

August 2017 Beaufort Weather Station Summary

Weather Underground

Data from the MaREI weather station are available to access in real time from the Weather Underground site. The Link to the Beaufort Weather Station is:

<https://www.wunderground.com/personal-weather-station/dashboard?ID=ICARRIGA4#history>

Operating since 1993, Weather Underground (or “Wunderground” as it is commonly referred to by weather enthusiasts!) facilitates access to meaningful weather data from around the world. The platform leverages the extensive personal weather station community that exists worldwide (including the Beaufort Weather Station), with over 250,000 personal weather station owners volunteering their weather data. The meteorology team at Weather Underground make the data they receive meaningful through analysis, and provide insight into the science behind weather data and the relationships between weather and climate. The extensive personal weather station that powers this service is an example of the power of citizen science initiatives.

Beaufort Building

Temperature – Warm at the start of the month then gradually becoming cooler

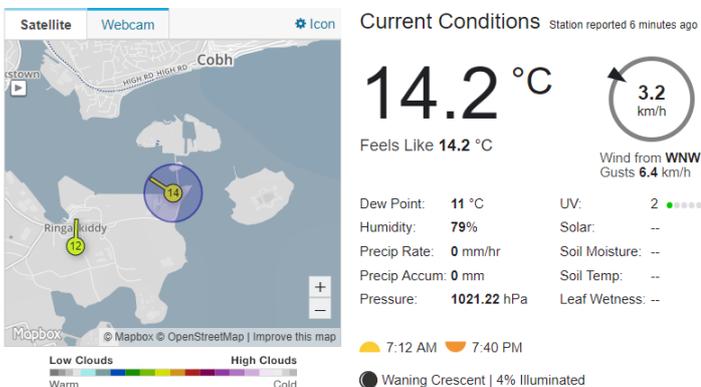
The highest temperature recorded during the month was 22.3°C (on August 20th), the lowest was 9.6°C (on August 18th). The mean temperature for August was 15.5°C: +0.4°C compared to the Climate Normal (1961-1990) for Cork harbour, this is the lowest temperature departure recorded so far this year since observations began on April 11th, replacing July’s former low:

Month	Departure from Normal Temperature (1961-1990)	Mean
April*	+2.2°C	
May	+2.4°C	
June	+1.8°C	
July	+1.3°C	
August	+0.4°C	

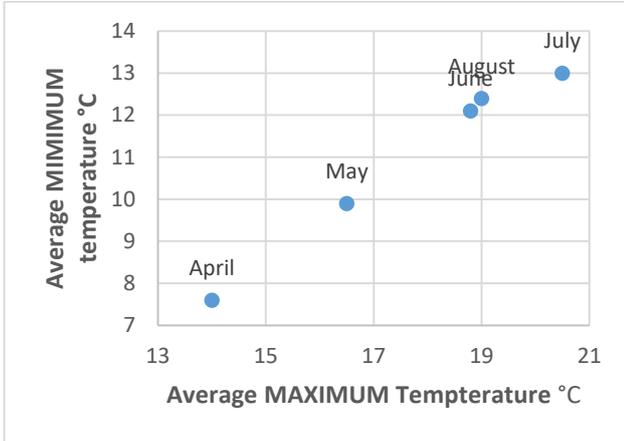
* Beaufort weather station began recording April 11 2017

The Highest Diurnal Temperature Range (DTR) was 9.3°C on August 9th (Maximum daily temperature [MxDt] 20.7°C Minimum daily temperature [MnDt] 11.4°C), the lowest DTR was 2.3°C on July 25, (MxDt 17.8°C, MnDt 15.5°C). Mean DTR for the month of July was 6.6°C.

As we move into the Autumnal Months (September October November) we can expect to see temperatures gradually decreasing as the tilt of the Earth’s axis (approximately 23.5 degrees) combined with its annual orbit around the sun will mean less



energy is received at our latitude, this is also manifested in shorter daylengths.



