

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 2024

Temperature (°C)	Anomaly	Rank in the past 143 years
Mean maximum	15.7	+0.2 31st highest
Mean minimum	8.0	+0.5 22nd highest
Daily mean	11.9	+0.4 23rd highest
Highest maximum	19.7	on 16th Lowest maximum 10.2 on 13th
Highest minimum	12.1	on 2nd Lowest minimum 0.1 on 11th
Mean grass minimum	5.4	+1.1 Lowest grass minimum -2.2 on 11th
Mean earth @30 cm	13.7	+0.3 Earth @100 cm 14.6 -0.1
Frost duration (hrs)	0.0	Rain duration (hrs) 52.4
Rainfall total (mm)	50.6	69% 51st lowest
Highest daily fall	11.3	on 13th Highest rate mm/hr 95 on 7th
Number of: Dry days (<0.2mm)	13	Wet days (>0.9mm) 12 days ≥5mm 4
Sunshine total (hrs) 96.9	Daily mean 3.13	85% Sunniest day 8.9 on 17th
N° days with: Air frost 0	Ground frost 2	Snow falling 0 Snow lying 0
Thunder 0	Hail ≥5mm 0	Small hail/ice 0 Fog @09 2 Nil sun 6
Pressure MSL: Mean @09 GMT, mbar 1014.4	-0.1	Highest 1033.0 on 23rd Lowest 986.0 on 9th
Relative humidity: Mean (%) 89.9	Lowest 48	on 11th Water vapour (g/kg), mean at 09 and 15 GMT 8.0, 8.0
Overall mean wind speed (mph) 4.6	Windiest day 9.8	on 20th Max gust 38 on 20th
Wind direction (days)	N 2 NE 2 E 3 SE 5 S 5 SW 9 W 2 NW 3	
Least windy day (mph) 0.3	on 31st	Calm; less than 0.5 mph (minutes) n/a

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

Notes:

