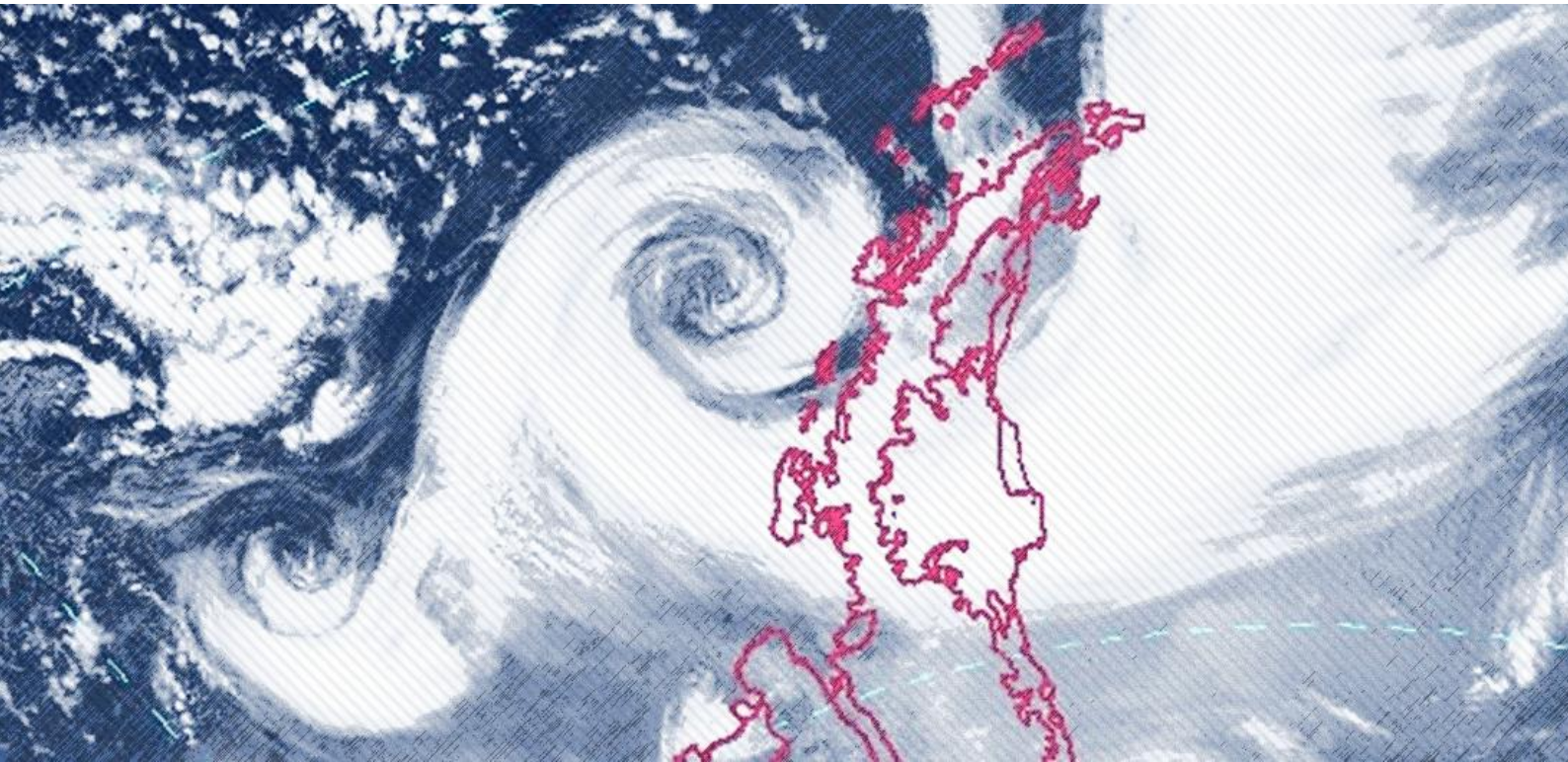




WORLD
ENVIRONMENTAL
CONSERVANCY

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

AUGUST 2022

During this month, only 11 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 Neumayer, Davis, Syowa, Dumont D'Urville, Mawson, Marambio, Palmer and Frei. Of these 11 events 01 of them reached the level of an Antarctic hurricane.

