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## Warm core mesoscale eddies along the boundary current and in the Sofia Deep north of Svalbard

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The Atlantic water boundary current north of Svalbard is a major heat and salt source to the Arctic Ocean. Yet, the mechanisms controlling the lateral transport of Atlantic water properties are not well understood. Model simulations suggest mesoscale eddies may be important for transporting heat away from the boundary current, but supporting observations are sparse.

Between September and November in 2018, a Seaglider was deployed north of Svalbard as part of the Nansen Legacy project to investigate intraseasonal variations in the boundary current and the transformation of Atlantic water. It made several transects across the boundary current and a transect across the Sofia deep. Warm core eddies originating from the boundary current were detected in the Sofia deep. Combining the Seaglider data with two year-long mooring arrays north of Svalbard, deployed in 2018 within the Nansen Legacy framework, we investigate mesoscale eddies using eddy recognition algorithms applied to glider transects and timeseries from moorings. Initial results indicate that mesoscale eddies frequently occur in the boundary current, with radius less than 10 km and velocity maxima as high as 0.35 m/s.