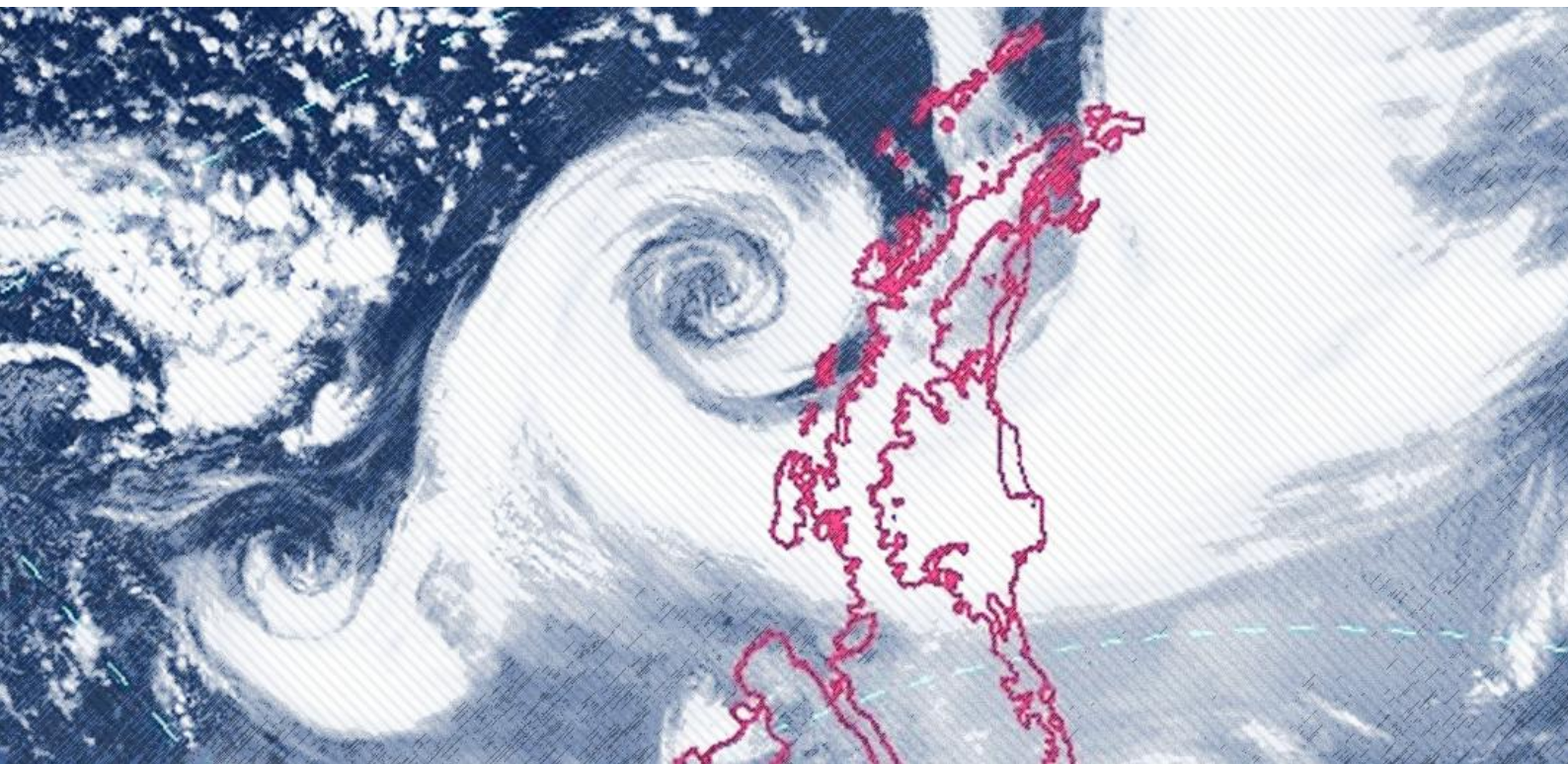




WORLD
ENVIRONMENTAL
CONSERVANCY

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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AUGUST 2020

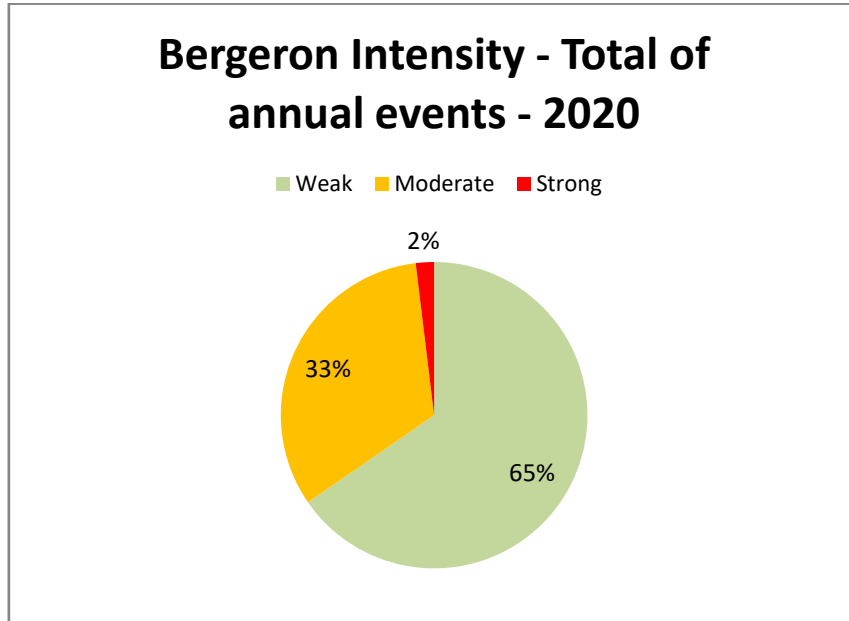
During this month, 11 events were registered among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of explosive cyclones (bomb cyclones). The stations affected by cyclones this month were: Frei, Mawson, Casey, Davis, Mirny and Palmer. There was a significant increase of 36% in the number of cyclones in comparison to the same month of the previous year (2019).

