

Orals OSA1.12

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Ground-based profiling networks for improving weather forecasts: COST Action ES1303

Convener: Anthony Illingworth

Co-Convener: Domenico Cimini

[Session details](#)

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/ Attendance Mon, 04 Sep, 18:30–19:30 / Display Mon, 04 Sep, 09:00–Tue, 05 Sep, 12:00 / Poster area

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Tuesday, 05 Sep 2017

Room Business school 1

Chairperson: Anthony Illingworth

Field Experiments

09:45– [EMS2017-341](#)

10:00 ★ **Recent advances in processing of ground-based remote sensing observations and their application for NWP model evaluation.** (solicited)

James M. Wilczak, Robert Banta, Laura Bianco, **Tim Bonin**, Aditya Choukulkar, Joel Cline, Irina Djalalova, Jaymes Kenyon, Julie Lundquist, Katherine McCaffrey, Joseph Olson, Yelena Pichugina, and Will Shaw

10:00– [EMS2017-368](#)

10:15 ★ **Real-time data assimilation of ground-based microwave radiometer network for short-range rainfall forecast in Tokyo** (solicited)

Shingo Shimizu, Ryohei Kato, Yasushi Uji, Ken-ichi Shimose, Koyuru Iwanami, Takeshi Maesaka, and Shin-ichi Suzuki

10:15– [EMS2017-527](#)

10:30 ★ **The international ceilometer inter-comparison campaign CeiLinEx2015 - uncertainties and artefacts of aerosol profiles -**

Ina Mattis, Margit Pattantyús-Ábrahám, Robert Begbie, Juan Antonio Bravo-Aranda, Mike Brettle, Jan

Cermak, Marc-Antoine Drouin, Alexander Geiss, Ulrich Görsdorf, Alexander Haefele, Martial Haeffelin, Maxime Hervo, Kateřina Komínková, Ronny Leinweber, Gerhard Müller, Christoph Münkel, Kornelia Pönitz, Frank Wagner, and Matthias Wiegner

10:30– [EMS2017-261 | Presentation](#)

10:45  **1D variational retrievals of boundary layer temperature profiles from ground-based microwave radiometers in an Alpine valley**

Pauline Martinet, Domenico Cimini, Francesco De Angelis, Guylaine Canut, Alexandre Paci, and Vinciane Unger

Coffee break

Chairperson: Dominique Ruffieux

Thermodynamical Profiling

11:15– [EMS2017-838 | Presentation](#)

11:30  **Calibration and standardization efforts for a network operation of ground-based microwave radiometers**

Bernhard Pospichal, Ulrich Löhnert, Nils Kuchler, and Harald Czekala

11:30– [EMS2017-508](#)

11:45  **Microwave temperature profiles from ground to the stratopause**
Francisco Navas-Guzmán, Niklaus Kämpfer, and Alexander Haefele

11:45– [EMS2017-599](#)

12:00  **Application of Coherent Doppler Lidar in Boundary Layer Observation** (solicited)
Kohin Hirano, Sue Grimmond, Shinzo Shimizu, Takeshi Maesaka, Shinichi Suzuki, Koyuru Iwanami, and Ryohei Misumi

12:00– [EMS2017-775](#)

12:15  **Marine wind profiles measured by a wind-lidar – ability of WRF predict marine wind profiles**
Ekaterina Batchvarova and Sven-Erik Gryning

12:15– [EMS2017-514 | Presentation](#)

12:30  **Turbulence classification of the atmospheric boundary-layer for Doppler wind lidar networks**
Tobias Marke, Susanne Crewell, Ulrich Löhnert, and Ewan O'Connor

12:30– [EMS2017-768](#)
12:45 **Comparison and Synergy of MWR and Doppler lidar for ABL retrievals**
 Umar Saeed and Ewan O'Connor

12:45– [EMS2017-794](#) | [Presentation](#)
13:00 **An uncertainty estimate for windprofilers in a turbulent atmosphere**
 Jan H. Schween

Lunch break

Chairperson: Martial Haeffelin

Cloud and Aerosol Profiling

14:00– [EMS2017-662](#)
14:15 **The E-PROFILE/TOPROF network of automatic lidars and ceilometers for cloud and aerosol/ash profiling**
 **Maxime Hervo**, Alexander Haeefe, Myles Turp, Martial Haeffelin, Marc-Antoine Druoin, Emma Hopkin, Simone Kotthaus, Ina Mattis, Frank Wagner, Matthias Wiegner, Werner Thomas, Jean-Luc Lampin, Christoph Münkel, and Holger Wille

