

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

BY ROMAO, M. AND PIRES, L. B. M.

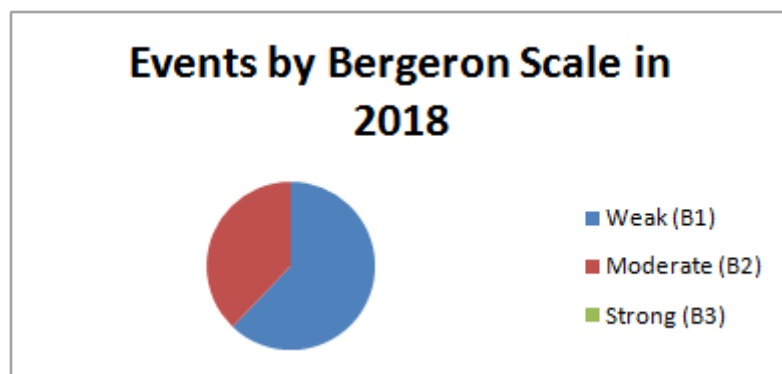
JUNE 2018

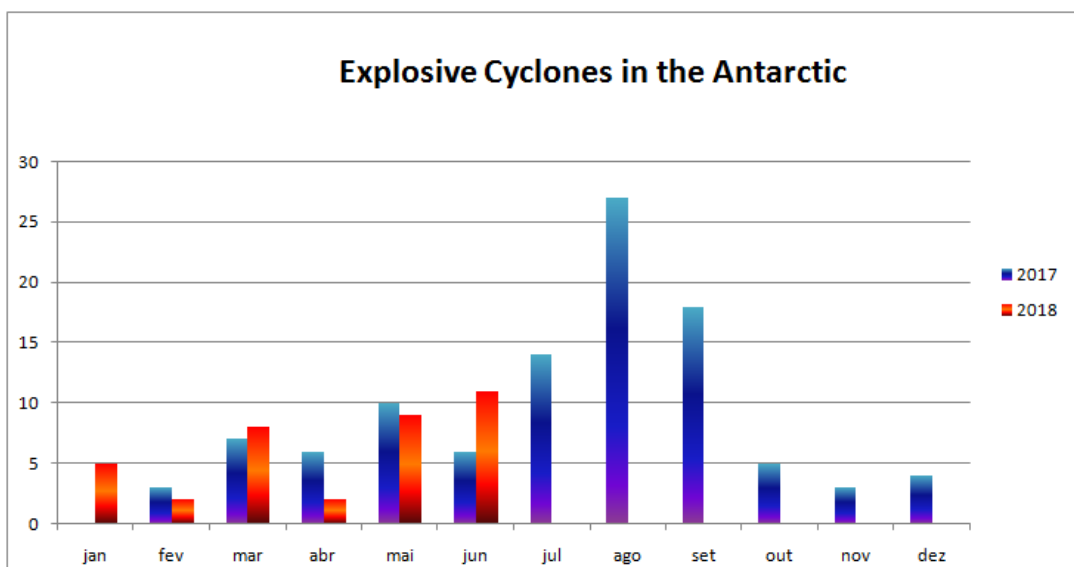
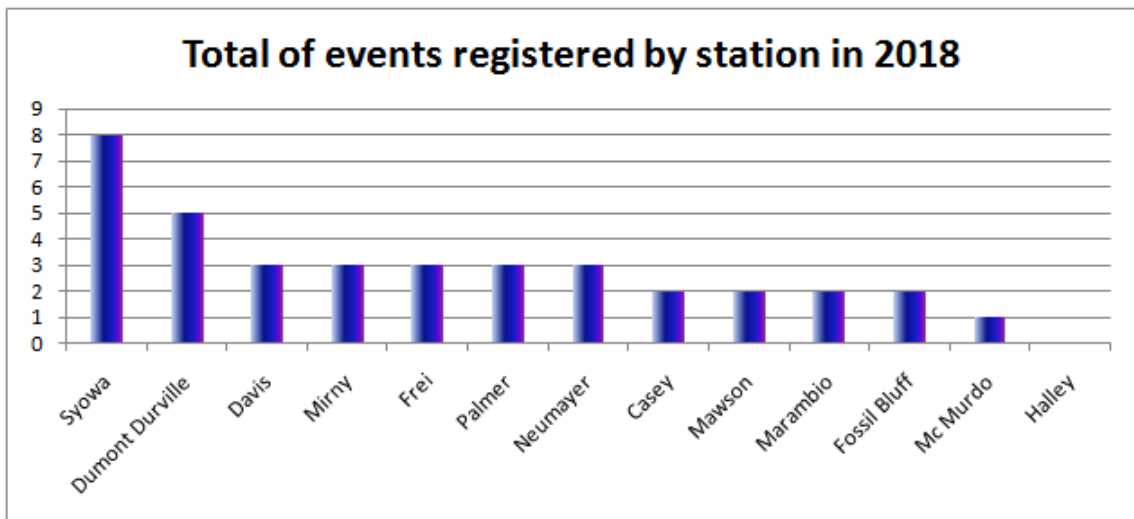
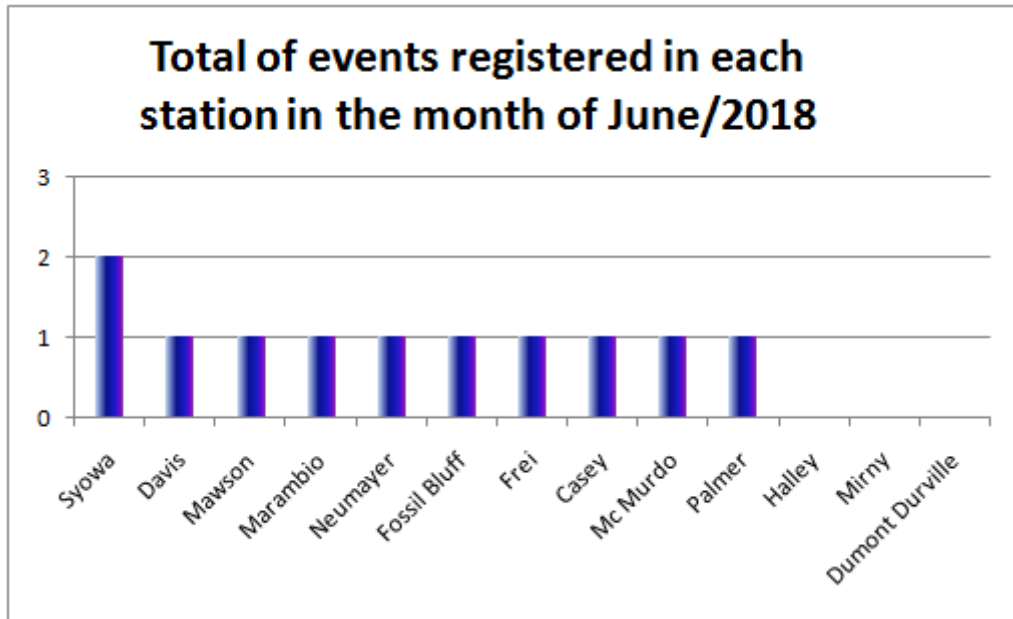
During this month, 11 events were recorded among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. Because only 06 cases were registered last year, there has since been an increase in cyclone events. The stations that were affected by cyclones this month were: Syowa, Casey, Fossil Bluff, Mawson, Davis, Marambio, McMurdo, Frei, Palmer, and Neumayer. The most intense cyclone recorded was no. 27/2018 at the Syowa station on June 02 with sustained winds of up to 34.5 m/s (77 mph). The cyclone with the lowest recorded atmospheric pressure at sea level was also no. 33/2018 at the Palmer station, with values reaching 963.9 hPa.

