

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

FEBRUARY 2018

		Anomaly	Rank in the past 137 years				
Temperature (°C)							
Mean maximum	7.0	-1.2	43 rd lowest				
Mean minimum	-0.5	-2.0	23 rd lowest				
Daily mean	3.2	-1.7	31 st lowest				
Highest maximum	11.3	on 19 th	Lowest maximum	0.5	on 28 th		
Highest minimum	7.1	on 20 th	Lowest minimum	-8.3	on 28 th		
Mean grass minimum	-4.7	-2.9	Lowest grass minimum	-12.6	on 28 th		
Mean earth @30 cm	5.1	-0.2	Earth @100 cm	6.9			
Frost duration (hrs)	151.0		Rain duration (hrs)	54.1			
Rainfall total (mm)	26.4	62%	45 th lowest				
Highest daily fall	5.8	on 14 th					
Number of: Dry days (<0.2mm)	16	Wet days (>0.9mm)	9	days ≥5mm	1		
Sunshine total (hrs)	127.0	Daily mean	4.54	164 %	Sunniest day	10.2 on 25 th	
N° days with: Air frost	17	Ground frost	23	Snow falling	6	Snow lying	1
Thunder	0	Hail ≥5mm	0	Small hail/ice	1	Fog @09	0
						Nil sun	3
Pressure MSL: Mean @09 GMT, mbar	1017.9	+0.5	Highest	1032.0	on 26 th	Lowest	996.7 on 10 th
Relative humidity : Mean (%)	78.6	Lowest	36	on 26 th	Water vapour (g/kg), mean at 09 and 15 GMT	3.8,	3.8
Overall mean wind speed (mph)	7.5	Windiest day	11.9	on 11 th	Max gust	40	on 28 th
Wind direction (days)	N 2	NE 10	E 1	SE 0	S 7	SW 2	W 4
						NW 2	
Least windy day (mph)	3.6	on 3 rd	Calm; less than 0.5 mph (minutes)				258

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

Notes:

Cold and Very Sunny with Below Average Rainfall

Temperature: This is the coldest February since 1996, at least in terms of the mean temperature. However, the mean maximum is lowest only since 2013. The highest max is 1.7° below the median, and the lowest max is 1.9° below its median. The highest min is 0.9° below the median while the lowest min is 3.3° below its median. The mean grass min is lowest since 1991, but the lowest grass min is lowest only since 2012. Mean earth temperatures at both 30cm and 1m depth are a little below average. The number of air frosts is 7 more, and ground frosts 6 more, than average. The duration of air frost is 61.5 hours above average, highest since 2012 and before that, 1996. It was cold at the start and end of the month, and the daily anomalies for both max and min were predominantly negative. From the 1st to the 9th, anomalies for daily max ranged from -5.0° on the 6th to +0.1° on the 2nd, while in the same period anomalies for daily min ranged from -5.1° on the 8th to +1.3° on the 2nd. It was a little milder from the 10th to the 20th, with anomalies for daily max up to +3.4° on the 15th and down to -2.4° on the 13th. For min, anomalies were over +5° on the 19th and 20th, and below -3° on the 10th. After the 20th it became increasingly cold, with anomalies for max below -4° from the 26th to 28th, reaching -8.7° on the 28th. For min anomalies were over -4° from the 23rd to the 28th, reaching -10.5° on the 28th. **Rainfall:** This month had only 62% of the average rainfall, making it the driest February since 2012. However, the total of 25.4 mm is 1.5 mm more than would be required for a dry category month. Despite the low total, the rainfall duration is 107 % of average. The highest daily fall is 4.7 mm below the median and lowest since 2008. There were 4 more dry days than average and most of the month's rain fell between the 8th and 14th. The daily accumulation compared with average showed a deficit of 7 mm on the 7th, decreasing to zero on the 14th, after which the deficit increased steadily, reaching 22 mm by the 28th, mostly as a result of a 7 day dry spell ending on the 26th. **Sunshine:** This is one of the sunniest Februaries in the past century, with only 2008 being sunnier in the millennium. Over 10 hours of sunshine was recorded on both the 24th and 25th, the first February days to exceed 10 hours in at least 40 years. The daily accumulation compared with normal was in surplus throughout, reaching 30 hours by the 17th and 50 hours by the 28th. Overall there were 9 days with <3 hours, 10 with =>6 hours and 3 with =>9 hours. **Wind:** The mean wind speed this month is 0.5 mph below average. The mean speed on the windiest day of 11.9 mph is lowest for February since 2003, also the month's highest gust is 8 mph below average. Daily mean speeds were fresh on the 1st, 4th, 9th, 11th, 13th to 15th, 20th and 28th, otherwise light or moderate. Directions were W'ly on the 1st veering E'ly by the 3rd, backing SW'ly by the 8th, becoming S or SW from the 13th to 18th, veering N'ly by the 20th then NE'ly on the 21st.

