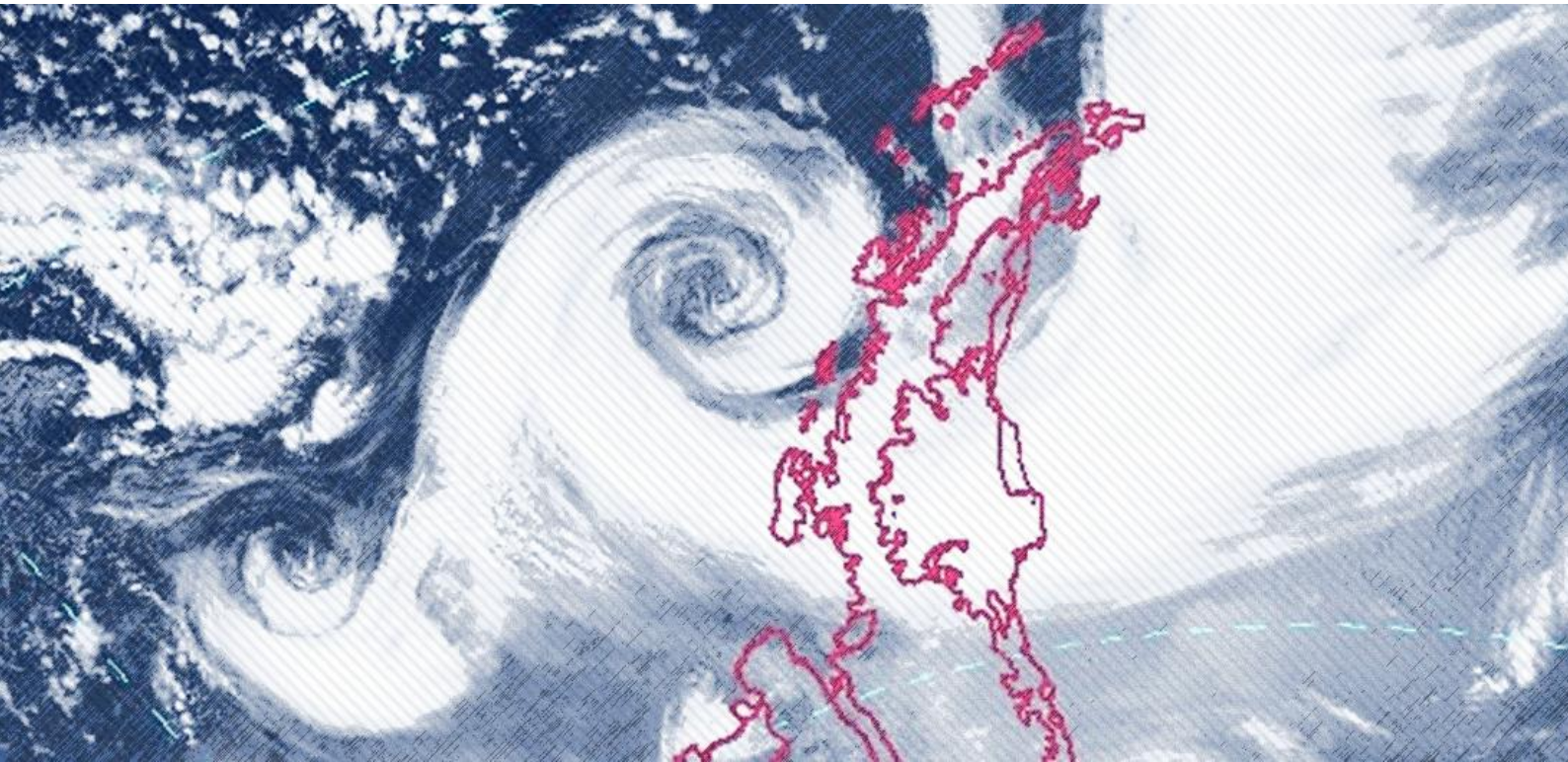




WORLD
ENVIRONMENTAL
CONSERVANCY

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

JULY 2022

During this month, only 12 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 Casey, Davis, Fossil Bluff, Mawson, Mirny, Palmer and Frei. Of these 12 events 05 of them reached the level of an Antarctic hurricane.

