

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

JANUARY 2018

Temperature (°C)		Anomaly	Rank in the past 137 years				
Mean maximum	9.3	+1.5	16 th highest				
Mean minimum	3.0	+1.2	17 th highest				
Daily mean	6.2	+1.4	14 th highest				
Highest maximum	13.0	on 28 th	Lowest maximum	4.6	on 8 th		
Highest minimum	9.9	on 24 th	Lowest minimum	-2.2	on 30 th		
Mean grass minimum	0.6	+1.7	Lowest grass minimum	-7.2	on 30 th		
Mean earth @30 cm	6.2	+0.8	Earth @100 cm	7.8			
Frost duration (hrs)	12.7		Rain duration (hrs)	62.3			
Rainfall total (mm)	68.7	111 %	50 th highest				
Highest daily fall	14.3	on 2 nd					
Number of: Dry days (<0.2mm)	12	Wet days (>0.9mm)	14	days ≥5mm	4		
Sunshine total (hrs)	69.1	Daily mean	2.23	110 %	Sunniest day	7.3 on 17 th	
N° days with: Air frost	5	Ground frost	13	Snow falling	1	Snow lying	0
Thunder	0	Hail ≥5mm	0	Small hail/ice	1	Fog @09	0
						Nil sun	10
Pressure MSL: Mean @09 GMT, mbar	1011.2	-5.5	Highest	1033.0	on 30 th	Lowest	988.3 on 3 rd
Relative humidity: Mean (%)	84.1	Lowest	51	on 16 th	Water vapour (g/kg), mean at 09 and 15 GMT		
					5.0,	5.1	
Overall mean wind speed (mph)	8.8	Windiest day	17.5	on 3 rd	Max gust	63	on 3 rd
Wind direction (days)	N 0	NE 3	E 1	SE 4	S 1	SW 17	W 3
						NW 2	
Least windy day (mph)	3.0	on 26 th	Calm; less than 0.5 mph (minutes)		326		

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

Notes:

Mild with Rainfall and Sunshine above average. Windy at times.

Temperature: This has been a mild January, only falling outside the very mild category by 0.1°, nevertheless, it is the 4th mildest this millennium, and mildest since 2008. The month's highest max is 0.5° above the median, and the highest min is 1.5° above its median. The lowest max is 3.6° above the median while the lowest min is 3.7° above its median and 7th highest in 115 years. Both the mean and lowest grass min are highest since 2008. Earth temperature at 30cm depth is will above average, but is close to normal at 1m depth. The frequency of both air and ground frost was low, 6 days below average for air and 5 below for ground. Air frost duration is 84 hours below average and lowest since 2008. The month was mild up to the 4th, then cool for 3 days, then near normal to the 19th and mainly mild after, apart from cool on the 20th. Anomalies for daily max were over +4° on the 2nd, 4th, 17th, 23rd, 24th, 28th and 29th, peaking at +5.5° on the 28th, and reached -3.3 on the 20th. For daily min, anomalies were over +4° on the 3rd, 4th, 13th, 23rd to 25th, 28th and 29th, peaking at +8.6 on the 24th, and reaching -4.0° on the 30th. **Rainfall:** This January's total is 11% above average, but that is only about 6 mm above what would fall in an average month. Although slightly wetter than January last year, it is about 30 mm drier than January 2016. The month's highest fall is close to average and also to the long-term median. The month got off to a wet start, with daily accumulation compared with normal 15 mm in surplus by the 4th. There followed a drier episode eradicating the surplus by the 13th, and led to a 3 mm deficit by the 18th. It then became wet again, especially on the 21st, with the surplus increasing to 15 mm by the 24th, the month ending on a drier note with the surplus falling back to 7 mm by the 31st. A violent rain shower on the 2nd gave the month's highest rainfall rate of 169 mm/hr at 2302 hours. Snow and sleet fell on the 21st, and although it produced a covering of less than 1 cm by mid morning, had entirely thawed by the afternoon. No thunder occurred this month, but ice pellets fell on the 31st. Over the past 43 years, snow has fallen on 167 January days out of a possible 1333. Lying snow at 09 hours has been recorded in 16 Januarys, and a total of 84 days. **Sunshine:** The total this month is slightly above average, but is lowest since 2013. Despite the reasonable total, only 7 days had more than 50 % of the maximum, with the 10th, 17th, 19th and 25th having over 70 %. The daily accumulation compared with normal showed near normal amounts up to the 11th, but several sunless days then produced a deficit of 6 hours by the 15th, followed by a sunny episode giving a surplus of 8 hours by the 19th. A period with only the odd sunny day reduced the surplus to zero by the 24th, though it increased again to 7 hours by the 31st. Overall there were 21 days with <3 hours and 4 with =>6 hours. **Wind:** This has been quite a windy January, with the mean speed 0.7 mph above average, and highest since 2008. The month's maximum gust of 63 mph is highest for the month since 2007. There were also gusts to 61 mph on the 18th, and a 10 minute mean speed of 33 mph also on that day. Daily mean directions were mainly SW'ly, except NE'ly from 6th to 8th, SE'ly on 9th, NW'ly on 11th and 26th and E'ly on 20th. Speeds were fresh on the 1st, increasing very strong for the 3rd and 4th, then moderate of fresh, decreasing light on the 11th, increasing fresh on the 15th and very strong on the 18th, falling moderate until the 23rd, temporarily strong on the 24th, and apart from falling light on the 26th were mainly fresh until the 31st.

