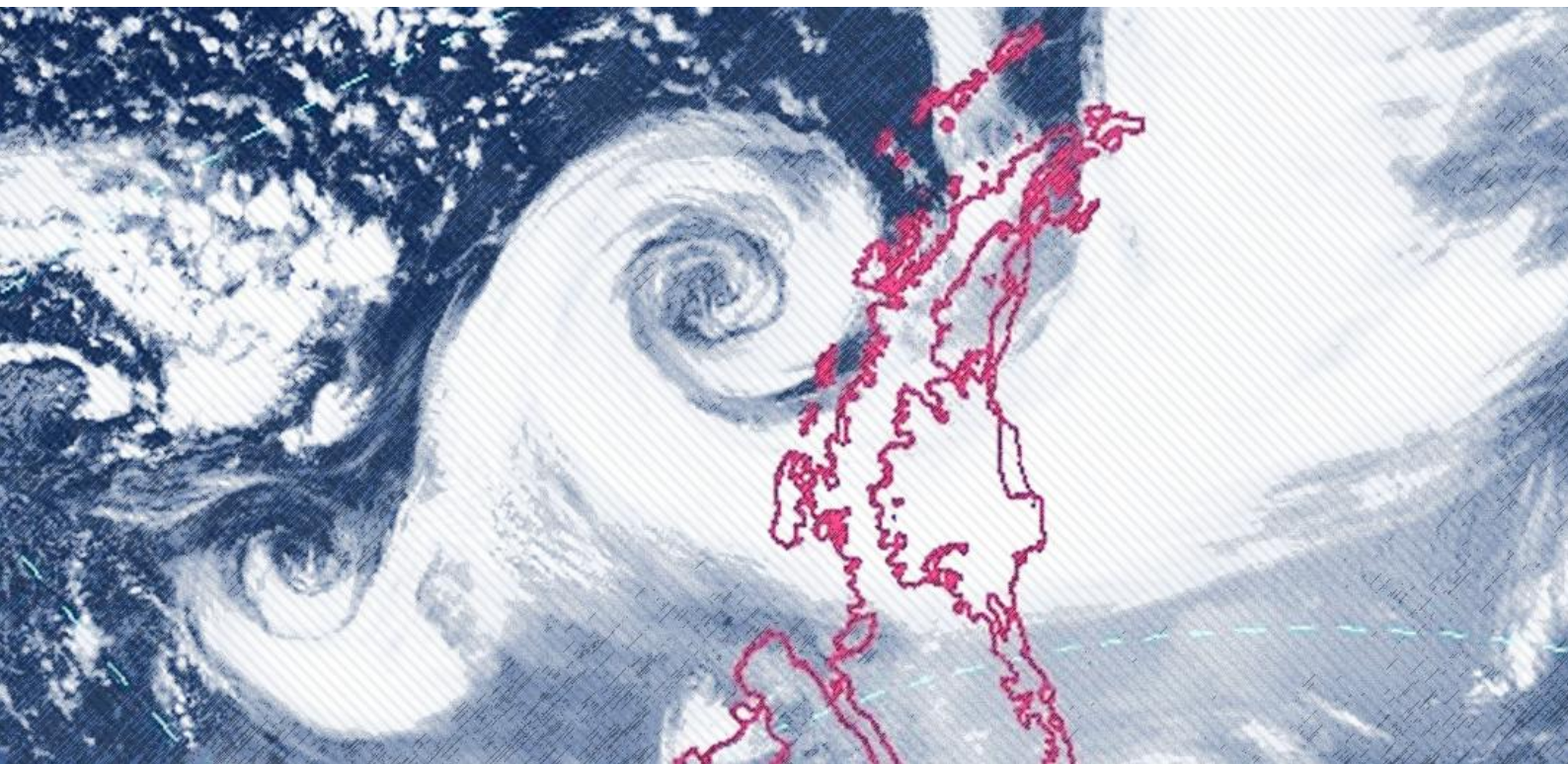




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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MAY 2021

