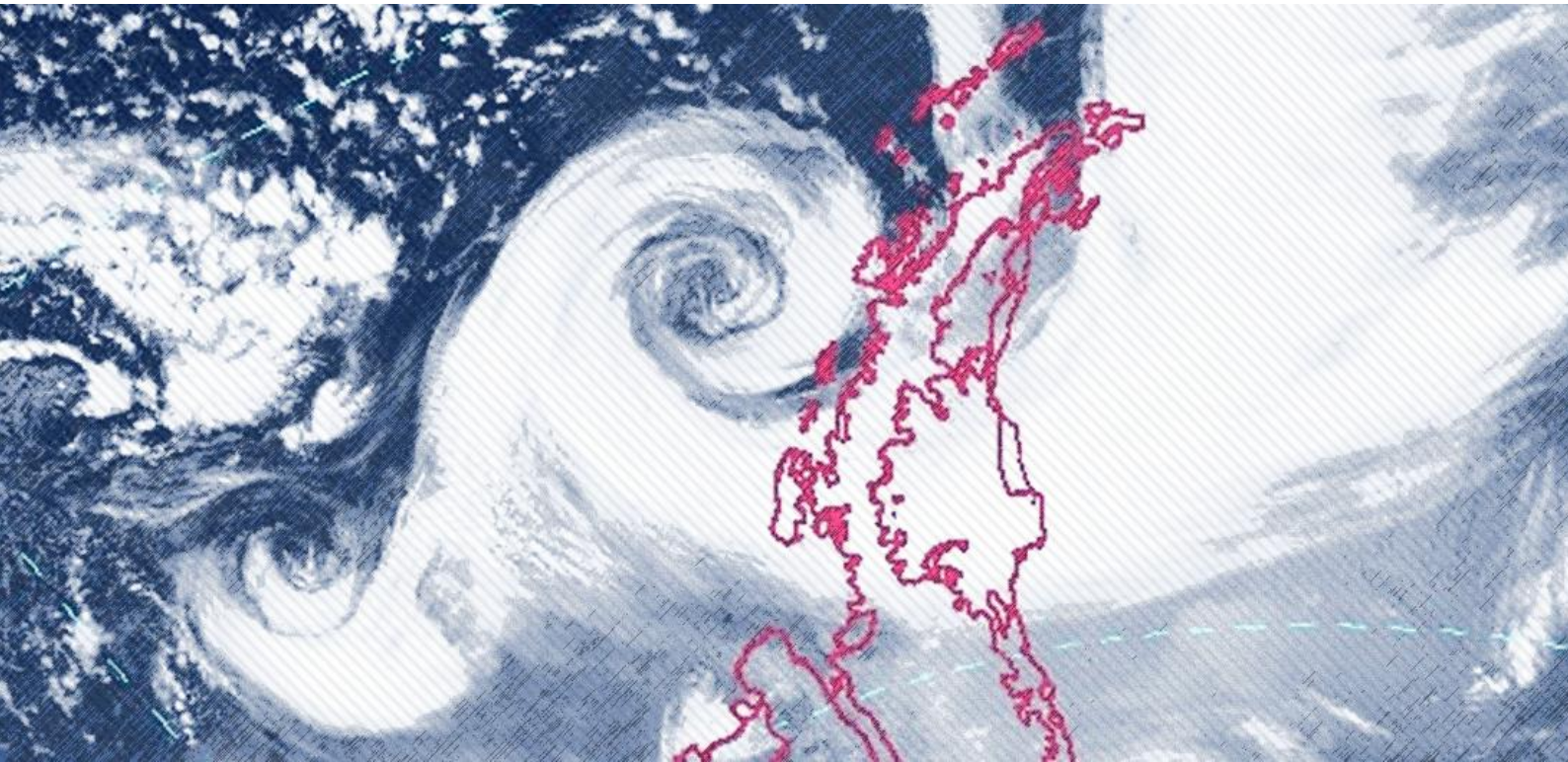




WORLD  
ENVIRONMENTAL  
CONSERVANCY

# MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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## MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

MAY 2023

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During this month, 10 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 Mawson, Frei, Syowa, Palmer, Casey, Marambio and Dumont D'Urville. The cyclone that hit Casey, Dumont D'Urville and Marambio reached the category of Antarctic Hurricane AH-1.