TOTAL OF EVENTS REGISTERED IN STATIONS IN JULY

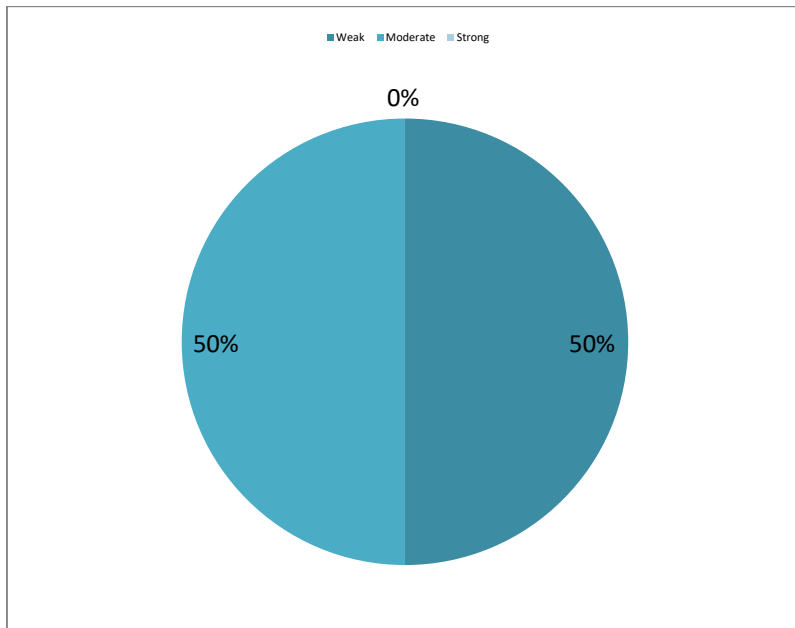
2017	2018	2019	2020	2021	2022
14	6	7	10	9	12

STATISTICS OF THE MONTH: JUNE 2022

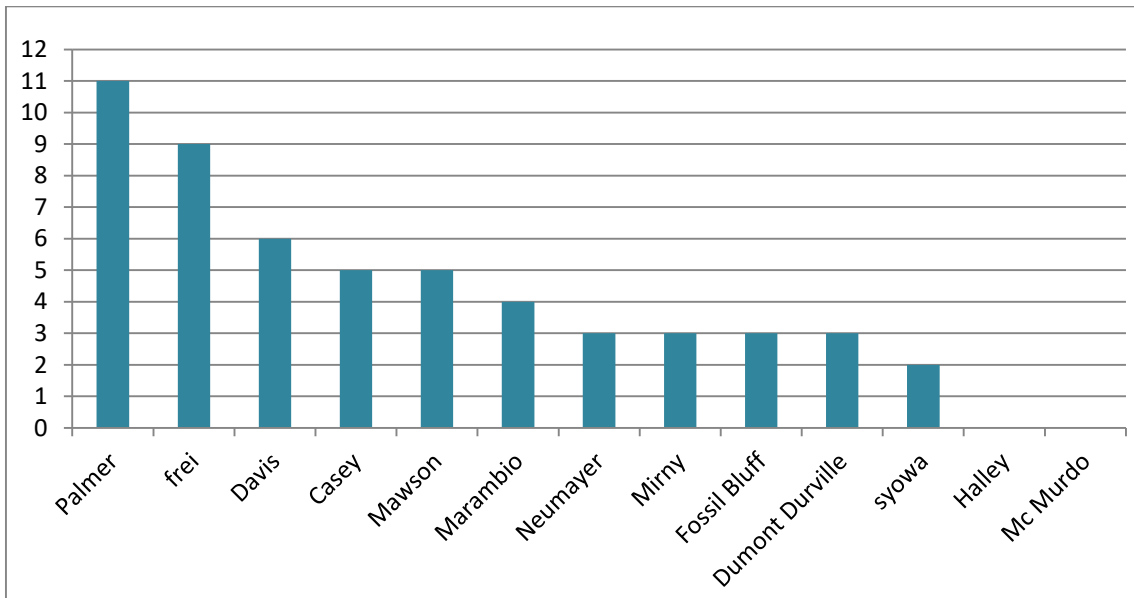
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	08
B2	1.3 a 1.8	Moderate	04
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-43.4 hPa/24h	944.2 hPa	47.8 m/s
Mawson Station	Mawson Station	Mawson Station
Jul 14	Jul 15	Jul 14

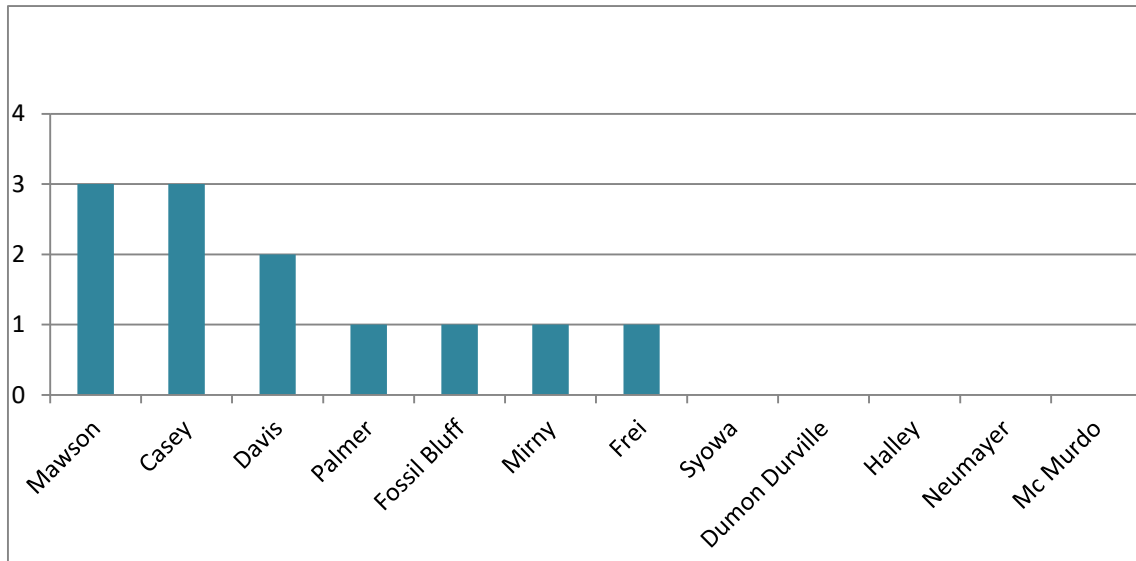
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2022