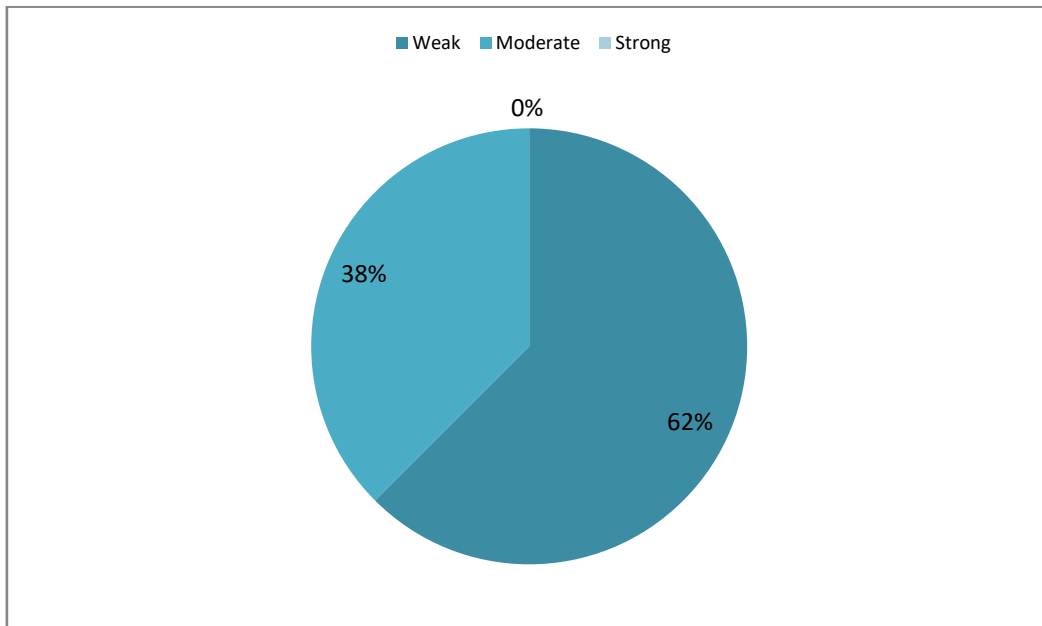
During this month, 07 events were registered among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. The stations affected by cyclones this month were: Dumont D'Urville, Casey, Syowa, Fossil Bluff, Davis and Mirny. There was a significant increase (75%) in the number of cyclones in comparison to the same month of the previous year (2020).

STATISTICS OF THE MONTH

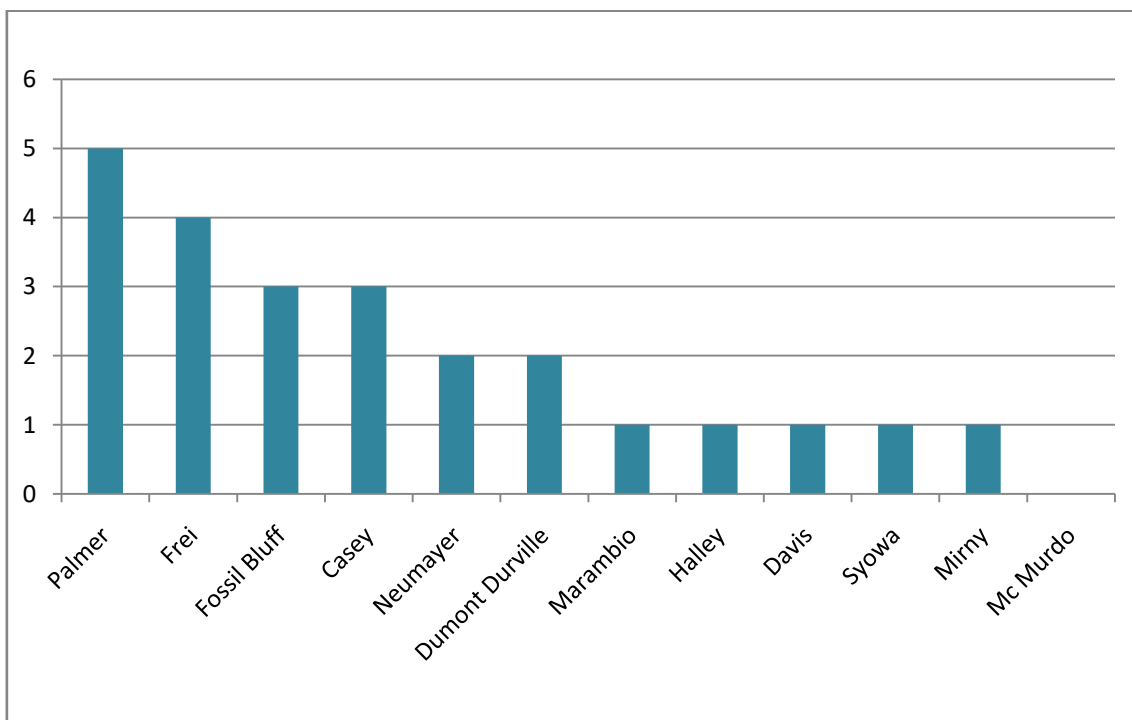
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	03
B2	1.3 a 1.8	Moderate	04
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-43.8 hPa/24h	949.9 hPa	42.0 m/s
Davis Station	Syowa Station	Casey Station
May 23	May 19	May 28

