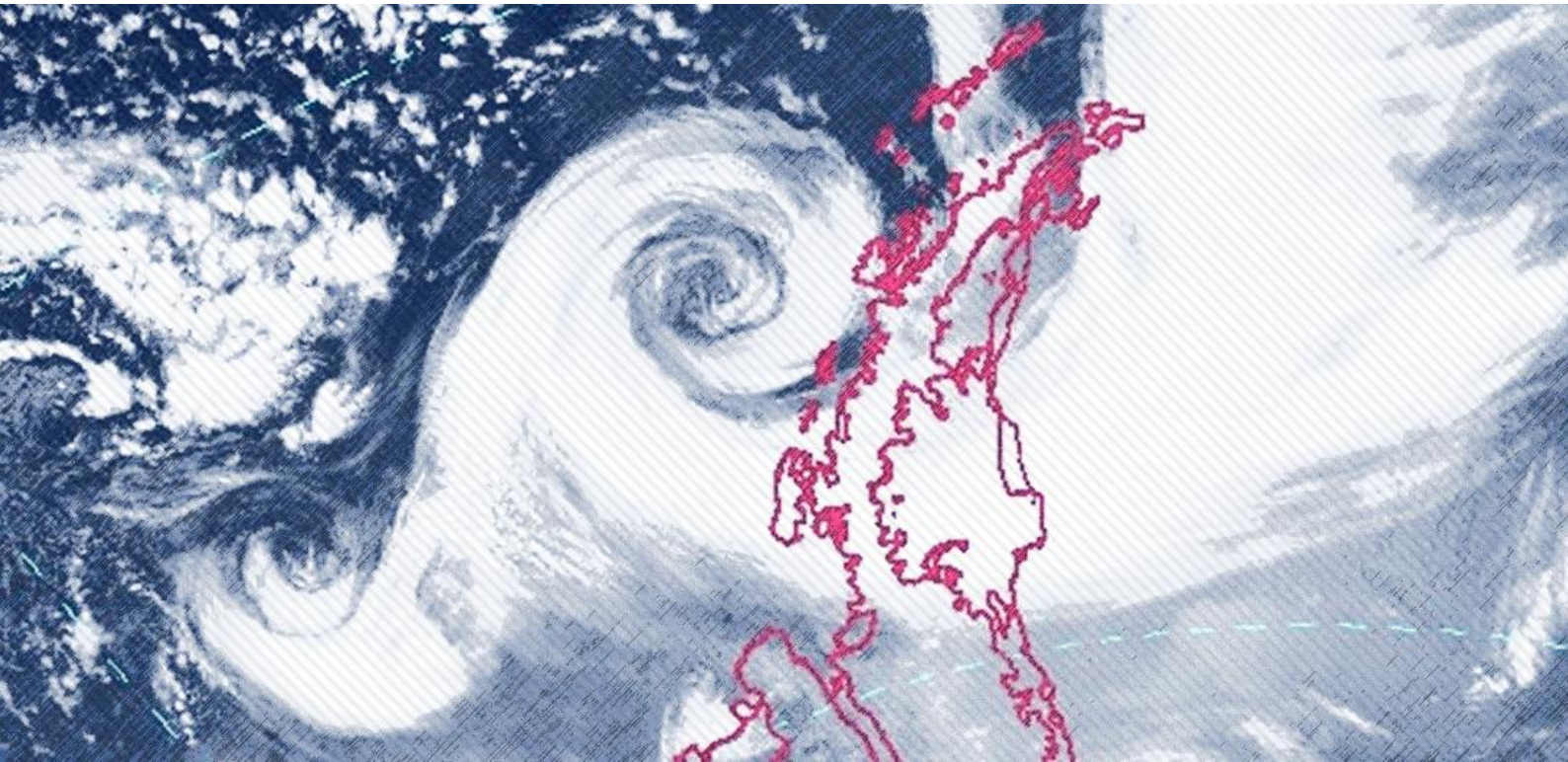




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



By Romao, M. and Pires, L. B. M.



MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

OCTOBER 2023

During this month, only 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 Davis, Halley, Mirny, Dumont D'Urville, Casey, Mawson, Marambio, Neumayer, Palmer and Frei. Of these 10 events 02 of them reached the level of an Antarctic hurricane.

