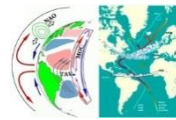


PREFACE-PIRATA-CLIVAR Tropical Atlantic Variability Conference



28th November – 1st December 2016, UPMC, Paris, France



Programme

Registration: Monday 28th November, 8:00-9:00; 10:30-11:00; 15:15-15:45

Start of scientific conference: Monday 28th November, 9:00

End of scientific conference: Thursday 1st December, 14:00

NOTE: The conference will followed by PREFACE General Assembly 2016 from Thursday 1st 14:00 to Friday 2nd 13:30. PIRATA internal meetings will take place on Friday 2nd 09:00-13:00

Monday, 28/11/2016

8:00-9:00 Registration

09:00-09:15 General welcome and opening of the assembly (Alban Lazar, Noel Keenlyside & Bernard Bourlès)

Session 1: Oceanic and atmospheric processes affecting physical-biogeochemical interaction and climate

Chairs: Nathalie Lefèvre (IRD, LOCEAN) and Julien Jouanno (IRD)

9:15-9:30 **Interannual tropical Atlantic variability modes: classification and Sea Surface Salinity signature** Mesmin Awo, Gael Alory, Thierry Delcroix and Ezinvi Baloitcha

9:30-9:45 **Potential impact of Atlantic climate modes on the ventilation of the oxygen minimum zone in the eastern tropical north Atlantic** Kristin Burmeister and Joke Lübbecke

9:45-10:00 **Oxygen minimum zones variability in the Atlantic Ocean over the last Millennium and the 21st Century in an Earth System Model** Angélique Hameau, Fortunat Joos, Juliette Mignot and Kathrin Keller

10:00-10:15 **Influence of greenhouse gas concentration and Arctic sea-ice change on the West African Monsoon** Paul-Arthur Monerie, Thomas Oudar, Emilia Sanchez-Gomez, Laurent Terray

10:15-10:30 **Changes in the ecosystem structure of the algae *Sargassum* in the tropical Atlantic Ocean** Sandrine Djakouré, M. Araújo, B. Bourlès, A. Hounsou-Gbo and C. Noriega

10:45-11:15 Coffee break (Registration continued)

11:15-12:15 Posters (sessions 1 & 3 – list of posters below)

12:15-13:30 Lunch

Session 1 continued.

Chairs: Rebecca Hummels (GEOMAR), Gregory Foltz (NOAA) and Frederic Marin (IRD)

13:45-14:00 **The Angola Current at 11°S: observations and response to tropical Atlantic variability**
Peter Brandt, Robert Kopte, Marcus Dengler and Pedro C. M. Tchipalanga

14:00-14:15 **Current variability and wave propagation along the south-west African coast as revealed by mooring observations** Tim Junker, Volker Mohrholz, Martin Schmidt, Lydia Siegfried and Anja van der Plas

14:15-14:30 **TKE dissipation and turbulent mixing in the Northern Benguela** Volker Mohrholz, Toralf Heene, Martin Schmidt

14:30-14:45 **Role of Interannual Kelvin wave propagations in the equatorial Atlantic on the Angola Benguela current system** Rodrigue Anicet Imbol Koungue, Serena Illig and Mathieu Rouault

14:45-15:00 **Observations of Air-Sea interactions in the Gulf of Guinea during the OLACTA-DACCIWA 2016 field campaign** Rémi Meynadier, C. Flamant, P. Rosenberg, M. Diakhate, G de Coëtlogon and P. Knippertz

15:00-15:15 **The upper layer circulation in the Gulf of Guinea revisited from in situ data and a high resolution numerical model** Gaëlle Herbert, B. Bourlès, P. Penven, G. Cambon and J. Grelet

15:30-15:50 Coffee break (Registration continued)

15:50-16:50 Posters (sessions 1 & 3 – list of posters below)

17:00-19:00 **Discussion:**

- How are signals from the equatorial and South Atlantic communicated to the upwelling regions in the southeastern Atlantic?
- What are the mechanisms of physical-biogeochemical interaction in the tropical Atlantic?

(Lead: Nathalie Lefèvre and Frédéric Marin)

- Salinity: Passive tracer or active participant in tropical Atlantic climate?
- Which oceanic processes are not explicitly included in models and what are the observations needed to address them?

