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- Awards Session
  - Young Scientist Award and Young Scientist Travel Awards
  - EMS Outstanding Contributions and Media Awards
  - EMS Tromp Award
  - Harry Otten Prize for Innovation in Meteorology
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- Oral Conference Programme – Tuesday
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Floor plan
Dear participants, welcome to the EMS Annual Meeting and the European Conference on Applications of Meteorology (ECAM) 2015 in Sofia.

Under this year’s conference theme ECAM explores the end-to-end process of modern weather and flood risk forecasting.

The considerable socio-economic costs of severe weather and its impacts across Europe each year are increasingly apparent. The benefits of effective forecasting and warning are clear and quantifiable: lives are saved, communities are protected, and governments and businesses can take action to manage and mitigate risks.

Conference programme
You will notice that a new programme group “Measurements and Observations” has been established, to reflect the changing needs of society for observations and establish a forum for discussions on how they can be met in the future.

The programme also includes new sessions in most other programme groups: the first open call for session proposals has resulted in eight new sessions. This approach will be continued in future, the EMS and partner conferences will be open to larger projects and communities as a forum for their meetings.

Both, oral and poster presentations are important for the conference – they offer diverse opportunities for discussions and presentation of the authors’ work. This year distinct time slots are scheduled for short poster introductions of each session.

The winner of the Outstanding Poster Award will be announced on Friday at lunchtime, but the prize will be awarded at the next Annual Meeting 2016 in Trieste. Detailed information about the session programme is also available online, on the USB stick and through the app for mobile devices.

The Great Debate: Big Data in Meteorology
Big Data - is it real or is it hype? To explore the opportunities and challenges of “Big Data” for meteorological applications as well as the risks, questions such as:
- How do we ensure that the right information is used in the forecasting process?
- Can it improve our analyses and nowcasts?
- How can we be sure that forecasters and decision-makers can identify and have access to the most relevant data?
will be the focus of a plenary discussion.

The exhibition – use the opportunity
The conference will also feature a small exhibition of commercial companies involving manufacturers of meteorological instruments and the American Meteorological Society. It will be open from Monday lunchtime to Thursday afternoon and we hope you will make use of the opportunity to inform yourself on new developments and plans of these organisations.

Awards
During a special ceremony on Tuesday a number of awards will be handed over, including the new EMS Outstanding Contribution Award and four Young Scientist Travel Awards. Other bodies have decided to make use of this forum for their own awards scheme: the EMS Tromp Award and the Harry Otten Prize will also be presented. The EMS Silver Medal will be presented and the Laureate Anton Elissen will then give the Silver Medal Lecture “Meteorology and Society: Air pollution, weather forecasting and free data”.

Side meetings – Networking – Social programme
Side meetings, the sessions and the social programme that includes the icebreaker, coffee breaks and the closing ceremony, will provide many opportunities for networking at the conference. Make ample use of these – this is the raison d’être of the meetings.

Thank you
We are grateful to all who have contributed to make this meeting in Sofia a reality – the local organisers, the EMS Member Societies and Associates, the Copernicus organisation, the exhibitors.

To build the session programme would not have been possible without the work of the convenors who developed and promoted the sessions. Sincere thanks to all of them for their commitment and hard work! We are also grateful to the Programme and Science Committee (PSC) for having devised a very interesting programme and hope you will enjoy and benefit from the wealth of research, results and applications that will be presented and discussed during the week.

Feedback
As in previous years you will be invited to give feedback on all aspects of the conference. The PSC appreciates your comments and where ever possible tries to act and further develop the meetings.

Welcome again, and we hope you will have a very interesting week in Sofia.

Horst Böttger
EMS President

Hristomir Branzov
NIMH-BAS Director

Ekaterina Batchvarova
BMS President

Paulina Valtchanova
AMC President

Georgi Peev
BULATSA Director General
General information

Location and conference address
The 15th EMS Annual Meeting & the 12th European Conference on Applications of Meteorology (ECAM) are held jointly in Sofia, Bulgaria from 07 to 11 September 2015.

The conference is organised jointly by the European Meteorological Society (EMS), EUMETNET, BMS, AMC and National Institute of Meteorology and Hydrology (NIMH-BAS).

Venue
Hotel Marinela Sofia
James Bourchier Boulevard 100
1407 Sofia, Bulgaria

Rules of conduct
- Smoking is prohibited in the conference centre.
- It is prohibited to copy any presentation from the desktops in the lecture rooms.
- Please switch off any mobile phones or set in mute mode during the sessions.
- Please note that video-graphic recordings are not allowed.

Official language
The official language of the conference is English. Simultaneous interpretation is not provided. It is therefore expected that authors are able to present their research in the English language.

Insurances
The organisers cannot accept liability for personal accident, loss or damage to private property, which may be incurred as a result of the participation in the conference. Participants are, therefore, advised to arrange appropriate insurance cover. This should extend not only to travel but also to cancellation costs.

Local transportation information

Central bus station
Sofia's international bus station is adjacent to the main railway station.

Public transport
Two metro lines intersect in the city centre at the Serdika stop. Line 1 runs from the East (Sofia Airport) to the West (Obelya), via the city centre while line 2 runs from South (conference hotel, stop "James Bourchier") to North (Obelya). The underground is clean and efficient, though it does get crowded at peak times. Tickets cost one Bulgarian Lev (BGN) and can be bought from the ticket machines at the entrance to the stations. Bus, trolley bus and tram tickets must be bought from kiosks prior to boarding and validated on the bus or tram. Look for the punching devices on the wall. Insert ticket and punch. Many trams and trolley buses now have ticket machines at the front, where you can buy a ticket that does not need punching. The ticket is only valid for the journey on that particular tram/bus so if you change you will need to punch a new ticket. One ticket costs 1 BGN. It is valid for the metro, busses, trams etc. as well. Week tickets are not available. The fine for not having a ticket is 10 BGN and is payable on the spot.

Taxis
A taxi costs around €5 from the city centre to the hotel and around €15 from the airport to the hotel. Fares per kilometre are displayed on a small piece of paper on the taxi window and any price is legal if written. You need to see it before you enter. Entering the taxi means that you agree with the price. The fees vary between 0.79–4.99 BGN (€0.40–€2.50) per km.

OK Supertrans prices and average taxi prices:
- Initial tax 0.70 BGN or €0.35
- During day time (06:00–22:00): 0.79 BGN/km or €0.40
- During night time (22:00–06:00): 0.90 BGN/km or €0.46
- While standing: 0.22 BGN/minute or €0.11

TAXI-S-EXPRESS: tel. (+359) 2 9 12 80.
YELLOW: tel. (+359) 2 9 11 119.

Wireless network access
Participants have free WiFi access in the conference area. A password is not required.

Registration & information desk
The registration & information desk is located in the foyer of the hotel conference area.

Opening hours
Sunday, 06 September 2015
15:00–18:00
Monday – Thursday, 07–10 September 2015
08:00–18:00
Friday, 11 September 2015
08:00–10:00

Registration & abstract management
Copernicus Meetings
Bahnhofsallee 1e
37081 Göttingen, Germany
Phone: +49-551-900339-20
meetings@copernicus.org
www.copernicus.org

EMS Sustainable Meetings Policy
The EMS Council at its Session in March 2015 approved the EMS Sustainable Meetings Policy, which includes actions as well as recommendations for collaborating organisations and participants. It covers a variety of areas
such as travel activities with their impact on the climate, consumption of resources (energy, water, paper etc.) and considerations about reduction and minimisation of waste. For details on actions and recommendations consult: http://www.emetsoc.org/meetings-events/ems-annual-meetings/sustainable-meetings.

Specifically, this programme book has been printed on recycled paper; the lanyard is made of bamboo fibre (no PET) along with a biodegradable snap hook (pressed maize). We kindly ask you to return the name badge with the lanyard at the registration counter when leaving the conference centre.

EMS2015 app

Download the EMS2015 app for iPhones and Android smartphones.

Conference hours

Oral sessions
Starting time for the oral sessions Tuesday to Friday is 09:00 am.

Monday, 07 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30–13:00</td>
<td>Opening</td>
</tr>
<tr>
<td>14:00–16:00</td>
<td>Block 3</td>
</tr>
<tr>
<td>17:00–19:00</td>
<td>Block 4</td>
</tr>
<tr>
<td>19:15–21:00</td>
<td>Icebreaker reception</td>
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</tbody>
</table>

Tuesday, 08 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>09:00–10:30</td>
<td>Block 1</td>
</tr>
<tr>
<td>11:00–13:00</td>
<td>Block 2</td>
</tr>
<tr>
<td>14:00–15:30</td>
<td>Award ceremony</td>
</tr>
<tr>
<td>17:00–19:00</td>
<td>Block 4</td>
</tr>
</tbody>
</table>

Wednesday, 09 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>09:00–10:30</td>
<td>Block 1</td>
</tr>
<tr>
<td>11:00–13:00</td>
<td>Block 2</td>
</tr>
<tr>
<td>14:00–16:00</td>
<td>Block 3</td>
</tr>
<tr>
<td>17:00–18:30</td>
<td>Plenary discussion</td>
</tr>
</tbody>
</table>

Thursday, 10 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>09:00–10:30</td>
<td>Block 1</td>
</tr>
<tr>
<td>11:00–13:00</td>
<td>Block 2</td>
</tr>
<tr>
<td>14:00–16:00</td>
<td>Block 3</td>
</tr>
<tr>
<td>17:00–18:30</td>
<td>Block 4</td>
</tr>
</tbody>
</table>

Friday, 11 September 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:30</td>
<td>Block 1</td>
</tr>
<tr>
<td>11:30–13:00</td>
<td>Block 2</td>
</tr>
<tr>
<td>13:15–14:00</td>
<td>Announcement of poster award recipient</td>
</tr>
</tbody>
</table>

▲ Please note that video-graphic recordings are not allowed, and mobile phones must be switched off/in mute mode during the sessions.

Poster sessions
All posters are on display in room Sofia I, adjacent to the foyer. Poster numbers on the boards are printed in different colours, indicating the programme group.

Poster introductions
For each session time is reserved for short oral introductions to posters. Some sessions foresee such a time slot within the oral programme, for other sessions this time slot is normally scheduled at 16:00, directly preceding the related poster-in-attendance time. For these later, the oral time slots can be found in the programme under separate session names, called P01, P02, P03, etc. For details of each session see the programme or the table on the right.

Display times
Authors are kindly asked to put up their posters as soon as possible within the according display time in order to enable the conference participants to view their posters at any time within the display day, and to take them down on Wednesday between 18:00–18:30 (display time: Monday to Wednesday) and on Friday between 13:00–14:00 (display time: Thursday to Friday). Posters that have not been removed within this dismantling time will be removed and disposed of.

Outstanding Poster Award
An Outstanding Poster Award will be given at the 15th EMS & 12th ECAM in Sofia.
All posters displayed on their poster boards will be screened by a selection committee. The evaluation of posters will be based on the following criteria:

- Scientific quality;
- Innovativeness of the approach;
- Potential impacts of the results;
- Presentation aspect, including clarity of the message to readers of your poster.

The selection committee consists of the following senior scientists:

- Ingeborg Auer, Austria
- Frank Beyrich, Germany
- Marie Doutriaux Boucher, EUMETSAT
- Ewen McCallum, UK (chair)
- Georgi Georgiev, Bulgaria

Award
The author(s) will receive a certificate, one registration fee waiver for the EMS&ECAC 2016 and the poster will be highlighted as example of Best Practice on the EMS Website. The recipient of the award will be announced on Friday, 11 September 2015, 13:15, in the foyer. The award winning poster 2014 is on display in the foyer and at the back of this programme book.
<table>
<thead>
<tr>
<th>Day</th>
<th>Poster introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday, 07 September 2015</strong></td>
<td></td>
</tr>
<tr>
<td>ECAM1: From Observations to Mitigation</td>
<td>During oral session 15:50 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>ECAM6: Economic Benefits of Forecasts</td>
<td>During oral session 15:50 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>ASI1/NWP1: Dynamical Meteorology/predictability of high impact weather</td>
<td>During oral session 15:15 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI2: Monsoon circulations over East Asia</td>
<td>PO2 16:00 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI9: Atmospheric hazards</td>
<td>During oral session 18:45 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>CL4: Climate change detection</td>
<td>PO1 16:00 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td><strong>Tuesday, 08 September 2015</strong></td>
<td></td>
</tr>
<tr>
<td>ASI3: Space weather</td>
<td>PO3 09:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>ASI5: Coastal meteorology &amp; oceanography</td>
<td>PO6 15:45 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI7/CE6: Human Biometeorology</td>
<td>PO3 09:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>ASI10: BL physics and parameterizations</td>
<td>PO4 15:45 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td>ASI15: Phenology &amp; agrometeorology</td>
<td>PO3 09:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>CL3: Historical Climatology</td>
<td>PO5 15:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>CL5: Climate prediction</td>
<td>During oral session 12:45 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>CE5: Education</td>
<td>PO6 15:45 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>OBS4: Meteorological Observations from GNSS</td>
<td>During oral session 10:15 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td>OBS5: Precipitation Monitoring</td>
<td>PO4 15:45 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td><strong>Wednesday, 09 September 2015</strong></td>
<td></td>
</tr>
<tr>
<td>SPS3: Big Data</td>
<td>During oral session 17:15 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>ECAM2: Impact-based warnings</td>
<td>During oral session 14:00 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>ECAM5/ASI20: Weather Risks to Transport</td>
<td>During oral session 12:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>ASI11: Hydrological &amp; met. Forecast models</td>
<td>During oral session 10:15 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI12/OBS2: Sub-kilometre scale precipitation</td>
<td>During oral session 12:30 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI13: Urban climate</td>
<td>PO9 16:00 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>ASI14: Atm. Composition &amp; pollution</td>
<td>During oral session 12:30 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>CL1: Climate monitoring</td>
<td>PO8 16:00 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>CL7: Synoptic Climatology</td>
<td>PO7 16:00 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>OBS3/ASI19: Airborne Meteorology</td>
<td>PO9 16:00 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td><strong>Thursday, 10 September 2015</strong></td>
<td></td>
</tr>
<tr>
<td>ECAM3: Verification</td>
<td>PO12 16:00 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>ASI16: Energy meteorology – part I</td>
<td>PO11 16:00 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td>CL2: Spatial climatology</td>
<td>During oral session 10:15 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>CL6: Global and regional reanalyses</td>
<td>PO10 16:00 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>CL10: Copernicus CC Service</td>
<td>PO10 16:00 Sofia II 16:15–17:00</td>
</tr>
<tr>
<td>CE1: Media and Communication</td>
<td>During oral session 12:50 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>OBS1/ASI8: Atmospheric measurements</td>
<td>During oral session 12:45 Sofia III 16:15–17:00</td>
</tr>
<tr>
<td>NWP2: Numerical aspects in NWP models</td>
<td>During oral session 09:00/10:15 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td>NWP3: Data assimilation</td>
<td>During oral session 18:15 Vitosha 16:15–17:00</td>
</tr>
<tr>
<td>NWP4: Probab. &amp; ensemble forecasting</td>
<td>During oral session 12:45 Kyoto 16:15–17:00</td>
</tr>
<tr>
<td><strong>Friday, 11 September 2015</strong></td>
<td></td>
</tr>
<tr>
<td>ECAM3: Verification</td>
<td>Thursday 10:30–11:30</td>
</tr>
<tr>
<td>ASI4: Paramet. of small-scale processes</td>
<td>PO16 10:30 Vitosha 10:30–11:30</td>
</tr>
<tr>
<td>ASI16: Energy meteorology – part II</td>
<td>PO14 10:30 Sofia III 10:30–11:30</td>
</tr>
<tr>
<td>CL9/CE7: Climate Services partnerships</td>
<td>PO13 10:30 Sofia II 10:30–11:30</td>
</tr>
<tr>
<td>NWP6: MesoVICT</td>
<td>PO15 10:30 Kyoto 10:30–11:30</td>
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</tbody>
</table>
Coffee breaks & lunch

Coffee breaks

Free coffee/tea will be served during the coffee breaks. The coffee station is located in the foyer of the conference area.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
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<tbody>
<tr>
<td>Monday, 07 September 2015</td>
<td>10:30–11:00 and 16:00–17:00</td>
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<tr>
<td>Tuesday, 08 September 2015</td>
<td>10:30–11:00 and 16:00–17:00</td>
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<tr>
<td>Wednesday, 09 September 2015</td>
<td>10:30–11:00 and 16:00–17:00</td>
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<tr>
<td>Thursday, 10 September 2015</td>
<td>10:30–11:00 and 16:00–17:00</td>
</tr>
<tr>
<td>Friday, 11 September 2015</td>
<td>10:30–11:30</td>
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</tbody>
</table>

Lunch

Monday–Friday, 13:00–14:00

Drinks and meals are served in the restaurants of the conference hotel, i.e.

- Ambassador restaurant
- Captain Cook Restaurant
- Happy Sushi
- Candy Club

In addition, bistro, restaurants and supermarkets are available in walking distance.

Icebreaker reception

Location: Conference foyer
Date: Monday, 07 September 2015, 19:15–21:00

Announcement of poster award recipient

Location: Conference foyer
Date: Friday, 11 September 2015, 13:15–14:00

Publications

Paper publication in Advances in Science and Research

Authors of contributions that have been accepted to one of the EMS & ECAM 2015 session topics are invited to submit short conference papers to the open access journal Advances in Science and Research (http://www.adv-sci-res.net/volumes.html).

Details will be sent to the authors by email after the conference.

Upload of presentations

After the conference, you have the option to upload your oral presentation or your poster as Power Point or PDF file for online publication alongside your abstract. This shall give all interested participants the chance to revisit your contribution.

Details will be sent to the authors by email after the conference.
Managing Editor | Martina Junge

Advances in Science and Research (ASR) is the international open access proceedings journal of the European Meteorological Society (EMS). ASR publishes advances in science, profession and application of meteorology, climatology and related fields presented at the Annual Meetings of the EMS as well as at the European Conferences on Applications of Meteorology (ECAM) and on Applied Climatology (ECAC). All manuscripts submitted to ASR undergo a rigorous peer-review organised by the Programme and Science Committee (PSC).

Abstracted/Indexed
Indexed in ADS and GeoRef
Included in Directory of Open Access Journals (DOAJ)
Long-term e-archived in Portico and CLOCKSS

Deadline for submissions: 15 January 2016
Authors of contributions that have been accepted to one of the EMS & ECAM 2015 session topics are invited to submit short conference papers. Details will be sent to the authors by email after the conference.
Exhibition

Monday, 12:00–18:00 and Tuesday–Thursday, 09:00–18:00

Please use the opportunity to visit the exhibition in the conference foyer (the exhibitors are listed in alphabetical order):

**American Meteorological Society**
45 Beacon Street
Boston, MA 02108
United States

http://ametsoc.org/

The American Meteorological Society promotes the development and dissemination of information and education on the atmospheric and related oceanic and hydrologic sciences and the advancement of their professional applications. Founded in 1919, AMS has a membership of more than 14,000 professionals, students, and weather enthusiasts. AMS publishes eleven atmospheric and related oceanic and hydrologic journals – in print and online –, sponsors more than 12 conferences annually, and offers numerous programs and services.

**Kipp & Zonen B.V.**
P.O. Box 507
2600 AM Delft
Netherlands

http://www.kippzonen.com

Kipp & Zonen is the leading specialist in the measurement of solar and sky radiation, from the ultraviolet to the far infrared. We offer a complete range of high quality instrumentation and accessories, from reliable cost-effective products to the best performance available. Our equipment is used in meteorology, climate and solar energy networks around the world. Furthermore our expertise and close links with the scientific community have led to high-end solutions for the measurement of atmospheric properties such as stratospheric Ozone, UV Spectra and evapo-transpiration.

The USB flash drives which contain the programme and the abstracts of the conference are sponsored by Kipp & Zonen.

**Meteorological Technology World Expo Brussels**
Brussels Expo, Hall 3
Belgieplein - 1 - Place de Belgique
1020 Brussels
Belgium

http://www.meteorologicaltechnologyworldexpo.com

Meteorological Technology World Expo Brussels, Belgium, 13th to 15th October, is the largest exhibition of meteorological technology in the World, with 170 exhibitors demonstrating the very latest in observation and prediction technologies for better environmental monitoring, weather forecasting and business decision-making. UKIP Media & Events is an established and rapidly growing trade fair organiser and publisher of journals in niche technology areas. Come and see us to discuss your free magazine subscription, or participation at our next Expo.

**Scintec AG**
Wilhelm-Maybach-Strasse 14
72108 Rottenburg
Germany

http://www.scintec.com

Scintec produces the most advanced and comprehensive line of wind and temperature profilers in SODAR, RADAR and RASS technology, as well as optical SCINTILLOMETERS for the measurement of boundary layer turbulence and heat flux. Continuing scientific innovation, outstanding product design and customer oriented philosophy has made Scintec a global leader in this field. Please come and visit us at our booth.

The conference writing pads for participants are sponsored by Scintec.
NEXT-GENERATION METEOROLOGICAL INSTRUMENTS ARE HERE!

The world’s largest global exhibition and conference that showcases the latest and next-generation meteorological forecasting and measurement technologies

Meteorological TECHNOLOGY WORLD EXPO 2015

OCTOBER 13, 14, 15, 2015

BRUSSELS BELGIUM

Further information:
Please contact Simon Willard at: UKIP Media & Events Ltd,
Abinger House, Church Street, Dorking, Surrey, RH4 1DF, UK
Tel: +44 1306 743744 • Email: simon.willard@ukipme.com

www.meteorologicaltechnologyworldexpo.com
**OPENING SESSION, MONDAY, 07 SEPTEMBER 2015**
Room: Sofia II

**09:30–10:30 OPENING BY THE EMS PRESIDENT AND WELCOME ADDRESSES**

Horst Böttger, EMS President
Hristomir Branzov, NIMH-BAS Director
Ekaterina Batchvarova, BMS President
Paulina Valtchanova, AMC President, BULATSA
Ivelina Vassileva, Minister of the Environment and Water, Bulgaria
Liliyana Pavlova, Minister of Regional Development and Public Works, Bulgaria
Academician Stefan Vodenicharov, President of the Bulgarian Academy of Sciences
Will Lang, ECAM
Ingeborg Auer, Climate Programme
Robert Mureau, PRIMET
HMEI – The Association of Hydro-Meteorological Equipment Industry
Alexander MacDonald, AMS President

**10:30–11:00 COFFEE BREAK**

**11:00–13:00 STRATEGIC LECTURES**
Chair: Horst Böttger

**Deon Terblanche**, World Meteorological Organization
*The WMO contribution towards minimizing risks from weather, climate, hydrological and related environmental events*

**Stuart Goldstraw**, UK Met Office
*Observing Initial Conditions and Hydro-Meteorological Impacts – how do we ensure both requirements are met in the coming years?*

**Fernando Prates**, ECMWF
*Predicting high impact weather using ECMWF products*

**Michael Staudinger**, ZAMG
*Multihazard early warning systems: What can European citizens expect from their NHMSs?*

**13:00 CLOSING**
“BIG DATA” IN METEOROLOGY: OPPORTUNITIES AND CHALLENGES
17:00–18:30

Big Data – is it real or is it hype? Interest is now growing in the meteorological world in this subject. The ever-growing amounts of information now available presents both opportunities and problems for meteorologists. “Big Data” – huge in volume and from multiple, and often non-traditional, sources – is almost by definition “messy”.

- So how do we ensure that the right information is used in the forecasting process?
- Can it improve our analyses and nowcasts?
- How can we be sure that forecasters and decision-makers can identify and have access to the most relevant data?
- What can we infer from the vast amount of non-meteorological data?
- And what special techniques and systems are we developing to do all of this?

MODERATOR
Will Lang, UK Met Office

Short introductory statements will be given by invited speakers. The floor will then be open to panellists as well as the audience for questions, statements, discussions.

INVITED SPEAKERS
Ken Mylne, UK Met Office
Robert Mureau, Meteogroup
more to be confirmed
Young Scientist Travel Awards are given to support participation of outstanding students and young scientists at EMS-co-sponsored conferences. The award is given as travel expenses support. The recipients are selected by the EMS Awards Committee. For this year’s recipients see page 13.

The Outstanding Poster Award has been established to highlight good quality posters presented at the EMS Annual Meetings. The winners of the award 2014 are M. Ponater, V. Rieger, S. Dietmüller, DLR Oberpfaffenhofen, Germany, with the poster Can feedback analysis be used to understand efficacy differences between radiative forcings? The poster is on display in the foyer and printed at the back of this programme book. The winner of the award 2015 will be announced on Friday, 11 September 2015, 13:15.

The EMS Young Scientist Award is presented annually to acknowledge excellence in young scientists. The awardee 2015 is Miguel Potes, University of Evora. He is awarded for his work that links improved measurements of water quality and turbidity with modeling its impact on lake-atmosphere interactions at the regional scale. Miguel will give a Young Scientist Award Lecture on Thursday, 10 September 2015, 11:45 in Session OBS1/ASI8. See page 13.

The EMS Outstanding Contribution Award has recently been established and is given for the first time. Tanja Cegnar is honoured for her relentless pursuit of the Media and Communication activities of the Society, continuously contributing to their growth and promoting with exceptional dedication the international networking of Broadcast Meteorologists. See page 13.

The EMS Media Awards include the TV Weather Forecast Award – given to acknowledge best practice in communication of weather forecasts –, the Outreach and Communication Award – given in recognition of projects that explore new and effective ways to communicate the science of meteorology and related fields – and the Journalist Award that aims to highlight outstanding professional work that explains the science to the public. For details on the awardees 2015 see page 14.

The EMS Tromp Award is given for the first time and honours outstanding achievement in biometeorology. The first recipient is Bert G. Heusinkveld. He will give a presentation on his work on Tuesday, 08 September 2015, 18:45, Room Kyoto. For more details see page 15.

The Harry Otten Prize for Innovation in Meteorology encourages individuals and groups to come forward with new ideas on how meteorology in a practical way can further move society forward. Three finalists will present their ideas on Monday, 07 September 2015, 14:00, Room Kyoto. For more details see page 16.

The EMS Silver Medal is presented annually to a person that has made distinguished contributions to the development of meteorology in Europe. The Silver Medal 2015 is awarded to Anton Eliassen for his outstanding service to the European and international meteorological community and pioneering efforts to make meteorological data freely available. The Laudatio is given by Alain Ratier. More details see page 17.
Young Scientist Award


Citation: Miguel Potes’ work links improved measurements of water quality and turbidity with modelling its impact on lake-atmosphere interactions at the regional scale.

Miguel will give a Young Scientist Award Lecture in session OBS1/ASI8 Atmospheric measurements from the local to the regional scale: Concepts, new technologies and scientific progress: How lakes influence the local atmospheric circulation on Thursday, 10 September 2015 at 12:15 in room Sofia III.

Young Scientist Travel Awards

Anastasia Bleta and Panagiotis Nastos
EMS2015-44: Present and Future Human Thermal Bioclimatic Conditions and Impacts on Cardiovascular Admissions in Crete Island, Greece

Tuesday, 08 September 2015, 17:45–18:00
Session ASI7/CE6, room: Kyoto
See page 37.

Hajnalka Breuer and Júlia Göndöcs
EMS2015-46: Numerical study on parameterized and explicit cumulus convection resulted precipitation dependence on initial soil moisture content at 5 km horizontal resolution

Thursday, 10 September 2015
Author-in-attendance time: 16:15–17:00
Poster number: P76 (Sofia I)
Session NWP2
See page 83.

Markel García-Díez et al.
EMS2015-20: A study of the Urban Heat Island of Barcelona using a fast urban climate model

Wednesday, 09 September 2015, 14:00–14:15
Session ASI13, room: Vitosha
See page 55.

Yasar Burak Oztaner et al.
EMS2015-37: Impact of Land-Use Types and Urban Canopy Structure on Urban Heat Island via High Resolution WRF Modelling: Istanbul Case Study

Thursday, 10 September 2015, 10:00–10:15
Session: NWP2, room: Kyoto
See page 76.
EMS Outstanding Contribution Award

The recipient of the first EMS Outstanding Contribution Award is Tanja Cegnar, Slovenia, the chair of the EMS Media Team. She is honoured for her relentless pursuit of the Media and Communication activities of the Society, continuously contributing to their growth and promoting with exceptional dedication the international networking of Broadcast Meteorologists, developing the Media and Communication session programme at Annual Meetings as a forum for exchange and communication, as well as instigating communication and public presentation training for scientists.

Tanja Cegnar works at the Slovenian Environment Agency and is a weather presenter at the national television in Slovenia. She chairs the session on Media and Communication, Thursday, 10 September 2015, 09:00–13:00 in Room Vitosha.

The EMS Journalist Award 2015 is presented to Stéphane Foucart, France. Stéphane Foucart regularly publishes articles addressing climate change and its social and environment impact in the “Planet” section of “Le Monde”. He was nominated for the Journalist Award on the basis of three recent articles published in “Le Monde”:

- One third of sea level rise is due to melting of high altitude glaciers (Un tiers de l’élévation des mers est dû à la fonte des glaciers d’altitude, June 2013)
- The climate and war (Le climat et la guerre, November 2014)
- Climate and the trade of doubt (Le climat et le commerce du doute, March 2015)

Stéphane Foucart is vigilant to detect and expose misleading information about climate change and he is reporting in an understandable way the scientific facts about the environment, the climate and also about climate change in the context of politics. These implications of climate and climate change are rarely addressed by meteorologists or climatologists, but are of utmost importance.

Stéphane Foucart was born in 1973; he has been working for “Le Monde” for 15 years now, and he is the journal’s environmental sciences correspondent since 2007. He is also the author of books investigating the corporate influence on science (Le Populisme climatique, 2010, and La Fabrique du mensonge, 2013).

Stéphane Foucart will share some thoughts about science, journalism & the climate debate during the Media & Communication Session on Thursday, 10 September 2015.

The EMS Outreach & Communication Award 2015 is presented to the UK Festival of Weather, Arts and Music (WAM). In 2011 Pierrette Thomet Stott devised the idea for a festival bringing together the arts and meteorology/climate science to explore the possibilities inherent in bringing these different disciplines to interact. Since its foundation WAM has held three very successful events. The first festival in 2012 saw about a thousand people take part in a wide variety of events in Reading Town Hall. These included a weather fair, music recitals, a Climate Change Question Time, an art exhibition, a weather clinic, and a recreation of Lewis Fry Richardson’s Forecast Factory.

WAM has found new ways to communicate the beauty and fascination of meteorology thereby enhancing the understanding of weather and climate science by the general public in the United Kingdom. This outstanding initiative has broadened the reach of scientific meteorology, enabled the general public to engage with meteorology in novel ways and enhanced many people’s appreciation of its effects on our lives and the challenges involved in forecasting it. Pierrette Thomet Stott, WAM Director, holds a BA in Music from the University of Reading and a Diploma in Operatic Performance from the University of London. She trained as a mezzo-soprano and has performed in Great Britain and abroad as a recitalist and oratorio soloist. She will present the WAM project and talk about upcoming projects during the Media & Communication Session on Thursday, 10 September 2015.

The EMS TV Weather Forecast Award 2015 is presented to Martín Barreiro, Spain.

The entry went beyond a “normal” weather forecast, as it included information about the ocean and red tides. There was also a good scientific explanation of the link between meteorological conditions affecting wave heights and strengths on the western coast of Spain. His presentation of weather conditions was poised, confident, and thorough.

Martín Barreiro Carreira, was born 1977, and holds a Degree in Physics from the University of Santiago de Compostela (2003). From 2002 to 2010 he worked as operational and numerical meteorologist at MeteoGalicia, a regional meteorological centre, and as a weather forecaster and presenter at Televisión Galicia TVG (Galician public television). In 2010 he joined Televisión Española TVE (Spanish public television). Martín Barreiro is specialized in maritime weather forecasts. He likes to explain complex aspects of the relation between the atmosphere and the ocean. 19 video clips of TV weather forecasts were submitted for the Award, ten of the entries were received from countries outside of Europe.

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The Tromp Foundation (Foundation for Biometeorological Research), the legacy of Solco W. Tromp, is funding this award with the intention to promote biometeorology in Europe. Biometeorology is an interdisciplinary science studying the interactions between atmospheric processes and living organisms – plants, animals and humans. It provides answers to the question How does weather and climate impact the well-being of all living beings?

