The importance of NOAA satellites at the National Meteorological Service, Argentina
http://www.smn.gov.ar

Presented by Estela A. COLLINI

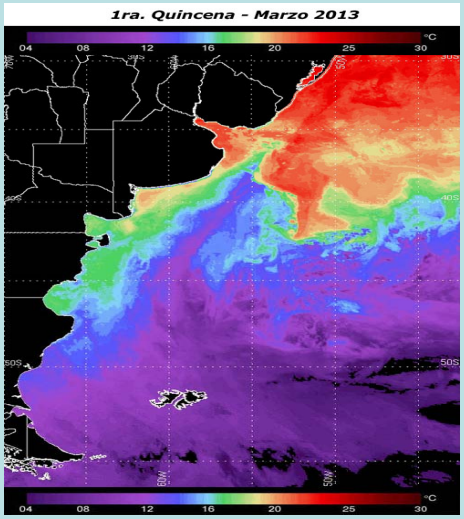
Data reception mechanisms currently used

❖ ***Operational products***

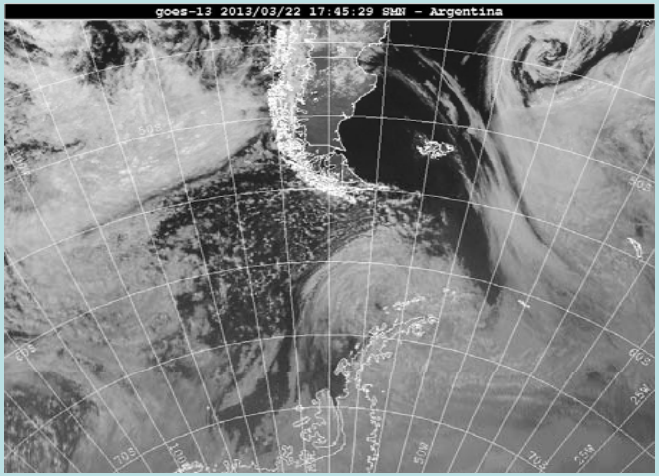
Equipment for GOES reception (installed 2010), receiving GOES 13

GVAR system with TERASCAN software from SEASPACE, every 30 m argentine sectorized and every 3 hours full disk.
http://www.smn.gov.ar/vmsr/principal.php

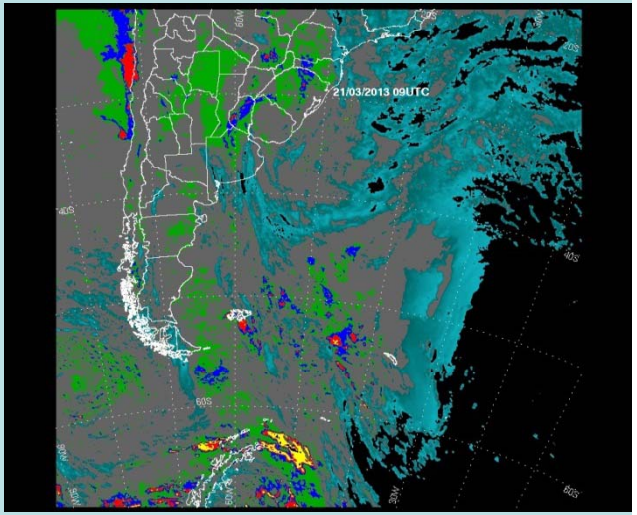
SST



Real time images



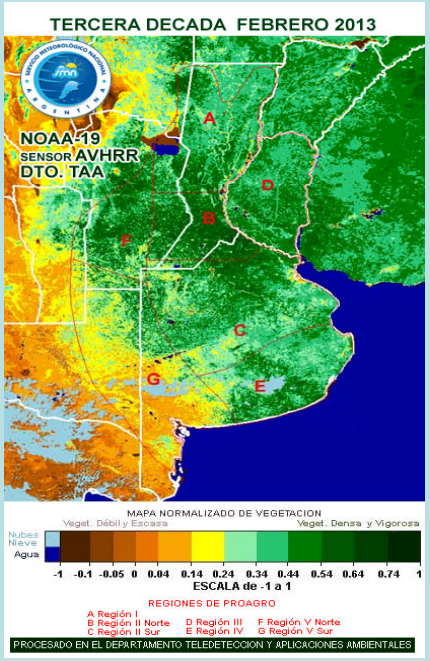
Stratus and fog



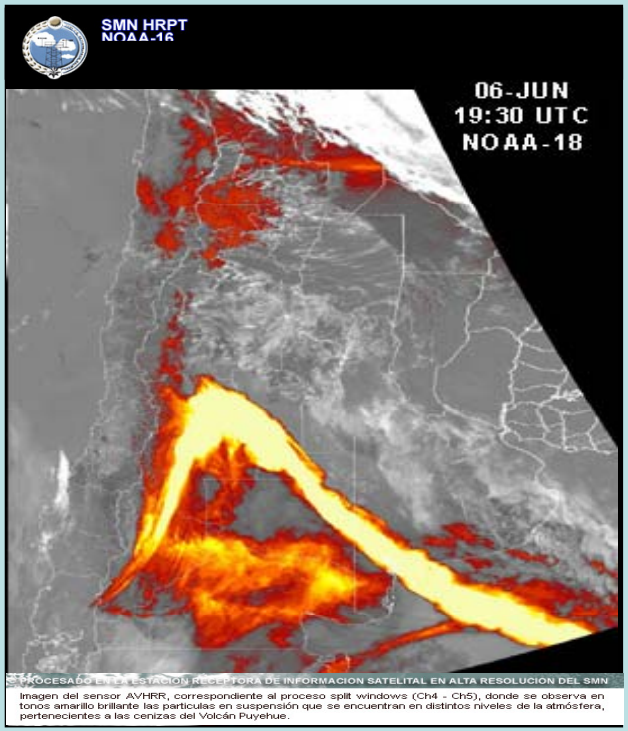
❖***Non operational remote sensing products from polar orbit satellites***