STATISTICS OF THE MONTH

Classification	Bergeron Scale	Intensity	Total of cases registered in the month
B1	1 a 1.2	Weak	08
B2	1.3 a 1.8	Moderate	03
B3	>1.8	Strong	00

Highest pressure drop	Lowest recorded pressure	Highest sustained wind
-39.1 hPa/24h	963.9 hPa	34.5 m/s
Davis	Palmer	Syowa
Jun. 05	Jun. 15	Jun. 02





BOMB CYCLONE N°27/2018- DATA: JUNE/02/2018
LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)

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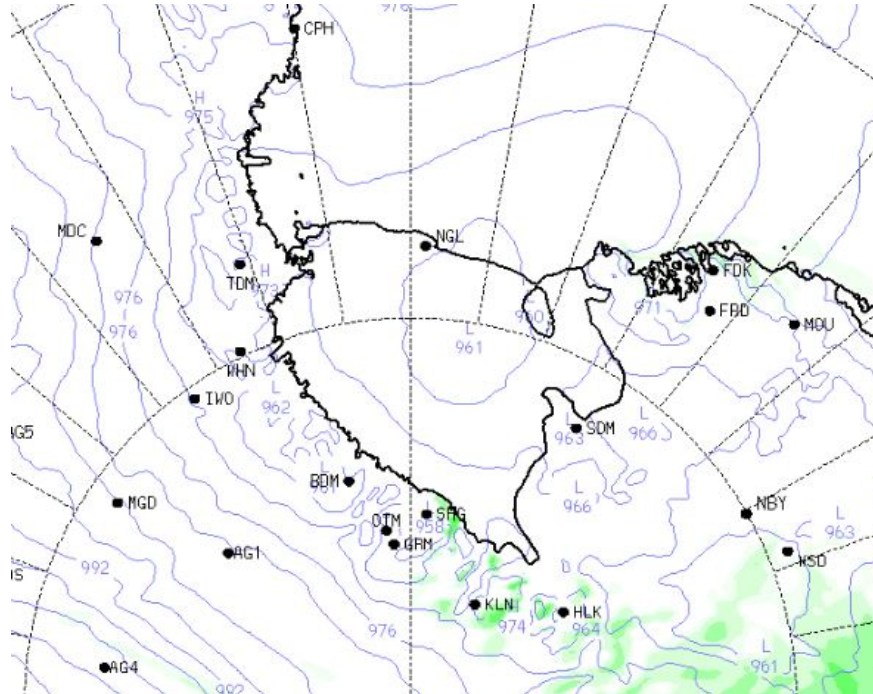
Drop of pressure in 24h	-34.2 hPa
Minimum pressure registred on station	970.9 hPa
Min. pressure estimation in the cyclone core	960 hPa
Sustined maximum wind	34.5 m/s (77 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.4 (moderate)

BOMB CYCLONE N°28/2018- DATA: JUNE/02/2018
LOCAL: NEUMAYER STATION – WMO 89002 (OPERATED BY GERMANY)

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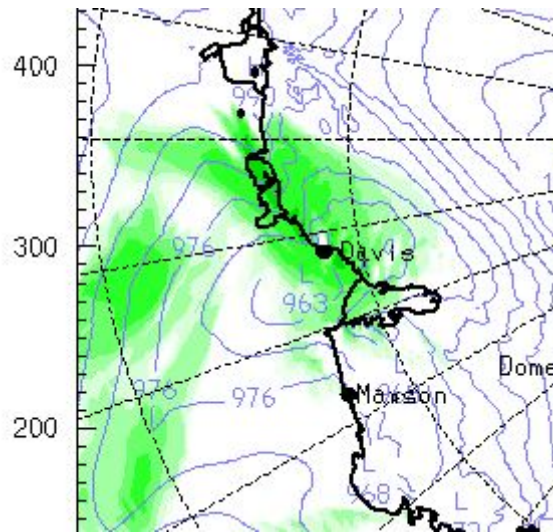
Drop of pressure in 24h	-28.9 hPa
Minimum pressure registred on station	966.4 hPa
Min. pressure estimation in the cyclone core	960 hPa
Sustined maximum wind	5.1 m/s (11 mph)
Maximum wind gust	none (mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°29/2018- DATA: JUNE/03/2018
LOCAL: MC MURDO STATION – WMO 89664 (OPERATED BY U.S.A.)



