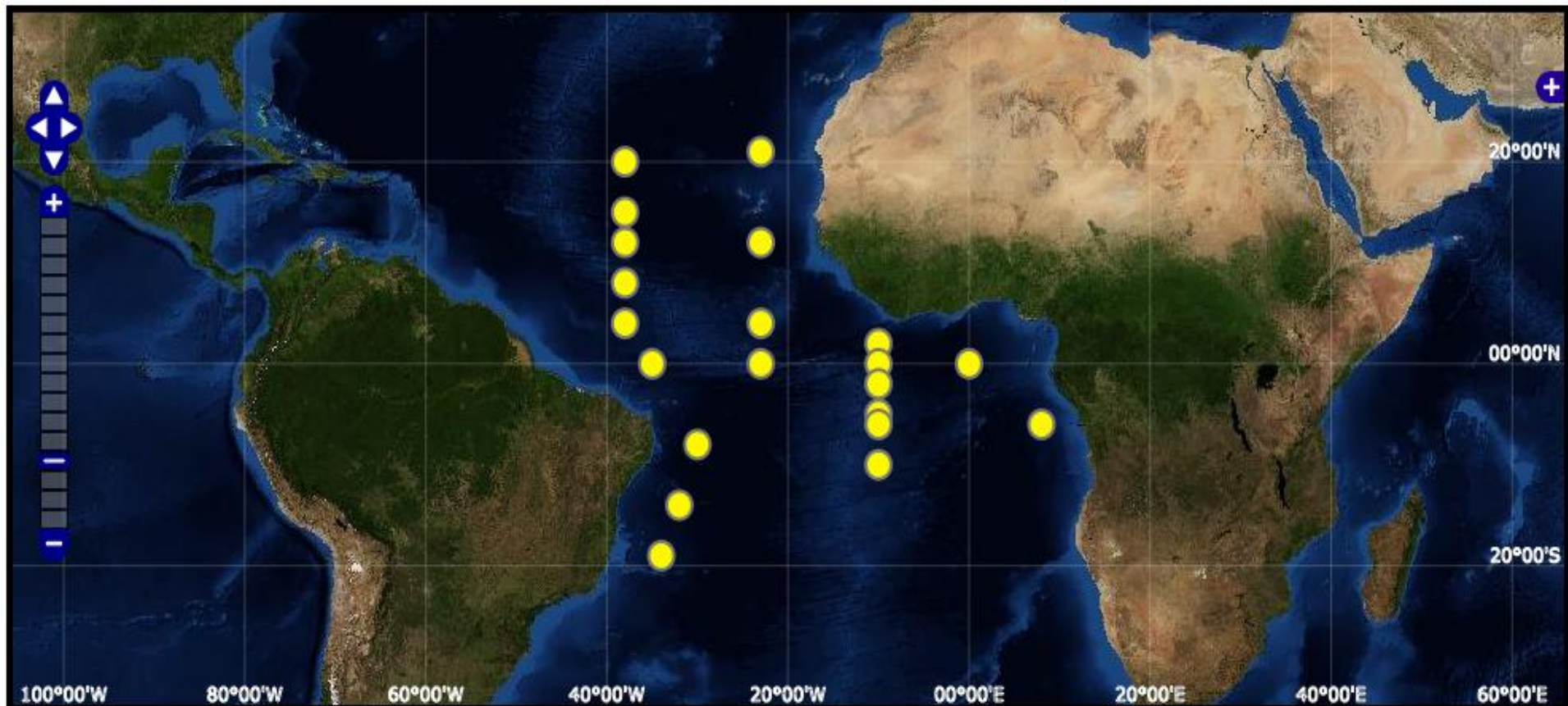
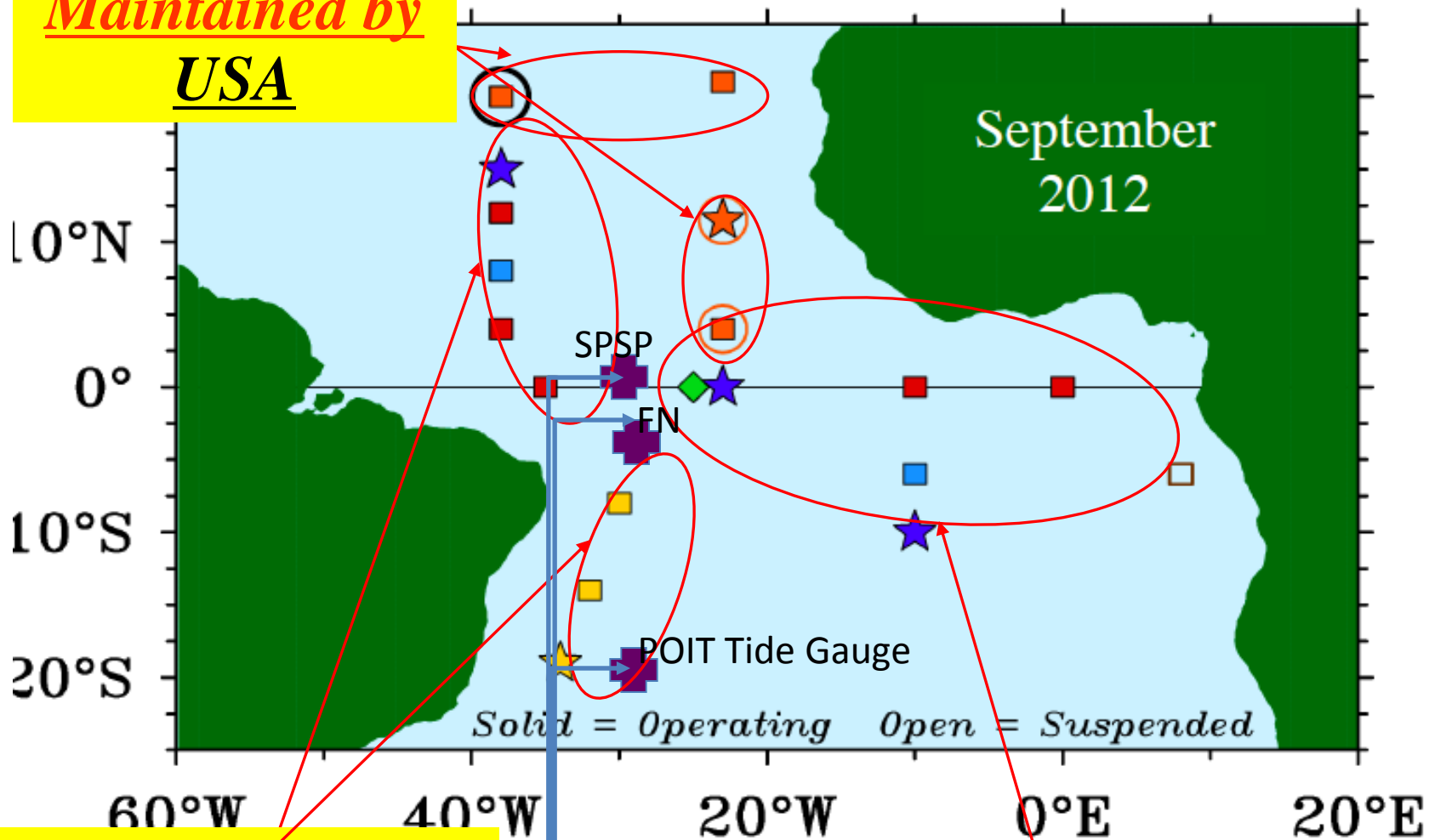


