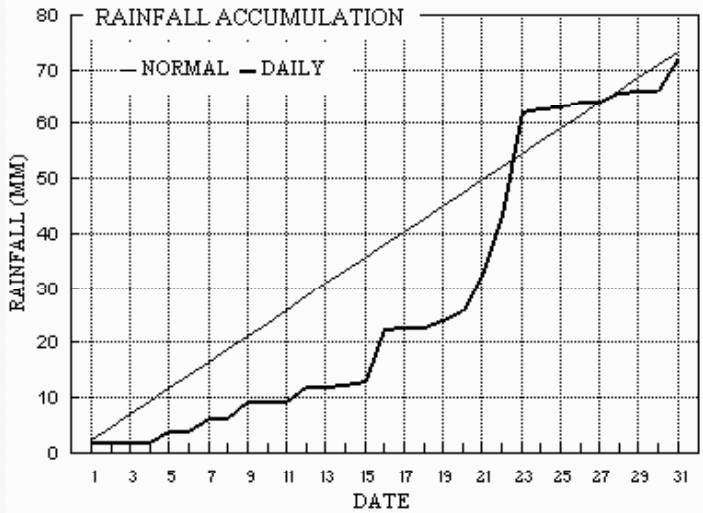
From the 1st to the 10th				From the 11th to the 20th				From the 21st to the 31st			
+2.0°	+0.2°	39%	173%	+1.9°	+0.4°	71%	145%	+4.7°	+4.4°	178%	117%

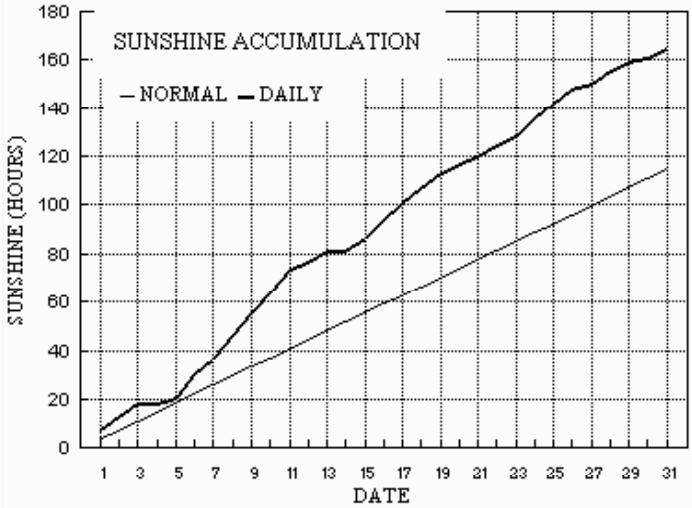
B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

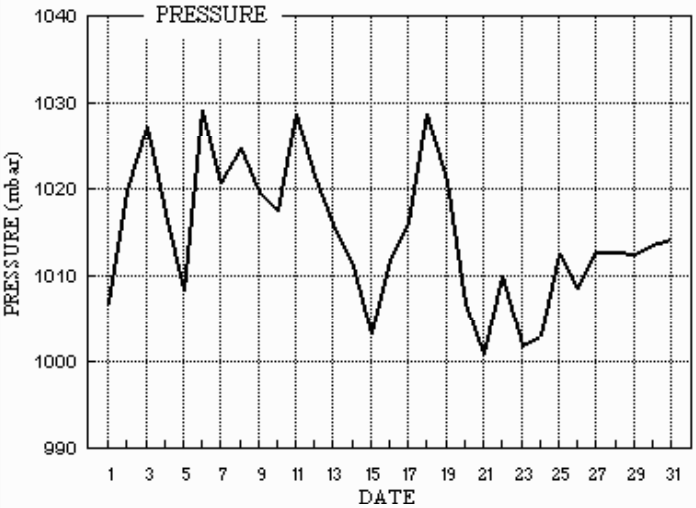
Wokingham climatological graphs for October 2022