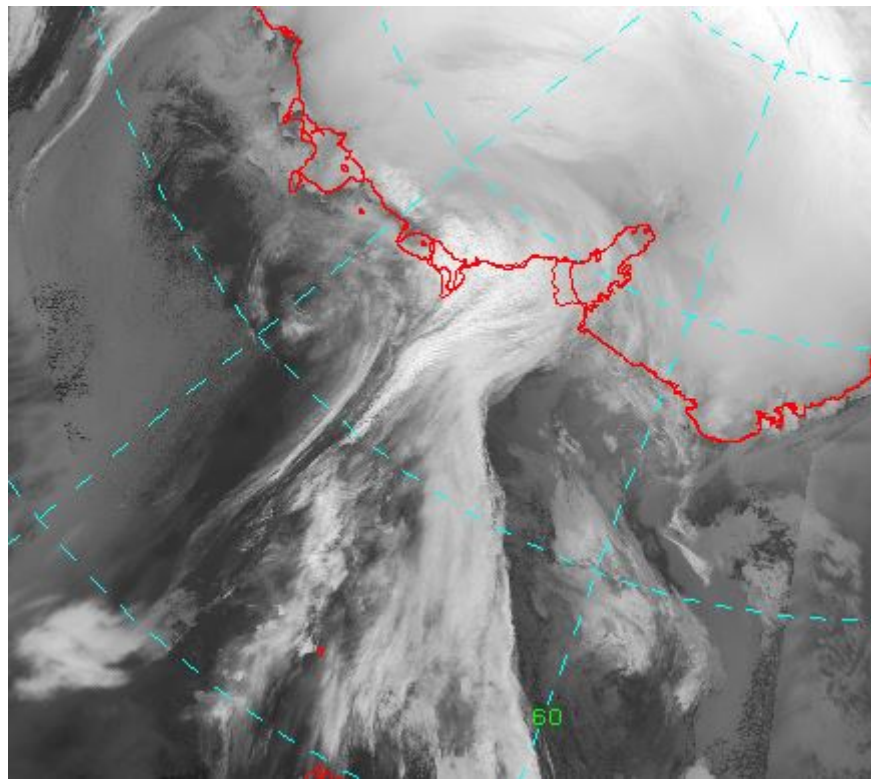
Drop of pressure in 24h	-29.7 hPa
Minimum pressure registred on station	964.3 hPa
Min. pressure estimation in the cyclone core	961 hPa
Sustined maximum wind	9.5 m/s (21 mph)
Maximum wind gust	14.0 m/s (31 mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°30/2018- DATA: JUNE/05/2018
LOCAL: DAVIS STATION – WMO 89571 (OPERATED BY AUSTRALIA)



