EMS Annual Meeting/ECAC 2010

10th EMS Annual Meeting
8th European Conference on Applied Climatology

High resolution climatology
- towards climate change services

Programme

Zürich, Switzerland
13 – 17 September 2010

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Home Affairs FDHA
Federal Office of Meteorology and Climatology
MeteoSwiss

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

IAC**ETH**

EUMETNET
ECSN
European Climate Support Network

SCCM

EMS

Monday	Audimax – F30	E3	E1.1	E1.2
09:00–13:00	Opening Session			
14:00–16:00	UC1: Climate change assessments	UC3: Synoptic climatology	AW10: Air-sea interactions and coastal meteorology	AW12: Phenology & Agrometeorology
16:30–18:30	UC2: Climate modelling, prediction, scenarios	MC3/AW13: Data mapping, spatial interpolation, GIS	AW4: Large-scale air-sea interactions	AW12
19:00–20:30	ICE BREAKER: Exhibition Area			
Tuesday	**Audimax – F30**	**E3**	**E1.1**	**E1.2**
08:30–10:30	Climate Services: Opening plenary 10:00 SE1: Ready to use applications	AW11: Environmental meteorology	AW9: Hydrometeorology	AW1: Dynamical meteorology
11:00–13:00	SE1 11:45 SE2/CE3: user tailored applications	AW11	AW14: Energy meteorology	AW1 12:15 AW2:Operational Oceanography
14:00–16:00	SE2/CE3	AW5: Space forcing of the Earth's and planets' climate	AW14	AW7: Nikolai Dotzek Memorial – Atmospheric hazards
16:30–18:30	SE2/CE3 17:00–19:00: Panel discussion	AW5	AW14	AW7
18:30–19:30	Poster Session			
Wednesday	**Audimax – F30**	**E3**	**E1.1**	**E1.2**
08:30–10:30	UC2	MC3/AW13	CE4: Education	NWP1: Dynamics and predictability of high impact weather
11:00–13:00	UC2	UC3	CE1: Adaptation Strategies – until 13:15	AW8: Boundary layer physics and parameterization
14:00–18:00	14:00–14:45: Silver Medal Lecture			
	14:45: Plenary Communication on climate change			15:00–16:00: AW8
19:00	CONFERENCE DINNER: Giesserei – Zürich Oerlikon			

Thursday	Audimax – F30	E3	E1.1	E1.2	D1.1
08:30–10:30	CE2: Media and Communication	UC1	MC1: Monitoring of the climate system	NWP4/AW15 Mountain meteorology	UC4: Climatic reconstructions
11:00–13:00	CE2 & Media Awards	MC3/AW13	AW6: Atmospheric measurements	NWP4/AW15	UC4
14:00–16:00	UC2	MC2: Data rescue and management	AW6	NWP4/AW15	
16:00–17:00	Poster Session & Outstanding Poster Award				
17:00–19:00	UC2	MC2	AW6	NWP4/AW15 18:00 NWP3: Observation targeting & impact	

Friday	Audimax – F30	E3	E1.1	E1.2
08:30–10:30	UC1	MC2	AW3: Parameterization small-scale processes	NWP2: Ensemble forecasting
11:00–13:00	UC1	UC3	AW3	NWP2

ECAC sessions	CE sessions	NWP sessions	AW sessions

Dear participants,

welcome to the Tenth EMS Annual Meeting and the Eighth European Conference on Applied Climatology (ECAC) in Zürich.
... welcome to a conference that will provide state of the art information on developments in research and applications on climatology and meteorology in Europe through presentations, discussions and an attractive exhibition, and foster networking.
… welcome to the charming city of Zürich, with its cultural attractions and beautiful and inspiring environment.
… and last but not least, welcome to the premises of the ETH, together with MeteoSwiss local host of this conference.

Conference theme

The theme of these meetings is "*High resolution climatology – towards climate change services*", highlighting the growing need for improved services that go beyond the traditional services of forecasting and warning systems. Socio-economic sectors such as agriculture, energy, water management, transport, insurance and tourism are highly sensitive to weather and climate extremes and the expected changes. Only stronger collaboration between developers, providers and users will ensure that climate (change) information is integrated into planning, policy and practice at all levels and scales.

Confronting these challenges, the ECAC conference in particular will serve as a platform for policy makers, practitioners and researchers to interact and to discuss ways for strengthening the production, availability, delivery and application of science-based climate services, supporting the user to adapt to today's and future climates. The core issues to be addressed are:

- Generation and dissemination of relevant data
- Advancing climate science
- Developing climate change services
- Dialogue between providers and users
- Outreach

Conference programme

The ECAC programme thus has been structured into three programme groups:

- Monitoring for a reference climate and monitoring change
- Understanding processes and climate change
- Climate (Change) Services :translating science to users

The programme of the EMS Annual Meeting is structured along the following themes:

- Communication and Education
- Numerical Weather Prediction
- The Atmosphere and the Water Cycle

Many of the sessions in the latter programme groups will also consider aspects related to climate observation, understanding and services. The breadth of the conference programme reflects the challenges and tasks ahead.

Theme day on Climate Change Services

The theme day on Climate change services on Tuesday will start off with key note presentations highlighting what has been achieved to date, then give the floor to many contributions on projects and initiatives from across Europe, and close off with a plenary discussion on the challenges ahead.

Communication – integral part of services

A panel discussion devoted to Communication and Adaptation Strategies will focus on the different perspectives of scientists, journalists, stakeholders, policy makers and the general public.

The exhibition – use the opportunity

The conference will also feature an exhibition of commercial companies and other agencies involving manufacturers, service providers, publishing houses and European organisations. Participants are encouraged to use the opportunity for exchange, network building, mutual inspiration – this is the underlying motivation for our meetings.

Networking

During the conference week various organisations will hold workshops, annual meetings or offer networking meetings, and we notice with pleasure that these synergies are continuing to develop year on year.

The convenors – a big thank you to all!

The EMS and ECAC conferences would not have been possible without the work of the convenors that developed and promoted the sessions. Sincere thanks for their commitment and hard work! We are also grateful to all who have contributed to make this meeting in Zürich a reality – the Local Organising Committee, the EMS Member Societies and Associates, the Programme and Science Committee, the Copernicus organization, the Exhibitors.

Outstanding Poster Award

It is expected that the conference will be attended by more than 500 participants. 400 oral presentations and as many poster presentations will be given during the entire week. An outstanding poster award will be presented; the winner will be announced during the poster sessions on Thursday.

We are looking forward to and welcome you to a very interesting and enjoyable week.

Fritz Neuwirth	***Aryan van Engelen***	***Markus Furger***	***Gerhard Müller***	***Ulrike Lohmann***
President EMS	Manager European Climate Support Network	President Schweizerische Gesellschaft für Meteorologie	Director MeteoSwiss	Head Institute for Atmospheric and Climate Science ETH

Location and Conference Address

The 10th Annual Meeting of the European Meteorological Society (EMS) and the 8th European Conference on Applied Climatology (ECAC) are held jointly at the ETH Zürich in Switzerland, from 13 – 17 September 2010. The congress is open to all interested in its themes and topics.

The conference takes place on the premises of the Eidgenössische Technische Hochschule (ETH) Zürich. It is organized jointly by the ETH, the IACETH, the Schweizerische Gesellschaft für Meteologie (SGM), the Schweizerische Eidgenossenschaft, the European Climate Support Network (ECSN) and the European Meteorological Society (EMS).

Conference Centre

ETH
Rämistr. 101
8092 Zürich
Switzerland
Phone: +41-(0)44-633-2759
ems2010@copernicus.org

Rules of Conduct

- Smoking is prohibited in the ETH buildings.
- It is prohibited to copy any presentation from the desktops in the lecture rooms.
- Please switch off any mobile phones during the sessions.
- Please note that video-graphic recordings are not allowed.

Official Language

The official language of the 10th EMS / 8th ECAC 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 organizers cannot accept liability for personal accident, loss or damage to private property, which may be incurred as a result of the participation in the 10th EMS / 8th ECAC. Participants are, therefore, advised to arrange appropriate insurance cover. This should extend not only to travel but also to cancellation costs.

Local Transportation Information

Zürich offers a very dense public transportation system. With your registration material you have received a map with tram and bus lines.

It is easy for you to get a ticket: Go to one of the blue ticket machines. As long as you do not want to go outside the city limits, don't bother about the name of the stop or the name of the street, just push the blue button to get a ticket which is valid for one hour (CHF 4.00) or the green button to get a ticket which is valid for 24 hours (CHF 8.00).

You do not need to validate the ticket, it is valid for any direction on any means of transport within the city limits, i.e., tram, bus, boat, train, and cable car. There are also newer ticket machines with touch screens; they guide you to your ticket step-by-step. Ticket shops located in train stations and squares and all kiosks with the "VBZ" sign also sell day passes and multiple-journey tickets with a discount.

The airport is located outside the city limits, hence, when going there, you need to get a ticket to "Airport Zürich" or "Flughafen Zürich".

Be sure to have a correct ticket when boarding any means of transportation. There are frequent checks, and Zürich is famous for its costly zero-tolerance with people not having a valid ticket!

WLAN

WLAN is available free of charge in the entire building. Via the WLAN you can connect to the global eduroam network, consequently, if you are from any university or other educational institution, you can log-on with your own username (e-mail format!, i.e. "user@server") and password. Participants without eduroam access can get a personal password at the Registration & Information Desk near the main entrance.

Computer Rooms

Computers with internet access are located on level E in rooms E26.1 and E26.2 (see floor plan, page11).

Registration & Information Desk

The registration & information desk is located near the main entrance.

Opening Hours

Monday – Thursday, 13 – 16 September 2010
08:00–18:00

Friday, 17 September 2010
08:00–10:00

Registration & Abstract Management

Copernicus Meetings
Bahnhofsallee 1e
37081 Göttingen
Germany
Phone: +49-551-900339-20
Fax: +49-551-900339-70
meetings@copernicus.org
www.copernicus.org

Conference Hours

Oral Sessions

Monday, 13 September 2010

Opening:	09:00–13:00
Lunch break:	13:00–14:00
Block 3:	14:00–16:00
Coffee break:	16:00–16:30
Block 4:	16:30–18:30

Important: Monday is a holiday in Zürich. As consequence, the ETH will officially be closed on Monday afternoon, and only the main entrance of the ETH (on the east side) will remain open for the conference!

Tuesday, 14 September 2010

Block 1:	08:30–10:30
Coffee break:	10:30–11:00
Block 2:	11:00–13:00
Lunch break:	13:00–14:00
Block 3:	14:00–16:00
Coffee break:	16:00–16:30
Block 4:	16:30–18:30
Poster Sessions:	18:30–19:30
Poster Sessions for sessions SE1 and SE2/CE3	19:00–20:00

Wednesday, 15 September 2010

Block 1:	08:30–10:30
Coffee break:	10:30–11:00
Block 2:	11:00–13:00
Lunch break:	13:00–14:00
Block 3:	14:00–18:00

Thursday, 16 September 2010

Block 1:	08:30–10:30
Coffee break:	10:30–11:00
Block 2:	11:00–13:00
Lunch break:	13:00–14:00
Block 3:	14:00–16:00
Poster Sessions:	16:00–17:00
Block 4:	17:00–19:00

Friday, 17 September 2010

Block 1:	08:30–10:30
Coffee break:	10:30–11:00
Block 2:	11:00–13:00

Poster Sessions

The poster areas are located on the floors & foyers (see maps on page 10 and following). Fixing material is available directly in the poster areas.

Outstanding Poster Award

The selected poster and the award winner will be announced at the beginning of the poster session on Thursday afternoon in the coffee area.

Display Time

Monday, 13 September 2010, 10:00 –
Friday, 17 September 2010, 13:00

Author in Attendance (by sessions)

Tuesday, 14 September 2010, 18:30–19:30:

UC2, AW1, AW2, AW4, AW5, AW7, AW9, AW10, AW11, AW12, AW14, CE1; posters of SE1, SE2/CE3 start at 19:00

Thursday, 16 September 2010, 16:00–17:00:

MC1, MC2, MC3/AW13, UC1, UC3, UC4, NWP1, NWP2, NWP3, NWP4/AW15, AW3, AW6, AW8, CE2, CE4

Coffee Breaks & Lunch

Coffee Breaks

Free coffee/tea will be served during the Coffee Breaks. The coffee station is located in Exhibition Area.

Monday, 13 September 2010
10:00–10:30 and 16:00–16:30

Tuesday, 14 September 2010
10:30–11:00 and 16:00–16:30

Wednesday, 15 September 2010
10:30–11:00 and 16:00–16:30

Thursday, 16 September 2010
10:30–11:00 and 16:00–17:00

Friday, 17 September 2010
10:30–11:00

Lunch

Lunch is available in the Mensa.
Monday – Friday, 13:00–14:00

More catering possibilites can be found on http://www.ems2010.ch

Icebreaker Reception

Location: Exhibition Area
Date: Monday, 13 September 2010, 19:00–20:30

Conference Committees

Programme and Science Committee (PSC)

Chair: H. Böttger (EMS)

Erik Andersson (ECMWF)
Christof Appenzeller (ECSN, MeteoSwiss)
Pierre Baüer (SMF, France)
Horst Böttger (EMS)
Tanja Cegnar (EARS, Slovenia)
Ben Dieterink (HMEI)
Zoltan Dunkel (MMT, Hungary)
Jochen Grandell (EUMETSAT)
Markus Furger (SGM, Switzerland)
Sylvain Joffre (FMI, Finland)
Martina Junge (EMS)
Haleh Kootval (WMO)
Evangelina Oriol-Pibernat (ESA)
Jean Pailleux (France)
Heleen ter Pelkwijk (NVBM, The Netherlands)
Hans Richner (SGM, IACETH, Switzerland)
Aryan van Engelen (ECSN, KNMI)

Programme Group Chairs

Monitoring for a reference climate and monitoring change: A. v. Engelen, C. Appenzeller
Understanding processes and climate change: A. v. Engelen, C. Appenzeller
Services translating science to users: A. v. Engelen, C. Appenzeller
Atmosphere and the Water Cycle: S. Joffre
Communication and Education: T. Cegnar
Numerical Weather Prediction: J. Pailleux

Local Organising Committee (LOC)

Gabrielle Attinger – PR
Eva Choffat – Secretarial Support
Petra Fourney – Secretarial Support
Markus Furger – SGM
Hans Hirter – IT and Webmaster
Hans Richner – Chair
Albert Waldvogel – Sponsoring
Saskia Willemse – MeteoSwiss

EMS10 & ECAC8 Paper Publication in *Advances in Science and Research*

Deadline for submissions: 31 December 2010

Authors of EMS & ECAC 2010 contributions that have been submitted/accepted to one of the listed session topics are invited to submit short conference papers (approximately four journal pages) to the Open Access Journal *Advances in Science and Research*.

- AW4: Large scale air-sea and land-atmosphere interaction processes
- AW6: Atmospheric measurements from local to regional scale: A data source for climate studies and model validation
- AW7: Nikolai Dotzek Memorial - Atmospheric hazards
- AW10: Air-sea interactions and coastal meteorology
- AW11: Environmental Meteorology
- AW12: Phenology and Agrometeorology
- AW14: Spatial Energy meteorology

- MC2: Data Data rescue, management, quality and homogenization
- MC3/AW13: Data mapping, spatial interpolation and GIS modelling, Reference climatologies

- SE1: Climate Services: standardized - ready to use – applications

- NWP1: Dynamics and predictability of high impact weather
- NWP4/AW15: Host country topical sessions: Mountain Meteorology

- CE1: Adaptation strategies
- CE2: Media and Communication

The respective session convenors have kindly agreed to act as guest editors.

The manuscript submission will start shortly after the conference. A direct link will be provided on

http://meetings.copernicus.org/ems2010/publication_of_conference_papers.html

Papers will be published online after acceptance by the editor.

sc | nat

Swiss Academy of Sciences
Akademie der Naturwissenschaften
Accademia di scienze naturali
Académie des sciences naturelles

The publication of 10th EMS Annual Meeting / 8th ECAC papers is sponsored by the Swiss Academy of Sciences; service charges for the first 80 papers (submission date) are covered (4 pages; each first authors can only be supported once).

Social Events

Monday, 13 September 2010
Icebreaker Reception
19:00 Exhibition Area

Excursions

Detailed information on all excursion at: http://www.ems2010.ch/index_files/Page836.html
Registration is obligatory for all of them, via the website or at the registration desk. Check availability and deadlines on the website.

Visit to MeteoSwiss, Zürich

Tuesday, 14 September 2010, 17:15
Thursday, 16 September 2010, 17:15
Meeting point: Main entrance of MeteoSwiss building, Krähbühlstrasse 58, 8044 Zürich
Price: The visit is free of charge.

MeteoSwiss or - as it is officially called - the Swiss Federal Office of Meteorology and Climatology is by Federal mandate the national provider for weather and climate services in Switzerland. In this role, it serves the community and industry, monitoring the entire atmosphere over Switzerland, issuing weather forecasts, warning the authorities and the general public of dangerous weather conditions and analysing climate data.

First, you will be shown a short video on these activities, after that you will visit the forecasting room and the local measuring site.

Lab tour at the Institute for Atmospheric and Climate Science, Zürich

Tuesday, 14 September 2010, 12:15
Thursday, 16 September 2010, 12:15
Meeting point: Entrance to the building CHN, Universitätsstrasse 16
Price: The visit is free of charge.

The Institute for Atmospheric and Climate Science (IACETH) is part of the Department of Environmental Sciences (D-UWIS) of the Swiss Federal Institute of Technology Zürich (ETH Zürich).
The IACETH is active both in research and education.
During the lab tour in the institute, two major experimental sites will be visited:
a) The Zürich Ice Nucleation Chamber ZINC and
b) The spectroscope for single, levitated aerosol particles.

The two laboratories will be visited in small groups (maximum 10 persons, duration 20 to 30 minutes per lab). Depending on the total number of persons interested, the lab tours can be repeated as needed.

Afternoon excursion to the Paul Scherrer Institute in Villigen

Thursday, 16 September 2010, 14:00 (to approx. 18:30)
Price: EUR 22 (for bus ride).

The Paul Scherrer Institute (PSI) is the largest Swiss government lab and belongs to the ETH Domain. It has been transformed from a nuclear and reactor research institute in the 1980s into a center with large facilities that can be applied to a broad variety of disciplines, e.g. materials sciences, biological and biochemical sciences, energy research, particle physics etc.

The excursion will provide insight into the research at the Laboratory of Atmospheric Chemistry and the Laboratory of Radio Chemistry and Environmental Chemistry, both related to atmospheric sciences. Facilities visited will be the smog chamber and the Swiss Light Source (SLS), the synchrotron light facility.

Exhibition Time

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

Please use the opportunity to visit the exhibition in the Haupthalle. You will find the exhibits of the following companies, institutions and societies (in alphabetical order):

Association of Hydro-Meteorological Equipment Industry Booth #15
7 bis, Avenue de la Paix
1211 Geneve 2
Switzerland
Phone: +41-22-730-8334
Fax: +41-22-730-8340
http://www.hydrometeoindustry.org

COST Booth #3
Avenue Louise 149
1050 Brussels
Belgium
Phone +32-2-5333803
Fax +32-2-5333890
http://www.cost.eu

EMS Member Societies Booth #4
Institut für Meteorologie, FU Berlin
C.-H.-Becker-Weg 6-10
12165 Berlin
Germany
Phone +49-30-79708328
Fax +49-30-7919002
http://www.emetsoc.org

Kipp & Zonen Booth #11
P.O. Box 507
2600 AM Delft
Netherlands
Phone: +31-15-2755210
Fax: +31-15-2620351
http://www.kippzonen.com

METEK GmbH Booth #12
Fritz-Strassmann-Strasse 4
25337 Elmshorn
Germany
Phone: +49-4121-43590
Fax: +49-4121-435920
http://www.metek.de

Meteolabor AG Booth #7
Hofstr. 92
8620 Wetzikon
Switzerland
Phone +41-44-9344040
Fax +41-44-9344099
http://www.meteolabor.ch

METEOMODEM Booth #14
Rue de Bessonville
77760 Ury
France
Phone: +33-160-747460
Fax: +33-160-747419
http://www.meteomodem.com

REMTECH SA Booth #9
2 et 4 Avenue de l'Europe
78140 Velizy Villacoublay
France
Phone: +33-1-3946595
Fax: +33-1-39466310
http://www.remtechinc.com

Rotronic AG Booth #8
Grindelstr. 6
8303 Bassersdorf
Switzerland
Phone +41-44-8381144
Fax +41-44-8381307
http://www.rotronic-humidity.com

Scintec AG Booth #6
Wilhelm-Maybach-Strasse 14
72108 Rottenburg
Germany
Phone: +49-7472-986430
Fax: +49-7472-9808714
http://www.scintec.com

SELEX-Gematronik Booth #10
Raiffeisenstrasse 10
41470 Neuss-Rosellen
Germany
Phone: +49-2137-782294
Fax: +49-2137-78211
http://www.gematronik.com

Vaisala Booth #13
P.O. Box 26
00421 Helsinki
Finland
Phone: +358-9-89491
Fax: +358-9-89492227
http://www.vaisala.com

WeatherBug Professional Booth #5
12410 Milestone Center Drive
Germantown, MD 20876
United States
Phone +1-301-2504053
Fax +1-301-258210
http://www.weatherbugprofessional.com

KIPP & ZONEN
SINCE 1830

Passion for Precision

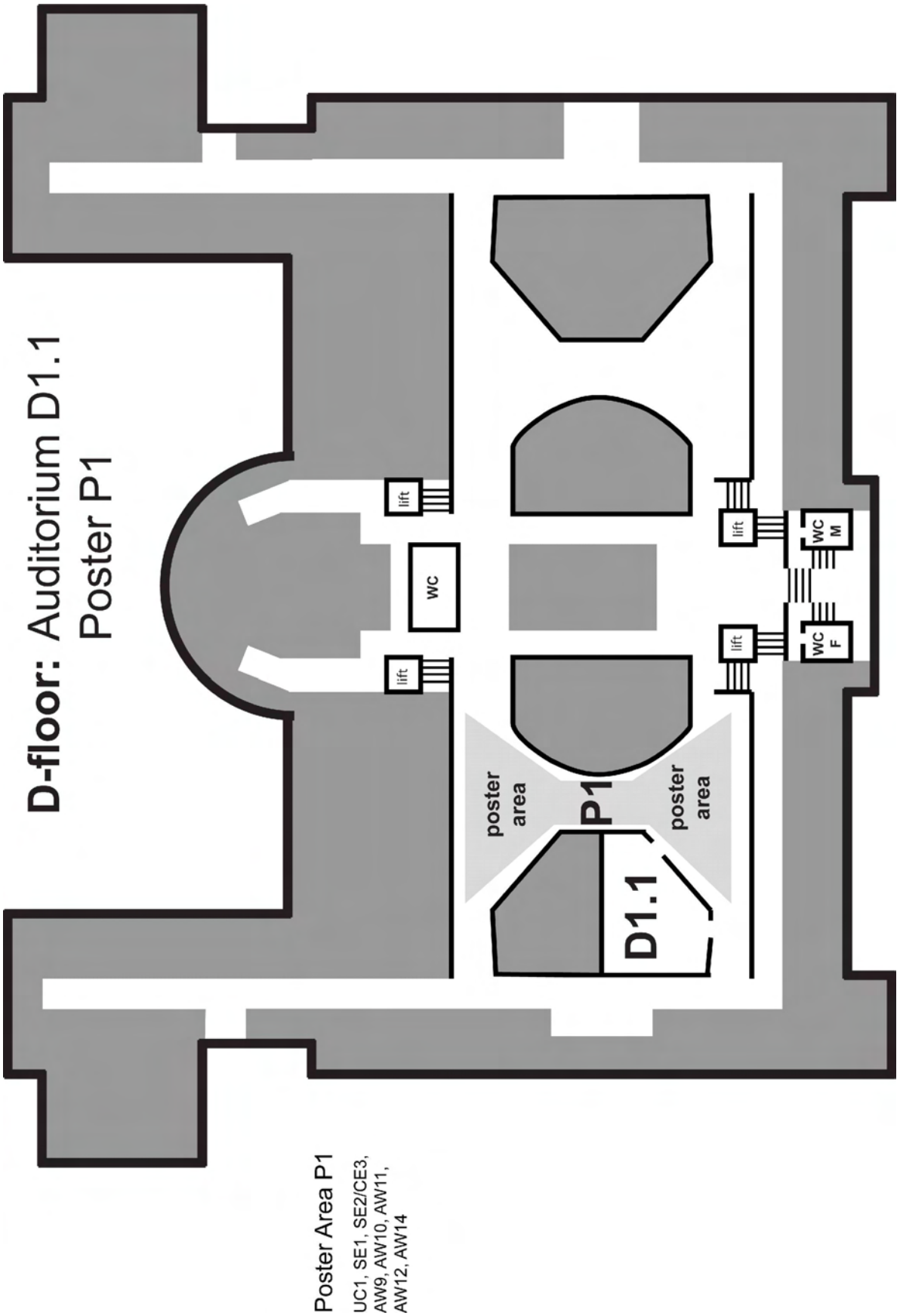
in the measurement of Solar Radiationand Atmospheric Properties

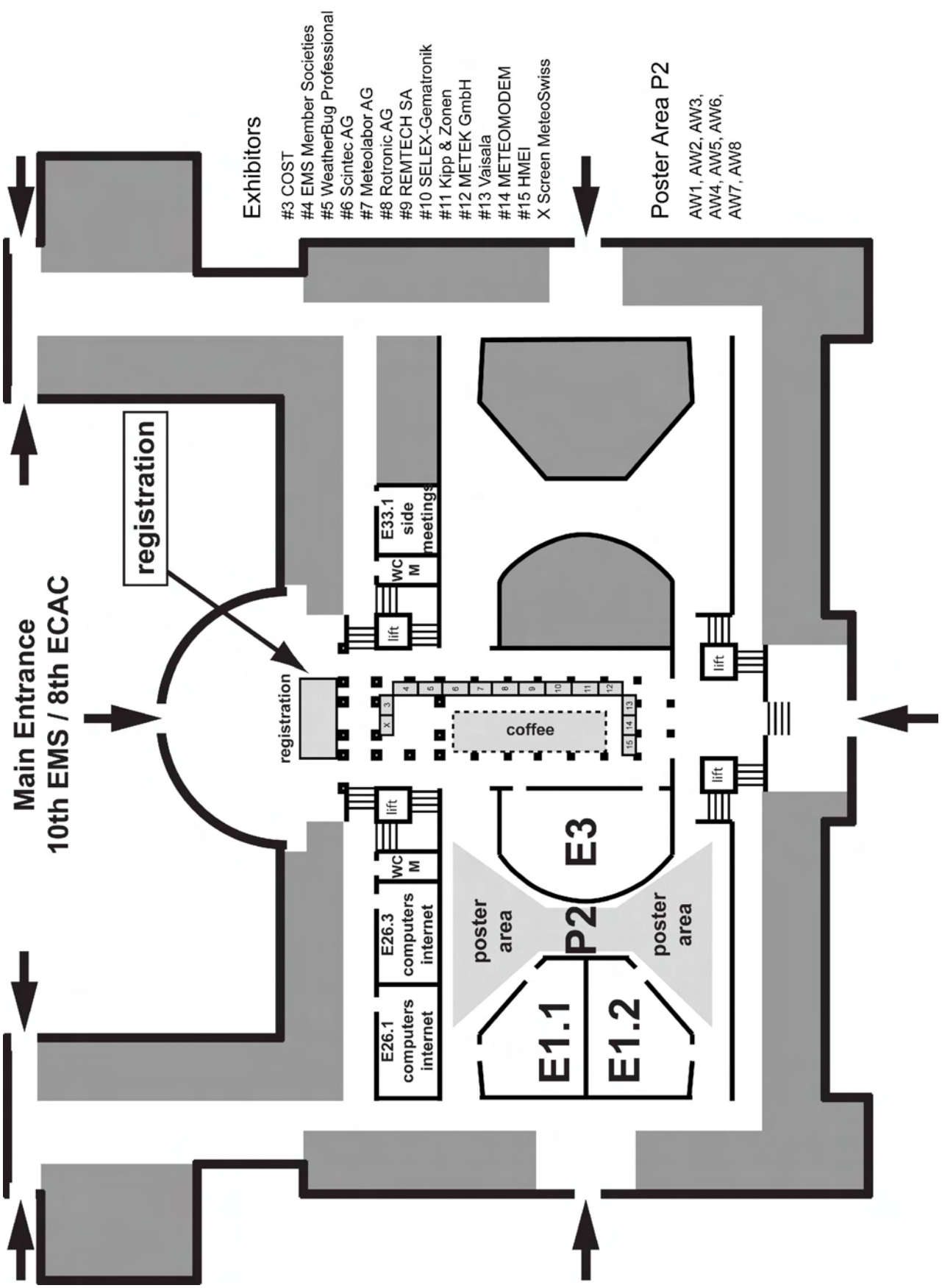
Kipp & Zonen is the leading specialist in instrumentation for the measurement of solar and atmospheric radiation, from the ultraviolet to the far infrared. Through our knowledge and experience we are able to provide complete solutions, from portable instruments with hand-held displays to advanced Baseline Surface Radiation Network (BSRN) monitoring stations, including data acquisition and remote communication. Our range of net radiometers is headed by the CNR 4, a unique instrument for measuring the energy balance in field applications.

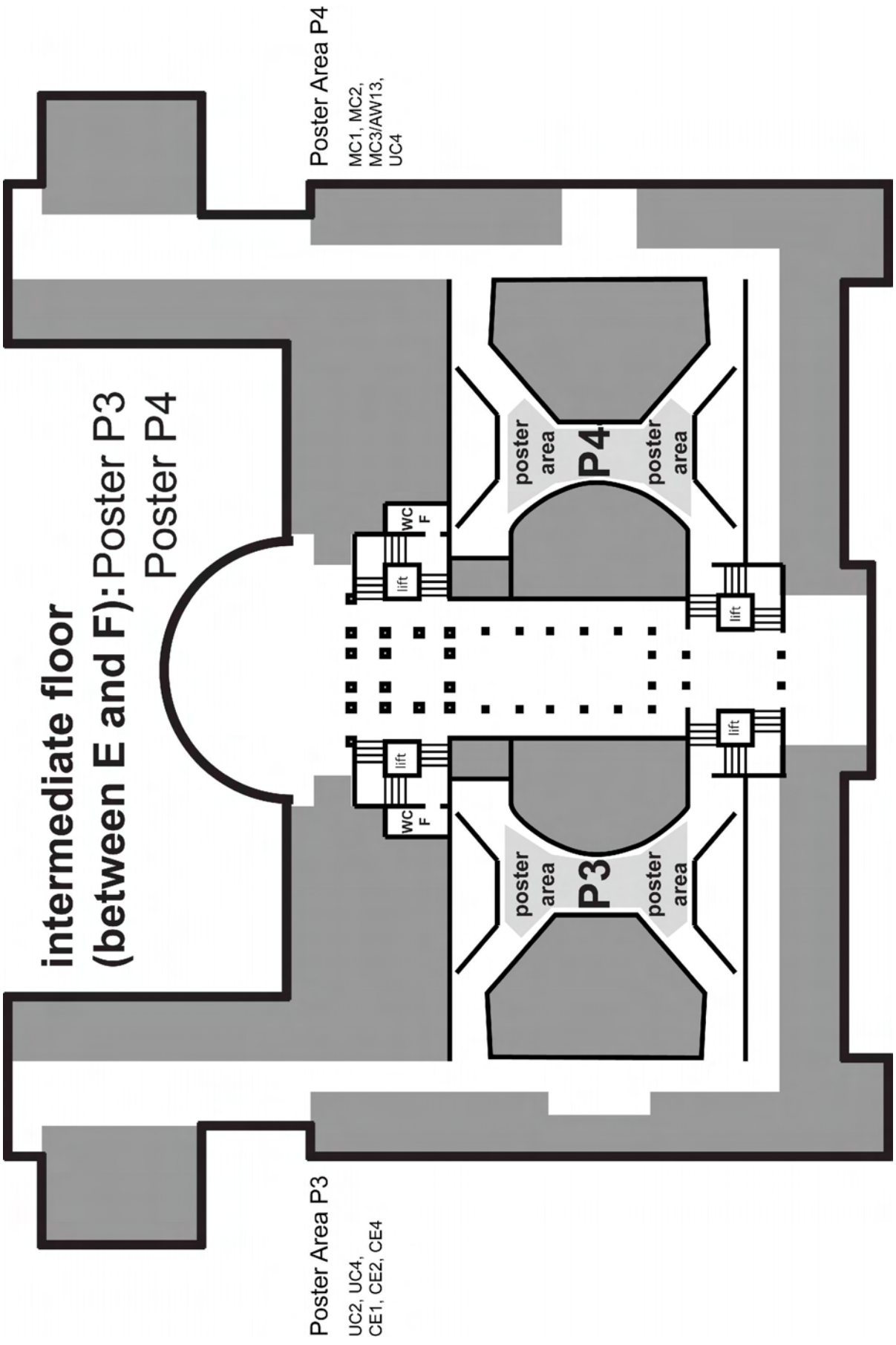
Visit our booth, number 11 for more information.

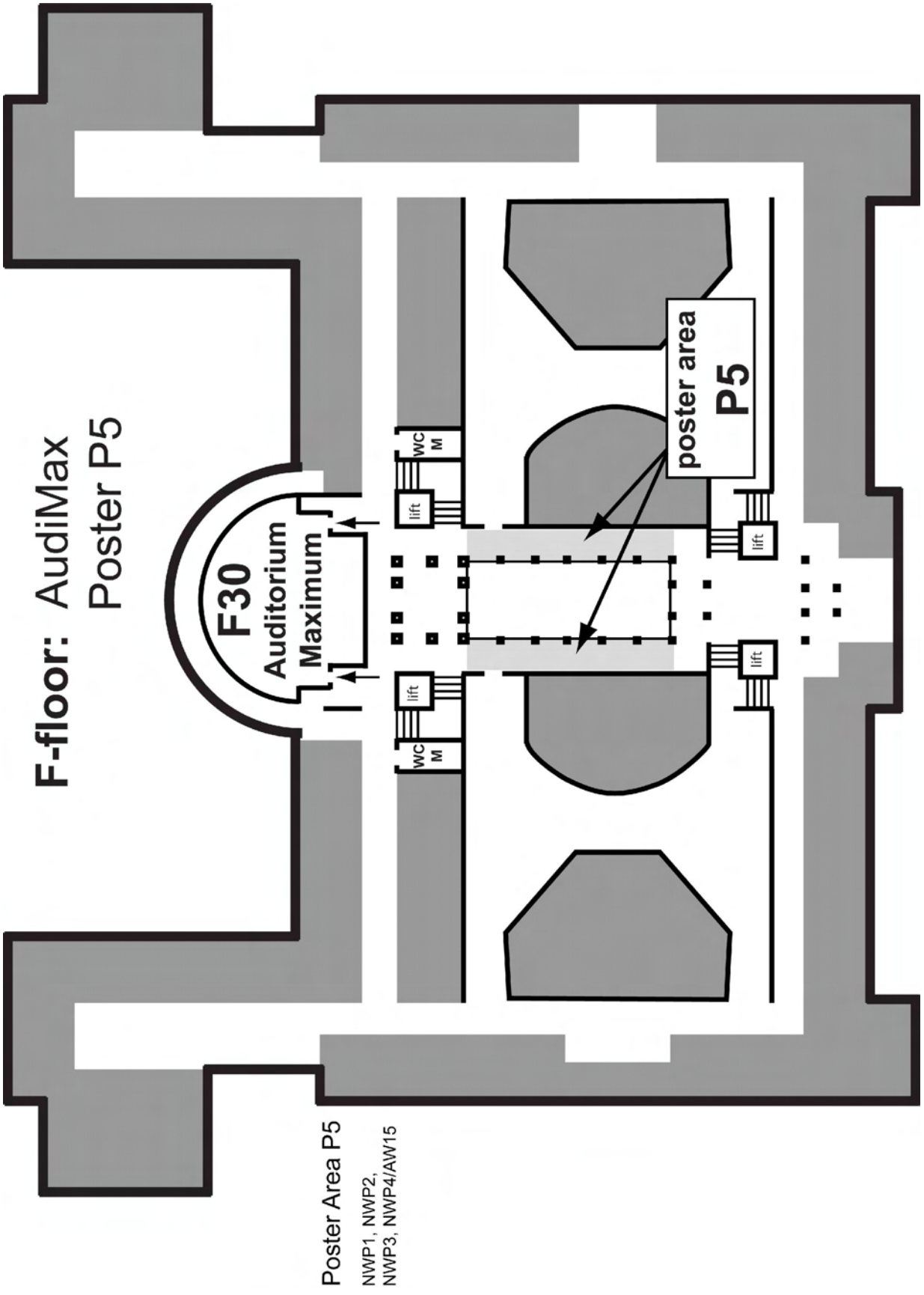
The Netherlands • France • United States of America • Singapore

Lecture rooms and poster areas are located on Level D (lowest level), Level E (main entrance, ground floor), intermediate Floor between Level E and F, Level F.




