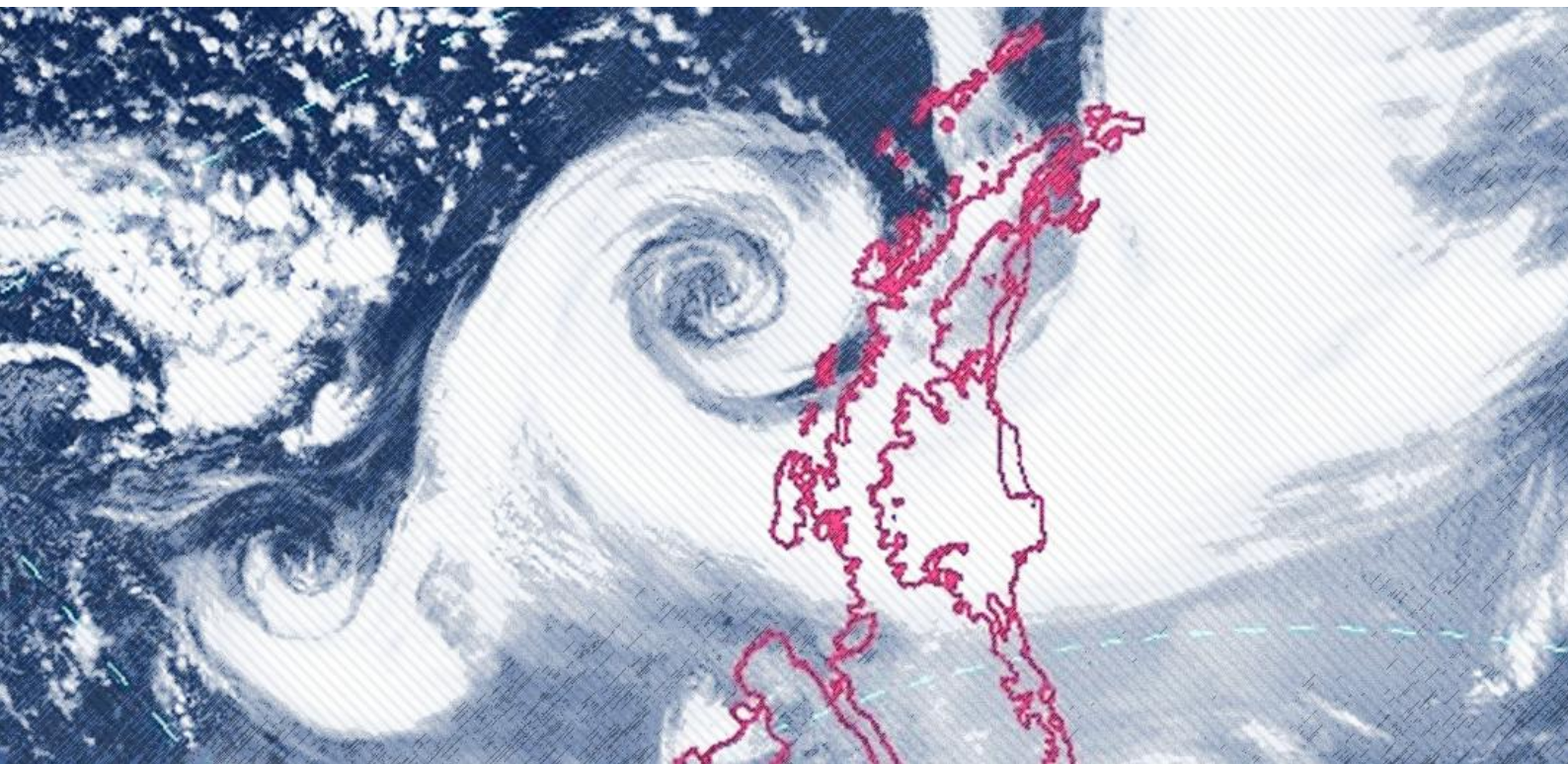




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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APRIL 2021