(Lead: Gregory Foltz, Julien Jouanno and Rebecca Hummels)

20:00 Welcome Reception (Tour Zemansky, Campus Jussieu, UPMC)

Tuesday, 29.11.2016

Session 3: Towards realising socio-economic benefits of climate prediction in the Tropical Atlantic for marine ecosystems, fisheries, and continental climate

Chairs: Jorge Parages (UNIVE), Chloe Prodhomme (BSC) and Noel Keenlyside (UiB & BCCR)

- 09:00-09:15** **Upper mesopelagic vertical and horizontal distributional patterns in relation to hydrographical conditions in the Eastern tropical North Atlantic** Stephanie Czudaj, Heino Fock, Matthias Schaber and Boris Cisewski
- 09:15-09:30** **Changes in the trans-equatorial distribution of Sherborn's basslet, *Howella sherborni*, and Atlantic pelagic basslet, *Howella atlantica*, in the northern tropical Atlantic** Heino O. Fock and Stephanie Czudaj
- 09:30-09:45** **First insights on the impact of hydrology and currents on the horizontal and vertical distributions of fish and macrozooplankton in the Eastern tropical Atlantic Ocean** Jérémie Habasque, Bernard Bourlès, Éric Machu, Patrice Brehmer and Arnaud Bertrand
- 09:45-10:00** **Tropical Atlantic Variability and fluctuations of small pelagic fish off Angola: The role of the main upwelling season** Marek Ostrowski and António Barradas
- 10:00-10:15** **Vertical habitat use and diving behaviour of yellowfin tuna, *Thunnus albacares*, in CABO VERDE** Pericles Silva, Ivanice Monteiro, Victor Stiebens, Matthias Schaber, Heino O. Fock
- 10:15-10:30** **Population traits in Small pelagic fish model: emergence from interactions between turbulent environment and individual behaviours in Upwelling Systems** Timothée Brochier, Pierre-Amaël Auger, Laure Pecquerie, Eric Machu, Xavier Capet, Modou Thiaw, Baye Cheikh Mbaye, Cheikh-Baye Braham, Omar Ettahiri, Najib Charouki and Patrice Brehmer
- 10:45-11:15** [Coffee break](#)
- 11:15-12:15** **Posters** (session 2 – list of posters below)
- 12:15-13:30** [Lunch](#)

Chairs: Timothee Brochier (IRD), Heino Fock (TI) and Jörn Schmidt (CAU)

- 13:45-14:00** **Climate change projections over West Africa: What would be the role of Ocean SST** M. Mouhamadou Bamba Sylla *et al.*
- 14:00-14:15** **Predictability of malaria parameters in Sahel under the S4CAST Model** Ibrahima Diouf, Rodríguez-Fonseca, B., Deme A., Cisse M., NDione J-A. and Gaye A. Th.
- 14:15-14:30** **Decadal prediction of Sahel rainfall: where does the skill (or lack thereof) come from?** Elsa Mohino, Noel Keenlyside and Holger Pohlmann
- 14:30-14:45** **Climate change: What kind of knowledge, what type of adaptation for what type of West African artisanal fisher folk** Adama Mbaye, Marie-Christine Cormier-Salem, Jörn Schmidt and Patrice Brehmer

Session 2: Mechanisms and simulation of tropical Atlantic climate variability

Chair: Alban Lazar (UPMC)

14:45-15:00 **Origin of upwelled water in the Benguela system: source region, upwelling depth and propagation pathways** Lydia Siegfried and Martin Schmidt

15:00-15:15 **Pathways of the upwelled water in the Benguela Current** Martin Krebs, Arne Biastoch, Jonathan Durgadoo, Claus Böning and Mojib Latif

15:15-15:30 **Alleviating Tropical Atlantic Sector Biases in the Kiel Climate Model by Enhancing Horizontal and Vertical Atmosphere Model Resolution: Climatology and Interannual Variability** M. Latif, J. Harlaß and W. Park

15:30-15:50 [Coffee break](#)

15:50-16:50 **Posters** (session 2 – list of posters below)

17:00-19:00 **Discussion:**

- How can knowledge gained from observations be used to improve modelling and predictions, including the development of alternative statistical approaches?
- What is the relation between model bias and prediction skill?
- How to better achieve predictions of marine ecosystems changes?