STATISTICS OF THE MONTH

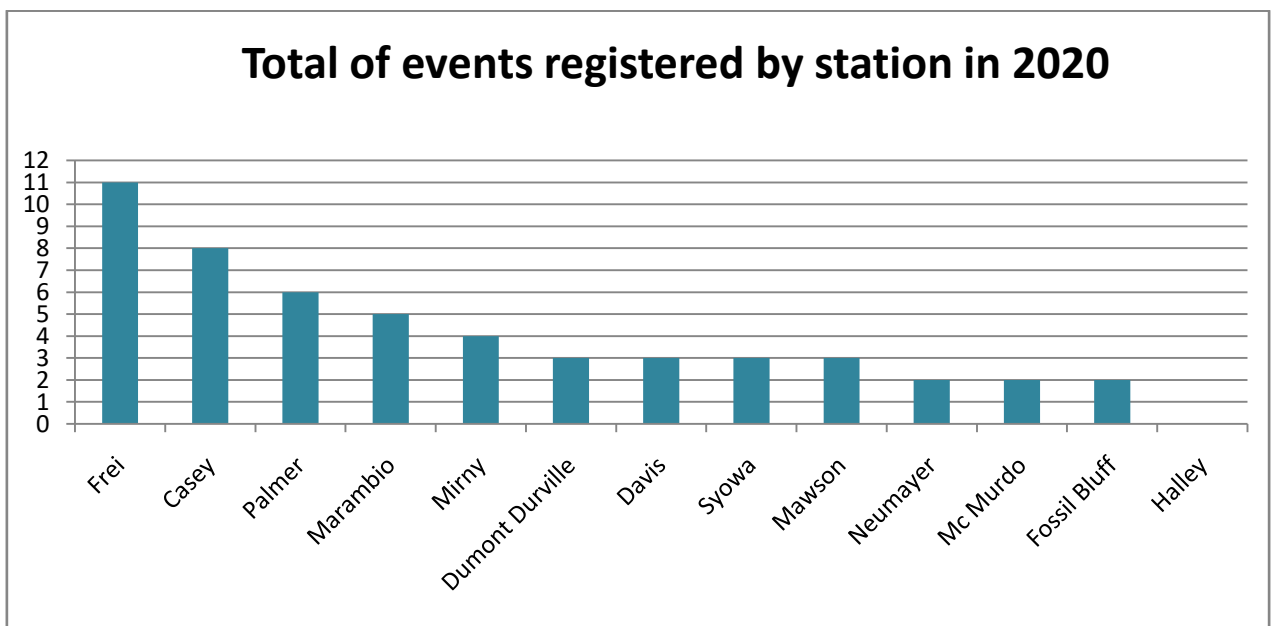
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	05
B2	1.3 a 1.8	Moderate	05
B3	> 1.8	Strong	01

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-47.4 hPa/24h	943.0 hPa	44.5 m/s
Davis Station	Davis Station	Mawson Station
August 01 st	August 01 st	August 30 th

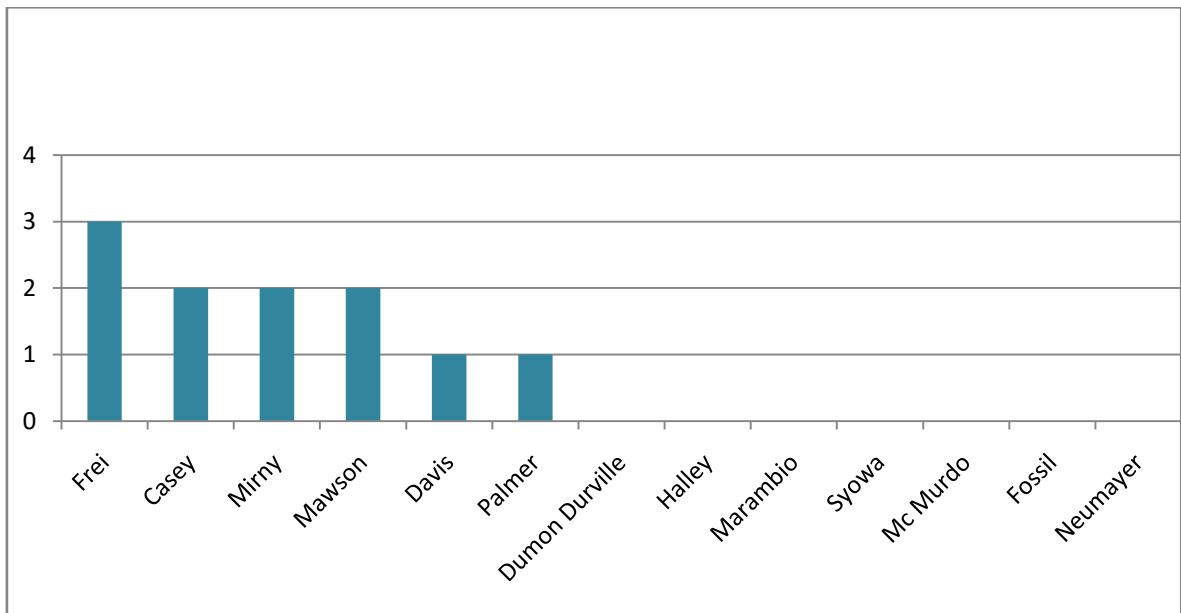
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2020