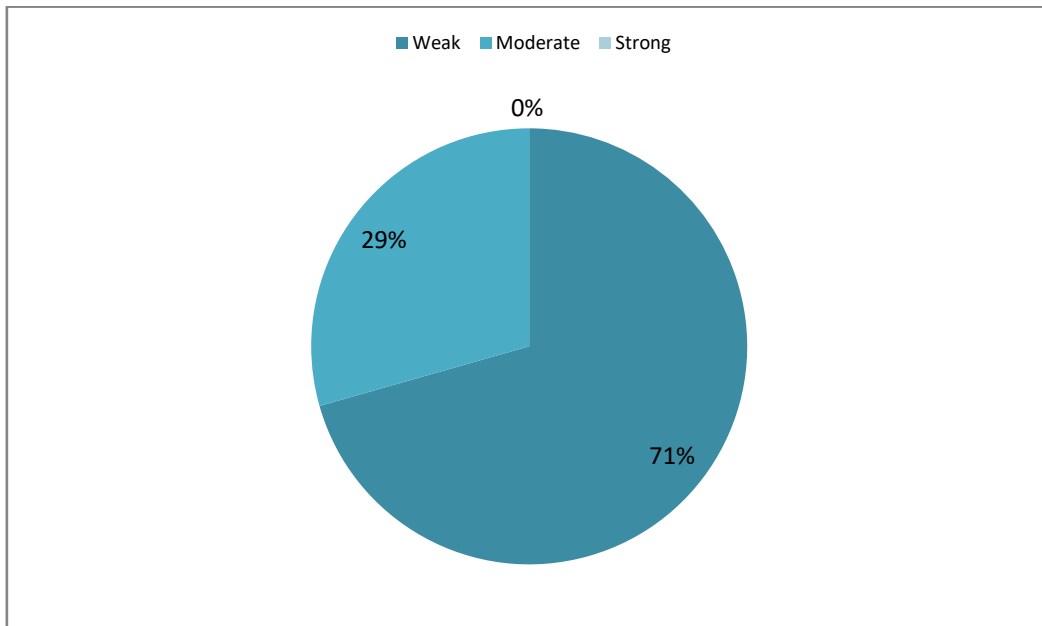
During this month, 8 events were registered among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. The stations affected by cyclones this month were: Frei, Dumont D'Urville, Casey, Neumayer, Fossil Bluff, Palmer, Marambio and Halley. There was a significant decrease (33%) in the number of cyclones in comparison to the same month of the previous year (2021).

STATISTICS OF THE MONTH

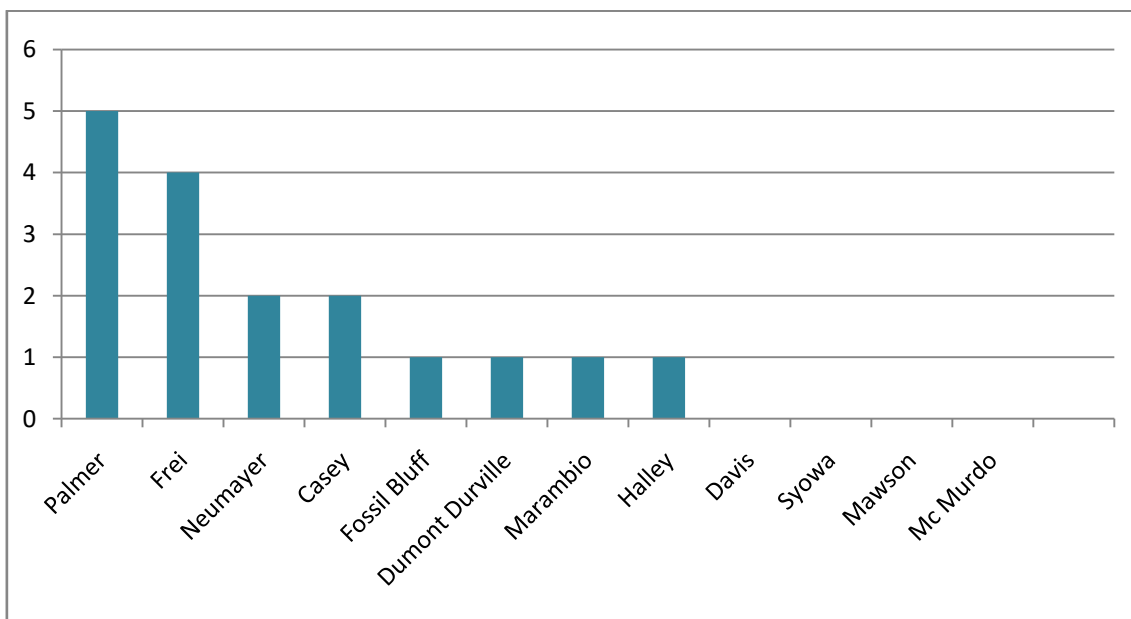
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	03
B2	1.3 a 1.8	Moderate	05
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-43.4 hPa/24h	950.0 hPa	35.5 m/s
Frei Station	Palmer Station	Casey Station
April 15	April 15	April 19