The EMS Tromp award has recently be established and is given for the first time this year. The EMS Tromp award 2015 winner is Bert G. Heusinkveld, nominated with the paper Spatial variability of the Rotterdam urban heat island as influenced by urban land use, published in the Journal of Geophysical Research: Atmospheres, 2014.

The prize will be presented during the 15th EMS Annual Meeting and 12th ECAM on 08 September 2015 in Sofia, Bulgaria. The awardee will receive $US 1,000 and travel expenses to attend the EMS Annual Meeting. The awardee will give a presentation on 08 September 2015 at the EMS & ECAM session ASI7/CE6 Human Biometeorology.

Who was Solco Walle Tromp?
Solco W. Tromp was born on March 1909. He studied geology and geography at Leyden University, The Netherlands, and after he received his PhD he worked as an exploration geologist for oil companies. During World War II he became involved in the Dutch section of MacArthur’s Headquarters. After the war, he studied physiology and meteorology; in 1947 he became a Professor of Geology at the King Saud University in Cairo, Egypt; from 1950 to 1955 he was a geological consultant at the UN Technical Assistance programme for Central America and the Middle east.

In 1955, he switched to biometeorology and founded the Biometeorological Research centre in Leyden. In the same year he founded the International Society for Biometeorology of which he was secretary until 1976. Solco Tromp combined three distinct qualities, a highly scientific mind, a logical intellect and an excellent organisational talent. By 1953, he already achieved a substantial bibliography on topics, which we may refer to as biomedical science or medical geography. His remarkable productive energy continued to the time of his death in 1993.

As a person, Solco Tromp was very courteous, full of humour and with a great zest for life. He became the main promoter of biometeorology for many years after his geology career. After he died part of his legacy was allocated to The Tromp Foundation (Foundation for Biometeorological Research). The aim of the Foundation is to promote Biometeorology.
Who will win the prize?
for the best innovative idea in meteorology

The Harry Otten Prize is a prize of 25000 Euro that will be awarded every two years for the best innovative idea in Meteorology.

The jury has selected three finalists who will present their ideas during a session on Monday, 7 September, at the meeting of the European Meteorological Society (EMS) in Sofia, Bulgaria.

Afterwards the jury will decide on the prize which will be presented to the winner during the award ceremony on Tuesday, 8 September.

The finalists are:
Alexandros Charalambides, Rogiros Tapakis
PROGNOSIS

Olivier Boucher
Low-cost humidity observations for weather prediction from automated detection of aviation contrails

Tim Hewson, Florian Pappenberger
Flash Flood Prediction using Current-Generation Global Models

Do you have your own great idea? The next Harry Otten Prize round will be in 2017. For additional information please see www.harry-otten-prize.org
The European Meteorological Society (EMS) has chosen Anton Eliassen as Laureate of the EMS Silver Medal 2015. He is honoured for his scientific contribution to environmental meteorology, his outstanding service to the European and international meteorological community that was e.g. central for the success of the Convention on Long-Range Trans-boundary Air Pollution, and his major role in increasing and enhancing the public understanding of meteorological information through his effort to make meteorological data freely available.

The Silver Medal ceremony, which includes the Silver Medal Lecture “Meteorology and Society: Air pollution, weather forecasting and free data” by the Laureate, will be held on Tuesday, 08 September 2015.

Anton Eliassen undoubtedly had and has a great influence on shaping the meteorological landscape in Europe over the past decades. He has had a leading role in the governance of most European meteorological organisations and in the international meteorological community. His outstanding leadership and capabilities to integrate has contributed to the development of the European Meteorological Infrastructure within ECMWF, ECOMET, EUMETSAT and WMO.

Anton Eliassen is an outstanding researcher, he has made significant scientific contributions to environmental meteorology through his pioneering work on the modelling of the long range transport of air pollutants since the early 1970s, resulting in a range of very important findings and providing the technical underpinning of the Convention of Long Range Transboundary Air Pollution and its ensuing Protocols for the reduction of air pollution emissions in Europe.

Being a strong advocate of free data policy, his pioneering efforts to make meteorological data freely available has greatly helped to enhance the public understanding of meteorological information. His view to make data freely available was visionary and ground breaking.

Laudation

The laudation will be given by Alain Ratier, EUMETSAT Director-General.

Mr Ratier was appointed EUMETSAT’s fourth Director-General on 01 August 2011. Between 2004 and 2011, he was Deputy Director-General of Météo-France.

Previously, Mr Ratier was Director of Programme Development and Deputy Director-General in EUMETSAT between 1996 and 2004. From 1987 to 1996 Mr Ratier was a Programme Manager and subsequently Associate Director for Earth Observation Programmes at the French Space Agency (CNES). Mr Ratier’s career began in R&D activities at Météo-France in 1983, on modelling of the upper ocean and air-sea interactions and on data assimilation. Mr Ratier graduated from the École Polytechnique in 1981.

EMS Silver Medal

The EMS Silver Medal was established in 2008 to honour important contributions to the development of meteorology in Europe. The Award is presented annually. Previous recipients include Karin Labitzke (Germany), René Morin (France), Lennart Bengtsson (Sweden/Germany), David Burridge (United Kingdom), Jean-François Geleyn (France/Czech Republic), Tim Palmer (United Kingdom), Hartmut Graßl (Germany) and Peter Lynch (Ireland).
Side meetings

Sunday, 06 September 2015

SPS6: Successful Session Chairing: some useful hints and exchange of best practices
Contact: Ewen McCallum and Martina Junge
18:00–19:00
Room: Madara

Monday, 07 September 2015

SIM1: Harry Otten Board meeting (by invitation only)
Contact: Richard Anthes
09:30–13:00
Room: Elena

Tuesday, 08 September 2015

SIM1: Harry Otten Board meeting (by invitation only)
Contact: Richard Anthes
09:00–12:30
Room: Elena

SIM4: UERRA WP3 (by invitation only)
Contact: A. K. Kaiser-Weiss
17:00–19:00
Room: Elena

Wednesday, 09 September 2015

SIM2: Communicating Climate Change (by invitation only)
Contact: Tanja Cegnar
09:00–13:00 & 17:00–18:30
Room: Silhouette Hall (19th floor)

SIM5: WMO Joint Working Group of Forecast Verification Research (by invitation only)
Contact: Marion Mittermaier
09:00–18:30
Room: Elena

SIM7: Programme and Science Committee 2016 (by invitation only)
Contact: Martina Junge
19:00–20:30
Room: Silhouette Hall (19th floor)

Friday, 11 September 2015

SIM6: MesoVICT project committee meeting (public)
Contact: Marion Mittermaier
13:30–15:30
Room: Elena
EUMETSAT
METEOROLOGICAL SATELLITE
CONFERENCE 2016

The EUMETSAT Meteorological Satellite Conference has been a key annual event for the meteorological community since the organisation’s inception in 1986. Since then, it has been hosted in numerous countries, and often co-organised by various Member and Cooperating States.

In its 30th anniversary year, it is fitting that the 2016 EUMETSAT Meteorological Satellite Conference will be held in EUMETSAT’s “home ground” of Darmstadt, Germany.

Sessions will be held on such topics as current and future satellite programmes and instruments, the use of satellite data for nowcasting and short-range NWP, the Arctic challenge, marine meteorology and oceanography, the role of satellite data records in climate services and space-based atmospheric composition and measurements.

WHO SHOULD ATTEND

• Experts from meteorological services, universities, satellite operating agencies working in the field of satellite meteorology and related applications in weather forecasting, climate research and services, oceanography and the environment.

• Interested scientists and students from universities and organisations dealing with Earth observations.

FOR MORE INFORMATION CONTACT:

Conference-organisation@eumetsat.int
Abstract submission deadline is 30 January 2016

DARMSTADT, GERMANY.
26-30 SEPTEMBER.
# Session index

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In the detailed daily programme (on page 22 to 32) the related ECAM, CL, and ASI sessions are listed in the following order: ECAM1, ECAM6, ASI1/NWP1, ASI2, ASI9, CL4.

**Poster display time Monday to Wednesday**
Authors are kindly asked to put up their posters as soon as possible within the allocated display time in order to enable the conference participants to view their posters at any time within the display days, and to take them down on Wednesday evening between 18:00–19:30. Posters that have not been removed within this dismantling time will be removed and disposed off.
Special Events

SPS1 Opening Session

Lecture Room: Sofia II

09:30–10:30

Chairperson(s): Horst Böttger

09:30–10:30:
Opening by the EMS President and Welcome Addresses

10:30 Coffee break

Strategic Lectures

11:00–11:30:
Deon Terblanche, WMO Atmospheric Research and Environment Branch, Director
The WMO contribution towards minimizing risks from weather, climate, hydrological and related environmental events

11:30–12:00:
Stuart Goldstraw, Met Office
Observing Initial Conditions and Hydro-Meteorological Impacts - how do we ensure both requirements are met in the coming years?

12:00–12:30:
Fernando Prates, ECMWF
Predicting high impact weather using ECMWF products

12:30–13:00:
Michael Staudinger, ZAMG
Multihazard early warning systems: What can European citizens expect from their NHMSs?

Closing

END OF ORAL PROGRAMME SPS1

SPS4 Harry Otten Prize for Innovation in Meteorology: Presentations by Finalists

Conveners: Richard Anthes; Dennis Schulze
Lecture Room: Kyoto

14:00–15:27

Chairperson(s): Rick Anthes

14:00–14:10:
Introduction

14:10–14:30: EMS2015-639
Methodology for predicting solar irradiance
Rogiros Tapakis, Alexandros G. Charalambides
PROGNOSIS, Greece

14:30–14:35:
Discussion

14:35–14:55: EMS2015-638
Probing the upper troposphere by watching aircraft
Olivier Boucher
Laboratoire de Météorologie Dynamique, UPMC / CNRS, Paris, France

14:55–15:00:
Discussion

15:00–15:20: EMS2015-640
Predicting Flash Floods using Current-Generation Global Models
Tim Hewson, Florian Pappenberger
ECMWF, UK

15:20–15:25:
Discussion

15:25–15:27:
Conclusion

END OF ORAL PROGRAMME SPS4
Applications of Meteorology

ECAM1 From Observations and NWP to Warnings and Impact Mitigation

Convener: Ken Mylne
Co-Conveners: P. Davies; Yong Wang; Bernhard Reichert
Lecture Room: Sofia II

14:00–16:00

Chairperson(s): Bernhard Reichert

14:00–14:05: Introduction

14:05–14:20: EMS2015-214
Seamless probabilistic forecasts on high impact weather for civil protection
Yong Wang, Martin Suklitsch, Clemens Wastl, Andre Simon, Mihaly Szucs
Zentralanstalt für Meteorologie und Geodynamik, Department of Forecasting Models, Vienna, Austria
(wang@zamg.ac.at)

14:20–14:35: EMS2015-524
FOGCAST: Probabilistic fog forecasting based on operational COSMO-DE model
Matthieu Masbou, Maike Hacker, Sabrina Wahl
Deutscher Wetterdienst, Research and Development, Offenbach am Main, Germany
(matthieu.masbou@dwd.de)

14:35–14:50: EMS2015-404
The Ensemble-MOS of Deutscher Wetterdienst
Reinhold Hess, Jenny Glaschoff, Bernhard K. Reichert
Deutscher Wetterdienst (DWD)

14:50–15:05: EMS2015-470
The automated generation of weather warning proposals as part of a decision support system for the weather warning service
Guido Schröder, Bernhard K. Reichert, Dirk Heizenreder
Deutscher Wetterdienst, Offenbach/Main, Germany

Grid-Based Forecasting and the Role of the Weather Forecaster
Michael Foley, Deryn Griffiths, Tennessee Leeuwenburg, Gary Weymouth
Bureau of Meteorology, Melbourne, Australia
(m.foley@bom.gov.au)

15:20–15:35: EMS2015-427
Recent developments in high-impact weather forecasting capabilities within the Met Office
Rob Neal, Jo Robbins, Helen Titley, Becky Hemingway, Rutger Dankers, Ken Mylne

15:35–15:50: EMS2015-623
Flooding from Intense Rainfall
Sarah Dance, Hannah Cloke, Sue Ballard
University of Reading, Reading, UK

15:50–16:00:
Joint Poster Introductions for sessions ECAM1 and ECAM6 - 1 slide

16:00 Coffee break

17:00–19:00

Chairperson(s): Ken Mylne

17:00–17:15: EMS2015-592
Prediction of weather related fire brigade operations on the basis of nowcasting data
Tobias Pardowitz, Tobias Heisterkamp, Martin Göber, Uwe Ulbrich
Freie Universität Berlin, Institut f. Meteorologie, Berlin, Germany
(tobias.pardowitz@met.fu-berlin.de), Hans-Ertel-Zentrum für Wetterforschung, Berlin, Germany

17:15–17:30: EMS2015-85
Assessing current capabilities and identifying areas of improvement to flood risk guidance information provided by the Flood Guidance Statement
Gavin Robbins
Flood Forecasting Centre, Exeter, United Kingdom
(gavin.robbins@environment-agency.gov.uk)

17:30–17:45: EMS2015-64
The potential of using model precipitation forecasts to predict floods on the example of the south of Western Siberia
Marina Zdereva, Svetlana Sannikova, Natalya Khluchina
Russian Federation (zder57@mail.ru) Siberian Regional Hydrometeorological Res. Institute City, Novosibirsk

17:45–18:45:
Oral programme ECAM 6

18:45–19:00
Joint Discussion: ECAM1 - ECAM6

END OF ORAL PROGRAMME ECAM1
ECAM6 Understanding and Improving the Socio-Economic Benefits of Forecasts

Convener: Adriaan Perrels
Lecture Room: Sofia II

17:45–19:00

Chairperson(s): Adriaan Perrels

Assessing Socioeconomic Benefits of Weather and Climate Services

17:45–18:00: EMS2015-634
Assessing Socioeconomic Benefits of Weather and Climate Services
Adriaan Perrels
Finnish Meteorological Institute

18:00–18:15: EMS2015-282
Recent developments in the use of Numerical Weather Outputs for agrometeorological services in Spain (Agroasesor project)
Antonio Mestre Barcelo, Roser Boteay, Andres Chazarra, J. Vicente Moreno
AEMET, Madrid, Spain (amestreba@aemet.es)

18:15–18:30: EMS2015-452
Assessing the Economic Value of Forest Fire Danger Forecasts in Germany
Thomas Schuhmacher
Deutscher Wetterdienst, München, Germany (thomas.schuhmacher@dwd.de)

18:30–18:45: EMS2015-635
Met Office European Windstorm Event response services
Bernd Becker, Paul Maisey
Met Office, Fitzroy Road, Exeter, EX1 3PB, UK (bernd.becker@metoffice.gov.uk, paul.maisey@metoffice.gov.uk)

18:45–19:00:
Joint Discussion: ECAM1 & ECAM6

END OF ORAL PROGRAMME ECAM6
The Atmospheric System and its Interactions

ASI1/NWP1 Dynamical meteorology and predictability of high impact weather

Conveners: Thomas Frisius; Timothy Hewson
Co-Conveners: Frank Lunkeit; Alessandro Dell’Aquila; Christian Franzke; Suzanne Gray
Lecture Room: Vitosha

14:00–15:40

Chairperson(s): Thomas Frisius

14:00–14:15: EMS2015-99
How orography affects jet tilt biases in climate models
Felix Pithan, Ted Shepherd
University of Reading, Department of Meteorology, United Kingdom (f.pithan@reading.ac.uk)

14:15–14:30: EMS2015-292
A climatology of poleward moisture transport by southern hemisphere extra-tropical cyclones
Victoria Sinclair, Helen Dacre
University of Helsinki, Division of Atmospheric Sciences, Department of Physics, Helsinki, Finland (Victoria.Sinclair@helsinki.fi)

14:30–14:45: EMS2015-266
Modulation of the Semiannual Oscillation Associated with Stratospheric Sudden Warming Events
Toshihiko Hirooka, Tsuyoshi Ohata, Nawo Eguchi
Department of Earth and Planetary Sciences, Kyushu University, Fukuoka, Japan (hiroook@geo.kyushu-u.ac.jp)

14:45–15:00: EMS2015-212
Winter precipitation variability during the western atmospheric circulation in Central Poland
Piotr Piotrowski, Joanna Jedruszkiewicz
Department of Meteorology and Climatology, University of Lodz, Poland (janos33@wp.pl)

15:00–15:15: EMS2015-153
Eta vs Sigma: Forecasts of extreme precipitation in parts of the Balkans in May 2014 using the Eta regional model
Dragana Marjanovic, Katarina Veljovic
University of Belgrade, Faculty of Physics, Serbia (marjanovicdragana@yahoo.com)

15:15–15:25: Introduction to Posters

END OF ORAL PROGRAMME ASI1/NWP1

ASI2 Dynamics, monsoon circulations and teleconnections on anomalous weather over East Asia

Conveners: Yafei Wang
Co-Conveners: Cholaw Bueh; Donghai Wang; Dehai Luo
Lecture Room: Kyoto

17:00–19:00

Chairperson(s): Yafei Wang and Cholaw Bueh

17:00–17:15: EMS2015-262
Additive linearity of atmospheric responses to Arctic sea ice reduction and La Nina
Shuanglin Li, Zhe Han, Yongqi Gao, Ping Zao
Institute of Atmospheric Physics, CAS (shuanglin.li@mail.iap.ac.cn)

17:15–17:30: EMS2015-260
Impact of ENSO on the thermal condition over the Tibetan Plateau
Yafei Wang, Xiaoyu Xu
Chinese Academy of Meteorological Sciences, State key laboratory of severe weather, Beijing, China (yfwang@cams.cma.gov.cn)

17:45–18:00: EMS2015-296
Influence of the Preceding Arctic Sea Ice and Eurasian Snow Cover Anomalies on the Urals Blocking during Summer
Ruonan Zhang, Weijing Li, Chenghu Sun
Chinese Academy of Meteorological Sciences, Beijing, China (zhangrn2010@126.com), National Climate Center, China Meteorological Administration, Beijing, China

18:00–18:15: EMS2015-162
Large-Scale Circulation Features Typical of Wintertime Extensive and Persistent Low Temperature Events in East Asia
Cholaw Bueh, Zuowei Xie
ICCES, Institute of Atmospheric Physics, Chinese Academy of Sciences, China (bueh@lasg.iap.ac.cn)

18:15–18:30: EMS2015-165
Precursory Signals of the Extensive and Persistent Extreme Cold Events in China
Jingbei Peng, Cholaw Bueh
The International Center for Climate and Environment Sciences, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China (pengjingbei@mail.iap.ac.cn)

18:30–18:45: EMS2015-188
Different Types of Cold Vortex Circulations over Northeast China and Their Weather Impacts
Zuowei XIE, Cholaw BUEH
Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China (xiezuowei@mail.iap.ac.cn)
18:45–19:00: EMS2015-52
The Positive North Atlantic Oscillation, European Blocking and Middle East Snowstorm
Yao Yao, Dehai Luo
RCE-TEA, Institute of Atmospheric Physics, Beijing, China (yaoyao@tea.ac.cn)

END OF ORAL PROGRAMME ASI2

ASI9 Atmospheric hazards
Convener: Fulvio Stel
Co-Conveners: Dario Giaiotti; Jordi Mazon;
Sante Laviola
Lecture Room: Vitosha
17:00–19:00

Chairperson(s): Jordi Mason Sante Laviola

17:00–17:15: EMS2015-135
Heat waves over Central Europe in regional climate models: evaluation and future projections
Ondrej Lhotka, Jan Kysely
Institute of Atmospheric Physics CAS, Prague, Czech Republic (ondrej.lhotka@ufa.cas.cz), Global Change Research Centre CAS, Brno, Czech Republic, Faculty of Science, Charles University, Prague, Czech Republic

17:15–17:30: EMS2015-267
Flash heat and flash cold phenomena in the Iberian Peninsula since 1900
Jordi Mazon, Jacob Cortés, Víctor Cortés, David Pino
Technical University of Catalonia, Department of Applied Physics, Castelldefels - Barcelona, Spain (jordi.mazon@upc.edu)

17:30–17:45: EMS2015-269
Transdisciplinary and multiscale reconstruction of the major flash floods
Jordi Mazon, Laura Romero, David Pino, Josep Carles Baalsch, Josep Lluís Ruiz-Bellet, Jordi Tuset, Mariano Barriendos
Technical University of Catalonia, Department of Applied Physics, Castelldefels - Barcelona, Spain (jordi.mazon@upc.edu), Escola d’Enginyeria de Telecomunicació i Aeronàutica de Castelldefels (EETAC), Universitat Politècnica de Catalunya - BarcelonaTech, Barcelona, Spain

17:45–18:00: EMS2015-324
Identification of the large-scale processes that lead to UK summer extreme hourly rain
Adrian Champion, Richard Allan
University of Reading, Department of Meteorology, United Kingdom (a.j.champion@reading.ac.uk)

18:00–18:15: EMS2015-617
Risk assessment for natural hazards in Croatia
Melita Percec Tadic, Branika Ivancan-Picek, Alica Bajic
Meteorological and Hydrological Service, Research and Development Division, Zagreb, Croatia (melita.percec.tadic@cirrus.dhz.hr)

18:15–18:30: EMS2015-506
Ice and wet snow storms - vanishing or underestimated hazard in a global warming climate - the case from Bulgaria
Dimitar Nikolov
National Institute of Meteorology and Hydrology, Bulgaria (dimitar.nikolov@meteo.bg)

18:30–18:45: EMS2015-94
Lightning climatology over the Mediterranean
Vassiliki Kotroni, Konstantinos Lagouvardos
National Observatory of Athens, Institute of Environmental Research and Sustainable Development, Athens, Greece (kotroni@meteo.noa.gr)

18:45–19:00:
Posters Short Presentation

END OF ORAL PROGRAMME ASI9
Climate

Understanding processes and climate change

CL4 Climate change detection, assessment of trends, variability and extremes

Convener: Albert M.G. Klein Tank
Co-Conveners: Monika Lakatos, Martine Rebetez
Lecture Room: Sofia III

14:00–16:00

14:00–14:15: EMS2015-511
Intercomparison of extra-tropical cyclones in nine reanalysis datasets
Xiaolan L. Wang, Yang Feng, Rodney Chan, Victor Isaac
Environment Canada, Climate Research Division, Toronto, Canada (xiaolan.wang@ec.gc.ca)

14:15–14:30: EMS2015-114
Detecting changes in the frequency of high impact weather events using circulation analogue statistics
Sabine Radanovics, Pascal You
Laboratoire des Sciences du Climat et de l'Environnement, IPSL, UMR 8212 CEA-CNRS-USQ, Gif-sur-Yvette, France (sabine.radanovics@lsce.ipsl.fr)

14:45–15:00: EMS2015-379
European long lasting dry and wet phases and atmospheric circulation - Variability and trends
Stephanie Hänsel, Wiebke Miketa, Andreas Hoy, Jörg Matschullat
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Freiberg, Germany (stephanie.haensel@ioez.tu-freiberg.de)

15:00–15:15: EMS2015-34
Importance of a good density rain gauge network to better estimate weather radar measurements
Fiorella Acquaotta, Alice Baronetti, Simona Fratianni, Diego Guenzi
University of Turin, Earth Science, Turin, Italy (fiorella.acquaotta@unito.it)

15:15–15:30: EMS2015-244
An Assessment of Historical and Future Hydro-Climatic Extremes over Key Watersheds within Western Canada
Barrie Bonsal, Charles Cuell
Environment Canada, Saskatoon, Canada (barrie.bonsal@ec.gc.ca)

15:30–15:45: EMS2015-144
Simulated versus Satellite Retrieval Distribution Patterns of the Snow Water Equivalent over Southeast Europe
Hristo Chervenkov
NIIMH - BAS

15:45–16:00: EMS2015-539
The snow disaster in the Rhodope mountains in march 2015
Anelia Gocheva, Krastina Malcheva, Dimitar Nikolov, Ilian Gospodinov
National Institute of Meteorology and Hydrology, Bulgaria (Anelia.Gocheva@meteo.bg)

16:00 Coffee break

17:00–19:00

17:00–17:15: EMS2015-398
Local climate extremes and their linkage to large-scale atmospheric features. Part 1 - Ideas and implementations
Arne Spekat, Wolfgang Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

17:15–17:30: EMS2015-399
Local climate extremes and their linkage to large-scale atmospheric features. Part 2 – Lessons learned when describing convective systems with a statistical methodology
Arne Spekat, Wolfgang Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

17:30–17:45: EMS2015-373
Generating percentile maps and bubble diagrams for extreme events using a grid data base solution
Peter Bissolli, Karsten Friedrich, Hermann Mächel, Stefan Rösner, Andrea Kreis, Maya Körber
Deutscher Wetterdienst, Offenbach, Germany (peter.bissolli@dwd.de)
17:45–18:00: EMS2015-372
Recent climatic changes and relation to weather patterns in a trans-boundary mountainous region in Central Europe
Andreas Hoy, Nils Feske, Petr Skalak, Petr Stepánek, Andreas Schmitt, Lenka Hájková, Lars Schöder, Anke Hahn, Petra Schneider, Wilfried Küchler, Pavel Zahradnicek
Saxon State Agency for Environment, Agriculture and Geology, Dresden, Germany, TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Freiberg, Germany (andreas.hoy@ioez.tu-freiberg.de)

18:00–18:15: EMS2015-568
Growing degree days variability in Central Europe in response to contemporary climate changes
Agnieszka Wypych, Zbigniew Ustrnul, Agnieszka Sulikowska, Małgorzata Sliwinska, Frank-M. Chmielewski Jagiellonian University, Cracow, Poland

18:15–18:30: EMS2015-411
Heat waves and weather types persistency over Italy
Marina Baldi, Giovanni Dalu
CNR - Institute of Biometeorology, Roma, Italy (m.baldi@ibimet.cnr.it)

18:30–18:45: EMS2015-233
Recent changes in continentality indices over the Middle East and North Africa (MENA) region and their association with atmospheric circulation
Ahmed Kenawy, Matthew McCabe, Sayed M. Robaa
King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia (kenawy@mans.edu.eg)

18:45–19:00: EMS2015-138
Climatology of heavy crown snow loads in the present and projected future climate of Finland
Ilari Lehtonen, Ari Venäläinen, Petri Hoppula, Matti Kämäräinen, Hilppa Gregow
Finnish Meteorological Institute, Helsinki, Finland (ilari.lehtonen@fmi.fi)

END OF ORAL PROGRAMME CL4
Applications of Meteorology

**ECAM1 From Observations and NWP to Warnings and Impact Mitigation**

**Convener:** Ken Mylne  
**Co-Conveners:** P. Davies, Yong Wang, Bernhard Reichert  
**Poster Area:** Sofia I  
**Chairperson(s):** Yong Wang  
**Introduction:** 15:50, Sofia II  
**Attendance Time:** 16:15–17:00

**P1: EMS2015-332**  
Communicating Uncertainty: Differences in Perspectives of Weather Forecasters, Emergency Managers and the General Public  
**Thomas Kox**, Catharina Lueder  
Freie Universität Berlin, Berlin, Germany  
(thomas.kox@fu-berlin.de), Hans-Ertel-Centre for Weather Research, Berlin, Germany

**P2: EMS2015-408**  
The impact of a large water reservoir on local temperature by using the COSMO NWP model  
**Zbynek Sokol**, Kristyna Bartunkova, Lukas Pop  
Institute of Atmospheric Physics, Praha, Czech Republic (sokol@ufa.cas.cz)

**P3: EMS2015-497**  
Synoptic and Mesoscale Investigation of Ice Storms in Bulgaria  
**Dimitar Nikolov**, Uwe Ulbrich  
National Institute of Meteorology and Hydrology, Bulgaria  
(dimitar.nikolov@meteo.bg)

**P4: EMS2015-593**  
Predictability of Winter Storm Damages  
**Tobias Pardowitz**, Robert Oinski, Uwe Ulbrich  
Freie Universität Berlin, Institut f. Meteorologie, Berlin, Germany (tobias.pardowitz@met.fu-berlin.de), Hans-Ertel-Zentrum für Wetterforschung, Berlin, Germany

**P5: EMS2015-221**  
The Decision Support System AutoWARN for the Weather Warning Service at DWD  
**Bernhard Reichert**, Jenny Glashoff, Reinhold Hess, Tamas Hirsch, Paul James, Christine Lenhart, Jan Paller, Cristina Primo, Wolfgang Raatz, Thorsten Schleiner, Guido Schröder  
Deutscher Wetterdienst, Research and Development, Offenbach, Germany (bernhard.reichert@dwd.de)

**END OF POSTER PROGRAMME ECAM1**

**ECAM6 Understanding and Improving the Socio-Economic Benefits of Forecasts**

**Convener:** Adriaan Perrels  
**Poster Area:** Sofia I  
**Chairperson(s):** Adriaan Perrels  
**Introduction:** 15:50, Sofia II  
**Attendance Time:** 16:15–17:00

**Assessing Socioeconomic Benefits of Weather and Climate Services**

**P10: EMS2015-129**  
Analysis on the Intention to Purchase Index-based Weather Insurance and Development for wind power weather insurance index  
**Ki-Jun Park**, In-Gyum Kim, Jeong-Yun Kim, Cheol-Hong Park  
National Institute of Meteorological Research, Seogwipo-si, Jeju-do, Republic of Korea (pkj@korea.kr)

**P11: EMS2015-184**  
UrbaMet: Impact of weather on the efficiency of urban cleaning services. The case of Barcelona  
**Marc J. Prohom**, Anna Miró, Jèssica Amaro  
Meteorological Service of Catalonia, Area of Climatology, Barcelona, Spain (mprohom@meteo.cat)

**END OF POSTER PROGRAMME ECAM6**
The Atmospheric System and its Interactions

ASI1/NWP1 Dynamical meteorology and predictability of high impact weather

**Conveners:** Thomas Frisius, Timothy Hewson  
**Co-Conveners:** Frank Lunkeit, Alessandro Dell’Aquila, Christian Franzke, Suzanne Gray

**Poster Area:** Sofia I

**Introduction:** 15:30, Vitosha  
**Attendance Time:** 16:15–17:00

P12: EMS2015-147  
The role of blocking in the summer 2014 collapse of Etesians over the eastern Mediterranean  
**Evangelos Tyrlis,** Filippos Tymvios, Christos Giannakopoulos, Jos Lelieveld  
The Cyprus Institute, Energy, Environment and Water Research Center (EEWRC), Nicosia, Cyprus  
(e.tyrlis@cyi.ac.cy)

P13: EMS2015-176  
Variations in the mesosphere and the lower thermosphere associated with stratospheric sudden warming events  
**Koki Iwao,** Toshihiko Hirooka  
Department of Earth Planetary Science, Kyushu University, Fukuoka, 812-8581 Japan  
(hirooka@geo.kyushu-u.ac.jp)

P14: EMS2015-406  
Diagnosis and forecast verification of an intense cyclogenesis during IOP 18 of HYMEX-SOP1  
**M.Ángeles Picornell,** Joan Campins, Agustí Jansà  
AEMET, DELEGACION TERRITORIAL EN ILLES BALEARS, PALMA DE MALLORCA, Spain  
(mpicornella@aemet.es)

P15: EMS2015-259  
Development and verification of a non-hydrostatic global atmospheric model using horizontal spectral element and vertical finite difference method on a cubed sphere  
**Suk-Jin Choi,** Kyung-Hee Seol, Song-You Hong  
Korea institute of atmospheric prediction systems, Seoul, Republic of Korea (sj.choi@kiaps.org)

P16: EMS2015-486  
Factors affecting atmospheric vertical motions as analyzed with a generalized omega equation and Open IFS model  
**Oleg Stepanyuk,** Jouni Räisänen  
University of Helsinki, Department of Physics, Finland, oleg.stepanyuk@helsinki.fi

END OF POSTER PROGRAMME ASI1/NWP1

ASI2 Dynamics, monsoon circulations and teleconnections on anomalous weather over East Asia

**Convener:** Yafei Wang  
**Co-Conveners:** Cholaw Bueh, Donghai Wang, Deyhai Luo

**Poster Area:** Sofia I  

**Chairperson(s):** Prof. Shuanlin Li  
**Introduction:** 16:00, Vitosha  
**Attendance Time:** 16:15–17:00

P17: EMS2015-391  
Summer precipitation extremes in Yellow River Loop Valley and the possible cause  
**Yina Diao**  
Ocean university of China, College of Physical and Environmental Oceanography, China  
(diaoyn@ouc.edu.cn)

P18: EMS2015-97  
Positive Correlation between the Silk Road Pattern and the Meridional Displacement of the Upper-Level Mid-Latitude Jet  
**Xiaowei Hong,** Riyu Lu  
State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, University of the Chinese Academy of Sciences, Beijing, China

P19: EMS2015-96  
Break of the Western North Pacific Summer Monsoon in Early August  
**Ke Xu,** Riyu Lu  
State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, University of the Chinese Academy of Sciences, Beijing, China

P20: EMS2015-186  
Relationship between Summer Rainfalls over North China and India and Its Genetic Analysis  
**Dawei Lin,** Cholaw Bueh, Zuowei Xie  
Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China (ljindawei@mail.iap.ac.cn), University of Chinese Academy of Sciences, Beijing, China

P21: EMS2015-263  
External forcing in modulating the relationship of the Atlantic Multidecadal Variability with the Indian Summer Monsoon  
**Feifei Luo,** Yongqi Gao, Lea Svendsen, Noel Keenlyside, Shuanglin Li  
Nansen-Zhu International Research Centre and Climate Change Research Center, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China (luofeifei212@mail.iap.ac.cn)

END OF POSTER PROGRAMME ASI2
**ASI9 Atmospheric hazards**

**Convener:** Fulvio Stel  
**Co-Conveners:** Dario Giaiotti, Jordi Mazon, Sante Laviola  
**Poster Area:** Sofia I  
**Chairperson(s):** Fulvio Stel  
**Introduction:** 18:45, Vitosha  
**Attendance Time:** 16:15–17:00

P33: EMS2015-45  
**Trends and variability of joint distribution extreme climate indices over Greece**  
Iliana Polychroni, Panagiotis Nastos, Evangelos Baltas  
Laboratory of Climatology and Atmospheric Environment, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, University Campus, Athens, Greece, Department of Water Resources and Environment, Faculty of Civil Engineering, National Technical University of Athens, Athens, Greece

P34: EMS2015-82  
**Hail characteristics in Northern Greece**  
Dimitrios Foris, Vasileios Foris  
Meteorological Applications Center, EL.G.A., Thessaloniki, Greece (d.foris@yahoo.com)

P35: EMS2015-246  
**Analysis of an episode of heavy rainfall with flooding in Kadağua watershed. 29-31 January 2015 case**  
Joseba Egaña, Santiago Gaztelumendi, Olatz Principe, Maialen Martija  
Basque Meteorology Agency (Euskalmet), Tecnalia - Energy and Environment Division - Meteorology Area.

