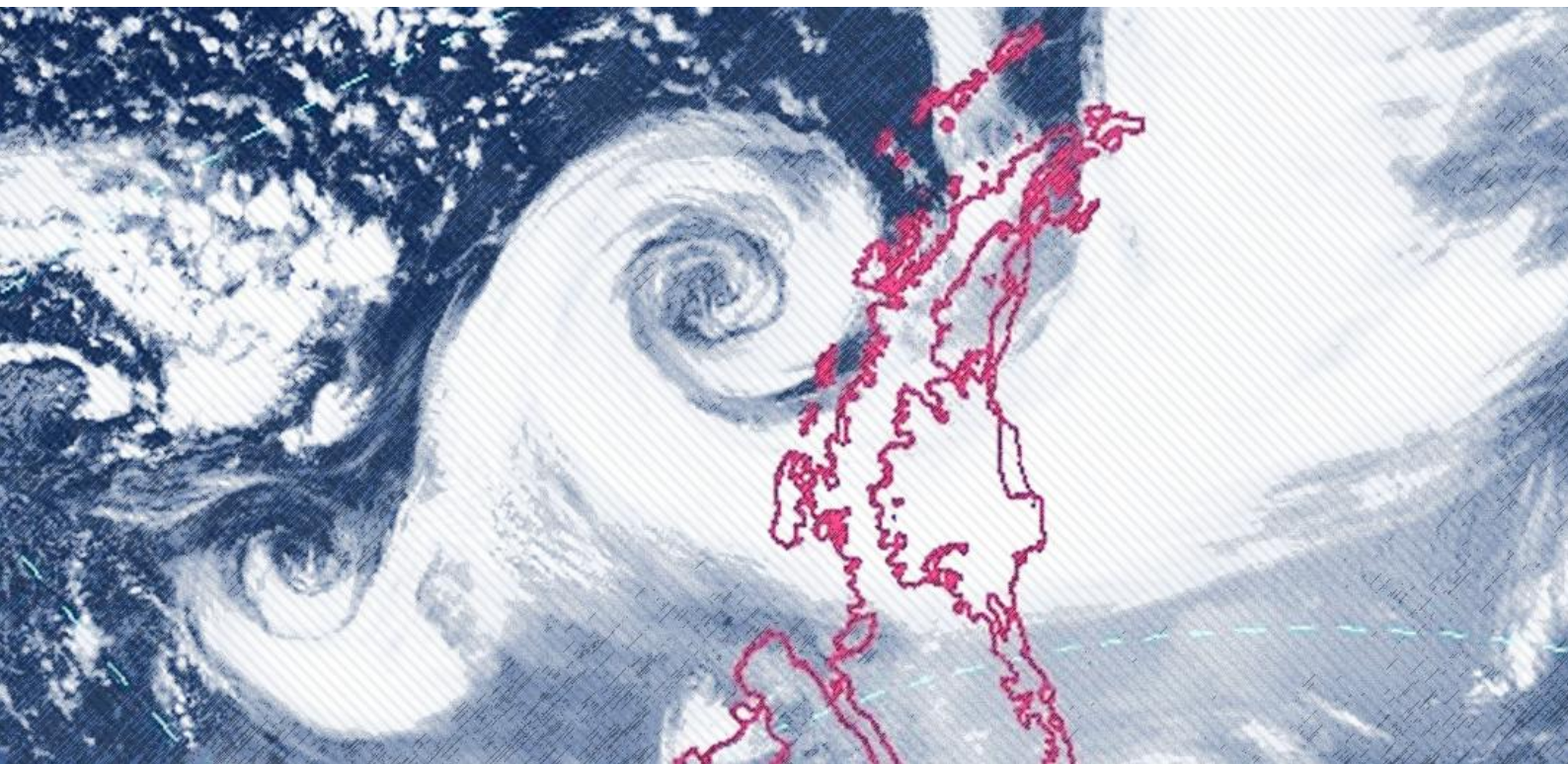




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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MARCH 2020