Rainfall and Sunshine Below Average but Temperature Slightly Above

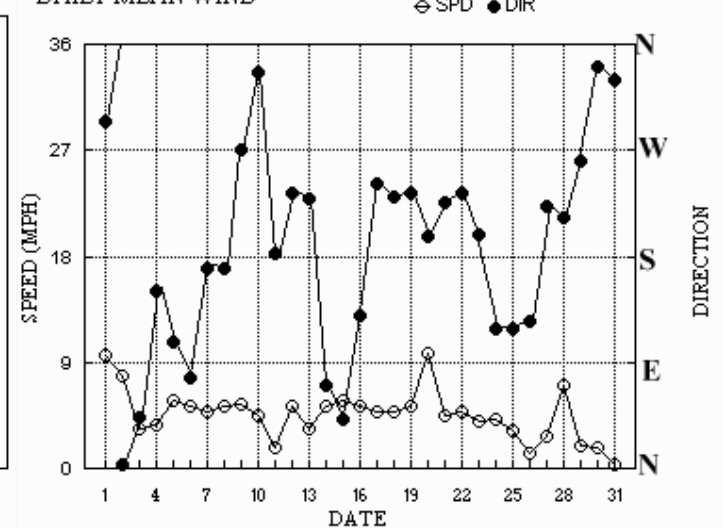
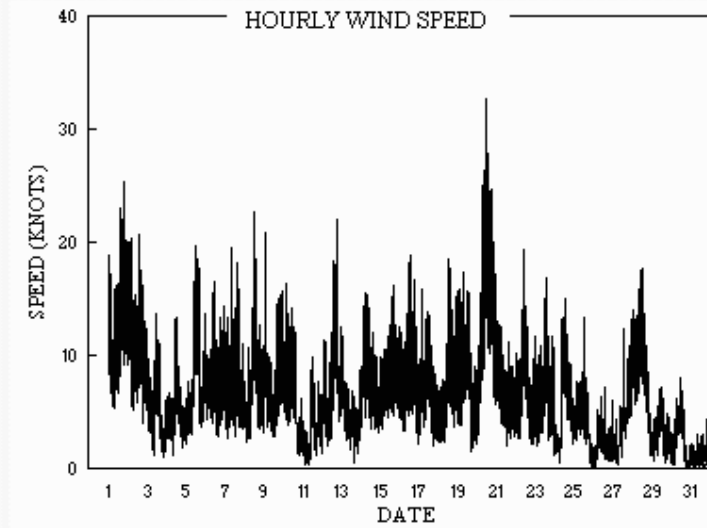
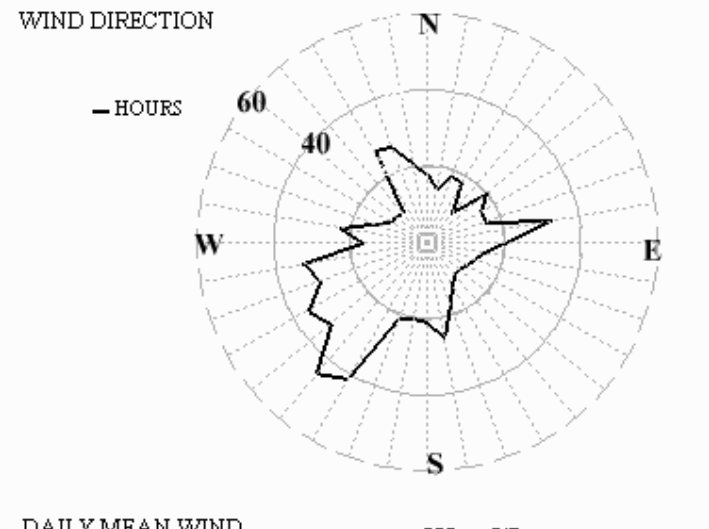
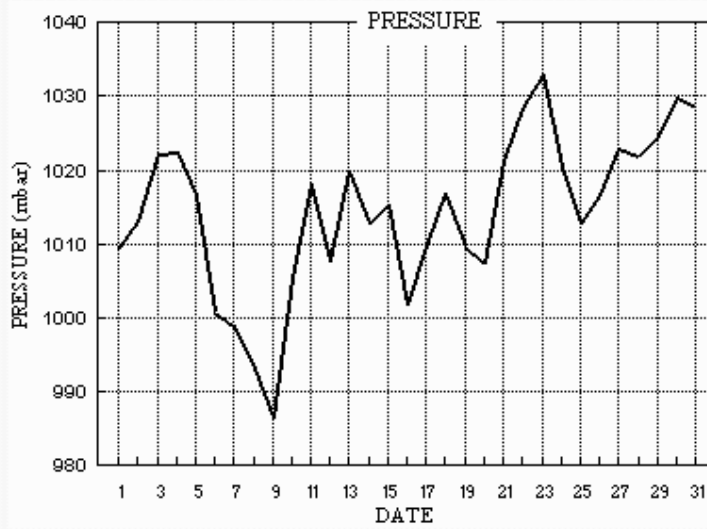
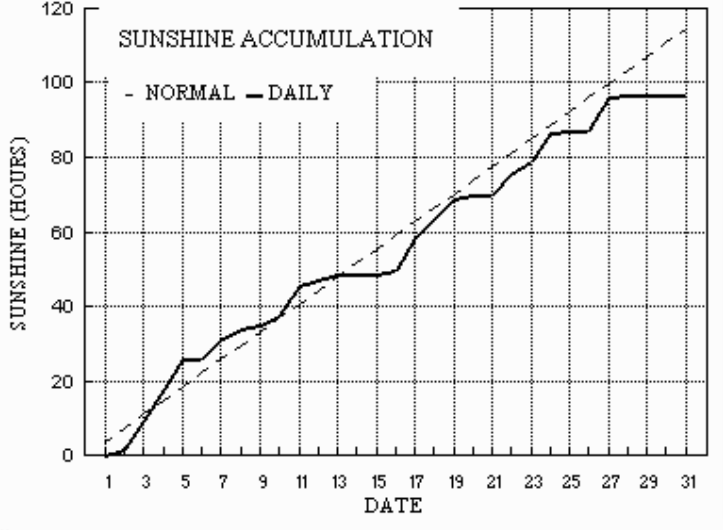
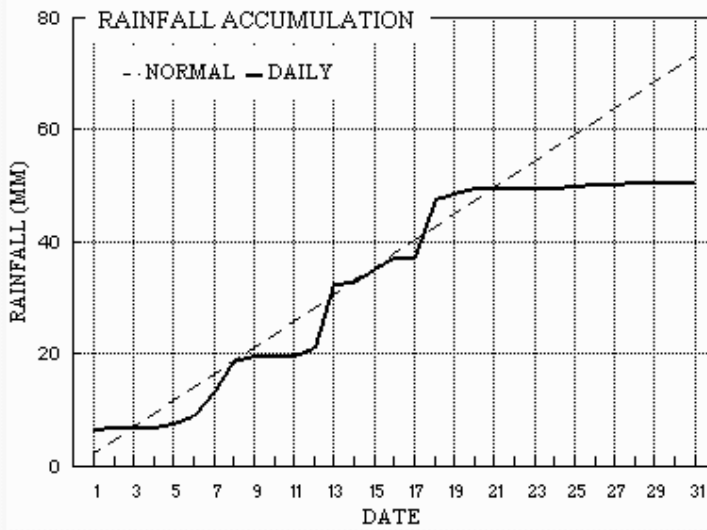
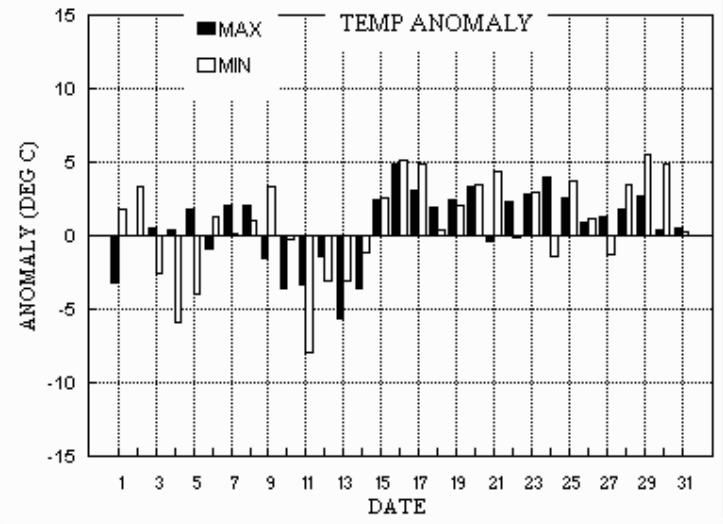
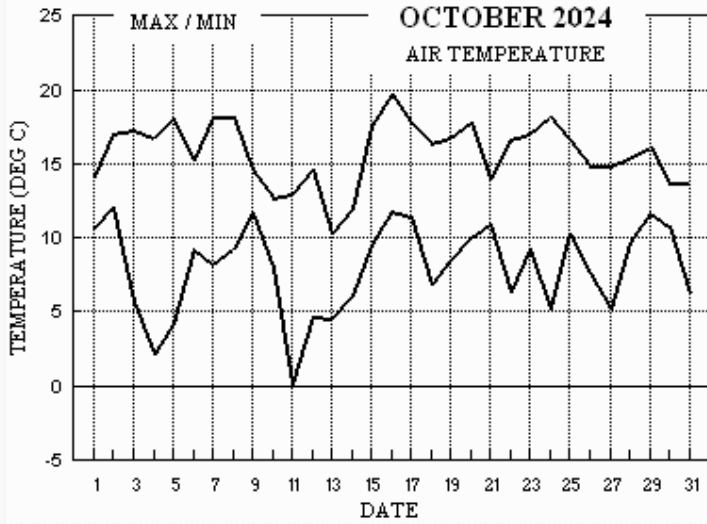
Temperature: The mean this October is lowest since 2020, but is 1.1° above the long-term median and 0.4° above the current climatological average. The mean maximum is similarly 1.0° above its median, while the mean minimum is 1.4° above its median. In this millennium, 11 Octobers have been milder and 13 cooler than this year's. The highest max is 0.5° below the median and the lowest max is 0.7° above its median. The highest min is 1.1° below the median while the lowest min is 1.1° above its median. Temperature-wise the month could be split into 3. From the 1st to the 9th daily maxima were not far from normal, but there were large swings in the anomaly for daily min, between +3° on the 2nd and 9th to -6° on the 4th. From the 10th to the 14th there was a short cool snap with anomalies for daily max between -1° and -6°, and for daily min between -1° and -8°. From the 15th onward anomalies were generally +ve, for daily max up to +5° on the 16th and +4° on the 24th, and for daily min anomalies ranged from -1° on 24th and 27th and +5° on the 16th, 17th, 29th and 30th. The mean grass min is 1.0° above the 45 year average and the lowest daily value is 2.2° above average. Earth temperature is a little above average at 30 cm depth but slightly below average at 1 m depth. There was no air frost this month, along with 12 other Octobers in this millennium, but it was very close on the 11th with a minimum of just 0.1°. **Rainfall:** After a very wet September this month saw drier conditions develop after