# Brazilian operated open-ocean sites PIRATA and Atlas-B

Olga Sato and Edmo Campos  
University of São Paulo – Brazil  
OceanSites 2013



# The Flavors of PIRATA



*Maintained by*  
**USA**

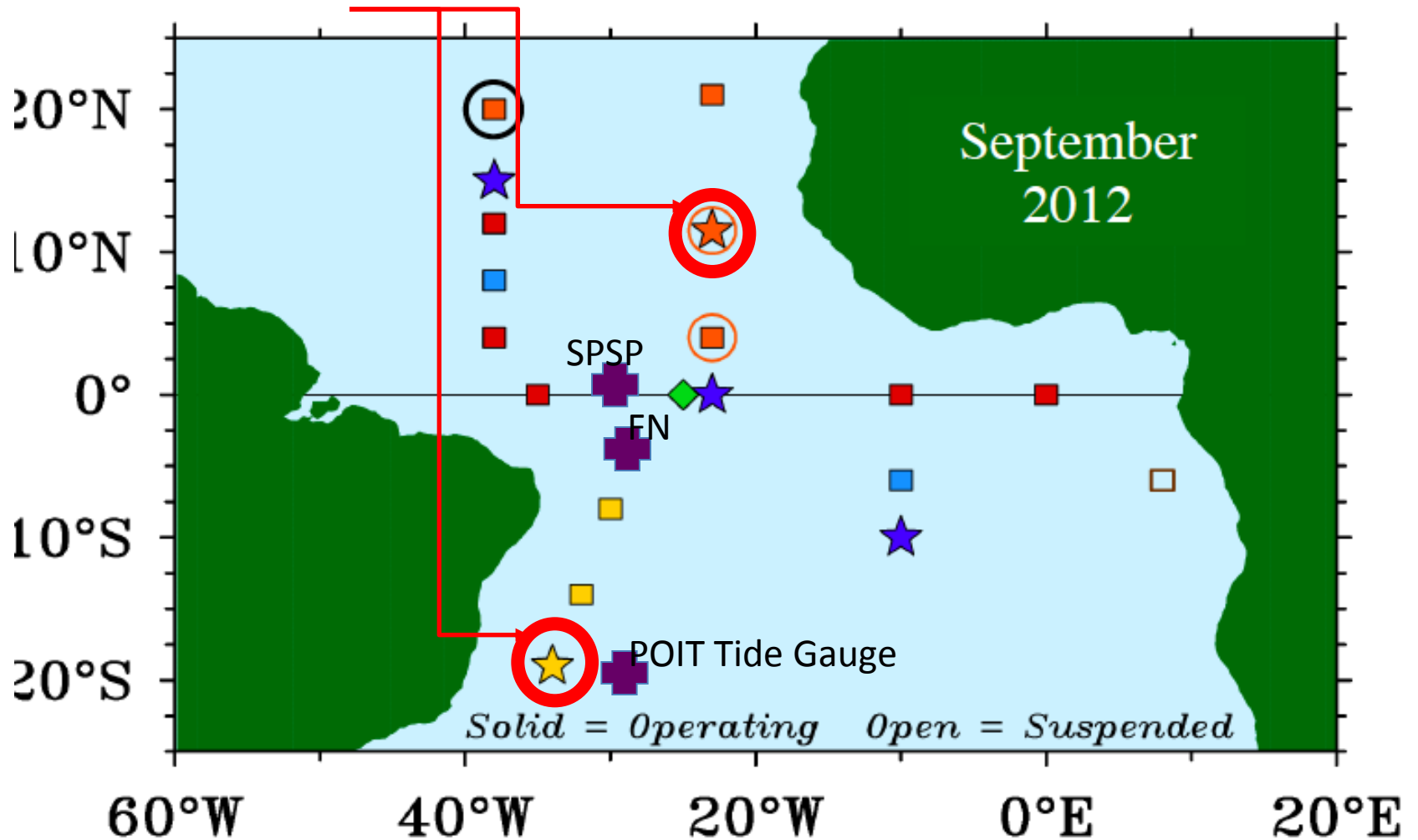
*Maintained by*  
**Brazil**

*Maintained by*  
**France**

- ★ ★ ★ Flux Reference Site
- CO<sub>2</sub>/O<sub>2</sub> Enhanced ATLAS
- O<sub>2</sub> Enhanced ATLAS
- Standard ATLAS
- Southwest Ex

Courtesy of M. McPhaden, PMEL.

