

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

JULY 2017

		Anomaly	Rank in the past 136 years
Temperature (°C)			
Mean maximum	23.2	+0.3	35 th highest
Mean minimum	13.6	+1.0	4 th highest
Daily mean	18.4	+0.7	19 th highest
Highest maximum	31.6	on 6 th	Lowest maximum 19.1 on 22 nd
Highest minimum	16.9	on 8 th	Lowest minimum 8.9 on 23 rd
Mean grass minimum	10.4	+0.6	Lowest grass minimum 5.4 on 23 rd
Mean earth @30 cm	19.8	+1.1	Earth @100 cm 18.1
Frost duration (hrs)	0.0		Rain duration (hrs) 45.2
Rainfall total (mm)	118.0	262 %	9 th highest
Highest daily fall	35.0	on 18 th	
Number of: Dry days (<0.2mm)	16	Wet days (>0.9mm)	8 days ≥5mm 5
Sunshine total (hrs)	183.4	Daily mean 5.92	92 % Sunniest day 15.2 on 5 th
N° days with: Air frost	0	Ground frost	0 Snow falling 0 Snow lying 0
Thunder	2	Hail ≥5mm	0 Small hail/ice 0 Fog @09 0 Nil sun 1
Pressure MSL: Mean @09 GMT, mbar	1014.5	-2.1	Highest 1025.4 on 17 th Lowest 1000.8 on 30 th
Relative humidity: Mean (%)	73.5	Lowest 28	on 17 th Water vapour (g/kg), mean at 09 and 15 GMT 9.2, 8.9
Overall mean wind speed (mph)	6.6	Windiest day 11.3	on 28 th Max gust 32 on 28 th
Wind direction (days)	N 2 NE 2 E 1 SE 0 S 4 SW 14 W 5 NW 3		
Least windy day (mph)	3.5	on 5 th	Calm; less than 0.5 mph (minutes) 368

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

Notes: **Warm, especially by night, and Very Wet with Below Average Sunshine**

Temperature: This July has been warm overall, and there was a 5 day hot spell from the 5th to the 9th. However, the mean maximum ranks only 35th highest compared with 4th highest for the mean minimum. The resulting daily mean has been exceeded in several recent Julys, 2014, 2013, 2010 and 2006. Also, the mean maximum is 4.5° below the record set in 2006, while the mean minimum is 1.1° below the 1983 record. The month's highest max is 3.0° above the median but is 1.4° below that of last July. The lowest max is 2.3° above the median and is highest since 2010. The highest min is 0.5° above the median while the lowest min is 1.9° above its median and is 7th highest in 114 years. The mean grass min is highest since 2010 and the lowest grass min is highest since 2003. The mean earth temperatures at 30 cm and 1 m depth are well above average, and at the latter depth is a new record in the past 29 years, 0.2° above the previous highest in 2014. The month started with anomalies for both daily max and min a little above average, but from the 5th to the 9th anomalies for max were between +6° and +10°, with anomalies for min between +0° and +4° in the same period. From the 10th to the 18th anomalies for max ranged from -1° on the 15th to +5° on the 18th, with those for min between +1° and +3°. After the 18th anomalies for daily max were generally below zero, ranging between +0° on the 25th to -4° on the 29th, and for daily min, +4° on the 19th and -4° on the 23rd. **Rainfall:** This is the 9th wettest July in the past 136 years, and wettest since 2007. Had we had just 1.2 mm more it would have been wettest since 1957. Since 1882 there have been 14 Julys having over 100 mm of rain, the record being 174.0 mm in 1917. The month's highest daily fall ranks 8th highest in 114 years, but the 35.0 mm on the 18th was closely matched by 33.5 mm on the 11th, these two days alone providing 1.5 times the July average. The month started dry, with an 8 day dry spell ending on the 10th, but from the 18th onwards it was persistently wet with only 3 more dry days before the month's end. A heavy thunderstorm on the evening of the 18th produced a rainfall rate of 185 mm/hr at 2023 GMT, and 29.6 mm fell between 1900 and 2100 GMT, with some flood damage reported locally. Further thunder in the early hours of the 19th was accompanied by less intense rainfall. The total duration of measurable rain is 163 % of average. The number of dry days is 3 fewer than average, but the 4 days with =>10mm is highest since before 1976, (average 1.2). **Sunshine:** The month's sunshine is slightly below average, but there were a couple of sunny spells. Of interest, July 2016 had an almost identical total, just 12 minutes more than this July. The month got off to a sunny start, with an accumulated surplus of 5 hours by the 4th. The next 6 days were sunny, giving a total of 69.1 hours, a mean of 11.5 hours/day, increasing the surplus to 33 hours. The next few days were poor, allowing the surplus to fall back to 10 hours by the 16th. Although the 17th and 18th were sunny, most of the following days were not, and the surplus became a deficit of 15 hours by the 29th. Overall there were 8 days with <3 hours, 13 with =>6 hours, 9 with =>9 hours, 3 with =>12 hours and 1 with =>15 hours. **Wind:** The mean wind speed, the speed on the windiest day and the maximum gust are all close to average. Winds were light or moderate on all but 3 days, but fresh on the 21st, 28th and 30th. Directions were generally between SW and W, but E'ly on the 5th, NW'ly on the 8th, 24th and 25th, N'ly on the 14th and 17th, and S'ly from the 19th to the 22nd.