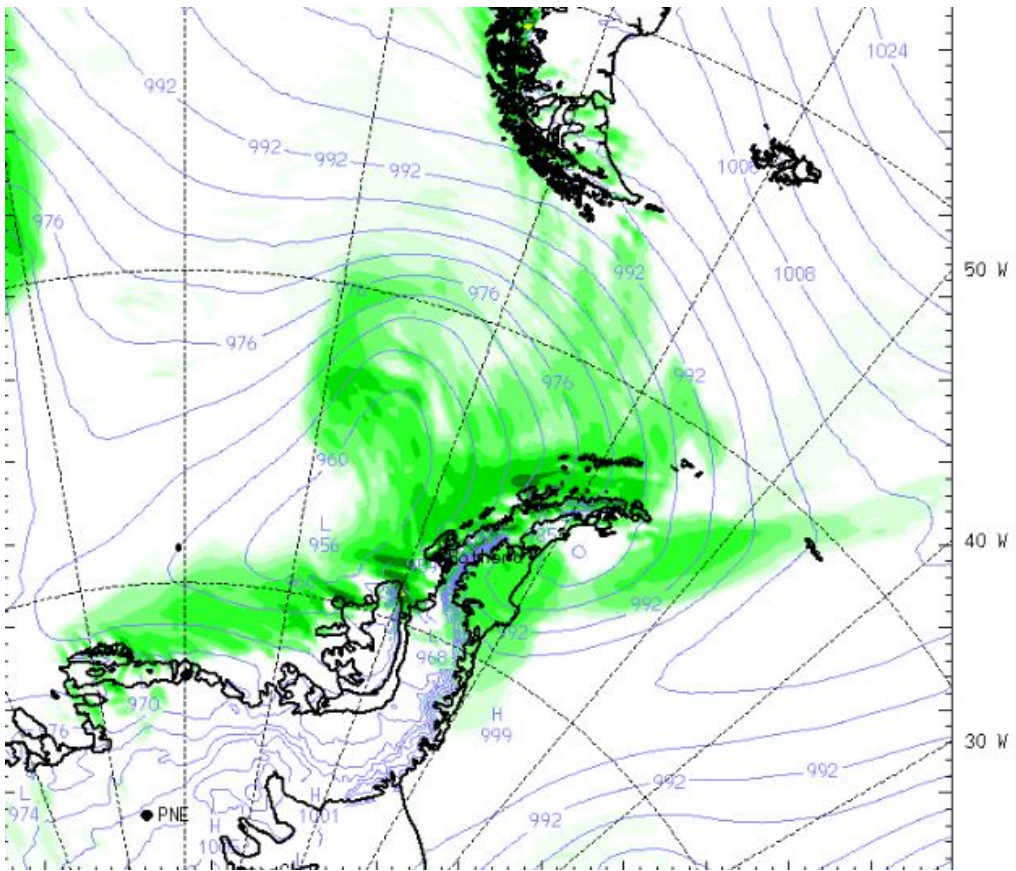
Drop of pressure in 24h	-39.1 hPa
Minimum pressure registred on station	968.1 hPa
Min. pressure estimation in the cyclone core	961 hPa
Sustined maximum wind	21.5 m/s (48 mph)
Maximum wind gust	30.5 m/s (68 mph)
Bergeron	1.6 (moderate)

BOMB CYCLONE N°31/2018- DATA: JUNE/05/2018
LOCAL: MAWSON STATION – WMO 89564 (OPERATED BY AUSTRALIA)



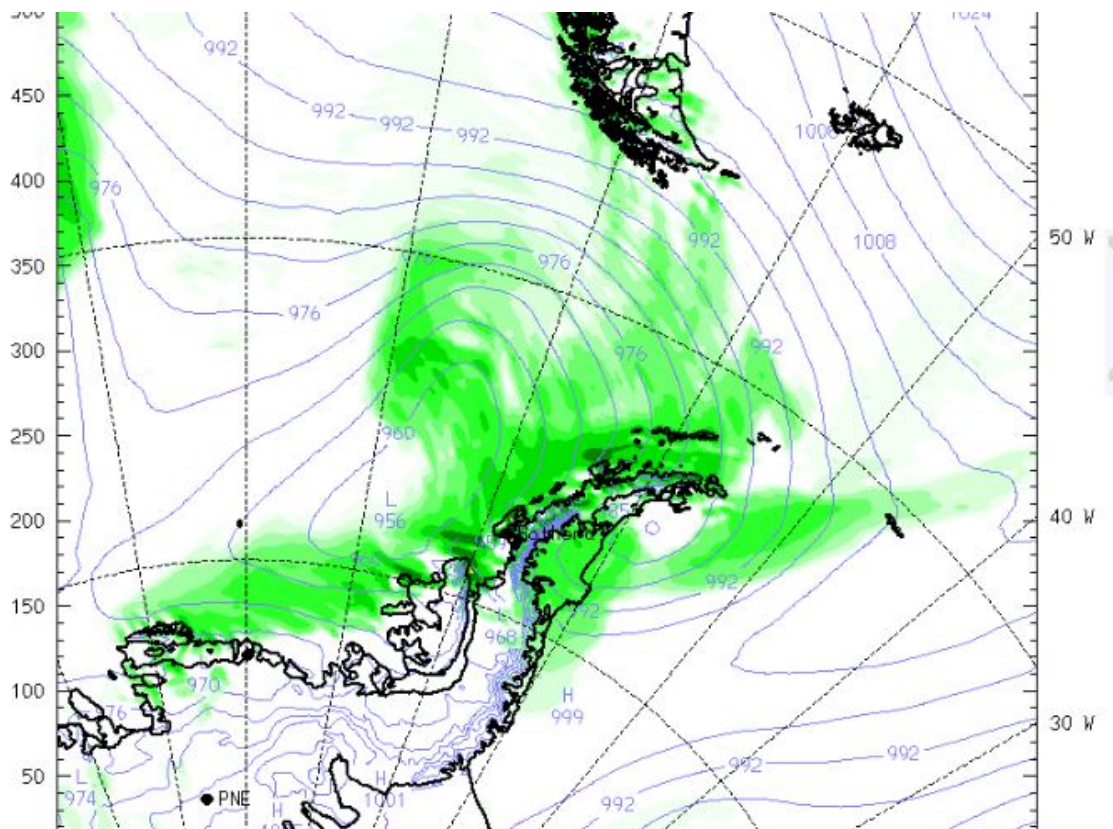
Drop of pressure in 24h	-28.3 hPa
Minimum pressure registred on station	972.3 hPa
Min. pressure estimation in the cyclone core	970 hPa
Sustined maximum wind	19.5 m/s (44 mph)
Maximum wind gust	23.5 m/s (53 mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°32/2018- DATA: JUNE /15/2018
LOCAL: FOSSIL BLUFF STATION – WMO 89065 (OPERATED BY U.K.)