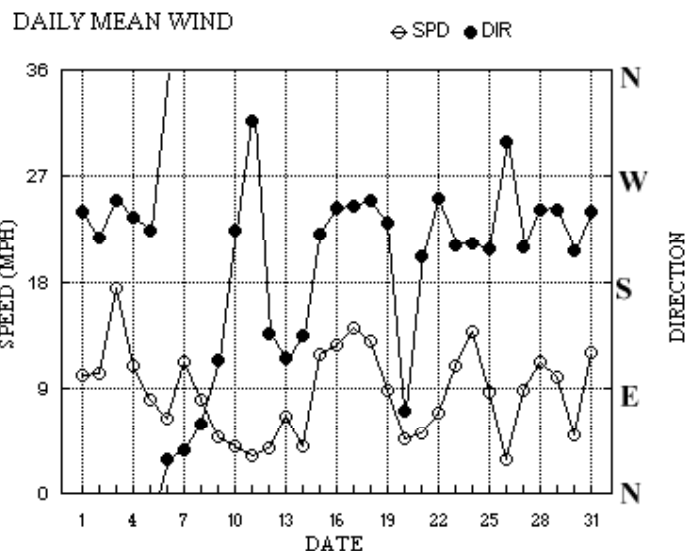
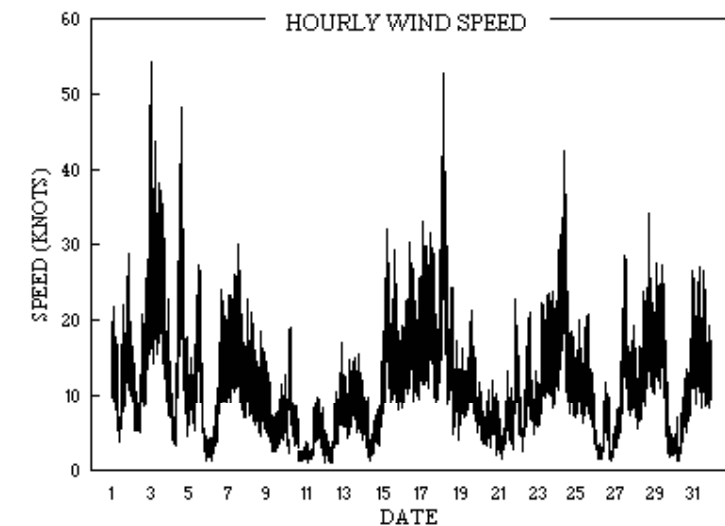
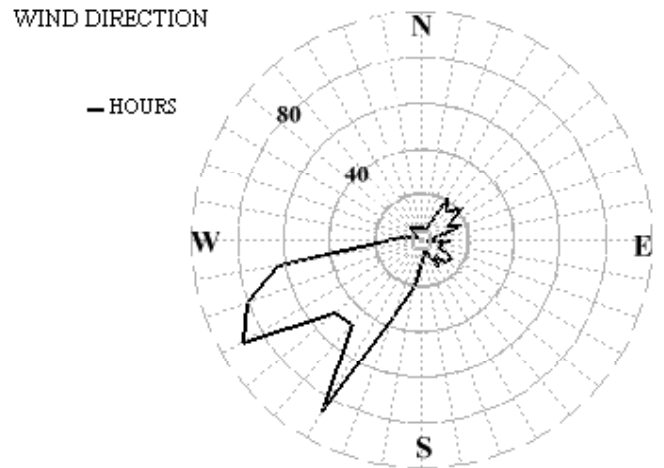
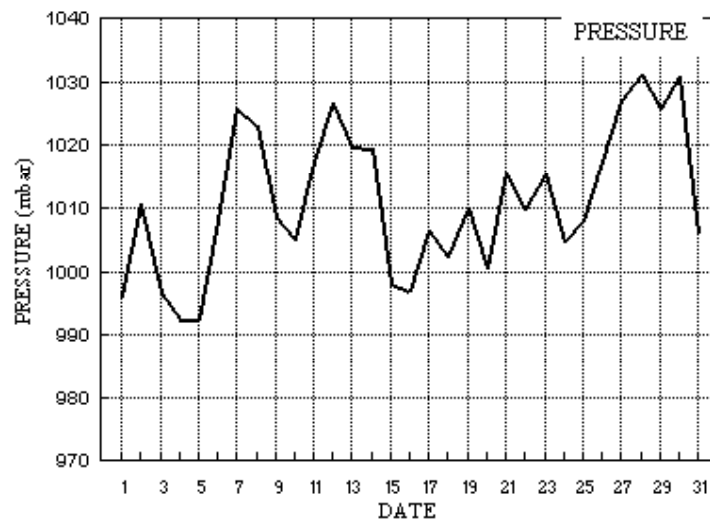
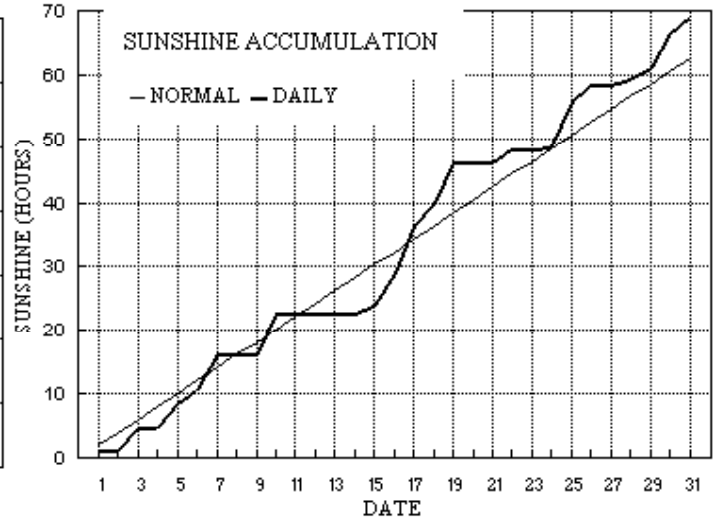
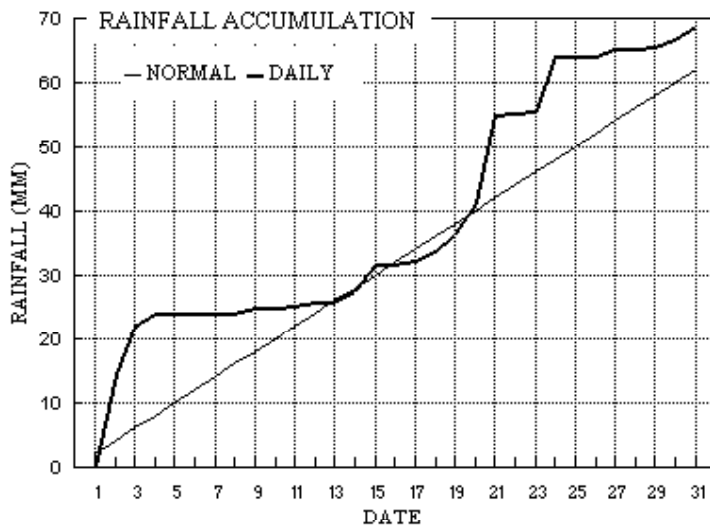