The actual equipment since 1994 is an Quorum Communications HRPT Data Capture Engine, with a circular polarized antena, TAC-2 and 3 receiving plates (PC-HRPT AVHRR Data Receiver, PC-HRPT AVHRR Bit/Frame Synchronizer, PC-ST1 SatTracker 1). The software is Qtrack V2.5. Receiving from NOAA-15, NOAA-16, NOAA-18 y NOAA-19. and CLASS NOAA (LAC) 1KM.

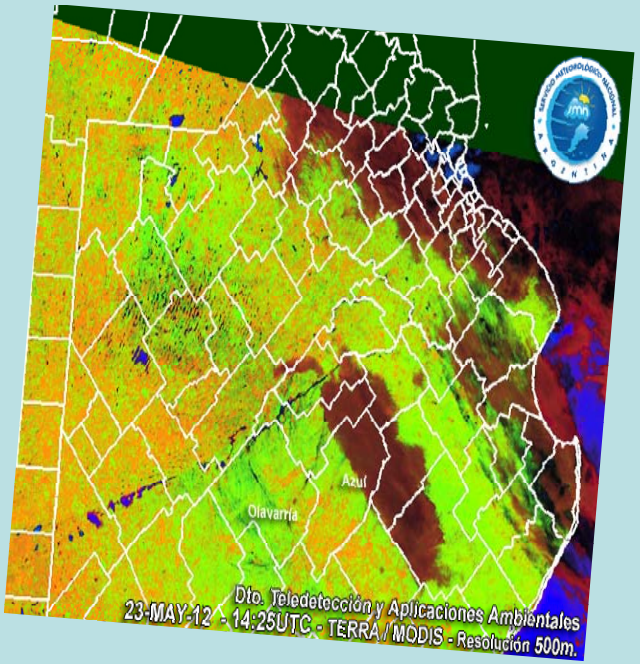
NDVI



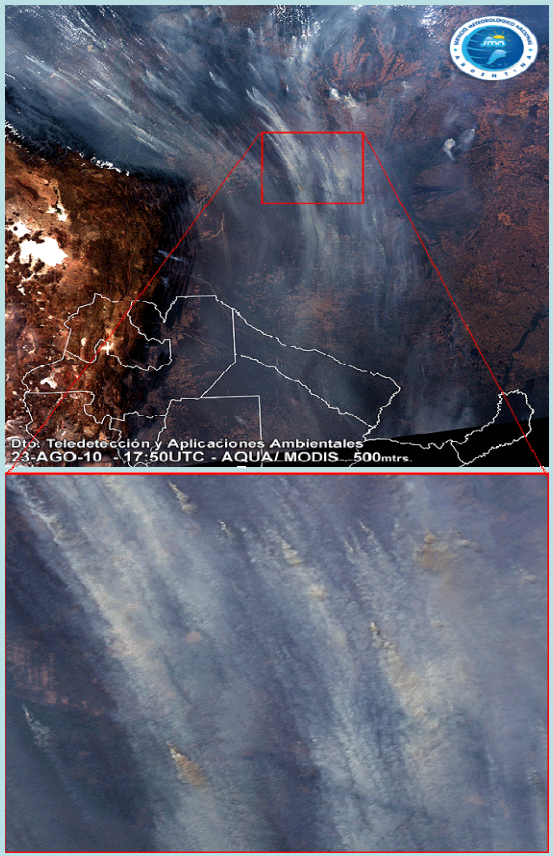
Volcanic ash plume



Floods monitoring



Fires monitoring



Floe monitoring

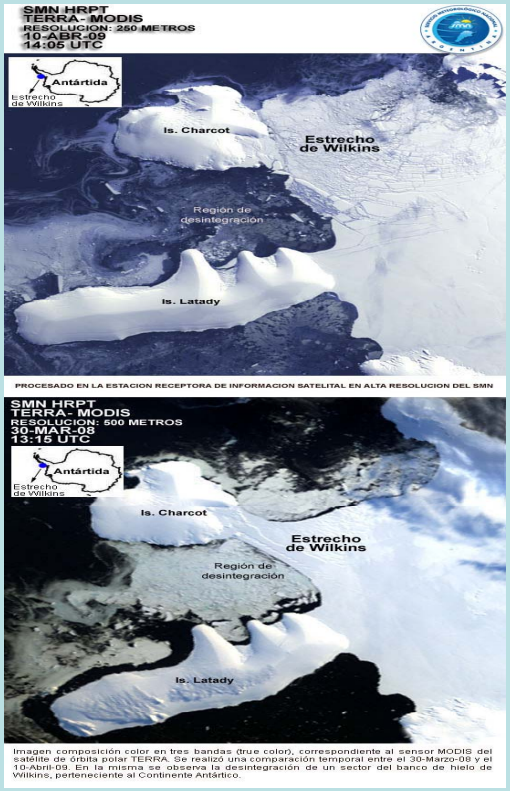
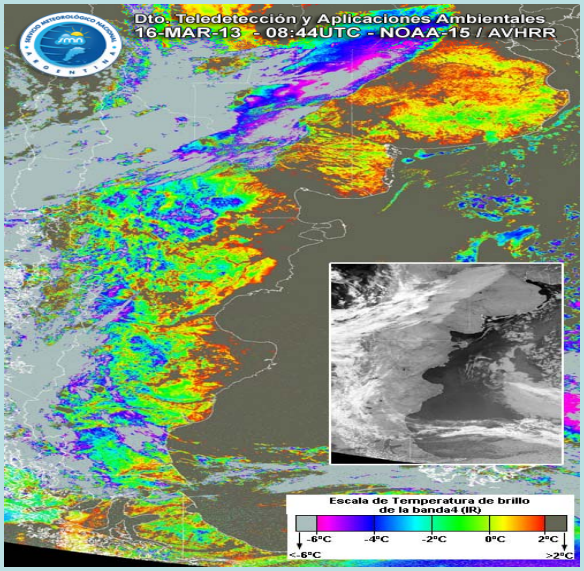
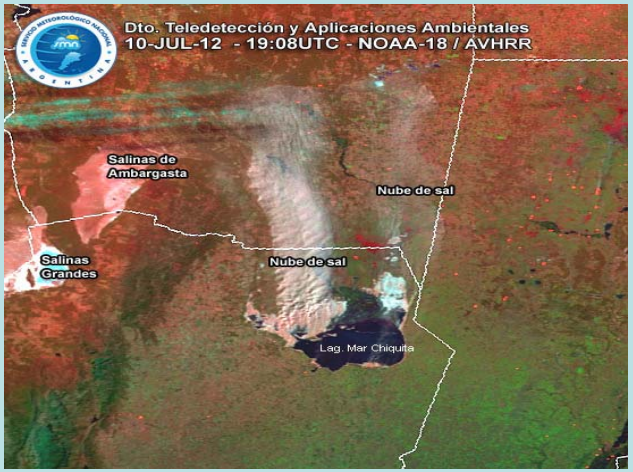