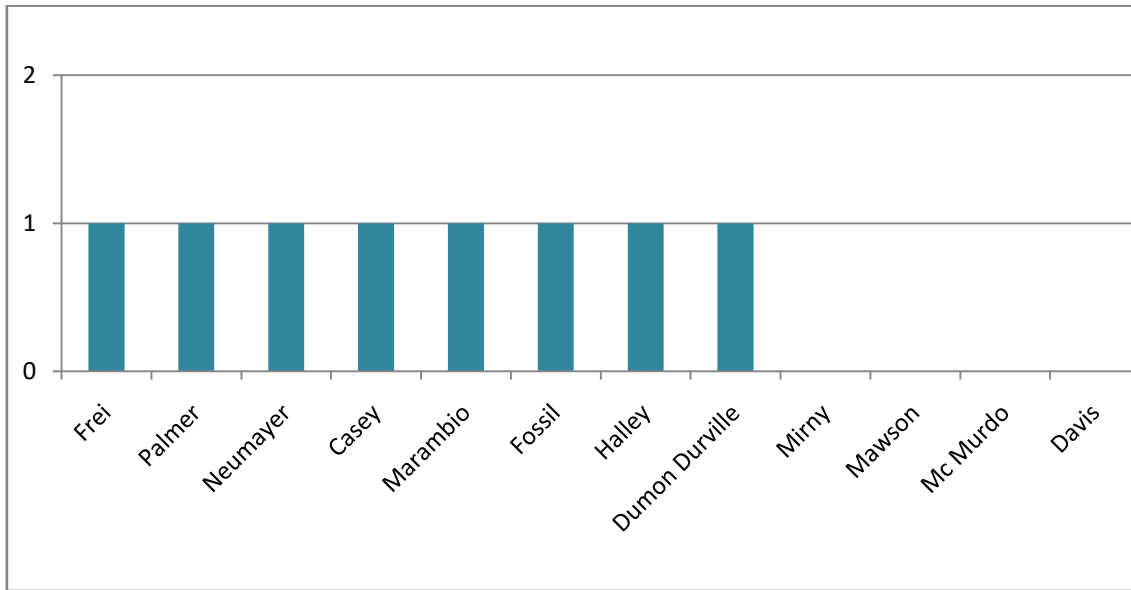
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2021



