MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

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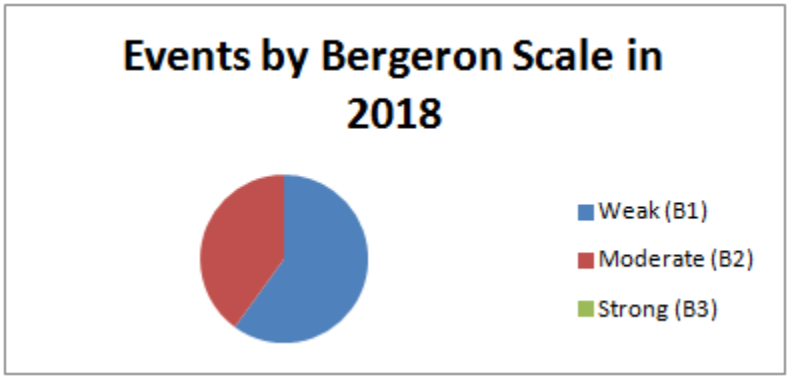
APRIL 2018

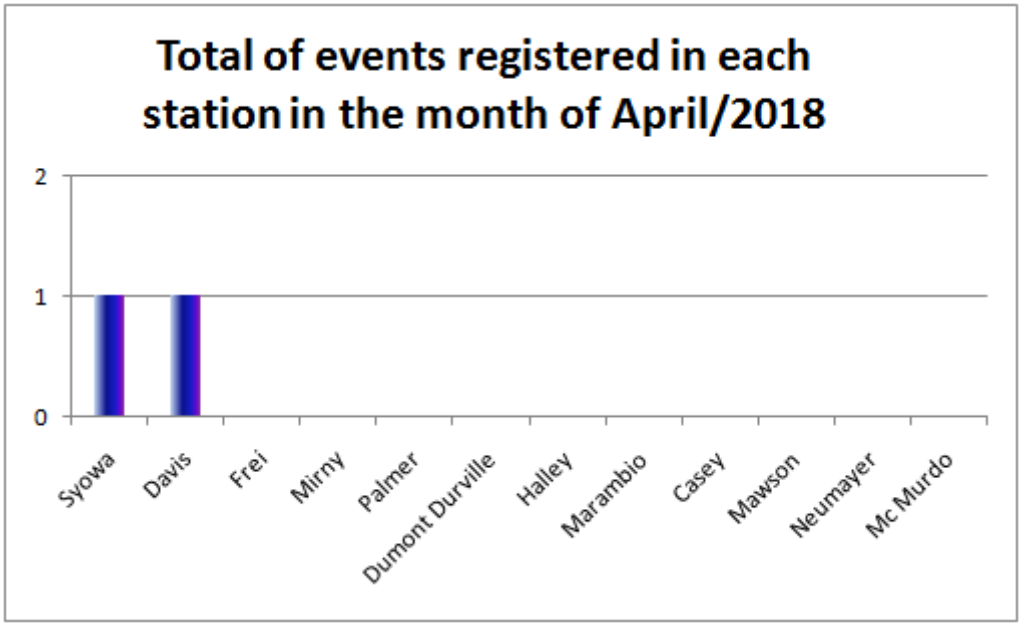
During this month, 02 events were recorded among the 13 research stations located on the coast of the Antarctic utilized as references for the monitoring of bomb cyclones. There was a reduction in the number of cyclones both in relation to the previous month and the same month of April 2017. The stations that were affected by the cyclones this month were: Davis and Syowa. The most intense cyclone recorded was no. 16/2018 at the Davis station on April 29th with sustained winds of up to 20.6 m/s (46 mph). The cyclone with the lowest recorded atmospheric pressure at sea level was also no. 17/2018 at the Syowa station, with values reaching 959 hPa.

