



RAPID - US AMOC International Science Meeting
21-24 July 2015, Bristol, U.K.



Towards a holistic picture of the Atlantic Meridional Overturning Circulation via observation, modelling and synthesis

This meeting is the 3rd in a series of international science meetings jointly organised by the UK Natural Environment Research Council's RAPID Climate Change Programme and the US Atlantic Meridional Overturning Circulation (AMOC) Program. Its goal is a holistic understanding of the AMOC and its impacts on weather, climate and ecosystems, in the past, present and future.

Such an understanding can only be achieved by comprehensive observations (both present day and paleo), by the use of climate and earth system models, and by synthesizing observations and models.

Therefore the meeting will seek to address the following four themes:

1. Characterising the AMOC: structure, variability, mechanisms and ocean response

To characterise the AMOC structure and variability holistically requires continuous observations, supported by modelling to provide insights into the mechanism involved. To understand the AMOC's role in weather, climate and ecosystems, it is necessary to know how variations in the AMOC are related to variations in the ocean's transport and storage of heat, freshwater, carbon and nutrients. The theme will address these issues.



KEY DATES

- 15 Jan 2015:**
Abstract submission opens
- 15 Feb 2015:**
Meeting registration opens
- 27 Apr 2015:**
Abstract submission closes
- 15 May 2015:**
Preliminary programme

2. Impacts of the AMOC on the atmosphere, cryosphere, and land

Changes in the AMOC have potential impacts on many aspects of the global climate. Most recently it has been implicated in the so-called warming hiatus. Therefore, this theme seeks to examine the links between past and present changes in the AMOC and changes in the atmosphere, in the cryosphere and on land.

3. AMOC state estimation, predictability and prediction

One of the major challenges is to describe the complete, pan-Atlantic, state of the AMOC accurately, and to use this as a basis for making predictions of its future state and climate impacts on timescales of years to decades. This theme will examine progress towards determining the state of the AMOC, assessing its predictability, and delivering actual predictions of its future state and wider impacts.

4. Novel approaches to pan-Atlantic observations, modelling, analysis and synthesis

This theme seeks to explore new developments in observational techniques (e.g. autonomous platforms) and data security (e.g. data transmission), new approaches to modelling, analysing, and predicting the AMOC, new methods for synthesizing observations and models, and how these can contribute to achieving a better holistic picture of the Atlantic in the future.

SCIENTIFIC STEERING COMMITTEE

- Chair:** Meric Srokosz (RAPID Science Coordinator)
- RAPID:** Rowan Sutton, NCAS, University of Reading; David Smeed, NOC.
- OSNAP:** Penny Holliday, NOC;
- US AMOC:** Renellys Perez, UM CIMAS; Rong Zhang, NOAA GFDL; Steve Yeager, NCAR

More information on the science meeting website:

www.rapid.ac.uk/ic15

VENUE

@Bristol Science and Discovery Centre (below) lies in the heart of Bristol's historic Harbourside.





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