

# MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

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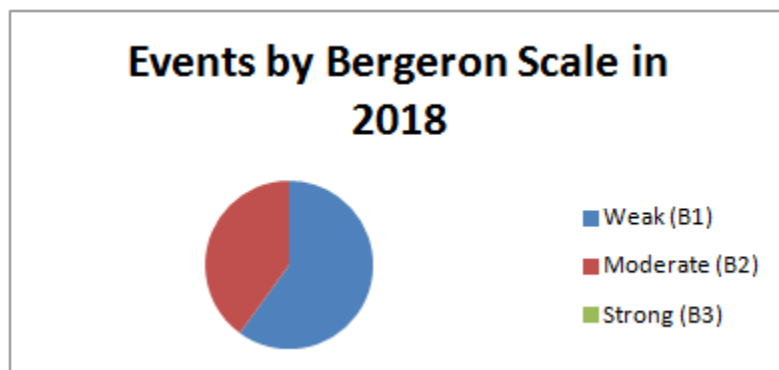
## JANUARY 2018

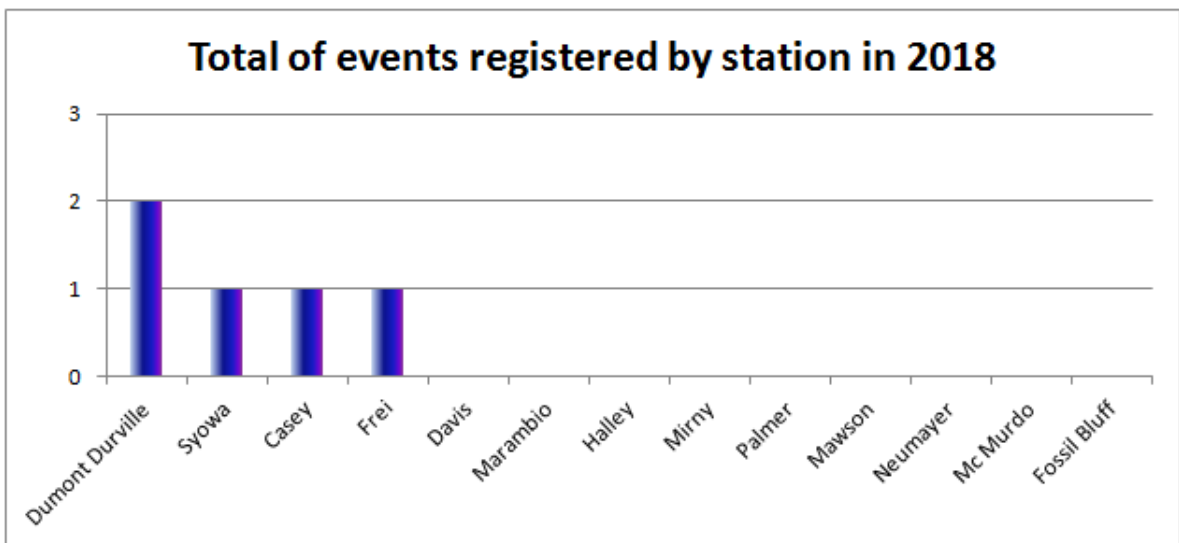
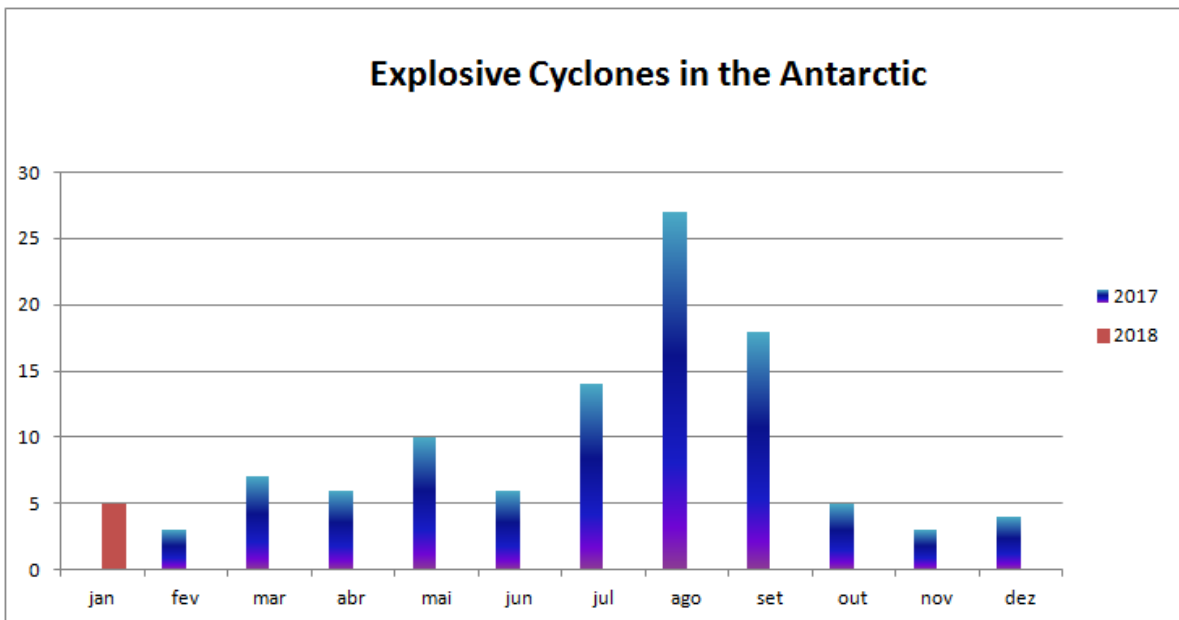
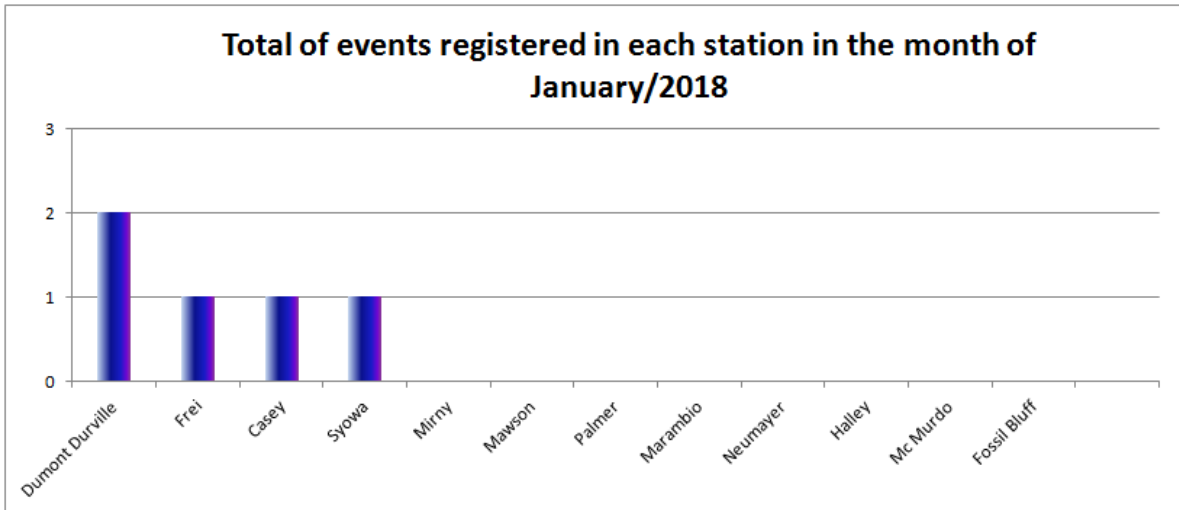
During this month, 05 events were recorded among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. It was a significant increase, because in January of last year no cyclones were registered to have affected any of the stations. The stations that were affected by cyclones this month were: Casey, Dumont D'Urville, Frei, and Syowa. The most intense cyclone recorded was no. 01/2018 at the Syowa station on January 03th with sustained winds of up to 29.5 m/s (66 mph). The cyclone with the lowest recorded atmospheric pressure at sea level was no. 03/2018 at the Dumont D'Urville station, with values reaching 958.2 hPa. Russkaya's Russian station will no longer be monitored because the regular meteorological service has stopped working. We added a new station in the monitoring system, Fossil Bluff – WMO 89065 (operated by England), which is located south of the Antarctic Peninsula.

