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Transport Structure and Energetic of the North Atlantic Current in Subpolar Gyre from Observations

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We present the first 2 years of UK-OSNAP glider missions on the Rockall Plateau in the North Atlantic subpolar gyre. From July 2014 to August 2016, 20 gliders sections were realized along 58°N, between 22°W and 15°W. Depth-averaged currents estimated from gliders show very strong values (up to 45cm.s-1) associated with meso-scale variability, due particularly to eddies and subpolar mode water formation.

The variability of the flow on the eastern slope of the Iceland basin and on the Rockall Plateau is presented. Meridional absolute geostrophic transports are calculated from the glider data, and we discuss the vertical structure of the absolute meridional transport, especially the part associated with the North Atlantic Current.