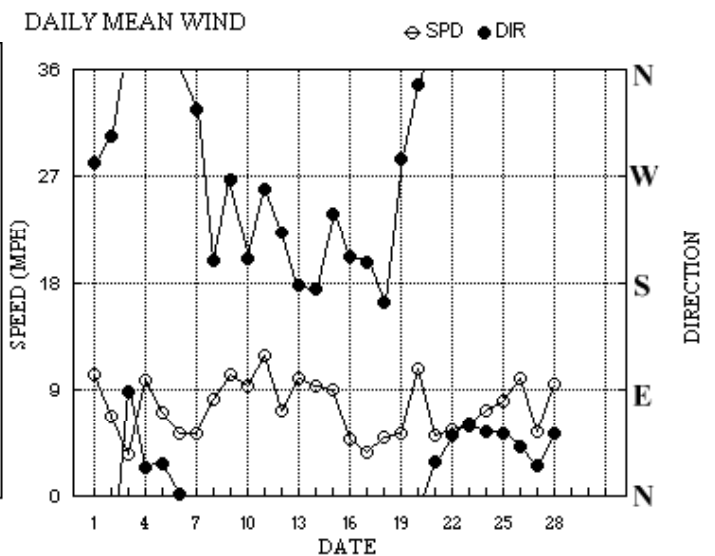
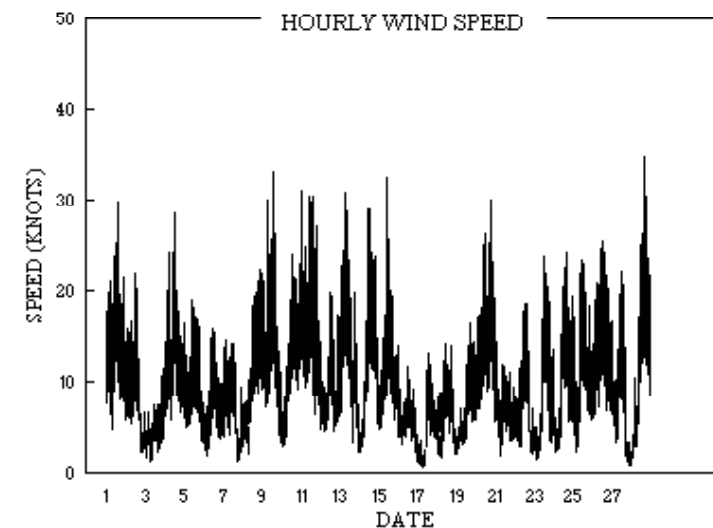
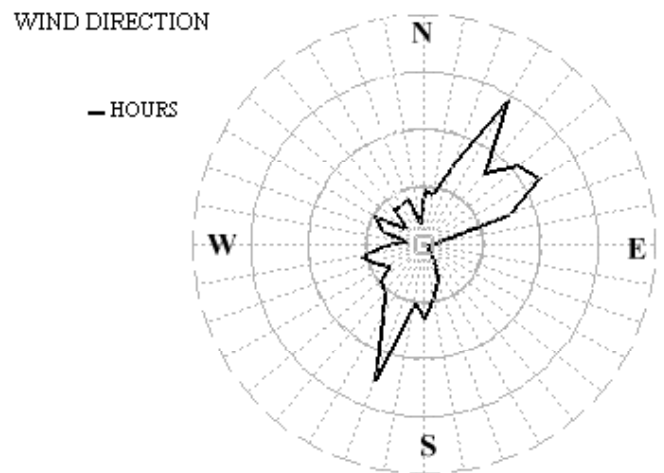
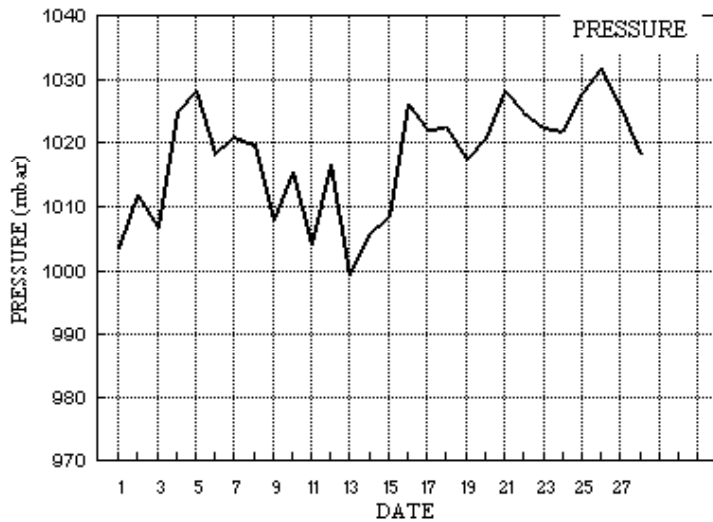
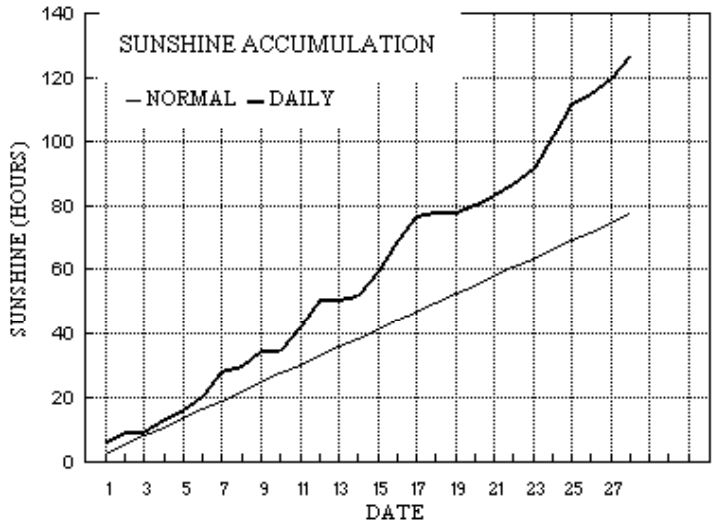
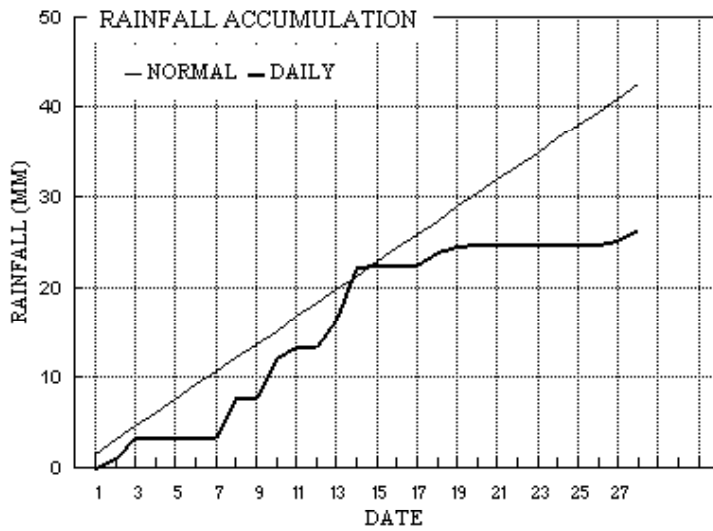
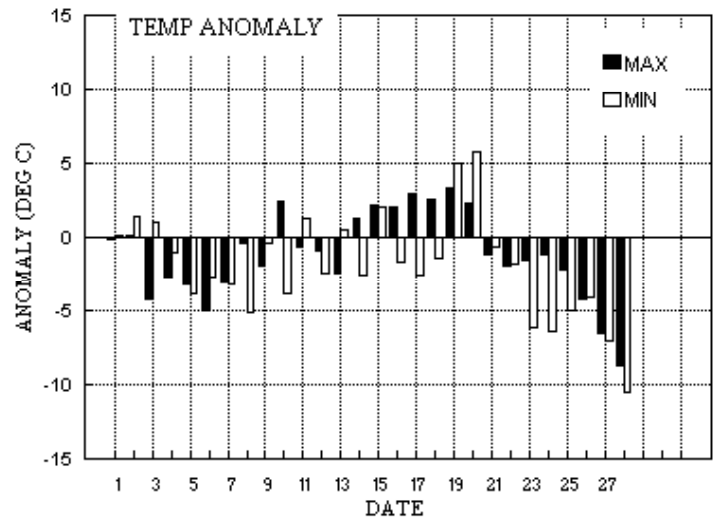
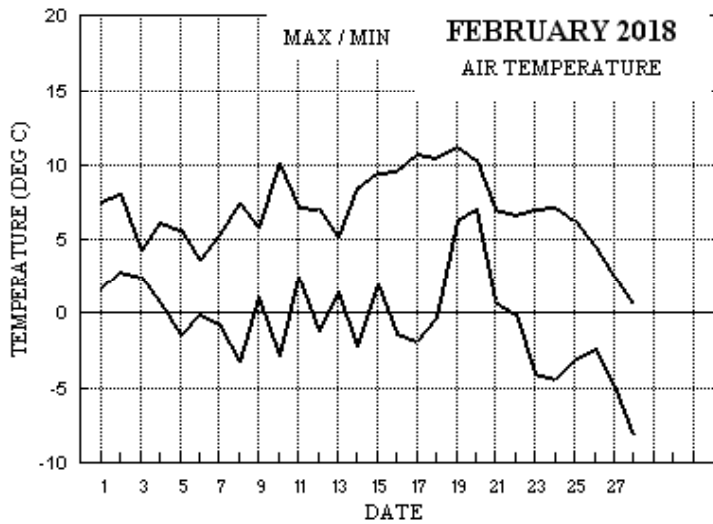
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 9 th				From the 10 th to the 18 th				From the 19 th to the 28 th			
-2.3°	-1.5°	59%	141%	+1.1°	-1.1°	118%	174%	-2.1°	-2.5°	13%	178%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for February 2018