TOTAL OF EVENTS REGISTERED IN STATIONS IN OCTOBER

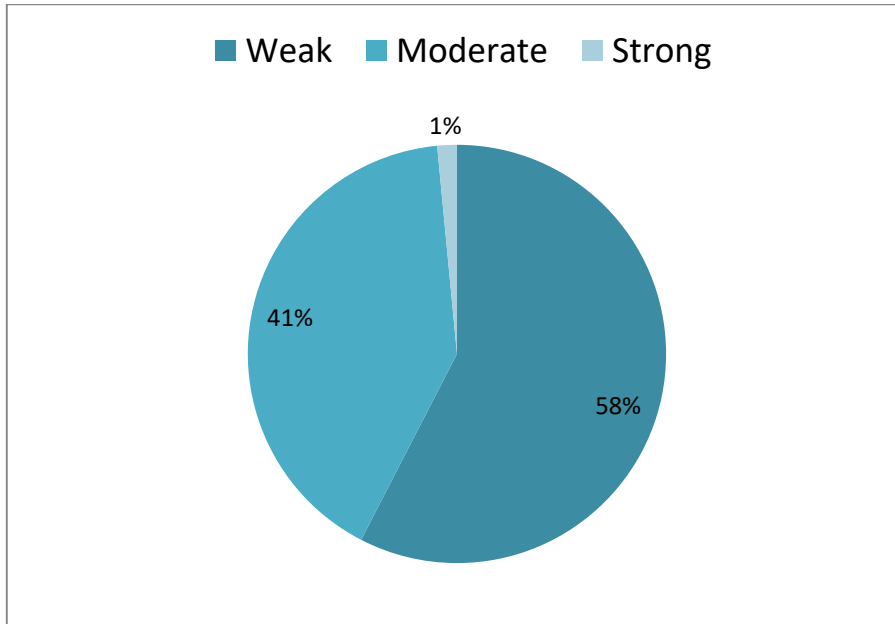
2017	2018	2019	2020	2021	2022	2023
05	09	04	11	18	24	10

STATISTICS OF THE MONTH: OCTOBER 2023

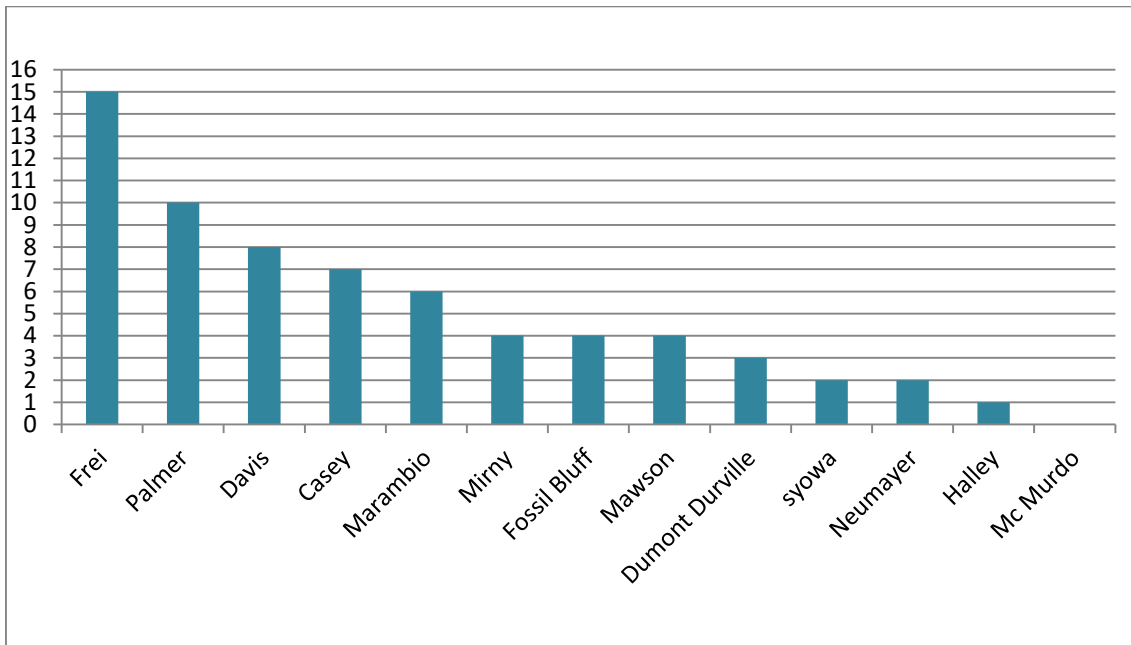
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	07
B2	1.3 a 1.8	Moderate	03
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-40.1 hPa/24h	945.6 hPa	39.0 m/s
Casey station	Casey station	Mawson station
Oct. 03	Oct. 03	Oct. 10