(Lead: Chloé Prodhomme and Heino Fock)

[Wednesday, 30.11.2016](#)

09:00-09:30 **Climate change after the COP 21: economic aspects** Anna Creti

Session 2: Mechanisms and simulation of tropical Atlantic climate variability

Chairs: Regina Rodrigues (UFSC) and Mathieu Rouault (UCT)

09:30-09:45 **Growth and decay of the equatorial Atlantic SST mode by means of closed heat budget in a coupled general circulation model** Irene Polo, [Alban Lazar](#), Belen Rodriguez-Fonseca and Juliette Mignot

09:45-10:00 **Symmetry of the Atlantic Niño mode** Joke F. Lübbecke and Michael J. McPhaden

10:00-10:15 **Observational evidence of Atlantic Niño decadal variability** Hyacinth C. Nnamchi, Noel S. Keenlyside, Fred Kucharski, Ping Chang and Riccardo Farneti

10:15-10:30 **On the inter-annual tropical Atlantic variability modes under negative AMO phases** Marta Martín-Rey, Irene Polo, Belén Rodríguez-Fonseca, Teresa Losada and Alban Lazar

10:45-11:15 [Coffee break](#)

11:15-12:15 **Posters** (session 2 – list of posters below)

12:15-13:30 [Lunch](#)

Chairs: Elsa Mohino (UCM) and Ping Chang (TAMU)

13:45-14:00 **SST bias development in the Tropical Atlantic in PREFACE coordinated experiments** Aurore Voltaire, Teferi Demissie, Anna-Lena Deppenmeier, Eleftheria Exarchou, Claudia Frauen, Katerina Goubanova, Noël Keenlyside, Shunya Koseki, Chloé Prodhomme, Emilia Sanchez-Gomez, Jon Shonk, Thomas Toniazzo and Abdoul-Khadre Traoré

14:00-14:15 **A mechanism for the changing impact of the tropical Atlantic on the Pacific. Influence of bias** Belén Rodríguez-Fonseca, Irene Polo, Elsa Mohino, Teresa Losada, Marta Martín-Rey and Noel Keenlyside

14:15-14:30 **Disentangling atmospheric biases in the tropical Atlantic in the CNRM climate model** Romain Roehrig, Claudia Frauen and Aurore Voltaire

14:30-14:45 **The complexity of climate model drifts** Davide Zanchettin, Maeregu Arisido, Carlo Gaetan and Angelo Rubino

14:45-15:00 **Role of equatorial forcing in SST bias development in the South-Eastern Tropical Atlantic in a high resolution version of CNRM-CM CGCM** Katerina Goubanova, [Emilia Sanchez Gomez](#), Claudia Frauen and Aurore Voltaire

15:00-15:15 **On the possible sources of southeastern Atlantic warm bias** William Cabos, Dmitry Sein, Dmitry Sidorenko and Thomas Jung

15:30-15:50 [Coffee break](#)

Session 2 continued.

Chairs: Joke Lübbecke (GEOMAR) and Aurore Voldoire (MF-CNRM)

- 15:50-16:05** **The influence of ocean-SST-cloud feedback on the tropical Atlantic SST bias** Anna-Lena Deppenmeier, Wilco Hazeleger and Rein Haarsma
- 16:05-16:20** **On the influence of GCM biases on seasonal prediction skill in the tropical Atlantic** Ingo Richter, Takeshi Doi and Swadhin K. Behera
- 16:20-16:35** **Impact of Sea Surface Temperature Biases on Tropical Cyclone Simulations** Wei-Ching Hsu, Christina Patricola, Ping Chang
- 16:35-16:50** **Impact of dynamical regionalization on precipitation biases and teleconnections over West Africa** Iñigo Gómara, Elsa Mohino, Teresa Losada, Marta Domínguez and Belén Rodríguez-Fonseca
- 16:50-17:05** **Modelling surface and sub-surface temperature- and salinity variability in the south-eastern Atlantic Ocean** Martin Schmidt, Tim Junker, Volker Mohrholz and Lydia Siegfried - **cancelled**
- 16:50-17:05** **Importance of marine boundary layer clouds for the mean climate and interannual variability over the Atlantic Ocean** Carlos R. Mechoso, Timothy A. Myers, Teresa Losada, Shunya Koseki, Elsa Mohino-Harris, Noel Keenlyside, Antonio Castaño-Tierno, Belen Rodriguez-Fonseca, Thomas Toniazzo, Teferi D. Demissie and Gabriel Cazes-Boezio
- 17:05-17:20** **Climatological mean tropical Atlantic surface wind convergence: analysis of the drivers in reanalyses** Moussa Diakhaté, Alban Lazar, Gaëlle de Coëtlogon and Amadou T. Gaye
- 17:20-19:00** **Discussion:**
- What is the current understanding of the causes of Tropical Atlantic biases in climate models? (*Lead: Ingo Richter*)
 - What are the current consensus on the mechanisms and predictability for seasonal to interannual TAV and impacts? (*Lead: Elsa Mohino*)
 - What is the current consensus on ENSO impact on TAV, and has there been any impact of the 2015/16 El Niño? (*Lead: Regina Rodrigues*)

Thursday, 01.12.2016

Session 2: Mechanisms and simulation of tropical Atlantic climate variability, continued.

