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One could say indeed that the search of the eddy was a tedious action. Having used various methods, having searched in different areas, using larger and smaller grids we finally were successful. Comments from land arrived, expressing some astonishment about our seemingly strange courses, which are visible worldwide via the web.

An important clue we found during the recovery of one of the moorings. The autonomous profiling instrument that was expected near the surface was not there but at a deeper location. This can happen if a current event hampers the upward movement. The rim of an eddy is related to such an eddy event, and because of our suspicion we immediately performed a CTD profile close to the mooring site. This did not result in an unambiguous decision, and so we continued the mooring work and the eddy search according to our programme. However, further eddy searching gave no positive result. But at least there was enough time to allow an inspection of the recorded mooring profiles. These showed an eddy passing through the mooring a number of times, and the eddy could be identified as a strong one. Thus the single CTD measurement at the mooring site gained increased importance.

We constructed a triangle grid with 3.5-mile station distances around this point, to which we had to steam back to the west for 60 miles (with mixed feelings). Numerous stations were needed to resolve position and extent of the eddy that was recognised as the structure searched for, and this was located slightly further south than originally assumed. After having found its centre, we performed a transect across it with a station distance of only 1.2 miles, appropriate for the size of the structure. The complete set of water analysis expertise on board was in use. Apart from the physical parameters, different nutrients, oxygen, bacteria, plankton and various tracers were investigated. The research time within the eddy was limited by the remaining part of the large zonal transect, but we were happy enough to be able to perform stations over the full diameter of the eddy.

The steaming time eastwards which followed was a necessary, desired and well deserved break of six valuable hours for the water sampling scientists who were exhausted by the extremely rapid station sequence in the eddy. Thereafter, the detailed schedule was easy to plan, and under best conditions - that is low winds and calm sea - the zonal transect ended near Bear Island.

Those returning to their home countries on Sunday will presumably arrive there earlier than this letter will be delivered to its addressees; those staying on board will already be at work near Svalbard. Together with them, I send my last greetings from Polarstern.

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