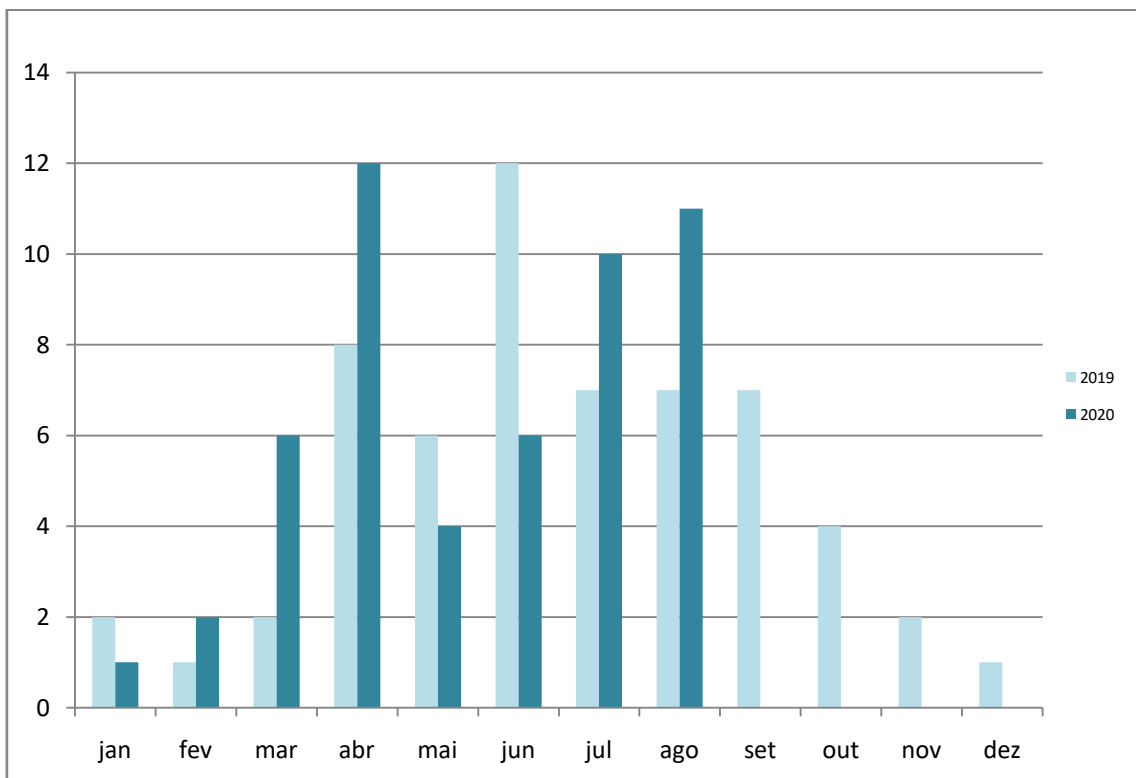
TOTAL OF EVENTS REGISTERED BY STATION IN 2020