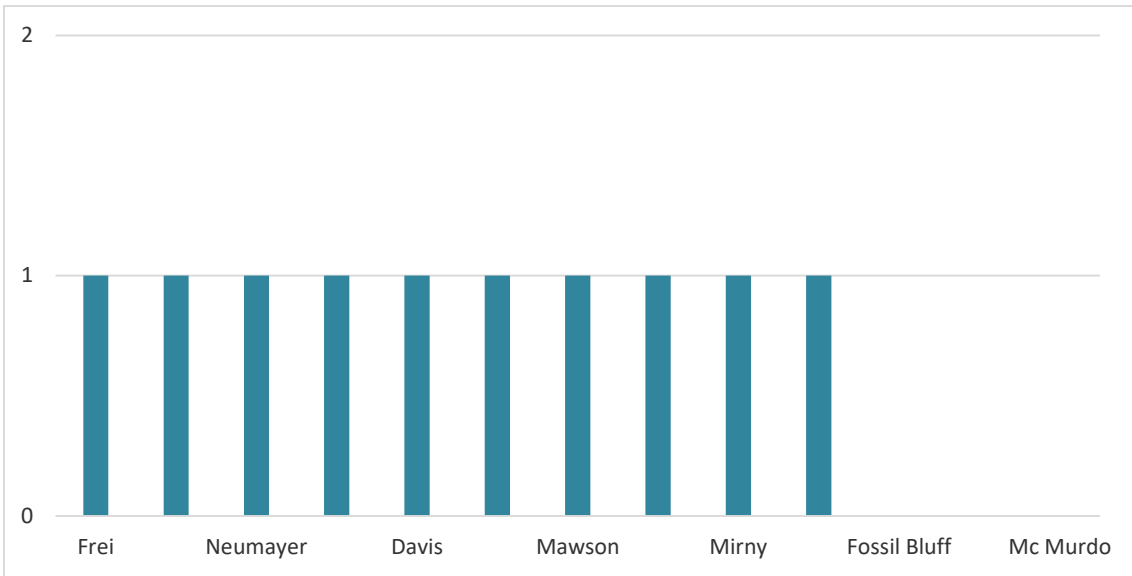
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2023



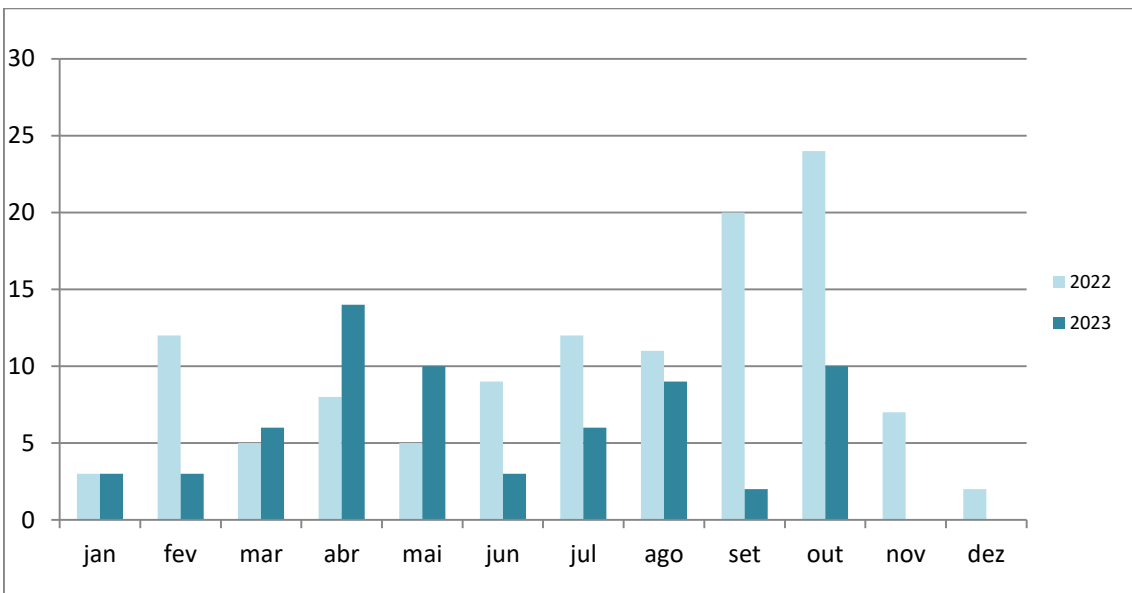
TOTAL OF EVENTS REGISTERED BY STATION IN 2023