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: FEBRUARY 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	7.5	1.7	0.0	-2.2	6.4	7.7	6.4	0.0	1003.5	0	1	0	0	0	282	8.3	9.0	302	30	1414	301	13	14	0.0	
2	8.1	2.8	1.0	-0.1	6.1	7.7	3.1	0.0	1011.8	0	1	0	0	0	304	5.0	5.9	323	22	1155	330	11	11	3.2	
3	4.2	2.4	2.4	-3.5	5.9	7.6	0.0	0.0	1006.8	0	1	0	0	0	88	1.0	3.1	26	12	2357	20	5	20	8.1	
4	6.1	0.7	tr	-2.7	5.9	7.6	4.0	0.0	1024.9	0	1	0	0	0	24	8.5	8.6	30	29	1308	30	13	12	0.0	
5	5.7	-1.5	0.0	-7.1	5.7	7.5	3.4	4.5	1028.2	1	1	0	0	0	28	6.1	6.2	27	19	1051	32	8	12	0.0	
6	3.6	-0.1	tr	-4.0	5.3	7.4	3.7	0.0	1018.2	1	1	1	0	0	3	4.5	4.6	15	16	1014	18	9	10	0.0	
7	5.2	-0.7	0.0	-4.3	5.1	7.3	7.9	5.7	1021.0	1	1	1	0	0	326	3.9	4.7	322	15	0342	335	7	11	0.0	
8	7.4	-3.3	4.3	-8.5	4.7	7.2	1.6	8.5	1019.7	1	1	0	0	0	198	7.1	7.1	180	22	2216	194	11	23	5.1	
9	5.8	1.0	tr	2.4	4.8	7.1	4.8	0.6	1007.9	0	0	0	0	0	267	6.8	8.9	298	33	1434	304	14	14	0.0	
10	10.1	-2.9	4.5	-8.1	4.7	7.0	0.1	6.9	1015.4	1	1	0	0	0	200	8.1	8.2	186	24	1406	201	12	16	6.2	
11	7.2	2.5	1.2	0.3	5.0	6.9	7.6	0.0	1004.2	0	0	1	0	0	259	10.1	10.3	244	31	0007	245	15	00	0.6	
12	7.0	-1.2	0.1	-7.1	4.8	6.9	8.4	7.4	1016.5	1	1	0	0	0	223	5.7	6.2	253	20	1158	250	10	12	0.3	
13	5.1	1.5	2.9	-4.5	4.5	6.8	0.0	0.0	999.2	0	1	0	0	0	177	5.2	8.7	169	31	0723	174	14	07	4.5	
14	8.5	-2.3	5.8	-7.8	4.6	6.8	0.8	7.8	1005.9	1	1	0	0	0	175	7.8	8.1	196	29	1126	188	13	12	7.2	
15	9.4	2.0	0.3	2.6	4.7	6.7	8.0	0.0	1008.4	0	0	0	0	0	239	7.5	7.8	255	33	1050	254	11	12	0.1	
16	9.6	-1.4	0.0	-7.0	4.8	6.6	9.2	2.5	1026.1	1	1	0	0	0	202	3.9	4.3	230	13	0033	228	7	00	0.0	
17	10.7	-1.9	tr	-6.8	4.6	6.6	7.6	5.6	1022.3	1	1	0	0	0	197	2.5	3.3	266	13	1346	235	6	15	0.0	
18	10.5	-0.3	1.5	-4.8	4.7	6.5	1.6	0.2	1022.4	1	1	0	0	0	163	4.3	4.4	145	14	1019	157	7	10	5.1	
19	11.3	6.3	0.6	5.7	5.2	6.5	0.0	0.0	1017.4	0	0	0	0	0	285	3.1	4.7	315	17	1620	313	8	16	1.5	
20	10.3	7.1	0.1	7.1	5.9	6.5	2.1	0.0	1020.6	0	0	0	0	0	347	8.8	9.4	12	30	1937	7	13	19	0.3	
21	7.1	0.8	tr	-4.5	6.2	6.6	2.8	0.0	1028.2	0	1	0	0	0	30	4.3	4.5	56	14	0209	44	7	02	0.0	
22	6.6	-0.1	0.0	-6.1	6.1	6.7	3.7	4.9	1024.8	1	1	0	0	0	52	4.7	4.9	57	19	1325	65	9	15	0.0	
23	7.0	-4.0	0.0	-9.8	5.5	6.8	4.9	12.1	1022.5	1	1	0	0	0	59	5.2	5.4	68	24	1234	61	12	13	0.0	
24	7.2	-4.4	0.0	-10.5	5.0	6.8	10.1	9.3	1021.9	1	1	0	0	0	55	6.3	6.3	60	24	1507	55	11	15	0.0	
25	6.3	-3.1	tr	-9.3	4.4	6.7	10.2	12.9	1027.9	1	1	0	0	0	54	6.9	6.9	63	24	1047	54	11	12	0.0	
26	4.5	-2.4	tr	-7.9	4.0	6.6	3.2	17.5	1031.8	1	1	1	0	0	43	8.5	8.7	42	26	1232	51	12	12	0.0	
27	2.5	-4.9	0.4	-10.8	3.8	6.5	4.7	20.7	1025.8	1	1	1	0	0	26	4.4	4.8	29	22	1210	22	9	10	2.8	
28	0.5	-8.3	1.3	-12.6	3.4	6.4	7.1	23.9	1017.9	1	1	1	0	0	54	7.9	8.3	57	35	1614	58	15	16	9.1	
Total			26.4				127.0	151.0																	54.1
Mean	7.0	-0.5		-4.7	5.1	6.9	4.54	5.4	1017.9						336	0.7	6.5								
Anom	-1.2	-2.0	62%	-2.9	-0.2	+0.1	164%																		
Daily mean		3.2																							
Anom		-1.7																							
Number of days with:																									
Air frost = 17																									
Ground frost = 23																									
Nil sun = 3																									
Snow falling = 6																									
Snow lying = 1																									
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 FEBRUARY 2018

