

Subproject: The function of a polynya: deployment of moorings in Young Sund, NE Greenland

Actual field dates: October, 20-30, 2013
 Field site: Young Sound, NE Greenland
 Number of man-days in the field: 70

Summary:

This project is studying polynyas. A polynya is an ice-free site in an otherwise ice-covered area. This particular polynya studied is located outside the Young Soundfjord in NE Greenland and is maintained by high winds blowing the newly formed sea ice away from the area. We deployed various moorings covering measurements of current velocities, salinity and temperature conditions throughout the 350 m deep-water column year round. Current velocities, temperature and salinity profilers will make profiles salinity every hour until we get here again in spring. We also deployed mass balance buoys equipped with weather stations, ultrasonic sensors etc. enabling the measurements of weather conditions, snow and ice depth as well as temperatures within the snow and sea ice. Many of the data will be transmitted to satellites and received by our colleagues in warm offices back home. Finally, we brought a newly developed device called the HARP that will be deployed for the first time in the field. It is a device measuring salinity and temperature conditions at high resolution in the sea ice itself. We were lucky with the weather. When we arrived sea ice was only patchy distributed in the fjord. Due to dropping air temperatures and calm weather sea ice formed almost everywhere in the fjord. In places up to 25 cm. Further out of the fjord there are still open water though. This enabled us to deploy all equipment in the ice and hopefully it still is around when we go up in the spring to recover it and the data collected.

Photos:

- Fig.1: Study site – Young Sound, NE Greenland
Credit: - Søren Rysgaard
- Fig. 2: Ivali Lennert on thin ice.
Credit Søren Rysgaard
- Fig. 3: The Russians are deploying moorings – and they are good at it!
Credit: Søren Rysgaard

Participants:

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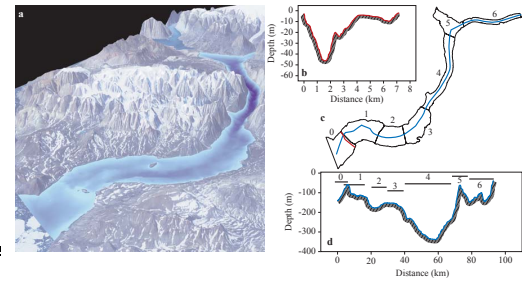


Figure 1



Figure 2



Figure 3