Exhibitors
#3 COST
#4 EMS Member Societies
#5 WeatherBug Professional
#6 Scintec AG
#7 Meteolabor AG
#8 Rotronic AG
#9 REMTECH SA
#10 SELEX-Gematronik
#11 Kipp & Zonen
#12 METEK GmbH
#13 Vaisala
#14 METEOMODEM
#15 HMEI
X Screen MeteoSwiss
Poster Area P2
AW1, AW2, AW3,
AW4, AW5, AW6,
AW7, AW8
registration
Main Entrance
10th EMS / 8th ECAC
registration
E33.1
side
meetings
WC
M
lift
coffee
E26.3
computers
internet
E26.1
computers
internet
poster
area
E3
P2
E1.1
E1.2
poster
area


Poster Area P4
MC1, MC2,
MC3/AW13,
UC4
intermediate floor
(between E and F): Poster P3
Poster P4
poster area
P4
poster area
poster area
P3
poster area
lift
lift
lift
lift
WC
F
WC
F
Poster Area P3
UC2, UC4,
CE1, CE2, CE4


F-floor: AudiMax
Poster P5
F30
Auditorium
Maximum
poster area
P5
lift
WC
M
Poster Area P5
NWP1, NWP2,
NWP3, NWP4/AW15

Opening Session: Monday, 13 September 2010, AudiMax (F30)

09:00 – 10:00 Welcome Addresses, Awards Ceremony

Fritz Neuwirth, EMS President
Corine Mauch, Mayor of Zürich
Gerhard Müller, Director MeteoSwiss
Aryan van Engelen, ECSN Manager
Christoph Schär, IACETH
Markus Furger, SGM President
Walter Dabberdt, AMS
Ben Dieterink, HMEI Council

Awards Ceremony

10:00 – 10:30 Coffee Break

10:30 – 13:00 Strategic Lectures: *Towards high resolution climate services*

Chair: Fritz Neuwirth

Michel Jarraud, Secretary-General WMO
The Global Framework on Climate Services

Johannes Schmetz, EUMETSAT
On the Role of Climate Observations from Space for Climate Services

Dick Dee, ECMWF
The role of atmospheric reanalysis in future climate services

Steve Noyes, EUMETNET
Moving towards high resolution climate services - some of the challenges and opportunities

Guy Brasseur & Irene Fischer-Bruns, Climate Service Center, Hamburg
From Global Change Science to Earth System Management

13:00 Closing

Theme Day on Climate Services: Tuesday, 14 September 2010, AudiMax (F30)

08:30 – 10:00 Opening Plenary Climate Services

A. Kattenberg/EUMETNET
Playing field for climate information in Europe

J. Burroughs, R. Baldwin, D. Herring, N. Lott, J. Boyd, S. Handel, F. Niepold, and E. Shea
The National Oceanic and Atmospheric Administration (NOAA) Climate Services Portal: A New Centralized Resource for Distributed Climate Information (solicited)

H. Huebener and C. Linke
The challenge of presenting climate change information to the public and to political stakeholders: coordinated efforts of German environmental agencies

C. Nilsson
Creating and maintaining dialogue on climate information - Reflections on the adaptation process in Sweden

10:00 – 10:30 Session SE1:
Climate Services: standardized - ready to use - applications – part I

10:30 – 11:00 Coffee Break

11:00 – 11:45 Session SE1:
Climate Services: Standardized - ready to use - applications – part II

11:45 –13:00 Session SE2/CE3:
Climate Services: User tailored - custom made applications – part I

13:00 – 14:00 Lunch Break

14:00 – 16:00 Session SE2/CE3:
Climate Services: User tailored - custom made applications – part II

16:00 – 16:30 Coffee Break

16:30 – 17:00 Session SE2/CE3:
Climate Services: User tailored - custom made applications – part III

17:00 – 19:00 Panel Discussion on Climate Services

17:00–17:25 Stéphane Isoard, EEA

17:25–17:50 Roger Street, UkCIP

17:50–18:15 Gilles Drogue, AMICE programme

18:15–19:00 Panel Discussion
Stéphane Isoard, Roger Street, Gilles Drogue, Frits Brouwer (EUMETNET)

19:00 – 20:00 Poster Session on Climate Services

Communication on Climate Change, 15 September 2010

Convenors: R. van Dorland (KNMI, The Netherlands), R. Benestad (met.no, Norway), T. Cegnar (EARS, Slovenia)

Location and time: Audimax (F30), 14:45

14:45 – 16:00 Presentations

14:45 – 14:55 Introduction by convenors

14:55 **Robert Dijkgraaf**, President, Royal Netherlands Academy of Arts and Sciences
- on the IPCC investigation

15:15 **N.N.**
- on Communication and Outreach

15:35 **Martin Visbeck**, Deputy Director, IFM-Geomar, Kiel, Germany
Chair Programme Committee World Climate Conference – 3
- on Climate Science & Global Climate services

16:00 – 16:30 Coffee Break

16:30 – 17:45 Panel Discussion

Moderator: Huw Davies, ETH, Switzerland

Robert Dijkgraaf – President, Royal Netherlands Academy of Arts and Sciences

Thomas Stocker – Co-Chair IPCC Fifth Assessment Report (AR5) - Working Group I

Martin Bäumle – Member of the Swiss National Parliament, Member of the Commission for the Environment and Energy, President of the Green-liberal Party

Fred Pierce – Science journalist, London, UK

David Bresch – Head of Sustainability & Emerging Risk Management, Swiss Re

EWSN – an international Network for Women in Earth Sciences

As the name implies, the Earth Science Women's Network (ESWN) is a peer- mentoring network of women in the Earth Sciences, most of whom are in the early stages of their careers. Its mission is to promote career development, build community, provide informal mentoring and support, and facilitate professional collaborations.

The network informally took shape in 2002, at a meeting of the American Geophysical Union (AGU). Its membership has grown through "word of mouth". Currently ESWN has almost 1,000 members spanning at least 19 different countries.

Through ESWN's online activities, its members establish connections for peer-mentoring and scientific collaboration, share job announcements, discuss professional life, find room mates for meetings, and organize get-togethers at conferences.

These activities are facilitated through a webpage, a discussion board, an active emailing list, and a regular newsletter (see past editions on www.eswnonline.org). ESWN has also launched a job-search mailing list, open to all members of the geosciences community.

In September 2009, ESWN was awarded a National Science Foundation ADVANCE program PAID grant (Partnership in Adaptation, Implementation and Dissemination).

The overarching goal in applying for this funding was to help make ESWN sustainable for the foreseeable future. This funding will support the following initiatives over four years:

- Continue to grow ESWN and increase the diversity of the membership.
- Create a web centre with a searchable database of ESWN membership.
- Arrange career development workshops with the first to take place in 2010–2011 in Madison.
- Professional networking events at major scientific conferences

Due to its history the main focus of activities so far has been North America. One of ESWN's current aims is to improve the value of ESWN for members around Europe and elsewhere by raising ESWN's visibility and attracting new members especially from European countries.

For further information or how to join, feel free to contact Amélie Kirchgäßner at amelie.kirchgaessner_at_bas.ac.uk

On Tuesday, 14 September 2010, a **Networking lunch for women** takes place in Room E33.1, 13:00–14:00. Elke Hodson from ESWN will provide information on ESWN. Join us at the lunch reception for an opportunity to network. All women are welcome!

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Transport and Climate Research: EWENT at EMS/ECAC

"We want to be present and visible at the EMS/ECAC because the conference attracts a wide range of experts in the field of applied climate research" says Dr. Pekka Leviäkangas (VTT Technical Research Centre of Finland), coordinator of the EU FP7 research project EWENT (Extreme Weather Impacts on European Networks of Transport). EWENT is a Europe-wide research project that integrates meteorological and climatological research with a major societal key activity – Transport.

EWENT studies adverse weather effects impinging on transport of people and goods. The objective of this EU-funded project is to assess the impacts and consequences of extreme or harmful weather events on all (air, sea, land) EU transport systems. EWENT will also evaluate the efficiency, applicability and finance needs for adoption and mitigation measures which will reduce the costs of weather impacts. The methodological approach is based on a generic risk management framework that follows a standardized process from the identification of hazardous weather events.

Interdisciplinary research is one of the keys to the success of EWENT. There is a strong link between the meteorological community and the transport sectors via operational weather services. EWENT is very much related to applied climate research, and the EMS/ECAC conference will provide ample opportunities for fruitful interaction and discussions of mutual interests.

The first phase of EWENT has covered the definition and identification of hazards on EU transport systems caused by extreme weather phenomena. The next phase is to map the probabilities of these hazardous weather events in the present climate and to estimate the expected changes in potential future climates – up to the 2050s. EWENT website: ewent.vtt.fi

EWENT Workshop: "Probabilities of Extreme and Harmful Weather Events"

EU FP7 project EWENT will organize a half-day side-meeting "Estimation of Probabilities of Extreme and Harmful Weather Events in a Changing Climate" during the 10th EMS / 8th ECAC in Zürich. At this open workshop, EWENT partners will present their on-going studies on extreme and harmful weather events affecting the transport systems based on observations or on projections of future climate. There is also room for external presentations, and papers are invited on methods, trends, mapping, and projections of extreme events, as well as papers dealing with harmful weather affecting transport systems.

If you are interested in participating, please join us in Room **E33.1 on Tuesday 10:00–12:30**, or contact any of the workshop organizers:

Heikki Tuomenvirta (heikki.tuomenvirta@fmi.fi)
Pertti Nurmi (pertti.nurmi@fmi.fi)
Pekka Leviäkangas (pekka.leviakangas@vtt.fi)

Side Meetings

Monday, 13 September 2010	
16:30–18:00	**Programme and Science Committee 2011** Contact: Martina Junge **Room E33.1**

Tuesday, 14 September 2010	
10:00–12:30	**EWENT workshop "Estimation of Probabilities of Extreme and Harmful Weather Events in a Changing Climate"** Organized by EU/FP7 project "Extreme Weather Impacts on European Networks of Transport " Programme at ewent.vtt.fi **Room E33.1**
13:00–14:00	**Networking lunch for women**: All women welcome. Contact: Elke Hodson, ESWN www.sage.wisc.edu/eswn Martina Junge, EMS **Room E33.1**
18:30–22:00	**ESSL Advisory Council and ESSL General Assembly** Contact: Alois Holzer, ESSL **Room E33.1**

Thursday, 16 September 2010	
17:30–19:30	**Informal WMO RA VI Pilot RCC-Network Coordination Meeting** Contact: Stefan Rösner, DWD **Room E33.1**

Friday, 17 September 2010	
14:00–18:30	**EUMETNET WG Climate Change** Contact: Arie Kattenberg, KNMI **Room E33.1**

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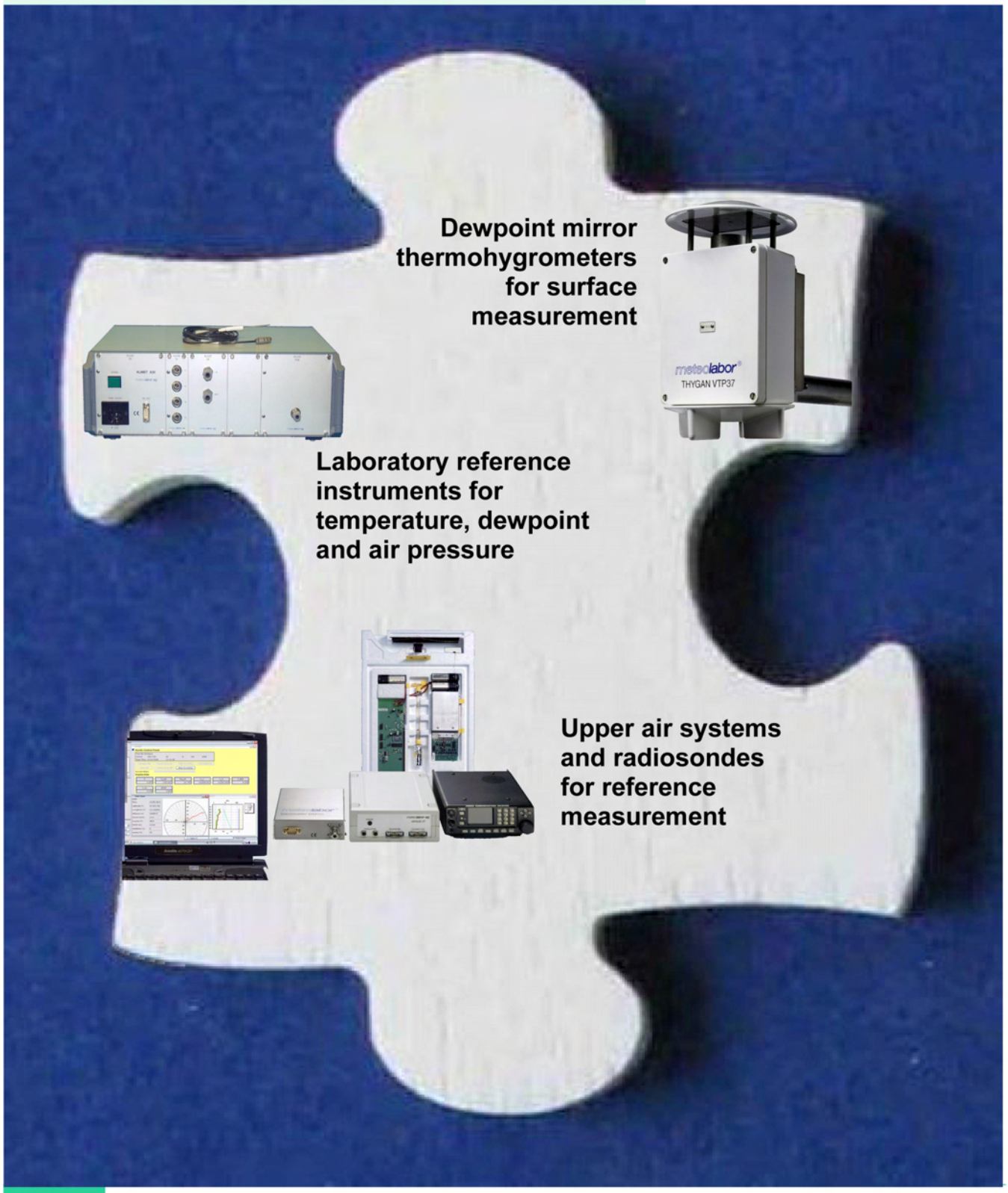

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EMS Silver Medal Lecture 2010

The 2010 EMS Silver Medal is awarded to David Burridge for his outstanding leadership and scientific contributions in the field of numerical weather prediction.

Silver Medal Lecture
Weather Forecasting in Europe
Wednesday, 15 September 2010, 14:00, AudiMax

The European Meteorological Society (EMS) has chosen Dr David Burridge as Laureate of the EMS Silver Medal 2010. Dr Burridge is honoured for his outstanding leadership and scientific contributions in the field of numerical weather prediction. Additionally, Dr Burridge is an excellent advocate for the meteorological sciences; he has the capability of being able to explain convincingly scientific issues to experts, whilst being adept at conveying complex ideas to the public and the media in an understandable way.

Dr Burridge said "I am delighted and honoured to receive this award and I regard it as also recognizing the exceptional pan-European collaboration that has made ECMWF a leading institution in numerical weather prediction. I am thankful that, during my time at ECMWF, I was fortunate to be in a key position to provide support and encouragement to ECMWF colleagues. The award is also a great personal stimulus to continue working on the THORPEX Programme which I hope will improve the prediction of high impact weather around the world."

Dr Burridge held the position of Director of the European Centre for Medium-Range Weather Forecasts (ECMWF) from 1991 to 2004. His innovative contributions to the field of numerical weather prediction were a major contribution to the establishment and maintenance of the ECMWF as a world-leading forecast centre.

Since retirement from ECMWF in 2004, he has been enthusiastically, and effectively, shaping and steering the implementation of the THORPEX Programme. Here his in-depth knowledge of the scientific questions at the forefront of NWP, his ability to assimilate new ideas and look at problems from a number of different angles and his outstanding people management skills have been instrumental in keeping this complex programme moving forward.

Dr Burridge was the president of the EMS from 2005 to 2008, and the enthusiasm with which he undertook this role and stimulated new initiatives, underlines that his vocation has been and is still of great benefit to the meteorological community. Dr Burridge was honoured by the government of the UK when he was made a Commander of the British Empire (CBE) in 1995 for services to meteorology. In 2005 he received an honorary Doctorate of Science from the University of Reading and in 2006 he was awarded an Honorary Fellowship by the University of Swansea.

The EMS Silver Medal was established in 2008 to honour important contributions to the development of meteorology in Europe. The Award is presented annually. Candidates for the EMS Silver Medal are nominated by Member Societies and Associate Members of the EMS. The EMS Awards Committee, consisting of senior members of meteorological institutions in Europe, makes recommendations to the EMS Council for a final decision.

Young Scientist Travel Awards

Damyan Barantiev
EMS2010-68: *Meteorological observations of the coastal boundary layer structure by remote measurement methods for determining the impact of meteorological conditions on the breeze circulation*

Thursday, 16 September 2010
12:30–12:45
Session AW6: E1.1

Stéphanie Singla
EMS2010-54: *Predictability in France: atmospheric forcing or land surface initial conditions?*

Tuesday,14 September 2010
09:30– 09:45
Session AW9: E1.1

Zornitsa Spasova
EMS2010-56*: Weather and emotional state*

Tuesday, 14 September 2010,
Author in attendance time: 18:30–19:30
Session CE1 Adaptation Strategies
Poster Area: P3, Poster No: P3-59

Rafiq Hamdi
EMS2010-70: *Effects of historical urbanization in the Brussels Capital Region on surface air temperature time series: a model study*

Friday, 17 September 2010
9:30–9:45
Session MC2: E3

Laura Trapero Bagué
EMS2010-67: *Modelisation of northerly snow episodes over Andorra (Pyrenees) using WRF*

Thursday, 16 September 2010
Poster author in attendance time: 16:00–17:00
Session NWP4/AW15: Host country topical session Mountain meteorology
Poster Area: P5, Poster No: P5-29

Erika Miklos
EMS2010-75: *Analysis of expected regional climate change in the Carpathian Basin using ENSEMBLES model simulations*

Tuesday, 14 September 2010
Poster in attendance time 18:30 – 19:30
Session UC2 Climate modelling, climate prediction and scenarios from seasons to century

Gabriella Szépszó
EMS2010-60: *The future climate characteristics of the Carpathian Basin based on a regional climate model mini-ensemble*

Thursday, 16 September 2010
15:45 – 16:00
Session UC2: AudiMax
EMS2010-20*: Analysis of the influence of lateral boundary conditions based on REMO RCM simulations over the Carpathian Basin*
Tuesday, 14 September 2010
Poster in attendance time 18:30–19:30
Poster Area: P3, Poster No: P3-24

Matthieu Chevallier
EMS2010-79*: Seasonal potential predictability of the Arctic sea ice in the ENSEMBLES and CMIP3 simulations*

Monday, 15 September 2010
17:00–17:15
Session UC2: AudiMax

Matthias Demuzere
EMS2010-1*: The COST733cat software: An example on surface ozone concentrations in Central Europe*

Wednesday, 15 September 2010
11:45–12:00
Session UC3: E3
Also: EMS2010-2*: The effect of large-scale nudging on climate indices in the Regional Climate Model CCLM*
Thurssday, 16 September 2010
18:15–18:30
Session UC2: AudiMax

Elena Maksimovich
EMS2010-91*: Meteorological factors controlling year-to-year variations in the spring onset of snow melt over the Arctic sea ice*

Thursday, 16 September 2010
09:30–09:45
Session UC1: E3

These Awards are presented during the Opening Session, Monday, 13 September 2010.

	Audimax – F30			
09:00–10:00	Opening Session – Welcome Addresses & Award Presentations			
10:00–10:30	Coffee Break			
10:30–13:00	Opening Session – Strategic Lectures			
13:00–14:00	Lunch Break			
	Audimax – F30	E3	E1.1	E1.2
14:00–16:00	UC1: Climate change assessments of trends, variability and extremes	UC3: Synoptic climatology	AW10: Air-sea interactions and coastal meteorology	AW12: Phenology & Agrometeorology
16:00–16:30	Coffee Break			
16:30–18:30	UC2: Climate modelling, climate prediction and scenarios from seasons to century	MC3/AW13: Data mapping, spatial interpolation and GIS modelling, Reference climatologies	AW4: Air-sea and land-atmosphere interaction processes and their influence on the European and Mediterranean regional climate	AW12
19:00–20:30	ICE BREAKER: Exhibition Area			

Side meetings	
16:30–18:00	**Programme and Science Committee 2011** Contact: Martina Junge **Room E33.1**

Monitoring for a reference climate and monitoring change

MC3/AW13 Data mapping, spatial interpolation and GIS modelling, Reference climatologies (co-organized)

Convener: O. E. Tveito
Co-Conveners: I. Auer; M. Dolinar; C. Frei
Lecture Room: E3

16:30–18:30
Chairperson(s): O.E.Tveito

16:30–17:00: EMS2010-77
Data-driven exploration of orographic enhancement of precipitation (solicited)
L. Foresti, M. Kanevski, **A. Pozdnoukhov**
National Centre for Geocomputation, Nat.University of Ireland - Maynooth (alexei.pozdnoukhov@nuim.ie)

17:00–17:15: EMS2010-726
Spatial interpolation for climate monitoring in Switzerland
C. Frei, R. Schiemann, M. Willi
Federal Office of Meteorology and Climatology, MeteoSwiss, Zürich, Switzerland (christoph.frei@meteoswiss.ch)

17:15–17:30: EMS2010-774
GIS and GAMs to predict extreme wind speeds over Switzerland and to assess storm damage
C. Etienne, A. Lehmann, S. Goyette, M. Beniston
University of Geneva, Switzerland (christophe.etienne@unige.ch)

17:30–17:45: EMS2010-703
Spatial interpolation of biologically effective UV radiation over Poland
J. Walawender, Z. Ustrnul
Faculty of Biology and Earth Sciences, Jagiellonian University, Krakow, Poland, Institute of Meteorology and Water Management, Krakow, Poland

17:45–18:15: EMS2010-160
Determining the accuracy of gridded climate data and how this varies with observing network size (solicited)
T.P. Legg
Met Office, National Climate Information Centre, Exeter, United Kingdom (tim.legg@metoffice.gov.uk)

18:15–18:30: EMS2010-513
Mapping of SPI drought index in South-Eastern Europe, theory and practice
Z. Bihari, T. Szentimrey, M. Lakatos, G. Gregoric, T. Likso
Hungarian Meteorological Service, Budapest, Hungary (bihari.z@met.hu)

ORAL PROGAMME MC3/AW13 CONTINUES WEDNESDAY

Understanding processes and climate change

UC1 Climate change assessments of trends, variability and extremes

Convener: R. Heino
Co-Conveners: M. Rebetez; A. M. G. Klein Tank
Lecture Room: AudiMax (F30)

14:00–16:00
Chairperson(s): Raino Heino

14:00–14:15: EMS2010-121
Understanding Regional Climate Variations and Trends over North America
R. M. Dole
NOAA Earth System Research Laboratory, Boulder, United States (randall.m.dole@noaa.gov)

14:15–14:30: EMS2010-267
Variability in the Summer Season Hydrological Cycle over the Atlantic-European Region
R. Allan, **I. Zveryaev**
P.P. Shirshov Institute of Oceanology, Moscow, Russian Federation (igorz@sail.msk.ru)

14:30–14:45: EMS2010-324
A global dataset of self-calibrating Palmer Drought Severity Index dataset
G. van der Schrier, P.D. Jones, K.R. Briffa
Royal Netherlands Meteorological Institute, Climate Analysis, De Bilt, Netherlands (schrier@knmi.nl)

14:45–15:00: EMS2010-679
Has the probability of water deficit changed in Central Europe since the middle of the 20th century?
J. Wibig
University of Lodz, Meteorology and Climatology, Lodz, Poland (zameteo@uni.lodz.pl)

15:00–15:15: EMS2010-19
Human Influence on Warm European Seasons
N. Christidis, P. A. Stott, G. S. Jones, H. Shiogama, T. Nozawa, J. Luterbacher
Met Office, Hadley Centre, Exeter, United Kingdom

15:15–15:30: EMS2010-503
Relationship between alpine tourism demand and hot summer air temperatures associated with climate change
M. Rebetez, G. Serquet
WSL, Lausanne, Switzerland (rebetez@wsl.ch)

15:30–15:45: EMS2010-322
Observed changes in extreme winter events in Europe with implication for transport system
A. Vajda, H. Tuomenvirta
Finnish Meteorological Institute, Meteorological Research / Climate Change, Helsinki, Finland (andrea.vajda@fmi.fi)

15:45–16:00: EMS2010-317
Are extremes increasing or have we underestimated them?
L. Makkonen, M, Pajari
VTT Technical Research Centre of Finland, Espoo, Finland (lasse.makkonen@vtt.fi)

ORAL PROGAMME UC1 CONTINUES THURSDAY

UC2 Climate modelling, climate prediction and scenarios from seasons to century

Convener: C. Appenzeller
Co-Conveners: C.M. Goodess; C. Schär; R.E. Benestad
Lecture Room: AudiMax (F30)

16:30–18:30

Monthly to Seasonal Prediction

16:30–16:45: EMS2010-289
Autumn-time response of the ocean-atmospheric system to interannual changes in Arctic sea-ice extent
Y. J. Orsolini, R. Senan, R. E. Benestad, A. Melsom, M. A. Balmaseda
Norwegian Institute for Air Research, Kjeller, Norway (orsolini@nilu.no)

16:45–17:00: EMS2010-746
ENSO-Driven Predictability of Tropical Dry Autumns Using the Seasonal ENSEMBLES Multimodel
R. Manzanas, J.M. Gutiérrez, A.S. Cofiño, M.D. Frías
Institute of Physics, University of Cantabria-CSIC, Spain

17:00–17:15: EMS2010-79
Seasonal potential predictability of the Arctic sea ice in the ENSEMBLES and CMIP3 simulations
M. Chevallier, D. Salas-Melia
CNRM-Météo France, GMGEC, Toulouse, France (matthieu.chevallier@meteo.fr)

17:15–17:30: EMS2010-373
Evolution of the Canadian regional ensemble prediction system
R. Frenette, M. Charron, X. Li, N. Gagnon, C. Lavaysse, S. Belair, M. Carrera, P. Yau, G. Candille
Laboratoire national des conditions météorologiques menaçantes, Environnement Canada, région du Québec, Montréal, Canada (ronald.frenette@ec.gc.ca)

17:30–17:45: EMS2010-349
Analysis of MJO forecast errors in a seamless system
P. Xavier, A. Shelly
Met Office Hadley Centre, Exeter, UK

17:45–18:00: EMS2010-536
Assessing two operational systems for monthly and seasonal climatic anomalies forecast in Italy.
M. Pasqui, V. Pavan, S. Quaresima, J. Primicerio, C. Cacciamani, B. Gozzini, L. Perini
CNR - IBIMET, Institute of Biometeorology, Sesto Fiorentino (FI), Italy (m.pasqui@ibimet.cnr.it)

18:00–18:15: EMS2010-397
Dynamic-enforced Statistical Downscaling of Global Seasonal Prediction of Precipitation for Regional Hydrological Applications
Y. Liu, D. Rostkier-Edelstein, A. Givati, W. Wu, G. Descombes, M. Ge, T. Warner, S. Swerdlin
National Center for Atmospheric Research, Research Application Lab, Boulder, United States (yliu@ucar.edu)

18:15–18:30: EMS2010-326
Can monthly to seasonal precipitation forecasts be useful for hydro-power production planning in french Guyana?
L. Dubus, J. Najac, J. Dessagne
EDF R&D / MFEE, Applied Meteorology and Atmospheric Environment, Chatoux Cedex, France (laurent.dubus@edf.fr)

ORAL PROGAMME UC2 CONTINUES WEDNESDAY

UC3 Synoptic climatology

Conveners: R. Huth; R.E. Benestad
Lecture Room: E3

14:00–16:00
Chairperson(s): R.Huth

14:00–14:15: EMS2010-61
A new global set of downscaled temperature scenarios
R.E. Benestad
Norwegian Meteorological Institute, Climate, Oslo, Norway (rasmus.benestad@met.no)

14:15–14:45: EMS2010-436
Synoptic and climatological aspects of extra-tropical cyclones (solicited)
G.C. Leckebusch
Freie Universität Berlin, Institut für Meteorologie, Berlin, Germany (gcl@met.fu-berlin.de)

14:45–15:00: EMS2010-344
Analysis of cyclone water budgets in the North Atlantic and their role for Europe
C. Moseley, H. Göttel, D. Jacob
Max-Planck-Institut für Meteorologie, Hamburg, Germany (christopher.moseley@zmaw.de)

15:00–15:15: EMS2010-217
Rain producing cyclone activity water vapor transport in Mongolia during summer
K. Kimura, S. Taniguchi, M. Shinoda
Information Science and Technology, Hokkaido University, Sapporo, Japan (kimura@ssi.ist.hokudai.ac.jp)

15:15–15:30: EMS2010-382
The structure of cyclonic moisture transport into the European Arctic: results from a water vapour tagging method
H. Sodemann, A. Stohl
NILU (Norwegian Institute for Air Research), Kjeller, Norway (harald.sodemann@nilu.no), Institute for Atmospheric and Climate Science, ETH Zürich, Zürich, Switzerland

15:30–15:45: EMS2010-260
Analysis of North Atlantic Polar Lows by Two Tracking Methods
L. Xia
GKSS Research Center, Germany (lan.xia@gkss.de)

15:45–16:00: EMS2010-546
Assessing the capability of high resolution climatic model experiments to simulate Mediterranean cyclonic tracks
M. Hatzaki, H.A. Flocas, C. Giannakopoulos, E. Kostopoulou, I. Kouroutzoglou, K. Keay, I. Simmonds
Department of Environmental Physics-Meteorology, Faculty of Physics, University of Athens, Athens, Greece (marhat@phys.uoa.gr), Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece

ORAL PROGAMME UC3 CONTINUES WEDNESDAY

Atmosphere and the Water Cycle

AW4 Large scale air-sea and land-atmosphere interaction processes and their influence on the European and Mediterranean regional climate

Convener: S. Gualdi
Co-Conveners: W. May; S. Somot
Lecture Room: E1.1

16:30–18:30

16:30–16:45: EMS2010-243
Sea level rise over the Mediterranean: present climate and scenario Simulations
A. Dell'Aquila, S. Calmanti, A. Carillo, V. Rupolo, PM Ruti, G. Sannino, V. Artale
ENEA, C.R. Casaccia,UTMEA-CLIM, Rome, Italy (alessandro.dellaquila@casaccia.enea.it)

16:45–17:00: EMS2010-419
Assesment of the teleconnections between the Mediterranean climate and the global climate with a quadruple coupled model
B. Lhévéder, L. Li
LMD, UPMC, Paris, France (blh@locean-ipsl.upmc.fr)

17:00–17:15: EMS2010-781
Analysis of Evaporation Sources and Hydrological Cycle over the Mediterranean Region
A. Elizalde, D. Jacob
Max Planck Institute for Meteorology, Atmosphere, Hamburg, Germany (alberto.elizalde@zmaw.de)

17:15–17:30: EMS2010-676
On the importance of anthropogenic and biogenic aerosols for the regional water budget in semiarid areas
W. Junkermann
KIT, IMK-IFU, Garmisch-Partenkirchen, Germany (wolfgang.junkermann@kit.edu)

17:30–17:45: EMS2010-232
Impacts Of Atmospheric Modes Of Variability On Mediterranean Sea Surface Heat Exchange
S. A. Josey, S. Somot, M. Tsimplis
National Oceanography Centre, Ocean Observing and Climate Research Group, Southampton, United Kingdom (simon.josey@noc.soton.ac.uk)

17:45–18:00: EMS2010-424
Correlation between air-sea heat fluxes over the Aegean Sea and the total precipitable water over Europe and North Africa
V.P. PAPADOPOULOS, A. BARTZOKAS, T. CHRONIS, S. RUIZ, G. FEREDINOS
Hellenic Centre for Marine Research, Anavissos, Greece (vassilis@ath.hcmr.gr)

18:00–18:15: EMS2010-264
Interannual Variability of Mediterranean Evaporation and its Links to Regional Climate
I. Zveryaev, A. Hannachi
P.P. Shirshov Institute of Oceanology, Moscow, Russian Federation (igorz@sail.msk.ru)

18:15–18:30: EMS2010-286
The Influence of Dominant Global Climate Phenomena ENSO, NAO, and AO on Climate in Serbia
G. Jovanovic, I Reljin, B. Reljin
Republic Hydrometeorological Service of Serbia, Belgrade (gordana.jovanovic@hidmet.gov.rs)

END OF ORAL PROGAMME AW4

AW10 Air-sea interactions and coastal meteorology

Convener: AM Sempreviva
Co-Conveners: S.E. Gryning; M.M. Miglietta; Dr. Sørensen
Lecture Room: E1.1

14:00–16:00
Chairperson(s): Anna Maria Sempreviva

14:00–14:15: EMS2010-751
Air-sea exchange - a mixture of atmospheric and oceanic processes
A-S Smedman
Department of earth sciences, Uppsala University, Uppsala, Sweden (ann-sofi.smedman@met.uu.se)

14:15–14:30: EMS2010-14
New parameterization of surface short wave radiation based on highly accurate in-situ measurements in the Atlantic Ocean
A. Sinitsyn, S.K. Gulev
P.P.Shirshov Institute of Oceanology, RAS, Moscow, Russia (sinitsyn@sail.msk.ru)

14:30–14:45: EMS2010-173
Enhancing the prediction of turbulent kinetic energy in the marine atmospheric boundary layer
R.J. Foreman, S. Emeis
Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology, Garmisch-Partenkirchen, Germany (richard.foreman@kit.edu)

14:45–15:00: EMS2010-434
Comparative analysis of humidity characteristics for open-sea and coastal areas in the Mediterranean
L. Velea, T. Chronis, E. Anagnostou, A. Papadopoulos
Hellenic Centre For Marine Research, Anavyssos, Greece, National Meteorological Administration, Bucharest, Romania

15:00–15:15: EMS2010-509
Investigation of the atmosphere-land-ocean interaction at the southwestern edge of the Saharan heat low
C.M. Grams, S.C. Jones, J.H. Marsham, D.J. Parker, J.M. Haywood, V. Heuveline
Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology, Germany

15:15–15:30: EMS2010-760
Atmospheric Boundary Layer wind profile at a flat coastal site - wind speed lidar measurements and mesoscale modeling results during a summer period
E Batchvarova, S.-E. Gryning, A Hahmann, A Peña, T Mikkelsen
NIMH, National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences, Bulgaria, Risø DTU, National Laboratory for Sustainable Energy, Denmark

15:30–15:45: EMS2010-641
Evolution of the inland vertical structure of a coastal Atmospheric Boundary Layer in the Central Mediterranean using surface and ground -based remote sensing measurements
AM Sempreviva, T Lo Feudo, C Calidonna, R Wagner, MS Courtney, L De Leo, S Federico, E Avolio
Institute for Atmospheric Sciences and Climate - CNR, ISAC, Lamezia Terme, Italy (am.sempreviva@isac.cnr.it), Risoe - Danish Technical University, Department of Wind Energy, Roskilde, Denmark

15:45-16:00 Poster presentations

END OF ORAL PROGAMME AW10

AW12 Phenology and Agrometeorology

Convener: E. Koch
Co-Conveners: J. Eitzinger; B. Lalic
Lecture Room: E1.2

14:00–16:00
Chairperson(s): E. Koch

14:00–14:15: EMS2010-508
The terroir of vineyards - climatic variability in an Austrian wine-growing region
T. Gerersdorfer and the Project Team
University of Natural Resources and Applied Life Sciences, Vienna (BOKU), Institute of Meteorology, Vienna, Austria (thomas.gerersdorfer@boku.ac.at)

14:15–14:30: EMS2010-69
Data validation procedures in Agricultural Meteorology. A prerequisite for their use
J. Estévez, P. Gavilán, A. García-Marín
University of Córdoba, Projects Engineering, Ingeniería Rural Department, Cordoba, Spain (jestevez@uco.es)

14:30–14:45: EMS2010-98
The use of ECMWF products in agrometeorological forecast in Croatia
V. Vucetic
Meteorological and Hydrological Service of Croatia, Agrometeorological Department, Zagreb, Croatia (vucetic@cirus.dhz.hr)

14:45–15:00: EMS2010-193
Beginning of grain harvest in the tri-border region Basel as a proxy for mean April-July temperatures; creation of a long Swiss series c. 1454 AD - 1950 AD
O. Wetter, C. Pfister
University of Berne, Institute of History, WSU, Bern, Switzerland (oliver.wetter@hist.unibe.ch)

15:00–15:15: EMS2010-292
Use of the Soil Moisture Index for drought monitoring
J. Noskova, M. Mozny, M. Trnka, Z. Zalud, P. Hlavinka, M. Virag
Czech Hydrometeorological Institute, Doksany, Czech Republic (jana.noskova@seznam.cz)

15:15–15:30: EMS2010-302
The influence of meteorological conditions on the progress and dynamics of pollen phenophases of selected species
K. Jatczak, J. Linkowska, P. Rapiejko
Centre for Poland's Climate Monitoring, Institute of Meteorology and Water Management, Warsaw, Poland (Katarzyna.Jatczak@imgw.pl)

15:30–15:45: EMS2010-318
Evaluating climate suitability for agriculture based on agroclimatic indices
A. Holzkämper, P. Calanca, J. Fuhrer
Agroscope Reckenholz-Tänikon ART, Research Station ART Air Pollution and Climate Group, (annelie.holzkaemper@art.admin.ch)

15:45–16:00: EMS2010-323
Evaluating reference evapotranspiration in mountain areas
P. Calanca, R. Philipona, D. Bretscher, M. Rohrer, J. Sanabria, I. Trebejo, C. Alarcón Velazco, P. Smith
Agroscope Reckenholz-Tänikon, Research Station ART, Air Pollution & Climate, Zurich, Switzerland (pierluigi.calanca@art.admin.ch)

16:00 Coffee Break

16:30–18:30
Chairperson(s): T. Gerersdorfer

16:30–16:45: EMS2010-427
Sensitivity of crop models on different climate model downscaling techniques
B. Lalic, J. Eitzinger, B. Rajkovic, V. Djurdjevic, M. Vujadinovic, A. Vukovic
Faculty of Agriculture, Department for Field & Vegetable Crops, Novi Sad, Serbia (branka@polj.ns.ac.yu)

16:45–17:00: EMS2010-429
Experimental and modeling analysis of micro-meteorological factors involved in the development of Piedmontese vineyards
C. Cassardo, C. Francone, R. Richiardone, D. Bertoni, L. Alemanno, F. Spanna
Dipartimento di Fisica Generale - Facoltà di Scienze M.F.N. - Università degli Studi di Torino, Torino, Italy (claudio.cassardo@unito.it)

17:00–17:15: EMS2010-446
Phenological response of five wild plant shrubs and assessment its sums of effective units in region of the Czech Republic during 1961-2010
L. Bartosova, Z. Bauer, M. Trnka, J. Balek, J. Kucera, P. Stepanek, Z. Zalud
Institute of Agrosystems and Bioclimatology, Mendel University in Brno, Czech Republic, bartolen@gmail.com

17:15–17:30: EMS2010-586
Assessing and Mapping Drought Vulnerability in Agricultural Systems - A case Study for Slovenia
M. Slejko, G. Gregoric, K. Bergant, S. Stanic
University of Nova Gorica, Nova Gorica, Slovenia (maja.slejko@ung.si, samo.stanic@ung.si)

17:30–17:45: EMS2010-616
Utilization of Live Localized Weather Information for Sustainable Agriculture
J. Anderson, J. Usher
WeatherBug Professional, Germantown, MD, USA (janderson@weatherbug.com)

17:45–18:00: EMS2010-620
New possibilities in following the transport of water in living plants
P. Jakusch, A. Anda
University of Pannonia Georgikon Faculty, Department of Meteorology and Water Management, Keszthely, Hungary

18:00–18:15: EMS2010-737
Analysis of long soil moisture data series
Z. Dunkel
OMSZ - Hungarian Meteorological Service, Budapest, Hungary (dunkel.z@met.hu)

18:15–18:30: EMS2010-763
Can we match plant phenology from single species to the landscape scale?
T. Rutishauser, R. Stöckli, F. Jeanneret, J. Peñuelas
University of Bern, Institute of Geography and Oeschger Centre for Climate Change Research, Bern, Switzerland (rutis@giub.unibe.ch)

END OF ORAL PROGAMME AW12

Tuesday	Audimax – F30	E3	E1.1	E1.2
08:30–10:30	**Climate Services: Opening plenary 10:00 SE1: Ready to use applications**	**AW11: Environmental meteorology**	**AW9: Interfacing hydrological and meteorological models in forecasting systems**	**AW1: Dynamical meteorology**
10:30–11:00	**Coffee Break**			
11:00–13:00	**SE1 11:45 SE2/CE3: User tailored applications**	**AW11**	**AW14: Energy meteorology**	**AW1 12:15 AW2: Operational Oceanography**
13:00–14:00	**Lunch Break**			
14:00–16:00	**SE2/CE3**	**AW5: Space forcing of the Earth's and planets' climate**	**AW14**	**AW7: Nikolai Dotzek Memorial – Atmospheric hazards**
16:00–16:30	**Coffee Break**			
16:30–18:30	**SE2/CE3 17:00–19:00: Panel discussion**	**AW5**	**AW14**	**AW7**
18:30–19:00		**18:30–19:30 Poster authors in attendance time 1: UC2, AW1, AW2, AW4, AW5, AW7, AW9, AW10, AW11, AW12, AW14, CE1**		
19:00–20:00	**19:00–20:00: Poster authors in attendance time 1: SE1, SE2/CE3**			

