

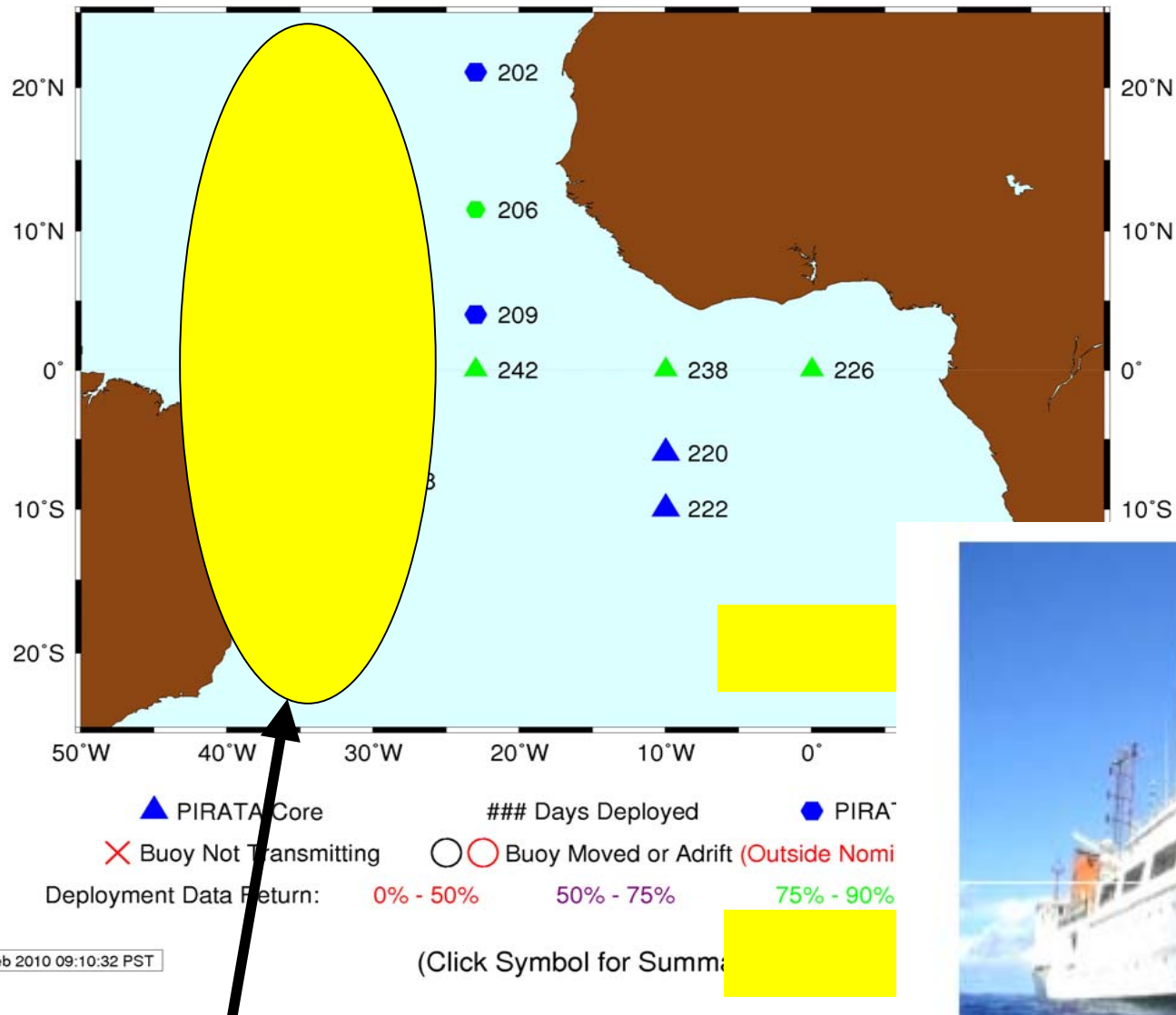
# **The “Subtropical Pirate Extension” of the PIRATA Array and other Brazilian efforts towards a sustained program of ship-based observations**