TOTAL OF EVENTS REGISTERED IN STATIONS IN AUGUST

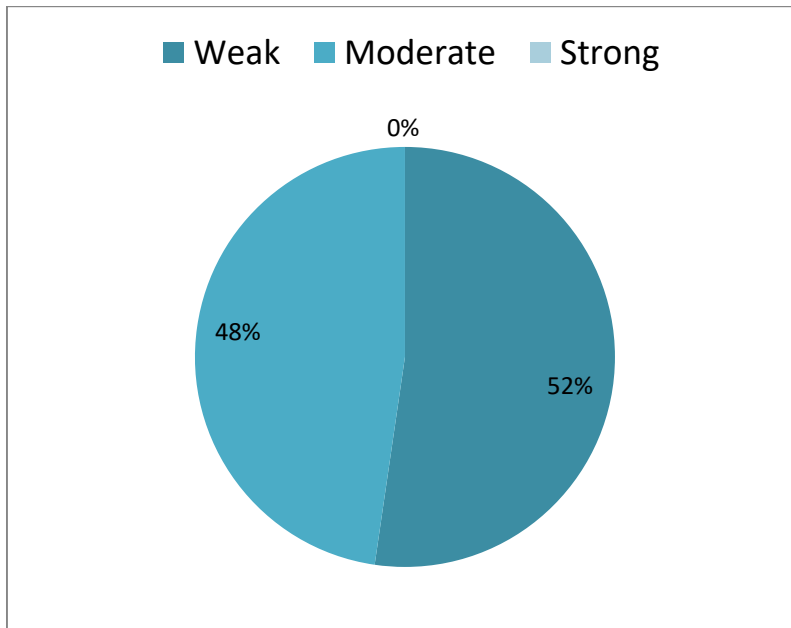
2017	2018	2019	2020	2021	2022
24	20	07	08	09	11

STATISTICS OF THE MONTH: AUGUST 2022

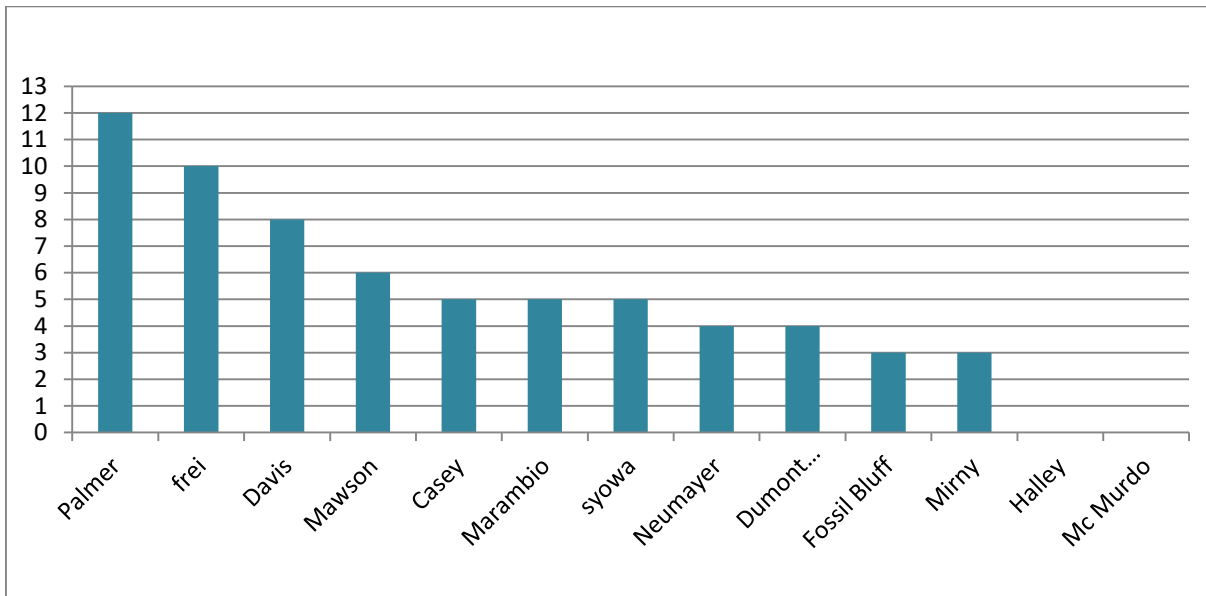
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	07
B2	1.3 a 1.8	Moderate	04
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-37.9 hPa/24h	948.1 hPa	36.0 m/s
Syowa Station	Syowa Station	Neumayer Station
Aug. 30	Aug. 30	Aug. 29