Rainfall – Close to July LTA at Roches Point

In total, the weather station recorded 76mm of rain during the month of August; this represents 95% of the August Long Term Average (LTA) of the nearest station operated by Met Éireann (Roches Point, 1961-1990 79.9mm) and stands in contrast to the rest of the country, which received almost 200% of its normal rainfall for the month in some areas of the north and west.

Amount	LTA Roches Point	August Beaufort WOS
Mean no. of days with $\geq 0.2\text{mm}$	14	14
Mean no. of days with $\geq 1.0\text{mm}$	11	12
Mean no. of days with $\geq 5.0\text{mm}$	5	5
Greatest Daily Amount	84.4mm	14.8mm

The wettest day was August 20th with 14.8mm of rain, followed by August 2nd with 13.2mm of rain. The highest consecutive period with recorded rain was 4 days (between August 1st-4th and August 20th-24th) a total of 17.8mm of rain (or 23.5% of the total amount recorded in August) fell between August 1st and 4th, whereas 20mm fell between August 20th and 24th (26% of the total amount for August). The longest consecutive period with no rain recorded was 6 days (between August 24th-29th).

Month	Amount	Departure from Normal (1961-1990)
April*	10.8mm	-43.9mm
May	53.2mm	-10.7mm
June	99.4mm	+45.5mm
July	45.8mm	-7.3mm
August	76mm	-3.9mm