### TOTAL OF EVENTS REGISTERED IN STATIONS IN MAY

2017	2018	2019	2020	2021	2022	2023
10	08	06	04	07	05	10

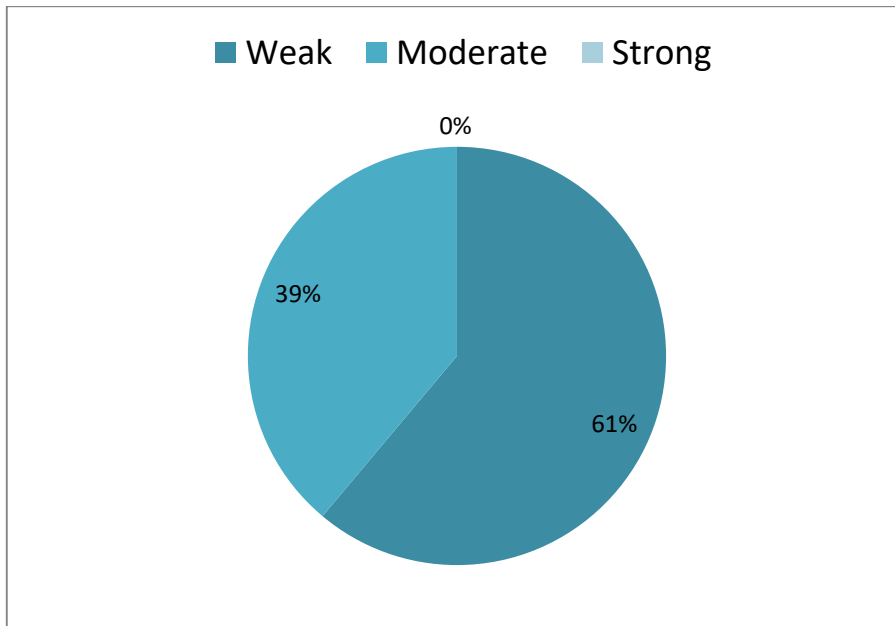
### STATISTICS OF THE MONTH: MAY 2023

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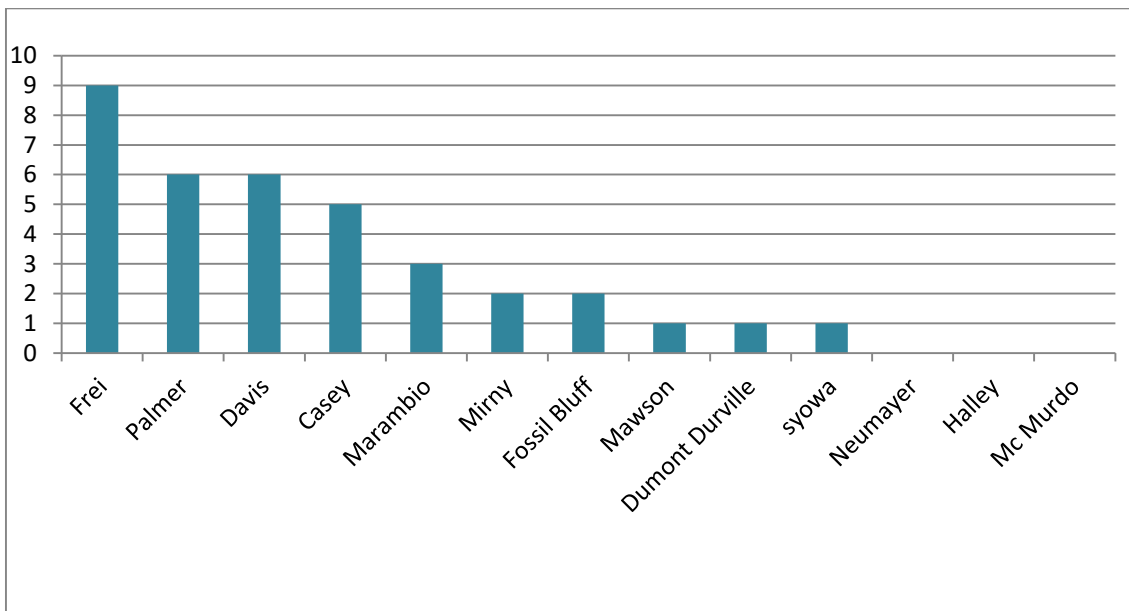
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	04
B2	1.3 a 1.8	Moderate	06
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-40.9 hPa/24h	936.4 hPa	40.5 m/s
Marambio Station	Syowa Station	Casey Station
May 11	May 13	May 25