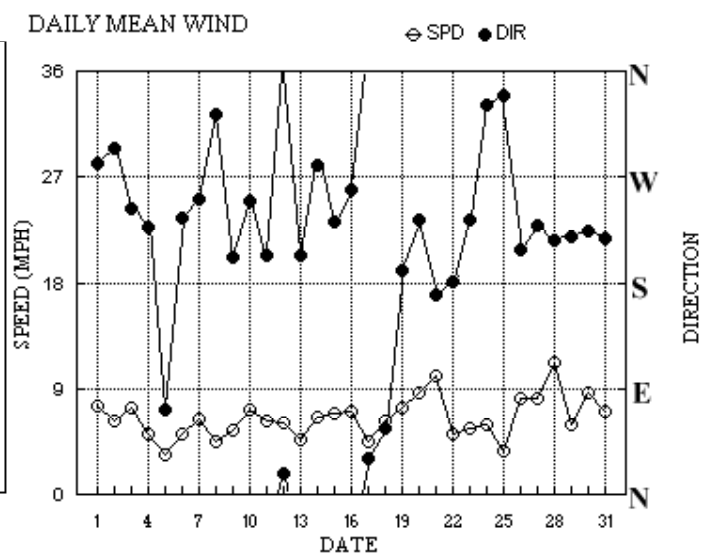
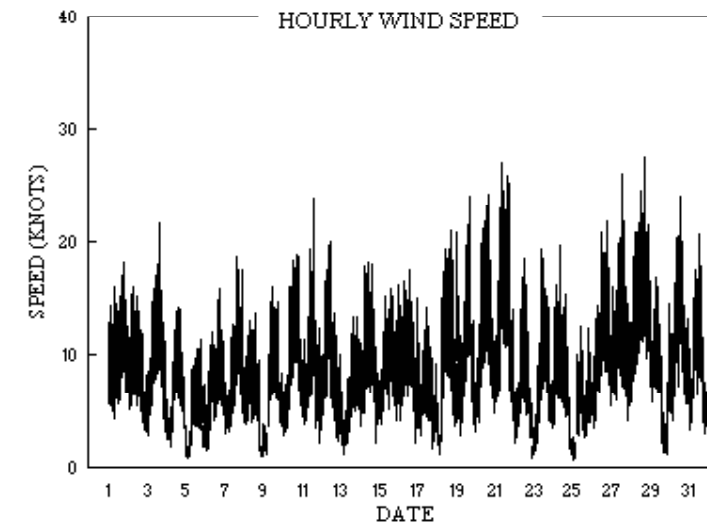
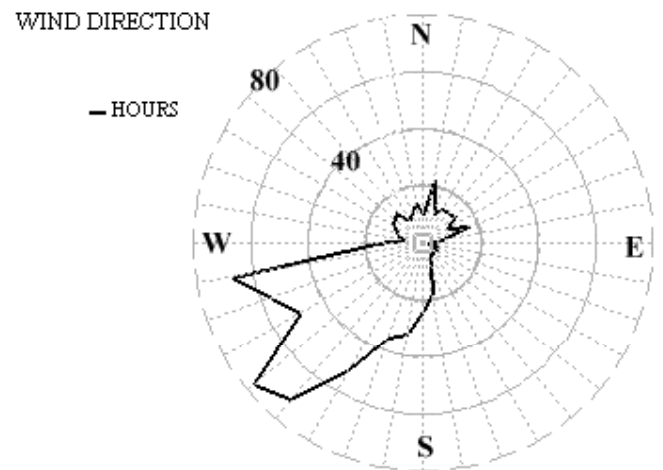
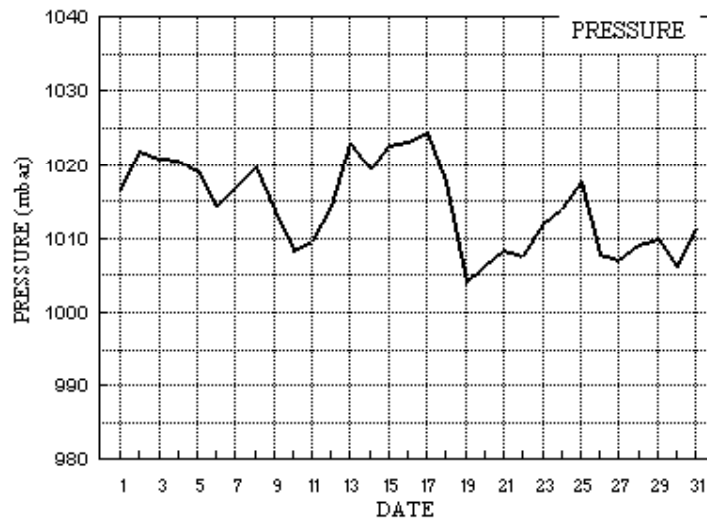
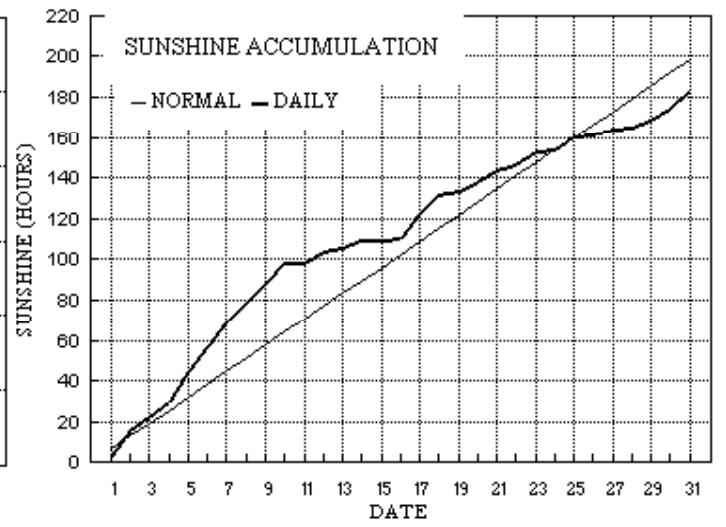
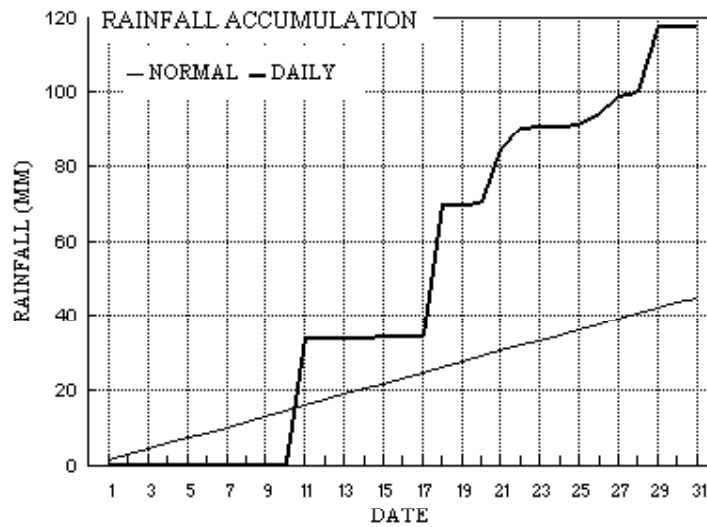