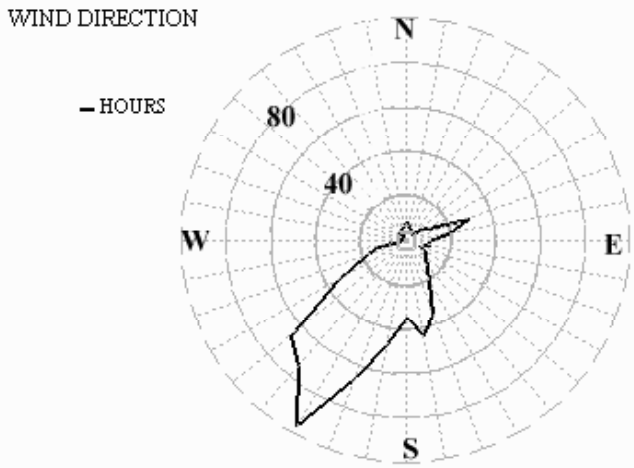


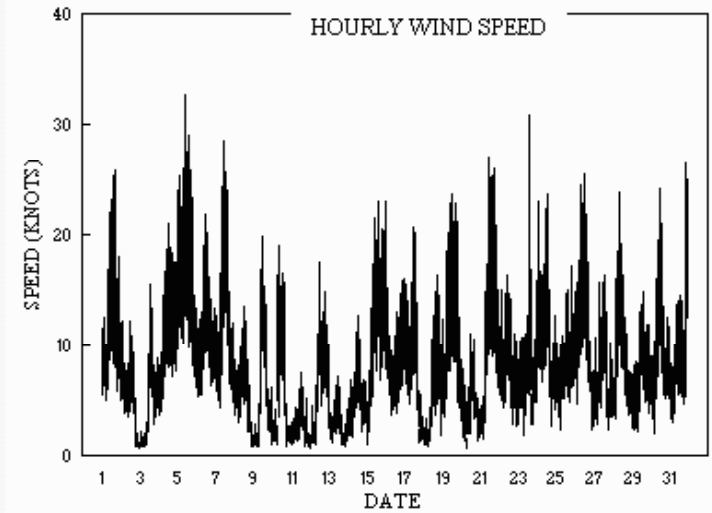


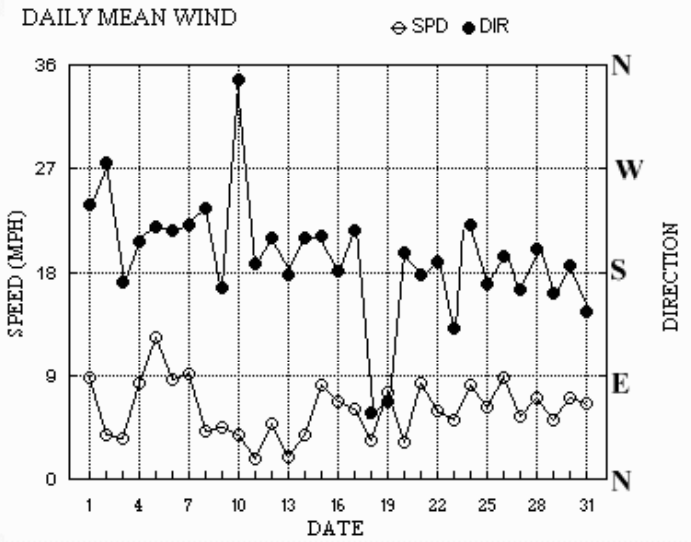












Daily meteorological data. Emmbrook, WOKINGHAM, Berkshire.