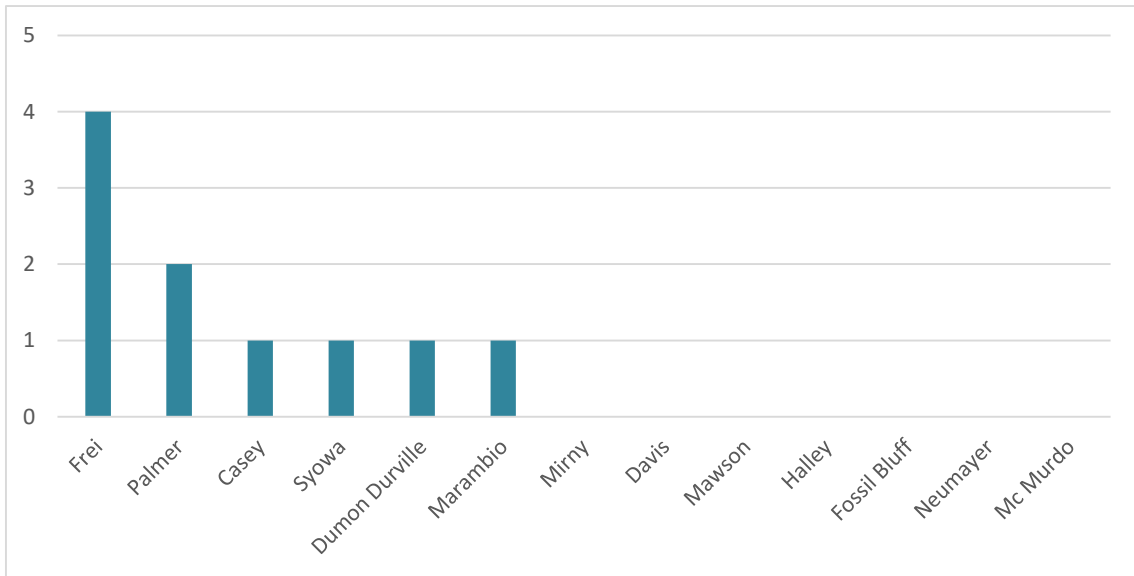
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2023



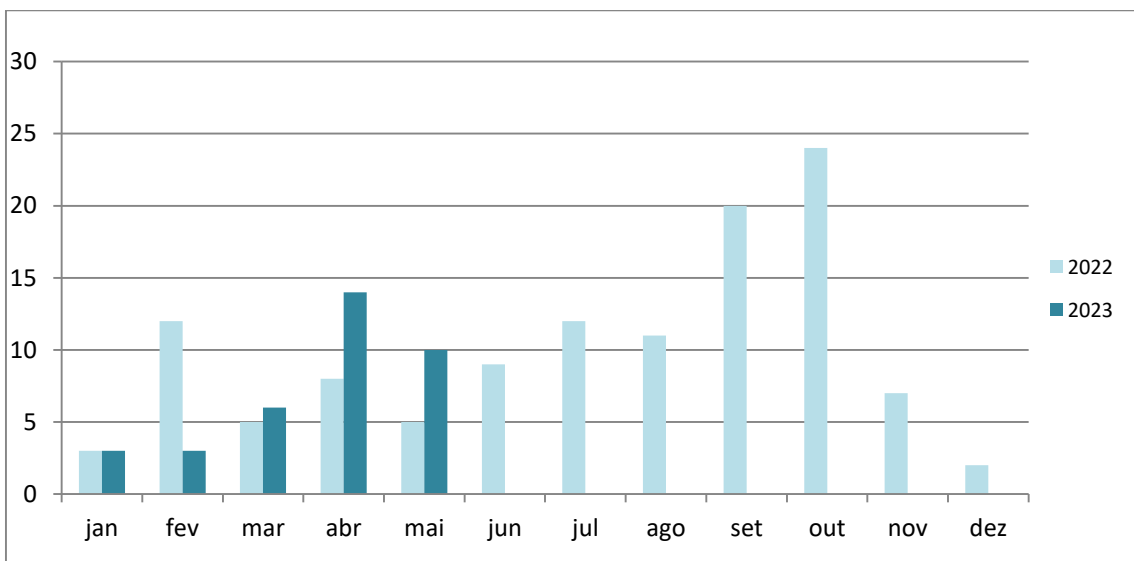
TOTAL OF EVENTS REGISTERED BY STATION IN 2023