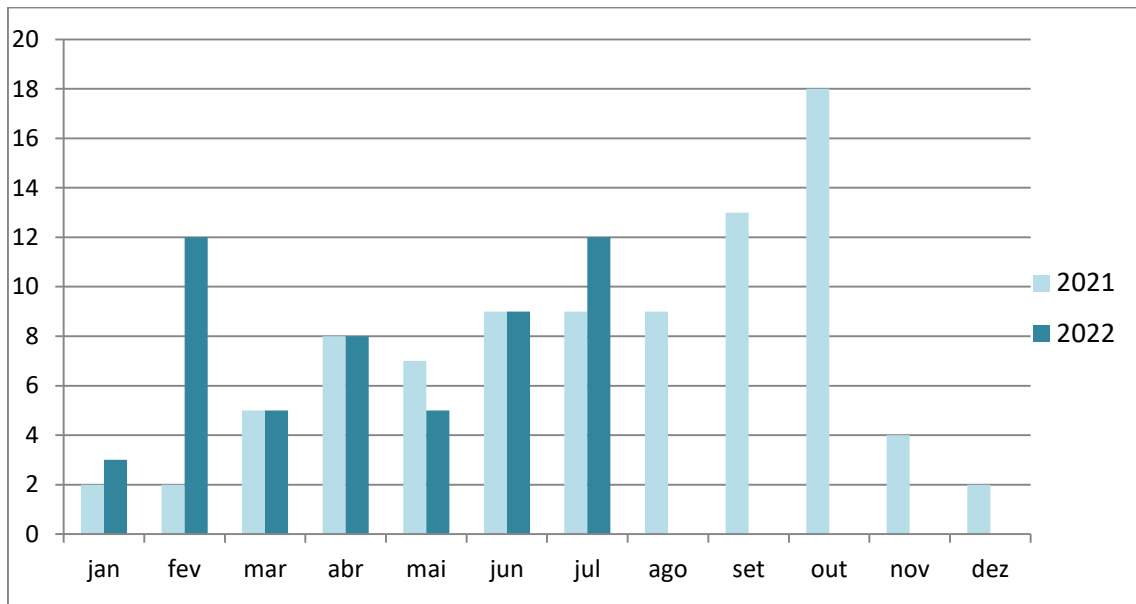
TOTAL OF EVENTS REGISTERED BY STATION IN 2022