P36: EMS2015-247  
**A case study of local floods in Añarbe area (Basque Country)**  
Joseba Egaña, Santiago Gaztelumendi, Virginia Palacio, Maialen Martija  
Basque Meteorology Agency (Euskalmet), Tecnalia - Energy and Environment Division - Meteorology Area.

P37: EMS2015-488  
**Probabilistic Analysis of Daily Precipitation Maxima over Greece**  
Katerina K. Argyrouli, Elissavet G. Feloni, Panagiotis T. Nastos  
Laboratory of Climatology & Atmospheric Environment, Faculty of Geology & Geoenvironment, University of Athens, University Campus, 157 84, Athens, Greece

P38: EMS2015-545  
**Impact analysis of atmospheric instability indices in forecasting process using data mining methods**  
Nikolaos Kamperakis, Ioannis Matsangouras, Panagiotis Nastos, Ioannis Pytharoulis  
Laboratory of Climatology and Atmospheric Environment, Faculty of Geology and Geoenvironment, University of Athens, University Campus, Athens, Greece

P39: EMS2015-610  
**A persistent fog in Sofia in January 2014: Analysis by equivalent potential temperature**  
Anastasiya Stoycheva, Stilian Evtimov  
National Institute of Meteorology and Hydrology, Sofia, Bulgaria (anastassia.stoycheva@meteo.bg)

END OF POSTER PROGRAMME ASI9
Climate

Understanding processes and climate change

CL4 Climate change detection, assessment of trends, variability and extremes

Convener: Albert M.G. Klein Tank
Co-Conveners: Monika Lakatos, Martine Rebetez
Poster Area: Sofia I
Chairperson(s): Albert Klein Tank
Introduction: 16:00, Sofia III
Attendance Time: 16:15–17:00

P85: EMS2015-378
Consistency between observed and projected seasonal trends in dry periods and heavy precipitation events in Central Eastern Germany
Stephanie Hänsel
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Freiberg, Germany
(stephanie.haensel@ioez.tu-freiberg.de)

P86: EMS2015-156
Analysis of wind for the Carpathian Basin using homogenized and simulated data sets
Csilla Peline Nemeth, Judit Bartholy, Rita Pongracz, Kornélia Radics
Geoinformation Service of HDF, Budapest, Hungary
(pelinenemeth.csilla@mhtehi.gov.hu)

P87: EMS2015-571
Temporal and spatial variability of frost free period in Central Europe and its circulation background
Agnieszka Wypych, Agnieszka Sulikowska, Małgorzata Sliwinska, Zbigniew Ustrnul, Frank-M. Chmielewski
Jagiellonian University, Cracow, Poland

P88: EMS2015-440
Assessment of meteorological drought in the Carpathian Mountains region during 1961-2010 by means of various indices
Marius-Victor Birsan, Sorin Cheval, Alexandru Dumitrescu, Dana Magdalena Micu
Meteo Romania, Department of Climatology, Bucharest, Romania

P89: EMS2015-343
Randomized MSSA in finding the significant oscillations in the 20th century reanalysis data
Teija Seitola, Johan Silen, Heikki Järvinen
Finnish Meteorological Institute, Helsinki, Finland
(teija.seitola@fmi.fi)

P90: EMS2015-180
Predictability of daily temperature series determined by maximal Lyapunov exponent
Jan Skorepa, Jiri Miksovsky, Ales Raidl
Charles University in Prague, Department of Atmospheric Physics, Czech Republic
(skorejan@seznam.cz)

P91: EMS2015-287
Temporal evolution of extreme temperature events in the Czech Republic: A comparison among seasons
Anna Valerianova, Lenka Chrová, Eva Holitanová
CHMI, Climatology, Prague, Czech Republic
(anna.valerianova@chmi.cz)

P92: EMS2015-336
Heat Stress in South Romania in Connection to Large-Scale Circulation Patterns
Simona Andrei, Dana Micu, Nicu Barbu, Carmen Dragota
National Institute of R&D in Optoelectronics, Remote Sensing Department, Magurele - Bucharest, Romania
(simona.andrei@inoe.ro)

P93: EMS2015-388
Assessment of impact indicators for extreme winter phenomena considering critical infrastructure
Andrea Vajda, Ilka Juga, Matti Kämäräinen, Ilari Lehtonen, Filippa Gregow
Finnish Meteorological Institute, Climate Service Centre, Helsinki, Finland
(andrea.vajda@fmi.fi)

P94: EMS2015-400
Heavy precipitation in mid-elevation mountain systems in Central Europe: case study of the Krünnehory/Erzgebirge (Czech Republic, Germany)
Jana Minarová, Miloslav Müller, Stephanie Hänsel, Jörg Matschullat, Alain Clappier
Department of Physical Geography and Geocology, Faculty of Science, Charles University, Prague, Czech Republic
(jana.minarova@natur.cuni.cz), Laboratoire Image, Ville, Environnement, National Center for Scientific Research & University ofStrasbourg, France,
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Germany

P95: EMS2015-394
Rainfall Characteristics and Trends for the Palestinian Territories, 1951-2010
Kamal Zurba, Stephanie Hänsel
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Freiberg, Germany
(stephanie.haensel@ioez.tu-freiberg.de)

P96: EMS2015-227
Intraseasonal differences of the stratospheric signal on temperature and precipitation anomalies over Europe during wintertime
Adelaida Diaz-Durán, Encarna Serrano
Dept. Geophysics and Meteorology, Universidad Complutense de Madrid, Spain
(eserrano@ucm.es)

P97: EMS2015-566
Relationship between precipitation and hydrological extremes in the Polish Carpathians in the last several decades
Agnieszka Wypych, Zbigniew Ustrnul
Jagiellonian University, Cracow, Poland

P98: EMS2015-641
Detection of main factors driving precipitation in Poland
Joanna Wibig
University of Lodz, Poland
(zameteo@uni.lodz.pl)
<table>
<thead>
<tr>
<th>Room</th>
<th>Sofia II</th>
<th>Sofia III</th>
<th>Kyoto</th>
<th>Vitosha</th>
<th>Room</th>
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<tr>
<td></td>
<td><strong>CL3</strong>: Historical climatology and paleo-climatology</td>
<td><strong>OBS4</strong>: Meteorological observations from ground and space-based Global Navigation Satellite System</td>
<td><strong>ASI15</strong>: Phenology and agrometeorology (09:00-09:45)</td>
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<td><strong>ASI5</strong>: Coastal meteorology and oceanography</td>
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<td>09:00-10:30</td>
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<td>09:45: P03: Poster Introduction ASI15, ASI7/CE6 and ASI13</td>
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<td>10:15: Poster Introduction</td>
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<td>10:30</td>
<td><strong>Coffee Break</strong></td>
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<td>11:00-13:00</td>
<td><strong>CL5</strong>: Climate prediction and scenarios on decadal to centennial timescales</td>
<td><strong>OBS5</strong>: Recent Advances in Climate (Services) Ready Precipitation Monitoring</td>
<td>ASI3: Meteorology, climate and space weather</td>
<td>ASI5 continued (11:00 - 12:00)</td>
<td>ASI6: Modeling the dynamics of coupled processes (12:00 - 13:00)</td>
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<td>12:45 poster introductions</td>
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<td>11:00-13:00</td>
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<td>13:00</td>
<td><strong>Lunch Break</strong></td>
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<td>14:00-15:30</td>
<td>Award Ceremonies (room Sofia II):</td>
<td>Young Scientist Travel Awards, 2014 Poster Award, EMS Young Scientist Award, EMS Outstanding Contribution Award, EMS Media Awards</td>
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<td>14:00-15:30</td>
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<td>EMS Tromp Award</td>
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<td>Harry Otten Prize</td>
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<td><strong>EMS Silver Medal: Laudatio and Silver Medal Lecture</strong></td>
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<td>Detailed programme: see page 17.</td>
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<td>15:45</td>
<td>P04: Poster Introduction ASI10 and OBS5</td>
<td>P05: Poster Introduction CL3</td>
<td>P06 Poster Introduction ASI5 and CE5</td>
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<td>15:45</td>
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<td>16:00-17:00</td>
<td><strong>Poster Session &amp; Coffee Break</strong></td>
<td><strong>Foyer and Room Sofia I</strong></td>
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<td>Poster authors in attendance time for the following sessions:</td>
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<td>ASI programme group: ASI3 (P22 - P23), ASI5 (P24 - P28), ASI7/CE6 (P29 - P32), ASI10 (P40 - P46), ASI15 (P66 - P67)</td>
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<td>CL programme group: CL3 (P82 - P84), CL5 (P99 - P108)</td>
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<td>CE programme group: CE5 (P116 - P117)</td>
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<td>OBS programme group: OBS4 (P121 - P125), OBS5 (P126 - P127)</td>
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<td>17:00-19:00</td>
<td><strong>CL5 continued</strong></td>
<td><strong>ASI10</strong>: Boundary-layer physics and parameterizations in weather and climate models</td>
<td><strong>ASI7/CE6</strong>: Human Biometeorology 18:45 EMS Tromp Award Presentation</td>
<td><strong>CE5</strong>: Education 17:00 GNSS Video Presentation</td>
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</table>

In the detailed daily programme (on page 34 to 49) the related ASI, CL, CE and OBS sessions are listed in the following order: ASI3, ASI5, ASI6, ASI7/CE6, ASI10, ASI15, CL3, CL5, CE5, OBS4, OBS5.

**Poster display time Monday to Wednesday**

Authors are kindly asked to put up their posters as soon as possible within the allocated display time in order to enable the conference participants to view their posters at any time within the display days, and to take them down on Wednesday evening between 18:00–19:30. Posters that have not been removed within this dismantling time will be removed and disposed of.
**Special Events**

**SPS2 Award Ceremony**

**Lecture Room:** Sofia II  
**14:00–15:35**

**Chairperson(s):** Horst Böttger (EMS President)

**Conference awards and grants**

**14:00–14:20:**
- EMS Young Scientist Travel Awards  
- 2014 Outstanding Poster Award  
- EMS Young Scientist Award  
- EMS Media Awards: Outreach & Communication Award, TV Weather Forecast Award and the Journalist Award  
- EMS Outstanding Contribution Award

**Tromp Foundation**

**14:20–14:30:**
- EMS Tromp Award:  
  [http://www.emetsoc.org/awards/other-awards/ems-tromp-award](http://www.emetsoc.org/awards/other-awards/ems-tromp-award)

**Harry Otten Foundation**

**14:30–14:55:**
- The Harry Otten Prize for Innovation in Meteorology will be presented by Harry Otten.

**Silver Medal Award Ceremony**

**14:55–15:00:**
- Laudation: Alain Ratier, EUMETSAT Director-General

**15:00–15:05:**
- Presentation of Silver Medal

**15:05–15:35:**
- Silver Medal Lecture by Anton Eliassen: "Meteorology and Society: Air pollution, weather forecasting and free data"

**END OF ORAL PROGRAMME SPS2**
The Atmospheric System and its Interactions

ASI3 Meteorology, climate and space weather: science, applications and coordination

Convener: Mauro Messerotti
Co-Conveners: David R. Jackson; Annika Seppälä; Suzy Bingham
Lecture Room: Kyoto

11:00–13:00

Chairperson(s): Mauro Messerotti

11:00–11:30: EMS2015-637
Recent development of space weather activities within the World Meteorological Organization
Jérôme Lafeuille
World Meteorological Organization (Switzerland)

11:30–12:00: EMS2015-478
Space weather services at the Finnish Meteorological Institute (solicited)
Tiera Laitinen, Ari Viljanen, Minna Palmroth, Kirsti Kauristie
Finnish Meteorological Institute, Helsinki, Finland (tiera.laitinen@fmi.fi)

12:00–12:15: EMS2015-89
Application of NWP verification methods to verify space weather forecasts
David R. Jackson, Suzy Bingham, Ed Pope
Met Office, Space Weather Research Group, Exeter, United Kingdom (david.jackson@metoffice.gov.uk)

12:15–12:45: EMS2015-279
Solar-cycle effect of energetic electron precipitation seen in mesospheric ozone (solicited)
Monika E. Andersson, Perka T. Verronen, Craig J. Rodger, Mark A. Ciliverd, Annika Seppälä, Shuhui Wang, Bonar R. Carson
Finnish Meteorological Institute, Earth Observation Unit, Helsininki, Finland (monika.andersson@fmi.fi)

12:45–13:00: EMS2015-609
The whole atmosphere response to century-scale changes in the Earth’s magnetic field
Ingrid Cnossen, Hanli Liu, Hua Lu
British Antarctic Survey, Cambridge, United Kingdom (inog@bas.ac.uk)

END OF ORAL PROGRAMME ASI3

ASI5 Coastal meteorology and oceanography

Convener: Mario Marcello Miglietta
Co-Conveners: Anna Maria Sempreviva; Manel Grifoll; Silvio Gualdi
Lecture Room: Vitosha

09:00–10:30

Chairperson(s): Silvio Gualdi

09:00–09:15: EMS2015-389
Ocean-atmosphere dynamics in a wind-jet region (Ebre Delta shelf, NW Mediterranean Sea)
Manel Grifoll, Jorge Navarro, Laura Ráfols, Elena Pallarés, Manuel Espino, Ana Palomares, Pedro Jimenez
LIM/UPC, Barcelona, Spain (manel.grifoll@upc.edu), CIIRC, Barcelona, Spain

09:15–09:30: EMS2015-315
Intense air-sea exchanges and heavy rainfall: impact of the northern Adriatic SST
Paolo Stocchi, Silvio Davolio
ISAC - CNR, Bologna, Italy (s.davolio@isac.cnr.it)

09:30–09:45: EMS2015-265
Frontogenesis at the whole mesoscale in the West Mediterranean basin: from raincells to rainbands
Jordi Mazon, David Pino
Technical University of Catalonia, Department of Applied Physics, Castelldefels - Barcelona, Spain (jordi.mazon@upc.edu)

09:45–10:00: EMS2015-535
Reducing the uncertainty of near-shore wind estimations using wind lidars and mesoscale models
Rogier Floors, Nikola Vasiljevic, Guillaume Lea, Alfredo Peña
DTU, Wind Energy, Department of Wind Energy, Roskilde, Denmark (rofi@dtu.dk)

10:00–10:15: EMS2015-555
Numerical modeling and synoptic analysis of an intense coastal erosion event in Thessaly, Greece
Panagiotis T. Nastos, Ioannis T. Matsangouras, Konstantinos Lazagiannis, Serafin Poulos
Department of Geography and Climatology, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, University Campus, GR 15784 Athens, Greece (nastos@geo.uoa.gr)

10:15–10:30: EMS2015-517
Vertical Profiles of Wind & Turbulence above the Southern North Sea: Micro- & Meso-Scale Model Performance and the Accuracy of Measurements
Jens Tambke, John A. T. Bye, Gerald Steinfeld, Hauke Wurps, Jörg-Olaf Wolff
Institute of Physics, University of Oldenburg, Oldenburg, Germany (jens.tambke@uni-oldenburg.de)

10:30 Coffee break
11:00–12:00

Chairperson(s): Manel Grifoll

11:00–11:15: EMS2015-589
Climate response to ocean temperature variations along the South Atlantic coast of Africa
Stefano Materia, William Large, Joe Tribbia, Gokhan Danabasoglu, Silvio Gualdi, Antonio Navarra
Centro Euro-Mediterraneo sui Cambiamenti Climatici, Bologna, Italy (stefano.materia@cmcc.it)

11:15–11:30: EMS2015-382
The diurnal cycle of coastal cloudiness over west Iberia using the CM-SAF cloud data record (CLAAS) and a WRF regional climate simulation
Joao P. A. Martins, Rita M. Cardoso, Pedro M. M. Soares, Isabel F. Trigo, Margarida Belo-Pereira, Nuno Moreira, Ricardo Tomé
IPMA, LSA-SAF, Lisboa, Portugal (joao.p.martins@ipma.pt), IDL, University of Lisbon

11:30–11:45: EMS2015-178
Intrusion of coastal waters into the pelagic eastern Mediterranean: in situ and satellite-based characterization
Eyal Heifetz, Shai Efrati, Yoav Lehahn, Eyal Rahav, Nurit Kress, Barak Herut, Isaac Gertman, Ron Goldman, Michael Lazar
Tel-Aviv University, Geophysics and Planetary Sciences, Tel-Aviv, Israel (eyalh@post.tau.ac.il)

11:45–12:00: EMS2015-16
Potential impact of the coloured Amazon and Orinoco plume on tropical cyclone intensity
Christina Newinger, Ralf Toumi
Imperial College, United Kingdom (r.toumi@imperial.ac.uk)

END OF ORAL PROGRAMME ASI5

ASI6 Modeling the dynamics of coupled atmosphere-wave-ocean processes

Convener: Sandro Carniel
Co-Conveners: John C. Warner; Peter Janssen; Huw Lewis
Lecture Room: Vitoshka

12:00–13:00

Chairperson(s): Huw Lewis, Sandro Carniel

12:00–12:15: EMS2015-311
UK Environmental Prediction - integration and evaluation at the convective scale
Juan Manuel Castillo Sanchez, Huw Lewis, David Pearson, Chris Harris, Martin Best, Andy Sautler, Lucy Bricheno, Ashley Brenton, Eleanor Blyth, Alberto Marinez de la Torre
Met Office, FitzRoy Road, Exeter, Devon, EX1 3PB, United Kingdom

12:15–12:30: EMS2015-30
On the use of coupled ocean-atmosphere-wave models in the Adriatic Sea: lessons from an intense CAO event
Antonio Ricchi, Francesco Barbariol, Alvise Benetazzo, Davide Bonaldo, Francesco M. Falcieri, Mario M. Miglietta, Mauro Sclavo, Sandro Carniel
Università Politecnica delle Marche, Ancona, Italy (aricky84@gmail.com)

12:30–12:45: EMS2015-460
Twenty-first Century Wave Climate Projections for Ireland: Assessing the Future Wave Energy Potential
Sarah Gallagher, Emily Gleseson, Ray McGrath, Roxana Tiron, Frédéric Dias
Research, Environment and Applications Division, Met Éireann, Glasnevin Hill, Glasnevin, Dublin 9, Ireland, UCD School of Mathematical Sciences, University College Dublin, Belfield, Dublin 4, Ireland

12:45–13:00: EMS2015-256
A coupled atmosphere-ocean-wave modeling approach for a Tropical Like Cyclone in the Mediterranean Sea.
Sandro Carniel, Antonio Ricchi, Francesco Barbariol, Alvise Benetazzo, Davide Bonaldo, Francesco M. Falcieri, Mauro Sclavo, Aniello Russo, Mario M. Miglietta
CNR-ISMAR, Venice, Dept. Oceanography, Head, Venice, Italy (sandro.carniel@cnr.it)

END OF ORAL PROGRAMME ASI6

ASI7/CE6 Human Biometeorology

Convener: Andreas Matzarakis
Co-Convener: Tanja Cegnar
Lecture Room: Kyoto

17:00–19:00

Chairperson(s): Andreas Matzarakis

17:00–17:15: EMS2015-56
Comparison of cold and heat related mortality in Vienna
Andreas Matzarakis, Lion Schöpfer, Ernest Rudel, Elisabeth Koch
University of Freiburg, Freiburg, Germany (matzarakis@uni-freiburg.de)

17:15–17:30: EMS2015-124
Three dimensional mean radiant temperature estimations through airborne LiDAR and thermal Infrared images in urban area
Tzu-Ping Lin, Yu-Cheng Chen, Jin-King Liu, Andreas Matzarakis, Chih-Yu Chen
National Cheng Kung University, Department of Architecture, Tainan, Taiwan

17:30–17:45: EMS2015-14
Introducing a cumulative thermal index based on Physiologically Equivalent Temperature (PET) for the bioclimatic assessment of urban open spaces
Ioannis Charalampopoulos, Ioannis Tsios, Andreas Matzarakis
Agricultural University of Athens, Lab. of General and Agricultural Meteorology, Athens, Greece
17:45–18:00: EMS2015-44 (YSTA)  
Present and Future Human Thermal Bioclimatic Conditions and Impacts on Cardiovascular Admissions in Crete Island, Greece

**Anastasia Bleta**, Panagiotis Nastos  
National and Kapodistrian University of Athens, Geology and Geoenvironment, Climatology and Atmospheric Environment, Kaisariani Athens, Greece  
(ableta@geol.uoa.gr)

18:00–18:15: EMS2015-272  
Felt temperature computations at the Bulgarian weather service

**Ilian Gospodinov**, Anna Tsenkova-Bratoeva  
National institute of meteorology and hydrology, Bulgaria  
(ilian.gospodinov@meteo.bg)

18:15–18:30: EMS2015-55  
Curiosities in micro scale modeling for human-biometeorological assessment

**Andreas Matzarakis**  
University of Freiburg, Freiburg, Germany  
(matzarak@uni-freiburg.de)

18:30–18:45: EMS2015-6  
Development of an approach to quantify thermal stress of livestock in Germany

**Ronja Vitt**, **Andreas Matzarakis**  
Chair of Meteorology and Climatology, University of Freiburg, Germany  
(ronja_vitt@gmx.de)

18:45–19:00:  
EMS Tromp Award  
Bert G. Heusinkveld

END OF ORAL PROGRAMME ASI7/CE6

**ASI10 Boundary-layer physics and parameterizations in weather and climate models**

**Convener**: Sergej Zilitinkevich  
**Co-Convener**: Arakel Petrosyan  
**Lecture Room**: Sofia III

17:00–19:00

17:00–17:30: EMS2015-102  
Why turbulence sustains in the free atmosphere? (solicited)

**Sergej Zilitinkevich**  
Finnish Meteorological Institute, Helsinki, Finland  
(sergej.zilitinkevich@fmi.fi), Division of Atmospheric Sciences, University of Helsinki, Finland, Department of Radio Physics, University of Nizhniy Novgorod, Russia

17:30–17:45: EMS2015-121  
Dynamics of the nocturnal boundary layer in direct numerical simulation

**Ivo van Hooijdonk**, Arnold Moene, Herman Clercx, Judith Donda, Bas van de Wiel  
Eindhoven University of Technology, Fluid Dynamics Laboratory, Eindhoven, Netherlands  
(i.g.s.v.hooijdonk@tue.nl)

17:45–18:00: EMS2015-62  
High-resolution large eddy simulations of stably stratified turbulence in free atmosphere

**Quentin Rodier**, Valéry Masson, Alexandre Paci, Pascal Marquet, Guylaine Canut  
CNRM-GAME, Toulouse, France  
(quentin.rodier@meteo.fr)

18:00–18:15: EMS2015-613  
Validation of a high Resolution forecast modelling system against detailed mean flow and turbulence observations and state-of-the-art LES model simulations

**Reinder Ronda**, Jisk Attema, Jordi Vilà-Guerau de Arellano, Gert-Jan Steeneveld, Bert Holtslag  
Wageningen University, Meteorology and Air Quality Section, Wageningen, Netherlands  
(gert-jan.steeneveld@wur.nl)

18:15–18:30: EMS2015-234  
Spatio-temporal Pattern of the Surface-based Turbulent Layer during Polar Winter at Dome C, Antarctica as observed by Sodar

**Igor Petenko**, Stefania Argentini, Margarita Kallistratova, Giangiuseppe Mastrantonio, Angelo Viola, Giampietro Casasanta, Roberto Sozzi  
Institute of Atmospheric Sciences and Climate, CNR, Roma, Italy  
i.petenko@isac.cnr.it, A.M. Obukhov Institute of Atmospheric Physics, Moscow, Russia

18:30–18:45: EMS2015-588  
Evaluation of PBL schemes in WRF for high Arctic conditions

**Hristina Kirova-Galabova**, Ekaterina Batchvarova, Sven-Erik Gryning, Henrik Skov, Lisa Lotte Sørensen  
National Institute of Meteorology and Hydrology-BAS, Sofia, Bulgaria  
(hristina.kirova@meteo.bg)

END OF ORAL PROGRAMME ASI10
**ASI15 Phenology and agrometeorology**

**Convener:** Elisabeth Koch  
**Co-Convener:** Josef Eitzinger  
**Lecture Room:** Kyoto

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<th>Time</th>
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<tr>
<td>09:00–09:45</td>
<td>Chairperson(s): Elisabeth Koch/Josef Eitzinger</td>
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<td>09:00–09:15</td>
<td>EMS2015-581: monitoring of spring phenology 2015</td>
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<td><em>Elisabeth Koch</em>, Markus Ungersböck, Thomas Hübner, Anita Paul, European Partners</td>
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<td>Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria</td>
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<td>(<a href="mailto:elisabeth.koch@zamg.ac.at">elisabeth.koch@zamg.ac.at</a>)</td>
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<td>09:15–09:30</td>
<td>EMS2015-117: Austrian drought monitoring system for agriculture</td>
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<td><em>Josef Eitzinger</em>, Vojko Daneu, Gernot Bodner, Gerhard Kubu, Willibald Loiskandl, Peggy Macaigne, Sabina Thaler, Andreas Schaumberger, Christoph Wittmann, Erwin Murer, Carmen Krammer, Mirek Trnka, Michael Hayes</td>
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<td>Univ. of Natural Resources and Life Sciences, BOKU, Vienna, Austria</td>
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<td>09:30–09:45</td>
<td>EMS2015-110: Comprehensive Study on the Influence of Evapotranspiration and Albedo on Surface Temperature Related to Changes in the Leaf Area Index</td>
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<td><em>Jiawen Zhu</em>, Xiaodong Zeng</td>
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<td></td>
<td>International Center for Climate and Environment Sciences, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China</td>
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<td>(<a href="mailto:zhujw@mail.iap.ac.cn">zhujw@mail.iap.ac.cn</a>)</td>
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END OF ORAL PROGRAMME ASI15
Climate

Monitoring climate and climate change

CL3 Historical climatology and paleoclimatology

Convener: Rudolf Brazdil
Co-Conveners: Ricardo García-Herrera; Ulf Buentgen; Fidel González-Rouco
Lecture Room: Sofia II

09:00–10:30

Chairperson(s): Fidel González-Rouco

09:00–09:15: EMS2015-431
Revisiting Chinese temperature simulations over the last 2k from reconstructions and uncertainty constraints from climate simulations
Elena García-Bustamante, J. Fidel González-Rouco, Laura Fernández-Donado, Juerg Luterbacher, Johann Jungclaus
Universidad de Murcia, Departamento de Fisica, Murcia, Spain (e.garciaabustamante@um.es)

09:15–09:30: EMS2015-436
Last millenium temperature simulations and reconstructions: overview, comparison and uncertainties
Laura Fernández-Donado, J. Fidel González-Rouco, Elena García-Bustamante, Jason E. Smerdon, Christoph C. Raible, Jürg Luterbacher
Institute of Geosciences (UCM-CSIC), Dpto. Astrophysics and Atmospheric Sciences, University Complutense Madrid, Spain (laurafernandez@fis.ucm.es)

09:30–09:45: EMS2015-383
Covariability of the seasonal temperature and precipitation in a high-resolution climate simulation for the Iberian Peninsula during the last five centuries
Fernando S. Rodrigo, Sonia Fernández Montes, Juan Pedro Montávez, Juan Andrés García-Valero, Juan José Gómez-Navarro
Department of Chemistry and Physics, University of Almería

10:00–10:15: EMS2015-633
Tornadoes in Estonia and Latvia
Andres Tarand
Estonia (andres.tarand@gmail.com)

10:15–10:30: EMS2015-585
Trends in wind speed over South America
Maria Gertrudés Justi da Silva, Luiz Felipe Cardoso, Igor Campos, Wanderson Silva
UENF, CCT, Laboratório de Meteorologia, Macaé, Brazil (justi.meteoro@gmail.com)

END OF ORAL PROGRAMME CL3

Understanding processes and climate change

CL5 Climate prediction and scenarios on decadal to centennial timescales

Convener: Mark Liniger
Co-Conveners: Clare Goodess; Martin Widmann; Jean-Pierre Céron
Lecture Room: Sofia II

11:00–13:00

11:00–11:30: EMS2015-515
VALUE: a framework to validate downscaling approaches for climate change studies (solicited)
Douglas Maraun, Martin Widmann, Jose M. Gutierrez, Sven Kottarski, Richard E. Chandler, Elke Hertig, Joanna Wilig, Radan Huth, Renate Wilcke
GEOMAR Helmholtz Centre for Ocean Research, Ocean Circulation and Climate Dynamics, Kiel, Germany (dmaraun@geomar.de)

11:30–11:45: EMS2015-380
Regionalized climate change projections in AEMET: history, current status and perspectives
Petra Ramos, Asuncion Pastor, Pilar Amblar, J. Carlos Sanchez, Jose M. Rodriguez, Maria J. Casado,
AEMET, Spain

11:45–12:00: EMS2015-225
From regional to local climate scenario: the effects of a statistical bias correction on different spatial scale climate change signal
Lorenzo Sangelantoni, Aniello Russo
Polytechnic University of Marche, Department of Life and Environmental Sciences, Ancona, Italy (l.sangelantoni@univpm.it)

12:00–12:15: EMS2015-447
Good surface performance of GCMs, good driving data for RCMs? Towards a clarification
Martin W. Jury, Andreas F. Prein, Heimo Truhetz, Andreas Gobiet
University of Graz, Wegener Center for Climate and Global Change, Graz, Austria (martinwolfgang.jury@edu.uni-graz.at)
12:15–12:30: EMS2015-619
On the comparison of EuroCORDEX ensemble and ENSEMBLES ensemble of regional simulations
Tomas Halenka, Michal Belda, Zuzana Klukova
Charles University in Prague, Fac. of Mathematics and Physics, Prague, Czech Republic
(tomas.halenka@mff.cuni.cz)

