

TO EGRIP STEERING COMMITTEE MEMBERS, DANISH AND GREENLANDIC AUTHORITIES.

Expedition Permit C-23-7 EGRIP – SITuation REPort (SITREP) no. 08, Sunday 11 June 2023

This SITREP covers the period June 05 – June 11, 2023 (inclusive).

Movement of personnel:

06 June Thomas Blunier (DK/CH) from Copenhagen to Kangerlussuaq by Air Greenland.

09 June Iben Koldtoft (DK) from Kangerlussuaq to Copenhagen by Air Greenland.

Movement of cargo:

10 June 118 kg various cargo including power logger for solar panels from Copenhagen to Kangerlussuaq by Air Greenland (AWB 631-28177730)

EGRIP camp activities:

Monday, we unexpectedly received a request from a R66 helicopter pilot from Icelandic Volcano Heli, who wanted to make a fuel stop at EGRIP on route from Thule to Iceland. The weather was excellent and the crossing of the Inland ice was carried out with a 45 minutes fuel stopover at EGRIP. Sunday morning, the main generator could not restart after an oil check. It showed up to be a defect control panel that caused the troubles, so it was replaced. Friday, an ApRES radar was re-deployed in camp to detect any changes associated with the reaching of bedrock for the drilling. Otherwise, with a low camp population, no ongoing surface programs and no planned flights, it has not been the busiest week of the season.

Drilling:

Monday and Tuesday the drilling proceeded with a daily production of more than 10 m. Wednesday; the cores became shorter as the cutters had difficulties engaging. Thursday the difficulties continued with a short core drilled in the morning and no core retrieved in second attempt. After lunch, a magnet was lowered into the hole to see if a dropped metal part in the hole could be the cause of the problem, but nothing was recovered. After drilling 1.6 m of core at around 20:00 the current suddenly went high and the drill was stuck. After more than an hour and several attempts of pulling with up to 2400 kg without any noticeable effect, it was decided to add 2 kg of frozen glycol to the borehole. While preparing the glycol, the drill did, however, free itself. Friday the borehole was logged again, and over the weekend it was filtered. A new stock of frozen glycol pellets was prepared and the shorter Hans-Tausen drill was made ready. Saturday, the acoustic drill liquid level detector was mounted in the inclined trench and it appears functional. Tests run over the following days will show how consistent the measurement is with that obtained with the drill.

Science:

Logging and processing are ongoing together with physical properties analysis. Logging depth from 2573.49 m to 2610.13 m and processing (DEP + cutting/packing) depth from 2569.60 m to 2609.20 m. The ice crystals in the core have rapidly increased from millimeter to centimeter sizes, consistent with deep ice cores at other sites with similar warm temperatures. A preliminary matching between the NorthGRIP ECM and EastGRIP DEP records suggests that the oldest drilled ice is in stratigraphic order and more than 115 ka old, but this needs confirmation from isotope measurements. Tuesday, special 'gas loss' samples were taken, sealed in vacuum containers and packed for shipment with other 'cold' gas samples.

EGRIP Camp Population: 14**Weather at EGRIP:**

Over the week, weather has been dominated by blue sky, fairly low temperatures at night and moderate winds. Temperatures -26°C to -16°C and wind 0-14 kt mostly from SW. Sunday, the temperature started to raise, the wind picked up and snowdrift was initiated.

Kangerlussuaq activities:

It has been a quiet week in Kangerlussuaq with preparation of PAX-, cargo- and DV information for the next flight period. Inside the warehouse, retro cargo from EastGRIP camp was organized and cleaned up. The oxygen bottle borrowed last year from the nurse station in Kangerlussuaq was handed back. Hand-over of FOM office from Iben to Thomas. First online meeting with 109th for flight period 3. On Tuesday, Iben and Thomas gave a talk to 10 DIS students and two teachers.

Weather in Kangerlussuaq/SFJ:

Weather has been mostly cloudy/overcast with snow at the beginning of the week turning into rain mid-week. Temperatures close to the freezing point at start of the week increasing to double digits end of the week. Beautiful sunny and mostly mosquito free day on Sunday.

EGRIP camp communication:

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