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

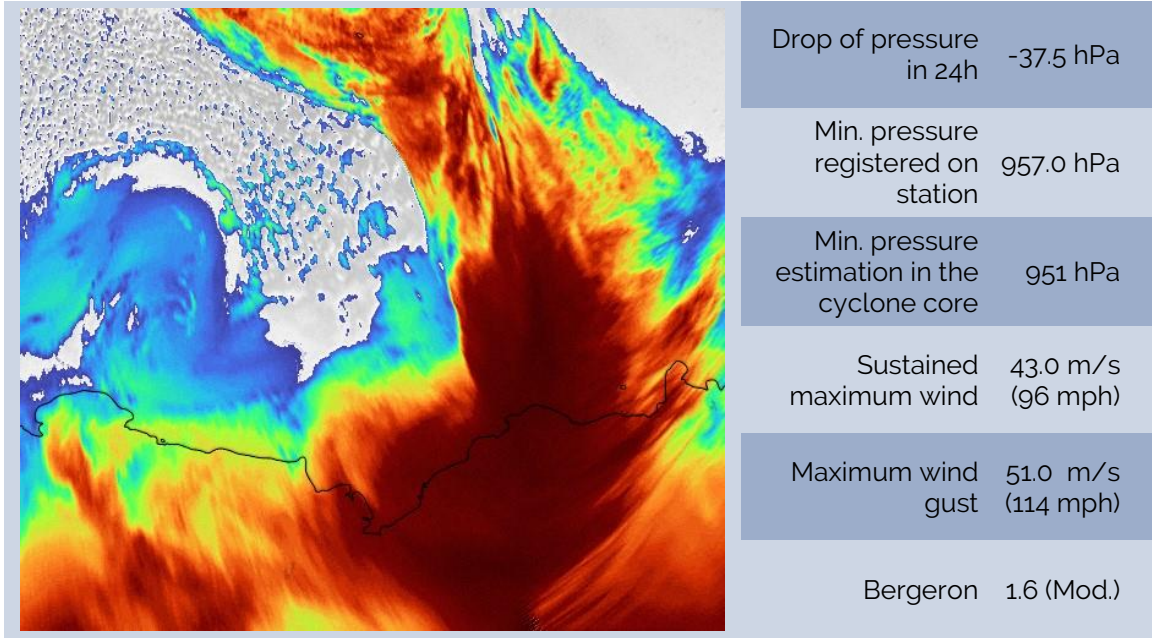


TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



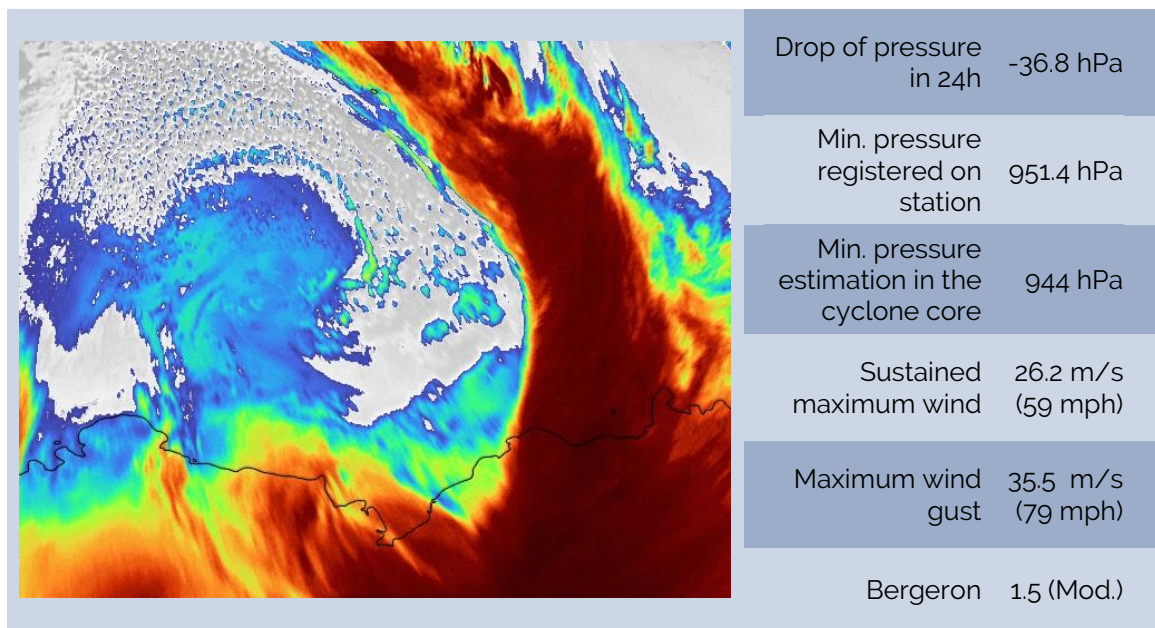
BOMB CYCLONE N°43/2022 (ANTARCTIC HURRICANE CAT-2)
 DATE: JULY/03/2022

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



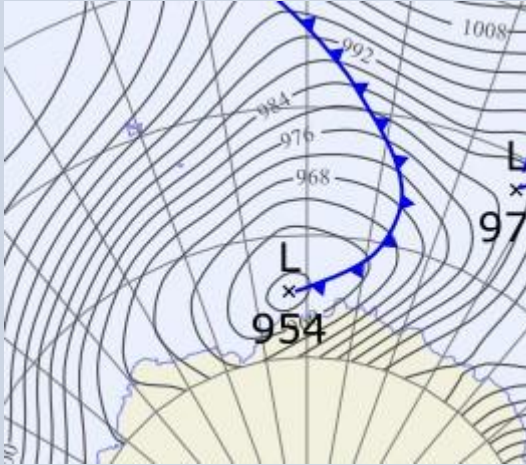
BOMB CYCLONE N°44/2022- DATE: JULY/03/2022

