



The 2002-2010 mean circulation across the Greenland to Portugal A25-OVIDE section

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The OVIDE project aims at documenting and understanding the variability of the oceanic circulation and water mass properties in the northern North Atlantic on climate-relevant time scales. Based on summer (June - July) hydrographic measurements made every two years since 2002, we assessed a mean state of the full-depth circulation across the A25-OVIDE section between Cape Farewell (Greenland) and Portugal.

The absolute transports across the section were estimated, for each of the five realizations, using a geostrophic box inverse model constrained by ship-mounted Acoustic Doppler Current Profiler velocity measurements and by an overall mass balance. Then, the mean circulation across the section was obtained by averaging the five synoptic patterns.

We focus on the mean transports of the main currents: the North Atlantic Current, Irminger Current, East Greenland Current and Deep Western Boundary Current. We also discuss the Labrador Sea Water and Antarctic Bottom Water transports in the Iceland and West European Basins, as well as the Meridional Overturning Circulation.

Finally, by combining the mean transports across the OVIDE line with those recently obtained from data collected at 59.5N, we updated schemes of the large-scale circulation in the region.