Month: OCTOBER 2022

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	18.9	10.3	2.0	8.0	14.2	15.7	7.7	0.0	1006.9	0 0 0 0		0 0 0 0		238	7.5	7.7	260	26	1610	250	11	15	1.9
2	18.9	12.4	0.0	11.7	14.7	15.6	5.7	0.0	1019.8	0 0 0 0		0 0 0 0		275	1.9	3.4	231	12	0159	226	6	02	0.0
3	18.3	4.7	0.0	1.5	14.5	15.5	4.9	0.0	1027.4	0 0 0 0		0 0 0 0		172	2.6	3.1	174	16	1311	173	7	13	0.0
4	18.1	9.5	tr	10.6	14.8	15.5	0.4	0.0	1017.3	0 0 0 0		0 0 0 0		207	7.1	7.2	211	21	1356	203	10	23	0.0
5	19.6	15.4	1.9	14.6	15.2	15.5	1.8	0.0	1008.4	0 0 0 0		0 0 0 0		219	10.3	10.8	210	33	1020	209	17	10	1.1
6	19.0	7.0	0.0	4.3	14.8	15.5	10.3	0.0	1029.2	0 0 0 0		0 0 0 0		216	7.4	7.5	220	22	1243	226	11	12	0.0
7	19.0	11.0	2.3	7.1	14.6	15.5	6.1	0.0	1020.7	0 0 0 0		0 0 0 0		221	7.9	8.0	203	29	1153	225	14	12	0.4
8	17.1	6.1	0.0	1.5	14.4	15.4	9.9	0.0	1024.8	0 0 0 0		0 0 0 0		235	3.4	3.7	250	14	1214	259	5	10	0.0
9	18.5	1.4	3.0	-1.5	13.7	15.3	8.9	0.0	1019.6	0 1 0 0		0 0 0 0		166	3.5	3.9	173	20	1110	188	10	12	1.4
10	16.7	7.2	0.0	4.0	13.5	15.2	8.1	0.0	1017.6	0 0 0 0		0 0 0 0		347	2.6	3.4	13	19	0947	349	7	10	0.0
11	15.7	0.9	0.0	-1.8	13.2	15.0	9.6	0.0	1028.7	0 1 0 0		0 0 0 0		188	1.1	1.5	295	8	1355	201	3	13	0.0
12	17.7	2.6	2.9	-0.6	12.6	14.9	3.5	0.0	1021.5	0 1 0 0		0 0 0 0		209	3.7	4.2	210	18	1225	218	9	12	3.2
13	16.7	10.0	0.0	7.1	13.3	14.7	4.1	0.0	1016.1	0 0 0 0		0 0 0 1		178	0.2	1.7	333	7	1200	21	3	09	0.0
14	16.0	8.0	0.4	5.1	13.4	14.6	0.3	0.0	1011.1	0 0 0 0		0 0 0 0		209	3.2	3.4	275	13	1409	213	6	13	0.8
15	16.4	6.2	0.4	3.1	13.2	14.5	5.6	0.0	1003.3	0 0 0 0		0 0 0 0		211	7.0	7.2	205	23	1417	213	11	15	0.2
16	16.6	8.6	9.7	4.3	13.2	14.5	7.0	0.0	1011.9	0 0 0 0		0 0 0 0		181	4.7	5.9	208	23	0116	215	10	01	4.0
17	19.0	12.6	0.1	12.2	13.6	14.4	7.2	0.0	1016.1	0 0 0 0		0 0 0 0		216	5.1	5.4	254	21	1116	241	9	11	0.0
18	18.2	5.1	0.0	1.1	13.4	14.4	6.3	0.0	1028.8	0 0 0 0		0 0 0 1		58	2.4	3.0	64	16	1838	65	6	19	0.0
19	18.0	7.4	1.4	6.6	13.2	14.3	6.1	0.0	1020.9	0 0 0 0		0 0 0 0		68	6.6	6.6	77	24	1215	71	10	11	3.3
20	15.8	13.0	1.8	10.4	13.6	14.3	3.8	0.0	1006.8	0 0 0 0		0 0 0 0		197	0.9	2.8	280	11	1255	256	5	12	2.1
21	18.3	7.4	6.4	4.4	13.6	14.3	3.0	0.0	1000.9	0 0 0 0		0 0 0 0		178	6.5	7.3	179	27	1130	186	12	17	2.6
22	18.8	10.8	10.9	7.9	13.9	14.3	4.0	0.0	1010.1	0 0 0 0		0 0 0 0		189	4.4	5.2	216	16	1016	226	8	03	3.1
23	18.9	12.4	18.9	11.3	14.2	14.3	3.8	0.0	1002.0	0 0 0 0		1 0 0 0		132	3.7	4.5	216	31	1550	152	6	15	5.1
24	17.9	10.6	0.8	9.5	14.3	14.4	7.5	0.0	1003.0	0 0 0 0		0 0 0 0		221	7.0	7.1	214	24	1313	225	10	13	0.7
25	17.7	9.0	0.1	5.8	14.1	14.4	6.5	0.0	1012.6	0 0 0 0		0 0 0 0		169	4.7	5.4	135	17	2029	138	7	21	0.2
26	18.9	13.3	1.0	11.3	14.1	14.4	5.6	0.0	1008.5	0 0 0 0		0 0 0 0		193	7.2	7.7	205	26	1328	209	12	13	1.4
27	20.4	10.7	0.1	6.9	14.2	14.4	2.3	0.0	1012.9	0 0 0 0		0 0 0 0		165	3.8	4.8	179	17	1534	189	8	15	0.1
28	18.2	12.6	1.7	9.2	14.3	14.4	5.3	0.0	1012.9	0 0 0 0		0 0 0 0		200	5.1	6.2	231	24	0913	227	10	09	1.7
29	21.5	10.6	0.4	7.8	14.1	14.4	3.8	0.0	1012.6	0 0 0 0		0 0 0 0		161	3.2	4.5	163	15	1416	164	7	12	0.5
30	16.8	11.1	tr	6.6	14.4	14.5	1.9	0.0	1013.6	0 0 0 0		0 0 0 0		185	6.0	6.2	226	24	1348	201	11	13	0.0
31	16.4	9.1	6.0	4.8	14.0	14.5	3.9	0.0	1014.4	0 0 0 0		0 0 0 0		145	4.8	5.7	193	27	2257	199	12	23	4.0
Total			72.2				164.9	0.0															37.8
Mean	18.0	8.9		6.3	13.9	14.8	5.32	0.0	1014.9					197	3.6	5.3							
Anom	+2.5	+1.4	99%	+2.0	+0.5	+0.1	144%		+0.4														

Daily mean 13.5 Pressure, abs highest = 1029.5 on 6

Anom +2.0 Pressure, abs lowest = 992.0 on 24

Number of days with:

