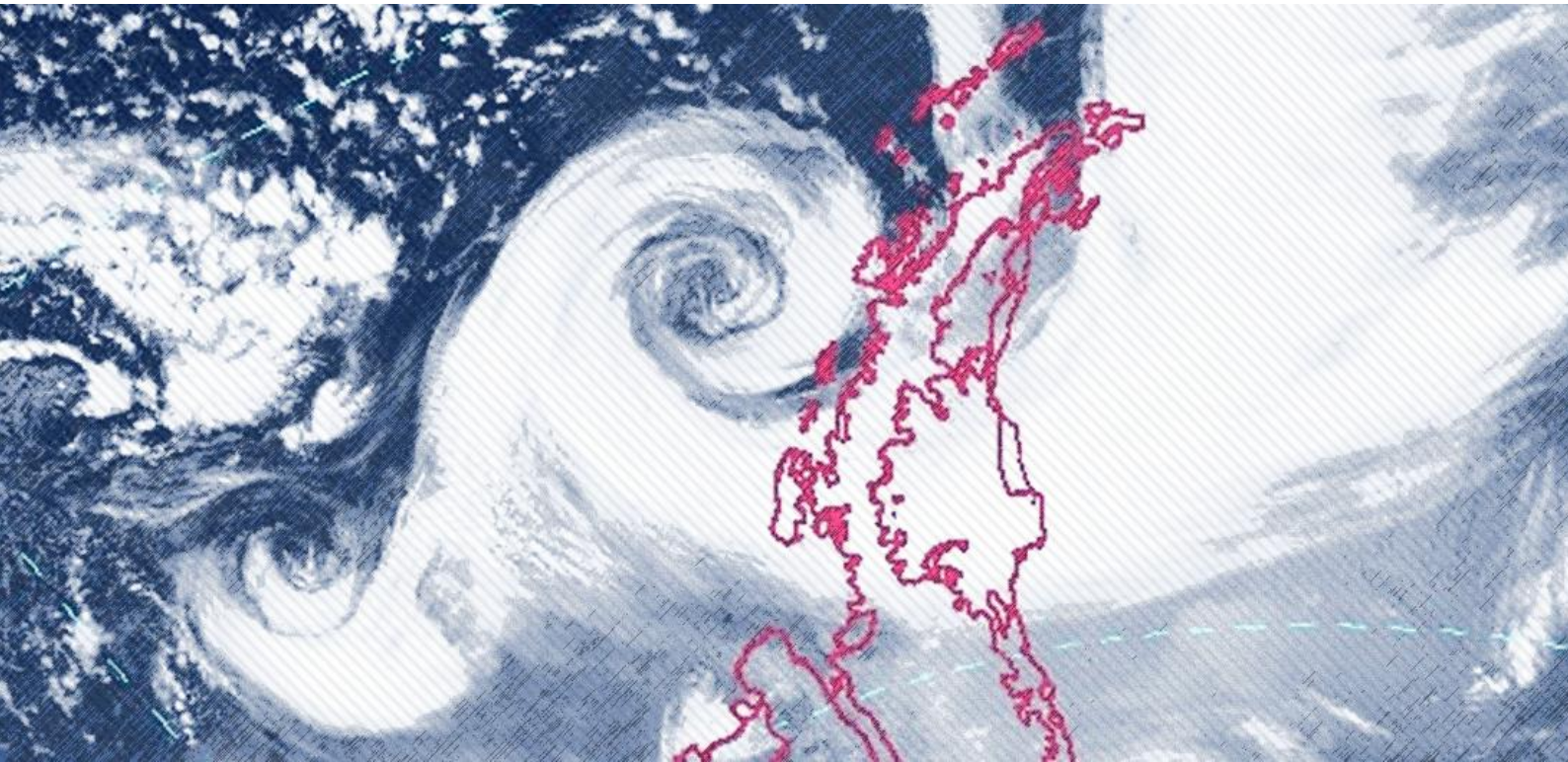




WORLD  
ENVIRONMENTAL  
CONSERVANCY

# MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



## MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

SEPTEMBER 2022

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During this month, only 20 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 Fossil Bluff, Davis, Syowa, Mirny, Dumont D'Urville, Casey, Mawson, Marambio, Palmer and Frei. Of these 11 events 01 of them reached the level of an Antarctic hurricane.

### TOTAL OF EVENTS REGISTERED IN STATIONS IN AUGUST

2017	2018	2019	2020	2021	2022
16	11	07	10	13	20

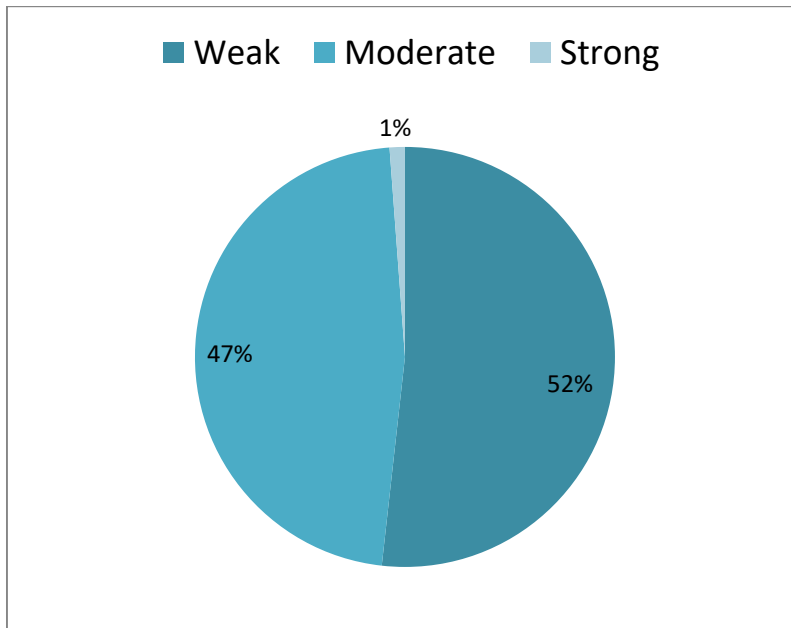
### STATISTICS OF THE MONTH: SEPTEMBER 2022