mid-month, resulting in a deficit of 22 mm by the 31st. October is, on average, the 2nd wettest month of the year here after November, but this month's 69% of average makes it the driest October since 2017 and 8th driest in this millennium. However, there were 3 fewer dry days than average, and the rainfall duration is close to average. There was no thunder or hail, but the rainfall rate was in the violent category on both the 7th and 8th. Rainfall was quite sparse after the 20th with a total of just 0.8 mm over the 11 days to the 31st. **Sunshine:** This has been a month with a more than usual number of cloudy days, resulting in 15 % less sunshine than average, making it the 4th dullest October in this millennium. There were, however, isolated sunny days, the 11th, 17th, 24th and 27th for instance, and the 3 day period to the 5th had a mean of 8.0 hours per day. On the other hand, apart from a sunny 27th, 6 of the final 7 days of the month saw a total of just 1.5 hours sunshine, and the sun was not seen on both the 30th and 31st. **Wind:** Once again the wind record has been supplemented by data from Reading University, due to the Wokingham sonic anemometer being off-line for 14 days. The overall mean speed of 4.6 mph is 1.6 mph below average and is lowest for the month since 2016, and before that, 2007. The month's highest gust is 5 mph below average. Daily speeds were light or moderate until the 8th, then mainly light until the 18th, temporarily increasing fresh on the 20th, the falling light or very light until the 31st. Directions were between N and E on the 2nd, 3rd, 6th, 14th and 15th, between E and S on the 4th, 5th, 7th, 8th, 16th and 24th to 26th, between S and W on the 11th to 13th, 17th to 23rd and 27th to 29th, and between W and N on 1st, 9th, 10th, 30th and 31st. **Humidity:** The mean relative humidity of 89.9 % is 5.1 % above average and highest for October in the past 27 years.