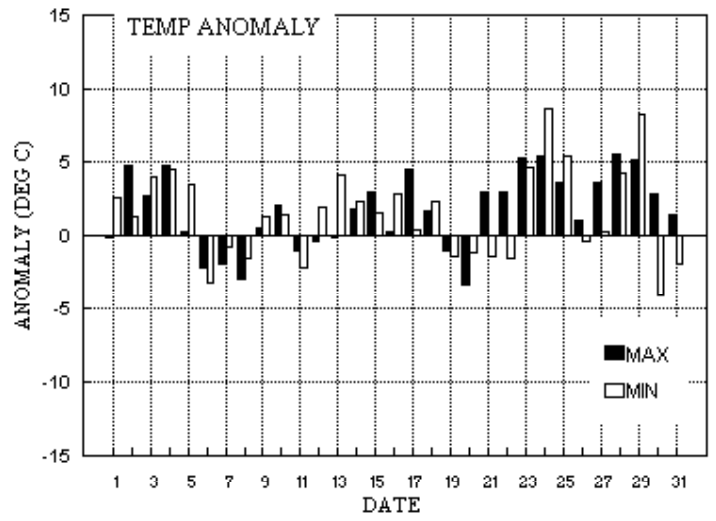
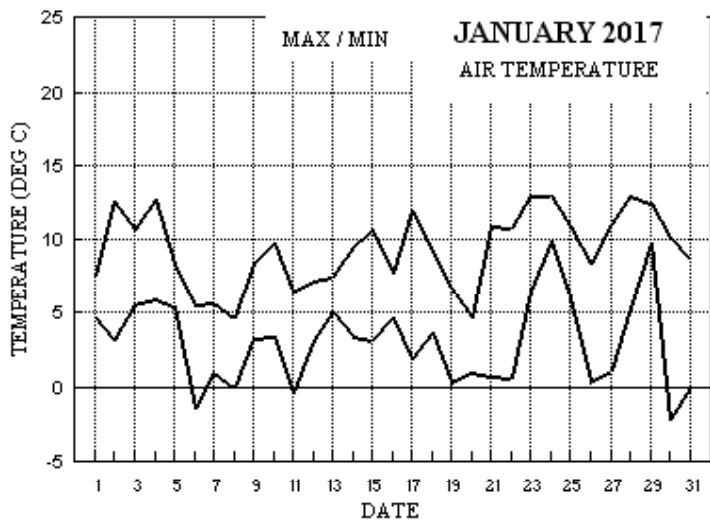
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+0.8°	+1.3°	125%	112%	+0.5°	+1.1°	80%	118%	+3.6°	+2.0°	126%	101%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for January 2018