**Edmo Campos**

University of São Paulo – Brazil

PIRATA/TACE Meeting  
Portland – Oregon, 20/Feb/2010

# The PIRATA original Array and its extensions



The "Brazilian" buoys

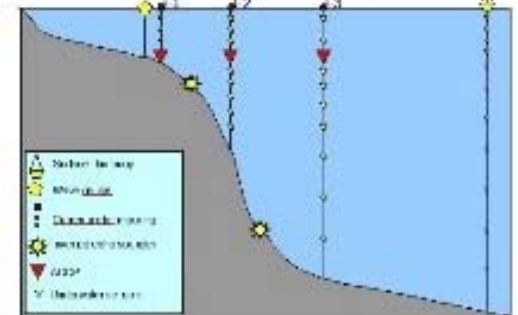
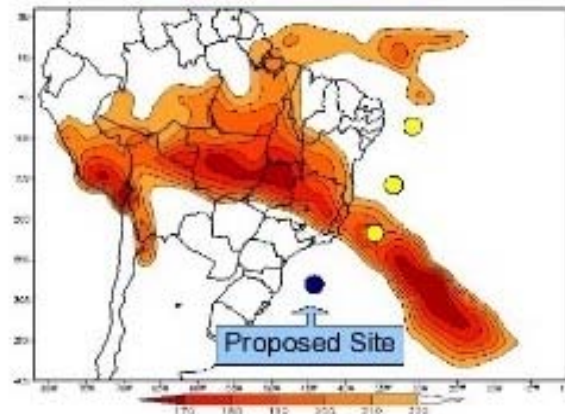
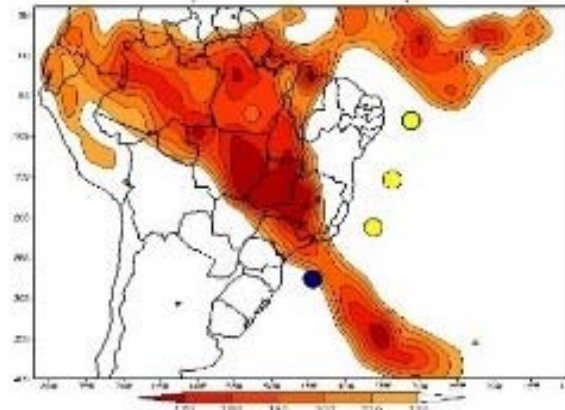
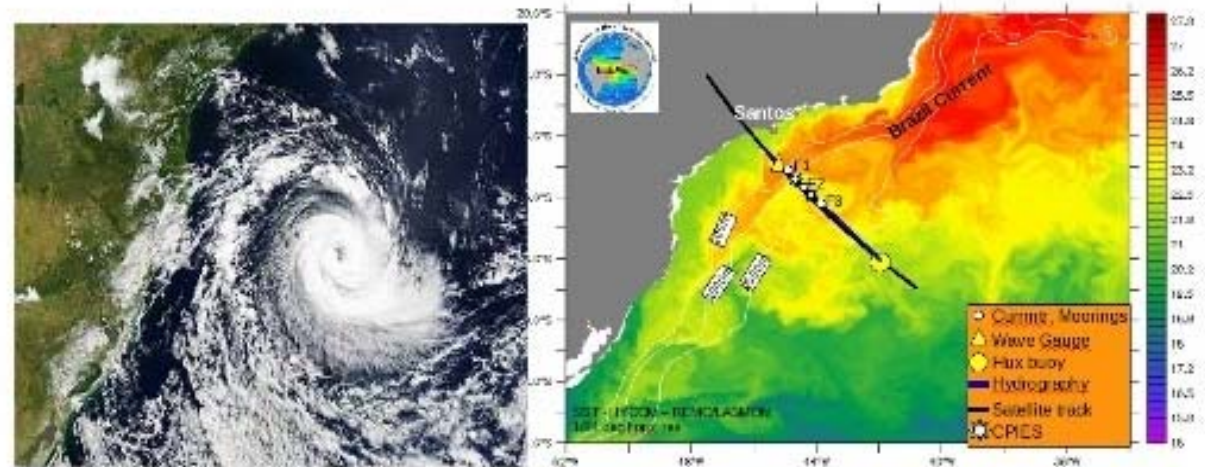


