

Report – field campaign spring 2014

(March 27th – April 13th)

Participants on the spring 2011 field campaign:

- Roman Finkelburg, Universidad Politécnica de Madrid
- Rebecca Möller, RWTH Aachen University
- Marco Möller, RWTH Aachen University
- Francisco Navarro, Universidad Politécnica de Madrid
- Evgeniy Vasilenko, Universidad Politécnica de Madrid

Associated colleagues:

- Marcel Schütz, Arctic and Antarctic Operations Schütz

Logistic support:

- Jon Ove Hagen, University of Oslo

Objectives:

- Documentation and analysis of winter accumulation on Tellbreen, Blekumbreen, Drønbreen, Møysalbreen, Longyearbreen, Elfenbeinbreen and Sveigbreen
- Investigation of mass balances on Elfenbeinbreen and Sveigbreen
- Meteorological and GPR measurements
- Investigation of surface energy balance on Elfenbeinbreen
- Investigation of spatial variability in local air-temperatures fields in Sabine Land (Elfenbeinbreen and Sveigbreen)
- Preparation for future assessment of ice dynamic information

Conducted fieldwork:

- Gathering data on snow water equivalent distribution of winter accumulation on Tellbreen, Blekumbreen, Drønbreen, Møysalbreen, Longyearbreen, Elfenbeinbreen and Sveigbreen
- Installation and metering of ablation stake networks on Elfenbeinbreen and Sveigbreen
- Installation of an automatic weather station (AWS) on Elfenbeinbreen
- Installation of air-temperature measurement networks on Elfenbeinbreen and

Sveigbreen

- Gathering data on ice stratigraphy and depth on Elfenbeinbreen and Sveigbreen using GPR measurements

LOG of activities:

Date	Workings	Weather	Site
27.03.2014	Arrival in LYR (Marco, Rebecca, Roman)	windy, cloudy, -4 °C	LYR
28.03.2014	Preparing field campaign	windy, cloudy, -10 °C	LYR
29.03.2014	Trip to Tellbreen/Blekumbreen and back to Longyearbyen; SWE measurements	windy, cloudy, partly sunny, -14 °C	LYR/ Tellbreen/ Blekumbreen
30.03.2014	Trip to Drønbreen/Møysalbreen and back to Longyearbyen; SWE measurements	light winds, partly cloudy, -10 °C	LYR/ Drønbreen/ Møysalbreen
31.03.2014	Trip to Longyearbreen and back to Longyearbyen; SWE measurements	sunny, -12 °C	LYR/ Lonyearbreen
01.04.2014	Recovering; Preparing field campaign	sunny, -13 °C	LYR
02.04.2014	Preparing field campaign; Arrival in LYR (Evgeniy, Francisco)	light winds, cloudy, -14 °C	LYR
03.04.2014	Trip to Elfenbeinbreen; setting up basecamp	windy, partly cloudy, -16 °C	LYR/ Elefenbeinbreen
04.04.2014	Installation of the AWS at Elfenbeinbreen	sunny, light winds, windy during night, -16 °C	Elfenbeinbreen
05.04.2014	Finishing AWS setup; GPR measurement on Elfenbeinbreen	sunny, light winds, windy during night, -17 °C	Elfenbeinbreen

06.04.2014	Installation of 6 ablation stakes with attached air-temperature sensors and 7 SWE measurements at Elfenbeinbreen; checking AWS; Installation of 5 ablation stakes with 3 attached air-temperature sensors and 5 SWE measurements on Sveigbreen; GPR measurements on Elfenbeinbreen	sunny, light winds, windy during night, -22°C	Elfenbeinbreen/ Sveigbreen
07.04.2014	checking AWS; GPR measurements on Elfenbeinbreen and Sveigbreen	sunny, light winds, windy during night, -25°C	Elfenbeinbreen/ Sveigbreen
08.04.2014	Dismounting basecamp; trip back to Longyearbyen	cloudy, light winds, light snow, whiteout, -10°C	Elfenbeinbreen/ LYR
09.04.2014	Recovering	cloudy, light winds, light snow, light whiteout, 0°C	LYR
10.04.2014	Clearance and stocktaking	cloudy, light winds, light snow, -10°C	LYR
11.04.2014	Trip to Barentsburg and back to Longyearbyen	cloudy, windy, snow, whiteout, -10°C	LYR/ Barentsburg
12.04.2014	Clearance and stocktaking	sunny, partly cloudy, light winds, -14°C	LYR
13.04.2014	Departure from LYR	sunny, partly cloudy, windy, -17°C	LYR

