

# 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

### APRIL 2023

Temperature (°C )	Anomaly	Rank in the past 142 years
Mean maximum	14.9	+0.1 28th highest
Mean minimum	4.3	-0.4 46th highest
Daily mean	9.6	-0.1 34th highest
Highest maximum	19.8	on 29th Lowest maximum 10.5 on 14th
Highest minimum	9.6	on 28th Lowest minimum -2.1 on 4th
Mean grass minimum	1.3	+0.3 Lowest grass minimum -6.6 on 4th
Mean earth @30 cm	10.6	+0.4 Earth @100 cm 10.1 +0.6
Frost duration (hrs)	12.4	Rain duration (hrs) 53.8
Rainfall total (mm)	62.0	129% 35th highest
Highest daily fall	10.5	on 11th Highest rate mm/hr 63 on 10th
Number of: Dry days (<0.2mm)	15	Wet days (>0.9mm) 11 days ≥5mm 5
Sunshine total (hrs) 156.1	Daily mean 5.20	92% Sunniest day 12.7 on 4th
N° days with: Air frost 3	Ground frost 12	Snow falling 0 Snow lying 0
Thunder 1	Hail ≥5mm 0	Small hail/ice 1 Fog @09 0 Nil sun 0
Pressure MSL: Mean @09 GMT, mbar 1016.8	+1.8 Highest 1031.8 on 2nd	Lowest 988.1 on 12th
Relative humidity : Mean (%) 77.4	Lowest 31 on 4th	Water vapour (g/kg), mean at 09 and 15 GMT 5.7, 5.5
Overall mean wind speed (mph) 5.8	Windiest day 10.8 on 12th	Max gust 48 on 12th
Wind direction (days) N 3 NE 7 E 4 SE 0 S 5 SW 7 W 2 NW 2		
Least windy day (mph) 2.5 on 8th	Calm; less than 0.5 mph (minutes) n/a	

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

#### Notes: Mean Temperature Near Average, Rainfall Above and Sunshine Below Average.

**Temperature:** The mean this April is just 0.1° below the current 30 year average, but it is 0.9° above the 142 year median. In the past 10 years, only 2021 and 2016 have been cooler, although both 2017 and 2019 were within 0.2° of the mean this April. The highest max is 0.9° below the median, and this is the 18th April in the past 48 when 20° was not reached. The lowest max is 2.5° above its median. Both the highest and lowest min are 0.2° below their respective medians. The mean grass min is 0.3° above average, and highest since 2018. Mean earth temperature at both 30cm and 1 m depth are around 0.5° above average. The number of days with ground frost is 2 below average, and the duration of air frost is 3.3 hours below the 42 year average of 15.7 hours. Anomalies for daily max were above +4° from 7th to 9th, on 17th, 19th, 28th and 29th, and exceeded -2° on 14th and 21st, with extreme values of +5.4° on 17th and -3.1° on 21st. Anomalies for daily min were above +4° on 1st, 6th, 10th and 17th, and exceeded -4° on 3rd, 4th, 22nd and 25th, with extreme values of +5.9° on 10th and -5.9° on 25th. **Rainfall:** This has been quite a wet April, wettest since 2018, and in this millennium only 6 Aprils have been wetter, including the current record holder in 2000 when 140.4 mm fell and also the second wettest 119.5 mm in 2012. This month, the 6 days to the 14th were quite wet, producing a total of 29.1 mm, but the first five days of the month were dry, also only 0.8 mm fell in the 5 days to the 19th. Thunder was heard on the 24th, and there was a fall of small ice pellets on the same day. Rainfall rate exceeded the violent threshold on the 10th, 12th and 24th. Rainfall accumulation compared with normal was 10 mm in deficit on the 8th, becoming a surplus of 6 mm by the 11th, decreasing to 2 mm by the 19th, increasing to 19 mm by the 27th, ending the month 14 mm in surplus. **Sunshine:** The total this month is 8 % below average, making it the duller April since 2018, yet it is the first April since 1990 to have no days with nil sun.. However, in this millennium 8 Aprils have been duller than this. The month's sunniest day occurred early in the month, which accounts for the 12.7 hours on that day being lowest since 2012. While only 3 days up to mid-month had less than 20 % of the maximum, there were 8 in the 2nd half. There were no especially sunny periods, but individual days had at least 80% of the maximum, namely 4th, 8th, 20th and 25th. Daily accumulation compared with normal was slightly in deficit up to the 3rd, then reached a surplus of 13 hrs by the 13th, then fluctuated around zero from 18th to 25th, becoming a deficit of 11 hr on 28th. **Wind:** The mean speed is 1.0 mph below the April average, but it is lowest only since 2021. The mean of 10.8 mph on the month's windiest day is 2.2 mph below average, but the highest gust is 6 mph above average. Daily mean direction was between N and E on 2nd, 3rd, 8th, 17th to 21st and 25th, between E and S on 4th, 9th, 14th, 22nd, 25th, 27th and 29th, between W and N on 1st, 6th, 7th, 15th and 24th, otherwise was between S and W. Daily mean speed was mainly light until the 9th, then fresh, increasing strong on 12th, then mainly moderate until the 20th, then generally light.

