

Meteorological Services

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- The connection to the TDAU server was lost on the 3rd, causing data to be missing from 0113–0349 UTC (13:13–15:49 NZST). Local weather observation data was estimated during this time.
- The AT/RH#1 sensor was replaced with another calibrated unit on the clean air tower on the 16th. This was done due to a malfunction of the aspirator fan motor.
- Winter Solstice occurred at 0504 UTC (17:04 NZST) on the 21st.
- The connection to the TDAU server was lost on the 25th, causing data to be missing from 0056–0216 UTC (12:56–14:16 NZST). Local weather observation data was estimated during this time.
- All routine data collection and reporting activities continued as normal.

Weather: June 2013

Temperatures:	Date	
Average		-52.7°C / -62.9°F
Departure from Normal	+5.8°C / +10.4°F	Maximum 06/19/13 -28.8°C / -19.8°F
Minimum	06/07/13 -77.7°C / -107.9°F	
Station Pressure in millibars:		
Average pressure		685.7 mb / 20.249 in. Hg
Departure from Normal		+4.7 mb / +0.139 in. Hg
Highest pressure	06/19/13	702.4 mb / 20.742 in. Hg
Lowest pressure	06/06/13	664.5 mb / 19.623 in. Hg
Physiological altitude in feet and meters:		
Average physio-altitude	10,414 ft / 3,174 m	Highest physio-altitude 06/06/13
	11,218 ft / 3,419 m	
Lowest physio-altitude	06/19/13	9,794 ft / 2,985 m
Visibility:		9 days with ¼ mile or less
Wind:		
Average Wind Speed		15.5 mph or 13.5 knots
Maximum Gust	06/17/13	51 mph or 44 knots
Maximum Gust Direction		Grid North
Vectored Wind Direction		045 degrees
Vectored Wind Speed		11.3 knots
Prevailing Direction		Grid North or 020 degrees
** Records**		

- Day 2: The peak wind speed of 32 knots/37 mph broke the previous peak wind speed record of 31 knots/36 mph set in 1989.
- Day 2: The temperature of -30.1°C/-22.2°F broke the previous maximum temperature record of -37.6°C/-35.7°F set in 1987.
- The temperature of -30.1°C/-22.2°F broke the previous maximum temperature record for the month of June of -30.9°C/-23.6°F set on June 1st, 1993 and June 14th, 1963.

