

Programme

The 45th Annual European Meeting on Atmospheric Studies by Optical Methods

Monday	Tuesday	Wednesday	Thursday	Friday
09:00 – 10:00 Registration 10:00 – 10:10 Welcome and useful information	09:30 – 10:40 Session 2 EISCAT-3D and optical instruments	09:00 – 12:00 Excursion to Jukkasjärvi and Esrange	09:30 – 10:00 Session 7 Active experiments in the upper atmosphere	09:30 – 12:00 Session 8 Ground-based, in-situ and space-based instruments, new facilities
10:10 – 10:30 Session 1 Aurora and ionosphere-thermosphere interaction				
10:30- 11:00 Coffee	10:40- 11:00 Coffee		10:30- 11:00 Coffee	10:20- 10:50 Coffee
11:00-11:50 Session 1 Aurora and ionosphere-thermosphere interaction	11:00 – 10:50 Session 2 EISCAT-3D and optical instruments		11:40 – 11:50 Session 8 Ground-based, in-situ and space-based instruments, new facilities	10:50 – 11:50 Session 8 Ground-based, in-situ and space-based instruments, new facilities
11:50 – 13:00 Lunch	11:50 – 13:00 Lunch	12:00 – 13:00 Lunch at Esrange	11:50 – 13:00 Lunch	11:50 – 13:00 Lunch
13:00 – 14:20 Session 1 Aurora and ionosphere-thermosphere interaction	13:00 – 14:20 Session 3 Aerosol and clouds	13:00 – 13:50 Session 5 Meteors 13:50 – 14:30 Session 6 Transient luminous events	13:00 – 14:30 Session 8 Ground-based, in-situ and space-based instruments, new facilities	13:00 – Inf Discussion End of meeting
14:20- 15:00 Coffee	14:20- 15:00 Coffee	14:30- 15:00 Coffee	14:30- 15:00 Coffee	
15:00 – 17:00 Session 1 Aurora and ionosphere-thermosphere interaction	15:00 – 15:40 Session 3 Aerosol and clouds 15:40- 17:20 Session 4 Noctilucent clouds and mesospheric aeronomy	15:00 – 16:00 Session 6 Transient luminous events	15:00 – 16:00 Session 8 Ground-based, in-situ and space-based instruments, new facilities	
17:00 – 20:00 Welcome reception	13:00 - Inf Intercalibration workshop for low-light sources		16:20 – 18:30 Excursion to LKAB mine. Bus starts from IRF 19:00 – 22:00 Conference dinner at Hotel Scandic Ferrum	

Monday, August 27

08:30 – 09:00 Bus from Kiruna to IRF. See Bus timetable.

09:00 – 10:00 Registration

10:00 - 10:10 Welcome and useful information

Session 1 (Aurora and ionosphere-thermosphere interaction)

Chair: Daniel Whiter

10:10 – 10:30 Noora Partamies, Pulsating aurora — why should we care?

10:30 – 11:00 Coffee

11:00 – 11:30 Xiaoyan Zhou, Dayside auroral dynamics under interplanetary shock conditions.
(Invited)

11:30 – 11:50 Jade Reidy, A. Multi-scale observation of polar cap aurora.

11:50 – 13:00 Lunch

Session 1 (Aurora and ionosphere-thermosphere interaction)

Chair: Jade Reidy

13:00 – 13:20 Noora Partamies, Auroral omega bands.

13:20 – 13:40 Björn Gustavsson. B. Flickering Aurora: time-dependent electron transport modelling of electron precipitation at 5-12 Hz.

13:40 – 14:00 David Price, A new technique for measuring heating of the lower thermosphere by auroral processes.

14:00 – 14:20 Vladimir Belakhovsky, Influence of different ionospheric disturbances on the GPS scintillation at high latitudes.

14:20 – 15:00 Coffee

Session 1 (Aurora and ionosphere-thermosphere interaction)

Chair: Noora Partamies

15:00 – 15:20 Tima Sergienko, The fast variable aurora: Results of the Monte-Carlo simulation.

15:20 – 15:40 Derek McKay, Lumikot: fast auroral transients.

15:40 – 16:00 Boris Kozelov, Triangulation of altitude profiles of auroral emission by MAIN system in Apatity.

16:00 – 16:20 Daniel Whiter, Optical emission produced by a combination of infra-sound and an auroral electric field?

16:20 – 16:40 Roman Vasilyev, Aurora, wind and temperature of mid-latitude upper atmosphere during geomagnetic perturbations

16:40 – 17:00 Pavel Budnikov, Variations of GNSS signals in Euro-Arctic region during auroral activity.