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	81	3	28	07	19	4.5	-0.3	71	3.7	1003.5	1	019	02	0	0	1	5	6	0	1	81635	83072	1		
2	80	6	28	07	14	4.1	0.6	78	4.0	1011.8	3	015	03	2	2	6	5	6	0	0	81635	86650	2	2Sc40	
3	57	8	18	02	03	3.1	2.4	95	4.5	1006.8	7	010	61	6	6	5	5	4	2	/	85618	88525	3		
4	84	4	02	07	15	2.0	-1.4	78	3.4	1024.9	1	034	25	8	1	4	8	6	0	0	81835	84650	4		
5	81	1	03	06	13	0.2	-1.9	86	3.3	1028.2	0	002	02	0	0	1	5	7	0	0	81650		5	Hoar slt Gnd sfc frzn	
6	62	7	01	06	10	1.0	-2.2	79	3.2	1018.2	6	004	15	2	2	7	5	6	/	/	87645		6	jp NW&SW	
7	88	1	33	05	10	0.1	-4.3	72	2.7	1021.0	2	014	01	0	0	1	5	7	3	0	81656		7	1Ac60	
8	62	7	19	06	10	1.0	-1.6	83	3.4	1019.7	8	005	15	1	1	7	5	5	/	1	82625	85650	8	/Ci75 COTRA jpNW Hoar slt	
9	86	5	27	10	19	4.0	1.0	81	4.1	1007.9	2	027	01	6	2	3	5	5	7	0	82520	84358	9	2Sc50	
10	75	8	19	08	13	2.5	0.1	84	3.8	1015.4	7	022	03	1	1	8	0	9	7	/	82358	88460	10		
11	84	1	25	09	21	4.4	-0.8	69	3.6	1004.2	2	022	02	0	0	1	0	9	3	1	81359		11	1Ci72	
12	82	1	23	06	09	1.5	-2.1	77	3.2	1016.5	1	012	02	0	0	0	0	9	0	1	81075		12	Hoar slt Gnd frz icy pat	
13	60	8	18	13	29	4.8	2.3	84	4.5	999.2	6	017	60	6	2	7	5	4	2	/	87615	88525	13		
14	68	7	15	10	17	2.0	-0.6	83	3.7	1005.9	8	010	03	1	1	7	0	9	5	8	82359	86362	87275	14	COTRA
15	82	4	24	09	18	7.1	4.1	81	5.1	1008.4	3	043	01	8	1	1	8	4	3	1	81815	84070	15	1Sc56 1Ac59 COTRA Cu fra Parhelia+U/A cont	
16	65	1	19	03	07	2.7	0.9	88	4.0	1026.1	1	020	02	0	0	0	0	9	0	1	81080		16	COTRA Hoar mod. Gnd frzn	
17	50	2	28	01	03	0.9	0.6	98	3.9	1022.3	2	008	10	1	1	2	0	9	3	0	82359		17	Hoar slt. Gnd frzn	
18	40	6	13	05	09	6.2	5.8	97	5.6	1022.4	5	002	21	6	2	6	5	2	0	1	82704	85645	18	1Sc35 3Ci75	
19	15	8	23	03	05	7.1	6.7	97	6.0	1017.4	8	001	63	6	5	8	7	2	/	/	88703		19		
20	70	7	33	10	22	7.5	5.1	85	5.4	1020.6	3	018	80	8	6	7	5	4	/	/	85612	83640	87650	20	
21	23	2	02	04	08	3.3	1.3	87	4.1	1028.2	2	006	05	0	0	2	5	7	0	0	82656		21		
22	57	7	04	04	10	2.2	-1.1	79	3.5	1024.8	0	002	05	1	1	7	5	5	/	/	87628		22		
23	59	5	05	04	08	-0.1	-1.5	90	3.3	1022.5	1	002	05	1	1	5	5	5	0	1	85628		23	1Ci80 COTRA Hoar mod Gnd frz	
24	57	0	04	05	10	-0.6	-2.6	86	3.1	1021.9	1	014	05	0	0	0	0	9	0	0			24	Hoar mod Gnd frz	
25	70	1	05	07	14	0.5	-3.6	74	2.9	1027.9	1	011	03	0	0	1	1	4	0	0	81818		25	Cu fra Hoar slt Gnd frz	
26	65	7	05	09	21	-0.8	-5.6	70	2.5	1031.8	1	010	71	7	1	7	8	5	/	/	85825	86650	26	2Sc40	
27	65	2	01	07	14	-2.2	-4.7	83	2.6	1025.8	7	007	03	0	0	2	8	4	0	0	81815		27	2Sc45 1Sc56 Hoar slt. Gnd frz. Slny tr	
28	59	1	06	07	13	-3.3	-4.8	89	2.6	1017.9	2	002	05	7	1	0	0	9	0	1	81075		28	COTRA Gnd frz. Slny 0.5cm 100%	