### STATISTICS OF THE MONTH

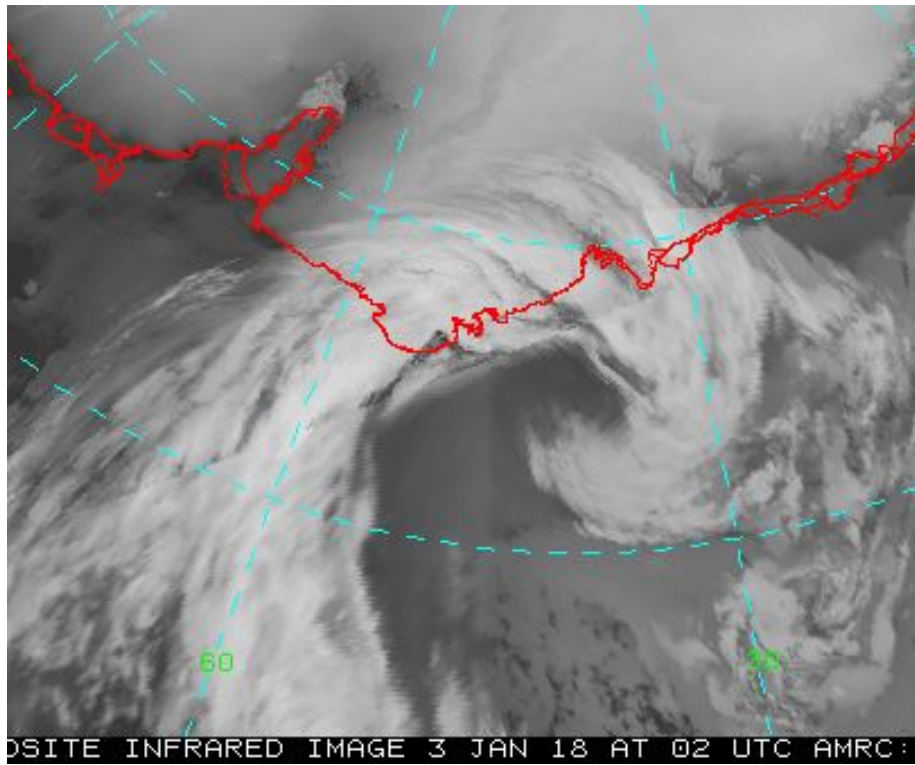
Classification	Bergeron Scale	Intensity	Total of cases registered in the month
B1	1 a 1.2	Weak	03
B2	1.3 a 1.8	Moderate	02
B3	>1.8	Strong	00

Highest pressure drop	Lowest recorded pressure	Highest sustained wind	Average minimum pressures	Mean of pressure drops
-33.1 hpa/24h	958.2 hPa	29.5 m/s	961.7	-29.1 hPa/24h
Syowa	Dumont D'Urville	Syowa		
Jan. 03	Jan. 13	Jan. 03		



