

# MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT



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



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OCTOBER 2022

During this month, only 23 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 23 events 03 of them reached the level of an Antarctic hurricane.

#### TOTAL OF EVENTS REGISTERED IN STATIONS IN OCTOBER

2017	2018	2019	2020	2021	2022
5	9	4	11	18	23

#### STATISTICS OF THE MONTH: OCTOBER 2022

CLASSIFICATION	BERGERON SCALE	INTENSITY	TOTAL OF CASES REGISTERED IN THE MONTH
B1	1 a 1.2	Weak	10
B2	1.3 a 1.8	Moderate	13
B3	> 1.8	Strong	00

HIGHEST PRESSURE DROP	LOWEST RECORDED PRESSURE	HIGHEST SUSTAINED WIND
-41.9 hPa/24h	929.6 hPa	37.5 m/s
Dumont d'Urville station	Palmer station	Casey station
Oct. 07	Oct. 09	Oct. 12





#### TOTAL OF EVENTS REGISTERED BY STATION IN 2022



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#### TOTAL OF EVENTS REGISTERED IN EACH STATION IN THE MONTH OF OCTOBER/2022



#### TOTAL EXPLOSIVE CYCLONES IN THE ANTARCTIC

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BOMB CYCLONE N°84/2022 - DATE: OCT./04/2022

#### (ANTARCTIC HURRICANE CAT-1)

	Drop of pressure in 24h	-36.8 hPa
	Min. pressure registered on station	951.3 hPa
	Min. pressure estimation in the cyclone core	939 hPa
and the second	Sustained maximum wind	33.9 m/s (76 mph)
	Maximum wind gust	None m⁄s ( mph)
	Bergeron	1.5 (Mod.)

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

## BOMB CYCLONE N°85/2022 - DATE: OCT./05/2022

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

	Drop of pressure in 24h	-26.3 hPa
	Min. pressure registered on station	987.2 hPa
	Min. pressure estimation in the cyclone core	964 hPa
	Sustained maximum wind	14.0 m/s (31 mph)
Constant of the second	Maximum wind gust	None m⁄s ( mph)
	Bergeron	1.1 (Weak)

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BOMB CYCLONE N°86/2022 - DATE: OCT./07/2022

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

-40	Drop of pressure in 24h	-41.9 hPa
	Min. pressure registered on station	961.0 hPa
-00 -00 -00 -00	Min. pressure estimation in the cyclone core	951 hPa
-80	Sustained maximum wind	15.0 m/s (34 mph)
	Maximum wind gust	22.0 m/s (49 mph)
	Bergeron	1.7 (Mod.)

BOMB CYCLONE N°87/2022 - DATE: OCT./09/2022

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

	Drop of pressure in 24h	-28.3 hPa
	Min. pressure registered on station	951.2 hPa
	Min. pressure estimation in the cyclone core	950 hPa
Rock Son	Sustained maximum wind	20.5 m/s (46 mph)
	Maximum wind gust	28.5 m/s (64 mph)
	Bergeron	1.2 (Weak)

#### BOMB CYCLONE N°88/2022 - DATE: OCT./09/2022



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

#### BOMB CYCLONE N°89/2022 - DATE: OCT./09/2022

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

	Drop of pressure in 24h	-31.0 hPa
	Min. pressure registered on station	943.7 hPa
	Min. pressure estimation in the cyclone core	926 hPa
and a second and a second a se	Sustained maximum wind	23.0 m/s (51 mph)
a star Carto	Maximum wind gust	28.5 m/s (64 mph)
	Bergeron	1.3 (Mod.)

BOMB CYCLONE N°90/2022 - DATE: OCT./09/2022



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

#### BOMB CYCLONE N°91/2022 - DATE: OCT./12/2022

#### (ANTARCTIC HURRICANE CAT-1)

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

	Drop of pressure in 24h	-35.1 hPa
	Min. pressure registered on station	944.2 hPa
	Min. pressure estimation in the cyclone core	938 hPa
	Sustained maximum wind	37.5 m/s (84 mph)
A. rank	Maximum wind gust	45.3 m/s (101 mph)
	Bergeron	1.5 (Mod.)

#### BOMB CYCLONE N°92/2022 - DATE: OCT./14/2022

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

	Drop of pressure in 24h	-32.0 hPa
	Min. pressure registered on station	964.9 hPa
	Min. pressure estimation in the cyclone core	938 hPa
and a	Sustained maximum wind	20.5 m/s (46 mph)
4	Maximum wind gust	36.5. m/s (82 mph)
	Bergeron	1.3 (Mod.)

