

**Monday, May 10<sup>th</sup>****Theme:** Earth system mechanisms (atmosphere, ocean, land, ice) affecting tropical Atlantic climate**Session Chairs:** Jonathan Christophersen, Hervé Giordani, Philip Tuchen

- 10:00-10:20 *Welcome (R. Perez), NOAA's role in international tropical Atlantic observing (D. Legler), meeting themes/goals (G. Foltz) and logistics (R. Perez)*
- 10:20-10:35 **Hyacinth Nnamchi**  
Impacts of diabatic heating on the seasonality of the Atlantic Niño
- 10:35-10:50 **Bingkun Luo**  
Saharan dust effects on North Atlantic sea surface skin temperatures
- 10:50-11:05 **Gael Alory**  
Coastal upwelling limitation by onshore geostrophic flow in the Gulf of Guinea around the Niger River plume
- 11:05-11:20 **Saliou Faye**  
Upwelling physics off West Africa: evidences of seasonal cooling caused by dry air mass intrusions against warming upwelling
- 11:20-11:35 *Discussion*
- 11:35-11:45 *Break*
- 11:45-12:00 **Manon Gévaudan**  
Influence of ocean salinity stratification on the tropical Atlantic Ocean surface
- 12:00-12:15 **Aurpita Saha**  
Growth and decay of northwestern tropical Atlantic barrier layers
- 12:15-12:40 **Jim Moum (Invited)**  
Mixing in the equatorial cold tongues - A TAO/PIRATA comparison of Xpod adventures
- 12:40-12:55 **Sabrina Speich**  
EUREC<sup>4</sup>A-OA
- 12:55-13:10 *Discussion*
- 13:10-13:20 *Break*
- 13:20-13:35 **Mia Sophie Specht**  
Subsurface Tropical Instability Waves in the Atlantic Ocean in model and observations
- 13:35-13:50 **Léa Olivier**  
Tropical Instability Waves in the Atlantic Ocean: Investigating the relative role of sea surface salinity and temperature from 2010 to 2018
- 13:50-14:05 **Philip Tuchen**  
Tropical pathways and water mass transformation of the Atlantic Ocean upper circulation
- 14:05-14:20 **Fraser Goldsworth**  
Symmetric instability in cross-equatorial western boundary currents
- 14:20-14:35 *Discussion*

## **Tuesday, May 11th**

**Theme:** Physical-biogeochemical-ecosystem interactions and impacts on ocean and human health

**Session Chairs:** Leticia Cotrim, Marcus Dengler, Léa Olivier

- 10:00-10:05 *Intro/logistics (G. Foltz, R. Perez; moderators)*
- 10:05-10:30 **Peter Brandt (Invited)**  
Decadal variability of circulation and oxygen in the upper tropical Atlantic
- 10:30-10:45 **Fanny Chenillat**  
Tropical Atlantic climate variability: insight from interannual sea surface chlorophyll-a
- 10:45-11:00 **Gilles Reverdin**  
Fresh water plumes of Amazon water in boreal winter: impact on stratification/CO<sub>2</sub> fluxes
- 11:00-11:15 **Marcus Dengler**  
The role of bottom enhanced turbulence and non-linear internal waves on the diapycnal velocities and cross-slope circulation in upwelling regions
- 11:15-11:30 *Discussion*
- 11:30-11:40 *Break*
- 11:40-11:55 **Libby Johns (Special Sargassum Talk 1)**  
Pelagic Sargassum in the tropical Atlantic Ocean: A basin-scale dispersal event driven by anomalous physical forcing that led to a new “normal” for the biology of the Atlantic
- 11:55-12:10 **Frank Muller-Karger (Special Sargassum Talk 2)**  
Mechanism for the recurrence of pelagic Sargassum in the tropical Atlantic: Biological consequences of mid-ocean surface aggregation and nutrient supply processes
- 12:10-12:25 **Julien Jouanno**  
Evolution of the riverine nutrient export to the Tropical Atlantic over the last 15 years: is there a link with Sargassum proliferation?
- 12:25-12:40 **Ana Fernández-Carrera (pre-recorded presentation)**  
Where’s my pattern? Patchy primary production at surface in the eastern tropical Atlantic Ocean  
*Recording:* <https://www.youtube.com/watch?v=akVSJpCc6lk>  
*Form for asking Ana questions about her presentation:*  
[https://docs.google.com/forms/d/e/1FAIpQLSeNO3bIp4hHn5ubaDCJpjkWuxuNU9qqBmCzB5rK4Fb2wwauew/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSeNO3bIp4hHn5ubaDCJpjkWuxuNU9qqBmCzB5rK4Fb2wwauew/viewform?usp=sf_link)
- 12:40-12:55 **Guelson Silva**  
Fishing operations to catch tunas on aggregated schools at the vicinity of the PIRATA data buoys in the western Atlantic
- 12:55-13:10 *Discussion*
- 13:10-13:20 *Poster introductions and logistics*
- 13:20-13:30 *Break*
- 13:30-15:00 **Poster session – All posters available**