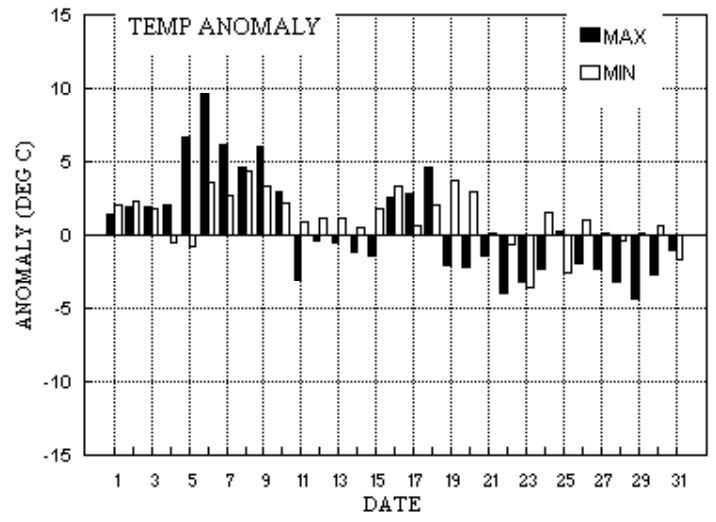
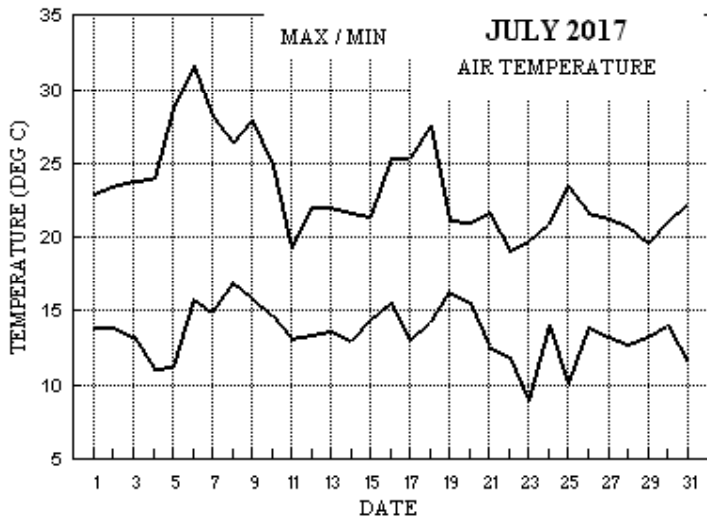
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+4.3°	+2.1°	7%	155%	-0.1°	+1.8°	483%	61%	-2.4°	-0.5°	297%	64%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for July 2017