Mean vis = 22.3 km

Mean cloud = 4.3 54%

Mean wind speed = 6.4 kn

Mean gust = 13 kn

Mean TT = 2.3 °C

Mean TdTd = -0.3 °C

Mean RH = 83.0 %

Mean r = 3.8 g/kg

Mean PPP = 1017.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for FEBRUARY 2018

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks											
1	82	4	29	11	30	6.4	-0.1	63	3.8	1004.8	2	001	02	1	1	4	8	5	0	0	84828	1	1Sc40	Cu	hum						
2	83	7	34	05	17	6.7	-0.3	61	3.7	1012.1	3	001	02	1	1	7	8	6	/	/	82833	87640	2	Cu	hum						
3	30	8	06	02	05	4.1	3.5	96	4.9	1005.3	5	003	58	6	5	8	7	2	/	/	85703	87705	88708	3							
4	70	6	02	08	20	5.0	2.0	71	4.3	1027.1	2	004	80	8	1	6	8	5	0	0	83828	85645	4	Cu	med						
5	82	7	04	07	17	3.9	-0.9	71	3.5	1024.8	7	020	02	2	2	7	8	5	/	/	82825	87650	5	Cu	med						
6	70	6	36	08	16	2.8	-4.2	60	2.8	1016.7	6	013	85	8	1	6	8	5	/	/	82825	85650	6	Cu	med	Sn	v	slt			
7	84	4	34	05	12	4.7	-4.1	53	2.8	1021.0	6	011	03	0	0	1	5	7	3	4	81650	84077	7	1Ac68	COTRA						
8	65	8	20	08	18	7.1	3.2	76	4.7	1016.4	7	023	15	2	2	8	5	4	/	/	82712	86615	88630	8	jpW						
9	84	3	32	15	33	5.4	-2.4	57	3.2	1012.3	2	018	01	1	1	3	8	6	0	0	83830		9	1Sc45							
10	23	8	20	11	24	7.6	6.7	94	6.1	1007.5	7	046	51	6	5	8	5	3	/	/	85706	87708	88615	10							
11	61	5	28	07	28	4.6	-0.6	69	3.6	1005.6	0	012	27	8	1	4	9	6	0	3	82930	82835	83068	11	jpNW&E	vv60k	ex	p			
12	82	7	23	10	20	6.5	-1.2	58	3.5	1014.4	7	019	03	1	1	3	2	6	4	1	83835	87075	12	1Ac68	Cu	med					
13	61	8	12	06	15	4.9	3.6	91	5.0	997.8	5	000	61	6	6	7	5	3	2	/	83707	86615	88525	13							
14	45	8	17	10	25	4.5	3.2	91	4.8	1002.8	7	019	63	6	6	7	7	3	2	/	83708	87712	88520	14							
15	65	3	25	11	20	2.0	0.9	61	4.0	1013.7	2	020	80	8	1	3	8	5	0	0	82825		15	2Sc40	Cu	med	Rainbow				
16	84	7	20	06	10	9.1	-2.5	44	3.1	1024.2	7	021	03	1	1	1	1	6	0	1	81840	87075	16	COTRA	Cu	hum	Halo	22°	part		
17	72	5	21	07	11	10.3	0.9	52	4.0	1022.0	6	007	03	1	1	5	8	6	0	0	82835	84656	17	Cu	hum						
18	84	7	15	06	11	9.4	4.4	71	5.1	1020.7	7	010	03	2	2	7	8	5	/	/	83822	87635	18	Cu	hum						
19	65	8	30	07	14	11.3	9.4	88	7.3	1016.3	6	007	60	6	2	8	5	4	/	/	82612	86615	88625	19							
20	82	6	34	09	18	9.7	2.6	61	4.5	1021.5	8	003	02	2	2	6	8	5	0	0	82828	85645	20	Cu	med						
21	58	7	01	05	11	6.2	-0.1	64	3.7	1026.3	8	016	05	2	2	7	8	5	/	/	81825	85635	87656	21	Cu	hum					
22	60	1	06	08	19	6.1	-2.0	56	3.2	1023.2	8	015	05	1	1	1	8	6	0	0	81835		22	1Sc40	Cu	hum					
23	65	7	06	11	21	4.3	-3.2	58	3.0	1020.0	7	018	03	1	1	7	5	6	/	/	87632		23								
24	68	4	06	12	23	6.7	-5.0	43	2.6	1021.4	7	006	02	0	0	0	0	9	0	1	84080		24	COTRA							
25	80	0	05	10	19	5.5	-5.8	44	2.4	1027.7	5	004	02	0	0	0	0	9	0	0			25								
26	84	6	05	11	24	1.4	-8.4	48	2.0	1030.4	7	011	85	8	1	6	8	6	0	0	85830	84656	26	Cu	med.	Sn	v	slt			
27	50	6	03	07	18	-0.1	-5.1	69	2.6	1022.3	7	017	26	8	2	6	8	5	/	/	81820	85830	27	2Sc50	jpNW	vv30k	ex	p	Snly	<0.5	20%
28	30	4	06	13	26	-1.7	-7.2	66	2.2	1015.2	7	020	85	8	1	4	8	6	0	0	84830		28	1Sc50	Cu	med	Snly	<0.5cm	in	shade	