Side Meetings Tuesday	
10:00–12:30	**EWENT workshop: "Estimation of Probabilities of Extreme and Harmful Weather Events in a Changing Climate"** Organized by EU/FP7 project "Extreme Weather Impacts on European Networks of Transport " Programme at ewent.vtt.fi See also page 19. **Room E33.1**
13:00–14:00	**Networking lunch for women**: All women welcome. Contact: Elke Hodson, ESWN www.sage.wisc.edu/eswn Martina Junge, EMS See also page 19. **Room E33.1**
18:30–22:00	**ESSL Advisory Council and ESSL General Assembly** Contact: Alois Holzer, ESSL www.essl.org **Room E33.1**

Services translating science to users

Opening Plenary Climate Services

Convener: A. Kattenberg
Lecture Room: AudiMax (F30)

08:30–10:00

08:30-09:00
Playing field for climate information in Europe
A. Kattenberg
KNMI, The Netherlands

09:00–09:30: EMS2010-22
The National Oceanic and Atmospheric Administration (NOAA) Climate Services Portal: A New Centralized Resource for Distributed Climate Information (solicited)
J. Burroughs, R. Baldwin, D. Herring, N. Lott, J. Boyd, S. Handel, F. Niepold, E. Shea
NOAA National Climatic Data Center, Asheville, NC (jon.burroughs@noaa.gov)

09:30–09:45: EMS2010-426
The challenge of presenting climate change information to the public and to political stakeholders: coordinated efforts of German environmental agencies
H. Huebener, C. Linke
Hessian Agency for Environment and Geology, Hessian Centre for Climate Change, Wiesbaden, Germany (heike.huebener@hlug.hessen.de)

09:45–10:00: EMS2010-694
Creating and maintaining dialogue on climate information - Reflections on the adaptation process in Sweden
C. Nilsson
SMHI, Norrköping, SWEDEN (carin.nilsson@smhi.se)

SE1 Climate Services: standardized - ready to use - applications

Convener: J. Prior
Co-Conveners: R. Sluijter; K. Fortuniak; E. Forland; Z. Ustrnul; D. Hollis
Lecture Room: AudiMax (F30)

10:00–10:30
Chairperson(s): Eirik Forland

10:00–10:15: EMS2010-314
National, ready-to-use climate indicators calculation and dissemination
F. Desiato, G. Fioravanti, P. Fraschetti, W. Perconti, A. Toreti
ISPRA, Rome, Italy (franco.desiato@isprambiente.it)

10:15–10:30: EMS2010-481
DRIAS project: A component of French Climate Services
J. Lémond, P. Dandin, J.M. Moisselin, L. Franchistéguy, M. Kerdoncuff, C. Pagé, R. Vautard, M. Déqué, S. Planton
Météo-France, Direction de la Climatologie, Toulouse, France (julien.lemond@meteo.fr)

10:30 Coffee Break

11:00–11:45
Chairperson(s): Eirik Forland

11:00–11:15: EMS2010-795
Scientific climate change information by collaborative venture and digital portal
W Dubelaar-Versluis
Royal Netherlands Meteorological Institute (KNMI), De Bilt, Netherlands (versluis@knmi.nl)

11:15–11:30: EMS2010-613
A modified Drought Index for the WMO RA VI Region
P. Bissolli, S. Pietzsch
Deutscher Wetterdienst, Dep. Climate Monitoring, Offenbach, Germany (peter.bissolli@dwd.de)

11:30–11:45: EMS2010-265
Assessment of climate vulnerability in the Norwegian built environment
H. O. Hygen, C. F. Øyen, A. J. Almås
Norwegian Meteorological Institute, Climate, Oslo, Norway (hans.olav.hygen@met.no)

END OF ORAL PROGAMME SE1

SE2/CE3 Climate Services: User tailored custom made applications (co-organized)

Convener: A. Kattenberg
Co-Conveners: I. Meinke; C.M. Goodess; J. Bessembinder; B. Overbeek; A. Spekat
Lecture Room: AudiMax (F30)

11:45–13:00
Chairperson(s): Arie Kattenberg

11:45–12:00: EMS2010-222
Crossing the river: Developing a strategy to support understanding of uncertainty within probabilistic climate projections
P. Walton, R. Lamb
University of Oxford, School of Geography and the Environment, Oxford, UK (peter.walton@ouce.ox.ac.uk)

12:00–12:15: EMS2010-369
Improving access to data on climate change and its impacts in the Netherlands
C.D. Homan, J. Bessembinder, B. Schaap, P. Reidsma, J. Delsman, F. Witte, C. Jacobs, P. van Bodegom, J. Verboom
KNMI, De Bilt, Netherlands

12:15–12:30: EMS2010-563
Climate Services for Development
M. Saunby, B. Bhaskaran, C. Buontempo, **K. Willett**
Met Office Hadley Centre, Exeter, United Kingdom

12:30–12:45: EMS2010-152
Learning from user feedback to improve the way probabilistic climate information is communicated
A. Steynor, R Street
UK Climate Impacts Programme, Oxford University, Oxford, United Kingdom

12:45–13:00: EMS2010-337
Generation of future time series for impact assessments
A. Bakker
KNMI, climate services, De Bilt, Netherlands (bakker@knmi.nl)

14:00–14:15: EMS2010-372
Probabilistic projections of mean and variance evolution for temperatures. Application for extremes analysis
M. Pausader, D. Bernie, S. Parey, M. Nogaj
EDF, R&D, CHATOU, France (sylvie.parey@edf.fr)

14:15–14:30: EMS2010-452
Test Reference Years for engineering purposes - incorporating the Urban Heat Island effect
A. Spekat, F. Kreienkamp, U. Wienert, W. Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

14:30–14:45: EMS2010-493
Climate Services at AEMET
E. Rodriguez, A. Mestre
AEMET, C/ Leonardo Prieto Castro 8, 28040-Madrid, Spain

14:45–15:00: EMS2010-454
Adaptation and the Two-Degree Target - Regional Climate Consequences
F. Kreienkamp, H. Hübener, **A. Spekat**, H. Wolf
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany
(frank.kreienkamp@cec-potsdam.de)

15:00–15:15: EMS2010-107
Agricultural Decision Making Using North Dakota Agricultural Weather Network
F. Akyuz, B Mullins, D Morlock, R Carcoana
North Dakota State University, Fargo, North Dakota, USA (Adnan.Akyuz@ndsu.edu)

15:15–15:30: EMS2010-236
The assessment of future extremes of air temperature to design EPR type power plants
S. Parey, T.T.H. Hoang, D. Dacunha-Castelle
EDF, R&D, CHATOU, France (sylvie.parey@edf.fr)

15:30–15:45: EMS2010-471
Assessing disruptive effects of climate change on road networks with Road Weather Information System data
P. Saarikivi
Foreca Consulting Ltd, Helsinki, Finland (pirkko.saarikivi@foreca.com)

15:45–16:00: EMS2010-526
An integrated assessment of climate change impacts for Athens- relevance to stakeholders and policy makers
C. Giannakopoulos, M. Hatzaki, E. Kostopoulou, K. Varotsos
Environmental Research, National Observatory of Athens, Athens, Greece (cgiannak@meteo.noa.gr)

16:00 Coffee Break

16:30–17:00

16:30–16:45: EMS2010-700
NCAR activities related to translating climate and weather information into infectious-disease and other public-health early warnings
T. Warner, A. Monaghan, T. Hopson
National Center for Atmospheric Research, Research Applications Laboratory, Boulder, CO, United States (warner@ucar.edu)

16:45–17:00: EMS2010-72
Translating global climate model projections into usable information for water managers and industry: A case study from Tasmania, Australia
J. Bennett, F. Ling, B. Graham, M. Grose, S. Corney, G. Holz, C. White, S. Gaynor, N. Bindoff
Antarctic Climate and Ecosystems Cooperative Research Centre, University of Tasmania, Hobart, Australia (james.bennett@hydro.com.au), Hydro Tasmania Consulting, Cambridge, Australia

END OF ORAL PROGAMME SE2/CE3

Panel Discussion on Climate Services

Convener: A. Kattenberg
Lecture Room: AudiMax (F30)

17:00–19:00

Stéphane Isoard of EEA

Roger Street of UkCIP

Gilles Drogue from the AMICE programme

Panel Discussion (Panel Members: Stéphane Isoard, Roger Street, Gilles Drogue, Frits Brouwer from EUMETNET)

END OF ORAL PROGAMME CLIMATE SERVICES

Atmosphere and the Water Cycle

AW1 Dynamical Meteorology

Convener: T. Frisius
Co-Conveners: F. Lunkeit; P. M. Ruti
Lecture Room: E1.2

08:30–10:30
Chairperson(s): Thomas Frisius

08:30–08:45: EMS2010-181
Warm conveyor belts and tropopause-level Rossby waves
H. Wernli
ETH Zurich, Institute for Atmospheric and Climate Science, Zurich, Switzerland (heini.wernli@env.ethz.ch)

08:45–09:00: EMS2010-172
Influence of diabatic processes on the PV development in a warm conveyor belt
H. Joos, H. Wernli
IAC ETH Zürich, IAC, Umweltwissenschaften, Zürich, Switzerland (hanna.joos@env.ethz.ch)

09:00–09:15: EMS2010-120
Forcing mechanisms of the wintertime subtropical jet over Africa
O. Martius, H. Wernli
ETH Zurich, Institute for Atmospheric and Climate Science, Zurich, Switzerland (olivia@env.ethz.ch)

09:15–09:30: EMS2010-580
Dynamics of Atlantic jet stream regimes
T. Woollings, A. Hannachi, C. Franzke, B. Hoskins, O. Martius
University of Reading, Reading, United Kingdom (t.j.woollings@rdg.ac.uk)

09:30–09:45: EMS2010-253
The variable link between PNA and NAO in observations and in multi-century CGCM simulations
J.G. Pinto, M. Reyers, U. Ulbrich
Institute for Geophysics and Meteorology, University of Cologne, Germany (jpinto@meteo.uni-koeln.de)

09:45–10:00: EMS2010-717
Moistening the lower extratropical stratosphere by processes associated with double tropopause events
J.M. Castanheira, L. de la Torre, J. A. Añel
CESAM - University of Aveiro

10:00–10:15: EMS2010-31
Does rain affect surface pressure?
T. Spengler, J. Egger, S.T. Garner
Atmospheric and Oceanic Sciences Program, Princeton University, USA (thomas.spengler@noaa.gov)

10:15–10:30: EMS2010-169
Spontaneous gravity wave radiation from vortex pair in an f-plane shallow water system
N. Sugimoto
Keio University, Physics, Yokohama, Japan (nori@phys-h.keio.ac.jp)

10:30 Coffee Break

11:00–12:15

11:00–11:15: EMS2010-408
Effects of the greenhouse gas increase to the quasi-biennial oscillation in the tropical stratosphere up to year 2100 as simulated with the chemistry-climate model of Meteorological Research Institute
K. Shibata, M. Deushi
Meteorological Research Institute, Tsukuba, Japan (kshibata@mri-jma.go.jp)

11:15–11:30: EMS2010-591
Rossby Wave Breaking and Large-scale Flow Modulations in Conjunction with the Madden-Julian Oscillation
R. Moore, T. Spengler, O. Martius
Department of Meteorology, Naval Postgraduate School, Monterey, CA

11:30–11:45: EMS2010-585
Analysis of tropical cyclone dynamics in a conceptual box-model and the axisymmetric cloud model HURMOD
D. Schönemann, T. Frisius
JRG Dynamical Systems, KlimaCampus, Unversity of Hamburg,, Germany (daria.schoenemann@zmaw.de)

11:45–12:00: EMS2010-597
The Tropical Transition of Western Pacific Tropical Storm 16W
F. Schoenenberger, R. Moore, O. Martius
Institute for Atmospheric and Climate Science, ETH-Zuerich, Zuerich, Switzerland

12:00–12:15: EMS2010-821
The Remote Effect of the Tibetan Plateau on Downstream Flow in Early Summer
Y. Wang, X. Xu, P. Li, Z. Yin
State Key Laboratory of Severe Weather Chinese Academy of Meteorological Sciences Beijing, China

END OF ORAL PROGAMME AW1

AW2 Operational Oceanography from observations to decisions through data assimilation and forecasts

Conveners: M. Faucher; H. Ravenel
Lecture Room: E1.2

12:15–13:00

12:30–12:45: EMS2010-207
Oceanic mixed layer heat budget in the Eastern Equatorial Atlantic from ARGO floats
M. Wade, **G. Caniaux**, Y. DuPenhoat
CNRM/GAME, CNRM, Toulouse, France (malick.wade@meteo.fr; caniaux@meteo.fr)

END OF ORAL PROGAMME AW2

AW5 Space forcing of the Earth's and planets' climate

Convener: M. Messerotti
Co-Conveners: H. Lundstedt; K. Matthes
Lecture Room: E3

14:00–16:00
Chairperson(s): H. Lundstedt

14:00–14:15: EMS2010-807
Forcing of planetary weather and climate: an ontological approach
M. Messerotti
INAF-Astronomical Observatory of Trieste, Trieste, Italy (messerotti@oats.inaf.it), Department of Physics, University of Trieste, Trieste, Italy, INFN-Trieste Division, Trieste, Italy

14:15–14:35: EMS2010-818
Solar change and climate: an update in the light of the current exceptional solar minimum (solicited)
M. Lockwood
Space Environment Physics Group, Department of Meteorology, University of Reading, Earley Gate, P.O. Box 243, RG6 6BB, UK (m.lockwood@reading.ac.uk), Space Science and Technology Dept., Rutherford Appleton Laboratory, Harwell Campus, Chilton, Didcot, Oxfordshire, OX11 0QX, UK

14:35–14:50: EMS2010-632
Are cold winters in Europe associated with low solar activity?
T. Woollings, M. Lockwood, C. Bell, G. Harrison, S. Solanki
University of Reading, Reading, United Kingdom (t.j.woollings@rdg.ac.uk)

14:50–15:10: EMS2010-791
Total Solar Irradiance during the Holocene using cosmogenic 10Be measured in polar ice cores (solicited)
F. Steinhilber, J. Beer, C. Fröhlich
Eawag, Dübendorf, Switzerland (friedhelm.steinhilber@eawag.ch)

15:10–15:25: EMS2010-538
Sun's influence on climate: Explored with SDO
H. Lundstedt
Swedish Institute of Space Physics, -, Lund, Sweden (henrik@lund.irf.se)

15:25–15:45: EMS2010-154
What can Venus and Mars tell us about Sun's direct influence on Earth's Atmosphere? (solicited)
R. Lundin
Swedish Institute of Space Physics, Umeå, Sweden (rickard.lundin@irf.se)

15:45–16:00: EMS2010-718
Influence of Galactic Cosmic Rays on the atmospheric composition and temperature
M. Calisto, T. Peter, E. Rozanov, I. Usoskin
ETH Zürich, Atmosphere and Climate, Zürich, Switzerland (thomas.peter@env.ethz.ch)

16:00 Coffee Break

16:30–18:30
Chairperson(s): M. Messerotti

16:30–16:50: EMS2010-801
Solar Energetic Particles and their effects on the chemistry of the middle and upper atmosphere (solicited)
A. Seppälä
British Antarctic Survey (NERC), Cambridge, United Kingdom

16:50–17:10: EMS2010-790
Cosmic Rays and Climate Change (solicited)
A.D. Erlykin, B.A. Laken, T. Sloan, **A.W. Wolfendale**
Physics Department, Durham University, UK (a.w.wolfendale@durham.ac.uk)

17:10–17:30: EMS2010-815
Cosmic ray Clouds and Climate (solicited)
H. Svensmark
Danish Space Research Institute, Copenhagen, Denmark

17:30-18:30: Round Table Discussion:
The role of Space Forcing in Earth's and Planets' Climate
Moderators: R. Lundin, M. Messerotti

END OF ORAL PROGAMME AW5

AW7 Atmospheric hazards – Nikolai Dotzek memorial

Conveners: F. Stel; D. Giaiotti
Lecture Room: E1.2

14:00–16:00
Chairperson(s): Fulvio Stel

14:00–14:15: EMS2010-668
Creating a comprehensive quality-controlled dataset of severe weather occurrence in Europe
P. Groenemeijer, T. Kühne, Z. Liang, A. Holzer, B. Feuerstein, N. Dotzek
European Severe Storms Laboratory, Weßling, Germany (pieter.groenemeijer@essl.org)

14:15–14:30: EMS2010-358
Synoptic- and Mesoscale Weather Situations Associated with Tornadoes in Europe
M. Graf, M. Sprenger, R.W. Moore
Institute for Atmospheric and Climate Science, ETH, Zurich, Switzerland

14:30–14:45: EMS2010-545
Atmospheric precursors and assessment of the extreme rainfall responsible for the Madeira flashfloods on 20 February 2010
M. Fragoso, R.M. Trigo, S. Lopes, A. Lopes, C. Magro
Universidade de Lisboa, Centro de Estudos Geográficos, Lisboa, Portugal (mfragoso@campus.ul.pt)

14:45–15:00: EMS2010-131
Mesoscale Convective Complexes over the China during 2005 to 2009
J. Xi
(jingxiailihua@126.com)

15:00–15:15: EMS2010-343
3D Structure of Typhoon Spiral Rainband Observed by Dual-Doppler
H.G. Zhou
Chinese Academy of Meteorological Sciences, State Key Laboratory of Severe Weather, Beijing, China (zhg@cams.cma.gov.cn)

15:15–15:30: EMS2010-206
Impact of Atlantic evaporation hot spots on southern Alpine heavy precipitation events
A. Winschall, S. Pfahl, H. Sodemann, H. Wernli
Institute for Atmospheric and Climate science, ETH Zürich, Universitätsstrasse 16, 8092 Zürich, Switzerland (andreas.winschall@env.ethz.ch)

15:30–15:45: EMS2010-150
High-resolution simulations of a heavy snowfall event in Germany
C. Frick, H. Wernli
ETH Zurich, Institute for Atmospheric and Climate Science, Switzerland (claudia.frick@env.ethz.ch)

15:45–16:00: EMS2010-283
Impact of radar data assimilation on WRF simulations of the Aniene flood
I. Maiello, R. Ferretti, S. Gentile, M. Montopoli, E. Picciotti, G. Giuliani, F.S. Marzano
Department of Engineering and Environmental Physics, University of Basilicata, (delfida2003@yahoo.it), Centre of Excellence CETEMPS, Department of Physics - Atmospheric Sciences University of L'Aquila

16:00 Coffee Break

16:30–18:30
Chairperson(s): Pieter Groenemeijer - Alois Holzer

16:30–16:45: EMS2010-623
The Application of Total Lightning Detection for Severe Storm Prediction
S. Heckman, C. Liu
WeatherBug Professional; Germantown, MD, USA (sheckman@weatherbug.com)

16:45–17:00: EMS2010-192
Ten years of Lightning Imaging Sensor (LIS) data: Preparing the way for geostationary lightning imaging
J. Grandell, R. Stuhlmann
EUMETSAT, Darmstadt, Germany (jochen.grandell@eumetsat.int)

17:00–17:15: EMS2010-634
Heavy rain over Marmara region due to a cut-off cyclone
A. Kahraman, S. Tilev Tanriover
Istanbul Technical University, Meteorology, Istanbul, Turkey (kahramanab@itu.edu.tr)

17:15–17:30: EMS2010-383
Automated turbulence forecasts for aviation hazards
R. Sharman, R. Frehlich, F. Vandenberghe
NCAR, RAL, Boulder, United States (vandenb@ucar.edu)

17:30–17:45: EMS2010-6
Application of hailpad data by construction of anti-hail nets in Croatia
D. Pocakal, Z. Vrljicak
Meteorological and Hydrological Service of Croatia, 10000 Zagreb, Gric 3, Croatia

17:45–18:00: EMS2010-281
On the analysis of an extreme Bora wind event over the northern Adriatic Sea
R.R. Colucci, A. Pucillo
Institute for Marine Sciences - Trieste, National Research Council of Italy (r.colucci@ts.ismar.cnr.it)
Friuli Venezia Giulia Meteorological Union - UMFVG, Italy

18:00–18:15: EMS2010-659
Low-mode analysis of tornado-type vortex in axial channel
P.B. Rutkevich, P.P. Rutkevych
Space Research Institute (IKI), RAS, Moscow, pbrutkevich@gmail.com

18:15–18:30: EMS2010-723
Response of the Lower and Higher Ionosphere to Strong Tropospheric Disturbances
L.B. Vanina-Dart, A.A. Romanov, E.A. Sharkov
Space Research Institute, Earth remote sensing, Moscow, Russian Federation (vandart@seeingear.org)

END OF ORAL PROGAMME AW7

AW9 Interfacing hydrological and meteorological models in forecasting systems

Conveners: B. Ahrens; M. Zappa; H. Formayer
Lecture Room: E1.1

08:30–10:30
Chairperson(s): B. Ahrens, H. Formayer, M. Zappa

08:30–08:45: EMS2010-477
Soil moisture initialization effects in the Indian monsoon system
S. Asharaf, A. Dobler, B. Ahrens
Institute for Atmospheric and Environmental Sciences, Goethe-University, Frankfurt am Main, Germany (asharaf@iau.uni-frankfurt.de)

08:45–09:00: EMS2010-792
Bias correction and localization of regional climate scenarios over mountainous area on a 1x1 km grid
B. Pospichal, H. Formayer, P. Haas, I. Nadeem
Institute of Meteorology, University of Natural Resources and Applied Life Sciences (BOKU), Vienna, Austria

09:00–09:15: EMS2010-73
Using dynamically downscaled GCM outputs in hydrological models: a case study from Tasmania, Australia
J. Bennett, M. Grose, F. Ling, S. Corney, G. Holz, C. White, B. Graham, D. Post, N. Bindoff
Antarctic Climate and Ecosystems Cooperative Research Centre, University of Tasmania, Australia (james.bennett@hydro.com.au), Hydro Tasmania Consulting, Cambridge, Australia

09:15–09:30: EMS2010-145
The state of the art of flood forecasting - Hydrological Ensemble Prediction Systems (solicited)
J. Thielen-del Pozo, F. Pappenberger, P. Salamon, K. Bogner, P. Burek, A. de Roo
EC Joint Reseach Centre, IES, ISPRA (VA), Italy (jutta.thielen@jrc.ec.europa.eu)

09:30–09:45: EMS2010-54
Predictability in France: atmospheric forcing or land surface initial conditions?
S. Singla, E. Martin, J.-P. Céron, F. Regimbeau
Climatology Department, Météo-France (CNRM-GAME), 42 Avenue G.Coriolis, F31057 Toulouse Cédex 01, France (stephanie.singla@meteo.fr)

09:45–10:00: EMS2010-135
Enhanced precipitation analysis in Alpine catchments by combining a meteorological analysis and nowcasting system with a hydrological model
B. Bica, M. Herrnegger, A. Kann, T. Haiden, H.P. Nachtnebel
Central Institute for Meteorology and Geodynamics, Vienna, Austria

10:00–10:15: EMS2010-691
Integration of meteorological forecasts in operational flood forecasting
M.G.F. Werner, R. Deizig, K. Jasper, D. Schwanenberg, S. Vogt, M. Zappa, M. Ossiaa, S. Patzke
Deltares, PO Box 177, 2600MH Delft, The Netherlands (Micha.Werner@deltares.nl), UNESCO-IHE, PO Box 3015, 2601DA Delft, The Netherlands

10:15–10:30: EMS2010-159
The (ir)relevance of improvements in meteorological forecasts for hydrology (solicited)
F Pappenberger
European Centre for Medium Range Weather Forecasts, Reading, UK (florian.pappenberger@ecmwf.int)

END OF ORAL PROGAMME AW9

AW11 Environmental Meteorology

Convener: S. M. Joffre
Co-Conveners: M. Piringer; R. Sokhi; A. Baklanov; P. Builtjes
Lecture Room: E3

08:30–10:30
Chairperson(s): Sylvain Joffre

08:30–08:45: EMS2010-489
Climate change impact on future air quality in Europe
K. V. Varotsos, C. Giannakopoulos, M. Tombrou
Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece, Division of Environmental Physics and Meteorology, National and Kapodistrian University of Athens, Greece

08:45–09:00: EMS2010-753
Investigating the Optical and Microphysical Properties of Particulate Matter during MEGAPOLI Field Campaigns
R. Hu, R. Sokhi, C. Chemel, X. Vazhappilly-Francis, Y. Yu, B. Fisher
University of Hertfordshire, Science and Technology Research Institute (STRI), Hatfield, United Kingdom (r.hu@herts.ac.uk)

09:00–09:15: EMS2010-788
Urban impact on air quality in RegCM/CAMx couple for MEGAPOLI project - high resolution sensitivity study
T. Halenka, P. Huszar, M. Belda
Charles University in Prague, Fac. of Math. & Physics, Dept. of Meteorology and Environment Protection, Prague, Czech Republic (halenka@mbox.troja.mff.cuni.cz)

09:15–09:30: EMS2010-759
Response of London's urban heat island to a marine air intrusion in an easterly wind regime
C. Chemel, R. S. Sokhi
NCAS-Weather, Centre for Atmospheric & Instrumentation Research, University of Hertfordshire, Hatfield, UK (c.chemel@herts.ac.uk)

09:30–09:45: EMS2010-770
Simulation of European air pollution with the mesoscale model system M-SYS
O. Ross, D. Grawe, M. Uphoff, K.H. Schlünzen
Meteorological Institute, KlimaCampus, University of Hamburg, Germany (ole.ross@zmaw.de)

09:45–10:00: EMS2010-752
Air quality assessment and sensitivity studies by numerical simulations over a regional domain
S. Del Frate, I. Gallai, D. Giaiotti, F. Montanari, A. Petrini, A. Pillon, T Pinat, **F. Stel**, F. Tassan, F. Turoldo and the rest of ARPA FVG - CRMA Team
ARPA FVG - CRMA, Regional Center for Environmental Modeling, Palmanova, Italy (dario.giaiotti@arpa.fvg.it)

10:00–10:15: EMS2010-242
Meteorological determinants of air quality
F. Turoldo, S. Del Frate, I. Gallai, D. B. Giaiotti, F. Montanari, **F. Stel**, D. Goi
ARPA CRMA, Palmanova UD, Italy (fulvio.stel@arpa.fvg.it)

10:15–10:30: EMS2010-66
Evaluation of deposition models for simulating ecosystem ozone fluxes
D. Szinyei, Gy. Gelybó, A. Guenther, A. A. Turnipseed, L. Grünhage, A. Kerschbaumer, P. Builtjes
Institute for Meteorology, Freie Universität Berlin, Germany (szinyei.dalma@fu-berlin.de)

10:30 Coffee Break

11:00–13:00
Chairperson(s): Martin Piringer

11:00–11:15: EMS2010-816
International Centre for Earth Simulation (ICES)
R. Bishop
President, ICES Foundation, Geneva, Switzerland

11:15–11:30: EMS2010-595
Modeling and measurement of the volcanic ash plume transport from the Eyjafjallajökull volcano towards Central Europe in April 2010-Methods applied and lessons learned
G. Wotawa, M. Kerschbaum
Central Institute for Meteorology and Geodynamics, Data, Methods and Modelling, Vienna, Austria (gerhard.wotawa@zamg.ac.at)

11:30–11:45: EMS2010-680
Observation of volcanic aerosol transfer over Siberian - Far Eastern lidar network
A.A. Cheremisin, V.N. Marichev, P.V. Novikov
Siberian Federal University, Krasnoyarsk, Russia (cher@akadem.ru)

11:45–12:00: EMS2010-420
Sensitivity of the dust cycle in a Chemistry-GCM
G. Gläser, A. Kerkweg, H. Wernli
Johannes Gutenberg University Mainz, Institute for Atmospheric Physics, Mainz, Germany

12:00–12:15: EMS2010-130
Large-Eddy Simulation on Plume Dispersion within Regular Arrays of Cubic Buildings
H. Nakayama, K. Jurcakova, H. Nagai
Japan Atomic Energy Agency, Japan (nakayama.hiromasa@jaea.go.jp)

12:15–12:30: EMS2010-568
Turbulent structure of the urban boundary layer over Paris as obtained in urbanized large-eddy simulations
I Esau
G.C. rieber Climate Institute, Nansen Environemntal and Remote Sensing Centre, Bergen, Norway (igor.ezau@nersc.no)

12:30–12:45: EMS2010-525
LES validation for contaminant transport in urban areas
D. Hertwig, B. Leitl, M. Schatzmann, G. Patnaik
Meteorological Institute, KlimaCampus, University of Hamburg, Germany (denise.hertwig@zmaw.de)

12:45–13:00: EMS2010-296
Evaluating the impact of alternative stable boundary layer heights formulations for air quality modelling in south-eastern France
S. Argence, S. Amblard, F. Brocheton
NUMTECH, Aubière, France (sebastien.argence@numtech.fr)

END OF ORAL PROGAMME AW11

AW14 Energy meteorology

Convener: S.E. Gryning
Co-Conveners: E. Batchvarova; L. Wald; M. Schroedter-Homscheidt
Lecture Room: E1.1

11:00–13:00
Chairperson(s): Ekaterina Batchvarova

11:00–11:15: EMS2010-657
Wind turbines in icing conditions: performance and prediction
S. Dierer, R. Oechslin, R. Cattin
Meteotest, Bern, Switzerland (silke.dierer@meteotest.ch)

11:15–11:30: EMS2010-783
Prediction of unsteady pressure loads on slender bodies using V-LES as an alternative to LES
C. Narayanan, M. Labois, D. Lakehal
ASCOMP GmbH, Technoparkstrasse 1, 8005 Zürich, Switzerland (chidu@ascomp.ch)

11:30–11:45: EMS2010-552
Large-eddy simulation of an infinitely large wind farm in a stable atmospheric boundary layer
H. Lu, F. Porté-Agel
University of Minnesota, Saint Anthony Falls Laboratory, Department of Civil Engineering, United States

11:45–12:00: EMS2010-549
Large Eddy Simulation study of fully developed thermal wind-turbine array boundary layers
M. Calaf
EPFL, Lausanne, Switzerland

12:00–12:15: EMS2010-702
A Non-Linear Mixed Spectral Finite-Difference 3-D Model of Planetary Boundary-Layer Flow over Complex Terrain and Its Application
W. Weng, P.A. Taylor
York University, Earth & Space Science & Engineering, Toronto, Ontario M3J 1P3, Canada (wweng@yorku.ca)

12:15–12:30: EMS2010-390
Impact of assimilating met-tower, turbine nacelle anemometer and other intensified wind farm observation systems on 0 - 12h wind energy prediction using the NCAR WRF-RTFDDA model
Y. Liu, W. Cheng, Y.W. Liu, G. Wiener, R. Frehlich, W. Mahoney, T. Warner, J. Himelic, K. Parks, S. Early
National Center for Atmospheric Research, Research Application Lab, Boulder, United States (yliu@ucar.edu)

12:30–12:45: EMS2010-599
An application of ensemble/multi model approach for wind power production forecast.
S. Alessandrini, G. Decimi, R. Hagedorn, S. Sperati
(ERSE, Milan, Italy,stefano.alessandrini@erse-web.it)

12:45–13:00: EMS2010-766
Applications of Self Organizing Maps in Wind Energy Meteorology
A. Hahmann, C. Vincent, M. Kelly
Risoe-DTU, Risoe, Wind Energy Division, Roskilde, Denmark (ahah@risoe.dtu.dk)

13:00 Lunch Break

14:00–16:00

Chairperson(s): Lucien Wald

14:00–14:15: EMS2010-719

Wind tunnel simulations of wind turbine wake interactions in neutral and stratified wind flow.

P. E. Hancock, F. Pascheke
EnFlo Laboratory, University of Surrey, UK

14:15–14:30: EMS2010-739

Estimation of wind shear components over complex terrain, and their removal to enhance wind profiling

S. Bradley, B Vallès
University of Auckland, Physics, Auckland, New Zealand (s.bradley@auckland.ac.nz)

14:30–14:45: EMS2010-261

The Tall Wind project - exploring the wind profile and boundary-layer height in the atmosphere's first kilometer over flat terrain.

S.E. Gryning, E. Batchvarova, A. Pena, T. Mikkelsen, B. Brümmer, S. Emeis, L. Gulstad, N. Lee
Technical University of Denmark, Risoe DTU, Wind Energy Division, Roskilde, Denmark (sveg@risoe.dtu.dk)

14:45–15:00: EMS2010-652

Variability of Wind Speeds and Power over Europe

J. Tambke, L. von Bremen, J. De Decker, M. Schmidt, G. Steinfeld, J.-O. Wolff
ForWind / Institute of Physics, University of Oldenburg, Oldenburg, Germany (jens.tambke@uni-oldenburg.de)

15:00–15:15: EMS2010-794

Widespread land surface wind decline in the Northern Hemisphere

R. Vautard, J. Cattiaux, P. Yiou, J.-N. Thépaut, P. Ciais
LSCE/IPSL, Laboratoire CEA/CNRS/UVSQ, France

15:15–15:30: EMS2010-215

Use of meteorological information in the risk analysis of a mixed wind farm and solar

H.-T. Mengelkamp, D. Bendel
GKSS Research Center Geesthacht GmbH, 21502 Geesthacht, Germany, anemos Gesellschaft für Umweltmeteorologie mbH, Bunsenstr. 8, 21365 Adendorf, Germany

15:30–15:45: EMS2010-127

Analysis of the balancing of the wind and solar energy resources in Andalusia (Southern Spain)

F.J. SANTOS-ALAMILLOS, **D. POZO-VAZQUEZ**, V. LARA-FANEGO, J.A. RUIZ-ARIAS,
J. HERNANDEZ-ALVARO, J. TOVA-PESCADOR
UNIV. JAEN, DEPART. OF PHYSICS, JAEN, Spain (dpozo@ujaen.es)

15:45–16:00: EMS2010-136

Cloud physical parameters for an improved solar power plant site selection and characterisation

M. Schroedter-Homscheidt, G. Gesell
DLR, German Remote Sensing Data Center, Wessling, Germany (marion.schroedter-homscheidt@dlr.de)

16:00 Coffee Break

16:30–18:30

Chairperson(s): Marion Schroedter-Homscheidt

16:30–16:45: EMS2010-414

Trends in global radiation between 1950 and 2100

J. Remund, S.C. Müller
Meteotest, Meteorology, Bern, Switzerland (jan.remund@meteotest.ch)

16:45–17:00: EMS2010-235

Assessment of TMY generation methods for solar power production estimation

H. Zebner
Lahmeyer International GmbH, 61118 Bad Vilbel, Germany, holger.zebner@lahmeyer.de)

17:00–17:15: EMS2010-221

On the intraday resampling of time-integrated values of solar radiation

Ph. Blanc, **L. Wald**
MINES ParisTech, Sophia Antipolis cedex, France (lucien.wald@mines-paristech.fr)

17:15–17:30: EMS2010-228

Tailored high-resolution numerical weather forecasts for energy efficient predictive building control

V.J. Stauch, M. Gwerder, D. Gyalistras, F. Oldewurtel, F. Schubiger, P. Steiner
Federal Office of Meteorology and Climatology (MeteoSwiss), Process Models, Zürich, Switzerland (vanessa.stauch@meteoswiss.ch)

17:30–17:45: EMS2010-319

PV production forecast in La Reunion Island

L. Dubus, V. Leboucher, M. Garo
EDF R&D / MFEE, Applied Meteorology and Atmospheric Environment, CHATOU CEDEX, France (laurent.dubus@edf.fr)

17:45–18:00: EMS2010-387

Assessment of model global and direct radiation for use in solar energy resource estimation

A. Troccoli, C Russell, J-J Morcrette, P Bechtold
CSIRO, Canberra, Australia (alberto.troccoli@csiro.au)

18:00–18:15: EMS2010-406

Development of a short-term irradiance prediction system using post-processing tools on WRF-ARW meteorological forecasts in Spain

A. Rincón, O. Jorba, J.M. Baldasano
Barcelona Supercomputing Center, Earth Sciences, Spain (angel.rincon@bsc.es), Environmental Modelling Laboratory, Technical University of Catalonia, Barcelona, Spain

18:15–18:30: EMS2010-495

A computer vision approach for solar radiation nowcasting using MSG images

L. Álvarez, **C.A. Castaño Moraga**, J. Martín
Instituto Tecnológico de Canarias, S.A. Playa de Pozo Izquierdo, s/n, 35119 - Santa Lucía (Las Palmas), Spain

END OF ORAL PROGAMME AW14

Understanding processes and climate change

UC2 Climate modelling, climate prediction and scenarios from seasons to century

Convener: C. Appenzeller
Co-Conveners: C.M. Goodess; C. Schär; R.E. Benestad
Poster Area: P3
Attendance Time: 18:30–19:30

P3-1: EMS2010-16
Predictive Ocean Atmosphere Model for Australia (POAMA)
A. Zhong, D Hudson, O Alves, G Wang, H Hendon (ahz@bom.gov.au) National Meteorological & Oceanographic Centre, Bureau of Meteorology, Melbourne, Australia

P3-2: EMS2010-166
Impact of snow on the NH autumn and winter circulation in an ensemble of coupled forecasts
Y. ORSOLINI, G. BALSAMO, F. DOBLAS-REYES, F. VITART, A. WEISHEIMER
NILU, ATMOS, Kjeller, Norway (orsolini@nilu.no)

P3-3: EMS2010-476
Impact of horizontal resolution on simulations of summertime Euro-Atlantic blocking
M. Matsueda, T. N. Palmer
JAMSTEC, Tsukuba, Japan (miom@jamstec.go.jp)

P3-4: EMS2010-663
Performance of tropical channel simulations using the WRF model: Ethiopian rainfall responses to microphysical and cumulus parameterization schemes
D. Korecha, T. M. Lunde, M. d. S. Mesquita, A. Sorteberg
National Meterological Agency, Addis Abeba, Ethiopia (diriba.korecha@gmail.com)

P3-5: EMS2010-9
Initial tendencies of cloud regimes in the Unified Model
K. D. Williams, M. E. Brooks
Met Office, Exeter, United Kingdom (keith.williams@metoffice.gov.uk)

P3-6: EMS2010-630
Assessment of precipitation in the Iberian Peninsula: WRF regional climate simulations
R. M. Cardoso, P. M. Soares, P. M. Miranda
Centro de Geofísica - IDL, Universidade de Lisboa, Lisboa, Portugal (rmcardoso@fc.ul.pt)

P3-7: EMS2010-186
Evaluation of COSMO-CLM simulations for the use in climate impact studies
B. Früh, S. Brienen, A. Walter
Deutscher Wetterdienst, Klima und Umweltberatung, Offenbach, Germany (barbara.frueh@dwd.de)

P3-8: EMS2010-195
Processing of mesoscale climate projection data for the joint research project KLIWAS
F. Imbery, S. Plagemann, **J. Namyslo**

P3-9: EMS2010-244
A Regional Earth System Perspective on the Water Budget over the Mediterranean Catchment Area
A. Dell'Aquila, S. Calmanti, A. Carillo, G. Pisacane, P.M. Ruti, G. Sannino, M.V. Struglia, V. Artale
ENEA, C.R. Casaccia, UTMEA-CLIM, rome, Italy (alessandro.dellaquila@enea.it)