Emmbrook, WOKINGHAM, Berkshire.

Month: JULY 2017

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs						
1	23.0	13.9	0.2	13.3	19.0	17.5	3.2	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	282	5.5	6.6	242	18	1929	256	9	17	0.7	
2	23.5	13.9	0.3	12.8	19.2	17.5	13.1	0.0	1021.9	0 0 0 0	0 0 0 0	0 0 0 0	294	4.0	5.5	342	16	0707	345	7	07	0.4	
3	23.8	13.3	tr	8.4	19.6	17.5	6.4	0.0	1020.9	0 0 0 0	0 0 0 0	0 0 0 0	243	6.3	6.4	264	22	1509	252	10	15	0.0	
4	24.0	11.1	0.0	7.1	19.5	17.5	7.0	0.0	1020.6	0 0 0 0	0 0 0 0	0 0 0 0	227	4.3	4.5	251	14	1505	230	7	12	0.0	
5	28.7	11.2	0.0	7.3	19.6	17.6	15.2	0.0	1019.2	0 0 0 0	0 0 0 0	0 0 0 0	72	1.2	3.0	203	12	1903	30	7	09	0.0	
6	31.6	15.8	0.0	12.8	20.4	17.6	11.6	0.0	1014.4	0 0 0 0	0 0 0 0	0 0 0 0	235	1.0	4.5	288	16	1705	295	7	17	0.0	
7	28.2	14.9	0.0	10.5	21.0	17.7	12.7	0.0	1016.9	0 0 0 0	0 0 0 0	0 0 0 0	251	5.3	5.5	258	19	1621	258	9	16	0.0	
8	26.4	16.9	0.0	15.1	21.2	17.9	9.8	0.0	1019.6	0 0 0 0	0 0 0 0	0 0 0 0	322	3.3	3.9	335	14	1436	353	6	07	0.0	
9	27.9	15.9	0.0	11.2	21.4	18.1	9.1	0.0	1013.8	0 0 0 0	0 0 0 0	0 0 0 0	202	4.0	4.8	187	16	1226	193	8	12	0.0	
10	24.9	14.7	0.0	10.4	21.3	18.2	10.7	0.0	1008.3	0 0 0 0	0 0 0 0	0 0 0 0	250	6.3	6.3	267	19	1808	257	10	17	0.0	
11	19.2	13.1	33.5	10.9	21.0	18.3	0.0	0.0	1009.7	0 0 0 0	0 0 0 0	0 0 0 0	204	4.3	5.5	213	24	1444	210	10	14	13.5	
12	22.0	13.4	tr	13.7	19.9	18.4	5.0	0.0	1014.2	0 0 0 0	0 0 0 0	0 0 0 0	19	4.9	5.4	26	20	1104	14	10	09	0.0	
13	22.0	13.6	tr	9.5	19.9	18.4	1.9	0.0	1023.0	0 0 0 0	0 0 0 0	0 0 0 0	203	3.6	4.0	229	14	2008	232	7	20	0.0	
14	21.7	13.0	tr	9.5	19.8	18.4	3.9	0.0	1019.5	0 0 0 0	0 0 0 0	0 0 0 0	280	4.6	5.7	307	18	1008	318	9	08	0.0	
15	21.4	14.4	0.8	9.9	19.6	18.3	0.3	0.0	1022.7	0 0 0 0	0 0 0 0	0 0 0 0	232	5.9	6.0	260	16	2345	226	8	08	1.1	
16	25.3	15.6	tr	13.7	19.6	18.3	0.9	0.0	1023.2	0 0 0 0	0 0 0 0	0 0 0 0	259	5.3	6.1	266	18	1450	253	9	08	0.1	
17	25.4	13.0	0.0	8.3	19.9	18.3	11.7	0.0	1024.6	0 0 0 0	0 0 0 0	0 0 0 0	31	3.6	4.0	4	15	0003	17	6	08	0.0	
18	27.5	14.3	35.0	9.7	20.3	18.3	9.1	0.0	1017.7	0 0 0 0	1 0 0 0	1 0 0 0	57	5.2	5.5	59	21	1743	64	9	17	3.3	
19	21.1	16.3	0.3	14.9	20.7	18.4	1.8	0.0	1004.2	0 0 0 0	1 0 0 0	1 0 0 0	191	4.2	6.4	218	24	1706	218	11	16	0.2	
20	21.0	15.6	0.2	13.0	20.3	18.5	4.5	0.0	1006.5	0 0 0 0	0 0 0 0	0 0 0 0	233	6.5	7.5	249	24	1504	249	12	15	0.6	
21	21.7	12.6	14.5	9.7	19.9	18.5	5.6	0.0	1008.5	0 0 0 0	0 0 0 0	0 0 0 0	169	8.7	8.9	174	27	0857	180	12	09	4.7	
22	19.1	11.9	5.9	6.6	19.4	18.5	3.5	0.0	1007.7	0 0 0 0	0 0 0 0	0 0 0 0	181	4.3	4.5	167	19	1346	189	8	10	4.5	
23	19.8	8.9	0.6	5.4	19.0	18.5	5.7	0.0	1011.9	0 0 0 0	0 0 0 0	0 0 0 0	233	4.8	5.0	254	19	1047	252	9	10	1.7	
24	20.9	14.0	tr	10.5	19.1	18.4	1.4	0.0	1014.1	0 0 0 0	0 0 0 0	0 0 0 0	330	4.2	5.1	340	20	0909	348	8	15	0.0	
25	23.4	10.1	0.6	5.9	18.7	18.3	6.1	0.0	1017.5	0 0 0 0	0 0 0 0	0 0 0 0	339	0.4	3.3	312	13	1148	327	6	11	1.5	
26	21.6	13.9	2.6	10.4	19.1	18.3	0.9	0.0	1007.8	0 0 0 0	0 0 0 0	0 0 0 0	208	6.5	7.1	239	22	1913	214	11	13	1.7	
27	21.3	13.3	4.5	11.9	18.9	18.2	3.1	0.0	1007.2	0 0 0 0	0 0 0 0	0 0 0 0	228	7.1	7.1	247	26	1432	230	11	13	1.1	
28	20.8	12.8	1.4	10.4	18.8	18.2	0.8	0.0	1009.2	0 0 0 0	0 0 0 0	0 0 0 0	216	9.7	9.8	201	28	1757	210	13	17	1.6	
29	19.6	13.3	17.6	10.5	18.8	18.1	4.0	0.0	1010.0	0 0 0 0	0 0 0 0	0 0 0 0	219	4.8	5.2	237	17	0856	227	9	00	8.5	
30	21.0	14.0	tr	13.1	18.9	18.1	5.6	0.0	1006.1	0 0 0 0	0 0 0 0	0 0 0 0	224	7.1	7.6	217	24	1456	214	12	15	0.0	
31	22.3	11.5	tr	7.3	19.0	18.1	8.8	0.0	1011.6	0 0 0 0	0 0 0 0	0 0 0 0	218	6.0	6.2	214	21	1556	207	10	15	0.0	
Total			118.0				183.4	0.0						232	3.2	5.7							45.2
Mean	23.2	13.6		10.4	19.8	18.1	5.92	0.0	1014.5														
Anom	+0.3	+1.0	262%	+0.6	+1.1	+1.3	92%																
Daily mean		18.4																					
Anom		+0.7																					

Number of days with:

Air frost = 0 Ground frost = 0 Nil sun = 1
 Snow falling = 0 Snow lying = 0 Thunder = 2
 Hail=>5mm = 0 Hail<5mm or ice = 0 Fog at 09GMT = 0

Abbreviations.

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

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

Grass min = Lowest overnight temperature at grass tip level.

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

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

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

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

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

Sp = 24 hour mean wind speed in knots.

