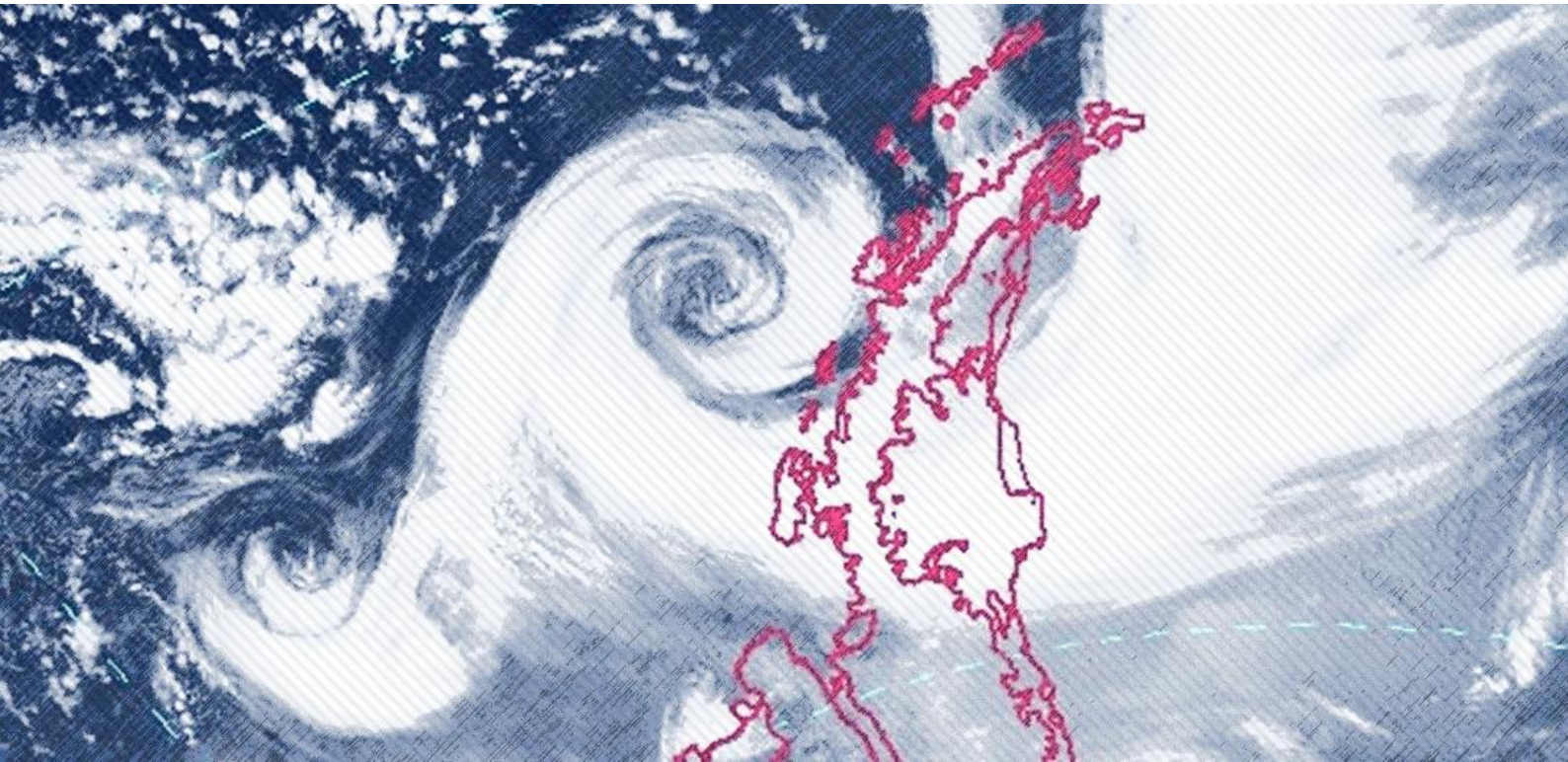




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

MARCH 2023

During this month, only 06 events were registered among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. The stations hit by a cyclone this month was Frei, Marambio, Palmer and Casey. The cyclone that hit Casey on the 19th reached the category of Antarctic Hurricane AH-1.