* Beaufort weather station began recording April 11 2017

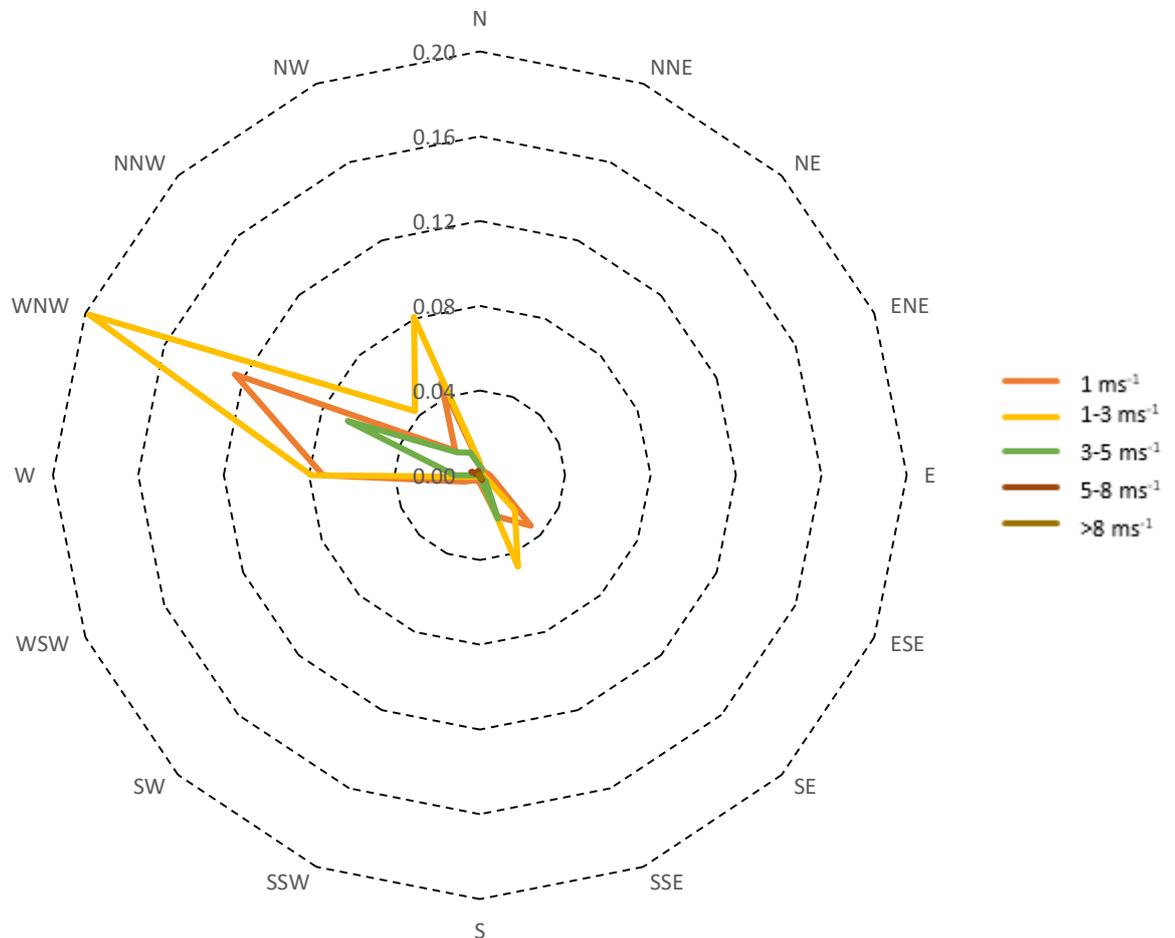


Top: Bridge collapse in Co. Derry due to heavy rain in August BL: Flooded roads in Co. Donegal BR: Heavy rain in Dublin during August 2017

**Wind – Light at the start of the month,
becoming fresher towards the end**

WNW, suggesting a strong Atlantic regime
(see August wind rose below)

Following the trends of this summer, the wind speeds for August generally remained low, with a mean wind speed of 1.7 ms^{-1} . The average gust speed was 7.4 ms^{-1} for the month, with the highest gust occurring on the 18th of August between 15:00 and 15:05 with a speed of 13.9 ms^{-1} (27 knots, 50.4 kmh^{-1}). Wind direction was predominantly from the



Summary Table August 2017

Variable	Recording for July	Timing
Highest Temperature	22.3°C	August 20
Lowest Temperature	9.6°C	August 18
+/- Climate Normal (1961-1990)	+0.4°C	5 th consecutive above average record since BMS started recording (April 11 2017)
Highest DTR	9.3°C (MxDT 20.7°C MnDT 11.4°C)	August 09
Lowest DTR	2.3°C (MxDT 17.8°C MnDT 15.5°C)	August 21
Mean DTR	6.6°C	
Rainfall	76mm	Total July
Rainfall Roches Pt.	78.6mm	BWS represents 97%
No. of days recorded rainfall	19	
No. of dry days	12	
Wettest day	14.8mm	August 20
Departure from normal rainfall (1961-1990)	-8.4mm	
Longest period no rain	6 days	August 24-29
Dominant wind direction	W/WNW/NW	
Mean Wind Speed	1.7ms ⁻¹	
Average gust speed	7.4ms ⁻¹	
Highest gust	13.9ms ⁻¹	July 26

NOAA Report

MONTHLY CLIMATOLOGICAL SUMMARY for AUG. 2017

NAME: Beaufort Building CITY: Cork STATE: Munster, IRE
ELEV: 5 m LAT: 51° 50' 04" N LONG: 8° 18' 07" E



TEMPERATURE (°C), RAIN (mm), WIND SPEED (m/s)