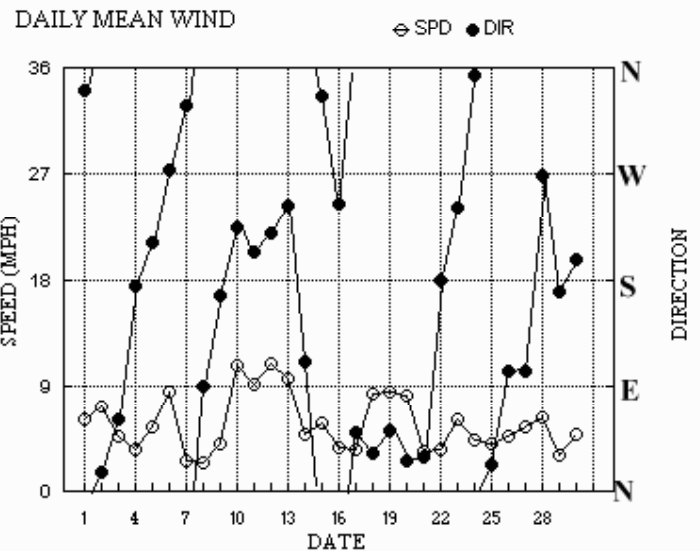
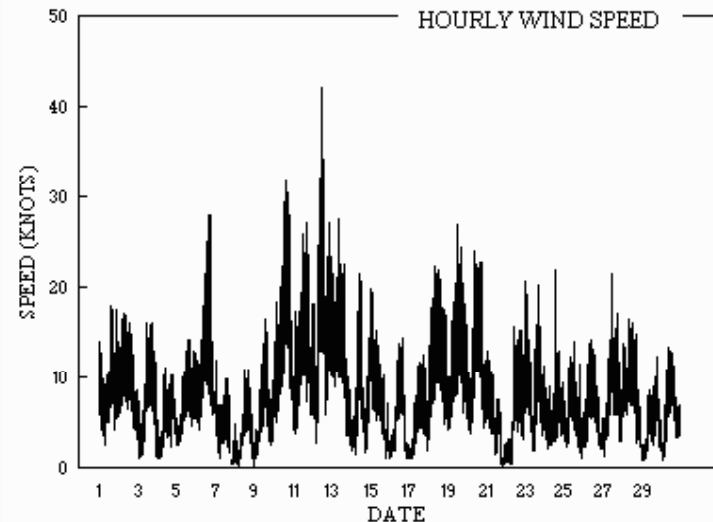
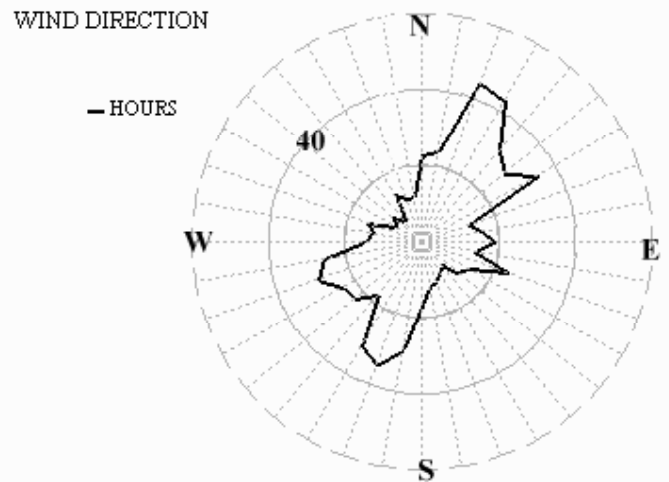
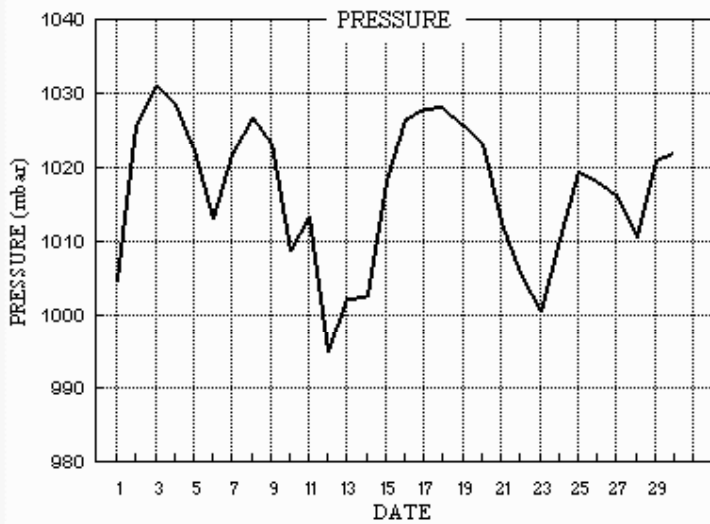
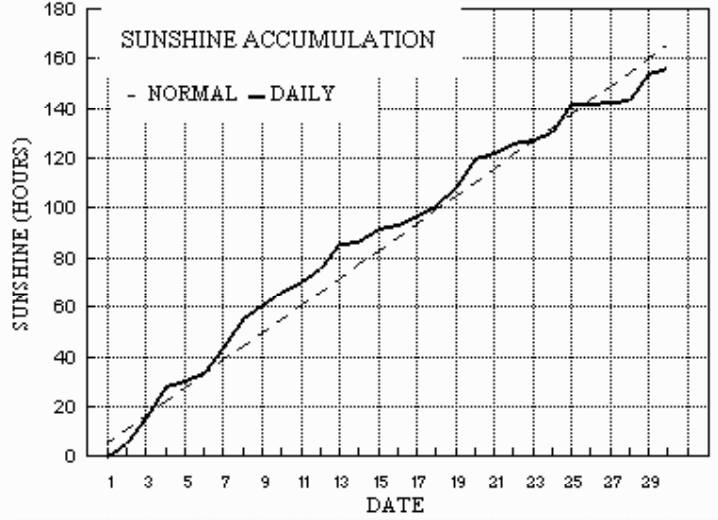
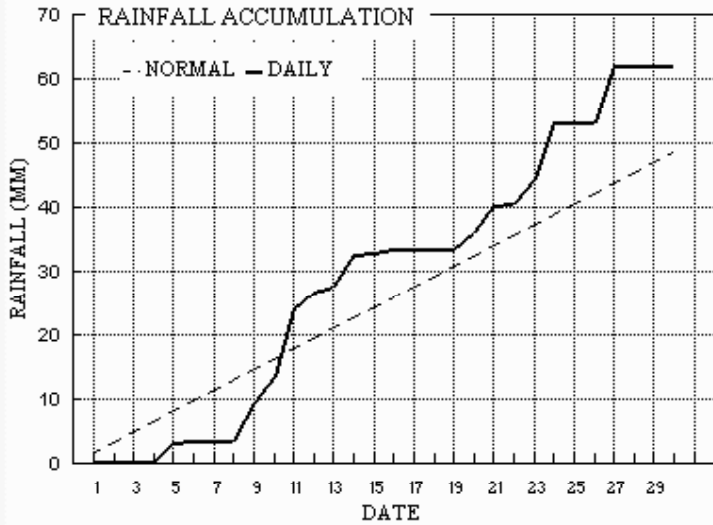