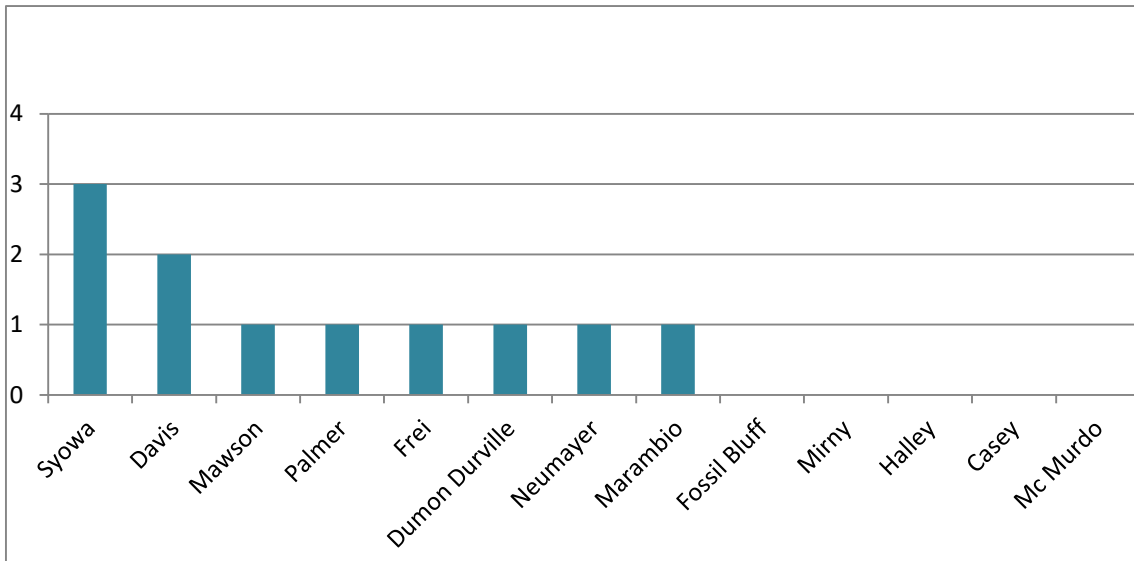
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2022



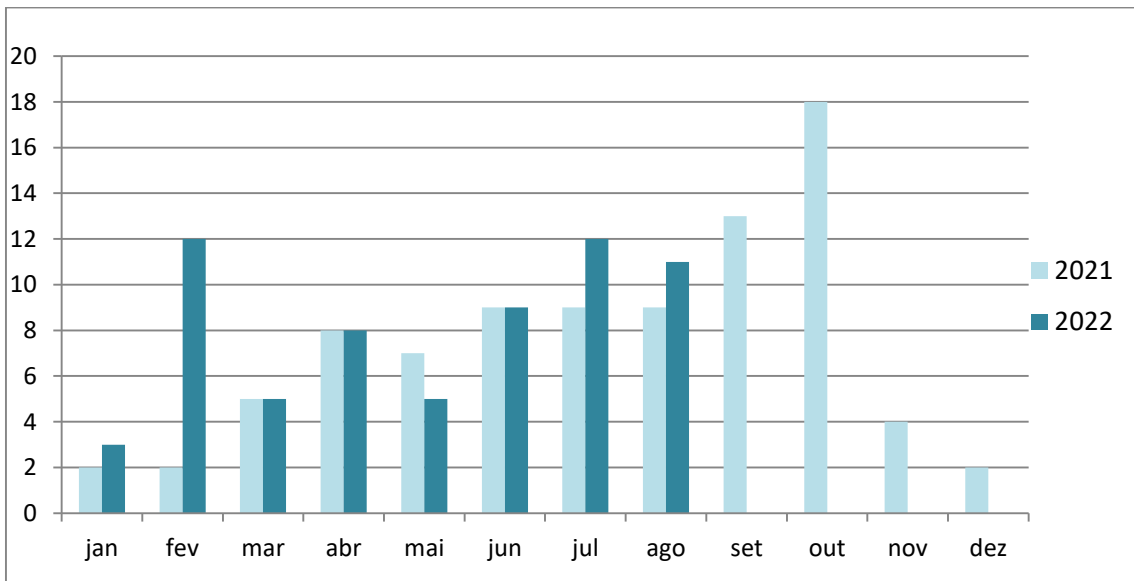
TOTAL OF EVENTS REGISTERED BY STATION IN 2022



TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF AUGUST/2022

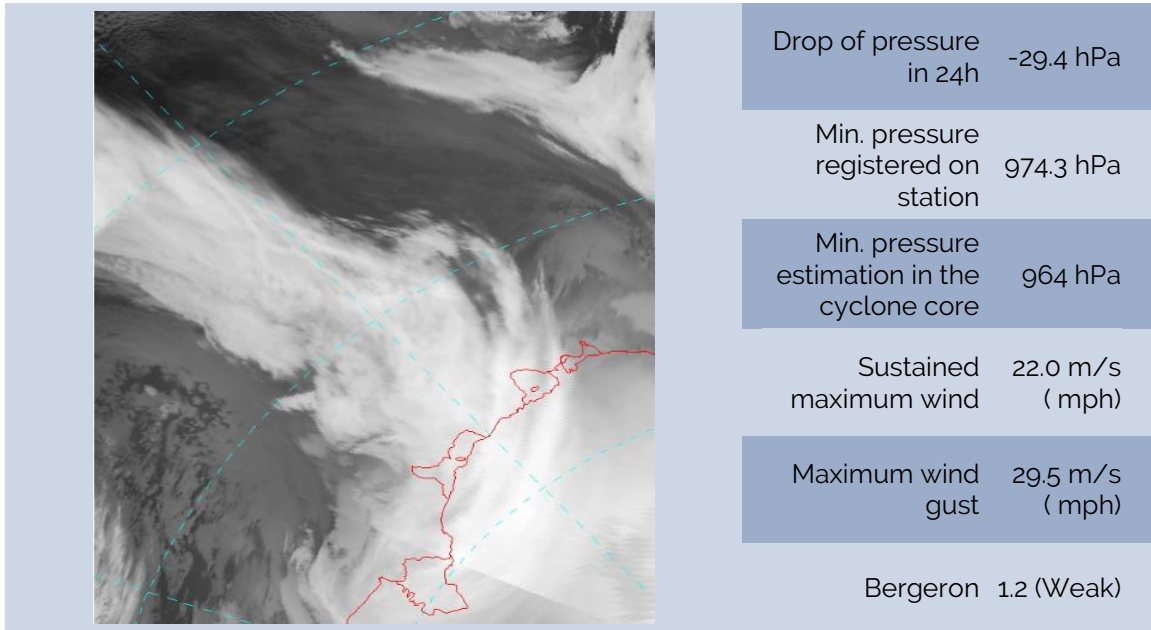


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



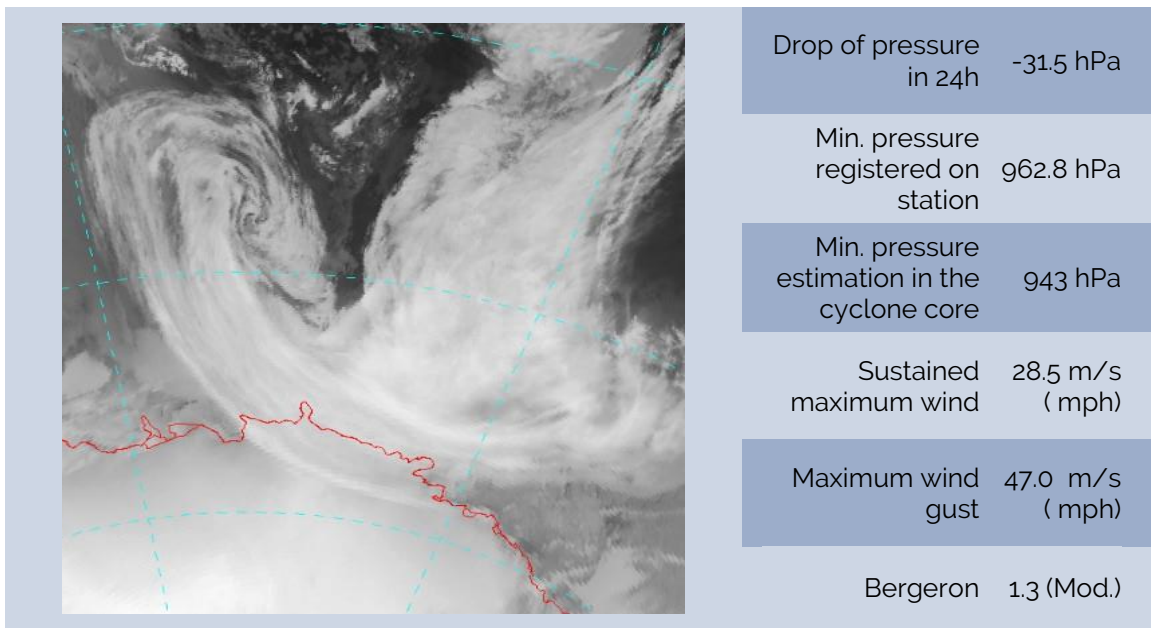
BOMB CYCLONE N°54/2022 - DATE: AUG./14/2022

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



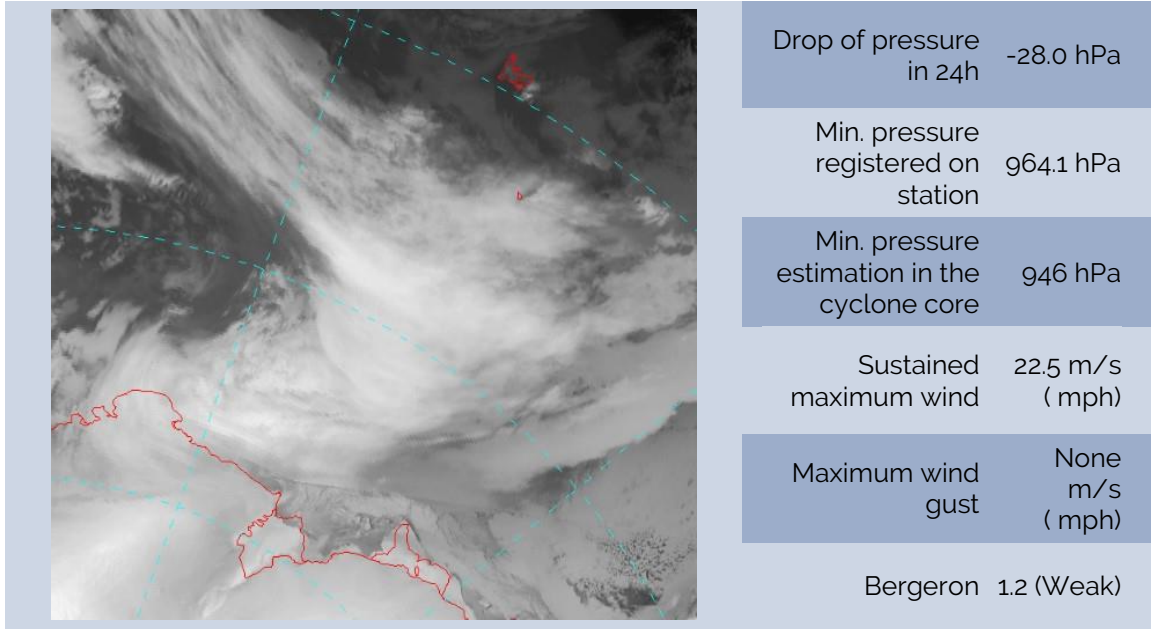
BOMB CYCLONE N°55/2022 - DATE: AUG./17/2022