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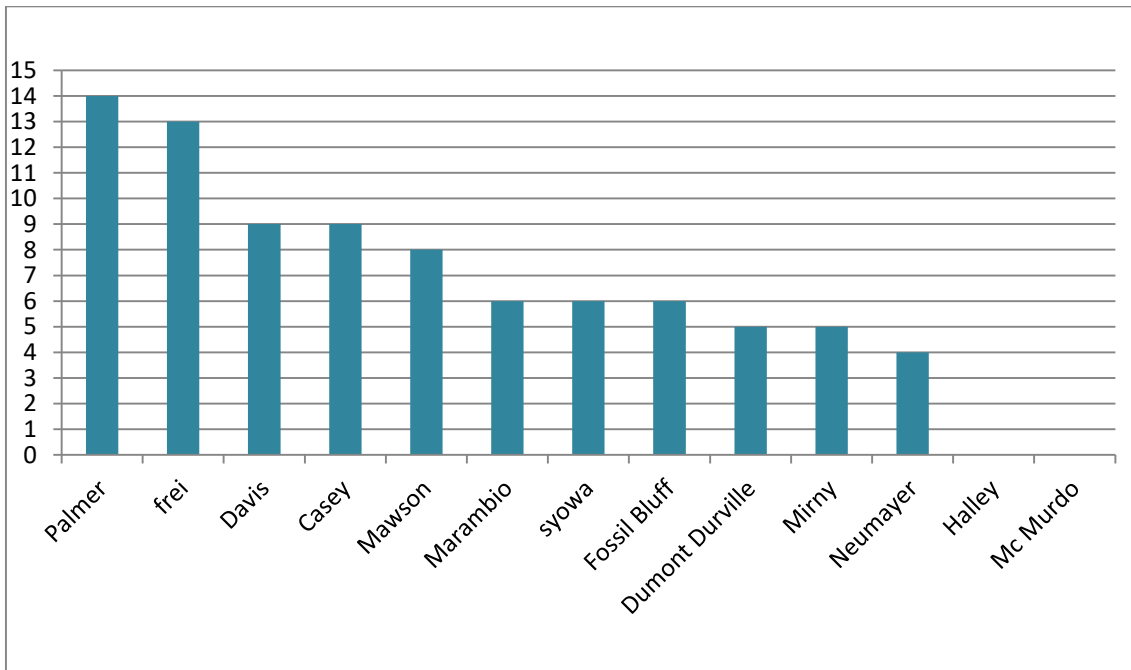
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	09
B2	1.3 a 1.8	Moderate	10
B3	> 1.8	Strong	01

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-49.8 hPa/24h	933.2 hPa	39.0 m/s
Davis station	Davis station	Casey station
Sept. 03	Sept. 03	Sept. 28

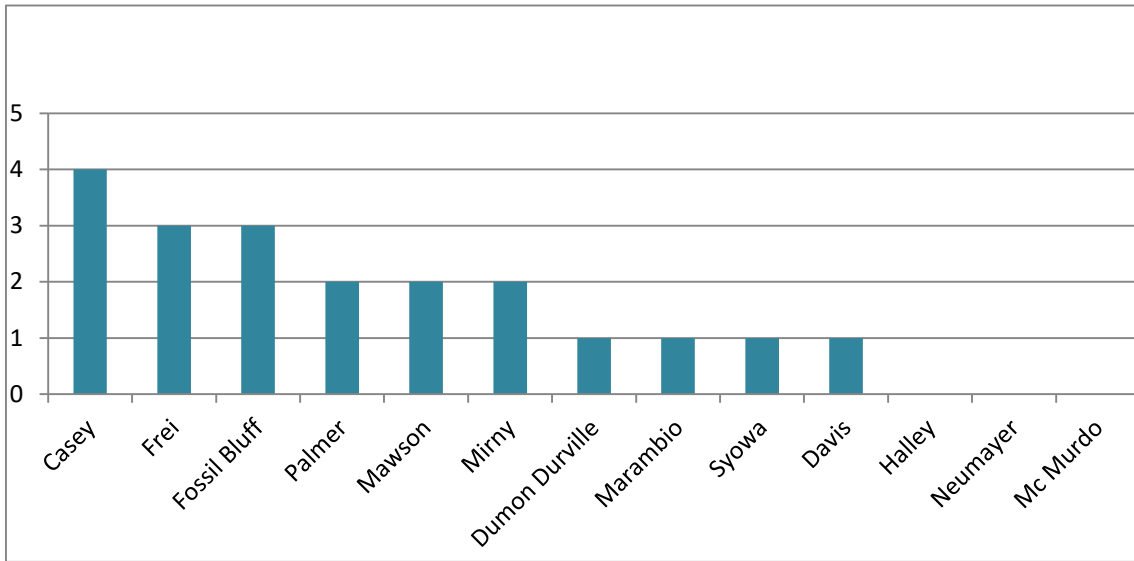
BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2022



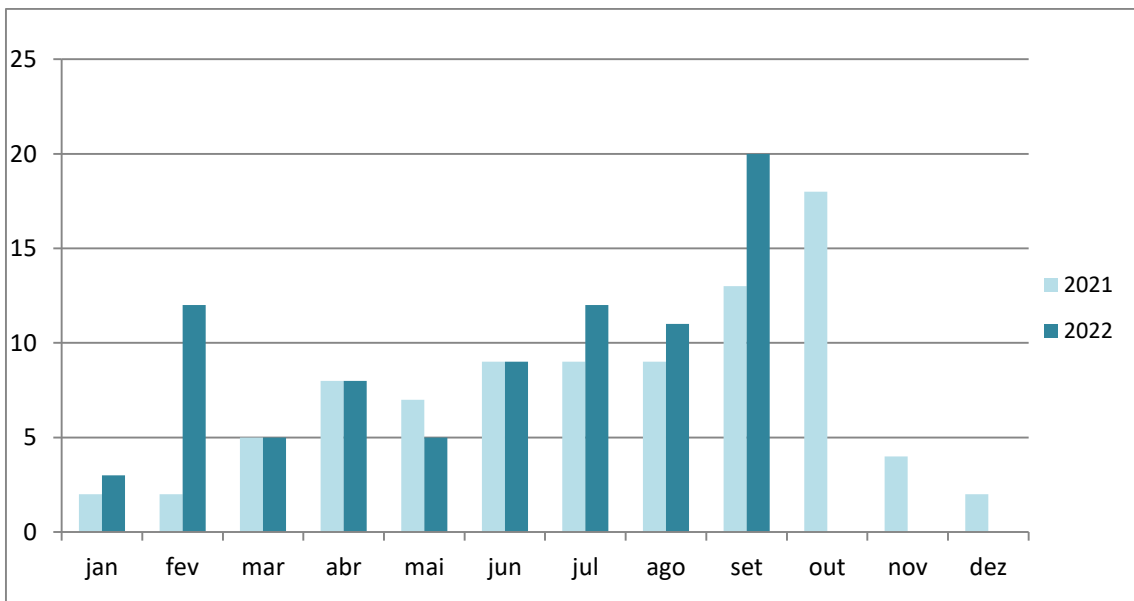
TOTAL OF EVENTS REGISTERED BY STATION IN 2022



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



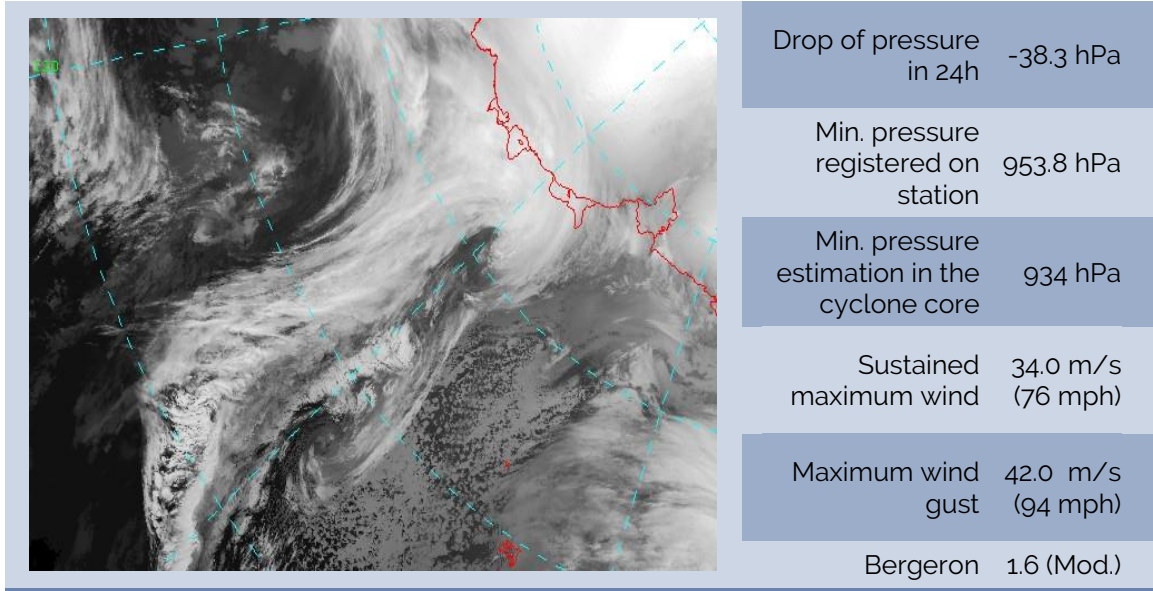
TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC



## BOMB CYCLONE N°65/2022 - DATE: SEP./03/2022

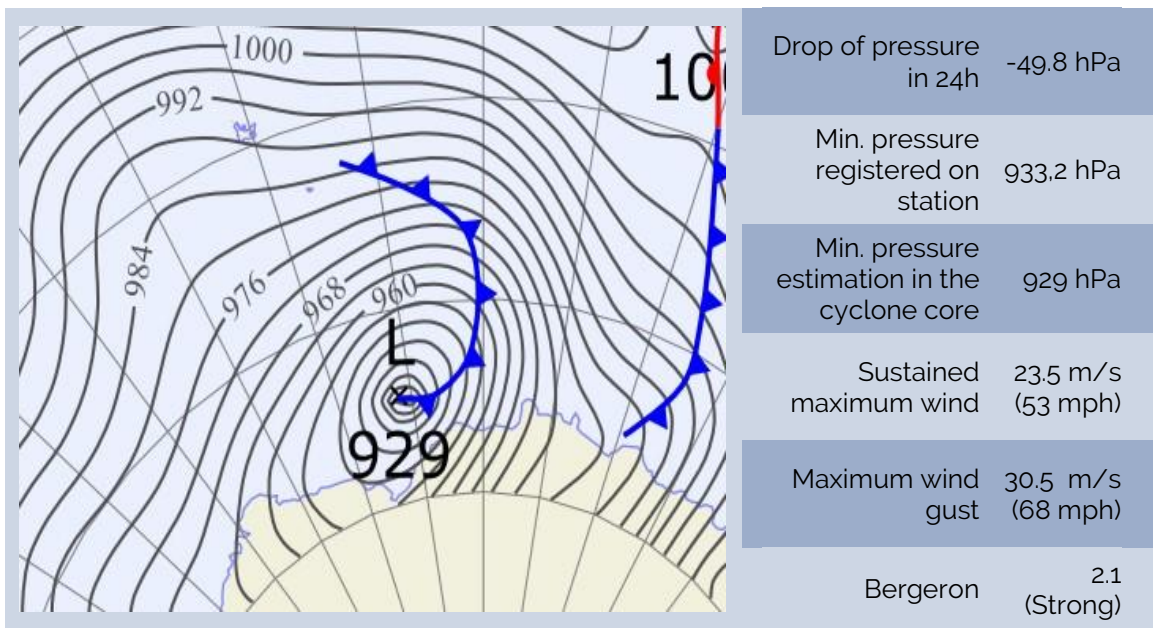
(ANTARCTIC HURRICANE CAT-1)

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



## BOMB CYCLONE N°66/2022 - DATE: SEP./03/2022

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



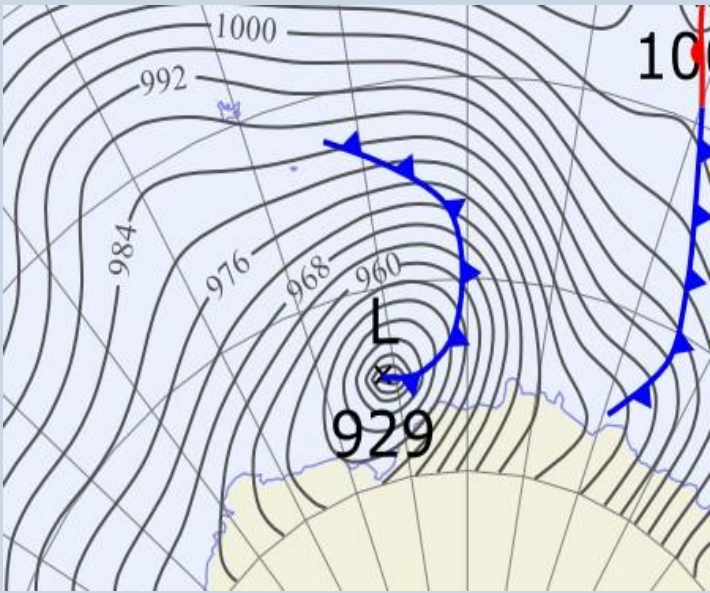
## BOMB CYCLONE N°67/2022 - DATE: SEP./03/2022

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

NO IMAGE	Drop of pressure in 24h	-33.1 hPa
	Min. pressure registered on station	947.3 hPa
	Min. pressure estimation in the cyclone core	934 hPa
	Sustained maximum wind	26.5 m/s (59 mph)
	Maximum wind gust	33.5 m/s (75 mph)
	Bergeron	1.4 (Mod.)

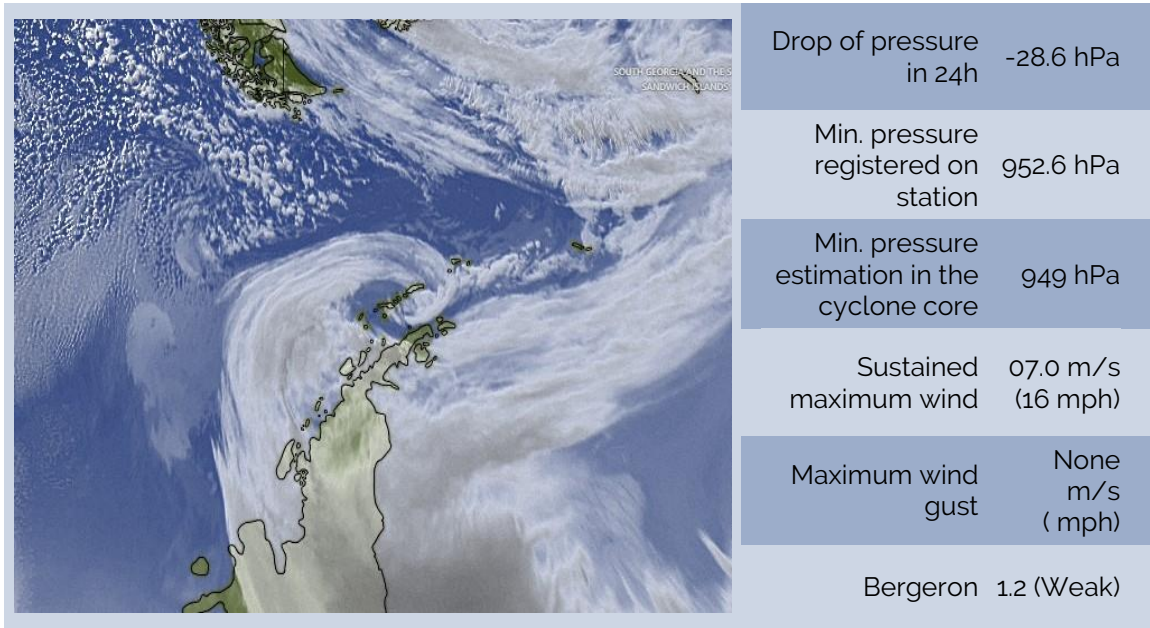
## BOMB CYCLONE N°68/2022 - DATE: SEP./04/2022

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

	Drop of pressure in 24h	-31.4 hPa
	Min. pressure registered on station	960.9 hPa
	Min. pressure estimation in the cyclone core	929 hPa
	Sustained maximum wind	21.5 m/s (48 mph)
	Maximum wind gust	25.5 m/s (57 mph)
	Bergeron	1.3 (Mod.)