DAY	MEAN TEMP	HIGH	TIME	LOW	TIME	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	15.2	18.9	13:35	11.5	6:05	2.9	0.0	0.8	1.6	6.7	11:05	WNW
2	16.2	19.4	12:25	13.7	1:25	2.0	0.1	13.2	2.9	13.0	4:15	WNW
3	16.6	20.2	15:00	14.0	4:25	1.8	0.3	1.6	3.1	8.9	1:15	WNW
4	15.6	18.9	12:40	13.7	4:05	2.4	0.0	2.2	1.3	5.8	18:40	NW
5	14.6	18.9	16:05	11.3	5:50	3.4	0.0	0.0	2.1	7.6	12:20	WNW
6	14.3	17.9	13:05	10.5	2:10	3.6	0.0	1.2	1.8	9.4	13:25	WNW
7	14.4	18.2	12:30	11.1	6:20	3.6	0.0	1.0	1.1	5.4	20:20	WNW
8	13.6	16.6	13:25	11.6	4:40	4.4	0.0	4.6	1.7	6.7	13:40	NW
9	15.8	20.7	17:00	11.4	4:30	2.7	0.6	0.0	3.2	9.8	11:10	NNW
10	14.9	19.3	17:00	10.5	6:25	3.2	0.1	0.0	1.4	7.2	17:20	WNW
11	17.0	21.4	14:55	13.4	0:05	1.7	0.7	0.2	2.3	7.6	12:00	WNW
12	15.8	19.1	18:10	13.0	5:55	2.2	0.1	0.0	1.9	7.2	10:20	WNW
13	14.8	17.8	13:15	12.9	6:30	3.2	0.0	8.6	1.4	7.6	19:50	SSE
14	16.2	18.5	16:55	12.8	23:55	1.8	0.0	7.0	1.2	5.8	17:15	WNW
15	15.3	20.0	16:40	11.3	3:35	3.0	0.3	0.0	1.4	6.3	12:35	WNW
16	16.3	18.0	15:35	14.3	0:05	1.7	0.0	12.0	1.8	9.4	8:05	SE
17	15.8	19.4	14:55	11.4	5:10	2.4	0.2	2.4	2.0	9.4	14:50	WNW
18	13.9	17.8	14:15	9.6	6:25	4.1	0.0	0.4	3.4	13.9	15:05	WNW
19	14.6	18.4	15:45	10.8	5:50	3.4	0.0	0.0	2.4	8.9	11:45	WNW
20	16.5	22.3	16:15	13.3	5:40	2.1	0.6	14.8	2.1	8.0	9:15	SSE
21	16.8	17.8	16:40	15.5	23:50	1.2	0.0	0.4	0.9	5.4	13:35	WNW
22	15.8	17.9	17:35	13.8	00:00	2.2	0.0	4.4	1.7	5.8	5:15	SSE
23	15.8	19.9	14:45	12.2	2:55	2.5	0.3	0.4	1.2	7.6	14:35	WNW
24	15.5	19.2	16:25	11.7	5:00	2.6	0.1	0.0	1.4	8.9	16:35	W
25	15.9	18.3	12:35	13.4	7:10	2.1	0.0	0.0	0.5	4.5	12:10	WNW
26	16.8	20.1	15:45	14.2	5:10	1.4	0.2	0.0	0.9	4.9	14:45	SSE
27	17.4	19.9	17:40	16.3	5:35	0.9	0.3	0.0	0.6	3.6	12:35	WNW
28	16.9	19.6	13:45	14.8	22:35	1.2	0.2	0.0	1.5	6.3	16:50	W
29	14.1	17.6	17:05	10.6	6:00	3.9	0.0	0.0	1.5	7.2	15:20	WNW
30	13.6	18.1	15:10	9.7	7:05	4.4	0.0	0.6	0.8	5.8	18:20	WNW
31	14.1	18.5	13:50	10.6	7:15	3.9	0.0	0.2	0.9	6.3	14:00	WNW
	15.5	22.3	20	9.6	18	82.0	4.1	76.0	1.7	13.9	18	WNW