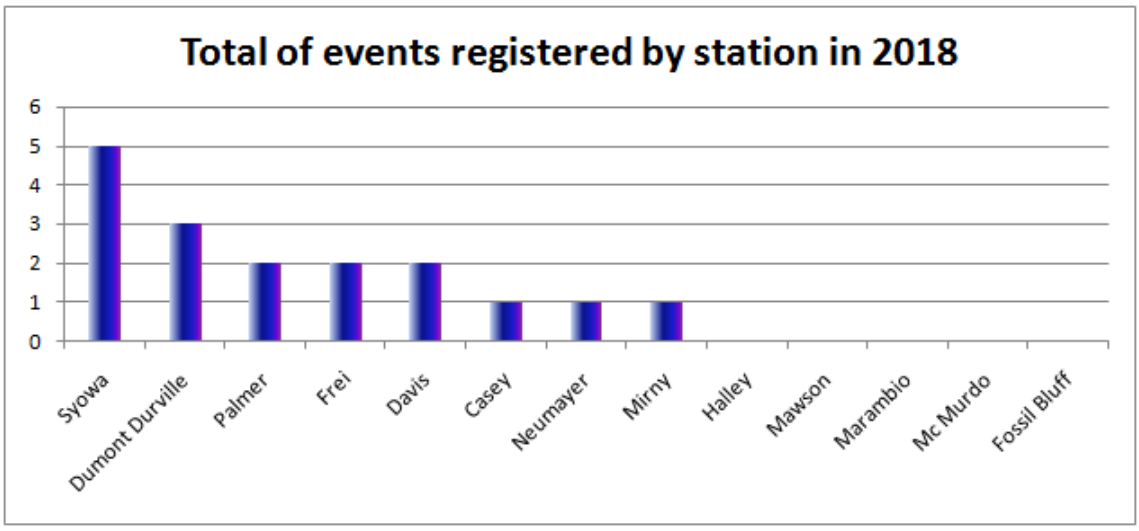
STATISTICS OF THE MONTH

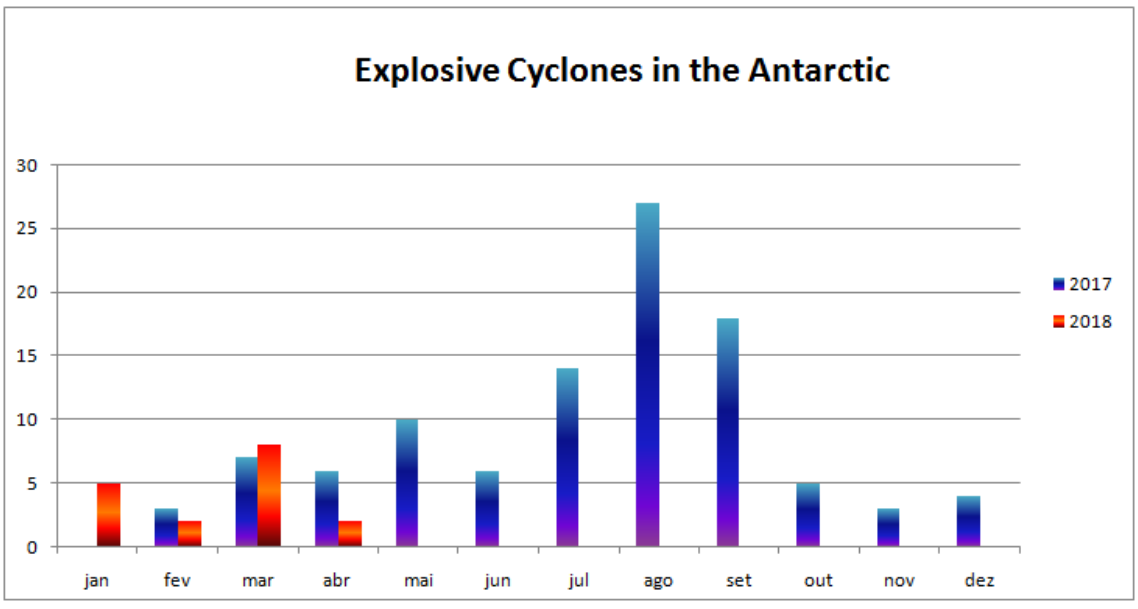
Classification	Bergeron Scale	Intensity	Total of cases registered in the month
B1	1 a 1.2	Weak	01
B2	1.3 a 1.8	Moderate	01
B3	>1.8	Strong	00

Highest pressure drop	Lowest recorded pressure	Highest sustained wind
-31.5 hPa/24h	959.7 hPa	20.6 m/s
Syowa	Syowa	Davis
April 30th	April 30th	April 29th

