

Subproject: Mercury transport and transformation across the sea ice environment

Actual field dates: April 6-16, 2013

Field site: Kanajorusuit Fjord

Number of man-days in the field: 15

Summary:

Snow, sea ice brine and seawater samples were collected at a landfast ice site. Vertical profiles of two icebergs and the water column near Narssap Sermia were also collected. Analysis of mercury showed high enrichment in sea ice brine, similar to the results obtained in the Beaufort Sea. Mercury concentrations in icebergs were much higher than the surrounding seawater. We also analyzed several other trace elements including iron in iceberg related samples. One problem encountered was the Milli-Q water in the GINR laboratories, which contained higher mercury background than the level we could use for seawater studies. Nevertheless, the preliminary data collected from this study will help us design future studies in the region, with a particular focus on how sea ice glacier melt affect mercury and other trace elements in the fjord.

Photos:

Fig.1: Location of the mercury sites in the Kanajorsuit Fjord, Greenland

Credit: Fei Wang

Fig. 2: Coring an iceberg.

Credit: Odile Crabeck

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Figure 1



Figure 2