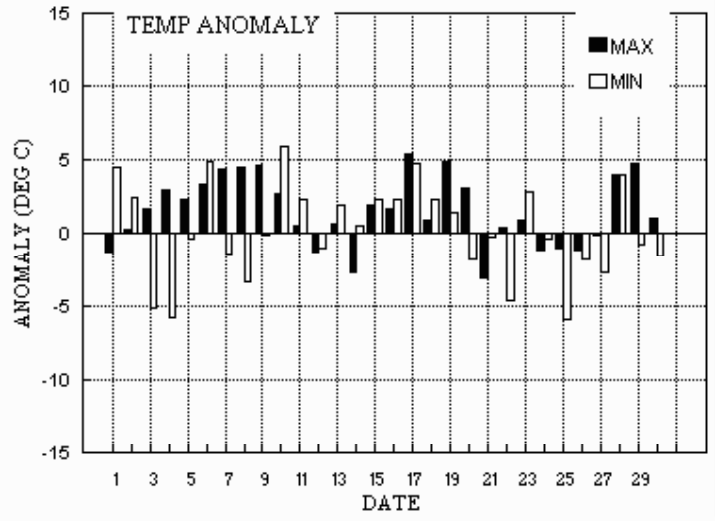
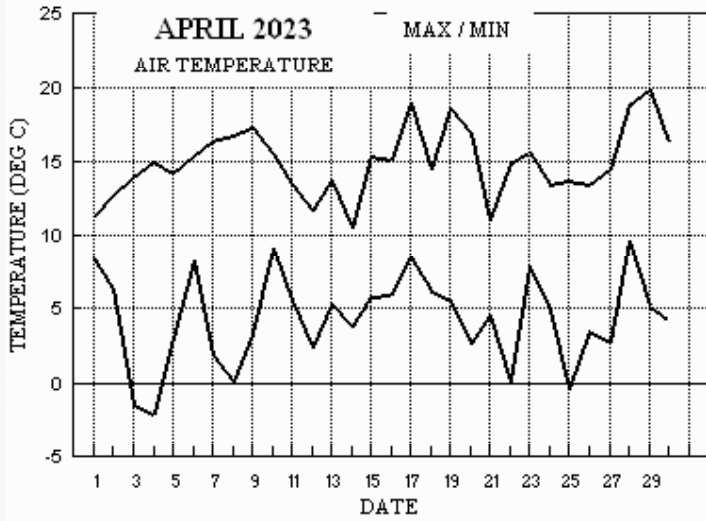
**Note:** Wind sensor, partial failure. Winds were estimated from 6th to 14th, and 19th to 23rd, using other available data.