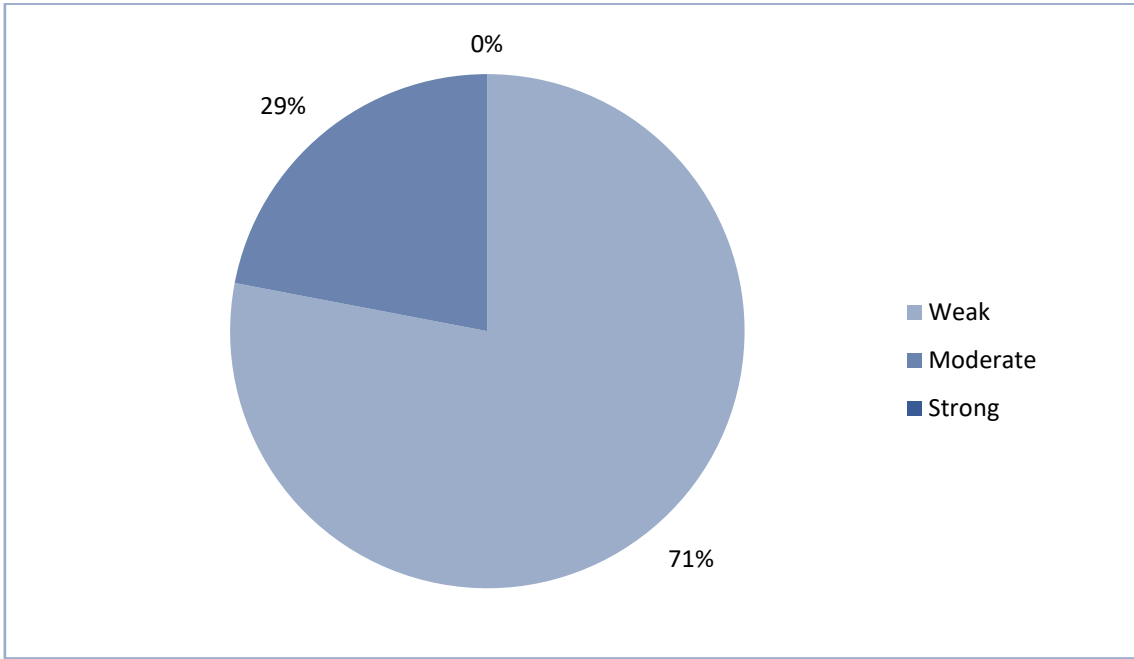
During this month, only 06 event were registered among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. The stations hit by cyclones this month were: Frei, Dumont D'Urville, Marambio, Palmer, and Davis. There was a significant increase in the number of cases in comparison to the same month of the previous year (200%).

STATISTICS OF THE MONTH

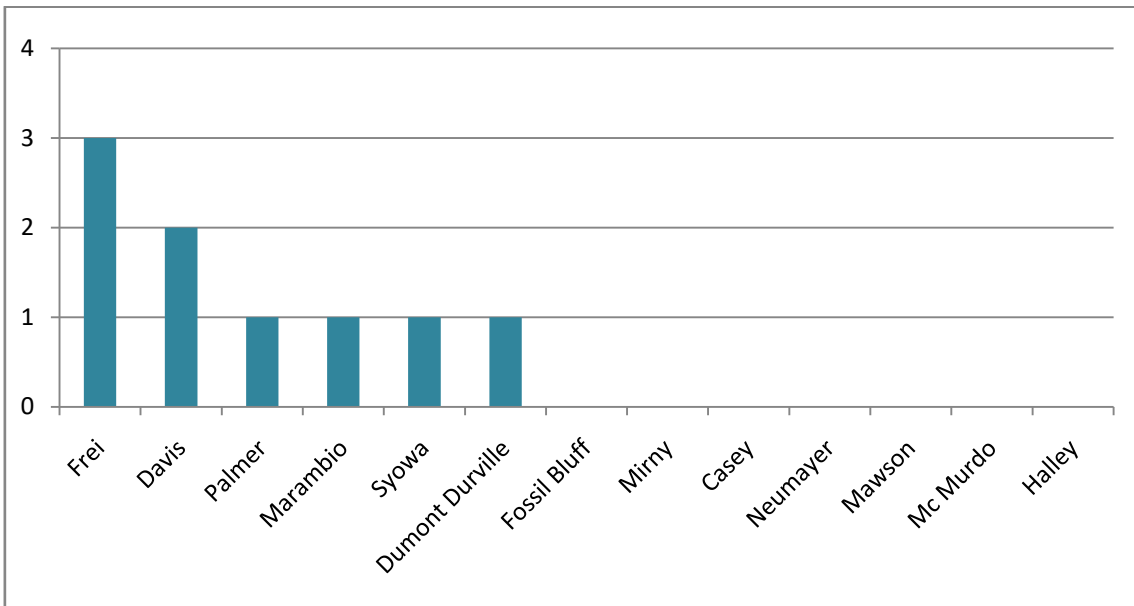
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	04
B2	1.3 a 1.8	Moderate	02
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-30.5 hpa/24h	957.5 hPa	19.0 m/s
Davis	Dumont D'Urville	Dumont D'Urville
Mar. 03rd	Mar. 20th	Mar. 20th