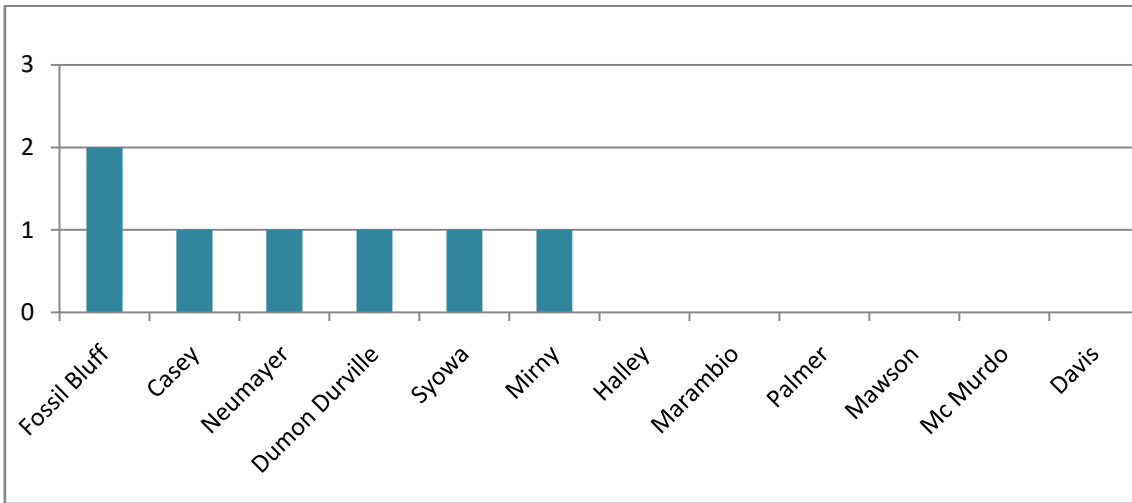
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2021



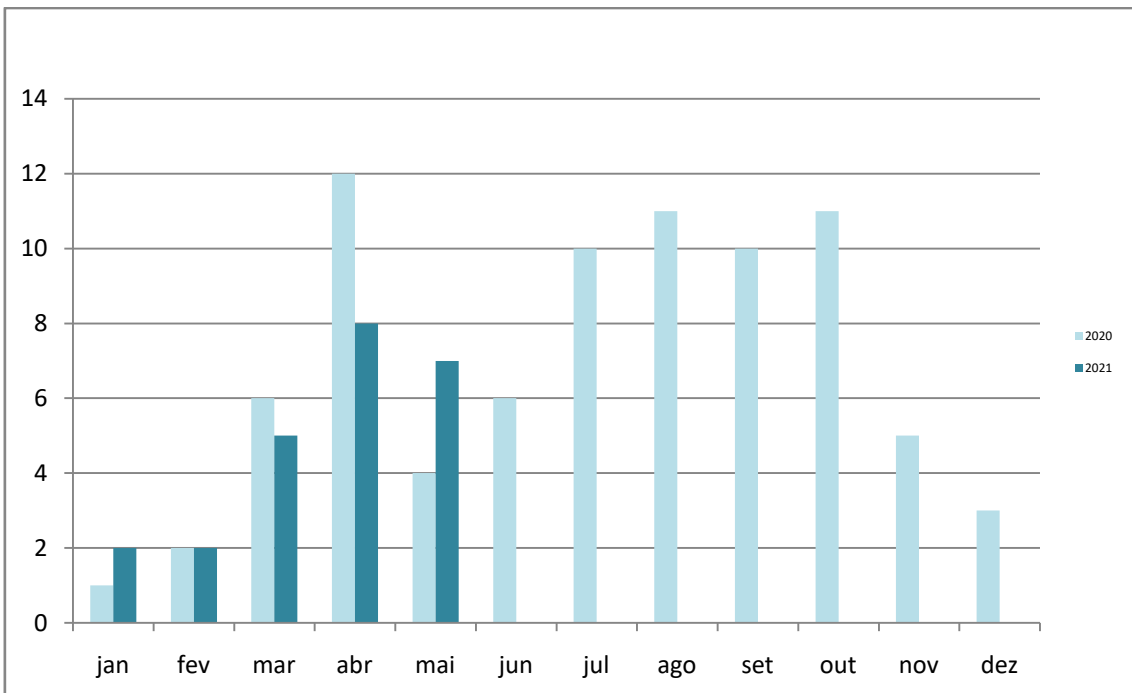
TOTAL OF EVENTS REGISTERED BY STATION IN 2021



TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF MAY/2021

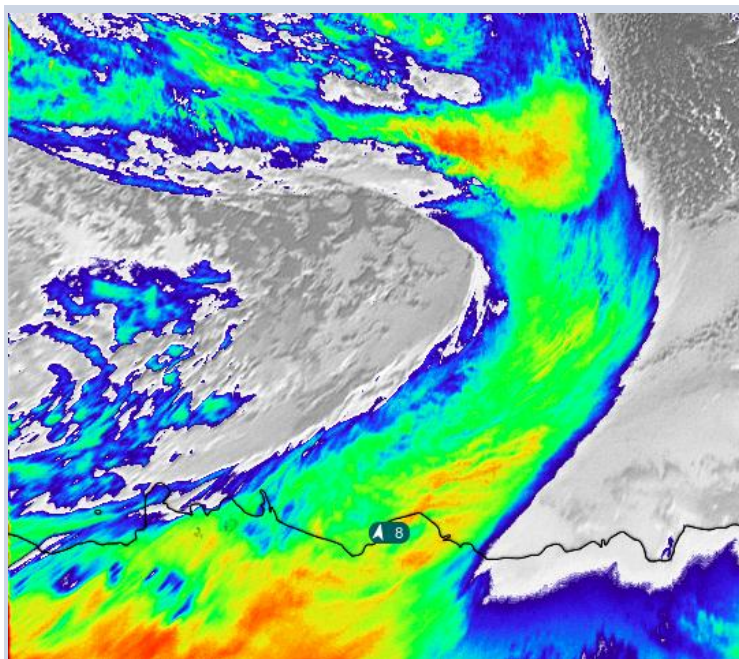


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



BOMB CYCLONE N°18/2021- DATE: MAY/02/2021

LOCAL: MIRNY STATION – WMO 89532 (OPERATED BY RUSSIA)



Drop of pressure in 24h -25.5 hPa

Min. pressure registered on station 964.8 hPa

Min. pressure estimation in the cyclone core 949 hPa

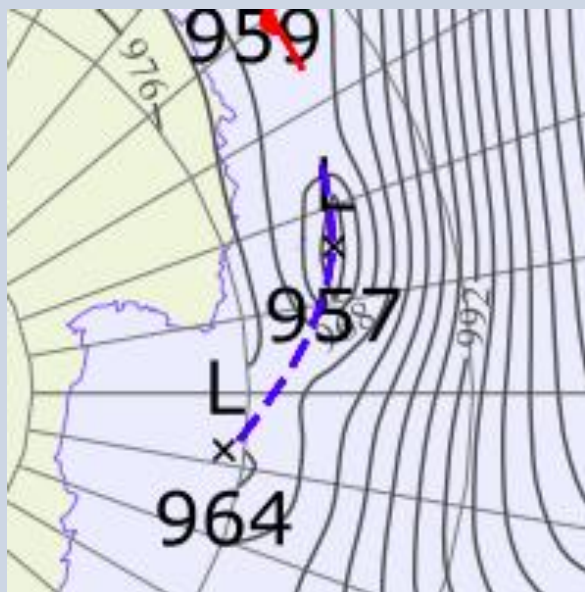
Sustained maximum wind 10.0 m/s

Maximum wind gust 12.5 m/s

Bergeron 1.1 (Weak)