Noc. ANTARES

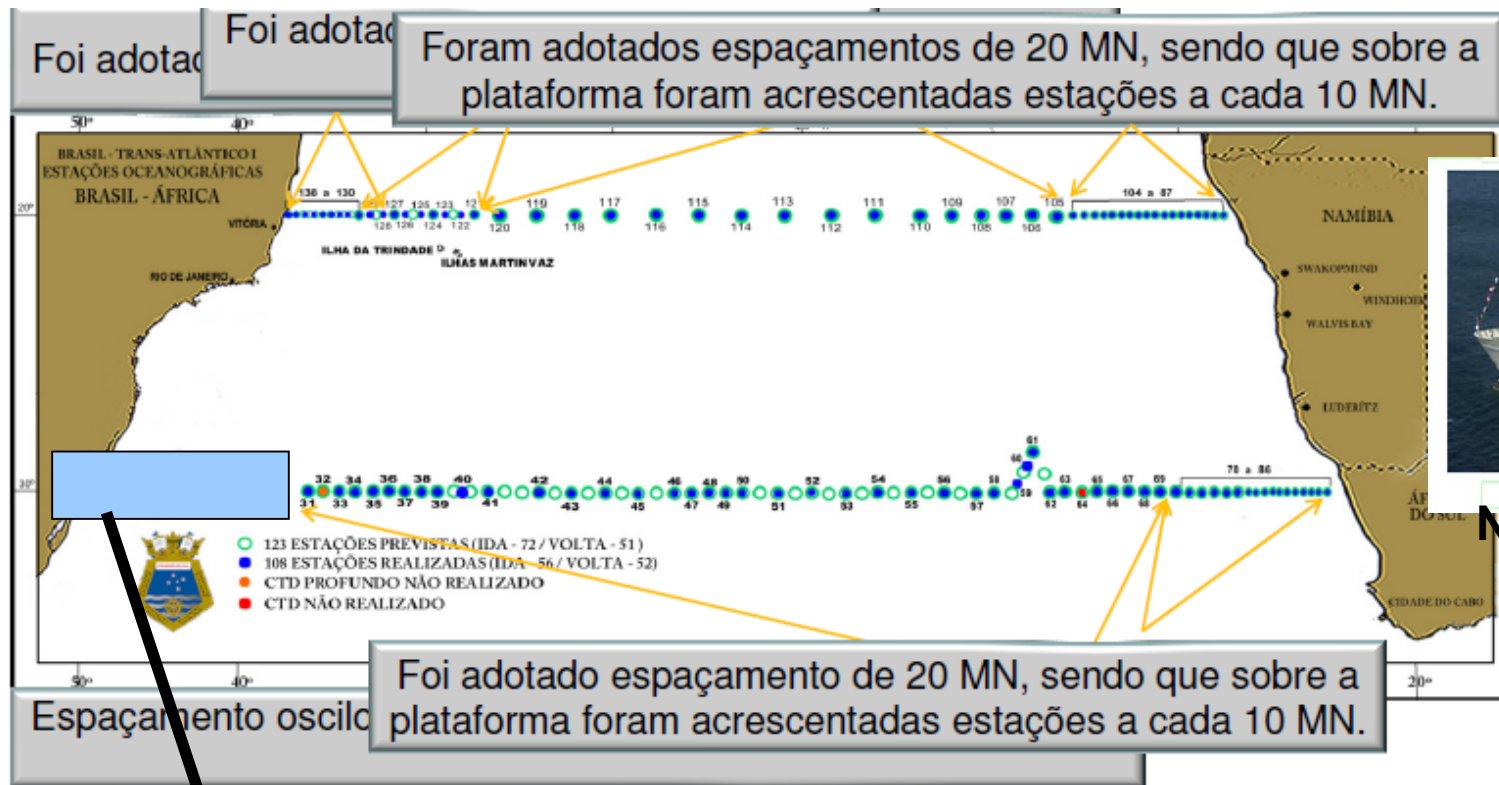
# The “Subtropical Pirate Extension” of the Pirata Array in the Western South Atlantic

This project, already funded, will construct and deploy a Brazilian Prototype of the Atlas Buoy (ATLAS-B) for monitoring the SACZ and the mixed layer heat content at 28° S, 42° W.

A repeated hydrographic section, together with current-meter mooring, will be carried across the Brazil Current.