# Two New OceanSites sites?



■ Standard ATLAS

◆ ADCP

○ MF BP

■ Northeast Extension

■ Southwest Extension

■ Southeast Extension

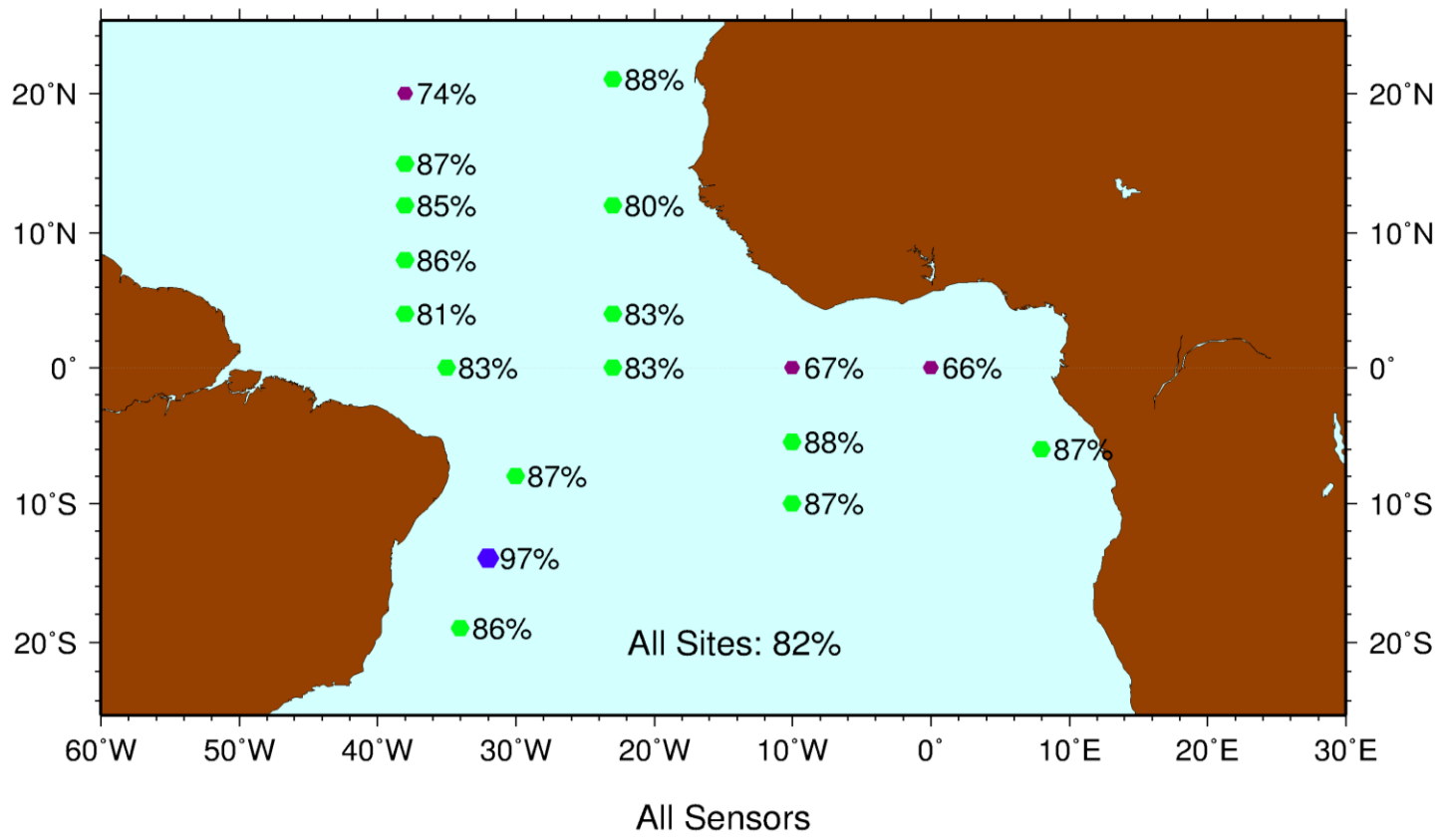
★ ★ ★ Flux Reference Site

■ CO<sub>2</sub>/O<sub>2</sub> Enhanced ATLAS

○ O<sub>2</sub> Enhanced ATLAS

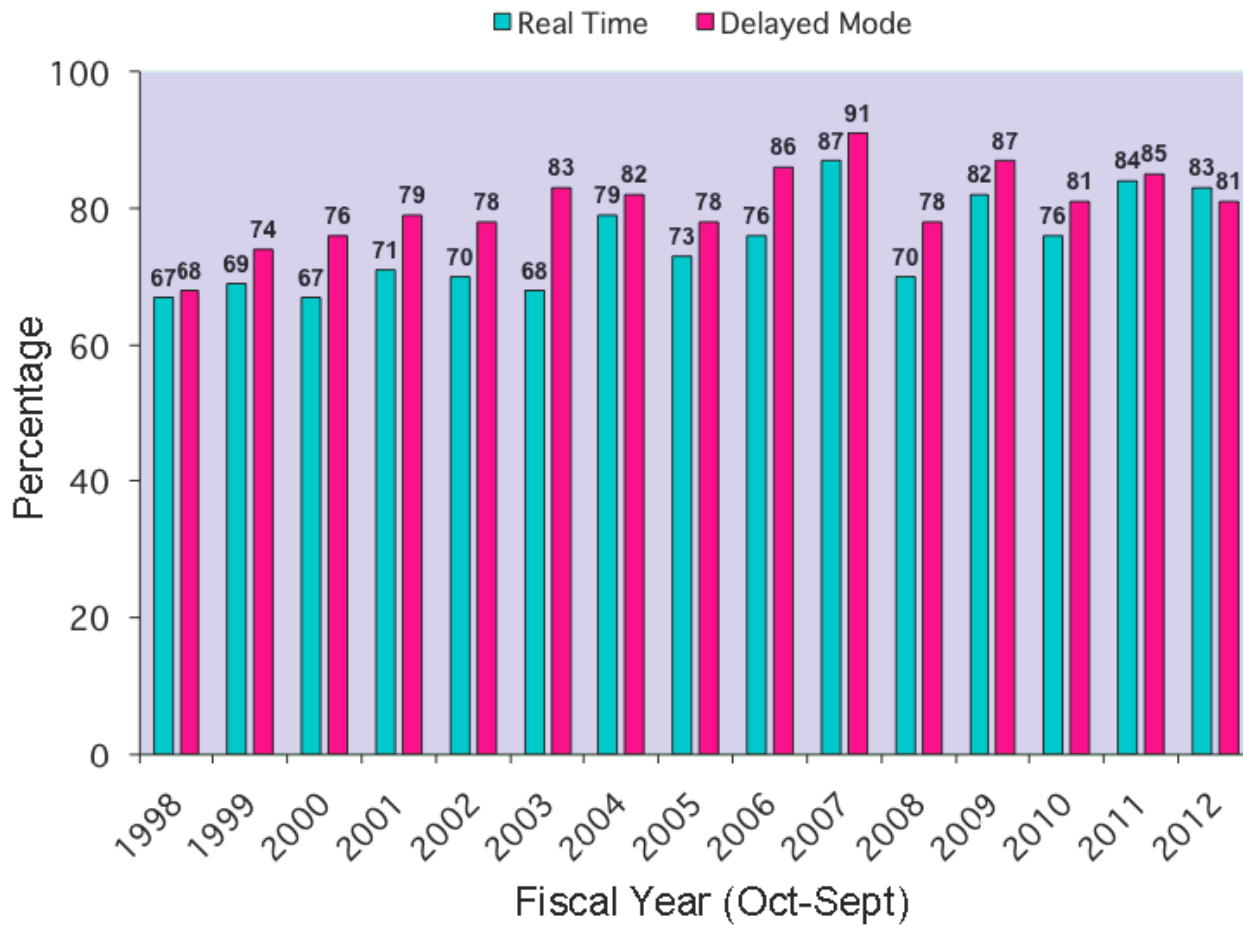
Courtesy of M. McPhaden, PMEL.

