2008 EUMETSAT Meteorological Satellite Conference

Darmstadt, Germany
08 - 12 September 2008

Oral Programme

EUMETSAT
# Conference Schedule

**All times reflect GMT +1**

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<th>Day</th>
<th>Sunday 07 Sept</th>
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<td>B. J. Kerridge</td>
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**Room Allocation**

- **Spectrum A Main**
- **Spectrum B**
- **Spectrum C**
- **Lobby**

**Session Guide:**

1. Future systems
2. Future sensors and calibration
3. Oceanography
4. Climate monitoring with operational satellites
5. Nowcasting
6. Data services for real time application
7. Advanced sounding
8. Monitoring land use
9. Activities for training in meteorology
10. Hydrometeorology
11. Atmospheric composition
12. Numerical Weather Prediction applications
The National Polar-orbiting Operational Environmental Satellite System (NPOESS): Improving weather forecasting and environmental monitoring from space

Stockton, Dan - NPOESS Integrated Program Office (presented by Peter Wilczynski)

12:15 - 14:00
LUNCH BREAK

09:00 Official Address
Prahm, Lars Dr.
Director-General of EUMETSAT

09:15 Official Address
Schmidt, Thilo
Director General for Civil Aviation and Aerospace of the German Ministry for Transport, Housing and Urban Affairs

09:30 Official Address
Kusch, Wolfgang
President of German Meteorological Service (DWD)

09:45 EUMETSAT Geostationary and Low Earth Programmes: Status and Plans
Koenemann, Ernst
Director of Programme Development
EUMETSAT

10:00 NOAA Current and Future
Baker, Charlie
Deputy Assistant Administrator of NOAA/ NESDIS

10:15 Fostering the benefits of weather and climate observation from space
Lafeuille, Jérôme
Chief, Space-based Observing Systems Division WMO Space Programme
WMO

10:30 Conference Announcements
Pooley, Madeleine – EUMETSAT

10:40 COFFEE BREAK - POSTER VIEWING

11:30 GOES-R Instrument overview and anticipated user benefits
Gurka, James
NOAA/NESDIS

11:45 Meteosat Third Generation: Progress on space segment system feasibility studies: Payload aspects
Aminou, Donny M. A.
ESA/ ESTEC
14:00  Keynote Address
        Calibration experience with 3-axis stabilized geostationary meteorological satellite
        Wu, Xiangqian – NOAA/NESDIS

14:20  Inter-calibration of Meteosat imagers and IASI
        Hewison, Tim – EUMETSAT

14:35  Satellite data validation in Sodankylä, Northern Finland; EPS validation campaign in 2007
        Aulamo, Osmo – Finnish Meteorological Institute (FMI)

14:50  Combining ground-based remote sensing and balloon-borne profile measurements in Lindenberg (Richard-Aßmann-Observatory) for IASI-Validation: methods, availability, and accuracy
        Stiller, Bernd – German Meteorological Service (DWD)

15:05  Simulation of Meteosat Third Generation – lightning imager through tropical rainfall measuring mission – Lightning imaging sensor data.
        Biron, Daniele – Centro Nazionale di Meteorologia e Climatologia Aeronautica, Pratica di Mare, Italy (presented by Melfi, Davide)

15:20  COFFEE BREAK - POSTER VIEWING

16:00  Corrections to gains and spectral response of CERES based on in-flight measurements
        Szewczyk, Zbigniew – SSAI

16:15  Towards a consensus calibration of the AVHRR reflectance channels for climate studies
        Heidinger, Andrew – NOAA

16:30  IR-based solar channel calibration using deep convective clouds
        Sohn, Byung-Ju - Seoul National University, South Korea
08:30  **Keynote Address**
The use of satellite data for reanalysis and climate monitoring
Thépaut, Jean-Noël - ECMWF

08:50  **HOAPS-3**: An 18 year climatology of global ocean water cycle parameters derived from SSM/I satellite data
Andersson, Axel - University of Hamburg

09:05  The first long-term satellite-derived total water vapour column climatology from CM-SAF: features, intercomparison results and trend estimation.
Jonas, Markus - German Meteorological Service (DWD)

09:20  Comparison of global water vapour column trends from GOME/SCIAMACHY with independent data sets
Mieruch, Sebastian - University of Bremen

09:35  On the distribution of the Free Tropospheric Humidity from METEOSAT
Roca, Rémy - LMD

09:50  Upper tropospheric humidity data set from operational microwave sounders
John, Viju - Met Office

10:05  **COFFEE BREAK - POSTER VIEWING**

11:00  Moistening processes in the tropical upper troposphere observed from Meteosat measurements
Chung, Eui-Seok - Seoul National University

11:15  Bias monitoring of satellite infrared radiances utilising ground based reference observations and radiative transfer simulations
Schulz, Jörg - German Meteorological Service (DWD)

11:30  Climate data records for Metop HIRS and IASI
Fennig, Karsten - Met Office
SESSION 5 In Parallel (SPECTRUM B)
Nowcasting
Chairperson: Marianne Koenig - EUMETSAT

08:30 Keynote Address
Use of geostationary rapid scan imagery in the observation, detection, and nowcasting of convective storms
Bedka, Kristopher - UW-CIMSS

08:50 Validation of severe weather forecasts based on synthetic satellite data as part of an integrated thunderstorm forecast system
Forster, Caroline - German Aerospace Center (DLR)

09:05 Using multi-spectral satellite remote sensing techniques to nowcast nocturnal convection initiation
Mackenzie, Wayne - University of Alabama in Huntsville

09:20 Application of the European Severe Weather Database (ESWD) to the verification of satellite-based nowcasting
Dotzek, Nikolai - European Severe Storms Laboratory