Month: JANUARY 2018

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	7.6	4.7	tr	1.6	7.0	8.2	1.3	0.0	996.1	0 0 0 0	0 0 0 0	0 0 0 0	240	7.9 8.8	250 29 2011	260 13	19 0.3	
2	12.6	3.1	14.3	-0.3	6.7	8.2	0.0	0.0	1010.6	0 1 0 0	0 0 0 0	0 0 0 0	217	8.1 9.0	258 49 2307	251 17	23 8.4	
3	10.6	5.5	7.8	4.6	6.8	8.2	3.4	0.0	996.6	0 0 0 0	0 0 0 0	0 0 0 0	250	15.1 15.2	252 55 0241	247 20	02 6.1	
4	12.7	5.9	1.9	3.3	6.8	8.2	0.2	0.0	992.3	0 0 0 0	0 0 0 0	0 0 0 0	235	8.7 9.5	264 49 1404	251 22	14 1.9	
5	8.3	5.4	tr	2.6	6.9	8.2	3.7	0.0	992.5	0 0 0 0	0 0 0 0	0 0 0 0	224	6.4 7.0	230 27 1219	231 13	11 0.0	
6	5.6	-1.5	tr	-5.6	6.5	8.2	2.1	2.7	1007.9	1 1 0 0	0 0 0 0	0 0 0 0	29	5.5 5.6	35 24 1634	27 10	18 0.0	
7	5.7	1.0	0.0	-4.0	6.0	8.2	5.6	0.1	1026.2	0 1 0 0	0 0 0 0	0 0 0 0	37	9.7 9.7	44 30 1246	33 12	09 0.0	
8	4.6	-0.1	tr	-5.1	5.3	8.1	0.0	0.0	1023.0	1 1 0 0	0 0 0 0	0 0 0 0	60	6.8 7.0	48 23 0106	46 9	00 0.0	
9	8.3	3.2	1.0	3.2	5.4	8.0	0.0	0.0	1008.4	0 0 0 0	0 0 0 0	0 0 0 0	114	3.7 4.2	119 13 0138	147 7	23 1.6	
10	9.8	3.4	0.0	2.4	5.8	7.9	6.4	0.0	1004.9	0 0 0 0	0 0 0 0	0 0 0 0	224	2.4 3.6	237 19 0631	239 8	04 0.0	
11	6.5	-0.5	0.1	-4.0	5.7	7.8	0.0	1.6	1017.5	1 1 0 0	0 0 0 0	0 0 0 0	317	2.1 2.8	340 10 1550	335 5	16 0.4	
12	7.2	3.1	0.6	3.4	5.8	7.8	0.0	0.0	1026.7	0 0 0 0	0 0 0 0	0 0 0 0	136	2.4 3.4	143 17 2047	143 8	20 1.6	
13	7.5	5.0	0.0	4.5	6.1	7.7	0.0	0.0	1019.7	0 0 0 0	0 0 0 0	0 0 0 0	115	5.5 5.8	94 16 1938	134 8	13 0.0	
14	9.5	3.4	2.0	2.9	6.2	7.7	0.0	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0	134	0.9 3.5	189 15 2350	188 7	23 3.6	
15	10.6	3.1	4.1	-0.7	6.2	7.7	1.2	0.0	998.2	0 1 0 0	0 0 0 0	0 0 0 0	221	9.6 10.3	206 32 0652	204 15	06 2.6	
16	7.7	4.6	tr	1.5	6.4	7.7	5.0	0.0	997.0	0 0 0 0	0 0 0 0	0 0 0 0	243	10.9 11.0	252 31 1014	253 15	12 0.0	
17	11.9	1.9	0.5	-0.6	6.0	7.7	7.3	0.0	1006.5	0 1 0 0	0 0 0 0	0 0 0 0	245	11.7 12.3	263 33 0204	259 16	11 2.4	
18	9.2	3.7	1.5	1.2	5.8	7.7	3.7	0.0	1002.2	0 0 0 0	0 0 0 0	0 0 0 0	250	11.1 11.3	244 53 0404	250 25	03 0.2	
19	6.7	0.3	2.6	-4.7	5.7	7.7	6.6	0.0	1009.9	0 1 0 0	0 0 0 0	0 0 0 0	231	7.6 7.7	242 22 1445	235 10	15 4.3	
20	4.7	1.0	4.6	-3.4	5.2	7.6	0.0	0.0	1000.5	0 1 0 0	0 0 0 0	0 0 0 0	71	1.3 4.1	22 12 1545	211 6	00 7.0	
21	10.9	0.7	14.0	-1.3	5.3	7.5	0.0	0.0	1015.7	0 1 1 0	0 0 0 0	0 0 0 0	201	2.0 4.5	251 23 2150	243 10	21 9.3	
22	10.8	0.6	0.3	4.4	5.4	7.4	1.8	0.0	1009.6	0 0 0 0	0 0 0 0	0 0 0 0	251	5.6 6.0	281 21 1636	273 10	13 0.5	
23	12.9	6.4	0.2	1.0	5.8	7.4	0.2	0.0	1015.5	0 0 0 0	0 0 0 0	0 0 0 0	211	9.4 9.5	227 24 1833	221 12	14 1.5	
24	12.9	9.9	8.5	8.3	6.5	7.3	0.1	0.0	1004.6	0 0 0 0	0 0 0 0	0 0 0 0	213	11.6 12.0	207 43 0949	209 20	10 5.7	
25	10.9	6.1	tr	2.5	6.9	7.4	7.1	0.0	1007.9	0 0 0 0	0 0 0 0	0 0 0 0	208	7.5 7.6	201 21 1523	215 11	12 0.0	
26	8.3	0.3	0.0	-4.6	6.5	7.5	2.8	0.0	1017.4	0 1 0 0	0 0 0 0	0 0 0 0	299	1.0 2.6	328 12 1309	358 5	13 0.0	
27	11.0	1.1	1.3	-3.4	6.2	7.5	0.0	0.0	1026.9	0 1 0 0	0 0 0 0	0 0 0 0	209	7.4 7.8	204 29 1244	202 13	12 2.1	
28	13.0	5.3	tr	4.9	6.4	7.5	0.7	0.0	1031.1	0 0 0 0	0 0 0 0	0 0 0 0	242	9.6 9.7	265 35 1936	249 15	19 0.0	
29	12.4	9.8	0.3	7.4	7.0	7.6	1.9	0.0	1025.8	0 0 0 0	0 0 0 0	0 0 0 0	241	7.9 8.6	231 28 0416	233 14	11 0.6	
30	10.1	-2.2	1.1	-7.2	7.0	7.6	5.4	8.3	1030.8	1 1 0 0	0 0 0 0	0 0 0 0	206	4.2 4.3	236 20 2355	224 11	23 1.3	
31	8.6	-0.1	2.0	4.1	6.7	7.7	2.6	0.0	1005.7	1 0 0 0	0 0 1 0	0 0 1 0	240	10.1 10.4	251 27 0911	229 14	01 0.9	
Total			68.7				69.1	12.7										62.3
Mean	9.3	3.0		0.6	6.2	7.8	2.23	0.4	1011.2					230	4.6 7.6			
Anom	+1.5	+1.2	111%	+1.7	+0.8	+0.3	110%		-5.5									
Daily mean		6.2							Pressure, abs highest =	1033.0	on 30							
Anom		+1.4							Pressure, abs lowest =	988.3	on 3							

