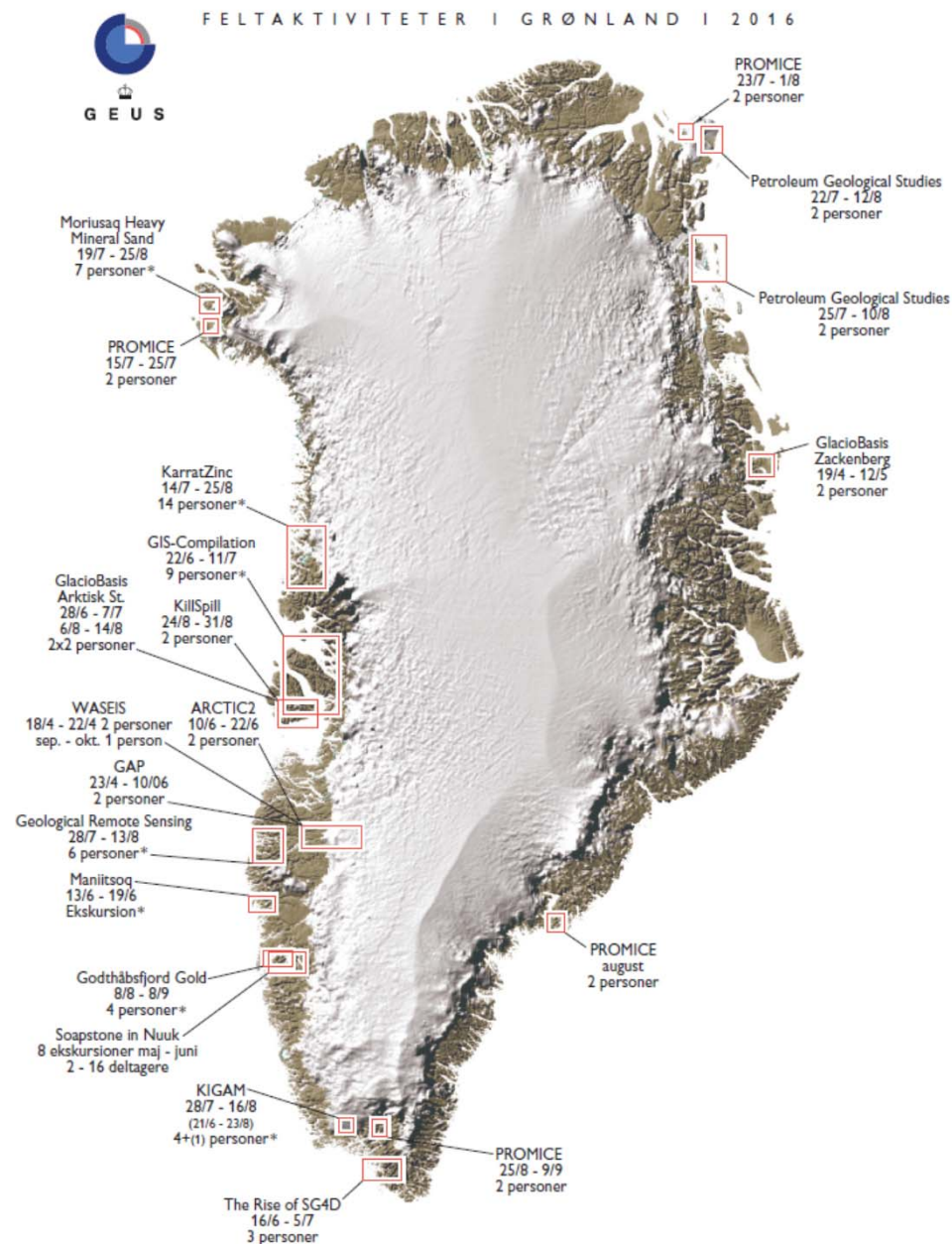
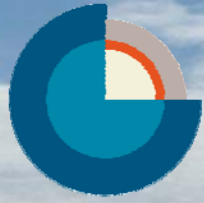


GEUS' fieldwork in Greenland 2017

Jørgen A. Bojesen-Koefoed & Marianne Vestergaard



- 2016: a number of minor activities and a few ones with greater volume
- 2017: very similar to 2016, a number of minor activities and a few ones with greater volume




GEUS

GEUS glaciology fieldwork 2017

Programme for Monitoring of the Greenland Ice Sheet (www.PROMICE.dk)

Glaciobasis

Greenland Analogue Project (GAP)

Greenland Ecosystem Monitoring (GEM)

FirnCover

Retain

Dark Snow

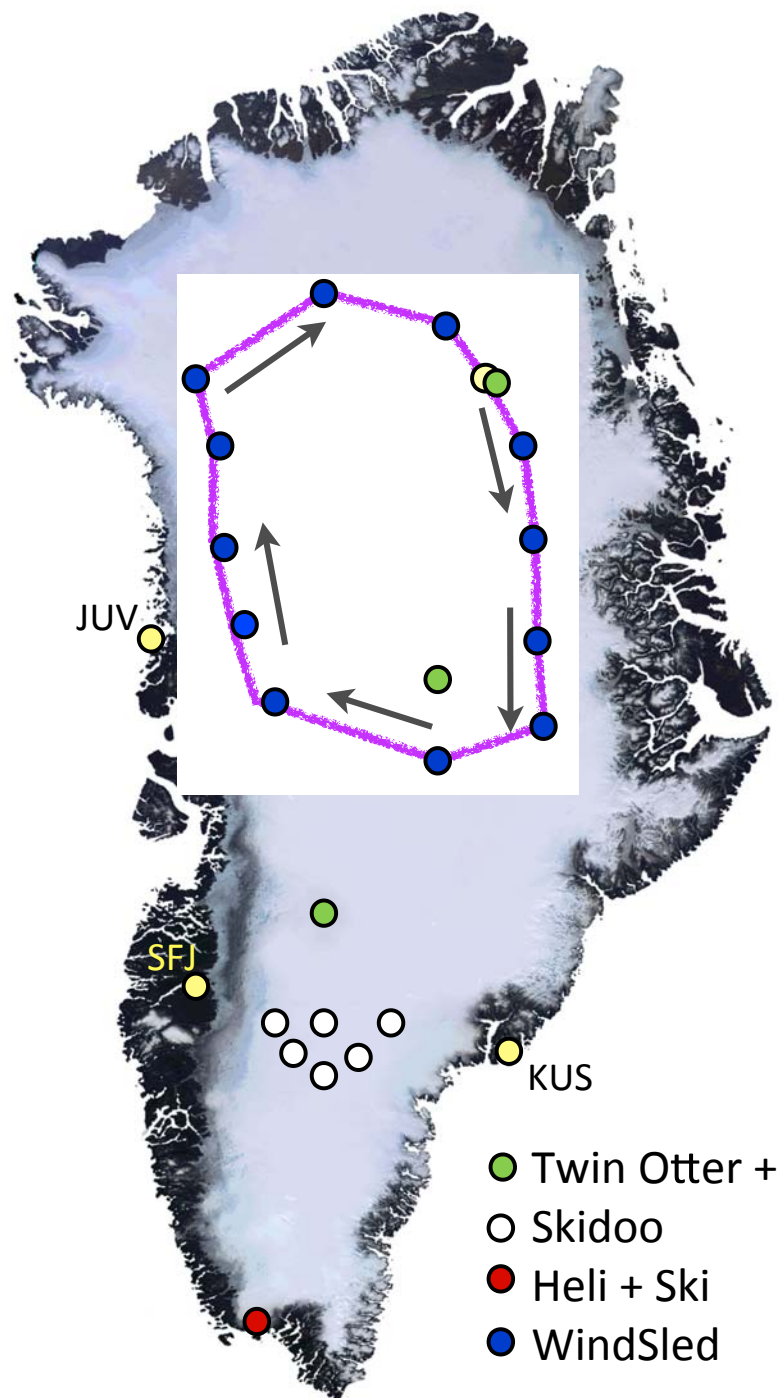
Extreme Ice Survey (EIS)