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

From the 1 <sup>st</sup> to the 10 <sup>th</sup>				From the 11 <sup>th</sup> to the 20 <sup>th</sup>				From the 21 <sup>st</sup> to the 30 <sup>th</sup>			
+2.5°	+0.2°	84%	116%	+1.5°	+1.5°	142%	95%	+0.5°	-1.1°	161%	64%

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

# Wokingham climatological graphs for April 2023



Month: APRIL 2023

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs	
1	11.3	8.4	0.1	8.5	10.5	9.4	0.4	0.0	1004.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	340	4.6	5.4	332	18	1541	351	8	15	0.8	
2	12.7	6.3	0.0	3.7	10.2	9.5	5.0	0.0	1025.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	17	6.2	6.3	22	17	0721	20	9	07	0.0	
3	14.0	-1.4	0.0	-5.7	9.8	9.6	9.8	4.6	1031.1	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	62	3.6	4.1	101	16	1125	69	8	16	0.0	
4	15.0	-2.1	0.0	-6.6	9.5	9.6	12.7	6.0	1028.5	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	174	1.5	3.1	99	11	1020	191	5	20	0.0	
5	14.2	3.0	3.2	-0.3	9.4	9.5	2.3	0.0	1022.2	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	211	4.5	4.8	218	14	1717	228	7	12	5.8	
6	15.3	8.2	0.3	8.7	9.9	9.5	3.1	0.0	1012.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	273	6.7	7.4	328	28	1555	264	11	15	0.5	
7	16.4	1.9	0.0	-1.8	10.0	9.6	10.5	0.0	1021.7	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	328	2.0	2.3	300	12	0105	300	4	00	0.0	
8	16.8	0.1	0.0	-3.4	10.0	9.7	11.9	0.0	1026.8	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	90	1.8	2.2	120	11	1205	70	4	15	0.0	
9	17.2	3.2	5.8	-1.2	10.1	9.7	5.4	0.0	1023.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	166	3.0	3.6	190	17	1335	210	7	14	5.6	
10	15.5	9.1	4.1	9.2	10.7	9.8	4.7	0.0	1008.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	224	8.2	9.3	250	32	1525	250	15	14	1.2	
11	13.4	5.6	10.5	1.7	10.5	9.9	4.8	0.0	1013.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	204	7.4	8.0	180	27	1602	200	12	13	5.9	
12	11.7	2.4	2.8	-1.1	10.2	9.9	5.7	0.0	994.8	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	219	8.8	9.4	210	42	1255	205	17	12	2.8	
13	13.7	5.3	0.9	2.1	9.9	9.9	9.8	0.0	1002.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	243	8.0	8.3	250	28	1002	245	12	10	1.3	
14	10.5	3.8	5.0	-0.5	9.9	9.9	0.6	0.0	1002.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	110	2.4	4.2	110	22	1200	110	11	12	7.0	
15	15.3	5.8	0.1	5.4	9.9	9.9	5.4	0.0	1018.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	336	4.3	5.0	338	20	0009	335	10	00	0.1	
16	15.1	5.9	0.7	1.7	10.3	9.9	1.4	0.0	1026.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	244	2.6	3.3	270	14	1624	246	7	15	0.9	
17	18.9	8.5	0.0	5.0	11.1	10.0	4.1	0.0	1028.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	50	2.9	3.1	40	13	1747	45	6	12	0.0	
18	14.4	6.2	0.0	0.9	11.4	10.1	3.7	0.0	1028.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	32	7.2	7.3	20	22	0924	42	10	10	0.0	
19	18.5	5.5	0.0	0.4	11.3	10.3	7.0	0.0	1025.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	51	7.2	7.4	60	27	1350	60	11	15	0.0	
20	16.9	2.6	2.7	-2.7	11.2	10.4	11.3	0.0	1023.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	27	7.1	7.2	40	24	1050	30	11	12	1.4	
21	11.0	4.5	4.1	1.4	11.3	10.5	2.3	0.0	1012.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	29	2.1	2.9	30	13	0300	25	6	03	3.6	
22	14.8	0.1	0.3	-1.9	10.8	10.6	4.3	0.0	1005.6	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	179	2.6	3.1	200	16	1115	190	6	16	1.0	
23	15.6	7.8	3.9	7.6	11.0	10.6	1.6	0.0	1000.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	241	3.5	5.3	190	21	0105	280	8	16	2.1	
24	13.4	4.9	8.7	1.6	11.1	10.6	2.7	0.0	1010.1	0 0 0 0	0 0 0 0	1 0 1 0	0 0 0 0	353	2.2	3.8	204	22	1353	23	6	18	4.4	
25	13.7	-0.5	0.0	-3.7	10.9	10.6	11.6	1.8	1019.3	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	23	2.7	3.5	74	14	1434	17	6	10	0.0	
26	13.5	3.5	0.0	0.3	11.0	10.6	0.2	0.0	1018.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	103	3.6	4.0	104	14	1132	126	7	12	0.0	
27	14.5	2.7	8.7	-1.2	10.8	10.7	0.1	0.0	1016.2	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	103	4.2	4.8	143	22	1211	131	9	12	9.2	
28	18.8	9.6	tr	9.6	11.1	10.7	1.0	0.0	1010.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	268	3.3	5.5	262	17	0909	252	8	09	0.0	
29	19.8	5.1	0.0	1.6	11.7	10.7	10.3	0.0	1021.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	169	0.7	2.7	191	12	1926	186	6	19	0.0	
30	16.3	4.3	0.1	0.7	12.1	10.8	2.4	0.0	1022.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	196	3.5	4.2	180	13	1057	179	7	11	0.2	
Total			62.0				156.1	12.4																53.8
Mean	14.9	4.3		1.3	10.6	10.1	5.20	0.4	1016.8					268	0.3	5.0								
Anom	+0.1	-0.4	129%	+0.3	+0.4	+0.6	92%																	+1.8
Daily mean		9.6																						
Anom		-0.1																						

Number of days with:

Air frost = 3                      Ground frost = 12                      Nil sun = 0  
 Snow falling = 0                      Snow lying = 0                      Thunder = 1  
 Hail=>5mm = 0                      Hail<5mm or ice = 1                      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.

Maximum daily rain rate in mm/hr

All temperatures in degrees Celsius.