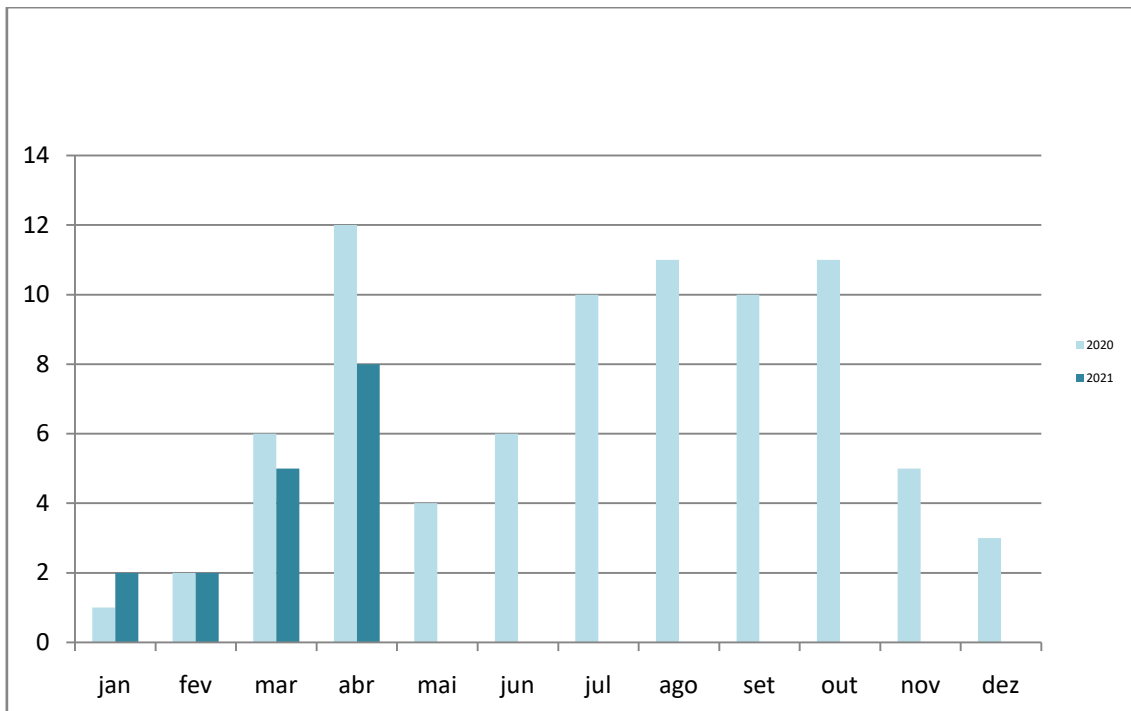
TOTAL OF EVENTS REGISTERED BY STATION IN 2021



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

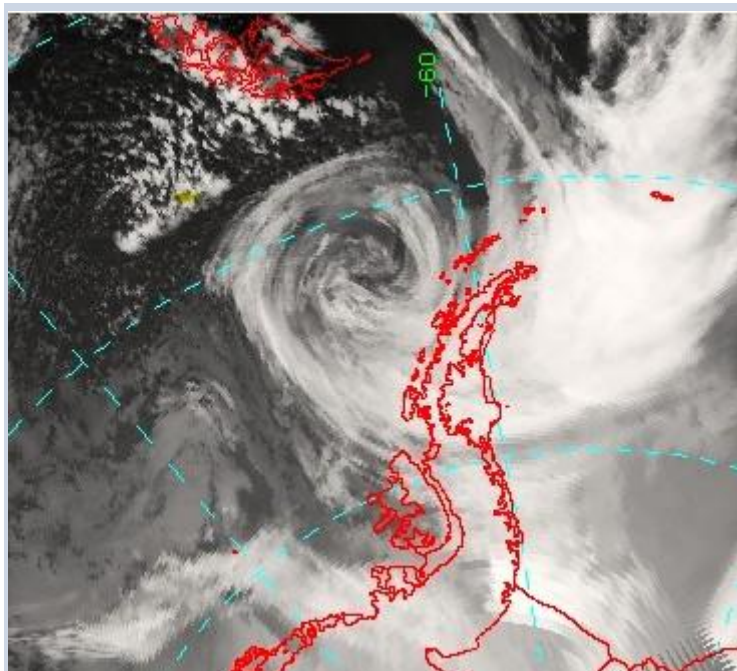


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



BOMB CYCLONE N°10/2021- DATE: APR/15/2021

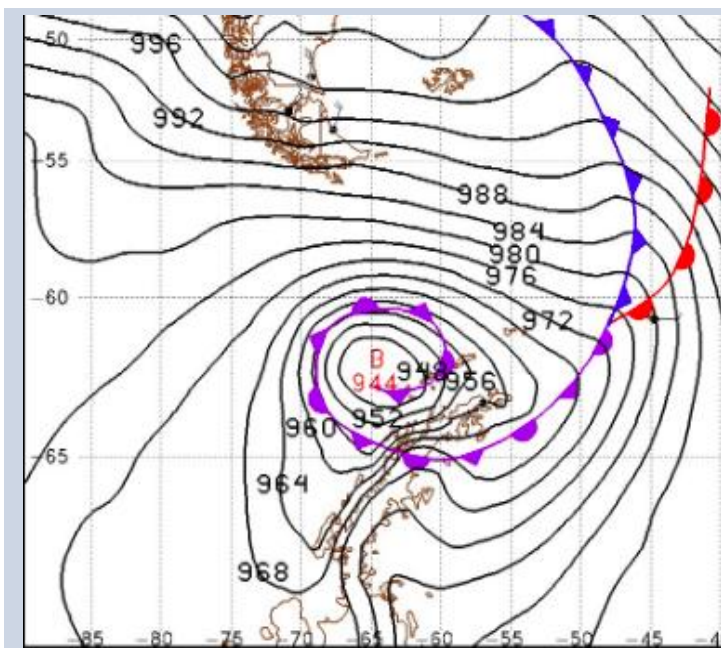
LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



