

MONITORING EXPLOSIVE CYCLONES ON THE COAST OF THE ANTARCTIC CONTINENT

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

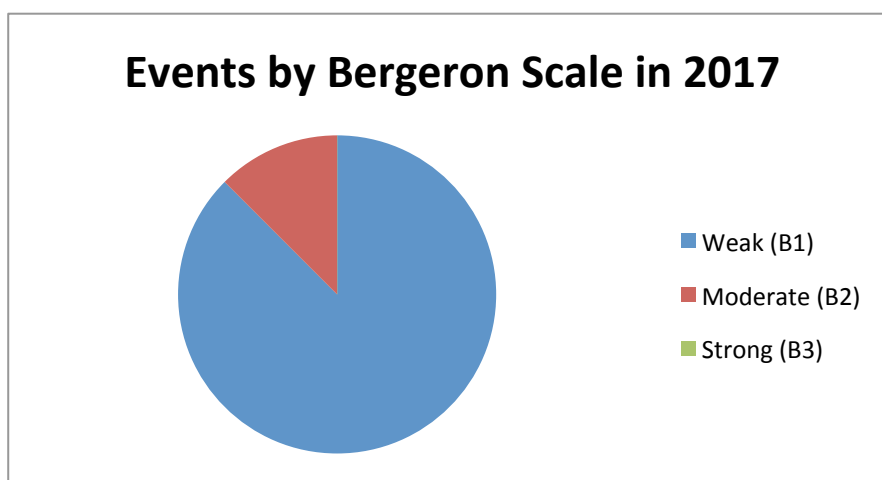
JUNE 2017

During this month, 6 events were registered among all 13 research stations that we used as references for the monitoring of explosive cyclones located on the coast of Antarctic, at the stations of: Russkaya, Syowa, Casey, Mawson, Davis and Dumont D'Urville, with one event for each one of these. The most intense cyclone recorded was at the Russkaya station on June 25th with sustained winds of up to 88 m/s (197 mph). The cyclone which registered the lowest atmospheric pressure at sea level was at the Casey station, with values reaching 957.1 hPa at June 2th. In this year, So far this year only Marambio, Halley and McMurdo have not yet registered any explosive cyclones.