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



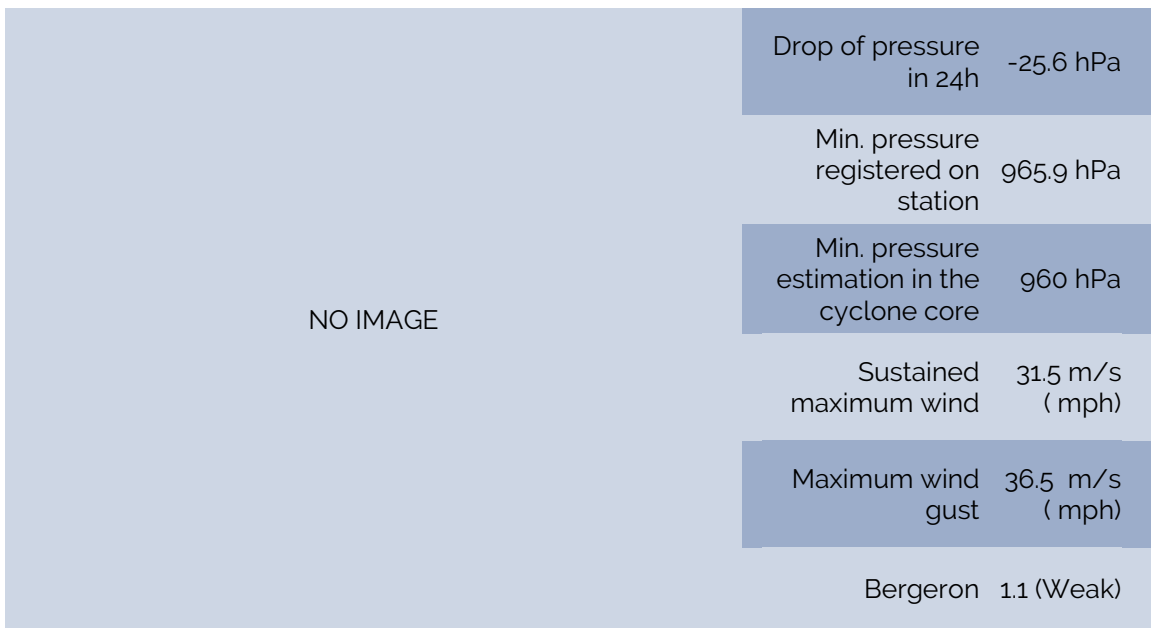
BOMB CYCLONE N°56/2022 - DATE: AUG./19/2022

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



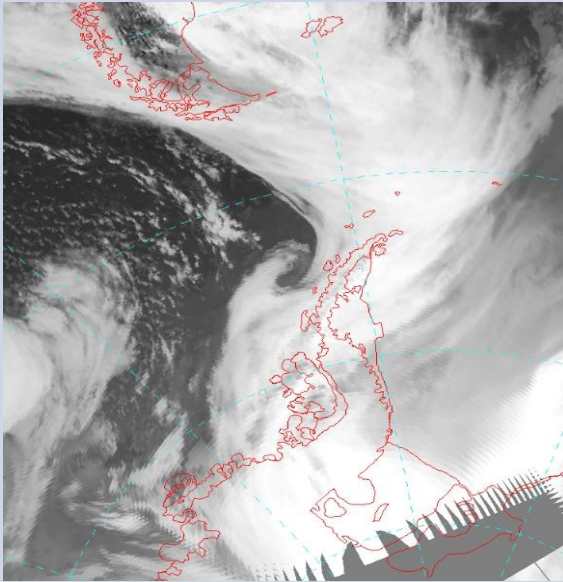
BOMB CYCLONE N°57/2022 - DATE: AUG./21/2022