Water and Sediment Discharge from the Greenland Ice Sheet (WASEIS)

PROMICE
Programme for Monitoring of the Greenland Ice Sheet

Firn coring

- when: Apr + May
- Where
 - A.) W and central Greenland via SFJ
 - B.) South Greenland via UAK
 - C.) Central Greenland via EGRIP
- How:
 - A.) snow mobiles + Twin Otter
 - B.) Helicopter + Skis + B
 - C.) C130 + WindSled
- contact: Jason Box and Dirk van As



Firn coring

- when: Apr+May
- how: snow mobiles, Twin Otter, wind sled?
- logistics contact: Jason Box and Dirk van As

Automatic weather station maintenance

- when: Jul/Aug, or else Apr/May
- how: helicopter
- logistics contact: Michele Citterio (Zackenberg and Disko) or Dirk van As (rest)

Time-lapse camera maintenance

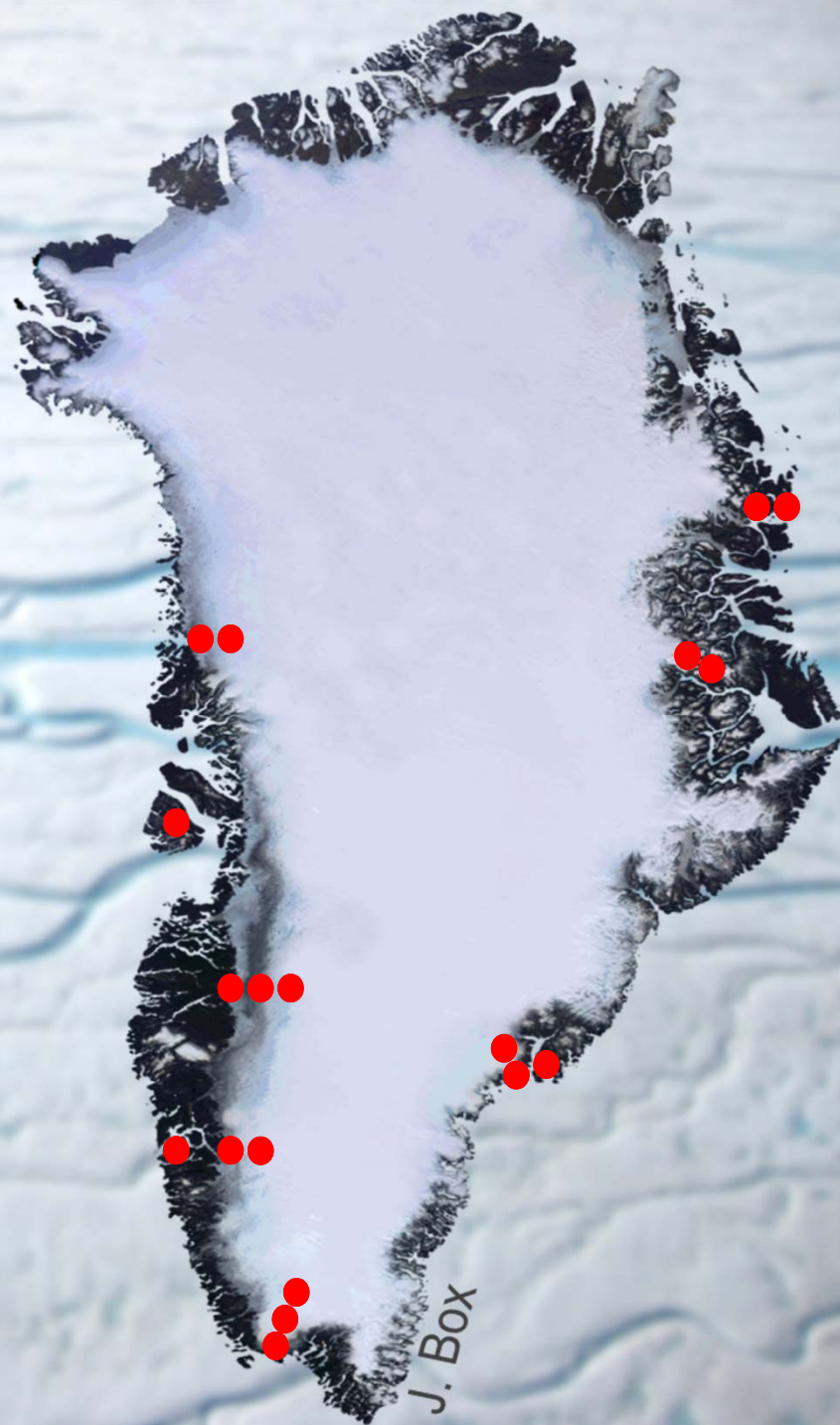
- with weather station maintenance

GPS maintenance

- with weather station maintenance

River discharge station maintenance

- when: Apr-Oct
- how: bicycle
- logistics contact: Dirk van As



Firn coring

- when: Apr+May
- how: snow mobiles, Twin Otter, wind sled?
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Time-lapse camera maintenance

