

**OSNAP RAMOC DYNAMOC Workshop and Project Meetings:
NOC (Southampton), 24-25 November 2016**

Joint Workshop and Discussion

Talks were given by:

Pablo Ortega: Multidecadal climate variability and impacts in the North Atlantic

Vassil Roussenov: Long-term heat and salt content variability in the North Atlantic

Chris Wilson: Constraining subpolar transport and mixing - a Regional Thermohaline Inverse Method

Neill Mackay: Application of the Regional Thermohaline Inverse Method to observational reanalyses in an Arctic domain

Agathe Germe: ORCA12 ensembles

Stefan Gary: Particle residence times and AMOC pathways in the Eastern Subpolar North Atlantic

Yavor Kostov: Adjoint Sensitivity Analysis of the Atlantic Meridional Overturning Circulation

Loic Houpert: Transport and energetics of the North Atlantic Current in the eastern part of the subpolar gyre

Matt Menary: The impact of Labrador Sea temperature and salinity variability on density and the subpolar AMOC in a decadal prediction system

Bablu Sinha: Analysis of structural errors inherent in the rapid method (with relevance to OSNAP)

Stuart Cunningham: Ocean Heat Content and Transport of Energy in the Labrador Sea (1992:2014)

Clare Johnson: ATLAS: Adding chemical sensors to the eastern portion of the OSNAP array

David Smeed: RAPID 26°N: results and plans

Other attendees:

Penny Holliday, Jon Robson, David Marshall, Helen Johnson, Darren Rayner, Ric Williams, Adam Blaker, Joel Hirschi, Keith Haines, Irene Polo, Rowan Sutton, Gerard McCarthy, David Smeed, Ben Moat, Simon Josey, Meric Srokosz

Breakout groups:

In order to stimulate new ideas and to compare perspectives from modelling and observations, two breakout groups discussed the topic: "What influences Labrador Sea density, and how does that impact AMOC?". The workshop reconvened to discuss in plenary.

UK OSNAP Project Meeting

Attended by: Loic Houpert, Helen Johnson, Stefan Gary, Darren Rayner, Richenda Houseago-Stokes, Clare Johnson, Stuart Cunningham, Vassil Roussenov, Yavor Kostov. Apologies received from Ric Williams, Chris Wilson and David Marshall.

Field work progress, plans, problems

P. Holliday, S. Cunningham and L. Houpert provided updates on the 2016 fieldwork and data analysis.

The eastern boundary array moorings were refurbished on cruise *RRS Discovery* DY053, led by S. Cunningham. The cruise also deployed seagliders, Argo floats and US RAFOS floats, and refurbished the US OSNAP moorings in the Iceland Basin.

Have obtained April to July glider data in the Rockall-Hatton Plateau, but with 10+6 week gaps in July-September due to glider fault and loss. The operational problems that led to the long gaps are being addressed.

The Irminger Sea Deep Western Boundary Array moorings were refurbished on cruise *RRS Discovery* DY054, led by P. Holliday. The cruise also deployed Argo floats and US RAFOS floats, and refurbished

the NIOZ moorings in the eastern Irminger Sea. The cruise hosted an artist and a WHOI videographer for outreach purposes.

Data

UK OSNAP at BODC: R. Houseago-Stokes provided up update. All 2014-2016 glider, moored array and CTD data have been processed, calibrated and submitted to BODC. BODC are developing the tools to write data to OceanSites data format - in the meantime Loic has written code to generate temporary OceanSites format files from the moored array data. When BODC can write the final OceanSites data files, the temporary ones will be deleted. The BODC OSNAP page is not yet live - awaiting some server upgrades.

Action: P. Holliday to write to BODC expressing the urgent requirement for UK OSNAP data to be written to OceanSites files for sharing within OSNAP and eventually with the wider community

Update since meeting: Helen Snaith informs us that this will happen by summer 2017.

Array data submission to Duke: Loic has submitted all the NOC and SAMS moored array data to the Duke data hub - by this action UK OSNAP has submitted our data in accordance with the schedule set by the OSNAP Steering Committee. Unsubmitted data from the remaining OSNAP groups (US, NIOZ) is promised by end Dec 2016.

Production of OSNAP metrics and gridded files: Still on track for the first datasets to be published in summer 2017. Duke will generate preliminary datasets for PIs to scrutinise and discuss early in 2017 (Feb).

Other Business

PAG feedback and report. Contributions due with Penny by 25 Nov (some already received). The UK OSNAP PAG report due to be sent to Meric by 9 Dec. PAG meeting in Southampton Jan 11, 2017.

Upcoming meetings: OSNAP PI meeting at EGU, 23 April 2017. OSNAP-RAPID-ACIS Science meeting, September 2017 (Penny and Helen are on organising committee).