Air frost = 0 Ground frost = 3 Nil sun = 0

Snow falling = 0 Snow lying = 0 Thunder = 1

Hail=>5mm = 0 Hail<5mm or ice = 0 Fog at 09GMT = 2

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 OCTOBER 2022

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	72	2	24	08	17	14.1	11.4	84	8.4	1006.9	2	027	03	0	0	1	1	4	3	1		81813			1	2Ac68 1Ci72 COTRA Cu fra
2	70	7	24	04	08	12.7	11.9	95	8.6	1019.8	2	026	15	6	2	7	0	9	2	/		82558	87462		2	Cld edge N jpS
3	65	7	22	01	02	9.5	8.6	94	6.8	1027.4	3	001	03	2	2	7	0	9	7	/		81365	87367		3	
4	84	7	20	08	15	15.4	11.6	78	8.4	1017.3	2	001	02	2	2	7	8	4	/	/		81817	87625		4	Cu fra/hum
5	75	7	21	12	26	17.7	13.0	74	9.3	1008.4	8	012	15	2	2	7	8	5	/	/		84820	85635	87650	5	Cu hum. jp NW&N vv50k ex p
6	68	3	23	08	15	12.7	8.2	74	6.6	1029.2	2	014	02	0	0	0	0	9	0	1		83081			6	COTRA Ci fib
7	68	6	21	09	21	14.7	12.0	84	8.6	1020.7	8	009	03	2	2	1	6	3	0	2		81709	85075		7	1Sc40 1Cc72 COTRA Ci fib/spi
8	80	0	24	06	10	10.0	8.3	89	6.7	1024.8	1	021	02	0	0	0	0	9	0	0					8	
9	81	1	16	07	12	10.9	9.5	91	7.3	1019.6	8	011	02	0	0	1	5	6	0	4		81638			9	1Ci75 Ci edge W
10	75	5	35	05	10	10.9	9.0	88	7.1	1017.6	1	036	01	6	2	5	5	4	0	0		81715	83640	85650	10	Sc edge NNW
11	70	1	18	01	03	6.4	5.5	94	5.5	1028.7	1	007	02	0	0	0	0	9	0	1		81080			11	COTRA
12	65	4	16	04	07	9.9	8.5	91	6.8	1021.5	8	009	01	1	1	1	5	6	7	0		81630	84359		12	1Ac57
13	09	8	04	02	04	11.8	11.6	99	8.5	1016.1	7	003	42	4	1	8	6	1	/	/		88702			13	
14	57	8	20	03	07	12.1	11.6	97	8.5	1011.1	7	001	10	2	2	7	5	4	7	/		81718	85625	87650	14	/Ac58
15	83	1	23	09	17	12.6	10.7	88	8.0	1003.3	3	004	02	8	1	1	5	6	0	0		81630			15	Sc len
16	72	2	21	04	08	12.6	8.3	75	6.8	1011.9	2	023	02	0	0	1	5	6	0	1		81645			16	2Ci77 Ci fib/unc
17	65	7	22	06	12	15.1	13.0	87	9.2	1016.1	1	039	01	2	2	1	6	3	7	8		81708	87272		17	1Ac67 2As68 COTRA Halo 22° part+U/a cpnt
18	02	0	02	02	03	7.4	7.4	100	6.3	1028.8	2	013	44	4	4	0	0	9	0	0					18	vv 250m
19	62	7	07	08	19	13.5	11.4	87	8.3	1020.9	8	015	03	2	2	5	5	4	8	8		81710	85615	87272	19	1Ac62 COTRA Ac cas
20	35	8	23	02	05	14.8	14.6	99	10.4	1006.8	7	011	21	6	4	7	5	2	2	/		82708	83645	87656	20	8As65 Re fg
21	62	6	17	07	14	14.6	13.8	95	9.9	1000.9	0	005	25	8	1	4	9	5	6	3		81920	82825	83640	21	1Ac62 3Ci68 Cb cap jp S to W
22	64	6	20	04	09	12.3	10.7	90	8.0	1010.1	1	024	02	2	2	0	0	9	0	2		82171	85073		22	COTRA Ci fib/spi Parhelion
23	30	8	13	02	06	14.1	13.8	98	9.9	1002.0	7	010	63	6	2	6	5	6	2	/		82630	85650	88558	23	
24	84	2	23	08	16	13.1	10.8	86	8.1	1003.0	2	026	02	1	1	1	8	4	3	8		81812			24	1Sc25 1Ac60 1Cs70 1Ci75 COTRA Cu fra/hum Cs edge N
25	60	6	18	05	09	13.2	12.6	96	9.0	1012.6	2	009	10	2	2	1	8	4	0	1		81818	86075		25	1Sc50 COTRA Cu med Ci fib
26	65	7	19	09	22	15.3	12.4	83	9.0	1008.6	2	018	80	8	2	7	8	4	/	/		81815	85630	86650	26	Cu med
27	65	7	17	05	16	15.2	14.2	94	10.1	1012.9	5	002	03	6	2	7	5	4	/	/		83712	85622	87640	27	
28	80	7	22	11	21	16.4	13.5	83	9.6	1012.9	2	023	01	6	2	1	1	5	7	8		81815	87270		28	1Ac58 2As65 Cu fra Cs edge NW
29	56	8	13	02	05	14.3	14.1	99	10.0	1012.6	7	005	10	2	2	4	0	9	7	7		81358	84363	88275	29	COTRA
30	65	8	19	09	16	13.6	12.2	91	8.8	1013.6	4	000	21	6	2	4	8	4	2	/		81812	84640	88557	30	Cu med
31	59	5	18	04	08	12.8	12.2	96	8.8	1014.4	7	010	10	1	1	1	6	2	0	1		81703	85078		31	1Cc70 COTRA Ci fib