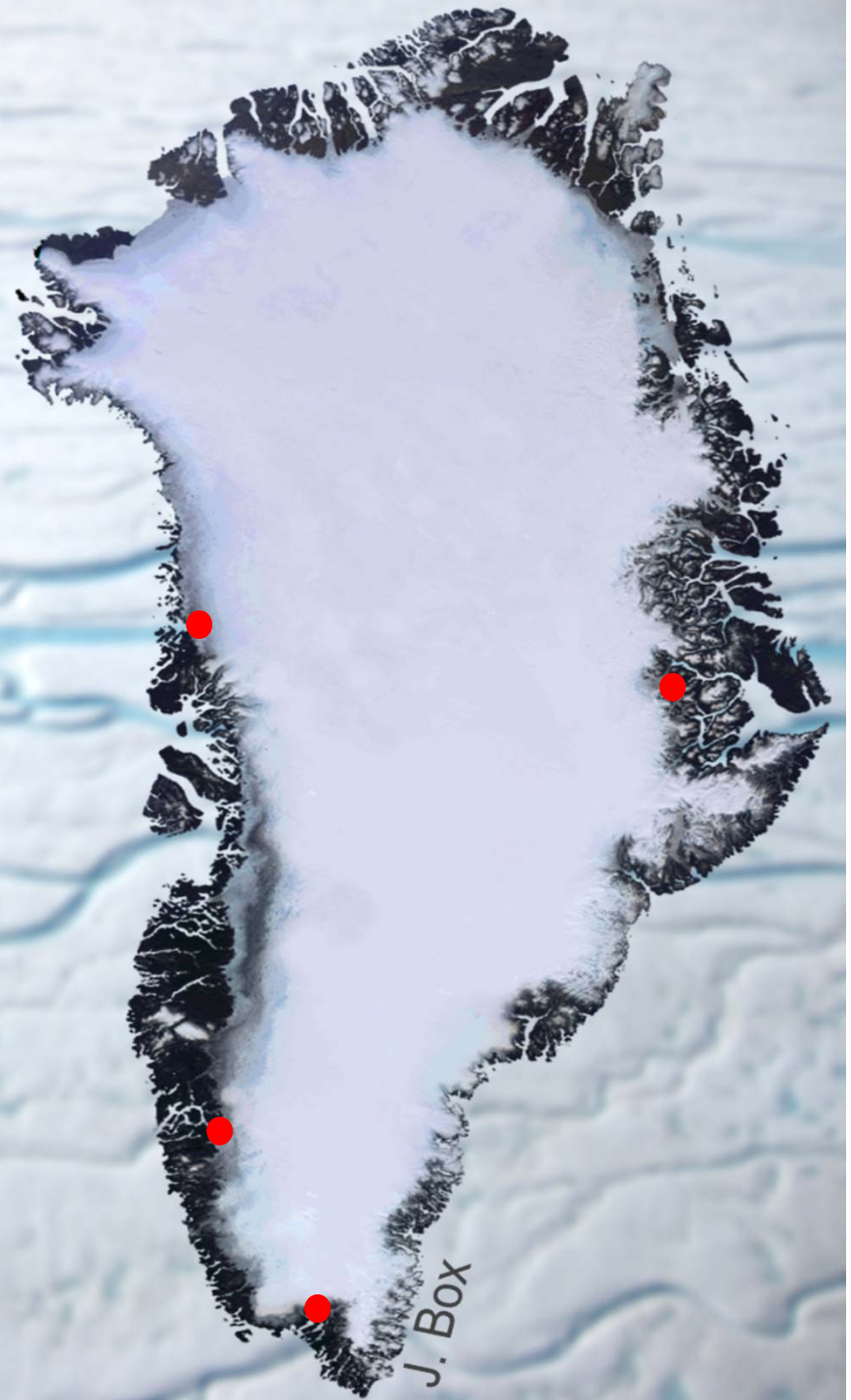
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GPS maintenance

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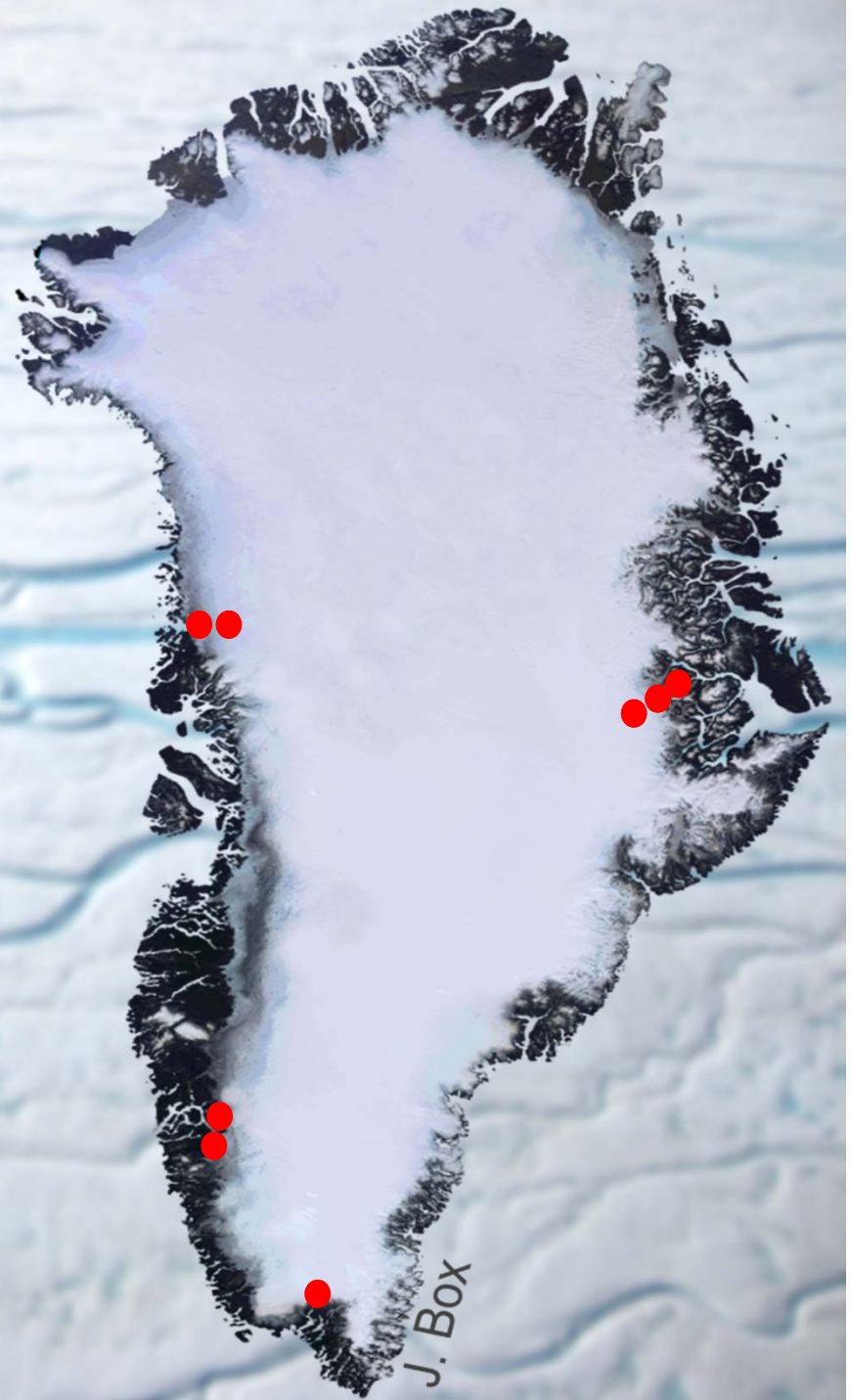
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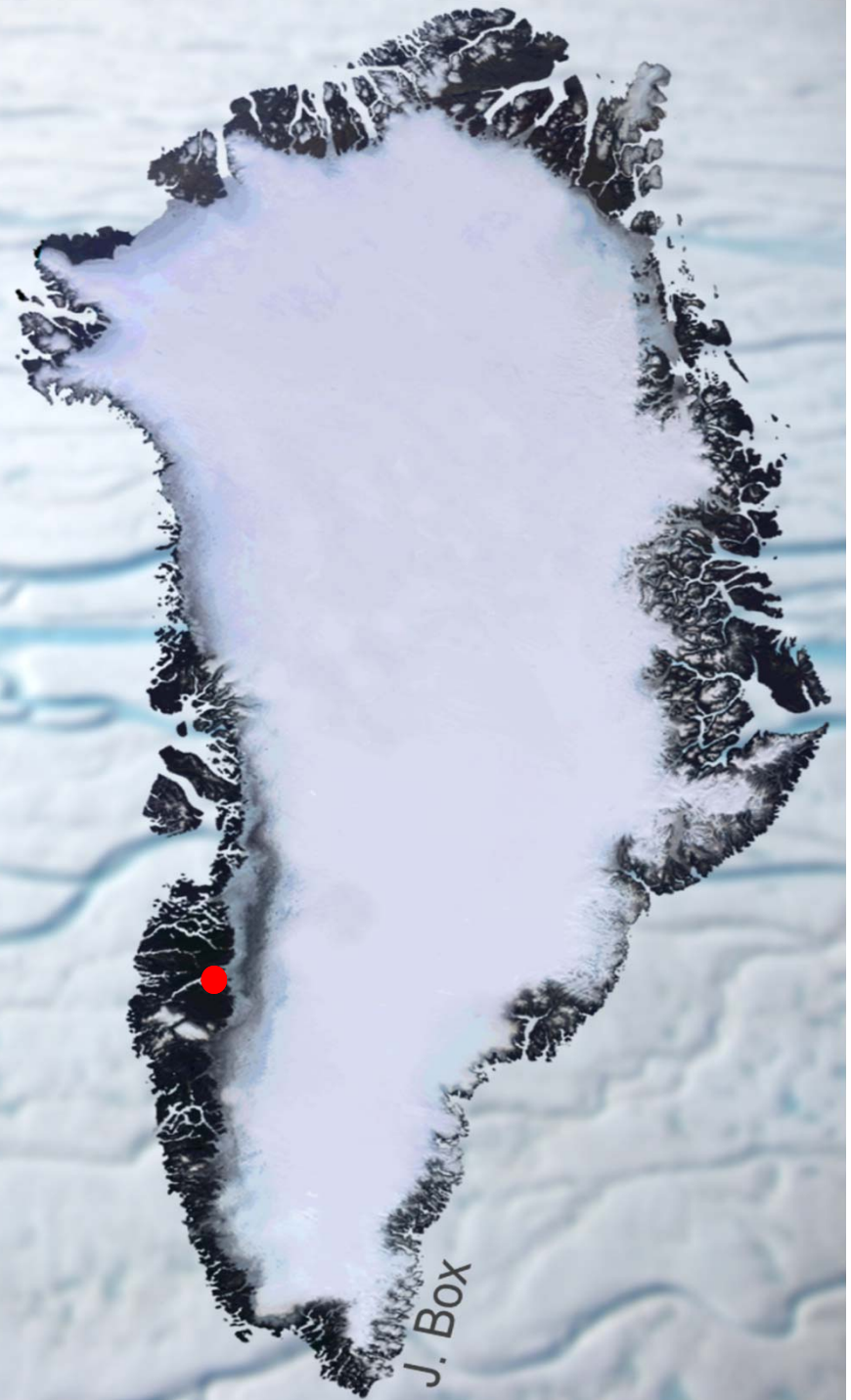
- with weather station maintenance