Chairs: Ingo Richter (JAMSTEC) and Hyacinth Nnamchi (UNN)

- 09:00-09:15** **Influence of decadal sea surface temperature variability on northern Brazil rainfall in CMIP5 simulations** Julián Villamayor, Tércio Ambrizzi and Elsa Mohino
- 09:15-09:30** **Role of the Tropical Atlantic in ENSO variability** Noel Keenlyside, Hui Ding, Marta Martin-Rey, Mao-Lin Shen, Mojib Latif and Belen Rodriguez-Fonseca
- 09:30-09:45** **How sensitive are the Pacific–tropical North Atlantic teleconnections to the position and intensity of El Niño related warming?** Regina R. Rodrigues, A. S. Taschetto, G. A. Meehl, S. McGregor and M. H. England
- 09:45-10:00** **The effects of the El Niño duration on the climatic impact over the tropical North Atlantic** Enzo Pinheiro, Diogenes Passos Fontenele, Francisco das Chagas Vasconcelos Junior, Eduardo Savio Passos Rodrigues Martins and Jacques Servain
- 10:00-10:15** **External forcing links Atlantic multidecadal variability and the Indian summer monsoon** Lea Svendsen, FeiFei Luo, Syam Sankar, Yongqi Gao, Noel Keenlyside, P.V. Joseph and Ola M. Johannessen
- 10:30-11:00** [Coffee break](#)
- 11:15-12:15** Summary from the Mon-Wed discussion sessions
- 12:15-13:30** [Lunch and END of conference](#)

PREFACE GENERAL ASSEMBLY: the agenda for Thursday afternoon and Friday morning is in a separate document available to PREFACE participants. Thank you.

Monday, 28/11 (11:15-12:15 and 15:50-16:50) - POSTERS:

Session 1 posters

1. **Seasonal variability of the Angola Current related to resonant equatorial basin modes** Robert Kopte, Peter Brandt, Marcus Dengler, Martin Claus and Richard J. Greatbatch (rkopte@geomar.de)
2. **Seasonal Mixed Layer Heat and Salinity Budget in the South Eastern Tropical Atlantic Ocean** Jan Lüdke, Marcus Dengler, Peter Brandt and Willi Rath (jluedke@geomar.de)
3. **An enhanced PIRATA data set for tropical Atlantic ocean-atmosphere research** Gregory Foltz, Claudia Schmid and Rick Lumpkin (gregory.foltz@noaa.gov)
4. **Property Changes of Deep and Bottom Waters in the Western Tropical Atlantic** Josefine Herrford, Peter Brandt and Walter Zenk (jherrford@geomar.de)
5. **Genesis dynamics of the Angola-Benguela Frontal Zone: Ocean frontogenesis function** Shunya Koseki, Hervé Giordani, Katerina Goubanova, Noel Keenlyside, Thomas Toniazzo and Kunihiro Aoki (Shunya.Koseki@uib.no)
6. **Impacts of chlorophyll concentrations on the Tropical Atlantic Ocean** Hernandez O, Jouanno J. and Echevin V. (olgahernand@gmail.com)
7. **Atlantic Meridional Overturning Circulation: Variability of the Boundary Circulation Systems and AMOC at 11°S** Rebecca Hummels, Peter Brandt, Marcus Dengler, Jürgen Fischer, Moacyr Araujo, Doris Veleda, Jonathan Durgadoo, Josefine Herrford and Robert Kopte (rhumhels@geomar.de)
8. **Role of the Equatorial undercurrent salinity maximum in the seasonal variability of sea surface salinity in the Equatorial Atlantic Cold Tongue** Casimir. Y. Da-Allada, J. Jouanno, F. Gaillard, N. Kolodziejczyk, C. Maes, N. Reul and B. Bourlès (daallada@yahoo.fr)
9. **A new dipole index for the tropical Atlantic from the PIRATA data set** Antonio Geraldo Ferreira, Jacques Servain, Juan J. Carrasco, Emilio Soria Olivas and Leandro Valente Jacinto (gerald@funceme.br)
10. **The CO₂ network in the tropical Atlantic: A contribution to the Integrated Carbon Observation System (ICOS)** Nathalie Lefèvre, D. Diverrès and L. Beaumont (nathalie.lefevre@locean-ipsl.upmc.fr)
11. **Do the Amazon and Orinoco freshwater plumes really matter for hurricane-induced ocean surface cooling?** Olga Hernandez, J. Jouanno and F. Durand (olgahernand@gmail.com)
12. **A climatological analysis of the seasonal variability of surface temperature and circulation over the Canary current upwelling system** Saliou Faye, Alban Lazar, Bamol Sow and Amadou T. Gaye (saliou.faye@ucad.edu.sn)
13. **Variability of the Inter-Tropical Convergence Zone: Influence of the tropical Atlantic Warm Pool** Dahirou WANE, Alban LAZAR, Malick WADE, Amadou Thierno GAYE (mahasimw@gmail.com)

