



GEOTRACES Scientific Steering Committee Meeting #7  
Goa, India, 29-31 October 2012

## Brazilian Activities

Angela Wagener

[angela@puc-rio.br](mailto:angela@puc-rio.br)

# Results of South Atlantic JC-057 Cruise

José Marcus Godoy\*, Alexandre Vilela. Pontificia Universidade Catolica do Rio de Janeiro, Brazil ;Maria Luiza D. P. Godoy, Instituto de Radioproteção e Dosimetria, Rio de Janeiro, Brazil

\*E-mail : [jmgodoy@puc-rio.br](mailto:jmgodoy@puc-rio.br)

- -2 mL filtered seawater samples collected from 18 stations at 24 different depth. The samples were analyzed for Ba, Mo and U applying a quadrupole ICP-MS after a simple 1:10 dilution.  
-The samples were also directly analyzed for  $\delta(D)$  and  $\delta(^{18}O)$  using a L-1102i PICARRO water analyzer (cavity ring down spectrometer, CRDS).
- -Better identification of the watermasses was attained with Ba as compared to Mo or U. Saturation index for barium sulfate was calculated for each sample and the calculated values showed a saturation gradient from surface to bottom (unsaturation at the surface and saturation at higher depths).
- -Light isotopes were valuable tools to identifying watermasses showing good correlation to salinity and nutrients such as phosphate.



# GEOTRACES Latin American Workshop

12-15 November 2012  
Pontifical Catholic University of Rio de Janeiro

Preliminary  
Abstract Collection

GEOTRACES

The contribution by the following sponsors is gratefully acknowledged:

- Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)
- Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)
- Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro (FAPERJ)
- Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)
- Scientific Committee on Oceanic Research (SCOR)
- US National Science Foundation (NSF)

Budget (US\$ dollars):

Brazilian Agencies: 24,000

SCOR + US Geotraces: 40,000

Page Num	Name	Surname	Affiliation	Country	Title
<b>Invited GEOTRACES Senior Researchers</b>					
7	Robert	Anderson	Lamont-Doherty Earth Observatory	USA	Supply and removal of trace elements at ocean boundaries
8	Edward	Boyle	Massachusetts Institute of Technology	USA	The US GEOTRACES North Atlantic Transect: lessons learned and initial results
9	Gregory	Cutter	Old Dominion University	USA	Intercalibration, an essential component of the GEOTRACES Program
10	Jordi	Garcia - Orellana	Universitat Autònoma de Barcelona	Spain	Submarine Groundwater Discharge: a potential source of TEIs to the ocean
11	Gideon	Henderson	University of Oxford	UK	Quantifying fluxes of essential micronutrients to the high productivity belt at 40oS in the South Atlantic
12	Gideon	Henderson	University of Oxford	UK	The GEOTRACES Programme: What? Why? When? How?
13	Catherine	Jeandel	CNRS	France	AMANDES: a multidisciplinary GEOTRACES process study on the Amazon shelf
14	William	Landing	Florida State University	USA	The US GEOTRACES aerosol and rainwater intercalibration and sampling program
15	Jim	Moffet	University of Southern California	USA	Redox Conditions and metal transport along eastern boundaries
16	Willard	Moore	University of South Carolina	USA	Applications of radium isotopes to studies of coastal ocean mixing and submarine groundwater discharge
17	Frank	Muller-Karger	University of South Florida	USA	The CARLACO Ocean Time-Series and the ANTARES Network: An effort to coordinate a continental-scale observatory of long-term changes in coastal ecosystems of the Americas