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

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

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

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for JULY 2017

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	80	7	31	06	16	17.6	12.3	71	8.8	1016.7	1	019	01	2	2	7	8	4	/	/	81815	87645					1	Cu hum	
2	80	3	34	06	14	17.3	8.7	57	6.9	1021.9	1	013	01	1	1	3	5	6	0	0	83630						2		
3	82	7	25	09	16	18.1	14.0	77	9.9	1020.9	0	000	01	6	2	7	5	4	3	/	81645	87635					3	/Ac65	
4	84	7	26	05	09	20.2	12.7	62	9.0	1020.6	8	003	03	2	2	6	8	5	/	1	81828	86635	87075				4	COTRA Cu hum	
5	89	3	05	03	09	20.7	12.7	60	9.0	1019.2	8	005	01	1	1	1	1	6	8	1	81830	83080					5	1Ac65 COTRA Cu hum Ac cas SE	
6	82	3	10	06	12	25.5	14.3	50	10.1	1014.4	8	011	02	1	1	2	0	9	8	1	82362						6	2Ci75 COTRA Ac cas	
7	75	5	28	05	10	22.6	14.4	60	10.1	1016.9	3	009	01	2	2	1	1	5	3	1	81828	85080					7	1Ac70 COTRA Cu hum	
8	86	5	32	05	13	19.8	11.0	57	8.1	1019.6	1	008	01	2	2	1	1	6	7	1	81830	83359					8	1Ac62 1Ci78 Cu hum	
9	82	1	21	07	14	23.5	14.5	57	10.2	1013.8	8	004	03	1	1	1	8	6	0	0	81832						9	1Sc56 Cu hum, cu con NW	
10	75	4	25	07	12	19.6	14.0	70	9.8	1008.3	8	005	03	1	1	3	2	5	0	1	83822	83080					10	COTRA Cu med	
11	70	7	22	07	14	19.3	12.8	66	9.1	1009.7	8	005	15	2	2	7	8	5	/	/	81820	83630	87656				11	Cu hum jpW	
12	65	8	01	09	18	14.7	12.4	86	8.9	1014.2	2	038	20	5	2	8	5	4	/	/	86612	88618					12		
13	80	7	19	03	04	15.8	11.2	74	8.2	1023.0	8	003	02	2	2	7	8	6	/	/	81830	83650	87656				13	Cu hum Cld edge E	
14	88	7	34	08	17	16.8	9.5	62	7.3	1019.5	2	009	02	2	2	7	8	6	/	1	83830	86645					14	1Ci80 COTRA Cu med	
15	58	8	23	09	15	15.8	12.9	83	9.2	1022.7	1	004	60	6	2	3	5	4	2	/	81709	83630	88550				15		
16	82	7	25	09	16	21.0	16.2	74	11.3	1023.2	1	002	02	2	2	7	5	4	/	/	87618						16		
17	88	3	01	05	12	19.6	10.3	55	7.7	1024.6	8	004	03	0	0	1	0	9	8	1	81365	83075					17	1Ac69 COTRA Ac cas	
18	80	7	07	06	16	22.2	15.1	64	10.6	1017.7	7	015	02	2	2	3	0	9	8	1	81365	83369	86075				18	COTRA Ac cas	
19	57	8	18	04	09	20.7	18.3	86	12.9	1004.2	8	012	05	2	2	8	6	3	/	/	85709	88712					19		
20	60	8	26	09	21	15.6	13.6	88	9.6	1006.5	3	020	60	6	2	8	5	3	/	/	83709	86612	88620				20		
21	84	5	18	13	27	19.3	9.8	54	7.4	1008.5	8	004	03	1	1	2	1	6	3	2	82830	83072					21	2Ac68 COTRA Cu hum	
22	60	6	21	05	13	16.8	12.9	78	9.2	1007.7	2	007	15	2	2	3	2	4	7	3	83818	83460					22	/Ac63 /Ci72 Cu con Cb top SW jpE vv60k ex E	
23	82	4	23	04	10	17.0	12.9	77	9.2	1011.9	0	004	03	1	1	1	2	4	3	2	81815	83075					23	1Ac65 Cu med L/a cont	
24	60	8	34	07	17	15.3	13.3	88	9.4	1014.1	2	021	20	5	2	8	5	4	/	/	86710	88618					24		
25	61	8	29	04	07	14.7	12.4	86	8.9	1017.5	0	000	01	2	2	8	5	4	/	/	83710	88625					25		
26	59	8	19	06	13	17.2	16.1	93	11.2	1007.8	8	014	63	6	2	7	7	2	2	/	83705	87709	88525				26		
27	67	7	21	08	16	16.1	11.5	74	8.3	1007.2	8	004	01	2	2	3	8	4	7	/	81812	83645	87364				27	Cu fra	
28	75	7	22	10	19	18.3	13.0	71	9.2	1009.2	1	007	03	2	2	2	8	5	7	1	82823	86360					28	1Sc45 2Ac58 /Ac62 /Ci80 COTRA Cu hum	
29	80	5	23	08	17	18.0	12.9	72	9.2	1010.0	2	010	03	2	2	3	1	4	7	0	83818	83357					29	1Ac65 Cu hum	
30	84	5	23	10	16	18.0	11.8	67	8.5	1006.1	2	022	03	2	2	5	8	5	0	1	82822	84656					30	1Ci80 Cu med	
31	82	2	24	09	15	16.9	10.7	67	7.9	1011.6	1	008	03	0	0	2	2	5	0	1	82825						31	1Ci75 Cu med	

Mean vis = 32.5 km
 Mean cloud = 5.8 73%
 Mean wind speed = 6.8 kn
 Mean gust = 14 kn
 Mean TT = 18.5 °C
 Mean TdTd = 12.8 °C
 Mean RH = 70.5 %
 Mean r = 9.2 g/kg
 Mean PPP = 1014.5 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