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

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
-0.3°	-0.2°	84%	102%	+0.4°	+0.3°	127%	87%	+1.7°	+2.1°	3%	67%

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

Wokingham climatological graphs for October 2024



Month: OCTOBER 2024

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs
1	14.1	10.7	6.7	8.8	14.6	15.8	0.0	0.0	1009.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	294	7.5	8.4	332	26	1824	307	11	16	11.2
2	17.0	12.1	0.4	11.9	14.7	15.6	1.6	0.0	1013.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	4	6.4	6.8	20	21	1405	337	10	02	0.4
3	17.2	5.7	0.0	2.0	14.8	15.5	7.7	0.0	1022.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	44	2.1	2.9	66	14	1121	69	6	11	0.0
4	16.8	2.1	0.0	-0.4	14.3	15.5	8.4	0.0	1022.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	151	0.6	3.2	156	14	1301	151	7	10	0.0
5	18.0	4.1	0.5	1.5	13.8	15.4	8.0	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	107	1.8	5.0	164	20	1137	153	9	15	0.6
6	15.2	9.3	1.3	5.0	13.8	15.2	0.0	0.0	1000.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	77	1.7	4.7	148	17	1200	238	7	23	2.1
7	18.1	8.2	4.6	5.4	14.0	15.1	5.2	0.0	998.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	170	2.4	4.3	192	20	0941	179	7	15	3.6
8	18.1	9.3	5.3	6.4	14.2	15.0	3.2	0.0	993.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	169	4.4	4.7	187	23	1225	185	9	12	2.8
9	14.6	11.7	1.0	9.7	14.4	14.9	0.7	0.0	986.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	270	3.0	4.7	215	21	0205	202	8	01	2.6
10	12.7	8.0	tr	8.2	14.5	14.9	2.7	0.0	1005.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	335	3.7	4.0	357	17	0500	309	6	00	0.0
11	12.9	0.1	tr	-2.2	13.8	14.9	7.9	0.0	1018.0	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	183	0.5	1.7	211	10	1250	222	5	12	0.0
12	14.6	4.7	1.3	2.5	13.3	14.8	1.7	0.0	1007.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	233	2.4	4.6	279	22	1905	256	9	16	0.7
13	10.2	4.5	11.3	1.1	13.0	14.7	1.3	0.0	1019.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	229	1.5	3.0	259	13	0040	246	6	01	7.1
14	11.9	6.1	0.5	5.2	12.6	14.5	0.0	0.0	1012.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	71	4.6	4.6	58	16	0750	76	7	03	3.2
15	17.5	9.5	2.3	10.0	12.9	14.3	0.4	0.0	1015.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	43	4.7	5.1	62	16	1836	54	7	18	2.5
16	19.7	11.8	2.0	12.7	13.6	14.2	0.7	0.0	1001.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	130	2.6	4.6	157	19	1413	202	6	19	3.0
17	17.8	11.4	0.1	8.1	14.4	14.2	8.9	0.0	1009.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	241	3.9	4.2	256	16	0504	227	7	13	0.0
18	16.4	6.8	10.3	3.7	14.2	14.3	4.8	0.0	1016.9	0 0 0 0	0 0 0 0	0 0 0 1	230	3.0	4.3	272	19	1331	201	7	15	8.3	
19	16.8	8.5	1.0	10.6	14.0	14.4	5.6	0.0	1009.7	0 0 0 0	0 0 0 0	0 0 0 0	233	3.4	4.6	202	18	0744	280	9	08	0.9	
20	17.8	10.0	1.2	5.5	13.9	14.4	0.9	0.0	1007.4	0 0 0 0	0 0 0 0	0 0 0 0	197	7.6	8.5	197	33	1213	209	14	12	1.4	
21	13.9	10.9	tr	7.2	13.8	14.4	0.0	0.0	1021.1	0 0 0 0	0 0 0 0	0 0 0 0	226	3.7	4.0	219	13	0151	219	6	05	0.1	
22	16.6	6.3	tr	2.0	13.3	14.3	6.0	0.0	1028.2	0 0 0 0	0 0 0 0	0 0 0 0	233	4.1	4.2	208	20	1102	245	8	11	0.0	
23	17.0	9.3	tr	5.0	13.3	14.2	3.4	0.0	1032.8	0 0 0 0	0 0 0 0	0 0 0 0	198	1.8	3.5	172	17	1540	191	7	14	0.0	
24	18.1	5.1	tr	0.7	13.2	14.2	7.5	0.0	1020.5	0 0 0 0	0 0 0 0	0 0 0 0	118	3.3	3.6	119	15	1305	127	7	10	0.0	
25	16.6	10.2	0.3	5.9	13.1	14.1	0.3	0.0	1012.7	0 0 0 0	0 0 0 0	0 0 0 0	119	1.8	2.8	209	13	1325	211	5	13	0.7	
26	14.8	7.6	0.2	3.9	13.2	14.0	0.4	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	125	0.4	1.2	231	7	1440	78	4	10	0.2	
27	14.9	5.1	tr	1.4	13.0	14.0	8.8	0.0	1023.0	0 0 0 0	0 0 0 0	0 0 0 0	223	2.0	2.5	242	12	1535	205	6	22	0.1	
28	15.3	9.6	0.3	4.8	12.7	13.9	0.3	0.0	1021.9	0 0 0 0	0 0 0 0	0 0 0 0	213	6.2	6.2	216	18	1325	215	9	13	0.9	
29	16.1	11.6	tr	7.2	13.2	13.8	0.5	0.0	1024.5	0 0 0 0	0 0 0 0	0 0 0 0	260	1.5	1.7	235	7	1210	271	3	14	0.0	
30	13.7	10.8	0.0	9.8	13.4	13.7	0.0	0.0	1029.9	0 0 0 0	0 0 0 0	0 0 0 0	340	1.5	1.6	356	8	1240	330	4	12	0.0	
31	13.7	6.2	0.0	2.7	13.3	13.8	0.0	0.0	1028.7	0 0 0 0	0 0 0 0	0 0 0 1	329	0.2	0.3	162	4	2005	331	1	13	0.0	
Total			50.6				96.9	0.0															52.4
Mean	15.7	8.0		5.4	13.7	14.6	3.13	0.0	1014.4					220	0.9	4.0							
Anom	+0.2	+0.5	69%	+1.1	+0.3	-0.1	85%																

Daily mean 11.9 Pressure, abs highest = 1033.0 on 23
 Anom +0.4 Pressure, abs lowest = 986.0 on 9

