Contribution ID: **23** Type: **Talk**

Interannual variability of the subpolar MOC and OSNAP array reduction experiment

Wednesday 19 July 2023 09:55 (15 minutes)

The Overturning in the Subpolar North Atlantic Program (OSNAP) array, consisting of an OSNAP West section covering the Labrador Sea and an OSNAP East section covering the Irminger and Iceland basins, has continuously observed the MOC and meridional heat and freshwater transports (MHT and MFT, respectively) since 2014. The OSNAP observations have contributed substantially to the understanding of the mean state and sub-seasonal to seasonal variability of the subpolar MOC. We present here the latest OSNAP observational results covering 2014-2022 and investigate interannual variability of the subpolar MOC with respect to water mass transformation in the Labrador Sea and eastern subpolar basins. We propose an optimized observational design that employs a less densely instrumented array for continuing OSNAP beyond the first decade. We show that the reduced OSNAP array can capture over 90% of the MOC, MHT and MFT variability across the full OSNAP section.

Topic

Future AMOC observing –outlining a roadmap

Author: FU, Yao (Georgia Institute of Technology)

Co-authors: Dr LOZIER, M. Susan (Georgia Institute of Technology); TEAM, The OSNAP

Presenter: FU, Yao (Georgia Institute of Technology)

Session Classification: Roadmap for future AMOC observing

Track Classification: Roadmap for future