Anomaly - Departure from the 1991 to 2020 climatological average

\*Wind estimated on some days due to sensor fault

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for APRIL 2023

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	65	8	35	04	09	9.1	7.7	91	6.6	1004.7	2	023	20	6	2	8	5	3	/	/	83707	87711	88630			1	Emm flood around sen sch	
2	75	8	02	07	17	6.8	3.2	78	4.7	1025.9	2	026	02	6	2	8	5	4	/	/	83617	88620			2			
3	78	5	06	06	09	6.9	3.7	80	4.8	1031.1	7	002	01	1	1	5	5	6	0	0	85630				3			
4	72	1	10	06	10	7.8	-0.2	57	3.7	1028.5	8	006	02	0	0	0	0	9	0	2	81075				4	Tr Ci on W Horizon		
5	64	7	20	05	10	8.2	3.3	71	4.7	1022.2	7	005	02	2	2	4	0	9	7	8	83360	87272			5	2Ac63 COTRA		
6	62	7	28	09	19	10.8	8.0	83	6.7	1012.9	2	006	80	2	2	7	8	4	1	/	83812	86640			6	/As65 Cu fra/med		
7	84	1	34	03	05	9.2	4.2	71	5.1	1021.7	2	010	02	1	1	0	0	9	0	1	81075				7	Ci edge W		
8	59	5	09	03	06	9.7	5.7	76	5.6	1026.8	2	011	05	1	1	0	0	9	0	1	85075				8	COTRA Wind est.		
9	56	3	13	04	07	9.0	6.3	83	5.8	1023.1	7	004	05	1	1	2	6	3	0	1	82706				9	2Ci80 COTRA Wind est		
10	58	8	19	10	18	11.0	10.1	94	7.7	1008.7	7	022	58	6	6	7	7	2	2	/	83705	87708	88540		10	Wind est		
11	86	3	23	09	17	11.3	5.2	66	5.5	1013.3	8	001	03	0	0	2	8	5	3	5	81825				11	1Sc45 1Ac63 2Cs77 COTRA Cu med Wind est Parhelic cir		
12	84	2	21	13	25	9.1	2.2	62	4.5	994.8	8	015	03	1	1	2	2	6	0	0	82830				12	Cu med Wind est		
13	80	1	25	12	22	10.2	2.1	57	4.4	1002.3	1	018	03	0	0	1	1	6	0	1	81833				13	1Ci75 Cu hum Wind est		
14	58	8	12	04	10	8.7	7.2	90	6.3	1002.5	6	008	60	6	2	4	8	3	7	/	81708	83635	88462		14	2Cu12 2Ac58 Cu med Wind est		
15	65	8	35	06	15	8.3	5.9	85	5.7	1018.1	2	032	02	6	2	8	5	4	/	/	87610	88620			15	Wind OK		
16	75	8	28	03	06	12.5	6.5	67	5.9	1026.5	2	007	02	6	2	4	8	5	1	/	81820	84650	88457		16	1Sc40 Cu med Wind OK		
17	65	7	05	04	07	12.3	10.4	88	7.7	1028.1	2	013	03	6	2	7	8	4	/	/	82810	84635	87645		17	Cu med		
18	59	1	03	09	20	11.1	4.8	65	5.2	1028.3	7	008	05	1	1	1	1	5	0	0	81822				18	Cu hum		
19	57	6	06	08	18	11.9	8.0	77	6.6	1025.7	2	005	05	1	1	6	5	4	/	/	85618	83648			19	Wind est		
20	82	0	04	08	16	12.0	2.7	53	4.6	1023.1	8	007	02	0	0	0	0	9	0	0					20	Wind est		
21	61	8	01	05	10	7.2	5.3	88	5.5	1012.4	6	017	61	6	2	8	8	4	/	/	83812	86620	88630		21	Cu med Wind est		
22	50	7	12	02	04	7.8	6.3	90	5.9	1005.6	8	005	05	2	2	7	0	9	7	1	87460				22	/Ac64 /Ci72 Wind est		
23	65	8	19	03	08	10.4	8.0	85	6.7	1000.6	4	000	60	6	2	8	8	4	/	/	83812	85620	88640		23	Cu med Wind est		
24	70	6	34	03	06	8.5	4.1	74	5.1	1010.1	1	010	01	2	2	5	5	4	3	/	84615	83640	85358		24			
25	82	1	01	06	12	7.4	2.1	69	4.4	1019.3	0	008	03	0	0	1	1	5	0	1	81820				25	1Ci80 COTRA Cu hum		
26	86	7	09	07	13	8.9	2.5	64	4.5	1018.2	7	002	02	2	2	5	5	6	7	/	81640	85650	87360		26			
27	60	7	08	06	12	11.0	5.3	68	5.5	1016.2	8	011	05	2	2	7	5	6	/	/	82638	87650			27			
28	62	8	25	07	15	12.6	11.2	91	8.2	1010.5	2	015	05	6	5	8	5	3	/	/	83709	85612	88618		28			
29	57	3	03	03	06	13.1	8.4	73	6.8	1021.0	1	008	05	1	1	1	1	4	0	1	81815	83073			29	COTRA Cu fra		
30	56	7	18	05	11	13.2	7.9	70	6.5	1022.0	8	004	05	2	2	1	1	4	3	8	81818	87272			30	1Ac68 Cu hum U/a cont		