TOTAL OF EVENTS REGISTERED IN STATIONS IN MARCH

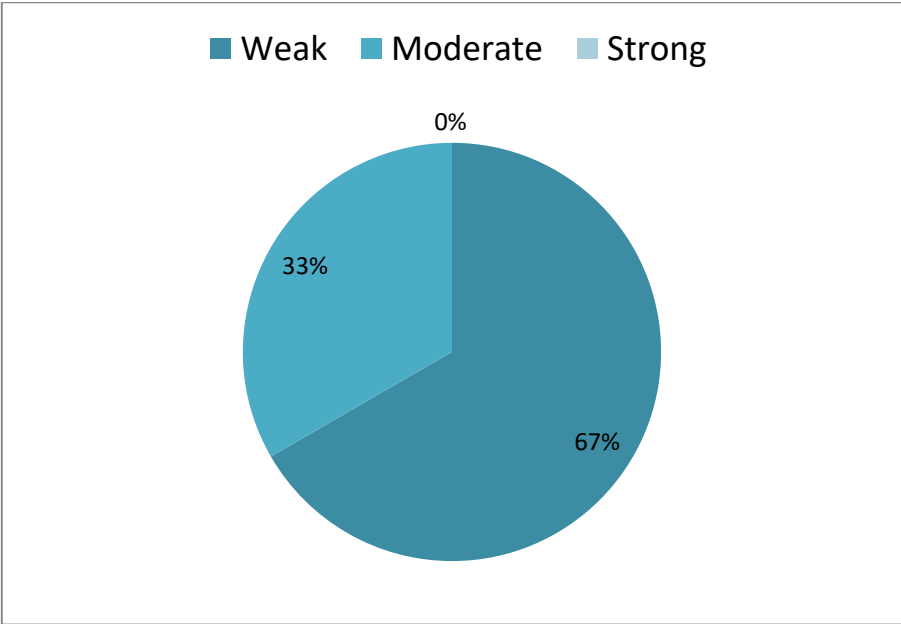
2017	2018	2019	2020	2021	2022	2023
07	06	02	06	05	05	06

STATISTICS OF THE MONTH: MARCH 2023

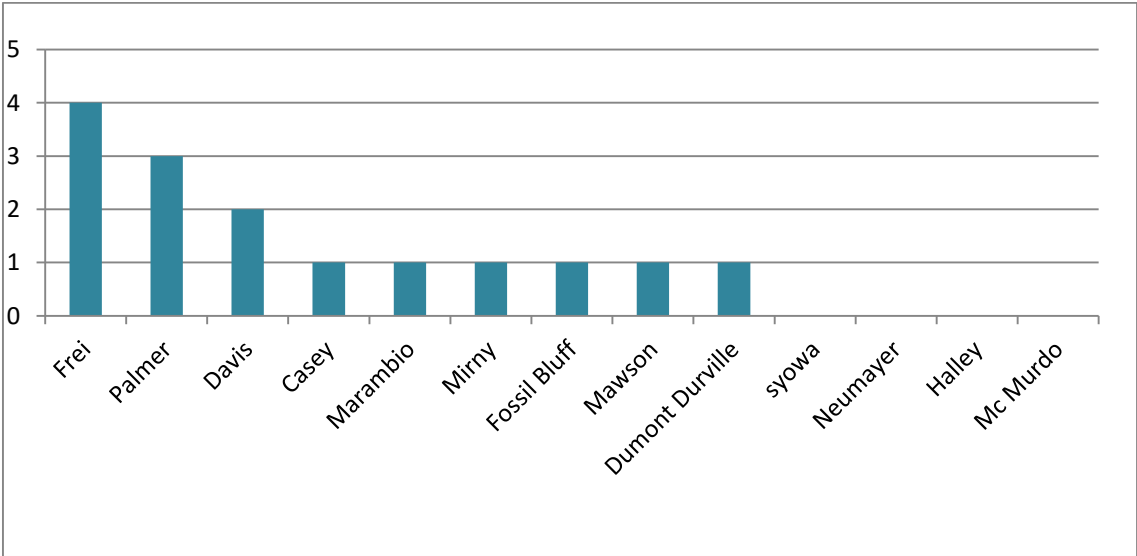
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	02
B2	1.3 a 1.8	Moderate	04
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-38.0 hPa/24h	945.1 hPa	36.5 m/s
Casey Station	Marambio Station	Casey Station
Mar. 27	Mar. 22	Mar. 19