Photos:



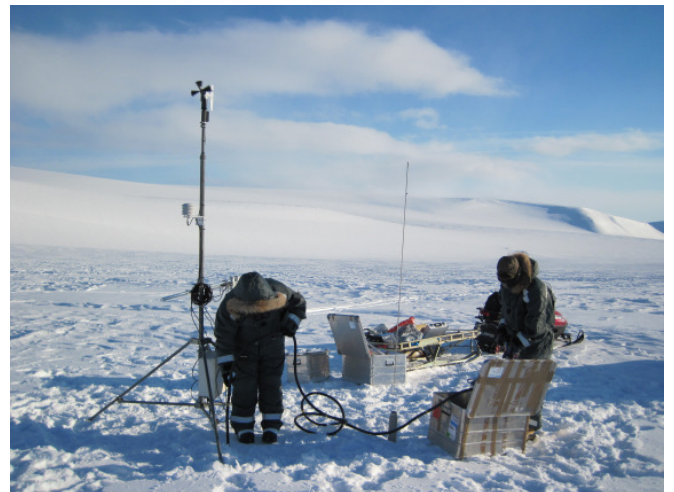
*Drilling core for SWE measurements
(Marco Möller, Roman Finkelburg)*



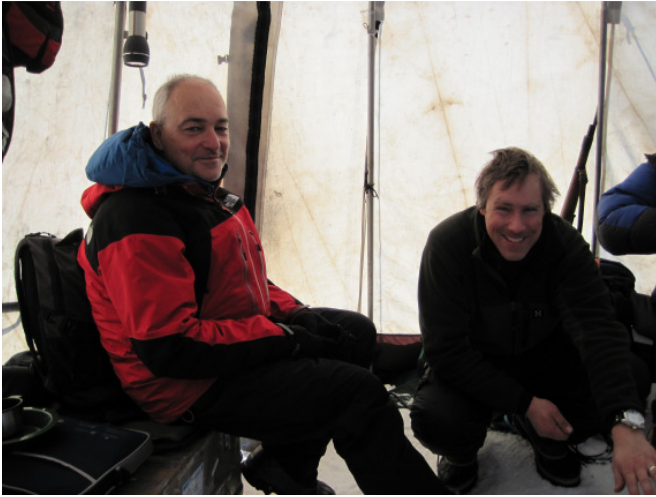
*Mounting air-temperature sensor on ablation stake
(Rebecca Möller)*



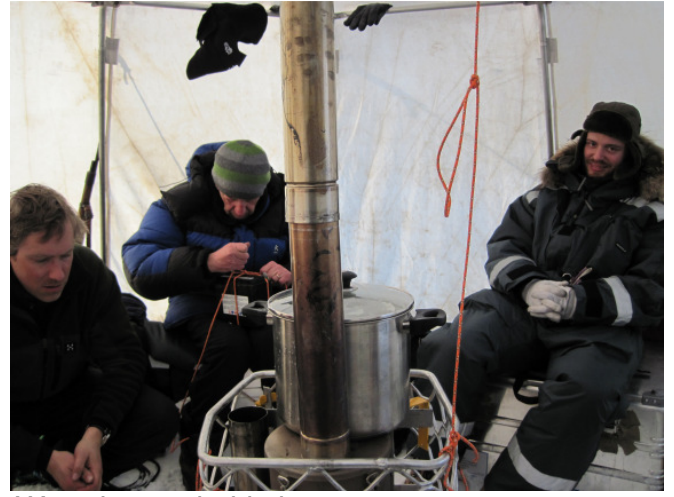
*Preparing GPR for measurements
(Evgeniy Vasilenko, Francisco Navarro)*



*Mounting automatic weather station on
Elfenbeinbreen
(Rebecca Möller, Roman Finkelburg)*



*Warming up in kitchen tent
(Francisco Navarro, Marco Möller)*



*Warming up in kitchen tent
(Marco Möller, Evgeniy Vasilenko, Roman Finkelburg)*



*Warming up in kitchen tent
(Roman Finkelburg, Rebecca Möller)*



*Gathering in basecamp
(Marco Möller, Rebecca Möller, Roman Finkelburg, Francisco Navarro, Evgeniy Vasilenko)*