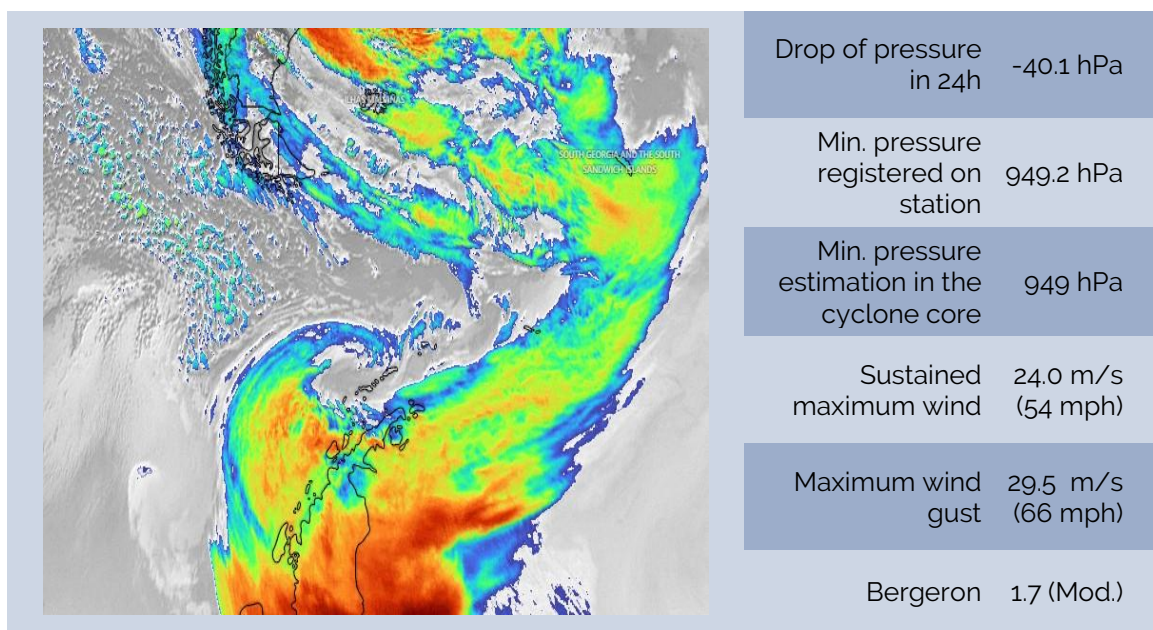
## BOMB CYCLONE N°69/2022 - DATE: SEP./05/2022

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



## BOMB CYCLONE N°70/2022 - DATE: SEP./05/2022

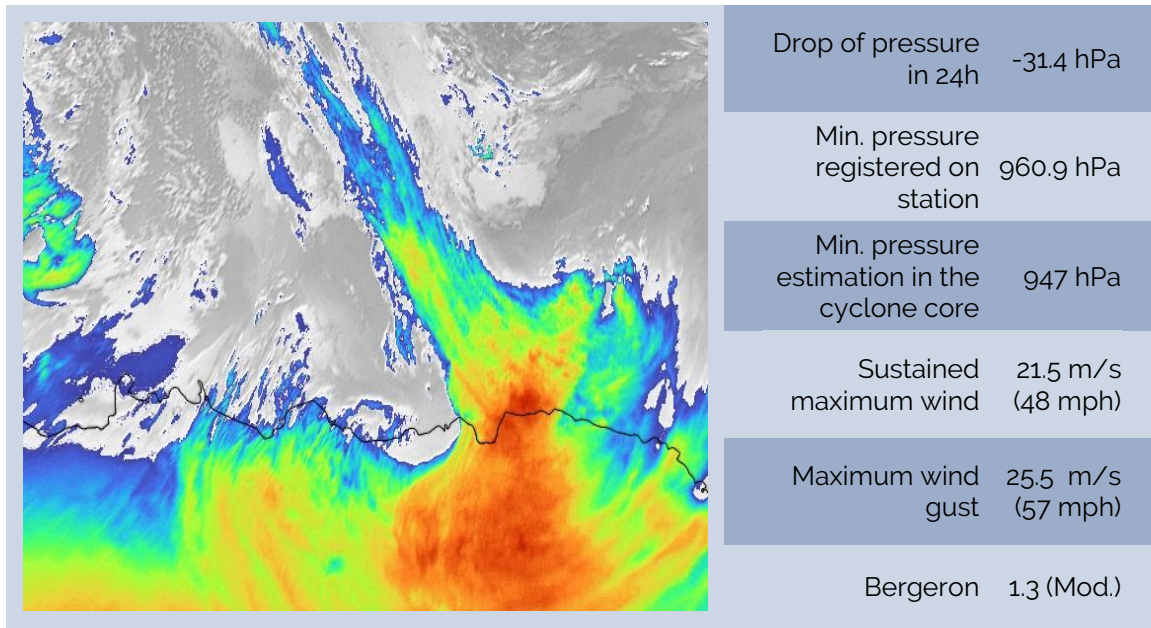
LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



## BOMB CYCLONE N°71/2022 - DATE: SEP./06/2022

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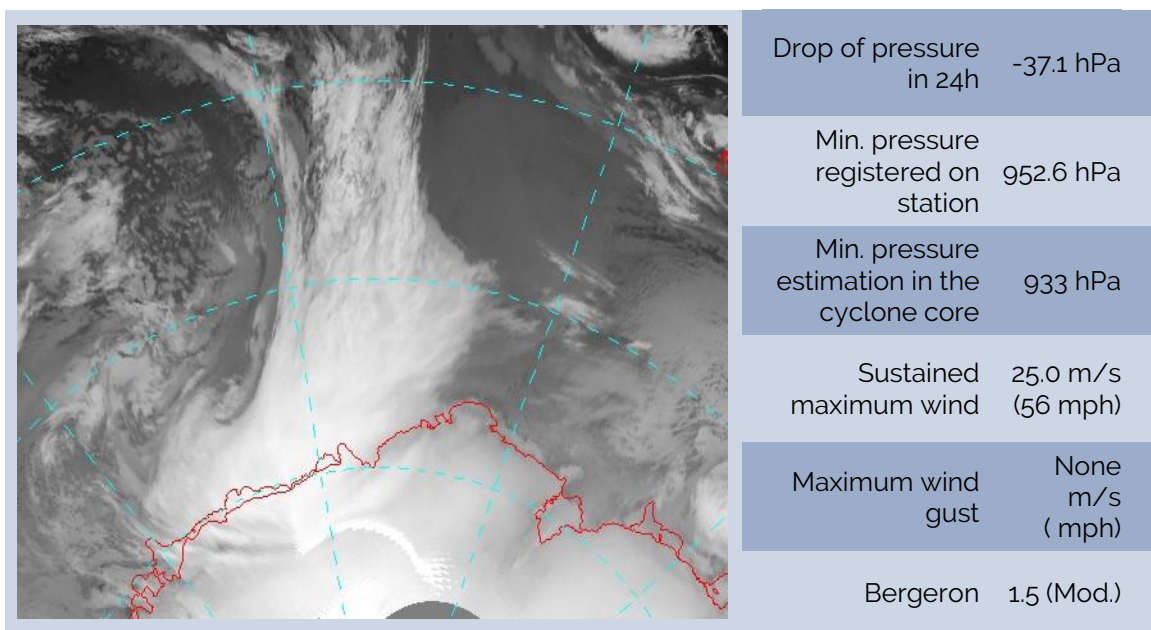
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