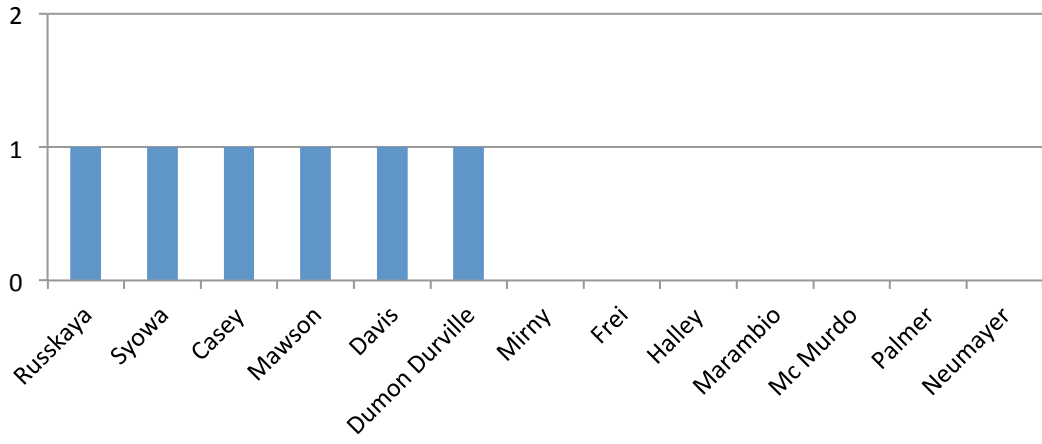
STATISTICS OF THE MONTH

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	01
B3	>1.8	Strong	00

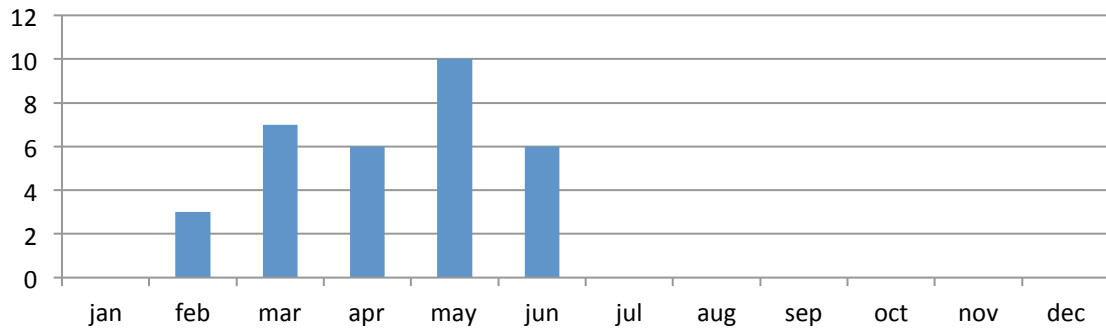
Highest pressure drop	Lowest recorded pressure	Highest sustained wind	Average minimum pressures	Mean of pressure drops
37.3 hPa/24H	957.1 hPa	88 m/s (196.85 mph)	964.9 hPa	26.5 hPa/24H
Davis Station June 30	Casey Station June 02	Russkaya Station June 25		



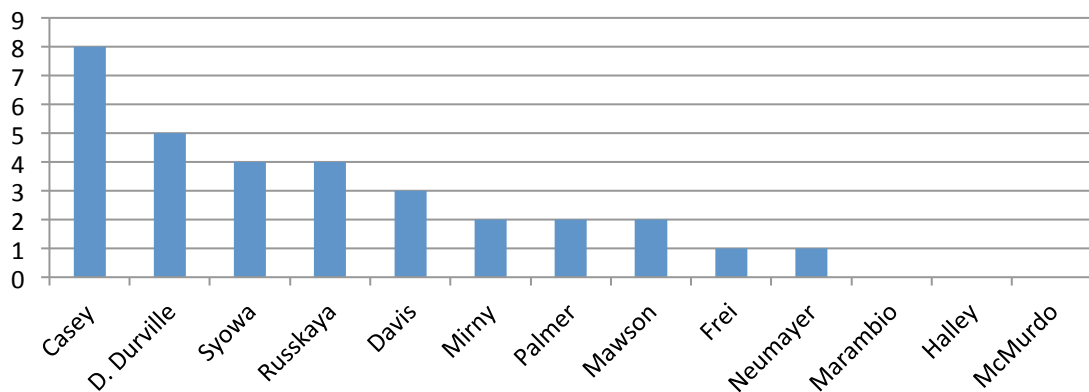
Total of events registered in each station in the month of June/2017



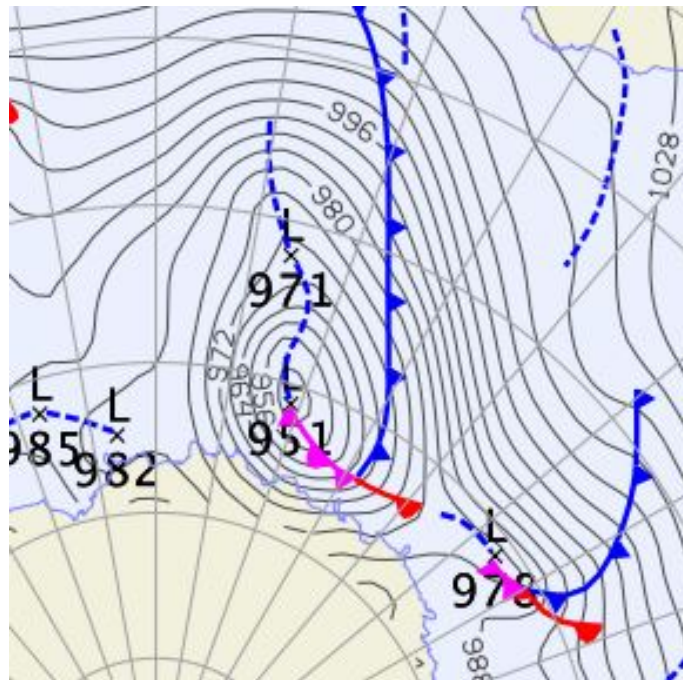
Explosive Cyclones in the Antarctic Total of monthly events