# The "Antares/Cruzeiro do Sul" Trans-Atlantic Survey Nov-Dec 2009



Comissão Trans-Atlântico I (19/OUT a 22/DEZ/09)

**NOC Cruzeiro do Sul**

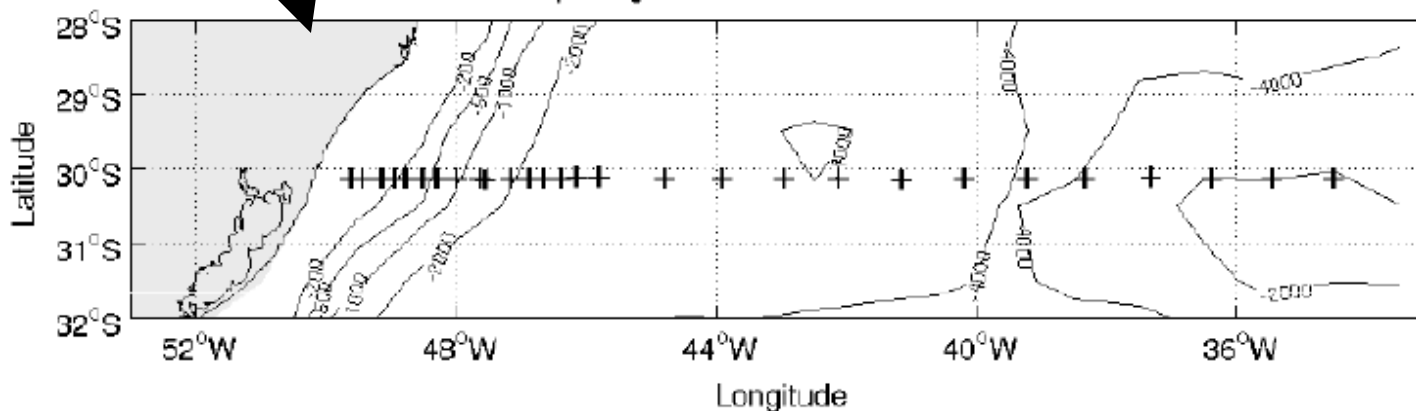


Figura 1. Estações oceanográficas ocupadas durante a realizada de 09 a 20 de Novembro de 2009 pelo Noc Antares da Marinha do Brasil.



