

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

JUNE 2020

Temperature (°C)		Anomaly	Rank in the past	139	years				
Mean maximum	22.1	+1.6	12 th highest						
Mean minimum	11.2	+0.7	19 th highest						
Daily mean	16.6	+1.1	11 th highest						
Highest maximum	33.0	on 25 th	Lowest maximum	15.4	on 6 th				
Highest minimum	16.6	on 26 th	Lowest minimum	5.8	on 7 th				
Mean grass minimum	8.7	+1.1	Lowest grass minimum	0.3	on 7 th				
Mean earth @30 cm	17.4	+0.6	Earth @100 cm	15.7					
Frost duration (hrs)	0.0		Rain duration (hrs)	34.3					
Rainfall total (mm)	55.7	113 %	49 th highest						
Highest daily fall	12.1	on 17 th	Highest rate mm/hr	96	on 12 th				
Number of: Dry days (<0.2mm)	12	Wet days (>0.9mm)	11	days ≥5mm	4				
Sunshine total (hrs)	199.1	Daily mean	6.64	102 %	Sunniest day	15.5	on 24 th		
N° days with: Air frost	0	Ground frost	0	Snow falling	0	Snow lying	0		
Thunder	3	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0	Nil sun	2
Pressure MSL : Mean @09 GMT, mbar	1012.8	-4.3	Highest	1025.8	on 22 nd	Lowest	995.9	on 5 th	
Relative humidity : Mean (%)	71.4	Lowest	24	on 24 th	Water vapour (g/kg), mean at 09 and 15 GMT	8.1,	8.0		
Overall mean wind speed (mph)	6.7	Windiest day	12.4	on 29 th	Max gust	38	on 29 th		
Wind direction (days)	N 3	NE 3	E 2	SE 3	S 6	SW 10	W 1	NW 2	
Least windy day (mph)	2.8	on 17 th	Calm; less than 0.5 mph (minutes)		486				

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

Notes:

Very Warm with Rainfall Above, and Sunshine Near, Average.

Temperature: This has been a warm June overall with a short heatwave in the final week. The mean temperature is 1.1° above average, and is in the top 10% of ranked values since 1882. In more recent years, since 2000 only 4 Junes have been warmer, but both 2017 and 2018 had means 1° higher than this June's. The highest max is 5.9° above the median and ranks 4th highest in 117 years. The lowest max is 0.6° above its median. The highest min is 1.7° above the median while the lowest min is 1.1° above its median. The lowest grass min is close to average. Earth temperatures at both 30 cm and 1 m depth are well above average. Anomalies for daily max were over +5° on the 1st, 2nd and 23rd to 26th, and over +10° on the 24th and 25th, and were over -4° on the 4th and 6th, with extreme values of +12.3° on the 25th and -4.2° on the 6th. Anomalies for daily min were more equitable, with extreme values of +5.8° on the 26th and -3.9° on the 7th. **Rainfall:** Here we see a return to normality after a very dry May, a 30 day dry spell coming to an end on the 2nd, and it was quite wet around mid-month with 31.4 mm over 4 days to the 18th. There were 7 fewer dry days than average. The rain total is 13 % above the climatological average, and in this millennium 13 Junes have been drier. Thunder occurred on the 15th, 16th and 17th, and the rainfall rate exceeded the violent category on the 12th and 15th, with 96 and 85 mm/hr respectively, but there was no hail. The duration of measurable rain is 4 hours above average. Daily rainfall accumulation compared with normal was 13 mm in deficit by the 11th, but this became a surplus of 17 mm by the 18th after which somewhat drier conditions reduced the surplus to 6 mm by the 30th. Despite the welcome rainfall, estimated soil moisture deficit continued high enough to cause severe stress for unsegregated shallow rooted plants. **Sunshine:** This June's sunshine ended up just above average, despite the poor showing early in the month. However, compared with the recent extremely sunny April and May, this month's daily mean of 6.64 hours marks a return to more normal values, being 2.21 hours per day less than in April, and 4.43 hours per day less than in May. In this millennium 12 Junes have been sunnier, the last in 2018. This month there were 7 days having over 80% of the maximum, 6 of which had over 90 %, the period 22nd to 26th being notable with 75.5 hours, a daily mean of 15.1 hours. At the other end of the scale, 11 days had less than 20 % of the maximum. Daily sunshine accumulation compared with normal was already in surplus of 18 hours on the 2nd, but this became a deficit of 20 hours by the 12th, maintaining a similar amount until the 19th, then building a surplus of 18 hours by the 26th, falling back to 4 hours by the 30th. Overall there were 11 days with <3 hours, 16 with =>6 hours, 7 with =>12 hours and 5 with =>15 hours. **Wind:** The overall mean speed is 0.4 mph above average, and both the month's windiest day and highest gust are slightly above average. Daily mean speeds were mainly light or moderate, but were fresh on the 6th and from the 27th to 29th. Directions were NE'ly on 1st, then between N and W until 8th, then were mainly between SE and SW, except for NE'ly on 10th/11th, and E'ly on 24th/25th.