<b>Participants</b>					
19	Danilo	Calliari	Facultad de Ciencias, Universidad de la República	Uruguay	On spatial patterns and regulation of primary production in the Rio de la Plata estuary
20	Renato	Carreira	PUC-Rio	Brazil	Source apportionment of organic matter in the SE Brazilian continental margin as revealed by lipid biomarkers
21	Konstantin	Choumiline	Centro Interdisciplinario de Ciencias Marinas - Instituto Politecnico Nacional	Mexico	Shale-normalized lanthanide signatures of the settling particulate matter and recent sediments of Alfonso Basin, La Paz Bay, Gulf of California
22	Leticia	Cotrim da Cunha	UERJ - FAOC	Brazil	What controls sea-air CO <sub>2</sub> fluxes in a pristine tropical estuary?
23	Joselene	de Oliveira	IPEN/CNEN-SP	Brazil	Distribution patterns of long-lived Ra isotopes in Bransfield Strait surface water – OPERANTAR XXIX and XXX expeditions
24	Diego	Gaiero	CICTERRA- Universidad de Cordoba	Argentina	Trace Elements Supply to the Southern Ocean through Dust and Recent Volcanic Ash Derived from Arid Deserts and Volcanoes of Southern South America
25	Santiago	Gassó	GESTAR/NASA	USA	Overview of Modern Dust Activity and in Southern South America
26	Jose Marcus	Godoy	PUC-Rio	Brazil	How many information can we get from 2ml samples? – Results of South Atlantic JC-057 Cruise
27	Vanessa	Hatje	Federal University of Bahia - UFBA	Brazil	Anthropogenic impacts and fluxes of trace elements on tropical estuaries of northeast Brazil
28	María Luisa	Leal-Acosta	Centro Interdisciplinario de Ciencias Marinas (CICIMAR)	México	Bahía Concepcion, western to Gulf of California: suitable natural laboratory for the marine biogeochemical studies of trace elements

29	Danil Eduardo	López Sánchez	Consejo Superior de Investigaciones Científicas.	Spain	Platinum geochemistry in aquatic systems.
30	Laura	Lorenzoni	University of South Florida	USA	Spatial and seasonal differences in the geochemistry of suspended particulate matter of rivers and bottom nepheloid layers in the Cariaco Basin
31	Juan Carlos	Miquel	IAEA-Environment Laboratories	Monaco	Some IAEA-Environment Laboratories activities related to GEOTRACES and potential collaboration within the Latin-America GEOTRACES group
32	Abraham	Mora	Venezuelan Institute for Scientific Research	Venezuela	Dissolved trace element concentrations and redox processes in the Orinoco River system, Venezuela
33	Sandor	Mulsow	Universidad Austral de Chile	Chile	Aquatic ecosystem responses to environmental events revealed by sediment tracers in the Southern Hemisphere
34	Luis Felipe	Niencheski	FURG Universidade Federal do Rio Grande	Brazil	Subterranean Fluxes of Nutrients to Coastal Zone of Southern Brazil
35	Luisa Margarita	Rodríguez Mata	Fundación La Salle de Ciencias Naturales/Estación de Investigaciones Marinas de Margarita (EDIMAR)	Venezuela	Elements concentrations in biota and sediments in the coastal zone of Nueva Esparta, Venezuela.
36	Evgueni	Shumilin	Centro Interdisciplinario de Ciencias Marinas (CICIMAR), Instituto Politécnico Nacional (IPN)	Mexico	Assessment of Present-Day Levels of Heavy Metals in Marine Sediments from Santa Rosalia Copper Mining Region in Baja California Peninsula, Mexico

37	Evgueni	Shumilin	Centro Interdisciplinario de Ciencias Marinas (CICIMAR), Instituto Politécnico Nacional	Mexico	Elements in Zooplankton of Northern Gulf of California in June 2008
38	Monica	Wallner-Kersanach	Federal University of Rio Grande (FURG)/Institute of Oceanography	Brazil	Measurement of Labile Concentrations of Copper and Zinc by Diffusive Gradients in Thin Films in a Marina and Port Areas in The Patos Lagoon, Brazil

Country	Number of Participants
Brazil	09
Mexico	04
Argentina	01
Uruguay	01
Chile	01
Venezuela	02
Monaco	01
Spain	02
USA	09
UK	01
France	01

32 participants

# Fostering Marine Sciences

- 5 new National Institutes for Marine Sciences
- 1 new ship recently announced
- It has been highlighted in all funding actions