Drop of pressure in 24h	-43.4 hPa
Min. pressure registered on station	950.3 hPa
Min. pressure estimation in the cyclone core	937 hPa
Sustained maximum wind	22.5 m/s (50 mph)
Maximum wind gust	29.5 m/s (66 mph)
Bergeron	1.8 (Mod.)

BOMB CYCLONE N°11/2021- DATE: APR/15/2021

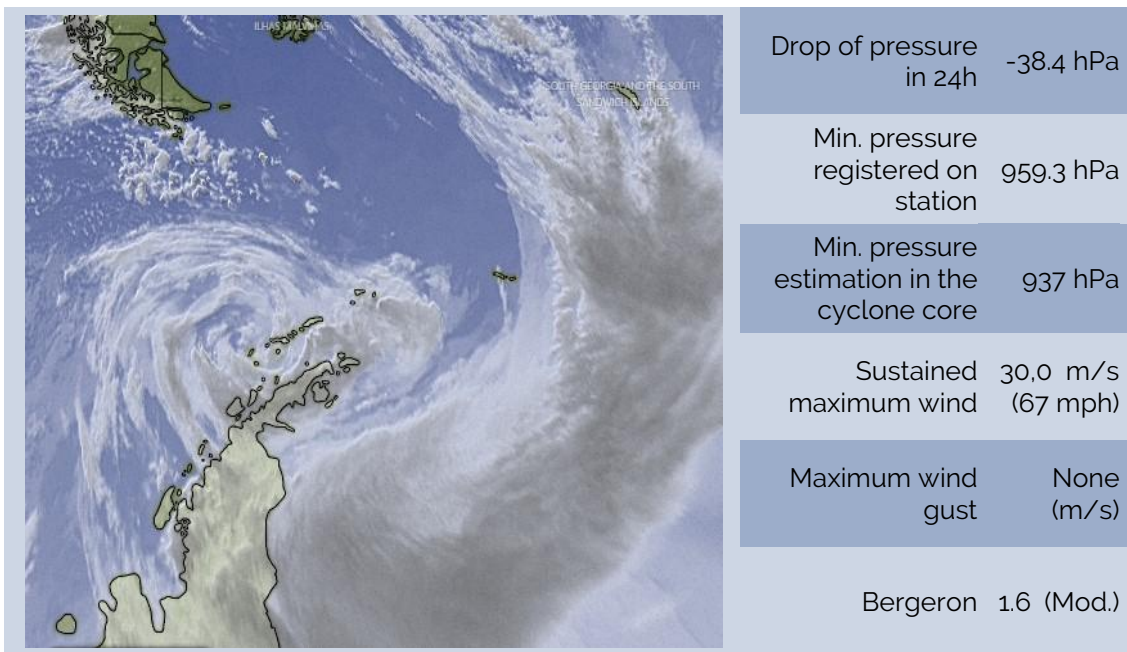
LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)



Drop of pressure in 24h	-37.9 hPa
Min. pressure registered on station	950.0 hPa
Min. pressure estimation in the cyclone core	937 hPa
Sustained maximum wind	11.0 m/s (25 mph)
Maximum wind gust	None (m/s)
Bergeron	1.6 (Mod.)