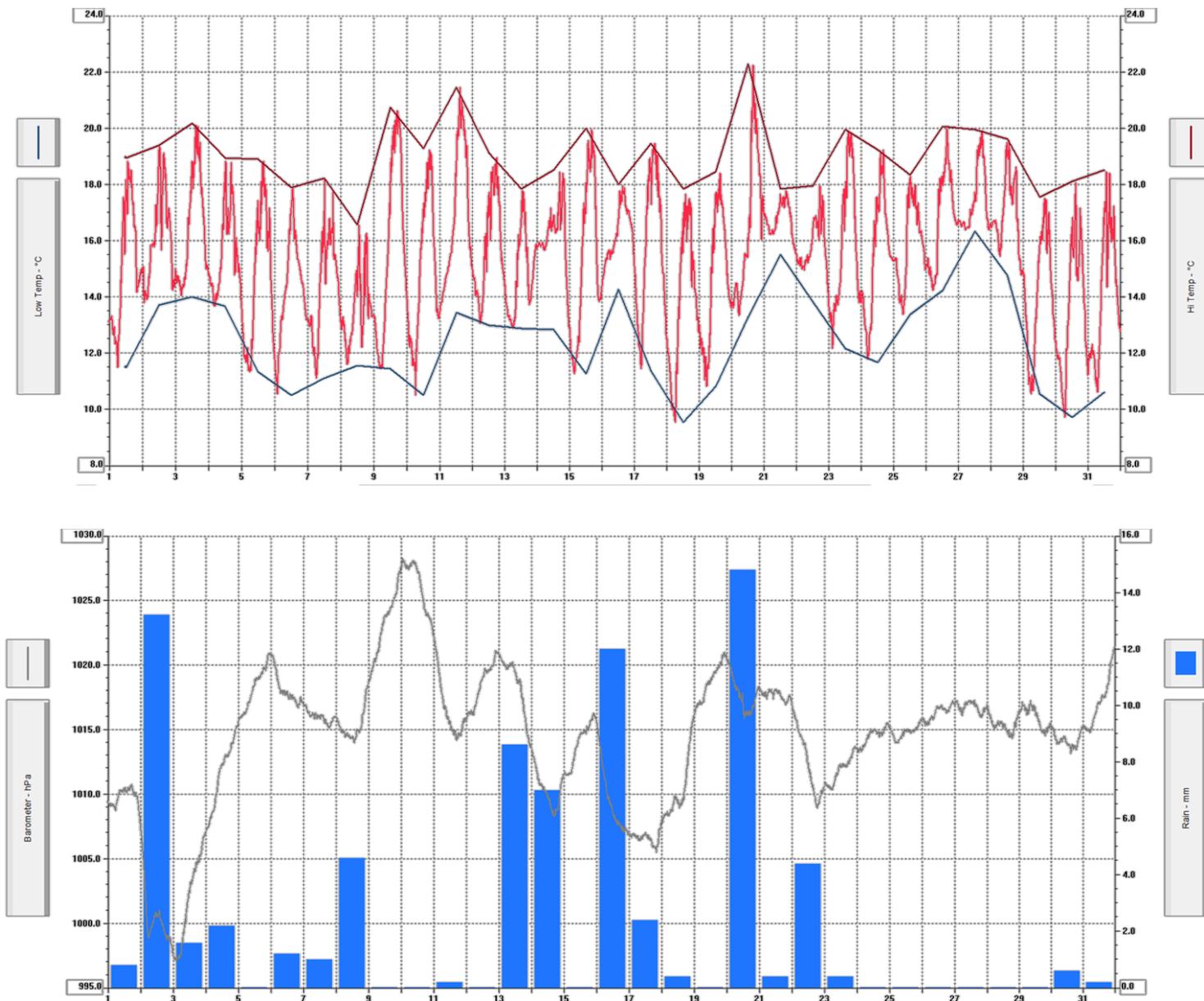
Max >= 32.0: 0
Max <= 0.0: 0
Min <= 0.0: 0
Min <= -18.0: 0

