



We are now in our fourth week at sea on board the RV *MARIA S. MERIAN* as part of Expedition MSM142. During this week, we made significant scientific progress, thanks to calmer weather conditions and the excellent collaboration between the ship's crew and scientific team. We are grateful for their dedication and support, which have made this progress possible.

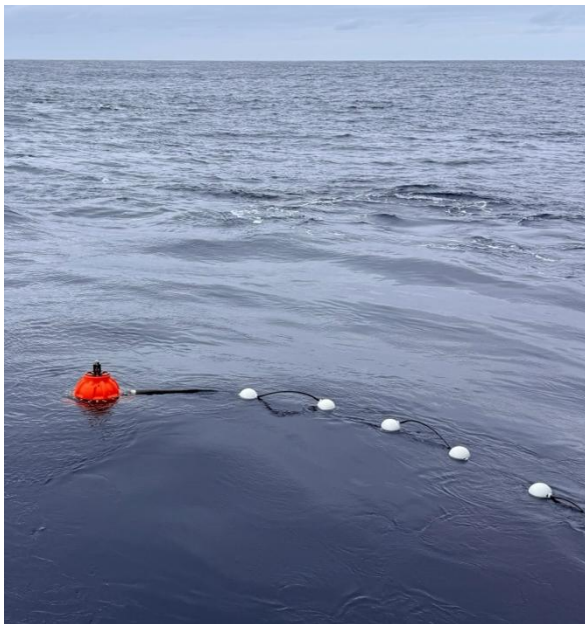


Figure 1: Surface telemetry system of the K1 mooring, which provides near real-time data of the upper 100m. (Photo: Fehmi Dilmahamod)

After several days of intensive mooring operations at the 53°N Observatory, we proceeded to the K1 mooring site. This mooring has been in operation since 1997 and is used to monitor variability in the deep convection region. In recent years, it has been equipped with a surface telemetry buoy that provides near real-time data of the temperature and salinity in the upper 100m of the water column. The previous deployment (2024-2026) marked the first time that the telemetry system successfully survived the extreme winter conditions. We redeployed the K1 mooring with the surface telemetry system, which we hope will continue to deliver continuous near real-time data from which essential climate variables can be derived.

After the K1 deployment, we had a 20-hour transit to the location of the gliders, which had been deployed two weeks earlier to survey an anticyclonic eddy west of the Greenland coast. This transit provided the perfect opportunity to hold our traditional mid-cruise "Bergfest," where everyone could come together and enjoy a selection of excellent snacks prepared by our on-board chefs, Matthias and Thomas.

Upon reaching the glider locations, and thanks to the excellent manoeuvring of the bridge team and the ship's crew, we recovered three gliders (two from GEOMAR and one from NOC) on the same day, followed by two additional gliders and one float the next day. The gliders have been in the water for 14-day mission, which is quite remarkable under these conditions. All platforms performed well and collected a valuable dataset.



*Figure 2: (Left) Glider recovery after a 13-day mission through an anticyclonic eddy west of the Greenland coast (Photo: Fehmi Dilmahamod). (Right) The greenish colour of the water, likely associated with the intense Labrador Sea spring bloom, with surface chlorophyll-a concentrations reaching up to  $15 \text{ mg m}^{-3}$  (Photo: Eleanor Frajka-Williams)*

We then continued with another set of high-resolution CTD measurements within the anticyclonic eddy. This concluded the SEA-Bloom component of the cruise, during which we were able to collect a wide range of observational data during the onset of the Labrador Sea spring bloom, which developed over the two weeks the gliders were in the water.

We ended the CTD section early as it was necessary to return to Nuuk for the disembarkation of one person. We extend our best wishes to them, and also thank the agency in Greenland, Eimskip Greenland Portagency, for arranging a smooth and timely transfer. Following this, we will proceed directly to the 53°N Observatory to complete the remaining mooring operations in the area.

On behalf of all participants of RV *MARIA S. MERIAN*, best regards.

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