Number of days with:
 Air frost = 0 Ground frost = 2 Nil sun = 6
 Snow falling = 0 Snow lying = 0 Thunder = 0
 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. SI = 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 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	Nhshs	NChshs	NChshs	Date	Remarks
1	65	8	27	07	16	12.1	10.3	89	7.8	1009.4	0	001	21	6	2	8	5	3	/	/	87708	88625			
2	65	7	02	09	15	14.0	13.1	94	9.3	1013.0	2	016	03	6	2	7	8	3	/	/	83709	85812	85650	2	Cu hum
3	84	2	05	03	10	10.9	9.0	88	7.0	1022.2	2	012	03	0	0	2	5	6	0	0	81635			3	2Sc50
4	58	2	25	01	04	8.6	8.5	99	6.8	1022.5	2	006	10	4	0	1	5	6	0	1	81640			4	1Cc72 2Ci81 COTRA
5	72	1	13	04	08	12.5	9.1	80	7.2	1016.7	8	007	01	1	1	1	8	6	0	0	81830			5	1Sc40 Cu hum
6	80	7	08	05	11	13.2	11.1	87	8.3	1000.8	7	014	03	2	2	6	5	4	7	/	86616	87358		6	
7	75	5	2	10	12	13.2	12.1	93	8.9	998.9	1	009	25	8	1	1	8	4	6	3	81815	84357		7	1Sc50 2Ac63 2Ci68 Cu con jpSW vv50k ex p
8	58	7	19	04	15	13.3	12.8	97	9.4	993.2	0	007	80	8	2	6	2	2	7	/	83705	85712	87360	8	Cu con
9	72	7	27	04	09	13.5	12.1	91	9.0	986.4	8	005	03	8	2	7	8	3	/	/	84708	85812		9	3Sc20 Cu hum
10	75	7	34	07	12	8.7	6.5	86	6.0	1005.4	2	032	01	6	2	7	5	4	7	/	81712	87645		10	/Ac58
11	80	1	34	01	02	4.6	4.2	97	5.1	1018.0	1	013	02	0	0	1	5	7	0	0	81656			11	
12	86	7	12	04	08	11.0	8.4	84	6.9	1007.6	8	014	01	2	2	5	5	4	3	/	81615	85650	87361	12	
13	82	8	27	04	07	7.1	3.9	80	5.0	1019.8	1	022	03	2	2	4	0	9	7	7	81365	84368	88275	13	COTRA Halo 22° part
14	30	8	05	07	14	9.5	9.4	99	7.3	1012.8	3	006	58	6	5	8	7	2	/	/	87703	88705		14	
15	35	8	08	04	08	11.9	11.7	99	8.5	1015.3	8	005	10	5	2	8	6	2	/	/	87703	88704		15	
16	33	8	13	04	11	15.7	15.2	97	10.8	1001.8	6	006	50	2	2	8	5	2	/	/	87704	88610		16	
17	68	4	24	04	10	13.0	11.9	93	8.7	1009.8	2	031	02	0	0	1	6	3	4	1	81708	83075		17	1Ac66 1Cc73 COTRA Parheliion
18	03	9	29	03	08	8.6	8.6	100	6.9	1016.9	2	009	43	4	4	9	/	/	/	/				18	
19	65	7	29	08	16	13.1	12.3	95	8.9	1009.7	3	022	61	6	5	7	7	3	/	/	87708	86650		19	Clearance W
20	50	8	17	08	21	14.2	13.2	94	9.5	1007.4	8	027	62	6	2	6	7	3	2	/	86706	88540		20	
21	62	8	21	05	09	12.6	10.0	84	7.5	1021.1	2	018	02	2	2	8	0	9	7	/	85363	88465		21	
22	58	7	23	07	14	11.7	10.6	93	7.8	1028.2	2	016	80	1	1	7	5	4	3	/	81615	83622	85656	22	/Ac58
23	58	7	20	03	11	12.3	11.7	96	8.3	1032.8	0	007	10	2	2	7	5	2	/	1	83705	83635	86648	23	/Ci78 COTRA
24	57	1	09	03	05	11.2	11.2	100	8.2	1020.5	8	011	10	0	0	1	6	3	0	0	81709			24	
25	50	8	09	05	10	15.2	15.0	99	10.6	1012.7	2	012	10	2	2	8	5	2	/	/	87704	88620		25	
26	56	7	08	02	05	12.0	11.8	99	8.6	1016.7	0	001	21	6	2	7	5	7	/	1	83650	87656		26	/Ci77 COTRA
27	65	1	25	01	03	9.5	9.5	100	7.3	1023.0	2	022	02	0	0	0	0	9	0	1	81080			27	COTRA
28	65	7	23	07	14	13.5	11.7	89	8.5	1021.9	1	003	03	1	1	7	5	4	3	/	87610	83362		28	
29	68	7	27	03	07	13.5	13.0	97	9.2	1024.5	2	012	02	2	2	7	5	3	/	/	81706	87627		29	
30	64	7	36	04	07	11.7	9.6	87	7.3	1029.9	0	012	02	2	2	7	5	6	/	/	87632			30	
31	01	4	32	01	02	7.0	6.9	99	6.1	1028.7	3	002	46	4	1	4	5	5	0	0	84625			31	vv150m