Imagen composición color en tres bandas (true color), correspondiente al sensor MODIS del satélite de órbita polar TERRA. Se realizó una comparación temporal entre el 30-Marzo-08 y el 10-Abril-09. En la misma se observa la desintegración de un sector del banco de hielo de Wilkins, perteneciente al Continente Antártico.

Soil temperature



RGB Images



A real case:
Puyehue-Cordon Caulle eruption

Onset of the eruption: **4 june 2011**
End of the eruption: **2 april 2012**

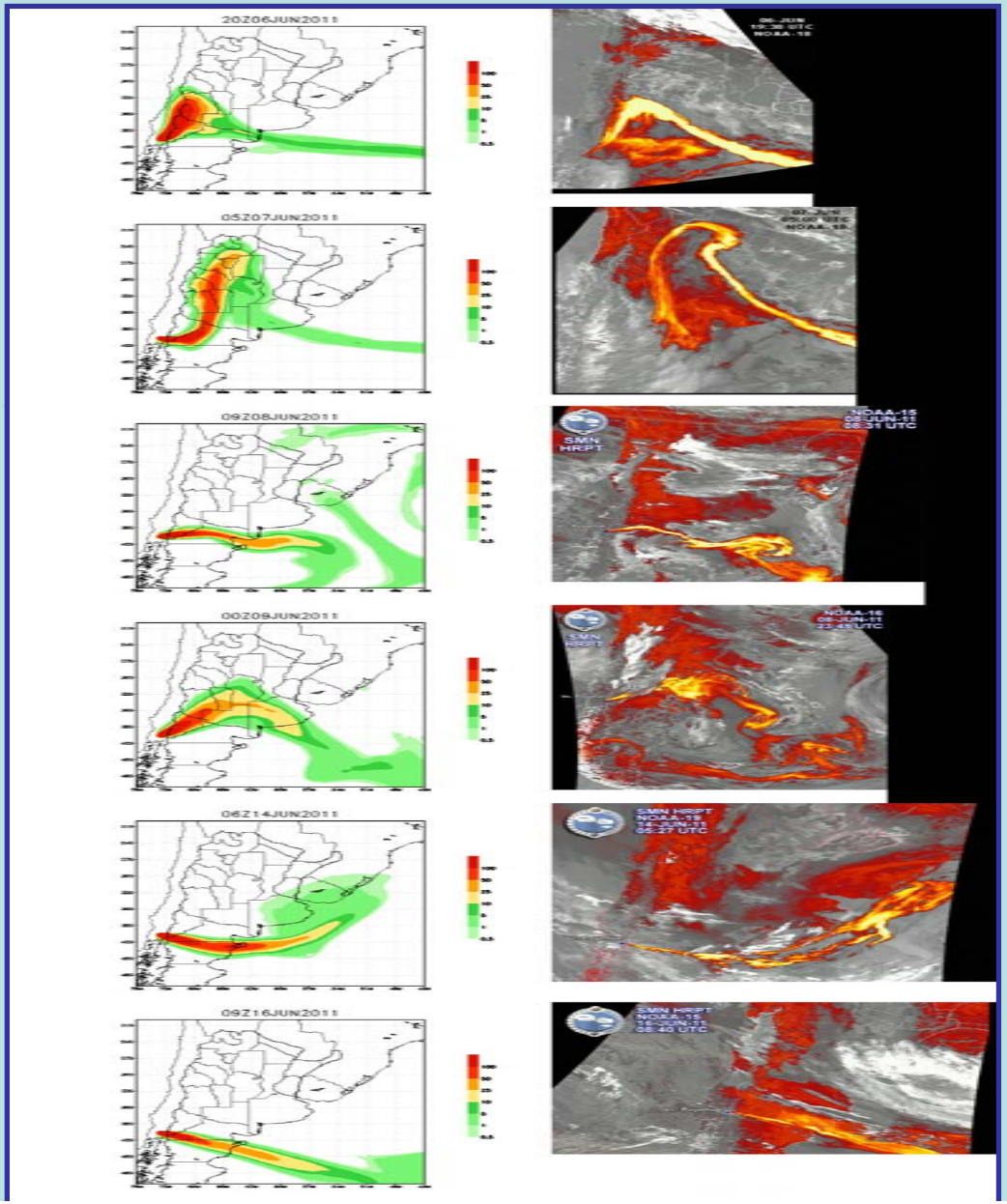
A qualitative comparison between **FALL3D forecasts and the NOAA-AVHRR satellite** ash detection retrievals obtained by the High Resolution Picture Transmission (HRPT) division SMN

