

**SVACLIME** - Deep-time Arctic climate archives:  
High-resolution coring of Svalbard's sedimentary record  
[www.svalclime.com](http://www.svalclime.com) / 18-21 October 2022, Longyearbyen



“Live agenda”:

<https://docs.google.com/document/d/1IDXNwWloihhFGVlcWHIMTXDjvAK4eQjkUUstr9qmrBg/edit?usp=sharing>

## Workshop agenda

### Day 1 (everybody) – Tuesday 18 October 2022

**Afternoon:** Arrival in Longyearbyen, transfer from airport to UNIS Guest House. Free time for optional city tour.

**Evening:** *Workshop Introduction and Icebreaker*  
Lassegrotta auditorium and canteen, UNIS

(session conveners Aleksandra Smyrak-Sikora and Kim Senger)

**17:00-18:00** Workshop registration and coffee

18:00-18:15 Introduction to Svalbard and UNIS (Jøran Moen, director of UNIS)

18:15-18:45 The SVACLIME project: what is it and what do we want to achieve? (SVACLIME proponents)

18:45-19:00 ICDP experiences: the Early Jurassic Earth System and Timescale project (Steve Hesselbo, Uni Exeter)

19:00-19:15 IODP experiences: Expedition 39 - Mid-Norwegian Margin Magmatism and Paleoclimate Implications (Sverre Planke, VBPR and Peter Betlem, UNIS)

19:15-19:30 Arctic climate over the past 200 million years: A Canadian perspective (Jennifer Galloway, NR Canada)

19:30-19:45 Svalbard's geological evolution in 10 minutes (Snorre Olausen, UNIS)

**19:30-22:00** Icebreaker at UNIS canteen with light food, beverages and poster stands

Virtual field trip to Festningen (Rafael Horota)  
Svalbox videos/display in canteen

NB: if you plan to bring a poster please let us know (email [svalclime@gmail.com](mailto:svalclime@gmail.com) by 15th October) so that we have enough poster boards

### Day 2 (everybody) – Wednesday 19 October 2022 – Lassegrotta and outdoors

(session conveners Valentin Zuchuat and Sverre Planke)

**Morning:** *Status review of deep-time paleoclimate (DTP) research in Svalbard and the Arctic.*

**08:45-09:00** Coffee and light refreshments

*Summary talks on deep-time paleoclimate (DTP) research in Svalbard (ca. 10 min talk and 10 min guided discussion)*

- 09:00-09:20 Review of Cryogenian-Ediacaran DTP research (Kristin Bergmann, MIT)
- 09:20-09:40 Review of Carboniferous-Permian DTP research (Aleksandra Smyrak-Sikora, UNIS)
- 09:40-10:00 Review of end-Permian mass extinction research (Valentin Zuchuat, RWTH Aachen)
- 10:00-10:30 Coffee break
- 10:30-10:50 Review of Triassic-Jurassic DTP research (Victoria Engelschiøn NHM Oslo)
- 10:50-11:10 Review of Early Cretaceous DTP research (Sten-Andreas Grundvåg, UiT)
- 11:10-11:30 Review of Paleogene DTP research (Morgan Jones, UiO/CEED)
- 11:30-12:00 HSE briefing for Endalen and airport road excursion (UNIS logistics)

*12:00-14:30 Extended lunch: Excursion to CO<sub>2</sub> lab site in Adventdalen and Endalen core storage. Bus tour with light lunch (sandwiches etc.) onboard. Look at PETM and CO<sub>2</sub> lab cores.*

**Afternoon:** Review of existing material, data handling and proxy studies

(session convener Denise Kulhanek)

*Summary talks on existing data sets, particularly drill cores (5 min per talk + 5 min questions) and drilling/coring experiences from Svalbard (15 min talk) and elsewhere. Existing data sets – what cores exist already, and where are the knowledge gaps?*

- 14:30-14:40 Deltadalen drill cores: data and scientific results (Sverre Planke, VBPR)
- 14:40-14:50 Longyearbyen CO<sub>2</sub> lab: data focus (Kim Senger and Peter Betlem, UNIS)
- 14:50-15:00 Sysselembreen research boreholes (Erik P Johannessen, Skolithos AS)
- 15:00-15:10 Coal exploration boreholes (Malte Jochmann, SNSK - digital)
- 15:10-15:30 Drilling onshore Svalbard: experiences and shallow gas hazards (Tom Birchall, Geobirch)
- 15:30-15:45 Drilling with Riksriggeren - TBC (Henning Lorenz, Uni Lund - TBC)

**15:45-16:15 Coffee break and refreshments**

(session convener Morgan Jones)