12:30–12:45: EMS2015-574
Research on the Change of Wind Speeds and Wind Energy in China
Ying Jiang, Yong Luo, Zongci Zhao
Public Meteorological Service Center of CMS, Beijing, China (jiangy@cma.gov.cn)

12:45–13:00: Poster Introduction

13:00 Lunch break

17:00–17:15: EMS2015-359
The extreme 2013/2014 winter in a future climate
Lucinda Rasmiijn, Gerard van der Schrier, Jan Barkmeijer, Andreas Sterl, Wilco Hazeleger
Royal Netherlands Meteorological Institute, De Bilt, Netherlands (schrier@knmi.nl)

17:15–17:30: EMS2015-249
ELAPSE - Enhanced regional and local climate scenarios for Switzerland
Sven Kotlarski, Elias Zubler, Martin Ivanov, Andreas M. Fischer, Mark A. Liniger, Christoph Schär
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland, Institute for Atmospheric and Climate Science, ETH Zurich, Zurich, Switzerland

17:30–17:45: EMS2015-174
Strategies for soil initialisation of regional decadal climate predictions
Steffen Kothe, Julian Tödter, Bodo Ahrens
Deutscher Wetterdienst, Germany (steffen.kothe@dwd.de)

17:45–18:00: EMS2015-112
Effects of horizontal resolution of regional climate model simulations on convective and stratiform precipitation
Zuzana Rulfova, Jan Kysely
Institute of Atmospheric Physics CAS, Prague, Czech Republic (rulfova@ufa.cas.cz), Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic

18:00–18:15: EMS2015-325
Validation of recent ALADIN-Climate simulations over Central Europe and Hungary
Tamás Illy, Judit Sábitz, Gabriella Szépszó
Hungarian Meteorological Service, Regional Climate Modelling Group, Budapest, Hungary (illy.t@met.hu)

18:15–18:30: EMS2015-362
Dynamically downscaled climate projection over the Maritime Continent using the MIT Regional Climate Model
Eun-Soon Im, Elfatih A. B. Eltahir
Singapore-MIT Alliance for Research and Technology, Center for Environmental Sensing and Modeling, Singapore, Singapore (esim@korea.kr)

18:30–18:45: EMS2015-23
Centennial-scale climate projection for the Carpathian Region assuming moderate change in the anthropogenic radiative forcing
Ildikó Pieczka, Karolina André, Rita Pongrácz, Judit Bartholy
Eötvös Loránd University, Department of Meteorology, Budapest, Hungary (pieczka@nimbus.elte.hu)

18:45–19:00: EMS2015-19
Evaluation of regional climate simulations with WRF model in conditions of central Europe
Jan Karlicky, Tomas Halenka, Michal Belda, Zuzana Klukova, Petr Skalak
Charles University in Prague, Czech Republic (jankarlicky@centrum.cz)

END OF ORAL PROGRAMME CL5
Communication and Education

CE5 Education

Convener: Tomas Halenka
Co-Conveners: Alessandro Chiariello; Gintautas Stankunavicius; Judita Liukaityte
Lecture Room: Vitosha

17:00–19:00

Chairperson(s): Tomas Halenka

17:00–17:15: Honourable Mention for Outreach & Communication Project: video on the application of the GNSS for atmospheric remote sensing

17:15–17:45: EMS2015-569
Eumetcal Training Activities and Strategies (solicited)
Alessandro Chiariello, Tero Siili
Finnish Meteorological Institute, Human Resource Development, Helsinki, Finland
(alessandro.chiariello@fmi.fi)

17:45–18:00: EMS2015-432
Using virtual technologies to deliver training solutions using real models
Glenn Carver, Stephan Siemen
ECMWF, Reading, United Kingdom
(glenn.carver@ecmwf.int)

18:00–18:15: EMS2015-396
Climate Change Adaptation - a Challenge Requiring Collaborative Actions
Kerstin Konitzer, Elin Fridahl, David Hirdman
Swedish Meteorological and Hydrological Institute (SMHI), Norrkoping, Sweden
(kerja.konitzer@smhi.se)

18:15–18:30: EMS2015-605
On the update of Meteorological Glossary at the Czech Meteorological Society
Daniela Rezacova, Petr Zacharov, Tomas Halenka and the eMS Team
Charles University in Prague, Fac. of Mathematics and Physics, Prague, Czech Republic
(tomas.halenka@mff.cuni.cz)

18:30–18:45: EMS2015-522
Educating secondary students about climate change through Art
Vasilis Dimopoulos, Panagiotis Giannopoulos
Hellenic American Educational Foundation, Psychico College, Greece (vdimop@gmail.com)

18:45–19:00: EMS2015-598
Update of ECTOM - European catalogue of training opportunities in meteorology
Tomas Halenka, Michal Belda
Charles University in Prague, Fac. of Mathematics and Physics, Prague, Czech Republic
(tomas.halenka@mff.cuni.cz)

END OF ORAL PROGRAMME CE5
Measurements and Observations

**OBS4 Meteorological observations from ground and space-based Global Navigation Satellite System (GNSS)**

**Convener:** Guergana Guerova  
**Co-Convener:** Jonathan Jones  
**Lecture Room:** Sofia III

**09:00–10:30**

**Chairperson(s):** Guergana Guerova

- **09:00–09:15:** EMS2015-90  
  Improving Ionospheric Imaging Via the Incorporation of Direct Ionosonde Observations Into GPS Tomography over South Africa  
  **Chelsey Cooper,** Cathryn Mitchell, David Jackson  
  Dept of Electrical and Electronic Engineering, University of Bath, Bath, UK, Met Office, Exeter, UK

- **09:15–09:30:** EMS2015-439  
  Comparison of GNSS processing techniques for estimation of tropospheric products over Bulgaria for 2013  
  **Tzvetan Simeonov,** Keranka Vassileva, Norman Teferle, Dmitry Sidorov  
  Sofia University, Meteorology and Geophysics, Sofia, Bulgaria (simeonov@phys.uni-sofia.bg)

- **09:30–09:45:** EMS2015-338  
  Atmospheric sensing by GNSS signal in GNSS&Meteo group investigations  
  **Pawel Hordyniec,** Witold Rohm, Jaroslaw Bosy, Tomasz Hadas, Krzysztof Sosnica, Karina Wilgan, Jan Kaplon, Jan Sienny, Kamil Kazmierski  
  University of Environmental and Life Sciences, Institute of Geodesy and Geoinformatics, Wrocław, Poland (pawel.hordyniec@igg.up.wroc.pl)

- **09:45–10:00:** EMS2015-239  
  Study of fog dynamics in Bulgaria with the GNSS tropospheric products  
  **Anastasia Stoycheva,** Guergana Guerova  
  National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences, Sofia, Bulgaria

- **10:00–10:15:** EMS2015-390  
  Study of frontal and convective intense precipitation cases in 2012 with GNSS tropospheric products and NWP model WRF for Bulgaria  
  **Guergana Guerova,** Martin Slavchev, Anastasia Stoycheva, Tzvetan Simeonov  
  Sofia University, Department of Meteorology and Geophysics, Sofia, Bulgaria (guerova@phys.uni-sofia.bg)

**10:15–10:30:** Poster presentations 3 min each

**END OF ORAL PROGRAMME OBS4**

**OBS5 Recent Advances in Climate (Services) Ready Precipitation Monitoring**

**Convener:** Andreas Becker  
**Co-Conveners:** Tanja Winterrath; Markus Ziese; Vincenzo Levizzani; Aart Overeem  
**Lecture Room:** Sofia III

**11:00–13:00**

**Chairperson(s):** Markus Ziese

- **11:00–11:15:** EMS2015-157  
  Measuring rainfall from cellular communication networks for a 2.5-year period  
  **Aart Overeem,** Hidde Leijnse, Remko Uijlenhoet  
  Wageningen University, Hydrology and Quantitative Water Management Group, Wageningen, Netherlands (aart.overeem@wur.nl), Royal Netherlands Meteorological Institute, De Bilt, Netherlands

- **11:15–11:30:** EMS2015-35  
  Urban flooding forecasting with weather radar and dense rain gauges network  
  **Diego Guenzi,** Fiorella Acquaotta, Simona Fratianni, Rodolfo Boraso, Roberto Cremonini  
  Università degli Studi di Torino - dip. di Scienze della Terra, Turin, Italy

- **11:30–11:45:** EMS2015-28  
  Climate change impact on flood characteristics in southwestern Hungary  
  **Anna Kis,** János Adolf Szabó, Rita Pongrácz, Judit Bartholy  
  Eötvös Loránd University, Department of Meteorology, Budapest, Hungary (kisanna@nimbus.elte.hu)

- **11:45–12:00:** EMS2015-298  
  Global daily precipitation analysis for the validation of medium-range climate predictions (DAPACLIP)  
  **Felix Dietzsch,** Axel Andersson, Marc Schröder, Kristin Raykova, Markus Ziese, Andreas Becker  
  Deutscher Wetterdienst, Offenbach, Germany

- **12:00–12:15:** EMS2015-405  
  Monitoring precipitation variations in Europe  
  **Christiana Phiotiadou,** Gerard van der Schrier, Jonathan Barichivich, Philip Jones  
  Royal Netherlands Meteorological Institute, De Bilt 3730 AE, The Netherlands (christiana.phiotiadou@knmi.nl)

- **12:15–12:30:** EMS2015-236  
  Spatial assessment of the performance of multiple gridded, reanalysis and remote sensing rainfall products over Saudi Arabia  
  **Ahmed Kenawy,** Matthew McCabe  
  King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia (kenawy@mans.edu.eg)
12:30–12:45: EMS2015-546
HOMPRA Europe - HOMogenized PRecipitation
Analysis of European in-situ data
Elke Rustemeier, Alice Kapala, Anja Meyer-Christoffer, Peter Finger, Udo Schneider, Victor Venema, Markus Ziese, Clemens Simmer, Andreas Becker
Deutscher Wetterdienst, Hydrometeorology, Offenbach am Main, Germany (markus.ziese@dwd.de)

12:45–13:00: EMS2015-530
On the new portfolio of “climate ready” gridded precipitation data products issued by the Global Precipitation Climatology Centre (GPCC)
Markus Ziese, Udo Schneider, Anja Meyer-Christoffer, Peter Finger, Elke Rustemeier, Andreas Becker
Deutscher Wetterdienst, Hydrometeorology, Offenbach am Main, Germany (markus.ziese@dwd.de)

END OF ORAL PROGRAMME OBS5
**The Atmospheric System and its Interactions**

**ASI3 Meteorology, climate and space weather: science, applications and coordination**

*Convener:* Mauro Messerotti  
*Co-Conveners:* David R. Jackson, Annika Seppälä, Suzy Bingham  
*Poster Area:* Sofia I  
*Chairperson(s):* David Jackson  
*Introduction:* 09:45, Kyoto  
*Attendance Time:* 16:15–17:00

**P22: EMS2015-141**  
Global water cycle and solar activity variations  
*Muthanna Al-Tameemi,* Vladimir Chukin  
Russian State Hydrometeorological University, St.Petersburg, Russian Federation  
(chukin@meteolab.ru), Mustansiriya University, Baghdad, Iraq (muthannaabd@yahoo.com)

**P23: EMS2015-285**  
Coupling between solar/geomagnetic activity and climate variability from stratosphere to troposphere  
*Dagmar Novotna,* Milan Paleček  
Institute of Atmospheric Physics, Czech Acad.of Sci, Czech Republic (nov@ufa.cas.cz)

**END OF POSTER PROGRAMME ASI3**

**ASI5 Coastal meteorology and oceanography**

*Convener:* Mario Marcello Miglietta  
*Co-Conveners:* Anna Maria Sempreviva, Manel Grifoll, Silvio Gualdi  
*Poster Area:* Sofia I  
*Chairperson(s):* Silvio Gualdi  
*Introduction:* 15:45, Vitosha  
*Attendance Time:* 16:15–17:00

**P24: EMS2015-113**  
Application of a wind-wave-current coupled model in the Catalan coast (NW Mediterranean Sea)  
*Ana Maria Palomares,* Jorge Navarro, Manel Grifoll, Elena Pallares, Manuel Espino, Pedro Jimenez  
CIEMAT (Centro de investigaciones Energéticas, Medioambientales y Tecnológicas), Madrid, Spain  
(ana.palomares@ciemat.es)

**P25: EMS2015-277**  
The new Euskalmet coastal marine warning system  
*Santiago Gatzelumendi,* Joseba Egaña, Pedro Liria, Manuel Gonzalez, José Antonio Aranda, Pedro Anitua  
Basque Meteorology Agency (EUSKALMET), TECNALIA, Meteorology Area

**P26: EMS2015-371**  
High resolution wave forecast and verification on the Catalan coast  
*Manuel Bravo,* Roger Veciana, Abdelmalik Saïrouni  
Servei meteorologic de Catalunya, meteo.cat

**P27: EMS2015-445**  
Case study of wind analysis at two coastal site using remote sensing sensors and ground based stations  
*Teresa Lo Feudo,* Damyan Barantiev, Ekaterina Batchvarova, Claudia Roberta Calidonna, Daniel Gulli, Luca Tiriolo, Rosamaria Calaudi, Anna Maria Semperviva  
ISAC-CNR, UOS of Lamezia Terme, Italy (t.lofeudo@isac.cnr.it)

**P28: EMS2015-596**  
Scale-dependent evaluation of mesoscale low-level winds in coastal areas obtained with ALADIN mesoscale NWP model  
*Mario Hrastinski,* Kristian Horvath, Iris Odak Plenkovic, Stjepan Ivatek-Sahdan, Alica Bajic  
Meteorological and Hydrological Service, Atmospheric research and forecast models development department, Zagreb, Croatia (mario.hrastinski@cirrus.dhz.hr)

**END OF POSTER PROGRAMME ASI5**

**ASI7/CE6 Human Biometeorology**

*Convener:* Andreas Matzarakis  
*Co-Conveners:* Tanja Cegnar  
*Poster Area:* Sofia I  
*Chairperson(s):* Andreas Matzarakis  
*Introduction:* 09:45, Kyoto  
*Attendance Time:* 16:15–17:00

**P29: EMS2015-123**  
Application of spatial synoptic classification in evaluating links between heat stress and cardiovascular mortality and morbidity in Prague, Czech Republic  
*Ales Urban,* Jan Kyselý  
Institute of Atmospheric Physics AS CR, Prague, Czech Republic (urban@ufa.cas.cz), Faculty of Science, Charles University, Prague, Czech Republic

**P30: EMS2015-320**  
Examination of human comfort predictability using ECMWF deterministic model  
*Dora Luptak,* Akos Nemeth, Richard Buki  
Hungarian Meteorological Service, Climatology Division, Budapest, Hungary (nemeth.a@met.hu)

**P31: EMS2015-255**  
An association between environmental variables with and Cardiovascular Diseases and Respiratory in São Paulo  
*Fabio Goncalves,* Alberto Afonso Jr.  
Brazil (fabio.goncalves@iag.usp.br)
P32: EMS2015-36
Biometeorological risks in Bulgaria
Vladimir Ivanov, Stilyan Evtimov
National Institute of Geophysics, Geodesy and Geography, Sofia, Bulgaria (vivanov@geophys.bas.bg)

P44: EMS2015-189
Parameterization of the PBL over orography-thermal non-homogeneities with some application in synoptic and climatic aspects
Evgeni Syrakov, Milen Tsankov, Kostadin Ganev
National Institute of Geophysics, Geodesy and Geography, Bulgarian academy of Sciences, Sofia, Bulgaria, kganev@geophys.bas.bg

P45: EMS2015-575
Comparison of Energy- & flux-budget turbulence closure with Large Eddy Simulation of idealized cases
Evgeny Kadantsev, Sergej Zilitinkevich
Division of Atmospheric Sciences, University of Helsinki, Finland (evgeny.kadantsev@helsinki.fi)

P46: EMS2015-616
Evaluation of convective boundary layer parameterizations versus Large-Eddy simulation data
Andrey Debolskiy, Victor Stepanenko
Moscow State University, Meteorology and climatology, Moscow, Russian Federation (and.debol@gmail.com)

END OF POSTER PROGRAMME ASI10

ASI15 Phenology and agrometeorology

Convener: Elisabeth Koch
Co-Convener: Josef Eitzinger
Poster Area: Sofia I
Chairperson(s): Elisabeth Koch, Josef Eitzinger
Introduction: 09:45, Kyoto
Attendance Time: 16:15–17:00

P66: EMS2015-275
Probability Distribution Function and One Relative Standard of Dry and Wet Index
Wanli Wang
Wuhan University, School of Resource and Environmental Science, Wuhan, China, 430079, Research Centre of climate and atmospheric environment, Wuhan, China (xiaowanw2002@yahoo.com)

P67: EMS2015-161
Estimation of Rice Yield using MODIS NDVI and Multimodel Ensemble Seasonal Hindcasts
Jong Chun, Sung Kim, Sang Oh
APEC Climate Center, Busan, Republic of Korea (jachun@apcc21.org)

END OF POSTER PROGRAMME ASI15
Climate

Monitoring climate and climate change

CL3 Historical climatology and paleoclimatology

**Convener:** Rudolf Brazdil  
**Co-Conveners:** Ricardo García-Herrera, Ulf Bengtgen, Fidel González-Rouco  
**Poster Area:** Sofia I  
**Introduction:** 15:45, Kyoto  
**Attendance Time:** 16:15–17:00

P82: EMS2015-542  
Modelling of dust deposition in Antarctica in glacial and interglacial climate conditions  
Natalia Sudarchikova, Uwe Mikolajewicz, Claudia Timmreck, Declan O’Donnell, Guy Schurgers, Dmitry Sein, Kai Zhang  
Max Planck Institute for Meteorology, Hamburg, Germany (natalia.sudarchikova@mpimet.mpg.de)

P83: EMS2015-291  
Early meteorological observations in western Africa, 1687-1793  
Fernando S. Rodrigo, Vicente Millán  
Dep. Chemistry and Physics, University of Almeria, Almeria, Spain (frrodrigo@ual.es)

P84: EMS2015-584  
Indicators of severe storms in Rio de Janeiro: trends observed in recent decades and in a climate change scenario  
Maria Gertrudes Justi da Silva, Camila Brasiliense, Fabricio Politke da Silva, Wallace Menezes  
UENF, CCT, Laboratório de Meteorologia, Macaé, Brazil (justi.meteoro@gmail.com)

END OF POSTER PROGRAMME CL3

Understanding processes and climate change

CL5 Climate prediction and scenarios on decadal to centennial timescales

**Convener:** Mark Liniger  
**Co-Conveners:** Clare Goodess, Martin Widmann, Jean-Pierre Céron  
**Poster Area:** Sofia I  
**Introduction:** 12:45, Sofia II  
**Attendance Time:** 16:15–17:00

P99: EMS2015-618  
On the integrated assessment of climate change using climate classification  
Michal Belda, Tomas Halenka, Jaroslava Kalvova, Eva Holtanova  
Charles University in Prague, Fac. of Mathematics and Physics, Prague, Czech Republic (tomas.halenka@mff.cuni.cz)

P100: EMS2015-32  
Identifying the freezing rain events in European gridded climate datasets  
Matti Kämäräinen, Kirsti Jylhä, Andrea Vajda, Hilppa Gregow, Pauli Jokinen, Seppo Saku  
Finnish Meteorological Institute, Helsinki, Finland (matti.kamarainen@fmi.fi)

P101: EMS2015-91  
Synthetic daily weather time-series for future climate in Switzerland  
Denise Keller, Mark Liniger, Andreas Fischer, Reto Knutti, Christof Appenzeller  
Federal Office of Meteorology and Climatology MeteoSwiss, Climate Division, Zurich-Airport, Switzerland (andreas.fischer@meteoswiss.ch)

P102: EMS2015-92  
Climate change signal over the Alpine region - sensitivity to GCM selection  
Elias Zubler, Andreas Fischer, Mark Liniger  
Federal Office of Meteorology and Climatology MeteoSwiss, Climate Division, Zurich-Airport, Switzerland (andreas.fischer@meteoswiss.ch)

P103: EMS2015-95  
Understanding of uncertainties in bunch of reanalysis data sets for MJO assessment  
Jinkyung Park, Hyun-Suk Kang, Tetsuo Nakazawa, ChunHo Cho  
National Institute of Meteorological Research, Jeju, Republic of Korea
**P104: EMS2015-139**  
Relationship between temperature and precipitation over Europe in EURO-CORDEX regional climate models  
*Lenka Crhova, Eva Holtanova*  
Charles University in Prague, Faculty of Mathematics and Physics, Department of Atmospheric Physics, Prague, Czech Republic (crhovai@gmail.com)

**P105: EMS2015-304**  
Climate change impact on future heating and cooling needs in Zagreb  
*Lidija Cvitan*, Mirta Pataric, Renata Sokol Jurkovic  
Meteorological and hydrological service, Research and development division, Zagreb, Croatia  
(cvitan@cirus.dhz.hr)

**P106: EMS2015-384**  
Quantifying groundwater recharge under projected climatic changes in an urban area  
Sabine Meißner, Volkmar Dunger, *Stephanie Hänsel*, Jörg Matschullat  
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Freiberg, Germany  
(stephanie.haensel@ioez.tu-freiberg.de)

**P107: EMS2015-554**  
Changes in winter streamflow in southern Iberian Peninsula during the 21th century  
*María Jesús Esteban-Parra*, Jose Manuel Hidalgo Muñoz, Matilde García-Valdecasas-Ojeda, Sonia R. Gámiz-Fortis, Yolanda Castro-Die  
Universidad de Granada, Dpto Física Aplicada, Granada, Spain (esteban@ugr.es)

**P108: EMS2015-552**  
Sensitivity of the WRF model for Dynamical Downscaling in term of evaporation and specific humidity over Spain  
*Matilde García-Valdecasas-Ojeda*, Sonia R. Gámiz-Fortis, Yolanda Castro-Diez, María Jesús Esteban-Parra  
Universidad de Granada, Dpto Física Aplicada, Granada, Spain (esteban@ugr.es)

**END OF POSTER PROGRAMME CL5**
Communication and Education

CE5 Education

Convener: Tomas Halenka
Co-Conveners: Alessandro Chiarrello, Gintautas Stankunavicius, Judita Liukaityte
Poster Area: Sofia I
Chairperson(s): Tomas Halenka
Introduction: 15:45, Vitosha
Attendance Time: 16:15–17:00

P116: EMS2015-428
Using virtual machines for training at ECMWF – Building sound environments to improve training
Stephan Siemen, Sándor Kertész, Iain Russell, Glenn Carver

P117: EMS2015-170
Teaching STEM through renewable energy for non-science major college students
Yukimasa Tsubota
Natural Science Divisions, J. F. Oberlin University, Tokyo, Japan (tsubota@obirin.ac.jp)

END OF POSTER PROGRAMME CE5
Measurements and Observations

**OBS4 Meteorological observations from ground and space-based Global Navigation Satellite System (GNSS)**

**Convener:** Guergana Guerova  
**Co-Convener:** Jonathan Jones  
**Poster Area:** Sofia I  
**Chairperson(s):** Jonathan Jones  
**Introduction:** 10:15, Sofia III  
**Attendance Time:** 16:15–17:00

**P121: EMS2015-323**  
COST Action ES1206: GNSS for Severe Weather and Climate (GNSS4SWEC)  
Jonathan Jones, Guergana Guerova, Jan Dousa, Galina Dick, Siebren de Haan, Eric Pottiiaux, Olivier Bock, Rosa Pacione  
Met Office, Observations R&D, Exeter, United Kingdom (jonathan.jones@metoffice.gov.uk)

**P122: EMS2015-455**  
Activities of GNSS4SWEC Working Group 1: Advanced GNSS Processing Techniques  
Jan Dousa, Galina Dick, Florian Zus, Michal Kacmarik, Pavel Vaclavovic, Hugues Brenot, Karolina Szafraniek, Zhiguo Dong, Elmar Brockmann, Norman Teferle, Witold Rohm, Marcelo Santos, Nicolas Zinas, Pawel Wielgosz, Samuel Nahmani, Laurent Morel  
Helmholtz Centre Potsdam - GFZ German Research Centre for Geosciences, Potsdam, Germany

**P123: EMS2015-53**  
Two modes of mixing ratio lamina vertical distribution  
Peter Krizan  
Institute of Atmospheric Physics, Prague, Czech Republic (krizan@ufa.cas.cz)

**P124: EMS2015-303**  
The assimilation of multi-GNSS tropospheric data  
Florian Zus, XingXing Li, Galina Dick, Stefan Heise, Wickert Jens  
GFZ Potsdam, 1.1, Potsdam, Germany (zusflo@gfz-potsdam.de)

**P125: EMS2015-544**  
Improvement of the vertical component of GPS and INSAR measurements in the western Corinth Gulf (Greece), by the use of high-resolution meteorological modeling of the lower troposphere: The PaTrop Experiment  
Nikolaos Roukounakis, Panagiotis Elias, Pierre Briole, Athanasios Argyriou, Ioannis Kioutoukis, Adrianos Retalis, Dimitrios Katsanos, Athanasios Gasas, Dimitar Dimitrov  
ENS, Laboratoire de Geologie, UMR 8538, 24 rue Lhomond, 75231 Paris CEDEX 5, France, Laboratory of Atmospheric Physics, Department of Physics, University of Patras, Patras GR 26500, Greece, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Lofos Koufou, P. Penteli 15236, Greece

**OBS5 Recent Advances in Climate (Services) Ready Precipitation Monitoring**

**Convener:** Andreas Becker  
**Co-Conveners:** Tanja Winterrath, Markus Ziese, Vincenzo Levizzani, Aart Overeem  
**Poster Area:** Sofia I  
**Chairperson(s):** Aart Overeem  
**Introduction:** 15:45, Sofia III  
**Attendance Time:** 16:15–17:00

**P126: EMS2015-532**  
Comparative statistical evaluation of the global daily precipitation data set DAPACLIP at GPCC  
Kristin Raykova, Elke Rustemeier, Kirstin Schamm, Markus Ziese, Anja Meyer-Christoffer, Udo Schneider, Peter Finger, Andreas Becker  
Deutscher Wetterdienst, Hydrometeorology, Offenbach am Main, Germany (markus.ziese@dwd.de)

**P127: EMS2015-543**  
Assessment of ERA-20C reanalysis monthly precipitation totals on the basis of GPCC in-situ measurements  
Elke Rustemeier, Markus Ziese, Andreas Becker, Anja Meyer-Christoffer, Udo Schneider, Peter Finger  
Deutscher Wetterdienst, Hydrometeorology, Offenbach am Main, Germany (markus.ziese@dwd.de)

END OF POSTER PROGRAMME OBS5
### Conference Programme – Wednesday

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<td>ASI14: Meteorological processes, atmospheric composition and pollution</td>
<td>OBS3/ASI19: Airborne meteorology</td>
<td>ASI11: Interfacing hydrological and meteorological models in forecasting system</td>
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<td>11:00–13:00</td>
<td>CL7: Synoptic climatology</td>
<td>ASI14</td>
<td>ECAM5/ASI20: Reducing Weather Risks to Transport: air, sea and land</td>
<td>ASI12/OBS2: Sub-kilometre Scale Precipitation Variability and its Impact on Hydrology</td>
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<td>14:00–16:00</td>
<td>ECAM2/CE3: Delivery and communication of impact based forecasts and risk based warnings</td>
<td>OBS1/ASI8: Atmospheric measurements from the local to the regional scale</td>
<td>CL1: Climate monitoring; data rescue, management, quality and homogenization</td>
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<td>CL1</td>
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<td>16:15–17:00</td>
<td>Poster Session &amp; Coffee Break</td>
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<td>Poster authors in attendance time for the following sessions:</td>
<td>ECAM and SPS programme group: SPS3 (GB1, GB2 in room Sofia II), ECAM2/CE3 (P6), ECAM5/ASI20 (P7 - P9)</td>
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<td>16:15–17:00</td>
<td>ASI programme group: ASI11 (P47 - P48), ASI12/OBS2 (P49 - P50), ASI13 (P51 - P55), ASI14 (P56 - P65)</td>
<td>CL programme group: CL1 (P68 - P81), CL7 (P109 - P115)</td>
<td>OBS programme group: OBS3/ASI19 (P118 - P120)</td>
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<td>17:00–18:30</td>
<td>The Great Debate: Big Data in Meteorology</td>
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In the detailed daily programme (on page 51 to 67) the related ECAM, ASI, CL and OBS sessions are listed in the following order: ECAM2/CE3, ECAM5/ASI20, ASI11, ASI12/OBS2, ASI13, ASI14, CL1, CL7, OBS1/ASI8, OBS3/ASI19.