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



BOMB CYCLONE N°45/2022- DATE: JULY/04/2022

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



Drop of pressure in 24h -28.1 hPa

Min. pressure registered on station 956.6 hPa

Min. pressure estimation in the cyclone core 951 hPa

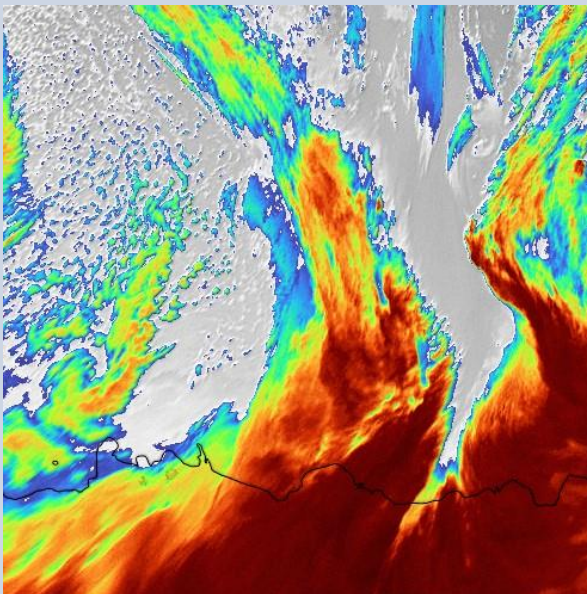
Sustained maximum wind 26.0 m/s (58 mph)

Maximum wind gust 32.0 m/s (72 mph)

Bergeron 1.2 (Weak)

BOMB CYCLONE N°46/2022- DATE: JULY/05/2022

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



Drop of pressure in 24h -32.2 hPa

Min. pressure registered on station 957.8 hPa

Min. pressure estimation in the cyclone core 957 hPa

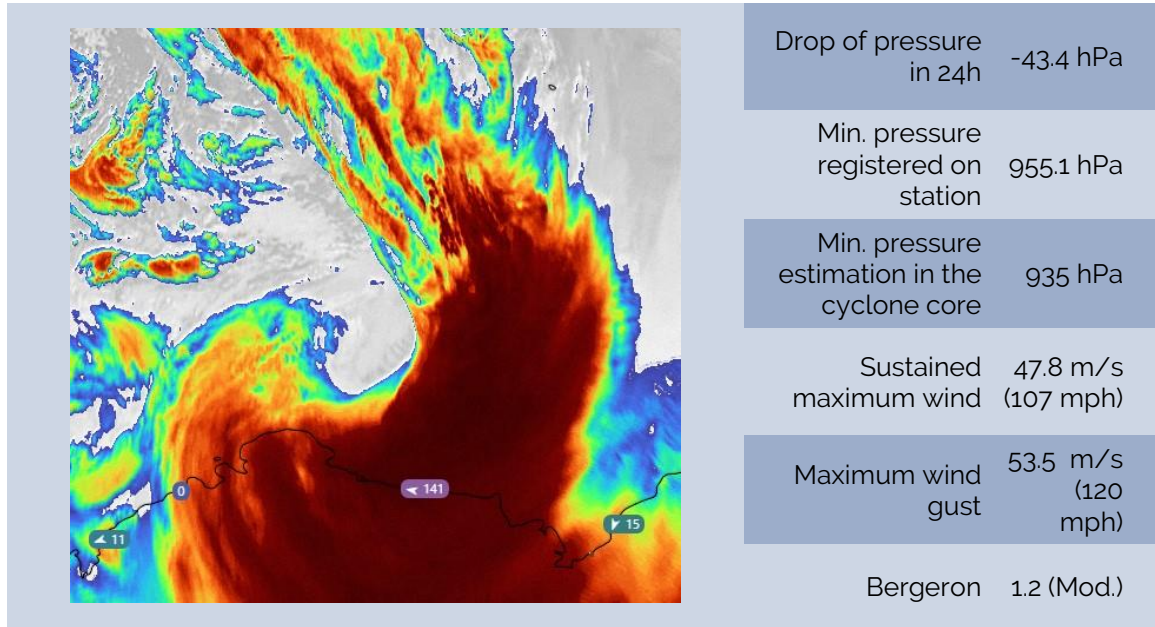
Sustained maximum wind 27.0 m/s (60 mph)

Maximum wind gust 32.0 m/s (72 mph)

Bergeron 1.3 (Mod.)