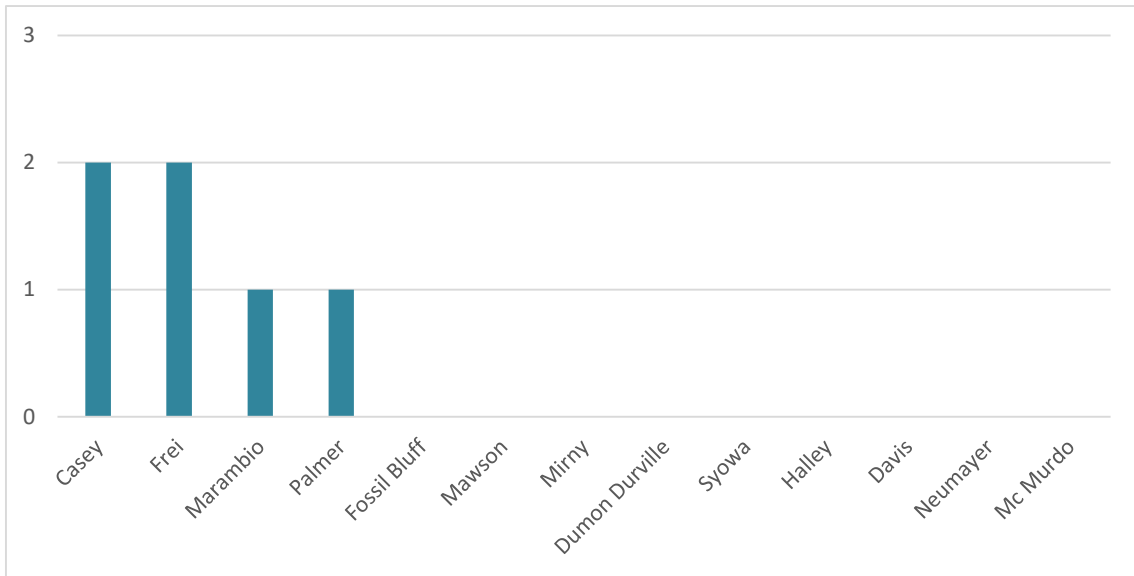
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2023



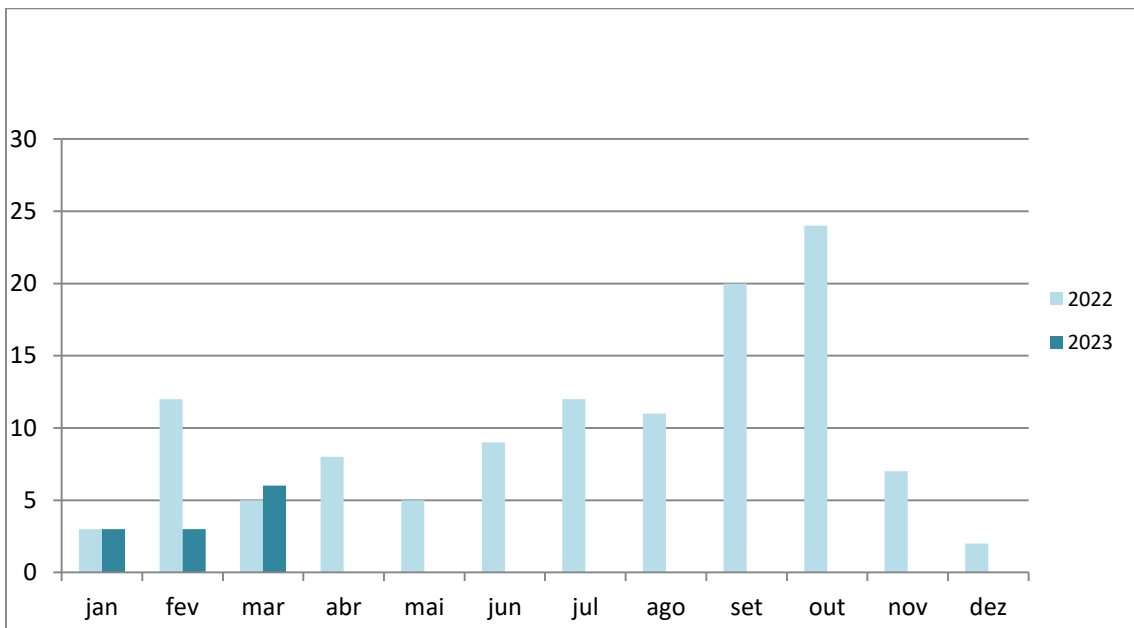
TOTAL OF EVENTS REGISTERED BY STATION IN 2023



TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF MARCH/2023

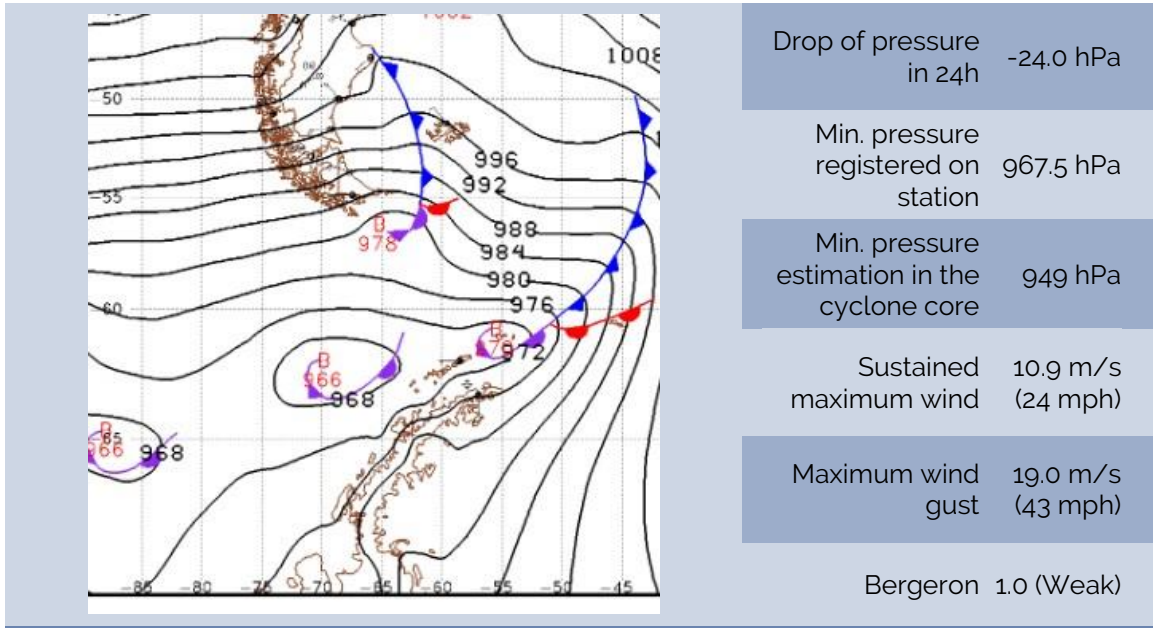


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



BOMB CYCLONE N°07/2022- DATE: MAR./01/2023

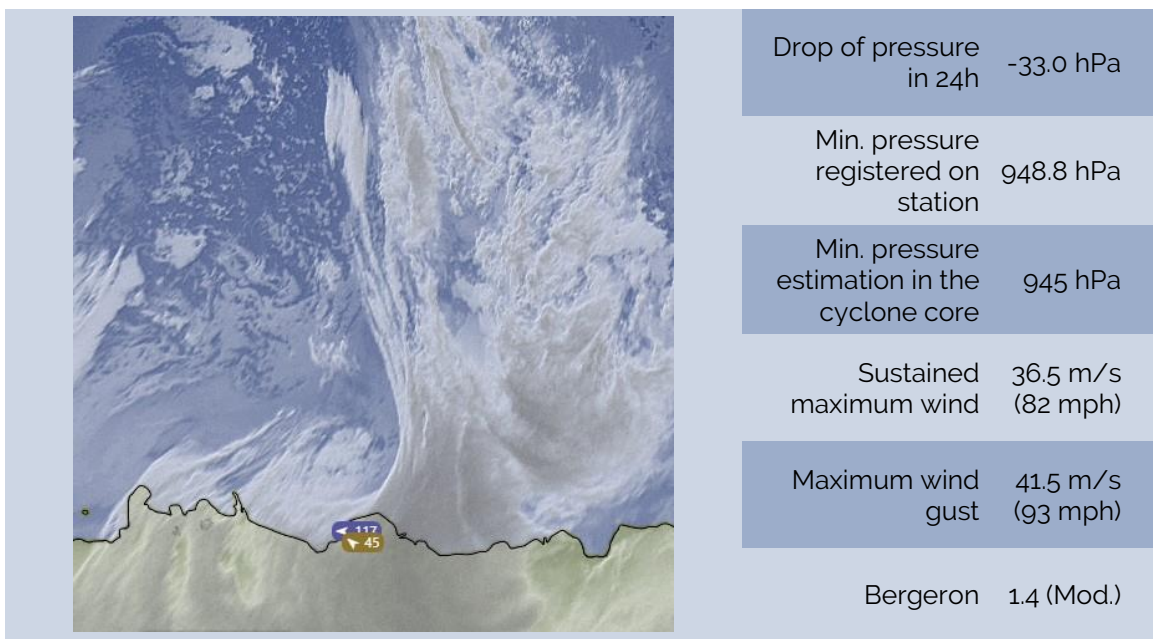
LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



BOMB CYCLONE N°08/2022- DATE: MAR./19/2023

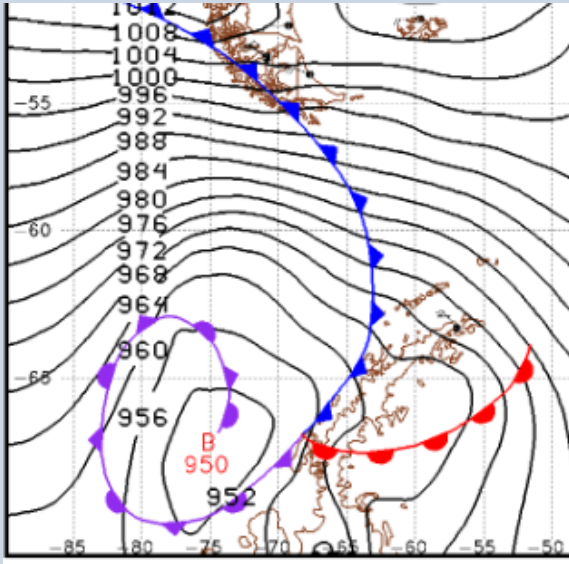