BOMB CYCLONE N°19/2021- DATE: MAY/11/2021

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



Drop of pressure in 24h -25.2 hPa

Min. pressure registered on station 967.4 hPa

Min. pressure estimation in the cyclone core 954 hPa

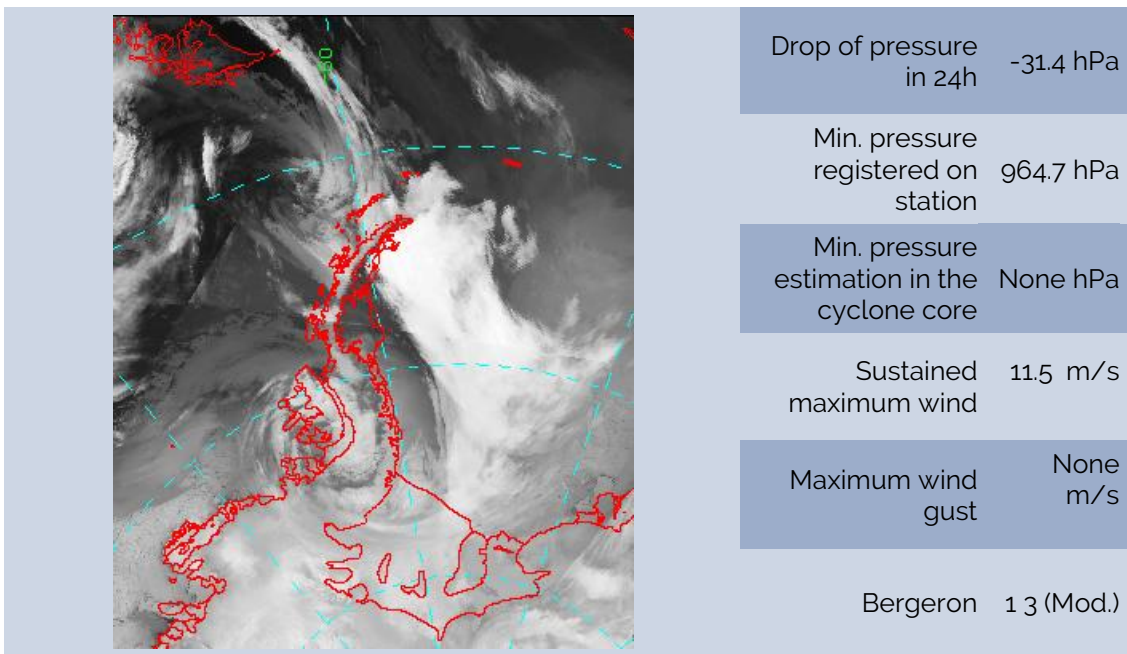
Sustained maximum wind 15.5 m/s

Maximum wind gust 26.5 m/s

Bergeron 1.1 (Weak)

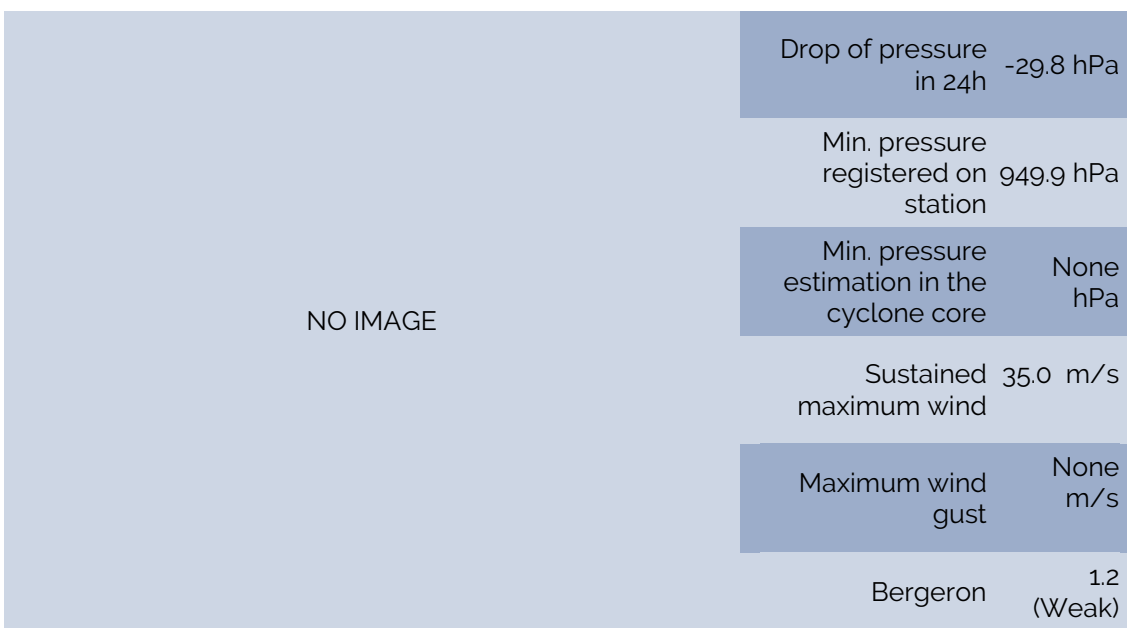
BOMB CYCLONE N°20/2021 - DATE: MAY/11/2021