P3-10: EMS2010-266
Estimation of wind storm impacts over Western Germany under future climate conditions using a statistical-dynamical downscaling approach
J.G. Pinto, C.P. Neuhaus, G.C. Leckebusch, L. Kirchhübel, M. Reyers, M. Kerschgens
Institute for Geophysics and Meteorology, University of Cologne, Germany (jpinto@meteo.uni-koeln.de)

P3-11: EMS2010-268
Assessment of possible changes in return period and ranking of losses associated with European wind storms in a future climate
M.K. Karremann, **J.G. Pinto**, M. Klawa, P.M. Della-Marta, M. Stowasser
Institute for Geophysics and Meteorology, University of Cologne, Germany (jpinto@meteo.uni-koeln.de)

P3-12: EMS2010-308
The urban impact on the regional climate of Dresden
B. Sändig, E. Renner
Leibniz Institute for Tropospheric Research (IfT), Leipzig (saendig@tropos.de)

P3-13: EMS2010-392
Drought analysis in Serbia using the Standardized Precipitation Index
I. Tosic, A. Krzic, V. Djurdjevic, M. Unkasevic, B. Rajkovic
University of Belgrade, Dept. of Meteorology, Belgrade, Serbia (itosic@ff.bg.ac.rs)

P3-14: EMS2010-45
Impact of climate change on cotton cultivation grown in the rainfed system in northeastern region of Brazil
V. P. Rodrigues da Silva, M. T Silva, P. V. Azevedo
Federal University of Campina Grande, Atmospheric Science, Campina Grande, Brazil (vicente@dca.ufcg.edu.br)

P3-15: EMS2010-637
Regional Climate Modeling at ZAMG and climate impact assessment for European ecosystems
I. Anders, M. Zuvela-Aloise, C. Matulla
Central Institute for Meteorology and Geodynamics (ZAMG), Climate Modelling, Vienna, Austria (ivonne.anders@zamg.ac.at)

P3-16: EMS2010-671
Precipitation efficiency of the Colorado mountains under warmed climate
R Nogherotto, **V Grubišić**, RM Rasmussen and the Rassmussen Team
University of Vienna, Department of Meteorology and Geophysics, Austria (vanda.grubisic@univie.ac.at)

P3-17: EMS2010-675
Analysis of simulated wind climate of the Carpathian basin using PRECIS outputs
L. Dobor, R. Pongracz, J. Bartholy, I. Pieczka
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary

P3-18: EMS2010-442
A Future Estimation of the Surface Runoff in the Greek Region: A Case Study of one of the Main Catchments Areas (Aravissos - Central Macedonia)
C. Anagnostopoulou, K. Tolika, M. Vafiadis
Aristotle University of Thessaloniki, Dept. of Meteorology and Climatology, Thessaloniki, Greece (chanag@geo.auth.gr)

P3-20: EMS2010-191
Atlantic Multidecadal oscillation, Thermohaline Catastrophe and their Impact on Climate of the North Atlantic Region
A. Polonsky
Marine Hydrophysical Institute, Sevastopol, Ukraine (apol@alpha.mhi.iuf.net)

P3-21: EMS2010-15
A study of some climate change scenarios in northeastern region of Brazil
V. P. Rodrigues da Silva, D. N. Santos, R. A. Silva, R. S. R. Almeida
Technology Centre and Natural Resource, Federal University of Campina Grande, Campina Grande, Brazil (vicente@dca.ufcg.edu.br)

P3-22: EMS2010-116
About the reaction of climatic conditions of Ukraine to global warming: semi-empirical model and scenarios
S.G. Boychenko, V.M. Voloshchuk
Institute of geophysics NAS of Ukraine., Kyev, Ukraine (uaclimate@gmail.com)

P3-23: EMS2010-185
A Comparison between a GFDL General Circulation Model and Observations using Harmonic Analysis
F. Taghavi
University of Tehran, Geophysics Institute, Space Physics, Tehran, Islamic Republic Of Iran (ftaghavi@ut.ac.ir)

P3-24: EMS2010-20
Analysis of the influence of lateral boundary conditions based on REMO RCM simulations over the Carpathian Basin
G. Szépszó
Hungarian Meteorological Service, Numerical Modeling and Climate Dynamics Division, Budapest, Hungary (szepszo.g@met.hu)

P3-25: EMS2010-219
Climate model downscaling for Slovenia
N. Zagar, G. Skok, J. Rakovec
University of Ljubljana, Faculty of Mathematics and Physics, Department of Physics, Ljubljana, Slovenia (nedjeljka.zagar@fmf.uni-lj.si)

P3-26: EMS2010-237
Temperature and precipitation extremes in climate model outputs over central Europe
R. Beranova, L. Gaal, J. Kysely, E. Plavcova, P. Stepanek
Institute of Atmospheric Physics AS, Institute of Atmospheric Physics, Praha, Czech Republic (rber@ufa.cas.cz)

P3-27: EMS2010-37
2. Wind speed change in central Europe: the projections based on regional climate models
M. Siedlecki
University of Lodz, Department of Meteorology and Climatology, Lodz, Poland (siedlec@geo.uni.lodz.pl)

P3-28: EMS2010-377
The range of regional climate change projections in central Europe: How to deal with the spread of climate model results?
D. Rechid, D. Jacob, R. Podzun
Max-Planck-Institut fuer Meteorologie, Hamburg, Germany

P3-29: EMS2010-401
Climate change scenarios of temperature and precipitation over five Italian regions for the period 2021-2050 obtained by statistical downscaling models
R. Tomozeiu, F. Tomei, G. Villani, M. Pasqui
ARPA-SIMC, Bologna, Italy (rtomozeiu@arpa.emr.it)

P3-30: EMS2010-405
Analysis of uncertainties in ENSEMBLES regional climate models outputs over the Czech Republic
E. Holtanova, J. Kalvova
Charles University in Prague, Faculty of Mathematics and Physics, Department of Meteorology and Environmental Protection, Praha, Czech Republic (eva.holtanova@matfyz.cz)

P3-31: EMS2010-407
Assessment of regional climate models performance in simulating present-day climate over the area of the Czech Republic
L. Crhova, E. Holtanova, J. Kalvova, J. Miksovsky
Charles University in Prague, Faculty of Mathematics and Physics, Department of Meteorology and Environmental Protection, Praha, Czech Republic (crhoval@gmail.com)

P3-32: EMS2010-410
Assessment of the future climate change in the Czech Republic based on ALADIN-CLIMATE/CZ and AR4 models
J. Kalvova, E. Holtanova, L. Crhova, J. Miksovsky, P. Pisoft, M. Motl
Charles University in Prague, Faculty of Mathematics and Physics, Department of Meteorology and Environmental Protection, Praha, Czech Republic (jaroslava.kalvova@mff.cuni.cz)

P3-33: EMS2010-475
Dealing with multi-GCM ensemble in developing the climate change scenarios the probabilistic impact assessments
M. Dubrovsky
Institute of Atmospheric Physics, Prague, Czech Republic (dub@ufa.cas.cz)

P3-34: EMS2010-480
Multi-step regionalization technique and regional model validation for climate studies
D. Argüeso, J.M. Hidalgo-Muñoz, D. Calandria-Hernández, S.R. Gámiz-Fortis, M.J. Esteban-Parra, Y. Castro-Díez
Facultad de Ciencias. Universidad de Granada, Física Aplicada, Granada, Spain (ycastro@ugr.es)

P3-35: EMS2010-484
Regional climate simulations over complex topography using WRF: Andalusian present climate
D. Argüeso, J.M. Hidalgo-Muñoz, D. Calandria-Hernández, S.R. Gámiz-Fortis, M.J. Esteban-Parra, Y. Castro-Díez
Facultad de Ciencias. Universidad de Granada, Física Aplicada, Granada, Spain (ycastro@ugr.es)

P3-36: EMS2010-491
CECILIA regional climate simulations for present climate - validation and inter-comparison
P. Skalak, M. Déqué, A. Farda, M. Belda, G. Csima, R. Pongratz, M. Caian, V. Spiridonov
Czech Hydrometeorological Institute, Department of Climatology, Na Sabatce 17, Prague, Czech Republic (skalak@chmi.cz)

P3-37: EMS2010-492
Trend and variability of Northern Hemisphere Teleconnection Indices simulated with CMIP3
N Gonzalez-Reviriego, C Rodriguez-Puebla
University of Salamanca, Department of Atmospheric Physics, Salamanca, Spain (nube@usal.es)

P3-38: EMS2010-500
Regional climate modelling of 2m temperature and precipitation changes in future climate over Europe
M. Patarcic, I. Guettler, L. Srnec, C. Brankovic
Meteorological and Hydrological Service, Zagreb, Croatia

P3-39: EMS2010-635
Projections of extreme indices over Europe from a pattern scaling approach
A. Lustenberger, R. Knutti
Institute for Atmospheric and Climate Science (IAC), ETH, Zurich, Switzerland
(andreas.lustenberger@env.ethz.ch)

P3-40: EMS2010-640
Regime-dependent validation of simulated surface wind speed
I. Anders, B. Rockel
Central Institute for Meteorology and Geodynamics (ZAMG), Climate Modelling, Vienna, Austria (ivonne.anders@zamg.ac.at)

P3-41: EMS2010-682
How the climate means and extremes are projected to change in the Carpathian Basin? An analysis of RegCM simulations using A1B emission scenario
R. Pongracz, J. Bartholy, G. Kovacs, Cs. Torma
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (prita@caesar.elte.hu)

P3-42: EMS2010-688
Intercomparison of statistical techniques for postprocessing the RCM-generated data
J. Miksovsky, P. Skalak, P. Stepanek
Dept. of Meteorology, Charles University, Prague, Czech Republic (jiri.miksovsky@mff.cuni.cz)

P3-43: EMS2010-699
Trend analysis of simulated wet and dry conditions in the Carpathian basin using PRECIS outputs
J. Bartholy, R. Pongracz, I. Pieczka, B. Hollosi, O. Torek
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (bari@ludens.elte.hu)

P3-44: EMS2010-75
Analysis of expected regional climate change in the Carpathian Basin using ENSEMBLES model simulations
E. Miklos, R. Pongracz, J. Bartholy
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (miklosera@yahoo.com)

P3-45: EMS2010-787
How can RCMs reproduce the annual cycle and what we can learn from it
T. Halenka, P. Skalak, P. Huszar, M. Belda
Charles University in Prague, Fac. of Math. & Physics, Dept. of Meteorology and Environment Protection, Prague, Czech Republic
(halenka@mbox.troja.mff.cuni.cz)

P3-46: EMS2010-88
Statistical downscaling of the pressure for extreme spring precipitation estimation in the Danube middle and lower basin for 21-st century
I. Mares, C. Mares, P. Stanciu, M. Mihailescu
National Institute of Hydrology and Water Management, Bucharest, Romania (ileana.mares@hidro.ro)

P3-47: EMS2010-94
Projected climate changes in Ukraine based on a multi-scenario AOGCM's ensemble
S. Krakovska, L. Palamarchuk, I. Shedemenko, G. Djukel, N. Gnatjuk
Ukrainian Hydrometeorological Institute, Physics of the Atmosphere Dept., Kiev, Ukraine (krasvit@ua.fm)

P3-48: EMS2010-58
21-st century precipitation estimation in the Danube middle and lower basin by EVT modelling
C. MARES, I. MARES, M. MIHAILESCU, A. STANCIU
National Institute of Hydrology and Water Management, Bucharest, Romania (constantin.mares@hidro.ro)

END OF POSTER PROGAMME UC2

Services translating science to users

SE1 Climate Services: standardized - ready to use - applications

Convener: J. Prior
Co-Conveners: R. Sluijter; K. Fortuniak; E. Forland; Z. Ustrnul; D. Hollis
Poster Area: P1
Attendance Time: 19:00–20:00

P1-47: EMS2010-706
The Climate Data Centre of Deutscher Wetterdienst (DWD)
F. Kaspar, K.-J. Schreiber, J. Behrendt
Deutscher Wetterdienst, Offenbach, Germany (frank.kaspar@dwd.de)

P1-48: EMS2010-24
Determination of informative climate characteristics for regional assessment of annual river runoff
V. Konovalov
Institute of Geography, Glaciology, Moscow, Russian Federation (vladgeo@gmail.com)

END OF POSTER PROGAMME SE1

SE2/CE3 Climate Services: User tailored custom made applications (co-organized)

Convener: A. Kattenberg
Co-Conveners: I. Meinke; C.M. Goodess; J. Bessembinder; B. Overbeek; A. Spekat
Poster Area: P1
Attendance Time: 19:00–20:00

P1-49: EMS2010-132
Modelling snow properties in Kautokeino, Northern Norway
D. Vikhamar-Schuler, S. Dish Mathiesen, I. Hanssen-Bauer
The Norwegian Meteorological Institute, Climatology, 0313 Oslo, Norway (dagrun@met.no)

P1-50: EMS2010-153
Assessment of factors responsbile for climate change and human health problems
V. K. Jena
(jenavinod02@gmail.com)

P1-51: EMS2010-305
Estimation of the (change in the) probability of simultaneous extreme weather events - a case study for snow & wind
H.W. van den Brink, W.D. van den Berg
MeteoGroup - Meteo Consult, Wageningen, Netherlands

P1-52: EMS2010-464
Earth System Model validation with weather station data: towards responding to user needs
S. Calmanti, **A. Dell'Aquila**, F. Maimone, V. Pelino
ENEA, C.R. Casaccia,UTMEA-CLIM, Rome, Italy

P1-53: EMS2010-482
How to assess extreme weather impacts - case European transport network
P. Leviäkangas
(pekka.leviakangas@vtt.fi) VTT Technical Research Centre of Finland

P1-54: EMS2010-579
Climate Services in the activities of WMO and GMES: an analytical overview
G. Kortchev, **E. Batchvarova**, V. Alexandrov, A. Yotova
National Institute of Meteorology and Hydrology, Sofia, Bulgaria (antoaneta.iotova@meteo.bg)

P1-55: EMS2010-633
Probabilistic Climate Projections Influencing Future Weather Years for Energy Modelling
S. Th Smith, V. I Hanby
Institute of Energy and Sustainable Development, De Montfort University, Leicester, UK (stsmith@dmu.ac.uk)

P1-56: EMS2010-643
Severe thunderstorms in a changing climate: Assessing their impact on European transport, in particular aviation
N. Dotzek, J. Sander, T. Gerz, P. Groenemeijer
DLR - Institute of Atmospheric Physics, Atmospheric Dynamics, Wessling, Germany (nikolai.dotzek@dlr.de), ESSL, Wessling, Germany

P1-57: EMS2010-762
User applications of the UK Met Office seasonal forecasting system GloSea4
M. Vellinga, A. Arribas, J. Camp, A. Maidens, K. Peterson, M. Gordon, C. MacLachlan, R. Graham, A. Colman, P. McLean
Met Office, Hadley Centre, Exeter, United Kingdom (michael.vellinga@metoffice.gov.uk)

END OF POSTER PROGAMME SE2/CE3

Atmosphere and the Water Cycle

AW1 Dynamical Meteorology

Convener: T. Frisius
Co-Conveners: F. Lunkeit; P. M. Ruti
Poster Area: P2
Chairperson(s): T. Frisius
Attendance Time: 18:30–19:30

P2-1: EMS2010-111
Arctic Oscillation and the Northern Hemisphere Cold Surge at 2009/2010 Winter
S.-J. Kim, B.-M. Kim, H.-H. Lee, Y.-J. Kim
Korea Polar Research Institute, Polar Climate Research Center, Incheon, Republic Of Korea (seongjkim@kopri.re.kr)

P2-2: EMS2010-211
Two Dimension Larger-Scale Stability and Subtropical High Meridian Behaviours
W.-L. Wang, Y.-L. Liu, N.-S. Deng, H.-B. Hou, Z.-W. Wang, C.-G. Cui, Y.-Q. Xie
School of Resource and Environmental science of Wuhan University, Wuhan, China, 430079, Wuhan Regional Climate Center, Wuhan, China, 430074, Institute of Heavy Rain, CMA, Wuhan, China, 430074, College of Earth Science, Yunnan University, Kunming, China

P2-3: EMS2010-210
Variability and Long-term Memory on an Aquaplanet with a Coupled Atmosphere-Ocean Model
E. Dahms, K. Fraedrich, F. Lunkeit, H. Borth
Max Planck Institute for Meteorology, Hamburg, Germany (eileen.dahms@zmaw.de), KlimaCampus Hamburg, Meteorological Institute, Germany

P2-4: EMS2010-30
Jet stream formation and modulation in the wake of large scale orography
T. Spengler, G.K. Vallis, I.M. Held
Atmospheric and Oceanic Sciences Program, Princeton University, USA (thomas.spengler@noaa.gov)

P2-5: EMS2010-598
A kinetic-energy budget of the winter storm “Klaus” (24th of January 2009)
P. Arbogast, G. Rivière, A. Joly
METEO-FRANCE, DPREVI, Toulouse, France (philippe.arbogast@meteo.fr)

P2-6: EMS2010-399
Tropical tropopause variability and PDO
B. Grassi, G. Redaelli, G. Visconti
University of L’Aquila, Physics, Coppito-L’Aquila, Italy (barbara.grassi@aquila.infn.it)

P2-7: EMS2010-628
Easterly Waves in Tropical Channel Simulations: An Assessement Using the WRF Model
M. d. S. Mesquita, T.M. Lunde, E. Kolstad, J. Bader
Bjerknes Centre for Climate Research, Regional Modeling, Bergen, Norway (michel.mesquita@uni.no)

P2-8: EMS2010-25
Convection in tropical cyclones associated with vapor volume reduction - a new concept
D. Mardhekar
Pune, India (dmardhekar@yahoo.co.in)

P2-9: EMS2010-697
Tropical cyclone influence on the higher ionosphere from tomography sounding data over Sakhalin island
L.B. Vanina-Dart, A.A. Romanov, E.A. Sharkov
Space Research Institute, Earth remote sensing, Moscow, Russian Federation (vandart@seeingear.org)

END OF POSTER PROGAMME AW1

AW2 Operational Oceanography from observations to decisions through data assimilation and forecasts

Conveners: M. Faucher; H. Ravenel
Poster Area: P2
Attendance Time: 18:30–19:30

P2-10: EMS2010-589
Analisys of oceano-meteorological conditions during Klaus episode on Basque Country area
J. Egaña, **S. Gaztelumendi**, I.R. Gelpi, K. Otxoa de Alda
Meteorology Division, EUVE Foundation, Vitoria-Gasteiz, Álava, (Spain). jegana@euve.org, Basque Meteorology Agency (EUSKALMET) Miñano, Álava, (Spain).

END OF POSTER PROGAMME AW2

AW4 Large scale air-sea and land-atmosphere interaction processes and their influence on the European and Mediterranean regional climate

Convener: S. Gualdi
Co-Conveners: W. May; S. Somot
Poster Area: P2
Attendance Time: 18:30–19:30

P2-25: EMS2010-197
Climate change projection in the Mediterranean Region as obtained from a global AOGCM coupled with an interactive high-resolution model of the Mediterranean Sea
S. Gualdi, E. Scoccimarro, A. Bellucci, P. Oddo, A. Sanna, E. Manzini, P.G. Fogli, M. Vichi, A. Navarra
Centro Euro-Mediterraneo per i Cambiamenti Climatici, Bologna, Italy (gualdi@bo.ingv.it), Istituto Nazionale di Geofisica e Vulcanologia, INGV, Bologna, Italy

P2-26: EMS2010-245
Decadal climate variability in the Mediterranean region: role of large-scale forcing and regional processes
A. Mariotti, **A Dell’Aquila**
ENEA, C.R. Casaccia,UTMEA-CLIM, Rome, Italy

P2-27: EMS2010-262
The role of Mediterranean mesoscale eddies on the climate of the Euro-Mediterranean region
A. Bellucci, S. Gualdi, E. Scoccimarro, A. Sanna, P. Oddo, A. Navarra
Centro Euro-Mediterraneo per i Cambiamenti Climatici, Bologna, Italy

P2-28: EMS2010-278
Present and future climate simulation of Mediterranean cyclones with a high resolution AOGCM
A. Sanna, A. Bellucci, P. Oddo, E. Scoccimarro
CMCC, AMS, Bologna, Italy
(antonella.sanna@gmail.com)

P2-29: EMS2010-304
Teleconnection between Indian Ocean and the Eastern Mediterranean interannual variability, as simulated by a coupled general circulation model
M. Roxy, S. Gualdi, E. Scoccimarro
CMCC, Bologna, Italy (roxy.mathew@cmcc.it), IITM, Pune, India

P2-30: EMS2010-411
Evaluating meteo marine climatic model inputs for the investigation of coastal hydrodynamics
D. Bellafiore, E. Bucchignani, G. Umgiesser
ISMAR-CNR, Venice, Italy
(debora.bellafiore@ismar.cnr.it)

P2-31: EMS2010-457
Atmospheric and oceanic influences on the winter and spring Miño river flow
M.J. Esteban-Parra, S.R. Gámiz-Fortis, D. Argüeso, J.M. Hidalgo-Muñoz, D. Calandria, Y. Castro-Díez
Universidad de Granada, Dpto Física Aplicada, Granada, Spain (esteban@ugr.es)

P2-32: EMS2010-461
Role of atmospheric dynamics in controlling frequency of extreme precipitation events over the Mediterranean region
S.O. Krichak, J.S. Breitgand

P2-33: EMS2010-638
A linkage between freshwater discharge into the Gulf of Guinea and summer climate variability in the Mediterranean: a preliminary study
S. Materia, J. Tribbia
CMCC - Centro Euro-Mediterraneo per i Cambiamenti Climatici, Numerical Applications and Scenarios (ANS), Bologna, Italy (stefano.materia@cmcc.it), NCAR - National Center for Atmospheric Research, Climate and Global Dynamics (CGD), Boulder, CO, USA

END OF POSTER PROGAMME AW4

AW5 Space forcing of the Earth's and planets' climate

Convener: M. Messerotti
Co-Conveners: H. Lundstedt; K. Matthes
Poster Area: P2
Chairperson(s): M. Messerotti
Attendance Time: 18:30–19:30

P2-34: EMS2010-736
Solar effects on circulation types over Europe: an analysis based on a large number of classifications
R. Huth, M. Cahynová, J. Kyselý
Institute of Atmospheric Physics, Dept. of Climatology, Prague 4, Czech Republic (huth@ufa.cas.cz)

END OF POSTER PROGAMME AW5

AW7 Atmospheric hazards - Nikolai Dotzek memorial

Conveners: F. Stel; D. Giaiotti
Poster Area: P2
Chairperson(s): Fulvio Stel
Attendance Time: 18:30–19:30

P2-49: EMS2010-26
Controlling a hurricane by altering its internal climate
D. Mardhekar
Pune, India (dmardhekar@yahoo.co.in)

P2-50: EMS2010-689
Synoptic-mesoscale analysis and numerical modeling of a tornado event on 12 February 2010 in northern Greece
J. T. Matsangouras, **P. T. Nastos**, I. Pytharoulis
Laboratory of Climatology and Atmospheric Environment, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Greece
(nastos@geol.uoa.gr)

P2-51: EMS2010-497
Evolution of Mesoscale Convective System in Southern Serbia
M. Rabrenovic, T. Majstorovic
Hydrometeorological Service of Serbia, Belgrade (maja_saska@yahoo.com)

P2-52: EMS2010-43
The use of partial thickness method and zero wet bulb temperature for discriminating precipitation type during winter months at the Ebro basin in Spain
S. Buisan, **J. Revuelto**
AEMET, State Meteorological Agency of Spain, Zaragoza, Spain (beca2zar@inm.es)

P2-53: EMS2010-559
A severe wind storm affecting the Basque country: the Xhyntia case study.
S. Gaztelumendi, J. Egaña, I.R. Gelpi, K Otxoa de Alda, R. Hernandez, D. Pierna
EUVE, Meteorology Division. Vitoria-Gasteiz, Spain (sgaztelumendi@euve.org), EUSKALMET. Basque Meteorology Agency. Vitoria-Gasteiz, Spain

P2-54: EMS2010-247
Lightning frequency over the Italian peninsula
F. Turoldo, **F. Stel**, D.B. Giaiotti, M. Bernardi, C. Adamo, C. Rovelli, S. Dietrich, D. Goi
ARPA CRMA, Palmanova UD, Italy
(fulvio.stel@arpa.fvg.it)

P2-55: EMS2010-571
Hail storm over Vitoria-Gasteiz city: the 2009 july 1st case.
S. Gaztelumendi, J. Egaña, D. Pierna, I.R. Gelpi, R. Hernandez, K. Otxoa de Alda
Meteorology Division, EUVE Foundation, Vitoria-Gasteiz, Álava, (Spain). sgaztelumendi@euve.org, Basque Meteorology Agency (EUSKALMET) Miñano, Álava, (Spain)

P2-56: EMS2010-564
Flash-floods on Basque Country at the end of January 2009
J. Egaña, **S. Gaztelumendi**, D. Pierna, I.R. Gelpi, R. Hernandez, K. Otxoa de Alda
Meteorology Division, EUVE Foundation, Vitoria-Gasteiz, Álava, (Spain). jegana@euve.org, Basque Meteorology Agency (EUSKALMET) Miñano, Álava, (Spain).

P2-57: EMS2010-587
27 May 2009 deep convection event: polarimetric radar analysis and comparison with COSMO-I2 microphysical fields
M. Celano, A. Fornasiero, R. Amorati, A. Morgillo, C. Marsigli, P.P. Alberoni
ARPA-SIMC, Bologna,Italy (mcelano@arpa.emr.it)

P2-58: EMS2010-755
Breeze transients as triggers for the initiation of deep moist convection on mountains slopes
D. Giaiotti, **F. Stel**, I. Gladich, A. Giacomini
ARPA FVG - CRMA, Regional Center for Environmental Modelin, Palmanova, Italy (dario.giaiotti@arpa.fvg.it, +39-0432-922626)

P2-59: EMS2010-662
Ostroumov convection in axial channel with matching on two vertical boundaries
P.B. Rutkevich, B.P. Rutkevych
Space Research Institute RAN, Dep 056, Moscow, Russian Federation (pbrutkevich@gmail.com)

END OF POSTER PROGAMME AW7

AW9 Interfacing hydrological and meteorological models in forecasting systems

Conveners: B. Ahrens; M. Zappa; H. Formayer
Poster Area: P1
Chairperson(s): M. Zappa, H. Formayer
Attendance Time: 18:30–19:30

P1-58: EMS2010-250
MINERVE flood warning and management project. What is computed, what is required and what is visualized?
J. Garcia Hernandez, J.-L. Boillat, A. Schleiss
Laboratoire de Constructions Hydrauliques, LCH-EPFL, Lausanne, Switzerland (javier.garciahernandez@epfl.ch)

P1-59: EMS2010-329
Error discrimination of an operational hydrological forecasting system at a national scale
F. JORDAN, T. BRAUCHLI
e-dric.ch ean énergie environnement, Le Grand-chemin 73, 1066 Lausanne, Switzerland

P1-60: EMS2010-336
Improvement of ECMWF monthly forecasts of precipitation over France with an analog method
M. Berthelot, **L. Dubus**, J. Gailhard
EDF R&D / MFEE, Applied Meteorology and Atmospheric Environment, CHATOU CEDEX, France (laurent.dubus@edf.fr)

P1-61: EMS2010-677
Coupling WRF with LEAFHYDRO: introducing groundwater and a fully dynamic water table in regional climate simulations
A. Martínez de la Torre, A. Rios Entenza, L. Gestal Souto, G. Miguez Macho
Universidad de Santiago de Compostela - Faculty of Physics, Department of Condensed Matter Physics, Santiago de Compostela - A Coruña, Spain (amartinez@fmares.usc.es)

P1-62: EMS2010-686
A modified soil water based Richards equation for layered soils
F. Kalinka, B. Ahrens
Biodiversity and Climate Research Centre (BiK-F), Frankfurt/Main, Germany
(frank.kalinka@iau.uni-frankfurt.de), Goethe University Frankfurt, Institute for Atmospheric and Environmental Sciences, Frankfurt/Main, Germany

P1-63: EMS2010-693
Interpolation of observed rainfall fields for flood forecasting in data poor areas
M.C. Rogelis Prada, M.G.F. Werner
Dirección de Prevención y Atención de Emergencias (DPAE), Diagonal 47 77ª-09 int 11, Bogotá, Colombia, UNESCO-IHE, PO Box 3015, 2601DA Delft, The Netherlands

END OF POSTER PROGAMME AW9

AW10 Air-sea interactions and coastal meteorology

Convener: AM Sempreviva
Co-Conveners: S.E. Gryning; M.M. Miglietta; Dr. Sørensen
Poster Area: P1
Chairperson(s): Mario Marcello Miglietta
Attendance Time: 18:30–19:30

P1-64: EMS2010-467
Preliminary results of a four-dimensional data assimilation technique at a Mediterranean coastal area, Southern Italy
E. Avolio, S. Federico, A.M. Sempreviva, C.R. Calidonna, L. De Leo, C. Bellecci
ISAC-CNR, 88046 Lamezia Terme (CZ), Italy

P1-65: EMS2010-156
Variability of wind parameters at the entrance of the Gulf of Finland
S. Keevallik
Marine Systems Institute at Tallinn University of Technology, Estonia (sirje.keevallik@gmail.com)

P1-66: EMS2010-230
Enhanced air-sea physics parametrization and assimilation of SST: a combined approach.
D. Pettenuzzo, S. Dobricic, P. Oddo, N. Pinardi
Istituto Nazionale di Geofisica e Vulcanologia, Bologna, Italy

P1-67: EMS2010-368
WRF model and ASAR-retrieved sea surface wind over Eastern Mediterranean Sea
M.M. Miglietta, S. Zecchetto, F. De Biasio
ISAC-CNR, Padua, Italy (m.miglietta@isac.cnr.it)

END OF POSTER PROGAMME AW10

AW11 Environmental Meteorology

Convener: S. M. Joffre
Co-Conveners: M. Piringer; R. Sokhi; A. Baklanov; P. Builtjes
Poster Area: P1
Chairperson(s): Peter Builjes
Attendance Time: 18:30–19:30

P1-68: EMS2010-11
Effect of wetland types on methane emission from Russian frozen wetlands under conditions of climate change
S. Reneva
State Hydrological Institute, Climatology, St.Petersburg, Russian Federation (svetlana.reneva@hydrology.ru)

P1-69: EMS2010-78
Spatial and temporal variations of atmospheric methane and carbon dioxide observed in Environment Canada's GHG measurement network.
E. Chan, D. E. J. Worthy, M. Ishizawa, D. Chan
Science and Technology, Environment Canada, Toronto, Canada (elton.chan@ec.gc.ca)

P1-70: EMS2010-212
The influence of Moscow City CO emissions on air pollution in rural aria and long-term trends CO total column over Moscow region
V. Rakitin, E. Fokeeva, E. Grechko, **A. Dzhola**
Obukhov Institute of Atmospheric Physics, RAS, Moscow, Russian Federation (vadim@ifaran.ru)

P1-71: EMS2010-709
Investigation of the three-dimensional actinic flux field in mountainous terrain
J.E. Wagner, F. Angelini, M. Blumthaler, M. Fitzka, J.P. Gobbi, R. Kift, A. Kreuter, H. E. Rieder, A. Webb, P. Weihs
BOKU - Universität für Bodenkultur, Department of Meteorology, Wien, Austria (jochen.wagner@boku.ac.at)

P1-72: EMS2010-142
How to protect the Earth from Global warming by means of Sunlight Shield Equipments
H. Murakami
Technology Division, Tohwa University, Fukuoka-city, Japan (muroku@oregano.ocn.ne.jp)

P1-73: EMS2010-459
Human comfort studies in Debrecen regarding the 2006-2008 period
R. Gyarmati, T. Toth, **S. Szegedi**, L. Kapocska
University of Debrecen Department of Meteorology, 4032 Debrecen Egyetem tér 1 (szegedis@puma.unideb.hu)

P1-74: EMS2010-478
Spatial layout of forecasted extreme temperatures in the city of Murcia (Spain)
L. Banon, E. Hernandez, F. Belda
Delegación Territorial en Murcia AEMET (parapen@inm.es)

P1-75: EMS2010-670
Effect of modified weather and environmental conditions on the regional ozone load
E. Komjáthy, R. Mészáros, I. Lagzi
ELTE-TTK, Insitute of Geography and Earth Sciences, Meteorology, Budapest, Hungary (komjathyeszter@gmail.com, mrobi@nimbus.elte.hu)

P1-76: EMS2010-456
Examinations on the Meteorologic Factors of Urban Heat Island Development in Small and Medium-sized Towns of Hungary
S. Szegedi, R. Gyarmati, L. Kapocska, T. Toth
University of Debrecen Department of Meteorology, 4032 Debrecen Egyetem tér 1 (szegedis@puma.unideb.hu)

P1-77: EMS2010-95
Studying the influence of meteorological conditions on air quality at Ukrainian urban and background monitoring sites
V. Godunova, O. Perekhod, Ya. Romanyuk, V. Lapchenko, M. Sosonkin
ICAMER Observatory, National Academy of Sciences, Kiev, Ukraine (godunova@mao.kiev.ua)

P1-78: EMS2010-276
The cold air drainage model KLAM_21
M. Kossmann
(meinolf.kossmann@dwd.de)

P1-79: EMS2010-655
Accumulated precipitation in cloud model coupled with chemistry module
D. Vujovic
University of Belgrade, Department of Meteorology, Belgrade, Serbia (dvujovic@ff.bg.ac.rs)

P1-80: EMS2010-291
The influence of source periodicity on formation of large scale spottiness of the total deposition
O. Skrynyk, R. Chernysh, Y. Hrytsyuk
Ukrainian Research Hydrometeorological Institute, Physics of Atmosphere, Kiev, Ukraine (skrynyk@univ.kiev.ua)

P1-81: EMS2010-754
A case study of Ozone advection in the Northern Adriatic area
S. Del Frate, I. Gallai, A. Giacomini, **D. Giaiotti**, F. Montanari, A. Petrini, A. Pillon, F. Stel, F. Tassan, F. Turoldo and the rest of ARPA FVG - CRMA Team
ARPA FVG - CRMA, Regional Center for Environmental Modeling, Palmanova, Italy (dario.giaiotti@arpa.fvg.it)

P1-82: EMS2010-789
Dealing with the transport pollution in the alpine environment: the iMONITRAF! Eu Project
G. Pession
Arpa Valle d'Aosta, Italy (gi.pession@arpa.vda.it)

P1-83: EMS2010-629
Saharan dust transport by Mediterranean cyclones causing dust rain in Istanbul
S. Tilev Tanriover, A. Kahraman
Istanbul Technical University, Meteorology, Turkey (tanriovers@itu.edu.tr)

P1-84: EMS2010-450
Modelling dispersion processes of hypothetical nuclear accidental release on different scales
R. Mészáros, I. Lagzi, F.Jr. Molnár, Cs. Vincze, Á. Leelőssy, T. Kovács
Eötvös Loránd University, Department of Meteorology, Budapest, Hungary (mrobi@nimbus.elte.hu)

END OF POSTER PROGAMME AW11

AW12 Phenology and Agrometeorology

Convener: E. Koch
Co-Conveners: J. Eitzinger; B. Lalic
Poster Area: P1
Attendance Time: 18:30–19:30

P1-85: EMS2010-40
Phenological monitoring of fruit trees in the Czech Republic
L. Hajkova, M. Striz, J. Nekovar
Czech hydrometeorological institute, Regional branch Usti nad Labem, Czech Republic (hajkova@chmi.cz)

P1-86: EMS2010-140
PEP725 Pan European Phenological Database
E. Koch, S. Adler, W. Lipa, M. Ungersböck, S. Zach-Hermann
Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria (e.koch@zamg.ac.at)

P1-87: EMS2010-374
Use of digital images to quantify canopy development and phenological observations
M. Mozny, M. Virag, D. Bares, J. Noskova
Czech Hydrometeorological Institute, Doksany Observatory, Doksany, Czech Republic (martin.mozny@chmi.cz)

P1-88: EMS2010-463
Estimation of the change in the harmfulness of selected pests in expected climate - European area
E. Svobodova, M. Trnka, Z. Zalud, D. Semeradova, M. Dubrovsky, H. Sefrova
Institute for Agrosystems and Bioclimatology, Mendel University in Brno, Czech Republic (jevicka@email.cz)

P1-89: EMS2010-512
Tree and stand water fluxes of hybrid poplar clone (Populus nigra x P. maximowiczii) in short rotation coppice culture
M. Fischer, M. Trnka, J. Kucera, Z. Zalud
Institute of Agrosystems and Bioclimatology, Mendel University in Brno, Czech Republic, fischer.milan@gmail.com

P1-90: EMS2010-685
Epfl Lyisimeters Measurements Campaign Summer 2010:Set-Up and First Results
F. Ciocca, M. Parlange, I. Lunati, N. Van De Giesen, H. Huwald
EPFL ENAC IIE EFLUM, Lausanne, Switzerland (francesco.ciocca@epfl.ch)

P1-91: EMS2010-692
On Connections Between Weather Types and the Arrival of Migratory Birds in Estonia
M. Sepp, K. Päädam, V. Palm, A. Leito
University of Tartu, Department of Geography, Tartu, Estonia (mait.sepp@ut.ee)

P1-92: EMS2010-569
Future state of the climate change, mitigation and development of sustainable agriculture in Bulgaria
V. Kazandjiev, V. Georgieva, M. Moteva, T. Marinova, P. Dimitrov
National Institute of Meteorology & Hydrology, Meteorology/NIMH-BAS, Sofia, Bulgaria (valentin.kazandjiev@meteo.bg)

END OF POSTER PROGAMME AW12

AW14 Energy meteorology

Convener: S.E. Gryning
Co-Conveners: E. Batcharova; L. Wald; M. Schroedter-Homscheidt
Poster Area: P1
Chairperson(s): Sven-Erik Gryning
Attendance Time: 18:30–19:30

P1-93: EMS2010-125
An evaluation study of the WRF model for wind resources assessment in Andalusia (Southern Spain)
F.J. SANTOS-ALAMILLOS, **D. POZO-VAZQUEZ**, J.A. RUIZ-ARIAS, V. LARA-FANEGO, J. GARCIA-GONZALEZ, J. TOVAR-PESCADOR
UNIV. JAEN, DEPT. OF PHYSICS, JAEN, Spain (dpozo@ujaen.es)

P1-94: EMS2010-350
A methodology for optimization of wind farm allocation under land restrictions: the case of the Canary Islands
C.A. Castaño Moraga, E. Suárez Santana, I. Sabbagh Rodríguez, R. Nebot Medina, S. Suárez García, J. Rodríguez Alvarado, G. Piernavieja Izquierdo, J. Ruiz Alzola
Instituto Tecnológico de Canarias, S.A. Playa de Pozo Izquierdo, s/n 35119 - Santa Lucía (Las Palmas), Spain

P1-95: EMS2010-592
Evaluation of dynamic subgrid-scale models and wind-turbine models in large-eddy simulations of wind-turbine wakes in boundary layer flows
Y.-T. Wu, F. Porté-Agel
EPFL, School of Architecture, Civil and Environmental Engineering, Lausanne, Switzerland (yu-ting.wu@epfl.ch), University of Minnesota, Civil Engineering, Minneapolis, United States