Split window (SW) technique (Prata, 1989) based on the brightness temperature difference between 11 and 12 μm spectral bands, where negative values indicate probable ash signal. Prata (1989) developed this methodology based on the larger emissivity of volcanic ash at the longer wavelength.

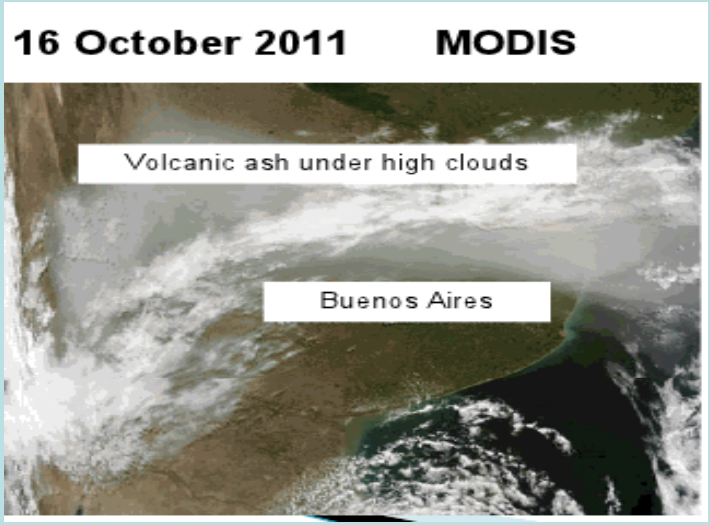
The threshold values applied here were negative, using the color enhancement technique ranging from red to yellow.

FALL3D Vert. integrated column mass (t km-2)

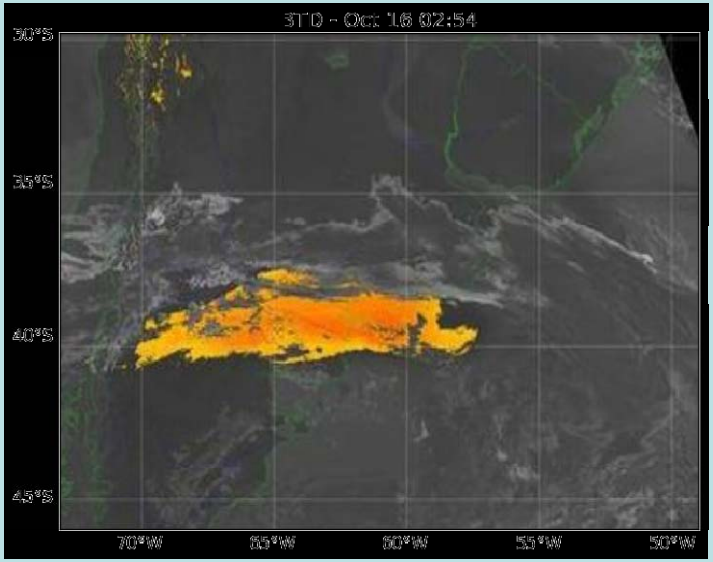
BTD from NOAA-AVHRR (HRPT-SMN)

