

## ASP PROJECT SUMMARY

Name of all actual participants listed by institution	AU: Stine Højlund Pedersen UoM: GINR: Other :
Actual field work start / end dates	25 February – 20 March 2014
Actual field work site	Qaanaaq, Qassiarsuk/Narsarsuaq, Kangerlussuaq in North - , South -, and West Greenland, respectively, and Tasiilaq in South-East Greenland.
Number of man-days used in field (specify for participants)	Stine Højlund Pedersen : 24 days

### Short summary, main achievements and difficulties encountered during field season (150 - 250 words)

Snow data collection on Greenland scale

In February through March 2014, I conducted a snow field campaign covering different regions in the ice-free area of Greenland. In order to cover the extremes in terms of snow regime in Greenland I collected snow observations in dry and high-Arctic Qaanaaq in North Greenland (mean snow depth ~5 cm) and in the snow rich and mild region around Tasiilaq (mean snow depth ~100 cm) in South East Greenland which receives the highest annual precipitation in Greenland, excluding the Ice Sheet. In between these two extreme conditions I made observations in the extremely dry polar desert and continental climate in Kangerlussuaq (mean snow depth ~10 cm), and the warmer inner fjord area of Narsarsuaq and Qassiarsuk (mean snow depth ~30 cm) with relatively deep snow in varied terrain with 2-3 m tall brushed or small trees which captures wind-transported snow.

These collected snow observations of snow depth, snow density, stratigraphy, and snow-water-equivalent will be used as either assimilation data or validation data in the snow modelling work in the domain covering the entire Greenland.

Stable weather conditions made such a roundtrip in both West and East Greenland by aero plane possible with only four hours delay in Tasiilaq. A range of helpful, dedicated local contacts made the transport in each of the four regions possible by snow mobile, dog sledge, and boat.

**Photos** (1 – 3 relevant photos in high resolution. Attach all photos as individual files)

Photo 1 (map/study area)



Credit: Stine Højlund Pedersen

Caption: Map of flight routes to Qaanaaq, N-Greenland; Tasiilaq, SE-Greenland; Kangerlussuaq, W-Greenland; and Qassarsuk, S-Greenland, 25 February - 20 March 2014.

Photo 2 (field work)



Credit: Stine Højlund Pedersen

Caption: 7 cm deep snowpit 20 km west of Qaanaaq, N-Greenland.

Photo 3 (field work)



Credit: Kuluk Frederiksen

Caption: 2-3 m tall Mountain birch near Qingua, S-Greenland

**Acknowledgements** (funding agencies, etc.)

Local accommodation and logistic support from Pele (Tasiilaq), Hans Jensen (Qaanaaq), Mads Ole Kristensen & sledge dogs (Qaanaaq), Jørgen Larsen (Kangerlussuaq), and Kuluk and Ellen Frederiksen (Qassiarsuk)