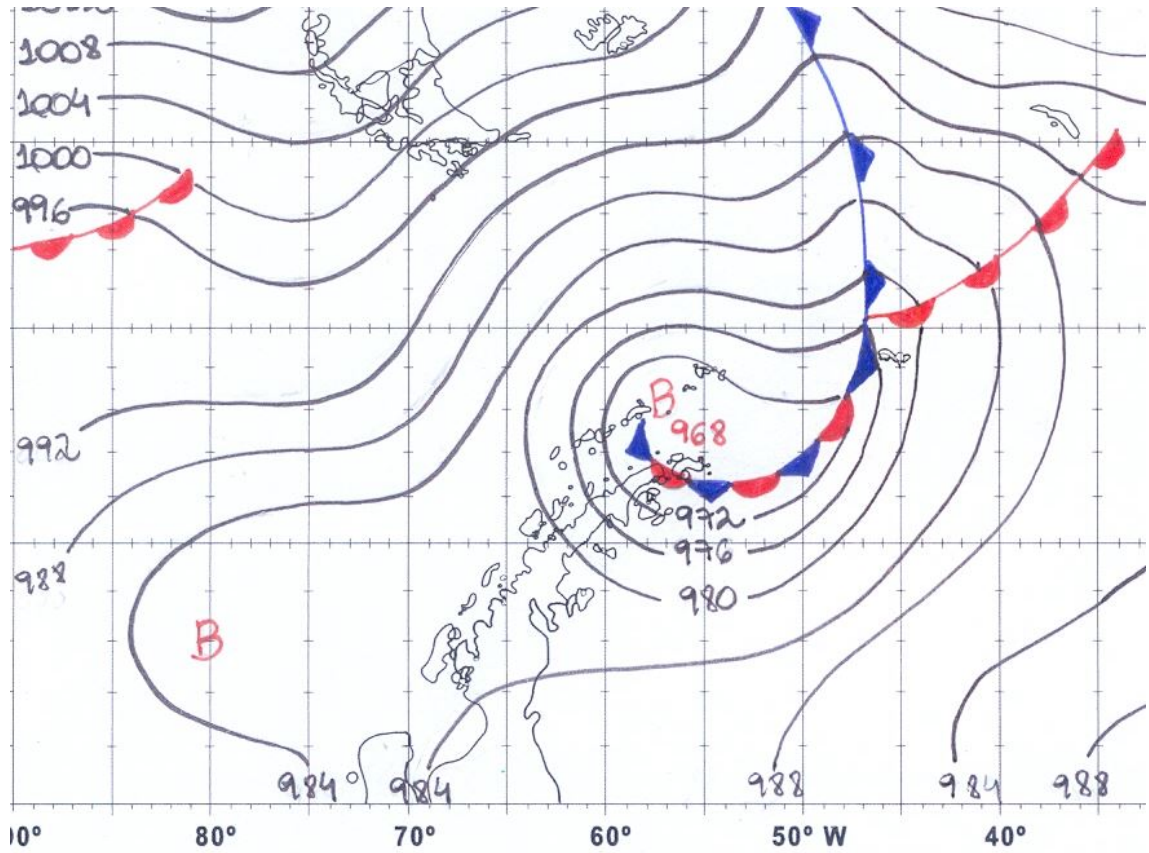


**BOMB CYCLONE N°01/2018- DATA: JAN/03/2018**  
**LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)**



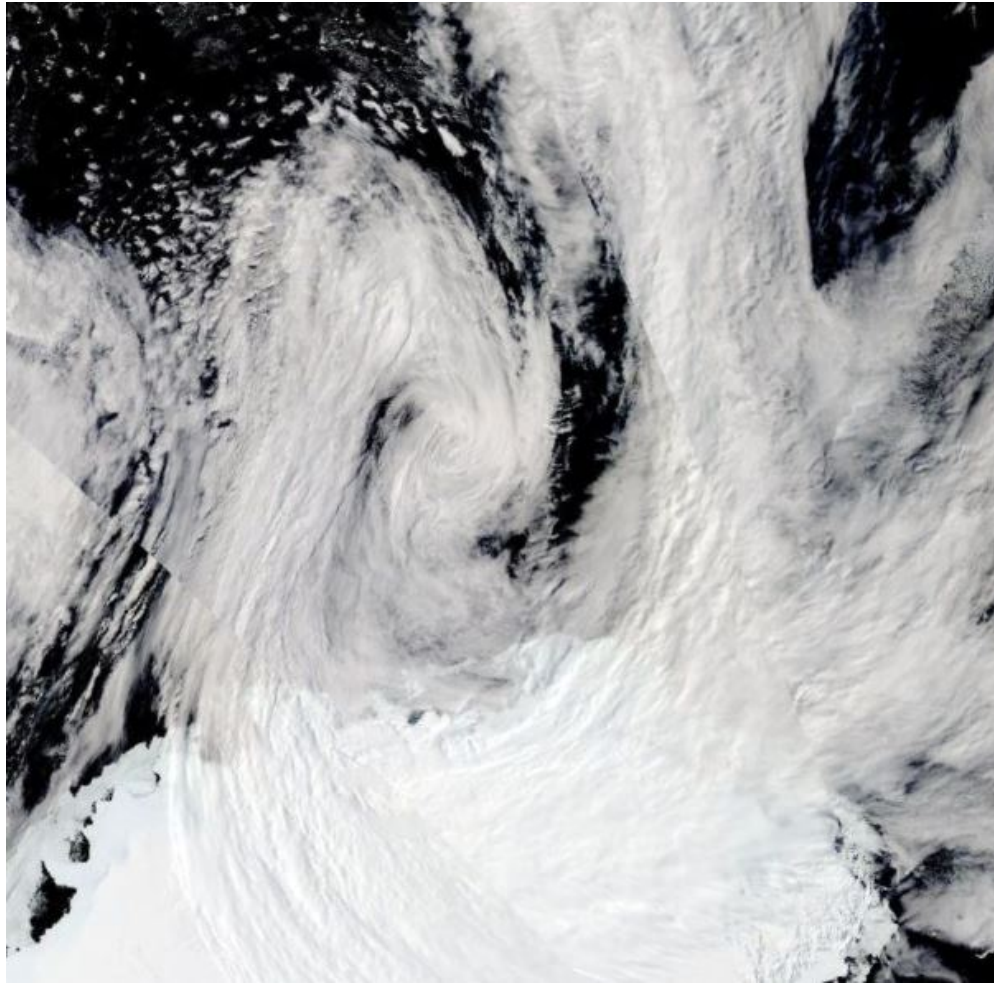
Drop of pressure in 24h	-33.1 hPa
Minimum pressure registered on station	958.8 hPa
Min. pressure estimation in the cyclone core	944 hPa
Sustained maximum wind	29.5 m/s (66 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.4 (moderate)