# PIRATA Mooring Data Return 1997 - 2012

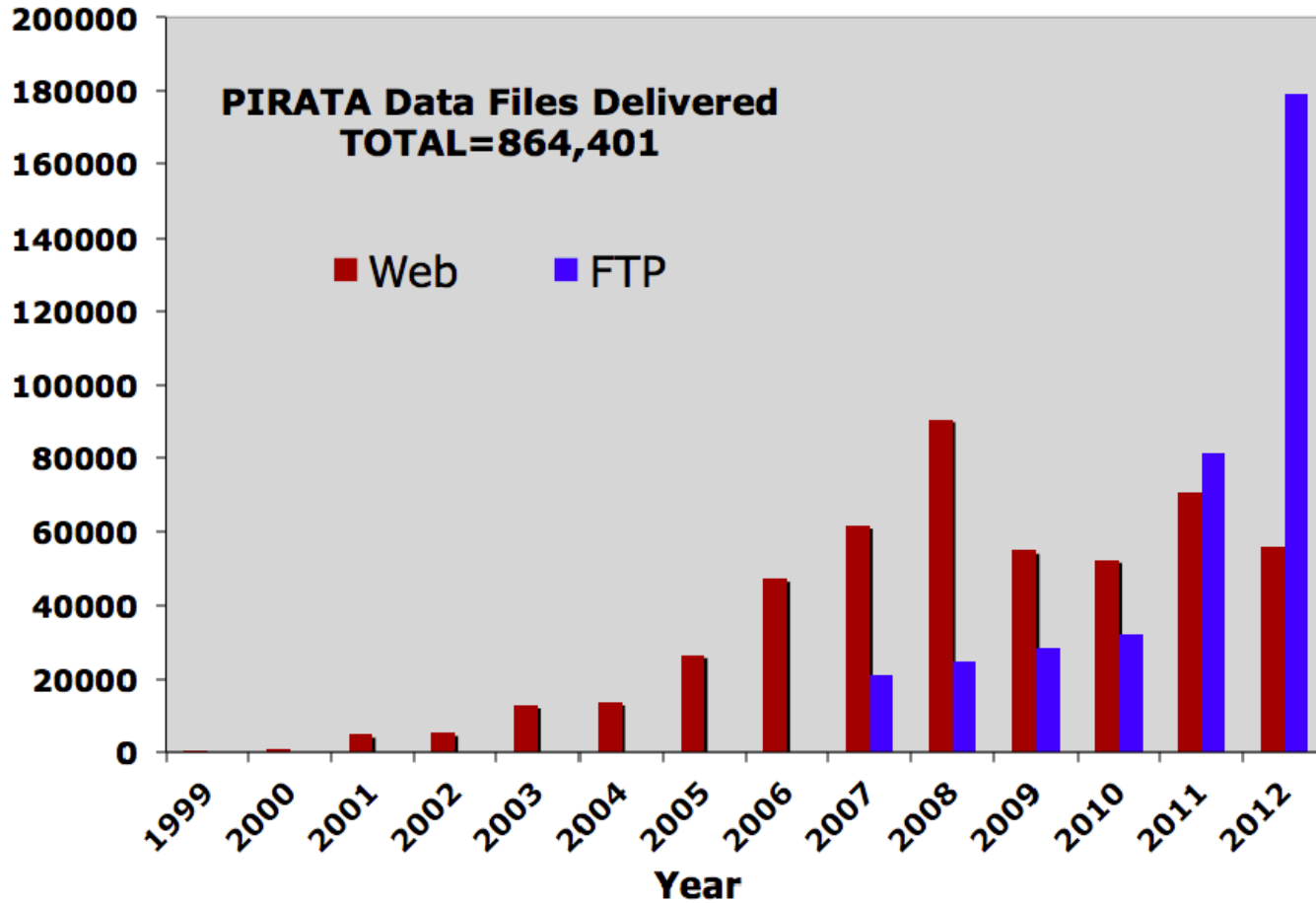


- 0% - 50%
- 50% - 75%
- 75% - 90%
- 90% - 100%

# PIRATA Data Return



**55,875 Web data files + 179,066 FTP data files=  
234,941 total files delivered Oct 11-Aug 12**