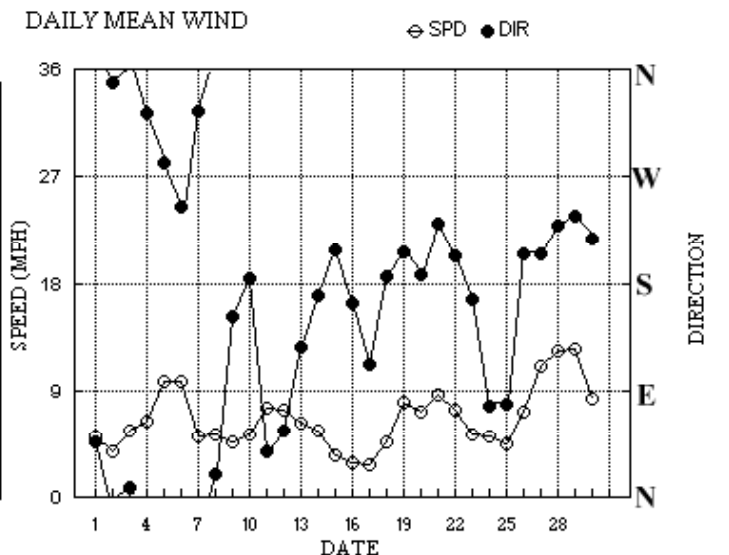
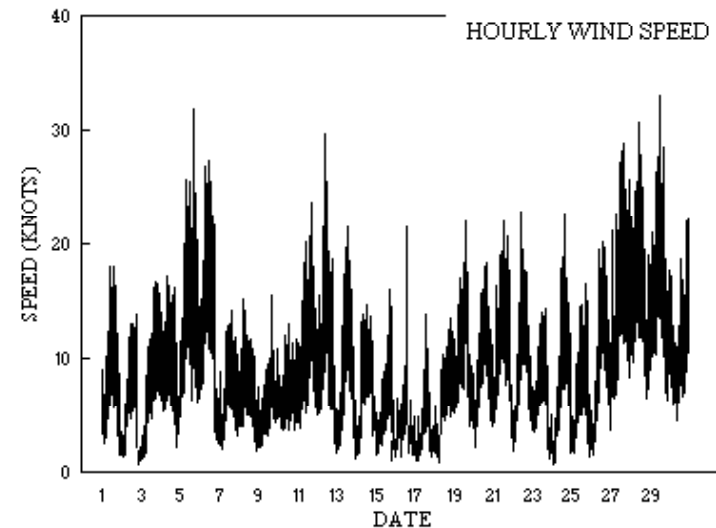
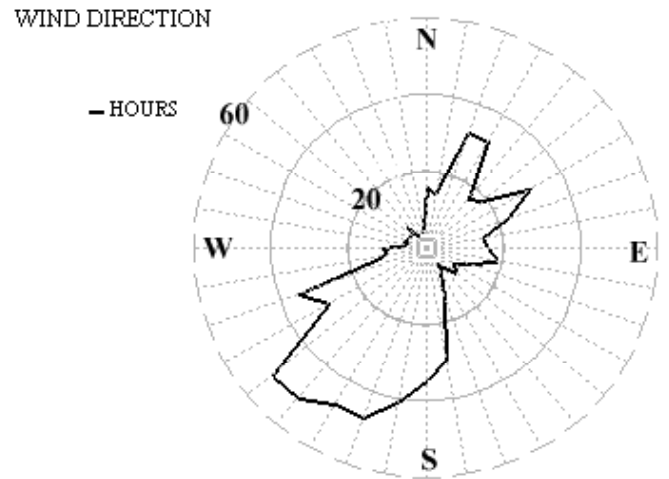
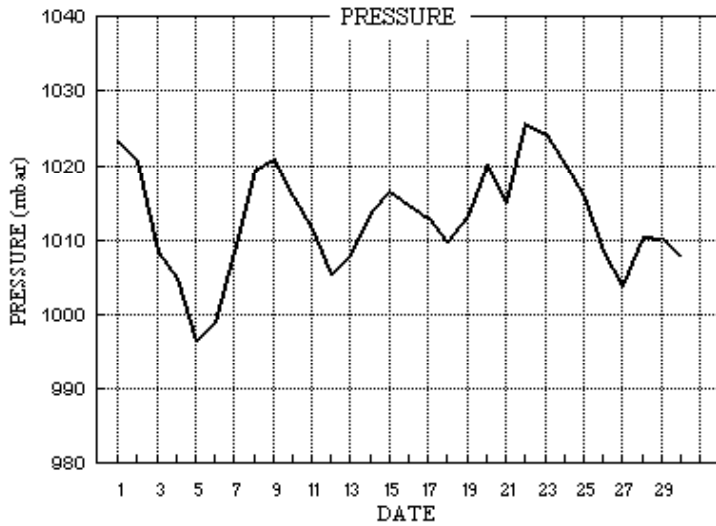
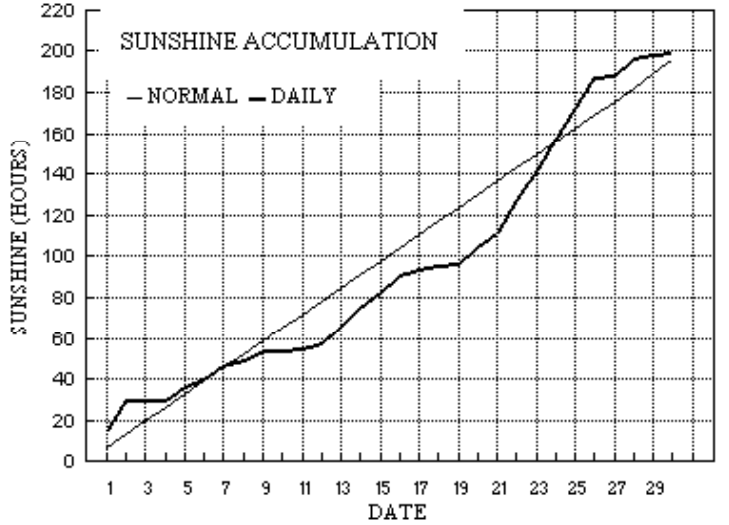
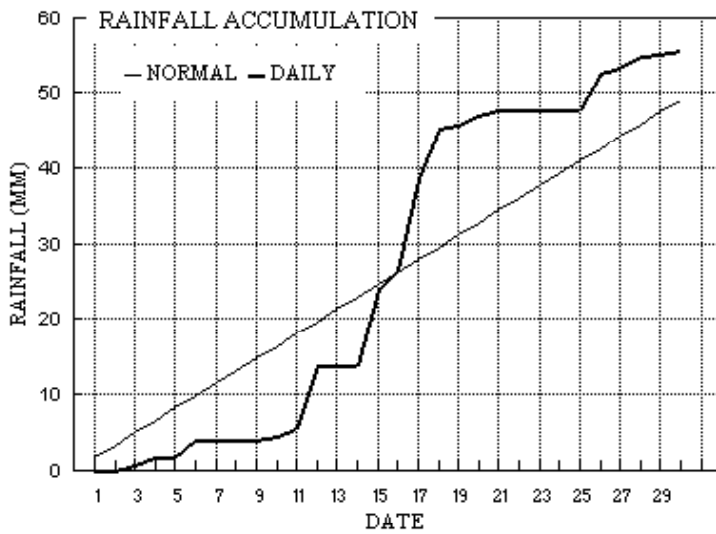