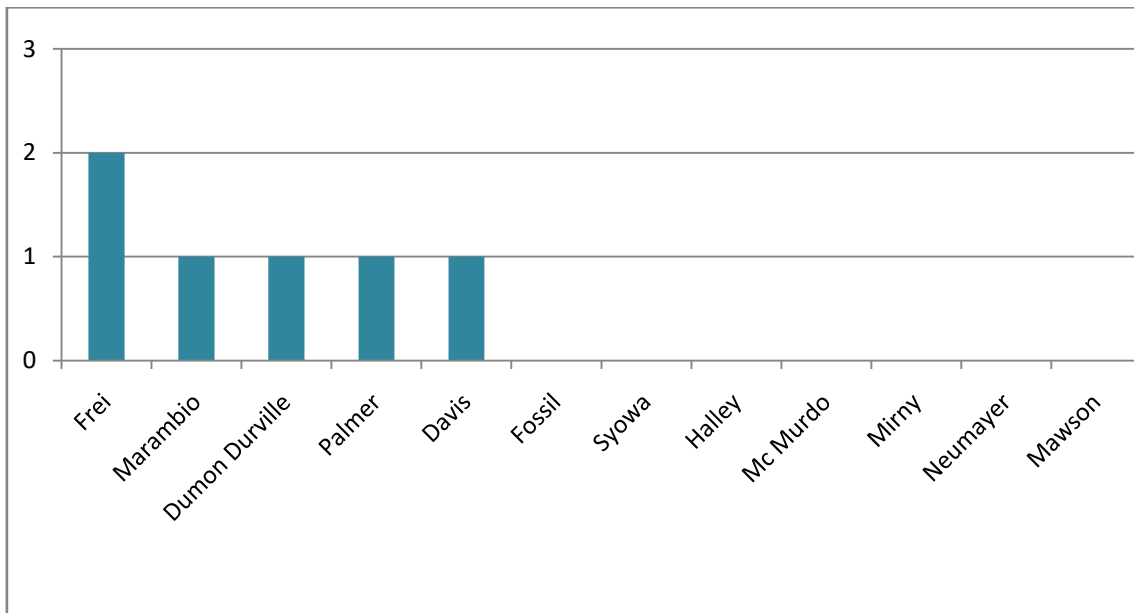
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2020



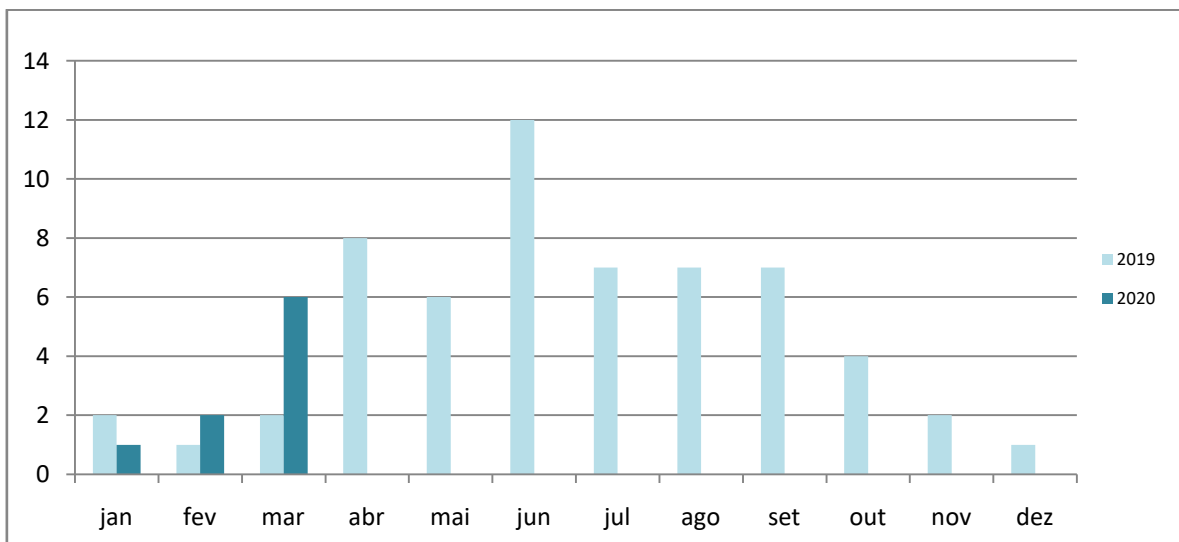
TOTAL OF EVENTS REGISTERED BY STATION IN 2020



TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF JUN/2020

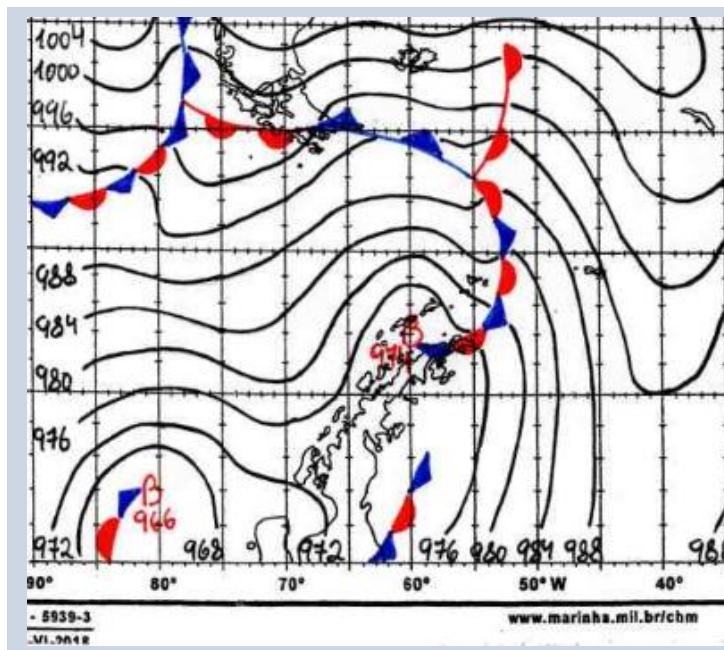


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



BOMB CYCLONE N°04/2020- DATE: MAR/01/2020

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



Drop of pressure in 24h -25.0 hPa

Min. pressure registered on station 972.0 hPa

Min. pressure estimation in the cyclone core 970 hPa

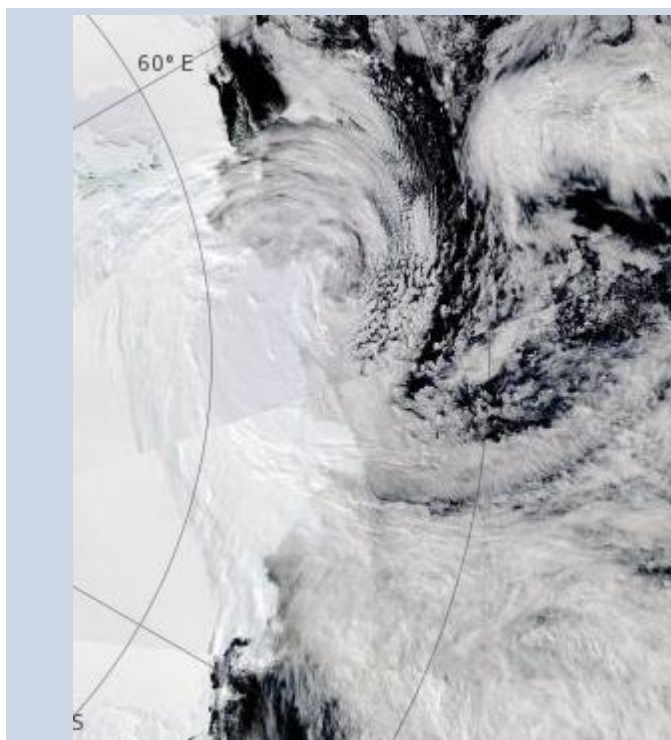
Sustained maximum wind 13.5 m/s (30 mph)

Maximum wind gust None m/s (mph)

Bergeron 1.1 (weak)