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for JULY 2017

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NChs	hshs	NChs	hshs	Date	Remarks
1	82	6	26	05	14	20.9	11.0	53	8.1	1017.4	4	000	01	2	2	6	8	6	/	1	82835	85645		1	/Ci78 Cu hum	
2	86	3	29	08	14	21.4	8.3	43	6.8	1021.8	8	003	02	0	0	1	1	7	0	1	81850	83078		2	COTRA Cu hum	
3	86	6	25	11	20	22.7	12.3	52	8.8	1019.7	8	006	01	8	2	2	2	6	4	1	82835	83365		3	2Ci75 COTRA Cu med	
4	88	7	22	06	13	23.7	11.7	47	8.5	1019.0	8	010	02	2	2	2	8	6	0	1	81840	87075		4	2Sc45 COTRA Cu hum U/a cont	
5	84	1	07	03	09	27.7	12.5	39	8.9	1016.7	7	012	01	0	0	1	1	7	3	1	81856			5	1Ac65 1Ci80 COTRA Cu hum	
6	80	3	24	05	10	31.1	15.9	40	11.1	1011.0	7	013	03	1	1	2	1	7	8	1	82850			6	1Ac58 2Ci78 Cu hum Ac cas	
7	84	7	25	07	14	26.9	11.8	39	8.5	1015.5	7	008	03	2	2	1	1	7	7	1	81856	83366	86369	7	/Ci80 Cu hum	
8	84	2	26	07	14	25.6	8.1	33	6.7	1017.5	7	017	01	1	1	1	1	7	4	0	81856			8	1Ac60 1Ac65 Cu hum	
9	84	6	19	06	14	27.5	13.4	42	9.5	1010.7	8	014	01	2	2	5	8	7	/	1	83850	83656		9	2Ci78 Cu med	
10	81	5	26	08	19	23.2	12.5	51	8.9	1007.7	7	005	02	1	1	5	8	6	6	0	84840			10	1Sc56 1Ac60 Cu med	
11	59	8	20	12	24	16.1	12.7	80	9.0	1009.4	5	000	60	6	2	7	8	4	2	/	81815	87630	88550	11	2Sc25 Cu fra	
12	86	5	01	07	13	20.9	8.9	46	7.0	1019.5	1	019	01	1	1	2	1	6	0	1	82845	84080		12	COTRA Cu hum	
13	88	7	19	05	12	20.3	8.3	46	6.8	1020.4	6	014	03	2	2	2	2	7	6	2	82850	83357	87072	13	Cu med	
14	89	7	30	07	18	20.7	8.7	46	6.9	1020.7	0	000	02	2	2	4	4	6	0	1	82845	83650	86075	14	COTRA Cu hum	
15	78	8	23	09	16	20.4	15.6	74	10.9	1021.4	5	010	02	2	2	8	5	5	/	/	86620	88625		15		
16	70	7	26	08	18	24.9	17.1	62	12.0	1022.5	8	005	15	2	2	7	8	5	/	1	83828	86650		16	/Ci75 Cu med jpSE vv60k ex p	
17	88	7	01	03	13	24.4	9.6	39	7.3	1021.8	7	014	02	2	2	2	0	9	3	8	82365	86275		17	22 Halo part	
18	78	7	06	08	17	27.3	15.7	49	11.0	1013.4	7	017	03	2	2	1	1	6	8	1	81845	83368	87075	18	1Ac65 COTRA Ac cas Ac len	
19	65	8	20	10	22	19.9	16.7	82	11.7	1005.3	5	001	02	5	2	8	5	4	/	/	86710	88615		19		
20	88	3	25	12	23	20.5	6.8	41	6.1	1009.6	2	010	01	1	1	2	2	7	0	2	82850			20	2Ci75 Cu med	
21	84	7	16	11	22	19.9	11.4	58	8.3	1006.5	8	009	02	2	2	6	8	6	7	/	85835	83656	85359	21	Cu med	
22	63	8	16	05	16	13.4	11.3	87	8.2	1008.9	0	008	61	8	6	1	8	4	2	/	81812	88556		22	1Sc45 Cu med	
23	75	6	22	07	16	18.2	13.3	73	9.4	1012.0	7	009	15	6	2	3	9	4	6	2	82918	82822	83072	23	1Ac58 1Ac65 jpSW vv60k ex SW	
24	80	7	35	08	14	20.1	13.1	64	9.3	1015.7	1	005	01	2	2	7	8	5	/	/	82825	83635	87650	24	Cu med	
25	75	3	04	04	08	22.4	13.5	57	9.5	1014.6	8	019	01	1	1	2	1	6	0	1	82835			25	2Ci75 COTRA	
26	86	8	20	09	19	19.4	16.6	84	11.7	1005.0	7	015	21	6	2	8	5	4	/	/	87612	88618		26		
27	75	7	25	06	26	16.7	14.5	87	10.2	1006.1	3	002	25	8	2	7	8	5	6	/	81826	83835	85650	27	/Ac59 Absent vv&cld est	
28	86	8	21	11	23	17.7	13.8	78	9.7	1009.0	8	002	21	6	2	8	5	4	/	/	82712	87615	88620	28		
29	62	8	22	03	10	15.0	13.5	91	9.6	1007.8	7	020	62	6	2	2	5	6	2	/	82635	88550		29	Re +R	
30	80	6	21	13	24	19.9	11.1	57	8.2	1007.4	4	000	15	8	2	4	8	6	0	1	82835	83656		30	4Ci75 COTRA Cu med jpNW vv50k ex p	
31	80	5	21	09	19	21.5	10.6	50	7.9	1011.3	0	000	15	8	2	4	2	6	6	1	84842			31	1Ac57 1Ci78 Cu med jpNW	

Mean vis = 41.9 km
 Mean cloud = 6.0 75%
 Mean wind speed = 7.5 kn
 Mean gust = 17 kn
 Mean TT = 21.6 °C
 Mean TdTd = 12.3 °C
 Mean RH = 57.7 %
 Mean r = 8.9 g/kg
 Mean PPP = 1013.7 mbar