Number of days with:

Air frost = 5 Ground frost = 13 Nil sun = 10
 Snow falling = 1 Snow lying = 0 Thunder = 0
 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.

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for JANUARY 2018

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	63	8	16	04	09	5.6	3.1	84	4.8	996.1	7	024	03	2	2	8	0	9	2	84461	88464	1			
2	64	8	19	04	09	5.5	2.8	83	4.7	1010.6	5	017	03	2	2	1	5	6	2	81645	88557	2			
3	68	4	26	14	32	8.0	1.8	65	4.4	996.6	3	041	02	8	1	4	8	6	3	0	81830	84640	3	1Ac59 Cu hum	
4	58	7	23	09	15	10.3	9.8	97	7.7	992.3	6	027	21	6	5	7	5	3	7	1	83708	86615	4	/Ac67 /Ci75 COTRA	
5	80	5	21	08	17	6.6	3.0	78	4.8	992.5	6	008	02	8	1	1	5	7	7	1	81656	85362	5	1Ci68 Ac vir	
6	10	7	03	04	09	1.0	0.7	98	4.0	1007.9	2	040	10	2	2	7	6	1	3	/	87702		6	/Ac59 Hoar slt	
7	80	3	03	11	22	2.4	0.6	88	3.9	1026.2	1	021	02	8	1	3	8	4	0	1	83815		7	1Sc30 1Ci75 Cu hum Hoar slt	
8	58	8	04	05	15	3.4	1.6	88	4.2	1023.0	6	005	05	2	2	8	6	3	/	/	86709	88712	8		
9	18	8	03	03	05	3.4	2.8	96	4.7	1008.4	7	016	51	5	5	8	6	2	/	/	83703	88704	9		
10	61	3	23	05	09	5.3	4.6	95	5.3	1004.9	2	020	01	1	1	1	6	4	7	1	81710	83075	10	1Ac58 2Ac63 COTRA	
11	22	8	25	01	03	3.1	3.0	99	4.7	1017.5	2	033	10	2	2	8	6	3	/	/	84706	88708	11		
12	20	7	02	01	02	5.3	4.7	96	5.2	1026.7	2	002	10	2	2	7	6	2	/	/	87703	87640	12		
13	65	8	14	06	12	6.2	2.8	79	4.6	1019.7	1	002	02	2	2	8	5	4	/	/	85618	88625	13		
14	57	8	01	01	04	3.8	0.8	81	4.0	1019.4	3	003	05	2	2	8	5	5	/	/	88625		14		
15	35	8	21	10	22	9.5	8.6	94	7.0	998.2	7	037	50	6	5	8	5	2	/	/	82705	87707	88615	15	
16	80	1	24	09	20	4.6	0.4	74	3.9	997.0	2	021	01	1	1	1	5	7	3	0	81650		16	1Ac60	
17	80	1	25	11	25	3.7	-1.5	69	3.4	1006.5	1	039	02	0	0	1	5	5	0	0	81620		17	1Sc40	
18	89	3	26	10	25	6.5	0.8	67	4.1	1002.2	1	052	03	0	0	3	5	6	0	0	83635		18		
19	75	1	23	07	13	1.0	-0.3	91	3.7	1009.9	2	009	02	0	0	1	0	9	4	1	81368		19	1Ci72 Hoar mod. lcy patches	
20	50	8	06	03	08	3.6	3.2	97	4.8	1000.5	6	022	61	6	6	8	5	2	/	/	82703	86706	88630	20	
21	18	8	10	03	06	0.7	0.3	97	3.8	1015.7	2	003	69	7	6	8	7	2	2	/	83703	88520	21		
22	60	7	26	05	10	7.4	6.2	92	5.9	1009.6	2	015	05	2	2	1	5	6	7	8	81645	83365	86275	22	1Ac62 4Ci70 COTRA
23	61	8	19	09	22	9.9	8.8	93	7.0	1015.5	6	006	21	6	2	8	5	2	/	/	83705	87707	88612	23	
24	60	6	21	18	38	12.5	10.4	87	7.9	1004.6	6	027	20	6	5	6	7	4	0	1	84712	83620	24	1Sc50 4Ci75 COTRA	
25	80	2	20	05	14	6.5	2.9	78	4.7	1007.9	3	004	02	0	0	1	0	9	3	1	81366		25	1Ci68 1Ci72 COTRA Parhelia	
26	50	7	30	02	03	3.5	3.1	97	4.7	1017.4	2	039	10	2	2	7	5	3	3	/	84708	83630	86645	26	/Ac65
27	65	7	19	07	15	5.3	2.8	84	4.6	1026.9	7	009	03	2	2	6	0	9	7	8	83358	85362	87270	27	
28	84	7	23	07	16	10.6	8.5	87	6.8	1031.1	2	009	01	2	2	6	6	4	0	1	86712	83075	28	COTRA	
29	84	7	23	14	25	10.0	6.5	79	5.9	1025.8	7	013	01	2	2	2	5	4	3	1	81618	86080	29	2Sc35 1Ac69 COTRA	
30	70	5	18	02	04	-0.1	-0.4	98	3.6	1030.8	8	003	01	1	1	3	5	6	0	1	83635	83080	30	COTRA Hoar thk	
31	75	8	25	13	25	8.4	4.4	76	5.2	1005.7	6	019	01	6	2	2	8	4	7	8	81818	87366	31	2Sc30 /Cs75 Cu fra	