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

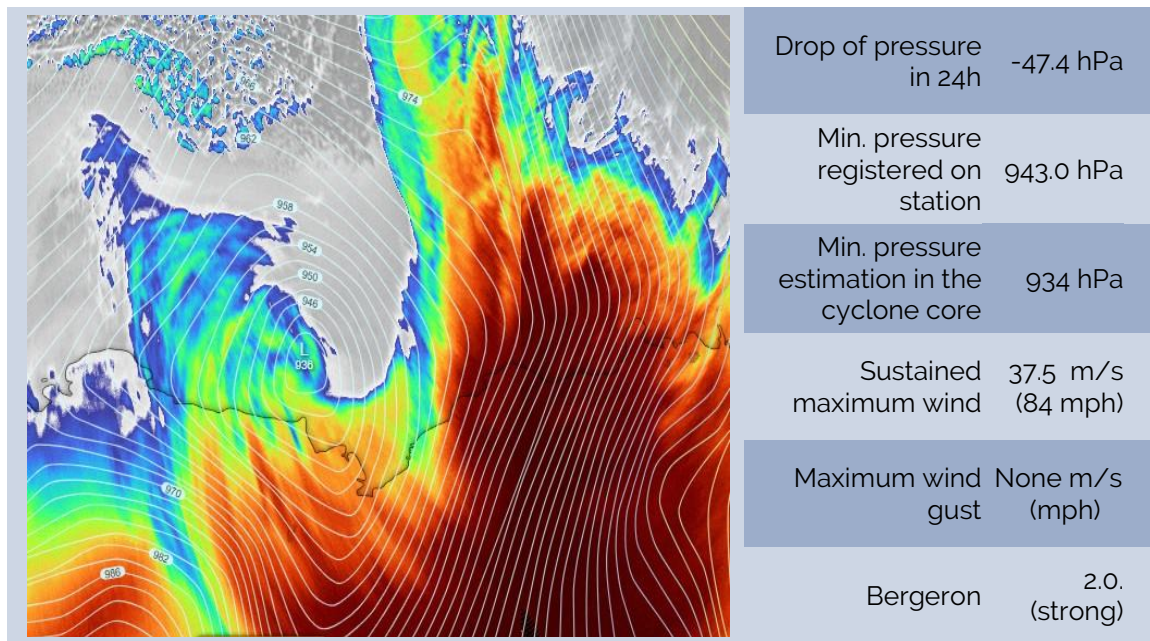


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



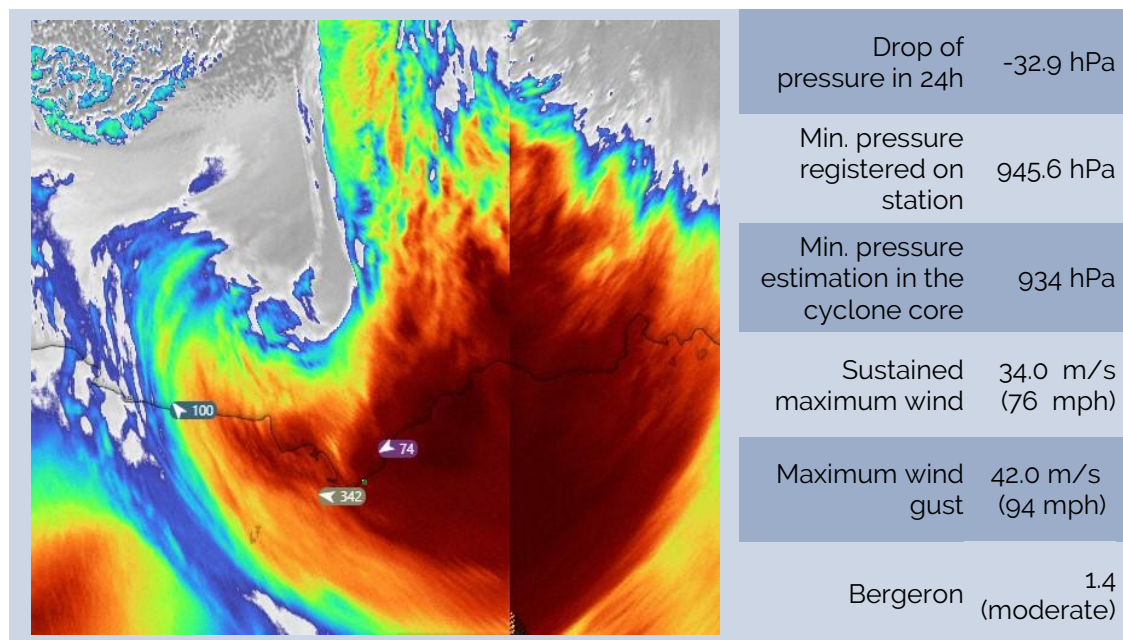
BOMB CYCLONE N°42/2020- DATE: AUG/01/2020

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



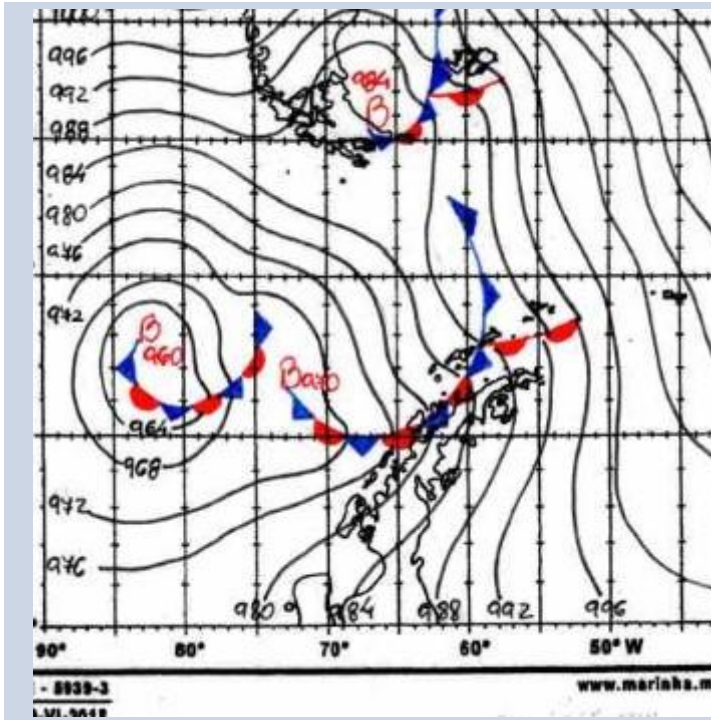
BOMB CYCLONE N°43/2020- DATE: DATE: AUG/01/2020