Total of events registered by station in 2017

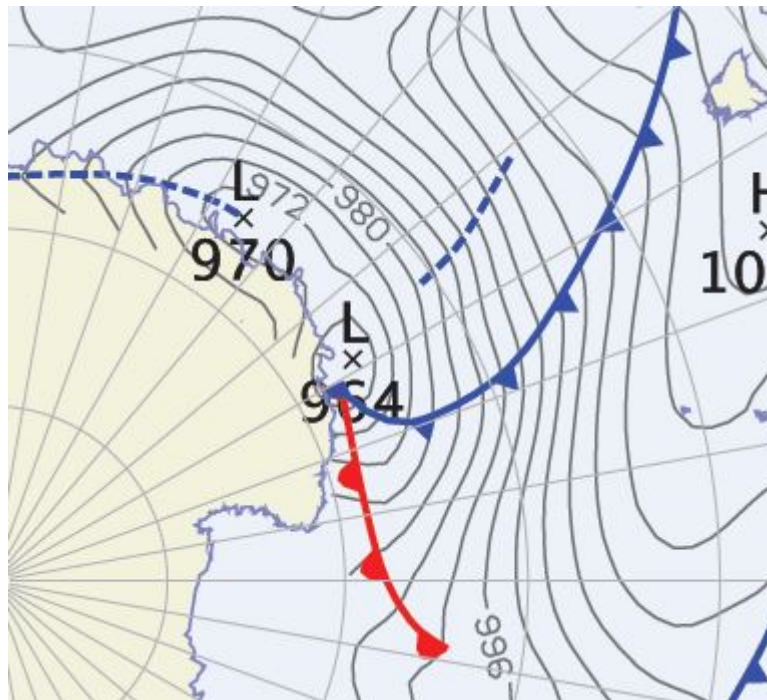


EXPLOSIVE CYCLONE N°27/2017- DATA: 02/JUNE/2017
LOCAL: CASEY STATION – WMO 89611 (OPERATED BY AUSTRALIA)



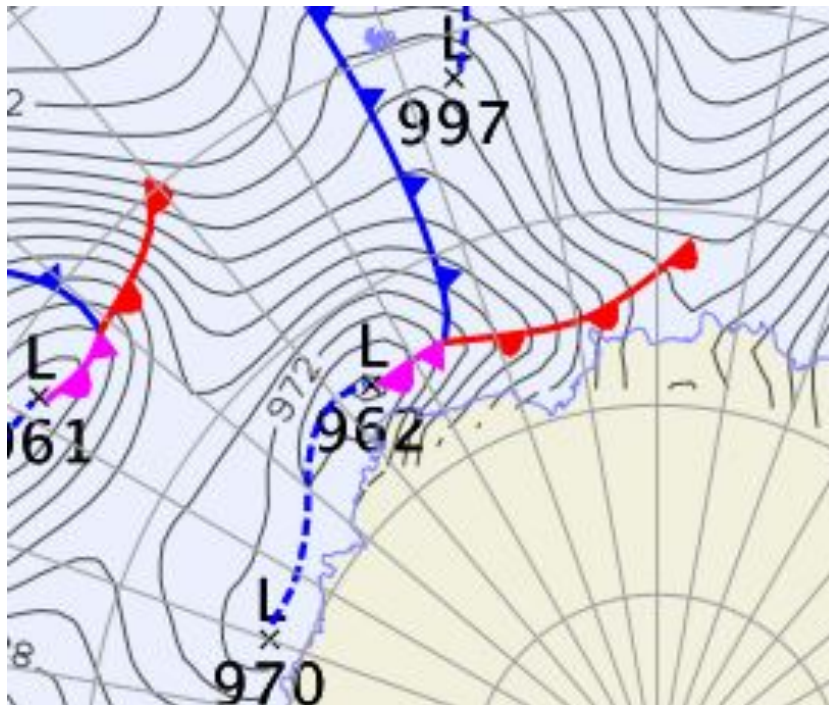
DROP OF PRESSURE IN 24H: 25.6 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 957.1 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 951.0 hPa
SUSTAINED MAXIMUM WIND: 35.5 m/s (79 mph)
MAXIMUM WIND GUST: 45.5 m/s (102.0 mph)
BERGERON: 1.1 (WEAK)