P1-96: EMS2010-683
Development of a reliable wind database for eastern Canada
E.E Lucio-Eceiza, J.F. González-Rouco, J. Navarro, P.A. Jiménez, E. García-Bustamante, A. Hidalgo, H. Beltrami
UNIVERSIDAD COMPLUTENSE DE MADRID, Astrofísica y Ciencias de la Atmósfera, Spain (eelucio@fis.ucm.es)

P1-97: EMS2010-747
Flow structure inside and above a variable wind farm: A wind tunnel study.
L. Chamorro, F Porte-Agel
Univeristy of Minnesota, Civil Engineering, MINNEAPOLIS, United States (chamo006@umn.edu)

P1-98: EMS2010-213
Dynamical downscaling of wind fields for wind power applications
H.-T. Mengelkamp, S. Huneke, J. Geyer
GKSS Research Center Geesthacht GmbH, D21502 Geesthacht, Germany, anemos Gesellschaft fuer Umweltmeteorologie mbH, Bunsenstr. 8, D-21365 Adendorf, Germany

P1-99: EMS2010-255
Aerosol lidar observations for wind power meteorology
A. Peña, S.-E. Gryning, E. Batchvarova, T. Mikkelsen
Wind Energy Division, Risø National Laboratory for Sustainable Energy, Technical University of Denmark, Roskilde, Denmark

P1-100: EMS2010-367
Improving short-term forecasting during ramp events by means of Regime-Switching Artificial Neural Networks
C. Gallego, A. Costa, **A. Cuerva**
IDR/UPM, E.T.S.I. Aeronáuticos, Universidad Politécnica de Madrid, Spain

P1-101: EMS2010-384
Exploiting long-term wind observations to inform the energy industry
A. Troccoli, K Muller, R Davy, C Russell, P Coppin
CSIRO, Canberra, Australia (alberto.troccoli@csiro.au)

P1-102: EMS2010-606
Large-eddy simulation of wind-turbine wakes: Evaluation of turbine parameterizations
F. Porté-Agel, Y.-T. Wu, H. Lu, L. Chamorro
EPFL, School of Architecture, Civil and Environmental Engineering, Lausanne, Switzerland (fernando.porte-agel@epfl.ch), Univeristy of Minnesota, Civil Engineering, Minneapolis, United States

P1-103: EMS2010-650
Offshore Wind Power Integration in severely fluctuating Wind Conditions
L. von Bremen
ForWind - Center for Wind Energy Research, Oldenburg, Germany (lbremen@gmx.de)

P1-104: EMS2010-665
Ad-Hoc Analysis of Synop Observations to enhance shortest-term wind power predictions
N. Busch-Saleck, L. von Bremen
University of Oldenburg, ForWind - Center for Wind Energy Research, Oldenburg, Germany (nadja.busch.saleck@uni-oldenburg.de)

P1-105: EMS2010-721
Lidar measurements of wind flow characteristics for on land and offshore wind energy
Y. Pichugina
Cooperative Institute for Research in Environmental Sciences (CIRES), Boulder, CO, U.S.A. (Yelena.Pichugina@noaa.gov)

P1-106: EMS2010-793
Wind energy forecasting for the Netherlands using the WRF atmosphere model
H. Zelle, C. Calkoen, P. Groenewoud, S. Hulst, Á. Mika
BMT ARGOSS, P.O. Box 61, 8325 ZH Vollenhove, The Netherlands (hein.zelle@bmtargoss.com)

P1-107: EMS2010-82
Towards the automatic identification of cloudiness condition by means of solar global irradiance measurements
G. Sanchez, A. Serrano, M.L. Cancillo
University of Extremadura, Department of Physics, Badajoz, Spain (gsanchezw@alumnos.unex.es)

P1-108: EMS2010-128
WIRE: Weather Intelligence for Renewable Energies
A. Heimo, R. Cattin, B. Calpini
Meteotest, Fabrikstrasse 14, CH-3012 Bern, Switzerland, alain.heimo@meteotest.ch

P1-109: EMS2010-403
Short-term solar irradiance forecast for the efficiency assessment of photovoltaic systems in Poland.
K. Sobotka, J. Struzewska, J.W. Kaminski
Department of Environmental Engineering Systems, Warsaw University of Technology, Poland

P1-110: EMS2010-572
UMTS Network Stations
C. HERNANDEZ
Instituto Tecnológico de Canarias, Las Palmas de Gran Canaria, España (clopez@itccanarias.org)

P1-111: EMS2010-749
Analysis of the solar/wind resources in Southern Spain for optimal sizing of hybrid solar-wind power generation systems
S. QUESADA-RUIZ, D. POZO-VAZQUEZ, F.J. SANTOS-ALAMILLOS, V. LARA-FANEGO, J.A. RUIZ-ARIAS, J. TOVAR-PESCADOR
UNIV. JAEN, PHYSICS, JAEN, Spain (dpozo@ujaen.es)

P1-112: EMS2010-750
A stochastic post-processing method for solar irradiance forecasts derived from NWPs models
V. LARA-FANEGO, **D. POZO-VAZQUEZ**, J.A. RUIZ-ARIAS, F.J. SANTOS-ALAMILLOS, J. TOVAR-PESCADOR

P1-113: EMS2010-224
Assessment of performances of sun zenith angle and altitude parameterisations of atmospheric radiative transfer for spectral surface downwelling solar irradiance
L. Wald, Ph. Blanc
MINES ParisTech, Sophia Antipolis cedex, France (lucien.wald@mines-paristech.fr)

P1-114: EMS2010-234
A preliminary assessment of the quality of UV data derived from the database HelioClim-3
L. Wald, A. Arola, C. Brogniez, J. M. Vilaplana
MINES ParisTech, Sophia Antipolis cedex, France (lucien.wald@mines-paristech.fr)

P1-115: EMS2010-386
Impact of inter-annual variability of solar radiation on energy supply estimation
A. Troccoli, R Davy
CSIRO, Canberra, Australia (alberto.troccoli@csiro.au)

P1-116: EMS2010-34
Improvement in the spatio-temporal distribution of surface solar radiation data over Belgium by merging ground-based and satellite measurements
M. Journée, C. Bertrand
Royal Meteorological Institute of Belgium, Brussels, Belgium
(michel.journee@oma.be, cedric.bertrand@oma.be)

P1-117: EMS2010-590
Forecasting of Hourly Photovoltaic Energy in Canarian Electrical System
D. Henriquez, C. Castaño, R. Nebot, G. Piernavieja, A. Rodriguez
R&D Division. Instituto Tecnológico de Canarias (ITC), Playa de Pozo Izquierdo, Gran Canaria, Spain (dhenriquez@itccanarias.org)

END OF POSTER PROGAMME AW14

Communication and Education

CE1 Adaptation strategies

Convener: T. Cegnar
Poster Area: P3
Chairperson(s): Tanja Cegnar
Attendance Time: 18:30–19:30

P3-59: EMS2010-56
Weather and emotional state
Z. Spasova
National Center of Public Health Protection, Health promotion and disease prevention, Sofia, Bulgaria (z_spassova@abv.bg)

P3-60: EMS2010-485
Prototype for Adaptation to Climate Change Strategy Based on Risk Assessment
I. Bruneniece, J. Brunenieks
Climate change and adaptation expert, Faculty of Geographical and Earth Sciences, University of Latvia, LV 1586, Riga, Latvia (ieva.bruneniece@gmail.com)

P3-61: EMS2010-488
Biometeorology – a science supporting adaptation strategies
A. Matzarakis, T. Cegnar
Meteorological Institute, Albert-Ludwigs-University Freiburg, Germany

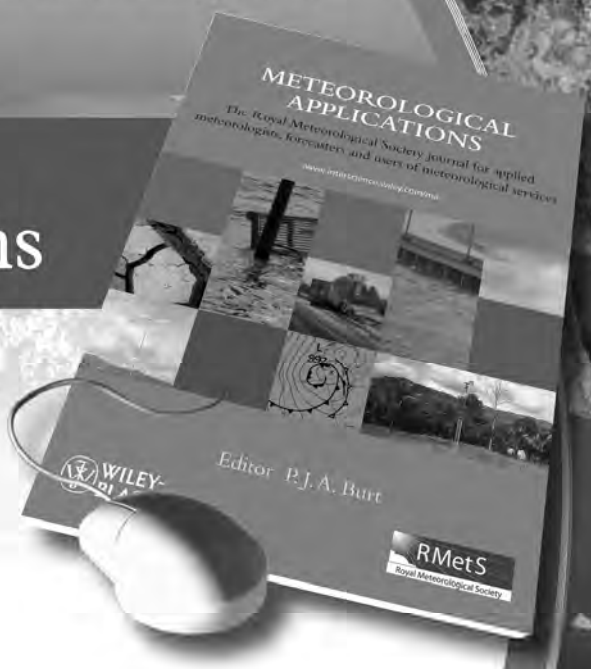
END OF POSTER PROGAMME CE1

Wednesday	Audimax – F30	E3	E1.1	E1.2
08:30–10:30	UC2: Climate modelling, climate prediction and scenarios from seasons to century	MC3/AW13: Data mapping, spatial interpolation and GIS modelling, Reference climatologies	CE4: Education	NWP1: Dynamics and predictability of high impact weather
10:30–11:00	Coffee Break			
11:00–13:00	UC2	UC3: Synoptic climatology	CE1: Adaptation Strategies – until 13:15	AW8: Boundary layer physics and parameterization in weather and climate models
13:00–14:00	Lunch Break			
14:00–16:00	14:00–14:45: Silver Medal Lecture			
	14:45: Communication on climate change: Keynote presentations			15:00–16:00: AW8
16:00–16:30	Coffee Break			
16:30–18:00	Communication on climate change: Panel discussion			
19:00	CONFERENCE DINNER: Giesserei – Zürich Oerlikon			

Communicating Weather Information and Impacts

Edited by A. Ghelli, L. Chapman and S. J. Keeling

Special Issue of
Meteorological Applications



- **Editorial**
  P. J. A. Burt
- **Visualization of the weather – past and present**
  S. J. Keeling
- **Weather broadcasting and training in the late twentieth century: the meteorologist's view**
  B. Giles
- **International broadcast meteorology**
  J. Teather
- **Improving TV weather broadcasts with technological advancements: two cases from a 20 year perspective**
  J. Bech, T. Molina, E. Vilaclara and J. Lorente
- **Examining the use of weather forecasts in decision scenarios: results from a US survey with implications for uncertainty communication**
  R. E. Morss, J. K. Lazo and J. L. Demuth
- **Emergency manager decision-making and tornado warning communication**
  C. E. League, W. Díaz, B. Philips, E. J. Bass, K. Kloesel, E. Gruntfest and A. Gessner
- **Public perception of and response to severe weather warnings in Nova Scotia, Canada**
  A. Silver and C. Conrad
- **Communicating forecast uncertainty: public perception of weather forecast uncertainty**
  S. Joslyn and S. Savelli
- **Beyond polar bears? Re-envisioning climate change**
  K. Manzo
- **Challenges in communicating and using ensembles in operational flood forecasting**
  D. Demeritt, S. Nobert, H. Cloke and F. Pappenberger
- **Communicating uncertainty in hydro-meteorological forecasts: mission impossible?**
  M.-H. Ramos, T. Mathevet, J. Thielen and F. Pappenberger
- **Mathematics versus common sense: the problem of how to communicate dynamic meteorology**
  A. Persson
- **Communicating the value of atmospheric services**
  J. Thornes, W. Bloss, S. Bouzarovski, X. Cai, L. Chapman, J. Clark, S. Dessai, S. Du, D. van der Horst, M. Kendall, C. Kidd and S. Randalls

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Monitoring for a reference climate and monitoring change

MC3/AW13 Data mapping, spatial interpolation and GIS modelling, Reference climatologies (co-organized)

Convener: O. E. Tveito
Co-Conveners: I. Auer; M. Dolinar; C. Frei
Lecture Room: E3

08:30–10:30
Chairperson(s): I.Auer

08:30–09:00: EMS2010-300
Testing geostatistical methods to combine radar and rain gauges for precipitation mapping in a mountainous region (solicited)
R. Erdin, C. Frei, I. Sideris, H.-R. Kuensch
MeteoSwiss, Zurich, Switzerland (rebekka.erdin@meteoswiss.ch)

09:00–09:15: EMS2010-177
Multilevel analysis of spatial temperature variability in Brno region (solicited)
P. Dobrovolný, R. Brázdil, L. Krahula
Masaryk University, Department of Geography, Brno, Czech Republic (dobro@sci.muni.cz)

09:15–09:30: EMS2010-263
Geostatistical interpolation of individual average monthly temperature supported by MODIS MOD11C3 product
M. Percec Tadic
Meteorological and Hydrological Service of Croatia, Research and Development Division, Zagreb, Croatia, (melita.percec.tadic@cirus.dhz.hr)

09:30–09:45: EMS2010-743
Analysis of climate change impacts on Urban Heat Island through geospatial data
M. ZORAN
National Institute of R&D for Optoelectronics, Environmental Remote Sensing Department, Bucharest Magurele, Romania (marianazoran@yahoo.com)

09:45–10:00: EMS2010-570
Development of a gridded surface solar radiation dataset from the Global Energy Balance Archive
E. Arabini, M. Chiacchio, M. Wild
University of Modena and Reggio Emilia, Modena, Italy (elena.arabini@unimore.it)

10:00–10:15: EMS2010-87
Spatial interpolation of solar global radiation
C. Lussana, F. Uboldi, C. Antoniazzi
ARPA Lombardia, Servizio Meteorologico Regionale, Milano, Italy (c.lussana@arpalombardia.it)

10:15–10:30: EMS2010-820
Spatial interpolation of solar irradiation data over complex orography: Solar map of Canaries Islands
A. Ortegón Gallego
Technological Institute of Canaries Islands, Software Engeneering, Spain (aortegon@itccanarias.org)

ORAL PROGAMME MC3/AW13 CONTINUES THURSDAY

Understanding processes and climate change

UC2 Climate modelling, climate prediction and scenarios from seasons to century

Convener: C. Appenzeller
Co-Conveners: C.M. Goodess; C. Schär; R.E. Benestad
Lecture Room: AudiMax (F30)

08:30–10:30

Climate Change Impacts

08:30–08:45: EMS2010-565
Consistent geographical patterns of changes in high-impact European heatwaves
E.M. Fischer, C. Schär
Institute for Atmospheric and Climate Science, ETH Zürich, Zürich, Switzerland (erich.fischer@env.ethz.ch)

08:45–09:00: EMS2010-52
Using bias-adjustment to improve the use of high-resolution climate model output
S Corney, G Holz, J Bennett, M Grose, CJ White, S Gaynor, NL Bindoff
Antarctic Climate and Ecosystems Co-operative Research Centre, University of Tasmania, Hobart, Tasmania, Australia

09:00–09:15: EMS2010-146
Fire Weather Index: from high resolution climatology to Climate change impact study
E. Cloppet, M. Regimbeau
Meteo-France, Department of Agrometeorology, Toulouse, France (emmanuel.cloppet@meteo.fr)

09:15–09:30: EMS2010-681
Water deficit risk in Central Europe in the middle of the 21st century
J. Wibig
University of Lodz, Meteorology and Climatology, Lodz, Poland (zameteo@uni.lodz.pl)

09:30–09:45: EMS2010-722
Simulation of Annual Snowfall over Colorado using a High Resolution Mesoscale Model and some Impacts of Climate Change using the Pseudo Climate Simulation Method
R. Rasmussen, V. Grubisic
NCAR, Boulder, United States (rasmus@ucar.edu)

09:45–10:00: EMS2010-199
Seasonal changes in the regional hydrological cycle and resulting potential vegetation changes in an aggressive mitigation scenario compared to SRES A1B
H. Huebener, I. Höschel, J. Körber, M. Sanderson, T.C. Johns, J.-F. Royer, D. Salas y Melia, E. Roeckner, M. Giorgetta, E. Manzini
Hessian Agency for Environment and Geology, Hessian Centre for Climate Change, Wiesbaden, Germany (heike.huebener@hlug.hessen.de)

10:00–10:15: EMS2010-602
Agricultural pests under future climate conditions: downscaling of regional climate scenarios with a stochastic weather generator
M. Hirschi, S. Stöckli, M. Dubrovsky, C. Spirig, M. W. Rotach, P. Calanca, J. Samietz
Federal Office for Meteorology and Climatology MeteoSwiss, Zurich, Switzerland
(martin.hirschi@meteoswiss.ch)

10:15–10:30: EMS2010-432
Assessment of Future Storm Losses in Germany: Probabilistic Extension of the Statistical-Dynamical Downscaling Approach
K. Born, M.K. Karremann, P. Ludwig, J. Pinto
Universität Köln, Institute for Geophysics and Meteorology, Meteorology, Cologne, Germany (kai.born@uni-koeln.de)

10:30 Coffee Break

11:00–13:00

Climate Scenarios and Long-Term Changes

11:00–11:15: EMS2010-642
Aerosol emissions and earth radiation balance in transient GCM simulations
D. Folini, M. Wild
ETH Zurich, Institute for Atmospheric and Climate Science, Switzerland (doris.folini@env.ethz.ch)

11:15–11:30: EMS2010-133
The impact of doubled CO2 on winter ENSO teleconnections
I. Herceg Bulic, C. Brankovic, F. Kucharski
Faculty of Science, University of Zagreb, Department of Geophysics, Zagreb, Croatia (ihercegb@gfz.hr)

11:30–11:45: EMS2010-269
Climate Predictability and Long Term Memory
X. Zhu, R. Blender, K. Fraedrich, Z. Liu
Max Planck Institute for Meteorology, Hamburg (xiuhua.zhu@zmaw.de), University of Hamburg, KlimaCampus, Hamburg, Germany

11:45–12:00: EMS2010-307
The West African Monsoon in the Regional Climate Model COSMO-CLM
S. Kothe, B. Ahrens
LOEWE Biodiversity and Climate Research Centre, Institute for atmospheric and environmental sciences, Frankfurt am Main, Germany
(kothe@iau.uni-frankfurt.de), Goethe-University Frankfurt, Institute for Atmospheric and Environmental Sciences, Frankfurt am Main, Germany

12:00–12:15: EMS2010-327
Evaluation of the Indian monsoon generated by four regional climate models during the period 1981-2000
P. Lucas-Picher, J. Christensen, P. Kumar, F. Saeed, S. Asharaf, A. Wiltshire, B. Ahrens, S. Hagemann
Danish Meteorological Institute, Copenhagen, Denmark, (plp@dmi.dk)

12:15–12:30: EMS2010-249
Regional climate projections of trends and variability in the Indian summer monsoon
A. Dobler, B. Ahrens
Goethe-University, Institute for Atmosphere and Environment, Frankfurt am Main, Germany
(dobler@iau.uni-frankfurt.de)

12:30–12:45: EMS2010-428
The effects of climate change on the number of cold spells in the Alps
C. Cassardo, M. Galli, S. M. Oh, S. K. Park
Department of General Physics "Amedeo Avogadro", University of Torino, Torino, Italy
(claudio.cassardo@unito.it)

12:45–13:00: EMS2010-99
Elevation Gradients of 21st Century European Climate Change
S. Kotlarski, D. Lüthi, P. Pall, C. Schär
ETH Zurich, Institute for Atmospheric and Climate Science, Zürich, Switzerland
(sven.kotlarski@env.ethz.ch)

ORAL PROGAMME UC2 CONTINUES THURSDAY

UC3 Synoptic climatology

Conveners: R. Huth; R.E. Benestad
Lecture Room: E3

11:00–13:00
Chairperson(s): O.E.Tveito

11:00–11:15: EMS2010-782
A new version of the database of classifications of circulation types over Europe
A. Philipp, **P. Post**, O.E. Tveito
Institute of Physics, University of Tartu, Tartu, Estonia (piia@ut.ee)

11:15–11:45: EMS2010-458
Circulation type classifications and precipitation variability in the Alps (solicited)
R. Schiemann, M. A. Liniger, C. Frei
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland
(reinhard.schiemann@meteoswiss.ch)

11:45–12:00: EMS2010-1
The COST733cat software: An example on surface ozone concentrations in Central Europe
M. Demuzere, P. Kassomenos, A. Philipp
Department of Earth and Environmental Sciences, Physical Geography, Katholieke Universiteit Leuven, Leuven, Belgium

12:00–12:15: EMS2010-734
Evaluation of circulation classifications from the COST733 database: The ability to stratify surface climate elements
R. Huth, M. Cahynová
Institute of Atmospheric Physics, Dept. of Climatology, Prague 4, Czech Republic (huth@ufa.cas.cz)

12:15–12:30: EMS2010-254
Evaluation of circulation type classifications for the eastern Mediterranean region
E. Kostopoulou, S. Lykoudis, C. Giannakopoulos
Energy Environment Water Research Center, The Cyprus Institute, Nicosia, Cyprus

12:30–12:45: EMS2010-448
The importance of the domain size for circulation classifications
A. Spekat, F. Kreienkamp
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

12:45–13:00: EMS2010-733
The Hess and Brezowsky synoptic catalogue: a timeless concept (although with a few drawbacks)
R. Huth, M. Cahynová, J. Kyselý
Institute of Atmospheric Physics, Dept. of Climatology, Prague 4, Czech Republic (huth@ufa.cas.cz)

ORAL PROGAMME UC3 CONTINUES FRIDAY

Atmosphere and the Water Cycle

AW8 Boundary-layer physics and parameterizations in weather and climate models

Convener: S. Zilitinkevich
Co-Convener: A.S. Petrosyan
Lecture Room: E1.2

11:00–13:00

11:00–11:15: EMS2010-811
Boundary-Layer & health (solicited)
V. Costigliola
The "European Medical Association", The "European Association for Predictive, Preventive and Personalised Medicine", Brussels, Belgium (vincenzo@epmanet.eu)

11:15–11:30: EMS2010-320
Climate change and malaria risk in Russia in 21st century (solicited)
S. Malkhazova, N. Shartova
Lomonosov Moscow State University, Faculty of Geography, Russian Federation
(sveta_geo@yahoo.com)

11:30–11:45: EMS2010-819
Downscaling modelling system for multi-scale air quality forecasting
R. Nuterman, A. Baklanov, A. Mahura, B. Amstrup, J. Weismann
Research Department, Danish Meteorological Institute, DMI, Lyngbyvej 100, DK-2100 Copenhagen, Denmark (ron@dmi.dk), Tomsk State University, TSU, Lenin Ave., 36, 634050, Tomsk, Russia

11:45–12:00: EMS2010-808
Turbulence closure for stably stratified flows: Local and non-local formulations
S.S. Zilitinkevich, T. Elperin, N. Kleeorin, I. Rogachevskii, I. Esau, R. Kouznetsov
Finnish Meteorological Institute, Helsinki, Finland, Division of Atmospheric Sciences, University of Helsinki, Finland, Nansen Environmental and Remote Sensing Centre / Bjerknes Centre for Climate Research

12:00–12:15: EMS2010-282
Testing stable boundary layer parameterizations against the BASE: ALFA measurements
G. Bonafè, **F. Tampieri**, F. Di Giuseppe, L. Caporaso
CNR-ISAC, Bologna, Italy (F.Tampieri@isac.cnr.it)

12:15–12:30: EMS2010-584
Response of the planetary boundary layer to changes in the land use pattern and corresponding adaptation options for farmers
I. Esau, G. Djolov
Nansen Environmental and Remote Sensing Centre, G.C. Rieber Climate Institute, Bergen, Norway (igor.ezau@nersc.no)

12:30–12:45: EMS2010-810
The relation between air pollution data and planetary boundary layer quantities in a complex coastal industrial site nearby populated areas
M.C. Mammarella, G. Grandoni, J. Fernando, M. Cacciani, S. Di Sabatino, M. Favaron, P. Fedele
ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development

12:45–13:00: EMS2010-812
Round table discussion "Development of qualification framework in meteorology (TEMPUS QUALIMET)"
I. Bashmakova, **A. Belotserkovsky**, L. Karlin, A. Petrosyan, N. Serditova, S. Zilitinkevich
TEMPUS QualiMet Team

13:00 Lunch Break

15:00–16:00

15:00–15:15: EMS2010-817
Energy Cycle of Wind Generated Surface Waves
G.S. Golitsyn
A.M. Obukhov Institute of Atmospheric Physics, RAS, Moscow, Russia

15:15–15:30: EMS2010-341
Analysis of urban boundary layer flow and turbulence parameters on the basis of an experimental campaign in Turin city
S. Trini Castelli, S. Falabino, L. Mortarini, E. Ferrero, R. Richiardone, D. Anfossi
Institute of Atmospheric Sciences and Climate, CNR-ISAC, Turin, Italy (trini@to.infn.it)

15:30–15:45: EMS2010-366
The afternoon and early-evening decay of turbulent kinetic energy over different land surfaces
D.F. Nadeau, E.R. Pardyjak, C.W. Higgins, H.J.S. Fernando, M.B. Parlange
EPFL, Lausanne, Switzerland (daniel.nadeau@epfl.ch)

END OF ORAL PROGAMME AW8

Communication and Education

COM1/CE6 Plenary on Communication on Climate Change (co-organized)

Conveners: R. van Dorland; R.E. Benestad; T. Cegnar
Lecture Room: AudiMax (F30)

14:45–18:00 **For a detailed programme see page 17**

CE1 Adaptation strategies

Convener: T. Cegnar
Lecture Room: E1.1

11:00–13:15
Chairperson(s): Joop Oude Lohuis

11:00–11:15: EMS2010-415
European information on climate change impacts, vulnerability and adaptation (solicited)
A. Jol, S. Isoard
European Environment Agency, Copenhagen, Denmark

11:15–11:30: EMS2010-201
Creation of the CCIVA ERA via a Networks of research funders and managers and joint transnational activities (solicited)
M. Leitner, T. Capela Lourenço
Federal Environmental Agency - Austria

11:30–11:45: EMS2010-771
The EPA Interest Group Climate & Adaptation (solicited)
J. van Minnen
Netherlands Environmental Assessment Agency, Department of Climate, Air and Energy, European Topic Centre on Air and Climate Change

11:45–12:00: EMS2010-772
Climate adaptation in the Netherlands: Moving from Science to policy and vice versa
J. van Minnen
Netherlands Environmental Assessment Agency, Department of Climate, Air and Energy, European Topic Centre on Air and Climate Change

12:00–12:15: EMS2010-796
Implementation of the German Climate Adaptation Strategy - Two years of experience
A. Daschkeit, P. Mahrenholz, C. Haße
German Federal Environment Agency

12:15–12:30: EMS2010-741
The development of the Swiss Adaptation Strategy
R. Hohmann, P. Köllner-Heck, T. Probst
Swiss Federal Office for the Environment (FOEN)

12:30–12:45: EMS2010-376
CITY 2020+
C. Schneider, M. Buttstädt, H. Merbitz, T. Sachsen, G. Ketzler, S. Michael, M. Klemme, W. Dott, K. Selle, H. Hofmeister and the RWTH Aachen University - City2020 Team
RWTH Aachen University, Department of Geography, Germany (christoph.schneider@geo.rwth-aachen.de)

12:45–13:00: EMS2010-89
A dynamic classification of biogeophysical environments integrating climatic and terrestrial data
A. Shkaruba, V. Kireyeu
Central European University, Environmental Sciences and Policy, Budapest, Hungary (shkarubaa@ceu.hu)

13:00–13:15: EMS2010-797
Vulnerability Assessment, Climate Change Impacts and Adaptation Measures in Slovenia
T. Cegnar
Environmental Agency of the Republic of Slovenia

END OF ORAL PROGAMME CE1

CE4 Education

Convener: T. Halenka
Lecture Room: E1.1

08:30–10:30

08:30–08:45: EMS2010-805
European Meteorological Society and education in atmospheric sciences (solicited)
T. Halenka, M. Belda
Dept. of Meteorology and Environment Protection, Charles University, Prague, Czech Republic, tomas.halenka@mff.cuni.cz

08:45–09:00: EMS2010-92
Meteorological Education and Awareness in the Russian Federation (solicited)
L. Karlin, L. Savelyev
Russian State Hydrometeorological University, St. Petersburg, Russia (rector@rshu.ru)

09:00–09:15: EMS2010-701
Atmospheric Sciences education in Turkey, and the role of recently established meteorology office at Istanbul Technical University.
A. Kahraman, M. Kadioglu
Istanbul Technical University, Meteorology, Istanbul, Turkey (kahramanab@itu.edu.tr)

09:15–09:30: EMS2010-804
EKLIMA: Tutorial e-learning model for lifelong learning in selected spheres of the Environment
E. Holtanova, R. Tolasz, V. Vozenilek, J. Jilkova
Czech Hydrometeorological Institute, Prague, Czech Republic, holtanova@chmi.cz

09:30–09:45: EMS2010-438
Little meteorological workshop
Spoler Canic, D. Rasol
Meteorological and Hydrological Service, Zagreb, Croatia (spoler@cirus.dhz.hr)

09:45–10:00: EMS2010-740
Open Day at SHMI.
M. Jarosova
Slovak Hydrometeorological Institute, Bratislava (miriam.jarosova@shmu.sk)

10:00–10:30: EMS2010-809
Sharing is Winning: Cooperative Learning about Atmospheric Composition Change (solicited)
E. Schuepbach
University Center César Ritz, Brig, Switzerland, eva.schuepbach@ritz.edu

END OF ORAL PROGAMME CE4

Numerical Weather Prediction

NWP1 Dynamics and predictability of high impact weather

Convener: E. Andersson
Co-Convener: H. Böttger
Lecture Room: E1.2

08:30–10:30
Chairperson(s): Erik Andersson

Case studies

08:30–08:45: EMS2010-593
Predicatbility of windstorm Klaus; sensitivity to PV perturbations
P. Arbogast, K. Maynard METEO-FRANCE, DPREVI, Toulouse, France (philippe.arbogast@meteo.fr)

08:45–09:00: EMS2010-601
The 20 February 2010 Madeira flash flood
P.M.A. Miranda, R. Tomé, E.B. Azevedo, R.M. Cardoso
University of Lisbon, IDL, Lisbon, Portugal (pmmiranda@fc.ul.pt)

09:00–09:15: EMS2010-138
A study of the 1 - 2 January 2010 sea storm over the Ligurian Sea
F. Pasi, A. Orlandi, S. Gallino, **L. Onorato**
CMIRL, Meteo idrological Center, Genova, Italy

09:15–09:30: EMS2010-511
The interaction between the outflow of Typhoon Jangmi (2008) and the midlatitude jet during T-PARC
C.M. Grams, S.C. Jones
Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology, Germany

Predictability

09:30–09:45: EMS2010-742
Sensitivity of a mesoscale convective system to soil moisture perturbations in West Africa
L. Gantner, B. Adler, N. Kalthoff
IMK, KIT, Karlsruhe, Germany
(leonhard.gantner@kit.edu)

09:45–10:00: EMS2010-394
Wind Power predictability a risk factor in the design, construction and operation of Wind Generation Turbines
J. Thiesen, I Gulstad, I Ristic, T Maric
ConWx ApS jt@conwx.com

10:00–10:15: EMS2010-468
Comparing TIGGE multi-model and ECMWF calibrated ensembles
R. Hagedorn, **R. Buizza**, T. M. Hamill, M. Leutbecher, T. N. Palmer
ECMWF, Research, Reading, United Kingdom (buizza@ecmwf.int)

10:15–10:30: EMS2010-769
Ensemble prediction skill in relation with large scale circulation patterns
L. Ferranti, S. Corti
ECMWF, Reading, UK (laura.ferranti@ecmwf.int)

END OF ORAL PROGRAMME NWP1

Is there a need for a code of ethics in science communication and Communicating Uncertainties on Climate Change?

T. Cegnar (1), R. Benestad (2), and C. Billard (3)

(1) Environmental Agency of Slovenia, Ljubljana, Slovenia, (2) Norwegian Meteorological Institute, Oslo, Norway, (3) Météo-France, Human Resources Department, France (christophe.billard@meteo.fr)

The EMS Media team recognises that:

- Scientific knowledge is valuable for society, but it also becomes fragile in a media-dominated society where the distortion of facts clouds the validity of the information.
- The use of scientific titles in communication normally brings expectations of high standards regarding the information content.
- Freedom of speech is fragile in the sense that it can be diluted by a high proportion of false information.
- The value of scientific and scholastic titles is degraded when they are used to give the impression of false validity.
- Science communication is powerful, and implies a certain responsibility and ethical standard.
- The scientific community operates with a more or less tacit ethics code in all areas touching the scientists' activities.
- Even though many scientific questions cannot be completely resolved, there is a set of established and unequivocal scientific practices, methods, and tests, on which our scientific knowledge rests.
- Scientists are assumed to master the scientific practices, methods, and tests.
- High standard in science-related communication and media exposure, openness, and honesty will increase the relevance of science, academies, and scientists in the society, in addition to benefiting the society itself.
- Science communication is important to maintain and enhance the general appreciation of science. The value of the role of science is likely to increase with a reduced distance between scientists and the society and a lower knowledge barrier.
- An awareness about the ethical aspects of science and science communication may aid scientists in making decisions about how and what to say.
- Scientists are often not trained in communication or ethics.
- A set of guide lines may lower the barrier for scientists concerned about tacit codes to come forward and talk to the media.

Recommendations:

- The mass media should seek more insight into scientific knowledge, history, principles, and societies. Journalists and artists should be encouraged and receive support to attend the large scientific conferences organised by e.g the EMS, EGU, AMS, and the AGU. National meteorological societies can contribute by promoting the idea of media participation, e.g. through statements and letters of opinion to news papers, in TV and radio. They can point to media awards and best-practice examples (such as the Norwegian collaboration between the national broadcasting corporation and the meteorological service yr.no.)
- Tacit ethics codes and expectations from scientists should be spelled out. The role of scientists should be clear, and national academies and member organisations are encouraged to provide a clear list of expectations.
- Statements drawing on the authority of science should have a basis in well-established and unequivocal scientific practices, methods, and tests. This means, for instance, that analysis and statistics must conform to well-established robust methods, avoiding 'cherry picking' and the misrepresentation of data. The information should also – to the greatest possible degree – be based on open source and transparent methods and data.

These issues will be discussed in the session *Media and communication (CE2)*, **Thursday, 16 September 2010, 08:30** in the lecture room AudiMax (F30) to provide a forum of exchange on existing codes of ethics and related experience. Everybody interested and concerned with these issues is invited to participate in the discussion.

Thursday	Audimax – F30	E3	E1.1	E1.2	D1.1
08:30–10:30	CE2: Media and Communication	UC1: Climate change assessments of trends, variability and extremes	MC1: Monitoring of the climate system	NWP4/AW15 Mountain meteorology	UC4: Climatic reconstructions
10:30–11:00	Coffee Break				
11:00–13:00	CE2 & Media Awards	MC3/AW13: Data mapping spatial interpolation and GIS modelling	AW6: Atmospheric measurements from local to regional scale	NWP4/AW15	UC4
13:00–14:00	Lunch Break				
14:00–16:00	UC2: Climate modelling, climate prediction and scenarios from seasons to century	MC2: Data rescue, management, quality and homogenization	AW6	NWP4/AW15	
16:00–17:00	Poster Session & Outstanding Poster Award and Coffee Break Poster authors in attendance time 2: MC1, MC2, MC3/AW13, UC1, UC3, UC4, AW3, AW6, AW8, CE2, CE4, NWP1, NWP2, NWP3, NWP4/AW15				
17:00–19:00	UC2	MC2	AW6	NWP4/AW15 18:00 NWP3: Observation targeting & impact studies	

Side Meetings on Thursday	
17:30–19:30	**Informal WMO RA VI Pilot RCC-Network Coordination Meeting** Contact: Stefan Rösner, DWD **Room E33.1**

Outstanding Poster Award

An Outstanding Poster Award will be given at the 10th EMS / 8th ECAC in Zürich.

A Select Committee has been established; members are:

- **Saskia Willemse**, MeteoSwiss
- **Jochen Grandell**, EUMETSAT
- **Sylvain Joffre** (Chair), FMI

All poster presenters are asked to put their posters onto the boards on Monday morning (or as early as possible after their arrival at the venue), and the select committee will screen all posters present along the following criteria:

- Scientific quality
- Innovativeness of the approach
- Potential impacts of the results
- Visual aspects, attractiveness
- Clarity/fluency to have the message through to the readers.

The selected poster and author(s) will be announced on Thursday, 16 September 2010, at the start of the poster session (16:00) in the exhibition and catering area. The author(s) will receive a certificate, one registration fee waiver for the EMS & ECAM 2011 in Berlin, and the poster will be highlighted on the EMS website as example of Best Practice.