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



BOMB CYCLONE N°44/2020- DATE: AUG/02/2020

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



Drop of pressure in 24h -29.0 hPa

Min. pressure registered on station 979.0 hPa

Min. pressure estimation in the cyclone core 976 hPa

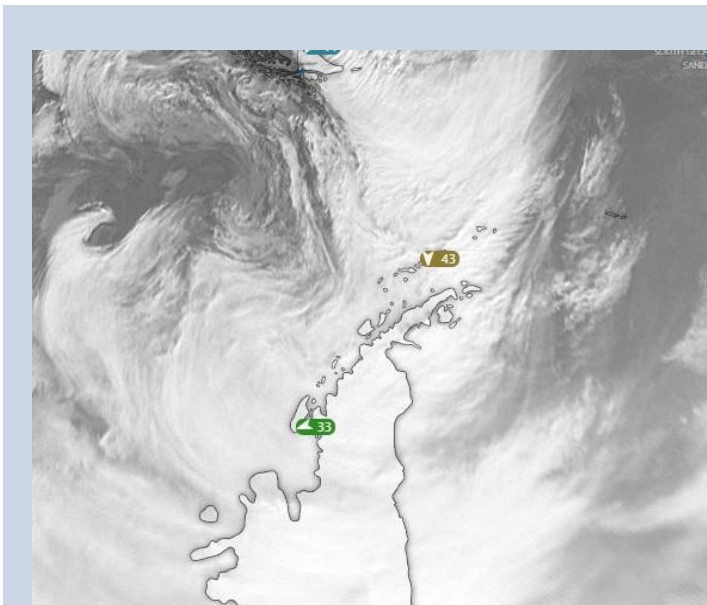
Sustained maximum wind 14.5 m/s (32 mph)

Maximum wind gust 19.5 m/s (44 mph)

Bergeron 12 (weak)

BOMB CYCLONE N°45/2020- DATE: AUG/02/2020

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



Drop of pressure in 24h -32.5 hPa

Min. pressure registered on station 970.3 hPa

Min. pressure estimation in the cyclone core 963 hPa

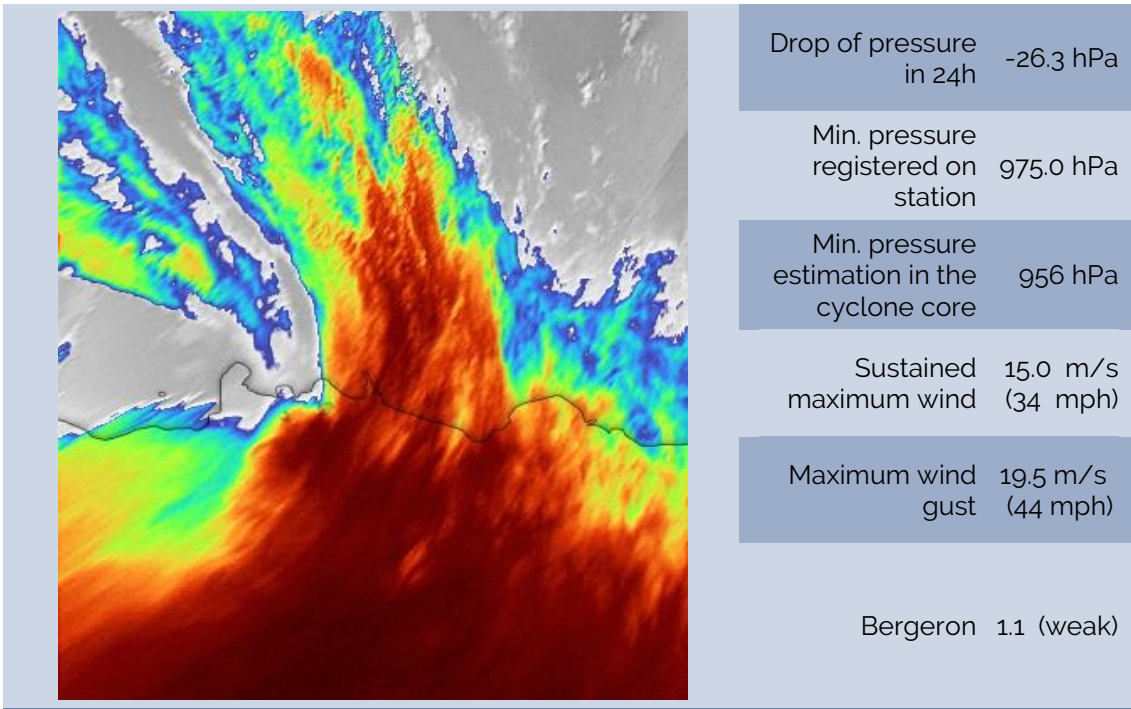
Sustained maximum wind 16.0 m/s (36 mph)