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)

(ANTARCTIC HURRICANE CAT-1)



BOMB CYCLONE N°09/2022- DATE: MAR./22/2023

LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



Drop of pressure in 24h -26.7 hPa

Min. pressure registered on station 962.2 hPa

Min. pressure estimation in the cyclone core 949 hPa

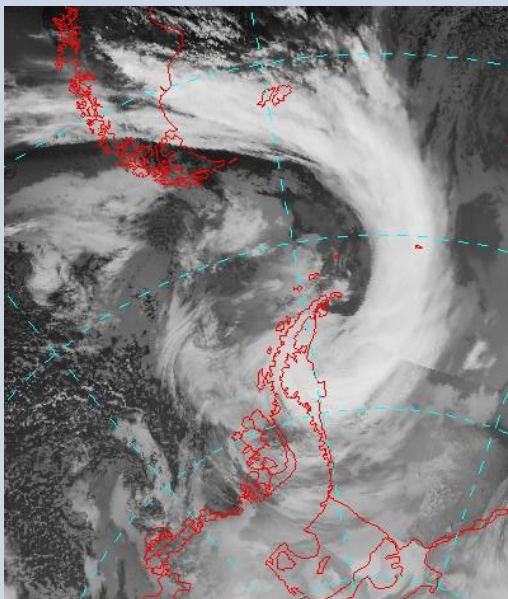
Sustained maximum wind 14.0 m/s (31 mph)