Max Rain: 14.81 ON 20/08/17

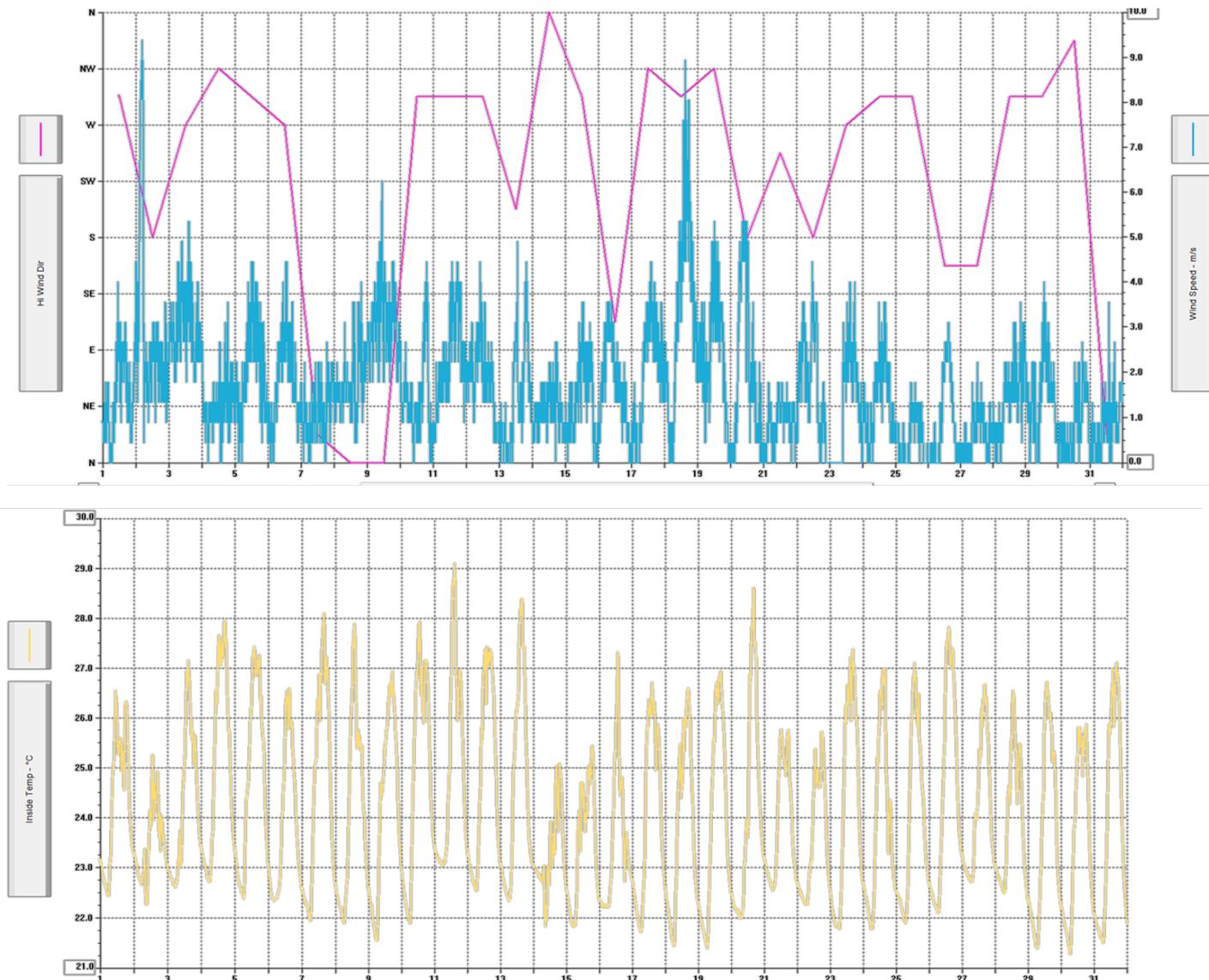
Days of Rain: 19 (> .2 mm) 9 (> 2 mm) 0 (> 20 mm)