Maximum wind gust None m/s (mph)

Bergeron 1.4 (moderate)

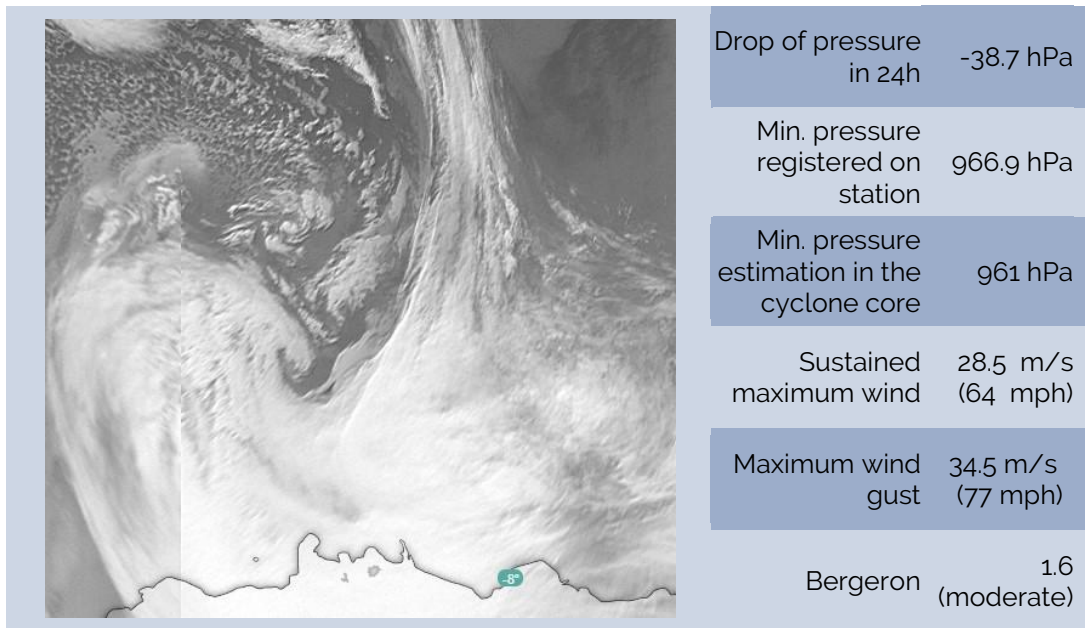
BOMB CYCLONE N°46/2020 - DATE: AUG/02/2020

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



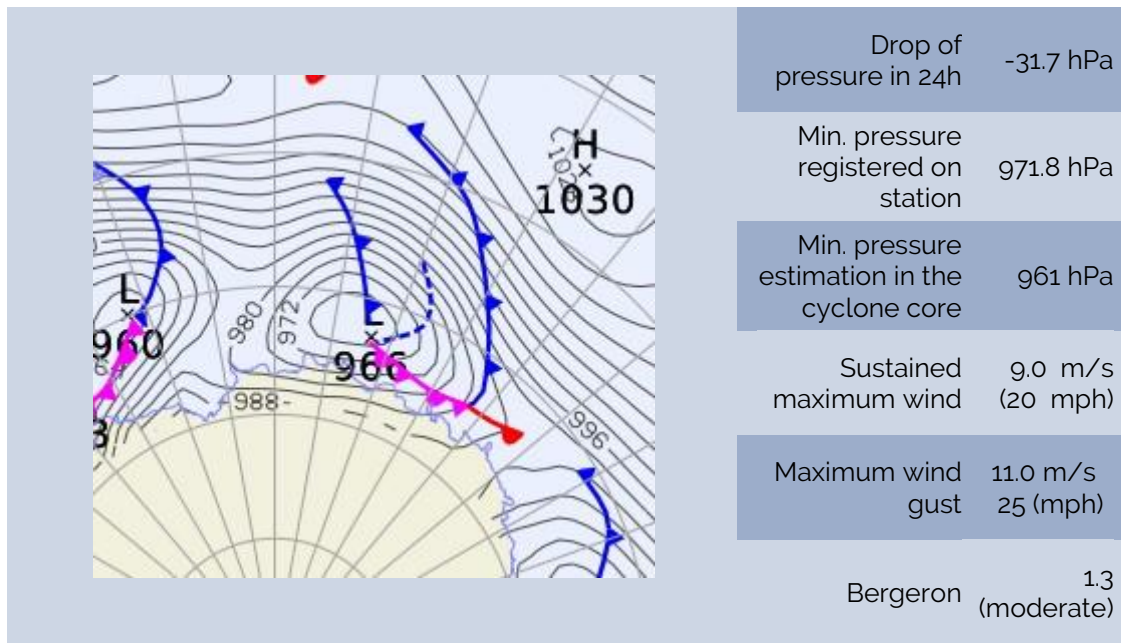
BOMB CYCLONE N°47/2020- DATE: DATE: AUG/04/2020