14:15– [EMS2017-163](#)
14:30 **Ceilometer Firmware Intercomparison at the Met Office, UK**
 **Cristina Charlton-Perez**, Mariana Adam, Sue Ballard, Joelle Buxmann, Bernie Ryley, Jacqueline Sugier, Simone Kotthaus, Christoph Muenkel, Holger Wille, Emma Hopkin, and Tim Allott

14:30– [EMS2017-174](#)
14:45 **The influence of water vapor absorption on ceilometer measurements: Relevance for aerosol retrievals**
 **Matthias Wiegner**, Josef Gasteiger, Robert Begbie, Neda Boyouk, Mike Brettle, Jan Cermak, Marc-Antoine Drouin, Alexander Geiß, Ulrich Görsdorf, Alexander Haeefe, Martial Haeffelin, Maxime Hervo, Katerina Kominkova, Ronny Leinweber, Ina Mattis, Gerhard Müller, Christoph Münkel, Margit Pattantyus-Abraham, Kornelia Pönitz, and Frank Wagner

14:45– [EMS2017-294](#) | [Presentation](#)
15:00 **A model-assisted retrieval of aerosol properties from elastic backscatter lidar and ceilometer**



measurements

Davide Dionisi, Francesca Barnaba, Henri Dièmoz, Luca Di Liberto, and **Gian Paolo Gobbi**

15:00–

[EMS2017-481](#)

15:15

Automatic Ceilometer-based Backscatter Coefficient Retrieval – Improving Network Capabilities by combining Ceilometer Networks and AERONET



Birgit Heese, Christoph Böhm, and Patric Seifert

15:15–

[EMS2017-539](#)

15:30

ALC profiling: valuable information to support the radiation fog forecasting in the airports



Quentin Laffineur, Martial Haeffelin, Juan-Antonio Bravo-Aranda, Marc-Antoine Drouin, Aude Lhuisset, Jean-Charles Dupont, and Hugo De Backer

15:30–

[EMS2017-560](#)

15:45

Characterising the atmospheric boundary layer based on ceilometer observations



Simone Kotthaus, Sue Grimmond, Juan-Antonio Bravo-Aranda, Martial Haeffelin, Maxime Hervo, and Alexander Haeferle

15:45–

[EMS2017-616](#) | [Presentation](#)

16:00

Calibration of the Met Office Ceilometer Network using the Cloud Method



Emma Hopkin, Anthony Illingworth, Cristina Charlton-Perez, Chris Westbrook, and Sue Ballard

Coffee break

Chairperson: Domenico Cimini

Networks and Synergy

16:30–

[EMS2017-737](#)

16:45

A Ground-based Network of Boundary Layer Thermodynamic Profilers: The Infrared Option(solicited)



David D. Turner

16:45–

[EMS2017-787](#)

17:00

Towards using a ground-based network of microwave radiometers and water vapor lidars for improving short-term weather forecasts



Ulrich Löhnert, Maria Toporov, Domenico Cimini, and Potthast Roland

- 17:00–
17:15  [EMS2017-745](#)
An emerging European Doppler lidar network for meteorological applications
Ewan O'Connor, Anne Hirsikko, Christos Halios, Sven-Erik Gryning, Ronny Leinweber, Antti Manninen, Tobias Marke, Nína Petersen, Jana Preissler, Eileen Päsche, Umar Saeed, Jan Schween, Yang Shu, Irene Suomi, Minttu Tuononen, Ville Vakkari, Ludovic Thobois, Guy Pearson, Alain Dabas, and Johannes Buehl
- 17:15–
17:30  [EMS2017-683](#)
A better understanding of the atmospheric boundary layer structure using ALCs, MWRs and Doppler lidars in the framework of TOPROF
Juan Antonio Bravo Aranda, Dominico Cimini, Martine Collaud-Coen, Juan Luis Guerrer-Rascado, Martial Haeffelin, Maxime Hervo, Simone Kotthaus, Ewan O'Connor, María João Costa, Jan Schween, Umar Saeed, Lucia Mona, Marc-Antoine Drouin, Alex Geiss, Mathias Wiegner, and Lucas Alados-Arboledas
- 17:30–
17:45  [EMS2017-827](#)
Towards an European continental-scale network of ground-based microwave radiometers
Domenico Cimini, Ulrich Löhnert, and Pauline Martinet and the [TOPROF WG3](#)
- 17:45–
18:00  **Final Discussion**