GPS maintenance

- with weather station maintenance

River discharge station maintenance

- when: Apr-Oct
- how: bicycle
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GLACIOBASIS ZACKENBERG

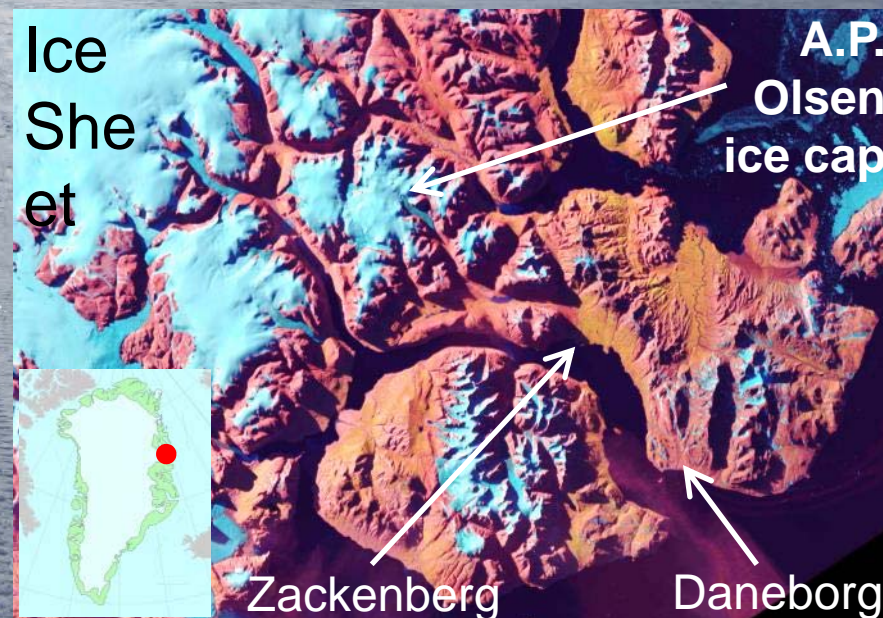


Monitoring of glacier surface mass and energy balance

- running every year since 2008
- 2-3 weeks fieldwork April/May



contact:
Michele Citterio, GEUS
mcit@geus.dk



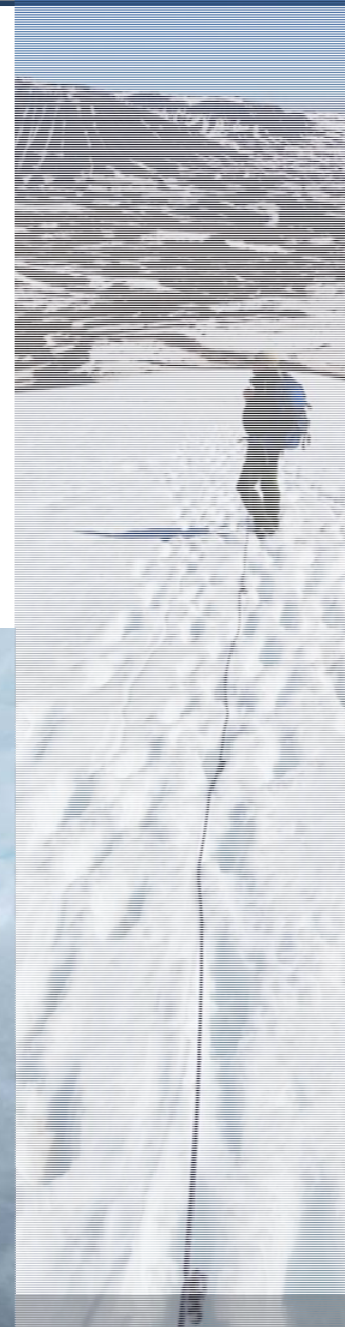


GLACIOBASIS DISKO

Monitoring of glacier surface
mass and energy balance

- pilot start in 2016

contact: Michele Citterio, GEUS (mcit@geus.dk)



Breaking News: INTAROS-project

- INTAROS – Integrated Arctic Observing System
- 5 year EU project. 20 countries (14 EU, 6 non-EU)
- Start December 2016
- GEUS-part mainly Glaciology and Earthquake monitoring by OBS
- Contact:
 - Andreas P. Ahlstrøm (glaciology)
 - Peter Voss (seismology)

Earthquake-monitoring (GLISN)

