

METEOROLOGY

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Palmer Station is Station 89061 in the World Meteorological Organization (WMO) Worldwide Network. Automated surface synoptic observations are made 8 times each day and emailed to the National Atmospheric and Oceanographic Administration (NOAA) for entry into the Global Telecommunication System (GTS).

The Palmer Automatic Weather Station (PAWS) is a collection of sensors, computers, and software that records the meteorological data and generates synoptic reports. PAWS began recording data in September of 2015. It was a replacement for the Palmer Meteorological Observing System (PalMOS) that was taken down in November 2017. The PAWS sensors and data acquisition hardware are located on a ridge in the backyard at -64.774130° -64.047440° at an elevation of 38.3 meters above sea level using the World Geodetic System-84. In addition to the synoptic and METAR reporting, PAWS also archives the current conditions at one-minute intervals and displays both raw data and graphs of the sensor data on our local intranet.

The Research Associate acts as Chief Weather Observer on station, measuring, compiling and distributing all meteorological data. Snow accumulation is physically observed by taking an average of five accumulation stakes found near the PAWS system. All weather data is archived locally and forwarded to the University of Wisconsin on the first day of each month for archiving and further distribution.

The local weather station (PAWS) operated well throughout the month. All remote island sites were consistently operational this month until April 27, when the Joubins and Gosslers stations began to fade in and out with the daylight. As winter sets in, all three remote island sites will lose sufficient solar power and will go dark for the remainder of the season.

One minute weather data is archived on the AMRC website:

<http://amrc.ssec.wisc.edu/data/ftp/pub/palmer/>.

Palmer Monthly Met summary for April, 2023

Temperature
Average: -0.2 °C / 31.7 °F
Maximum: 8.5 °C / 47.3 °F on 3 Apr 15:57
Minimum: -5.9 °C / 21.38 °F on 11 Apr 04:27
Air Pressure
Average: 981 mb
Maximum: 1012.6 mb on 12 Apr 10:46
Minimum: 954.6 mb on 23 Apr 00:50
Wind
Average: 16 knots / 18.4 mph
Peak (5 Sec Gust): 58 knots / 67 mph on 3 Apr 17:04 from NNE (31 deg)
Prevailing Direction for Month: NNE
Surface
Total Rainfall: 160.8 mm / 6.33 in
Total Snowfall: 32 cm / 12.5 in
Greatest Depth at Snow Stake: 19 cm / 7.4 in
WMO Sea Ice Observation: 1-5 bergs, bergy bits, growlers, and brash ice
Average Sea Surface Temperature: .55 °C / 33 °F

This month, the April high temperature record (1989-present) was broken with a high of 8.5 °C on April 3. This surpasses the prior record of 8.2 °C in April 2020.

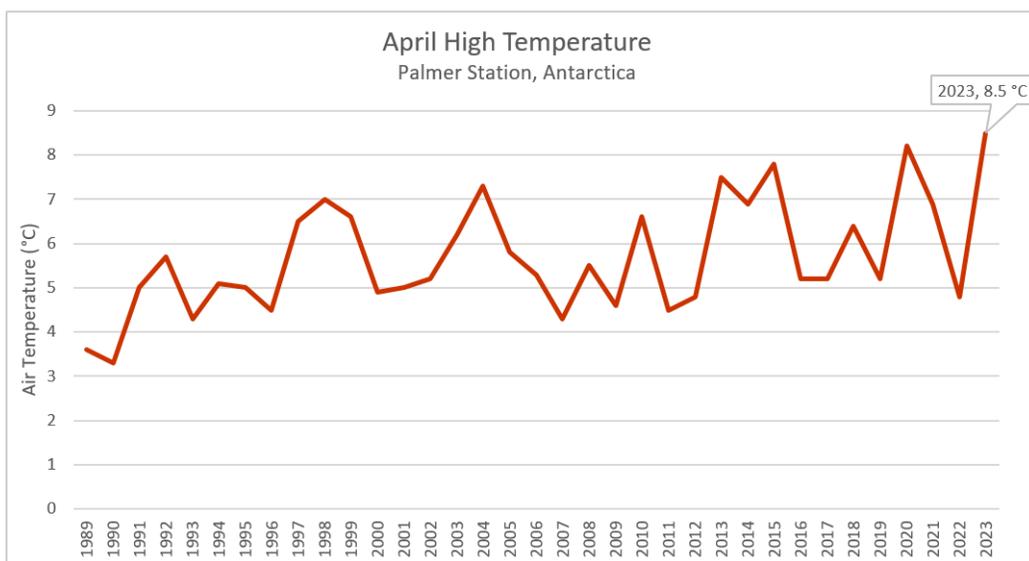


Figure 9. Palmer Station April high temperature, 1989-present.

The April average sea surface temperature record (2015-present) was also broken, with an average of 0.55 °C. The previous record was 0.52 °C in April 2019.

This month was the wettest April on record (1990-present), with 160.8 mm of melted precipitation. This narrowly surpasses the prior record of 160.5 mm in 2019. It was also tied for the windiest on record (1989-present), with an average wind speed of 16 knots (first reached in April 1998).