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

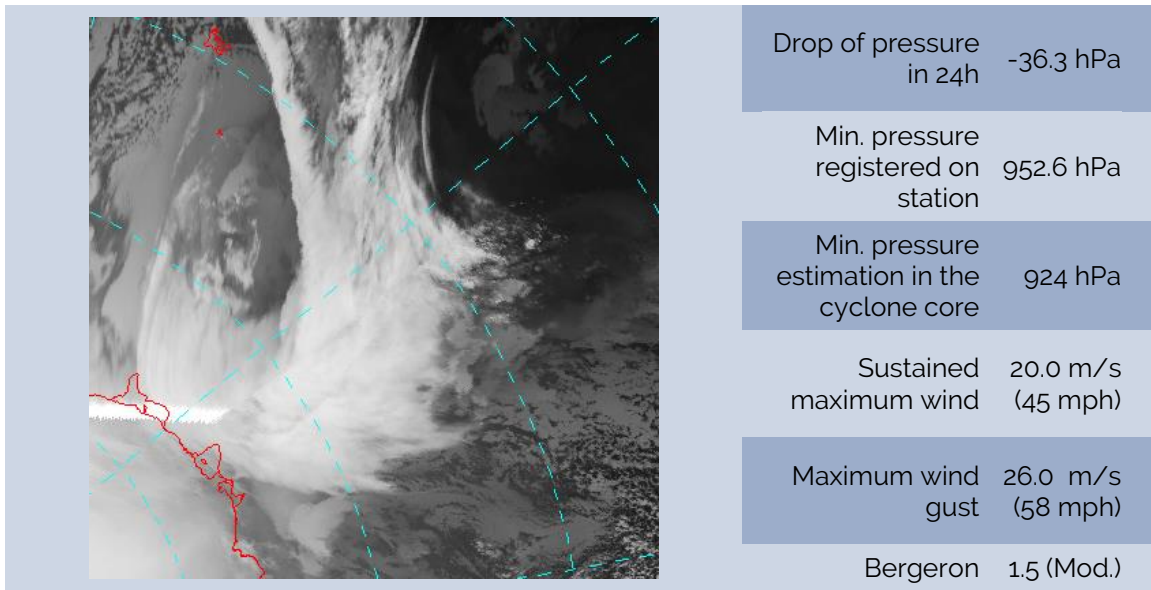


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



BOMB CYCLONE N°57/2023 - DATE: OCT./02/2023

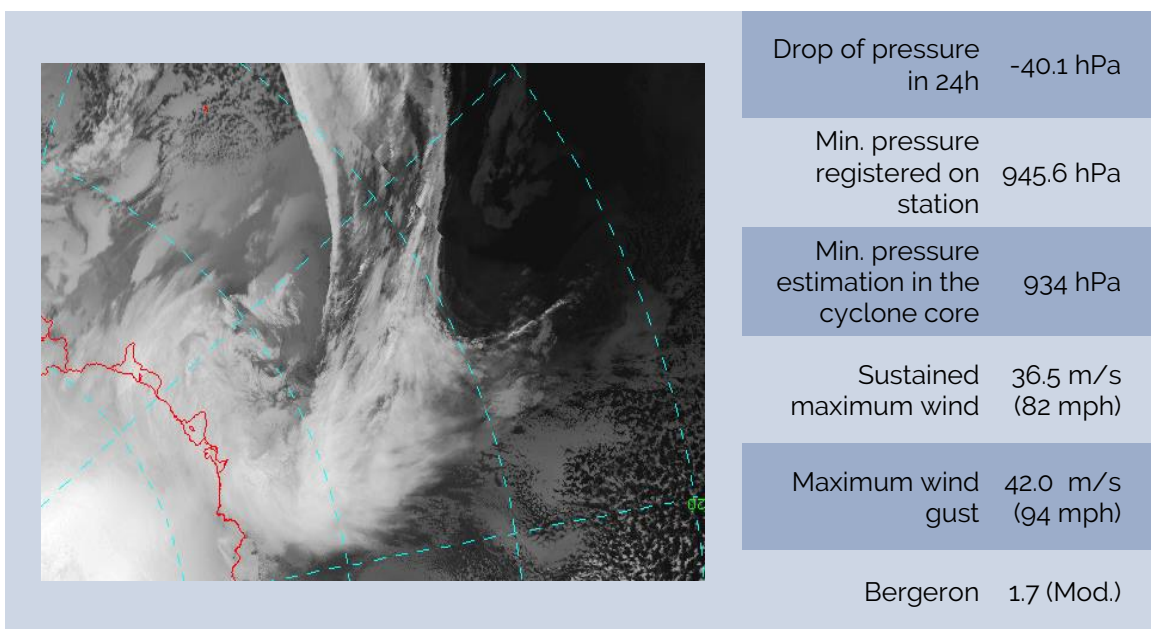
LOCAL: MIRNY STATION – WMO 89592 (OPERATED BY RUSSIA)



