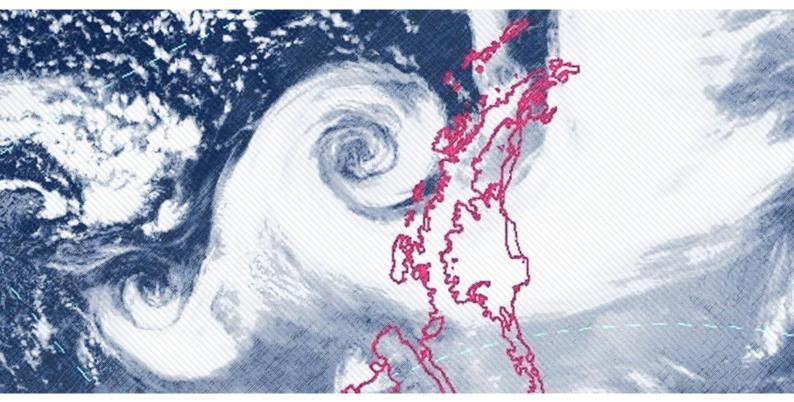


MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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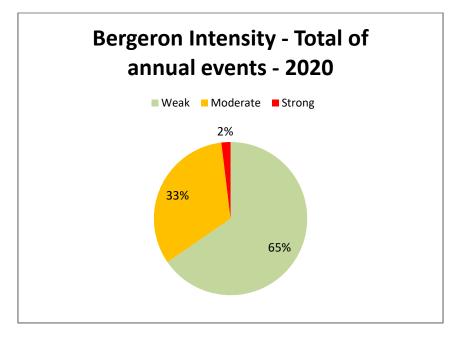
AUGUST 2020

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

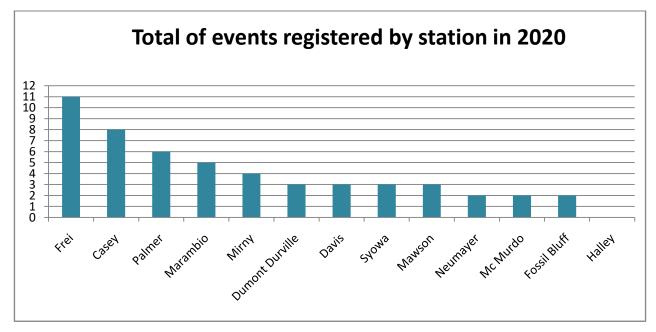
CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	05
B2	1.3 a 1.8	Moderate	05
B3	> 1.8	Strong	01

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

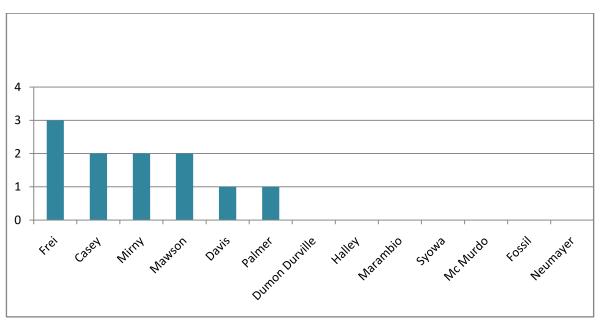


BERGERON INTENSITY TOTAL OF ANNUAL EVENTS IN 2020

TOTAL OF EVENTS REGISTERED BY STATION IN 2020

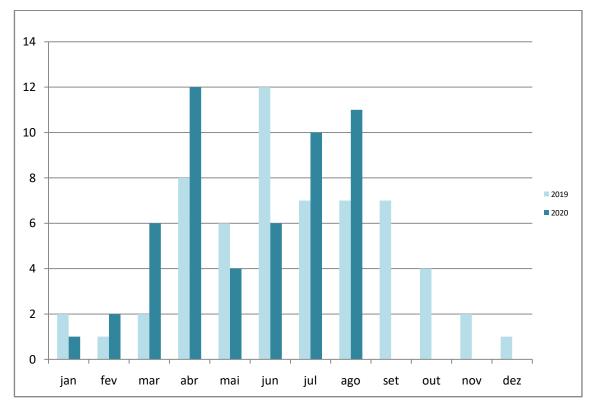


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TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF AUG/2020





BOMB CYCLONE Nº42/2020- DATE: AUG/01/2020

Drop of pressure in 24h	-47.4 hPa
Min. pressure registered on station	943.0 hPa
Min. pressure estimation in the cyclone core	934 hPa
Sustained maximum wind	37.5 m/s (84 mph)
Maximum wind gust	None m/s (mph)
Bergeron	2.0. (strong)