BOMB CYCLONE N°05/2020- DATE: MAR/03/2020

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



Drop of pressure in 24h -30.5 hPa

Min. pressure registered on station 968.3 hPa

Min. pressure estimation in the cyclone core 964 hPa

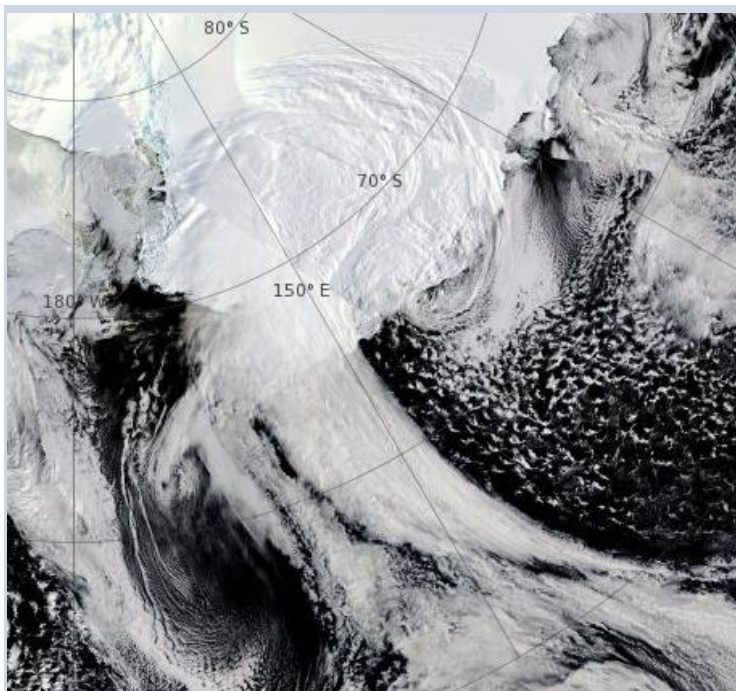
Sustained maximum wind 12.0 m/s (27 mph)

Maximum wind gust 14.0 m/s (37 mph)

Bergeron 1.3 (mod.)

BOMB CYCLONE N°06/2020 - DATE: MAR/20/2020

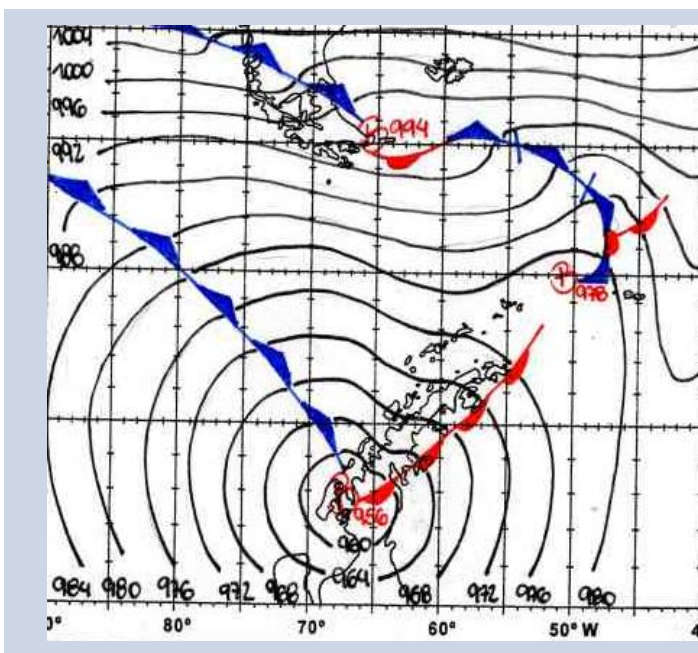
LOCAL: DUMONT D'URVILLE STATION – WMO 89642 (OPERATED BY FRANCE)



Drop of pressure in 24h	-30.4 hPa
Min. pressure registered on station	957.5 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustained maximum wind	19.0 m/s (43 mph)
Maximum wind gust	33.0 m/s (74 mph)
Bergeron	1.3 (mod.)