**Wednesday, May 12<sup>th</sup>**

**Theme:** Extreme weather and climate events

**Session Chairs:** Rodrigue Anicet Imbol Koungue, Matthieu Le Henaff, Robert West

10:00-10:05 *Intro/logistics (G. Foltz, R. Perez; moderators)*

10:05-10:30 **Eric Blake (Invited)**

NHC's use of oceanic observations for hurricane and marine prediction and assessments

10:30-10:45 **Matthieu Le Henaff**

Impact of ocean conditions on hurricane evolution and forecast during Hurricane Maria (2017)

10:45-11:00 **Greg Foltz**

Increase in Atlantic early-season tropical cyclone activity since 1980

11:00-11:15 **Karthik Balaguru**

Pronounced impact of salinity on rapidly intensifying tropical cyclones

11:15-11:30 *Discussion*

11:30-11:40 *Break*

11:40-12:05 **Regina Rodrigues (Invited)**

Marine Heatwaves in the Tropical and South Atlantic

12:05-12:20 **Afonso Gonçalves Neto**

Do Marine Heatwaves affect the intensity of tropical storms?

12:20-12:35 **Dongmin Kim**

Atlantic Niño/Niña influences on Atlantic tropical cyclone activity and their modulation of the ENSO teleconnection

12:35-12:50 **Ingo Richter**

The extraordinary Atlantic Niño of 2019/2020

12:50-13:05 **Rodrigue Anicet Imbol Koungue**

Impact of intraseasonal waves on Angolan warm and cold events

13:05-13:20 *Discussion*

13:20-13:30 *Poster introductions and logistics*

13:20-13:30 *Break*

13:30-15:00 **Poster session – All posters available**

## **Thursday, May 13th**

**Theme:** Simulation, predictability, and state estimates of tropical Atlantic climate variability and change

**Chairs:** Florent Gasparin, Matthew Harrison, Joke Lübbecke, Dante Napolitano

10:00-10:05 *Intro/logistics (G. Foltz, R. Perez; moderators)*

10:05-10:30 **Magdalena A. Balmaseda (Invited)**

Observational needs to for advancing subseasonal-to-seasonal forecasting systems: and ECMWF perspective

10:30-10:45 **Florent Gasparin**

How data assimilation on weekly and longer time scales influence on SST diurnal variations in the tropical Atlantic?

10:45-11:00 **Gabriel Cerveira**

Evaluation of future changes to the Atlantic Meridional Overturning Circulation and the North Brazil Current Retroflection eddies based on BESM-ROMS dynamical downscaling.

11:00-11:15 **Peter Minnett**

Using ship-board radiometers to generate climate data records of satellite-derived sea-surface temperature

11:15-11:30 **Nicholas Nalli**

Aerosols and Ocean Science Expeditions (AEROSE) in support of NOAA satellite cal/val

11:30-11:45 *Discussion*

11:45-11:55 *Break*

11:55-12:20 **Yoshimitsu Chikamoto (Invited)**

El Niño-Southern Oscillation evolution modulated by Atlantic forcing

12:20-12:35 **Joke Lübbecke**

Does the Tropical Atlantic reveal signs of a weakened AMOC?