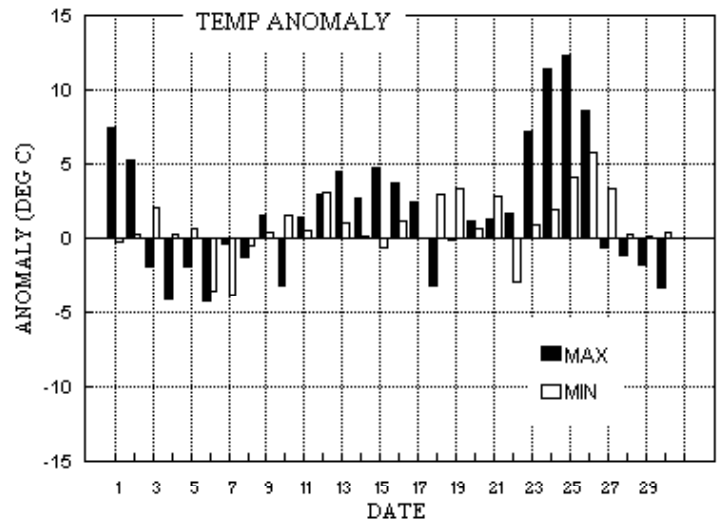
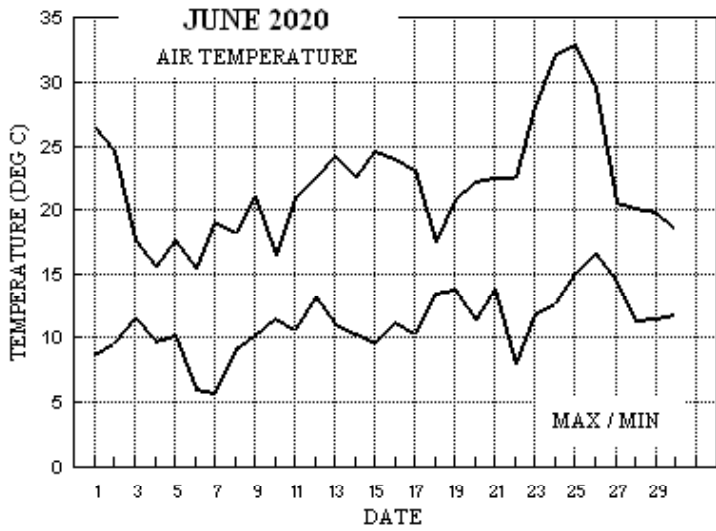
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
-0.3°	-0.3°	27%	83%	+2.0°	+1.2°	261%	79%	+3.5°	+1.7°	52%	145%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for June 2020



