

**Atlantic Meridional Overturning Circulation: Deep Western Boundary Current transport variability in the South Atlantic - Preliminary results from a pilot array at 34.5degS**

Christopher Meinen<sup>†</sup>; Silvia Garzoli; Renellys Perez ; Alberto Piola

<sup>†</sup> NOAA/AOML, USA

Leading author: [Christopher.Meinen@noaa.gov](mailto:Christopher.Meinen@noaa.gov)

One year of data from a line of four pressure-equipped inverted echo sounders spanning the Deep Western Boundary Current (DWBC) at 34.5degS are used to illustrate for the first time the variability of this crucial deep Meridional Overturning Circulation pathway in the South Atlantic Ocean. The amplitude and spectral character of the DWBC transport variability is compared to other locations with longer records, and the statistical representativeness of the data is evaluated compared to a high-quality eddy resolving numerical model. The observed DWBC transport variability is of roughly similar magnitude to that observed in the subtropical North Atlantic despite the splitting of the DWBC near 8degS into western boundary and eastern boundary components. Comparison to 27 years of model output indicates that another 3-4 years of data will be required to encompass a fairly complete span of deep transport variability.