

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

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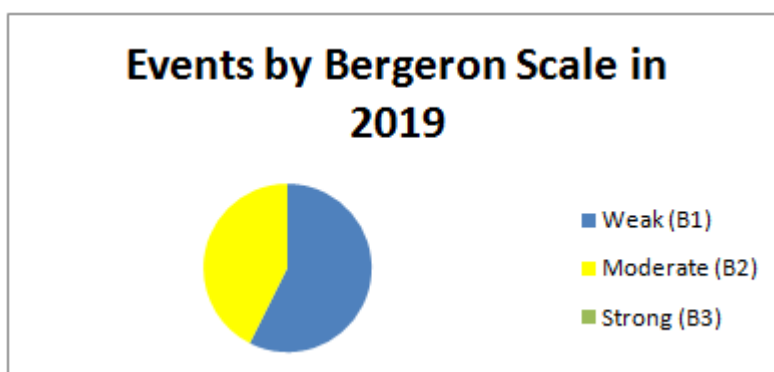
AUGUST 2019

During this month, 09 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 cyclones this month were: Frei, Mirny, Syowa, Palmer, Davis, Casey and Dumont D'Urville. The most intense cyclone recorded was no.48/2019 at the Casey station on 04th with sustained winds of up to 43.0 m/s (96 mph). The cyclone which registered the lowest atmospheric pressure at sea level was the no.54/2019 at the Syowa station, with values reaching 953.8 hPa. Houve uma queda muito acentuada no número de ciclones neste mês em relação ao mesmo mês de 2018, diminuição significativa de 59%.

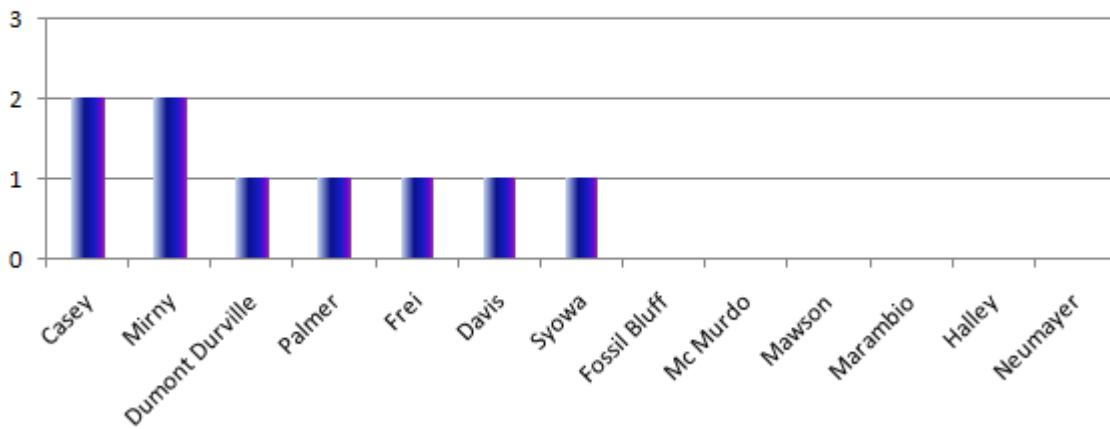
STATISTICS OF THE MONTH

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	04
B3	>1.8	Strong	00

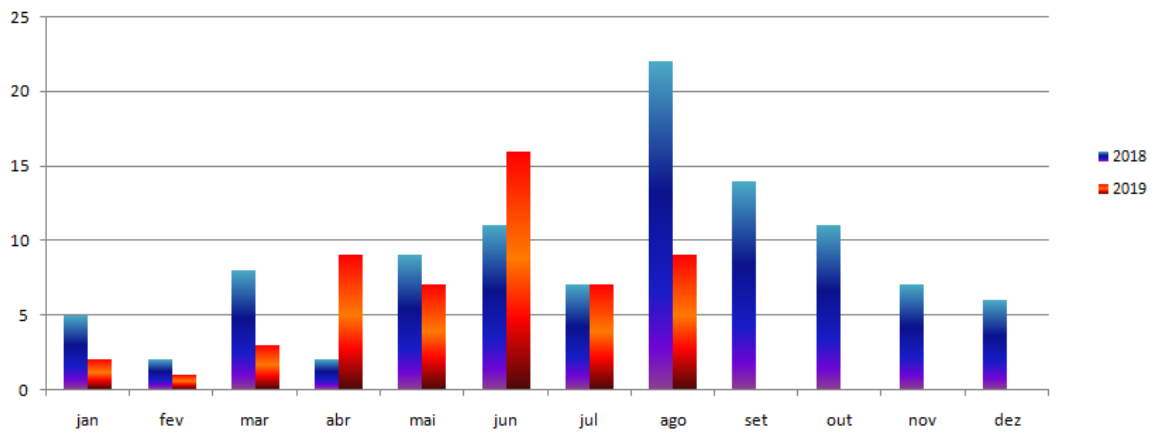
Highest pressure drop	Lowest recorded pressure	Highest sustained wind
-36.7 hPa/24h	953.8 hPa	43.0 m/s
Frei	Syowa	Casey
Aug. 04th	Aug. 25th	Aug. 04th



