



PROJECT SUMMARY REPORT - 2015 STATION NORD CAMPAIGN

Subproject: Greenhouse gas exchange over the Arctic Marine waters – focusing on CO₂ and CH₄ (GRAM)

Actual field dates: April 11 – still measuring

Field site: Station Nord, Greenland

Number of man-days in the field: Lise Lotte Sørensen: 21 days, Bjarne Jensen: 21 days, Stine Højlund Pedersen: 21 days. UoM: Tim Papakyriakou: 21 days

Summary:

A mobile flux tower was installed on the sea ice in mid-April with two Licor instruments (one enclosed sampler 7200 and one open path sampler 7500A) and two sonics to measure fluxes of CO₂ and heat over the snow covered sea ice in spring and summer 2015 with a gap in July due to difficulties in access to the station with batteries. In May a CH₄ instrument was added to the instrument package to also measure CH₄ fluxes. The instruments were power using batteries and solar panels. We had problems with one of the sonics so for the data analysis we will use the same sonic for all instruments. In end of May the tower was moved from the ice to the shore. The instruments have been measuring most of the summer and we try to continue sampling until December 2015, where the tower will be taken down and instruments will be calibrated. We have just started the data analyzes, where the first task is to compare data from the two different CO₂ sampler.

Photos:

Fig.1: Position of the flux tower. Credit:

Fig. 2: Preparation of the AUV Deployment with Søren Rysgaard, Tim Papakyriakou is adjusting the enclosed path CO₂ instrument in the flux tower at Station Nord. Credit: Lise Lotte Sørensen

Fig. 3: The mobile flux tower with CO₂ and CH₄ instruments in winter and summer. Credit: Bjarne Jensen

Participants:

Lise Lotte Sørensen, Bjarne Jensen, Stine Højlund Pedersen, Tim Papakyriakou



Figure 1



Figure 2

Acknowledgements:

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Figure 3