17:00 – 20:00 Welcome reception

20:00 Bus from IRF to Kiruna

Tuesday, August 28

08:50 – 09:20 Bus from Kiruna to IRF. See Bus timetable.

Session 2 (EISCAT-3D and optical instruments)

Chair: Johan Kero

- 09:30 – 10:00 Craig Heinselman, EISCAT_3D Capabilities and Status. (Invited)
- 10:00 – 10:20 Urban Brändström, ALIS_4D, a Swedish complementary instrument for EISCAT_3D, status of Kiruna Atmospheric and Geophysical Observatory and the European Working group on optical calibration.
- 10:20 – 10:40 Thomas Ulich, Optical and other ground-based instrumentation: readiness for EISCAT_3D.
- 10:40 – 11:00 Coffee
- 11:00 – 11:30 Yoshifumi Saito, Y, SS-520-3 Sounding Rocket Experiment Targeting the Ion Outflow over the Cusp Region. (Invited) (from the Instrument session)
- 11:30 – 11:50 Carl-Fredrick Enell, EISCAT 3D: overview of the system and its experiment modes.
- 11:50 – 13:00 Lunch

Session 3 (Aerosol and clouds)

Chair: Ingrid Hanssen

- 13:00 – 13:30 Silke Groß, Aerosol type classification and characterisation of microphysical parameters by lidar; challenges and technologies. (Invited)
- 13:30 – 13:50 Maki Tachikawa, Optical trapping of ice crystals and its application in cloud physics.
- 13:50 – 14:20 Carlos Toledano, Sun photometer and lidar collocated aerosol measurements at ALOMAR: a long-term comparison. (Invited)
- 14:20 – 15:00 Coffee
- 15:00 – 15:20 Veronika Wolf, Synergies between balloon-borne in-situ particle imaging and ground-based lidar measurements of Arctic cirrus clouds.
- 15:20 – 15:40 Peter Voelger, Lidar observations at the Swedish Institute of Space Physics.

Session 4 (Noctilucent clouds and mesospheric aeronomy)

Chair: Njål Gulbrandsen

- 15:40 – 16:10 Joshua Chadney, Changes in hydroxyl temperatures during high-energy auroral precipitation. (Invited)
- 16:10 – 16:30 Roman Vasilyev, Sudden stratospheric warming events 2017, 2018 and mesosphere over Eastern Siberia.
- 16:30 – 16:50 Hidehiko Suzuki, Derivation of the horizontal wind field in the polar mesopause region by using successive images of noctilucent clouds from ground.
- 16:50 – 17:20 Jacek Stegman, The MATS satellite - mission planning and optical calibration.

18:00 Bus from IRF to Kiruna

On Tuesday after lunch 13:00 – Inf, the intercalibration workshop for low-light sources. Please contact Urban Brändström.

Wednesday, August 29

The Estringe day of the 45th Optical Meeting

08:00 – 12:00 Excursion to Jukkasjärvi and Estringe.

12:00 – 13:00 Lunch at Estringe

Session 5 (Meteors)

Chair: Daniel Kastinen

13:00 – 13:30 Ryou Ohsawa, Optical observations of faint meteors with a wide-field CMOS camera Tomo-e Gozen. (Invited)

13:30 – 13:50 Johan Kero, Simultaneous radar head echo and optical meteor observations.

Session 6 (Transient luminous events)

Chair: Varo Maria Passas

13:50 – 14:10 Gali Garipov, Detection of Global Optical Phenomena of natural and man-made origin of Ultraviolet and Infrared glow of Earth atmosphere onboard the “Vernov” Satellite.

14:10 – 14:30 Oscar van der Velde, Analysis of elves, Colombia gigantic jet campaigns, and the Atmosphere-Space Interactions Monitor.

14:30 – 15:00 Coffee

15:00 – 15:20 Pavel Klimov, The TUS detector on board the Lomonosov satellite: multifunctional geophysical UV observatory.

15:20 – 15:40 Pavel Klimov, UV transient emission of the atmosphere measured by the Lomonosov satellite with high temporal resolution.

15:40 – 16:00 Pavel Klimov, P.A. UV transient atmospheric events observed far from thunderstorms by the Vernov satellite.

16:10 Bus from Estringe to Kiruna

Thursday, August 30

08:50 – 09:20 Bus from Kiruna to IRF. See Bus timetable.