Heat Base: 18.0 Cool Base: 18.0 Method: Integration

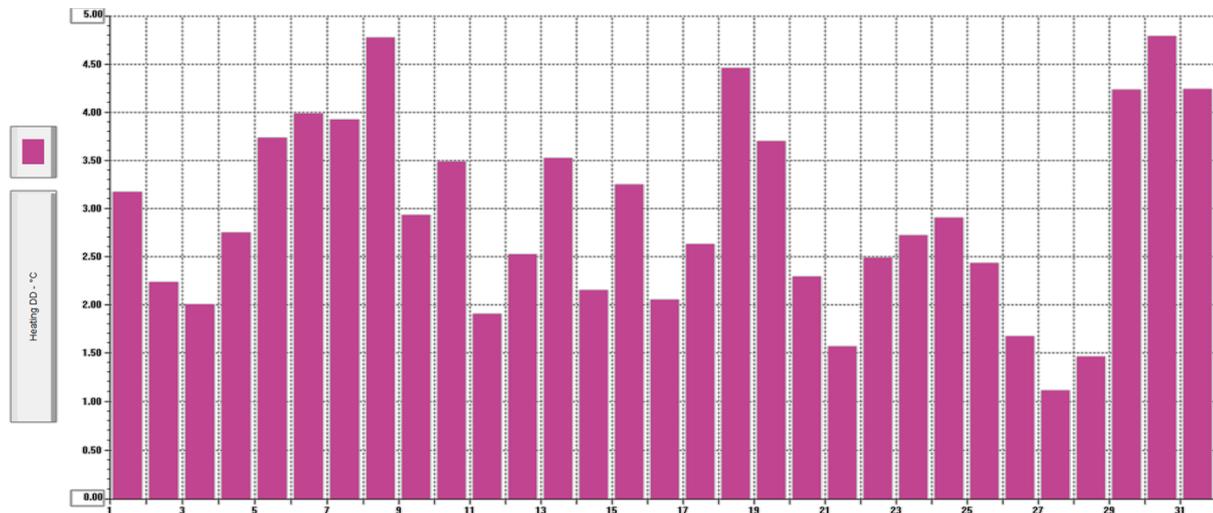
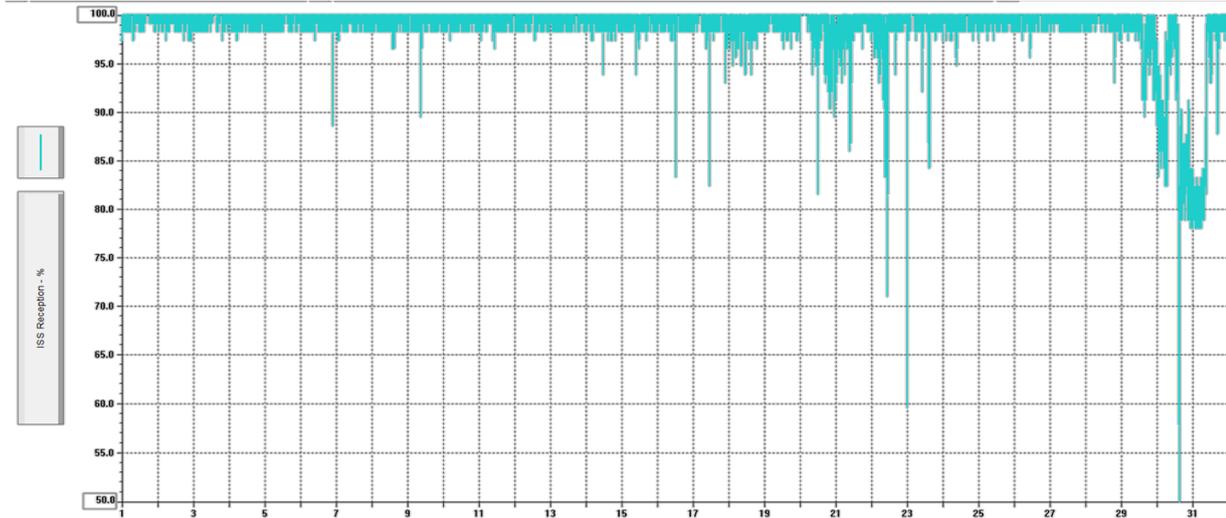
Time Series for August 1 to August 31 2017 for Min, Mean and Max Temperature (top), Precipitation and Pressure (bottom)



Time Series for August 1 to August 31 2017 for Wind speed and high wind direction (top) and inside air temperature (bottom)



Time Series for August 1 to August 31 2017 for ISS data packet receipt (top) and heating degree-days (bottom)



Real-time information from the station can now be viewed live on the MaREI website at:

<http://www.marei.ie/data-hub/weather-station/>

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This report was undertaken voluntarily please contact either of the authors directly for more information