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



BOMB CYCLONE N°58/2022 - DATE: AUG./22/2022

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



Drop of pressure in 24h -26.7 hPa

Min. pressure registered on station 969.9 hPa

Min. pressure estimation in the cyclone core 953 hPa

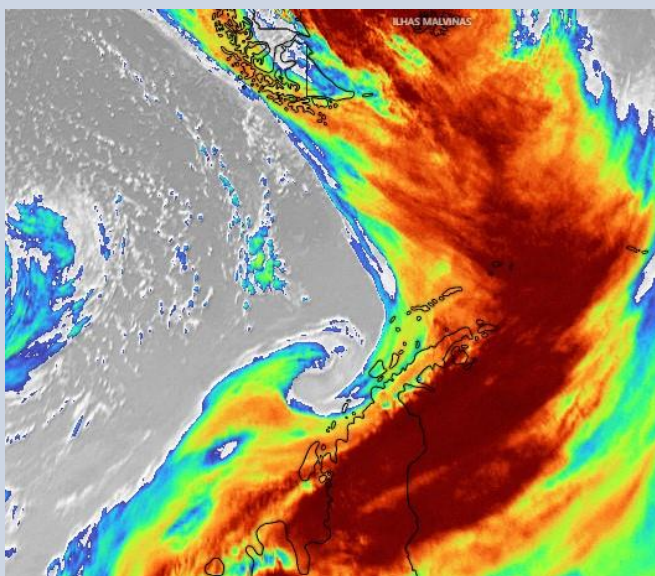
Sustained maximum wind 23.0 m/s (mph)

Maximum wind gust None m/s (mph)

Bergeron 1.1 (Weak)

BOMB CYCLONE N°59/2022 - DATE: AUG./22/2022

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



Drop of pressure in 24h -25.1 hPa

Min. pressure registered on station 980.3 hPa

Min. pressure estimation in the cyclone core 953 hPa

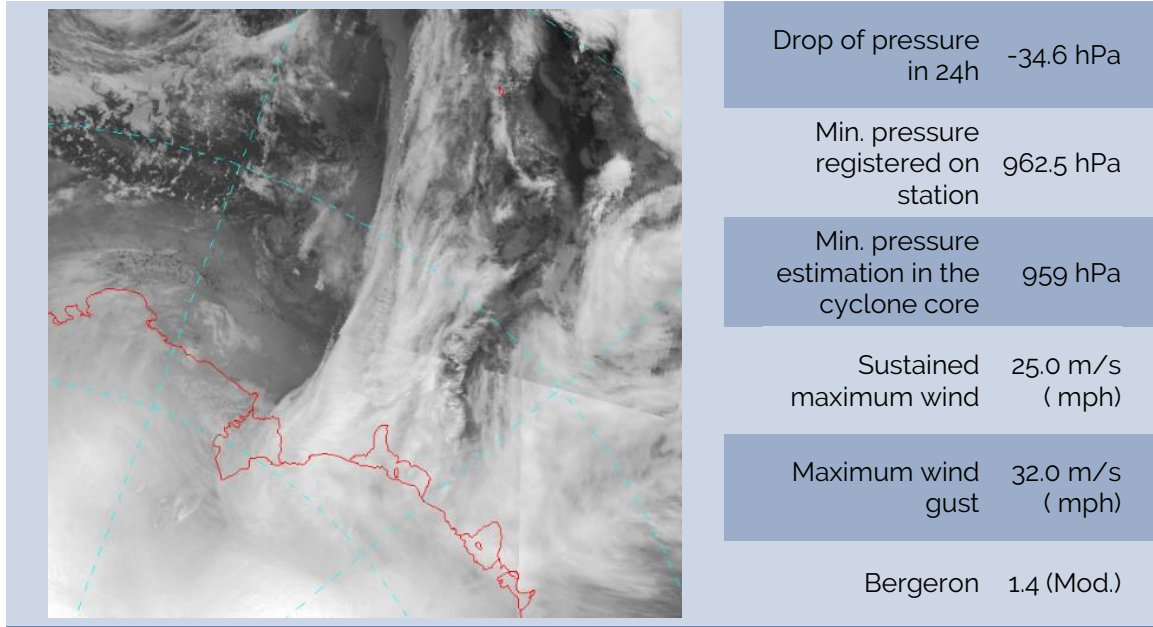
Sustained maximum wind 17.0 m/s (mph)

Maximum wind gust 21.0 m/s (mph)

Bergeron 1.0 (Weak)