See appendix 2 below for full code details

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

Wokingham	Hour	01-Jul	02-Jul	03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
Sunshine	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
Hourly analysis	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
2017	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	0.37	0.41	0.00	0.21	0.00	0.00	0.20	0.00	0.00	0.00	0.26	0.00	0.00
	5	0.00	0.35	0.00	1.00	1.00	0.85	0.80	0.50	0.67	0.95	0.00	0.00	0.00	0.04	0.00	0.00
	6	0.00	0.77	0.19	1.00	1.00	0.49	1.00	0.77	0.10	1.00	0.00	0.00	0.00	0.00	0.26	0.00
	7	0.00	0.25	0.00	1.00	1.00	0.78	1.00	1.00	0.92	1.00	0.00	0.00	0.00	0.08	0.00	0.59
	8	0.00	0.83	0.45	0.67	1.00	1.00	1.00	0.94	1.00	0.61	0.00	0.00	0.00	0.14	0.00	0.00
	9	0.00	1.00	0.23	0.00	1.00	1.00	1.00	0.91	0.93	0.51	0.00	0.00	0.00	0.00	0.00	0.00
	10	0.00	1.00	0.06	0.00	1.00	0.56	1.00	0.92	0.70	0.59	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.97	0.04	0.00	1.00	0.98	1.00	0.89	0.35	0.15	0.00	0.00	0.07	0.03	0.00	0.00
	12	0.00	1.00	0.00	0.00	1.00	0.92	0.98	0.52	0.01	0.29	0.00	0.12	0.06	0.22	0.00	0.08
	13	0.34	1.00	0.27	0.34	1.00	1.00	0.75	0.88	0.30	0.96	0.00	0.42	0.39	0.16	0.00	0.00
	14	0.07	1.00	0.30	0.46	1.00	0.95	0.45	1.00	0.87	0.36	0.00	0.52	0.41	0.42	0.00	0.13
	15	0.62	1.00	0.99	0.38	1.00	0.54	0.17	1.00	0.79	0.61	0.00	0.70	0.10	0.59	0.00	0.02
	16	0.66	1.00	1.00	0.67	1.00	0.63	0.97	0.07	0.46	0.88	0.00	0.74	0.47	0.57	0.00	0.00
	17	1.00	1.00	0.93	0.39	1.00	0.72	1.00	0.11	1.00	1.00	0.00	0.98	0.36	0.25	0.00	0.06
	18	0.43	0.90	0.97	0.35	0.91	0.54	1.00	0.04	0.92	1.00	0.00	0.95	0.00	0.72	0.00	0.00
	19	0.00	1.00	0.87	0.07	0.77	0.67	0.42	0.29	0.03	0.54	0.00	0.54	0.00	0.47	0.05	0.00
	20	0.03	0.08	0.12	0.27	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		3.15	13.14	6.42	6.95	15.15	11.61	12.73	9.84	9.07	10.67	0.00	4.99	1.87	3.94	0.31	0.88

Hour	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	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	0.36	0.00	0.00	0.00	0.33	0.00	0.42	0.00	0.29	0.28	0.00	0.00	0.32	0.00	0.30	0.12
6	1.00	0.27	0.54	0.00	1.00	0.00	0.92	0.00	0.20	0.41	0.04	0.00	0.94	0.23	1.00	0.41
7	1.00	0.69	0.02	0.00	0.88	0.60	0.02	0.00	0.00	0.00	0.00	0.00	0.75	0.66	1.00	0.39
8	1.00	0.77	0.00	0.00	0.98	0.99	0.28	0.00	0.00	0.00	0.00	0.00	0.89	0.38	0.77	0.44
9	1.00	1.00	0.00	0.00	0.97	0.60	0.66	0.00	0.00	0.00	0.00	0.12	0.78	1.00	0.56	0.46
10	1.00	1.00	0.00	0.00	0.62	0.85	0.83	0.00	0.43	0.00	0.20	0.41	0.36	0.49	0.82	0.44
11	1.00	1.00	0.00	0.03	0.16	0.48	0.00	0.00	0.38	0.00	0.03	0.21	0.00	0.27	0.55	0.32
12	1.00	1.00	0.00	0.23	0.09	0.00	0.00	0.00	0.05	0.00	0.58	0.03	0.00	0.02	0.19	0.28
13	1.00	1.00	0.00	0.52	0.11	0.00	0.05	0.00	0.13	0.19	0.23	0.00	0.00	0.44	0.00	0.29
14	0.87	1.00	0.00	0.41	0.38	0.00	0.29	0.01	0.16	0.00	0.29	0.00	0.00	0.04	0.50	0.38
15	0.51	1.00	0.00	0.79	0.04	0.00	0.02	0.19	1.00	0.00	0.00	0.00	0.00	0.40	0.58	0.40
16	0.83	0.38	0.00	0.93	0.04	0.00	0.22	0.15	0.56	0.00	0.59	0.00	0.00	0.43	0.65	0.43
17	0.88	0.00	0.00	0.16	0.02	0.00	0.00	0.04	0.90	0.00	0.30	0.00	0.00	0.18	0.60	0.39
18	0.24	0.00	0.15	0.66	0.00	0.00	0.58	0.00	1.00	0.00	0.64	0.00	0.00	0.37	0.61	0.45
19	0.00	0.00	0.69	0.81	0.00	0.01	0.83	0.22	0.96	0.00	0.14	0.00	0.00	0.63	0.59	0.44
20	0.00	0.00	0.43	0.00	0.00	0.00	0.63	0.76	0.06	0.00	0.04	0.00	0.00	0.02	0.00	0.25
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	0.02
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11.71	9.10	1.83	4.54	5.61	3.54	5.74	1.37	6.13	0.89	3.09	0.78	4.04	5.55	8.75	183.42