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

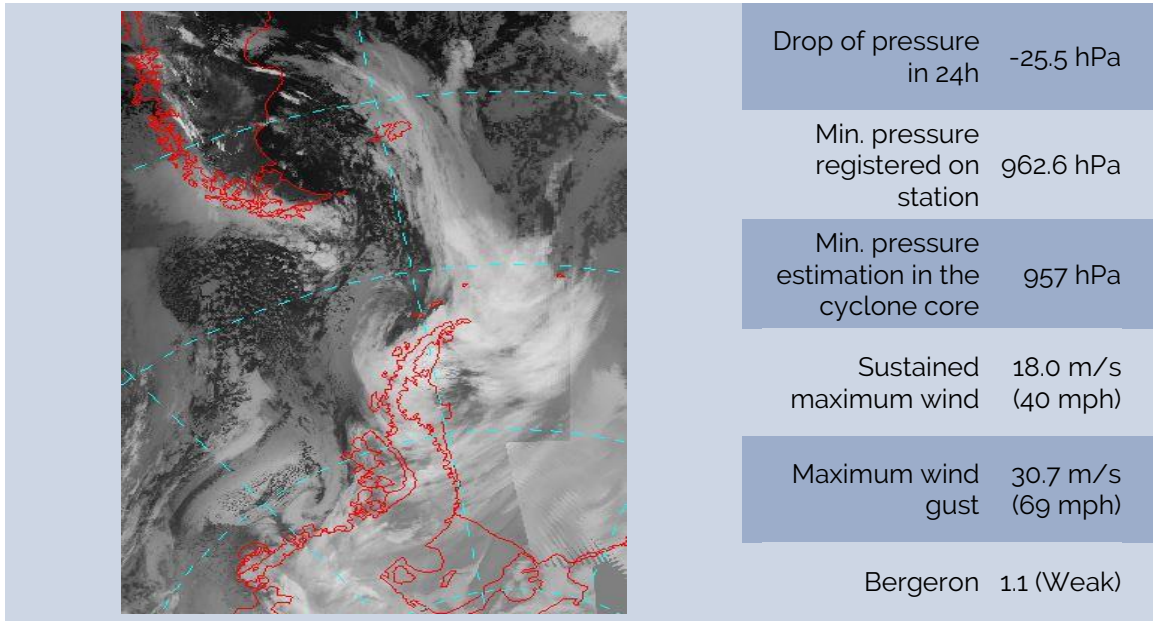


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



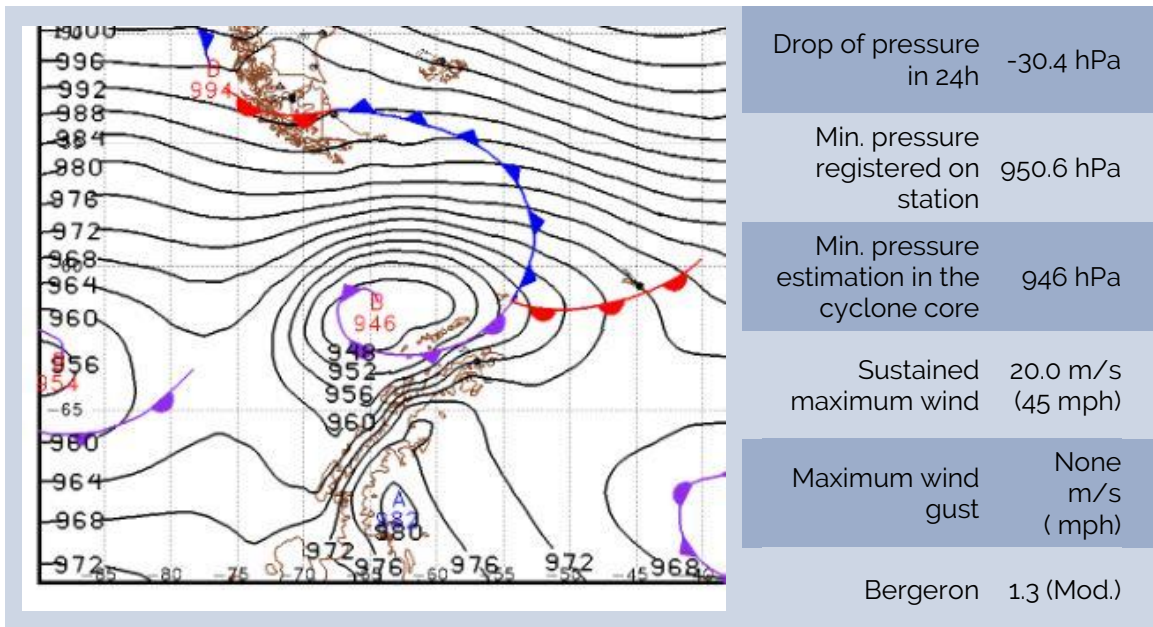
## BOMB CYCLONE N°27/2023- DATE: MAY/01/2023