BOMB CYCLONE N°58/2023 - DATE: OCT./03/2023

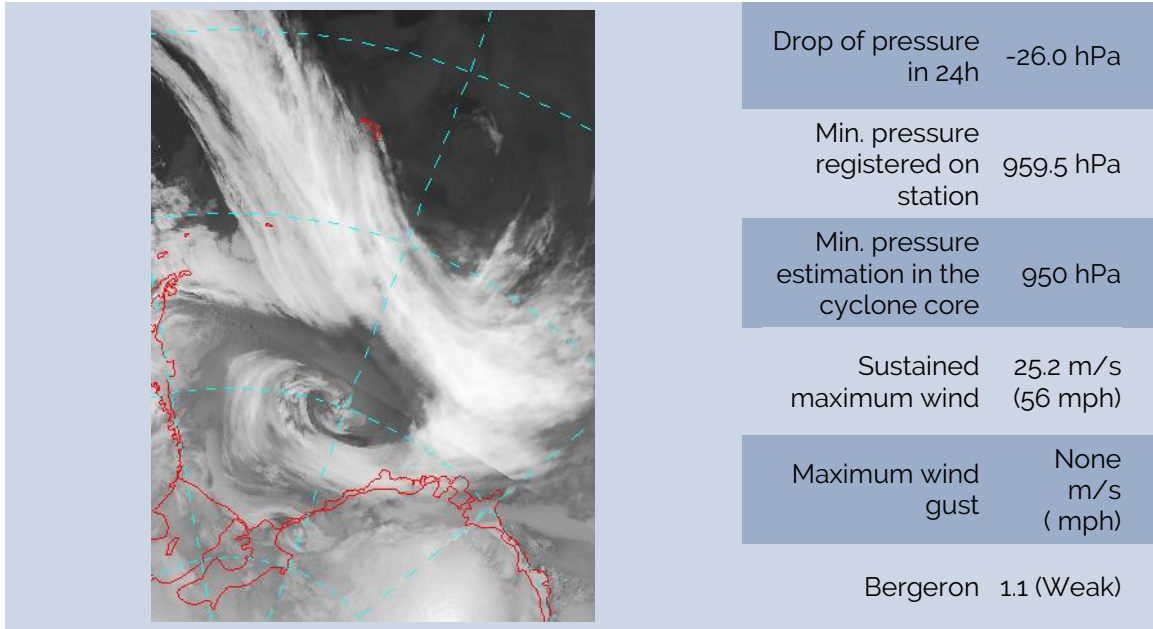
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)

ANTARCTIC HURRICANE – AH 1



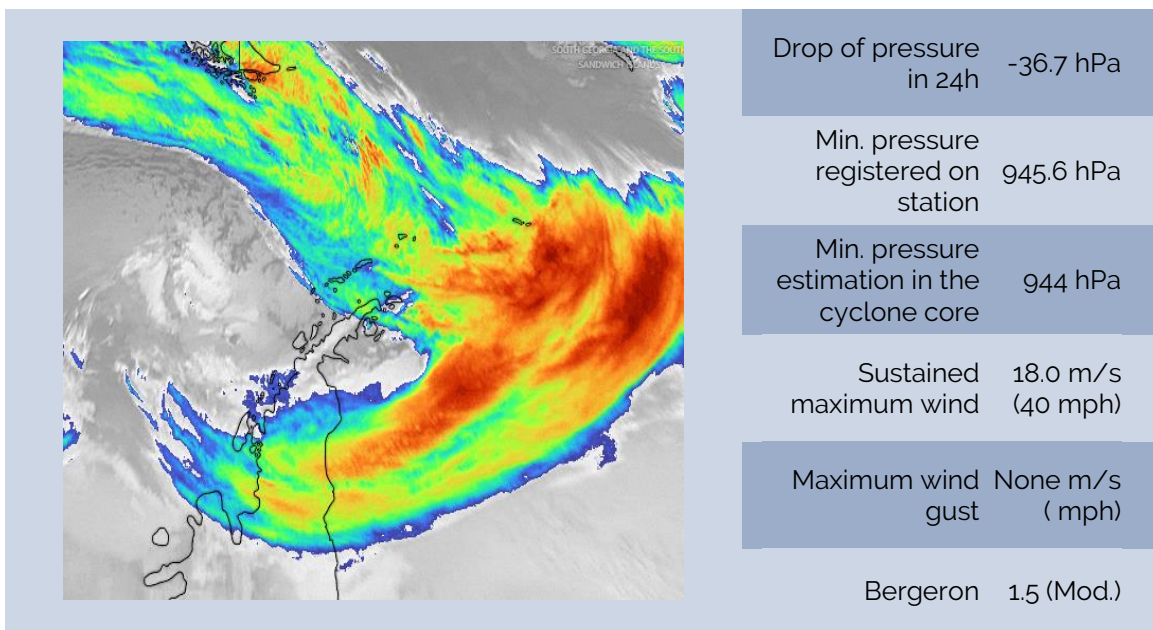
BOMB CYCLONE N°59/2023 - DATE: OCT./03/2023