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



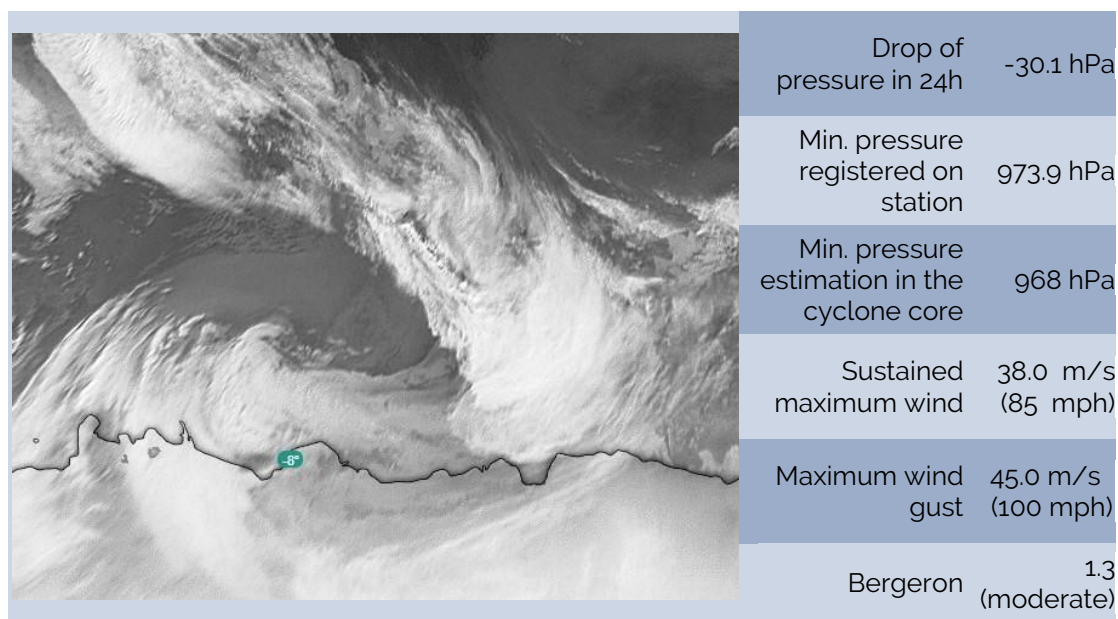
BOMB CYCLONE N°48/2020- DATE: DATE: AUG/04/2020

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



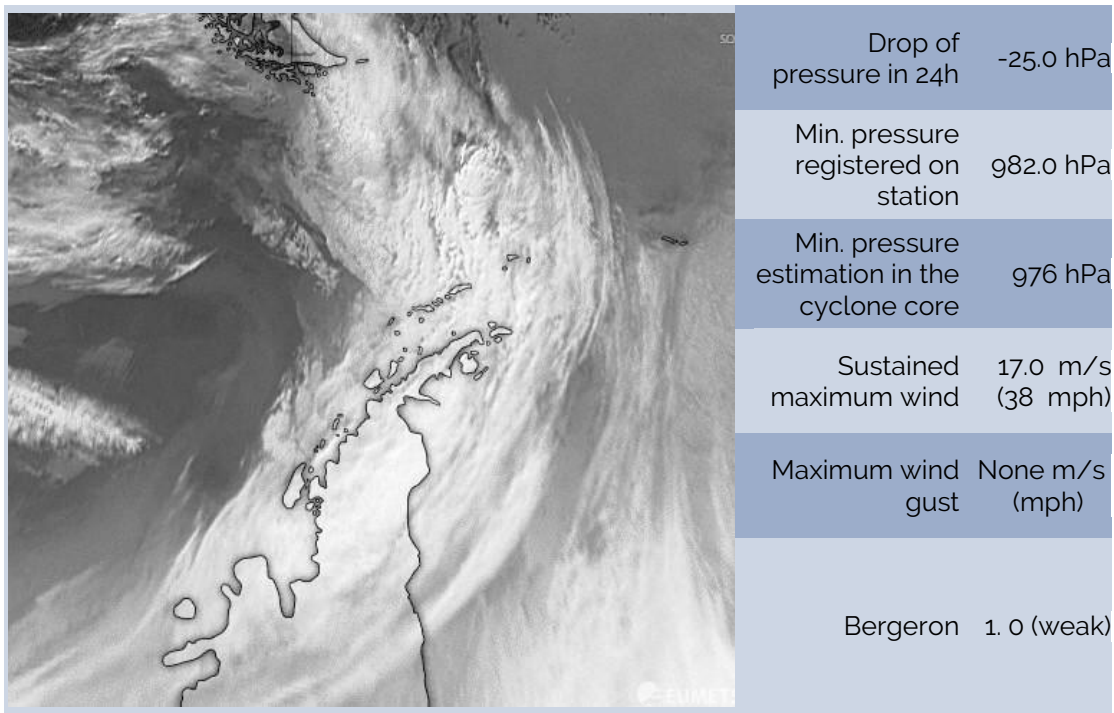
BOMB CYCLONE N°49/2020- DATE: DATE: AUG/12/2020