Mean vis = 24.4 km

Mean cloud = 5.7 71%

Mean wind speed = 8.4 kn

Mean gust = 19 kn

Mean TT = 5.5 °C

Mean TdTd = -0.5 °C

Mean RH = 65.6 %

Mean r = 3.8 g/kg

Mean PPP = 1016.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham	Hour	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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
2018	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
	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
	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
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.23	0.00	0.10	0.28	0.28	0.00	0.29	0.09
	8	0.60	0.03	0.00	0.07	0.99	0.00	0.69	0.51	0.01	0.00	1.00	1.00	0.00	0.54	1.00
	9	1.00	0.62	0.00	1.00	0.53	0.75	1.00	0.00	0.96	0.00	1.00	1.00	0.00	0.00	1.00
	10	1.00	0.93	0.00	0.94	0.73	0.51	1.00	0.15	0.51	0.00	1.00	1.00	0.00	0.00	0.91
	11	0.86	1.00	0.00	0.53	0.08	0.00	1.00	0.69	0.05	0.00	0.84	1.00	0.00	0.00	0.74
	12	0.89	0.51	0.00	0.70	0.16	0.09	1.00	0.00	0.00	0.00	0.71	1.00	0.00	0.00	1.00
	13	0.57	0.03	0.00	0.31	0.33	0.89	1.00	0.00	0.50	0.00	0.79	0.75	0.00	0.00	0.67
	14	0.82	0.00	0.00	0.12	0.02	0.67	1.00	0.00	0.83	0.00	0.50	0.74	0.00	0.00	0.60
	15	0.29	0.00	0.00	0.09	0.47	0.54	1.00	0.00	0.93	0.00	0.58	0.58	0.00	0.00	0.77
	16	0.33	0.00	0.00	0.27	0.05	0.25	0.07	0.00	0.96	0.00	0.86	0.98	0.00	0.00	1.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.11	0.00	0.00	0.23
	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
	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
	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		6.36	3.12	0.00	4.02	3.36	3.70	7.88	1.59	4.77	0.10	7.62	8.44	0.00	0.83	8.02

Wokingham	Hour	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	Mean
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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
	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
2018	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
	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
	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
	7	0.44	0.45	0.00	0.00	0.00	0.43	0.00	0.01	0.63	0.76	0.00	0.85	0.78	0.21
	8	1.00	1.00	0.05	0.00	0.00	1.00	0.00	0.68	1.00	1.00	0.02	1.00	1.00	0.51
	9	1.00	1.00	0.71	0.00	0.00	0.98	0.00	1.00	1.00	1.00	0.09	0.96	1.00	0.63
	10	1.00	1.00	0.47	0.00	0.18	0.12	0.00	0.95	1.00	1.00	0.27	0.59	1.00	0.58
	11	1.00	1.00	0.00	0.00	0.05	0.28	0.01	1.00	1.00	1.00	0.60	0.44	0.67	0.49
	12	1.00	0.95	0.02	0.00	0.59	0.00	0.06	0.96	1.00	1.00	0.75	0.32	0.38	0.47
	13	1.00	0.60	0.40	0.00	0.20	0.00	0.39	0.16	1.00	1.00	0.89	0.10	0.91	0.45
	14	1.00	1.00	0.00	0.00	0.12	0.00	0.92	0.07	1.00	1.00	0.31	0.34	0.40	0.41
	15	1.00	0.55	0.00	0.00	0.73	0.00	1.00	0.02	1.00	1.00	0.27	0.04	0.66	0.41
	16	0.80	0.00	0.00	0.00	0.20	0.00	1.00	0.01	1.00	1.00	0.02	0.03	0.31	0.33
	17	0.00	0.00	0.00	0.00	0.05	0.00	0.34	0.00	0.43	0.47	0.00	0.00	0.00	0.06
	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
	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
	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
	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
	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
	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
Tot		9.24	7.55	1.64	0.00	2.12	2.81	3.72	4.85	10.06	10.23	3.22	4.67	7.10	127.05