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: JUNE 2020

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	26.5	8.8	0.0	2.9	17.5	15.2	15.3	0.0	1023.1	0 0 0 0	0 0 0 0	0 0 0 0	47	4.2	4.5	78 18 1050	46 8 10 0.0
2	24.6	9.6	tr	4.8	17.8	15.3	14.8	0.0	1020.7	0 0 0 0	0 0 0 0	0 0 0 0	348	3.0	3.4	318 14 1707	330 6 10 0.0
3	17.6	11.5	0.6	6.9	17.8	15.5	0.0	0.0	1008.5	0 0 0 0	0 0 0 0	0 0 0 0	9	4.0	4.9	16 17 1846	15 8 18 1.3
4	15.6	9.8	1.1	8.8	17.1	15.6	0.1	0.0	1004.8	0 0 0 0	0 0 0 0	0 0 0 0	322	3.9	5.6	15 17 0741	341 7 09 1.0
5	17.7	10.2	tr	8.1	16.5	15.5	6.0	0.0	996.4	0 0 0 0	0 0 0 0	0 0 0 0	282	7.7	8.6	311 32 1646	314 11 11 0.1
6	15.4	6.1	2.2	3.1	16.0	15.4	3.7	0.0	999.0	0 0 0 0	0 0 0 0	0 0 0 0	245	8.3	8.5	252 27 1137	253 13 07 2.4
7	19.2	5.8	tr	0.3	15.4	15.3	6.3	0.0	1008.4	0 0 0 0	0 0 0 0	0 0 0 0	325	2.5	4.5	330 14 1412	11 6 15 0.0
8	18.3	9.2	tr	7.5	15.8	15.1	3.5	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0	20	4.4	4.6	24 15 0619	14 7 07 0.0
9	21.1	10.2	tr	7.0	16.0	15.1	4.1	0.0	1021.0	0 0 0 0	0 0 0 0	0 0 0 0	153	2.5	4.1	220 16 1526	207 8 16 0.2
10	16.5	11.5	0.5	10.6	16.3	15.1	0.0	0.0	1015.7	0 0 0 0	0 0 0 0	0 0 0 0	184	3.8	4.7	179 13 1418	186 7 14 0.6
11	21.0	10.6	1.1	10.4	16.0	15.1	1.0	0.0	1011.5	0 0 0 0	0 0 0 0	0 0 0 0	39	6.3	6.6	54 24 1638	25 11 17 0.6
12	22.5	13.2	8.4	12.8	16.3	15.1	2.8	0.0	1005.3	0 0 0 0	0 0 0 0	0 0 0 0	56	6.0	6.4	68 30 1013	65 11 12 1.9
13	24.2	11.1	tr	7.1	16.4	15.1	8.6	0.0	1007.9	0 0 0 0	0 0 0 0	0 0 0 0	127	4.7	5.4	109 22 1309	149 11 14 0.1
14	22.6	10.4	tr	7.0	16.7	15.2	9.0	0.0	1013.9	0 0 0 0	0 0 0 0	0 0 0 0	170	4.3	5.0	170 15 1350	159 8 13 0.0
15	24.7	9.6	9.9	5.7	16.7	15.3	7.5	0.0	1016.5	0 0 0 0	1 0 0 0	0 0 0 0	208	2.2	3.2	197 16 1715	236 6 15 1.0
16	24.0	11.3	2.7	8.4	17.0	15.4	8.0	0.0	1014.9	0 0 0 0	1 0 0 0	0 0 0 0	163	2.3	2.6	129 22 1500	162 5 15 0.9
17	23.1	10.3	12.1	7.0	17.2	15.5	2.8	0.0	1012.9	0 0 0 0	1 0 0 0	0 0 0 0	113	1.0	2.4	76 14 1400	92 5 14 9.3
18	17.5	13.5	6.7	13.7	17.6	15.6	2.1	0.0	1009.8	0 0 0 0	0 0 0 0	0 0 0 0	186	3.2	4.1	174 14 1937	180 6 17 7.2
19	20.8	13.8	0.5	12.9	17.2	15.7	1.4	0.0	1013.2	0 0 0 0	0 0 0 0	0 0 0 0	206	6.7	6.9	223 22 1525	213 13 14 0.5
20	22.3	11.4	1.4	9.9	17.1	15.7	8.0	0.0	1020.1	0 0 0 0	0 0 0 0	0 0 0 0	187	6.3	6.3	187 19 1508	198 9 13 1.5
21	22.5	13.8	0.7	12.7	17.5	15.8	6.7	0.0	1015.0	0 0 0 0	0 0 0 0	0 0 0 0	230	6.5	7.6	257 22 1246	261 10 18 0.1
22	22.6	8.0	0.0	3.6	17.6	15.9	15.4	0.0	1025.7	0 0 0 0	0 0 0 0	0 0 0 0	203	6.3	6.4	246 23 1114	208 10 14 0.0
23	28.1	11.9	0.0	9.6	17.9	16.0	15.2	0.0	1024.2	0 0 0 0	0 0 0 0	0 0 0 0	166	4.3	4.6	127 15 1627	156 7 16 0.0
24	32.2	12.8	0.0	8.5	18.6	16.2	15.5	0.0	1020.2	0 0 0 0	0 0 0 0	0 0 0 0	78	4.2	4.5	67 23 1553	77 8 18 0.0
25	33.0	15.0	tr	10.8	19.4	16.4	15.1	0.0	1015.9	0 0 0 0	0 0 0 0	0 0 0 0	79	3.5	3.9	69 17 1856	81 7 18 0.1
26	29.5	16.6	4.8	14.8	20.1	16.7	14.3	0.0	1008.5	0 0 0 0	0 0 0 0	0 0 0 0	205	5.6	6.3	225 20 1402	204 11 14 1.6
27	20.6	14.4	0.7	13.4	20.1	17.0	1.4	0.0	1003.9	0 0 0 0	0 0 0 0	0 0 0 0	205	9.1	9.6	263 29 1749	214 14 15 1.3
28	20.2	11.4	1.5	10.4	19.0	17.2	7.9	0.0	1010.4	0 0 0 0	0 0 0 0	0 0 0 0	228	10.7	10.7	224 31 1120	224 14 12 0.9
29	19.9	11.5	0.3	10.0	18.5	17.2	2.3	0.0	1010.3	0 0 0 0	0 0 0 0	0 0 0 0	237	10.7	10.8	253 33 1336	238 15 12 0.6
30	18.5	11.8	0.5	11.0	18.0	17.1	0.3	0.0	1007.7	0 0 0 0	0 0 0 0	0 0 0 0	218	7.2	7.3	225 22 2334	222 10 23 1.1
Total			55.7				199.1	0.0									34.3
Mean	22.1	11.2		8.7	17.4	15.7	6.64	0.0	1012.8					210	2	5.8	
Anom	+1.6	+0.7	113%	+1.1	+0.6	+1.1	102%		-4.3								
Daily mean		16.6															
Anom		+1.1															

Number of days with:

Air frost = 0 Ground frost = 0 Nil sun = 2
 Snow falling = 0 Snow lying = 0 Thunder = 3
 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 JUNE 2020