## BOMB CYCLONE N°72/2022 - DATE: SEP./07/2022

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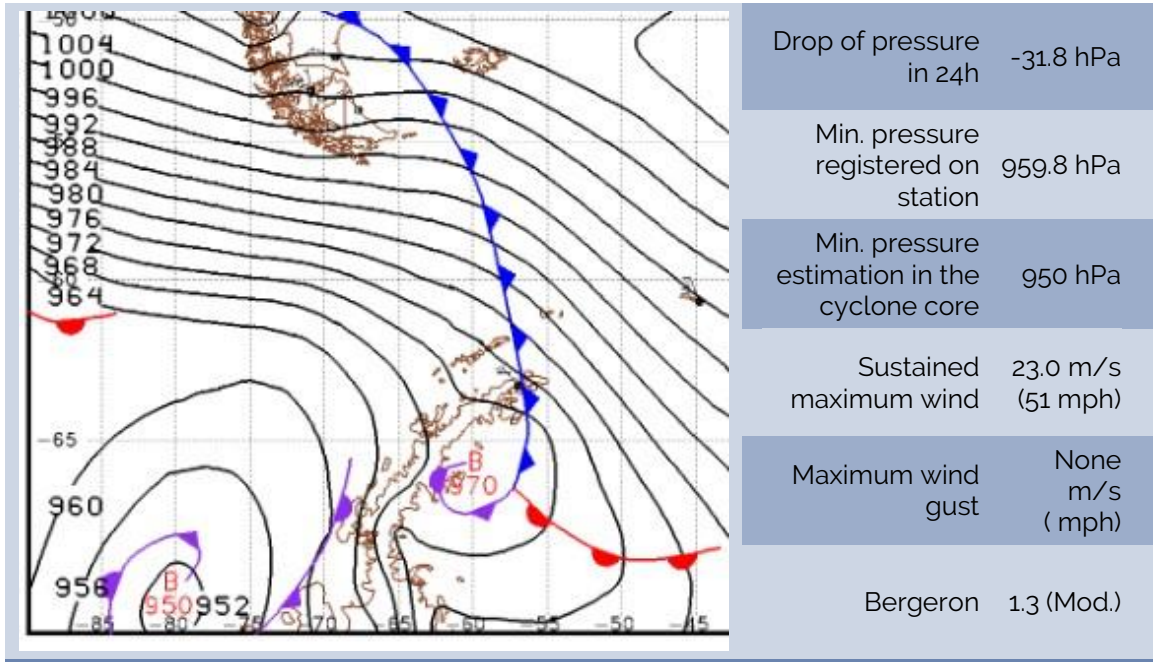
LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)





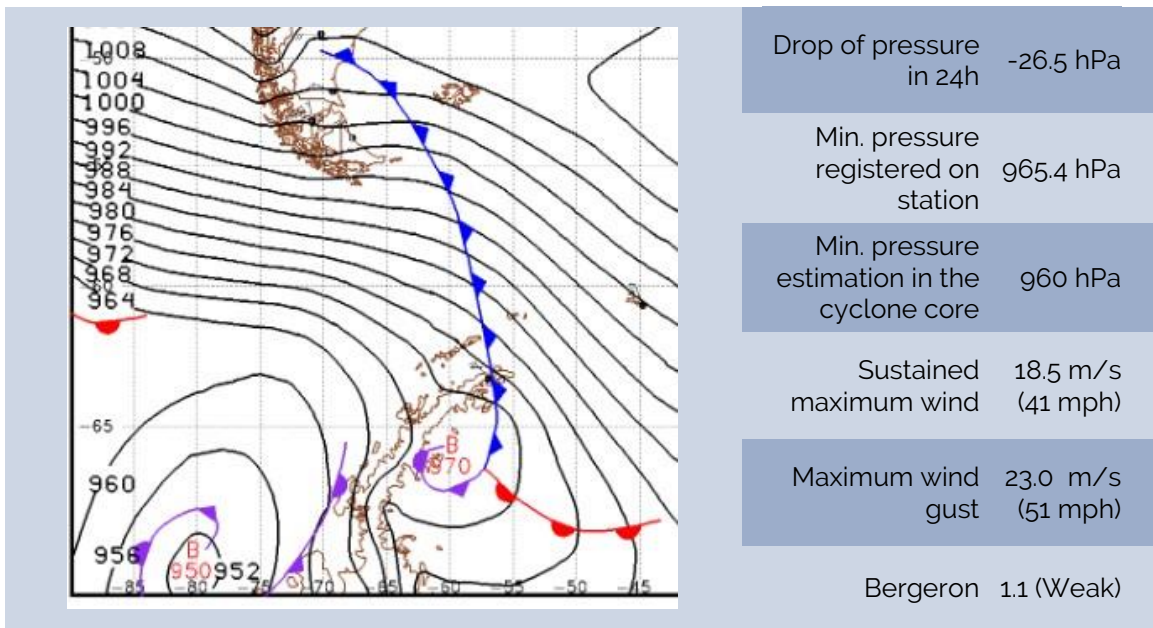
## BOMB CYCLONE N°73/2022 - DATE: SEP./09/2022

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



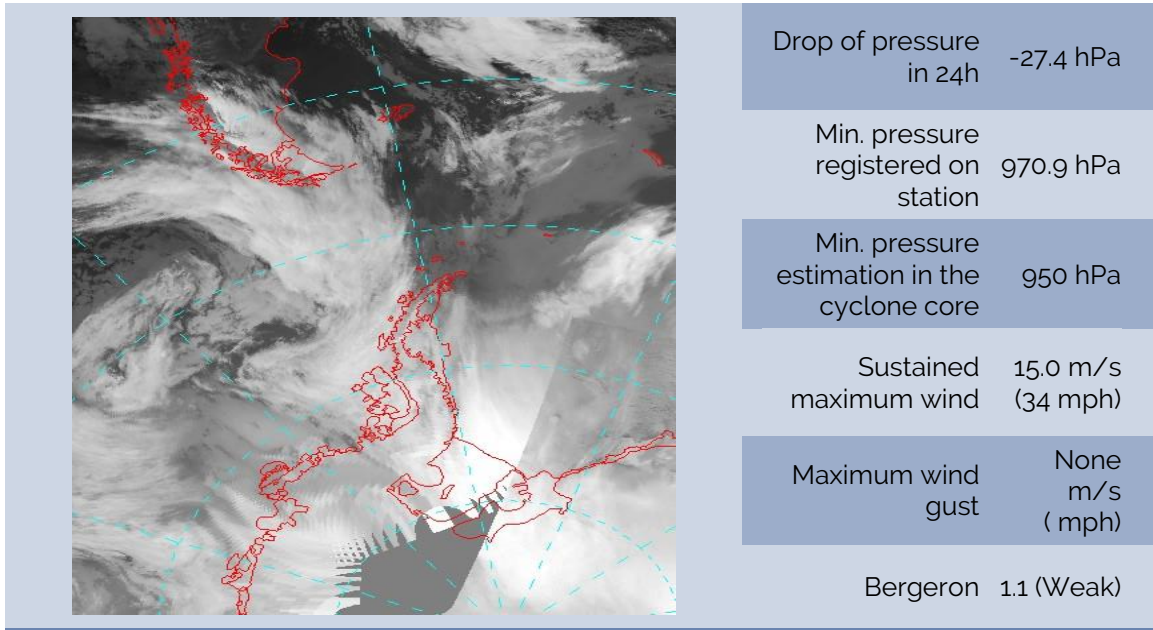
## BOMB CYCLONE N°74/2022 - DATE: SEP./09/2022