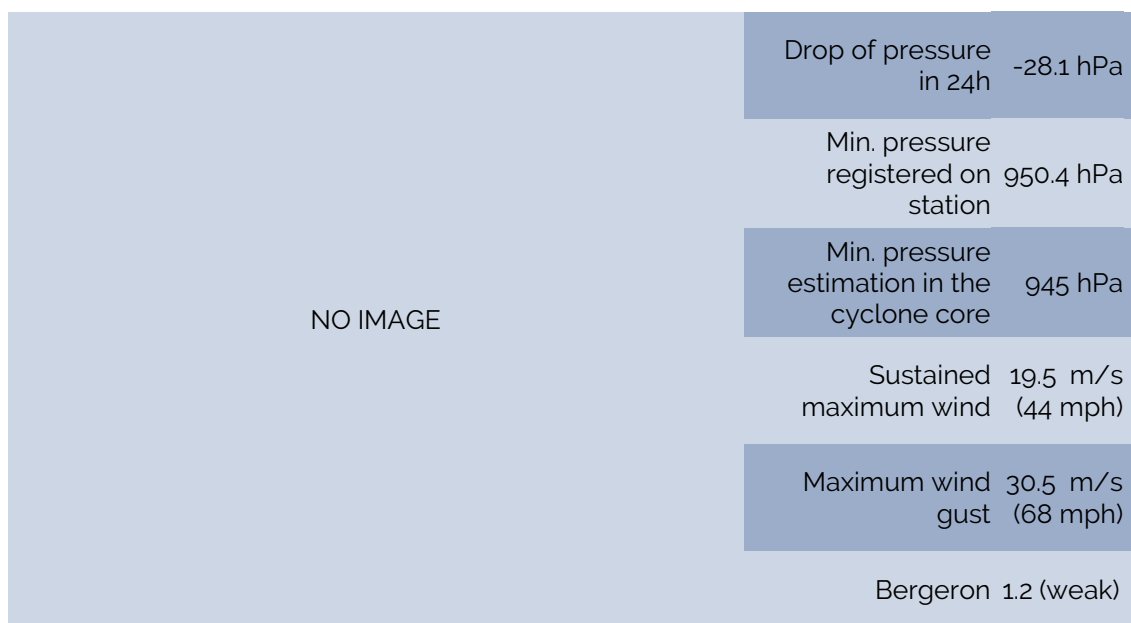
BOMB CYCLONE N°12/2021 - DATE: APR/15/2021

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



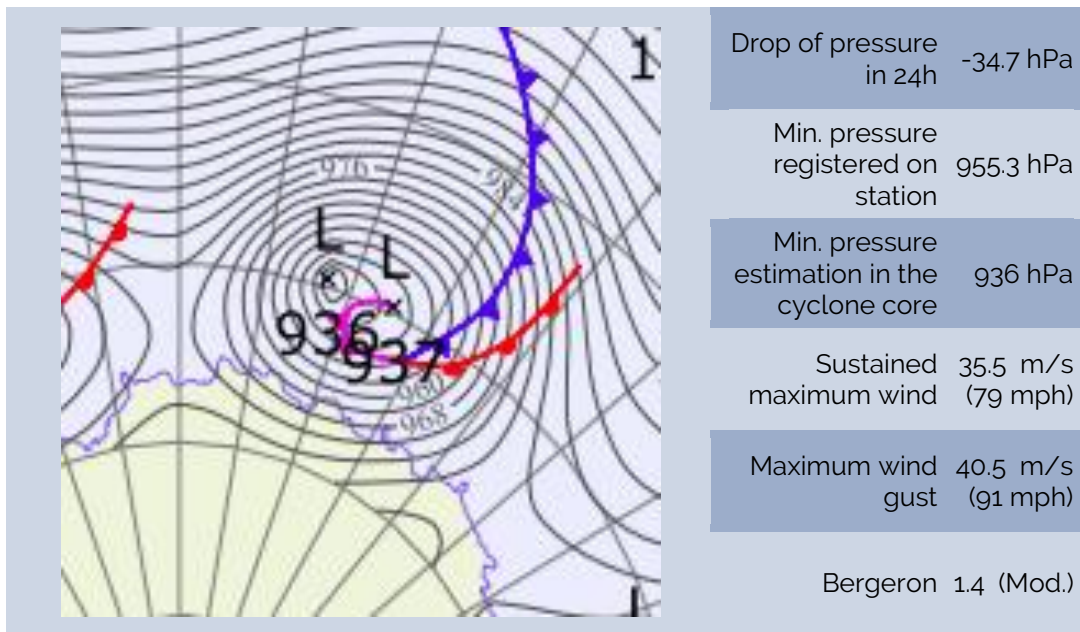
BOMB CYCLONE N°13/2021 - DATE: APR/15/2021