LOCAL: NEUMAYER STATION – WMO 89002 (OPERATED BY GERMANY)



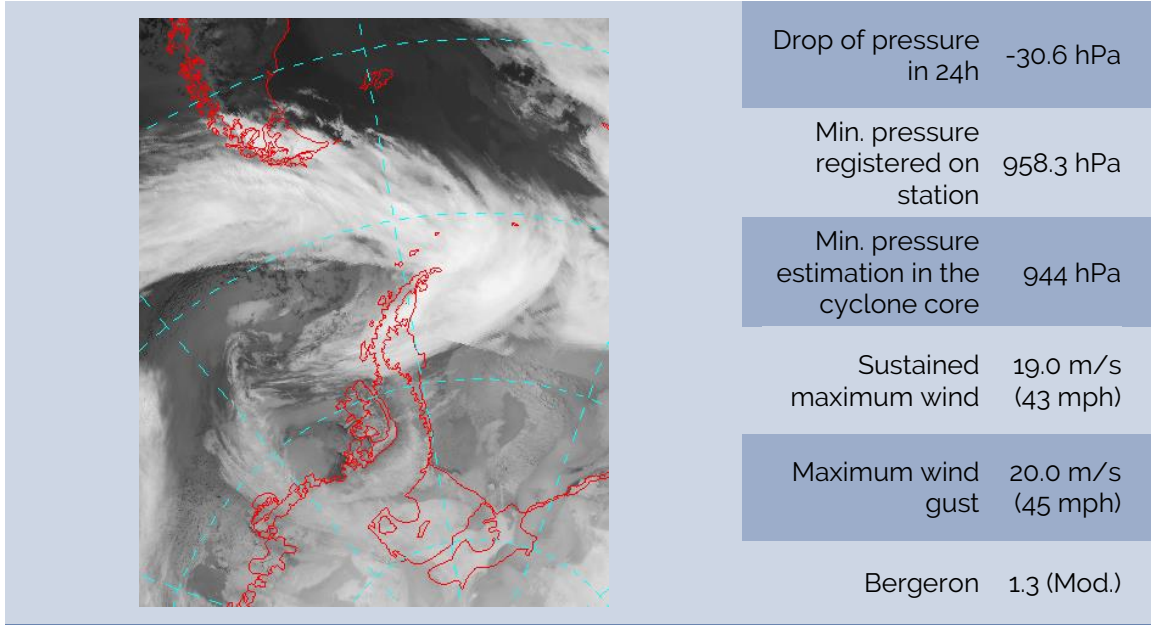
BOMB CYCLONE N°60/2023 - DATE: OCT./04/2023

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



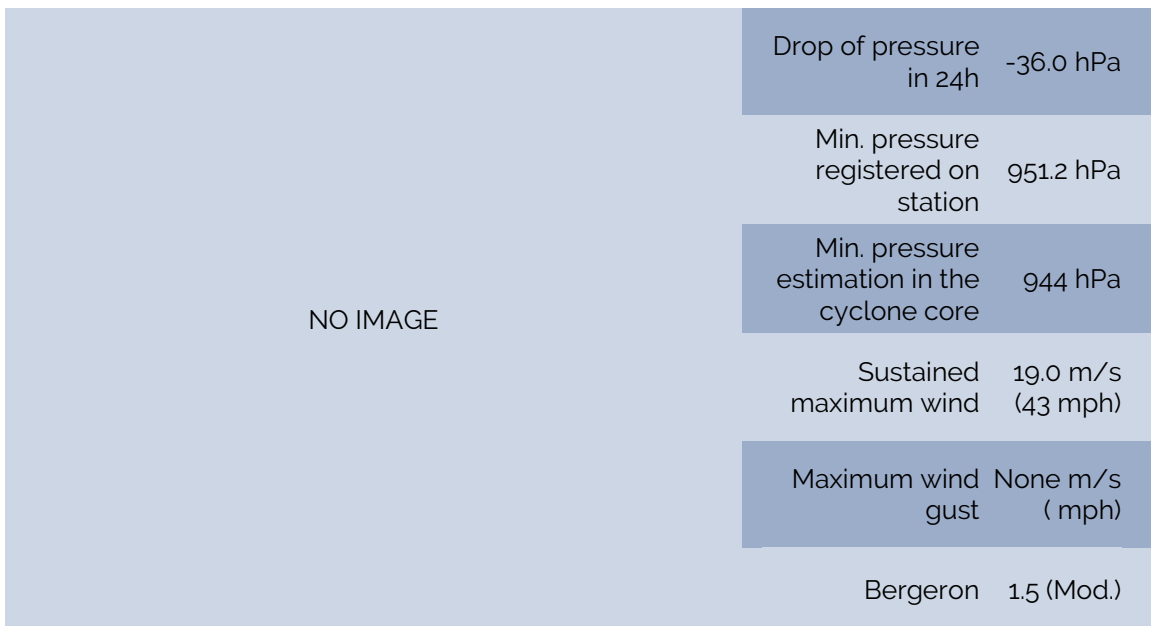
BOMB CYCLONE N°61/2023 - DATE: OCT./04/2023