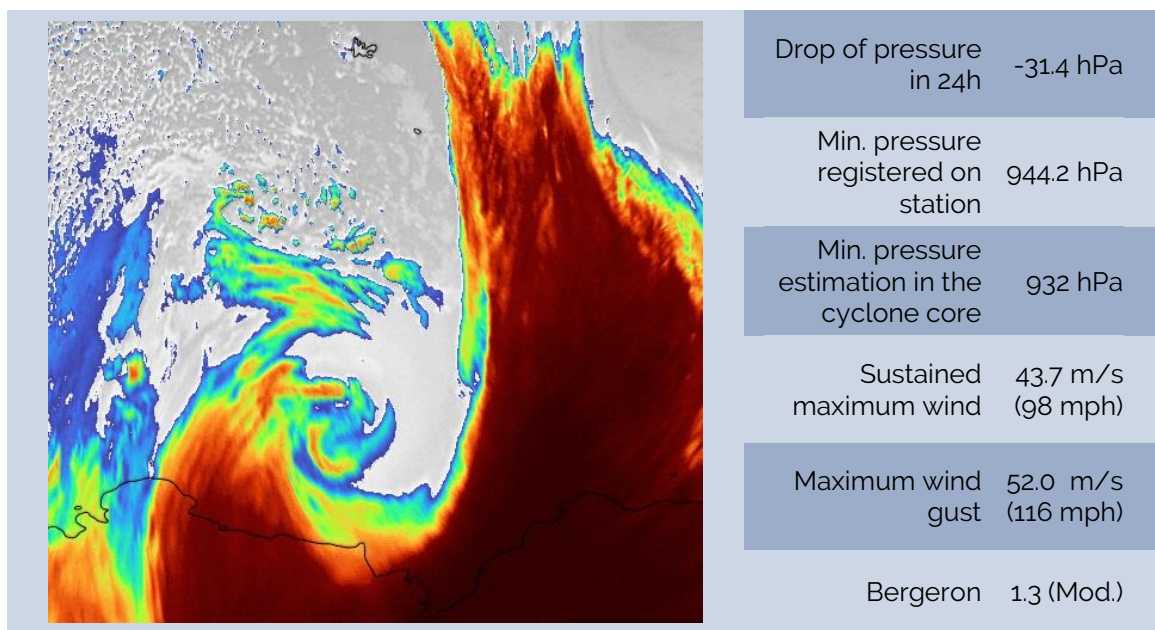
BOMB CYCLONE N°47/2022 (ANTARCTIC HURRICANE CAT-2)
 - DATE: JULY/14/2022

LOCAL: MAWSON STATION – WMO 89564 (OPERATED BY)



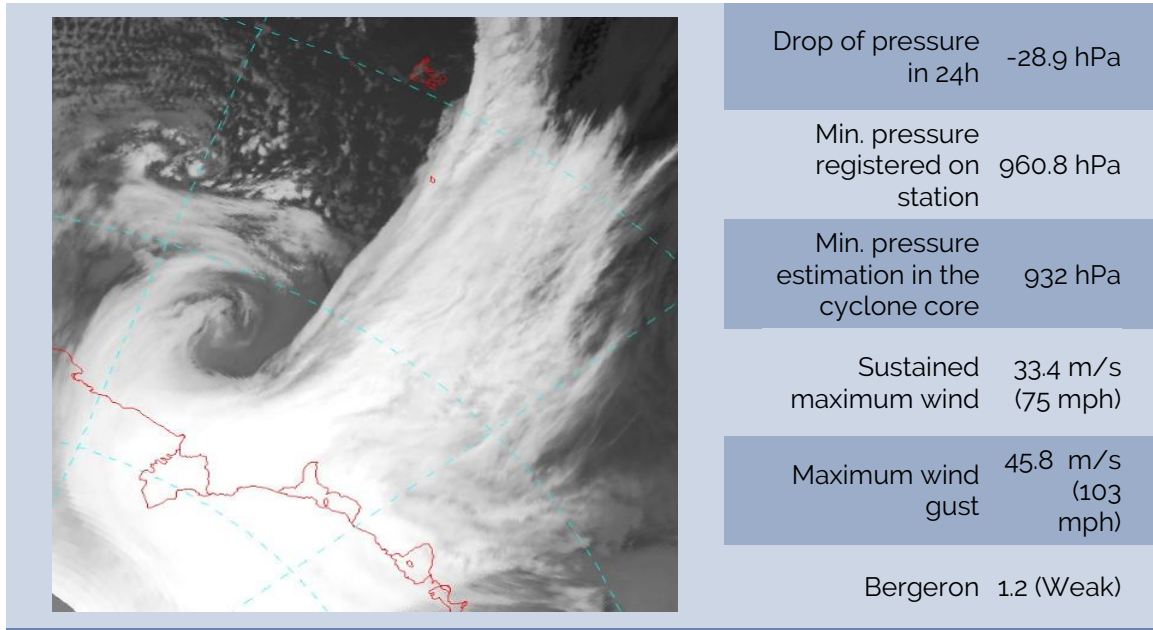
BOMB CYCLONE N°48/2022 (ANTARCTIC HURRICANE CAT-2)
 - DATE: JULY/15/2022