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



## BOMB CYCLONE N°28/2023 - DATE: MAY/06/2023

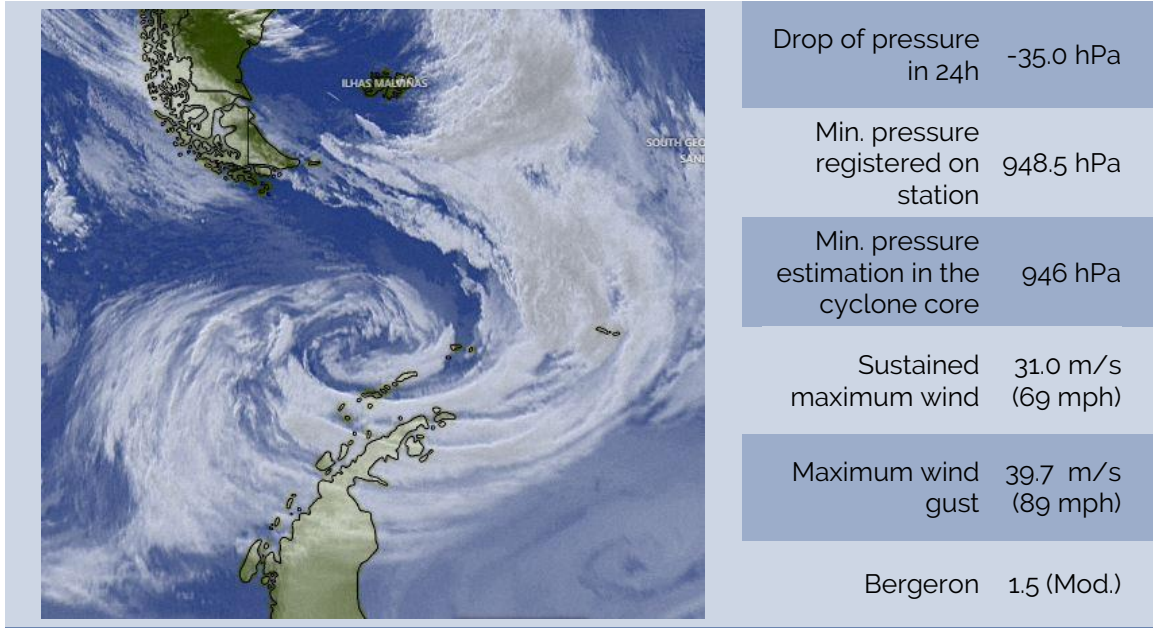
LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)





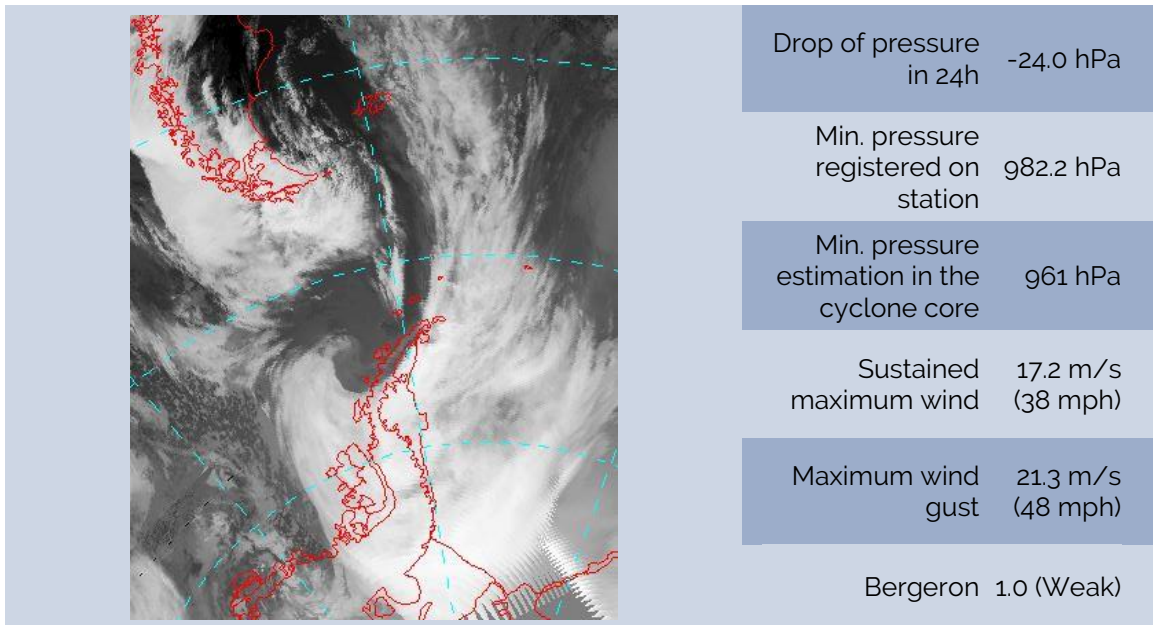
## BOMB CYCLONE N°29/2023 - DATE: MAY/06/2023