# The Atlas-B "Guariroba"

A monitoring system for the South Atlantic

National Institute of Science and Technology for Climate Change  
(INCT-MC)



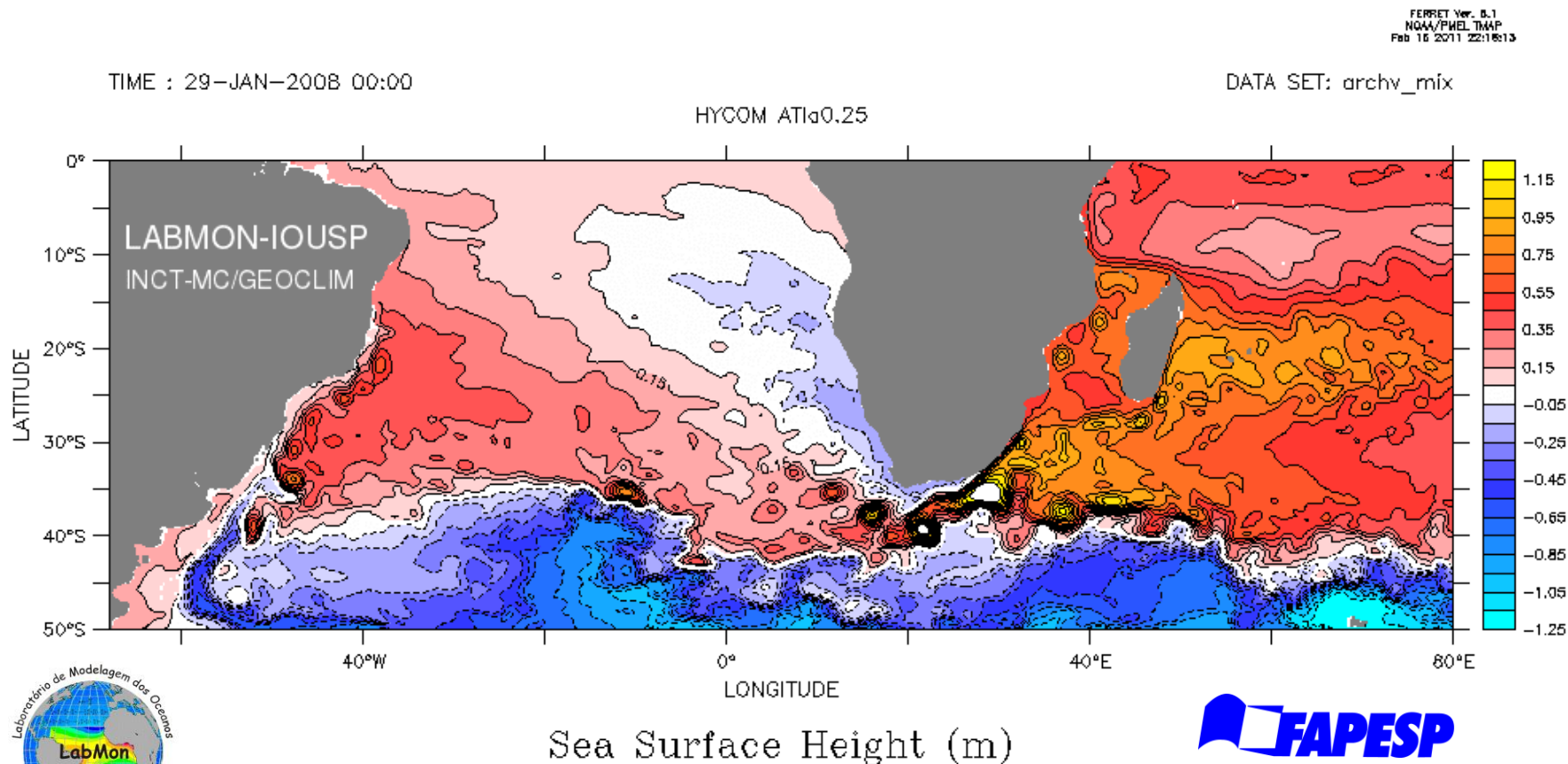
OceanSITES 2013: 9th Steering Committee  
and 6th Data Management Team Meetings

