

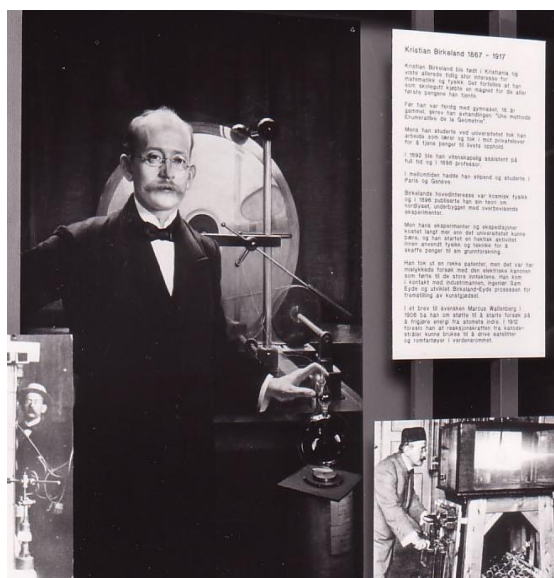


“Birkeland Space Weather Symposium”

Oslo 15-16 June, 2017

Prof Kristian Birkeland, the world’s first space scientist, was born in Kristiania, Norway in 1867. Birkeland is indeed famous for his pioneering research on Aurora Borealis and for his innovations leading to the industrial production of fertilizers. Birkeland plausibly addressed the Northern Lights to electrically charged particles of solar origin. The Birkeland currents, currents floating along the Earth magnetic field lines, facilitate an electrical coupling of the Earth atmosphere to the solar wind. Today, the term space weather is used for various impacts of the solar interactions with the near Earth space environment, which under severe conditions poses a considerable risk critical infrastructure that needs to be considered.

As part of the Birkeland Week in Oslo, we devote two days to space weather impacts on modern society, with particular emphasis on the European Arctic Sector. On June 15 we have an exciting program filled with key note speakers providing scientific, technology and user perspectives on various space weather phenomena and challenges. On June 16 we have a workshop welcoming contributed talks, good discussion, that hopefully will lead to new collaborations. We welcome talks on user needs, space weather products as well as on research activities.



DRAFT PROGRAM
15 June 2017

Venue: Down town Oslo

UiO Domus Academica
 Karl Johans gate 47
 Oslo

MAP: <https://www.uio.no/om/finn-fram/omrader/sentrum/se02/>



Domus Academica, built in 1852, was the building that hosted Kristian Birkeland's experimental activities.

All talks by invitation

09:00 Door opens

09:30-10:00 Opening Speeches

UiO Rector

Ministry of Education and Research

Research Council of Norway

Norwegian Space Center

10:00 – 10:30 Reducing vulnerability to space weather storms: Developing and implementing a preparedness strategy: **Mr. William Murtagh**, Program Coordinator for NOAA, Space Weather Prediction Center (SWPC) in Boulder, Colorado.

10:30-11:00 The industrial applications of monitoring the polar cap/auroral ionosphere: Prof. **P. T. Jayachandran**, University of New Brunswick, Canada

11:00-11:30 "We need a law against this! How legislators, insurers and contract parties should handle solar storms affecting the Arctic.". Prof. **Erik Røsæg**, University of Oslo.

11:30-11:40 Questions

11:40-12:30 Lunch in Frokostkjelleren

12:30-13:00 ESA Space Situation Awareness program: Director **Juha-Pekka Luntama**, ESA

13:00-13:20 The Norwegian space weather priorities: Deputy Director General **Terje Wahl**, Norwegian Space Center

13:20-13:40 Space Weather Hazards and Challenges to Future Civil Aerospace: Pilot **Bryn Jones**, Virgin Airlines

13:40-14:00 "How the Sun made Air Traffic Controllers go blind": **Andreas D. Skjervold**, Head of CNS Tower Operations, Avinor Air Navigation Services

14:00-14:30 Break

14:30-14:50 What are the major space weather challenges for ground and Aviation users of GNSS in Northern Scandinavia?: **Dr. Knut Stanley Jacobsen**, Norwegian Mapping Authorities

14:50-15:10 Geomagnetically induced currents: science, engineering and applications readiness, The Birkeland Medal winner 2016 Dr. **Antti Pulkkinen**, NASA

14:10-15:30 Impact of Space Weather in the Scandinavian Power Grid: **Trond Ohnstad**, Statnett

15.30-15:50 Space weather: A research challenge, **Prof. Michael Hesse**, Birkeland Centre for Space Science, Univ. of Bergen

15:50-16:00 Concluding remarks

16 June Space Weather Workshop

Venue: Yara Norge AS
Drammensveien 131, 0277 Oslo

Key note + contributed talks. Attract the European Space Weather community

09:00-10:30 Space weather satellites and ground instrumentation

09:00-09:20 Invited keynote
+ 4-6 contributed talks

11:00-12:30 Innovative space weather research/technology

11:00-11:20 Keynote: Per Høeg, DTU

4-6 contributed talks

13:30-15:00 User needs and innovative space weather product ideas

Contributed talks