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



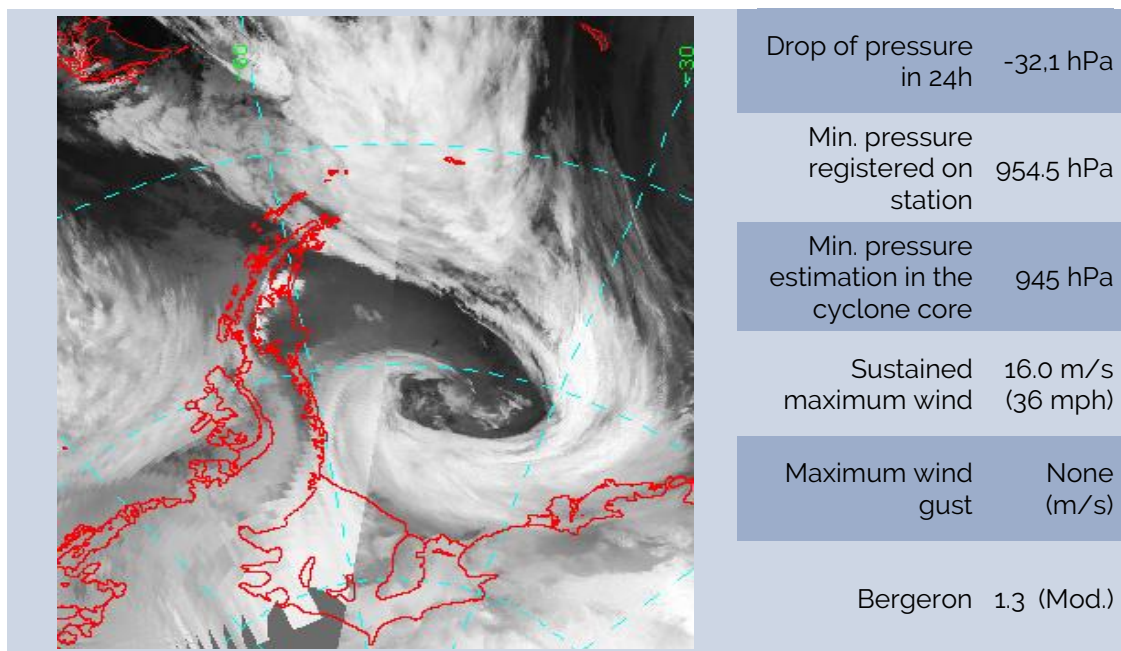
BOMB CYCLONE N°14/2021- DATE: APR/19/2021