Monitoring for a reference climate and monitoring change

MC1 Monitoring of the climate system

Conveners: W. A. Monna; S. Rösner
Lecture Room: E1.1

08:30–10:30
Chairperson(s): W. Monna, S. Rösner

08:30-08:33: S.Rösner – Introduction

08:33–08:45: EMS2010-745
Roadmap for embedding requirements from climate into the European Surface Land Station Network
A.F.V. van Engelen
KNMI, Netherlands (aryan.van.engelen@knmi.nl)

08:45–08:57: EMS2010-171
National Climate Observing System (GCOS Switzerland)
G. Seiz, **N. Foppa**, M. Meier, O. Meister
Federal Office of Meteorology and Climatology MeteoSwiss, Climate Division, Swiss GCOS Office

08:57–09:09: EMS2010-122
The Global Climate Observing System. French contribution
R. Juvanon-du-Vachat
(Regis.Juvanon-du-Vachat@meteo.fr)

09:09–09:21: EMS2010-202
EURO4M: monitoring weather and climate extremes in Europe
A. M. G. Klein Tank
Royal Netherlands Meteorological Institute, Climate Research and Seismology, De Bilt, Netherlands (albert.klein.tank@knmi.nl)

09:21–09:33: EMS2010-556
The SPEIbase: a new gridded product for the analysis of drought variability and drought impacts
S. Begueria-Portugues, S.M. Vicente-Serrano, J.I. López-Moreno, M. Angulo-Martínez, A. El Kenawy
Consejo Superior de Investigaciones Científicas, Estación Experimental de Aula Dei, Zaragoza, Spain (sbegueria@eead.csic.es)

09:33–09:45: EMS2010-714
Quantitative precipitation climatology over the Himalayas by using Precipitation Radar on Tropical Rainfall Measuring Mission (TRMM) and a dense network of rain-gauges
A. Yatagai
Research Institute for Humanity and Nature, Research department, Kyoto, Japan (akiyo@chikyu.ac.jp)

09:45–09:57: EMS2010-208
A satellite-derived climate data record of global radiation
R Posselt, R Müller, R Stöckli, J Trentmann
Meteoswiss Zurich, Climate Analysis, Zurich, Switzerland (rebekka.posselt@meteoswiss.ch)

09:57–10:19: EMS2010-3
Annual sea surface height variation on the Caspian Sea from Topex / Poseidon and Jason-1 altimetry data
K. Shojaee
KITO Enterprises, Offshore Surveying, Sharjah, United Arab Emirates (k.shojaee@kitoenterprises.ae)

10:09–10:14: A. Kuhn – The Global Climate Observing System - Progress & Update

10:14–10:26: Poster introduction

10:26–10:30: W. Monna – Final remarks

END OF ORAL PROGAMME MC1

MC2 Data rescue, management, quality and homogenization

Convener: M. Brunet India
Co-Conveners: O. Mestre; A. Mestre; C. Kern-Hansen; R. Allan
Lecture Room: E3

14:00–16:00
Chairperson(s): Claus Kern-Hansen

Data Rescue and Data Management

14:00–14:15: EMS2010-80
The Research Data Archive at NCAR: A System Designed to Handle Diverse Climate Datasets
B. Dattore, S. Worley
National Center for Atmospheric Research, Boulder, Colorado, USA (dattore@ucar.edu, worley@ucar.edu)

14:15–14:30: EMS2010-97
HIST-EU - a dataset of European relevance, a database to enable long-term climate variability studies on regional scale
I. Auer, R. Böhm, M. Ganekind, W. Schöner, J. Nemec, B. Chimani
Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria
(ingeborg.auer@zamg.ac.at)

14:30–14:45: EMS2010-229
Using synoptical messages for near-real-time updating of climate time series
E.J.M. van den Besselaar, A.M.G. Klein Tank, G. van der Schrier
Royal Netherlands Meteorological Institute (KNMI), KS/KA, De Bilt, Netherlands (besselaar@knmi.nl)

14:45–15:00: EMS2010-398
Austrian Daily Climate Data Rescue and Quality Control
A. Jurkovic, W. Lipa, S. Adler, J. Albenberger, W. Lechner, R. Swietli, I. Vossberg, S. Zehetner
ZAMG-Central Institute for meteorology and Geodynamics, Vienna, Austria

15:00–15:15: EMS2010-507
A central repository for gridded data in the MeteoSwiss Data Warehouse
E. Grueter
MeteoSwiss, Data Coordination, Zurich, Switzerland (estelle.grueter@meteoswiss.ch)

15:15–15:30: EMS2010-554
Aspects of quality insurance in digitizing historical climate data in Germany
H. Mächel, J. Behrends, A. Kapala
Deutscher Wetterdienst, Klima und Umwelt, Offenbach, Germany (hermann.maechel@dwd.de)

15:30–15:45: EMS2010-617
Data Integration and long-term Planning of the Observing System as a cross-cutting Process in a NHMS
C. Haeberli, E. Grueter, M. Braendli, M. Musa, C. Stocker, M. Kube, L. von Dach
(christian.haeberli@meteoswiss.ch)

Quality Control and Homogenisation

15:45–16:00: EMS2010-36
Quality control of solar radiation data within the RMIB solar measurements network
M. Journée, C. Bertrand
Royal Meteorological Institute of Belgium, Brussels, Belgium
(michel.journee@oma.be, cedric.bertrand@oma.be)

16:00 Poster Session & Coffee Break

17:00–19:00
Chairperson(s): Manola Brunet

17:00–17:15: EMS2010-161
Homogenising time series: Beliefs, dogmas and facts
P. Domonkos
Univ. Rovira i Virgili, Campus Terres de l'Ebre, Centre for Climate Change, Tortosa, Spain (peter.domonkos@urv.cat)

17:15–17:30: EMS2010-328
Wind bias of the NCEP/NCAR 50-year reanalysis over the West African and Asian Monsoon Regions during the Years 1948-57
A. Stickler, S. Brönnimann
Institute for Atmospheric and Climate Science, Environmental Sciences, Zürich, Switzerland (alexander.stickler@env.ethz.ch)

17:30–17:45: EMS2010-354
A Majorca case study of daily extreme temperatures homogenization
J.A. Guijarro
AEMET (Meteorology State Agency), Balearic Islands Office, Palma de Mallorca, Spain (jguijarrop@aemet.es)

17:45–18:00: EMS2010-437
Quality control procedures in MISH-MASH systems
T. Szentimrey, Z. Bihari, M. Lakatos
Hungarian Meteorological Service, Budapest, Hungary (szentimrey.t@met.hu)

18:00–18:15: EMS2010-449
Filling gaps in hourly data – a crucial step for homogeneity in high temporal resolution
F. Kreienkamp, **A. Spekat**
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

18:15–18:30: EMS2010-505
Operational quality control of daily precipitation using spatio-climatological consistency testing
S. C. Scherrer, M. Croci-Maspoli, D. van Geijtenbeek, C. Naguel, C. Appenzeller
Federal Office of Meteorology and Climatology, Climate Services, Zürich, Switzerland
(simon.scherrer@meteoswiss.ch)

18:30–18:45: EMS2010-516
Precipitation chemistry based on row and homogenised data series
K. Spoler Canic, D. Rasol
Meteorological and Hydrological Service, Zagreb, Croatia (spoler@cirus.dhz.hr)

18:45–19:00: EMS2010-557
A physics-based correction method for homogenizing historical subdaily time series from Switzerland
R. Kocen, S. Brönnimann, L. Breda, R. Spadin, M. Begert, C. Füllemann
Institute for Atmospheric and Climate Science, ETH Zurich, Zurich, Switzerland (renate.kocen@env.ethz.ch), Oeschger Centre for Climate Change Research, Graduate School of Climate Sciences, University of Bern, Switzerland

END OF ORAL PROGAMME MC2

MC3/AW13 Data mapping, spatial interpolation and GIS modelling, Reference climatologies (co-organized)

Convener: O. E. Tveito
Co-Conveners: I. Auer; M. Dolinar; C. Frei
Lecture Room: E3

11:00–13:00
Chairperson(s): C.Frei

11:00–11:30: EMS2010-226
Development of a longtime dataset of temperature and solid precipitation (solicited)
B. Chimani, R. Böhm, C. Matulla, M. Ganekind
Central Institute for Meteorology and Geodynamics, Climate Department, Vienna, Austria
(barbara.chimani@zamg.ac.at)

11:30–11:45: EMS2010-342
Multi-methodical realisation of the new Austrian climate maps for 1971-2000
I. Auer, R. Böhm, **J. Hiebl**, S. Reisenhofer, W. Schöner
Central Institute for Meteorology and Geodynamics (ZAMG), Vienna, Austria

11:45–12:00: EMS2010-540
WegenerNet climate station network region Feldbach/ Austria: local climate and weather at 1km-scale resolution
T. Kabas, A. Leuprecht, C. Bichler, G. Kirchengast
Wegener Center for Climate and Global Change (WegCenter), University of Graz, Austria

12:00–12:15: EMS2010-325
A Comparison Between Kriging, CoKriging and Geographically Weighted Regression Models for Estimating Rainfall over North West of Iran
A. Matkan, **A. Shakiba**, B. Mirbagheri, H. Tavoosi
RS & GIS Department, Faculty of Earth sciences, Shahid Beheshti University, Tehran, Iran

12:15–12:30: EMS2010-674
Spatial mapping of daily extreme temperature in Europe and Middle East
S. Krähenmann, B. Ahrens, P. Bissolli, J. Rapp
Frankfurt am Main, Institute for Atmospheric and Environmental Sciences, Geosciences, Frankfurt, Germany (kraehenmann@iau.uni-frankfurt.de)

12:30–12:45: EMS2010-610
Mapping of Snow Depth Data for the WMO RA VI Region and its Quality Assessment
P. Bissolli, S. Pietrucha, U. Maier
Deutscher Wetterdienst, Dep. Climate Monitoring, Offenbach, Germany (peter.bissolli@dwd.de)

12:45–13:00: EMS2010-802
EUMETGRID - towards a common European data infrastructure for gridded climate data (solicited)
O.E. Tveito
Norwegian Meteorological Institute, Oslo, Norway (ole.einar.tveito@met.no)

END OF ORAL PROGAMME MC3/AW13

Understanding processes and climate change

UC1 Climate change assessments of trends, variability and extremes

Convener: R. Heino
Co-Conveners: M. Rebetez; A. M. G. Klein Tank
Lecture Room: E3

08:30–10:30
Chairperson(s): Albert Klein Tank

08:30–08:45: EMS2010-332
Understanding climate change-induced variations in daily temperature distributions over Italy
C. Simolo, M. Brunetti, M. Maugeri, T. Nanni, A. Speranza
ISAC -CNR, Italy (c.simolo@isac.cnr.it)

08:45–09:00: EMS2010-279
Daily precipitation variability in the Italian Alps over the last century
Y. Brugnara, M. Brunetti, M. Maugeri, T. Nanni, C. Simolo
ISAC-CNR, via Gobetti 101, I-40129 Bologna, Italy

09:00–09:15: EMS2010-510
Local and large-scale influences on Swiss temperature trends 1959-2008
P. Ceppi, S. C. Scherrer, A. Fischer, C. Appenzeller
Federal Office of Meteorology and Climatology, Climate Services, Zürich, Switzerland
(simon.scherrer@meteoswiss.ch)

09:15–09:30: EMS2010-514
Analyses of newly digitised and reconstructed snow series over the last 100+ years in Switzerland
S. C. Scherrer, C. Wüthrich, M. Croci-Maspoli, C. Appenzeller
Federal Office of Meteorology and Climatology, Climate Services, Zürich, Switzerland
(simon.scherrer@meteoswiss.ch)

09:30–09:45: EMS2010-91
Meteorological factors controlling year-to-year variations in the spring onset of snow melt over the Arctic sea ice
E Maksimovich and the DAMOCLES Team
University Pierre et Marie Curie, Paris, France

09:45–10:00: EMS2010-42
Effect of Planetary Boundary Layer Feedback on the Diurnal Temperature Range
S. Outten
(stephen.outten@nersc.no)

10:00–10:15: EMS2010-187
Urban sites in climate change
B. Früh, M. Kossmann
Deutscher Wetterdienst, Klima und Umweltberatung, Offenbach, Germany (barbara.frueh@dwd.de)

10:15–10:30: EMS2010-184
Up-to-date (1900-2009) rapid warming over Japan: an assessment of urban contamination
L. Das, J.D. Annan, J.C. Hargreaves, S. Emori
RIGC/JAMSTEC, GCPRP-IPCC, Yokohama City, Japan (daslalu@jamstec.go.jp)

ORAL PROGAMME CONTINUES FRIDAY

UC2 Climate modelling, climate prediction and scenarios from seasons to century

Convener: C. Appenzeller
Co-Conveners: C.M. Goodess; C. Schär; R.E. Benestad
Lecture Room: AudiMax (F30)

14:00–16:00

14:00–14:30: EMS2010-246
Risks of model weighting in multi-model climate projections - lessons learnt from seasonal forecasting (solicited)
A.P. Weigel, R. Knutti, M.A. Liniger, C. Appenzeller
Federal Office of Meteorology and Climatology (MeteoSwiss), Climate Services, Zurich, Switzerland (andreas.weigel@meteoswiss.ch)

14:30–14:45: EMS2010-786
High Resolution Regional Climate Modelling - Lessons Learned from EC FP6 Project CECILIA
T. Halenka, M. Belda, J. Miksovsky
Charles University in Prague, Fac. of Math. & Physics, Dept. of Meteorology and Environment Protection, Prague, Czech Republic
(halenka@mbox.troja.mff.cuni.cz)

14:45–15:00: EMS2010-607
Evaluation of the regional climate model REMO over several CORDEX domains throughout the globe
A. Elizalde, A. Haensler, P. Kumar, R. Podzun, D. Rechid, A. Remedio, F. Saeed, K. Sieck, **C. Teichmann**, C. Wilhelm and the REMO Team
Max-Planck-Institute for Meteorology, The Atmosphere in the Earth System, Hamburg, Germany
(claas.teichmann@zmaw.de)

15:00–15:15: EMS2010-209
Regional Climate Simulation (1989-2009) with WRF in the CORDEX-Europe Domain
J. Chu, K Warrach-Sagi, V Wulfmeyer, T Schwitalla, H Bauer
University of Hohenheim, Institute of Physics & Meteorology, Stuttgart, Germany
(jtchu@uni-hohenheim.de)

15:15–15:30: EMS2010-299
Dynamical downscaling of the ERA-40 reanalysis and ARPEGE GCM with the WRF regional climate model in complex terrain in Norway - comparison with ENSEMBLES
U. Heikkilä, A. D. Sandvik, A. Sorteberg
Bjerknes Centre for Climate Research, Bergen, Norway (ulla.heikkila@uni.no)

15:30–15:45: EMS2010-558
Calculation of Probabilistic Climate Change Scenarios for Switzerland
A. M. Fischer, A. P. Weigel, M. A. Liniger, C. Buser, C. Appenzeller
Federal Office of Meteorology and Climatology MeteoSwiss, Climate Services, Switzerland
(andreas.fischer@meteoswiss.ch)

15:45–16:00: EMS2010-60
The future climate characteristics of the Carpathian Basin based on a regional climate model mini-ensemble
G. Szépszó, J. Bartholy, G. Csima, A. Horányi, A. Hunyady, I. Krüzselyi, I. Pieczka, R. Pongrácz, P. Szabó, Cs. Torma
Hungarian Meteorological Service, Budapest, Hungary

16:00 Poster Session & Coffee Break

17:00–19:00

17:00–17:15: EMS2010-63
Downscaling Precipitation Extremes: Correction of Analog Models through PDF Predictions
R.E. Benestad
Norwegian Meteorological Institute, Climate, Oslo, Norway (rasmus.benestad@met.no)

17:15–17:30: EMS2010-576
Statistical downscaling assessments of temperature and precipitation extremes in the Mediterranean area
E. Hertig, J. Jacobeit, S. Fernandez-Montes
University of Augsburg, Physical Geography, Augsburg, Germany (elke.hertig@geo.uni-augsburg.de)

17:30–17:45: EMS2010-447
Forcing the statistical regionalization method WETTREG with large scale models of different resolution: A sensitivity study
A. Spekat, S. Baumgart, F. Kreienkamp, W. Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany (arne.spekat@cec-potsdam.de)

17:45–18:00: EMS2010-13
Very high resolution climate modelling of extremes
E. Kendon, K. Williams
UK Met Office, Hadley Centre, Exeter, United Kingdom (elizabeth.kendon@metoffice.gov.uk)

18:00–18:15: EMS2010-259
Downscaling of extreme precipitation events under climate change conditions
M. Hofstätter, C. Matulla, J. Wang
Central Institute of Meteorology, Climate Research Department, Vienna, Austria (m.hofstaetter@zamg.ac.at)

18:15–18:30: EMS2010-2
The effect of large-scale nudging on climate indices in the Regional Climate Model CCLM
M. Demuzere, I. Anders, E. Jaeger, E. Brisson, N.P.M. van Lipzig
Department of Earth and Environmental Sciences, Physical Geography, Katholieke Universiteit Leuven, Leuven, Belgium (matthias.demuzere@ees.kuleuven.be)

18:30–18:45: EMS2010-17
Strengthening regional climate change projections of rainfall changes through fine-scale dynamical downscaling modelling and analyses of climate drivers at all scales
M.R. Grose, S Corney, J Bennett, C.J. White, G.K. Holz, N.L. Bindoff
Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), University of Tasmania, Hobart, Australia

18:45–19:00: EMS2010-735
Validation of autocorrelations and higher-order statistical moments of surface temperature simulated by statistical downscaling and regional climate models on a dense grid over central Europe
R. Huth, J. Mikšovský, J.C. Moliba, P. Stepanek, Z. Chládová
Institute of Atmospheric Physics, Dept. of Climatology, Prague 4, Czech Republic (huth@ufa.cas.cz)

END OF ORAL PROGAMME UC2

UC4 Climatic reconstructions based on instrumental, documentary and natural proxy data

Convener: R. Brázdil
Co-Conveners: S. Bronnimann; M. Gagen; J. F. Gonzalez-Rouco; D. Wheeler
Lecture Room: D1.1

08:30–10:30
Chairperson(s): R. Brázdil, J. F. Gonzáles-Rouco

08:30–08:45: EMS2010-348
The vertical structure of climate variability and change over the Arctic during the past 140 years in different observation-based data sets
S. Bronnimann, A. Stickler
Institute of Geography and Oeschger Centre for Climate Change Research, University of Bern, Switzerland , ETH Zürich, Institute of Atmospheric and Climate Science, Zürich, Switzerland (broennimann@env.ethz.ch)

08:45–09:00: EMS2010-288
Ships' logbooks and North Atlantic air circulation reconstructions 1685 - 1750
D. Wheeler, C. Ward, C. Wilkinson, R. Garcia-Herrera
University of Sunderland, Faculty of Applied Sciences, Sunderland, United Kingdom (denniswheeler1948@msn.com)

09:00–09:15: EMS2010-346
European temperature reconstruction based on model analogs constrained by proxy data
J. Franke, J.F. González Rouco, D. Frank
Swiss Federal Research Institute WSL, Dendro Sciences Unit, Birmensdorf, Switzerland

09:15–09:30: EMS2010-646
A novel approach to climate reconstructions using Ensemble Kalman Filtering
J. Bhend, S. Brönnimann
Institute for Atmospheric and Climate Science, ETH Zürich, Universitätsstr. 16, 8092 Zürich, Switzerland

09:30–09:45: EMS2010-141
BACCHUS historical vine records and old temperature measurements
C. Maurer, C. Hammerl, T. Hammerl, **E. Koch**, E. Pokorny
Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria (e.koch@zamg.ac.at)

09:45–10:00: EMS2010-198
A 500-year reconstruction of May-July temperatures for the region of Western Hungary and Eastern Austria, based on biophysical (vine and grain) indicators
A. Kiss, R. Wilson, F. Holawe, R. Brázdil, I. Bariska, E. Strömmer
University of Szeged, Physical Geography and Geoinformatics, Szeged, Hungary (kissandi@earth.geo.u-szeged.hu)

10:00–10:15: EMS2010-451
A 500 year climate reconstruction of Southwest Germany based on documentary and direct data with a special focus on high resolute reconstructed extreme rain events
P. Dostal, J. Seidel, F. Imbery
University of Mainz, Germany, Computer Science, Department of Physics, Math and Computer Science, Mainz, Germany (dostal@uni-mainz.de)

10:15–10:30: EMS2010-148
Five centuries of Czech May-June precipitation and drought variability inferred from instrumental measurements, tree rings and documentary archives
R. Brázdil, U. Büntgen, P. Dobrovolný, M. Trnka, T. Kyncl
Masaryk University, Institute of Geography, Brno, Czech Republic (brazdil@sci.muni.cz, dobro@sci.muni.cz)

10:30 Coffee Break

11:00–13:00
Chairperson(s): S. Brönnimann, D. Wheeler

11:00–11:15: EMS2010-785
Regional climate simulation over Europe over the past 500 years: comparison with proxy-based reconstructions
J. Luterbacher, J.J. Gómez-Navarro, J.F. González-Rouco, J.P. Montávez, S. Wagner, E.R. Wahl, J. Werner, E. Zorita
Department of Geography, Justus-Liebig University, Giessen, Germany, juerg.luterbacher@geogr.uni-giessen.de

11:15–11:30: EMS2010-293
European climate variability and human susceptibility over the past 2500 years
U. Buentgen and the CLIMO Team
Swiss Federal Research Institute WSL, Birmensdorf, Switzerland

11:30–11:45: EMS2010-252
Simulated and Reconstructed Climate Variability in China during the last 1200 years
D. Zhang, **R. Blender**, X. Zhu, K. Fraedrich
University of Hamburg, KlimaCampus, Hamburg

11:45–12:00: EMS2010-103
Merits and drawbacks of the regional curve standardization of tree-ring records
N.N. Ivashchenko, N.M. Datsenko, D.M. Sonechkin, B. Yang, C. Qin
Hydrometeorological Research Centre of Russia, Moscow, Russia (nnivach@mail.ru)

12:00–12:15: EMS2010-653
Reconstruction of highly resolved atmospheric forcing fields of Northern Europe for 1850-2009
F. Schenk, E. Zorita
GKSS Research Center, Insitute for Coastal Research, Geesthacht, Germany (frederik.schenk@gkss.de)

12:15–12:30: EMS2010-621
Stability of Northern Hemisphere teleconnection patterns in ensemble simulations from 1000 to 2100
C. C. Raible, D. Hofer, T. F. Stocker
University of Bern, Climate and Environmental Physics, Bern, Switzerland (raible@climate.unibe.ch), Oeschger Centre for Climate Change Research, Bern, Switzerland

12:30–12:45: EMS2010-773
Comparison of two millennial regional climate experiments over the Iberian Peninsula
J.J. Gomez-Navarro, J.P. Montavez, S. Jerez, P. Jimenez-Guerrero, R. Lorente-Plazas, J.F. Gonzalez-Rouco, E. Zorita
Universidad de Murcia, Departamento de Física, Murcia, Spain

12:45–13:00: EMS2010-506
Evolution of the Mediterranean climate in the last 7000 years in coupled model simulations with ECHO-G
S Wagner, E Zorita, F Schenk
GKSS Research Center, Institute for Coastal Research, Geesthacht, Germany, sebastian.wagner@gkss.de

END OF ORAL PROGAMME UC4

Atmosphere and the Water Cycle

AW6 Atmospheric measurements from local to regional scale: A data source for climate studies and model validation

Convener: F. Beyrich
Co-Conveners: F. C. Bosveld; H. de Bruin
Lecture Room: E1.1

11:00–13:00
Chairperson(s): Frank Beyrich

11:00–11:30: EMS2010-168
The rising greenhouse effect: experiments and observations in and around the Alps (solicited)
R. Philipona
MeteoSwiss, Station aerologique, Payerne, Switzerland (rolf.philipona@meteoswiss.ch)

11:30–11:45: EMS2010-626
Mesonet Programs - Needs and Best Practices
J. Usher, J. Doherty
WeatherBug Professional, Germantown, MD (jdoherty@weatherbug.com), WeatherBug Professional, Germantown, MD (jusher@weatherbug.com)

11:45–12:00: EMS2010-605
MicroRadarNet: a Network of Integrated High-Resolution Weather Micro Radars to Service Tracking and Forecasting of Local Precipitation Patterns
S. Turso, O. Terzo, M. Gabella, G. Perona
Politecnico di Torino, Dipartimento di Elettronica, Remote Sensing Group, Torino, Italy (stefano.turso@polito.it)

12:00–12:15: EMS2010-41
Novel method for water vapour monitoring using wireless communication networks measurements
N. David, P. Alpert, H. Messer
The Department of Geophysics and Planetary Sciences, Tel-Aviv University, Tel Aviv, Israel (noamda@post.tau.ac.il)

12:15–12:30: EMS2010-65
The system of meteorological observations based on high-altitude meteorological mast in Obninsk
M. Novitsky, N. Mazurin, L. Kulizhnikova, M. Matskevich, P. Korneev
Research and Production Association "Typhoon" - Obninsk, Russian Federal Service on Hydrometeorology and Environmental Monitoring, Russia (novitsky@typhoon.obninsk.ru)

12:30–12:45: EMS2010-68
Meteorological observations of the coastal boundary layer structure by remote measurement methods for determining the impact of meteorological conditions on the breeze circulation
D. Barantiev
National Institute of Meteorology and Hydrology, Hydro-Meteorological Observatory, Burgas, Bulgaria (damyan.barantiev@meteo.bg)

12:45–13:00: EMS2010-223
Atmospheric conditions measured by a wireless sensor network on the local scale
K. Lengfeld, F. Ament
University of Hamburg, Meteorological Institute, Germany (katharina.lengfeld@zmaw.de)

13:00 Lunch Break

14:00–16:00
Chairperson(s): Fred Bosveld

14:00–14:30: EMS2010-778
On the use of surface observational data sets for Short Range Numerical Weather Prediction (solicited)
J.-F. Mahfouf
Météo-France/CNRM, Toulouse, France

14:30–14:45: EMS2010-64
The Budget of the Atmosphere-Soil Exchange: A Long-term Fluxes Analysis (BASE:ALFA) project.
L. Caporaso, F. Di Giuseppe, G. Bonafè
ARPA- Servizio IdroMeteoClima, Bologna Italy (lcaporaso@arpa.emr.it), Università di Bologna, Bologna, Italy, ISAC-CNR, Roma, Italy

14:45–15:00: EMS2010-581
Analysis of regional albedo characteristics and its influence in the regional climate model REMO
S. Preuschmann, D. Jacob
Atmosphere in the Earth System, Max Planck Institute for Meteorology, Hamburg, Germany (swantje.preuschmann@zmaw.de)

15:00–15:15: EMS2010-529
Time series of Essential Climate Variables from Satellite Data
M. Werscheck
Deutscher Wetterdienst, Satellite Application Facility on Climate Monitoring, Offenbach, Germany (martin.werscheck@dwd.de)

15:15–15:30: EMS2010-277
Remote sensing of boundary layer properties using Infrared Sounding
J. P. A. Martins, J. Teixeira, P. M. M. Soares, P. M. A. Miranda, A. F. Santos, V. Dang, F. W. Irion, E. Fetzer, E. F. Fishbein
University of Lisbon, IDL, CGUL, Lisbon, Portugal (jpmartins@fc.ul.pt)

15:30–15:45: EMS2010-708
A Raman Lidar as Operational Tool for Long-Term Water Vapor, Temperature and Aerosol Profiling in the Swiss Meteorological Office
Dr Simeonov, Dr Dinoev, Dr Serikov, Dr Calpini, Dr Bobrovnikov, Dr Arshinov, Dr Ristori, Dr van den Bergh, Dr Parlange
EPFL, ISTE, EFLUM, Lausanne, Switzerland (valentin.simeonov@epfl.ch)

15:45–16:00: EMS2010-27
Regional energy and CO2 exchange over transitional grassland of Inner Mongolia - a weight-shift microlight aircraft study.
S. Metzger, W. Junkermann, L. Wang, K. Butterbach-Bahl, X.H. Zheng, T. Foken
Institute for Meteorology and Climate Research, KIT, Garmisch-Partenkirchen, Germany (stefan.metzger@kit.edu)

16:00 Poster Session & Coffee Break

17:00–19:00
Chairperson(s): Henk A.R. de Bruin

17:00–17:30: EMS2010-798
The Coordinated Energy and Water cycle Observations Project (CEOP) Data Integration Approach (solicited)
S. F. Williams
National Center for Atmospheric Research, Earth Observation Laboratory, Boulder, USA, email: sfw@ucar.edu

17:30–17:45: EMS2010-298
Long-term operation and intercomparison of scintillometers for flux measurements
F. Beyrich, H.A.R. de Bruin
Deutscher Wetterdienst, Meteorologisches Observatorium Lindenberg, Tauche - OT Lindenberg, Germany (frank.beyrich@dwd.de)

17:45–18:00: EMS2010-333
Low Frequency Loss in Regional Scale Flux Observations from a Tall Tower
F. C. Bosveld, J. Schalkwijk, A. P. Siebesma
KNMI, De Bilt, Netherlands (Fred.Bosveld@knmi.nl)

18:00–18:15: EMS2010-315
Temporal-spatial characteristics of area-averaged sensible heat flux by Large Aperture Scintillometer over Hai River Basin
J. Bai, S.M. Liu, Z.W. Xu, L. Jia, X.P. Ding
Beijing Normal University, School of Geography, Beijing, China (baijie126126@126.com), Alterra, Wageningen University and Research Centre, The Netherlands

18:15–18:30: EMS2010-357
First Results of two Optical Millimeter-wave Scintillometer Systems during LITFASS2009
O.K. Hartogensis, U. Weisensee, J. Evans, A.J.H. Van Kesteren, F. Beyrich
Wageningen University, Meteorology and Air Quality, Wageningen, Netherlands (oscar.hartogensis@wur.nl)

18:30–18:45: EMS2010-364
Statistical study of radar and aircraft turbulence strengths
A. Dehghan, W.K Hocking, K. Hayden
University of Western Ontario, Physics & Astronomy, London, Canada (adehghan@uwo.ca)

18:45–19:00: EMS2010-690
Multi-scale analysis of the impact of increased spatial resolution of soil moisture and atmospheric water vapour on convective precipitation
S. Khodayar, G. Schaedler, N. Kalthoff
Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology, Karlsruhe, Germany

END OF ORAL PROGAMME AW6

Communication and Education

CE2 Media and communication

Convener: T. Cegnar
Co-Convener: G. Fleming
Lecture Room: AudiMax (F30)

08:30–10:15
Chairperson(s): Tanja Cegnar

08:30–08:45: EMS2010-756 (see page 58)
Is there a need for a code of ethics in science communication and Communicating Uncertainties on Climate Change?
T. Cegnar, R. Benestad, **C. Billard**
Météo-France, Human Resources Department, France (christophe.billard@meteo.fr)

08:45–09:00 TBD

09:00–09:15: EMS2010-822
Abstraction the public from scientific – applied meteorological-climatologic data
L. Trajanoska
HMS-Skopje, Republic of Macedonia

09:15–09:30: EMS2010-806
RCOF in European region: current status and future perspective
A Hovsepyan
Co-chair of the RAVI Working Group on Climate and Hydrology, Head of Climate Research Division, Armstatehydromet, Yerevan, Armenia

09:30–09:45: EMS2010-729
Publishing Issues and Strategies for the Atmospheric Sciences: the Challenge of Climate Change
F. Murphy
John Wiley & Sons, Ltd, The Atrium, Chichester, West Sussex, PO19 8SQ, UK

09:45–10:00: EMS2010-724
Issues faced in digitally repurposing printed archival material
T. Dart
"The Seeing Ear" on-line library, Charity 1111371, St.Leonards-on-Sea, UK (tony.dart@seeingear.org)

10:00–10:15: EMS2010-732
The ancient story of Bora
R.R. Colucci, R. Lomabrdi
Institute for Marine Sciences - Trieste, National Research Council of Italy, Trieste, Italy (r.colucci@ts.ismar.cnr.it)

10:15 Coffee Break

11:00–13:15
Chairperson(s): Tanja Cegnar

11:00–11:30: EMS2010-730
Arts and Climate (solicited)
T. Cegnar
Environmental Agency of Slovenia, Ljubljana, Slovenia

11:30–11:45: EMS2010-544
... AND HERE COMES THE WEATHER - Austrian TV and radio weather news in the eye of the public
A. Keul, **A. M. Holzer**, T. Wostal
ORF, Austrian Broadcasting Corporation, Austria (alois.holzer@orf.at), ESSL, European Severe Storms Laboratory e. V., Germany (alois.holzer@essl.org)

11:45–12:00: EMS2010-728
The state of broadcast meteorology in the United States
J. Trobec
KELO-TV, Sioux Falls, South Dakota, Commissioner on Professional Affairs, American Meteorological Society

12:00–12:15: EMS2010-483
Graphical tools for TV weather presentation
M. Najman
Meteopress, s.r.o., Marketing, Prague, Czech Republic (marketing@meteopress.cz)

12:15–12:30: EMS2010-416
Weather Presenter vs Meteorologist
F. Cavallaro
Weather Specialist, CBC News Montreal, 1400 Rene-Levesque E, Montreal, QC, H2L 2M2, Canada

12:30-13:15: Award ceremony
EMS Broadcast Meteorologist Award
EMS Outreach & Communication Award
EMS TV Weather Forecast Award

END OF ORAL PROGAMME CE2

Numerical Weather Prediction

NWP3 Observation targeting and observation impact studies

Convener: A. Cress
Co-Convener: S. Klink
Lecture Room: E1.2

18:00–19:00
Chairperson(s): Alexander Cress

18:00–18:15: EMS2010-470
Singular vector-based thinning of satellite data
P. Bauer, **R Buizza**, C. Cardinali, J. N. Thepaut
ECMWF, Research, Reading, United Kingdom (buizza@ecmwf.int)

18:15–18:30: EMS2010-499
ASCAT soil moisture data assimilation in the local area model ALADIN
S. Schneider
ZAMG, Model Development, Vienna, Austria (stefan.schneider@zamg.ac.at)

18:30–18:45: EMS2010-309
Employing an ensemble prediction system in coastal flood forecasting
R. Hewston, Q. Zou, S. Pan, Y. Chen, D. Reeve, Z. Peng, X. Lv, I.D. Cluckie
School of Engineering, Swansea University, Singleton Park, Swansea, SA2 8PP, United Kingdom

18:45–19:00: EMS2010-761
Regional impact studies performed in the COSMO Community
A. Cress
Deutscher Wetterdienst, Dept. of Research and Developm, Offenbach, Germany (ALEXANDER.CRESS@DWD.DE)

END OF ORAL PROGAMME NWP3

NWP4/AW15 Host country topical session: Mountain Meteorology (co-organized)

Convener: M. Arpagaus
Co-Conveners: MW Rotach; M. Sprenger
Lecture Room: E1.2

08:30–10:30
Chairperson(s): Michael Sprenger

Local wind systems (valley and gap winds, foehn)

08:30–09:00: EMS2010-412
Mechanisms of along-valley winds and heat exchange over mountainous terrain (solicited)
J. Schmidli
ETH, Institut for Atmospheric and Climate Science, Zürich, Switzerland (juerg.schmidli@env.ethz.ch)

09:00–09:15: EMS2010-83
Analysis of the thermal structure of the "Ora del Garda" wind from airborne and surface measurements
L. Laiti, D. Zardi, M. de Franceschi
Atmospheric Physics Group, Department of Civil and Environmental Engineering, University of Trento, Via Mesiano, 77, 38123 Trento, Italy (laitil@ing.unitn.it)

09:15–09:30: EMS2010-32
Dynamics of Heat Lows over elevated terrain
T. Spengler, R.K. Smith
Atmospheric and Oceanic Sciences Program, Princeton University, USA (thomas.spengler@noaa.gov)

09:30–09:45: EMS2010-361
Large Eddy Simulation over three-dimensional mountain topography
M. Diebold, C. Higgins, M. Lehning, E. Bou-Zeid, M. B. Parlange
Ecole Polytechnique Fédérale de Lausanne (EPFL), School of Architecture, Civil and Environmental Engineering, Switzerland (marc.diebold@epfl.ch)

09:45–10:15: EMS2010-678
Downslope windstorms and gap winds during T-REX (solicited)
G. J. Mayr, L. Armi
University of Innsbruck, Meteorology and Geophysics, Innsbruck, Austria (georg.mayr@uibk.ac.at)

10:15–10:30: EMS2010-404
The Interruption of Alpine Foehn by a Cold Front. Part I: Observations
A. Gohm, G. J. Mayr, L. S. Darby, R. M. Banta
Institute of Meteorology and Geophysics, University of Innsbruck, Innsbruck, Austria (alexander.gohm@uibk.ac.at)

10:30 Coffee Break

11:00–13:00
Chairperson(s): Mathias Rotach

11:00–11:15: EMS2010-460
Foehn diagnosis and model comparison
B. Duerr, M. Sprenger, O. Fuhrer, K. Burri, T. Gutermann, P. Hächler, A. Neururer, H. Richner, R. Werner
Alpine Research Group Foehn Rhine Valley - Lake Constance (AGF), Buchs, Switzerland (bruno.duerr@gmail.com)

Mountain waves (lee-waves, rotors, and wave-induced turbulence)

11:15–11:30: EMS2010-338
Trapped lee wave interference over double ridges
I. Stiperski, V. Grubišić
Meteorological and Hydrological Service, Zagreb, Croatia (stiperski@cirus.dhz.hr)

11:30–11:45: EMS2010-334
Laboratory experiments on mountain-induced rotors
C. Knigge, D. Etling, A. Paci, O. Eiff
Institute of Meteorology and Climatology, Leibniz University of Hanover, Hanover, Germany (knigge@muk.uni-hannover.de)

11:45–12:00: EMS2010-578
Mountain waves near the tropopause
J. McHugh, R. Sharman
University of New Hampshire, Durham, NH, USA (john.mchugh@unh.edu)

12:00–12:15: EMS2010-378
Empirical method for the prediction of mountain wave turbulence
R. Sharman, T. Keller
NCAR, RAL, Boulder, United States (tkeller@ucar.edu)

Precipitation initiation and enhancement

12:15–12:45: EMS2010-799
COPS and D-PHASE: QPF research in low-mountain regions on precipitation statistics, predictive skills of models, and high-impact weather events (solicited)
V. Wulfmeyer, H.-S. Bauer, A. Behrendt, T. Schwitalla, M. Dorninger, M.W. Rotach, M. Arpagaus
Institute of Physics and Meteorology, University of Hohenheim

12:45–13:00: EMS2010-664
Convective intitiation over a heated mountain: mechanisms and predictability
D. Kirshbaum
University of Reading, Reading, UK

13:00 Lunch Break

14:00–16:00
Chairperson(s): Marco Arpagaus

14:00–14:15: EMS2010-238
Orographic precipitation enhancement by boundary-layer turbulence: evidence from vertically pointing airborne cloud radar data
B. Geerts, Q. Miao
University of Wyoming, Atmospheric Science, Laramie, WY, United States (geerts@uwyo.edu)

14:15–14:30: EMS2010-76
Mesoscale Analysis and Modeling of a Severe Thunderstorm and its Interaction with Foehn-dried Air at the Northern Alpine Slope.
M. Stoll, D. Leuenberger
MeteoSwiss, Regional Forecast Office Zurich, Switzerland

Fluxes and diffusion over complex terrain

14:30–14:45: EMS2010-294
Mesoscale impacts of effective horizontal resolution in a convection-permitting model
W. Langhans, J. Schmidli, C. Schär
ETH Zürich, Institute for Atmospheric & Climate Science, Switzerland (wolfgang.langhans@env.ethz.ch)

14:45–15:00: EMS2010-118
Seasonal variations of latent and sensible heat fluxes in complex terrain
O. Liechti, R. Thehos
Analysen & Konzepte, Winterthur, Switzerland (OlivierLiechtiAuK@compuserve.com)

15:00–15:15: EMS2010-240
The characteristics and mechanisms of persistent temperature inversions in the U.S. Intermountain West
S. Zhong, X. Bian, X. Xu, C. D. Whiteman, J. Horel
Michigan State University, Geography, East Lansing, United States (zhongs@msu.edu)

Applications of NWP and statistical methods

15:15–15:45: EMS2010-85
The COST 731 Action and the MAP D-PHASE Initiative - Overview on Main Outcomes (solicited)
A. M. Rossa
Centro Meteorologico Teolo, ARPAV, Teolo (PD), Italy (arossa@arpa.veneto.it)

15:45–16:00: EMS2010-566
Modeling snow drift in the turbulent boundary layer
G. Lieberherr, C. Groot Zwaaftink, J. Overney, M. Diebold, N. Vercauteren, M. Lehning, M.B. Parlange
School of Architecture, Civil and Environmental Engineering, EPFL, Lausanne, Switzerland (gian.lieberherr@epfl.ch)

16:00 Poster Session & Coffee Break

17:00–18:00
Chairperson(s): Marco Arpagaus

17:00–17:15: EMS2010-550
Statistical weather forecasting in the Swiss Alps by means of the Analogs method
P. Horton, M. Jaboyedoff, R. Metzger
University of Lausanne, IGAR, Lausanne, Switzerland (contact: pascal.horton@unil.ch)

Nowcasting and verification

17:15–17:30: EMS2010-126
Evaluation of precipitation nowcasting techniques for the Alpine region
L. Panziera, P. Mandapaka, A. Atencia, A. Hering, U. Germann, M. Gabella, M. Buzzi
MeteoSwiss, Locarno Monti, Switzerland

17:30–17:45: EMS2010-174
Evaluation of precipitation forecasts over the Alps using the D-PHASE multi-model ensemble
T. Weusthoff, M. Arpagaus, M.W. Rotach
MeteoSwiss, Zuerich, Switzerland (tanja.weusthoff@meteoswiss.ch)

17:45–18:00: EMS2010-353
Intercomparison of two meteorological models, COSMO and WRF, for verification of QPF over Italy
e. oberto, m. milelli, **f. pasi**, b. gozzini
CNR-IBIMET, Firenze, Italy (pasi@lamma.rete.toscana.it), LaMMa Consortium, Sesto Fiorentino, Italy

