



**ICDP Workshop
“Postglacial Fault Drilling in Northern Europe”
Skokloster, Sweden, Oct 4-7, 2010**

Workshop organizers: Ilmo T. Kukkonen, Maria Ask & Odleiv Olesen

Program



Photos on Pärvie fault by R. Lagerbäck and B. Lund

Workshop program

Oct 4 (Mo)

Arrival and accommodation
Dinner

October 5 (Tu)

8.30 Welcome, opening and practicalities

9:00-13:00 Presentations before lunch (coffee/tea at 10:30-11:00)

Ilmo T. Kukkonen, Odleiv Olesen and Maria Ask: Introduction to the Postglacial Fault Drilling Project (PFDP)

Thomas Wiersberg: International Continental Scientific Drilling Program

Holger Steffen and Patrick Wu: Spatio-temporal evolution of stress and fault stability in glaciated areas

Björn Lund: Postglacial fault seismicity in Sweden, its cause and glacial isostatic adjustment modelling

Christophe Pascal, David Roberts, Roy H. Gabrielsen,

Camille Raulin and S.A.P.L. Cloetingh: Present and late glacial tectonic stresses in Fennoscandia

Odleiv Olesen: Postglacial faulting in Norway: A review

Conrad Lindholm: Present seismicity in northern Norway

Chris Juhlin: Reflection seismic imaging over two end-glacial faults in northern Sweden, the Pärvie and Burträsk Faults

Lunch 13:00-14:00

14:00 – 17:00 Presentations after lunch (coffee/tea at 15:30-16:00)

Stephen Hickman, Mark Zoback and William Ellsworth: Structure, properties and mechanical behavior of the San Andreas Fault at seismogenic depths: Results from the SAFOD experiment

Horst Zwingman: Potential and limitations of brittle fault dating

Joachim Jacobs, Anna Ksienzyk, Istvan Dunkl, Klaus Wemmer and Haakon Fossen: Post-Caledonian fault activity in the Bergen area (southwestern Norway): New insights from low-temperature thermochronology

Raimo Sutinen and Eija Hyvönen: LIDAR surveillance of paleo-landslides in Finnish Lapland

Ari Luukkonen: Glacial faulting - a regulatory perspective

Chris Juhlin: The Swedish Deep Drilling Program

Posters: (short poster introductions)

Giulio Viola, Jussi Mattila, Asko Käpyaho and Horst Zwingmann: Structural characterization and direct dating of brittle deformation zones in Precambrian crystalline rocks – examples from Sweden and Finland. A methodology applicable to the analysis of postglacial faults?

Savka Dineva: Neotectonic stress field in eastern Canada and postglacial rebound

Taija Torvela and Ismo Aaltonen: Investigating steeply dipping faults with reflection seismics

Henning Lorenz, Chris Juhlin and the SDDP working group: The Swedish Deep Drilling Program. An emerging scientific drill program and new infrastructure

17:00-17:30 Plenum discussion on PFDP

17:30-18:30 Working in thematic groups, part 1.

“What are the main aims for the drilling? Major geoscientific problems? Where and how to drill? How deep?”

Groups:

- 1) Geology, tectonics, age determination studies
- 2) Seismic structures, seismicity and other geophysics
- 3) Stress field, land uplift & plate tectonic forces
- 4) Hydrogeology, hydrochemistry and deep biosphere
- 5) Drilling technology

Dinner 19:00

October 6 (We)

8:30 – 13:00 Presentations before lunch (coffee/tea at 10:30-11:00)

Thomas Wiersberg: Monitoring and sampling of fluids and gases during fault zone drilling

Ingunn H. Thorseth: The biosphere of deep subsurface environments: present knowledge and outstanding questions

Merja Itävaara: Outokumpu deep drill hole biosphere

Hendrik Vogel: "The potential of lake sediment records from the Torneträsk area to study paleoseismicity and climate change"

Erik R. Ivins: Crustal deformation and Coulomb stress field in time-evolving surface load hydrological systems (**cancelled**)

Fridtjof Riis: Erosion, gas leakage and pore pressure reduction in the south-western Barents Sea

Snorre Olaussen: CCS laboratory in the Arctic - the Longyearbyen CO2 lab: (Geological, geophysical and reservoir engineering input to reservoir models and behavior of carbon storage in an uplifted area)

Jan S. Ronning, Einar Dalsegg, Harald Elvebakk and Guri Ganerød: Shallow and borehole geophysics for characterization of fracture zones in bedrock.

Peter Jonsson: A Swedish core drilling platform for multidisciplinary deep subsurface investigations

13:00-14:00 Lunch

14:00-15:30 Working in thematic groups (continued)

“What are the main aims for the drilling? Major geoscientific problems? Where and how to drill? How deep?”

15:30- 17:00 Reports from working groups, Discussion

17:00-18:30 Planning of PFDP project plan

- Forming of research teams
- Cost estimation
- Possible funding schemes
- Core storage, data management
- Outreach and media relations
- Schedules
- Discussion

19:00 Dinner

October 7 (Th)

8:30-10:30

- Further discussions, small group planning
- Short contributions by participants

10:30-11:00 Coffee and tea

11:00 -13:00 Session 8: Summing up

- Plans to prepare a full proposal to ICDP
- Next meetings

13:00-14:00 Lunch

14:00-15:00

- Further discussions, small group planning

15:00 Closing of workshop