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



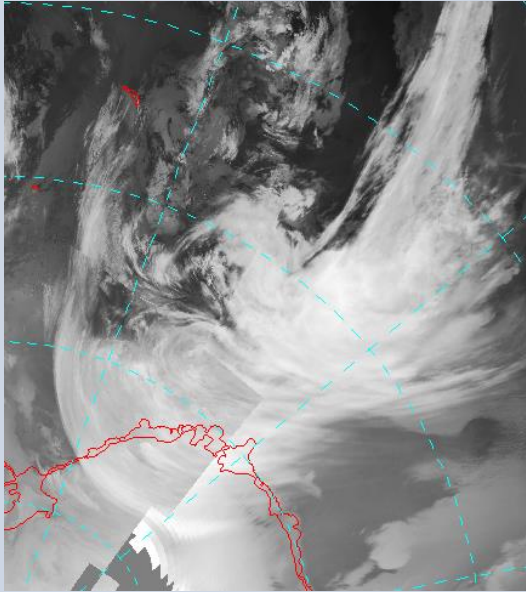
BOMB CYCLONE N°62/2023 - DATE: OCT./04/2023

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



BOMB CYCLONE N°63/2023 - DATE: OCT./08/2023

LOCAL: HALLEY STATION – WMO 89022 (OPERATED BY U.K.)



Drop of pressure in 24h -33.8 hPa

Min. pressure registered on station 954.8 hPa

Min. pressure estimation in the cyclone core 945 hPa

Sustained maximum wind 21.0 m/s (47 mph)

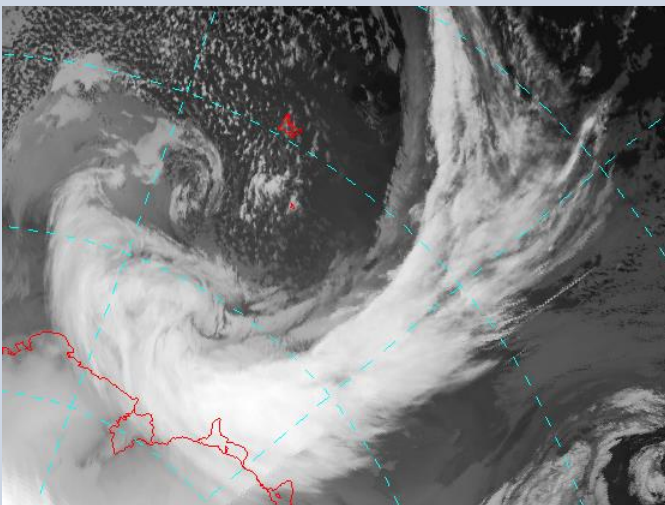
Maximum wind gust None m/s (mph)

Bergeron 1.4 (Mod.)

BOMB CYCLONE N°64/2023 - DATE: OCT./10/2023

LOCAL: MAWSON STATION – WMO 89564 (OPERATED BY AUSTRALIA)