Monday, 28/11 (11:15-12:15 and 15:50-16:50) - POSTERS:

Session 3 posters

1. **Seasonal Prediction in the Tropical Atlantic** Noel Keenlyside, Stephanie Gleixner, Mao-Lin Shen, François Counillon, Shunya Koseki, Yiguo Wang, Teferi Demisie (noel.keenlyside@uib.no)
2. **Climate influence on North West African fisheries: a large-scale perspective** Jorge López-Parages, Belén Rodríguez-Fonseca, Timothee Brochier, Angelo Rubino, Davide Zanchettin, Carlo Gaetan, Noel Keenlyside and Pierre-Amael Auger (jorge.parages@unive.it)
3. **Highlighting the impacts of the tropical Atlantic over the rainfall seasons of Northeast Brazil** Hounsou-Gbo, G. A., Servain, J., Araújo, M. and Bourlès, B. (h.aubains@gmail.com)
4. **Linking local fisheries observations to climate - a first analysis of historical data from Cabo Verde** Ivanice Monteiro, Pericles Silva and Heino O. Fock (ivanice.monteiro@indp.goc.cv)
5. **Aspects of the trophic structure of mesopelagic sound scattering layers in the Eastern tropical North Atlantic** Stephanie Czudaj, Heino Fock and Ana Marta Gonçalves (stephanieczudaj@thuenen.de)
6. **ECLAIRS: Integrated climate and ocean studies around West Africa and response to climate change in Senegal** J. Mignot, A. Lazar and A.T. Gaye (Juliette.Mignot@locean.upmc.fr)
7. **Farmers' awareness and attitude to climate change adaptation techniques in Southwestern Nigeria** Ayansina Ayanlade (sinaayanlade@yahoo.co.uk) - **cancelled**
8. **Variability of climatic elements in Nigeria over recent 100 years** Tairu Salami (adesat2002@yahoo.com) - **cancelled**