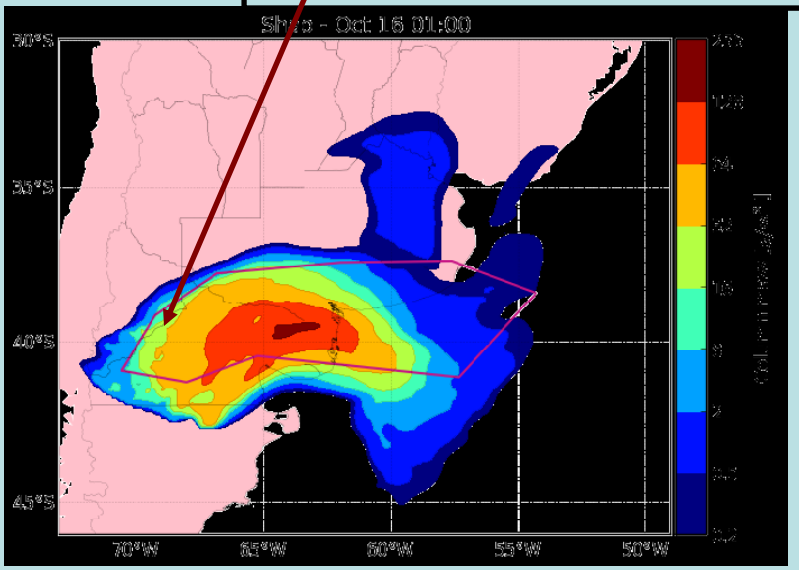


Another challenge is the volcanic ash resuspension modeling, this is a phenomena very usual at the Patagonian steppe, but in this case it reaches Buenos Aires, 16 October 2011



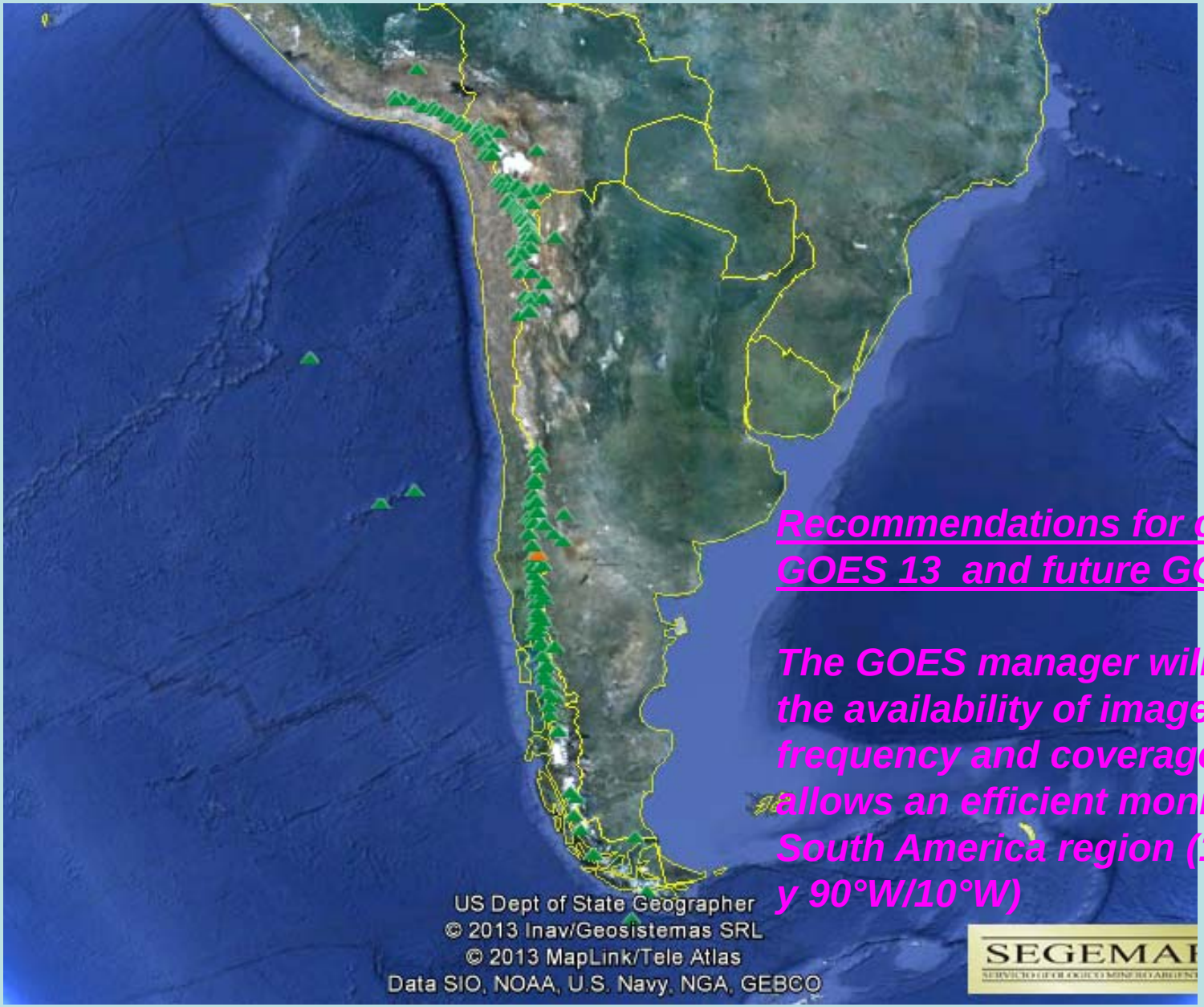
SMN VAG 16 October, 01:28 UTC based on **GOES 13**





BTD MODIS images 02.54 UTC

FALL3D 7.0 resuspension forecast 01.00 UTC



Recommendations for current GOES 13 and future GOES R

The GOES manager will review the availability of images with frequency and coverage, that allows an efficient monitoring of South America region (10°S/90°S y 90°W/10°W)

Volcanoes in The Andes

National Space Agency of Argentina (CONAE)