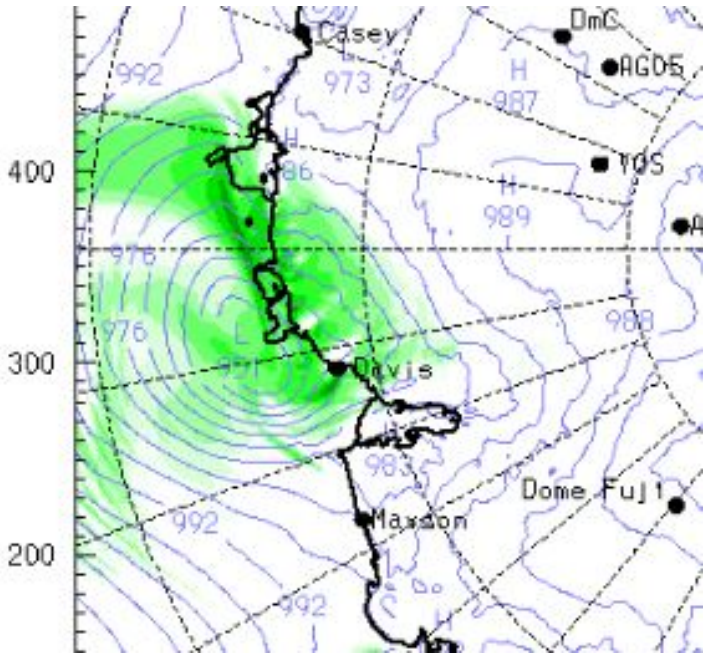



Total of events registered in each station in the month of April/2018
2
1
0
Syowa
Davis
Frei
Mirny
Palmer
Dumont Durville
Halley
Marambio
Casey
Mawson
Neumayer
Mc Murdo


Total of events registered by station in 2018
6
5
4
3
2
1
0
Syowa
Dumont Durville
Palmer
Frei
Davis
Casey
Neumayer
Mirny
Halley
Mawson
Marambio
Mc Murdo
Fossil Bluff

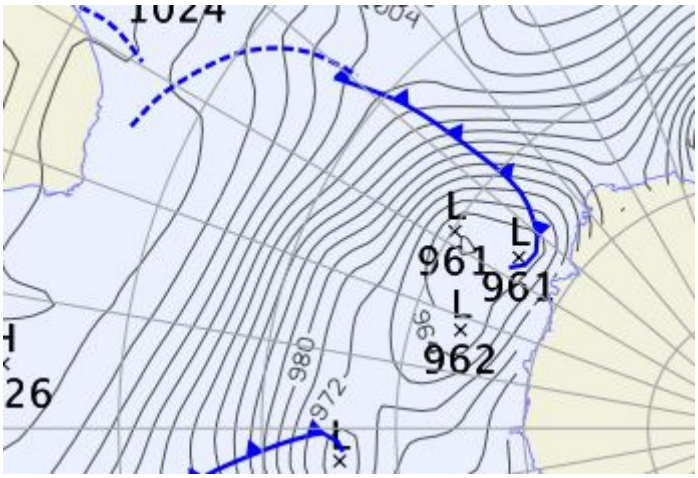

Explosive Cyclones in the Antarctic
30
25
20
15
10
5
0
jan
fev
mar
abr
mai
jun
jul
ago
set
out
nov
dez
2017
2018

BOMB CYCLONE Nº16/2018- DATA: APR./29/2018
LOCAL: DAVIS STATION – WMO 89571 (OPERATED BY AUSTRALIA)



Drop of pressure in 24h	-29.1 hPa
Minimum pressure registred on station	961.3 hPa
Min. pressure estimation in the cyclone core	949 hPa
Sustined maximum wind	20.6 m/s (46 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.2 (weak)

BOMB CYCLONE Nº17/2018- DATA: APR./30/2018
LOCAL: SYOWA STATION – WMO 89532 (OPERATED BY JAPAN)



Drop of pressure in 24h	-31.5 hPa
Minimum pressure registred on station	959.7 hPa
Min. pressure estimation in the cyclone core	959 hPa
Sustined maximum wind	17.5 m/s (39 mph)
Maximum wind gust	None m/s (mph)
Bergeron	1.3 (moderate)

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