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



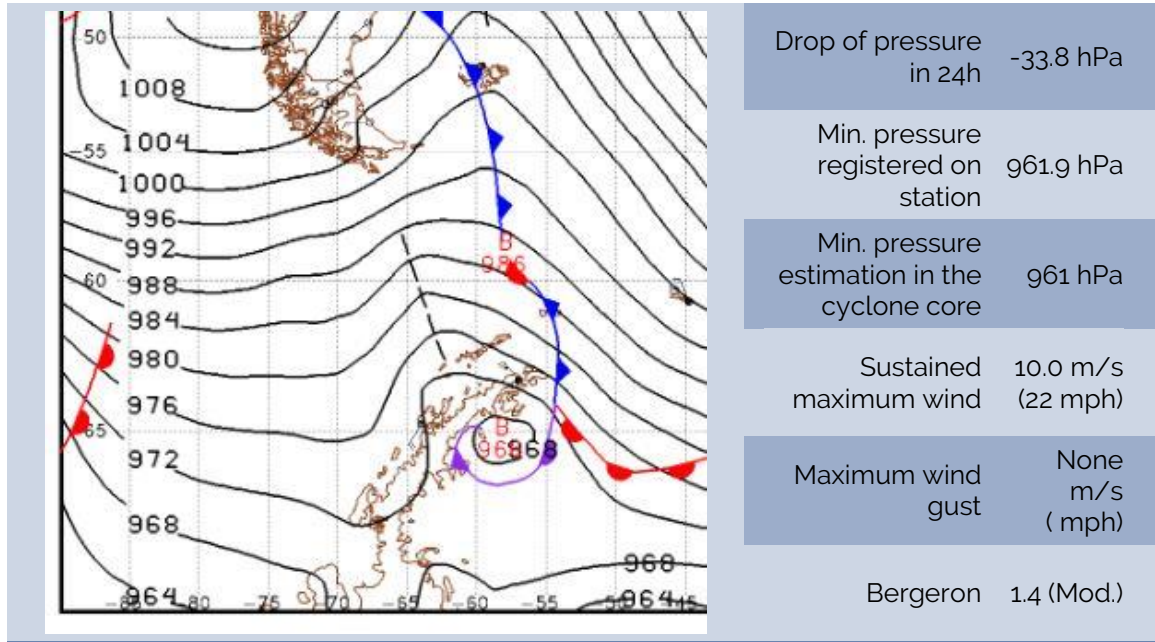
## BOMB CYCLONE N°30/2023 - DATE: MAY/11/2023

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



## BOMB CYCLONE N°31/2023 - DATE: MAY/11/2023

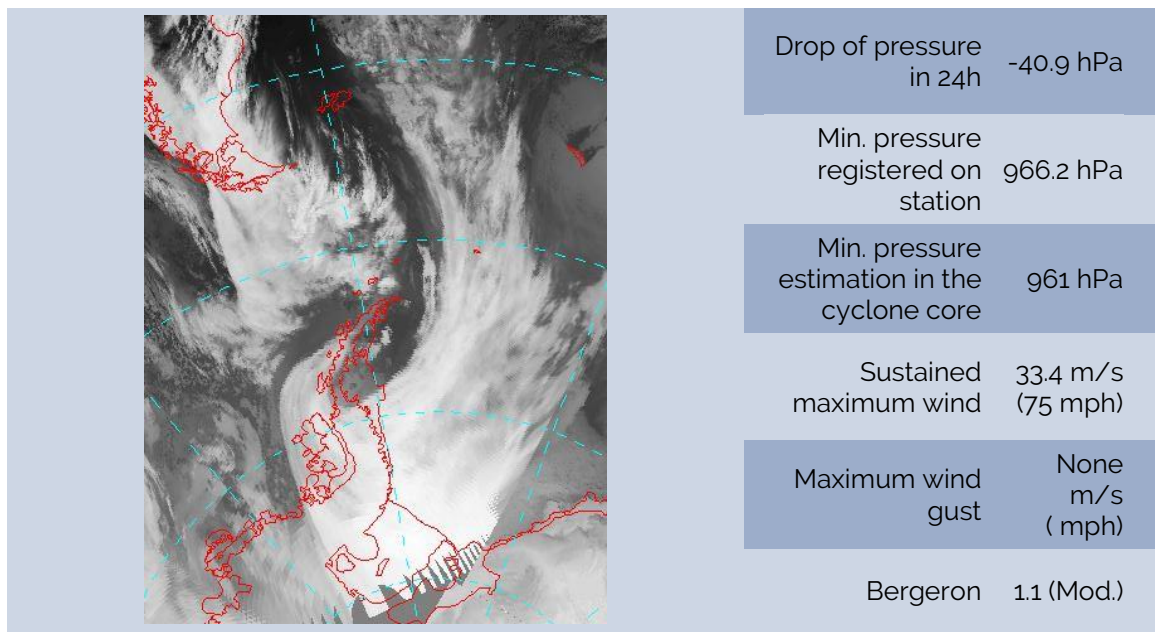
LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)