FEBRUARY 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	4.67	7.6	1241	1.6	37	72.4	87.5	237	53.9	1249	0.0	3.8	4.2	349	3.5	1249	1004.24	1009.5	2358	999.3	312	0
2	4.59	8.2	1222	2.6	1845	73.6	83.7	2003	57.0	1214	0.2	3.8	4.2	1002	3.5	1739	1011.57	1013.1	1921	1009.4	5	0
3	3.13	4.3	1300	2.3	309	92.1	97.2	1858	75.1	12	1.9	4.4	5.0	1507	3.7	18	1008.12	1013.8	2359	1005.0	1404	3.3
4	2.83	6.2	1243	0.1	2215	80.6	96.9	0	62.2	1247	-0.3	3.7	4.5	1	3.0	704	1024.70	1029.7	2309	1013.7	0	0
5	1.65	5.9	1313	-1.6	740	81.0	94.2	542	62.5	1311	-1.3	3.4	3.9	1307	3.1	734	1026.22	1029.4	0	1021.5	2359	0
6	1.35	3.7	1424	0.1	346	74.2	91.3	2258	51.7	1443	-2.8	3.1	3.7	2358	2.5	1443	1018.47	1021.6	0	1016.5	1442	0
7	1.33	5.2	1317	-2.6	2339	70.4	89.3	2	50.5	1449	-3.6	2.9	3.7	2	2.5	1604	1020.95	1022.4	2017	1018.8	110	0
8	2.99	7.5	1338	-3.4	504	81.7	95.2	814	68.0	1153	0.1	3.9	5.1	2359	2.6	348	1017.42	1021.8	14	1010.0	2359	0.1
9	4.28	6.7	429	-1.3	2357	77.1	94.4	526	56.2	1454	0.5	4.0	5.8	425	2.9	1912	1011.26	1019.2	2358	1005.0	407	4.2
10	4.40	10.2	2359	-3.0	337	90.9	95.6	1933	81.7	938	3.1	5.0	7.4	2359	2.8	335	1010.55	1019.5	119	996.7	2352	4.1
11	4.49	10.2	1	0.3	2359	70.2	94.2	3	47.2	1400	-0.6	3.7	7.4	3	2.8	1341	1005.11	1013.4	2359	997.3	6	1.7
12	2.46	7.1	1446	-1.4	658	73.7	91.4	2334	52.6	1612	-2.0	3.3	4.0	2355	2.9	429	1014.26	1016.7	844	1009.0	2359	0
13	3.88	5.6	806	-0.2	2359	85.5	94.7	1739	73.4	709	1.6	4.3	5.1	1526	3.4	2358	1002.02	1009.0	0	997.0	1311	3.1
14	2.90	7.9	2348	-2.4	252	90.6	97.5	216	70.6	1112	1.5	4.4	6.5	2359	3.1	329	1004.24	1008.3	207	999.9	2147	5.5
15	6.73	9.5	1044	2.6	2357	76.5	97.6	52	47.2	1249	2.6	4.7	6.8	147	3.3	1557	1010.71	1020.8	2357	1000.8	0	0.5
16	4.08	9.7	1247	-1.5	511	77.3	97.6	705	39.5	1446	0.0	3.8	4.7	1138	2.8	1447	1024.19	1026.8	1134	1020.7	0	0
17	4.29	10.8	1318	-2.0	717	81.5	98.8	810	49.4	1504	1.0	4.1	5.1	1013	3.2	717	1022.43	1023.7	2120	1021.4	606	0
18	6.19	10.7	1317	-0.4	337	87.3	98.3	727	65.7	1318	4.1	5.1	6.0	916	3.5	337	1021.58	1023.3	15	1019.5	2352	0
19	8.70	11.4	1456	6.3	239	92.3	97.6	1024	84.5	2122	7.5	6.4	7.5	1347	5.6	23	1017.38	1019.7	0	1016.0	1531	2
20	8.39	10.4	1315	4.8	2333	75.7	90.2	723	56.2	1606	4.2	5.1	6.5	2	4.1	1726	1021.23	1026.0	2355	1017.5	100	0.2
21	4.36	7.2	1154	0.7	732	80.0	95.6	749	61.7	1408	1.1	4.1	4.6	109	3.6	1408	1026.91	1028.4	954	1025.5	2358	0
22	2.13	6.8	1314	-2.3	2321	74.5	92.6	722	46.9	1539	-2.2	3.2	4.3	430	2.3	1923	1024.10	1025.6	4	1022.7	1635	0
23	0.49	7.1	1242	-4.1	533	77.9	97.1	535	48.3	1230	-3.2	3.0	3.7	947	2.6	649	1021.26	1023.2	0	1019.5	1947	0
24	0.92	7.3	1445	-4.5	705	72.5	93.8	709	38.4	1515	-3.8	2.8	3.5	1200	2.3	1515	1021.83	1025.0	2356	1020.0	335	0
25	0.62	6.4	1313	-3.2	625	66.3	89.9	619	37.4	1420	-5.4	2.5	3.1	6	1.9	1849	1027.78	1030.6	2357	1024.9	6	0
26	-0.63	4.6	1411	-3.8	2232	66.4	83.3	2133	36.1	1412	-6.3	2.3	2.8	1610	1.7	1420	1030.63	1032.0	1050	1029.0	2359	0
27	-3.07	2.6	1256	-7.6	2358	80.1	95.6	2221	48.5	1252	-6.2	2.4	3.1	1401	2.0	1214	1024.26	1029.2	24	1019.8	2354	0.3
28	-4.10	0.6	1401	-8.4	231	79.5	95.8	714	44.3	1153	-7.4	2.2	2.7	901	1.6	1137	1015.79	1020.0	9	1009.4	2347	x

Total																						25.0
Mean	3.00	7.20		-1.14		78.6	93.82		55.95		-0.55	3.77	4.80		2.96		1017.47	1021.49		1013.07		
Max	8.70	11.43		6.26		92.3	98.80		84.50		7.50	6.42	7.47		5.61		1030.63	1032.04		1029.02		
Min	-4.10	0.61		-8.40		66.3	83.30		36.11		-7.39	2.18	2.67		1.61		1002.02	1008.33		996.69		

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

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL

Seasonal Means and Totals

WINTER 2017/18

Temperature (°C)		Rank in the past 136 years	
Mean maximum	8.3 (+0.2)	44 th highest	
Mean minimum	1.6 (-0.2)	67 th highest	
Daily mean	5.0 (0.0)	50 th highest	
Rainfall total (mm)	177.7 (106 %)	50 th highest	
Sunshine total (hours)	260.6 (133 %)		
N° of:			
Dry days	39 (-6)	Wet days	37 (+6)
Days with: Air frost	34 (+3)	Ground frost	54 (+3)
		Snow falling	13 (+3)
		Snow lying	2 (-3)
Thunder	0 (-1)	Hail ≥5mm	0 (-1)
		Small hail/ice	3 (0)
		Fog @09 GMT	1 (-5)
		Nil sun	25 (-4)
Air pressure MSL : Mean @09 GMT (mbar)	1014.2 (-2.4)		

Departure from 1981 to 2010 average shown in brackets.