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



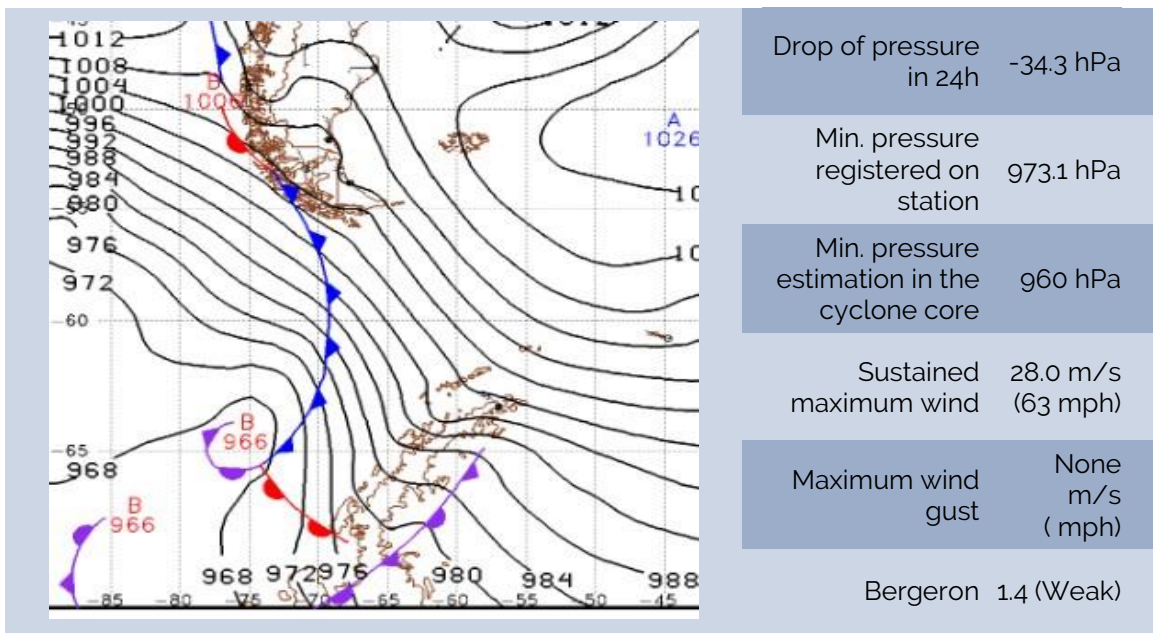
BOMB CYCLONE N°49/2022 (ANTARCTIC HURRICANE CAT-1)
 DATE: JULY/15/2022

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



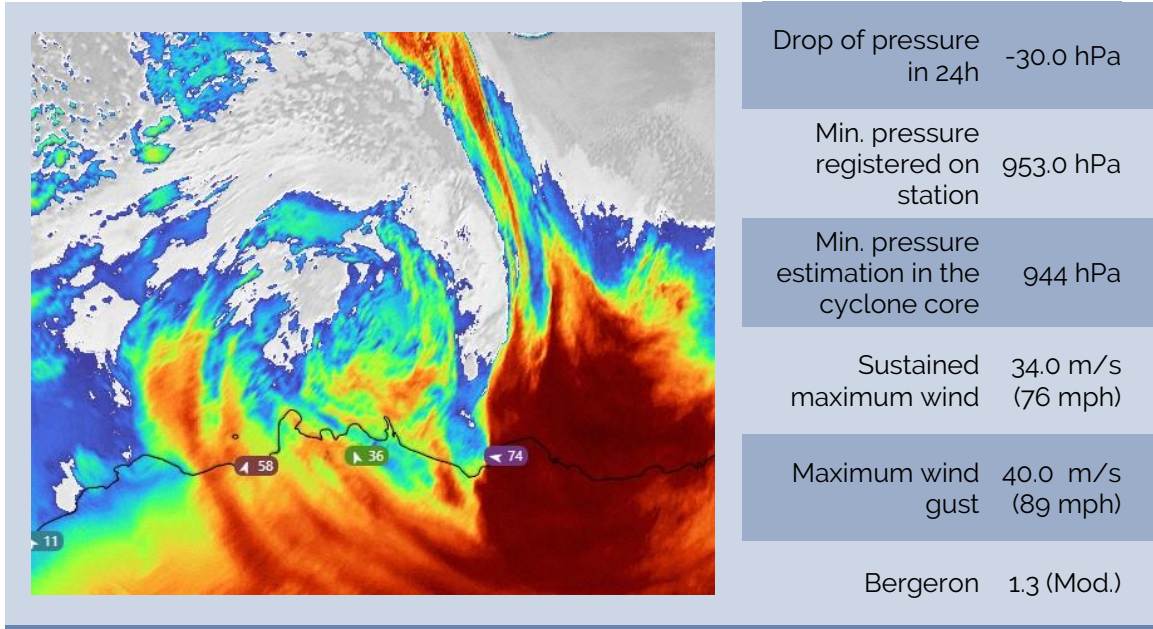
BOMB CYCLONE N°50/2022- DATE: JULY/16/2022