Mean vis = 21.1 km

Mean cloud = 5.3 66%

Mean wind speed = 6.0 kn

Mean gust = 12 kn

Mean TT = 9.9 °C

Mean Td = 5.6 °C

Mean RH = 75.5 %

Mean r = 5.7 g/kg

Mean PPP = 1016.8 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

Td = 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 APRIL 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	86	7	01	06	14	10.4	6.7	78	6.1	1009.5	2	025	02	2	2	7	8	4	/ /	85816	87630	1	Cu med		
2	83	2	03	08	16	11.9	3.7	57	4.8	1028.1	1	004	01	1	1	2	5	6	0	0	82635	2			
3	82	1	06	07	16	13.6	2.2	46	4.4	1028.1	7	020	02	0	0	1	1	6	0	1	81835	3	1Ci80 Cu hum Ci edge NW		
4	81	1	19	04	08	14.4	-1.2	34	3.4	1025.5	7	021	02	0	0	0	0	9	0	1	81075	4	Wind dir var		
5	62	8	24	07	15	11.8	6.9	72	6.1	1018.9	7	018	60	6	2	5	1	5	2	/	85825	88556	5		
6	63	5	25	10	18	13.6	6.5	62	6.0	1014.2	1	009	15	8	1	5	9	5	6	3	82925	82835	6	!Sc56 1Ac59 1Ci68 Cb and jp NW to E & S vv50k ex p	
7	89	2	35	04	10	15.2	2.0	41	4.4	1020.6	8	005	02	0	0	2	2	7	0	1	82850		7	1Ci75 Cu med Wind est	
8	82	3	05	05	09	15.3	3.8	46	4.9	1024.9	7	011	02	1	1	2	4	7	0	1	82650		8	2Ci75 COTRA Wind est	
9	80	7	18	08	16	15.9	4.3	46	5.1	1019.4	6	013	03	1	1	1	4	6	3	6	81642	87273	9	1Ac68 Halo 22° part Wind est	
10	84	4	25	16	29	15.0	5.5	53	5.6	1007.5	5	000	03	8	1	3	2	6	0	3	83845		10	1Ci68 Cu med Cb tops NW, W&S Wind est	
11	59	8	19	11	25	8.9	6.3	84	6.0	1008.3	7	026	61	6	2	2	8	4	2	/	81812	88550	11	2Sc35 Cu fra/hum Wind est	
12	62	7	21	16	32	9.3	4.5	72	5.3	989.1	7	023	15	8	2	5	9	5	/	3	82920	84823	85070	12	jpS & line W-NE Wind est
13	80	6	27	12	21	9.2	2.5	63	4.6	1004.1	3	012	80	8	1	2	9	6	6	3	81930	85068		13	1Cu45 1Sc56 2Ac58 vv60k ex N Wind est
14	50	8	11	05	12	8.3	5.9	85	5.8	1003.6	3	012	63	6	2	8	5	4	/ /		82712	85615	88620	14	Wind est
15	84	3	01	05	09	14.8	5.6	54	5.6	1021.8	2	013	02	1	1	3	8	6	0	0	83835			15	1Sc56 Cu med Wind sensor OK
16	82	8	26	05	13	14.4	6.0	57	5.7	1026.4	8	003	02	6	2	8	8	6	/ /		81833	86650	88656	16	Cu hum
17	65	7	05	05	10	15.7	7.2	57	6.2	1027.3	8	001	02	2	2	7	8	6	/ /		81835	87656		17	2Sc45 Cu med
18	82	8	04	07	18	10.8	4.9	67	5.3	1026.1	8	007	02	2	2	8	8	5	/ /		82828	86635	88645	18	Cu med
19	70	3	06	11	23	18.0	8.0	52	6.6	1022.9	7	015	01	1	1	3	5	6	0	0	83636			19	Wind est
20	86	1	02	10	21	16.0	2.1	39	4.4	1018.3	7	023	02	0	0	1	1	7	4	0	81850			20	1Ac57 Cu hum Ac edge E Wind est
21	80	7	07	03	07	9.4	5.9	79	5.8	1010.8	8	011	01	6	2	7	8	4	7	/	83812	86625		21	/Ac62 Cu med Wind est
22	61	6	20	04	08	13.0	4.2	55	5.1	1005.0	8	001	01	6	2	6	8	6	/	1	82835	83650	85656	22	/Ci75 Cu med Wind est
23	82	6	28	05	10	13.7	3.2	49	4.8	999.6	7	004	03	2	2	5	8	6	6	/	82845	84656		23	3Ac60 Cu con pil Wind est
24	56	8	25	02	09	8.2	7.1	93	6.3	1010.3	0	000	92	9	8	3	5	2	/		81705	83630	88540	24	T 1410
25	86	5	03	04	14	12.8	-0.8	39	3.5	1019.0	0	000	02	1	1	5	4	7	0	1	85650			25	1Ci80 Sc cugen
26	73	7	12	04	13	12.4	3.4	54	4.8	1017.0	7	009	02	2	2	7	5	6	7	/	83640	87650		26	/Ac57
27	40	8	13	05	12	11.1	8.5	84	6.9	1013.6	5	005	63	6	2	6	5	5	2	/	82625	86633	88540	27	
28	88	7	32	06	16	17.2	10.3	64	7.8	1012.9	2	009	02	2	2	6	8	6	0	0	82830	86650		28	Cu med
29	83	7	20	04	09	19.1	7.5	47	6.4	1020.5	4	000	03	1	1	7	8	6	/ /		81843	84650	87656	29	Cu med
30	61	8	21	07	13	15.6	7.4	58	6.3	1019.7	8	009	02	2	2	2	8	6	7	/	81830	85360	88465	30	2Sc56 Cu hum

