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Title Optimizing monitoring of volume, heat, and salt transport across the Greenland-Scotland Ridge towards the Arctic

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Theme -Theme 1: Design, Optimization and Implementation of the Observing System

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Poster title (brief) Optimizing monitoring of volume, heat, and salt transport across the Greenland-Scotland Ridge towards the Arctic

Abstract - text box

Warm and saline water of Atlantic origin is transported across the Greenland Scotland Ridge into the Arctic Mediterranean. This inflow has a large impact on e.g. the climate and sea-ice in the Arctic and the knowledge of its variability and possible trend is therefore of huge importance in predicting Arctic climate change. The inflow has been monitored since the late 1990s with moored instrumentation combined with regular hydrographic cruises and data from satellite altimetry, but deploying moorings in the heavily fished region close to the Greenland Scotland Ridge is highly demanding in terms of manpower and funding. Efforts have therefore been made to optimize the monitoring systems, lately within the H2020 Blue-Action project. This has led to systems, which rely heavily on satellite altimetry. More recently moored PIES (Pressure Inverted Echo Sounders) have been used in a pilot project to monitor short-term variations of the temperature and salinity fields and these results look promising.