END OF ORAL PROGRAMME NWP4/AW15

Monitoring for a reference climate and monitoring change

MC1 Monitoring of the climate system

Conveners: W. A. Monna; S. Rösner
Poster Area: P4
Chairperson(s): S. Rösner, W. Monna
Attendance Time: 16:00–17:00

P4-1: EMS2010-108
Observation for the changes of the gravitational field of the Earth - one of fundamental factors that form the climate of planet
B. Kapochkin, **V. Dolia**
Odesa State Ecological University, Ukraine (vadim@earth.org.ua)

P4-2: EMS2010-251
Utilization of SPI, PDSI and RDI as drought indicators in South Bulgaria
V. Alexandrov, **S. Radeva**

P4-3: EMS2010-321
The new WMO RA VI Regional Climate Centre on Climate Monitoring
J. Rapp, H. Nitsche
Deutscher Wetterdienst, RCC-CM/KU23, Offenbach am Main, Germany (joerg.rapp@dwd.de)

P4-4: EMS2010-705
Climate monitoring with meteorological satellites: CM-SAF's cloud and radiation products derived from AVHRR observations
F. Kaspar, R. Hollmann, M. Lockhoff, K.-G. Karlsson, P. Fuchs, M. Werscheck
Deutscher Wetterdienst, Satellite Application Facility on Climate Monitoring, Offenbach, Germany (frank.kaspar@dwd.de)

END OF POSTER PROGAMME MC1

MC2 Data rescue, management, quality and homogenization

Convener: M. Brunet India
Co-Conveners: O. Mestre; A. Mestre; C. Kern-Hansen; R. Allan
Poster Area: P4
Chairperson(s): Manola Brunet, Claus Ker-Hansen, Antonio Mestre
Attendance Time: 16:00–17:00

P4-5: EMS2010-44
Climatological Data Rescue from historic meteorological stations in the Czech Republic.
M. Repka
Czech Hydrometeorological Institute, Ostrava, Czech Republic (repka@chmi.cz)

P4-6: EMS2010-57
The SPOOKI post production system
M. Beauchemin, M. Klasa, S. Fortier, F. Fortin, G. Hardy, L. Pelletier, S. Edouard, B. Archambault, H. Yazidi
MSC - Canadian Meteorological Centre, Montreal, Canada (maryse.beauchemin@ec.gc.ca)

P4-7: EMS2010-96
The Vienna Temperature Series: Strengths and weaknesses for the use in climate change analyses
I. Auer, R. Böhm, C. Gruber, A. Jurković
Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria (ingeborg.auer@zamg.ac.at)

P4-8: EMS2010-164
Newest developments of ACMANT
P. Domonkos, R. Poza
Univ. Rovira i Virgili, Campus Terres de l'Ebre, Centre for Climate Change, Tortosa, Spain (peter.domonkos@urv.cat)

P4-9: EMS2010-272
Observation and Modelling of 1/f-Noise in Weather and Climate
R. Blender, X. Zhu, F. Sienz, K. Fraedrich
University of Hamburg, KlimaCampus, Hamburg, Germany (Richard.Blender@zmaw.de)

P4-10: EMS2010-393
The Mountain Observatory Bjelašnica – History, Analysis, Homogenization and Interpretation of a more than 100 years long Temperature Data Set
A. Jurkovic, Z. Majstorovic, R. Böhm, I. Auer, Ch. Gruber, S. Hodzic, A. Orlik, Dz. Zulum
ZAMG - Central Institute for Meteorology and Geodynamics, Vienna, Austria

P4-11: EMS2010-396
Renewed data quality control of Slovenian climate data
G. Vertacnik
Environmental Agency of the Republic of Slovenia, Ljubljana, Slovenia (gregor.vertacnik@gov.si)

P4-12: EMS2010-402
Actual problems of collection and processing of climate data of Georgia
Z. Tskvitinidze, **L. Tskvitinidze**, M. Pkhakadze, G. Dartsimelia
Society of Ecological Security, (NGO), Tbilisi, Georgia, (ses_ts@yahoo.com)

P4-13: EMS2010-465
Data quality control for daily and subdaily series of various meteorological elements in the area of the Czech Republic
P. Stepanek, **P. Zahradnicek**
Czech Hydrometeorological Institute, Brno, Brno, Czech Republic (zahradnicek@chmi.cz)

P4-14: EMS2010-490
Comparison and homogenization of three different data sources available for spatial and temporal variability of air temperature in Brno region (Czech Republic)
L. Reznikova, P. Dobrovolný
Masaryk University, Department of Geography, Brno, Czech Republic (ladkar@sci.muni.cz)

P4-15: EMS2010-498
Integration of upper air data in the MeteoSwiss Data Warehouse
M. Musa, **Ch. Haeberli**
MeteoSwiss, 8044 Zuerich Switzerland (christian.haeberli@meteoswiss.ch)

P4-16: EMS2010-517
Gaussian Mixture Models for forecasting and filling of climatological time series
D. Calandria-Hernández, J.M. Hidalgo-Muñoz, D. Argüeso, S.R. Gámiz-Fortis, M.J. Esteban-Parra, Y. Castro-Díez
Facultad de Ciencias. Universidad de Granada, Física Aplicada, Granada, Spain (ycastro@ugr.es)

P4-17: EMS2010-519
Snowline retrievals using operational satellite data
R. Becker
(ralf.becker@dwd.de)

P4-18: EMS2010-521
Grid Data Management and Customer Demands at MeteoSwiss
G. Rigo, Ch. Lukasczyk
MeteoSwiss, Dataservice, Climate Services, Zurich, Switzerland

P4-19: EMS2010-528
Metadata in Climatology: its reconstruction and digitization
M. Nadbath
ARSO (EARS), Climatology, Ljubljana, Slovenia (mateja.nadbath@gov.si)

P4-20: EMS2010-533
Development of a homogeneous long monthly precipitation dataset for Spain
M. Y. Luna, J. A. Guijarro, J. A. López
Agencia Estatal Meteorología, Area de Climatologia, Madrid, Spain (yluna@inm.es)

P4-21: EMS2010-534
Advances in the homogenization of daily climate surface data in Switzerland
C. Füllemann, M. Begert, M. Croci-Maspoli
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland (christine.fuellemann@meteoswiss.ch)

P4-22: EMS2010-539
Homogeneous maximum temperature series of the Swiss National Basic Climatological Network from 1864 to 2009
M. Begert, C. Füllemann
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland (michael.begert@meteoswiss.ch)

P4-23: EMS2010-636
Homogeneity of Latvian temperature and precipitation series
L. Lizuma, A. Briede
University of Latvia, Faculty of Geography and Earth sciences, Riga, Latvia (lita.lizuma@lvgmc.lv)

P4-24: EMS2010-764
The SunCloud project: An initiative for a development of a worldwide sunshine duration and cloudiness observations dataset
A. Sanchez-Lorenzo and the SunCloud Team
Institute for Atmospheric and Climate Science, ETH Zurich, Barcelona Science Park, Barcelona, Spain (asanchezl@pcb.ub.cat)

END OF POSTER PROGAMME MC2

MC3/AW13 Data mapping, spatial interpolation and GIS modelling, Reference climatologies (co-organized)

Convener: O. E. Tveito
Co-Conveners: I. Auer; M. Dolinar; C. Frei
Poster Area: P4
Chairperson(s): M.Dolinar
Attendance Time: 16:00–17:00

P4-25: EMS2010-8
Mesoscale analysis of minimum, mean and maximum temperatures in Calabria, southern Italy
S. Federico, E. Avolio, C. Bellecci
ISAC-CNR, c/o CRATI, zona Industriale, 88046 Lamezia Terme (CZ), Italy (s.federico@isac.cnr.it), CRATI Scrl, Università della Calabria, 87036 Rende (CS)

P4-26: EMS2010-86
Spatial interpolation of atmospheric pressure observations from automatic weather stations in complex alpine terrain
C. Lussana, F. Uboldi, M. R. Salvati, M. Ranci
ARPA Lombardia, Servizio Meteorologico Regionale, Milano, Italy (c.lussana@arpalombardia.it)

P4-27: EMS2010-93
Determination of climatic potential of Qom province for rain fed wheat using RS and GIS
H. Yazdan Panah, M. Soleimani Tabar
University of Isfahan, Faculty of Humanities, Department of Geography, Isfahan, Islamic Republic Of Iran (h.yazdan@geog.ui.ac.ir)

P4-28: EMS2010-123
A high spatial resolution precipitation dataset for Andalusia (Southern Spain) based on residual kriging
H. ALSAMAMRA, **D. POZO-VAZQUEZ**, F.J. SANTOS-ALAMILLOS, V. LARA-FANEGO, J.A. RUIZ-ARIAS, J. TOVAR-PESCADOR, A. MOLINA
UNIV. JAEN, DEPT. OF PHYSICS, JAEN, Spain (dpozo@ujaen.es)

P4-29: EMS2010-124
Mapping surface wind speed in Andalusia (Southern Spain) based on residual kriging
H. ALSAMAMRA, **D. POZO-VAZQUEZ**, F.J. SANTOS-ALAMILLOS, J.A. RUIZ-ARIAS, V. LARA-FANEGO, R. LUZON-CUESTA, J. TOVAR-PESCADOR
UNIV. JAEN, DEPT. OF PHYSICS, JAEN, Spain (dpozo@ujaen.es)

P4-30: EMS2010-139
Challenges of spatial interpolation near country borders - case study of precipitation interpolation on the border between Slovenia and Austria
M. Dolinar, M. Mole
Environmental Agency of the Republic of Slovenia, Climatological department, Ljubljana, Slovenia (mojca.dolinar@rzs-hm.si)

P4-31: EMS2010-143
Spatial interpolation of air temperature for improving snow and hydrological forecasts on Alpine catchments
E JABOT, I ZIN, T LEBEL
University of Grenoble/CNRS, Grenoble, France (eric.jabot@hmg.inpg.fr)

P4-32: EMS2010-257
Comparison of the European gridded temperature dataset (E-OBS) with a dataset gridded from a high-density network of stations (GriSt)
J. Kysely, E. Plavcova
Institute of Atmospheric Physics, Prague, Czech Republic (kysely@ufa.cas.cz)

P4-33: EMS2010-303
Spatial modelling of summer precipitation over the Czech Republic using auxiliary geographical variables
J. C. Moliba Bankanza
Institute of Atmospheric Physics, Dept. of Climatology, Bocni II 1401, 141 31 Prague, Czech Republic (moliba@ufa.cas.cz)

P4-34: EMS2010-306
Gridded monthly temperatures over Italy
G. Fioravanti, A. Toreti, P. Fraschetti, W. Perconti, F. Desiato
Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA), Rome, Italy
(guido.fioravanti@isprambiente.it)

P4-35: EMS2010-494
Phytoclimatic Atlas of the Spanish Peninsular territory. First approach: Climate Atlas of Spain
J. GONZALO
Dept. of Vegetable Production and Forest Resources, University of Valladolid - E.T.S. de Ingenierías Agrarias, Palencia, Spain (jgonzalo@pvs.uva.es), Sustainable Forest Management Institute Uva-INIA, Madrid, Spain

P4-36: EMS2010-496
Foehn wind detection using numerical modelling
A. Irimescu, M. Caian
National Meteorological Administration, Bucharest, Romania, (anisoara.irimescu@meteoromania.ro)

P4-37: EMS2010-524
Mapping rainfall variability using different GIS interpolation techniques over Siret Basin
A. T. Nertan, V. Panaitescu
National Meteorological Administration, Buchares, Romania, argentina.nertan@meteoromania.ro

P4-38: EMS2010-639
Evaluation of precipitation from ECMWF re-analyses over Iberian Peninsula
M. Belo-Pereira, E. Dutra, P. Viterbo, S. Gomes
Meteorological Institute, Lisbon, Portugal
(margarida.belo@meteo.pt)

P4-39: EMS2010-644
Climate Atlas of mainland Portugal
A. Silva, S. Cunha, M. Belo-Pereira, F. Coelho, L. Nunes, V. Pires, L. Mendes, J. Neto, M. Mendes
Meteorological Institute, Lisbon, Portugal
(alvaro.silva@meteo.pt)

P4-40: EMS2010-716
Interpolation technique and error estimation of APHRO_PR, a gauge-based high-resolution daily precipitation data
K. Kamiguchi
(kkamigu@mri-jma.go.jp)

P4-41: EMS2010-744
Climate and anthropogenic impacts on forest vegetation derived from satellite data
M. ZORAN, R. SAVASTRU, D. SAVASTRU, M. TAUTAN, S. MICLOS, L. BASCHIR
National Institute of R&D for Optoelectronics, Environmental Remote Sensing Department, Bucharest Magurele, Romania (marianazoran@yahoo.com)

P4-42: EMS2010-182
Spatial analysis of climate hazards in relation to urban environments in Iran by using AHP and Kriging methods
B. Alijani, S. Alijani
Professor of climatology and director of the Centre of Excellence for the Spatial Analysis of the Environmental Hazards, Tarbiat Moallem University, Tehran

END OF POSTER PROGAMME MC3/AW13

Understanding processes and climate change

UC1 Climate change assessments of trends, variability and extremes

Convener: R. Heino
Co-Conveners: M. Rebetez; A. M. G. Klein Tank
Poster Area: P1
Chairperson(s): Raino Heino
Attendance Time: 16:00–17:00

P1-1: EMS2010-12
On evident signs of a natural origin of the modern climate change
V.I. Byshev, V.G. Neiman, Yu.A. Romanov, **I.V. Serykh**
P.P.Shirshov Institute of Oceanology of Russian Academy of Science, Russian Federation
(iserykh@gmail.com)

P1-2: EMS2010-100
Heavy Precipitation Events in Lithuania
A. Bukantis, E. Rimkus, J. Ka˛ys
Vilnius University, Department of Hydrology and Climatology, Vilnius, Lithuania (arunas.bukantis@gf.vu.lt)

P1-3: EMS2010-109
Geophysical factors of climate changes
B. Kapochkin, V. Dolia, **A. Glushkov**
Odesa State Ecological University, Ukraine (vinm3@ukr.net)

P1-4: EMS2010-112
Environmental consequences of the climate change in tropical regions
L. GONIMA
(lgonima@sinu.unicordoba.edu.co)

P1-6: EMS2010-144
Heat waves: Identification in Galicia from 1986 to 2006.
M. deCastro, M. Gómez-Gesteira, A. M. Ramos, I. Álvarez, **I. Iglesias**
EPphysLab (Environmental Physics Laboratory), Universidade de Vigo, Spain (mdecastro@uvigo.es)

P1-7: EMS2010-158
Climate and Mortality in Vienna and Impact of Climate Change
S. Muthers, A. Matzarakis, **E. Koch**
Central Institute for Meteorology and Geodynamics, Climatology, Vienna, Austria (e.koch@zamg.ac.at)

P1-8: EMS2010-175
The temperature variability and heat waves in Serbia
M. Unkasevic, I. Tosic
University, Meteorology, Belgrade, Serbia (itosic@ff.bg.ac.rs)

P1-9: EMS2010-176
Evaluation of trends in some temperature series at some Italian stations and their modelling by means of spectral methods: first results in the Latium coastal area
M. C. Beltrano, O. Testa, V. Malvestuto, S. Esposito
CRA- Unit Research for Climatology and Meteorology applied to Agriculture, Rome, Italy (mariacarmen.beltrano@entecra.it)

P1-10: EMS2010-190
Spatial and Temporal Study of Precipitation Characteristics over Iran Using Harmonic Analysis
F. Taghavi, M. Moghbel, M. Davudi, A. Neyestani
Space Physics Department, Geophysics Institute, University of Tehran, Tehran, Islamic Republic of Iran (ftaghavi@ut.ac.ir)

P1-11: EMS2010-205
Detection of the signs of climate change in the meteorological data series of Keszthely, Hungary
T. Kocsis
University of Pannonia Georgikon Faculty Department of Meteorology and Water Management 8360 Keszthely Festetics u. 7. Hungary (kocsis.timea@t-online.hu)

P1-12: EMS2010-220
Impacts of hot and cold temperature extremes on hospital admissions for cardiovascular diseases
H. Davídkovová, J. Kyselý, B. Kříž
Institute of Atmospheric Physics, Prague, Czech Republic (davidkov@ig.cas.cz), Faculty of Science, Charles University, Prague, Czech Republic

P1-13: EMS2010-225
200 years of temperature and snow in the Alpine region.
B. Chimani, R. Böhm, C. Matulla, M. Ganekind
Central Institute for Meteorology and Geodynamics, Climate Department, Vienna, Austria (barbara.chimani@zamg.ac.at)

P1-14: EMS2010-227
Impact of climate change estimated through statistical downscaling on crop productivity and soil water balance in Southern Italy
D. Ventrella, L. Giglio, M. Charfeddine, L. Palatella, C. Pizzigalli, D. Vitale, P. Paradisi, M. M. Miglietta, G. Rana
CRA - Research unit for cropping systems in dry environments, Agricultural Research Council, Bari, Italy (domenico.ventrella@entecra.it)

P1-15: EMS2010-285
Climatological analysis of precipitation patterns over Mount Baldo (Southern Alps)
G. Poletti, D. Zardi, M. de Franceschi
Atmospheric Physics Group, Department of Civil and Environmental Engineering, University of Trento, Trento, Italy (Dino.Zardi@ing.unitn.it)

P1-16: EMS2010-310
Recent trends in Iberian river flows (1945-2006)
J. Lorenzo-Lacruz, S.M. Vicente-Serrano, J.I. López-Moreno, J. Zabalza, E. Morán-Tejeda, J.C. González-Hidalgo
(jlorenzo@ipe.csic.es)

P1-17: EMS2010-331
Spatial and temporal variability of extreme Temperature in Northeastern Spain
A. El Kenawy, J.I. Lopez Moreno, S.M. Vicente-Serrano
Instituto Pirenaico de Ecologia, CSIC, Zaragoza, Spain (kenawy@ipe.csic.es)

P1-18: EMS2010-335
Drought analysis using SPI index and its effects on groundwater resources in East of Kermanshah, Iran
A. Shakiba, B. Mirbagheri, A. Kheiri
Faculty of Earth sciences, Shahid Beheshti University, Tehran, Iran

P1-19: EMS2010-355
Observed tropical and extratropical modes of variability in moisture fields from climate satellite dataset
S. Malmusi, M. Boccolari
University of Modena and Reggio Emilia, Department of Engineering of Materials and Environment, Modena, Italy (simona.malmusi@unimore.it)

P1-20: EMS2010-370
Analysis of high temperature extremes and climatological drought long-term tendencies in Latvia
A. Briede, L. Lizuma
University of Latvia, Faculty of Geography and Earth Sciences, Riga, Latvia (agrita.briede@lu.lv)

P1-21: EMS2010-375
Regional variability of mean and extreme wind characteristics over Hungary
K. Radics, **J. Bartholy**, N. Cs. Péliné
Department of Meteorology, Eötvös Loránd University, Budapest, Hungary (bari@ludens.elte.hu)

P1-22: EMS2010-380
An assessment of heat stress in the Iberian Peninsula
D. RASILLA ÁLVAREZ, **F. FERNANDEZ GARCÍA**
Universidad Autónoma de Madrid, Grupo GEOCLIMA, Departamento de Geografía (felipe.fernandez@uam.es)

P1-23: EMS2010-395
What climate changes could be observed by two generations of Poles?
M. Szwed
Polish Academy of Sciences, Institute for Agricultural and Forest Environment, Poznan, Poland (mszwed@man.poznan.pl)

P1-24: EMS2010-400
Comparison of the impacts of hot and cold spells on mortality in individual seasons and population groups
E. Plavcova, J. Kysely, J. Kyncl, B. Kriz
Institute of Atmospheric Physics AV CR, Prague, Czech Republic (plavcova@ufa.cas.cz), Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic

P1-25: EMS2010-418
Seasonal variability of diurnal temperature range in Egypt with links to atmospheric circulations and sea surface temperature
A. El Kenawy, J I Lopez Moreno, S Vicente-Serrano
Instituto Pirenaico de Ecologia, CSIC, Zaragoza, Spain (kenawy@ipe.csic.es)

P1-26: EMS2010-433
Statistical downscaling of daily precipitation: A two-step probabilistic approach
R. Haas, K. Born
Universität Köln, Institute for Geophysics and Meteorology, Meteorology, Cologne, Germany (kai.born@uni-koeln.de)

P1-27: EMS2010-472
Probability of drought occurrence in the Rhine drainage basin during the 21st century
K. Bülow, D. Jacob
Max Planck Institute for Meteorology, Hamburg, Germany (katharina.buelow@zmaw.de)

P1-28: EMS2010-474
Trends in indices of climatic extremes in central-western Spain
M. Alvarez-Gallego, F. J. Alvarez-Garcia, M. J. OrtizBevia, W. D. CabosNarvaez
University of Alcala, Physics, Alcala de Henares, Spain (franciscoj.alvarez@uah.es)

P1-29: EMS2010-479
Climatic indicators over Catalonia during the last century
M. Busto, M. Prohom
Meteorological Service of Catalonia, Climatology Department, Barcelona, Spain (mbusto@meteo.cat)

P1-30: EMS2010-501
Estimating the impact of wintry weather on transportation in Europe
I. Juga, J. Rauhala, A. Vajda
Finnish Meteorological Institute, Helsinki, Finland (ilkka.juga@fmi.fi)

P1-31: EMS2010-504
The role of teleconnection patterns on extreme precipitation indices over Europe
A. Casanueva, **C. Rodriguez-Puebla**, N. Gonzalez-Reviriego
University of Salamanca, Atmospheric Physics, Salamanca, Spain (concha@usal.es)

P1-32: EMS2010-522
Trends in cooling degree-days for five locations in Croatia
L. Cvitan
Meteorological and hydrological service, Research and development division, Zagreb, Croatia (cvitan@cirus.dhz.hr)

P1-33: EMS2010-527
Analysis of Precipitation Pattern from two Long-Term Hourly Dataset in Central Italy
B. Gozzini, G. Bartolini, T. Torrigiani, D. Grifoni
Institute of Biometeorology, CNR-IBIMET, Sesto Fiorentino, Italy (gozzini@lamma.rete.toscana.it)

P1-34: EMS2010-531
West African Climate and Linkages with the Atlantic Ocean, the Mediterranean Basin and Eurasia
S. Paz, Y.M. Tourre
Department of Geography and Environmental Studies, University of Haifa, Haifa, Israel (shlomit@geo.haifa.ac.il)

P1-35: EMS2010-551
Cluster analysis of temperature trends during the 20th century in the 20C3M experiments of the ENSEMBLE project
P. Pisoft
Charles University in Prague, Faculty of Mathematics and Physics, Department of Meteorology and Environment Protection, Czech Republic (petr.pisoft@mff.cuni.cz)

P1-36: EMS2010-562
The Standardized Precipitation-Evapotranspiration Index (SPEI): a multiscalar drought index
S. Begueria-Portugues, S.M. Vicente-Serrano, M. Angulo-Martínez, J.I. López-Moreno, A. El Kenawy
Consejo Superior de Investigaciones Científicas, Estación Experimental de Aula Dei, Zaragoza, Spain (sbegueria@eead.csic.es)

P1-37: EMS2010-575
Madeira Extreme Floods: 2009/2010 Winter. Case study - 2nd and 20th of February
V. Pires, J. Marques, A. Silva
Meteorology Institute, Meteorology and Climate / Observation and Climate Division, Lisbon, Portugal (vanda.cabrinha@meteo.pt)

P1-38: EMS2010-614
The Year without summer 1816
F. Arfeuille, E. Rozanov, T. Peter, D. Weisenstein, G. Hadorn, T. Bodenmann, S. Brönnimann
IAC, ETH Zurich, Switzerland

P1-39: EMS2010-619
Evaluation of climate change on flood event by using parametric T-test and non-parametric Mann-Kendall test in Barcelonnette basin, France
A. Ramesh, T. Glade, J.-P. Malet
University of Vienna, Institut of Geography, Department of Geography and Regional Research, Vienna, Austria (azadeh.ramesh@univie.ac.at)

P1-40: EMS2010-672
Long Term Precipitation Variability over the Northern Coasts of Persian Gulf and Oman Sea
M. R. PISHVAEI
Water Engineering Dept., Shiraz University, 71441 Shiraz, Iran (mrpishvaei@yahoo.com)

P1-41: EMS2010-695
Convective precipitation variability estimated by CAPE and CIN
K. Riemann-Campe, R. Blender, N. Dotzek, K. Fraedrich, F. Lunkeit
Max-Planck-Institut für Meteorologie, IMPRS-ESM, Hamburg, Germany (kathrin.riemann@zmaw.de), Meteorologisches Institut, Universität Hamburg, Hamburg, Germany

P1-42: EMS2010-707
Snow cover regime response to meteorological conditions in region of small mountain watershed of Hucava in Polana Mts. in Central Slovakia
J. Pecho, M. Hríbik, P. Fasko, J. Skvarenina
Slovak Hydrometeorological Institute, Climatology Department, Bratislava, Slovakia (jozef.pecho@shmu.sk)

P1-43: EMS2010-710
Statistical and frequency analysis of extreme 2-days and 5-days precipitation totals in western Slovakia within the 1951-2009 period
J. Pecho, P. Fasko, L. Gaál, K. Mikulová, P. Stastny, O. Bochnícek, P. Nejedlík, M. Lapin
Slovak Hydrometeorological Institute, Climatology Department, Bratislava, Slovakia (jozef.pecho@shmu.sk)

P1-44: EMS2010-712
Comparative spatial and statistical analysis of selected snow cover climatological characteristics and extremes in Slovakia within the 1950/1951-1979-1980 and 1980/1981-2009/2010 winters
J. Pecho, P. Fa¨ko, K. Mikulová, P. Nejedlík, P. Stastny, J. Kostalova
Slovak Hydrometeorological Institute, Climatology Department, Bratislava, Slovakia (jozef.pecho@shmu.sk)

P1-45: EMS2010-713
Trend analysis of regional heat wave warning using RegCM simulations
R. Pongracz, J. Bartholy, E.B. Bartha, O. Torek, Cs. Torma
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (prita@caesar.elte.hu)

P1-46: EMS2010-780
Improving the surface humidity record for climate research
K. Willett
Met Office Hadley Centre, Exeter, UK, (kate.willett@metoffice.gov.uk)

END OF POSTER PROGAMME UC1

UC3 Synoptic climatology

Conveners: R. Huth; R.E. Benestad
Poster Area: P4
Chairperson(s): R.Benestad, R.Huth
Attendance Time: 16:00–17:00

P4-43: EMS2010-381
Circulation patterns and wave climate along the coast of the Iberian Peninsula
D. RASILLA ÁLVAREZ, J.C. GARCÍA CODRÓN
Universidad de Cantabria, Grupo GIMENA, Departamento de Geografía, Urbanismo y OT, Santander, Spain (rasillad@unican.es)

P4-44: EMS2010-548
Relations of atmospheric circulation and recent climatic variability and trends in Europe - a comparative approach based on the COST733 classifications database
M. Cahynova, R. Huth
Institute of Atmospheric Physics, Academy of Sciences of the Czech Republic, Prague, Czech Republic (cahynova@ufa.cas.cz), Department of Physical Geography and Geoecology, Charles University, Prague, Czech Republic

P4-45: EMS2010-573
Circulation types classification for the Iberian Peninsula and relationships with observed relative extreme values of temperature and precipitation
S. Fernández-Montes, F.S. Rodrigo, S. Seubert, E. Hertig, A. Philipp
University of Almeria, Applied Physics, Almería, Spain (soniafm@ual.es)

P4-46: EMS2010-577
Synoptic characteristics of extreme low temperatures episodes in the Basque Country
J. Egaña, **S. Gaztelumendi**, K. Otxcoa de Alda, I.R. Gelpi
Meteorology Division, EUVE Foundation, Vitoria-Gasteiz, Álava, (Spain). jegana@euve.org, Basque Meteorology Agency (EUSKALMET) Miñano, Álava, (Spain).

P4-47: EMS2010-588
Extreme precipitation events in Estonia and associated atmospheric circulation patterns
P. Post, K. Päädam
University of Tartu, Institute of Physics, Tartu, Estonia (piia@ut.ee)

P4-48: EMS2010-462
Synoptic patterns associated with heavy rainfall events in the South of the Iberian Peninsula
J.M. Hidalgo-Muñoz, D. Argüeso, D. Calandria-Hernández, S.R. Gámiz-Fortis, M.J. Esteban-Parra, Y. Castro-Díez
Facultad de Ciencias. Universidad de Granada, Física Aplicada, Granada, Spain (ycastro@ugr.es)

P4-49: EMS2010-654
Analysis of thunder and lightning frequency in the Belgrade area in Serbia in the period 1975 - 2009
N. Todorovich, D. Vujovic
Hydrometeorological Service of Serbia, Belgrade, Serbia (nedeljko.todorovic@hidmet.gov.rs)

P4-50: EMS2010-667
Application of different weather pattern classifications to simulated future climate conditions for Central Europe
J. Bartholy, R. Pongracz, A. Philipp, C. Beck, A. Kern
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (bari@ludens.elte.hu)

P4-51: EMS2010-275
A Lagrangian circulation type classification based upon clustering
A. M. Ramos, M. Sprenger, H. Wernli, L. Gimeno, M. N. Lorenzo, A. M. Durán-Quesada
Universidade de Vigo, EPhysLab, Ourense, Spain (alexramos@uvigo.es)

P4-52: EMS2010-62
An analysis of simulated and observed storm characteristics
R.E. Benestad
Norwegian Meteorological Institute, Climate, Oslo, Norway (rasmus.benestad@met.no)

P4-53: EMS2010-256
Klaus - an exceptional winter storm over Northern Iberia and Southern France
M.R.L. Liberato, **J.G. Pinto**, I.F. Trigo, R.M. Trigo
Institute for Geophysics and Meteorology, University of Cologne, Germany (jpinto@meteo.uni-koeln.de)

P4-54: EMS2010-765
Extreme fog events in Poland with respect to circulation conditions
Z. Ustrnul, D. Czekierda, A. Wypych
Jagiellonian University, Krakow, Poland, Institute of Meteorology and Water Management, Poland

P4-55: EMS2010-777
Evaluation of circulation type classifications: overview of the COST733 - Working Group 3 activities and results
M. Pasqui, P. Esteban, C. Beck, C. Frei, R. Huth, K. Konka, J. Martin-Vide, R. Schiemann, O. E. Tveito
National Research Council - Institute of Biometeorology, CNR - IBIMET, Rome, Italy (m.pasqui@ibimet.cnr.it)

P4-56: EMS2010-658
How do Southern cyclones appear in the COST 733 catalogue 2.0 domain 05 weather types?
K. Mändla, K. Päädam, **M. Sepp**
University of Tartu, Department of Geography, Tartu, Estonia (mait.sepp@ut.ee)

P4-57: EMS2010-339
Extreme storm activity in North Atlantic and European region
N. Vyazilova
Russian Research Institute of Hydrometeorological Information - World Data Center, Obninsk,, Russian Federation (nav@meteo.ru)

P4-58: EMS2010-167
Synoptic analysis of frost days in Zanjan Province of Iran
B. Alijani, M. Tagiloo
Professor of climatology, Tarbiat Moallem University, Tehran,Iran

P4-59: EMS2010-345
Investigation of 700-hpa Geopotential Height Atmospheric Circulation Patterns in Iran
A. Kashki
Dept. of Geography, Faculty of Humanities, University of Isfahan, Isfahan, Iran (r.kashki@yahoo.com)

END OF POSTER PROGAMME UC3

UC4 Climatic reconstructions based on instrumental, documentary and natural proxy data

Convener: R. Brázdil
Co-Conveners: S. Bronnimann; M. Gagen; J. F. Gonzalez-Rouco; D. Wheeler
Poster Area: P3
Chairperson(s): D. Wheeler
Attendance Time: 16:00–17:00

P3-49: EMS2010-486
Towards a daily weather type classification for the alpine region back to the late 18th century
R. Kocen, S. Brönnimann, L. Breda, R. Spadin
Institute for Atmospheric and Climate Science, ETH Zurich, Zurich, Switzerland (renate.kocen@env.ethz.ch)
Oeschger Centre for Climate Change Research, Graduate School of Climate Sciences, University of Bern, Bern, Switzerland

P3-50: EMS2010-421
Newspapers as early meteorological data sources in Andalusia (southern Spain), 1796-1830
S. Fernández-Montes, F.S. Rodrigo

P3-51: EMS2010-535
Cold winters in Poland in the period from 10th century to the first decade of 21st century
D. Limanowka, E. Cebulak, R. Pyrc
Institute of Meteorology and Water Management, Centre for Poland's Climate Monitoring, Warsaw, Poland (Danuta.Limanowka@imgw.pl)

P3-52: EMS2010-775
Climate of the Iberian Peninsula in the preindustrial period
J. F. González-Rouco and the Salvà-Sinobas Team
Universidad Complutense de Madrid, Spain (fidelgr@fis.ucm.es)

P3-53: EMS2010-608
Simulated and reconstructed climate during the last millennium
L. Fernández-Donado, J. F. González-Rouco, C. C. Raible
Universidad Complutense de Madrid, CC. Físicas, Spain (laurafernandez@fis.ucm.es)

P3-54: EMS2010-553
Fluctuations of hydrometeorological extremes around the River Morava in the 18th-19th centuries
R. Brázdil, **K. Chromá**, H. Valá¨ek, L. Dolák
Masaryk University, Institute of Geography, Brno, Czech Republic (kchroma@sci.muni.cz)

P3-55: EMS2010-758
Crossing historical and sedimentary archives to reconstruct an extreme flood event calendar in high alpine areas
B. Wilhelm, C. Giguet-Covex, F. Arnaud, F. Allignol, A. Legaz, A. Melo
EDYTEM, University of Savoie, EDYTEM, Geography, Le Bourget-du-Lac, France (wilhelm_bruno@yahoo.fr)

P3-56: EMS2010-814
Correcting Borehole Temperture Profiles for the Effects of Postglacial Warming
V. Rath, J. F. Gonzalez-Rouco
Universidad Complutense de Madrid, Departamento de Física de la Tierra, Astronomía y Astrofísica, 28040 Madrid, Spain (vrath@fis.ucm.es, fdelgr@fis.ucm.es)

P3-57: EMS2010-216
Miocene oceanographic changes of the western equatorial Atlantic (Ceara Rise) based on calcareous dinoflagellate cysts
S. Heinrich, K.A.F. Zonneveld, H. Willems
University of Bremen, Department of Geosciences, Bremen, Germany (sonja.heinrich@uni-bremen.de)

P3-58: EMS2010-385
The last millennia climate dynamics in Central Asia as a function of recent geochemical response of lacustrine sedimentation
I. Kalugin, A. Darin, D. Ovchinnikov, V. Myglan, V. Babich
Institute of Geology and Mineralogy of SB RAS, Novosibirsk, Russian Federation (ikalugin@uiggm.nsc.ru)

END OF POSTER PROGAMME UC4

Atmosphere and the Water Cycle

AW3 Formulation, validation and parameterization of small-scale processes in atmospheric modelling

Conveners: B. Holtslag; T. Heus; G.J. Steeneveld
Poster Area: P2
Chairperson(s): G.J. Steeneveld
Attendance Time: 16:00–17:00

P2-12: EMS2010-101
Orographic wave drag as a possible explanation for intermittent behaviour in stable boundary layers over land
G.J. Steeneveld, C.J. Nappo, A.A.M. Holtslag
Wageningen University, Meteorology and Air Quality Section, Wageningen, Netherlands (gert-jan.steeneveld@wur.nl)

P2-13: EMS2010-117
The non-local parameterization of turbulent exchange: numerical analysis.
V.M. Voloshchuk, Y.V. Voloshchuk
Ukrainian Hudrometeorological Research Institute, Dept. of Physic of Atmosphere, Kiev, Ukraine (uaclimate@gmail.com)

P2-14: EMS2010-119
Momentum Transport in the Convective Boundary Layer
P.M.M. Soares, P.M.A. Miranda, J. Martins, J. Teixeira
University of Lisbon, CGUL, IDL, Lisbon, Portugal (pmsoares@fc.ul.pt)

P2-15: EMS2010-134
Sensitivity of snow cover to horizontal resolution in a land surface model
E. Dutra, **S. Kotlarski**, P. Viterbo, G. Balsamo, P.M.A. Miranda, C. Schär
IAC, ETH, Zürich, Switzerland

P2-16: EMS2010-155
Study of the critical radius influence on the cloud drops formation in the seeding operations
R.. C. Pérez
Universidad Tecnológica Nacional, LIHANDO, Ingenieria Civil, San Martín. Mendoza, Argentina (rcperezi@gmail.com)

P2-17: EMS2010-165
LES modeling of a diurnal cycle driven by WRF
U. Rizza, V. Anabor, G.A. Degrazia, **M.M. Miglietta**
CNR-ISAC, Italy (u.rizza@isac.cnr.it)

P2-18: EMS2010-274
The evolution of turbulence during the transition from shallow to deep convection over land as estimated by LES
J. P. A. Martins, P. M. A. Miranda, P. M. M. Soares, J. Teixeira
University of Lisbon, IDL, CGUL, Lisbon, Portugal (jpmartins@fc.ul.pt)

P2-19: EMS2010-441
Evaluation of simple model for net radiation estimates above various vegetation covers
P. Hlavinka, M. Trnka, M. Fischer, J. Kucera, M. Mozny, Z. Zalud
Mendel University Brno, Institute of agrosystems and bioclimatology, Brno, Czech Republic (phlavinka@centrum.cz)

P2-20: EMS2010-445
Bowen ratio measurements above various vegetation covers and its comparison with actual evapotranspiration estimated by SoilClim model
P. Hlavinka, M. Trnka, M. Fischer, J. Kucera, M. Mozny, Z. Zalud
Mendel University Brno, Institute of agrosystems and bioclimatology, Brno, Czech Republic (phlavinka@centrum.cz)

P2-21: EMS2010-443
Investigation of the uncertainties in regional climate modelling
K. Sieck
Max Planck Institute for Meteorology, Hamburg, Germany (kevin.sieck@zmaw.de)

P2-22: EMS2010-784
Comparison of land surface schemes in WRF
J.R. Nielsen, E. Dellwik, A. Hahmann
Risø DTU, National Laboratory for Sustainable Energy, Denmark (jref@risoe.dtu.dk)

P2-23: EMS2010-615
Parameterisation of Neutral wind profiles for urban areas
A. Pelliccioni, C. Gariazzo, P. Monti, G. Leuzzi
ISPESL-DIPIA, Monteporzio Catone (RM) (armando.pelliccioni@ispesl.it)

P2-24: EMS2010-727
Merging RANS & LES approaches in submesoscale modeling
B. H. Fock, K. H. Schluenzen
KlimaCampus Hamburg, Meteorological Institute, University of Hamburg, Germany (bjoern.fock@zmaw.de)

END OF POSTER PROGAMME AW3

AW6 Atmospheric measurements from local to regional scale: A data source for climate studies and model validation

Convener: F. Beyrich
Co-Conveners: F. C. Bosveld; H. de Bruin
Poster Area: P2
Attendance Time: 16:00–17:00

P2-35: EMS2010-23
The ISAC-CNR micrometeorological base and database in Lecce
P. Martano, F. Grasso, C. Elefante
CNR, ISAC, Lecce, Italy (p.martano@isac.cnr.it)