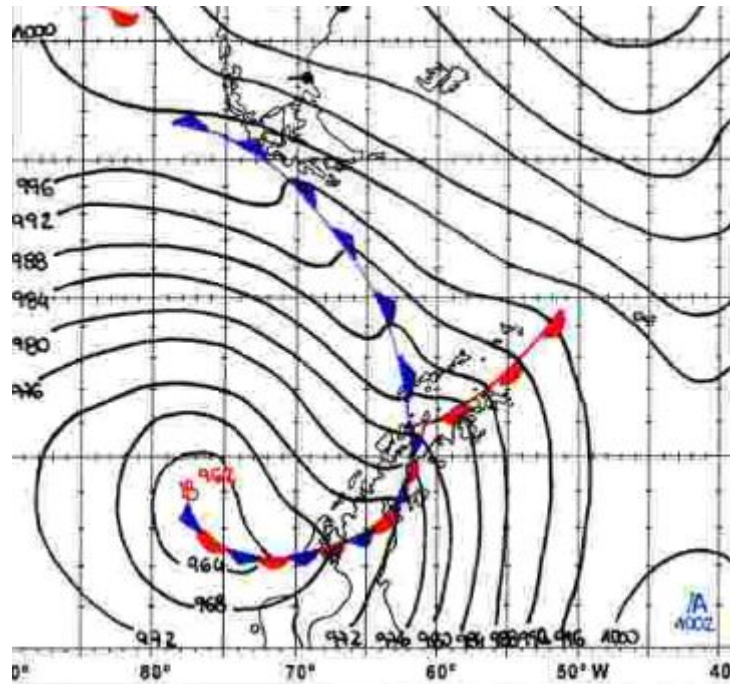
Drop of pressure in 24h	-28.5 hPa
Minimum pressure registred on station	966.0 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustined maximum wind	11.0 m/s (25 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°33/2018- DATA: JUNE/15/2018
LOCAL: PALMER STATION – WMO 89061 (OPERATED BY U.S.A.)