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



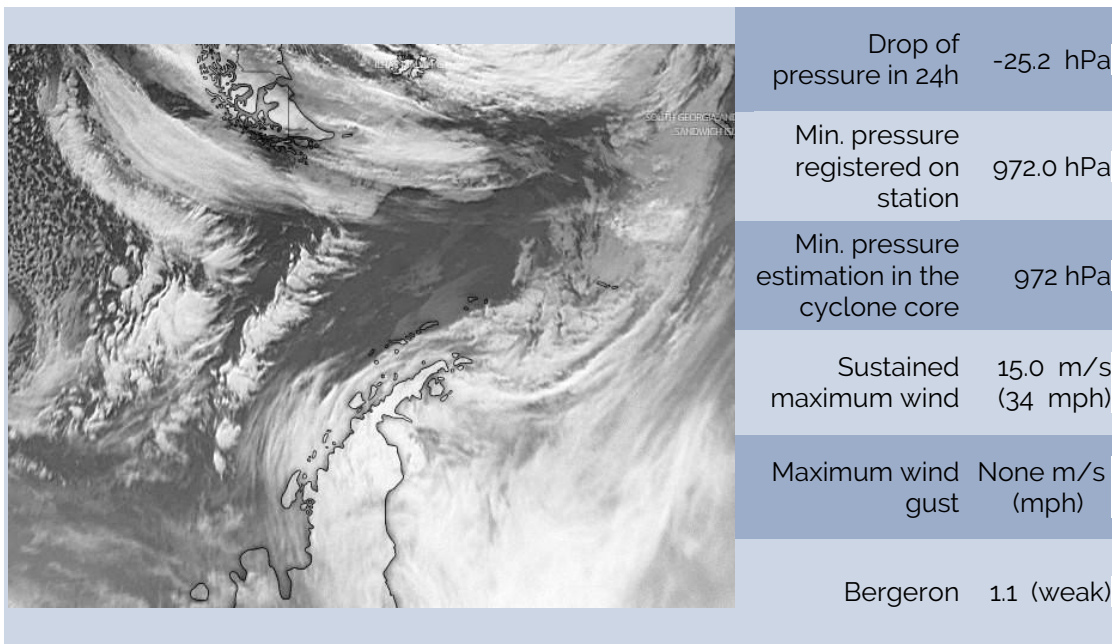
BOMB CYCLONE N°50/2020- DATE: DATE: AUG/19/2020

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



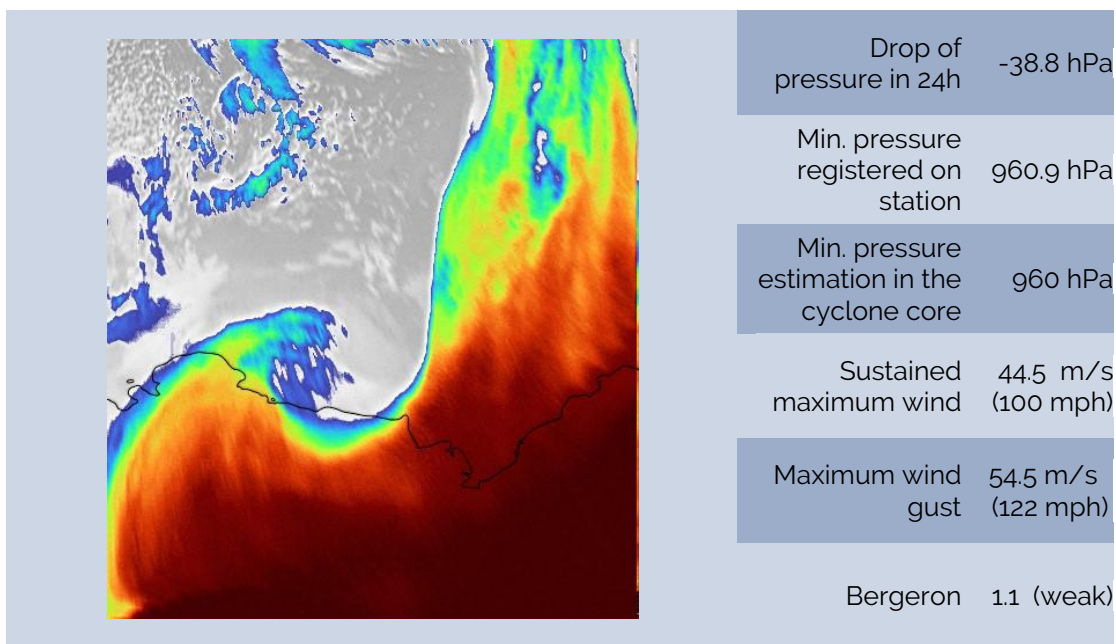
BOMB CYCLONE N°51/2020- DATE: DATE: AUG/22/2020

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



BOMB CYCLONE N°52/2020- DATE: DATE: AUG/30/2020

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



VIDEOS

BOMB CYCLONE N°43/2020- DATE: DATE: AUG/01/2020

<https://www.youtube.com/watch?v=35dHFbmgK8I>

BOMB CYCLONE N°44/2020- DATE: AUG/02/2020

<https://www.youtube.com/watch?v=enC-2ySVWfl>

BOMB CYCLONE N°47/2020- DATE: DATE: AUG/04/2020

https://www.youtube.com/watch?v=r7LjKv_Q1rg

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>