## BOMB CYCLONE N°32/2023 - DATE: MAY/11/2023

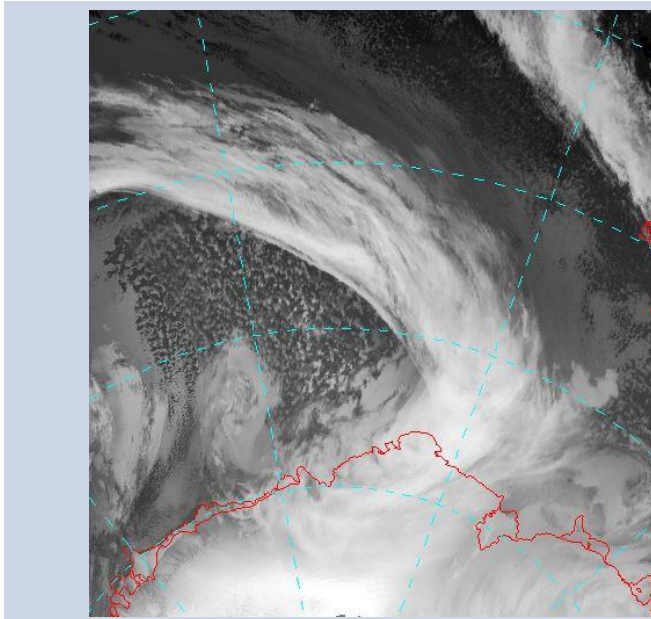
LOCAL: MARAMBIO STATION – WMO 89055 (OPERATED BY ARGENTINA)

### ANTARCTIC HURRICANE – AH-1



## BOMB CYCLONE N°33/2023 - DATE: MAY/13/2023

LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)



Drop of pressure in 24h -39.3 hPa

Min. pressure registered on station 936.4 hPa

Min. pressure estimation in the cyclone core 936 hPa

Sustained maximum wind 26.5 m/s (59 mph)

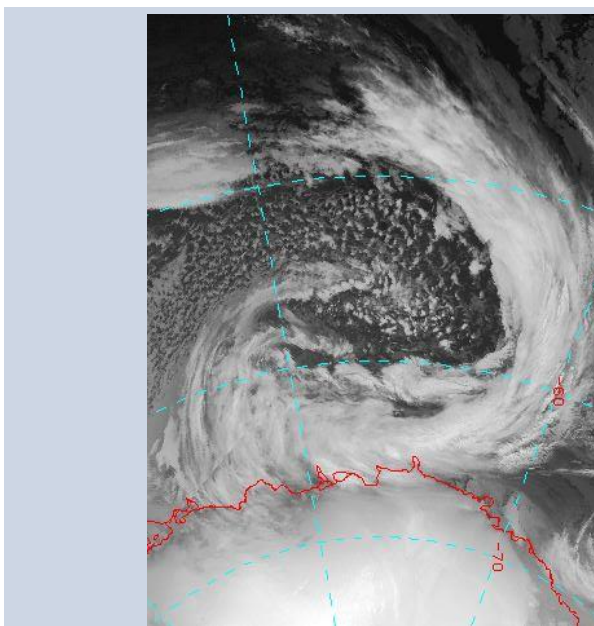
Maximum wind gust None m/s (mph)

Bergeron 1.5 (Mod.)

## BOMB CYCLONE N°34/2023 - DATE: MAY/14/2023

LOCAL: DUMONT D'URVILLE STATION – WMO 89642 (OPERATED BY FRANCE)

### ANTARCTIC HURRICANE – AH-1



Drop of pressure in 24h -27.1 hPa

Min. pressure registered on station 947.9 hPa

Min. pressure estimation in the cyclone core 938 hPa

Sustained maximum wind 33.0 m/s (74 mph)