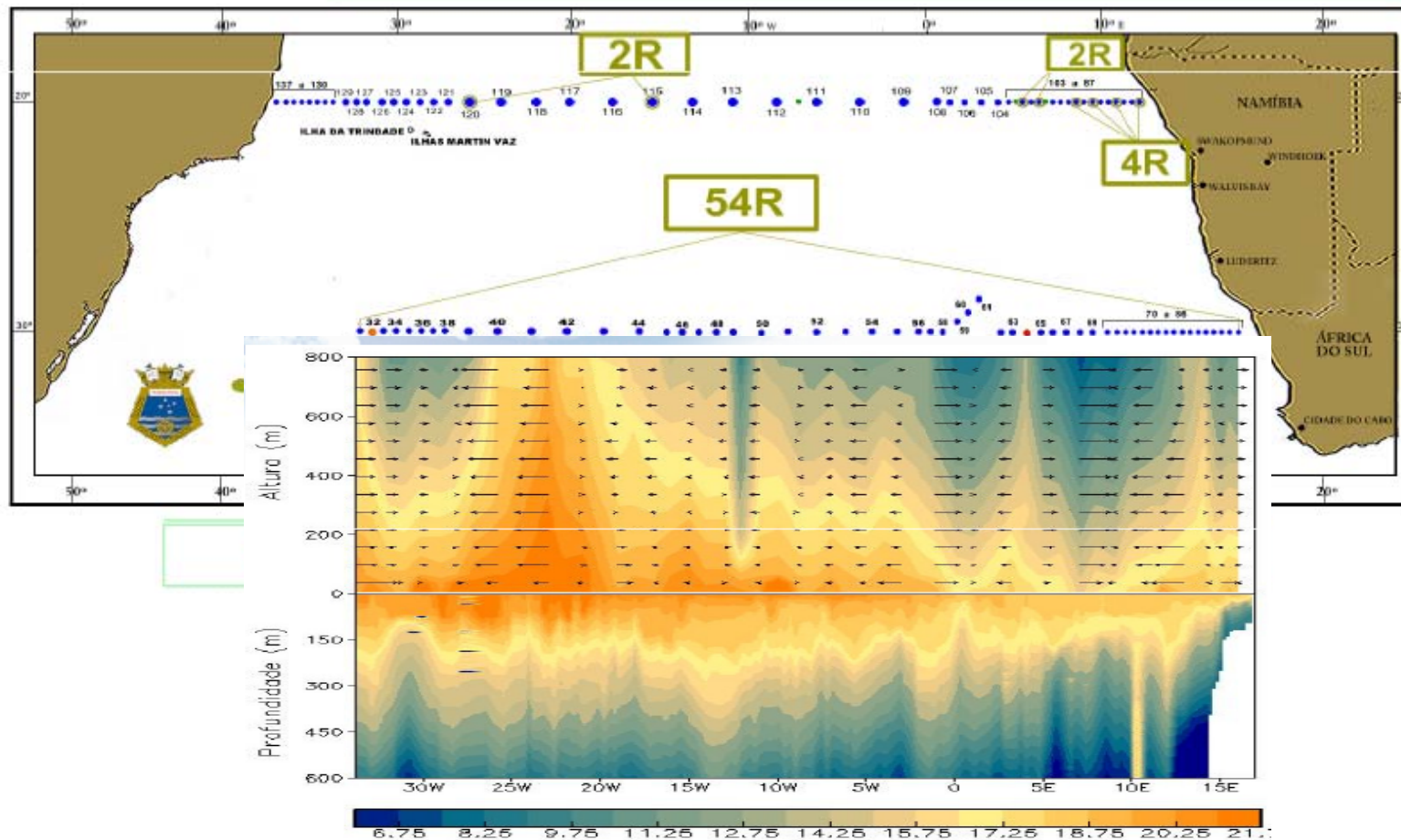
**NOC. ANTARES**

# The “Antares/Cruzeiro do Sul” Trans-Atlantic Survey Nov-Dec 2009

There is a possibility of repeating the trans-Atlantic section every other year.



- Lançadas 54 radiossondas na pernada BRA-AFR  
(60 previstas)
- Lançadas 8 radiossondas na pernada AFR-BRA  
(21 previstas)