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	86	1	02	05	13	19.7	10.7	56	7.9	1023.1	8	003	02	0	0	0	9	0	1	81080	1	COTRA				
2	88	5	36	05	12	19.1	6.6	44	6.0	1020.7	8	011	02	1	1	0	0	9	0	1	84080	2	2Ci81 COTRA			
3	80	8	36	04	10	17.5	9.7	60	7.5	1008.5	6	009	60	6	2	1	5	6	7	/	81645	84357	88459	3	Sc cas	
4	82	8	36	07	16	12.5	6.3	66	6.0	1004.8	6	006	01	2	2	4	8	5	7	7	82822	83630	86365	4	8Cs70 Cu hum	
5	86	7	29	11	26	14.3	3.7	49	5.0	996.4	2	002	03	2	2	4	8	6	3	0	83840	84362		5	2Sc50 Cu med	
6	81	7	25	14	25	11.5	3.0	56	4.8	999.0	5	001	03	1	1	7	5	6	7	/	86633	84645		6	/Ac58	
7	86	7	31	05	12	14.9	8.2	64	6.7	1008.4	1	013	03	2	2	1	8	5	4	8	81825	83270	86075	7	1Sc56 1Ac66 COTRA Cu hum Halo 22°	
8	82	7	01	06	12	13.1	6.9	66	6.1	1019.4	2	010	02	2	2	7	5	5	/	/	86625	87630		8		
9	81	7	12	04	07	14.8	4.5	50	5.2	1021.0	0	002	02	2	2	7	5	6	/	/	84640	87650		9		
10	82	7	20	04	07	14.9	9.1	68	7.1	1015.7	7	007	21	2	2	1	8	4	7	/	81818	85358	87462	10	1Sc40 Cu med	
11	56	7	05	09	18	16.5	12.5	77	9.0	1011.5	8	002	05	2	2	6	6	4	7	/	86712	85630		11	/Ac58	
12	59	7	06	08	21	19.1	12.8	67	9.2	1005.3	6	014	05	2	2	6	8	5	/	1	84822	83635		12	/Ci75 Cu med	
13	82	4	05	04	11	17.1	12.8	76	9.2	1007.9	1	011	03	1	1	1	2	5	0	2	81820	83072		13	Cu hum/med	
14	86	7	18	06	14	18.1	12.1	68	8.7	1013.9	1	008	03	1	1	7	8	5	/	/	83825	87635		14	Cu hum	
15	88	3	17	04	08	19.8	10.5	55	7.8	1016.5	8	003	03	1	1	1	1	6	8	1	81830			15	1Ac59 2Ac60 1Ci75 Cu hum Ac cas	
16	81	5	06	02	06	17.8	13.9	78	9.8	1014.9	8	001	03	1	1	2	2	5	4	0	82827	83358		16	1Ac65 Cu med, con dist N	
17	80	7	10	02	04	18.3	11.8	66	8.6	1012.9	0	000	02	2	2	1	1	5	7	1	81825	83362	87075	17	1Ac59 4Ac64 Cu hum U/a cont	
18	61	8	21	05	09	15.4	13.9	91	9.9	1009.8	5	003	61	6	6	7	8	3	2	/	83806	83620	86640	18	8Ns56 Cu med	
19	56	8	21	08	17	14.3	12.9	91	9.2	1013.2	2	013	63	6	6	7	5	3	2	/	83708	87615	88556	19		
20	83	7	18	06	14	17.0	12.1	73	8.7	1020.1	2	004	03	1	1	7	8	4	3	/	83818	85635		20	/Ac58 Cu med	
21	80	7	23	08	17	17.7	13.4	76	9.5	1015.0	2	008	01	6	2	3	8	4	7	/	82815	86365		21	2Sc30 Absent vv&cld est	
22	84	2	20	08	14	18.3	8.6	53	6.8	1025.7	1	004	.0	3	0	1	1	6	0	1	81832			22	2Ci75 1Ci80 COTRA	
23	81	1	15	07	11	21.9	11.6	52	8.4	1024.2	8	006	02	0	0	0	0	9	0	1	81080			23	COTRA El hz lyr W	
24	75	0	03	04	08	24.5	16.0	59	11.2	1020.2	8	009	02	0	0	0	0	9	0	0					24	
25	80	0	07	05	11	26.7	16.6	54	11.7	1015.9	8	004	02	0	0	0	0	9	0	0					25	
26	84	3	21	04	11	26.8	15.2	49	10.7	1008.5	7	009	01	1	1	0	0	9	0	2	83075			26		
27	63	8	20	10	23	16.8	14.3	85	10.2	1003.9	5	008	60	6	2	8	8	4	/	/	81815	86618	88650	27		
28	80	6	23	13	25	16.6	8.3	58	6.8	1010.4	1	014	15	1	1	6	8	6	0	0	85830			28	2Sc45 Cu med jpN&NW	
29	81	6	24	12	27	16.5	9.0	61	7.1	1010.3	2	003	02	2	2	6	5	5	0	0	85625			29	2Sc35	
30	65	8	21	06	12	14.3	11.6	84	8.5	1007.7	6	007	62	6	2	7	5	4	2	/	81812	83630	87650	30	8As60 Cu hum	

Mean vis = 36.5 km

Mean cloud = 5.6 70%

Mean wind speed = 6.5 kn

Mean gust = 14 kn

Mean TT = 17.5 °C

Mean TdTd = 10.6 °C

Mean RH = 65.1 %

Mean r = 8.1 g/kg

Mean PPP = 1012.8 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 JUNE 2020