LOCAL: FOSSIL BLUFF STATION – WMO 89065 (OPERATED BY U.K.)



BOMB CYCLONE N°21/2021 - DATE: MAY/19/2021

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



BOMB CYCLONE N°22/2021- DATE: MAY/23/2021

LOCAL: FOSSIL BLUFF STATION – WMO 89065 (OPERATED BY U.K.)

NO IMAGE	Drop of pressure in 24h	-31.4 hPa
	Min. pressure registered on station	964.7 hPa
	Min. pressure estimation in the cyclone core	None hPa
	Sustained maximum wind	11.5 m/s
	Maximum wind gust	None m/s
	Bergeron	1 3 (Mod.)

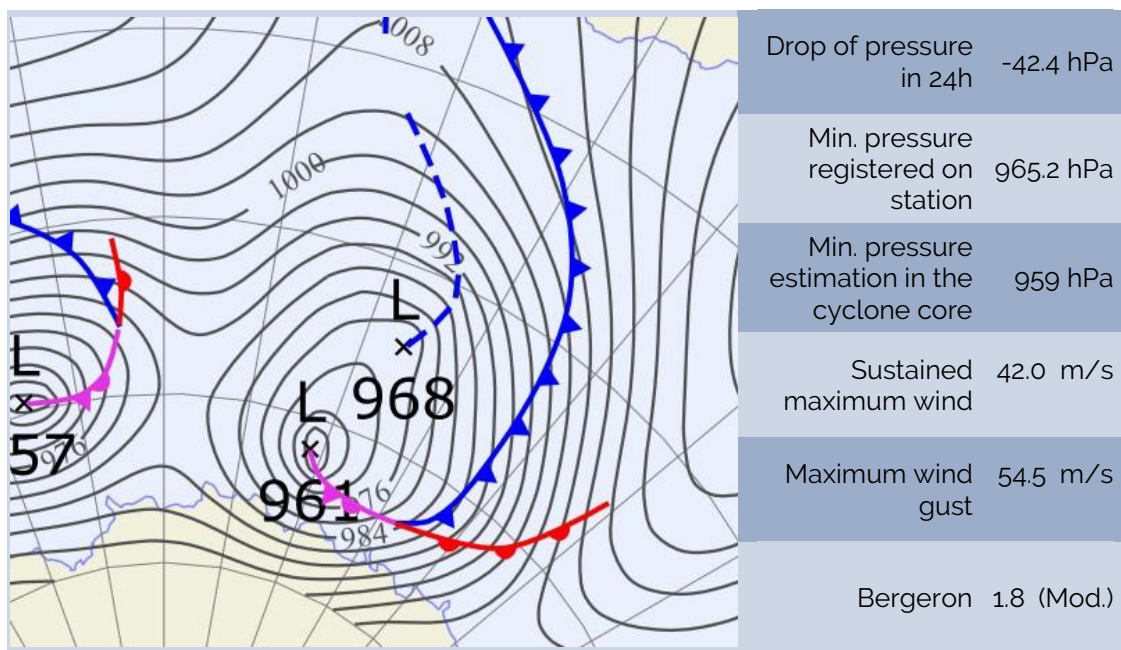
BOMB CYCLONE N°23/2021- DATE: MAY/23/2021

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

NO IMAGE	Drop of pressure in 24h	-43.8 hPa
	Min. pressure registered on station	953.2 hPa
	Min. pressure estimation in the cyclone core	None hPa
	Sustained maximum wind	27.0 m/s
	Maximum wind gust	None m/s
	Bergeron	1.8 (Mod.)

BOMB CYCLONE N°24/2021- DATE MAY/28/2021

LOCAL: CASEY STATION – WMO 89611 (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>