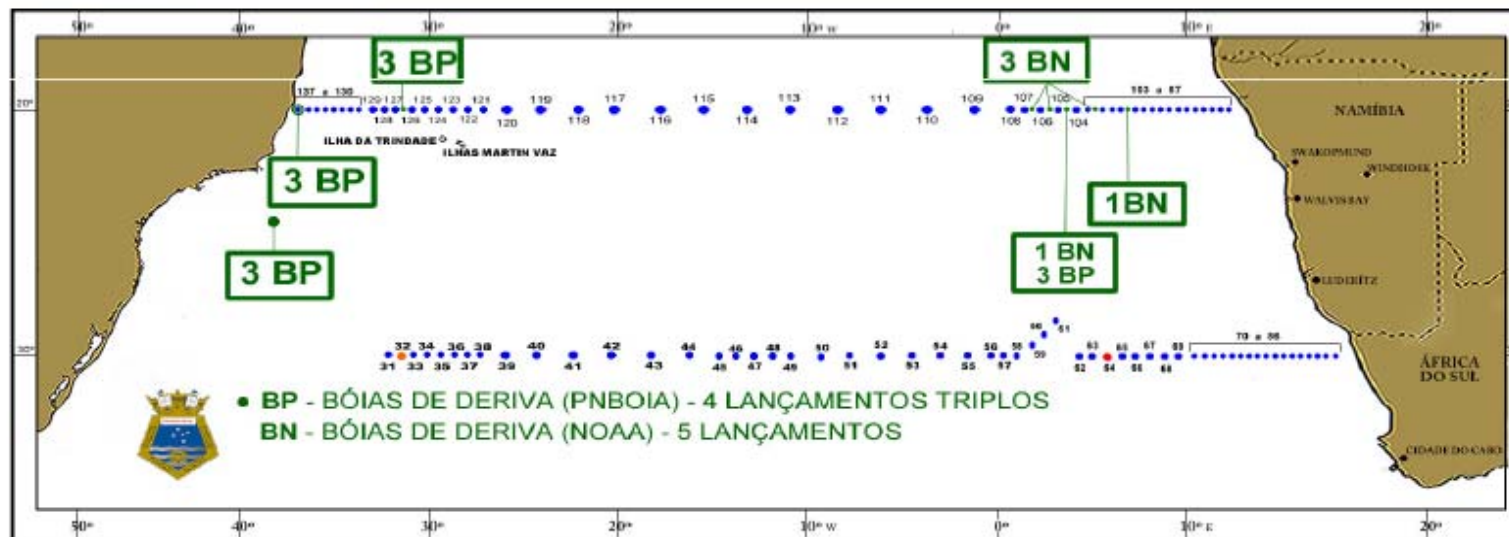


# The “Antares/Cruzeiro do Sul” Trans-Atlantic Survey Nov-Dec 2009

NOAA/AOML provided a number of drifting buoys, XBTs and ARGO floats for deployment during the trans-atlantic cruise.



- Lançadas 12 bóias de deriva do PNBOIA  
(4 lançamentos com 3 bóias).
- Lançadas 5 bóias de deriva da NOAA.