JULY 2017	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	17.43	23.1	1605	13.8	353	71.2	94.6	137	41.2	1739	11.8	8.6	10.8	1328	6.2	1914	1016.17	1018.4	2338	1011.6	0	0.1
2	18.26	23.6	1621	13.8	507	62.0	94.5	415	34.4	1608	10.2	7.7	10.5	416	5.9	1610	1020.92	1022.3	1046	1017.8	244	0.3
3	18.06	24.0	1505	13.2	411	69.9	91.6	509	41.2	1514	12.2	8.7	11.9	1334	7.3	1524	1020.62	1022.1	23	1019.2	1636	0.3
4	18.37	24.2	1513	11.0	428	70.3	97.7	445	43.5	1458	12.4	8.9	10.8	816	7.7	353	1019.83	1021.4	2	1017.8	1914	0.0
5	20.52	28.8	1600	11.1	410	66.4	97.6	447	34.0	1400	13.1	9.3	11.7	1423	7.9	410	1018.04	1019.9	730	1015.9	1725	0.0
6	23.65	31.7	1556	15.6	453	59.4	87.1	11	33.9	1601	14.6	10.3	13.8	1257	8.9	420	1013.81	1017.3	15	1010.6	1602	0.0
7	21.38	28.3	1311	14.7	352	62.7	90.4	352	30.7	1233	13.3	9.4	11.4	840	6.9	1212	1016.21	1018.4	2240	1014.5	5	0.0
8	20.40	26.5	1445	15.8	2218	60.7	87.0	512	31.5	1445	11.8	8.6	10.7	539	6.1	1152	1018.02	1019.9	1025	1016.3	2359	0.0
9	21.67	28.0	1538	16.4	513	62.9	93.0	518	36.5	1150	13.7	9.7	11.7	1112	8.0	1150	1012.29	1016.4	0	1009.2	1728	0.0
10	19.22	25.1	1406	14.4	2357	65.7	92.3	335	35.4	1341	12.1	8.8	11.4	923	6.8	1332	1008.81	1010.8	2318	1007.3	1614	0.0
11	15.36	19.4	859	13.0	130	86.2	98.2	2354	65.2	900	13.0	9.4	11.4	1201	7.7	130	1008.93	1010.8	430	1005.1	2330	24.7
12	16.16	22.2	1622	13.3	618	74.5	98.2	10	36.9	1727	11.1	8.2	10.3	2	5.6	1719	1015.66	1023.5	2313	1005.0	51	9.3
13	17.27	22.1	1659	13.7	350	64.9	87.0	349	35.2	1256	10.2	7.7	8.8	1120	5.4	1256	1021.46	1023.6	212	1018.8	1924	0.0
14	16.94	21.9	1441	12.9	315	65.6	94.2	318	39.2	1441	10.0	7.6	9.6	644	6.1	1308	1020.20	1022.8	2307	1018.1	357	0.0
15	17.49	21.5	1723	14.3	301	81.1	94.5	1149	70.4	1602	14.2	10.0	11.9	1730	8.2	713	1022.02	1022.9	1027	1020.8	1711	0.8
16	20.64	25.5	1449	16.5	356	77.4	91.5	358	57.6	1451	16.4	11.5	12.8	1217	8.8	2359	1022.75	1024.0	903	1021.7	4	0.1
17	19.32	25.5	1344	12.8	522	56.6	82.5	537	28.1	1353	9.9	7.5	9.6	1102	5.4	1354	1022.91	1025.4	903	1020.6	1728	0.0
18	20.20	27.6	1346	14.2	57	71.1	97.3	2351	41.0	1349	14.2	10.1	12.9	1316	7.8	9	1015.50	1021.1	35	1008.6	2357	28.6
19	18.68	21.2	908	15.7	2321	87.9	98.2	544	75.9	1937	16.6	11.8	13.7	900	9.9	2238	1005.76	1009.0	31	1004.0	900	4.9
20	17.13	21.2	1506	13.0	2358	71.4	93.3	103	34.8	1445	11.4	8.6	11.8	634	5.2	1419	1007.99	1011.4	2209	1004.2	614	0.7
21	16.87	21.8	1329	12.5	213	72.1	95.7	2116	49.6	1346	11.5	8.5	10.6	2110	7.3	909	1007.63	1011.1	25	1004.9	1803	12.9
22	13.94	19.2	1030	11.3	2358	89.4	98.6	440	54.4	1029	12.1	8.8	10.1	829	7.5	1013	1007.87	1009.7	2333	1005.5	100	7.5
23	14.50	19.9	1339	8.8	449	83.7	99.4	550	56.2	1012	11.6	8.5	10.8	1510	6.8	1113	1011.62	1013.0	1149	1009.5	17	0.1
24	15.90	21.0	1513	11.7	2316	84.0	97.6	2329	59.6	1515	13.1	9.3	10.7	1512	8.2	2316	1014.57	1018.1	2342	1010.7	308	0.7
25	16.80	23.5	1617	10.0	438	78.6	99.1	533	50.3	1608	12.7	9.1	11.3	1424	7.4	438	1015.63	1018.0	32	1011.9	2352	0.0
26	17.01	21.7	1250	13.8	420	86.7	96.1	212	71.5	2102	14.7	10.5	13.5	1238	7.9	2326	1007.44	1012.1	1	1004.1	1749	3.4
27	16.05	21.5	1330	13.2	447	78.3	95.5	2308	49.0	1339	12.1	8.8	11.8	1120	7.6	1346	1006.77	1008.0	721	1005.2	1330	4.4
28	16.42	21.0	1024	12.7	210	80.7	94.5	2109	50.1	1025	13.0	9.3	11.3	2323	7.7	1025	1008.10	1009.8	1353	1005.8	2256	0.8
29	16.03	19.8	959	13.1	456	87.1	98.2	2251	56.5	1006	13.8	9.8	11.5	2345	7.9	1006	1007.49	1010.2	847	1002.4	2359	9.5
30	16.51	21.1	1439	13.5	2341	78.1	97.4	0	51.5	1442	12.4	9.0	11.4	4	7.5	1313	1006.09	1009.5	2251	1000.8	215	9.2
31	16.63	22.4	1439	11.4	513	72.4	97.3	518	43.8	1440	11.2	8.3	10.0	1336	6.8	951	1011.42	1013.8	2351	1009.1	28	0.0
Total																						118.3
Mean	17.90	23.36		13.26		73.5	94.52		46.42		12.58	9.11	11.30		7.23		1013.95	1016.61		1010.88		
Max	23.65	31.71		16.54		89.4	99.40		75.90		16.60	11.82	13.84		9.85		1022.91	1025.41		1021.66		
Min	13.94	19.24		8.79		56.6	82.50		28.05		9.87	7.49	8.84		5.21		1005.76	1008.00		1000.79		

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

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.