**Poster display time Monday to Wednesday**

Authors are kindly asked to put up their posters as soon as possible within the allocated display time in order to enable the conference participants to view their posters at any time within the display days, and to take them down on Wednesday evening between 18:00–19:30. Posters that have not been removed within this dismantling time will be removed and disposed.
Special Events

SPS3 Public Great Debate: “Big Data” in Meteorology: Opportunities and Challenges

Convener: Will Lang
Co-Convener: Robert Mureau
Lecture Room: Sofia II

17:00–18:30

Chairperson(s): Will Lang

17:00–17:15: EMS2015-242
Urban air temperature estimation from smartphone battery temperatures (solicited)
Jan Jaap Pape, Aart Overeem, Hidde Leijnse, James Robinson, Gert-Jan Steeneveld, Berthold K.P. Horn, Remko Uijlenhoet
Wageningen University, Hydrology and Quantitative Water Management Group, Wageningen, Netherlands (aart.overeem@wur.nl), Royal Netherlands Meteorological Institute, De Bilt, Netherlands

17:15–17:25:
Introduction to “Great Debate” by Will Lang (including poster summaries)

17:25–17:30: EMS2015-172
Big Data challenges in NWP and its Application
Ken Mylne
Met Office, Weather Science, Exeter, United Kingdom (ken.mylne@metoffice.gov.uk), Chair Data Processing and Forecasting System, WMO Commission for Basic Systems

17:30–17:35:
Robert Mureau (MeteoGroup)

17:35–17:40:
Panellist 3: Statement

17:40–17:45:
Panellist 4: Statement

17:45–18:30:
Discussion moderated by Will Lang

END OF ORAL PROGRAMME SPS3
Applications of Meteorology

ECAM2/CE3 Delivery and communication of impact based forecasts and risk based warnings

Conveners: Dee Cotgrove; Haleh Kootval
Co-Convener: Tanja Cegnar
Lecture Room: Sofia II

14:00–16:00

Chairperson(s): Dee Cotgrove/Haleh Kootval

14:00–14:05: Introduction

14:05–14:20: EMS2015-278
Geographical contextualize and quantify flood risk using global precipitation data and GIS
Elena Isotta Cristofori, Amos Mtonya, Walther Camaro, Simone Balbo, Paolo Pasquaill Politecnico di Torino, Torino, Italy (elena.cristofori@polito.it), ITHACA - Information Technology for Humanitarian Assistance, Cooperation and Action, Torino, Italy

14:20–14:35: EMS2015-395
A communication issue: Extremes - they have a will of their own!
Arne Spekat, Wolfgang Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

14:35–14:50: EMS2015-471
Weather Information Tailored to the Needs of Renewable Energy Industry
Isabel Alberts, Carmen Köhler, Andrea Steiner, Harald Kempf, Renate Hagedom
Deutscher Wetterdienst, Offenbach, Germany (isabel.alberts@dwd.de)

14:50–15:05: EMS2015-83
Innovations in communicating high impact weather events
Joanne McLellan
Met Office, Exeter, Devon, EX1 3PB, United Kingdom (joanne.mcelellan@metoffice.gov.uk)

Panel Discussion

15:05–15:15: Gerald Fleming, Head Forcasting Met Eireann (panelist)

15:15–15:25: Nina Kukurainen, Communications Director Finnish Meteorological Institute (panelist)

15:25–15:35: Tanja Cegnar, Slovenian Environment Agency (panelist)

15:35–16:00: Challenges and best practice in communicating severe weather: Questions & Answers with the Panel

END OF ORAL PROGRAMME ECAM2/CE3

ECAM5/ASI20 Reducing Weather Risks to Transport: air, sea and land

Conveners: Fraser Ralston
Co-Conveners: Thomas Hauf; Christine Le Bot
Lecture Room: Kyoto

11:00–13:00

Chairperson(s): Fraser Ralston

11:00–11:15: EMS2015-215
Weather Window Planning
Maurits Geuze
Netherlands (maurits.geuze@meteogroup.com)

11:15–11:30: EMS2015-137
Cb-LIKE - Thunderstorm forecasts up to six hours with fuzzy logic
Martin Köhler
Germany (martin.koehler@dlr.de)

11:30–11:45: EMS2015-168
Road weather forecasting in Météo-France
Ludovic Bouilloud, Odile Coudert

11:45–12:00: EMS2015-376
Viamet: Advanced integration of meteorological data to achieve high resolution winter road condition forecasts
Roger Veciana Rovira, Abdelmalik Sairouini, Josep Ramon Miró Cubells, Rocky Otto Inarejos, Jesús Amaro
Servei Meteorològic de Catalunya, Spain (rveciana@gmail.com)

12:00–12:15: EMS2015-495
Winter time road traffic accidents compared to weather in Finland
Marjo Hippi, Otto Solin
Finnish Meteorological Institute, Helsinki, Finland (marjo.hippi@fmi.fi)

12:15–12:30: EMS2015-7
A Vehicle OverTurning Model: Forecasting Risk of Disruption on the UK Road Network during Winter Storms
Rebecca Hemingway
United Kingdom (rebecca.hemingway@metoffice.gov.uk)
12:30–12:45: EMS2015-57
  Evaluation of ship icing algorithms against unique ice accumulation data in Norwegian waters
  **Eirik Mikal Samuelsen**
  UiT - The Arctic University of Tromsø
  (eirik.m.samuelsen@uit.no), MET Norway, Tromsø
  (eiriks@met.no)

12:45–13:00:
  Short Poster Presentation

END OF ORAL PROGRAMME ECAM5/ASI20
The Atmospheric System and its Interactions

ASI11 Interfacing hydrological and meteorological models in forecasting system

Convener: Bodo Ahrens
Co-Conveners: Massimiliano Zappa; Herbert Formayer
Lecture Room: Vitosha

09:00–10:20

Chairperson(s): B. Ahrens

09:00–09:15: EMS2015-60
Simulation of Seasonal Extreme River Flows for Selected Climates Change Scenarios and Odra River Basin
Leszek Kuchar, Slawomir Iwanski, Leszek Jelonek
Wrocław University of Environmental and Life Sciences (WUELS), Wrocław, Poland
(leszek.kuchar@gmail.com), Institute of Meteorology and Water Management, Wrocław, Poland

09:15–09:30: EMS2015-65
How seasonal forecast could help a decision maker: an example of climate service for water resource management.
Christian Viel, Anne-Lise Beaulant, Jean-Michel Soubeiryroux, Jean-Pierre Ceron
Météo-France, Climatology, France
(christian.viel@meteo.fr)

09:30–09:45: EMS2015-132
Assessing various post-processing methods with regard to a low-flow forecast system in the Thur basin
Konrad Bogner, Stefanie Joerg-Hess, Luzi Bernhard, Massimiliano Zappa
Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Birmensdorf, Switzerland
(konrad.bogner@yahoo.com)

09:45–10:00: EMS2015-525
Flood warning for the city of Venice using an Ensemble Prediction System tool
Riccardo Mel, Piero Lionello
University of Padua, Dipartimento di Ingegneria Civile, Edile ed Ambientale, Padova, Italy
(riccardo.mel@dicea.unipd.it)

10:00–10:15: EMS2015-624
Assessing the performance of ensemble streamflow forecasts produced by the rainfall forecasts from Australian numerical weather prediction models
Durga Lal Shrestha, David Robertson, James Bennett, Yong Song, QJ Wang
Land and Water Flagship, CSIRO, Australia

10:15–10:20:
Poster introductions

END OF ORAL PROGRAMME ASI11

ASI12/OBS2 Sub-kilometre Scale Precipitation Variability and its Impact on Hydrology

Convener: Katharina Lengfeld
Co-Conveners: Marco Clemens; Marie-claire ten Veldhuis; Auguste Gires; Sylvia Bohnenstengel
Lecture Room: Vitosha

11:00–12:40

Chairperson(s): Marco Clemens, Katharina Lengfeld

11:00–11:15: EMS2015-66
Operational applications of dual-polarized weather radar in Finland
Ljubov Nevonen
Finland (ljubov.nevonen@fmi.fi)

11:15–11:30: EMS2015-39
Assessment of vertical variability of radar backscatter moments
Marek Jacob, Marco Clemens, Hans Münster, Felix Ament
Meteorological Institute of the University of Hamburg, Germany (marek.jacob@uni-hamburg.de)

11:30–11:45: EMS2015-40
Urban High-Resolution Precipitation Product for rainfall-runoff simulations: Combining C-Band and Local X-Band Radar Data
Katharina Lengfeld, Marc Berenguer, Marco Clemens, Felix Ament, Daniel Sempere-Torres
University of Hamburg, Meteorological Institute, Germany (katharina.lengfeld@zmaw.de), Universitat Politècnica de Catalunya, Centre de Recerca Aplicada en Hidrometeorologia, Barcelona, Spain

11:45–12:00: EMS2015-492
Implementation of temporal and spatial variable relationships of radar reflectivity and rainfall rate in a network of X-band radars
Marco Clemens, Katharina Lengfeld, Hans Münster, Felix Ament
Meteorological Institute, University of Hamburg, Germany

12:00–12:15: EMS2015-538
High resolution modelling of urban catchments
Abdellah Ichiba, Auguste Gires, Ioulia Tchiguirinskaia, Daniel Schertzer, Philippe Bompard
U. Paris-Est, Ecole des Ponts ParisTech, LEESU, Marne-la-Vallée, France
(abdellah.ichiba@leesu.enspc.fr), Conseil général du Val-de-Marne, Direction des Services de l'Environnement et de l'Assainissement (DSEA), Bonneuil-sur-Marne, France

15th EMS & 12th ECAM | 07–11 September 2015 | Sofia, Bulgaria
12:15–12:30: EMS2015-134  
Statistically quantifying rain radar reflectivity errors using measurements from a radar network  
Claire Merker, Marco Clemens, Katharina Lengfeld, Felix Ament  
Meteorologisches Institut, Hamburg, Germany  
(claire.merker@uni-hamburg.de)

12:30–12:40:  
Introduction to Posters

END OF ORAL PROGRAMME ASI12/OBS2

ASI13 Urban Climate

Convener: Martin Wattenbach  
Co-Conveners: Dr. Martin Rumberg; Sascha Henninger
Lecture Room: Vitosha

14:00–16:00

Chairperson(s): Sascha Henninger & Martin Wattenbach

14:00–14:15: EMS2015-20 (YSTA)  
A study of the Urban Heat Island of Barcelona using a fast urban climate model  
Markel García-Diez, Joan Ballester, Koen De Ridder, Hans Hooyberghs, Dirk Lauwaet, Xavier Rodó
Catalan Institute of Climate Sciences, Climate Dynamics and Impacts Unit, Spain  
(markel.garcia@ic3.cat)

14:15–14:30: EMS2015-417  
Scaling the maximum Urban Heat Island for mid-latitude cities  
Natalie Theeuwes, Gert-Jan Steeneveld, Reinder Ronda, Albert A.M. Holtslag

14:30–14:45: EMS2015-464  
Impact of Urban Heat Island on the thermal regime of buildings in Bucharest (Romania)  
Dan Constantinescu, Sorin Cheval, Alexandru Dumitrescu, Gabriela Caracas  
National Meteorological Administration, Bucharest, Romania (sorin.cheval@meteororomania.ro)

14:45–15:00: EMS2015-251  
Urban Heat Island or Urban Heat Bubble?  
Sergio Buricelli, Renato R. Colucci, Paolo Galluccio, Riccardo Milocco, Luigi Molinari, Cristian Noacco, Sergio Nordio, Gianluca Pistrin, Furio Pieri, Roberto Stampetta, Alberto Villani, Fulvio Stel  
Unione Meteorologica del Friuli Venezia Giulia (fulvio.stel@arpa.fvg.it)

15:00–15:15: EMS2015-257  
Spatial pattern of urban sensible heat flux retrieved by means of remote-sensing observations  
Lech Gawuc, Mariusz Zielsinski, Joanna Struzewska  
Warsaw University of Technology, Faculty of Environmental Engineering, Warsaw, Poland  
(lech.gawuc@is.pw.edu.pl)

Measured and modeled tropospheric profiles over Sofia  
Orlin Gueorguiev, Ekaterina Batchvarova  
National Institute of Meteorology and Hydrology, Sofia, Bulgaria (orlin.gueorguiev@meteo.bg, ekaterina.batchvarova@meteo.bg)

15:30–15:45: EMS2015-620  
On the assessment of urban land-surface impacts on climate in regional climate model simulations over Central Europe  
Peter Huszar, Michal Beida, Tomas Halenka  
Charles University in Prague, Fac. of Mathematics and Physics, Prague, Czech Republic  
(tomas.halenka@mff.cuni.cz)

15:45–16:00: EMS2015-196  
Techniques for Modeling Approaches of the Main Sources of Anthropogenic Heat in the so-called Heat Islands and Their Behavior  
Premysl Derbek, Jana Blumelova, Jaroslav Resler, Pavel Jurus, Pavel Hrubes  
Faculty of Transportation Sciences, Department of Transport Telematics, Czech Technical University in Prague, Prague, Czech Republic  
(derbek@k620.fd.cvut.cz)

END OF ORAL PROGRAMME ASI13

ASI14 Meteorological processes, atmospheric composition and pollution

Convener: Charles Chemel  
Co-Conveners: Martin Piringer; Astrid Manders; Alexander Baklanov
Lecture Room: Sofia III

09:00–10:30

Chairperson(s): Charles Chemel

09:00–09:15:  
Introduction

09:15–09:30: EMS2015-130  
Computer simulations of the atmospheric composition climate of Bulgaria  
Georgi Gadzhiev, Kostadin Ganev, Nikolay Miloshev, Dimiter Syrakov, Maria Prodanova  
National Institute of Geophysics, Geodesy and Geography, Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl.3, Sofia 1113, Bulgaria kganev, ggadjev, miloshev@geophysics.bas.bg

09:30–09:45: EMS2015-38  
A Statistical Comparison of Observed and Modelled Daily PM10 Levels in Marmara Region  
Duygu Ozcomak, Yasur Burak Oztaner, Luca Pozzoli, Tayfun Kindap, Alper Unal  
Eurasia Institute of Earth Science, Climate and Marine Science, Istanbul Technical University (ozcomak@itu.edu.tr, oztaner@itu.edu.tr, pozzoli.ist@gmail.com, kindap@itu.edu.tr, alper.unal@gmail.com)
09:45–10:00: EMS2015-345
Inter-comparison and evaluation of dust prediction models in the Sahel region
**Enric Terradellas, Gerardo García-Castrillo, Sara Basart, Emiliano Cuevas, Beatrice Marticorena**
AEMET, Barcelona, Spain (eterradellasj@aemet.es)

10:00–10:15: EMS2015-253
Sensitivity of ammonia concentrations to meteorology
Carl J Hendriks, Mari Quaade, Richard Kranenburg, Astrid Manders, Martijn Schaap
TNO, Climate, Air and Sustainability, Utrecht, Netherlands (astrid.manders@tno.nl)

10:15–10:30: EMS2015-507
5-year evaluation of Ecoforecast.eu - air quality forecasting system for Poland
Jacek W. Kaminski, Paweł Durka, Joanna Struzewska
Warsaw University of Technology, Department of Environmental Engineering, Warsaw, Poland

10:30 Coffee break

11:00–13:00

Chairperson(s): Astrid Manders

11:00–11:15: EMS2015-410
Air Quality Modelling with WRF-CMAQ over Europe - Focus on Ozone and Particulate Matter
**Dimiter Syrakov, Maria Prodanova, Emilia Georgieva, Kiril Slavov**
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences, Sofia, Bulgaria (emilia.georgieva@meteo.bg)

11:15–11:30: EMS2015-510
Modelled and observed vertical ozone distribution in the troposphere over Europe
**Joanna Struzewska,** Jacek W. Kaminski, Maciej Jefimow, Karol Szymankiewicz
Warsaw University of Technology, Department of Environmental Engineering, Warsaw, Poland (struzw@is.pw.edu.pl)

11:30–11:45: EMS2015-631
Results of the modelling exercises in COST Action ES1006: local-scale models for accidental releases in built environments
Silvia Trini Castelli, Kathrin Baumann-Stanzer, Bernd Leitl, Ekaterina Batchvarova, Maya Milliez, Eva Berbeker, Anniko Rakai, Vladimir Fuka, Antti Hellste, Anton Petrov, George Efthimiou, Spyros Andronopoulos, Gianni Tinarelli, Richard Tavares, Patrick Armand, Claudio Garaiazzo, Maxime Nibart, all COST ES1006 Members
National Institute of Meteorology and Hydrology-Bulgarian Academy of Sciences, Sofia, Bulgaria

11:45–12:00: EMS2015-254
Impacts of air masses origin and trajectory on atmospheric phenomena
Arianna Miniussi, Dario Giaiotti, Fulvio Stel
Regional Agency for the Environmental Protection of Friuli Venezia Giulia, Regional Center for Environmental Modeling, Palmanova, Italy (fulvio.stel@arpa.fvg.it)

12:00–12:15: EMS2015-210
Study of diurnal pattern of surface ozone with special emphasis to nighttime ozone at multiple urban sites in the United Kingdom
**Pavan Kulkarni,** Daniele Bortoli, Ana Maria Silva, Claire Reeves
Instituto de Ciências da Terra (ICT), University of Evora (UE), Evora, Portugal (pavannpl@yahoo.co.in)

12:15–12:30: EMS2015-231
Lidar observations of tropical stratospheric aerosol transfer over the Western Siberia
**Alexander Cherepin, Valery Marichev, Pavel Novikov**
Siberian Federal University, Krasnoyarsk, Russian (aacheremisin@gmail.com), Krasnoyarsk Railway Institute, Krasnoyarsk, Russia

12:30–12:45: Discussion

END OF ORAL PROGRAMME ASI14
Oral Conference Programme – Wednesday

Climate

Monitoring climate and climate change

CL1 Climate monitoring; data rescue, management, quality and homogenization

Convener: Manola Brunet-India
Co-Conveners: Hermann Mächel; Victor Venema; Ingeborg Auer; Dan Hollis
Lecture Room: Kyoto
14:00–16:00

Chairperson(s): Manola Brunet

14:00–14:15: EMS2015-49
Transforming the Availability Climate Data in Africa: The ENACTS Approach
Tufa Dinku, Remi Cousin, John del Corral
Columbia University, International Research Institute for Climate and Society (IRI), Palisades, United States
(tufa@cheerful.com)

14:15–14:30: EMS2015-74
Impact of daily temperature homogenization on cold extremes in Switzerland
Renate Auchmann, Franz Kuglitsch, Andrea Toreti, Stefan Brönnimann
University of Bern, Institute of Geography, Oeschger Center for Climate Change Research, Bern, Switzerland
(renate.auchmann@giub.unibe.ch)

14:30–14:45: EMS2015-76
Overview of the RHtests_dlyPrcp software package for homogenization of daily precipitation
Xiaolan L. Wang, Yang Feng
Environment Canada, Climate Research Division, Toronto, Canada (xiaolan.wang@ec.gc.ca)

14:45–15:00: EMS2015-84
Automatic networking for the homogenization of large climatic datasets
Peter Domonkos
Univ. Rovira i Virgili, Campus Terres de l’Ebre, Centre for Climate Change, Tortosa, Spain
(peter.domonkos@urv.cat)

15:00–15:30: EMS2015-557
Is the global mean land surface temperature trend too low? (solicited)
Victor Venema, Phil Jones, Ralf Lindau, Tim Osborn
University of Bonn, Meteorological Institute, Bonn, Germany (victor.venema@uni-bonn.de)

15:30–15:45: EMS2015-218
Homogenization in areas of sparse data networks: a case study applying HOMER
Stefanie Gubler, Stefan Hunziker, Michael Begert, Mischa Croci-Maspoli, Thomas Konzelmann, Stefan Brönnimann, Clara Oria, Gabriela Rosas
Federal Office of Meteorology and Climatology
MeteoSwiss, Zürich, Switzerland

15:45–16:00: EMS2015-519
Description of the bias introduced by the transition from Conventional Manual Measurements to Automatic Weather Station through the analysis of European and American parallel datasets.
Enric Aguilar, Petr Stepanek, Victor Venema, Renate Auchmann, Fabricio Daniel dos Santos Silva, Erik Engström, Alba Gilabert, Zoia Kretova, Jose Antonio Lopez-Diaz, Yolanda Luna Rico, Clara Oria Rojas, Marc Prohom, Domingo Rasilla, Mozar Salvador, Gregor Vetacnik, Yzhak Yosef
Universitat Rovira i Virgili, Center for Climate Change, C3, Tarragona/Tortosa, Spain.

END OF ORAL PROGRAMME CL1

Understanding processes and climate change

CL7 Synoptic climatology

Conveners: Radan Huth; Rasmus Benestad
Lecture Room: Sofia II
11:00–13:00

11:00–11:15: EMS2015-500
20th Century extratropical cyclone climatology and risk assessment
Filipa Varino, Philippe Arbogast, Bruno Joly, Gwendal Riviere Riviere, Marie-Laure Fandeur, Henry Boyv Centre National de Recherches Méteorologiques (CNRM)-Meteo-France, Toulouse, France

11:15–11:30: EMS2015-491
Cyclones producing positive and negative sea level extremes along the coast of the Mediterranean Sea
Piero Lionello, Dario Conte, Marco Reale
University of Trieste, Trieste, Italy

11:30–11:45: EMS2015-200
Analysis of observed tropical cyclones over the subtropical eastern North Atlantic
Miguel Angel Gaertner, Teresa Losada, Juan Jesús González-Alemán, Enrique Sánchez, Raquel Romero, Marta Domínguez, Victoria Gil, Clemente Gallardo
University of Castilla-La Mancha, Environmental Sciences and Biochemistry Faculty, Toledo, Spain
(Miguel.Gaertner@uclm.es)
11:45–12:00: EMS2015-567
Large scale dynamics preconditioning heavy precipitating events over southern France: a multivariate weather regimes approach
Bruno Joly, Philippe Arbogast
National Center for Meteorological Research (CNRM) Meteo France/GAME

12:00–12:15: EMS2015-205
Applicability of Dzerdzeevski’s atmospheric circulation classification to northern-hemispheric climate variations
Andreas Hoy, Matt Sepp
TU Bergakademie Freiberg, Interdisciplinary Environmental Research Centre, Germany

12:15–12:30: EMS2015-207
Daily Weather Types Computed from Early Instrumental Data back to 1763
Mikhaël Schwander, Stefan Brönnimann
Institute of Geography, University of Bern, Switzerland (mikhael.schwander@giub.unibe.ch), Oeschger Centre for Climate Change Research, University of Bern, Switzerland

12:30–12:45: EMS2015-397
Region size matters - Statistical downscaling for more than a limited focus area
Arne Spekat, Wolfgang Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arnespekat@cec-potsdam.de)

12:45–13:00: EMS2015-536
Statistical relationships between North Atlantic and Pacific circulation patterns and surface wind in North Eastern North America: annual to centennial variability
Etor E. Lucio-Eceiza, J. Fidel González-Rouco, Jorge Navarro, Elena García-Bustamante, Hugo Beltrami
Dpto. Astrofísica y Ciencias de la Atmósfera. Instituto de Geociencias (UCM-CSIC), Universidad Complutense de Madrid. Spain (eelucio@fis.ucm.es)

END OF ORAL PROGRAMME CL7
Measurements and Observations

OBS1/ASI8 Atmospheric measurements from the local to the regional scale: Concepts, new technologies and scientific progress

Convener: Frank Beyrich
Co-Conveners: Fred C. Bosveld
Lecture Room: Sofia III

14:00–16:00

Chairperson(s): F. Beyrich

Profiles from Lidars and Sodars

14:00–14:30: EMS2015-63
Advanced Raman lidars for humidity, temperature and aerosol observations (solicited)
Valentin Simeonov, Todor Dinoev, Ilya Serikov, Pablo Ristori, Hubert van den Bergh, Marc Parlange, Martin Froidevaux, Yury Arshinov, Sergey Bobrovnikov, Bertrand Calpini, Alexander Haefele
EPFL, ISTE, EFLUM, Lausanne, Switzerland (valentin.simeonov@epfl.ch)

14:30–14:45: EMS2015-523
Synergy of Raman lidar and microwave radiometry for high vertically resolved atmospheric profiles
Maria Barrera Verdejo, Susanne Crewell, Ulrich Löhner, Emiliano Orlandi, Paolo Di Girolamo, Andreas Fix, Martin Wirth
University of Cologne, Institute of Geophysics and Meteorology, Köln, Germany (mbarrera@mail.uni-koeln.de)

14:45–15:00: EMS2015-386
First steps towards a European Doppler lidar network for meteorological applications
Ewan J. O’Connor, Anne Hirskiko
Finnish Meteorological Institute, Helsinki, Finland (ewan.oconnor@fmi.fi), Department of Meteorology, University of Reading, UK

15:00–15:15: EMS2015-339
On a flexible wind retrieval algorithm from measurements with a new generation of Doppler lidar systems for high resolution vertical wind profile observations
Eileen Päschke, Volker Lehmann, Ronny Leinweber
DWD, Met. Observatory Lindenberg, Met. Observatory Lindenberg, Germany, Tauche (OT Lindenberg), Germany (eileen.paeschke@dwd.de)

Studying the temporal and spatial evolution of turbulent mixing with a scanning Doppler lidar
Ville Vakkari, Ewan J. O’Connor
Finnish Meteorological Institute, Helsinki, Finland (ville.vakkari@fmi.fi)

15:30–15:45: EMS2015-281
Multiple-point sodar observations of structures in the summertime ABL over slightly sloped glacier in Antarctica
Rostislav Kouznetsov, Prit Tisler, Timo Vihma
Finnish Meteorological Institute, Air Quality, Helsinki, Finland (rostislav.kouznetsov@fmi.fi), A.M. Obukhov institute for atmospheric physics, Moscow, Russia

15:45–16:00: EMS2015-340
One-year comparison of PBL structure derived by ceilometer, radiosonde, and weather prediction model in Sofia, Bulgaria
Ventsislav Danchovski, Guergana Guerova, Danko Ivanov, Plamen Savov, Nikolay Kolev, Tsvetina Evgenieva, Evgeni Donev
Faculty of Physics, Department of Meteorology and Geophysics, Sofia University "St. Kliment Ohridsky", Sofia, Bulgaria (danchovski@phys.uni-sofia.bg)

OBS3/ASI8 Airborne meteorology

Convener: Clemens Drüe
Co-Conveners: Jens Bange; Paulina Valtchvanova
Lecture Room: Kyoto

09:00–10:30

Chairperson(s): Paulina Valtchvanova

09:00–09:15: EMS2015-502
NARVAL-North: Comparison of Cloud Properties from Aircraft Measurements with COSMO Simulations
Heike Konow, Felix Ament, Susanne Crewell, Lutz Hirsch, Christian Klepp, Mario Mech, Emiliano Orlandi
Meteorological Institute, Hamburg University, Germany (heike.konow@uni-hamburg.de)

09:15–09:30: EMS2015-125
An airborne case study on the influence of atmospheric boundary layer dynamics on the new particle formation
Andreas Platis, Barbara Altsstädt, Birgit Wehener, Norman Wildmann, Astrid Lampert, Markus Hermann, Wolfram Birmili, Jens Bange
Universität Tübingen, ZAG, Environmental Physics, Tübingen, Germany (andreas.platis@uni-tuebingen.de)

09:30–09:45: EMS2015-606
Airborne investigations of a fully turbulent stable boundary layer over a polynya near Greenland
Günter Heinemann, Clemens Drüe
Universität Trier, Umweltmeteorologie / environmental meteorology, Trier, Germany (druee@uni-trier.de)
Oral Conference Programme – Wednesday

09:45–10:00: EMS2015-203
RPA-borne Measurements of Vertical Profiles and Turbulent Fluxes of the Near-Coastal North Sea Boundary-Layer during Strong Winds
**David Tupman**, Andreas Platis, Norman Wildmann, Jens Bange
Centre for Applied Geosciences, Tubingen, Germany (david-james.tupman@uni-tuebingen.de)

10:00–10:15: EMS2015-365
Mode S and ADS-B as a Source of Clear-Air Turbulence Measurements
**Jacek M. Kopec**, Kamil Kwiatkowski, Szymon P. Malinowski, Siebren de Haan
Faculty of Physics, University of Warsaw, Warszawa, Poland (jkopec@icm.edu.pl), Interdisciplinary Centre for Mathematical and Computational Modeling, University of Warsaw, Warszawa, Poland

10:15–10:30: EMS2015-360
Balloon-borne accelerometer observations of atmospheric turbulence
**Graeme Marlton**, Giles Harrison, Keri Nicoll, Paul Williams
University of Reading, Meteorology, Reading, United Kingdom (g.j.marlton@pgr.reading.ac.uk)

END OF ORAL PROGRAMME OBS3/ASI19
Special Events

SPS3 Public Great Debate: 'Big Data’ in Meteorology: Opportunities and Challenges

Convener: Will Lang
Co-Convener: Robert Mureau
Poster Area: Sofia II
Introduction: 17:15, Sofia II
Attendance Time: 16:15–17:00

GB1: EMS2015-245
Big data in the context of Euskalmet activities
Santiago Gaztelumendi, Jose Daniel Gomez de Segura, Kepa Otxoa de Alda, Judith Orue, Jesus Torres, Jose Antonio Aranda
Basque Meteorology Agency (EUSKALMET), TECNALIA R&I, Energy and Environment Division, Meteorology Area

GB2: EMS2015-413
SINOBAS, a tool for collaborative mapping applied to observation of "Singular" weather phenomena
Delia Gutiérrez Rubio, Jesús Riesco Martín, Salvador Ponce Gutiérrez
AEMET, Sevilla, Spain (dgutierrezr@aemet.es)

END OF POSTER PROGRAMME SPS3
Applications of Meteorology

ECAM2/CE3 Delivery and communication of impact based forecasts and risk based warnings

Conveners: Dee Cotgrove, Haleh Kootval
Co-Conveners: Tanja Cegnar
Poster Area: Sofia I
Chairperson(s): Dee Cotgrove/Haleh Kootval
Attendance Time: 16:15–17:00

P6: EMS2015-458
Delivery and communication of severe weather events in Basque Country: the Euskalmet case.
Santiago Gaztelumendi, Iñaki Orbe, Onintze Salazar, Ana Lopez, José Antonio Aranda, Pedro Anitua
Basque Meteorology Agency (EUSKALMET), TECNALIA R&I, Energy and Environment Division, Meteorology Area

ECAM5/ASI20 Reducing Weather Risks to Transport: air, sea and land

Conveners: Fraser Ralston
Co-Conveners: Thomas Hauf, Christine Le Bot
Poster Area: Sofia I
Chairperson(s): Christine LeBot
Introduction: 12:45, Sofia III
Attendance Time: 16:15–17:00

P7: EMS2015-152
Low visibility now-casting based on statistical methods at Vienna airport
Philipp Kneringer, Sebastian J. Dietz, Georg J. Mayr, Achim Zeileis
Institute of Meteorology and Geophysics, University Innsbruck, Austria (philipp.kneringer@uibk.ac.at)

P8: EMS2015-533
Forecasting Low-Visibility Conditions with Tree-Based Statistical Models
Sebastian J. Dietz, Philipp Kneringer, Georg J. Mayr, Achim Zeileis
Institute of Atmospheric Science, University of Innsbruck, Austria (sebastian.dietz@uibk.ac.at)

P9: EMS2015-594
L Probability Distribution Function and One Self-Comparison Theoretical Standard of Dry and Wet Index
Wanli Wang, Juan Peng
Wuhan University, School of Resource and Environmental Science, Wuhan, China, 430079, Research Centre of climate and atmospheric environment, Wuhan, China (xiaowanw2002@yahoo.com)

END OF POSTER PROGRAMME ECAM2/CE3

END OF POSTER PROGRAMME ECAM5/ASI20
**The Atmospheric System and its Interactions**

**ASI11 Interfacing hydrological and meteorological models in forecasting system**

**Convener:** Bodo Ahrens  
**Co-Conveners:** Massimiliano Zappa, Herbert Formayer  
**Poster Area:** Sofia I  
**Chairperson(s):** B. Ahrens  
**Introduction:** 10:15, Vitosha  
**Attendance Time:** 16:15 – 17:00

P47: EMS2015-126  
Ensemble-based land surface data assimilation with TERRA  
Julian Toedter, Bodo Ahrens  
University of Frankfurt, Institute for Atmospheric and Environmental Sciences, Frankfurt am Main, Germany  
(bodo.ahrens@iau.uni-frankfurt.de)

P48: EMS2015-512  
Postprocessing of medium range hydrological ensemble forecasts making use of reforecasts  
Joris Van den Bergh, Emmanuel Roulin  
RMI Belgium (jorisvdb@meteo.be)

**END OF POSTER PROGRAMME ASI11**

**ASI12/OBS2 Sub-kilometre Scale Precipitation Variability and its Impact on Hydrology**

**Convener:** Katharina Lengfeld  
**Co-Conveners:** Marco Clemens, Marie-claire ten Veldhuis, Auguste Gires, Sylvia Bohnenstengel  
**Poster Area:** Sofia I  
**Chairperson(s):** Marco Clemens, Katharina Lengfeld  
**Introduction:** 12:30, Vitosha  
**Attendance Time:** 16:15 – 17:00

P49: EMS2015-133  
Quantifying errors in radar rainfall estimates using a data assimilation method  
Claire Merker, Marco Clemens, Katharina Lengfeld  
Meteorologisches Institut, Universität Hamburg, Germany (claire.merker@uni-hamburg.de)

P50: EMS2015-526  
Analysis of convective storms in Estonia based on the data from polarimetric weather radars and lightning detectors  
Tanel Voormansik, Piia Post  
University of Tartu, Institute of Physics, Estonia (tanel.voormansik@ut.ee)

**END OF POSTER PROGRAMME ASI12/OBS2**

**ASI13 Urban Climate**

**Convener:** Martin Wattenbach  
**Co-Conveners:** Dr. Martin Rumberg, Sascha Henninger  
**Poster Area:** Sofia I  
**Chairperson(s):** Martin Rumberg  
**Introduction:** 16:00, Vitosha  
**Attendance Time:** 16:15 – 17:00

P51: EMS2015-3  
Silver-linden trees - the perfect urban tree specie?  
Timo Wundsam, Sascha M. Henninger  
University of Kaiserslautern, Dept. of Physical Geography, Kaiserslautern, Germany (wundsam@rhk.uni-kl.de)

P52: EMS2015-195  
On the Development of Urban Adaptation Strategies Using Ecosystem-based Approaches to Adaptation - Impact Evaluation  
Jana Blumelova, Premysl Derbek, Jaroslav Resler, Pavel Jurus, Pavel Hrubes  
Faculty of Transportation Sciences, Department of Transport Telematics, Czech Technical University in Prague, Czech Republic (blumelova@k620.fd.cvut.cz)

P53: EMS2015-442  
Impact of the Land-Use Data on the Simulation of the Bucharest Urban Heat Island Using the WRF Modelling System  
Amalia Iriza, Sabina Stefan, Rodica Claudia Dumitrache  
University of Bucharest, Faculty of Physics, Atmospheric Physics, Bucharest, Romania (sabina_stefan@yahoo.com)

P54: EMS2015-479  
Analysis of Bucharest’s Urban Heat Island between 1961 - 2013  
Simona Andrei, Sabina Stefan, Nicu Barbu, Valentin Florin Benciu  
National Institute of R&D in Optoelectronics, Remote Sensing Department, Magurele - Bucharest, Romania (simona.andrei@inoe.ro)