P2-36: EMS2010-301
A prototype data pool for boundary-layer process validation of NWP and climate models
C. Heret, F. Beyrich, G. Vogel
Deutscher Wetterdienst, Tauche OT Lindenberg, Germany (claudia.heret@dwd.de)

P2-37: EMS2010-515
Evaluation of climate reference mast measurements at Debrecen, Hungary for climate studies
Z. Nagy, **T. Weidinger**, Gy. Baranka, Z. Popov
Department of Meteorology, Eötvös Loránd University, Budapest, Hungary (weidi@ludens.elte.hu)

P2-38: EMS2010-33
Solar radiation at the surface around the Baltic Proper
K. Loitjärv, S. Keevallik
Marine Systems Institute at Tallinn University of Technology, Tallinn, ESTONIA

P2-39: EMS2010-711
Selected characteristics of the atmospheric turbulence over a central European city centre - spectral statistics
K. Fortuniak
University of Lodz, Meteorology and Cimatology, Lodz, Poland (kfortun@uni.lodz.pl)

P2-40: EMS2010-473
Remote sensing methods to investigate boundary-layer structures in proximity of urban areas
A. Pelliccioni, C. Gariazzo
ISPESL-DIPIA, Monteporzio Catone (RM) (armando.pelliccioni@ispesl.it)

P2-41: EMS2010-704
Comparison of the urban heat island effect calculated from ground-based and remotely sensed temperature observations
R. Pongracz, J. Bartholy, E. Lelovics, Zs. Dezso
Department of Meteorology, Eotvos Lorand University, Budapest, Hungary (prita@caesar.elte.hu)

P2-42: EMS2010-520
Hamburg Urban Soil Climate Observatory (HUSCO): A concept to assess the impact of moisture and energy fluxes of urban soils on local climate
S. Sandoval, F. Ament, L. Kutzbach, A. Eschenbach
KlimaCampus, University of Hamburg, Hamburg, Germany (sarah.sandoval@zmaw.de)

P2-43: EMS2010-687
Impact of spatial heterogeneity of meteorological forcing on soil moisture redistribution over complex terrain
S. Fernandez, S. Simoni, M. Parlange
ENAC, EFLUM, EPFL, Lausanne, Switzerland (susana.fernandezvidal@epfl.ch)

P2-44: EMS2010-189
Diurnal and seasonal variability of carbon dioxide net turbulent flux in the center of Lodz, Poland
W. Pawlak
University of Lodz, Institute of Geographical Sciences, Department of Meteorology and Climatology, Lodz, Poland (wpawlak@uni.lodz.pl)

P2-45: EMS2010-178
Tracing the water cycle using measurements of stable water isotopes in ambient water vapour
F. Aemisegger, S. Pfahl, H. Wernli
Institute of Atmospheric and Climate Sciences, ETH, Zürich, Switzerland (franziska.aemisegger@env.ethz.ch)

P2-46: EMS2010-645
Balloon borne measurements of water vapor profiles over northern Finland
R. Kivi, P. Heikkinen
Finnish Meteorological Institute, Arctic Research, Sodankylä, Finland (rigel.kivi@fmi.fi)

P2-47: EMS2010-356
Obtaining Crosswind from Single-Aperture Optical Scintillometers
D. van Dinther, O.K. Hartogensis
Meteorology and Air Quality, Wageningen University, The Netherlands (danielle.vandinther@wur.nl)

P2-48: EMS2010-359
"Moving" Ground Clutter influence on Radar and Sodar measurements
J.M. Fage
REMTECH, Velizy Villacoublay, France (sales@remtechinc.com)

END OF POSTER PROGAMME AW6

AW8 Boundary-layer physics and parameterizations in weather and climate models

Convener: S. Zilitinkevich
Co-Convener: A.S. Petrosyan
Poster Area: P2
Attendance Time: 16:00–17:00

P2-60: EMS2010-110
Tropical compression of atmospheric potential energy of instability
B. Kapochkin, **V. Dolia**
Odesa State Ecological University, Ukraine (vadim@earth.org.ua)

P2-61: EMS2010-170
Deriving boundary layer mixing height from LIDAR measurements using a Bayesian statistical inference method.
A. Riccio, L. Caporaso, F. Di Giuseppe, G. Bonafè, G. P. Gobbi, A. Angelini
Dept. of Applied Science, University of Napoli "Parthenope", Napoli, Italy

P2-62: EMS2010-530
New planetary boundary layer parametrization in ECHAM5-HAM: Dynamical refinement of the vertical resolution
C. Siegenthaler-Le Drian, P. Spichtinger, U. Lohmann
ETHZ, Institute for Atmospheric and Climate Science, Zürich, Switzerland (colombe.ledrian@env.ethz.ch)

P2-63: EMS2010-555
Large Eddy Simulation investigation of evaporation from open water bodies
N. Vercauteren, M. Froidevaux, C. Higgins, E. Bou-Zeid, M.B. Parlange
School of Architecture, Civil and Environmental Engineering, EPFL, Lausanne, Switzerland (nikki.vercauteren@epfl.ch)

P2-64: EMS2010-561
A modulated gradient model for large-eddy simulation: application to a neutral atmospheric boundary layer
H. Lu, F. Porté-Agel
University of Minnesota, Saint Anthony Falls Laboratory, Department of Civil Engineering, Minneapolis, United States

P2-65: EMS2010-673
A large-eddy simulation study of turbulent flow over multiscale topography
F. WAN, F. Porté-Agel
Saint Anthony Falls Laboratory, Department of Civil Engineering, University of Minnesota, Minneapolis, MN 55414, USA (wanxx021@umn.edu)

P2-66: EMS2010-813
Modeling of particulate plumes transportation in boundary layers with obstacles
K. Karelsky, **A. Petrosyan**, I. Smirnov
Space Research Institute of the Russian Academy of Sciences, Moscow

END OF POSTER PROGAMME AW8

Communication and Education

CE2 Media and communication

Convener: T. Cegnar
Co-Convener: G. Fleming
Poster Area: P3
Chairperson(s): Tanja Cegnar
Attendance Time: 16:00–17:00

P3-62: EMS2010-631
Did the volcanic ash from Eyjafjallajökull volcano affect the weather forecast in the Czech Republic?
D. Honsova, M. Najman
Meteopress, Weather Prediction, Prague, Czech Republic (dagmar.honsova@seznam.cz)

END OF POSTER PROGAMME CE2

CE4 Education

Convener: T. Halenka
Poster Area: P3
Attendance Time: 16:00–17:00

P3-63: EMS2010-90
Meteorology and Climatology education: an Experience with young people in Friuli Venezia Giulia - Italy
S. Nordio, A. Pucillo, S. Micheletti
Osservatorio Meteorologico Regionale - ARPA Agenzia Regionale per la Protezione dell'Ambiente del Friuli Venezia Giulia Italy (sergio.nordio@meteo.fvg.it)

P3-64: EMS2010-803
METEO in the TALNET project after 5 years - meteorology for talented high schools students
P. Pisoft, J. Miksovsky
Charles University, Prague, Czech Republic, petr@pisoft.cz

END OF POSTER PROGAMME CE4

Numerical Weather Prediction

NWP1 Dynamics and predictability of high impact weather

Convener: E. Andersson
Co-Convener: H. Böttger
Poster Area: P5
Chairperson(s): E.Andersson and H. Boettger
Attendance Time: 16:00–17:00

P5-1: EMS2010-81
Verification of a NWP model using a block bootstrapping method
M. Vallee, P. Vaillancourt
Meteorological Research Division at Environment Canada

P5-2: EMS2010-287
The Sensitivity of a Long-Range Numerical Weather Forecast Model to Small Changes of Model Parameters
M. Gavrilov, **G. Jovanovic**, Z. Janjic

P5-3: EMS2010-104
Experience with model-based monthly weather forecasting for one month ahead
D.M. Sonechkin
P.P. Shirshov Oceanology Institute, RAS, laboratory of the ocean and river discharge interactions and the antropogenic processes, Moscow, Russian Federation (dsonech@mecom.ru)

P5-4: EMS2010-466
Horizontal resolution impact on forecast error growth
R. Buizza
ECMWF, Research, Reading, United Kingdom (buizza@ecmwf.int)

P5-5: EMS2010-647
Sensitivity of a simulated extreme precipitation event to spatial resolution, parametrisations and assimilation
J. Ferreira, A. Carvalho, L. Carvalheiro, A. Rocha, J. Castanheira
CESAM - Centre for Environmental and Marine Studies, Department of Physics, University of Aveiro, Portugal

P5-6: EMS2010-439
A Statistical Approach for Wind Gust Estimation
K. Born, P. Ludwig, J.G. Pinto
Universität Köln, Institute for Geophysics and Meteorology, Meteorology, Cologne, Germany (kai.born@uni-koeln.de)

END OF POSTER PROGAMME NWP1

NWP2 Ensemble forecasting

Conveners: J. Barkmeijer; A. Montani
Poster Area: P5
Chairperson(s): Barkmeijer/Montani
Attendance Time: 16:00–17:00

P5-8: EMS2010-129
Can multimodel ensembles improve medium range precipitation forecasts?
J. Flowerdew
Met Office, Exeter, United Kingdom (Jonathan.Flowerdew@metoffice.gov.uk)

P5-9: EMS2010-214
Imbalance and its flow dependency in ensemble data assimilation
N. Zagar
University of Ljubljana, Faculty of Math&Physics, Department of Physics, Ljubljana, Slovenia (nedjeljka.zagar@fmf.uni-lj.si)

P5-10: EMS2010-231
Comparison of convective precipitation in COSMO model runs by variation of the initial soil moisture fields
V. Klüpfel, N. Kalthoff, L. Gantner
Karlsruhe Institute of Technology (KIT), Institute for Meteorology and Climate Research, Germany (vera.kluepfel@imk.fzk.de)

P5-11: EMS2010-273
Comparison of calibration techniques for a limited-area ensemble precipitation forecast using reforecasts
T. Diomede, C. Marsigli, A. Montani, T. Paccagnella
ARPA-SIMC, HydroMeteorological and Climate Service of the Emilia-Romagna Regional Agency for Environmental Protection, Bologna, Italy (tdiomede@arpa.emr.it)

P5-12: EMS2010-290
A simple stochastic model for testing ensemble data assimilation methods at the convective scale
M. Würsch, G.C. Craig
Meteorologisches Institut der Universität München, Germany, wuersch@meteo.physik.uni-muenchen.de

P5-13: EMS2010-330
Using the Plant-Craig stochastic convective parameterization in an ensemble forecast system
P. Groenemeijer, G.C. Craig
Ludwig-Maximilians-Universität, Meteorologisches Institut, München, Germany (groenemeijer@lmu.de)

P5-14: EMS2010-413
Meteo-hydrological predictions: testing different ensemble approaches
S. Davolio, T Diomede, C. Marsigli, M. M. Miglietta, **A. Montani**, A. Morgillo
ARPA-SIMC, Hydro-Meteo-Climate Regional Service, Bologna, Italy (amontani@arpa.emr.it)

P5-15: EMS2010-603
Probabilistic precipitation forecast obtained with Multimodel Dressing and its hydrological applications
D. Cane, M. Milelli, D. Rabuffetti, S. Ghigo
ARPA Piemonte, Torino, Italy
(daniele.cane@arpa.piemonte.it)

P5-16: EMS2010-776
A study on the spread/error relationship of the COSMO-LEPS ensemble
M. Salmi, **C. Marsigli**, A. Montani, T. Paccagnella
ARPA-SIMC, Bologna, Italy (cmarsigli@arpa.emr.it)

P5-17: EMS2010-523
The structure and sensitivity of singular vectors associated with extratropical transition of tropical cyclones
S. Lang, S. Jones, M. Leutbecher
Karlsruher Institut für Technologie, Karlsruhe, Germany

END OF POSTER PROGAMME NWP2

NWP3 Observation targeting and observation impact studies

Convener: A. Cress
Co-Convener: S. Klink
Poster Area: P5
Chairperson(s): Alexander Cress
Attendance Time: 16:00–17:00

P5-18: EMS2010-316
Initialization of the Eta Model using a backward-first version of the iterative Matsuno style scheme
L. Lazic
(Lazar@ff.bg.ac.rs)

P5-19: EMS2010-574
Back to MOS?
S. Gaztelumendi, K. Otxoa de Alda, S. Carreño, I.R. Gelpi, R. Hernandez, J. Egaña, J. Moreno
Meteorology Division, EUVE Foundation, Vitoria-Gasteiz, Álava, (Spain). sgaztelumendi@euve.org, Basque Meteorology Agency (EUSKALMET) Miñano, Álava, (Spain).

P5-20: EMS2010-612
Data denial and IASI data impact experiments for extratropical transition
D. Anwender, C. Cardinali, N. Fourrie, S. Jones, F. Rabier, P. Arbogast
Karlsruher Institut fuer Technologie, Karlsruhe, Germany (doris.anwender@kit.edu)

P5-21: EMS2010-388
Impact of assimilation of meso-scale tower data on simulations of weather over the Himalayan region.
V. Rakesh, P. Goswami
Center for mathematical modelling and computer simulation, NAL belur campus, Bangalore, india,(rakesh@cmmacs.ernet.in)

END OF POSTER PROGAMME NWP3

NWP4/AW15 Host country topical session: Mountain Meteorology (co-organized)

Convener: M. Arpagaus
Co-Conveners: MW Rotach; M. Sprenger
Poster Area: P5
Chairperson(s): Marco Arpagaus
Attendance Time: 16:00–17:00

P5-22: EMS2010-313
Numerical simulation of local atmospheric circulations in the pre-Alpine area between Lake Garda and Verona
L. Laiti, S. Serafin, D. Zardi
University of Trento, Faculty of Engineering, Civil and Environmental Engineering, Trento, Italy (lavinialaiti@gmail.com)

P5-23: EMS2010-39
The Interruption of Alpine Foehn by a Cold Front. Part II: Numerical Simulations
E. Dautz, A. Gohm
Institute of Meteorology and Geophysics, University of Innsbruck, Austria

P5-24: EMS2010-340
The complex bora flow in the lee of Southern Velebit
I. Stiperski, B. Ivancan-Picek, V. Grubišić
Meteorological and Hydrological Service, Zagreb, Croatia (stiperski@cirus.dhz.hr)

P5-25: EMS2010-600
Drag enhancement in sheared flows
P.M.A. Miranda, M.A.C. Teixeira, J.L. Argain
University of Lisbon, IDL, Lisbon, Portugal (pmmiranda@fc.ul.pt)

P5-26: EMS2010-347
Precipitations on the lee side of the Vosges Mountains : 2 case studies from the COPS campaign
L. Labbouz, J. Van Baelen, M. Reverdy, F. Tridon, C. Flamant, M. Hagen, T. Weckwerth, G. Dick, T. Gorgas, E. Richard, K. Schmidt
Blaise Pascal University, Observatoire de Physique du Globe de Clermont Ferrand, Laboratoire de Météorologie Physique, Clermont-Ferrand, France (l.labbouz@opgc.univ-bpclermont.fr)

P5-27: EMS2010-239
A numerical study of the interaction of the convective boundary layer and orographic circulation with locally-triggered deep convection around the Santa Catalina Mountains in Arizona
B. Geerts, J.C. Demko
University of Wyoming, Atmospheric Science, Laramie, WY, United States (geerts@uwyo.edu)

P5-28: EMS2010-666
The impact of entrainment on trade-wind precipitation over Dominica
D. Kirshbaum, R. B. Smith
University of Reading, Reading, UK

P5-29: EMS2010-67
Modelisation of northerly snow episodes over Andorra (Pyrenees) using WRF
L. Trapero, P. Esteban
Snow and Mountain Research Centre of Andorra, Institut d'Estudis Andorrans (CENMA-IEA), Sant Julià de Lòria (Andorra)

P5-30: EMS2010-271
A mechanism for orographically-generated PV banners to generate cloud and precipitation bands: a case study
T. Andretta, **B. Geerts**
University of Wyoming, Atmospheric Science, Laramie, WY, United States (geerts@uwyo.edu)

P5-31: EMS2010-656
Influence of a future climate on the radiative properties of orographic cirrus clouds
H. Joos, P. Spichtinger, F. Fusina
IAC ETH Zürich, Zürich, Switzerland (hanna.joos@env.ethz.ch)

P5-32: EMS2010-609
The influence of mountain-valley breeze circulations on the formation and maintenance of dry lids in the COPS region
C. Merlet, C. Flamant, S. Bastin, P. di Girolamo, J. Chaboureau, E. Richard, L. Labbouz, G. Pigeon, J. Cuesta, V. Wulfmeyer
LATMOS/IPSL, University Pierre et Marie Curie, Paris, France (christophe.merlet@latmos.ipsl.fr)

P5-33: EMS2010-800
Forecasting in Ethiopia, one of the most challenging and vulnerable regions with respect to weather and climate
V. Wulfmeyer, H.-S. Bauer, T. Schwitalla
Institute of Physics and Meteorology, University of Hohenheim

P5-34: EMS2010-180
Numerical Weather Prediction Over Caucasus Region With Nested Grid Models
Dr. Davitashvili, Dr. Kutaladze, Dr. Kvatadze
I.Vekua Institute of Applied Mathematics of Tbilisi State University, Mathematical modeling of hydro-meteorological processes, Tbilisi, Georgia (tedavitashvili@gmail.com)

P5-35: EMS2010-389
Simulation of Occurrence and characteristics of low-level Cloud over the Western Ghats
K.C GOUDA, P GOSWAMI
CSIR CENTRE FOR MATHEMATICAL MODELLING AND COMPUTER SIMULATION, WIND TUNNEL ROAD, BANGALORE-37, India (kcgouda@cmmacs.ernet.in)

P5-36: EMS2010-162
Early warnings for extreme snowfall in the Swiss Alps
P. Hächler, D. Gerstgrasser
MeteoSwiss, Zurich, Switzerland

P5-37: EMS2010-196
Early detection of severe thunderstorms in the Alpine region: the dynamical approach of COALITION.
L. Nisi, I. Giunta, P. Ambrosetti, L. Clementi
MeteoSwiss Locarno-Monti, Switzerland (luca.nisi@meteoswiss.ch)

P5-38: EMS2010-284
Verification of thunderstorm warnings over Piemonte Region
P.A. Bertolotto, M. Milelli
ARPA Piemonte, Turin, Italy (paolo.bertolotto@arpa.piemonte.it)

P5-39: EMS2010-351
Analysis of the COSMO Model performance over the Alpine region
E. Oberto, M. Milelli, M**. Turco**
GAMA, Barcelona, Spain (mturco@am.ub.es)

P5-40: EMS2010-258
Reducing uncertainty and optimizing flood forecasts in the Swiss Alps: Impact of improved mapping of meteorlogical fields
C. Tobin, L. Nicotina, A. Rinaldo, M.B. Parlange, A. Berne
Laboratory of Ecohydrology ECHO/IEE/ENAC, EPFL, Lausanne, Switzerland

Friday	Audimax – F30	E3	E1.1	E1.2
08:30–10:30	UC1: Climate change assessments of trends, variability and extremes	MC2: Data rescue, management, quality and homogenization	AW3: Formulation, validation and parameterization of small-scale processes	NWP2: Ensemble forecasting
10:30–11:00	Coffee Break			
11:00–13:00	UC1	UC3: Synoptic climatology	AW3	NWP2
13:00	The End – See you in Berlin 2011			

Side Meetings on Friday	
14:00–18:30	**EUMETNET WG Climate Change** Contact: Arie Kattenberg, KNMI **Room E33.1**

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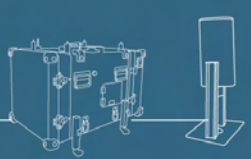

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Monitoring for a reference climate and monitoring change

MC2 Data rescue, management, quality and homogenization

Convener: M. Brunet India
Co-Conveners: O. Mestre; A. Mestre; C. Kern-Hansen; R. Allan
Lecture Room: E3

08:30–10:30
Chairperson(s): Antonio Mestre

08:30–08:45: EMS2010-625
Climate data quality control at MeteoSwiss - now and in future
G. Flury, D. van Geijtenbeek, C. Naguel, Th. Konzelmann
Federal Office of Meteorology and Climatology MeteoSwiss, Klimadienste, Krähbühlstrasse 58, 8044 Zürich, Switzerland (gaudenz.flury@meteoswiss.ch)

08:45–09:00: EMS2010-648
Comparison of correction methods for inhomogeneities in daily time series on example of Central European datasets
P. Stepanek, P, Zahradnicek
Czech Hydrometeorological Institute, Meteorology and Climatology, Brno, Czech Republic (petr.stepanek@chmi.cz)

09:00–09:15: EMS2010-715
Homogeneous temperature and precipitation series for a Peruvian High Andes regions from 1965 to 2009
D. Acuña, B. Serpa Lopez, E. Silvestre, Th. Konzelmann, **M. Rohrer**, M. Schwarb, N. Salzmann
Meteodat GmbH, Zurich, Switzerland (rohrer@meteodat.ch)

09:15–09:30: EMS2010-779
Creating climate quality global datasets for studying trends, variability and extremes
K. Willett, P. Thorne
Met Office Hadley Centre, Exeter, UK (kate.willett@metoffice.gov.uk)

09:30–09:45: EMS2010-70
Effects of historical urbanization in the Brussels Capital Region on surface air temperature time series: a model study
R. Hamdi
Royal Meteorological Institute, II section 3, Brussels, Belgium (rafiq.hamdi@oma.be)

09:45–10:00: EMS2010-417
The use of Meteonorm weather generator for climate change studies
J. Remund, S.C. Müller, C. Schilter, B. Rihm
Meteotest, Meteorology, Bern, Switzerland (jan.remund@meteotest.ch)

10:00–10:15: EMS2010-444
Applying Data-mining techniques to study drought periods in Spain
F. Belda, M.C. Penades
AEMET, Murcia, Spain (fbelda@inm.es)

10:15–10:30: EMS2010-604
JEM-EUSO: an opportunity for carrying out researches in atmospheric physics, meteorology and climatology using remote sensing techniques from space
C. Cassardo for the JEM-EUSO Collaboration
University of Torino, Dept. of General Physics "A. Avogadro", Torino, Italy (claudio.cassardo@unito.it)

END OF ORAL PROGAMME MC2

Understanding processes and climate change

UC1 Climate change assessments of trends, variability and extremes

Convener: R. Heino
Co-Conveners: M. Rebetez; A. M. G. Klein Tank
Lecture Room: AudiMax (F30)

08:30–10:30
Chairperson(s): Albert Klein Tank

08:30–08:45: EMS2010-738
Spatial differentiation of temperature extremes trends in Poland
Z. Ustrnul, A. Wypych
Jagiellonian University, Krakow, Poland, Institute of Meteorology and Water Management, Poland

08:45–09:00: EMS2010-696
Heat wave phenomenon in southern Slovakia: long-term changes and variability of daily maximum air temperature in Hurbanovo within the 1901-2009 period
J. Pecho, D. Výberči, M. Jarošová, P. Stastny
Slovak Hydrometeorological Institute, Climatology Department, Bratislava, Slovakia (jozef.pecho@shmu.sk)

09:00–09:15: EMS2010-151
Trends of average and extreme temperatures in the Euroregion Galicia- North Portugal
J.J. Taboada, A.M. Ramos, M.N. Lorenzo, M. Gómez-Gesteira, M. deCastro, I. Alvarez, **I. Iglesias**, A.J.C. Crespo, F.E. Santo
EPphysLab (Environmental Physics Laboratory), Universidade de Vigo, Ourense, Spain (isaiglesias@uvigo.es)

09:15–09:30: EMS2010-55
Temperature and precipitation extremes in Piedmont (North-West Italy) from 1937 to 2008
F. Acquaotta, S. Fratianni
University of Turin, Earth Science, Turin, Italy (fiorella.acquaotta@unito.it)

09:30–09:45: EMS2010-163
Changing precipitation extremes in Europe
E.J.M. van den Besselaar, A.M.G. Klein Tank, G. van der Schrier
Royal Netherlands Meteorological Institute (KNMI), De Bilt, The Netherlands

09:45–10:00: EMS2010-660
Non-stationarity of extreme precipitation in Switzerland
S. Fukutome, M. Liniger

10:00–10:15: EMS2010-435
Extreme Precipitation over Europe: Comparison of threshold selection methods
C. Anagnostopoulou, K. Tolika
Aristotle University of Thessaloniki, Dept. of Meteorology and Climatology, Thessaloniki, Greece (chanag@geo.auth.gr)

10:15–10:30: EMS2010-518
Analysis of extreme precipitation in different time intervals using moving precipitation totals
T. Tammets, J. Jaagus
Estonian Meteorological and Hydrological Institute, Tallinn, Estonia (jaak.jaagus@ut.ee)

10:30 Coffee Break

11:00–13:00
Chairperson(s): Martine Rebetez

11:00–11:15: EMS2010-194
Meteoalarm severe wind gust thresholds from uniform periods in ECA& D
I.L. Wijnant
(Ine.Wijnant@knmi.nl)

11:15–11:30: EMS2010-532
The impact of climate change on severe convective storms over Europe
J. Sander, N. Dotzek
DLR-IPA, Oberpfaffenhofen, Germany (julia.sander@dlr.de)

11:30–11:45: EMS2010-757
Extreme flood events occurrence in high and low mountain areas: A spatial and temporal difference of processes throughout the last 2 millennia in NW Alps
C. Giguet-Covex, F. Arnaud, D. Enters, B. Wilhelm
EDYTEM, University of Savoie, EDYTEM, Le Bourget-du-Lac, France (Charline.Giguet-Covex@univ-savoie.fr)

11:45–12:00: EMS2010-200
Drought occurrence in the Alpine Region, 1864-2050
P. Calanca, M. Spörri
Agroscope Reckenholz-Tänikon (ART), Air Pollution & Climate, 8046 Zurich, Switzerland (pierluigi.calanca@art.admin.ch)

12:00–12:15: EMS2010-502
Analysis of long time Standard Precipitation Index series to detect the drought frequency changes in Hungary
M. Lakatos, Z. Bihari, T. Szentimrey
Hungarian Meteorological Service, Budapest, Hungary (lakatos.m@met.hu)

12:15–12:30: EMS2010-391
Analysing long-term changes of extreme snow depth and snowfall with a time-dependent GEV model
C. Marty, J. Blanchet, S. Grob
WSL Institute for Snow and Avalanche Research SLF, Davos, Switzerland (marty@slf.ch)

12:30–12:45: EMS2010-38
Cyclonic variability in the Mediterranean-Black Sea region associated with global processes in the ocean-atmosphere system
V. N. Maslova, E. N. Voskresenskaya, A. V. Yurovskiy
Marine Hydrophysical Institute, Sevastopol, Ukraine (veronika_maslova@mail.ru)

12:45–13:00: EMS2010-233
Coastal and Oceanic SST variability along the western Iberian Peninsula
F. Santos, M. Gómez Gesteira, M. deCastro, I. Álvarez
EPhysLab (Environmental Physics Laboratory), Universidade de Vigo, Spain (fsantos@uvigo.es)

END OF ORAL PROGAMME UC1

UC3 Synoptic climatology

Conveners: R. Huth; R.E. Benestad
Lecture Room: E3

11:00–13:00
Chairperson(s): R.Benestad

11:00–11:15: EMS2010-312
North Atlantic Oscillation influence on the stramflows of the Iberian Rivers
J. Lorenzo-Lacruz, J.C. González-Hidalgo, S.M. Vicente-Serrano, J.I. López-Moreno (jlorenzo@ipe.csic.es)

11:15–11:30: EMS2010-157
Feature-based verification of synoptic-scale Rossby wave breaking in the ECHAM5-HAM model
A. Béguin, **O. Martius**, M. Sprenger, P. Spichtinger, D. Folini, H. Werlni
ETH Zurich, Institute for Atmospheric and Climate Science, Zurich, Switzerland (olivia@env.ethz.ch)

11:30–11:45: EMS2010-18
Synoptic climatology of rain from cutoff lows compared to other systems such as cold-frontal systems in fine-scale climate change model projections
M.R Grose, M.J. Pook, P.C. Macintosh, J.S. Risbey, S. Corney, J. Bennett, C.J. White, G.K. Holz, N.L. Bindoff
Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), University of Tasmania, Hobart, Australia, (Michael.Grose@acecrc.org.au)

11:45–12:00: EMS2010-425
The life-cycle of upper-tropospheric jet streams identified with a novel data segmentation algorithm
S. Limbach, E. Schömer, H. Wernli
Institut für Informatik, Universität Mainz, Germany (limbach@uni-mainz.de), Institut für Physik der Atmosphäre, Universität Mainz, Germany

12:00–12:15: EMS2010-720
Global climatology of diurnally varying low-level jets
D. L. Rife, J. O. Pinto, A. J. Monaghan, C. A. Davis, J. R. Hannan
National Center for Atmospheric Research, Boulder, Colorado, U.S.A

12:15–12:30: EMS2010-311
Comparison of a regional tropical cyclone hindcast for Southeast Asia and western North Pacific with satellite- and reanalyses- based products
M. Barcikowska, F. Feser, H. von Storch
GKSS Research Centre, Institute for Coastal Research, Geesthacht, Germany

12:30–12:45: EMS2010-453
Trans Weather Patterns - an extended outlook for the future climate
F. Kreienkamp, **A. Spekat**, W. Enke
Climate and Environment Consulting Potsdam GmbH, Potsdam, Germany
(frank.kreienkamp@cec-potsdam.de)

12:45–13:00: EMS2010-594
Air circulation types and the severe weather in south-eastern part of Romania during the cold season
S. Andrei, F. Georgescu, S. Stefan
National Meteorological Administration, Bucharest, Romania (simona.andrei.ro@gmail.com, florinela.georgescu@meteoromania.ro)

END OF ORAL PROGAMME UC3

Atmosphere and the Water Cycle

AW3 Formulation, validation and parameterization of small-scale processes in atmospheric modelling

Conveners: B. Holtslag; T. Heus; GJ Steeneveld
Lecture Room: E1.1

08:30–10:30
Chairperson(s): G.J. Steeneveld

08:30–09:00: EMS2010-105
Aspects of boundary layers in complex terrain and the interaction to the free troposphere (solicited)
MW Rotach
University of Innsbruck, Institute for Meteorology and Geophysics, Innrain 52, A-6020 Austria

09:00–09:15: EMS2010-102
Local predictions of frost, fog, and low clouds
O. Liechti
Analysen & Konzepte, Winterthur, Switzerland (OlivierLiechtiAuK@compuserve.com)

09:15–09:30: EMS2010-295
Modelling sublimation of drifting snow in an Alpine catchment and investigating temperature and moisture feedbacks
C. Groot Zwaaftink, M. Lehning
WSL Institute for Snow and Avalanche Research SLF, Switzerland (groot@slf.ch)

09:30–09:45: EMS2010-204
Sensing the Stable Boundary Layer in a Towing Tank
G.J. Steeneveld, D. Dobrovolschi, A. Paci, O. Eiff, L. Lacaze, A.A.M. Holtslag
Meteorology and Air Quality Section, Wageningen University, Wageningen, Netherlands, (Gert-Jan.Steeneveld@wur.nl)

09:45–10:00: EMS2010-669
Turbulence-induced heat and moisture transport at the snow-air interface
H. Huwald, C. W. Higgins, S. A. Drake, A. W. Nolin, E. R. Pardyjak, M. B. Parlange
School of Architecture, Civil and Environmental Engineering, Ecole Polytechnique Fédérale de Lausanne, Switzerland (hendrik.huwald@epfl.ch)

10:00–10:15: EMS2010-627
Simple parameterisations of mixing induced by drainage flows in a steep valley
Y. Largeron, **C. Staquet**, C. Chemel
LEGI, Grenoble, France (Chantal.Staquet@hmg.inpg.fr)

10:15–10:30: EMS2010-4
Improving the time-splitting errors of one-dimensional advection schemes in multidimensional applications
A. Bott
University of Bonn, Meteorological Institute, Bonn, Germany (a.bott@uni-bonn.de)

10:30 Coffee Break

11:00–13:00
Chairperson(s): T. Heus

11:00–11:15: EMS2010-649
Parameterizing Clouds and Turbulence in Coarse-Grid Cloud-Resolving Models
S. Krueger, P. Bogenschutz
University of Utah, Salt Lake City, USA (steve.krueger@utah.edu)

11:15–11:30: EMS2010-651
The Entrainment Interface Layer of Stratocumulus-topped Boundary Layers
S. Krueger, S. Hill
University of Utah, Salt Lake City, USA (steve.krueger@utah.edu)

11:30–11:45: EMS2010-7
Modulation of Internal Gravity Waves by Deep Convective Towers
D. Ruprecht, R. Klein, A. J. Majda
Freie Universität Berlin, Mathematik, Berlin, Germany (ruprecht@zib.de)

11:45–12:00: EMS2010-596
An idealized cloud-resolving framework for the study of mid-latitude diurnal convection over land
L. Schlemmer, C. Hohenegger, J. Schmidli, C. Schär
Institute for Atmospheric and Climate Science, ETH Zurich, Zurich, Switzerland
(linda.schlemmer@env.ethz.ch)

12:00–12:15: EMS2010-379
Observations of Upper-level Turbulence Statistics
R. Sharman, R. Frehlich
NCAR, RAL, Boulder, United States (frehlich@ucar.edu)

12:15–12:30: EMS2010-352
An improved parameterization of third-order moments in the COSMO numerical weather prediction model
B. Szintai, O. Fuhrer, **P. Kaufmann**, M. W. Rotach
Federal Office of Meteorology and Climatology MeteoSwiss, Zurich, Switzerland
(balazs.szintai@meteoswiss.ch)

12:30–12:45: EMS2010-541
The effect of advective fluxes on the surface energy budget: a field study
C. Higgins, M. Froidveaux, V. Simeonov, E. Pardyjak, M. Parlange
EEPFL, School Of Archetecture, Civil and Environmental Engineering, Lausanne, Switzerland

12:45–13:00: EMS2010-543
The effect of scale on the applicability of Taylor's hypothesis
C. Higgins, M. Froidveaux, V. Simeonov, **M. Parlange**
EEPFL, School Of Archetecture, Civil and Environmental Engineering, Lausanne, Switzerland

END OF ORAL PROGAMME AW3

Numerical Weather Prediction

NWP2 Ensemble forecasting

Conveners: J. Barkmeijer; A. Montani
Lecture Room: E1.2

08:30–10:30
Chairperson(s): Barkmeijer

08:30–09:00: EMS2010-768
Developing an Ensemble Prediction System based on COSMO-DE (solicited)
S. Theis, C. Gebhardt, M. Buchhold, Z. Ben Bouallègue, R. Ohl, M. Paulat, C. Peralta
Deutscher Wetterdienst (DWD), Offenbach, Germany (email: Susanne.Theis@dwd.de)

09:00–09:15: EMS2010-469
Recent changes of the ECMWF Ensemble Prediction System
R. Buizza, R. Hagedorn, L. Isaksen, M. Leutbecher, T. N. Palmer, M. Steinheimer, F. Vitart
ECMWF, Research, Reading, United Kingdom (buizza@ecmwf.int)

09:15–09:30: EMS2010-10
NCEP activities in very-short range and high resolution ensemble prediction
J. Du, B. Zhou, M. Pyle, G. Manikin, G. DiMego
NCEP/EMC, Camp Springs, MD 20746, United States (jun.du@noaa.gov)

09:30–09:45: EMS2010-147
Severe Weather Warnings from MOGREPS
R. Neal, J. Robbins, K. Mylne
Met Office, Ensemble Forecasting, United Kingdom (robert.neal@metoffice.gov.uk)

09:45–10:00: EMS2010-270
Activity in the field of mesoscale ensemble forecasting by the COSMO-LEPS system: main achievements and open challenges
A. Montani, D. Cesari, C Marsigli, T. Paccagnella
ARPA-SIMC, Hydro-Meteo-Climate Regional Service, Bologna, Italy (amontani@arpa.emr.it)

10:00–10:15: EMS2010-179
An assessment of the ECMWF tropical cyclone ensemble forecasting system and its use for insurance loss predictions
F. Aemisegger, O. Martius, M. Wüest
Institute for Atmospheric and Climate Sciences, ETH, Zürich, Switzerland (franziska.aemisegger@env.ethz.ch)

10:15–10:30: EMS2010-430
Blending a probabilistic nowcasting method with a high resolution ensemble for convective precipitation forecasts
K. Kober, G.C. Craig, C. Keil
Deutsches Zentrum für Luft-und Raumfahrt, Institut für Physik der Atmosphäre, Oberpfaffenhofen, Germany (kirstin.kober@dlr.de)

10:30 Coffee Break

11:00–13:00
Chairperson(s): Montani

11:00–11:30: EMS2010-582
Global and Limited-Area Ensemble Prediction Systems deployed for Wind Power Forecasting (solicited)
T.I. Petroliagis, M. Jacques, A. Montani, L.v. Bremen, D. Heinemann
ForWind, Center for Wind Energy Research, Carl von Ossietzky University of Oldenburg, Germany (thomas.petroliagis@forwind.de)

11:30–11:45: EMS2010-365
Dynamical and statistical downscaling of ensemble forecasts for wind energy applications in Ireland.
C. Sweeney, P. Lynch, J. Courtney
UCD, Meteorology and Climate Centre, School of Mathematical Sciences, Dublin, Ireland
(conor.sweeney@ucd.ie)

11:45–12:00: EMS2010-188
Hydrological Ensemble Prediction System (HEPS)
J. Thielen-del Pozo, J. Schaake, E. Martin, J. Pailleux, F. Pappenberger
EC Joint Reseach Centre, IES, ISPRA (VA), Italy (jutta.thielen@jrc.ec.europa.eu)

12:00–12:15: EMS2010-28

Ensemble Prediction System Development for Hydrometeorological Testbed (HMT) Application

I. Jankov, S. Albers, H. Yuan, L. Wharton, Z. Toth, T. Schneider, A. White, M. Ralph

Cooperative Institute for Research in the Atmosphere (CIRA), Colorado State University, Fort Collins, CO, USA Affiliated with NOAA/ESRL/Global Systems Division (Isidora.Jankov@noaa.gov)

12:15–12:30: EMS2010-542

Investigation of predictability during the Extratropical Transition of Tropical Cyclones using the THORPEX Interactive Grand Global Ensemble (TIGGE)

J.H. Keller, S.C. Jones, D. Anwender

Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany (julia.keller@kit.edu)

12:30–12:45: EMS2010-409

Ideas for a pattern-oriented approach towards a VERA analysis ensemble

T. Gorgas, M. Dorninger

University of Vienna, Department of Meteorology and Geophysics, Vienna, Austria (theresa.gorgas@univie.ac.at)

12:45–13:00: EMS2010-248

A new linear Model Output Statistics scheme for ensemble forecasts. Theory and applications

S. Vannitsem

Royal Meteorological Institute of Belgium, Meteorological and Climatological Research, Brussels, Belgium (stephane.vannitsem@oma.be)

END OF ORAL PROGAMME NWP2

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REMTECH at booth No. 9

SELEX-SI Gematronik at booth No. 10

Kipp & Zonen SINCE 1830 at booth No. 11

METEK Meteorologische Messtechnik GmbH Germany at booth No. 12

VAISALA at booth No. 13

MODEM Meteomodem.com at booth No. 14

HMP at booth No. 15

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