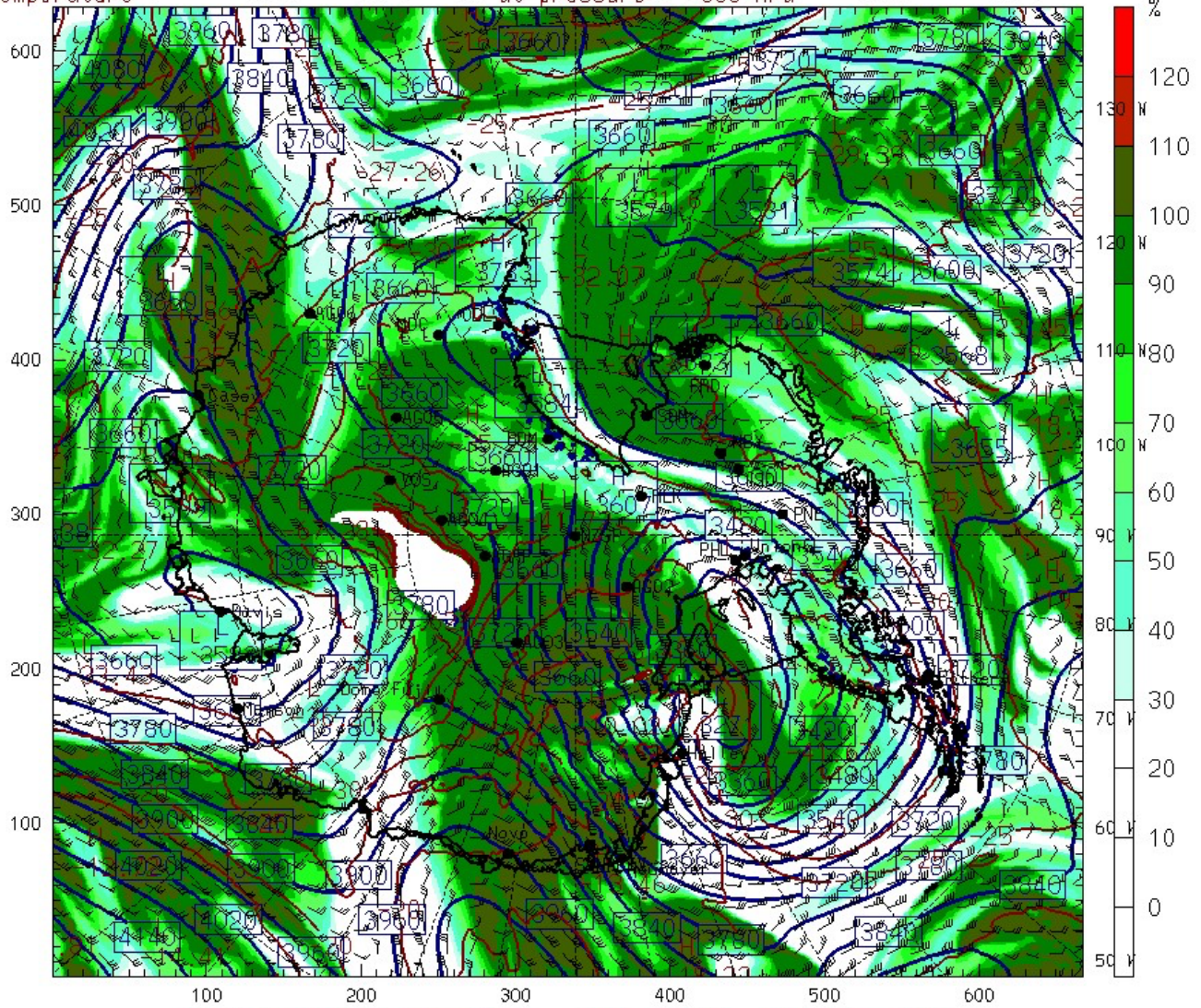
- Day 3: The temperature of $-32.1^{\circ}\text{C}/-25.8^{\circ}\text{F}$ broke the previous maximum temperature record of $-34.8^{\circ}\text{C}/-30.6^{\circ}\text{F}$ set in 1987.
- Day 6: The temperature of $-75.7^{\circ}\text{C}/-104.3^{\circ}\text{F}$ broke the previous minimum temperature record of $-73.5^{\circ}\text{C}/-100.3^{\circ}\text{F}$ set in 2004.
- Day 7: The temperature of $-77.7^{\circ}\text{C}/-107.9^{\circ}\text{F}$ broke the previous minimum temperature record of $-72.9^{\circ}\text{C}/-99.2^{\circ}\text{F}$ set in 2004.
- Day 8: The temperature of $-77.4^{\circ}\text{C}/-107.3^{\circ}\text{F}$ broke the previous minimum temperature record of $-73.6^{\circ}\text{C}/-100.5^{\circ}\text{F}$ set in 2004.
- Day 12: The peak wind speed of 33 knots/38 mph broke the previous peak wind speed record of 30 knots/35 mph set in 1986.
- Day 17: The peak wind speed of 44 knots/51 mph broke the previous peak wind speed record of 35 knots/40 mph set in 2009.
- The peak wind speed of 44 knots/51 mph broke the previous peak wind speed record for the month of June of 40 knots/46 mph set on June 22nd, 1990.
- Day 18: The peak wind speed of 40 knots/46 mph broke the previous peak wind speed record of 34 knots/39 mph set in 1990.
- Day 18: The temperature of $-36.2^{\circ}\text{C}/-33.2^{\circ}\text{F}$ broke the previous maximum temperature record of $-39.5^{\circ}\text{C}/-39.1^{\circ}\text{F}$ set in 1997.
- Day 19: The peak wind speed of 37 knots/43 mph tied the previous peak wind speed record set in 2001.
- Day 19: The temperature of $-28.8^{\circ}\text{C}/-19.8^{\circ}\text{F}$ broke the previous maximum temperature record of $-32.1^{\circ}\text{C}/-25.8^{\circ}\text{F}$ set in 1997.
- The temperature of $-28.8^{\circ}\text{C}/-19.8^{\circ}\text{F}$ broke the previous maximum temperature record for the month of June of $-30.1^{\circ}\text{C}/-22.2^{\circ}\text{F}$ set on June 2nd, 2013.
- Day 20: The temperature of $-35.9^{\circ}\text{C}/-32.6^{\circ}\text{F}$ broke the previous maximum temperature record of $-37.0^{\circ}\text{C}/-34.6^{\circ}\text{F}$ set in 1961.
- Day 28: The temperature of $-40.9^{\circ}\text{C}/-41.6^{\circ}\text{F}$ broke the previous maximum temperature record of $-41.8^{\circ}\text{C}/-43.2^{\circ}\text{F}$ set in 2001.

The cyclonic wave east of the Antarctic Peninsula was responsible for transporting moisture from Weddell Sea to the South Pole, which warmed temperatures up to $-30.1^{\circ}\text{C}/-22.2^{\circ}\text{F}$ on the 2nd. Multiple waves following this trajectory occurred on the 10th through the 22nd, with the peak temperature of $-28.8^{\circ}\text{C}/-19.8^{\circ}\text{F}$ occurring on the 19th.

AMPS 10-km WRF
 Fcst. 24 h

Init. 00 UTC Sat 01 Jun 13
 Valid. 00 UTC Sun 02 Jun 13

Relative humidity (w.r.t. ice) at pressure = 600 hPa
 Geopotential height at pressure = 600 hPa
 Temperature at pressure = 600 hPa sm = 2



Model Info: V3.3.1 M KF MYJ PBL WSM 5class Noah LSM 10 km, 60 levels, 49 sec
 SN: Goddard DIFF: simple KM: 2D Smagor

600 hPa display of the Antarctic Mesoscale Prediction System (AMPS) at 10km resolution forecasted at 0000 UTC 2 June 2013. The time of initialization is 0000 UTC 1 June 2013. Light to dark green fill represents relative humidity with respect to ice. Blue lines represent isoheights (lines of constant geopotential height (m)). Red lines represent isotherms (lines of constant temperature (°C)). Wind barbs are in knots (1 knot = 0.514 m s⁻¹). NZSP represents South Pole