27 - 30 May 2013, Seoul, Korea Rep



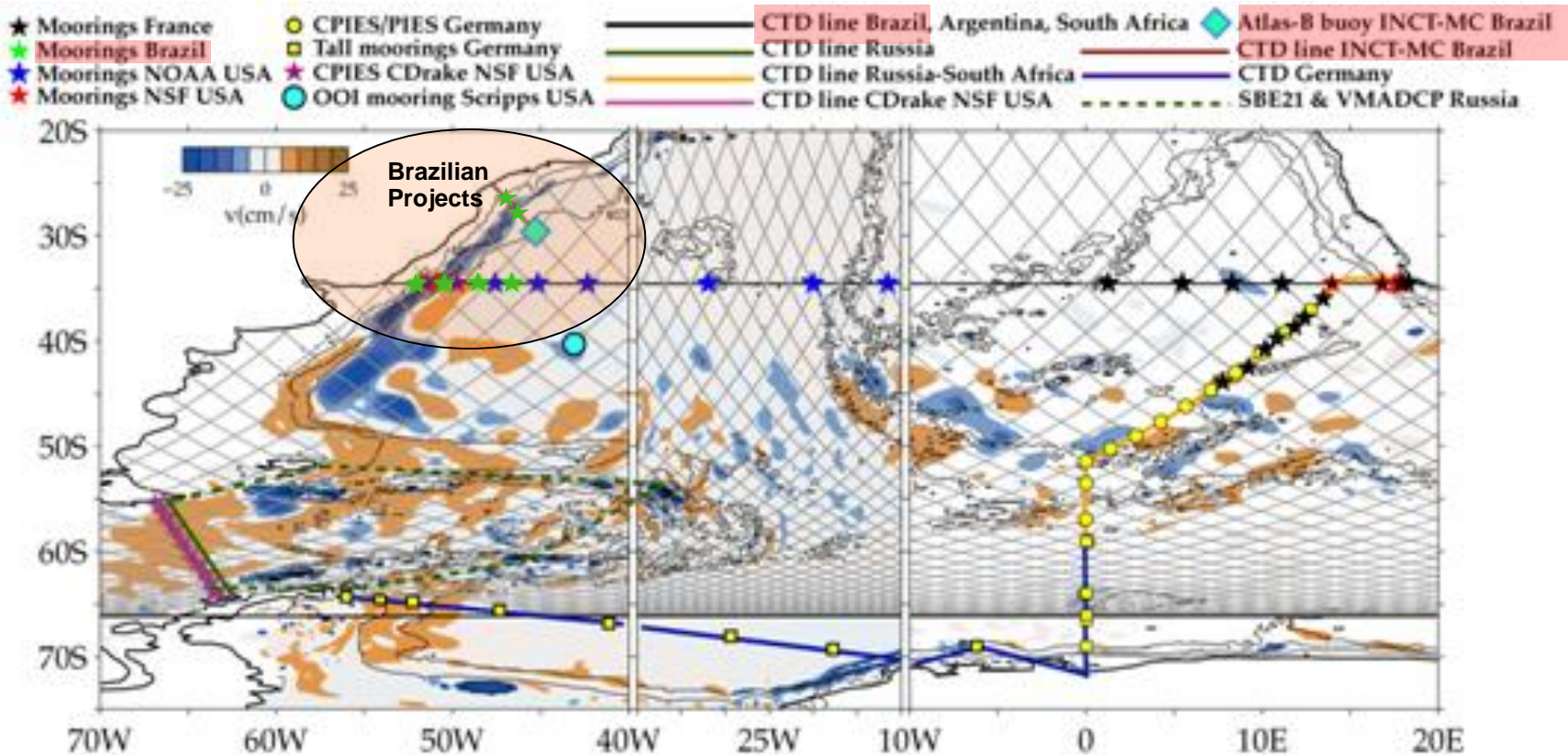
# The Agulhas Leakage

Numerical experiments suggest an increase in the inter-ocean exchanges between the Indian Ocean and the South Atlantic