**BOMB CYCLONE N°02/2018- DATA: JAN/12/2018**  
**LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)**



Drop of pressure in 24h	-28.3 hPa
Minimum pressure registered on station	963.3 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustained maximum wind	22.0 m/s (49 mph)
Maximum wind gust	28.0 m/s (63 mph)
Bergeron	1.2 (weak)

**BOMB CYCLONE N°03/2018- DATA: JAN/13/2018**  
**LOCAL: DUMONT D'URVILLE STATION –WMO 89642 (OPERATED BY FRANCE)**



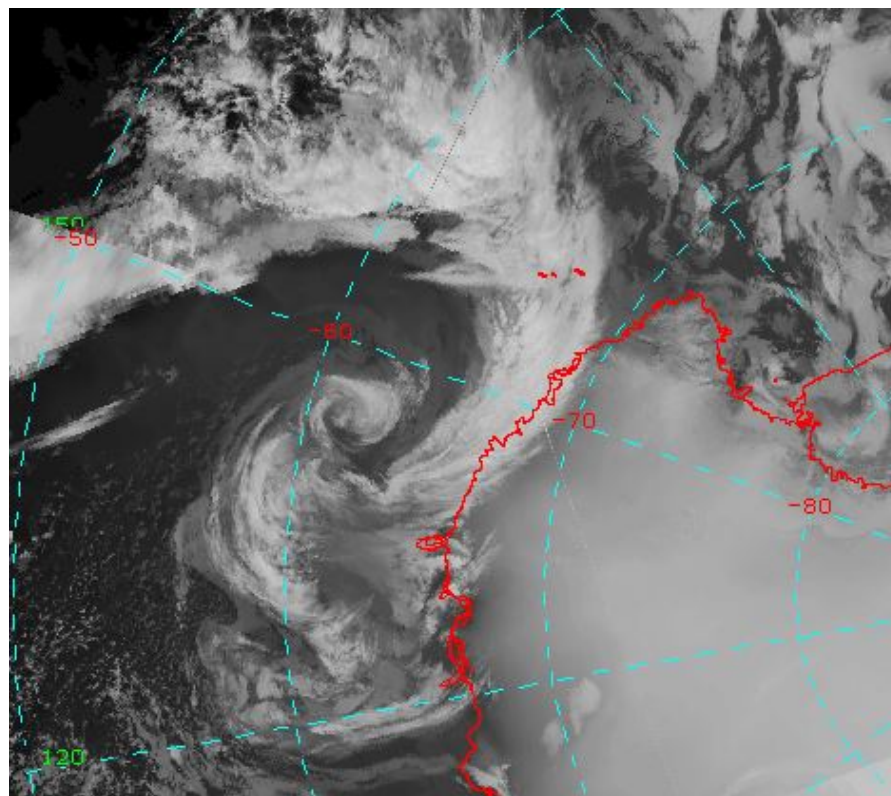
Drop of pressure in 24h	-32.4 hPa
Minimum pressure registered on station	958.2 hPa
Min. pressure estimation in the cyclone core	949 hPa
Sustained maximum wind	25.0 m/s (56 mph)
Maximum wind gust	40.0 m/s (90 mph)
Bergeron	1.4 (moderate)

**BOMB CYCLONE N°04/2018- DATA: JAN/13/2018**  
**LOCAL: CASEY STATION –WMO 89611 (OPERATED BY AUSTRALIA)**

**NO IMAGE**

Drop of pressure in 24h	-24.6 hPa
Minimum pressure registered on station	958.9 hPa
Min. pressure estimation in the cyclone core	947 hPa
Sustained maximum wind	15.0 m/s (34 mph)
Maximum wind gust	20.0 m/s (39 mph)
Bergeron	1.0 (weak)

**BOMB CYCLONE N°05/2018- DATA: JAN/28/2018**  
**LOCAL: DUMONT D'URVILLE STATION –WMO 89642 (OPERATED BY FRANCE )**



Drop of pressure in 24h	-27.2 hPa
Minimum pressure registered on station	969.1 hPa
Min. pressure estimation in the cyclone core	957 hPa
Sustained maximum wind	26.8 m/s (60 mph)
Maximum wind gust	37.5 m/s (84 mph)
Bergeron	1.1 (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>