Mean vis = 18.0 km

Mean cloud = 6.0 75%

Mean wind speed = 6.8 kn

Mean gust = 15 kn

Mean TT = 5.6 °C

Mean TdTd = 3.4 °C

Mean RH = 86.7 %

Mean r = 5.0 g/kg

Mean PPP = 1011.2 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 JANUARY 2018

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hshs	NChs	Date	Remarks
1	82	2	27	10	22	7.2	3.3	76	4.9	998.0	3	022	01	6	1	1	8	5	0	1	81822				1	1Sc45 1Ci70 Cu hum
2	65	8	23	09	21	10.3	9.1	92	7.2	1003.0	6	026	20	6	5	3	7	4	2	/	81710	83713	88562	2		
3	61	4	25	17	35	9.4	2.7	63	4.7	1001.3	1	018	03	0	0	1	1	6	3	2	81830	84073		3	1Ac67 Cu hum	
4	84	6	25	20	49	9.3	3.1	65	4.8	992.6	3	021	02	6	2	6	5	6	0	0	86632			4		
5	84	3	24	10	20	7.0	2.1	71	4.5	994.7	3	018	02	1	1	3	8	5	0	2	81825	83645		5	1Ci70 Cu med	
6	72	7	03	09	16	4.9	2.9	87	4.7	1012.5	3	020	03	2	2	7	8	4	/	8	82815	87630	85272	6	Cu hum	
7	81	1	04	11	27	4.2	-1.6	66	3.3	1025.8	6	006	01	0	0	1	0	9	3	0	81365			7		
8	59	8	07	06	14	4.5	2.5	87	4.5	1019.8	6	014	20	5	2	8	6	4	/	/	88710			8		
9	25	8	12	04	08	5.7	4.8	94	5.4	1004.7	7	016	20	5	2	8	5	2	/	/	83705	88620		9		
10	70	5	25	04	09	7.9	5.2	83	5.5	1005.8	3	005	02	1	1	1	8	4	0	1	81818	85075		10	1Sc40 1Cc72 COTRA Cu med	
11	50	8	36	04	07	6.4	5.4	93	5.5	1020.8	2	011	05	6	5	8	6	3	/	/	86708	88710		11		
12	50	7	13	04	08	6.6	5.7	94	5.6	1025.1	6	011	61	6	2	7	5	3	/	/	82706	85625	88635	12		
13	62	8	13	06	14	7.0	3.4	78	4.8	1018.2	6	009	02	2	2	8	5	4	/	/	86618	88625		13		
14	62	7	22	03	06	5.6	0.4	69	3.9	1017.6	6	015	02	2	2	7	5	5	/	/	87625			14		
15	81	5	25	10	29	9.7	7.6	87	6.6	992.7	6	006	25	8	2	5	8	4	0	0	81815	84656		15	2Sc40 Cu med	
16	82	6	25	10	26	5.6	0.0	67	3.8	996.7	7	008	03	1	1	3	8	6	7	0	81832	83645	85365	16	1Ac61 Cu hum	
17	78	3	26	11	29	7.0	-0.9	57	3.5	1009.2	1	005	02	0	0	1	1	6	4	1	81835	83072		17	1Ac68 Cu hum	
18	75	7	25	07	22	8.2	1.8	64	4.4	1002.1	7	005	80	8	1	5	8	4	7	3	81818	83830	85362	18	3Sc50 1Co70 Cu con Cb top dist NW vv80k ex W	
19	70	6	24	10	22	6.3	0.4	66	3.9	1009.4	6	008	15	1	1	3	8	5	4	1	82827	83072		19	2Sc45 1Ac68 COTRA Cu con jpS	
20	20	8	04	04	09	4.5	4.1	97	5.1	998.6	5	004	51	6	5	8	7	2	/	/	87703	88704		20		
21	45	8	15	05	10	4.3	3.9	97	5.0	1009.3	7	037	63	6	6	7	7	2	2	/	83703	87705	88515	21		
22	81	7	27	09	18	9.5	3.3	65	4.8	1015.2	2	025	03	1	1	7	5	6	/	/	87632			22		
23	84	7	22	13	24	12.9	10.1	83	7.6	1013.3	6	008	02	6	5	7	8	4	/	/	83815	87625		23	/Sc56 Cu hum	
24	62	8	25	06	22	7.2	5.7	90	5.7	1005.1	2	002	63	6	6	7	5	4	2	/	83710	86620	88540	24		
25	82	1	20	07	18	8.6	3.8	72	5.0	1006.5	6	012	02	8	1	1	8	5	0	3	81825			25	1Sc45 1Ci68 Cu hum Cb tops W,NW,E	
26	63	6	34	03	10	7.3	2.8	73	4.6	1022.1	2	018	03	1	1	6	8	5	0	0	81820	84632	85645	26	Cu hum	
27	62	8	20	11	23	8.9	8.0	94	6.6	1023.8	7	018	61	6	6	7	7	3	2	/	84706	87708	88515	27		
28	75	8	25	11	23	11.9	9.3	84	7.1	1031.3	7	007	20	5	2	8	5	4	/	/	86611	88618		28		
29	80	7	26	08	17	11.9	9.3	84	7.2	1026.1	3	008	21	6	5	6	8	4	3	1	83815	84635		29	1Sc50 1Ac65 2Ci75 Cu con N jpNE vv60k exNE	
30	81	4	21	07	11	7.9	2.6	69	4.5	1024.5	7	034	01	1	1	2	8	5	0	1	82822	83080		30	1Sc35 COTRA Cu hum	
31	82	3	26	11	20	6.5	-0.7	60	3.6	1003.5	6	022	15	6	1	2	9	6	7	1	81930	82835		31	2Ac65 1Ci75 Cb&jpN	

