Program Birkeland workshop May 27-May 31, 2010

Speakers:

David Stainforth, *Grantham Research Institute, London School of Economics, UK*
Rasmus Benestad, *Norsk meteorologsk institutt (met.no), NO*
Nick Watkins, *British Antarctic Survey, UK*
Kristoffer Rypdal, *University of Tromsø, NO*
Leif Svalgaard, *Stanford University, US*
Sandra Chapman, *University of Warwick, UK*
Zoltan Vörös, *University of Innsbruck, AUT*
Chris Hall, *University of Tromsø, NO*
Martin Rypdal: *University of Tromsø, NO*
Boris Kozelov: *Polar Geophysical Institute, Apatity, RU*
Tatjana Živkovič: *University of Tromsø, NO*
Richard Dendy: *UKEA Fusion, UK*
Jens Juul Rasmussen: *Denmark Technical University, DK*
Odd Erik Garcia: *University of Tromsø, NO*
Anders H. Nielsen: *Denmark Technical University, DK*
Alexander Milovanov: *ENEA Frascati, IT*
Svetlana Ratynskaia: *Royal Institute of Technology, Stockholm, SE*
John Wyller: *Norwegian University of Life Sciences, NO*
Sergey Vladimirov: *University of Sydney, AUS*
Boris Klumov: *Max Planck Institute for Extraterrestrial Physics, Garching, DE*
Wojciech. J. Miloch: *University of Tromsø, NO*
Giorgio Regnoli: *Royal Institute of Technology, Stockholm, SE*

Thursday May 27: *The Complexity of Climate Change*

Morning session:

09.00-10.00 David Stainforth: *Climate Prediction: Lessons from Simple Non-Linear Systems*

10.00-10.45 Rasmus Benestad: *What role does sea-ice have for the weather statistics over Europe? An attempt to understand a complex situation*

10.45-11.15 Coffe break

11.15-12.00 Nick Watkins: *What we gain from fractal (and multifractal) strawman models of complex systems?*

12.00-12.30 Kristoffer Rypdal: *Testing hypotheses about a sun-climate complexity linking*

12.30-14.00 Lunch and leisure

Afternoon: *Outreach Session on Climate Change*

14.00-14.30 David Stainforth: *climateprediction.net: How everyone with a PC can become a climate scentist*

14.30-15.00 Rasmus Benestad*: Climate & Communication*

15.00-15.30 Leif Svalgaard: *Has the sun's output really changed significantly since the little ice age?*

15.30-16.00 Kristoffer Rypdal: *Some reflections on the testing of hypotheses in climate science, the Bayesian approach*

19.00 Welcome dinner

Friday May 28: *Space Climate and the Sun-Earth Interaction*

Morning session:

09.00-10.00 Leif Svalgaard: *Two Centuries Space Weather. What we have learned from the past and what we think the near future might hold?*

10.00-10.45 Sandra Chapman: *Finite size effects in solar wind turbulence- are there universal aspects?*

10.45-11.15 Coffee break

11.15-12.00 Zoltan Vörös: *Multi-scale complexity in space physics*

12.00-12.30 Chris Hall: *Trend analyses of polar mesospheric dynamics*

12.30-14.00 Lunch and leisure

Afternoon session:

14.00-14.45 Martin Rypdal: *Discerning hidden scaling properties in confined multifractal motions: application to the solar wind-magnetosphere interaction*

14.45-15.30 Boris Kozelov: *Scale dependence of fluctuations in solar wind characteristics and magnetospheric-ionospheric activity*

15.30-16.00 Coffe break

16.00-16.45 Tatjana Živkovič: *Recurrence plot techniques applied to solar wind-magnetosphere interaction*

16.45-17.30 Sandra Chapman: *Self-organized criticality and turbulence- what's the same and what is different?*

Evening: Explore restaurants and Tromsø pubs and bars

Saturday May 29: Leisure and discussions.

Informal discussions, explore cafés and other Tromsø attractions. Try the mountain lift and visit ”Polaria”.

Sunday March 29: Leisure and discussions.

Excursion by car to the outer islands. Try fishing at Hella and have lunch at Sommarøy. Here one may do some strolling or hiking, or find places to continue discussions.

Monday March 31: *Plasmas and other Complex Systems*

Morning session:

09.00-10.00 Richard Dendy: *Motivations and outcomes for complex systems approaches to fusion plasma phenomenology*

10.00-10.30 Jens Juul Rasmussen: *Intermittent transport of particles, momentum and current in the scrape-off-layer of magnetically confined toroidal plasmas*

10.30-11.00 Odd Eric Garcia: *Turbulence and structures in fusion and space plasmas*

11.00-11.30 Coffee break

11.30-12.00 Anders Nielsen: *Numerical probe analyzer*

12.00-12.30 Alexander Milovanov: *Aspects of complex behavior in magnetically confined plasmas with intense energetic particle population*

12.30-14.00 Lunch and leisure

Afternoon session:

14.00-14.30 Svetlana Ratynskaia: *Diagnostic of fast dust particles in fusion devices*

14.30-15.00 John Wyller: *Neural fields*

15.00 15.30 Sergey Vladimirov: *Charging and shielding of grains: recent new results*

15.30-16.00 Coffee break

16.00-16.30 Boris Klumov: *Melting criteria in 3D/2D complex plasmas*

16.30-17.00 Wojciech. J. Miloch:

17.00-17.30 Giorgio Regnoli: *Long-range attraction and phase transitions in dusty plasmas*

20.00 Farewell supper