Subproject: Greenhouse gases (CO$_2$, N$_2$O, CH$_4$) dynamics within fjord sea ice

Actual field dates: Mar.5-April 16, 2013
Field site: Kanajorusuit Fjord
Number of man-days in the field: 72

Summary:
The inorganic carbon dynamics within sea ice has been studied using the total alkalinity (TA) and total dissolved (TCO2) inorganic carbon has been measured within bulk sea ice and in the underlying seawater. The exchange of CO$_2$ between the ice and the atmosphere were estimated using the chamber technique. CH$_4$ and N$_2$O concentrations were also sampled within sea ice and seawater.

Analysis are still on going.

Photos:
Fig.1: Location of the sampling site in the Kanajorusuit Fjord, Greenland
Credit: Brent Else
Fig. 2: Unloading equipment and setting up at the field site.
Credit: Shelley Carpenter
Fig. 3: Nix Geilfus and Odile Crabeck (CEOS) collecting water samples through the ice on Kanajorusuit Fjord
Credit: Shelley Carpenter

Participants:
Nicolas-Xavier Geilfus, Odile Crabeck, Søren Rysgaard

Acknowledgements:
Canada Excellence Research Chair (CERC) programme.

For more information contact: Nicolas-Xavier Geilfus: geilfus@biology.au.dk