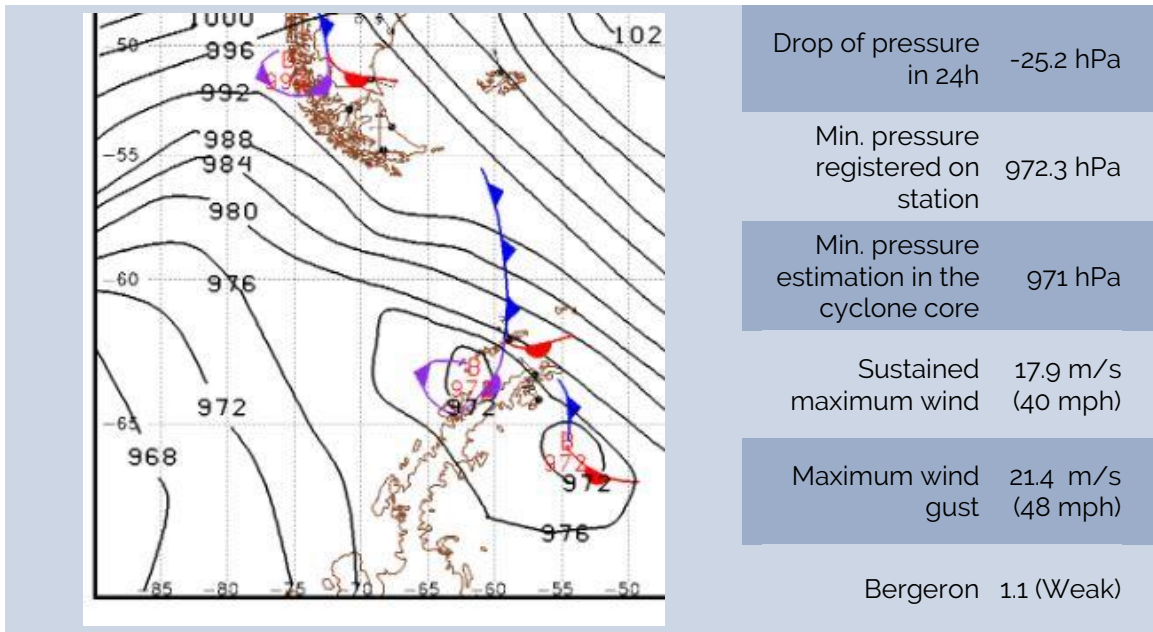
Maximum wind gust 49.5 m/s (111 mph)

Bergeron 1.1 (Weak)



## BOMB CYCLONE N°35/2023 - DATE: MAY/16/2023

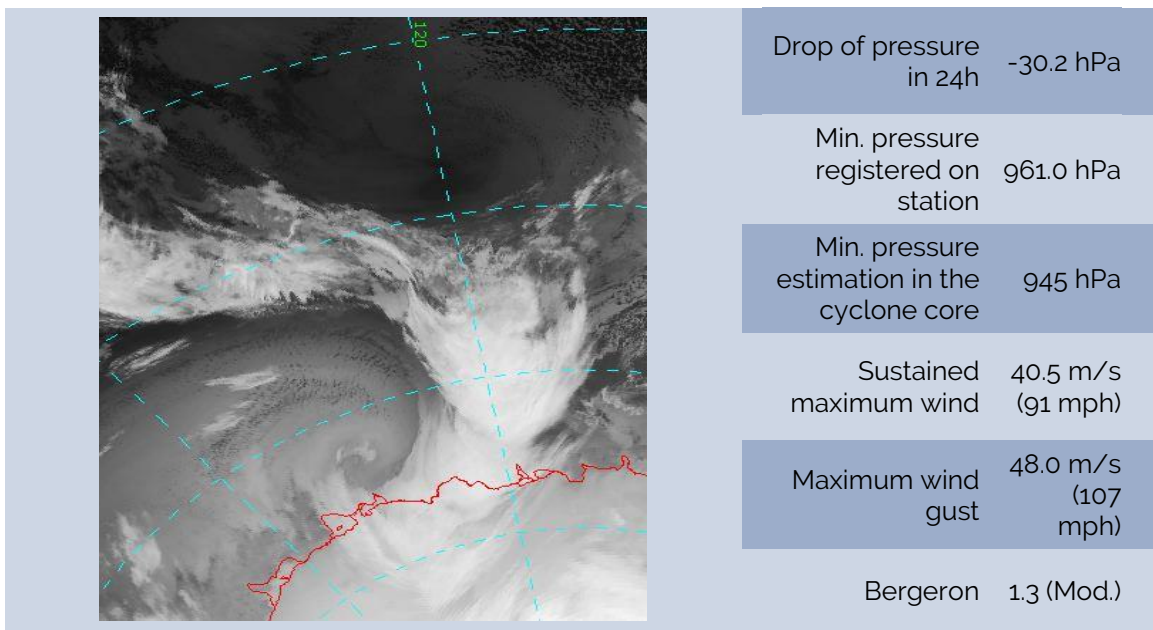
LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



## BOMB CYCLONE N°36/2023 - DATE: MAY/25/2023

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

**ANTARCTIC HURRICANE – AH-1**



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## SOURCES

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

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

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

<http://meteoarmada.directemar.cl>

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

[www. https://amrc.ssec.wisc.edu/](https://amrc.ssec.wisc.edu/)