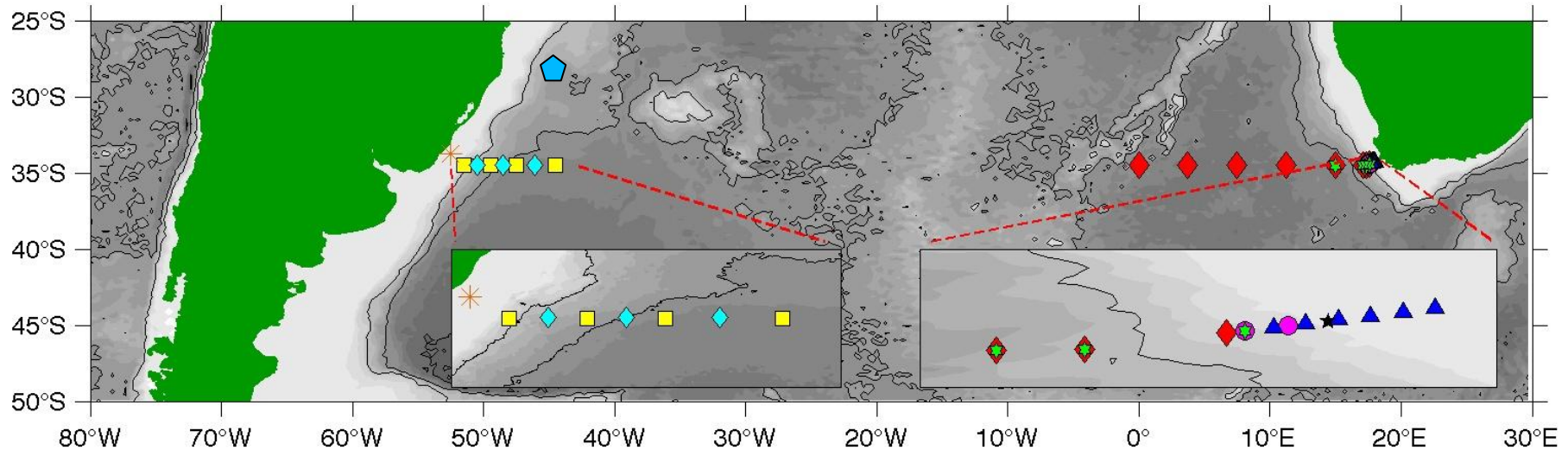
# Brazilian contributions in the South Atlantic



Helping to understand changes in the South Atlantic and the impacts on the climate on Global and Regional scales.

# Status of the Atlas-B and SAMOC Programs

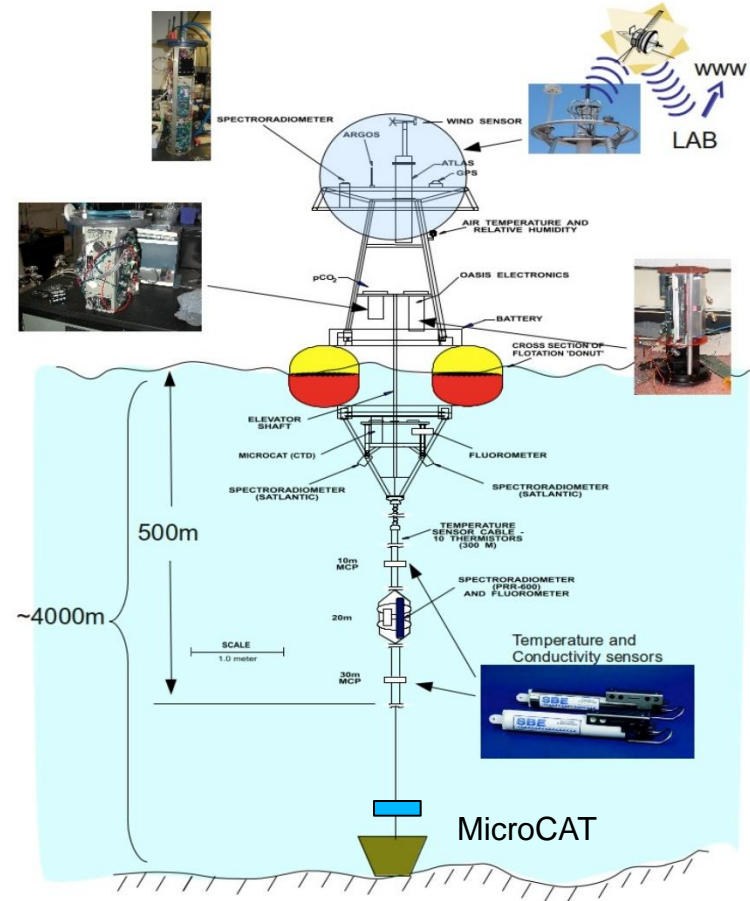
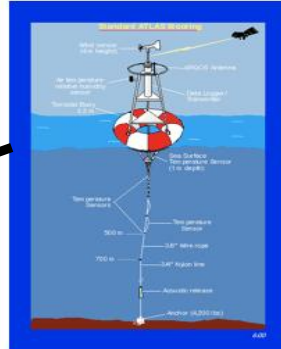
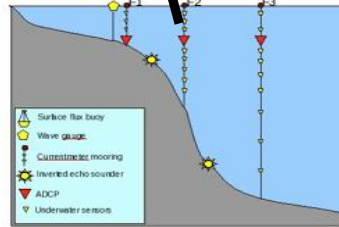
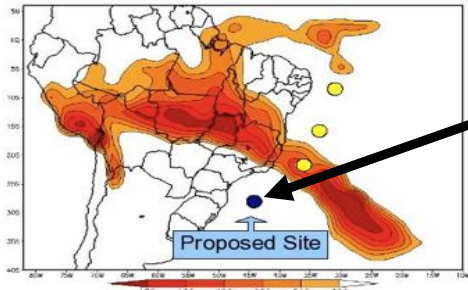
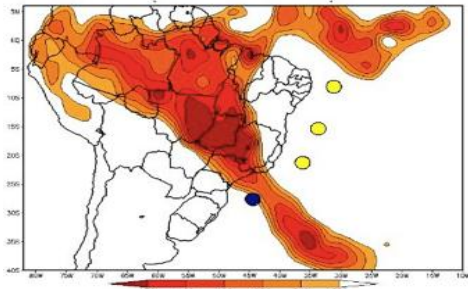
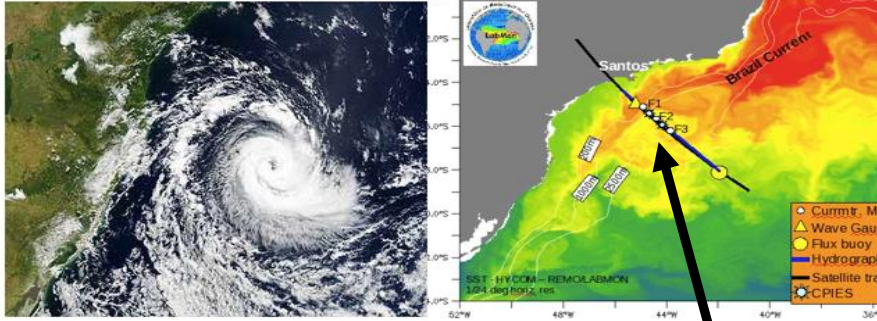
- PIES - NOAA - In place since March 2009
- ◆ CPIES - Brazil - In place since December 2012
- ✳ Bottom ADCP & BPR - Brazil - To be deployed in mid 2013
- ◆ CPIES - France - To be deployed in late 2013
- Bottom ADCP - South Africa - To be deployed in late 2013
- ▲ Short mooring - South Africa - To be deployed in late 2013
- ★ Thermister mooring - South Africa - To be deployed in late 2013
- ★ Tall mooring - South Africa - To be deployed in late 2013
- ◆ **The Atlas-B "Guariroba", since April 2013**