Mean vis = 18.6 km
Mean cloud = 5.2 65%
Mean wind speed = 5.6 kn
Mean gust = 12 kn
Mean TT = 12.9 °C
Mean TdTd = 11.2 °C
Mean RH = 89.6 %
Mean r = 8.3 g/kg
Mean PPP = 1014.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)
N = Total cloud amount, oktas
dd = Direction from which wind is blowing, tens of degrees true
ff = 10 minute mean wind speed, knots
gg = Highest gust in past hour, knots
TT = Air temperature at 1.2 m, deg Celsius
TdTd = Dew point temperature at 1.2 m, deg Celsius
RH = Relative humidity at 1.2 m
r = Humidity mixing ratio at 1.2 m, g/kg
PPP = Air pressure reduced to sea level, mbar
a = Characteristic of pressure tendency (Code FM12-0200)
ppp = 3 hr pressure tendency, tenths of mbar
ww = Present weather code (Code FM12-4677)
W1, W2 = Past weather code (Code FM12-4561)-
covers past 3 hours.
Nh = Amount of low cloud present, oktas
Cl = Type of low cloud (Code Fm12-0513)
h = Height of low cloud (Code FM12-1600)
Cm = Type of medium cloud (Code FM12-0515)
Ch = Type of high cloud (Code FM12-0509)
8 groups. 8 = indicator for cloud detail
N = Amount of cloud, oktas
C = Type of cloud (FM12-0500)
hshs= Height of cloud (FM12-1677)
Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for OCTOBER 2022