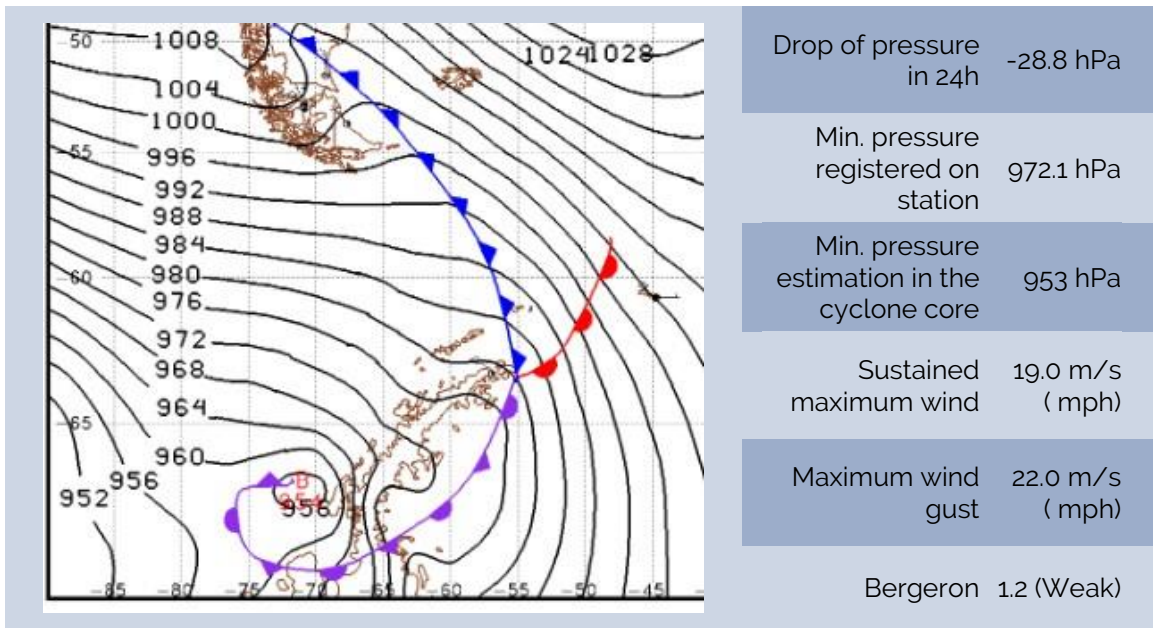
BOMB CYCLONE N°60/2022 - DATE: AUG./22/2022

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



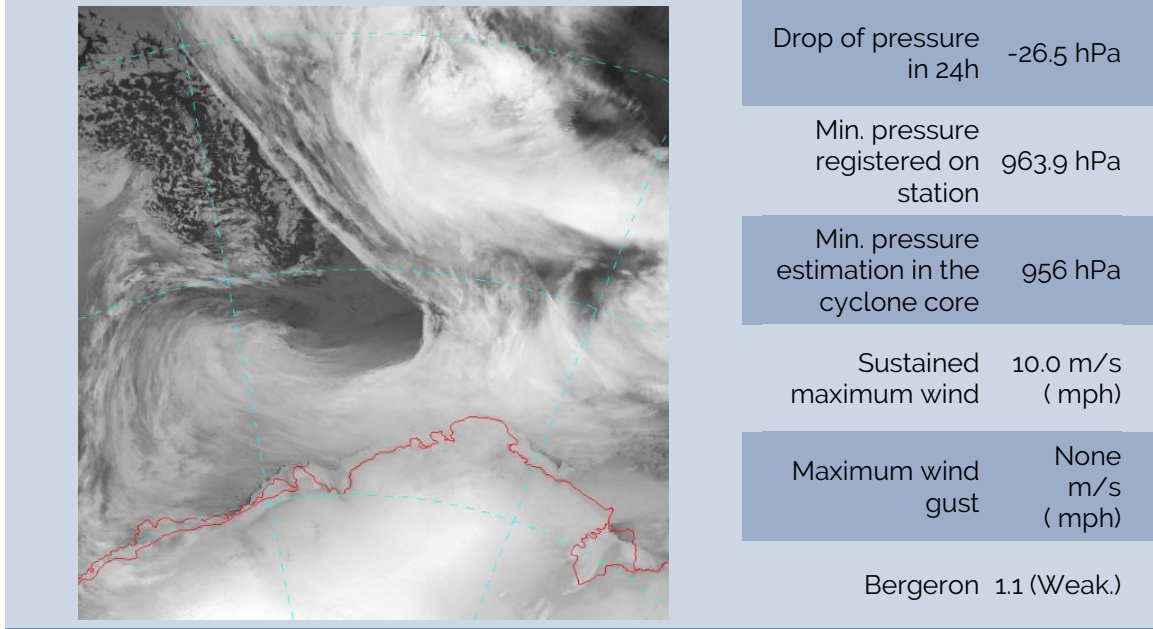
BOMB CYCLONE N°61/2022 - DATE: AUG./22/2022