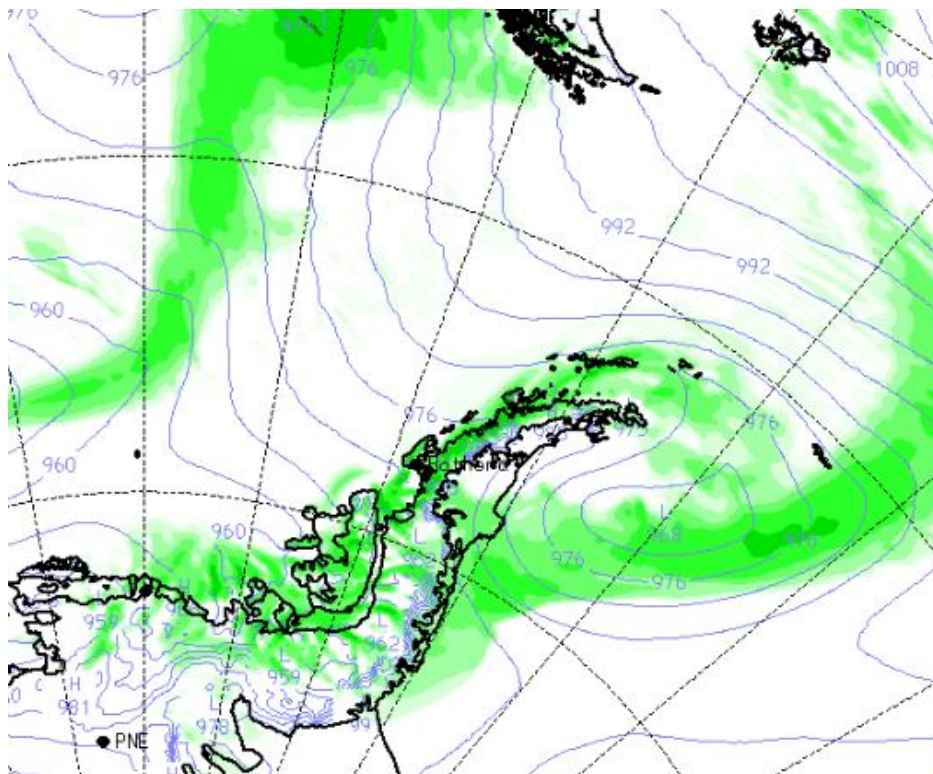
Drop of pressure in 24h	-31.5 hPa
Minimum pressure registered on station	963.9 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustined maximum wind	14.0 m/s (31 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.3 (moderate)

BOMB CYCLONE N°34/2018- DATA: JUNE/15/2018
LOCAL: FREI STATION – WMO 89056 (OPERATED BY CHILE)



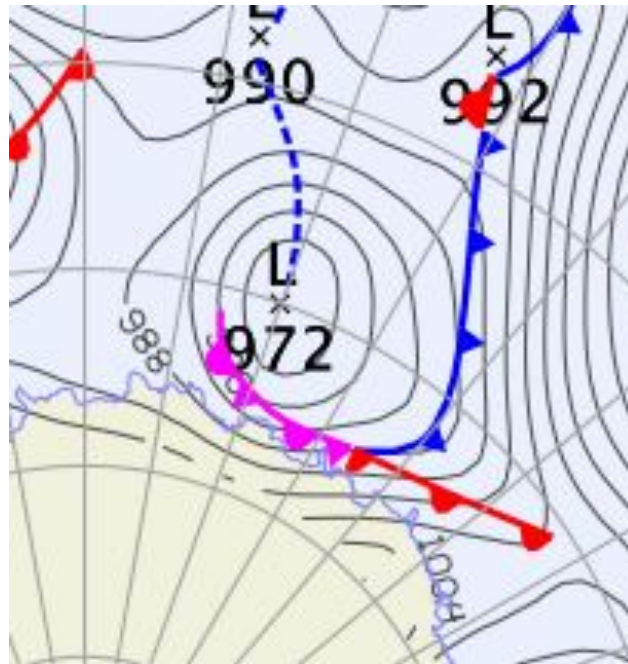
Drop of pressure in 24h	-29.0 hPa
Minimum pressure registred on station	972.0 hPa
Min. pressure estimation in the cyclone core	956 hPa
Sustined maximum wind	17.5 m/s (39 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.2 (weak)

BOMB CYCLONE N°35/2018- DATA: JUNE/15/2018
LOCAL: MARAMBIO STATION – WMO 89055 (OPERATED BY ARGENTINA)