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



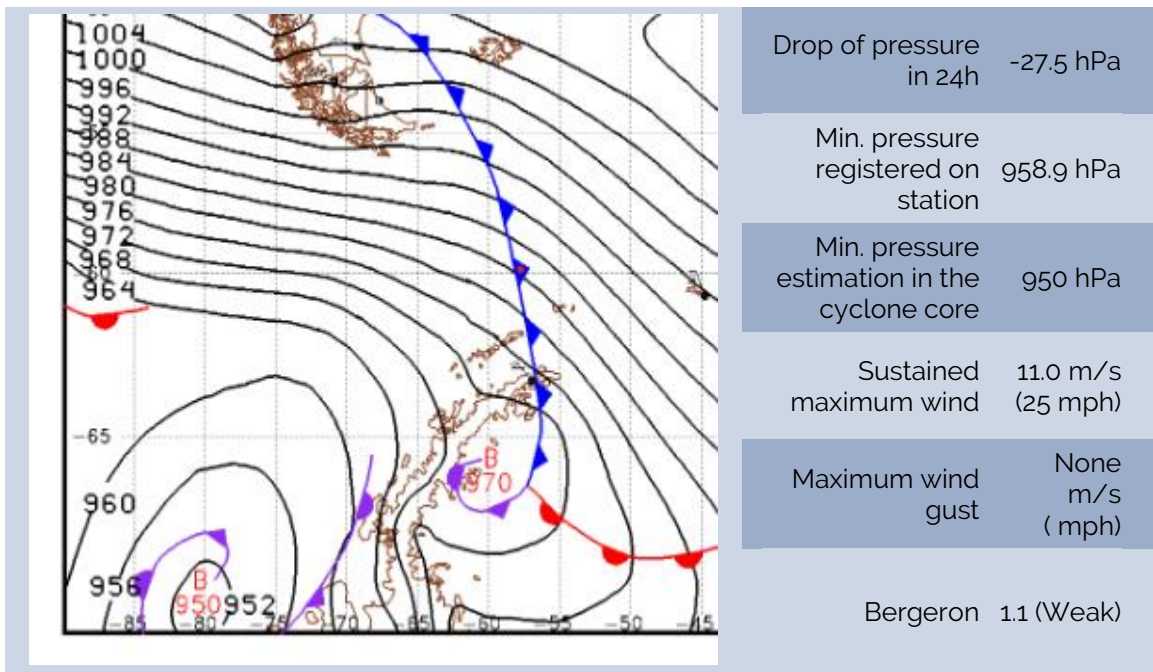
## BOMB CYCLONE N°75/2022 - DATE: SEP./09/2022

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



## BOMB CYCLONE N°76/2022 - DATE: SEP./09/2022

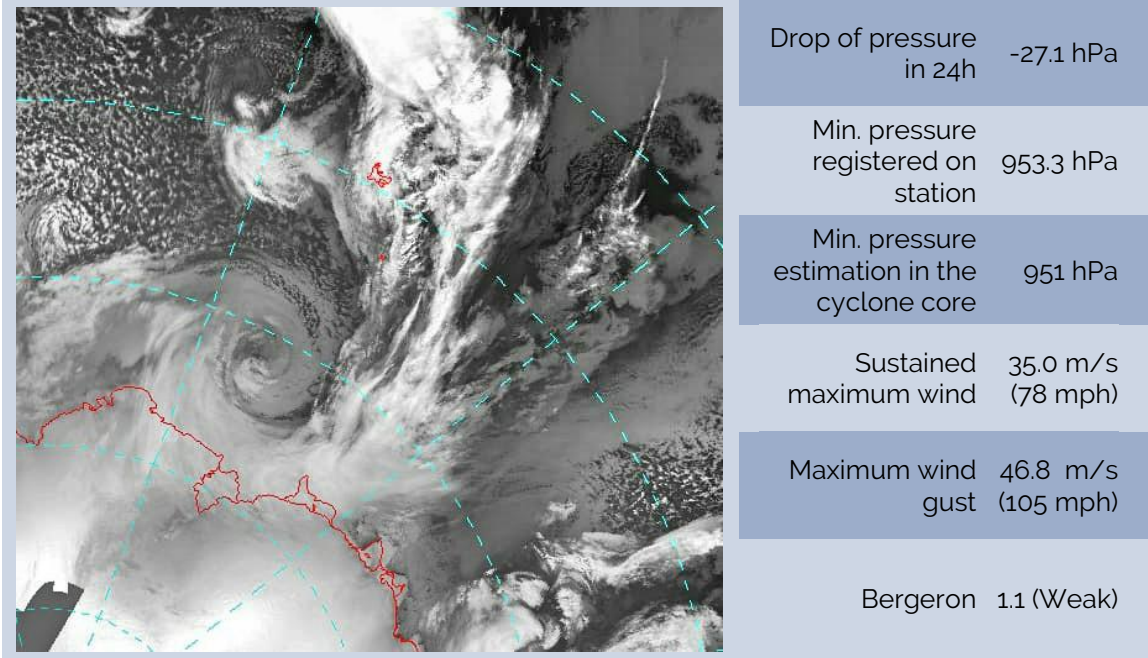
LOCAL: FOSSIL BLUFF STATION – WMO 89065 (OPERATED BY U.K.)