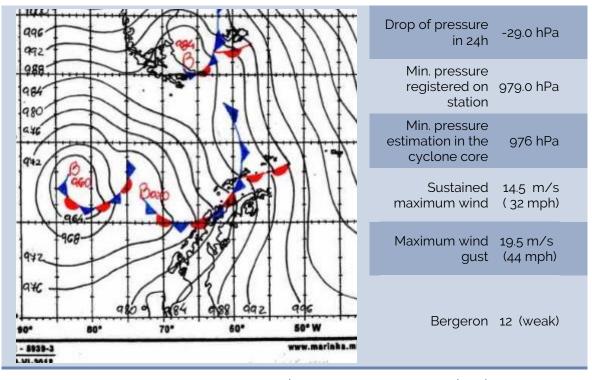
LOCAL: DAVIS STATION - WMO 89571 (OPERATED BY AUSTRALIA)

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

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

	Drop of pressure in 24h	-32.9 hPa
	Min. pressure registered on station	945.6 hPa
A Track	Min. pressure estimation in the cyclone core	934 hPa
	Sustained maximum wind	34.0 m/s (76 mph)
< 74 <342	Maximum wind gust	42.0 m/s (94 mph)
	Bergeron	1.4 (moderate)

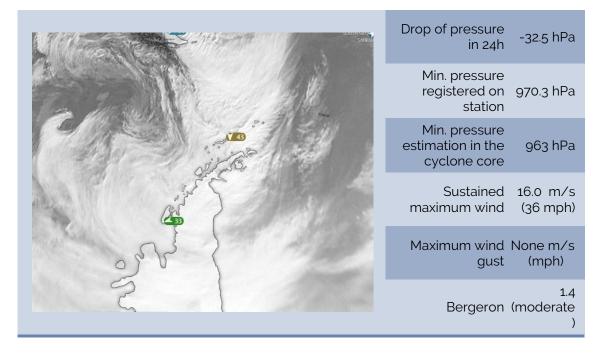
BOMB CYCLONE Nº44/2020- DATE: AUG/02/2020



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

BOMB CYCLONE Nº45/2020- DATE: AUG/02/2020

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



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BOMB CYCLONE Nº46/2020 - DATE: AUG/02/2020

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

	Drop of pressure in 24h	-26.3 hPa
	Min. pressure registered on station	975.0 hPa
Carlo Carlos	Min. pressure estimation in the cyclone core	956 hPa
in the second second	Sustained maximum wind	15.0 m/s (34 mph)
	Maximum wind gust	19.5 m/s (44 mph)
	Bergeron	1.1 (weak)

BOMB CYCLONE Nº47/2020- DATE: DATE: AUG/04/2020

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

	Drop of pressure in 24h	-38.7 hPa
	Min. pressure registered on station	966.9 hPa
	Min. pressure estimation in the cyclone core	961 hPa
	Sustained maximum wind	28.5 m/s (64 mph)
	Maximum wind gust	34.5 m/s (77 mph)
· Rondon	Bergeron	1.6 (moderate)

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

	Drop of pressure in 24h	-31.7 hPa
1030	Min. pressure registered on station	971.8 hPa
	Min. pressure estimation in the cyclone core	961 hPa
950 2 966	Sustained maximum wind	9.0 m/s (20 mph)
	Maximum wind gust	11.0 m/s 25 (mph)
	Bergeron	1.3 (moderate)

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)

	Drop of pressure in 24h	-30.1 hPa
	Min. pressure registered on station	973.9 hPa
a Mance -	Min. pressure estimation in the cyclone core	968 hPa
	Sustained maximum wind	38.0 m/s (85 mph)
	Maximum wind gust	45.0 m/s (100 mph)
Allow Stations and	Bergeron	1.3 (moderate)

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

	Drop of pressure in 24h	-25.0 hPa
	Min. pressure registered on station	982.0 hPa
and the second sec	Min. pressure estimation in the cyclone core	976 hPa
	Sustained maximum wind	17.0 m/s (38 mph)
Of the second se	Maximum wind gust	None m/s (mph)
3000	Bergeron	1. 0 (weak)

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)

	Drop of pressure in 24h	-25.2 hPa
	Min. pressure registered on station	972.0 hPa
	Min. pressure estimation in the cyclone core	972 hPa
	Sustained maximum wind	15.0 m/s (34 mph)
Change and	Maximum wind gust	None m/s (mph)
0943	Bergeron	1.1 (weak)

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

Drop of pressure in 24h	-38.8 hPa
Min. pressure registered on station	960.9 hPa
Min. pressure estimation in the cyclone core	960 hPa
Sustained maximum wind	44.5 m/s (100 mph)
Maximum wind gust	54.5 m/s (122 mph)
Bergeron	1.1 (weak)

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

VIDEOS

BOMB CYCLONE Nº43/2020- 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_Qlrg

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SOURCES

AMRC – UW Madison

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http://meteoarmada.directemar.cl

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