Mean vis = 23.7 km

Mean cloud = 5.9 74%

Mean wind speed = 8.4 kn

Mean gust = 19 kn

Mean TT = 7.6 °C

Mean TdTd = 3.9 °C

Mean RH = 78.3 %

Mean r = 5.1 g/kg

Mean PPP = 1010.6 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 2018	Hour	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.50
	9	0.00	0.00	0.09	0.00	0.01	0.00	0.22	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	1.00
	10	0.00	0.00	0.72	0.00	0.83	0.00	0.92	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.12	0.14
	11	0.00	0.00	0.26	0.09	0.43	0.76	0.44	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.01	0.82
	12	0.00	0.00	0.59	0.04	0.23	0.86	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.90
	13	0.21	0.00	0.96	0.00	0.77	0.41	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.93
	14	0.58	0.00	0.79	0.04	1.00	0.02	1.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.13	0.50
	15	0.54	0.00	0.01	0.00	0.38	0.00	0.96	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.68	0.22
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.31	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		1.32	0.00	3.43	0.17	3.66	2.05	5.57	0.00	0.00	6.36	0.00	0.00	0.00	0.00	1.23	5.02

Hour	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.57	0.11	0.69	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.11	0.27	0.00	0.10
9	1.00	0.94	1.00	0.00	0.00	0.38	0.00	0.01	1.00	0.37	0.00	0.15	0.84	1.00	0.00	0.29
10	1.00	1.00	1.00	0.00	0.00	0.05	0.00	0.00	1.00	0.34	0.00	0.49	0.07	0.90	0.00	0.31
11	1.00	0.95	1.00	0.00	0.00	0.67	0.00	0.00	0.99	0.31	0.00	0.08	0.20	0.70	0.00	0.30
12	1.00	0.55	1.00	0.00	0.00	0.39	0.00	0.00	0.94	1.00	0.00	0.00	0.00	1.00	0.06	0.34
13	0.92	0.01	0.79	0.00	0.00	0.26	0.00	0.00	0.31	0.45	0.00	0.02	0.00	0.14	0.32	0.27
14	0.93	0.00	0.04	0.00	0.00	0.07	0.16	0.00	1.00	0.24	0.00	0.00	0.38	0.47	0.60	0.29
15	0.87	0.10	0.92	0.00	0.00	0.00	0.00	0.00	1.00	0.04	0.00	0.00	0.12	0.95	0.83	0.26
16	0.05	0.09	0.18	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.17	0.01	0.79	0.07
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	7.34	3.74	6.62	0.00	0.00	1.82	0.16	0.01	7.14	2.76	0.00	0.74	1.88	5.43	2.60	69.09