*Summary talks on proxies for deep-time paleoclimate in general (10 min talks plus 5 min questions)*

- 16:15-16:30 The importance of reliable sedimentological interpretations for paleoclimate reconstructions (Marcello Gugliotta, Uni Bremen)
- 16:30-16:45 The application of paleotemperature proxies to deep time paleoclimate research (Madeleine Vickers, Uni Oslo)
- 16:45-17:00 Tracing the large igneous province volcanism and changes in continental silicate weathering rate using Os isotopes (Weimu Xu, University College Dublin)

- 17:00-17:15 Reduced plate motion controlled timing of Early Jurassic Karoo-Ferrar large igneous province volcanism  
(Micha Ruhl, The University of Dublin)
- 17:15-17:30 Anoxia – Driver of the Ecosystem Collapse in Shallow Marine Basins during the Permo-Triassic Crisis?  
(Anja Frank, Uni Hamburg)
- 17:30-17:45 Paleomagnetism and Magnetostratigraphy  
(Anniqve van der Boon, Uni Oslo/CLIPT lab)
- 17:45-18:00 Cyclostratigraphy: general principles and applications  
(Matthias Sinnesael, Observatoire de Paris, digital)

End of day – individual evening programme

### **Day 3 (everybody) – Thursday 20 October 2022**

**Morning:** *Knowledge gaps discussion – where to drill for high-resolution cores? Cryogenian and Ediacaran glaciations, Carboniferous-Permian, Middle Triassic, HALIP intrusions/background trends, Aspelintoppen Fm etc.*

(Session conveners: break-out session leaders)

**08:45-09:00 Coffee and light refreshments**

09:00-09:30 *Introduction to knowledge and data gaps session - Where to drill for high-resolution cores? Environmental considerations? Main goal – identify knowledge and data gaps for each internal and come up with a realistic plan for Deltadalen-style drilling (max 200-300 m deep boreholes)*

09:30-11:30 Break-out sessions (divide up participants based on interest)  
ICDP drilling proposal chapter Paleogene (led by Morgan)  
ICDP drilling proposal chapter Cretaceous/HALIP (led by Kim & Sten-Andreas)  
ICDP drilling proposal chapter EPME (led by Valentin)  
ICDP drilling proposal chapter pre-Permian (led by Aleksandra)  
Core and data handling and digitization (led by Nil and Peter)

**11:30-14:00 Extended lunch break: Excursion to Carolinefjellet Formation along airport road in Longyearbyen**

**Afternoon:** Synthesis and proposal discussion.

(Session convener Sverre Planke)

Proposal discussion – the red thread – how to coordinate logistics, scientific needs and data/analysis needs

14:00-14:30 Synthesis from break-out sessions (group leaders, 5 min each)

14:30-15:30 Open discussion on SVALCLIME ICDP proposal (moderated by SVALCLIME proponents) plus synthesis and time-line of way forward

**15:30-16:00 Coffee break and light refreshments**

(Session convener Denise Kulhanek)

Ending session – a broader overview and complementary projects

- 16:00-16:15 Marine temperature change during the Early Cretaceous using stable and clumped isotopes (Greg Price, Uni Plymouth)
- 16:15-16:30 NorthGreen IODP project (Lara Perez, GEUS)
- 16:30-16:45 IODP Arctic Drilling Expedition ArcOP - main objectives, status and possible future (Ruediger Stein, MARUM, digital)
- 16:45-17:00 GoNorth consortium: Cenozoic greenhouse – icehouse fluctuations in the Arctic Ocean (Katrine Husum, Norwegian Polar Institute)
- 17:00-17:15 Concluding remarks SVALCLIME proponents

19:00-22:00 Conference dinner in UNIS canteen

#### Day 4 (organisers and session chairs) – Friday 21 October 2022

Morning and afternoon: Workshop report, proposal drafting, task distribution to participants.

09:00-12:00 Workshop chairs contribute to proposal development (led by Sverre Planke)

#### Registration details:

Are you interested to join - in-person or online? Then make sure to fill in the registration form below ASAP and latest by **30th September 2022**.

[https://docs.google.com/forms/d/e/1FAIpQLScZf7VB72rCFWyeplFNENWilolg73RZPQdKU1D-WBz-nScLkQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScZf7VB72rCFWyeplFNENWilolg73RZPQdKU1D-WBz-nScLkQ/viewform?usp=sf_link)



#### Questions? Contact any of the SVALCLIME proponents:

*Kim Senger and Aleksandra Smyrak-Sikora (UNIS)*  
*Sverre Planke and Morgan Jones (University of Oslo)*  
*Denise Kulhanek (University of Kiel)*  
*Valentin Zuchuat (RWTH Aachen)*  
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