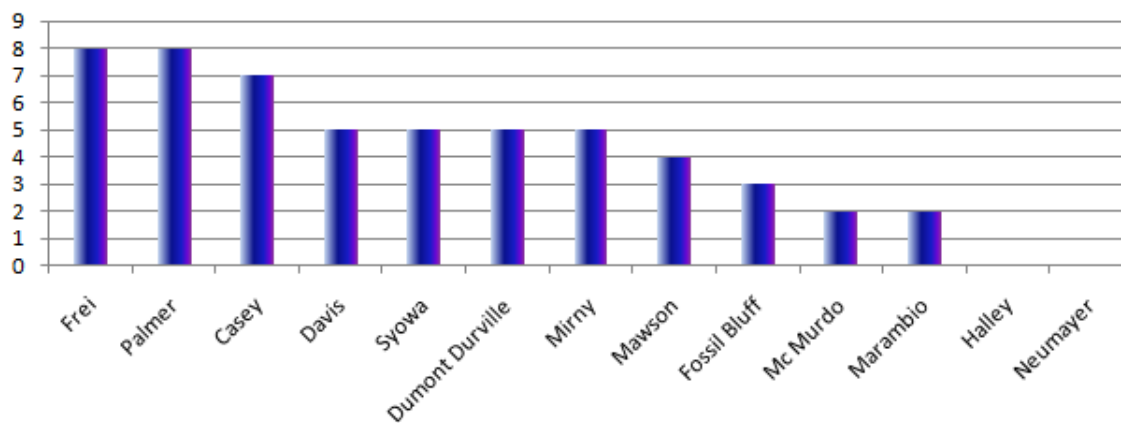
Total of events registered in each station in the month of August/2019



Total Explosive Cyclones in the Antarctic



Total of events registered by station in 2019



BOMB CYCLONE Nº46/2019- DATE: AUGUST/04/2019

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

Drop of pressure in 24h	-36.7 hPa
Minimum pressure registered on station	962.3 hPa
Minimum pressure estimation in the cyclone core	957 hPa
Sustained maximum wind	21.5 m/s (48 mph)
Maximum wind gust	31.0 m/s (69 mph)
Bergeron	1.5 (moderate)

BOMB CYCLONE Nº47/2019- DATE: AUGUST/04/2019

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

Drop of pressure in 24h	-31.6 hPa
Minimum pressure registered on station	957.5 hPa
Minimum pressure estimation in the cyclone core	957 hPa
Sustained maximum wind	24.0 m/s (54 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.3 (moderate)

BOMB CYCLONE Nº48/2019- DATE: AUGUST/04/2019

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

Drop of pressure in 24h	-27.7 hPa
Minimum pressure registered on station	968.8 hPa
Minimum pressure estimation in the cyclone core	955 hPa
Sustained maximum wind	43.0 m/s (96 mph)
Maximum wind gust	52.0 m/s (116 mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°49/2019 - DATE: AUGUST/09/2019

LOCAL: MIRNY STATION – WMO 89532 (OPERATED BY RUSSIA)

Drop of pressure in 24h	-33.3 hPa
Minimum pressure registered on station	962.4 hPa
Minimum pressure estimation in the cyclone core	962 hPa
Sustained maximum wind	24.0 m/s (54 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.4 (moderate)

BOMB CYCLONE N°50/2019 - DATE: AUGUST/10/2019

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

Drop of pressure in 24h	-26.0 hPa
Minimum pressure registered on station	979.1 hPa
Minimum pressure estimation in the cyclone core	979 hPa
Sustained maximum wind	12.0 m/s (27 mph)
Maximum wind gust	24.0 m/s (54 mph)
Bergeron	1.1 (weak)

BOMB CYCLONE N°51/2019 - DATE: AUGUST/11/2019

LOCAL: MIRNY STATION – WMO 89532 (OPERATED BY RUSSIA)

Drop of pressure in 24h	-27.5 hPa
Minimum pressure registered on station	970.3 hPa
Minimum pressure estimation in the cyclone core	958 hPa
Sustained maximum wind	26.0 m/s (58 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.1 (weak)

BOMB CYCLONE Nº52/2019- DATE: AUGUST/11/2019

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

Drop of pressure in 24h	-35.3 hPa
Minimum pressure registered on station	960.1 hPa
Minimum pressure estimation in the cyclone core	958 hPa
Sustained maximum wind	09 m/s (20 mph)
Maximum wind gust	11 m/s (25 mph)
Bergeron	1.5 (moderate)

BOMB CYCLONE Nº53/2019- DATE: AUGUST/13/2019

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

Drop of pressure in 24h	-27.7 hPa
Minimum pressure registered on station	968.8 hPa
Minimum pressure estimation in the cyclone core	965 hPa
Sustained maximum wind	29.0 m/s (65 mph)
Maximum wind gust	34.5 m/s (77 mph)
Bergeron	1.2 (weak)

BOMB CYCLONE Nº54/2019- DATE: AUGUST/25/2019

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

Drop of pressure in 24h	-25.0 hPa
Minimum pressure registered on station	953.8 hPa
Minimum pressure estimation in the cyclone core	952 hPa
Sustained maximum wind	22.0 m/s (49 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.0 (weak)

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>