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	NChshs	Date	Remarks
1	84	1	07	05	18	25.5	7.1	31	6.2	1020.8	7	011	02	0	0	1	4	7	0	1	81856			1	1Sc57 1Ci80 COTRA Cu hum
2	89	4	33	05	12	24.4	5.2	29	5.5	1016.8	7	021	01	1	1	0	0	9	0	2	82072	83075		2	Halo 22° part
3	62	8	02	07	16	16.2	11.4	73	8.4	1007.6	6	007	61	6	2	5	8	5	2	/	81825	85650	88556	3	Cu med
4	84	8	27	07	16	14.0	4.8	54	5.4	1002.5	7	011	15	2	2	8	8	6	/	/	81840	84650	88656	4	Cu med jpN
5	70	5	26	07	16	14.9	4.3	49	5.2	997.3	1	005	25	8	1	3	9	6	6	0	81940	82845		5	1Sc56 2Ac58 Cu con jp all quads vv50k ex p
6	59	8	24	09	20	12.5	8.8	78	7.1	999.0	6	001	60	6	2	8	5	4	/	/	81715	86620	88650	6	Vis 20k exNW
7	80	7	01	07	14	15.7	8.9	64	7.1	1010.8	3	017	21	6	2	7	8	5	7	/	82828	86650	87358	7	Cu med jpSW&E
8	82	7	01	05	10	15.4	6.9	57	6.1	1019.7	2	001	02	2	2	7	8	6	/	/	83835	87650		8	Cu med
9	80	7	18	05	10	20.7	6.3	39	5.9	1018.6	6	015	15	2	2	3	8	6	6	1	82848	85358		9	2Sc56 /Ci80 COTRA Cu med jpSW
10	62	8	19	06	13	13.9	9.9	77	7.6	1013.9	7	011	61	6	6	6	8	4	2	/	82815	85645	88557	10	Cu med
11	65	7	03	10	21	18.5	11.6	64	8.5	1010.3	6	013	15	8	2	7	8	6	6	/	83830	86656		11	/Ac58 Cu med jpNW vv30k ex p
12	35	8	08	06	17	17.4	15.4	88	10.9	1002.8	6	002	63	6	2	7	8	4	2	/	81715	83820	87635	12	8Ns50
13	86	6	14	10	21	22.5	7.5	38	6.4	1008.3	8	001	03	1	1	6	8	7	0	2	82850	85656		13	1Ci72 Cu med
14	88	4	19	07	14	22.2	12.2	53	8.8	1013.9	7	004	01	8	1	2	8	6	6	1	82835			14	1Sc56 2Ac57 1Ci75 Cu med
15	82	6	19	06	12	24.0	11.3	45	8.3	1015.1	7	008	03	2	2	3	2	6	6	1	83845	83360		15	3Ci75 Cu con
16	50	7	11	11	22	19.2	14.0	72	9.9	1012.7	6	011	95	9	2	2	9	6	6	/	86930			16	2Cu35 /Ac60 vv40k ex SE
17	80	7	09	02	14	20.1	14.0	68	9.9	1011.4	8	004	21	9	6	2	9	6	7	8	81930	83358	87272	17	1Cu35 1Sc56 3As68 Cu con
18	70	7	20	05	11	16.0	13.7	86	9.7	1009.4	7	003	21	6	2	1	8	3	7	8	81706	84465	86270	18	1Cu20 1Sc45 2Ac58 Cu con E jpW Cs edge E
19	86	7	22	13	22	17.5	11.1	66	8.2	1015.1	3	005	03	2	2	7	8	5	/	/	83828	83640	86650	19	
20	82	7	19	09	18	20.5	12.0	58	8.6	1019.0	7	003	02	2	2	7	8	6	/	/	83835	86656		20	Absent vv&cld est
21	82	3	24	12	22	20.7	9.6	49	7.4	1016.9	2	010	02	1	1	3	8	6	0	0	82840			21	1sc56 Absent vv&cld est
22	81	1	20	10	18	22.1	11.5	51	8.3	1024.2	7	008	02	0	0	1	1	6	0	1	81840			22	1Ci75 Cu hum
23	81	2	18	07	14	27.7	10.9	35	8.0	1022.0	7	012	03	0	0	0	0	9	0	4	82080			23	
24	80	1	11	09	17	31.8	11.0	28	8.1	1017.8	7	013	02	0	0	0	0	9	0	1	81080			24	El hz lyr
25	81	1	10	04	13	32.2	13.9	33	9.8	1012.5	8	017	02	0	0	1	1	8	0	0	81857			25	Cu hum
26	82	2	19	10	20	26.9	12.9	42	9.3	1007.8	7	001	02	0	0	1	2	7	8	1	81850			26	1Ac61 2Ci78 Cu con N Ac cas
27	82	7	22	13	25	18.5	12.7	69	9.2	1003.6	1	004	02	8	2	7	8	5	/	/	86825	83635		27	Cu med
28	70	7	23	13	26	18.2	9.8	58	7.5	1010.1	7	001	15	2	2	6	8	6	6	1	84832	83656		28	2Ac62 /Ci75 Cu con jpN&W vv40k ex p
29	82	6	24	13	25	18.8	8.5	51	6.9	1009.7	7	004	02	2	2	6	8	6	0	0	83840	85650		29	Cu hum
30	80	8	21	10	19	17.3	14.6	84	10.3	1006.3	7	010	20	5	6	8	5	3	/	/	81709	85712	88620	30	jpS vv50k ex p