# Constructing the Atlas-B

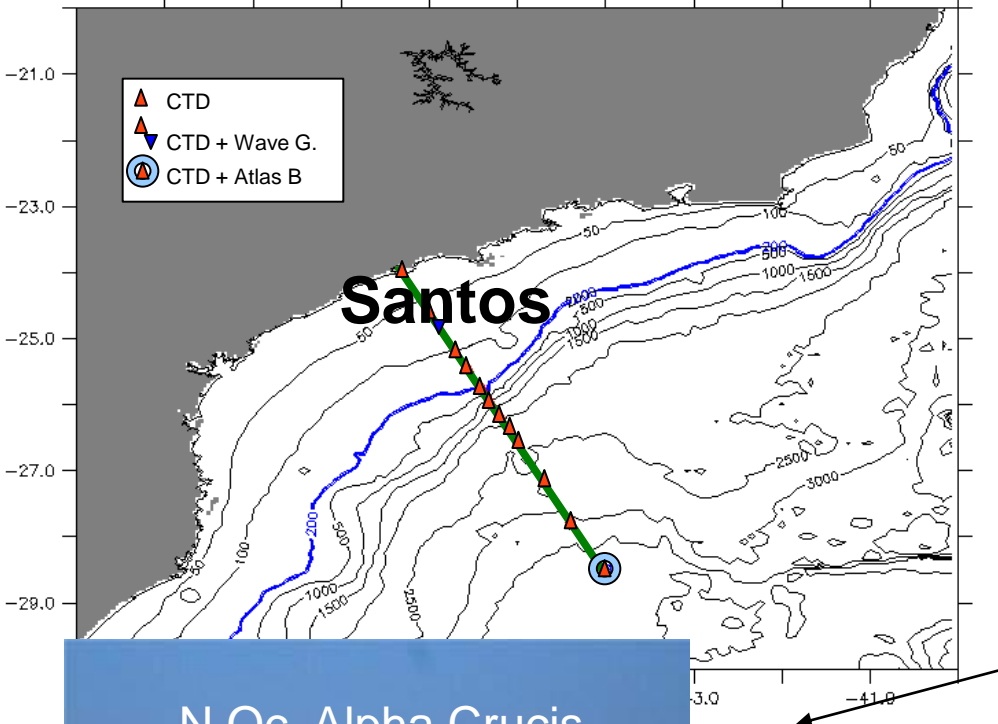


# The Atlas-B will monitor the region where occurred the 1<sup>st</sup> Hurricane in the South Atlantic: The Catarina (March 2004)



Construction and mooring of an Atlas buoy at 28S,44W

Projects FAPESP-MC, INCT-MC, ATLAS-B, NAP-MC  
1<sup>st</sup> Joint Cruise – November 2012  
*RV Alpha Crucis* – Univ. São Paulo



## Mooring of the Atlas-B “Guariroba”



44°W, 28.5°S

Porto de Santos  
15/11/2012



The Guariroba data will be released through the GTS