Mean vis = 32.7 km

Mean cloud = 5.6 70%

Mean wind speed = 6.9 kn

Mean gust = 15 kn

Mean TT = 13.2 °C

Mean TdTd = 5.0 °C

Mean RH = 59.6 %

Mean r = 5.5 g/kg

Mean PPP = 1015.8 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

Wokingham Sunshine Hourly analysis  2023	Hour	01-Apr	02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr	08-Apr	09-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.36	0.00	0.00	0.54	0.38	0.43	0.00	0.00	0.00
	6	0.00	0.00	0.01	1.00	0.04	0.01	0.63	1.00	0.00	0.00	1.00	0.33	1.00	0.02	0.00	0.00
	7	0.00	0.00	0.56	1.00	0.04	0.00	0.95	1.00	0.01	0.00	1.00	1.00	1.00	0.00	0.00	0.00
	8	0.00	0.00	0.89	1.00	0.32	0.00	1.00	1.00	0.40	0.00	1.00	0.88	1.00	0.00	0.00	0.00
	9	0.00	0.00	0.91	1.00	0.53	0.04	1.00	1.00	1.00	0.00	0.81	0.94	0.95	0.00	0.00	0.00
	10	0.00	0.00	0.27	1.00	0.08	0.11	0.96	1.00	1.00	0.00	0.31	0.55	0.75	0.03	0.07	0.19
	11	0.03	0.00	0.63	1.00	0.14	0.09	0.61	0.62	0.74	0.02	0.12	0.51	0.61	0.26	0.00	0.00
	12	0.00	0.12	1.00	1.00	0.98	0.25	0.82	1.00	0.58	0.30	0.00	0.05	0.70	0.26	0.19	0.01
	13	0.00	0.58	1.00	1.00	0.18	0.15	0.55	0.88	0.67	0.53	0.00	0.24	0.57	0.00	0.76	0.00
	14	0.00	0.96	1.00	1.00	0.00	0.39	0.66	0.86	0.95	0.78	0.00	0.67	0.13	0.00	0.94	0.19
	15	0.00	1.00	1.00	1.00	0.00	0.76	0.70	0.96	0.00	0.71	0.00	0.15	0.52	0.00	1.00	0.01
	16	0.38	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.89	0.00	0.00	1.00	0.00	1.00	0.30
	17	0.00	1.00	1.00	1.00	0.00	0.87	1.00	1.00	0.00	0.88	0.00	0.00	0.60	0.00	1.00	0.55
	18	0.00	0.37	0.52	0.40	0.00	0.48	0.60	0.21	0.00	0.63	0.00	0.00	0.54	0.00	0.40	0.10
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		<b>0.42</b>	<b>5.03</b>	<b>9.79</b>	<b>12.66</b>	<b>2.32</b>	<b>3.13</b>	<b>10.49</b>	<b>11.88</b>	<b>5.37</b>	<b>4.74</b>	<b>4.77</b>	<b>5.69</b>	<b>9.80</b>	<b>0.57</b>	<b>5.37</b>	<b>1.35</b>

Hour	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.42	0.82	0.00	0.12	0.06	0.33	1.00	0.00	0.03	0.21	0.72	0.72	0.21
6	0.00	0.21	1.00	1.00	0.00	0.19	0.17	0.90	1.00	0.00	0.00	0.00	1.00	0.23	0.36
7	0.06	0.72	0.62	1.00	0.00	0.49	0.00	0.08	1.00	0.00	0.00	0.00	1.00	0.91	0.41
8	0.07	1.00	0.21	1.00	0.00	0.26	0.00	0.31	1.00	0.05	0.00	0.00	1.00	0.54	0.43
9	0.00	0.99	0.01	1.00	0.00	0.46	0.00	0.77	0.71	0.00	0.00	0.00	1.00	0.00	0.44
10	0.71	0.59	0.08	1.00	0.00	0.38	0.01	0.01	0.48	0.00	0.00	0.00	1.00	0.00	0.35
11	0.54	0.00	0.01	1.00	0.00	0.43	0.00	0.00	0.73	0.00	0.00	0.00	1.00	0.00	0.30
12	0.32	0.00	0.18	0.99	0.00	0.33	0.14	0.29	0.45	0.00	0.00	0.25	0.39	0.00	0.35
13	0.18	0.00	0.04	1.00	0.00	0.00	0.45	0.04	0.85	0.00	0.00	0.21	0.53	0.00	0.35
14	0.00	0.00	0.65	1.00	0.17	0.22	0.54	0.00	0.75	0.00	0.00	0.07	0.33	0.00	0.41
15	0.54	0.00	0.87	0.95	0.28	0.44	0.04	0.00	0.87	0.10	0.00	0.14	0.00	0.00	0.40
16	0.11	0.00	1.00	0.50	0.91	0.62	0.23	0.00	0.96	0.00	0.00	0.04	0.34	0.00	0.44
17	0.97	0.01	1.00	0.00	0.09	0.35	0.00	0.00	0.89	0.00	0.00	0.02	1.00	0.00	0.44
18	0.56	0.14	0.93	0.00	0.82	0.00	0.00	0.00	0.86	0.00	0.00	0.04	0.93	0.00	0.28
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	<b>4.07</b>	<b>3.66</b>	<b>7.01</b>	<b>11.26</b>	<b>2.27</b>	<b>4.29</b>	<b>1.64</b>	<b>2.72</b>	<b>11.60</b>	<b>0.15</b>	<b>0.03</b>	<b>1.01</b>	<b>10.27</b>	<b>2.40</b>	<b>155.71</b>