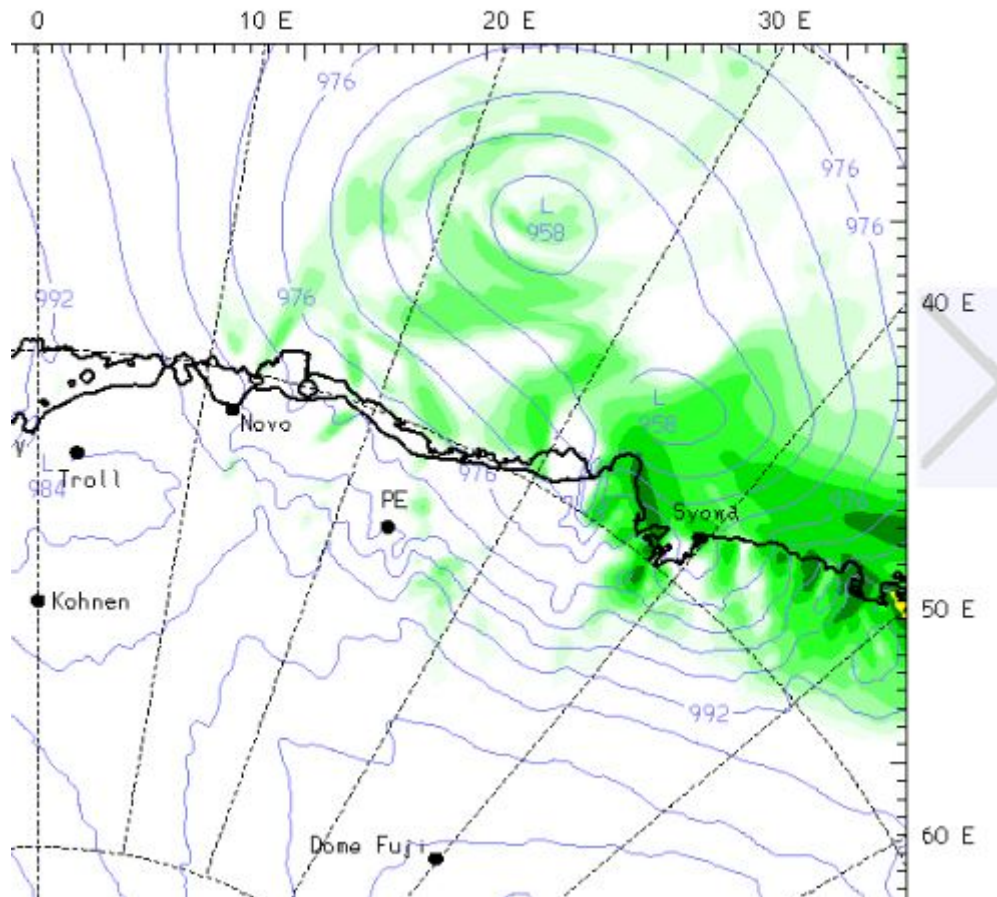
Drop of pressure in 24h	-24.5 hPa
Minimum pressure registered on station	979.0 hPa
Min. pressure estimation in the cyclone core	968 hPa
Sustained maximum wind	22.0 m/s (49 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.0 (weak)

BOMB CYCLONE N°36/2018- DATA: JUNE/18/2018
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



Drop of pressure in 24h	-27.2 hPa
Minimum pressure registered on station	975.0 hPa
Min. pressure estimation in the cyclone core	962 hPa
Sustained maximum wind	20.5 m/s (46 mph)
Maximum wind gust	27.0 m/s (60 mph)
Bergeron	1.1 (weak)

BOMB CYCLONE N°37/2018- DATA: JUNE//2018
LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)



Drop of pressure in 24h	-25.2 hPa
Minimum pressure registred on station	968.4 hPa
Min. pressure estimation in the cyclone core	958 hPa
Sustined maximum wind	27.3 m/s (61 mph)
Maximum wind gust	none m/s (mph)
Bergeron	1.1 (weak)