Maximum wind gust 34.5 m/s (77 mph)

Bergeron 1.1 (Weak)

BOMB CYCLONE N°10/2022- DATE: MAR./22/2023

LOCAL: MARAMBIO STATION – WMO 89055 (OPERATED BY ARGENTINA)



Drop of pressure in 24h -30.0 hPa

Min. pressure registered on station 945.1 hPa

Min. pressure estimation in the cyclone core 949 hPa

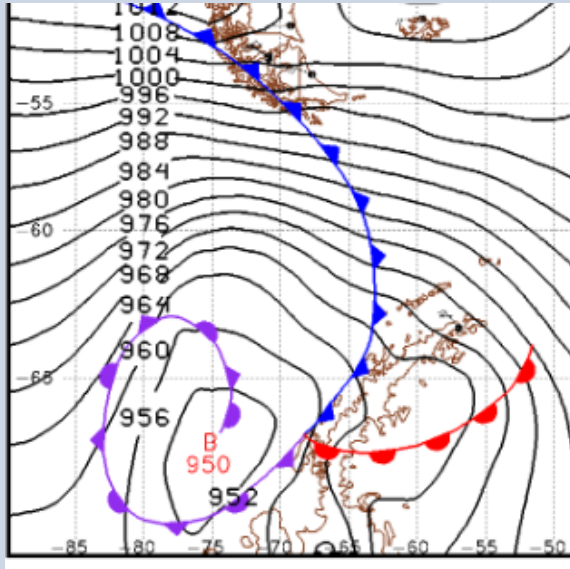
Sustained maximum wind 17.0 m/s (38 mph)

Maximum wind gust None m/s (mph)

Bergeron 1.3 (Mod.)

BOMB CYCLONE N°11/2022- DATE: MAR./22/2023

LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)



Drop of pressure in 24h -30.8 hPa

Min. pressure registered on station 952.3 hPa

Min. pressure estimation in the cyclone core 949 hPa

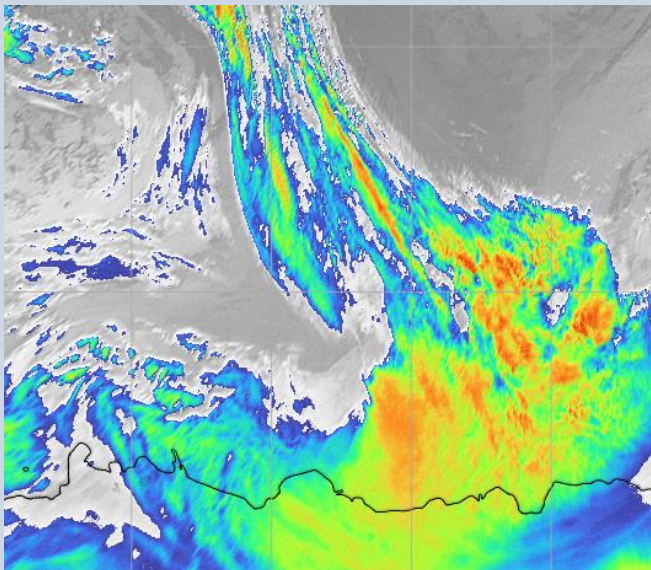
Sustained maximum wind 19.0 m/s (mph)

Maximum wind gust None m/s (43 mph)

Bergeron 1.3 (Mod.)

BOMB CYCLONE N°12/2022- DATE: MAR./27/2023

LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



Drop of pressure in 24h -38.0 hPa

Min. pressure registered on station 957.6 hPa

Min. pressure estimation in the cyclone core 955 hPa

Sustained maximum wind 31.5 m/s (71 mph)

Maximum wind gust 43.0 m/s (96 mph)

Bergeron 1.6 (Mod.)

SOURCES

<https://worldview.earthdata.nasa.gov>

<http://www.bom.gov.au>

<https://data.aad.gov.au>

<http://www.smn.gov.ar>

<http://meteoarmada.directemar.cl>

<https://www.marinha.mil.br/chm/chm/dados-do-smm-cartas-sinoticas>