Denmark: The Geological Survey of Denmark and Greenland – GEUS

Canada: Natural Resources Canada

Germany: GEOFON

Italy: INGV

Japan: JAMSTEC National Institute of Polar Research

Norway: NORSAR

Switzerland: Swiss Seismological Service, ETHZ

Poland: Institute of Geophysics, Polish Academy of Sciences – IGPAS

U.S.A.: IRIS PASSCAL LDEO Columbia University

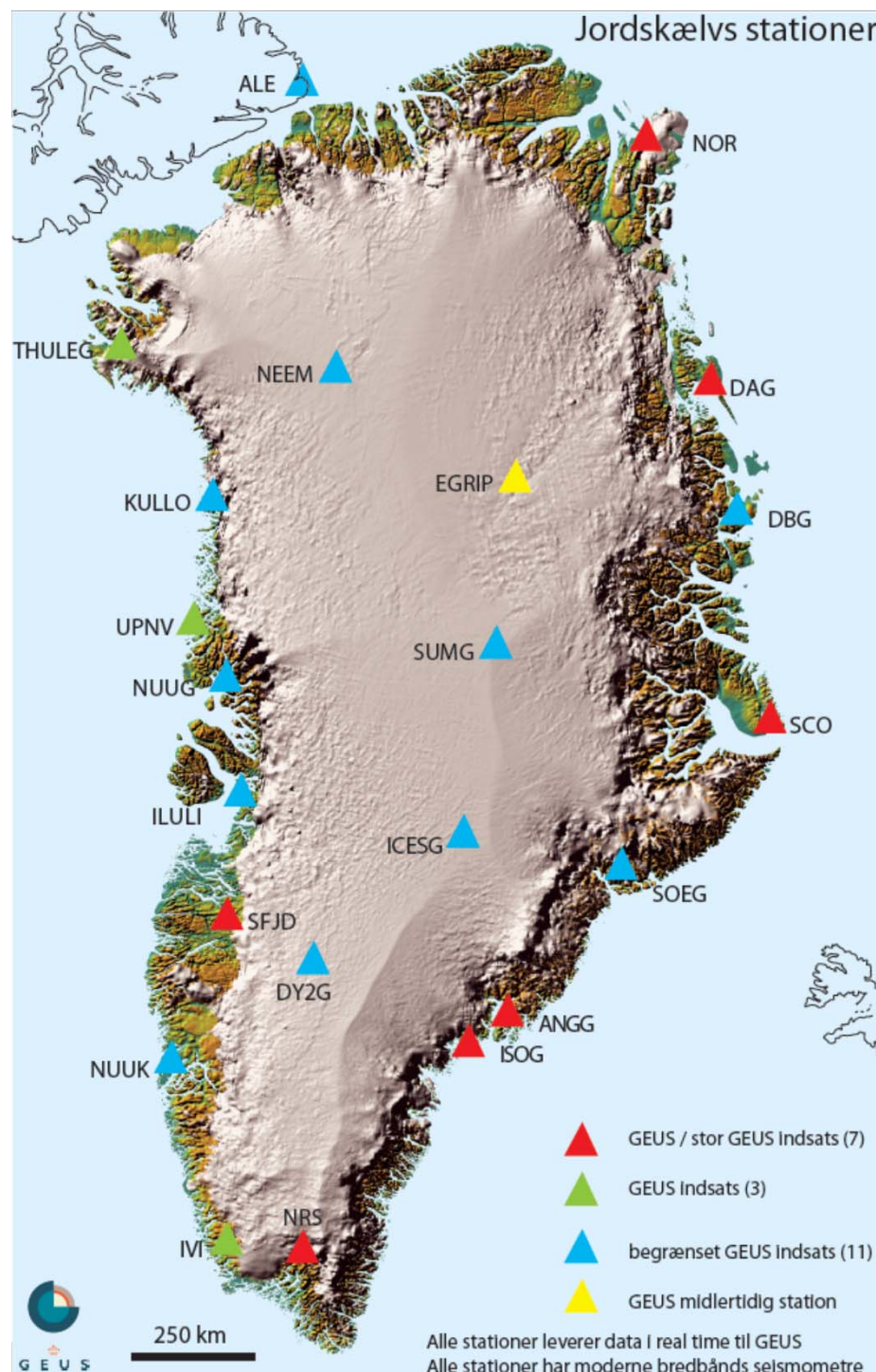
France: GEOSCOPE – Institute de Physique du Globe de Paris

South Korea: Korean Polar Research Institute

Funded by a US\$ 2 mill grant from NSF and contributions from the other countries.