Mean vis = 33.9 km

Mean cloud = 5.6 70%

Mean wind speed = 8.1 kn

Mean gust = 17 kn

Mean TT = 20.2 °C

Mean TdTd = 10.4 °C

Mean RH = 56.3 %

Mean r = 8.0 g/kg

Mean PPP = 1011.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham Sunshine Hourly analysis	Hour	01-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun	08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
2020	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	0.50	0.49	0.00	0.00	0.10	0.51	0.12	0.00	0.00	0.00	0.00	0.00	0.49	0.48	0.49	0.28
	5	1.00	1.00	0.00	0.00	0.34	1.00	0.56	0.00	0.39	0.00	0.00	0.15	0.83	1.00	0.93	1.00
	6	0.98	1.00	0.00	0.00	0.70	1.00	1.00	0.00	1.00	0.00	0.00	0.82	0.75	1.00	1.00	1.00
	7	1.00	1.00	0.00	0.00	0.41	0.88	1.00	0.07	0.03	0.00	0.02	0.79	0.95	0.61	1.00	1.00
	8	1.00	1.00	0.00	0.00	0.33	0.10	1.00	0.06	0.00	0.00	0.00	0.67	0.97	0.11	1.00	0.59
	9	1.00	1.00	0.00	0.02	0.19	0.00	0.98	0.20	0.27	0.00	0.16	0.04	0.69	0.01	1.00	0.26
	10	1.00	1.00	0.00	0.03	0.43	0.00	0.60	0.08	0.12	0.00	0.00	0.02	0.72	0.36	0.55	0.01
	11	1.00	1.00	0.00	0.00	0.77	0.00	0.71	0.07	0.50	0.00	0.00	0.06	0.73	0.02	0.00	0.15
	12	0.99	1.00	0.00	0.00	0.09	0.00	0.17	0.03	0.28	0.00	0.00	0.00	0.75	0.28	0.11	0.27
	13	0.98	0.98	0.00	0.00	0.29	0.00	0.00	0.01	0.19	0.00	0.22	0.00	0.43	0.03	0.08	0.58
	14	1.00	0.67	0.00	0.00	0.08	0.00	0.00	0.00	0.61	0.00	0.27	0.00	0.61	0.41	0.59	0.01
	15	0.92	1.00	0.00	0.00	0.58	0.00	0.01	0.00	0.65	0.00	0.01	0.00	0.03	0.73	0.25	0.00
	16	0.99	1.00	0.00	0.00	0.18	0.07	0.00	0.80	0.04	0.00	0.18	0.00	0.61	0.81	0.18	0.48
	17	1.00	1.00	0.00	0.00	0.75	0.00	0.00	0.88	0.00	0.00	0.12	0.00	0.07	0.95	0.16	1.00
	18	1.00	1.00	0.00	0.00	0.57	0.00	0.19	0.76	0.01	0.00	0.00	0.26	0.00	1.00	0.13	0.97
	19	0.97	0.67	0.00	0.00	0.20	0.11	0.00	0.57	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.41
	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	0.15	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		15.34	14.81	0.00	0.05	6.02	3.66	6.34	3.53	4.09	0.00	1.00	2.82	8.63	8.96	7.49	7.99

Hour	17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	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
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
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
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
4	0.44	0.00	0.00	0.45	0.00	0.46	0.46	0.45	0.45	0.00	0.00	0.47	0.02	0.24	0.23
5	0.00	0.00	0.00	0.70	0.00	1.00	1.00	1.00	1.00	0.49	0.00	1.00	0.01	0.08	0.48
6	0.02	0.00	0.00	0.84	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.94	0.01	0.00	0.57
7	0.03	0.00	0.00	0.56	0.24	1.00	1.00	1.00	1.00	1.00	0.06	0.76	0.03	0.00	0.51
8	0.61	0.00	0.00	0.29	0.44	1.00	1.00	1.00	1.00	1.00	0.00	0.34	0.33	0.00	0.46
9	0.18	0.00	0.00	0.06	0.38	1.00	1.00	1.00	1.00	1.00	0.00	0.64	0.01	0.00	0.40
10	0.42	0.00	0.00	0.45	0.11	1.00	1.00	1.00	1.00	1.00	0.00	0.34	0.19	0.00	0.38
11	0.46	0.00	0.00	0.56	0.11	0.97	1.00	1.00	1.00	1.00	0.18	0.50	0.26	0.00	0.40
12	0.60	0.00	0.45	0.52	0.17	0.85	1.00	1.00	1.00	0.99	0.47	0.49	0.32	0.00	0.39
13	0.00	0.00	0.57	0.63	0.57	1.00	1.00	1.00	1.00	1.00	0.10	0.35	0.30	0.00	0.38
14	0.00	0.00	0.09	0.15	0.66	1.00	1.00	1.00	0.68	1.00	0.12	0.54	0.10	0.00	0.35
15	0.00	0.28	0.04	0.36	0.14	1.00	1.00	1.00	1.00	1.00	0.05	0.16	0.03	0.00	0.34
16	0.00	0.39	0.03	0.66	0.75	1.00	1.00	1.00	1.00	1.00	0.16	0.35	0.01	0.00	0.42
17	0.00	0.57	0.00	0.58	0.88	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.13	0.00	0.45
18	0.00	0.48	0.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.06	0.30	0.17	0.00	0.46
19	0.00	0.35	0.25	0.17	1.00	1.00	0.71	1.00	1.00	0.80	0.00	0.44	0.40	0.00	0.37
20	0.00	0.00	0.00	0.00	0.19	0.14	0.07	0.06	0.00	0.00	0.00	0.03	0.00	0.00	0.02
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
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
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
Tot	2.76	2.08	1.44	7.96	6.65	15.42	15.23	15.51	15.12	14.27	1.39	7.85	2.30	0.32	199.02