Session 7 (Active experiments in the upper atmosphere)

Chair: Björn Gustavsson

09:30 – 10:00 Todd Pedersen, Spatial separation of optical spectral features in chemical release experiments. (Invited)

10:00 – 10:30 Jeffrey Holmes, A combined spectroscopic and plasma chemical kinetic analysis of ionospheric samarium releases. (Invited)

10:30 – 11:00 Coffee

Session 8 (Ground-based, in-situ and space-based instruments, new facilities)

Chair: Fred Sigernes

11:00 – 11:30 Njål Gulbrandsen, Laser investigation of the mesospheric magnetic field – The Mesospheric Sodium Layer as a Remotely, Optically Pumped Magnetometer. (Invited)

11:30 – 11:50 Julianne Kealy, Detection of infrasound in the Earth's upper atmosphere by observing nightglow emissions.

11:50 – 13:00 Lunch

Session 8 (Ground-based, in-situ and space-based instruments, new facilities)

Chair: Todd Pedersen

13:00 – 13:30 Varo Maria Passas, GRASSP and GALIUS: two slit spectrographs designed to remotely characterize transient atmospheric plasmas. (Invited)

13:30 – 14:00 Ingrid Hanssen, ALOMAR Tropospheric Lidar – Developments and ongoing projects. (Invited)

14:00 – 14:30 Shin-Ichiro Oyama, New insights found from coalescence of the ionospheric and thermospheric measurements at auroral latitudes (from the EISCAT session) (Invited)

14:30 – 15:00 Coffee

15:00 – 15:30 Margaret Campbell-Brown, The Canadian Automated Meteor Observatory: high resolution studies of meteor ablation. (Invited) (from the Meteor session)

15:30 – 15:00 Xiaoyan Zhou, Development of a near-infrared balloon-borne camera for dayside and sunlit auroral observations.

16:30 – 18:30 Excursion to LKAB mine. Bus starts from IRF

19:00 – 22:00 Conference dinner at Hotel Scandic Ferrum in Kiruna

Friday, August 31

08:50 – 09:20 Bus Kiruna city – IRF. See Bus time table.

Session 8 (Ground-based, in-situ and space-based instruments, new facilities)

Chair: Urban Brändström

09:30 – 10:00 Andres Spicher, The Investigation of Cusp irregularities 5 sounding rocket: multipoint measurement of turbulence. (Invited)

10:00 – 10:20 Masafumi Hirahara, Japanese Space-Earth Coupling Exploration Mission by Multiple Polar-orbiting Compact Satellites and its Collaborations in Instrumentations and Ground-based Observations.

10:20 – 10:50 Coffee

10:50 – 11:10 Roman Vasilyev, Coordinated satellite and ground-based observations of fast atmospheric processes.

11:10 – 11:30 Fred Sigernes, The DIY hyperspectral imager experiment.

11:30 – 11:50 Andres Spicher, Automatic classification of auroral images from the Oslo Auroral THEMIS (OATH) dataset using machine learning.

11:50 – 13:00 Lunch

13:00 – Inf Discussion (Next meeting etc.)

Poster session

- (1) Tikimani Bag, T. Sergienko, and U. Brändström. N2 1P Auroral Emission: Modeling and preliminary result.
- (2) Zhanna Dashkevich, and V.E. Ivanov. The evaluation of the NO density in the polar region using the ground-based photometer data.
- (3) Peter Dalin, R. Latteck, I. Mann, I. Häggström. Common-volume observations of NLC and PMSE above Andøya.
- (4) Roldugin, S.M., Chernyakov, A.V. Roldugin, O.F. Ogloblina. Simultaneous observations of noctiluculent clouds and polar mesospheric summer echoes at subauroral zone on 12 August 2016. (Presented by Boris Kozelov)
- (5) Daniel Kastinen, J. Kero, A. Pellinen-Wannberg, M. Holmström, J. Vaubailon, U. Brändström. A Monte-Carlo type simulation toolbox for small body dynamical astronomy.
- (6) Alpatov, V, Pavel Budnikov, and A. Vasiliev. Russian ionosphere monitoring system based on GNSS data.
- (7) Thi Ny Kieu, M. Passas, J. Sánchez and F. J. Gordillo-Vázquez. A quantitative analysis of high-speed time-resolved spectroscopy of sparks recorded by GALIUS.
- (8) Sakanoi, T., Masafumi Hirahara, M. Yamauchi, K. Asamura, Y. Saito, Shin-ichiro Oyama, H. Kojima, N. Kitamura, Yuichi Tsuda, A. Matsuoka, Y. Miyoshi, K. Hosokawa, N. Yagi1, M. Fuiizawa. FACTORS: A future satellite mission for understanding the coupling and transportation processes in the upper atmosphere.
- (9) Masatoshi Yamauchi, Automatic processing of combined ground-based measurements.