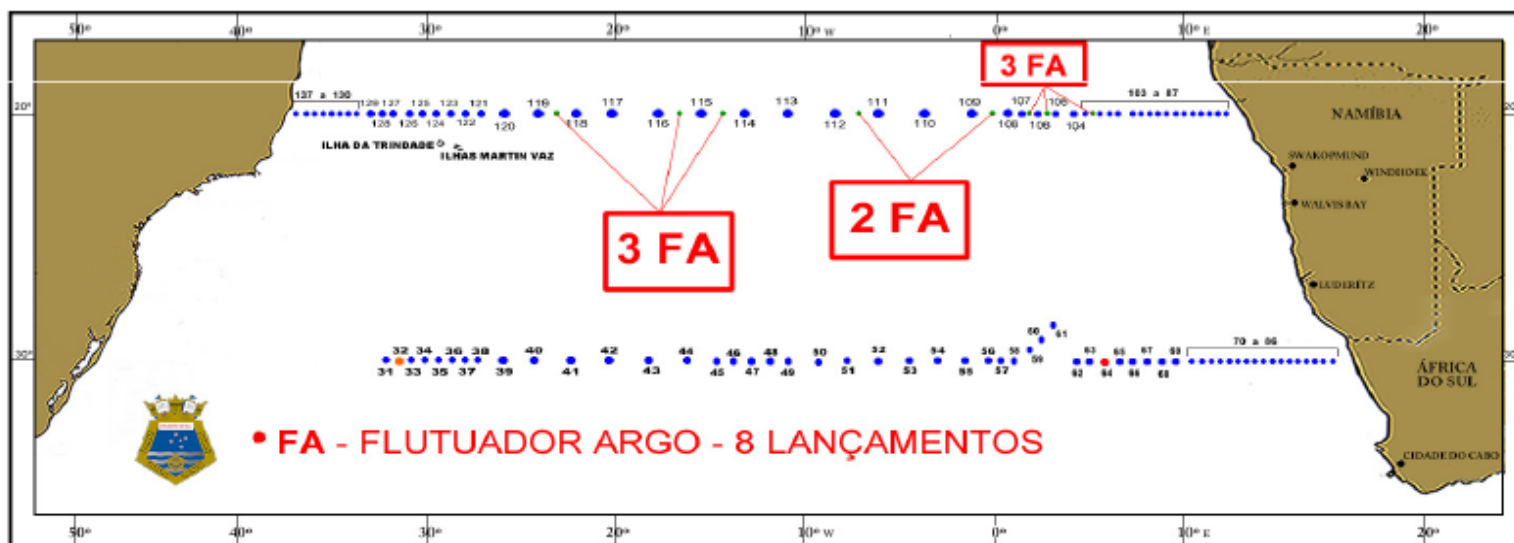


# The “Antares/Cruzeiro do Sul” Trans-Atlantic Survey Nov-Dec 2009

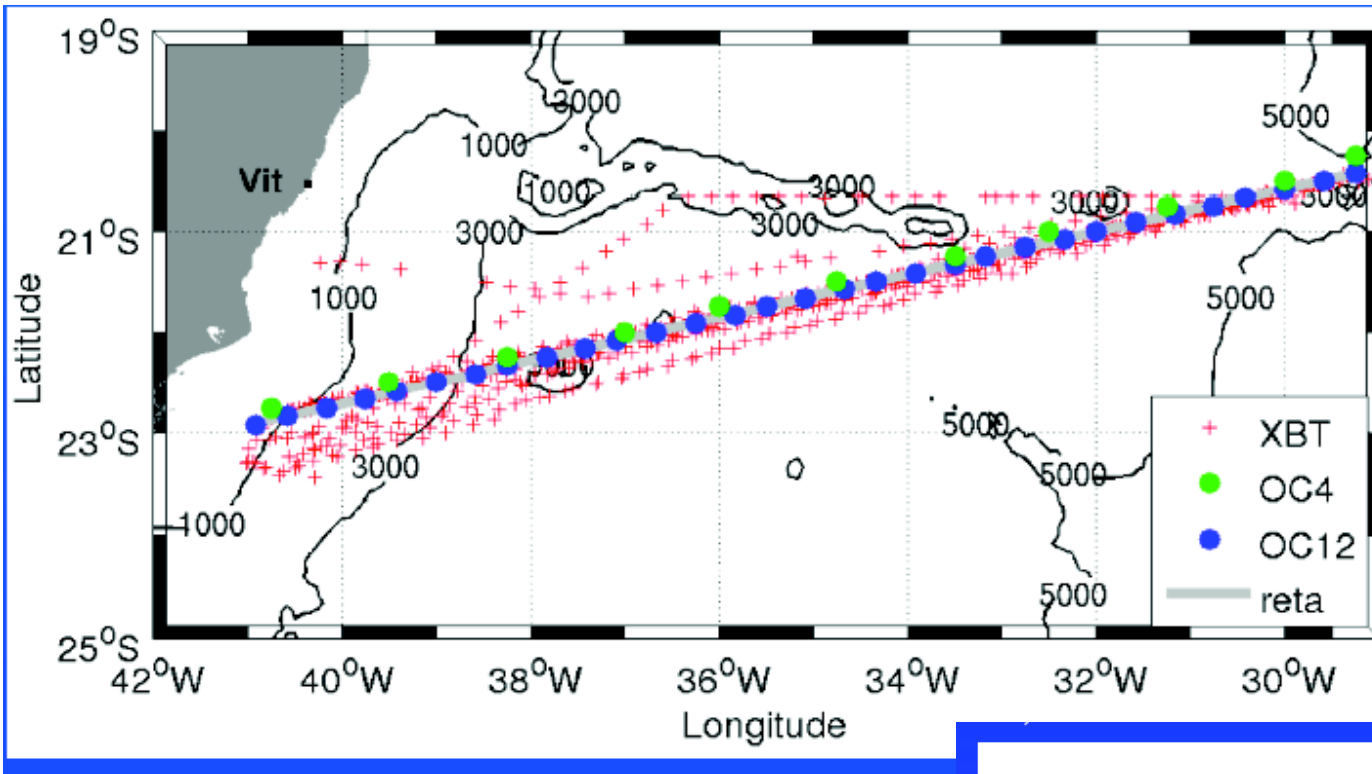
NOAA/AOML is willing to keep a continuous cooperation in the event this activity becomes long term program in Brazil.



■ Lançados 8 flutuadores ARGO da NOAA.



AOML has been collaborating with this program since its beginning.



## MOVAR: Multi-year Observations of the Brazil Current Volume Transport Variability near 22° S

(M. Mata - Furg)