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



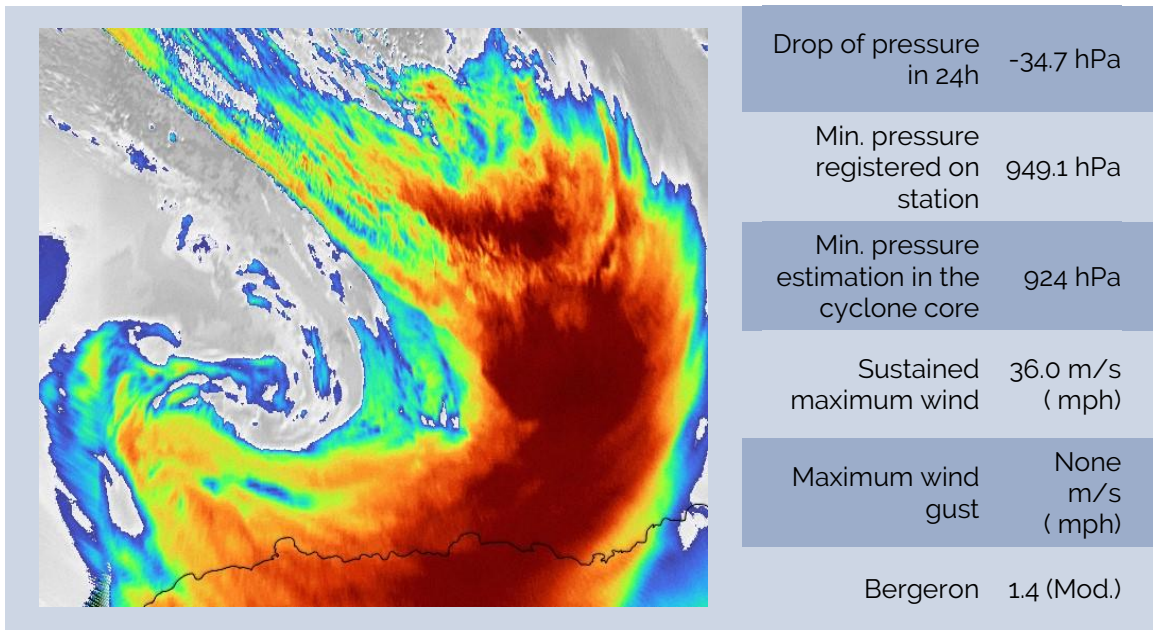
BOMB CYCLONE N°62/2022 - DATE: AUG./26/2022

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



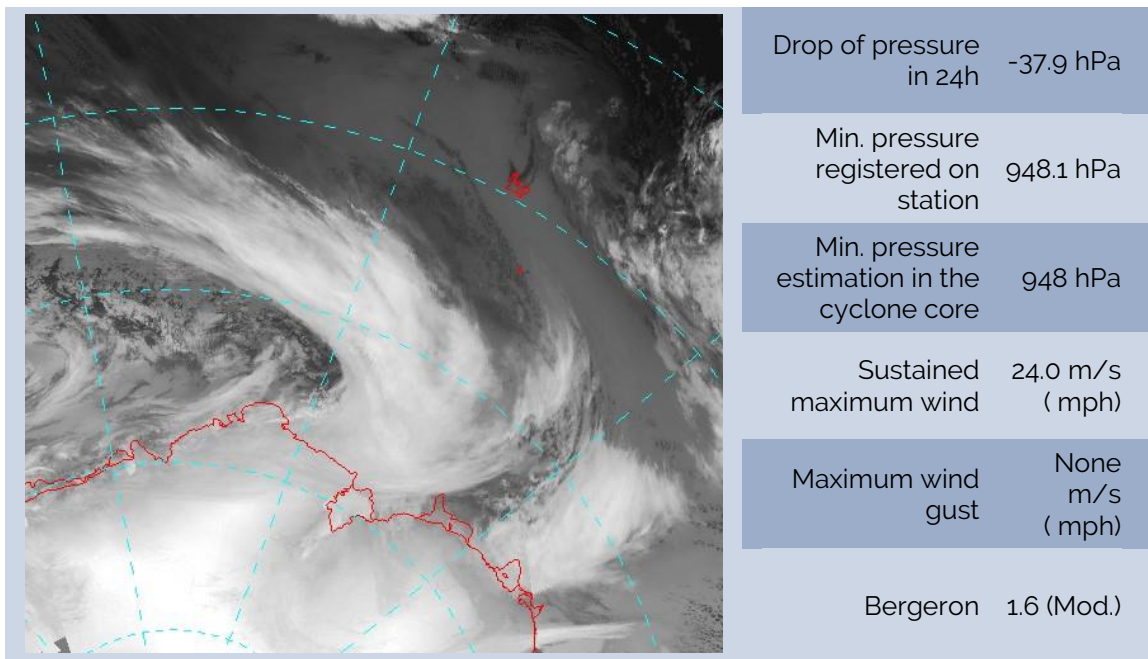
BOMB CYCLONE N°63/2022 - (ANTARCTIC HURRICANE CAT-1) DATE: AUG./29/2022

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



BOMB CYCLONE N°64/2022 - DATE: AUG./30/2022

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



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/>