## BOMB CYCLONE N°77/2022 - DATE: SEP./13/2022

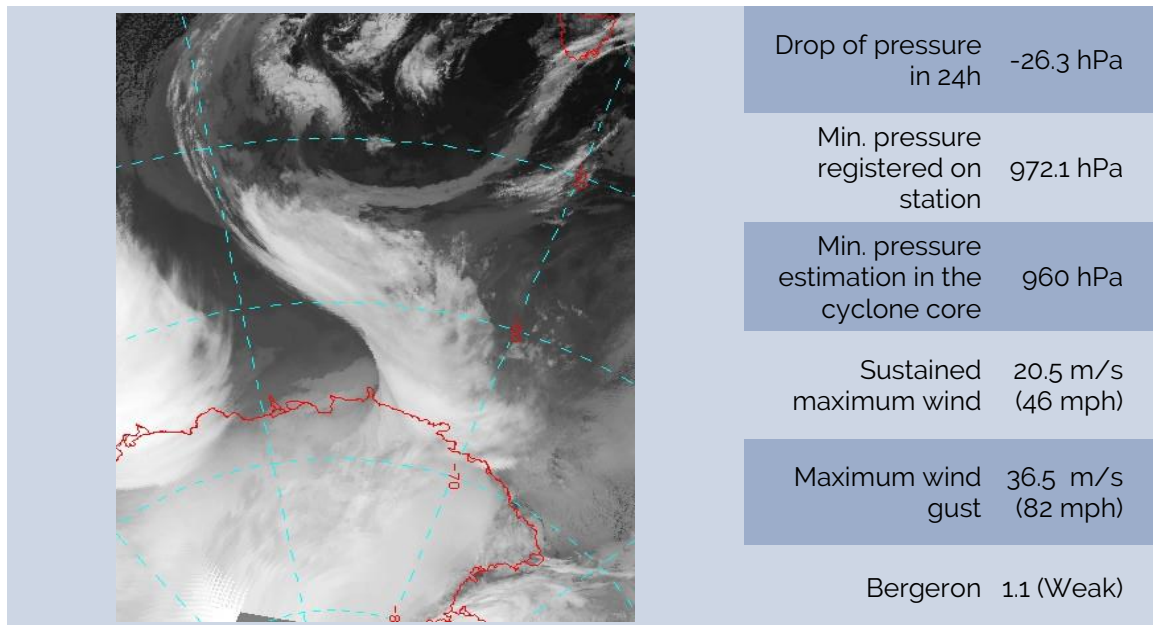
(ANTARCTIC HURRICANE CAT-1)

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



## BOMB CYCLONE N°78/2022 - DATE: SEP./15/2022

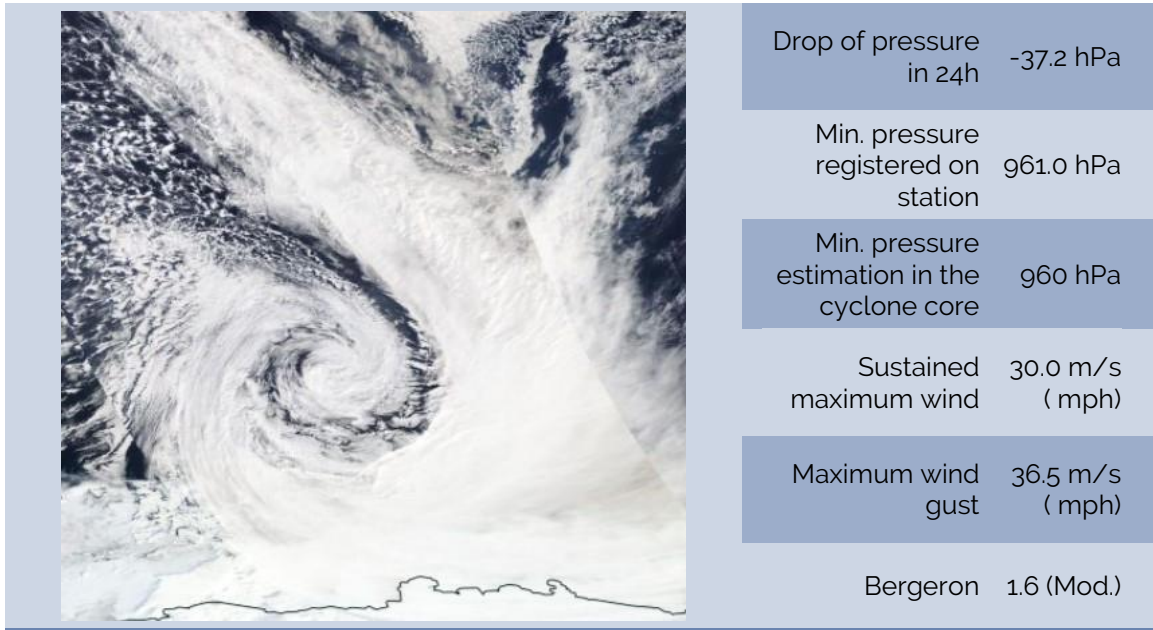
LOCAL: DUMONT D'URVILLE STATION – WMO 89642 (OPERATED BY FRANCE)



## BOMB CYCLONE N°79/2022 - DATE: SEP./16/2022

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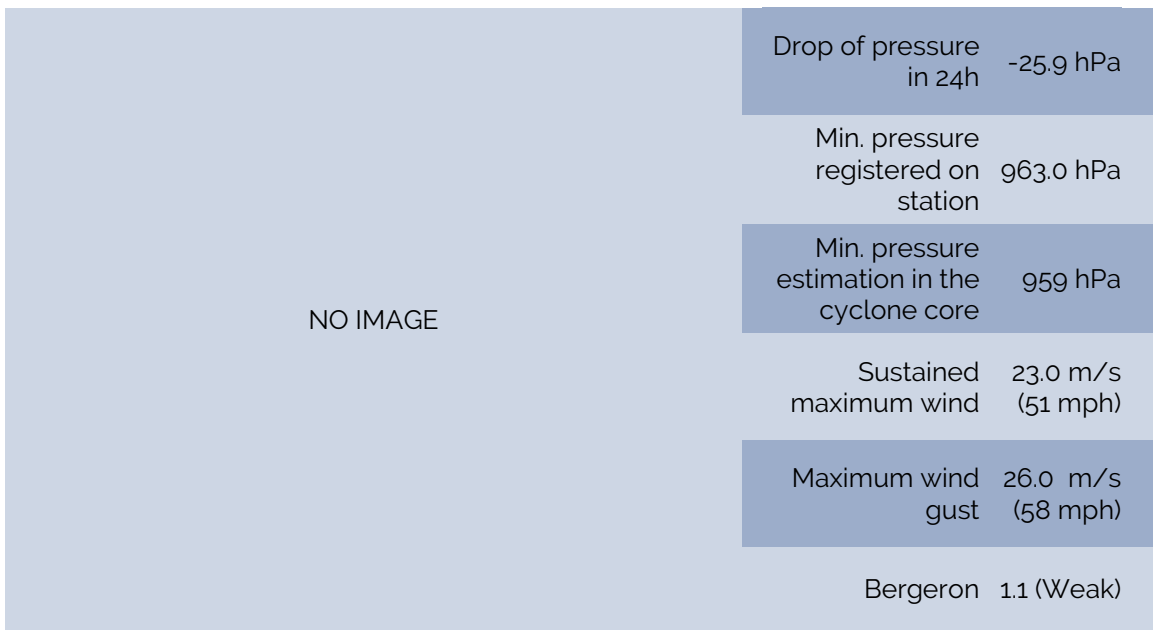
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