Notes: **Very Sunny with Average Temperature and Above Average Rainfall.**

Temperature: This season's mean temperature is exactly equal to the current 30 year climatological average. It is also similar to the previous winter, when the mean was only 0.2° higher than this winter's. January was the mildest month, mean 6.2°, anomaly +1.4°, with December next, mean 5.3°, anomaly +0.3°, then a cold February, mean 3.2°, anomaly -1.7°. The highest temperature was 13.9° on the 30th December, equal to the long-term median, and the lowest max was 0.5° on the 28th February, 0.7° above the median. The highest min was 9.9° on the 24th January, again exactly on the median, and the lowest min of -8.3° was on the 28th February, 0.8° below its median. The mean grass min was -1.4°, anomaly -0.3°, and the lowest grass min was -12.6° on the 28th February, anomaly +0.3°. The mean earth temperature at 30 cm depth was 6.0°, anomaly +0.2°, and at 1 m depth, the mean was 8.0°, 0.1° below average. Air frost duration was 236.3 hours, 84% of average. **Rainfall:** The total this winter, including melted snow, is 6 % above average, but is highest only since 2016. Worthy of note, only four winters ago, in 2014, we recorded our wettest winter since before 1883. This present winter, December was the wettest month with 82.6 mm, 132 % of average, then January with 68.7 mm, 111 % of average, with February the driest having 26.4 mm, 62 % of average. The highest daily fall of 15.6 mm was on the 9th December. Rainfall rate reached a maximum of 169 mm/hr at 2302 hours on the 2nd January, and also exceeded 50 mm/hr on the 7th December and 18th January. A dry spell of 5 days ended on the 1st December, and one of 7 days ended on the 26th February. The duration of measurable rain was 189.0 hours, 114 % of average. Snow fell on 13 days, 6 in December, one in January and 6 in February, but there were only 2 mornings with >50 % snow cover, the 10th December, 1cm depth, and the 28th February, <1cm depth. Thunder was absent this winter, but ice pellets fell on the 31st December, 31st January and 11th February. **Sunshine:** This has been a very sunny winter season, the daily mean of 2.90 hours is second highest after 2008 since before 1908. However, a change in sunshine recorder in 1999 means that long-term comparisons should be treated with caution. Each of the winter months had above average sunshine, and February came out top with a daily mean of 4.54 hours, 164% of average, followed by January, 2.23 hours, 110 %, then December 2.08 hours, 117 %. The February total is unusually high, and a near record. Despite the season being very sunny there were some dull periods, December 2nd to 6th, 0.3 hours total, December 20th to 25th, 0.0 hours, January 8th to 14th, 6 sunless days split by 6.4 hours on the 10th. Days with >6 hours sun were December 18th and 28th, January 10th, 17th, 19th and 25th, and February 1st, 7th, 11th, 12th, 15th to 17th, 24th, 25th and 28th. Overall there were 49 days with <3 hours, 16 with =>6 hours and 3 with =>9 hours. **Wind:** The mean speed this season, 7.9 mph, is slightly above average. The windiest day was the 3rd January, mean 17.5 mph, and the highest gust of 63 mph was also on that day. The 26th January was the least windy day, 2.9 mph, and there were 696 calm minutes. Daily mean direction/number of days: N,4 NE,14 E,2 SE,4 S,9 SW,39 W,12 NW,6. Compared with average, SW winds were 8.1 % more frequent, and NE winds 3.0% more frequent, at the expense of S, down 6.1 % and N and E combined, 6.7% down. **Humidity:** The overall mean relative humidity was 83.2 %, and the lowest value was 36 % on the 26th February. Mean water vapour content per kg of air was 4.6 g at 0900 hours and 4.7 g at 1500 hours. **Pressure:** The seasons highest MSL pressure was 1037.9 mb on the 22nd December, and the lowest was 971.9 mb on the 10th December, a span of 66.0 mb, compared with an average of 63.7 mb. **December:** Wet with near average temperature and above average sunshine. Minimum air pressure lowest since 1989. **January:** Mild with rainfall and sunshine above average. Windy at times. 4th mildest this millennium. Lowest min 7th highest in 115 years. Windiest since 2008 with maximum gust of 63 mph highest for January since 2007. Also gust of 61 mph on 18th with a 10 minute mean of 33 mph. **February:** Cold and very sunny with below average rainfall. Coldest since 1996. Mean grass min lowest since 1991. One of the sunniest Februaries in the past century.

Month	Mean	Anom	Mean	Anom	Rain	Anom	Sun	Anom	Mean	Max	Mean	Anom
	Max		Min		mm		hrs		Wind mph	gust	pressure	
December	8.4°	+0.4°	2.2°	+0.1°	82.6	132%	64.5	117%	7.7	45	1013.9	-1.8
January	9.3°	+1.5°	3.0°	+1.2°	68.7	111%	69.1	110%	8.8	63	1011.2	-5.5
February	7.0°	-1.2°	-0.5°	-2.0°	26.4	62%	127.0	164%	7.5	40	1017.9	+0.5

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

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.