Mean vis = 16.3 km

Mean cloud = 5.9 74%

Mean wind speed = 4.6 kn

Mean gust = 10 kn

Mean TT = 11.6 °C

Mean TdTd = 10.5 °C

Mean RH = 93.1 %

Mean r = 8.0 g/kg

Mean PPP = 1014.4 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

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 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	57	8	28	11	21	12.6	11.5	93	8.5	1006.7	6	018	61	6	2	7	5	3	2	82709	87613	88550	1		
2	75	7	03	08	21	15.2	11.6	79	8.4	1015.5	3	012	15	8	2	7	8	4	/	82815	83645	87656	2	Cu med jpN&E	
3	88	5	07	05	11	14.6	9.4	71	7.2	1021.2	6	008	03	1	1	5	8	6	0	0	81835	84656	3	2Sc45 Cu med	
4	82	7	14	05	08	15.6	7.4	58	6.3	1020.1	7	012	03	1	1	4	6	3	6	0	81635	85275	4	2Ac70 /Ci80 COTRA Halo 22° part+parhelia+u/a cont	
5	88	2	15	10	19	16.5	6.1	50	5.8	1011.6	8	030	01	0	0	1	4	6	0	4	81838		5	1Sc40 2Ci75 COTRA	
6	22	8	09	03	08	13.2	12.6	96	9.2	997.3	7	017	58	6	5	8	7	2	/	87703	88706	6			
7	80	3	18	05	14	17.4	11.7	69	8.6	996.6	7	018	01	8	1	2	8	5	3	1	82820		7	1Sc56 1Ac68 1Ci72 Cu med	
8	59	7	17	09	22	16.6	12.2	75	9.0	991.2	8	016	25	8	2	7	8	4	/	83815	84635	85650	8	/Ac62 /Ci68 Cu con jp all quads Cb top E	
9	78	7	31	07	13	14.2	12.1	87	9.0	986.3	0	001	25	8	2	7	8	4	/	81812	83625	86650	9	1Cs75 Cu hum Cs edge SE	
10	84	6	32	07	12	11.6	4.1	60	5.1	1009.1	2	013	03	1	1	6	8	6	0	0	81830	83645	85656	10	Cu med
11	88	5	32	02	08	12.7	3.4	53	4.8	1016.8	6	010	02	1	1	5	8	6	0	0	81835	85648	11	Cu hum Sc cas	
12	84	7	26	09	17	14.1	9.7	75	7.5	1005.1	6	006	02	6	2	7	8	5	3	/	82825	86650	12	/Ac58 Cu med	
13	75	7	22	02	07	9.9	5.5	74	5.5	1020.2	4	000	02	2	2	6	0	9	1	8	86468	87275	13	COTRA Parheliion	
14	20	8	07	05	11	11.3	11.0	98	8.1	1015.2	2	011	50	5	2	8	7	2	/	86704	88706	14			
15	78	7	12	06	12	16.8	13.9	83	9.9	1011.2	7	029	02	2	2	1	6	4	7	8	81715	87272	15	2Ac68 COTRA Parheliion	
16	70	7	15	05	19	19.6	16.3	81	11.6	1000.2	8	009	02	2	2	7	8	4	/	81816	83625	87635	16	Cu hum	
17	80	3	21	06	12	17.1	11.2	68	8.2	1011.3	2	005	01	1	1	4	6	0	8	0	81830		17	1Sc45 1Cs75 2Ci78 COTRA Cu med	
18	82	3	20	07	15	15.1	9.7	70	7.4	1012.9	6	016	03	0	0	1	1	5	5	1	81825	83080	18	1Ac65 COTRA Cu hum Ac edge W	
19	81	1	27	08	16	15.9	9.1	64	7.2	1012.7	3	013	01	0	0	1	2	6	0	0	81835		19	Cu med	
20	63	6	20	11	28	16.3	13.2	82	9.5	1007.4	1	016	01	6	2	4	8	4	7	2	82815	83656	20	4Ac58 /Ac63 /Ci70 COTRA Cu fra	
21	61	7	20	03	09	13.5	10.9	84	8.0	1021.6	0	000	03	2	2	1	2	4	2	/	81812	87461	21	Cu med As edge distant W	
22	75	4	21	06	13	16.0	11.8	76	8.4	1028.7	5	000	15	8	1	3	8	5	6	1	83822		22	1Sc40 1Ac58 1Ci73 Cu con jpSW vv40k ex p	
23	82	4	19	07	14	16.1	11.3	73	8.1	1029.7	7	021	01	1	1	2	8	5	0	1	82820		23	1Sc45 2Ci80 Cu med	
24	84	6	15	07	16	16.0	12.2	78	8.8	1015.8	6	022	03	1	1	6	5	4	0	0	82618	85645	24		
25	80	7	23	03	09	14.9	12.9	88	9.2	1013.6	3	008	21	6	2	7	8	4	/	82815	85632	87648	25	Cu fra/hum	
26	65	7	22	03	06	14.4	12.4	88	8.9	1015.1	7	005	21	6	2	7	8	4	/	81710	83815	87630	26	Cu hum/med jp W-N	
27	81	5	26	04	10	14.3	9.3	72	7.2	1022.9	5	006	02	1	1	2	1	6	0	1	82833	84080	27	COTRA Cu hum Absent vv&cld est	
28	65	8	22	08	18	15.1	13.3	89	9.4	1020.7	6	006	15	6	2	8	6	3	/	88709		28	jp NW		
29	75	8	29	04	08	14.5	12.4	87	8.8	1025.0	3	002	25	8	2	8	8	4	/	83815	83630	88640	29	Cu med jpE vv50k ex E	
30	67	7	32	04	08	13.2	9.6	79	7.3	1029.1	6	006	01	2	2	7	5	4	/	81615	87630	30			
31	75	7	35	01	03	13.6	11.1	85	8.1	1026.3	6	018	02	2	2	7	5	5	/	87625		31			