12:35-12:50 **Clemente Tanajura**

Observing System Experiment with PIRATA and XBT data and HYCOM+RODAS over the Atlantic Metarea V

12:50-13:05 **Swantje Bastin**

Reconstructing deep ocean current variability on the equator from Argo float data

13:05-13:20 *Discussion*

13:20-13:25 *Break (main meeting adjourned for the day)*

13:25-15:00 **SSG/PRB meeting – Part 1** (SSG, PRB members and invitees only)

**Friday, May 14th**

Mini-session open to everyone (**Theme:** importance of tropical Atlantic observations)

**Chairs:** Moacyr Araujo, Ronald Buss de Souza, Hyacinth Nnamchi

10:00-10:05 *Intro/logistics (G. Foltz, R. Perez)*

10:05-10:30 **Bill Johns (Invited)**

The TAOS Review

10:30-10:55 **Elisabeth Remy (Invited)**

Impact of tropical Atlantic observations on ocean analysis and forecasts

10:55-11:10 *Discussion*

11:10-11:20 *Wrap-up comments*

11:20-11:30 *Break (meeting adjourned)*

11:30-15:00 **SSG/PRB meeting – Part 2** (SSG, PRB members and invitees only)

## **Posters**

### **Diana Albernaz**

Diving in western equatorial Atlantic deep waters

### **Jonathan Christophersen**

Diurnal and seasonal thermocline and shear modulations from internal gravity waves

### **Diego Cortes Morales**

Estimates of large-scale vertical velocities in the tropical Atlantic Ocean

### **Natasha Victoria Costa**

Future marine heatwaves in the western South Atlantic

### **Hervé Giordani**

An eddy-diffusivity mass-flux parameterization for modeling oceanic convection

### **Virendra Goswami**

Application remote sensing to develop Tropical Atlantic Climate-Variability (TAC-V) model through the study of the correlation of climate variability with the energetics of meso-scale convective systems.

### **Matthew Harrison**

Simulating Tropical Instability Waves at 4N,23W using MOM6

### **Aubains Hounsou-Gbo**

Long-term variability of South Atlantic and connections with El Niño Southern Oscillation

### **Kanga Désiré Kouame**

Nitrate supply from deep waters to ocean surface waters at 10°W in the tropical Atlantic Ocean: insight from three decades of monitoring

Spatial and seasonal variability of mixed layer depth in the tropical Atlantic using 40 Years of observational data

### **Bingkun Luo**

Infrared satellite-derived sea surface skin temperature sensitivity to aerosol vertical distribution – field data analysis and model simulations

### **Francis Mensah**

AEROSE 2021 Research Campaign on the Atlantic Ocean with the NOAA Ron Brown ship

### **Regiane Moura**

Temperature trends over the PIRATA moored buoy array: an overview from observations and CMIP5 and CMIP6 climate change scenarios.

### **Dante Napolitano**

Island's topography effects on the meso-to-large scale circulation of the Gulf of Guinea

### **Renellys Perez**

Four years of velocity and vertical shear observations in the tropical North Atlantic

**Arthur Prigent**

Weakening future southeastern tropical Atlantic interannual sea surface temperature variability

**Badara Sane**

Impact of intra-seasonal coastal Kelvin waves on SST in the eastern boundary upwelling systems of the Tropical Atlantic: a composite analysis of boreal winter

**Paulo Silva**

Changes in the Equatorial Mode of the Tropical Atlantic in terms of the Bjerknes Feedback Index

**Dahirou Wane**

A climatological study of the mechanisms controlling the seasonal meridional migration of the Atlantic Warm Pool in an OGCM

**Robert West**

Seasonality of interbasin SST contributions on Atlantic tropical cyclone activity