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	shs	NChshs	NChshs	NChshs	Date	Remarks
1	81	2	25	11	25	18.9	10.5	58	7.9	1009.8	1	012	01	1	1	1	8	6	4	1	8	1825				1	1Sc45 1Ac63 1Ci72
2	84	5	35	05	11	18.2	8.2	52	6.7	1022.5	1	011	02	1	1	5	4	6	0	0	8	1840	85650			2	1Sc56 Cu hum
3	82	8	16	08	13	17.9	9.8	59	7.4	1024.1	7	018	02	2	2	1	4	6	4	7	8	1633	88274			3	1Ac66 Parhelion+parhelic circ part+cz arc+u/a cont
4	82	7	21	10	19	17.2	12.3	73	8.8	1016.1	7	008	15	6	2	7	8	4	4	8	8	2818	87625			4	/Ac65 /Cs75 Cu hum jpSW
5	70	7	25	11	29	14.2	10.4	78	7.8	1011.8	3	036	25	8	6	4	8	4	7	/	8	1815	84640	87465		5	4Ac60 jpE&SE vv80k ex p Cld edge distant NW
6	81	3	23	10	18	18.7	9.2	54	7.1	1027.4	7	013	02	1	1	2	4	6	0	1	8	2837				6	1Sc45 2Ci81 COTRA Cu hum Ci fib
7	80	3	22	11	23	17.7	11.0	65	8.1	1016.2	7	022	02	1	1	3	8	5	0	1	8	2828				7	2Sc48 1Ci80 COTRA Cuhum jpNW
8	86	2	24	05	12	15.3	6.8	57	6.1	1024.2	7	006	02	0	0	2	4	6	0	1	8	1845				8	1Sc48 1Ci81 COTRA Cu hum
9	84	6	17	08	15	17.1	6.0	48	5.8	1013.8	7	031	03	1	1	0	0	9	0	5	8	2275	86080			9	COTRA Ci spi/unc Parhelia
10	82	1	35	07	15	14.9	5.7	54	5.6	1021.3	2	016	01	0	0	1	4	6	0	0	8	1840				10	1Sc43 Cu hum
11	83	5	35	01	06	15.1	5.0	51	5.4	1025.8	7	019	03	1	1	1	4	6	0	2	8	1640	85075			11	COTRA Ci unc/spi Parhelion
12	82	8	22	06	12	16.6	10.7	68	7.9	1018.8	7	016	03	2	2	1	8	6	7	/	8	1830	83656	88360		12	4Ac58 Cu hum
13	84	2	12	02	05	14.3	10.7	79	8.0	1014.4	6	012	02	0	0	2	8	5	0	5	8	1826				13	1Sc45 1Cs77 Cu med Cs edge SW
14	65	7	25	04	13	13.8	12.9	94	9.2	1008.2	6	014	51	6	2	7	5	2	/	2	8	2705	85615	87640		14	1Cu12 /Ci75 Cu hum vv60k ex NE-SE
15	65	7	21	10	23	14.8	9.2	69	7.3	1003.0	5	004	25	8	2	6	8	5	7	1	8	1825	84656	86358		15	2Sc35 /Ci70 jpSE vv50k ex p
16	78	7	16	05	13	15.6	9.5	67	7.4	1011.4	5	007	03	1	1	1	8	6	7	/	8	1830	86357	87468		16	1Sc35 Cu hum Cld edge NNW
17	84	3	24	09	14	17.7	8.6	55	6.8	1020.0	2	013	02	1	1	1	1	6	3	8	8	1840	83075			17	1Ac68 1Cs72 Cu hum Ci unc Cs edge S
18	82	6	06	05	15	16.8	9.5	62	7.2	1027.1	5	013	03	1	1	0	0	9	0	4	8	3076	85080			18	COTRA Ci fib/spi U/a cont
19	70	4	06	09	21	16.7	12.0	74	8.7	1015.2	7	034	03	1	1	3	0	9	8	5	8	3360				19	2Cs75 Ac cas Cs edge S
20	84	1	22	05	09	15.1	11.5	79	8.5	1005.2	7	012	01	6	1	1	8	4	0	2	8	1812				20	1Sc45 1Ci75 Cu hum
21	61	7	17	10	25	16.5	12.7	78	9.2	999.6	7	011	25	8	1	7	3	5	2	/	8	1920	83825	86640		21	/As65 vv30k ex NW
22	68	7	18	05	14	16.8	12.9	78	9.3	1010.2	5	002	15	2	2	6	8	4	7	/	8	3818	83650			22	2Sc30 /Ac63
23	82	7	13	05	15	17.1	14.6	85	10.4	996.9	7	033	25	8	1	6	5	4	9	/	8	2815	85656	87360		23	Absent vv&cld est
24	62	6	22	07	21	16.3	11.0	71	8.2	1004.5	3	003	15	1	1	5	8	5	6	3	8	1825	84650			24	2Ac60 1Ci68 Cu con jpS&W-N vv30k ex p
25	84	7	16	06	13	16.5	12.3	76	8.9	1010.7	6	014	03	2	2	2	8	4	5	1	8	2818	84369	86075		25	1Sc45 COTRA Cu med Ci fib
26	72	4	21	11	22	17.1	11.6	70	8.5	1013.1	2	020	25	8	1	1	1	5	0	1	8	1825	84081			26	Cu hum Ci fib Sky turbid
27	81	3	19	08	15	19.4	14.6	74	10.3	1012.7	7	008	01	1	1	1	1	5	0	9	8	1822				27	2Cc74 2Ci80 COTRA Cu hum Ci fib/spi
28	88	2	24	07	15	16.6	8.8	60	7.0	1017.0	2	018	01	1	1	1	1	6	0	1	8	1830				28	1Ci75 2Ci30 COTRA Cu hum Ci fib/flo
29	70	7	17	05	15	20.1	14.9	72	10.5	1011.0	6	006	02	2	2	2	0	9	8	1	8	1360	87072			29	2Ac63 Ac cas Ci fib
30	65	7	20	09	21	15.3	12.1	81	8.7	1013.9	3	003	25	8	2	2	8	4	0	1	8	2815	86080			30	1Sc45 COTRA Cu med Ci fib jpSE vv35k exSE
31	84	8	09	05	13	15.8	11.8	77	8.6	1007.7	7	044	03	2	2	7	8	4	2	/	8	1818	86656	87362		31	2Sc45 /As68. Cu hum

Mean vis = 35.4 km
Mean cloud = 5.1 64%
Mean wind speed = 7.1 kn
Mean gust = 16 kn
Mean TT = 16.6 °C
Mean TdTd = 10.5 °C
Mean RH = 68.3 %
Mean r = 8.0 g/kg
Mean PPP = 1014.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)
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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
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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

2022

Hour	01-Oct	02-Oct	03-Oct	04-Oct	05-Oct	06-Oct	07-Oct	08-Oct	09-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct
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	0.59	0.00	0.00	0.00	0.01	0.54	0.29	0.40	0.29	0.00	0.21	0.00	0.07	0.00	0.13	0.18
7	1.00	0.00	0.01	0.00	0.00	1.00	0.57	1.00	0.98	0.00	0.85	0.01	0.49	0.00	0.97	1.00
8	1.00	0.00	0.04	0.00	0.09	1.00	0.99	1.00	1.00	0.04	1.00	0.84	0.00	0.00	1.00	1.00
9	1.00	0.00	0.30	0.00	0.47	1.00	0.72	1.00	1.00	0.97	1.00	0.39	0.00	0.00	0.71	1.00
10	0.88	0.50	0.68	0.05	0.10	1.00	0.95	1.00	0.75	1.00	1.00	0.66	0.44	0.00	0.00	1.00
11	0.16	1.00	0.58	0.00	0.00	0.94	0.68	0.99	1.00	1.00	1.00	0.88	0.29	0.21	0.31	1.00
12	0.47	1.00	0.79	0.00	0.00	0.86	0.65	1.00	1.00	1.00	1.00	0.72	0.25	0.00	0.21	1.00
13	0.14	0.62	0.51	0.07	0.00	0.69	0.59	0.96	1.00	0.92	1.00	0.00	1.00	0.00	0.55	0.66
14	0.66	0.87	0.23	0.05	0.10	0.98	0.26	0.69	1.00	0.94	1.00	0.00	0.57	0.00	0.15	0.12
15	1.00	0.27	0.88	0.25	0.00	0.99	0.38	0.79	0.79	1.00	0.87	0.00	0.87	0.00	0.81	0.00
16	0.63	0.97	0.69	0.00	0.94	1.00	0.00	1.00	0.08	1.00	0.70	0.00	0.06	0.13	0.76	0.00
17	0.17	0.47	0.14	0.00	0.13	0.28	0.00	0.09	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	**7.69**	**5.69**	**4.85**	**0.42**	**1.83**	**10.28**	**6.08**	**9.92**	**8.89**	**8.09**	**9.62**	**3.50**	**4.05**	**0.34**	**5.59**	**6.95**

