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Supplement of

South Atlantic overturning and heat transport variations in ocean reanalyses and observation-based estimates

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Supplementary Material

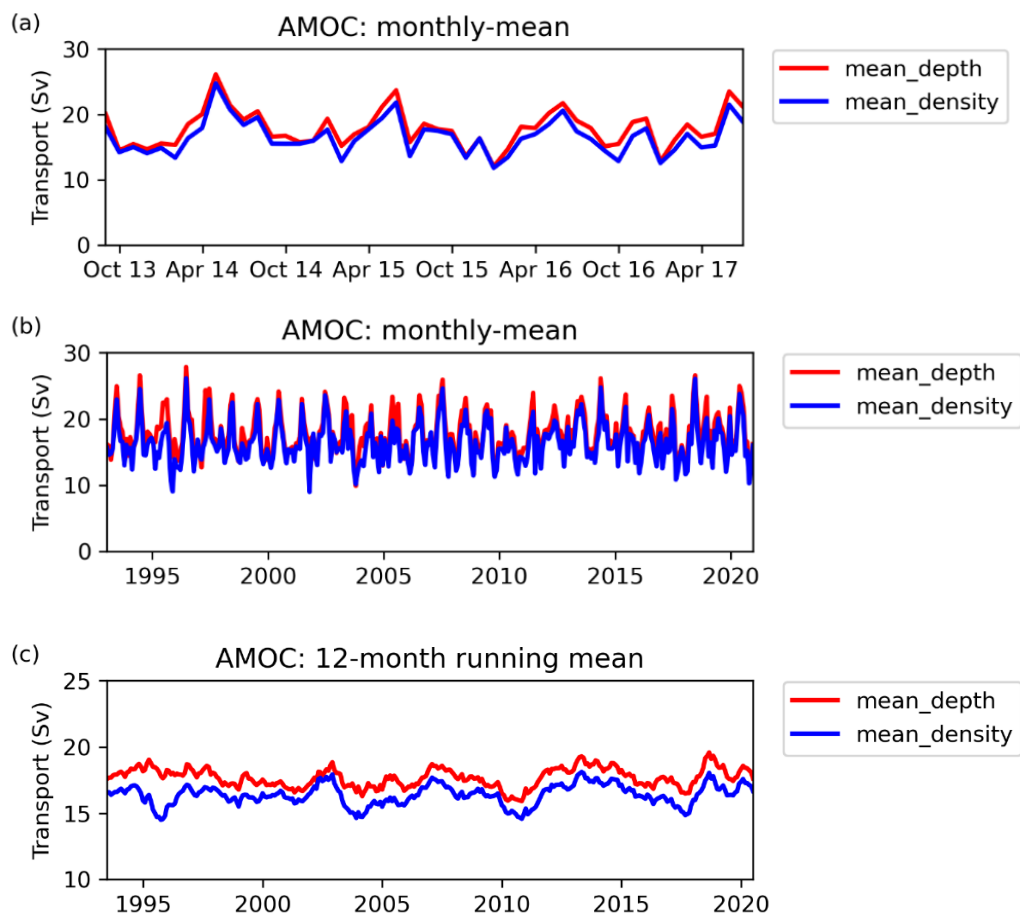


Figure S1: Timeseries of the overturning across 34.5°S in the reanalyses ensemble (product ref's 1, 2, 3), with the ensemble-mean plotted in depth (red) and density (blue) space. (a) monthly-mean MOC from September 2013 to July 2017 and (b) over 1993–2021. (c) 12-month running mean MOC over 1993–2021.

Correlations: density vs depth space

Correlation coefficients ($p < 0.05$) between the AMOC at 34.5°S in depth and density space in the three panels of Fig. S1: (a) 0.97, (b) 0.95, (c) 0.79

Further details on the Mayer energy-budget estimates

The ORAS5 and ORAP6 ocean reanalyses were used in the Mayer energy-budget estimates because the monthly-mean ORAS5- and ORAP6-based inferred MHT estimates at 26°N have significant correlations with observations across the RAPID array ($r=0.74$ and $r=0.59$ respectively). We take the mean of two estimates of the MHT that use either the Bering Strait or the Greenland Scotland Ridge as the northern boundary of integration.