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PC21A-01 - Volume, heat and freshwater transports across the OSNAP array: 2014-2018

Tuesday, 18 February 2020

08:00 - 08:15

SDCC - 1A, UL

Abstract

With contributions from the US, UK, Germany, the Netherlands, Canada and China, the Overturning in the Subpolar North Atlantic Program (OSNAP) observing system was installed in the summer of 2014, which aims at measuring and understanding what drives the Atlantic Meridional Overturning Circulation (AMOC) and its variability. This coast-to-coast array of high-resolution moorings provides a continuous record of the full water column, trans-basin fluxes of heat, mass and freshwater in the subpolar North Atlantic. Data from observing system between August 2014 – June 2018 have been used to estimate those key variables for the full array as well as two sub-sections: OSNAP West, in the Labrador Sea, and OSNAP East, between Greenland and the Scottish shelf. We show notable differences in the magnitude and variability of the MOC across the full array between 2014-2016 and 2016-2018, and discuss the associated changes in the heat and freshwater transports. Differences between the fluxes across the OSNAP West and OSNAP East subsections will also be presented, along with a discussion of how this relates to the formation and transport of deep waters in the region.

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