PROJECT SUMMARY REPORT - 2013 NUUK CAMPAIGN

Subproject: Underwater eddy correlation measurements of ice-ocean heat and mass exchange

Actual field dates: Mar.15-April 12, 2013
Field site: Kanajorusuit Fjord
Number of man-days in the field: 44

Summary:
Underwater eddy covariance measurements were made in Kanajorsuit Fjord (a tributary of Godthäbsfjord) from Mar. 15 – Apr. 12. The field site was not the originally intended site; the Kobbefjord site we initially planned to visit did not have a stable ice cover, so we were forced to find an alternative site. This alternative site was well sheltered, and had a stable ice cover (>40 cm), but had its own challenges. Currents under the sea ice were generally quite low (typically <2 cm/s, occasionally reaching 5 cm/s), which was not ideal for eddy covariance. The ice was also quite fresh, suggesting the influence of river runoff. This was also the initial field deployment of the eddy system, and technological difficulties were encountered. As a result, the dataset is not of high quality, however the expedition was successful in a number of ways. First, it gave valuable experience using the eddy equipment, which will be useful in future deployments. Also, deficiencies identified with the system during this experiment are being corrected, and will lead to high quality datasets in the future. This was an ideal location to test this system due to the close proximity to logistical support. The lessons learned from this expedition are expected to to be extremely valuable in future endeavors.

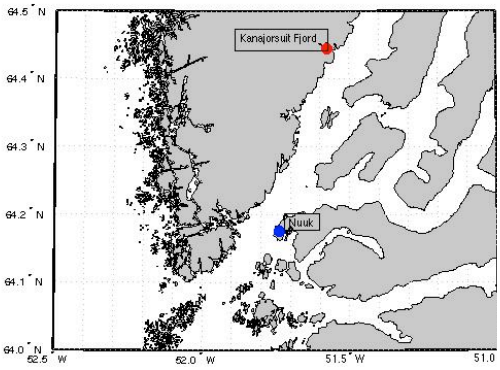

Figure 1

Figure 2

Photos:
Fig.1: Location of the sampling site in the Kanajorsuit Fjord, Greenland
Credit: Brent Else
Fig. 2: The underwater eddy covariance system deployed at the field site.
Credit: Brent Else
Fig. 3: The sampling site at Kanajorsuit Fjord
Credit: Brent Else

Figure 3

Participants:
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