ANTARCTIC HURRICANE – AH 1



Drop of pressure in 24h -27.5 hPa

Min. pressure registered on station 964.8 hPa

Min. pressure estimation in the cyclone core 928 hPa

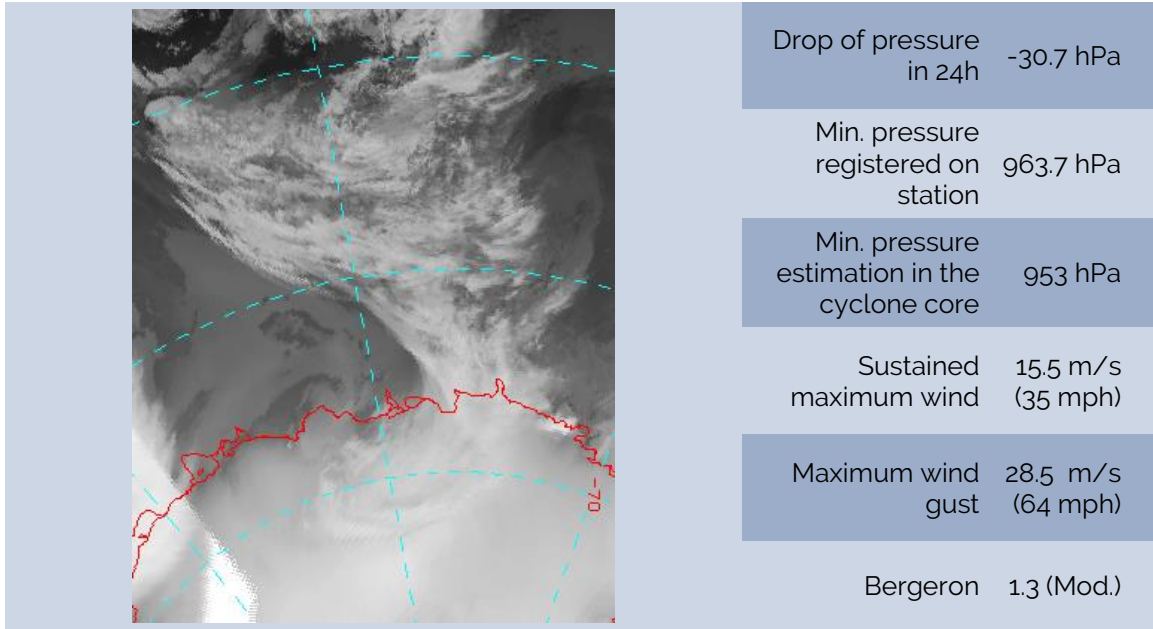
Sustained maximum wind 39.0 m/s (87 mph)

Maximum wind gust 47.5 m/s (106 mph)

Bergeron 1.1 (Weak)

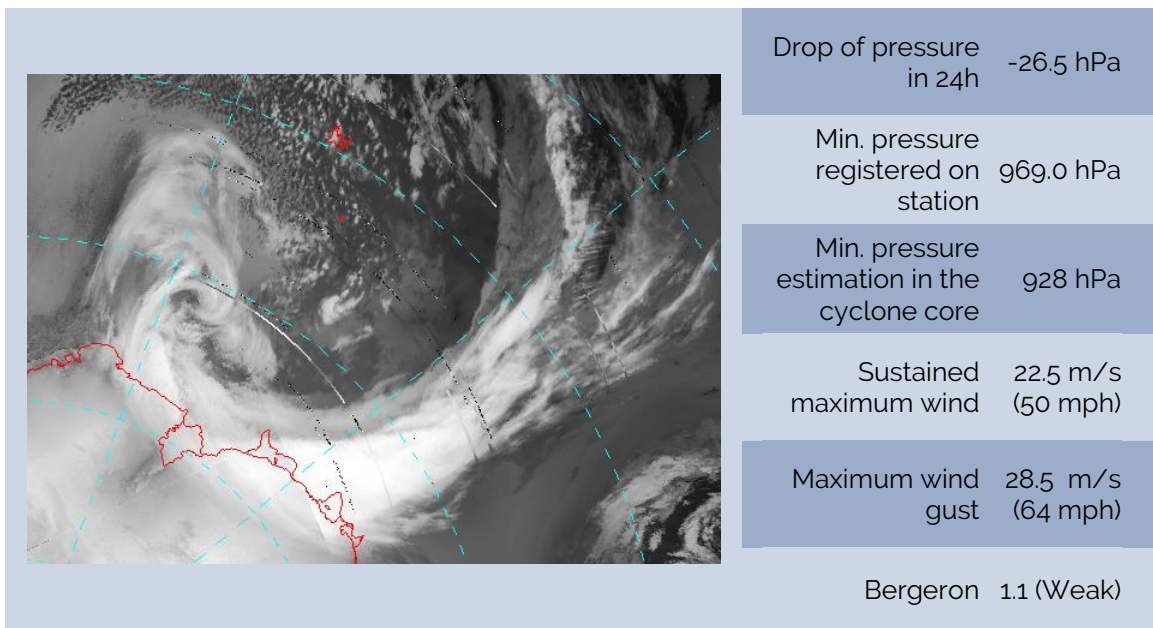
BOMB CYCLONE N°65/2023 - DATE: OCT./10/2023

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



BOMB CYCLONE N°66/2023 - DATE: OCT./10/2023

LOCAL: DAVIS STATION – WMO 89571 (OPERATED BY AUSTRALIA)



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>

<https://amrc.ssec.wisc.edu/>

www.windy.com