BOMB CYCLONE N°07/2020 - DATE: MAR/26/2020

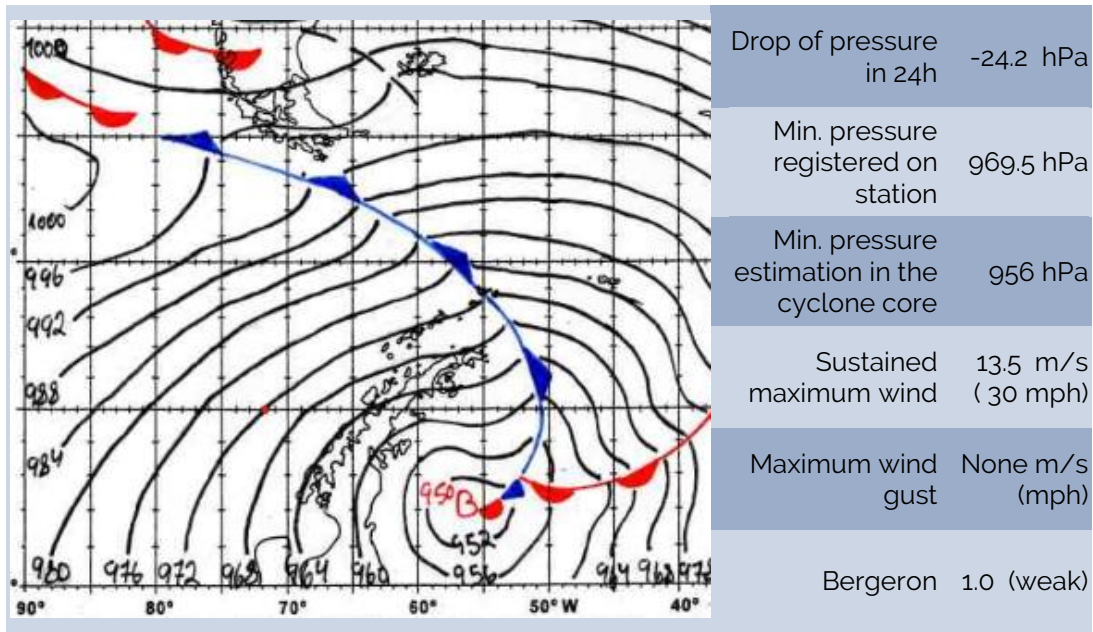
LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)



Drop of pressure in 24h	-27.1 hPa
Min. pressure registered on station	960.3 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustained maximum wind	18.0 m/s (40 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.1 (weak)

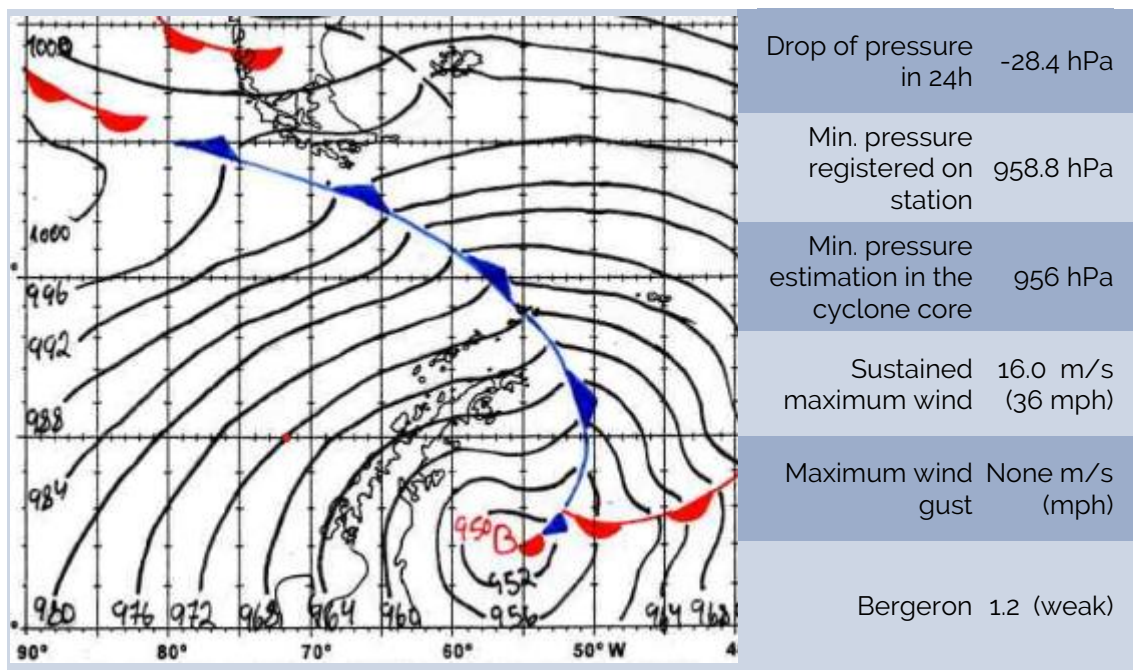
BOMB CYCLONE N°08/2020- DATE: MAR/26/2020

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



BOMB CYCLONE N°09/2020- DATE: MAR/26/2020

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



SOURCES

AMRC – UW Madison

<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>