P55: EMS2015-529  
Climate change adaptation potentials in Budapest - the roles of block rehabilitation and urban vegetation  
Csongor Dian, Cathy Fricke, Zsusanna Dezső, Judit Bartholy, Rita Pongrácz  
Eötvös Loránd University, Dept. of Meteorology, Budapest, Hungary

**END OF POSTER PROGRAMME ASI13**
**ASI14 Meteorological processes, atmospheric composition and pollution**

**Convener:** Charles Chemel  
**Co-Conveners:** Martin Piringer, Astrid Manders, Alexander Baklanov  
**Poster Area:** Sofia I  
**Chairperson(s):** Martin Piringer  
**Introduction:** 12:30, Kyoto  
**Attendance Time:** 16:15–17:00

**P56: EMS2015-11**  
Numerical study of the air quality in the city of Sofia - some preliminary results  
Ivelina Georgieva, Georgi Gadzhev, Kostadin Ganev, Maria Prodanova, Dimitar Syrakov, Nikolay Miloshev  
National Institute of Geophysics, Geodesy and Geography, Bulgarian Academy of Sciences, Sofia, Bulgaria  
(iivanova@geophys.bas.bg)

**P57: EMS2015-472**  
Precipitation Chemistry in the Bulgaria-Turkey Cross - Border Region for Different Synoptic Situations  
Emilia Georgieva, Ilker Oruc, Elena Hristova, Krum Velchev, Hristina Kirova, Valeri Nikolov, Damyan Barantiev, Dimitar Syrakov, Maria Prodanova, Ekaterina Batchvarova, Blagorodka Veleva, Anton Petrov, Rozeta Neikova, Hristimir Branov, Sevdalina Turmanova, Svetlana Tonkova, Maria Kolarova, Iglika Etropolska, Kiril Slavov  
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences, Sofia, Bulgaria  
(emilia.georgieva@meteo.bg)

**P58: EMS2015-21**  
Short term forecast of Total Ozone Content over Bulgaria based on autocorrelation analysis  
Petya Kaleyna, Plamen Mukhtarov, Nikolay Miloshev  
NIGGG - Bulgarian Academy of Sciences, Physics of Atmosphere, Sofia, Bulgaria  
(pkaleyna@geophys.bas.bg)

**P59: EMS2015-559**  
A preliminary Analysis of green-house gases at the coastal site Lamezia Terme, in central Mediterranean area, using data of different instruments  
Daniel Gulli, Teresa Lo Feudo, Ivan Ammoscato, Elenio Avolio, Rosamaria Calaudi, Stefania Montesanti, Paolo Bonasoli, Paolo Cristofanelli, Claudia Roberta Calidonna  
CNR - Institute of Atmospheric Sciences and Climate, Lamezia Terme, Italy
Climate

Monitoring climate and climate change

CL1 Climate monitoring; data rescue, management, quality and homogenization

Convener: Manola Brunet-India
Co-Conveners: Hermann Mächel, Victor Venema, Ingeborg Auer, Dan Hollis
Poster Area: Sofia I
Chairperson(s): Inge Auer, Victor Venema, Manola Brunet
Introduction: 16:00, Kyoto
Attendance Time: 16:15–17:00

DARE and climate data management

P68: EMS2015-280
Long-term variability in seasonal march of rainfall at Manila since the late 19th century reconstructed by data rescue
Ikumi Akasaka, Hisayuki Kubota, Jun Matsumoto, Masumi Zaiki, Esperanza O. Cayanan, Flaviana D. Hilario
Senshu University, Japan (akasaka-i@isc.senshu-u.ac.jp)

P69: EMS2015-602
Improving the climate data management in the meteorological service of Angola: Experience from SASSCAL
Rafael Posada, Jens Riede, Domingos Nascimento, Francisco Osvaldo S. Neto, Albert Mhanda, Samuel Machua, Frank Kaspar
Deutscher Wetterdienst, National Climate Monitoring, Offenbach, Germany (frank.kaspar@dwd.de)

P70: EMS2015-636
Rescue and quality control of European sub-daily data
Linden Ashcroft, Joan R. Coll, Mercè Castellà, Peter Donomkos, Enric Aguilar, Javier Sigro, Manola Brunet-India
Centre for Climate Change, Geography Department, University Rovira i Virgili, Tortosa, Spain (lindenclaire.ashcroft@urv.cat), Climatic Research Unit, School of Environmental Sciences, University of East Anglia, Norwich, UK

Quality Control and Homogenisation

P71: EMS2015-326
Data quality of Central Andean temperature and precipitation measurements
Stefan Hunziker, Stefanie Gubler, Clara Oria, Delia Acuña, Juan Calle, Isabel Moreno, Marcos Andrade, Fernando Velarde, Stefan Broennimann, Mischa Croci-Maspoli, Thomas Konzelmann, Gualberto Carrasco Oeschger Centre for Climate Change Research and Institute of Geography, University of Bern, Switzerland

P72: EMS2015-356
Recent improvements to ECA&D and E-OBS
Gerard van der Schrier, Elise van den Besselaar, Christiana Pothioud, Albert Klein Tank, Ge Verver
Royal Netherlands Meteorological Institute, De Bilt, Netherlands (schrier@knmi.nl)

P73: EMS2015-369
Quality control of the RMI’s AWS wind observations
Cedric Bertrand
Royal Meteorological Institute of Belgium, Climatology, Brussels, Belgium (Cedric.Bertrand@meteo.be)

P74: EMS2015-449
Quality Control of the Belgian Historical Weather Data
Charles Delvaux, Olivia Bleeckx, Michel Journée, Cédric Bertrand
Royal Meteorological Institute of Belgium, Brussels, Belgium

P75: EMS2015-513
Overview and updates of the RHtestsV5 data homogenization software package
Xiaolan L. Wang, Yang Feng
Environment Canada, Climate Research Division, Toronto, Canada (xiaolan.wang@ec.gc.ca)

P76: EMS2015-547
Testing of monthly satellite climate data records on temporal and spatial homogeneity
Kathrin Graw, Jörg Trentmann, Rainer Hollmann
Deutscher Wetterdienst, Offenbach, Germany (kathrin.graw@dwd.de, joerg.trentmann@dwd.de, rainer.hollmann@dwd.de)

P77: EMS2015-556
Inhomogeneities in daily data and their removal
Victor Venema, Enric Aguilar, Renate Auchmann, Ingeborg Auer, Theo Brandsma, Barbara Chimani, Alba Gilabert, Olivier Mestre, Andrea Toreti, Gregor Vertacnik
University of Bonn, Meteorological Institute, Germany (victor.venema@uni-bonn.de)

Miscellaneous

P78: EMS2015-357
Evolution of temperature and precipitation in France since the 1950s a new homogenised dataset
Brigitte Dubuisson, Anne-Laure Gibelin, Lola Corre, Thumette Madec
Meteo-France, DCLIM/DEC, Toulouse Cedex, France (brigitte.dubuisson@meteo.fr)

P79: EMS2015-520
Variability of solar radiation in a Mediterranean city (Lecce, Southern Italy)
Riccardo Buccolieri, Alessandro Rizzo, Silvana Di Sabatino, Piero Lionello
University of Salento, DISTEBA, Lecce, Italy (piero.lionello@unisalento.it)
P80: EMS2015-268
Spatial distribution of water surface evaporation, potential evapotranspiration and climatic indicators of humidification in Slovakia
Katarína Mikulová, Maros Turna, Peter Kajaba, Pavel Stastny, Pavol Nejedlík
Slovak Hydrometeorological Institute, Bratislava, Slovakia (peter.kajaba@shmu.sk)

P81: EMS2015-270
Spatial distribution of the hazardous atmospheric phenomena in Slovakia
Katarína Mikulová, Pavel Stastny, Pavol Nejedlík, Gabriela Ivanáková
Slovak Hydrometeorological Institute, Bratislava, Slovakia (peter.kajaba@shmu.sk)

P110: EMS2015-70
Thermodynamic configurations associated with heavy rainfall in Eastern Romania
Daniel Carbunaru, Sorin Burcea
National Meteorological Administration, Bucharest, Romania

P111: EMS2015-198
Mechanism of Circulation over Europe in Case of Heavy Rainfalls and Floods in Central Europe
Marjan Sandev
Czech Republic (sandev@chmi.cz)

P112: EMS2015-238
Analysis of Subtropical Cyclones within the Notheastern Atlantic
Juan Jesús González-Alemán, Francisco Valero, Francisco Martín-León, Jenni Louise Evans
Environmental Sciences Institute, University of Castilla-La Mancha, Toledo, Spain (juanjego@ucm.es)

P113: EMS2015-342
Aerosol type assessment at Magurele (Romania) based on remote sensing measurements and large scale circulation patterns
Simona Andrei, Nicu Barbu, Anca Nemuc, Ioannis Biniotoglou, Alexandru Dandocsi, Horatiu Stefanie
National Institute of R&D in Optoelectronics, Remote Sensing Department, Magurele - Bucharest, Romania (simona.andrei@inoe.ro)

P114: EMS2015-401
Daily maximum winter temperature distributions in Romania and their link to the large-scale atmospheric circulation
Cristian Necula, Sabina Stefan, Marius Birsan
University of Bucharest, Faculty of Physics, Atmospheric Physics, Bucharest, Romania (sabina.stefan@yahoo.com)

P115: EMS2015-503
Seasonal wind variability in South Italy by comparing Synthetic Aperture Radar (SAR) and ground base stations and a correlation with NAO North Atlantic Oscillation Index
Rosamaria Calaudi, Teresa Lo Feudo, Elenio Avolio, Daniel Gullì, Claudia Roberta Calidonna, Anna Maria Sempreviva
CNR - Institute of Atmospheric Sciences and Climate, Lamezia Terme, Italy, Wind Energy Department, Technical University of Denmark, Roskilde, Denmark

END OF POSTER PROGRAMME CL1

Understanding processes and climate change

CL7 Synoptic climatology

Conveners: Radan Huth, Rasmus Benestad
Poster Area: Sofia I
Introduction: 16:00, Sofia II
Attendance Time: 16:15–17:00

P112: EMS2015-238
Analysis of Subtropical Cyclones within the Notheastern Atlantic
Juan Jesús González-Alemán, Francisco Valero, Francisco Martín-León, Jenni Louise Evans
Environmental Sciences Institute, University of Castilla-La Mancha, Toledo, Spain (juanjego@ucm.es)

P113: EMS2015-342
Aerosol type assessment at Magurele (Romania) based on remote sensing measurements and large scale circulation patterns
Simona Andrei, Nicu Barbu, Anca Nemuc, Ioannis Biniotoglou, Alexandru Dandocsi, Horatiu Stefanie
National Institute of R&D in Optoelectronics, Remote Sensing Department, Magurele - Bucharest, Romania (simona.andrei@inoe.ro)

P114: EMS2015-401
Daily maximum winter temperature distributions in Romania and their link to the large-scale atmospheric circulation
Cristian Necula, Sabina Stefan, Marius Birsan
University of Bucharest, Faculty of Physics, Atmospheric Physics, Bucharest, Romania (sabina.stefan@yahoo.com)

P115: EMS2015-503
Seasonal wind variability in South Italy by comparing Synthetic Aperture Radar (SAR) and ground base stations and a correlation with NAO North Atlantic Oscillation Index
Rosamaria Calaudi, Teresa Lo Feudo, Elenio Avolio, Daniel Gullì, Claudia Roberta Calidonna, Anna Maria Sempreviva
CNR - Institute of Atmospheric Sciences and Climate, Lamezia Terme, Italy, Wind Energy Department, Technical University of Denmark, Roskilde, Denmark

END OF POSTER PROGRAMME CL7
Measurements and Observations

OBS3/ASI19 Airborne meteorology (co-organized)

**Convener:** Clemens Drüe  
**Co-Conveners:** Jens Bange, Paulina Valtchanova  
**Poster Area:** Sofia I  
**Chairperson(s):** Clemens Drüe  
**Introduction:** 12:45, Vitosha  
**Attendance Time:** 16:15–17:00

**P118: EMS2015-131**  
Validation of wind profiles generated by Doppler Weather radar as a tool for diagnostic of wind conditions in Sofia Airport approach zone  
Rosen Penchev, Elisaveta Peneva, Orlin Gueorguiev, Ekaterina Batchvarova  
Bulgarian Air Traffic Services Authority, Sofia, Bulgaria  
(rosen_penchev@digicom.bg)

**P119: EMS2015-590**  
Numerical simulations of fog cases at Sofia airport for 2011-2014  
Ilian Manafov, Guergana Guerova  
Bulgaria (ilianm@mail.com) BULATSA

**P120: EMS2015-607**  
Aeronautical Meteorological Services in BULATSA  
Paulina Valtchanova, Rosen Penchev  
Bulgarian Air Traffic Services Authority, Sofia, Bulgaria,  
(paulina.valtchanova@bulatsa.com)

END OF POSTER PROGRAMME OBS3/ASI19
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Sofia II</th>
<th>Sofia III</th>
<th>Kyoto</th>
<th>Vitosha</th>
<th>Room</th>
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<tbody>
<tr>
<td>09:00</td>
<td></td>
<td>CL2: Spatial Climatology</td>
<td>OBS1/ASI8: Atmospheric measurements from the local to the regional scale</td>
<td>NWP2: Numerical aspects and physical parametrization integration</td>
<td>CE1: Media and Communication</td>
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<td>10:15</td>
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<td>10:15: Poster Introduction</td>
<td>09:00 Poster introduction I</td>
<td>10:15 Poster introduction II</td>
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<td>10:30</td>
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<td>Coffee Break</td>
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<td>11:00</td>
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<td>CL10: The Copernicus Climate Change Service implemented by ECMWF</td>
<td>OBS1/ASI8 continued</td>
<td>NWP4: Probabilistic and ensemble forecasting at short and medium-range</td>
<td>CE1 continued</td>
<td>11:00-13:00</td>
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<td>13:00</td>
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<td>Lunch Break</td>
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<td>14:00</td>
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<td>CL6: Global and regional reanalyses</td>
<td>ASI16: Energy Meteorology</td>
<td>ECAM3: Forecast Verification of High-Impact Weather</td>
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<td>14:00-16:00</td>
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<td>16:00</td>
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<td>P10: Poster Introduction CL6 and CL10</td>
<td>P11: Poster Introduction ASI16 - part I</td>
<td>P12: Poster Introduction ECAM3</td>
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<td>16:15</td>
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<td>Poster Session &amp; Coffee Break</td>
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<td>Foyer and Room Sofia I</td>
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<td>16:15-17:00</td>
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<td>17:00</td>
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<td>CL2 continued</td>
<td>ASI16 continued ..., to be continued Friday</td>
<td>ECAM3 ..., to be continued Friday</td>
<td>NWP3: Data assimilation and use of observations in meteorology &amp; oceanography</td>
<td>17:00-18:30</td>
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<td>18:15</td>
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<td>18:15: Poster Introduction</td>
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</table>

In the detailed daily programme (on page 69 to 84) the related ECAM, ASI, CL, CE, OBS and NWP sessions are listed in the following order: ECAM3, ASI16, CL2, CL6, CL10, CE1, OBS1/ASI8, NWP2, NWP3, NWP4.

**Poster display time Thursday to Friday**

Authors are kindly asked to put up their posters as soon as possible within the allocated display time in order to enable the conference participants to view their posters at any time within the display days, and to take them down on Friday between 13:00–14:00. Posters that have not been removed within this dismantling time will be removed and disposed off.
Applications of Meteorology

ECAM3 Forecast Verification of High-Impact Weather

Convener: Pertti Nurmi
Co-Convener: Martin Göber
Lecture Room: Kyoto

14:00–16:00

Chairperson(s): Pertti Nurmi

14:00–14:15: EMS2015-299
Is there a limit to forecast accuracy? The impact of temporal sampling
Marion Mittermaier, David Stephenson
Met Office, Weather Science, Exeter, United Kingdom
(marion.mittermaier@metoffice.gov.uk)

14:15–14:30: EMS2015-485
Spurious skill? Varying event frequencies, non-collapsibility and Simpson’s Paradox in forecast verification
Roger Harbord
Met Office, Exeter, United Kingdom
(roger.harbord@metoffice.gov.uk)

14:30–14:45: EMS2015-570
A new verification method for assessing competing forecast performance with timing errors
Eric Gilleland, Gregory Roux, Barbara G. Brown, Tressa L. Fowler
National Center for Atmospheric Research, Research Applications Laboratory, Boulder, United States
(EricG@ucar.edu)

14:45–15:00: EMS2015-261
Verification of the accuracy and timeliness of Canadian Weather Warnings using the Weather Warning Index
Laurence Wilson, Nelson Shum, Tim Bullock
Environment Canada, Associate Scientist Emeritus, Canada
(laurence.wilson@sympatico.ca)

15:00–15:15: EMS2015-430
Verification of wind gust warnings at DWD
Cristina Primo, Guido Schröder, Bernhard K. Reichert, Dirk Heizenreder
Deutscher Wetterdienst, Offenbach, Germany
(cristina.primo@dwd.de)

15:15–15:30: EMS2015-204
Probabilistic SAL - Evaluating the spatial properties of probabilistic precipitation simulations
Sabine Radanovics, Jean-Philippe Vidal, Eric Sauquet
LSCE/IPSL, UMR 8212 CEA-CNRS-UVSQ, Gif-sur-Yvette, France
(sabine.radanovics@lsce.ipsl.fr)

15:30–15:45: EMS2015-474
Ensemble verification of cloud tracks
Felix Fundel
Deutscher Wetterdienst, Research & Development, Offenbach, Germany
(ffundel@gmail.com)

15:45–16:00: EMS2015-105
Challenge to Develop and Demonstrate New User-Oriented Forecast Verification Metrics
Elizabeth Ebert, Thomas Haiden, Barbara Brown, Martin Goeber, Marion Mittermaier, Pertti Nurmi
Bureau of Meteorology, Melbourne, Australia
(e.ebert@bom.gov.au)

16:00 Coffee break

17:00–18:30

Chairperson(s): Martin Göber

Sochi Olympics: FROST 2014

17:00–17:15: EMS2015-577
The Framework of the WMO/WWRP FROST-2014 Forecast Verification Setup and Activities (solicited)
Pertti Nurmi, Anastasia Bundel, Tatiana Dmitrieva, Dmitry Kiktev, Anatoly Muraviev, Alexander Smirnov, Evgeny Vasilyev, Larisa Nikitina, Tatiana Bazlova, Nikolai Bocharchnikov, Suleiman Mostmandy
Finnish Meteorological Institute, Helsinki, Finland
(pertti.nurmi@fmi.fi)

17:15–17:30: EMS2015-150
Verification of official operational forecasts for the Sochi Olympics
Anatoly Muraviev, Dmitri Kiktev, Tatiana Dmitrieva, Anastasia Bundel, Alexander Smirnov
Hydrometeorcentre of Russia/Roshydromet, Moscow

17:30–17:45: EMS2015-576
End-user focused verification of precipitation nowcast systems during the Sochi 2014 Winter Olympics
Larisa Nikitina, Suleiman Mostmandy, Pertti Nurmi
Aviamettelecom of Roshydromet, Russian Federation

17:45–18:00: EMS2015-364
Performance of deterministic numerical weather forecasts during the FROST-2014 project field campaign
Anastasia Bundel, Anatoly Muraviev, Pertti Nurmi, Dmitry Kiktev, Alexander Smirnov, Andrea Montani
Hydrometeorological Research Centre of Russia, Moscow, Russian Federation
(a.bundel@gmail.com)

18:00–18:15: EMS2015-155
Verification of high impact weather forecasts in the region of Sochi-2014 Olympic Games
Anatoly Muraviev, Dmitri Kiktev, Anastasia Bundel
Hydrometeorcentre of Russia/Roshydromet, Moscow

18:15–18:30: EMS2015-154
On the spatial verification of FROST-2014 precipitation forecast fields
Anatoly Muraviev, Anastasia Bundel, Dmitri Kiktev, Nikolai Bocharchnikov, Tatiana Bazlova
Hydrometeorcentre of Russia/Roshydromet, Moscow

ORAL PROGRAMME ECAM3 CONTINUES FRIDAY
### ASI16 Energy Meteorology

**Convener:** Sven-Erik Gryning  
**Co-Convener:** Ekaterina Batchvarova; Lucien Wald; Marion Schroeder-Homscheidt

**Chairperson(s):** Sven-Erik Gryning

#### 14:00–16:00

**14:00–14:15:** EMS2015-127  
The full scale spectrum of the boundary layer wind  
Xiaoli Larsen, Søren E. Larsen, **Erik Lundtang Petersen**

**14:15–14:30:** EMS2015-537  
Wind profile modelling using WASP and 'tall' wind measurements  
**Rogier Floors,** Mark Kelly, Ib Troen, Alfredo Peña, Sven-Erik Gryning  
DTU Wind Energy, Department of Wind Energy, Roskilde, Denmark (rofl@dtu.dk)

**14:30–14:45:** EMS2015-572  
Producing an atlas of the wind at a height of 100 m Gertie Geertsema, Henk van den Brink, **Mark Savenije**

**14:45–15:00:** EMS2015-348  
Large eddy simulation application with the mesoscale model RAMS for wind Energy studies in complex terrain: a study of the Askervein hill  
Nicolas Barranger, Platon Patlakas, Christina Kalogeris, Christos Stathopoulos, **George Kallos**  
University of Athens, Greece (nbarranger@mg.uoa.gr)

**15:00–15:15:** EMS2015-366  
On the influence of fetch on wind and stability conditions in the North and Baltic Sea  
**Martin Dörenkämper,** Gerald Steinfeld, Hauke Wurps, Detlev Heinemann  
Carl von Ossietzky University Oldenburg, Institute of Physics, ForWind, Oldenburg, Germany (martin.doerenkaemper@uni-oldenburg.de)

**15:15–15:30:** EMS2015-329  
Investigation Of The Flow Over An Escarpment With Regard To Wind-Energy Research Using Small Remotely Piloted Aircraft  
**Alexander Rautenberg,** Norman Wildmann, Joe Smith, Jens Bange  
Center for Applied Geoscience, Eberhard Karls Universität Tübingen, Tübingen, Germany (alexander.rautenberg@uni-tuebingen.de)

**15:30–15:45:** EMS2015-565  
Statistical methods to develop skillful probabilistic wind power forecasts  
**Lüder von Bremen,** Constantin Junk, Stephan Spåth, Detlev Heinemann  
Universität Oldenburg, ForWind, Oldenburg, Germany (lueder.von.bremen@uni-oldenburg.de)

**15:45–16:00:** EMS2015-22  
Climatology of low-level jets from reanalysis and observations  
**Minttu Tuononen,** Victoria Sinclair, Timo Vihma, Ewan O’Connor, Ville Vakkari, Lauri Laakso  
Finnish Meteorological Institute, Helsinki, Finland (minttu.tuononen@fmi.fi)

#### 16:00 Coffee break

#### 17:00–18:30

**17:00–17:15:** EMS2015-100  
Wind and solar energy potential in Bulgaria - some computer simulations results  
**Georgi Georgiev,** Kostadin Ganev, Georgi Gadzhev, Nikolay Miloshev, Dimitry Syrakov, Maria Prodanova  
National Institute of Geophysics, Geodesy and Geography, Bulgarian Academy of Sciences, Sofia, Bulgaria (jordanov@gmail.com)

**17:15–17:30:** EMS2015-621  
Dependence of Weibull distribution parameters on the CNR threshold in wind lidar data  
**Sven-Erik Gryning,** Ekaterina Batchvarova, Rogier Floors, Alfredo Peña  
DTU Wind Energy

**17:30–17:45:** EMS2015-498  
Mesoscale wind fluctuations and their correlation with solar variability  
**Anna Mehrens,** Lueker von Bremen, Detlev Heinemann  
University of Oldenburg, Institute of Physics, Forwind, Oldenburg, Germany (anna.mehrens@forwind.de)

**17:45–18:00:** EMS2015-351  
Handling of subpixel structures in the application of satellite derived irradianc data for solar energy system analysis - a review  
**Hans Georg Beyer**  
University of Agder, Inst. of Engineering, Department of Engineering and Science, Grimstad, Norway (hans-georg.beyer@ula.no)

**18:00–18:15:** EMS2015-288  
Validation of CM SAF surface solar radiation datasets over Finland and Sweden  
Aku Riihela, Thomas Carlund, Joerg Trentmann, Richard Mueller, **Anders Lindfors**  
Finnish Meteorological Institute, Finland (anders.lindfors@fmi.fi)

**18:15–18:30:** EMS2015-327  
Quantification of Solar Surface Radiation in the Alps  
**Jochen Wagner,** Reto Stöckli, Armin Costa, Roberto Monsomo, David Moser, Giorgio Belluardo, Georg Niedrist  
EURAC Research, Institute for Applied Remote Sensing, Bolzano, Italy

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**ORAL PROGRAMME ASI16 CONTINUES FRIDAY**
Climate

Monitoring climate and climate change

CL2 Spatial Climatology

Convener: Ole Einar Tveito
Co-Convener: Mojca Dolinar; Christoph Frei
Lecture Room: Sofia II

09:00–10:30

Chairperson(s): Ole Einar Tveito

09:00–09:15: EMS2015-625
High resolution hourly gridded temperature dataset for Germany
Stefan Krähenmann, Andreas Walter
Deutscher Wetterdienst, Offenbach, Germany

09:15–09:30: EMS2015-219
Spatial interpolation of meteorological variables for snow and hydrological modelling
Cristian Lussana, Jesper Andersen, Tuomo Saloranta, Thomas Skaugen, Ole Einar Tveito
Norwegian Meteorological Institute, Section for Data and Spatial Analysis, Oslo

09:30–09:45: EMS2015-241
Observed spatial and temporal variability of precipitation and drought in the Eastern Mediterranean
Shifa Mathbout, Joan Albert López Bustins, Javier Martín Vide
University of Barcelona, Physical Geography and Regional Geographical Analysis, Barcelona, Spain
(shifamathbout@yahoo.com)

09:45–10:00: EMS2015-501
Radar-derived precipitation products for forecasting of floods, landslides and avalanches
Cristian Lussana, Christoffer A. Elø, Kolbjørn Engeland, Jean-Marie Lepioffe, Snorre Stavik Rønning, Ole Einar Tveito
Norwegian Meteorological Institute

10:00–10:15: EMS2015-216
Mapping extreme precipitation return levels in Switzerland
Christoph Frei, Anne Schindler, Sophie Fukutome
Federal Office of Meteorology and Climatology, MeteoSwiss, Zürich, Switzerland
(christoph.frei@meteoswiss.ch)

10:15–10:30:
Introduction to posters

10:30 Coffee break

ORAL PROGRAMME CL2 CONTINUES AT 17:00

17:00–18:30

Chairperson(s): Christoph Frei

17:00–17:15: EMS2015-71
Hourly precipitation extremes versus temperature in Europe
Peter Siegmund, Gerard van der Schrier
Royal Netherlands Meteorological Institute, De Bilt, Netherlands (siegmund@knmi.nl)

17:15–17:30: EMS2015-632
Meteo: package for automated spatio-temporal mapping
Milan Klilbardo, Branislav Bajat, Aleksandar Sekulic
University of Belgrade, Faculty of Civil Engineering, Department of Geodesy and Geoinformatics, Belgrade, Serbia

17:30–17:45: EMS2015-226
Determining the accuracy of gridded daily rainfall amounts
Timothy Legg
Met Office, Climate Research, Exeter, United Kingdom
(tim.legg@metoffice.gov.uk)

17:45–18:00: EMS2015-61
Long-term consistent grid data for temperature in Switzerland
Francesco Isotta, Michael Begert, Christoph Frei
MeteoSwiss, Federal Office of Meteorology and Climatology MeteoSwiss, Zurich-Airport, Switzerland
(francesco.isotta@meteoswiss.ch)

18:00–18:15: EMS2015-402
Thermal conditions and oscillation patterns in the region of Central Europe in years 1918-2010
Zbigniew Szwejkowski, Ewa Draganska, Iwona Cymes, Stanislaw Suchecki
Warmia and Mazury University in Olsztyn, Poland

18:15–18:30: EMS2015-611
Long-term gridded temperature data for Norway
Ole Einar Tveito, Hanna Szewczyk-Bartnicka
Norwegian Meteorological Institute, Climatology Division, Oslo, Norway (ole.einar.tveito@met.no)

END OF ORAL PROGRAMME CL2
Understanding processes and climate change

CL6 Global and regional reanalyses

Convener: A. K. Kaiser-Weiss
Co-Conveners: Eric Bazile; Leopold Haimberger; Ge Verver; Dick Dee
Lecture Room: Sofia II

14:00–16:00

14:00–14:30: EMS2015-627
Progress in climate reanalysis (solicited)
Dick Dee
ECMWF, Reading, UK

14:30–14:45: EMS2015-142
Development of the regional UERRA reanalysis systems and the output validation
Per Unden, Manola Brunet, Dale Barker, Andrea Kaiser-Weiss, Albert Klein Tank, Phil Jones
Climatic Research Unit, School of Environmental Sciences, University of East Anglia (UEA), Norwich, UK

14:45–15:00: EMS2015-48
The Met Office Ensemble of Regional Reanalyses
Peter Jermy
UK Met Office, Data Assimilation and Ensembles, Exeter, United Kingdom (peter.jermy@metoffice.gov.uk)

15:00–15:15: EMS2015-118
Added value of a new high-resolution ensemble nudging reanalysis system
Lilo Bach, Christoph Schraff, Jan Keller, Andreas Hense
University of Bonn, Germany (libach@uni-bonn.de)

Uncertainties in the surface variables from an ensemble of reanalyses under UERRA project
Cornel Soci, Eric Bazile
Météo-France, CNRM/GMAP, Toulouse, France (cornel.soci@meteo.fr)

15:30–15:45: EMS2015-374
Using reanalysis fields of 10m winds and 2m temperature to characterize the representativeness of German station observations
Andrea K. Kaiser-Weiss, Vera Heene, Michael Borsche, Frank Kaspar
DWD, National climate monitoring, Offenbach, Germany (andrea.kaiser-weis@dwd.de)

15:45–16:00: EMS2015-434
High-resolution regional reanalysis for Europe and Germany: Evaluation and Applications
Sabrina Wahl, Jan Keller, Christian Ohlwein, Andreas Hense, Petra Friederichs, Susanne Crewell
University of Bonn, Meteorological Institute, Bonn, Germany (wah@uni-bonn.de), Hans-Ertel Centre for Weather Research - Climate Monitoring Branch

Research and services for socio-economic sectors

CL10 The Copernicus Climate Change Service implemented by ECMWF

Convener: J.-N. Thepaut; Dick Dee
Lecture Room: Sofia II

11:00–13:00

Chairperson(s): Jean-Noel Thepaut

11:00–11:15: EMS2015-328
The Copernicus Programme and Climate Change
(solicited)
Mauro Facchini, Hugo Zunker, Bernard Pinty
European Commission

11:15–11:30: EMS2015-377
How to incorporate expert and empirical knowledge to C3S?
Ernesto Rodriguez-Camino
AEMET, Spain (erodriguezc@aemet.es)

11:30–11:45: EMS2015-322
The regional reanalysis activities in UERRA to support Copernicus climate change services
Per Unden, Manola Brunet, Dale Barker, Andrea Kaiser-Weiss, Albert Klein Tank, Phil Jones
Swedish Meteorological and Hydrological Institute (SMHI), Norrkoping, Sweden

11:45–12:00: EMS2015-603
Use of a large ensemble of regional climate model simulations to depict future climate change in Sweden
Erik Kjellström, Lars Bärring, Grigory Nikulin, Gustav Strandberg, Renate Wilcke
Swedish Meteorological and Hydrological Institute, Rossby Centre, Norrköping, Sweden (erik.kjellstrom@smhi.se), Stockholm University, Department of Meteorology

12:00–12:15: EMS2015-595
Added value of regional climate modeling over areas characterized by complex terrain- Precipitation over the Alps
Csaba Torma, Filippo Giorgi, Erika Coppola
The Abdus Salam International Centre for Theoretical Physics, Earth System Physics Section, Trieste, Italy (coppolae@ictp.it)

12:15–12:30: EMS2015-193
Addressing global demands of water, energy and food with satellite based soil moisture data in a changing climate
Eva Maria Haas, Christian Briese, Wolfgang Wagner, Wouter Dorigo, Werner Mücke, Richard Kidd, Andreas Walli, Annett Bartsch, Stefan Schneider
GeoVille, Austria (haas@geoville.com)
12:30–12:45: EMS2015-438
Information system for adaptation to climate change in Hungary
Gabriella Szépszó, Judit Bartholy, Zita Bihari, Attila Kovács, Ákos Németh, Rita Pongrácz
Hungarian Meteorological Service, Budapest, Hungary
(szepszo.g@met.hu)

12:45–13:00: EMS2015-564
Potential use of climate information for mitigation and adaptation of the energy sector
Robert Vautard
Laboratoire des Sciences du Climat et de l’Environnement, CEA/CNRS/UVSQ, Institut Pierre-Simon Laplace, Gif sur Yvette, France
(robert.vautard@lsce.ipsl.fr)

END OF ORAL PROGRAMME CL10
Communication and Education

CE1 Media and Communication

Convener: Tanja Cegnar
Lecture Room: Vitosha

09:00–10:30

Chairperson(s): Cegnar

09:00–09:15
EMS TV Weather Forecast Award
Martin Barreiro

09:15–09:30: EMS2015-628
Considerations when broadcasting severe weather information on television
Jay Trobec
KELO TV

09:30–09:45: EMS2015-578
Weather forecasting and visualisation strategy: the example of “www.meteo.gr”
Vassiliki Kotroni, Konstantinos Lagouvardos
National Observatory of Athens, Institute of Environmental Research and Sustainable Development, Athens, Greece (kotroni@meteo.noa.gr)

09:45–10:00: EMS2015-43
User behavior analysis of online meteorological services
Atte Harjanne, Tiina Ervasti
Finnish Meteorological Institute, Helsinki, Finland, Aalto University School of Business, Department of Management Studies, Helsinki, Finland

10:00–10:15: EMS2015-528
An overview of the use of Twitter from weather presenters around the world
Tomas Molina, Enric Agud Pigue, Panagiotis Giannopoulos,Montserrat Cañas
Hellenic Nat. Met. Service, Greece (pgiannop1@yahoo.com)

10:15–10:30: EMS2015-615
Emergencies in the age of socials
Dario Giaiotti, Fulvio Stel
Regional Agency for the Environmental Protection of Friuli Venezia Giulia, Regional Center fo Environmental Modeling, Palmanova, Italy (fulvio.stel@arpa.fvg.it), Unione Meteorologica del Friuli Venezia Giulia, via S. Pellico 19, Cividale del Friuli, Italy

10:30 Coffee break

11:00–13:00

Chairperson(s): Cegnar

11:00–11:15: EMS2015-274
Seasonal forecasting at the Bulgarian weather service: quantifying and communicating uncertainty
IlIan Gospodinov
National Institute of Meteorology and Hydrology, Bulgaria (ilian.gospodinov@meteo.bg)

11:15–11:45: EMS2015-630
Role of communication in service delivery
Gerald Fleming

11:45–12:00: EMS2015-349
Halo; Met Norway’s weather service for the public sector
Solfrid Agersten, Ine-Therese Pedersen, Berit Hagen, Håkon Mjelstad
Norwegian Meteorological Institute, Metklim, Tromsø, Norway (inetp@met.no)

12:00–12:15: EMS2015-350
How we got comedians to talk about the climate
Hans Olav Hygen, Kamilla Pedersen, Rasmus Benestad, Bente Wahl
Norwegian Meteorological Institute, Oslo, Norway (hans.olav.hygen@met.no)

12:15–12:30:
EMS Outreach & Communication Award
Pierrette Thomet Stott

12:30–12:40:
EMS Outreach & Communication examples of good practice

12:40–12:50:
EMS Journalist Award
Stéphane Foucart

12:50–13:00:
Poster introduction

END OF ORAL PROGRAMME CE1
Measurements and Observations

OBS1/ASI8 Atmospheric measurements from the local to the regional scale: Concepts, new technologies and scientific progress

Convener: Frank Beyrich
Co-Convener: Fred C. Bosveld
Lecture Room: Sofia III

Chairperson(s): N.N.