EXPLOSIVE CYCLONE N°28/2017- DATA: 03/JUNE/2017
LOCAL: DUMONT D'URVILLE STATION – WMO 89642 (OPERATED BY FRANCE)



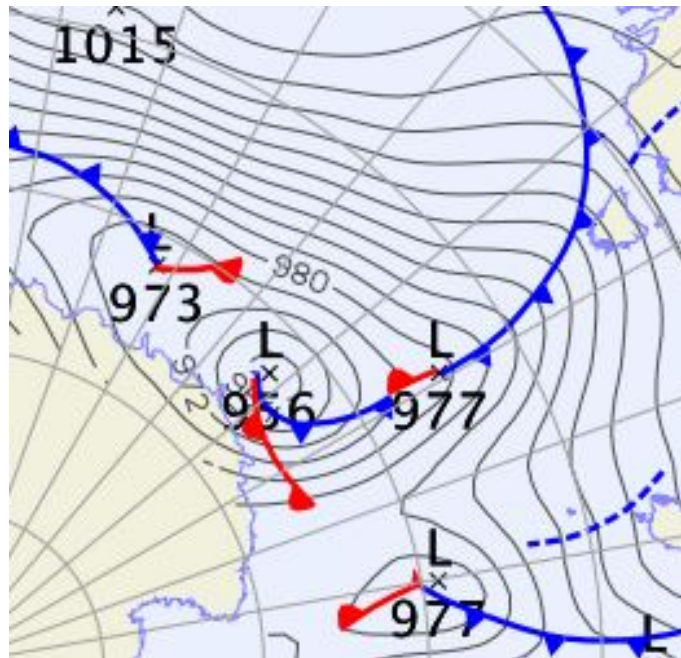
DROP OF PRESSURE IN 24H: 25.8 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 970.6 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 964 hPa
SUSTAINED MAXIMUM WIND: 20.0 m/s (45.0 mph)
MAXIMUM WIND GUST: 31.0 m/s (69.0 mph)
BERGERON: 1.1 (WEAK)

EXPLOSIVE CYCLONE N°29/2017- DATA: 21/JUNE/2017
LOCAL: SYOWA STATION –WMO 89532 (OPERATED BY JAPAN)



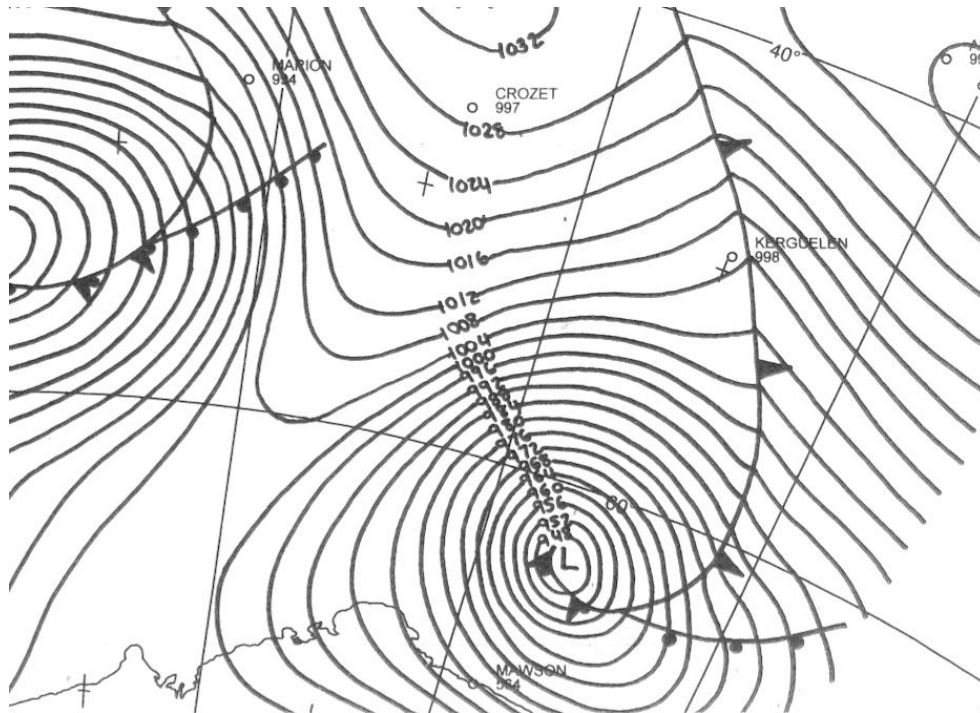
DROP OF PRESSURE IN 24H: 24.5 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 969.1 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 962.0 hPa
SUSTAINED MAXIMUM WIND: 8.5 m/s (19.0 mph)
BERGERON: 1.0 (WEAK)