Hour	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	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	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
7	0.00	0.00	0.32	0.00	0.11	0.53	0.00	0.85	0.88	0.02	0.09	0.00	0.00	0.00	0.43	0.36
8	0.00	0.27	0.10	0.00	0.60	0.35	0.00	1.00	0.98	0.00	0.04	0.00	0.00	0.00	0.98	0.43
9	0.95	0.11	0.79	0.00	0.00	0.79	0.40	1.00	0.74	0.00	0.00	0.35	0.75	0.00	1.00	0.53
10	0.87	1.00	0.27	0.00	0.45	0.78	0.98	0.93	0.37	0.65	0.05	0.13	0.24	0.01	0.78	0.57
11	0.97	1.00	0.89	0.00	0.73	0.74	0.67	0.86	0.54	1.00	0.01	0.64	0.80	0.05	0.47	0.63
12	1.00	1.00	1.00	0.07	0.46	0.67	0.88	0.62	0.73	1.00	0.03	0.82	1.00	0.18	0.17	0.63
13	1.00	1.00	1.00	0.86	0.55	0.03	0.70	1.00	0.62	0.87	0.45	1.00	0.37	0.48	0.05	0.60
14	1.00	1.00	1.00	1.00	0.00	0.00	0.14	0.76	0.69	0.88	0.82	1.00	0.54	0.40	0.00	0.54
15	0.92	0.90	0.69	1.00	0.00	0.06	0.00	0.34	0.84	1.00	0.79	1.00	0.13	0.78	0.00	0.56
16	0.47	0.04	0.00	0.83	0.00	0.00	0.00	0.13	0.13	0.20	0.00	0.33	0.00	0.00	0.00	0.33
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
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	**7.19**	**6.32**	**6.06**	**3.76**	**2.96**	**4.04**	**3.77**	**7.48**	**6.50**	**5.62**	**2.28**	**5.27**	**3.84**	**1.90**	**3.88**	**164.68**