## BOMB CYCLONE N°93/2022 - DATE: OCT./15/2022

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

	Drop of pressure in 24h	-37.7 hPa
	Min. pressure registered on station	959.5 hPa
	Min. pressure estimation in the cyclone core	938 hPa
	Sustained maximum wind	9.2 m/s (21 mph)
· · · · · · · · · · · · · · · · · · ·	Maximum wind gust	11.5. m/s (26 mph)
	Bergeron	1.6 (Mod.)

## BOMB CYCLONE N°94/2022 - DATE: OCT./15/2022

	Drop of pressure in 24h	-32.2 hPa
	Min. pressure registered on station	955.1 hPa
	Min. pressure estimation in the cyclone core	945 hPa
CA Man Det	Sustained maximum wind	20.0 m/s (45 mph)
KALPET .	Maximum wind gust	28.0 m/s (63 mph)
t Rus	Bergeron	1.3 (Mod.)

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

#### BOMB CYCLONE N°95/2022 - DATE: OCT./15/2022

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

A <sup>™</sup> → 23	Drop of pressure in 24h	-35.5 hPa
	Min. pressure registered on station	960.1 hPa
	Min. pressure estimation in the cyclone core	945 hPa
	Sustained maximum wind	11.0 m/s (25 mph)
- Rond	Maximum wind gust	14.0 m/s (31 mph)
A A A A A A A A A A A A A A A A A A A	Bergeron	1.5 (Mod.)

## BOMB CYCLONE N°96/2022 - DATE: OCT./17/2022

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

NO IMAGE	Drop of pressure in 24h	-30.9 hPa
	Min. pressure registered on station	943.1 hPa
	Min. pressure estimation in the cyclone core	903 hPa
	Sustained maximum wind	18.5 m/s (41 mph)
	Maximum wind gust	None m/s ( mph)
	Bergeron	1.3 (Mod.)

## BOMB CYCLONE N°97/2022 - DATE: OCT./17/2022

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

	Drop of pressure in 24h	-24.2 hPa
	Min. pressure registered on station	970.3 hPa
	Min. pressure estimation in the cyclone core	903 hPa
	Sustained maximum wind	24.9 m/s (56 mph)
	Maximum wind gust	46.3 m/s (104 mph)
	Bergeron	1.0 (Weak)

## BOMB CYCLONE N°98/2022 - DATE: OCT./17/2022

	Drop of pressure in 24h	-27.0 hPa
	Min. pressure registered on station	960.8 hPa
	Min. pressure estimation in the cyclone core	903 hPa
	Sustained maximum wind	20.5 m/s (46 mph)
1	Maximum wind gust	None m⁄s ( mph)
	Bergeron	1.1 (Weak)

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

## BOMB CYCLONE N°99/2022 - DATE: OCT./17/2022

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

NO IMAGE	Drop of pressure in 24h	-30.9 hPa
	Min. pressure registered on station	943.1 hPa
	Min. pressure estimation in the cyclone core	903 hPa
	Sustained maximum wind	18.5 m/s (41 mph)
	Maximum wind gust	None m⁄s ( mph)
	Bergeron	1.3 (Mod.)

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#### BOMB CYCLONE N°100/2022 - DATE: OCT./27/2022



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

BOMB CYCLONE N°101/2022 - DATE: OCT./27/2022

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



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#### BOMB CYCLONE N°102/2022 - DATE: OCT./31/2022

#### (ANTARCTIC HURRICANE CAT-1)

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

	Drop of pressure in 24h	-40.3 hPa
	Min. pressure registered on station	960.1 hPa
Will BAR	Min. pressure estimation in the cyclone core	936 hPa
Real	Sustained maximum wind	34.0 m/s (76 mph)
	Maximum wind gust	40.0 m/s (89 mph)
2 m	Bergeron	1.7 (Mod.)

## BOMB CYCLONE N°103/2022 - DATE: OCT./31/2022

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



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#### BOMB CYCLONE N°104/2022 - DATE: OCT./31/2022

	Drop of pressure in 24h	-26.8 hPa
And a start of the	Min. pressure registered on station	976.1 hPa
	Min. pressure estimation in the cyclone core	970 hPa
	Sustained maximum wind	29.0 m/s (65 mph)
	Maximum wind gust	33.5 m/s (75 mph)
	Bergeron	1.1 (Weak)

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

#### BOMB CYCLONE N°105/2022 - DATE: OCT./31/2022

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



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## BOMB CYCLONE N°106/2022 - DATE: OCT./31/2022

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

373	Drop of pressure in 24h	-25.4 hPa
	Min. pressure registered on station	967.1 hPa
	Min. pressure estimation in the cyclone core	960 hPa
	Sustained maximum wind	18.0 m/s (40 mph)
CARE OF BE	Maximum wind gust	26.5 m/s (59 mph)
0,000	Bergeron	1.1 (Weak)

#### SOURCES

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