EXPLOSIVE CYCLONE N°30/2017- DATA: 25/JUNE/2017
LOCAL: RUSSKAYA STATION – WMO 89132 (OPERATED BY RUSSIA)



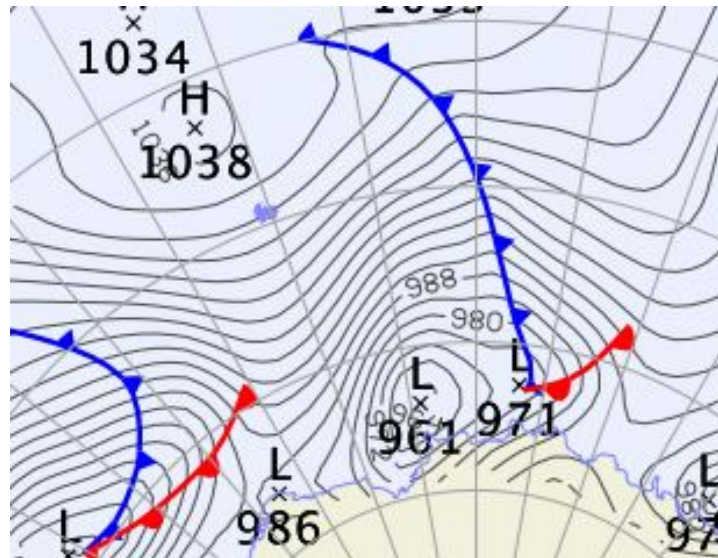
DROP OF PRESSURE IN 24H: 27.2 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 958.7 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 956.0 hPa
SUSTAINED MAXIMUM WIND: 88.0 m/s (197 mph)
BERGERON: 1.1 (WEAK)

EXPLOSIVE CYCLONE N°31/2017- DATA: 30/JUNE/2017
LOCAL: MAWSON STATION – WMO 89564 (OPERATED BY AUSTRALIA)



DROP OF PRESSURE IN 24H: 28.3 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 974.1 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 946.0 hPa
SUSTAINED MAXIMUM WIND: 34.0 m/s (76.0 mph)
MAXIMUM WIND GUST: 42.5 m/s (95 mph)
BERGERON: 1.2 (WEAK)

EXPLOSIVE CYCLONE N°32/2017- DATA: 30/JUNE/2017
LOCAL: DAVIS STATION – WMO 89571 (OPERATED BY AUSTRALIA)



DROP OF PRESSURE IN 24H: 37.3 hPa
MINIMUM PRESSURE REGISTERED ON STATION: 968.0 hPa
MINIMUM PRESSURE ESTIMATED IN THE CYCLONE CORE: 961.0 hPa
SUSTAINED MAXIMUM WIND: 27.5 m/s (62.0 mph)
MAXIMUM WIND GUST: 36.0 m/s (81 mph)
BERGERON: 1.6 (MODERATE)

Soucers:

<https://worldview.earthdata.nasa.gov>

<http://www.weathersa.co.za>

<http://www.bom.gov.au>

<https://data.aad.gov.au>

<http://www.smn.gov.ar>

<http://meteoarmada.directemar.cl>