## BOMB CYCLONE N°80/2022 - DATE: SEP./16/2022

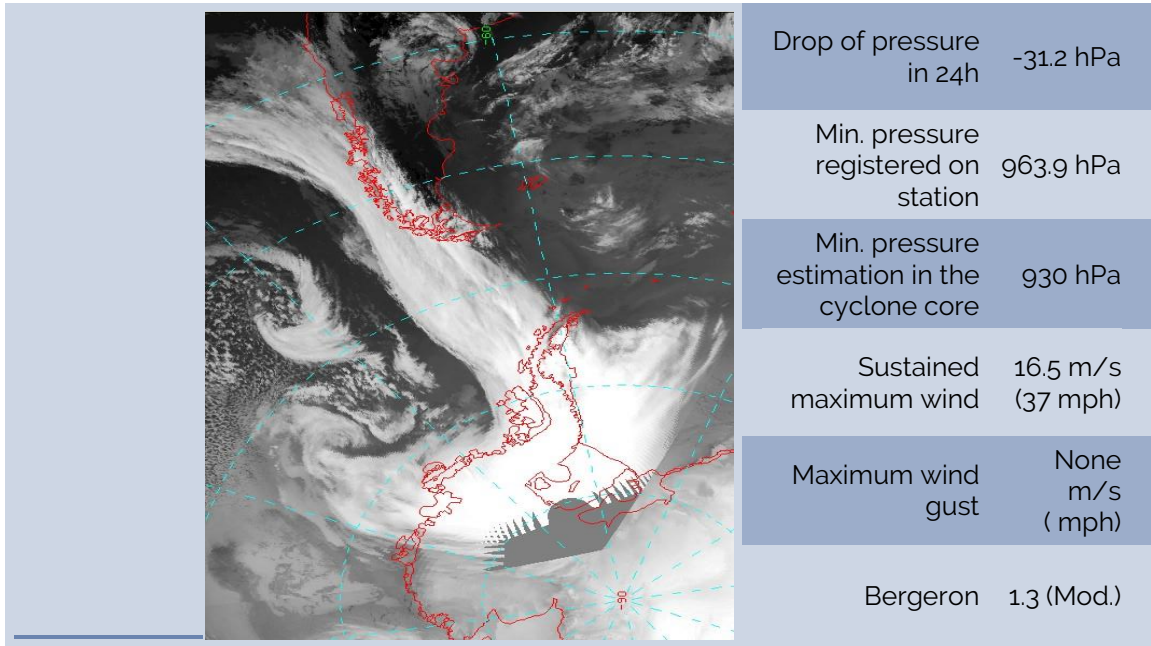
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LOCAL: MIRNY STATION – WMO 89592 (OPERATED BY RUSSIA)



## BOMB CYCLONE N°81/2022 - DATE: SEP./22/2022

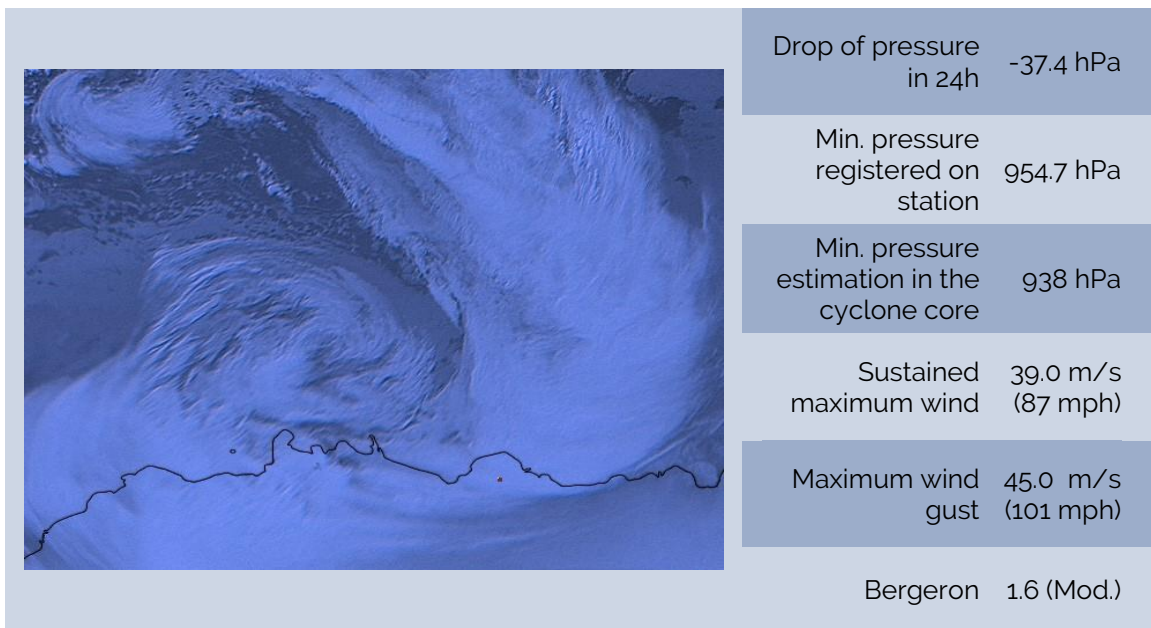
LOCAL: FOSSIL BLUFF STATION – WMO 89065 (OPERATED BY U.K.)



## BOMB CYCLONE N°82/2022 - DATE: SEP./28/2022

(ANTARCTIC HURRICANE CAT-1)

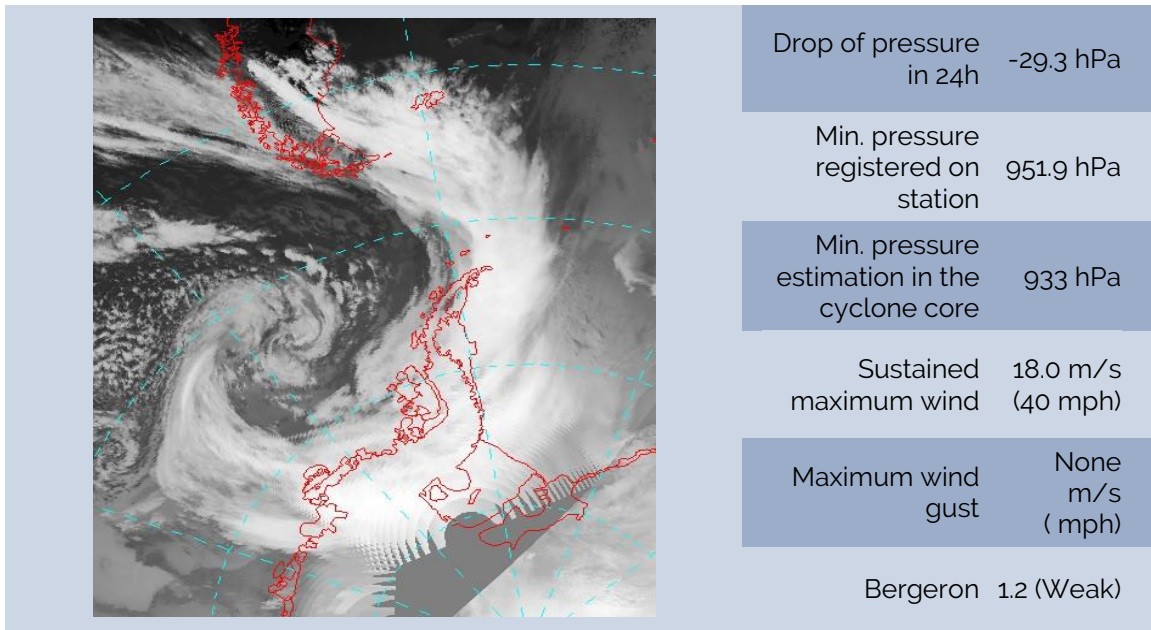
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



## BOMB CYCLONE N°83/2022 - DATE: SEP./29/2022

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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>

<http://meteoarmada.directemar.cl>

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

<https://amrc.ssec.wisc.edu/>