JANUARY 2018	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	6.32	7.7	1934	4.6	504	79.0	86.9	1222	68.9	1957	2.9	4.7	5.7	1222	4.2	2357	999.97	1010.2	2359	995.2	1027	0.4
2	7.56	12.7	2251	3.1	523	87.2	96.3	1312	73.0	0	5.5	5.8	8.7	2301	4.1	355	1004.62	1012.5	540	988.9	2253	12.3
3	8.63	10.7	1306	6.6	2355	67.5	82.1	2304	54.3	1303	2.9	4.8	6.2	2	4.1	601	997.43	1003.0	1856	988.3	240	0
4	7.98	12.8	1208	5.4	2314	82.1	98.1	823	62.4	1311	5.0	5.6	7.8	950	4.5	1648	994.82	1001.2	18	990.3	1225	10.1
5	5.39	8.5	1325	1.2	2123	83.5	96.6	2126	64.2	1306	2.7	4.7	5.5	34	4.0	1954	994.97	1000.8	2359	992.2	924	0.1
6	2.34	5.7	1321	-1.6	723	91.0	99.2	800	79.8	2337	1.0	4.1	4.9	1321	3.3	723	1010.47	1021.7	2359	1000.7	0	0
7	2.22	5.8	1249	-0.1	2232	77.2	88.0	812	62.0	1421	-1.4	3.4	4.0	919	2.9	2108	1025.23	1027.1	1034	1021.6	5	0
8	3.66	4.7	1349	1.5	0	86.6	90.1	946	81.5	127	1.6	4.2	4.6	1331	3.4	0	1020.85	1025.1	1	1014.6	2359	0
9	4.98	8.4	2333	3.1	732	93.3	96.8	1113	88.4	0	4.0	5.1	6.4	2350	4.3	629	1007.18	1014.8	4	1002.4	2359	0.1
10	5.79	9.9	1315	0.4	2151	92.7	99.0	2230	76.0	1303	4.7	5.4	6.7	406	3.8	2151	1005.07	1009.8	2357	1000.8	259	0.9
11	4.03	6.6	1339	-0.7	606	94.5	99.6	548	87.4	2019	3.2	4.8	5.6	1339	3.6	606	1018.86	1026.2	2244	1009.7	9	0.1
12	5.83	7.3	1205	4.7	735	91.6	96.2	823	84.7	2314	4.6	5.2	5.7	1140	4.6	2346	1025.51	1027.2	1012	1022.9	2356	0.6
13	5.75	7.6	1215	4.0	2354	81.4	87.5	510	74.5	1528	2.8	4.6	5.1	1159	4.2	2213	1019.53	1023.0	0	1018.1	1506	0
14	4.33	6.0	1305	3.0	2052	77.6	85.3	4	64.7	1417	0.7	4.0	4.4	1246	3.7	1417	1017.93	1019.8	1033	1012.4	2354	0
15	7.96	10.7	1407	4.8	11	86.7	95.2	1007	78.7	101	5.9	5.9	7.6	1237	4.3	0	998.57	1012.7	5	992.3	1331	5.5
16	4.97	7.8	1327	2.4	1936	74.9	87.0	1937	50.9	1338	0.8	4.1	5.1	203	3.3	1338	995.82	998.0	1106	993.8	414	0.1
17	4.83	8.3	2359	1.8	226	69.7	91.5	2351	52.8	1349	-0.3	3.8	6.3	2359	3.1	403	1004.97	1009.6	1637	996.8	16	0.4
18	7.09	12.0	307	0.8	2359	72.0	92.2	50	54.8	606	2.3	4.6	6.9	145	3.5	2359	1001.10	1007.8	2359	991.8	312	1.9
19	2.92	6.8	1341	0.2	725	81.0	93.4	730	61.0	1343	-0.1	3.8	4.3	1213	3.5	0	1009.45	1010.6	1053	1007.6	30	0
20	3.24	4.8	1352	0.9	2155	94.3	97.7	2210	85.8	219	2.4	4.6	5.3	1353	3.7	4	1003.63	1013.1	2358	997.8	1256	6
21	4.01	11.1	2125	0.5	933	95.5	99.1	1855	88.6	2348	3.4	5.0	7.8	2032	3.8	933	1011.41	1015.9	808	1005.5	1843	16.2
22	8.49	10.9	1200	6.3	2018	80.1	94.8	625	60.7	1357	5.2	5.5	7.1	2	4.4	1902	1012.87	1019.2	2126	1006.7	1	0
23	10.56	13.0	1502	7.4	227	87.3	93.9	956	77.1	2	8.5	6.9	8.2	1304	5.1	223	1015.32	1019.3	5	1012.6	1654	0.4
24	9.37	13.0	923	6.0	1634	88.6	94.3	1215	80.3	1126	7.6	6.6	8.3	1014	5.2	1751	1007.03	1014.1	1	1002.9	1000	8.8
25	7.03	11.0	1247	2.1	2355	79.2	94.6	2358	57.3	1258	3.6	4.9	5.5	19	4.1	2352	1007.84	1010.0	2358	1006.4	1501	0.1
26	4.50	8.4	1320	0.2	251	88.5	98.2	256	67.7	1340	2.7	4.6	5.3	1017	3.8	238	1019.63	1028.3	2359	1010.0	2	0
27	7.11	11.1	2133	1.0	557	90.7	96.3	1822	80.9	952	5.7	5.7	7.6	2007	3.8	557	1026.23	1028.7	319	1023.3	1558	1.2
28	10.98	13.1	1100	8.8	416	83.5	90.7	654	73.0	2044	8.3	6.7	7.6	1326	6.0	2353	1030.66	1032.2	1144	1027.6	19	0
29	8.80	12.4	1200	0.4	2354	82.5	97.7	2258	73.6	1712	5.9	5.8	7.5	1416	3.7	2354	1028.27	1032.9	2356	1025.1	1237	0.4
30	3.85	10.0	2351	-2.3	740	88.3	98.9	505	65.1	1327	1.9	4.4	7.1	2319	3.1	740	1026.11	1033.0	9	1012.9	2358	0.1
31	6.10	10.2	15	1.8	2229	79.1	92.2	246	56.4	1511	2.7	4.7	6.9	2	3.3	1547	1005.48	1013.1	1	999.9	2359	3.1
Total																						68.8
Mean	6.02	9.32		2.52		84.1	93.85		70.52		3.44	4.96	6.32		3.94		1011.19	1016.80		1005.51		
Max	10.98	13.10		8.75		95.5	99.60		88.60		8.53	6.94	8.69		5.96		1030.66	1032.96		1027.56		
Min	2.22	4.68		-2.32		67.5	82.10		50.91		-1.42	3.39	3.98		2.87		994.82	997.97		988.29		

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

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

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

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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