SAC-D/Aquarius

An Observatory for Ocean, Climate and Environment

Joint Mission between NASA & CONAE

SAC-D/AQUARIUS

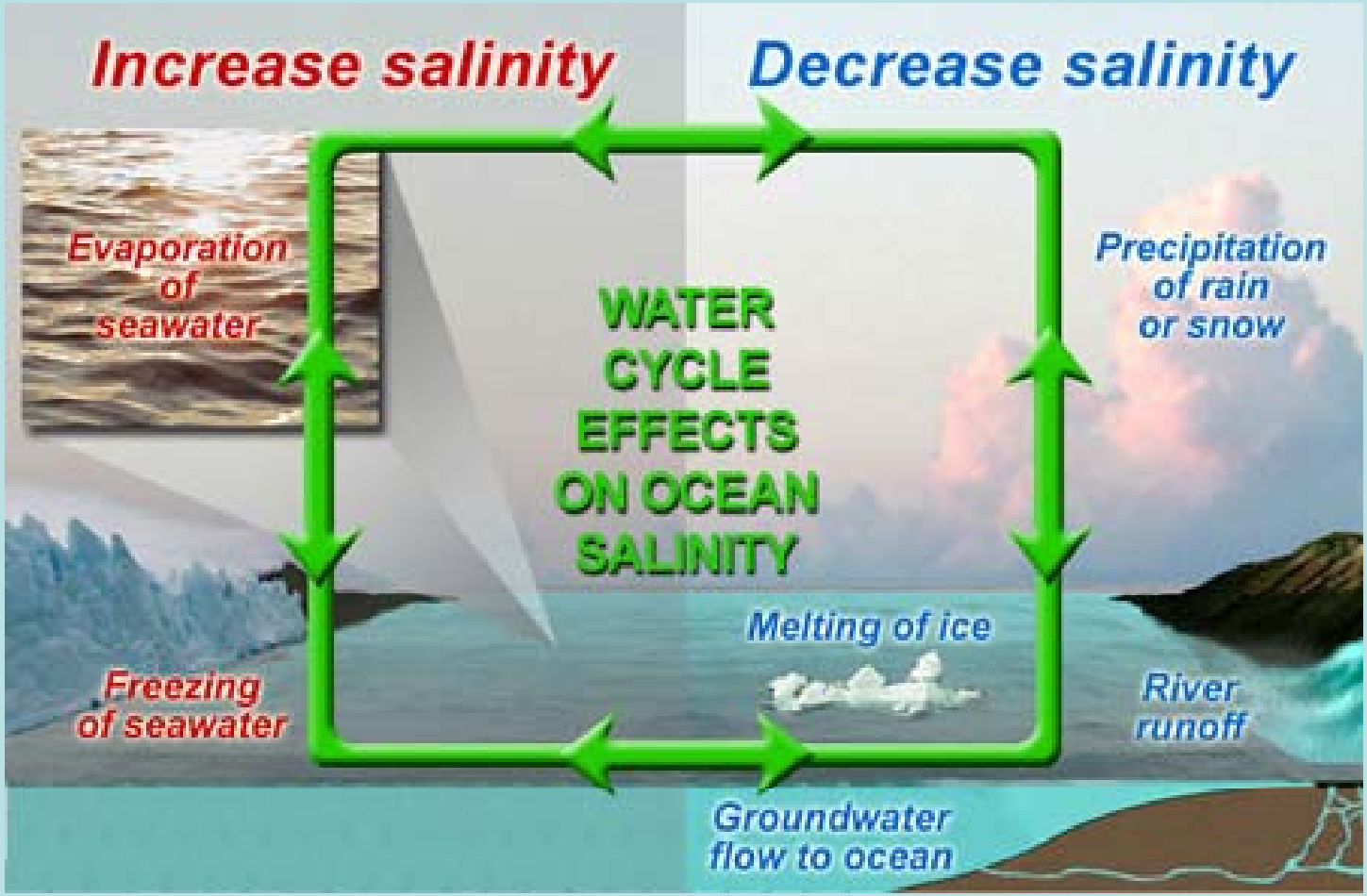
Launching: June 10, 2011.