Mean vis = 30.1 km

Mean cloud = 5.9 74%

Mean wind speed = 5.8 kn

Mean gust = 13 kn

Mean TT = 14.8 °C

Mean TdTd = 10.6 °C

Mean RH = 76.9 %

Mean r = 8.0 g/kg

Mean PPP = 1013.5 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

dd = Direction from which wind is blowing, tens of degrees true

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)- covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham Sunshine Hourly analysis 2024	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	0.00	0.00	0.22	0.24	0.00	0.00	0.41	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	1.00	1.00	0.16	0.00	0.78	0.00	0.53	0.00	1.00	0.00	0.09	0.00	0.00	0.00
	8	0.00	0.03	0.79	1.00	0.74	0.00	0.22	0.06	0.04	0.00	1.00	0.00	0.10	0.00	0.00	0.00
	9	0.00	0.00	0.83	1.00	1.00	0.00	0.94	0.06	0.00	0.00	1.00	0.16	0.73	0.00	0.00	0.00
	10	0.00	0.01	1.00	1.00	0.50	0.01	0.15	0.93	0.00	0.00	1.00	0.00	0.40	0.01	0.00	0.49
	11	0.00	0.17	1.00	0.75	0.76	0.00	0.10	0.61	0.00	0.29	1.00	0.00	0.00	0.00	0.00	0.04
	12	0.00	0.17	0.93	0.79	0.93	0.00	0.64	0.90	0.00	0.92	0.95	0.00	0.00	0.00	0.03	0.00
	13	0.00	0.36	0.66	0.92	0.96	0.00	0.30	0.33	0.00	0.51	0.86	0.08	0.00	0.00	0.04	0.03
	14	0.00	0.42	0.37	0.89	1.00	0.00	0.78	0.24	0.01	0.88	0.47	0.14	0.00	0.00	0.34	0.17
	15	0.00	0.00	0.00	0.30	1.00	0.00	0.74	0.02	0.14	0.03	0.34	0.55	0.00	0.00	0.00	0.00
	16	0.00	0.17	0.57	0.30	0.97	0.00	0.13	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00
	17	0.00	0.27	0.34	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	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		0.00	1.60	7.71	8.35	8.02	0.02	5.19	3.16	0.72	2.65	7.85	1.68	1.32	0.01	0.42	0.73

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	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
7	0.54	0.00	0.00	0.00	0.00	0.73	0.00	0.95	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.24
8	1.00	0.00	0.00	0.00	0.00	0.62	0.07	1.00	0.00	0.00	1.00	0.09	0.00	0.00	0.00	0.25
9	1.00	0.00	0.05	0.00	0.00	0.00	0.00	1.00	0.00	0.08	1.00	0.24	0.00	0.00	0.00	0.29
10	1.00	0.17	0.15	0.00	0.00	0.94	0.00	1.00	0.00	0.03	1.00	0.00	0.10	0.00	0.00	0.32
11	0.98	1.00	0.80	0.00	0.00	0.57	0.32	0.90	0.00	0.03	1.00	0.00	0.00	0.00	0.00	0.33
12	0.43	0.99	0.87	0.00	0.00	0.72	0.12	1.00	0.00	0.00	1.00	0.00	0.37	0.00	0.00	0.38
13	0.94	0.97	0.99	0.00	0.00	0.33	0.38	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.34
14	1.00	0.77	1.00	0.02	0.00	0.86	0.85	0.49	0.05	0.00	0.71	0.00	0.00	0.00	0.00	0.37
15	1.00	0.84	1.00	0.73	0.00	1.00	0.96	0.14	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.31
16	0.89	0.01	0.76	0.19	0.00	0.18	0.70	0.00	0.28	0.25	0.57	0.00	0.00	0.00	0.00	0.21
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	0.03
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	8.87	4.75	5.61	0.93	0.00	5.95	3.40	7.48	0.33	0.38	8.79	0.33	0.47	0.00	0.00	96.71