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



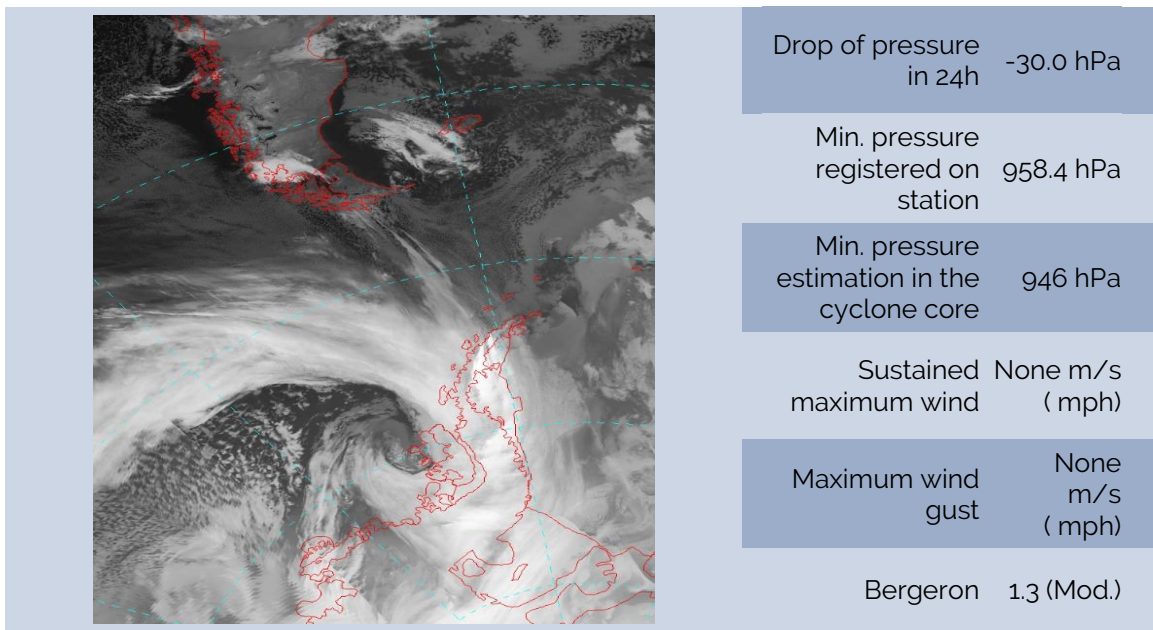
BOMB CYCLONE N°51/2022 (ANTARCTIC HURRICANE CAT-1)
 DATE: JULY/20/2022

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



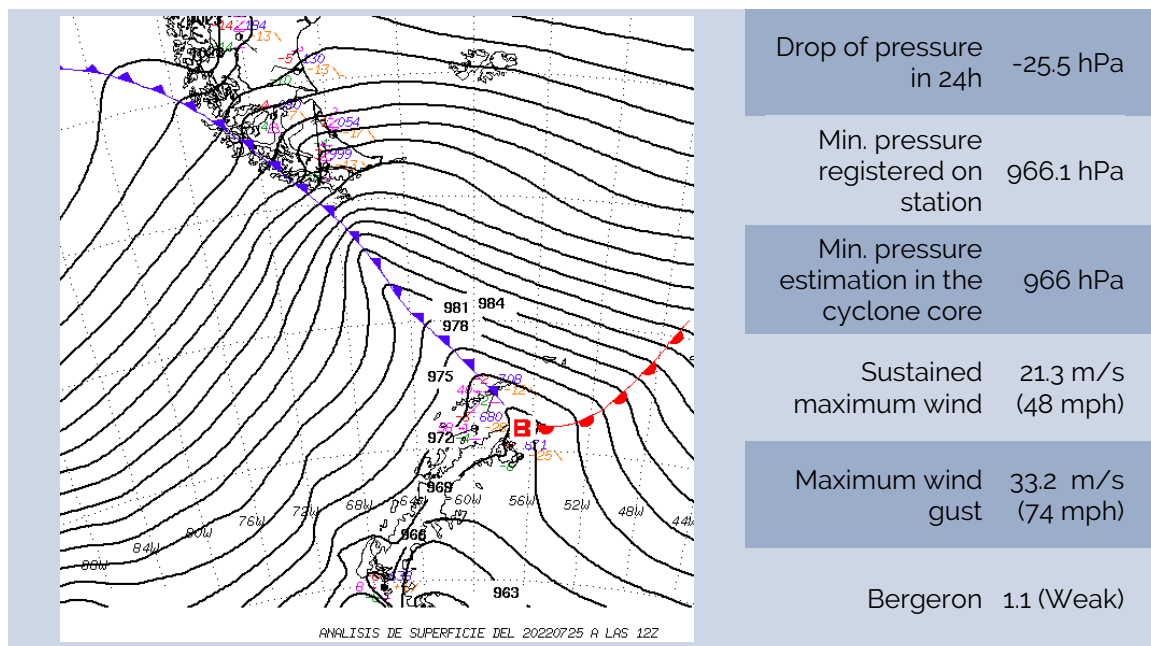
BOMB CYCLONE N°52/2022- DATE: JULY/24/2022

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



BOMB CYCLONE N°53/2022- DATE: JULY/25/2022

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



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/>