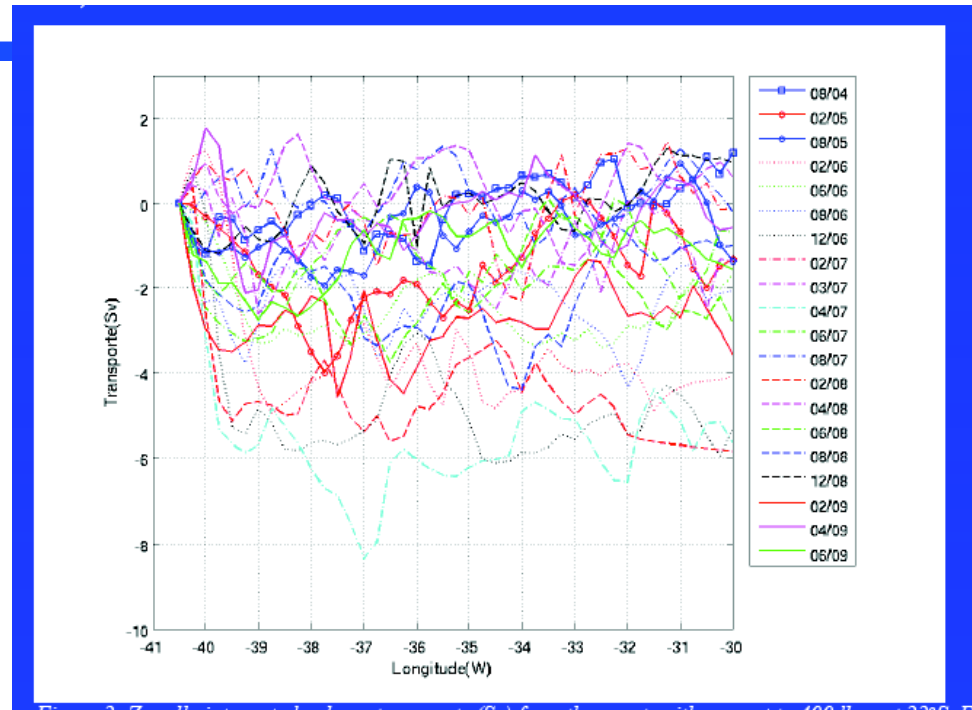


Figure 2. Time-Longitude plots of volume transport (Sv) from 1000 to 5000 m depth with a mean of 1000 m depth, 22° S.

# SAMOC 3

Rio de Janeiro/Niteroi, Brazil, May 11 - 13, 2010

The Third South Atlantic Meridional Overturning Circulation (SAMOC) workshop will take place in Niteroi/Rio, Brazil, on May 11, 12 and 13, 2010. SAMOC 3 plans to get together international experts to design and plan the South Atlantic and inter-ocean exchanges element of an MOC observing system that would help address questions and challenges outlined in the documents and recommendations provided by OceanObs'09. It is expected that the workshop will foster international collaborations and will provide concrete basis for the implementation of the program.

The Agenda will include:

1. Presentations from modelers, theoretician and those that did model products analysis leading towards recommendations on what needs to be observed, where and why.
2. Presentations from those that conducted observational studies in the regions of interest (the South Atlantic and inter ocean exchanges) with focus on what was learned from the observations and what is missing.
3. Based on results from 1 and 2, it is expected to develop recommendations for a plan to observe those parameters needed to measure and understand MOC variability in the South Atlantic and adjacent Southern Ocean sector.

The Workshop is supported by the Brazilian Diretoria de Hidrografia e Navegação (DHN), the NOAA Climate Office Program, and the US Clivar Office.

For more information or if you wish to participate, visit the SAMOC website  
<http://www.aoml.noaa.gov/phod/SAMOC/>  
or contact the organizers:

Silvia Garzoli, [Silvia.Garzoli@noaa.gov](mailto:Silvia.Garzoli@noaa.gov)  
Alberto Piola, [apiola@hidro.gov.ar](mailto:apiola@hidro.gov.ar)  
Sabrina Speich, [speich@univ-brest.fr](mailto:speich@univ-brest.fr)  
Edmo Campos, [edmo@usp.br](mailto:edmo@usp.br)

[Venue](#)

[Agenda](#)

[Participants](#)

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## The Hotel





## Meeting of the Americas Iguassu Falls, Brazil 8-13 August, 2010

*Earth - Oceans - Atmosphere - Space - Planets*



View of the falls from the  
Brazilian side



First meeting of the American Geophysical Union in South America

244 scientific sessions

660 conveners (280 Latin America, 270 USA and Canada, 90 Europe, 20 Asia/Australia)

Over 2000 geoscientists expected

Don't miss this unique chance to discuss major advances in the study of Planet Earth:

Climate Change, Extreme Weather, Natural Hazards (earthquakes, volcanoes, landslides, floods), Ocean Sciences, Hydrology, Andean Geodynamics, Evolution of the South American Continent, Subduction Zones, Space Physics, Planets, and much more!

**Abstract deadline: March 31st !**

[www.agu.org/meetings/ja10](http://www.agu.org/meetings/ja10)