



# 41AM

The 41<sup>st</sup> Annual European Meeting on  
Atmospheric Studies by  
Optical Methods

**Stockholm, Sweden, August 17-21, 2014**



# MEETING PROGRAMME

Status: 2014-08-15

[www.opticalmeeting.se](http://www.opticalmeeting.se)

# Sunday

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**Hotel check-in**

**Registration**

18:30 ***Welcome Reception***

19:00 ***Dinner***

# Monday Morning

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9:00-9:15 **Welcome and general information**

## **Session 1: Airglow as a target and tool I**

Convener: **J. Gumbel**

9:15-9:45 **Slanger et al.**, CESAR, The Compact Echelle Spectrograph  
(*INVITED*)

9:45-10:15 **Yankowski et al.**, Development of the daytime model of electronic-vibrational kinetics for excited products of photodissociation of O<sub>2</sub> and O<sub>3</sub> in the mesosphere and lower thermosphere (*INVITED*)

***Coffee break***

10:35-11:05 **Sheese et al.**, Temperature remote sensing using the O<sub>2</sub> Atmospheric Band (*INVITED*)

11:05-11:30 **Sakanoi et al.**, Concentric gravity waves observed with IMAV/VISI on the international space station

Poster **Martyshenko et al.**, An analysis of sensitivity of the inverse problem on retrieval of the altitude profiles of atomic oxygen and ozone from emission intensities of the molecular oxygen

12:30 ***Lunch***

# Monday Afternoon

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## Session 2: Imaging techniques

Convener: **M. Kosch**

- 13:30-14:00 **Frey**, Current state and potential future developments in auroral and airglow imaging (*INVITED*)
- 14:00-14:30 **Brändström et al.**, 20 years of multi-static optical observations with ALIS (*INVITED*)
- 14:30-14:55 **Taylor et al.**, Non-Stop High-Resolution Imaging Studies of Mesospheric Gravity Waves at South Pole and First Imaging Results from the DEEPWAVE Mission

*Coffee break*

- 15:25-15:55 **Conde**, Ground-based imaging of winds (*INVITED*)
- 15:55-16:20 **Enell et al.**, The EISCAT-MIRACLE-ALIS radar, optical and HF heating campaigns in February-March 2014
- 16:20-16:45 **Sergienko et al.**, Tomography-like reconstruction of spatial distribution of the radio induced optical emissions (RIOE) at different wavelengths (move to Monday, Imaging)
- 16:45-17:10 **Whiter et al.**, Using all-sky cameras to produce maps of electron precipitation over Lapland
- 17:10-17:35 **Ugolnikov et al.**, All-Sky Twilight Polarization Measurements: Mesosphere Boltzmann Temperatures and Meteoric Dust Detection

19:00 *Dinner*

# Tuesday Morning

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9:00-9:45 **Gumbel and Stegman**, Georg Witt and Atmospheric Studies by Optical Methods – a tribute

## Session 3: **Airglow as a target and tool II**

Convener: **J. Stegman**

9:45-10:10 **Hedin et al.**, Oxygen Species and Thermospheric Airglow in The Earth's Sky (O-STATES): A Rocket Project on the O<sub>2</sub> Atmospheric Band

10:10-10:35 **Gumbel et al.**, Mesospheric Airglow/Aerosol Tomography and Spectroscopy (MATS): a satellite mission on structures and waves

*Coffee break*

10:55-11:15 **General discussion, Location of the 42AM**

## Session 4: **Posters**

Convener: **J. Gumbel**

11:15-11:35 Introductory presentations (3 minutes each)

Poster **Cachorro et al.**, Climatology and interannual variability of desert dust outbreaks over north-central Spain between 2003 and 2012

Poster **Mateos et al.**, Aerosol load at the surface in the Iberian Peninsula during the last 25 years

Poster **Mateos et al.**, Proposal of a method to separate the shortwave radiative effects of clouds and aerosols

Poster **Martysenko et al.**, An analysis of sensitivity of the inverse problem on retrieval of the altitude profiles of atomic oxygen and ozone from emission intensities of the molecular oxygen

Poster **Schlatter et al.**, Radar Imaging of Anomalous Radar Echoes in Conjunction with High Resolution Optical Observations of Aurora

Poster **Roldugin et al.**, The electron and proton precipitation in Scandinavian sector during SC on 24 January 2012

12:30 *Lunch*

# Tuesday Afternoon

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**Boat excursion**

*Light picknick*

19:00      *Dinner*

# Wednesday Morning

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## Session 5: Lidar techniques and applications

Convener: **J. Hedin**

9:00-9:30      **Höffner**, New developments on resonance lidars (*INVITED*)

9:30-10:00      **Kaifler**, The ALIMA "all atmosphere" lidar (*INVITED*)

10:00-10:25      **Tsuda et al.**, Recent report on lidar observations at Syowa Station (69S, 39E) in the Antarctic

*Coffee break*

10:45-11:15      **Achtert et al.**, Assessing lidar-based classification schemes for Polar Stratospheric Clouds based on 16 years of measurements at Erange, Sweden (*INVITED*)

11:15-11:45      **Kahnert**, Light scattering on non-spherical particles (*INVITED*)

11:45-12:10      **Clemmons et al.**, A global upper atmosphere observatory using of lidar on the International Space Station

12:30      *Lunch*

# Wednesday Afternoon

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## Session 6: Auroral studies

Convener: **N. Ivchenko**

13:30-14:00 **Lanchester**, From optical emissions to auroral acceleration using several different models (*INVITED*)

14:00-14:30 **Sakanoi et al.**, Characteristics of optical aurora and precipitating particles observed from space and the ground: Small-scale aurora and auroral polarization (*INVITED*)

14:30-14:55 **Dahlgren et al.**, High resolution observations of structuring and temporal variability in dual-frequency pulsating aurora

14:55-15:20 **Kosch et al.**, Estimating the field-aligned topside ionospheric anomalous electric field and resistivity at EISCAT

*Coffee break*

15:50-16:15 **Kozlovsky**, On the VHF radar echoes from midnight aurora

16:15-16:40 **Enell et al.**, EISCAT data search and retrieval for combined optical-radar observations of the ionosphere

16:40-17:05 **Tsuda et al.**, Study on sodium atom layer variation induced by auroral particle precipitations

17:05-17:30 **Sigernes et al.**, Color matching the aurora

17:30-18:00 **Roth**, Aurora on Jupiter and Jupiter satellites (*INVITED*)

Poster **Schlatter et al.**, Radar Imaging of Anomalous Radar Echoes in Conjunction with High Resolution Optical Observations of Aurora

Poster **Roldugin et al.**, The electron and proton precipitation in Scandinavian sector during SC on 24 January 2012

19:00 *Conference dinner*

# Thursday Morning

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## Session 7: Facilities

Convener: **J. Stegman**

- 9:00-9:30 **Mann**, EISCAT\_3D: A new atmospheric research radar for the Scandinavian Arctic (*INVITED*)
- 9:30-9:55 **Laizans**, Calibration and characterization of optical instrumentation in Tartu Observatory
- 9:55-10:20 **Abrahamsson et al.**, Measurement opportunities by means of SSC Global Facilities and Services

*Coffee break*

- 10:40-11:05 **Ivchenko**, Small Explorer for Advanced Missions
- 11:05-11:30 **Brändström et al.**, Report from the intercalibration workshops 2011-2013

11:30-12:00 **Final discussions**

12:30 *Lunch*

# Friday

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- 9:00-16:00 **Calibration workshop at the Department of Meteorology, Stockholm University**