JUNE 2020

	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	17.99	26.5	1449	8.8	349	57.3	89.8	434	29.3	1424	8.5	6.8	8.4	1117	5.8	1424	1022.20	1023.7	624	1020.1	1544	0
2	17.30	24.6	1503	9.6	410	55.7	94.9	438	24.8	1701	6.7	6.1	7.7	715	4.5	1341	1018.37	1022.4	32	1012.5	2353	0
3	14.48	17.7	904	10.4	2359	70.3	90.8	2252	55.8	1005	9.1	7.2	8.5	1454	6.3	214	1008.59	1012.7	0	1006.9	1814	0.4
4	11.96	15.6	1151	9.8	352	73.3	95.3	2135	45.8	1337	7.0	6.3	7.6	2137	4.9	1337	1003.51	1007.5	2	999.0	2355	1.2
5	12.93	17.7	1540	8.2	2345	57.6	92.6	309	33.0	1540	4.1	5.3	7.6	324	3.8	1731	997.39	999.4	2358	995.9	540	0.1
6	10.25	13.5	1620	6.1	413	76.7	94.8	2306	53.1	756	6.2	6.0	7.9	1816	4.6	637	999.95	1004.1	2359	998.4	1000	2.4
7	12.74	19.2	1155	5.8	332	75.3	98.1	432	41.4	1307	8.1	6.7	8.1	1739	5.5	1305	1009.87	1016.3	2351	1004.0	2	0
8	13.07	18.3	1701	9.2	353	67.2	83.8	355	46.6	1622	6.9	6.1	6.6	1707	5.7	754	1019.00	1021.3	2357	1016.1	2	0
9	14.65	21.1	1454	10.2	420	62.3	80.0	451	36.9	1455	7.2	6.3	7.8	2112	4.9	730	1019.75	1021.3	750	1018.0	2358	0
10	12.99	16.1	1020	11.2	2344	79.1	90.4	1723	59.3	1021	9.4	7.3	8.3	1357	6.5	1102	1014.74	1018.2	0	1012.1	2259	0.6
11	14.32	21.0	1427	10.6	251	82.1	96.2	1147	56.6	1431	11.2	8.3	10.5	1352	7.2	310	1011.13	1012.4	1	1009.2	2358	1.1
12	16.03	22.5	1125	11.4	2358	84.7	98.5	2344	54.8	1138	13.3	9.5	11.3	1807	8.3	2358	1005.01	1009.4	1	1002.5	1659	8.3
13	17.25	24.2	1401	11.1	19	70.7	99.6	514	34.5	1402	10.9	8.2	10.5	735	6.3	1225	1008.29	1012.2	2218	1004.8	222	0
14	16.94	22.6	1630	10.4	413	72.3	98.6	523	46.9	1631	11.5	8.4	9.2	1257	7.6	1752	1013.92	1016.4	2303	1011.8	306	0
15	16.48	24.7	1506	9.6	419	75.1	98.7	2341	43.0	1051	11.3	8.3	10.2	1900	7.0	1051	1016.02	1017.1	626	1014.6	1654	9.9
16	16.42	24.0	1327	11.3	424	82.4	99.2	540	45.5	1359	13.0	9.3	12.8	1704	7.9	1359	1013.94	1015.7	3	1012.0	1844	2.7
17	16.50	23.1	1243	10.3	357	79.0	98.9	541	46.0	1243	12.5	9.0	11.0	1433	7.6	357	1012.29	1013.4	1	1011.2	1516	1.1
18	14.89	17.5	1715	13.5	626	90.9	98.5	600	78.1	1703	13.4	9.5	10.3	1026	8.6	2235	1010.18	1012.0	0	1009.2	1650	14.7
19	15.15	20.8	1352	12.0	2356	83.1	94.5	152	54.3	1353	12.2	8.8	9.6	1216	7.7	1309	1014.37	1019.1	2359	1010.6	228	2.4
20	16.63	22.3	1324	11.4	159	74.9	96.2	221	50.0	1324	11.8	8.5	9.5	1140	7.8	1330	1019.01	1020.3	1015	1016.6	2356	0
21	16.88	22.5	1445	10.9	2359	70.3	95.7	701	43.0	1446	11.0	8.2	11.2	736	6.0	2058	1017.29	1023.8	2359	1014.0	455	2.1
22	16.24	22.6	1341	8.0	249	67.1	97.2	507	43.3	1117	9.5	7.3	8.7	1339	6.3	822	1024.59	1025.8	758	1023.3	1902	0
23	20.13	28.1	1517	11.9	306	61.4	92.0	341	32.2	1438	11.4	8.3	9.8	1123	7.4	1438	1023.08	1024.8	708	1021.3	1852	0
24	22.82	32.2	1542	12.8	416	60.3	96.9	432	24.4	1617	13.3	9.4	12.1	1049	7.1	1618	1019.39	1022.0	26	1016.9	1658	0
25	24.29	33.0	1355	15.0	424	55.7	89.9	454	27.0	1619	13.5	9.6	12.0	835	7.7	1749	1014.35	1018.7	0	1011.0	1841	0
26	21.93	29.5	1145	14.5	2358	63.3	90.1	523	37.4	1245	13.9	9.9	11.6	1300	8.9	1508	1008.54	1011.5	13	1007.0	1620	0
27	16.64	20.6	1218	13.8	2321	79.2	95.2	451	60.9	1221	12.9	9.3	11.6	1133	7.7	2346	1004.81	1007.8	19	1002.9	1214	5.7
28	14.97	20.2	1307	11.4	319	70.1	88.3	1344	47.6	1155	9.3	7.3	10.1	1351	6.5	1145	1009.65	1010.9	2047	1006.6	0	1.7
29	14.96	19.9	1223	11.5	124	64.0	81.1	124	45.4	1224	8.0	6.7	7.7	901	5.9	1017	1010.01	1010.8	1041	1009.3	353	0.1
30	15.50	18.5	1808	11.8	356	81.3	89.8	1243	67.3	3	12.3	9.0	11.0	1803	6.6	3	1007.05	1009.7	0	1004.7	2359	0.9

Total																						55.4
Mean	16.11	22.00		10.75		71.4	93.52		45.47		10.30	7.90	9.64		6.62		1012.54	1015.37		1010.09		
Max	24.29	32.95		15.03		90.9	99.60		78.10		13.90	9.90	12.75		8.86		1024.59	1025.85		1023.25		
Min	10.25	13.48		5.85		55.7	80.00		24.44		4.12	5.26	6.59		3.84		997.39	999.37		995.93		

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

Appendix 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.