Wind, Rain, and Fog with New Technologies

09:00–09:15: EMS2015-107
An overview of operational AMV products extracted at EUMETSAT
Regis Borde, Olivier Hautecoeur, Manuel Carranza
EUMETSAT, Darmstadt, Germany
(regis.borde@eumetsat.int)

09:15–09:30: EMS2015-305
Wind measurements with smart-phones in the Atmospheric Boundary Layer
Cisco de Bruijn, Siebren de Haan, Werner Dierssen, Jonatan Leloux, Fred Bosveld
Royal Netherlands Meteorological Institute (KNMI), Observations and Data Technology, De Bilt, Netherlands (cisco.de.bruijn@knmi.nl)

09:30–09:45: EMS2015-421
Improving 2D-Video-Distrometer Performance Characteristics for High Data Rate and Heavy Weather Events
Martin Schwinzerl, Günter Lammer, Michael Schönhuber
JOANNEUM RESEARCH Forschungsges mbH, DIGITAL, Graz, Austria (martin.schwinzerl@joanneum.at)

09:45–10:00: EMS2015-158
Errors in rainfall measurement using cellular communication networks
Aart Overeem, Hidde Leijnse, Remko Uijlenhoet
Wageningen University, Hydrology and Quantitative Water Management Group, Wageningen, Netherlands (aart.overeem@wur.nl), Royal Netherlands Meteorological Institute, De Bilt, Netherlands

10:00–10:15: EMS2015-344
Cellular network infrastructure- the future of fog monitoring?
Pinhas Alpert, Noam David, Omri Sendik, Hagit Messer
Tel-Aviv University, Geosciences, Tel-Aviv, Israel (pinhas@post.tau.ac.il)

10:15–10:30: EMS2015-163
METEO-Cert: MeteoSwiss acceptance procedure for automatic weather stations
Joël Fisler, Marlen Kube, Bertrand Calpini
MeteoSchweiz, Zurich, Switzerland (joel.fisler@meteoswiss.ch)

10:30 Coffee break

11:00–13:00
Chairperson(s): F. Bosveld

Fluxes

11:00–11:30: EMS2015-271
Estimating long-term trends in actual evapotranspiration with help of lysimeter data (solicited)
Harrie-Jan Hendricks Franssen, Anne-Katrin Rößler, Thomas Pütz, Harry Vereecken
Forschungszentrum Jülich GmbH, Agroscope (IBG-3), Jülich, Germany (h hendricks-franssen@fz- juelich.de)

11:30–11:45: EMS2015-368
Flux-Gradient Technique with Ammer Valley Surface Layer Measurement Network
Francesca d’Amico, Joe Smith
University of Tuebingen, Germany

11:45–12:00: EMS2015-494
Measurements of Mass and Energy Exchange using Aircraft-based Sensors
Raymond Desjardins, Devon Worth, Matthias Mauder, Stefan Metzger, Ian MacPherson, Ramesh Srinivasan
Agriculture and Agri-Food Canada, Research Branch, Ottawa, Canada (ray.desjardins@agri.gc.ca)

12:00–12:15: EMS2015-553
Radiation and boundary layer measurements during the partial solar eclipse on March 20, 2015 at Lindenberg, Germany
Frank Beyrich, Claudia Becker, Klaus Behrens, Lionel Doppler, Carmen Köhler, Udo Rummel
Deutscher Wetterdienst, Meteorologisches Observatorium Lindenberg, Tauche - OT Lindenberg, Germany (frank.beyrich@dwd.de)

12:15–12:30: EMS2015-41
How lakes influence the local atmospheric circulation (Young Scientist Award Lecture)
Miguel Potes, Rui Salgado, Maria João Costa
Instituto de Ciências da Terra (mpotes@uevora.pt)

12:30–12:45: EMS2015-295
Investigation of the atmospheric boundary layer in the Laptev Sea area by means of ground-based remote sensing techniques and regional climate simulations
Pascal Schwarz, Clemens Drue, Heinemann Günther, Gutiár Oliver, Maisstas Alexander
University of Trier, Environmental Meteorology, Germany (schwarzp@uni-trier.de)

12:45–13:00:
Poster Introduction
**Numerical Weather Prediction**

**NWP2 Numerical aspects and physical parametrization integration in NWP models**

Convener: Daniel Reinert  
Co-Convener: Guy de Marselier  
Lecture Room: Kyoto

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| 09:00–10:30   | Chairperson(s): Daniel Reinert  
                09:00–09:15: Introduction to Posters I  
                09:15–09:30: EMS2015-164  
                Development of a next generation global model in Korea Institute of Atmospheric Prediction Systems  
                **Young Kwon**  
                Korea Institute of Atmospheric Prediction Systems  
                09:30–09:45: EMS2015-50  
                Impact of small-scale orographic gravity wave drag in the stable boundary layer on cyclone filling in a three-dimensional NWP model  
                **Gert-Jan Steeneveld**, Michal Kleczek, Liduin Burgering  
                Wageningen University, Meteorology and Air Quality Section, Wageningen, Netherlands  
                (gert-jan.steeneveld@wur.nl)  
                09:45–10:00: EMS2015-355  
                Implementation of the Bessel’s method for solar eclipses prediction within the WRF-ARW model  
                **Alex Montornes**, Bernat Codina, John Zach  
                Department of Astronomy and Meteorology, University of Barcelona, Barcelona, Spain  
                (amontornes@am.ub.es)  
                10:00–10:15: EMS2015-37 (YSTA)  
                Impact of Land-Use Types and Urban Canopy Structure on Urban Heat Island via High Resolution WRF Modeling; Istanbul Case Study  
                **Yasar Burak Oztaner**, Luca Pozzoli, Amir Hakami, Tayfun Kindap, Alper Unal  
                Eurasia Institute of Earth Science, Climate and Marine Science, Istanbul Technical University, Istanbul, Turkey  
                (oztaner@itu.edu.tr,pozzoli.ist@gmail.com,kindap@itu.edu.tr,alper.unal@gmail.com)  
                10:15–10:30:  
                Introduction to Posters II and final discussion |

END OF ORAL PROGRAMME NWP2

**NWP3 Data assimilation and use of observations in meteorology and oceanography**

Convener: Alexander Cress  
Co-Convener: Sarah Dance  
Lecture Room: Vitosha

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| 17:00–18:30   | Chairperson(s): A. Cress/ S L. Dance  
                17:00–17:15: EMS2015-115  
                Data assimilation using convective scale covariance structures  
                **Clarissa Figura**, Liselotte Bach, Jan D. Keller, Andreas Hense  
                Meteorological Institute, University of Bonn, Germany  
                17:15–17:30: EMS2015-317  
                Assimilation of MODE-S EHS observations in HARMONIE  
                **Cisco de Bruijn**, Siebren de Haan  
                Royal Netherlands Meteorological Institute (KNMI), Observations and Data Technology, De Bilt, Netherlands (cisco.de.bruijn@knmi.nl)  
                17:30–17:45: EMS2015-540  
                Diagnosing observation error statistics for numerical weather prediction  
                **Joanne A. Waller, Sarah L. Dance**, Nancy K. Nichols  
                University of Reading, School of Mathematical and Physical Sciences, Reading, United Kingdom  
                (s.l.dance@reading.ac.uk)  
                17:45–18:00: EMS2015-179  
                Biomass and Soil Moisture simulation and assimilation over Hungary  
                **Helga Tóth**, Balázs Szintai, László Kullmann  
                Hungarian Meteorological Service, Hungary  
                (tho.t@met.hu)  
                18:00–18:15: EMS2015-9  
                Improving road weather model forecasts by adjusting the radiation input  
                **Virve Karsisto**  
                Finnish Meteorological Institute, Helsinki, Finland  
                (virve.karsisto@fmi.fi)  
                18:15–18:30:  
                Introduction to Posters |

END OF ORAL PROGRAMME NWP3
NWP4 Probabilistic and ensemble forecasting at short and medium-range

Convener: Andrea Montani  
Co-Conveners: Jan Barkmeijer; Fernando Prates  
Lecture Room: Kyoto

11:00–12:55

Chairperson(s): Prates/Montani

From large scale to convection permitting ensemble systems

11:00–11:15: EMS2015-224
Stochastic parametrization of boundary layer processes in ENS  
Pirkka Ollinaho, Martin Leutbecher, Anton Beljaars, Irina Sandu  
European Centre for Medium-Range Weather Forecasts (pirkka.ollinaho@ecmwf.int)

11:15–11:30: EMS2015-108
Limited-area ensemble forecasts during Sochi-2014 Winter Olympics: multi-model vs single-model approach  
Andrea Montani, Chiara Marsigli, Tiziana Paccagnella  
ARPA-SIMC, HydroMeteoClimate Service of Emilia-Romagna Region, Bologna, Italy (amontani@arpa.emr.it)

11:30–11:45: EMS2015-549
New methods for ensemble generation in COSMO-DE-EPS?  
Richard Keane, Hendrick Reich, Christoph Schraff  
DWD, Germany (richard.keane@dwd.de)

11:45–12:00: EMS2015-116
Evaluation of a stochastic deep convection parameterization in HarmonEPS  
Lisa Bengtsson  
SMHI, Norrköping, Sweden (Lisa.Bengtsson@smhi.se)

12:00–12:15: EMS2015-582
How good is ensemble-based calibrated thunderstorm probability prediction over Australia?  
Harald Richter  
Research & Development Branch, Bureau of Meteorology, Australia (h.richter@bom.gov.au)

Applications of probabilistic products

12:15–12:30: EMS2015-12
Probabilistic Predictions in Complex Terrain with an Analog Ensemble  
Iris Odak Plenkovic, Luca Delle Monache, Kristian Horvath, Mario Hrastinski, Alica Bajic  
Meteorological and Hydrological Service, Zagreb, Croatia

12:30–12:45: EMS2015-302
Scenario forecasting using ensembles in water management  
Tessa van het Schip-Haverkamp, Wim van den Berg, Remco van de Beek  
MeteoGroup The Netherlands, Wageningen, Netherlands (t.vanhetschip@meteogroup.com)

12:45–12:55:
Poster presentations

END OF ORAL PROGRAMME NWP4
The Atmospheric System and its Interactions

ASI16 Energy Meteorology

**Convener:** Sven-Erik Gryning  
**Co-Conveners:** Ekaterina Batchvarova, Lucien Wald, Marion Schroeder-Homscheidt  
**Poster Area:** Sofia I  
**Chairperson(s):** Sven-Erik Gryning  
**Introduction Part I:** 16:00, Sofia III  
**Attendance Time:** 16:15–17:00

**P26: EMS2015-409**  
Full-scale wind lidar measurements of the shelter behind a fence  
**Alfredo Peña,** Andreas Bechmann, Davide Conti, Nikolos Angoul, Torben Mikkelsen, Peggy Friis  
DTU, Wind Energy, Wind Energy, Roskilde, Denmark (aldi@dtu.dk)

**P27: EMS2015-521**  
Studying non frequent wind events for energy applications  
**Platon Patlakas, Nicolas Barranger, Dimitris Diamantis,** George Galanis, George Kallos  
University of Athens, Department of Physics, Greece

**P28: EMS2015-504**  
Statistical analysis of coastal wind profiles - a parallel between Ahtopol at the Black Sea and Lamezia Terme at the Tyrrenian Sea  
**Damyan Barantiev,** Daniel Gulli, Luca Tiriolo, Elenio Avolio, Ekaterina Batchvarova, Claudia Roberta Calidonna, Teresa Lo Feudo, Anna Maria Semperviva, Mikhail Novitsky  
National Institute of Meteorology and Hydrology, Sofia, Bulgaria

**P29: EMS2015-499**  
Wettermast Hamburg: Applying Mixing Length Models at a Heterogeneous Location  
**Heike Konow,** Felix Ament, Ingo Lange  
Hamburg University, Meteorological Institute, Germany (heike.konow@uni-hamburg.de)

**P30: EMS2015-101**  
On some characteristics of the spatial distribution of turbulence components over the Bolund hill determined in wind tunnel compared to full-scale measurements  
**Alvaro Cuerva-Tejero, Cristóbal José Gallego-Castillo,** Oscar Lopez-Garcia, Tee Seong Yeow, Sergio Ávila-Sánchez  
DAVE-Universidad Politécnica de Madrid, Spain (alvaro.cuerva@upm.es)

**P31: EMS2015-18**  
Estimation of wind power resources in complex terrain prone to bora and scirocco flows  
**Mario Hrastinski,** Kristian Horvath, Alica Bajic, Iris Odak  
Croatian Meteorological and Hydrological Service, Atmospheric research and forecast models development department, Zagreb, Croatia (mario.hrastinski@cirus.dhz.hr)

**P32: EMS2015-509**  
How do regional reanalyses contribute to renewable energy applications?  
**Christopher Frank,** Susanne Crewell, Jan Keller, Christian Ohlwein  
Climate Monitoring Branch, Hans-Ertel-Centre for Weather Research, Germany, Institute for Geophysics and Meteorology, University of Cologne, Germany

**P33: EMS2015-435**  
Improvement of Solar and Wind forecasting in southern Italy through a multi-model approach  
**Elenio Avolio,** Rosa Claudia Torcasio, Teresa Lo Feudo, Claudia Roberta Calidonna, Daniele Contini, Stefano Federico  
ISAC-CNR, UOS of Lamezia Terme, Italy (e.avolio@isac.cnr.it)

**P34: EMS2015-297**  
Renewable energy production forecasts within the ORKA project  
**Regina Kohlepp,** Jonas von Schumann, Michael Buchhold  
Deutscher Wetterdienst (DWD), Offenbach am Main, Germany (Regina.Kohlepp@dwd.de)

**P35: EMS2015-199**  
Forecast of renewable energy with consideration of wind farm power curve and the broken cloud effect with PV  
**Armin Raabe,** Robby Göhler, Janek Zimmer  
Universität Leipzig, Institut für Meteorologie, Leipzig, Germany (raabe@uni-leipzig.de)

**P36: EMS2015-93**  
Solar and wind variability and complementarity in the Iberian Peninsula using clustering techniques  
**Claudia Gutiérrez Escribano,** Miguel Ángel Gaertner Ruiz-Valdepeñas, Clemente Gallardo Andrés, Victoria Gil Alfonso  
University of Castilla-La Mancha, Environmental Sciences Institute, Toledo, Spain (Claudia.Gutierrez@uclm.es)

END OF POSTER PROGRAMME ASI16 – PART I
Climate

Monitoring climate and climate change

CL2 Spatial Climatology

**Convener:** Ole Einar Tveito  
**Co-Conveners:** Mojca Dolinar, Christoph Frei  
**Poster Area:** Sofia I  
**Chairperson(s):** Ole Einar Tveito  
**Introduction:** 10:15, Sofia II  
**Attendance Time:** 16:15–17:00

P48: EMS2015-387  
Spatio-temporal interpolation of sub-daily (6-hour) precipitation over Romania for the period 1975-2010  
**Alexandru Dumitrescu,** Marius-Victor Birsan, Ancuta Manea  
National Meteorological Administration, Bucharest, Romania (dumitrescu@meteoromania.ro)

P49: EMS2015-591  
Spatio-temporal analysis of the annual maximum multi-day precipitation amounts in Croatia  
**Irena Nimac,** Ksenija Cindric Kalin, Melita Percec-Tadic  
Meteorological and hydrological service of Croatia, Croatia (irena.nimac@cirius.dhz.hr)

END OF POSTER PROGRAMME CL2

Understanding processes and climate change

CL6 Global and regional reanalyses

**Convener:** A. K. Kaiser-Weiss  
**Co-Conveners:** Eric Bazile, Leopold Haimberger, Ge Verver, Dick Dee  
**Poster Area:** Sofia I  
**Introduction:** 16:00, Sofia II  
**Attendance Time:** 16:15–17:00

P52: EMS2015-331  
Estimating seasonal to inter-annual variability of 10m and 100m monthly wind speed from station measurements and global and regional reanalyses over Germany  
**Michael Borsche,** Andrea Kaiser-Weiss, Frank Kaspar  
Deutscher Wetterdienst, Offenbach, Germany (michael.borsche@dwd.de)

P53: EMS2015-496  
Investigating the trends of the Hadley Circulation in ERA20C  
**Roberta D’Agostino,** Piero Lionello  
University of Salento, DISTEBA, Lecce, Italy (piero.lionello@unisalento.it)

P54: EMS2015-171  
Extratropical Factors Affecting the summer precipitation variability over the Yangtze River Basin in China  
**Xinyu Li,** Riyu Lu  
State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China, University of the Chinese Academy of Sciences, Beijing, China

P55: EMS2015-120  
Statistically derived upper-air pseudo-temperatures for assimilation in reanalyses  
**Lilo Bach,** Jan Keller, Christoph Schraff, Andreas Hense  
University of Bonn, Germany (libach@gmx.de)

END OF POSTER PROGRAMME CL6
Research and services for socio-economic sectors

CL10 The Copernicus Climate Change Service implemented by ECMWF

*Conveners:* J.-N. Thepaut, Dick Dee  
*Poster Area:* Sofia I  
*Chairperson(s):* Jean-Noel Thepaut  
*Introduction:* 16:00, Sofia II  
*Attendance Time:* 16:15–17:00

**P58: EMS2015-426**  
Homogenized, gridded observations for better climate change services - summary of the CARPATCLIM project  
*Monika Lakatos,* Zita Bihari, Tamás Szentimrey, Tamás Kovács, Sándor Szalai, Ákos Németh  
Hungarian Meteorological Service, Climate Division, Budapest, Hungary (lakatos.m@met.hu)

**P59: EMS2015-601**  
Producing, handling and disseminating information on regional climate change at the Swedish Meteorological and Hydrological Institute: Experiences from CORDEX  
*Erik Kjellström,* Lars Bärring, Michael Kolax, Grigory Nikulin  
Swedish Meteorological and Hydrological Institute, Rossby Centre, Norrköping, Sweden (erik.kjellstrom@smhi.se)

**P60: EMS2015-604**  
Climate-proofing forest production in Scandinavia  
*Lars Bärring,* Renate Wilcke, Mats Berlin, Bengt Andersson Gull, Erik Kjellström  
Rossby Centre, Swedish Meteorological and Hydrological Institute, Sweden (lars.barring@smhi.se), Centre for Environmental and Climate Research, Lund University, Sweden

**P61: EMS2015-375**  
Proposals of metrics for a more physical evaluation of climate models  
AEMET, Spain

END OF POSTER PROGRAMME CL10
Communication and Education

CE1 Media and Communication

Convener: Tanja Cegnar
Poster Area: Sofia I
Chairperson(s): Tanja Cegnar
Introduction: 12:50, Vitosha
Attendance Time: 16:15–17:00

P62: EMS2015-453
An overview of the use of Facebook in National Weather Services
Virginia Palacio, Olatz Principe, Maialen Martija,
Santiago Gaztelumendi
Basque Meteorolgy Agency (EUSKALMET), TECNALIA R&I, Energy and Environment Division, Meteorology Area

P63: EMS2015-128
An analysis of meteorological factors affecting user satisfaction
In-Gyum Kim, Hye-Min Kim, Ki-Jun Park, Jeong-Yun Kim, Cheol-Hong Park
National Institute of Meteorological Research, Seogwipo-si, Jeju-do, Republic of Korea
(kimig@korea.kr)

END OF POSTER PROGRAMME CE1
Measurements and Observations

OBS1/ASI8 Atmospheric measurements from the local to the regional scale: Concepts, new technologies and scientific progress

Convener: Frank Beyrich
Co-Convener: Fred C. Bosveld
Poster Area: Sofia I
Chairperson(s): N.N.
Introduction: 12:45, Sofia I
Attendance Time: 16:15–17:00

P64: EMS2015-222
The wind profile within the surface boundary layer measured by in situ (anemometric tower) and remotesensing (mini-sodar) techniques
Gilberto Fisch
Aeronautic and Space Institute, Atmospheric Science Division, São José dos Campos, Brazil (fisch.gilberto@gmail.com)

P65: EMS2015-334
A new method to improve the analyzed meteorological observations with the use of high-resolution remote sensing data
Antonio Daniel Sanchis-Dufau
University of Vienna, Institute of Meteorology and Geophysics, General Meteorology and Climatology, Vienna, Austria (antonio.sanchis-dufau@univie.ac.at)

P66: EMS2015-29
Hail detection algorithm derived from weather radar products
Nicu Barbu, Sabina Stefan, Cristian Craciun
University of Bucharest, Faculty of Physics, Magurele, Bucharest, Romania, National Meteorological Administration, Bucharest, Romania

P67: EMS2015-361
Global solar radiation: comparison of satellite and ground based observations on monthly time scale
Petr Skalak, Piotr Struzik, Pavel Zahradnicek, Ales Farda
Czech Hydrometeorological Institute, Department of Climatology, Praha, Czech Republic (skalak@chmi.cz), Global Change Research Centre AS CR, Brno, Czech Republic

P68: EMS2015-548
Upward and downward thermal infrared radiation determined by orbital data in Amazonia
Gabriel de Oliveira, Elisabete Caria Moraes, Yosio Edemir Shimabukuro, Nathaniel Brunsell, Luiz Eduardo Oliveira e Cruz de Aragao, Gabriel Bertani, Thiago Veloso dos Santos
National Institute for Space Research, Remote Sensing Division, Sao Jose dos Campos, SP, Brazil (gdo@dsr.inpe.br; bete@dsr.inpe.br; yosio@dsr.inpe.br; laragao@dsr.inpe.br; gabrielb@dsr.inpe.br), University of Kansas, Department of Geography, Lawrence, KS, USA (brunsell@ku.edu)

P69: EMS2015-367
Cloud cover estimation optical package: new facility, new algorithms, enhanced accuracy and new challenges.
Mikhail Krinitskiy, Alexey Sinitsyn
P.P. Shirshov Institute of Oceanology of the RAS, Sea Atmosphere Interaction And Climate Laboratory, Moscow, Russian Federation (krinitsky@sail.msk.ru)

P70: EMS2015-614
Climate reference stations in Germany: Concept, status and conclusions from parallel measurements
Frank Kaspar, Klaus-Jürgen Schreiber, Olaf Schulze Deutscher Wetterdienst, Offenbach, Germany (frank.kaspar@dwd.de)

P71: EMS2015-422
Improved estimates of sensible heat flux by a large aperture scintillometer with the use of real-time Bowen ratio
Jung-Hoon Chae, Moon-So Park, Min-Hyeok Choi, Yunyoung Song
Weather Information Service Engine, Seoul, Korea (zhzhah79@gmail.com)

P72: EMS2015-483
Evaporation Observations at CESAR: Experience with Mini Lysimeters
Fred C. Bosveld, Bernard Voortman, Jan A. Elbers
KNMI, De Bilt, Netherlands (Fred.Bosveld@knmi.nl)

P73: EMS2015-418
Surface Energy Balance at an Urban Residential Area in Seoul, Korea
Minsoo Kang, Moon-So Park, Min-Hyeok Choi, Sung-Hwa Park
Weather Information Service Engine, Seoul, Republic of Korea (kangms8993@gmail.com)

P74: EMS2015-47
Evaluating the relationship between forest degradation, recovery, and conservation efforts with Landsat imagery in southeastern Brazil
Megan Ewert
Czech Republic (megan.ewert@natur.cuni.cz)

END OF POSTER PROGRAMME OBS1/ASI8
Numerical Weather Prediction

NWP2 Numerical aspects and physical parametrization integration in NWP models

Convener: Daniel Reinert
Co-Convener: Guy de Morsier
Poster Area: Sofia I
Chairperson(s): Daniel Reinert
Attendance Time: 16:15–17:00

Introduction to Posters I, 09:00, Kyoto

P75: EMS2015-209
Numerical simulations of the super cell formed over Western Bulgaria on 08th of July 2014
Boryana Tsenova, Andrey Bogatchev
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences, Sofia, Bulgaria
(boryana.tsenova@meteo.bg)

P76: EMS2015-46 (YSTA)
Numerical study on parameterized and explicit cumulus convection resulted precipitation dependence on initial soil moisture content at 5 km horizontal resolution
Hajnalka Breuer, Júlia Göndöcs
Eötvös Loránd University, Department of Meteorology, Budapest, Hungary (bhajni@nimbus.elte.hu)

P77: EMS2015-166
A sensitivity study on the diurnal variation of simulated precipitation to cumulus parameterization schemes
In-Jin Choi, Emilia Kyung Jin, Ji-Young Han, So-Young Kim, Young-Cheol Kwon
Korea Institute of Atmospheric Prediction Systems (KIAPS), Seoul, Republic of Korea

P78: EMS2015-558
Evaluation of a new autoconversion parameter in a cumulus parameterization scheme
Ji-Young Han, Song-You Hong
Korea Institute of Atmospheric Prediction Systems, Seoul, Republic of Korea (jy.han@kiaps.org)

Introduction to Posters II, 10:15, Kyoto

P79: EMS2015-313
Urbanization Effect on Meteorological Parameters for Istanbul
Deniz Hazel Diren, Hüseyin Toros
Istanbul Technical University, Istanbul, Turkey
dirend@itu.edu.tr

P80: EMS2015-167
Representation of surface subgrid heterogeneity in ICON using tiles - Impact on forecast quality
Daniel Reinert, Günther Zängl, Jürgen Helmert, Ekaterina Machulskaya
German Weather Service, FE1, Offenbach am Main, Germany (daniel.reinert@dwd.de)

P81: EMS2015-106
Impacts of a prognostic large scale cloud scheme on a global forecasting system
Rae-Seol Park, Song-You Hong
Korea Institute of Atmospheric Prediction Systems, Seoul, Republic of Korea

END OF POSTER PROGRAMME NWP2

NWP3 Data assimilation and use of observations in meteorology and oceanography

Convener: Alexander Cress
Co-Convener: Sarah Dance
Poster Area: Sofia I
Introduction: 18:15, Vitospha
Attendance Time: 16:15–17:00

P82: EMS2015-412
Wind Power Data Assimilation in a Regional Model - Haves, Wants and Needs
Stefan Declair, Klaus Stephan, Roland Potthast
Deutscher Wetterdienst, FE 12 - Data Assimilation, Offenbach, Germany (stefan.declair@dwd.de)

P83: EMS2015-599
Comparison of EnOI Data Assimilation Into Two Physical Models of The Thermosphere
David R. Jackson, Edmund Henley, Sophie A. Murray
Met Office, Space Weather Research Group, Exeter, United Kingdom (david.jackson@metoffice.gov.uk)

P84: EMS2015-136
SATIN - Satellite driven Nowcasting system and a high resolution NWP AROME-1km model over the Eastern Alpine area
Ingo Meirold-Mautner, Florian Meier, Nauman Khurshid Awan, Martin Suklitsch, Alexander Kann, Christoph Wittmann, Yong Wang
Department of forecasting models, Central Institute for Meteorology and Geodynamics, Vienna, Austria

END OF POSTER PROGRAMME NWP3
NWP4 Probabilistic and ensemble forecasting at short and medium-range

Convener: Andrea Montani  
Co-Conveners: Jan Barkmeijer, Fernando Prates  
Poster Area: Sofia I  
Chairperson(s): Montani/Prates  
Introduction: 12:45, Kyoto  
Attendance Time: 16:15–17:00

P85: EMS2015-160  
Predictability of Heat Wave Occurrence in Korea during Summer 2013  
***Woo-Seop Lee, Hyun-Ju Lee, Jinho Yoo***  
APEC Climate Center, climate change department, Busan, Republic of Korea (wslee@apcc21.org)

P86: EMS2015-213  
Benefits of an ultra large and multiresolution ensemble for estimating available wind energy  
***Jonas Berndt, Charlotte Hoppe, Hendrik Elbern***  
Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research, Juelich, Germany, Rhenish Institute for Environmental Research at the University of Cologne, Germany

P87: EMS2015-316  
Improvement of Forecast Guidance by Blending Statistical Guidance with Direct Model Output  
***JunTae Choi, SooHyun Kim, JiYoun Kim***  
NIMR, Korea Meteorological Administration, Republic of Korea (cj@kma.go.kr)

P88: EMS2015-443  
A multi-model application for wind prediction in Southern Italy  
***Rosa Claudia Torcasio, Claudia Roberta Calidonna, Elenio Avolio, Stefano Federico, Oxana Drofa, Tony Christian Landi, Piero Malguzzi, Andrea Buzzi, Paolo Bonasoni***  
ISAC-CNR, UOS of Lamezia Terme, Italy

END OF POSTER PROGRAMME NWP4
Conference Programme – Friday

Friday, 11 September 2015

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<th>Kyoto</th>
<th>Vitosha</th>
<th>Room</th>
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<td>09:00–10:30</td>
<td>CL9/CE7: Creating national and regional climate services in Europe through partnerships</td>
<td>ASI16: Energy Meteorology</td>
<td>ECAM3: Forecast Verification of High-Impact Weather</td>
<td>ASI4: Formulation, validation and parameterization of small-scale processes</td>
<td>09:00–10:30</td>
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<td>10:45–11:30</td>
<td>Poster Session &amp; Coffee Break</td>
<td>Foyer and Room Sofia I</td>
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<td>11:30–13:00</td>
<td>CL9/CE7 continued</td>
<td>ASI16 continued</td>
<td>NWP6: Mesoscale Verification Inter-Comparison over Complex Terrain (MesoVICT)</td>
<td>ASI4 continued</td>
<td>11:30–13:00</td>
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<td>13:00</td>
<td>Small reception &amp; announcement of poster award recipient: 13:15–14:00</td>
<td>Foyer</td>
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In the detailed daily programme (on page 86 to 95) the related ECAM, ASI, CL, and NWP sessions are listed in the following order: ECAM3, ASI14, ASI16, CL9/CE7, NWP6.

