

TO EGRIP STEERING COMMITTEE MEMBERS, DANISH AND GREENLANDIC AUTHORITIES.

EGRIP (Expedition Permit C-24-05) – SITuation REPort (SITREP) no. 10, Sunday 30 June 2024

This SITREP covers the period 24 – 30 June 2024 (inclusive).

Movement of personnel:

25 June: Marie Kirk (DK) from Copenhagen to Kangerlussuaq by Air Greenland.

25 June: Thomas Blunier (DK) from Kangerlussuaq to Copenhagen by Air Greenland.

Movement of cargo:

25 June: (AWB 631-28378663) 241 kg of frozen ice core samples for University of California, Irvine, from Copenhagen to Kangerlussuaq by Air Greenland.

EGRIP camp activities:

The extension of the main borehole casing to surface is finalized, the casing is supported by densely packed snow in the trench and is rising some 2 meters above the surface that has been leveled. Metal grids have been placed around the casing to allow for future identification by radar. Most vehicles have been maintained, and the mechanics garage has been made ready for inventory. A first weatherport has been taken down leaving four erected on surface.

Drilling:

The S10 drilling test with the intermediate drill in the white tent is now terminated. Many different components and configurations have been tested and tried out, the drill control box and software are fully integrated, and experience has been obtained with the reamer and drilling with liquid in the borehole. Final logged depth of the S10 borehole is 82.89 m. Now starts the packing down phase.

Science:

The density of the S10 core has been obtained in 55 cm resolution. The core density is seen to increase faster with depth than at non-ice-stream sites such as the GRIP site. Water isotope samples have been scraped from the core surface in 55 cm resolution. The ECM profile of the S10 core has been obtained with a hand-held ECM instrument. Three repeated measurements were obtained for each 55 cm core section. Experiments were done with scraping and or turning the core before analysis, but, unfortunately, the obtained profiles appear rather inconsistent. The reproducibility of the measurement is low with both background levels and spike levels varying significantly from measurement to measurement. Spikes appear in the profile that cannot be matched to the ECM of the main core, and in general it is not possible to match up the main core and S10 ECM profiles. The one significant spike in the EGRIP main core ECM profile from the Laki 1783 AD eruption does not stand out in the S10 ECM profiles. Drill liquid on the core does not seem to have any noticeable effect on the measurement. A temperature logging of shallow hole S3 has been carried out. Knut's radar team has made several successful radar surveys beyond the NEGIS shear margin SE of camp and a profile almost 100 km upstream NEGIS. The last of the ApRES instruments deployed last year has been picked up some 30 km NW of camp downstream NEGIS. Preparations are made for several surveys closer to camp.

EGRIP Camp Population: 14

Weather at EGRIP:

A mixture of overcast, snowfall and sunny periods but outdoor activities have been possible throughout the week. Temperatures, -19 to -3 C. Wind 0 to 16 kt from varying directions but mostly from SW.

EGRIP team contact info:

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Kangerlussuaq activities:

Coordinating overlap between FOM Thomas Blunier and Marie Kirk. Picking-up ice core samples and storing in our freezer. Handling everyday FOM tasks like e.g. purchases, shipping from DK, uploading daily to the website, and coordinating with EGRIP camp.

Weather in Kangerlussuaq/SFJ:

Changing weather between cloudy and overcast days with heavy rain, to warm and sunny days. Wet and muddy all over Kangerlussuaq.

Mosquito situation: Still quite low.

The EGRIP FOM office is open:

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Prepared by the Kangerlussuaq field ops. Manager Marie Kirk and field leader Anders Svensson