PROJECT SUMMARY REPORT - 2015 SERF CAMPAIGN

Subproject: Phosphate removal by ikaite precipitation

Actual field dates: January 28- March 5, 2015
Field site: Sea-ice Environmental Research Facility (SERF), University of Manitoba, Winnipeg (Canada)
Number of man-days in the field: 40

Summary:

During the ridge experiments at SERF, eleven artificial ridges were sampled in total. Sampling of each ridge consisted of taking C-band scatterometer measurements at a range of incidence angles, creating a 3D point cloud model of the ridge with 2 mm resolution, physically sampling the ridge and the environment surrounding the ridge, and sampling 3 of the ridges with snow and without snow. The second ice sheet (February experiment) was extremely saline at the surface, likely due to a snow event during growth that caused brine expulsion without frost flower formation to occur. This extremely saline surface increased microwave backscatter at the surface compared to the December experiment (first ice sheet). This project collected extremely unique data that is new to remote sensing of sea ice. Results from this project will be published in 2015.

Photos:

Fig.1: Sea ice growing under calm condition at SERF. Credit: Yubin Hu
Fig. 2: Massive frost flower growing on sea ice surface Credit: Yubin Hu
Fig. 3: Dense ice coring during the experiment Credit: Yubin Hu

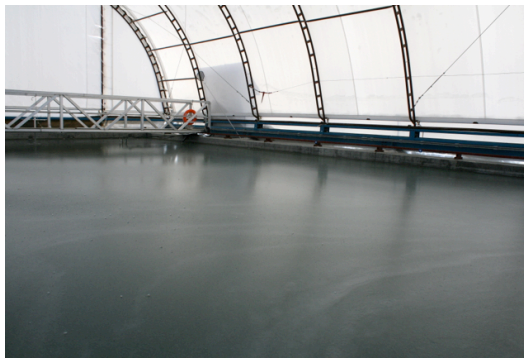

Figure 1

Figure 2

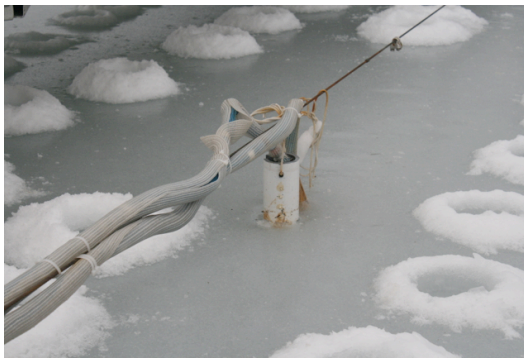

Figure 3

Participants:

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