OCTOBER 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	12.12	13.2	1001	10.6	456	90.0	95.7	2251	79.4	46	10.5	7.9	8.7	1201	6.7	16	1008.50	1009.6	2351	1006.3	1530	3
2	13.19	17.0	1311	9.6	2358	90.2	98.0	644	74.9	1450	11.6	8.4	10.2	1244	6.7	2358	1014.42	1019.8	2336	1009.5	4	3.3
3	10.23	17.2	1403	5.0	2358	86.6	98.6	2356	58.0	1402	7.9	6.5	7.9	1234	5.3	2358	1021.51	1022.9	2227	1019.5	1	0
4	8.52	16.8	1326	2.0	620	85.9	100.0	834	51.9	1327	5.9	5.7	7.8	940	4.3	618	1021.26	1022.6	926	1019.8	1546	0.1
5	10.80	18.0	1310	4.1	103	80.5	98.7	137	49.4	1451	7.1	6.3	7.3	820	4.9	51	1013.90	1020.1	16	1005.4	2355	0
6	12.56	15.2	1103	10.0	229	92.3	97.0	1755	76.7	1104	11.3	8.4	10.0	1931	6.7	11	999.43	1005.6	11	995.2	1821	1.2
7	13.25	18.1	1425	8.2	619	90.8	99.6	737	66.9	1433	11.7	8.7	10.0	1227	6.7	619	996.94	999.1	927	993.4	2357	2.8
8	13.69	18.1	1227	9.3	358	91.9	99.3	419	67.3	1247	12.3	9.0	10.4	1005	7.3	356	991.50	993.6	4	987.1	2353	6.3
9	13.09	14.6	1315	11.6	549	89.5	96.1	4	77.2	1214	11.4	8.5	9.1	1502	7.8	2359	987.81	994.9	2358	986.0	1518	0.1
10	8.69	12.7	1417	3.9	2050	85.6	97.8	2245	59.1	1419	6.2	6.0	8.0	56	4.8	2049	1006.59	1014.8	2241	994.9	1	0.9
11	6.78	12.9	1319	0.1	610	83.2	99.7	714	47.9	1320	3.7	4.9	6.2	1844	3.8	634	1016.35	1018.4	1048	1013.7	2351	0.1
12	10.24	14.6	1427	6.1	2338	81.4	95.2	1302	64.2	1704	7.1	6.3	9.2	1301	5.1	2337	1008.66	1013.9	0	1004.9	1427	1.2
13	7.14	10.2	1236	4.5	520	83.3	94.3	2249	67.7	1337	4.4	5.2	5.7	1420	4.5	632	1018.36	1021.0	951	1013.1	0	0
14	9.74	11.6	1400	7.0	0	97.4	99.3	1005	88.5	146	9.3	7.3	8.2	1400	5.6	47	1014.98	1017.8	2221	1011.9	608	9.8
15	13.28	17.5	1428	10.3	206	94.1	99.0	803	79.8	1424	12.3	8.9	10.3	1259	7.5	3	1012.71	1017.3	6	1005.2	2352	1.9
16	16.66	19.7	1351	14.6	147	92.8	99.2	335	80.3	1504	15.4	11.0	11.9	1033	10.1	112	1001.84	1005.6	14	999.4	1738	1.4
17	13.79	17.8	1420	7.5	2358	88.2	98.6	2340	63.8	1419	11.7	8.6	10.6	232	6.3	2358	1009.94	1015.4	2259	1002.8	11	0.4
18	10.94	15.8	1312	6.8	459	91.3	100.0	1021	66.8	1318	9.4	7.3	9.2	2356	6.1	459	1014.03	1016.9	900	1009.4	2346	2.6
19	13.60	16.8	1427	10.0	2044	88.5	97.7	735	58.9	1419	11.6	8.5	10.1	736	6.8	1506	1011.42	1015.7	2042	1007.3	541	6.1
20	14.00	17.8	1248	10.3	11	88.3	97.5	17	80.2	2017	12.1	8.8	11.8	1248	7.5	12	1010.29	1016.0	2359	1004.6	1142	1.9
21	11.66	13.9	1225	7.7	2310	88.7	99.2	2224	81.0	1137	9.8	7.4	8.1	1418	6.3	2310	1020.92	1024.6	2358	1015.8	0	0.1
22	11.11	16.6	1422	5.8	554	91.6	99.5	607	70.1	1242	9.7	7.4	8.7	1406	5.5	556	1028.43	1032.2	2333	1024.4	1	0.1
23	12.58	17.0	1431	7.5	2200	90.2	100.0	2219	69.9	1438	10.9	7.9	9.2	1151	6.2	2200	1030.68	1033.0	936	1026.0	2356	0.1
24	11.70	18.1	1243	5.1	403	90.5	100.0	814	65.1	1245	10.1	7.7	9.0	1756	5.3	403	1018.55	1026.1	0	1012.9	2355	0.1
25	12.99	16.6	1240	8.2	2345	96.0	99.8	320	87.4	1533	12.4	8.9	10.8	1237	6.6	2345	1013.83	1017.5	2353	1011.3	540	0.2
26	11.12	14.8	1328	6.9	2353	96.0	100.0	2221	82.6	1317	10.5	7.8	9.4	1052	6.1	2353	1016.31	1017.6	58	1014.5	1612	0.3
27	9.81	14.9	1423	5.5	403	90.9	100.0	903	65.0	1249	8.2	6.7	8.1	2342	5.5	403	1022.01	1023.9	2112	1017.5	0	0.1
28	13.65	15.3	1047	11.5	655	90.8	97.6	2355	82.7	939	12.2	8.7	9.7	2059	7.4	115	1021.73	1023.1	3	1020.5	1447	0.4
29	13.31	16.1	1223	11.6	212	93.4	99.6	225	76.4	1230	12.2	8.7	9.4	1222	8.0	209	1024.76	1027.8	2356	1022.2	0	0.1
30	11.17	13.7	1339	6.9	2149	90.7	98.9	2216	77.6	1246	9.6	7.3	8.4	2	5.9	2149	1029.23	1030.2	950	1027.5	23	0
31	9.63	13.7	1453	6.2	653	95.4	100.0	1022	78.7	1451	8.9	7.0	8.2	1514	5.6	712	1027.38	1029.6	11	1024.8	2359	0
Total																						44.6
Mean	11.65	15.69		7.56		89.9	98.58		70.82		9.92	7.67	9.08		6.22		1014.01	1017.64		1009.90		
Max	16.66	19.66		14.55		97.4	100.00		88.50		15.45	10.96	11.91		10.14		1030.68	1033.01		1027.52		
Min	6.78	10.21		0.12		80.5	94.30		47.87		3.72	4.95	5.75		3.76		987.81	993.61		985.96		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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