Poster display time Thursday to Friday

Authors are kindly asked to put up their posters as soon as possible within the allocated display time in order to enable the conference participants to view their posters at any time within the display days, and to take them down on Friday between 13:00–14:00. Posters that have not been removed within this dismantling time will be removed and disposed off.
Applications of Meteorology

ECAM3 Forecast Verification of High-Impact Weather

Convener: Pertti Nurmi  
Co-Convener: Martin Göber  
Lecture Room: Kyoto

09:00–10:30

Chairperson(s): Laurie Wilson

09:00–09:15: EMS2015-550  
Advanced Methods for Climate and Regional Model Validation with Societal Applications  
Barbara Brown, Eric Gilleland, Caspar Ammann, Tressa Fowler, Randy Bullock  
NCAR, RAL, Boulder, United States (bgb@ucar.edu)

09:15–09:30: EMS2015-284  
Verification of user-oriented monthly and seasonal forecasts  
Christoph Spirig, Jonas Bhend, Irina Mahlstein, Mark Liniger  
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland (christoph.spirig@meteoswiss.ch)

09:30–09:45: EMS2015-228  
Evaluation of summer temperature and precipitation predictions from NCEP CFSv2 retrospective forecast over China  
Wei Tang, Lifeng Luo, Zhao Hui Lin, Eric Wood  
China Meteorological Administration Training Centre, Beijing, China (weitang@cma.gov.cn)

09:45–10:00: EMS2015-307  
Ensemble versus deterministic performance: what are the benefits for thresholds of interest from a weather hazards/impacts perspective  
Marion Mittermaier, Gabriella Csima  
Met Office, Weather Science, Exeter, United Kingdom (marion.mittermaier@metoffice.gov.uk)

10:00–10:15: EMS2015-600  
Probabilistic predictability of weather types in operational ensemble forecasts and the Lorenz model  
Martin Göber, Eric Förster, Peter Nevir, Paul James  
Deutscher Wetterdienst (DWD), Offenbach, Germany (martin.goebcr@dwd.de), Hans-Ertel-Centre for Weather Research (HeRC)

10:15–10:30: EMS2015-81  
Quality Evaluation of Quantitative Precipitation Estimates from CMA for Grid Precipitation verification  
Zhao Bin  
National Meteorological Center, Beijing, 100081, China (zhaob@cma.gov.cn)

END OF ORAL PROGRAMME ECAM3
The Atmospheric System and its Interactions

ASI4 Formulation, validation, and parameterization of small-scale processes in atmospheric modelling

Convener: Gert-Jan Steeneveld
Co-Conveners: Bert Holtslag; Lisa Bengtsson
Lecture Room: Vitosha

09:00–10:30

Chairperson(s): Gert-Jan Steeneveld

09:00–09:30: EMS2015-10
Why models fail or succeed in representing the Arctic winter boundary layer – a GASS model intercomparison (solicited)
Felix Pithan, Andrew Ackerman, Wayne Angevine, Kerstin Hartung, Luisa Ickes, Thorsten Mauritsen, Brian Medeiros, Irina Sandu, Gert-Jan Steeneveld, Marina Sterk, Gunilla Svensson, Paul Vaillancourt, Ayrton Zadra
University of Reading, Department of Meteorology, United Kingdom (f.pithan@reading.ac.uk)

09:30–09:45: EMS2015-454
Prediction of nocturnal boundary layer regimes
Bas van de Wiel, Ivo Van Hooijdonk, Judith Donda, Arnold Moene, Harm Jonker, Herman Clercx, Fred Bosveld
Eindhoven Technical University, Tilburg, Netherlands (b.j.h.v.d.wiel@tue.nl)

09:45–10:00: EMS2015-420
Preliminary results of the GABLS4 intercomparison
Eric Bazile, Patrick Le Moigne, Fleur Couvreux, Bert Holtslag, Gunilla Svensson
Météo-France, CNRM/GAME, Toulouse, France (eric.bazile@meteo.fr)

10:00–10:15: EMS2015-423
Sensitivity tests of the surface characteristics in the GABLS4 experiment
Patrick Le Moigne, Eric Bazile, Fleur Couvreux, Guylaine Canut, William Maurel
CNRM/GAME, Météo-France/CNRS, France (patrick.lemoigne@meteo.fr)

10:15–10:30: EMS2015-217
Surface-soil tiling strategies in JULES
Richard Gilham, Heather Ashton, Martin Best
Met Office, Fitzroy Road, Exeter, EX1 3PB United Kingdom (richard.gilham@metoffice.gov.uk)

10:30 Coffee break

END OF ORAL PROGRAMME ASI4
ASI16 Energy Meteorology

Convener: Sven-Erik Grynig
Co-Conveners: Ekaterina Batchvarova; Lucien Wald; Marion Schroeder-Homscheidt
Lecture Room: Sofia III

09:00–10:30

Chairperson(s): Lucien Wald

09:00–09:15: EMS2015-429
Cloud, aerosols and the directional distribution of solar irradiances
Kristian Pagh Nielsen, Elsa Andersen, Simon Furbo, Janne Dragsted, Emily Gleeson
Danish Meteorological Institute, Department of Research and Development, Copenhagen, Denmark
(kpn@dmi.dk)

09:15–09:30: EMS2015-211
Verification of sectoral cloud motion based global and direct normal irradiance nowcasting
Marion Schroeder-Homscheidt, Luca Kraus, Miriam Kosmale
DLR Oberpfaffenhofen, Germany (marion.schroeder-homscheidt@dlr.de)

09:30–09:45: EMS2015-321
Nowcasting of Direct Normal Irradiance with the High Temporal and Spatial Resolution of MSG/SEVIRI
Tobias Sirch, Luca Bugliaro
Institut für Physik der Atmosphäre, DLR, Oberpfaffenhofen, Germany (Luca.Bugliaro@dlr.de)

09:45–10:00: EMS2015-335
Preliminary assessment of a new SoDa service for real-time estimates and short-term forecasts of the solar radiation
Claire Thomas, Laurent Saboret, Etienne Wey, Philippe Blanc, Lucien Wald
MINES ParisTech - PSL Research University, Sophia Antipolis cedex, France
(lucien.wald@mines-paristech.fr)

10:00–10:15: EMS2015-508
Intrasolar day energy forecasting using cloud motion observation from satellite combined with WRF irradiance forecast
Sylvain Cros, Raphael Thomas, Mathieu Turpin, Caroline Lallemand, Nicolas Sébastien, Nicolas Schmutz
Reuniwatt SAS, R&D, Paris, France
(sylvain.cros@reuniwatt.com)

10:15–10:30: EMS2015-490
Forecasting direct and diffuse irradiance with the use of hemispheric sky images
Thomas Schmidt, John Kalisch, Else Lorenz, Detlev Heinemann
Carl von Ossietzky Univ, Oldenburg, Physics, Energy Meteorology, Germany
(john.kalisch@uni-oldenburg.de)

10:30 Coffee break

11:30–13:00

Chairperson(s): Marion Schroeder-Homscheidt

11:30–11:45: EMS2015-318
Which effective solar zenith angles to use for hourly irradiation measurements?
Philippe Blanc, Lucien Wald
MINES ParisTech - PSL Research University, Sophia Antipolis cedex, France
(lucien.wald@mines-paristech.fr)

11:45–12:00: EMS2015-67
Investigating the impact of clouds on solar energy production - Analyzing different photovoltaic technologies on different time scales
Stefanie Meilinger, Ina Neher, Evandro Dresch, Khurshid Hasan, Bernd Evers-Dietze, Dieter Franke
Bonn-Rhein-Sieg University of Applied Sciences, Germany
(Stefanie.Meilinger@h-brs.de)

12:00–12:15: EMS2015-563
Solar energy lost in a Solar Thermal Energy plant, due to aerosol extinction between the heliostats and the optical receiver
Thierry ELIAS, Didier RAMON, Laurent DUBUS, Charles Bourdil, Rémi Perrin, Emilio Cuevas-Agulló, Taoufik Zaidouni
HYGEOS, Lille, France
(te@hygeos.com)

12:15–12:30: EMS2015-230
Assessing the temporal variability of the surface solar radiation with time-frequency-energy representations
Marc Bengulescu, Philippe Blanc, Lucien Wald
MINES ParisTech - PSL Research University, Sophia Antipolis cedex, France
(lucien.wald@mines-paristech.fr)

12:30–12:45: EMS2015-622
Trend evaluations of meteorological variables and solar global and ultraviolet horizontal irradiation in Spain
Julia Bilbao, Roberto Román, Argimiro de Miguel
University of Valladolid, Faculty of Sciences, Atmosphere and Energy Laboratory, Spain

12:45–13:00: EMS2015-175
A new CM SAF Solar Surface Radiation Climate Data Set derived from Meteosat Satellite Observations
Jörg Treutmann, Richard Müller, Uwe Pfeifroth, Christine Träger-Chatterjee, Roswitha Cremer, Steffen Kothe
Deutscher Wetterdienst, Germany
(steffen.kothe@dwd.de)

END OF ORAL PROGRAMME ASI16
Climate

Research and services for socio-economic sectors

CL9/CE7 Creating national and regional climate services in Europe through

Conveners: Clare Goodess; Carlo Buontempo
Co-Conveners: Tanja Cegnar; Chris Hewitt; Filipe Lúcio; Tomas Halenka; Francisco J. Doblas-Reyes
Lecture Room: Sofia II

09:00–10:30

Chairperson(s): Carlo Buontempo

09:00–09:15: EMS2015-476
Climate services from a user point of view
Paul-Antoine Michelangeli, Sylvie Parey, Laurent Dubus, Amélie Laugel
EDF R&D, Chatou, France

09:15–09:30: EMS2015-333
Tracing the use (and potential use) of seasonal climate forecasts across Europe
Marta Bruno Soares, Suraje Dessai and the EUPORIAS WP12 Team
Sustainability Research Institute, School of Earth and Environment, University of Leeds, United Kingdom (m.soares@leeds.ac.uk), Centre for Climate Change Economics and Policy, London School of Economics and Political Science and University of Leeds

09:30–09:45: EMS2015-51
Interaction with users during the development of the KNMI’14 regional climate change scenarios
Janette Bessembinder, Alexander Bakker, Bart van den Hurk, Bernadet Overbeek
KNMI, Netherlands

09:45–10:00: EMS2015-283
Tailored climate indices can improve seasonal forecasts
Irina Mahlstein, Jonas Bhend, Christoph Spirig, Mark Liniger
MeteoSwiss, Zurich, Switzerland (irina.mahlstein@meteoswiss.ch)

10:00–10:15: EMS2015-392
Use of seasonal forecasts for water resources management in Spain
Laurent Pouget, Tamara Roldán, Manuel Gomez, Ángels Cabello, Ernesto Rodríguez-Camino, Beatriz Navascues, Jose Voces, Federico Franco, Pau Comas, Fernando Pastor, Mª Concepción García-Gómez, Juan J. Gil, Delfina Gil, Rogelio Galván
AEMET, Spain

10:15–10:30: EMS2015-587
Making seasonal prediction information useful for application in the energy sector
Stefano Materia, Silvio Gualdi
Centro Euro-Mediterraneo sui Cambiamenti Climatici, Bologna, Italy (stefano.materia@cmcc.it)

10:30 Coffee break

11:30–13:00

Chairperson(s): Carlo Buontempo

11:30–11:45: EMS2015-220
The project CLIMANDES - Creating climate services for the Peruvian Andes
Stefanie Gubler, Mischa Croci-Maspoli, Thomas Konzelmann, Clara Oria, Gabriela Rosas, Delia Acuña, Mario Rohrer
Zürich, Zürich, Switzerland (stefanie.gubler@meteoswiss.ch)

11:45–12:00: EMS2015-347
A status on the development of The Norwegian Centre for Climate Service
Hans Olav Hygen, Inger Hanssen-Bauer, Hanne Heiberg
Norwegian Meteorological Institute, Norwegian Centre for Climate Service, Oslo, Norway (hans.olav.hygen@met.no)

12:00–12:15: EMS2015-232
The IMPACT2C web-atlas
Swantje Preuschmann, Daniela Jacob
Climate Service Center 2.0, Climate System, Hamburg, Germany (swantje.preuschmann@hzg.de)

12:15–12:30: EMS2015-192
Weather Derivatives on Human Health: The case of OxyAlert
Pablo Fdez-Arroyabe, Falko Schmidt, Lecha Luis
Centro de Estudios Ambientales de Villa Clara, CESAM, Cuba

12:30–12:45: EMS2015-463
Exploring the effect of weather and climate on official statistics
Mark McCarthy, Jennifer Davies, Duncan Elliot
Met Office, Hadley Centre, Exeter, United Kingdom (mark.mccarthy@metoffice.gov.uk)

12:45–13:00: EMS2015-505
The World Energy & Meteorology Council: a link between researchers and users of weather and climate services in the energy sector
Laurent Dubus, Alberto Troccoli, Sue Ellen Haupt, Mohammed Sadeck Boulahya
EDF R&D, Applied Meteorology and Atmospheric Environment, Chatou Cedex, France (laurent.dubus@edf.fr)

END OF ORAL PROGRAMME CL9/CE7
**Numerical Weather Prediction**

**NWP6 Mesoscale Verification Inter-Comparison over Complex Terrain (MesoVICT)**

**Convener:** Marion Mittermaier  
**Co-Conveners:** Manfred Dorninger; Eric Gilleland  
**Lecture Room:** Kyoto

**11:30–13:00**

**Chairperson(s):** Anastasia Bundel

**11:30–11:45:** EMS2015-560  
MesoVICT - overview and current status  
Manfred Dorninger, **Marion Mittermaier**, Eric Gilleland, Barb Brown, Beth Ebert, Laurence Wilson  
Met Office, Exeter, United Kingdom  
(marion.mittermaier@metoffice.gov.uk)

**11:45–12:00:** EMS2015-185  
Spatial verification activities at ARPA-SIMC: first results on MesoVICT cases  
**Maria Stefania Tesini**, Andrea Montani, Chiara Marsigili, Tiziana Paccagnella  
ARPA-SIMC, Hydro-Meteo-Climatic Regional Service, Bologna, Italy (mstesini@arpa.emr.it)

**12:00–12:15:** EMS2015-518  
Suitability of complex matching criteria in the contiguous rain area analysis: a MesoVICT study on MAP D-PHASE high-impact events  
**Stefano Mariani**, Marco Casaioli  
Institute for Environmental Protection and Research (ISPRA), Rome, Italy (stefano.mariani@isprambiente.it; marco.casaioli@isprambiente.it)

**12:15–12:30:** EMS2015-229  
Spatial verification using the Dual-Tree Complex Wavelet Transform: a MesoVICT case study  
Alex Deckmyn, **Geert Smet**, Bert Van Schaeybroeck  
Royal Meteorological Institute of Belgium, Brussels, Belgium (geert.smet@meteo.be)

**12:30–12:45:** EMS2015-561  
Towards a simple and easy to interpret wind verification scheme  
**Manfred Dorninger**  
University of Vienna, Department of Meteorology and Geophysics, Wien, Austria  
(manfred.dorninger@univie.ac.at)

**12:45–13:00:** EMS2015-301  
Exploring the impact of neighbourhood size and height stratification in neighbourhood-based methods using single-site observation  
**Marion Mittermaier**  
Met Office, Weather Science, Exeter, United Kingdom (marion.mittermaier@metoffice.gov.uk)

END OF ORAL PROGRAMME NWP6
Applications of Meteorology

ECAM3 Forecast Verification of High-Impact Weather

Convener: Perti Nurmi
Co-Convener: Martin Göber
Poster Area: Sofia I
Chairperson(s): Perti Nurmi
Introduction: Thursday, 16:00, Kyoto
Attendance Time: 10:45–11:30

P1: EMS2015-98
Verification of the MeteoExpert nowcasts
Tatiana Bazlova, Nikolai Bokharnikov
IRAM, Russian Federation (expert@iram.ru)

P2: EMS2015-393
Applicability of the FMI Road Weather Model (RWM) for use in winter maintenance activities for the Dutch highways
Sander Tijm, Marcel Molendijk, Virve Karsisto, Evgeny Atlaskin, Perti Nurmi, Jan Dekker
KNMI, De Bilt, Netherlands

P3: EMS2015-75
Quantifying the effect of radar observational uncertainty on the verification of kilometer-scale NWP precipitation forecasts using the Fractions Skill Score
Lesley Allison, Marion Mittermaier, Robert Scovell, Chris Vernon, Katie Norman, Clive Pierce
Weather Science, Met Office, Exeter, Devon, UK

P4: EMS2015-194
Verification and uncertainty analysis of clouds and precipitation in high resolution models using 3D radar data
Dan Zhang, Kathrin Wapler, Ulrich Blahak
Deutscher Wetterdienst, Offenbach am Main, Germany (dan.zhang@dwd.de)

P5: EMS2015-551
The Model Evaluation Tools: Expanded tools for forecast evaluation
Barbara Brown, Tara Jensen, John Halley Gotway, Paul Kucera, Randy Bullock, Tressa Fowler
NCAR, RAL, Boulder, United States (bgb@ucar.edu)

P6: EMS2015-122
A large-scale model verification and comparison system
Thorsten Riess
W3 Data GmbH, Konstanz, Germany (riess@w3-data.de)

P7: EMS2015-159
Verification of long range drought forecasts
Lovro Kalin, Domagoj Mihajlovic, Ksenija Cindric Kalin, Blazenka Matjacic
Meteorological and Hydrological Service of Croatia, DHMZ, Zagreb, Croatia (kalin@cirus.dhz.hr)

P8: EMS2015-457
Challenges in Verifying Hazard Impact Models
Rebecca Hemingway
United Kingdom (rebecca.hemingway@metoffice.gov.uk)

P9: EMS2015-73
Communicating forecast verification results to decision-makers
Marianne Giroud Gaillard, Daniel Cattani, Michel Matter, Anna Faes
MeteoSwiss, Analyses & Forecast, Genève 2, Switzerland (marianne.giroud@meteoswiss.ch)

P10: EMS2015-223
Verification of precipitation forecasts for hydrological modelling for small basins in the Czech Republic
Martin Vokoun
Czech Republic (vokounm@fzp.czu.cz)

P11: EMS2015-243
Study of NWP parameterizations on extreme precipitation events over Basque Country
Ivan R. Gelpi, Santiago Gaztelumendi, Sheila Carreño, Roberto Hernandez, Joseba Egaña
Basque Meteorology Agency (Euskalmet), Tecnalia - Energy and Environment Division - Meteorology Area

P12: EMS2015-456
Warning/alert/alarm verification in Basque Country: the Euskalmet case.
Santiago Gaztelumendi, Joseba Egaña, José Antonio Aranda, Pedro Anitua
Basque Meteorology Agency (EUSKALMET), TECNALIA R&I, Energy and Environment Division, Meteorology Area

P13: EMS2015-465
Weather predictions verification using feature based methods
Ioannis Tegoulias, Ioannis Pytharoulis, Stylianos Kotsopoulos, Stergios Kartsios, Dimitrios Bampzelis, Theodore Karacostas
Aristotle University of Thessaloniki, Department of Meteorology and Climatology, Thessaloniki, Greece (tegoulia@auth.gr)

P14: EMS2015-151
Verification of the Canadian GDPS-YY25 (Global Deterministic Prediction System) using bootstrapping procedure
Marcel Vallee
Environment Canada, RPN, Dorval, Canada (marcel.vallee@ec.gc.ca)
The Atmospheric System and its Interactions

ASI4 Formulation, validation and parameterization of small-scale processes in atmospheric modelling

Convener: Gert-Jan Steeneveld
Co-Conveners: Bert Holtslag, Lisa Bengtsson
Poster Area: Sofia I
Chairperson(s): Gert-Jan Steeneveld
Introduction: 10:30, Vitosha
Attendance Time: 10:45–11:30

P15: EMS2015-111
WRF Model Experiments on Local Wind Patterns in Petuniabukta, Svalbard
Zuzana Chladova, Kamil Laska, Jiri Hosek
Institute of Atmospheric Physics CAS, Prague, Czech Republic (chladova@ufa.cas.cz)

P16: EMS2015-208
Impact of Planetary Boundary Layer parametrization scheme and land cover classification on surface processes: wind speed and temperature bias spatial distribution analysis over south Italy
Francesca Fedele, Andrea Tateo, Micaela Menegotto, Annarita Turnone, Benedetto Figorito, Anna Guarnieri Calo Carducci, Crescenza Calculli, Nunziata Ribecce, Alessio Police, Roberto Bellotti
Dipartimento di Fisica, University of Bari, Bari, Italy (andrea.tateo@virgilio.it), Apulia Region Environmental Protection Agency (ARPA Puglia), Bari -Italy (f.fedele@arpa.puglia.it, a.guarnieri@arpa.puglia.it, m.menegotto@arpa.puglia.it,a.turnone@arpa.puglia.it, b.figorito@arpa.puglia.it)

P17: EMS2015-240
The turbulent fluxes and TKE budget in Amazonia using LES PALM model
Gilberto Fisch, Theomar Neves, Sigfried Raasch
Aeronautic and Space Institute, Atmospheric Science Division, São José dos Campos, Brazil (fisch.gilberto@gmail.com)

P18: EMS2015-294
From cloud to precipitation: a case study of layered mixed-phased cloud using WRF and remote sensing and surface observations.
Victoria Sinclair, Dmitri Moisseev, Ewan O’Connor, Tuukka Petäjä
University of Helsinki, Division of Atmospheric Sciences, Department of Physics, Helsinki, Finland (Victoria.Sinclair@helsinki.fi)

P19: EMS2015-534
Comparison of cumulus convection schemes in RegCM experiments for the Carpathian Region
Karolina André, Ildikó Pieczka, Judit Bartholy, Rita Pongrácz
Eötvös Loránd University, Dept. of Meteorology, Budapest, Hungary

P20: EMS2015-541
Improved cloud microphysics parameterization in COSMO-MUSCAT coupled model along with COSP satellite simulator
Dipu Sudhakar, Johannes Quaas, Ralf Wolke, Jens Stoll, Andreas Muhlbauer, Ina Tegen
Institute for Meteorology, University of Leipzig, Germany, (dipu.sudhakar@uni-leipzig.de, johannes.quaas@uni-leipzig.de)

P21: EMS2015-451
Characterization of low-scale oscillations of wind velocities and temperature during low-wind conditions
Luca Mortarini, Silvia Trini Castelli, Domenico Anfossi, Gervasio Degrazia
ISAC - CNR, Torino, Italy (l.mortarini@isac.cnr.it)

P22: EMS2015-493
Optimization of PBL schemes in the meso-scale model WRF for offshore wind conditions based on comparisons to measurements and LES simulations
Hauke Wurps, Gerald Steinfeld, Jens Tambke, Martin Dörenkämper
ForWind - Center for Wind Energy Research, Carl von Ossietzky Universität Oldenburg, Germany (hauke.wurps@forwind.de)

P23: EMS2015-197
Relating MSG rain over the tropical atlantic with ASCAT derived surface divergence and vorticity
Gregory King, Wenming Lin, Marcos Portabella, Ad Stoffelen, Anton Verhoef
Institut de Ciències del Mar (ICM-CSIC), ICM-CSIC CIF: Q2818002D, Barcelona, Spain (gking@icm.csic.es)

P24: EMS2015-475
Modifying and evaluating the land surface parameterization of the mesoscale model METRAS for long-term simulations
Christopher Purr, Felix Ament, Heinke Schlünen, Marita Boettcher
Meteorological Institute, University of Hamburg, Germany

END OF POSTER PROGRAMME ASI4
AS16 Energy Meteorology

Convener: Sven-Erik Gryning
Co-Conveners: Ekaterina Batchvarova, Lucien Wald, Marion Schroedter-Homscheidt
Poster Area: Sofia I
Chairperson(s): Marion Schroedter-Homscheidt
Introduction Part II: 10:30, Sofia III
Attendance Time: Friday, 10:45–11:30

P37: EMS2015-143
The present state and long term variations of the Black Sea wave power
Vasko Galabov
National Institute of Meteorology and Hydrology (NIMH-BAS), Bulgaria (vasko.galabov@meteo.bg)

P38: EMS2015-25
The SOLEA Project: nowcasting solar energy spectra and UV products
Panagiotis Kosmopoulos, Michael Taylor, Stelios Kazadzis
Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece, Faculty of Applied and Environmental Physics, Aristotle University of Thessaloniki, Greece

P39: EMS2015-69
Energy meteorology studies investigating the impact of clouds on solar energy production - Coupling a spectrally resolved radiation model and a two-diode model for solar cells to simulate PV power yields
Ina Neher, Evandro Dresch, Khurshid Hasan, Bernd Evers-Dietze, Dieter Franke, Stefanie K. Meilinger
International Center for Sustainable Development, University of Applied Sciences Bonn-Rhein-Sieg, Sankt Augustin, Germany (Ina.Neher@h-brs.de)

P40: EMS2015-26
A machine learning approach to derive surface solar irradiance spectra directly from satellite
Michael Taylor, Panagiotis Kosmopoulos, Stelios Kazadzis, Iphigenia Keramitsoglou, Chris Kiranoudis
Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece

P41: EMS2015-181
Solar energy availability for Slovenia - spatial and temporal variability
Boštjan Grasic, Primoz Mlakar, Marija Zlata Boznar, Dragana Kokal
MEIS d.o.o., Smarje - Sap, Slovenia (info@meis.si)

P42: EMS2015-235
Assessing the surface solar irradiance under cloud-free skies in Israel with the McClear model
Mireille Lefevre, Lucien Wald
MINES ParisTech - PSL Research University - Center for Observation, Impacts, Energy, Sophia Antipolis Cedex, France (lucien.wald@mines-paristech.fr)

P43: EMS2015-276
Comparison of HelioClim-3v5 satellite irradiation data with in situ measurements for five states in Brazil
Etienne Wey, Claire Thomas, Philippe Blanc, Lucien Wald
Transvalor, Mougins, France (claire.thomas@transvalor.com)

P44: EMS2015-330
Satellite-Based Surface Solar Irradiance Nowcast in Alpine Areas
Tobias Götsc, Jochen Wagner, Reto Stöckli, Marc Olefs, Helmut Rott
Institute of Meteorology and Geophysics, University of Innsbruck, Austria

P45: EMS2015-407
Validation of satellite-based surface solar irradiance calculations in Alpine areas
Andreas Luther, Friedrich Obleitner, Marc Olefs, Reto Stöckli
Institute of Meteorology and Geophysics, University of Innsbruck, Austria, Institute for applied remote sensing, EURAC, Bozen, Italy

P46: EMS2015-450
Comparison of the solar power production from different methodologies at a coastal Mediterranean site
Teresa Lo Feudo, Elenio Avolio, Stefano Federico, Claudia Roberta Calidonna, Anna Maria Sempreviva
ISAC-CNR, UOS of Lamezia Terme, Italy (t.lofeudo@gmail.com)

P47: EMS2015-514
Day-ahead solar radiation forecasting using GFS and artificial neural networks
Nicolas Sébastien, Pierre Zanchetta, Laurent Huet, Nicolas Nitche, Sylvain Cros, Nicolas Schmutz
Reuniwatt SAS, R&D, Sainte-Clotilde, Reunion Island, France (sylvain.cros@reuniwatt.com)

END OF POSTER PROGRAMME ASI16
Climate

Research and services for socio-economic sectors

CL9/CE7 Creating national and regional climate services in Europe through partnerships (co-organized)

Conveners: Clare Goodess, Carlo Buontempo
Co-Conveners: Tanja Cegnar, Chris Hewitt, Filipe Lúcio, Tomas Halenka, Francisco J. Doblas-Reyes
Poster Area: Sofia I
Chairperson(s): Carlo Buontempo
Introduction: 10:30, Sofia II
Attendance Time: 10:45–11:30

P56: EMS2015-42
El Niño forecast information to support public health decision making
Desislava Petrova, Rachel Lowe, Anna Stewart-Ibarra, Xavier Rodo
Catalan Institute of Climate Science, Barcelona, Spain (desislava.petrova@ic3.cat)

P57: EMS2015-381
INTERKLM - climate cooperation across the Czech-Saxon border
Petr Skalak, Lenka Hájková, Nils Feske, Anke Hahn, Petr Stepánek, Siv-Ann Lippert, Lars Schöder, Pavel Zahradnicek, Andreas Hoy, Ales Farda
Czech Hydrometeorological Institute, Department of Climatology, Praha, Czech Republic (skalak@chmi.cz), Global Change Research Centre AS CR, Brno, Czech Republic

END OF POSTER PROGRAMME CL9/CE7
Numerical Weather Prediction

NWP6 Mesoscale Verification Inter-Comparison over Complex Terrain (MesoVICT)

Conveners: Marion Mittermaier  
Co-Conveners: Manfred Dorninger, Eric Gilleland  
Poster Area: Sofia I  
Chairperson(s): Manfred Dorninger  
Introduction: 10:30, Kyoto  
Attendance Time: 10:45–11:30

P89: EMS2015-250  
An intensity-scale skill score to assess the added value of enhanced resolution  
Barbara Casati, Anna Glazer, Jason Milbrandt, Vincent Fortin  
Meteorological Research Division, Environment Canada

P90: EMS2015-300  
Analysis of Fraction Skill Score properties in idealized cases  
Gregor Skok  
University of Ljubljana, Faculty of Mathematics and Physics, Ljubljana, Slovenia (gregor.skok@fmf.uni-lj.si)

P91: EMS2015-437  
Using regional reanalyses for the spatial verification of high-resolution model output  
Sabrina Wahl, Christian Ohlwein, Jan Keller, Petra Friederichs, Andreas Hense  
University of Bonn, Meteorological Institute, Bonn, Germany (wahl@uni-bonn.de), Hans-Ertel Centre for Weather Research - Climate Monitoring Branch

P92: EMS2015-477  
A Wavelet Approach to the Verification of Probabilistic Spatial Fields  
Michael Weniger, Petra Friederichs  
Meteorological Institute, University Bonn, Germany (mweniger@uni-bonn.de)

P93: EMS2015-573  
When can we classify a model as good or bad? - Quality assurance of mesoscale predictions in high complex terrain  
Ronny Petrik, K. Heinke Schlünzen, Dietmar Öttl  
University of Hamburg, Meteorological Institute, Germany (ronny.petrik@zraw.de)

P94: EMS2015-140  
Intercomparison of Spatial Verification Methods for COSMO Terrain (INSPECT): Preliminary Results  
Dmitry Alferov, Elena Astakhova, Dimitra Boukouvala, Anastasia Bundel, Ulrich Damrath, Pierre Eckert, Flora Gofa, Alexander Kirsanov, Xavier Lapillonne, Joanna Linkowska, Chiara Marsigili, Andrea Montani, Anatoly Muraviev, Elena Oberto, Maria Stefania Tesini, Naima Vela, Andrzej Wyszogrodzki, Mikhail Zaichenko  
RHM (a.bundel@gmail.com)

END OF POSTER PROGRAMME NWP6

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