Routine maintenance

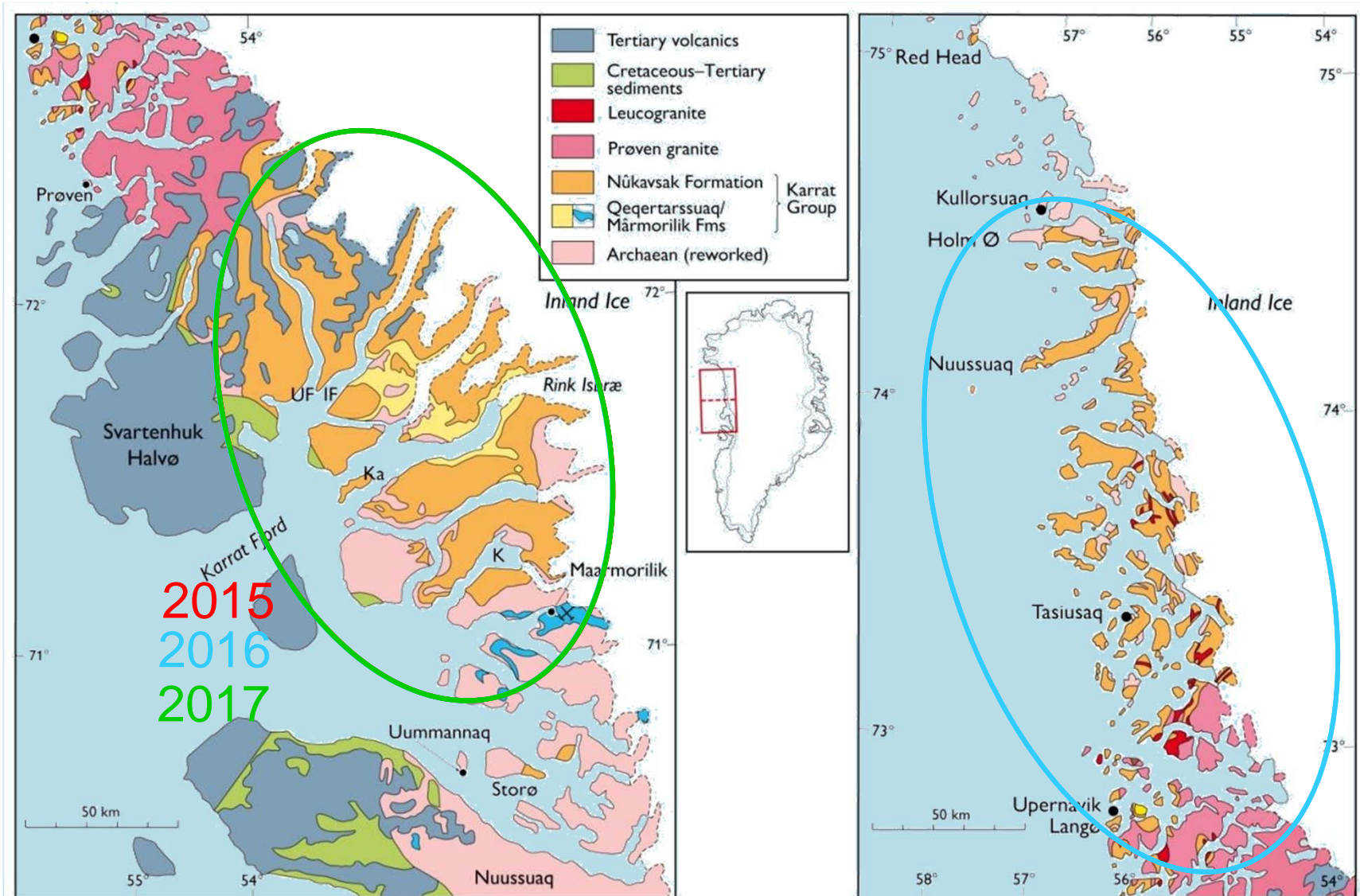
Contact: Trine Dahl Jensen tdj@geus.dk



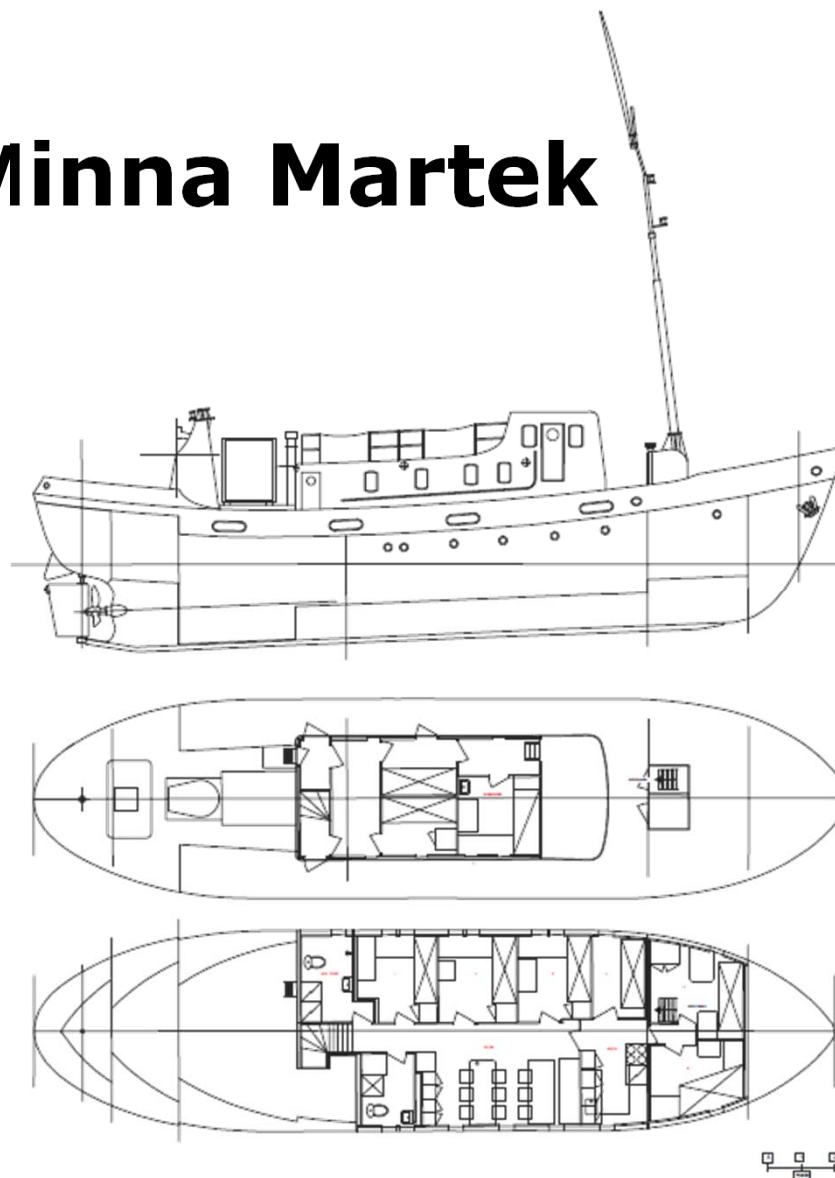
Karrat, central West Greenland

- Funding: Ministry of Mineral Resources of Greenland and GEUS;
- Field work: 2015, 2016, 2017.
- Aim: advance the understanding of the architecture of the Paleoproterozoic Karrat Basin, and assess its mineral resource potential.
- Main tasks: flying for 3D photogeology, stratigraphic and structural investigations, geochronology (on ore, igneous and detrital minerals), and economic geology studies.
- Logistical setup: Fieldwork is carried out by helicopter and inflatable boats, operating out of a ship used as basecamp. Whenever possible teams of geologists work out of fly camps.