April 2013

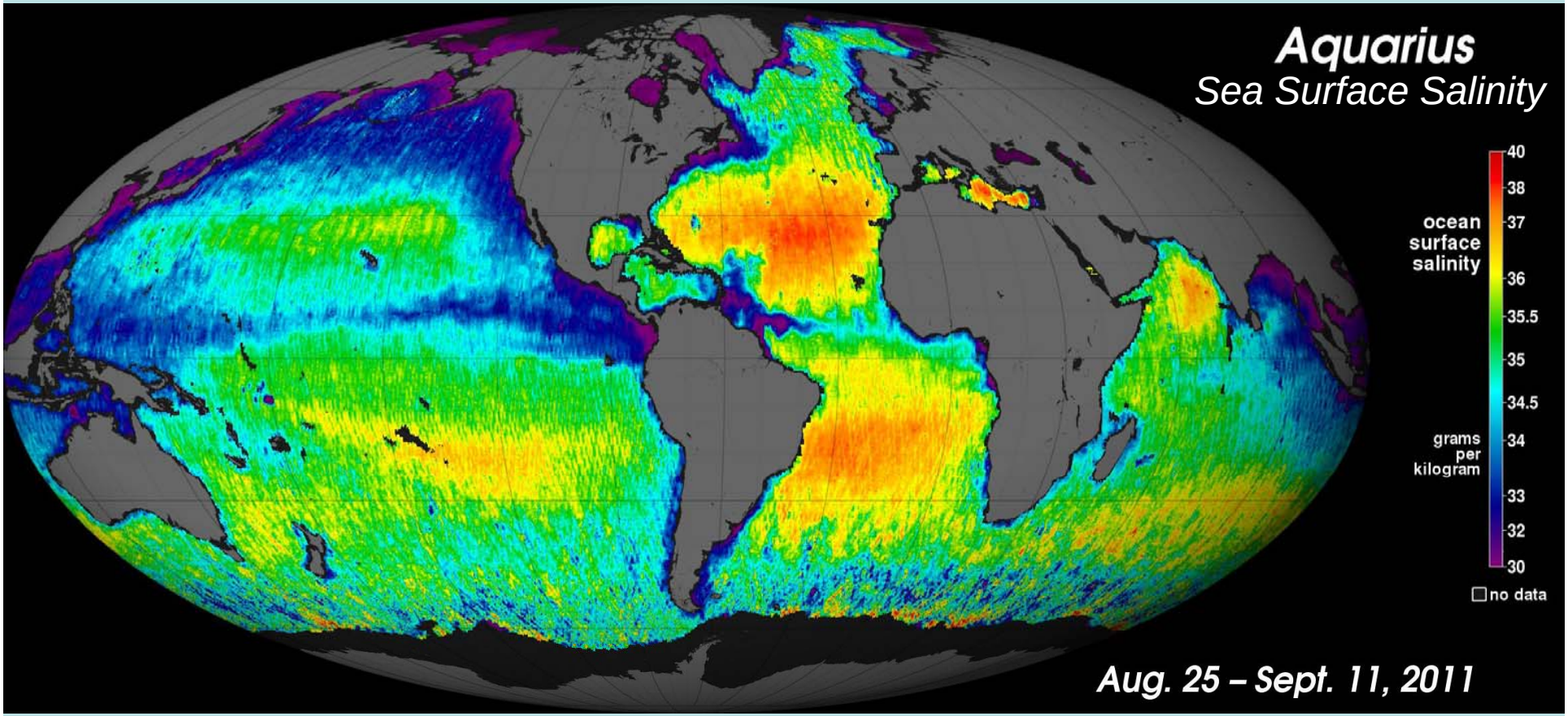
Science Objectives of the Mission

The **primary objective** of this Mission AQUARIUS/SAC-D is:

To contribute to a better understanding of ocean circulation, the prediction of changes in this circulation, and its impact on Earth's climate and water cycle.



SAC-D AQUARIUS
Data & Products:



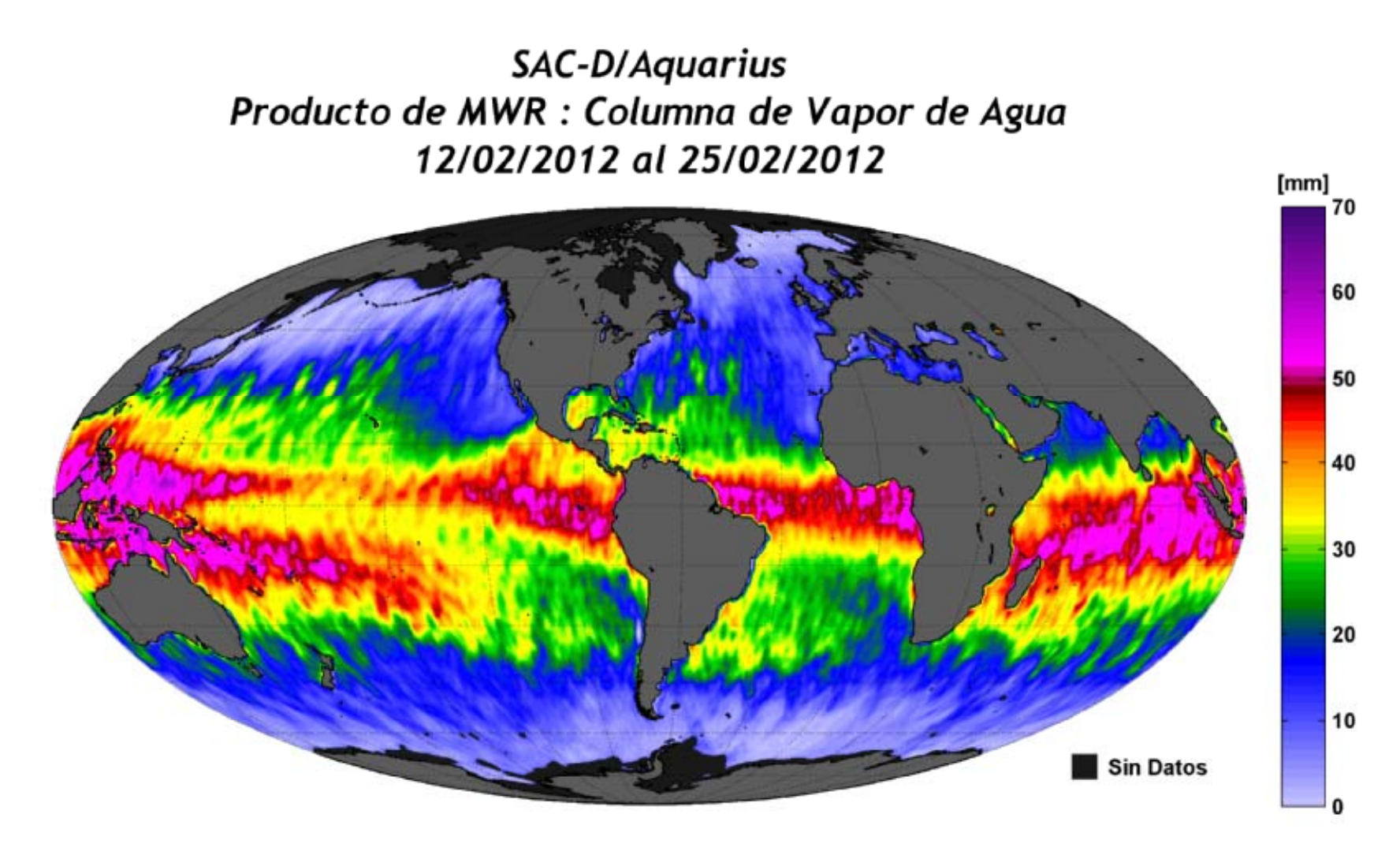
First Sea Surface Salinity Global Map

Yi Chao, (JPL)

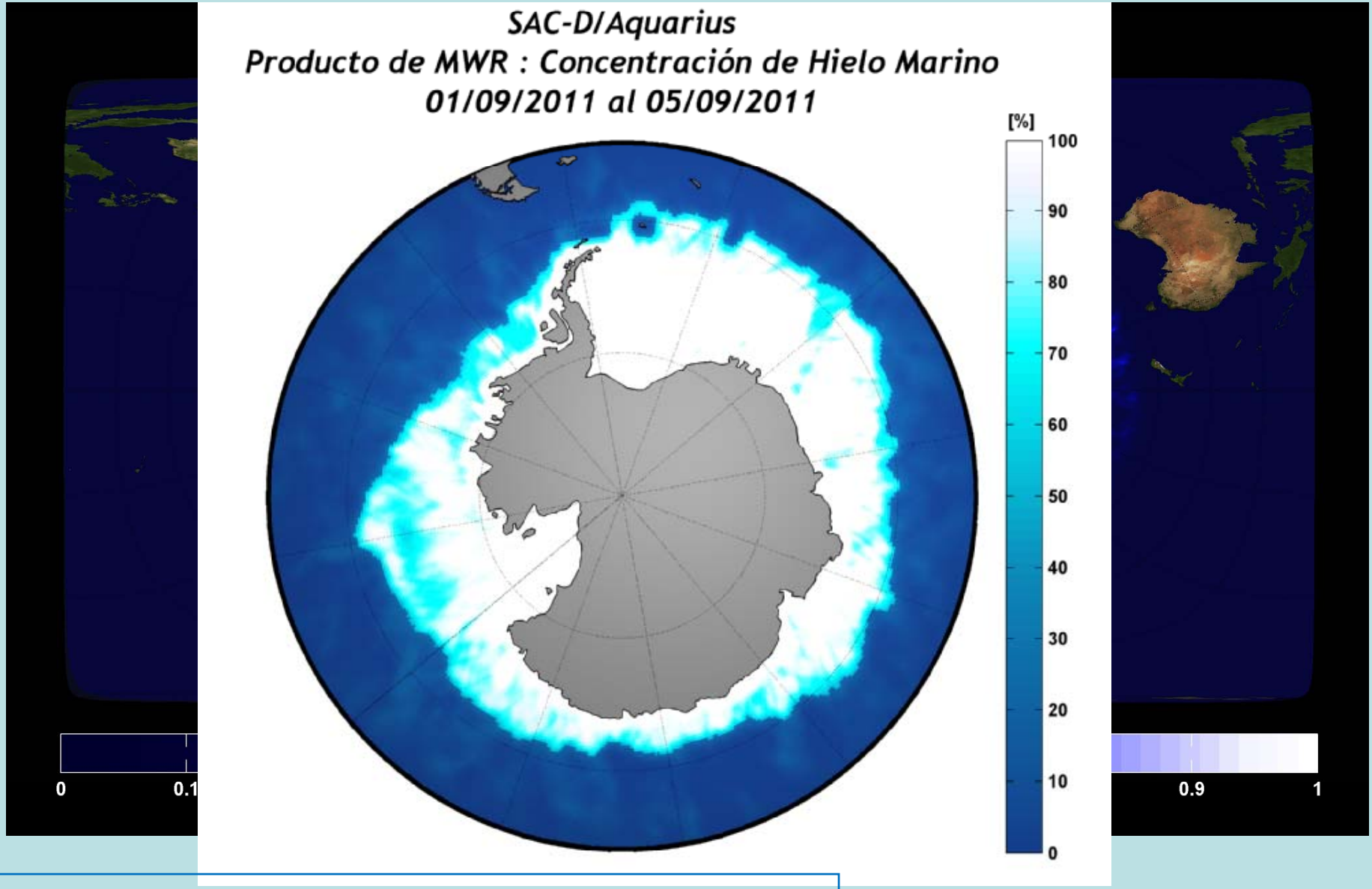
http://oceandata.sci.gsfc.nasa.gov/Aquarius/V1/V1.3/
http://aquarius.nasa.gov/cgi/aquarius_maps

Microwave Radiometer (MWR)

Wind Speed, Rainfall & Water Vapor on the ocean.
Weekly/Monthly Maps



MWR: Sea Ice Concentration



Access data contact: ssu.atencionUsuarios@conae.gov.ar

MANY THANKS