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



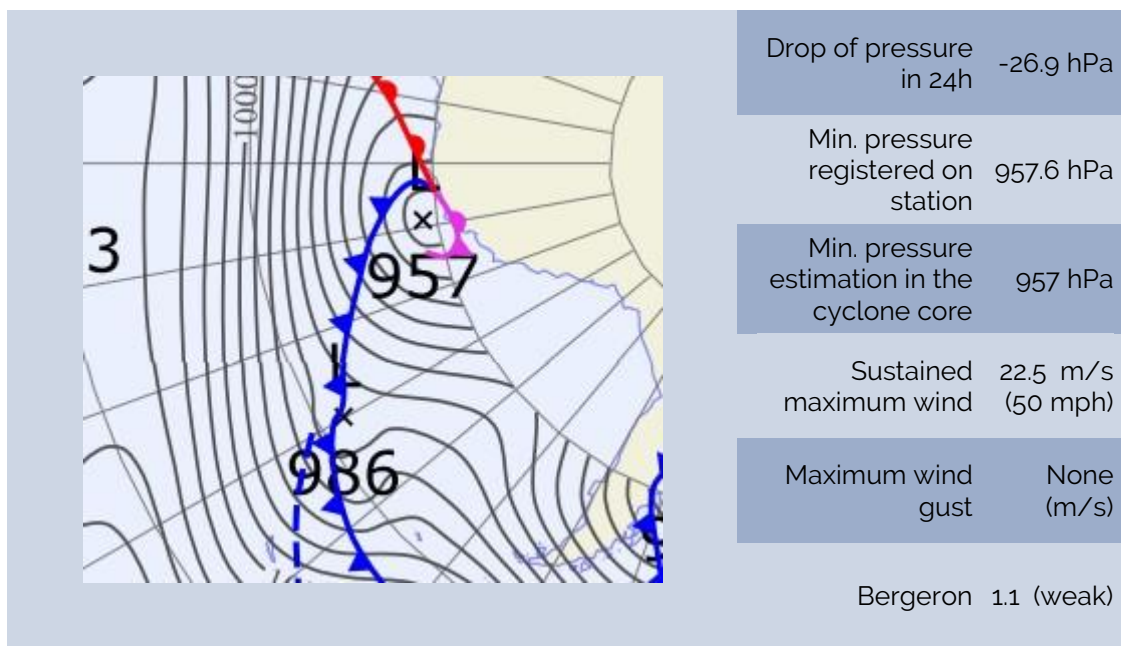
BOMB CYCLONE N°15/2021- DATE: APR/20/2021

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



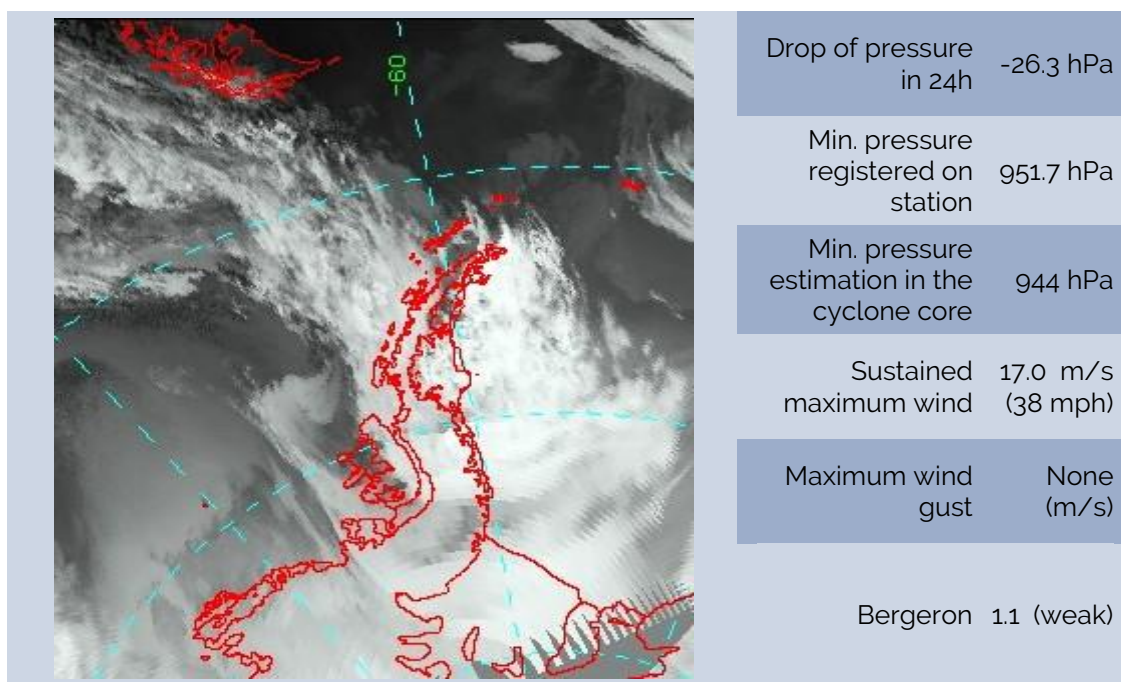
BOMB CYCLONE N°16/2021- DATE: APR/21/2021

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



BOMB CYCLONE N°17/2021- DATE: APR/21/2021

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



SOURCES

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

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

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

<http://www.smn.gov.ar>

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