Karrat



Minna Martek



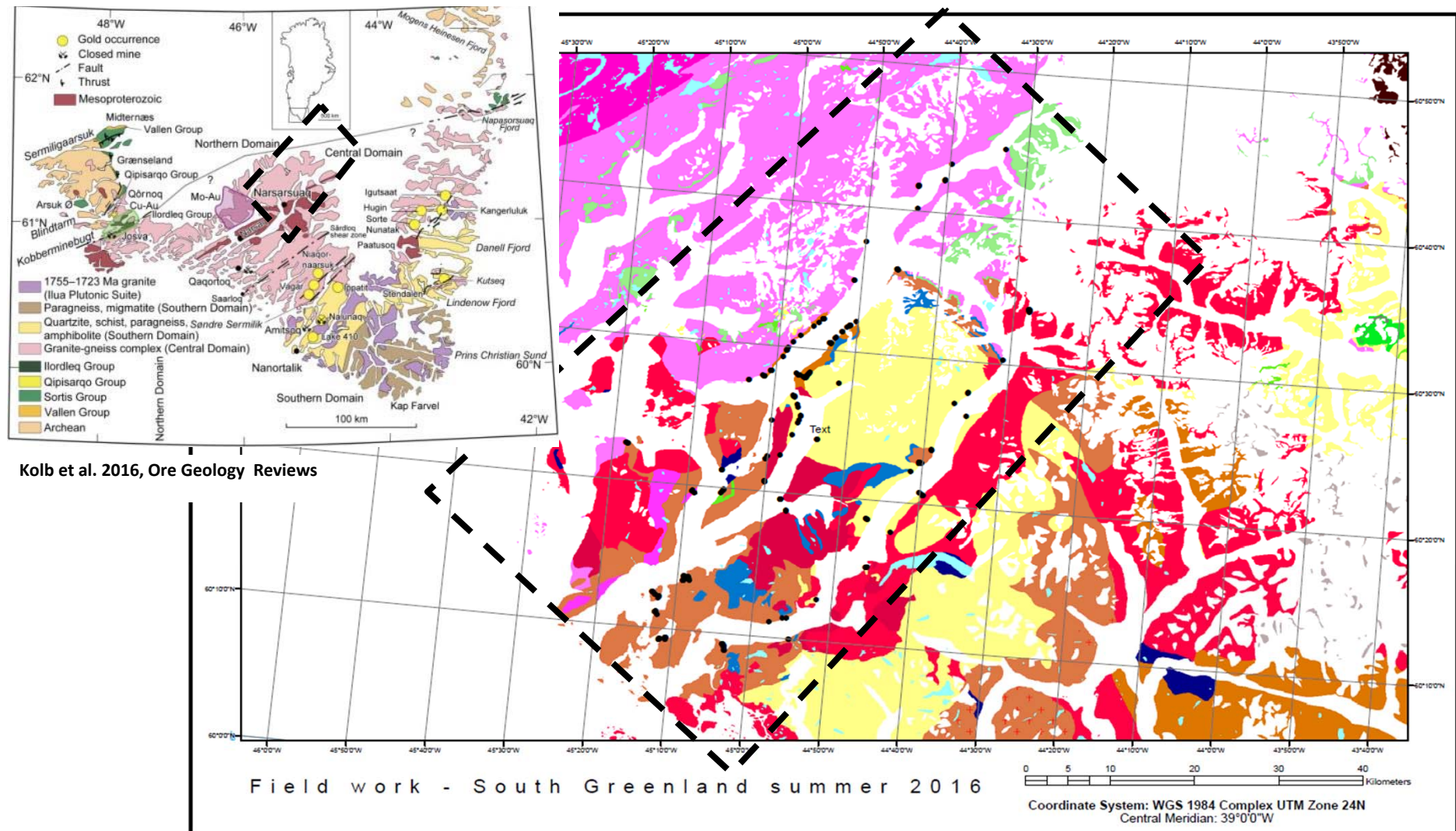
Full chartered helicopter



Contacts

Diogo Rosa, seniorforsker Afdeling for Petrologi og Malmgeologi, GEUS	Tel. +45 91 33 38 59 E-mail: dro@geus.dk
Julie Hollis, Head of Geology Department Ministry of Mineral Resources of Greenland	Tel. +299 346826 Email: juho@nanoq.gl
Marianne Vestergaard, logistikkoordinator Afdeling for Petrologi og Malmgeologi, GEUS	Tel. +45 31 10 30 38 E-mail: mve@geus.dk

Field work for the PhD project 'The Rise of South Greenland; 4D-time-space Model With Implications for the Tectonic Development of SW Greenland and Orogenic Gold Mineralization'



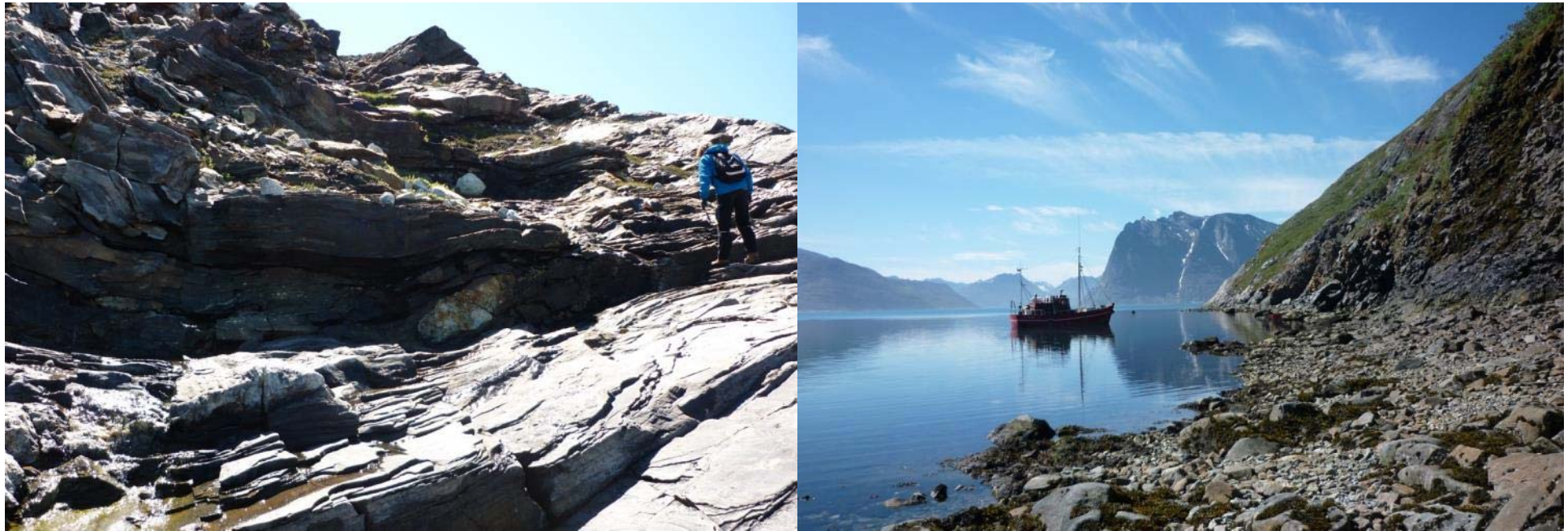
Field work 2017

Helicopter + boat based survey, to cover areas not accesable from shore

Duration: 2,5 weeks field work in july/august

● sites visited in june/july 2016

- - - area of interest



Contact: Katrine Baden (kab@geus.dk)

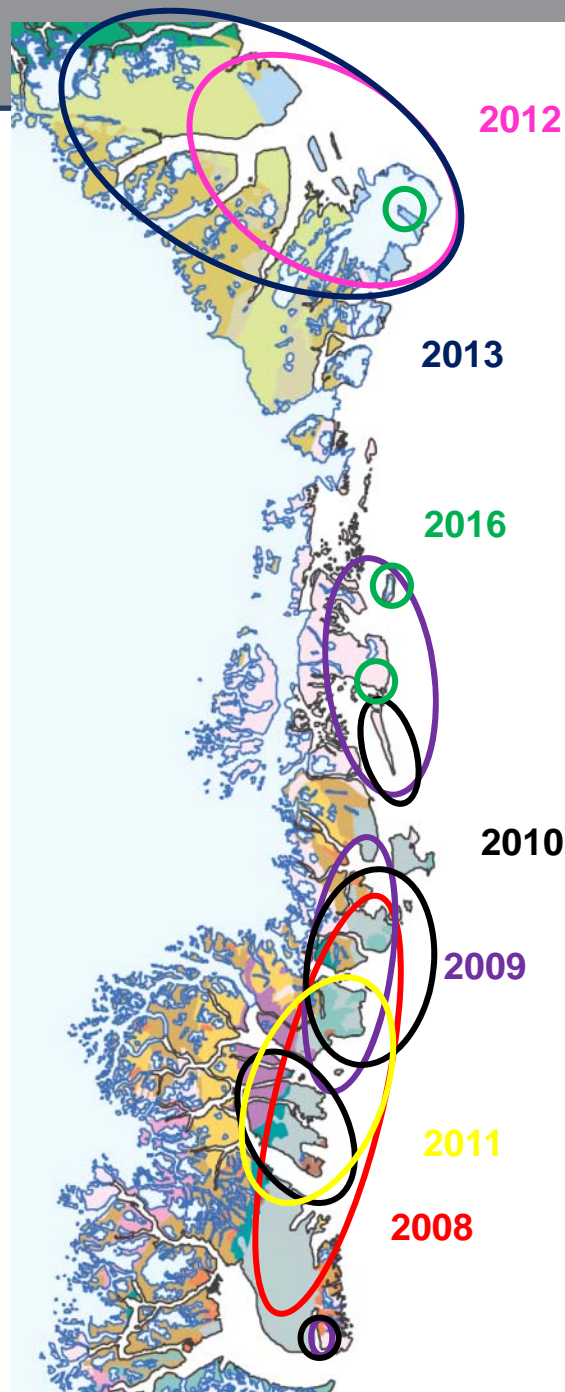
Project area: Ketilidian Orogen: Contact between the central and southern domain (Julianehåb Batholith and Psammite Zone)

Geological entity/entities: supracrustal rocks of the southern domain and granite-gneiss complex (Julianhåb Batholith)

Main implication for potential resources: Nalunaq Goldmine, Amitsoq Graphite Mine, Vagar-project...

