

Observatory Days 2022

10.-14. January 2022

Sodankylä Geophysical Observatory

Programme

Monday, 10th January, 10:00-13:30 EET / 08:00-11:00 UTC

- 10:00 Th Ulich **Welcome & Practicalities**
- Session 1** (Chair: Eija Tanskanen)
- 10:05 E Tanskanen The unique role of observatories and infrastructures in safe space exploration
- 10:20 S Kirchner Where does Space begin?
- 10:35 J Paakkari Enlarging the University of Oulu Space Research within Finland and EU
- 10:50 V Sergeev Substorm injections as major driver of Energetic Electron Precipitation events
- 11:05 **DISCUSSION**
Thematic network on Arctic Space Hub
- 11:30 **BREAK**
- Session 2** (Chair: Eija Tanskanen)
- 12:00 A Aikio EISCAT_3D and its current status
- 12:15 A Kero Energetic particle precipitation flux spectrum as a standard high-level data product for the upcoming EISCAT_3D?
- 12:30 S-I Oyama SDI-3D and collaborations with ground-based instruments in Fennoscandia
- 12:45 A Binios Current status of the LappiSat-1 – The first satellite of SGO's LappiSat Space Programme
- 13:00 S Poluianov Cosmic ray measurements by SGO: status report
- 13:15 **DISCUSSION**
- 13:30 End of Session

IMPORTANT NOTE:

Sessions will start at **10:00** and **12:00**.

There are **posters**, too. See last page of this Programme!

The **time limit for the presenter** is **15 min** per talk incl discussion.

Talks will start in sequence, in case of no-show or short talk, we will move on to the next talk immediately!

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Tuesday, 11th January, 10:00-13:30 EET / 08:00-11:30 UTC

Session 3 (Chair: Antti Kero)

- 10:00 P T Verronen Ozone response to high-energy electron precipitation related to pulsating aurorae
- 10:15 K Nilsen The impact of the Solar Proton Event of November 2001 on the middle atmospheric ozone chemistry
- 10:30 M Grandin Auroral electron precipitating fluxes generated with eVlasiator as an input to WACCM-D runs: Method and preliminary results
- 10:45 N Larsen Development of a new magnetospheric computation tool
- 11:00 E Marshalko Real-time simulation of the geoelectric field due to space weather events
- 11:15 **DISCUSSION**
- 11:30 **BREAK**

Session 4 (Chair: Ilya Usoskin)

- 12:00 A Mishev The first Ground Level Enhancement of solar cycle 25: study using neutron monitor data
- 12:15 S Vainio Cosmic Shower and Speculative Links Between the Macro- and MicroCosmic BioInformation Cycles
- 12:30 J Kallunki A connection between solar photosphere magnetic field strength and millimetre solar radio emission
- 12:45 T Renkwitz Variability of D region ionisation during the solar minimum of cycles 24/25
- 13:00 **DISCUSSION**
- 13:30 End of Session

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Wednesday, 12th January, 10:00-13:30 EET / 08:00-11:30 UTC

Session 5 (Chair: Anita Aikio)

10:00	M Lehtinen	Radar methods and equipment development 1980-2021
10:15	E Hirvonen	Software-Defined Radio implementation for Metsähovi Compact Array 1
10:30	H Tesfaw	Precipitating electron energy spectra and auroral power estimation by incoherent scatter radar with high temporal resolution
10:45	L Cai	Upper and lower thermospheric winds during substorms
11:00		DISCUSSION
11:30		BREAK

Session 6 (Chair: Jyrki Manninen)

12:00	N Thomas	Statistical survey of Arase satellite data sets in conjunction with the Finnish Riometer Network
12:15	D Rogov	Isolated substorms from two-frequency riometer observations in Sodankylä: frequency coefficient variations during a substorm
12:30	P Kirves	Reborn 30 GHz experimental radiometer for atmospheric tau evaluation
12:45	L Macotela	The fall-effect in ionospheric and mesospheric parameters
13:00	R Hynönen	Ground-response of geomagnetic ULF waves to solar wind speed
13:15		DISCUSSION
13:30		End of Session

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Thursday, 13th January, 10:00-13:30 EET / 08:00-11:30 UTC

Session 7 (Chair: Lauri Holappa)

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| 10:00 | G Carnevale | Sudden depletion of Alfvénic turbulence in the rarefaction region of corotating solar wind HSS at 1 AU: possible solar origin? |
| 10:15 | M Yamauchi | Two-step determination of auroral breakup seen in all-sky jpeg images |
| 10:30 | A Kozlovsky | On the orientation of auroral arcs |
| 10:45 | N Partamies | MLT dependence of auroral peak emission heights |
| 11:00 | | DISCUSSION |
| 11:30 | | BREAK |

Session 8 (Chair: Noora Partamies)

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|-------|---------------|--|
| 12:00 | L Holappa | The sign and magnitude of IMF By-component modulate substorm dynamics |
| 12:15 | M N Pedersen | Field-Aligned and Ionospheric Equivalent Currents from AMPERE and SuperMAG During ICME Driven Geomagnetic Storms |
| 12:30 | Xin Wang | Joule heating and its influence on thermospheric density during geomagnetic storms |
| 12:45 | R Sherstyukov | Investigation of midlatitude MSTIDs by ionosonde and dense GNSS-receivers' network |
| 13:00 | | DISCUSSION |
| 13:30 | | End of Session |

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Friday, 14th January, 10:00-13:00 EET / 08:00-11:00 UTC

10:00 National EISCAT Co-ordination Committee Meeting
(Chair: Anita Aikio)

The meeting is cancelled due to sudden timetable changes.
We apologise for any inconvenience.

POSTERS

Ilya Usoskin	Study of cosmic-ray modulation by AMS-02 spectrometer onboard ISS
Carl-Fredrik Enell	EISCAT 3D user access
Thomas Ulich	EISCAT_3D Finland – Status Update
Sergey Koldobskiy	New reconstruction of event-integrated spectra (spectral fluences) for major solar energetic particle events

Posters are viewable throughout the meeting.

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