OTOBER 2022	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	14.67	18.9	1454	10.9	614	79.2	96.2	629	54.2	1431	10.9	8.1	9.3	3	7.0	1431	1008.13	1015.4	2359	999.8	3	0.3
2	12.94	18.9	1433	6.2	2351	83.9	98.1	2356	49.0	1456	10.0	7.6	9.3	1034	5.7	2351	1021.21	1027.3	2303	1015.3	5	1.8
3	11.68	18.3	1313	4.7	322	84.4	98.5	334	57.5	1433	8.9	7.1	9.1	2351	5.1	323	1025.14	1027.8	211	1019.9	2359	0
4	15.73	18.1	1410	13.6	218	81.9	95.8	230	70.4	1411	12.6	9.0	9.9	1307	8.1	530	1016.52	1020.1	7	1012.6	2359	0
5	14.96	19.6	1007	9.4	2359	78.3	93.0	1225	65.0	1747	11.2	8.3	10.9	1249	6.0	2358	1012.98	1024.0	2357	1007.3	1008	1.9
6	12.67	19.0	1416	7.0	604	78.5	93.1	2351	52.7	1417	8.8	6.9	8.0	2100	5.7	608	1027.20	1029.5	1012	1023.8	3	0.1
7	13.68	19.0	1210	9.4	2357	84.8	95.9	620	55.6	1208	10.9	8.1	9.1	922	6.9	2357	1019.56	1025.2	1	1015.6	1559	2.2
8	10.17	17.1	1347	4.5	2359	81.9	97.4	535	47.2	1350	6.8	6.1	7.2	922	5.0	2359	1023.46	1025.1	1011	1019.1	0	0.2
9	9.56	18.5	1304	1.4	602	80.1	99.3	838	43.9	1314	5.7	5.7	7.6	1031	4.1	602	1017.05	1023.8	3	1011.1	2359	0
10	10.14	16.7	1429	3.6	2354	81.8	97.2	623	50.5	1447	6.8	6.1	7.7	638	4.7	2354	1019.08	1027.5	2357	1011.1	328	2.9
11	7.14	15.7	1315	0.9	622	84.1	98.6	657	46.3	1407	4.1	5.1	6.5	1158	3.9	622	1026.87	1028.9	845	1024.5	2358	0
12	10.84	17.7	1220	2.6	205	85.1	98.6	227	57.4	1223	8.2	6.8	9.0	2329	4.4	205	1020.56	1024.7	118	1017.5	2346	1.3
13	12.02	16.7	1318	8.7	2205	93.5	99.6	850	60.8	1338	10.9	8.1	9.1	1149	6.8	2205	1015.70	1017.9	16	1014.2	1454	1.4
14	11.20	16.0	1132	8.0	136	94.8	99.3	722	78.6	1137	10.4	7.9	9.3	1127	6.6	136	1009.85	1014.4	0	1006.1	2358	0.1
15	11.94	16.4	1347	6.2	129	84.2	99.9	355	60.0	1406	9.2	7.3	8.9	1248	5.8	129	1003.79	1006.2	8	1002.4	1427	0.8
16	13.40	16.6	1406	8.6	703	80.9	97.0	2021	59.2	1215	10.0	7.8	10.9	2319	6.2	659	1009.64	1012.4	1008	1005.5	5	8.3
17	14.13	19.0	1306	6.1	2359	82.3	97.9	2355	51.6	1335	10.9	8.1	10.7	0	5.6	2359	1017.66	1025.7	2358	1008.6	0	0.2
18	10.39	18.2	1414	5.1	353	86.0	100.0	1017	54.9	1423	7.9	6.6	9.1	1058	5.3	239	1027.32	1029.2	1002	1025.5	0	0.2
19	13.44	18.0	1417	9.7	229	87.3	97.5	344	69.4	1318	11.3	8.3	9.3	2328	7.0	2	1018.23	1026.0	0	1010.1	2359	0
20	12.82	15.8	1437	7.4	2322	94.1	99.1	2353	75.3	1443	11.9	8.7	10.3	904	6.3	2322	1006.56	1010.3	12	1004.1	2333	2.6
21	14.00	18.3	1224	8.2	0	90.8	99.9	601	73.5	1225	12.4	9.1	10.4	1013	6.7	0	1000.99	1004.3	0	999.1	1514	5.9
22	14.29	18.8	1236	10.8	526	88.6	96.7	2354	66.7	1237	12.4	9.0	9.7	8	7.7	522	1008.80	1010.8	1040	1002.4	1	0.3
23	14.17	18.9	1225	11.6	1813	93.3	98.8	939	71.3	1326	13.0	9.4	11.4	1019	8.3	1746	1000.03	1008.8	2	992.4	2357	20.5
24	13.14	17.9	1241	10.6	628	88.2	97.4	23	61.1	1256	11.1	8.3	9.2	37	7.5	1256	1003.25	1010.5	2359	992.0	31	5.3
25	13.47	17.7	1301	9.0	701	88.3	99.0	729	68.4	1308	11.5	8.4	9.6	1111	6.9	701	1010.41	1012.8	937	1006.6	2338	0.2
26	15.28	18.9	1310	10.7	2335	84.3	98.6	2351	63.2	1312	12.5	9.0	10.2	1033	7.7	2335	1010.93	1016.3	2135	1005.3	304	0.5
27	15.64	20.4	1428	11.5	35	90.6	99.1	232	72.1	1433	14.0	9.9	11.0	1425	8.2	28	1013.57	1016.0	11	1011.6	659	0.6
28	14.56	18.2	1303	11.2	2206	84.8	98.8	348	55.4	1311	11.9	8.6	10.4	755	7.0	1311	1015.08	1019.5	2124	1010.3	432	0.1
29	15.50	21.5	1301	10.6	106	88.4	98.7	906	67.4	1302	13.5	9.6	11.5	1058	7.6	106	1013.30	1018.1	0	1010.8	1437	1.5
30	13.54	16.8	1322	11.1	312	88.8	98.4	527	70.9	1103	11.7	8.5	9.2	838	7.8	1113	1014.39	1016.7	2359	1013.0	906	0.5
31	13.21	16.4	1229	9.1	436	89.9	98.5	506	70.4	1254	11.5	8.5	10.1	2004	7.0	436	1009.67	1016.8	14	998.7	2355	3.9
Total																						63.6
Mean	12.91	17.99		8.01		85.9	97.93		61.28		10.41	7.93	9.48		6.41		1014.42	1019.09		1009.55		
Max	15.73	21.48		13.59		94.8	100.00		78.60		14.03	9.92	11.48		8.30		1027.32	1029.49		1025.53		
Min	7.14	15.65		0.93		78.3	93.00		43.90		4.15	5.06	6.49		3.90		1000.03	1004.28		992.00		

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.