Present base of knowledge: mapping not updated with new observations since mid 60'ies, on the east side expeditions were carried out in the mid-late 90'ties

Deliverables: understanding the tectonometamorphic evolution of the orogen (dating of selected units), mineral potential map



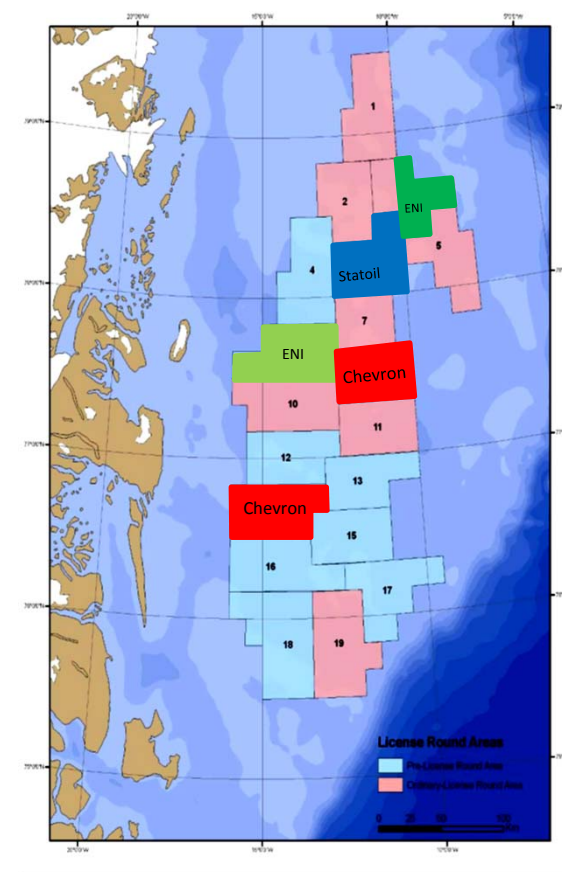
Northeast Greenland: fieldwork 2008-2016

Previous campaigns:

- 2008: Jameson Land – Wollaston Forland
- 2009: Bontekoe Ø – Stormlandet & Ile de France + Jameson Land
- 2010: Traill Ø – Store Koldewey + Jameson Land
- 2011: Traill Ø – Hold with Hope
- 2012: Kronprins Christian Land – Peary Land
- 2013: Kronprins Christian Land – Peary Land
- 2014: Fieldwork suspended due to lack of funding
- 2015: Fieldwork suspended due to lack of funding
- 2016: Supplementary fieldwork in Kilen, reconnaissance fieldwork on Ile de France and in Germania Land, all based on shared logistics.

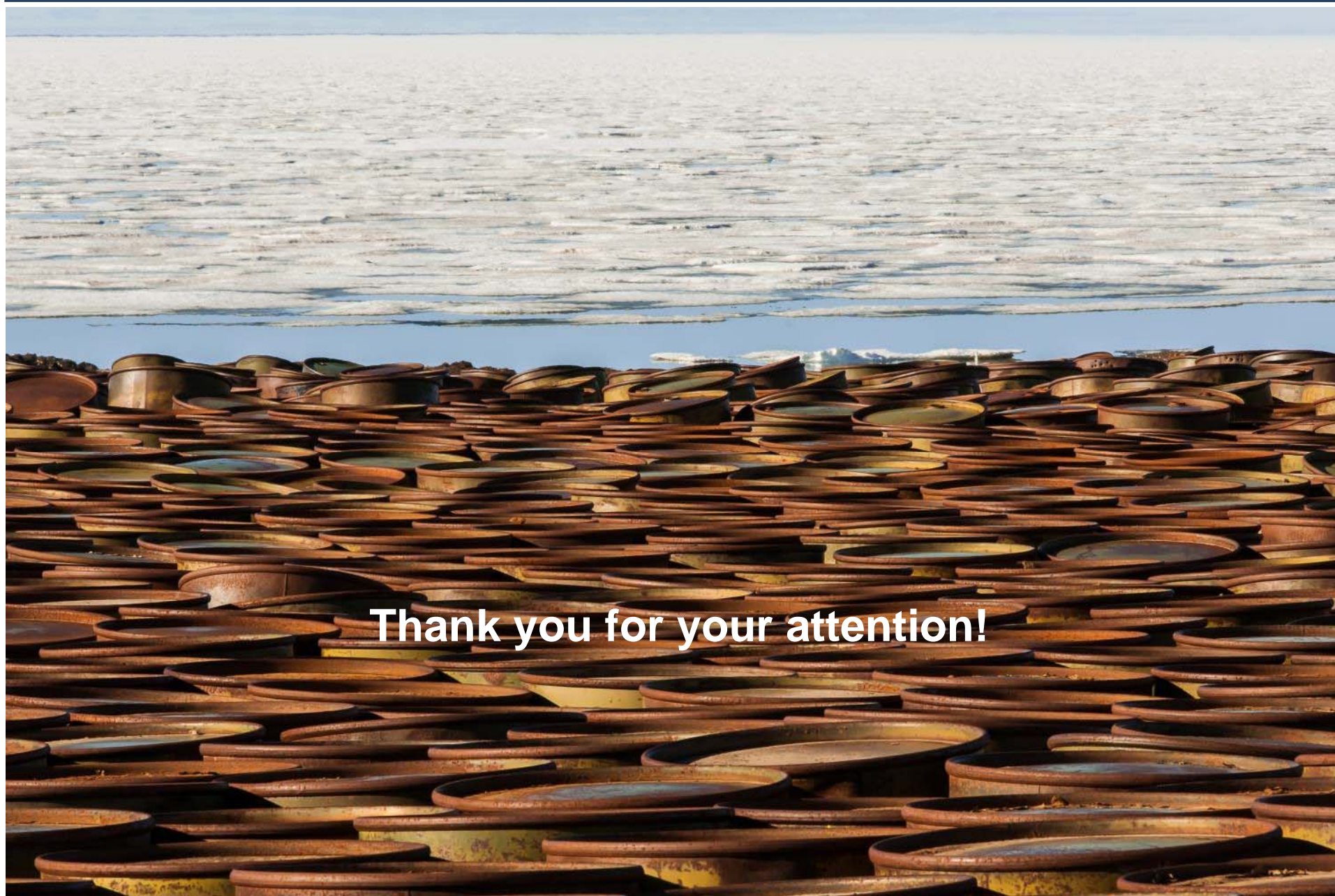
Northeast Greenland 2017

- On behalf of all the licensees in the Danmarkshavn Basin GEUS will carry out a field campaign including shallow core drilling and traditional fieldwork.
- Details are still to be decided, but logistics are in place.
- GEUS may decide to add some of its own activities to the planned field campaign. Details are to be decided.



Northeast Greenland 2017

- App. 20 participants
- Base Daneborg (Danmarkshavn)
- Core Drilling & traditional fieldwork
- Early-mid July – mid August 2017
- Fully chartered helicopter 80h, optional 120h
- TO for mobilisation/demobilisation (preferentially coordinated with ZAC)
- Contact: Jørgen A. Bojesen-Koefoed jbk@geus.dk or Marianne Vestergaard mve@geus.dk



Thank you for your attention!