Session 2 posters

1. **Reducing the Sea Surface Temperature Bias in the Kiel Climate Model to improve the Representation of Atlantic Niño Variability and Dynamics** Tina Dippe, Richard Greatbatch and Hui Ding (tdippe@geomar.de)
2. **Ocean data evolution along PIRATA sections from 1993 to 2016 using Mercator Project database** Diogenes Passos Fontenele, Jacques Servain, Enzo Pinheiro and Francisco das Chagas Vasconcelos Junior (diogenes.fontenele@funceme.br)
3. **Interdependence of Model Systematic Biases in the Tropical Atlantic and the Tropical Pacific** Jon Shonk, Thomas Toniazzo, Steve Woolnough and Eric Guilyardi (j.k.p.shonk@reading.ac.uk)
4. **Tropical Atlantic biases in CNRM-CM6: evaluation of the new atmospheric physics** Florent Brient, Romain Roehrig and Aurore Voldoire (florent.brient@meteo.fr)
5. **Application of remote sensing to study mechanism of Tropical Atlantic climate variability and monsoon energetics through morphological studies of northern-southern hemisphere (NH-SH) convective features** Virendra Goswami (vk_goswami1@rediffmail.com)
6. **Mean SST bias and variability at inter-annual time-scales in CMIP5 models** Irene Polo, Julian Villamayor, Belén Rodríguez-Fonseca, Elsa Mohino and Teresa Losada (irene.polouk@gmail.com)
7. **A methodology for anomaly coupling in climate simulation** Shunya Koseki and T. Toniazzo (shunya.koseki@uib.no)
8. **How does ECHAM represent the annual cycle of central Africa rainfall system and its relation to zonal atmospheric heat transport?** Georges-Noel T. Longandjo and Mathieu Rouault (longandjo@gmail.com)
9. **Sources of EC-Earth bias in Tropical Atlantic** Eleftheria Exarchou, Chloé Prodhomme, Virginie Guemas and Francisco Doblas-Reyes (eleftheria.exarchou@bsc.es)
10. **Oceanic processes involved in the development and decay of the Meridional Mode** Marta Martín-Rey and Alban Lazar (mmarlod@locean-ipsl.upmc.fr)
11. **Effects of river discharge on Atlantic Climate** Paulo Nobre and Raquel Leite Mello (paulo.nobre@cptec.inpe.br)
12. **Does the impact of Atlantic Niños on the Indian summer monsoon depend on the background state?** Lea Svendsen, Belén Rodríguez-Fonseca and Noel Keenlyside (lea.svendsen@uib.no)
13. **The ENSO - tropical North Atlantic teleconnection in CMIP5 models** Emilia Sanchez-Gomez and Javier Garcia-Serrano (sanchez@cerfacs.fr)
14. **The intrinsic ocean variability in the Tropical Atlantic** Laurent Bessières, Laurent Terray, Thierry Penduff, Jean-Marc Molines, Marie-Pierre Moine, Guillaume Sérazin and Emilia Sanchez-Gomez (bessieres@cerfacs.fr)
15. **Role of Air-Sea-Land Interactions in Tropical Atlantic Seasonal Cycle** Lander R. Crespo, Noel Keenlyside and Shunya Koseki (lander.crespo@uib.no)
16. **Mechanisms of variability of the Atlantic Niño in an ocean model forced with an interactive atmospheric boundary layer** Jouanno J., O. Hernandez, E. Sanchez-Gomez, F. Marin and B. Deremble (jouanno@legos.obs-mip.fr)

Session 2 posters continued.

17. **Influence of the reduction of the incoming radiation over the southern ocean on the simulation of the tropical Atlantic variability by the UCLA CGCM** Teresa Losada, A. Castaño-Tierno, B. Rodríguez-Fonseca, E. Mohino and C.R. Mechoso (tldoval@fis.ucm.es)
18. **Evaluation of the anomaly coupling technique in the UCLA CGCM** T. Losada, A. Castaño-Tierno, E. Mohino and B. Rodríguez-Fonseca(tldoval@fis.ucm.es)
19. **Relationship between CMIP5 models SST bias and coastal upwelling representation** Antonio Castaño-Tierno, Elsa Mohino, Teresa Losada and Belén Rodríguez-Fonseca (antcasta@ucm.es)
20. **The effect of external forcing on meridional modes in the tropical Atlantic** Sebastian Milinski, Johann H. Jungclaus, Jürgen Bader and Jochem Marotzke (sebastian.milinski@mpimet.mpg.de)
21. **Mixed Layer heat budget variability of the western tropical atlantic from Argo floats (2007-2012)** Antonio V. Nogueira Neto, Guy Caniaux, Hervé Giordani and Moacyr Araújo (antoniovasconcelos@meteo.fr)
22. **Assessing climate model biases of the Tropical Atlantic using Bayesian hierarchical approach** Maeregu Woldeyes Arisido, Davide Zanchettin, Carlo Gaetan and Angelo Rubino (maeregu.arisido@unive.it)
23. **Seasonal and decadal variability of th senegalo-mauritanien upwelling in the climate models and influence of the global warming** Adama Sylla, Juliette Mignot and Amadou Thierno Gaye (adamasylla36@gmail.com)
24. **What caused the 2009 cold event in the Atlantic Cold Tongue region?** Kristin Burmeister, Peter Brandt and Joke F. Lübbecke (kburmeister@geomar.de)
25. **On the Atlantic Multidecadal variability role on modulating Mediterranean impact on Sahelian rainfall** Roberto Suárez-Moreno, Belén Rodríguez-Fonseca, Marco Gaetani and Cyrille Flamant (roberto.suarez@fis.ucm.es)
26. **The current 2015-2016 warm event in the tropical Atlantic: A little twin brother of the 2015-2016 El Niño in the Pacific?** Jacques Servain, Guy Caniaux, Diogenes Fontenele, Dominique Dagonne, Bernard Bourles, Aubains Hounsou-Gbo, Moacyr Araujo, Mathieu Rouault (jacques.servain@gmail.com)