APRIL 2023	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	8.97	11.3	1622	7.3	2356	86.7	96.9	421	67.8	1614	6.8	6.2	7.0	17	5.1	1823	1007.65	1018.5	2358	999.0	1	2.6
2	7.41	12.7	1430	2.4	2358	77.1	92.9	0	51.2	1404	3.4	4.8	5.9	0	3.9	2354	1026.38	1031.8	2300	1018.4	0	0
3	5.80	14.0	1508	-1.5	527	73.7	98.5	549	37.7	1618	0.8	4.0	5.4	1322	3.3	1634	1029.93	1031.7	0	1027.7	1631	0.1
4	6.61	15.0	1537	-2.1	555	66.4	97.5	634	30.7	1429	-0.3	3.7	4.4	1209	3.0	1431	1027.05	1029.5	18	1024.2	1754	0.1
5	8.33	14.2	1315	3.0	344	78.4	96.3	2355	52.7	1256	4.6	5.3	6.6	2353	4.0	32	1020.40	1025.1	2	1015.2	2359	1.6
6	9.96	15.3	1306	5.1	2350	81.2	97.6	506	52.5	1220	6.7	6.1	7.1	607	4.6	2349	1014.69	1019.3	0	1011.9	620	1.6
7	8.44	16.4	1415	1.9	454	69.8	95.7	533	32.7	1547	2.6	4.5	5.8	1116	3.4	1547	1021.21	1023.9	2358	1019.2	0	0
8	8.22	16.8	1417	0.1	529	74.4	97.9	554	37.4	1602	3.2	4.7	6.1	1003	3.7	546	1025.38	1027.0	1000	1023.9	0	0.1
9	10.09	17.2	1418	3.2	514	72.2	98.0	558	42.2	1450	4.7	5.3	6.4	1244	4.5	1733	1020.79	1025.4	6	1015.1	2358	0
10	11.12	15.5	1416	7.2	2333	77.2	95.7	933	49.2	1429	7.0	6.3	8.4	1236	4.3	1913	1009.89	1015.2	2	1006.9	1425	8.6
11	8.51	13.4	1143	5.6	522	80.7	94.7	2010	54.1	1145	5.2	5.5	6.6	2031	4.4	324	1007.95	1013.7	718	997.6	2323	9.2
12	7.15	11.7	1059	2.4	518	79.2	96.7	543	45.5	1058	3.6	5.0	6.0	1400	3.9	1054	993.34	998.0	9	988.1	1653	3.6
13	8.46	13.7	1321	4.1	2359	63.7	80.9	2359	37.8	1324	1.7	4.3	5.1	1514	3.6	1307	1002.40	1006.1	2145	996.0	2	0
14	7.14	10.5	1222	3.8	153	88.1	96.2	2053	66.3	1234	5.2	5.6	6.5	849	4.1	14	1004.50	1009.5	2358	1002.0	1218	5.5
15	9.11	15.3	1513	5.8	113	79.5	94.8	0	47.1	1539	5.4	5.5	6.7	1246	4.9	1544	1019.07	1026.0	2331	1009.4	0	0
16	10.55	15.1	1207	5.9	147	77.4	95.4	156	51.4	1210	6.4	5.9	6.6	810	5.2	1137	1026.23	1026.9	1250	1025.3	401	0.1
17	11.69	18.9	1318	6.2	2259	78.6	96.5	650	45.8	1319	7.7	6.5	8.0	958	5.2	1850	1027.57	1029.6	2351	1026.2	152	0.7
18	9.43	14.4	1009	6.9	547	75.6	94.4	0	54.5	1010	5.2	5.4	5.9	1008	4.8	2005	1027.47	1029.7	122	1025.8	1602	0
19	10.26	18.5	1433	4.8	2359	72.7	95.6	423	44.7	1633	5.2	5.5	7.0	1432	3.9	1821	1024.63	1026.2	4	1022.6	1536	0
20	8.75	16.9	1433	2.6	336	71.4	97.4	2314	32.4	1540	2.8	4.6	5.9	1813	3.5	1540	1020.92	1024.5	18	1017.1	1631	2.4
21	6.67	11.0	1625	2.2	2331	89.1	98.1	2355	63.7	1705	4.9	5.4	6.3	1455	4.4	2334	1012.19	1017.6	18	1008.6	2359	3.8
22	7.96	14.8	1223	0.1	409	78.2	99.3	434	44.7	1220	3.8	5.1	7.2	2332	3.8	409	1005.15	1008.6	0	1001.4	2359	0.4
23	10.20	15.6	1416	6.6	2257	81.4	95.0	2202	45.8	1411	6.9	6.3	7.2	1244	4.6	1517	1001.43	1006.3	2357	999.4	1447	3.7
24	7.30	13.4	1230	3.5	2358	87.5	96.7	549	58.2	1222	5.2	5.5	6.4	1530	4.5	2357	1010.48	1015.7	2358	1006.2	4	7.8
25	6.33	13.7	1440	-0.5	500	69.3	98.8	536	35.4	1423	0.4	3.9	4.6	1336	3.0	1423	1018.53	1019.8	2304	1015.6	0	0.1
26	8.22	13.5	1532	3.5	44	70.6	90.7	2353	50.7	1531	2.9	4.6	5.3	1447	4.3	1258	1018.07	1019.7	3	1016.6	1541	0
27	8.97	14.5	1219	2.7	236	85.5	98.3	2347	57.9	1219	6.5	6.1	8.1	2359	4.3	236	1013.98	1019.0	9	1008.0	2318	7.2
28	13.47	18.8	1358	9.1	2358	83.5	98.5	107	57.7	1400	10.5	7.9	8.8	1057	6.4	2358	1012.01	1018.2	2358	1007.5	151	0.3
29	12.45	19.8	1454	5.1	512	75.8	98.6	600	44.2	1449	7.7	6.5	7.8	1137	5.3	452	1020.47	1022.7	2308	1018.0	5	0
30	11.39	16.3	1214	4.3	453	77.4	98.7	600	55.9	1235	7.2	6.3	7.4	927	5.0	453	1020.75	1022.9	42	1018.3	2355	0

Total	Mean	Max	Min	Tn	RHmn	RH x	RH n	Tdmn	r mn	r x	r n	p mn	p x	p n	R tot
	8.97	14.94	3.70	77.4	96.08	48.26	4.81	5.41	6.55	4.30	1016.35	1020.28	1012.38	59.5	
	13.47	19.81	9.07	89.1	99.30	67.78	10.51	7.88	8.76	6.45	1029.93	1031.77	1027.70		
	5.80	10.47	-2.09	63.7	80.90	30.69	-0.33	3.66	4.40	3.00	993.34	998.05	988.15		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

**Month:** Calendar month.

**Season:** Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

**Annual or Year:** The calendar year, 1<sup>st</sup> January to 31<sup>st</sup> 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  $-0.1^{\circ}\text{C}$  or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is  $-0.1^{\circ}\text{C}$  or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below  $0.0^{\circ}\text{C}$ , 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.