09:35 Innovations in convective and lightning initiation nowcasting using geostationary satellite at the university of Alabama in Huntsville
Mecikalski, John - University of Alabama in Huntsville

09:50 A severe weather event in Romania due to Mediterranean cyclonic activity
Georgescu, Florinela - National Administration of Meteorology, Bucharest, Romania

10:05 Ground-truth from the lightning detection network LINET in Europe for the interpretation of thunderstorm-related data collected by space-born sensors
Betz, Hans D. - University of Munich

10:20 COFFEE BREAK - POSTER VIEWING

SESSION 5 Continued In Parallel (SPECTRUM B)
Nowcasting
Chairperson: Marianne Koenig - EUMETSAT

11:00 NearCasting convective destabilization prior to isolated convective events using objective tools which optimize the impact of sequences of GOES moisture products
Petersen, Ralph - University of Wisconsin-Madison

11:15 A local version of the GII in South Africa – comparisons to verify the value of this product as an operational nowcasting tool
de Coning, Estelle – SA Weather Service

11:30 Physical retrieval algorithm development for operational SEVIRI clear sky nowcasting products
Martinez, Miguel A. – Instituto Nacional Meteorologia (INM)

11:45 Improved identification of convective clouds for the RDT product
Guillou, Yann - MétéoFrance

12:00 Combining Metop-A and MSG nowcasting related products to derive and monitor atmospheric instability and convection development
Antonelli, Paola – University of Wisconsin-Madison

12:15 Extreme convective cases – the use of satellite products for storm nowcasting and monitoring
Pajek, Monika - Institute of Meteorology and Water Management – Satellite Remote Sensing Centre, Krakow, Poland

12:30 - 14:00 LUNCH BREAK
SESSION 3                      In Parallel (SPECTRUM C)
Oceanography
Chairperson: Hans Bonekamp – EUMETSAT

08:30  **Keynote Address**
Thirty years after Seasat: the present status and future outlook of satellite altimetry for studying ocean circulation and sea level change
Fu, Lee-Lueng - Jet Propulsion Laboratory, NASA

08:50  **Future perspective for ocean surface topography**
Parisot, Francois - EUMETSAT

09:05  **Mean sea level monitoring from satellite altimetry**
Dorandeu, Joel – Collecte Localisation Satellites (CLS)

09:20  **Assessment of wind/wave prediction model performances in hurricane conditions**
Levevre, Jean-Michel - MétéoFrance

09:35  **The impact of the cut-off in the assimilation of ASAR wave spectra and Jason-1 altimeter data in the wave model**
Aouf, Lotfi - MétéoFrance

09:50  **New generation of wet tropospheric correction algorithms for altimetry missions**
Obligis, Estelle - Collecte Localisation Satellites (CLS)

10:05  **Improved Jason-2 altimetry products for coastal zones and continental waters (PISTACH Project)**
Mercier, Franck - Collecte Localisation Satellites (CLS)

10:20  **Coffee Break - Poster Viewing**

SESSION 3 Continued            In Parallel (SPECTRUM C)
Oceanography
Chairperson: Francois Parisot - EUMETSAT

11:00  **The EUMETSAT Ocean and Sea Ice SAF (OSI SAF) : A contribution to operational oceanography**
Guevel, Guenole - MétéoFrance

11:15  **Model and observation bias correction in altimeter ocean data assimilation in FOAM**
Lea, Daniel - Met Office

11:30  **SALP/AVISO and MyOcean Information Systems**
Blanc, Frederique - Collecte Localisation Satellites (CLS)

11:45  **SSALTO/DUACS: Faster data delivery for operational oceanography and GMES**
Dorandeu, Joel - Collecte Localisation Satellites (CLS)

12:00  **Status of global sea ice, snow and iceberg monitoring at the U.S. National Ice Center**
Clemente-Colón, Pablo - U.S. National Ice Center

12:15 – 14:00  **Lunch Break**
TUESDAY AFTERNOON 09 SEPTEMBER

 sessions 3, 4 and 5 are in parallel

14:00 - 14:45
PLENARY - Brian J. KERRIDGE
Sounding Atmospheric Composition from Space
SPECTRUM A (MAIN)

SESSION 4 Continued (SPECTRUM A - MAIN)
Climate Monitoring with Operational Satellites
Chairperson:
Roger Saunders - UK Met Office

15:00  MSG-based surface incoming shortwave radiation climatology over complex terrain
       Duerr, Bruno - MeteoSwiss

15:15  Satellite based analysis of surface solar radiation anomalies
       Traeger-Chatterjee, Christine - German Meteorological Service (DWD)

15:30  Long term surface albedo datasets generated with Meteosat images
       Lattanzio, Alessio – Makalumedia

15:45  Atmospheric effect on validation of broadband surface albedo (SAL) product of CM SAF using mast measurements
       Manninen, Terhikki - Finnish Meteorological Institute (FMI)

16:00  COFFEE BREAK - POSTER/EXHIBIT VIEWING

SESSION 4 Continued (SPECTRUM A - MAIN)
Climate Monitoring with Operational Satellites
Chairperson:
Roger Saunders - UK Met Office

16:30  Radiation climate data record based on the climate version of Heliosat
       Mueller, Richard - German Meteorological Service (DWD)

16:45  The effect of ancillary data on components of the earth's radiation budget as computed from satellite measurements
       Raschke, Ehrhard - University of Hamburg

17:00  Bi-temporal mineral dust detection over land from MSG infrared channels
       Klüser, Lars - German Aerospace Center (DLR)
SESSION 5 Continued                 Parallel (SPECTRUM B)
Nowcasting
Chairperson:
Piotr Struzik  -  Inst. Of Meteorology and Water Management, Krakow, Poland

15:00  **Keynote Address**
Cold-ring shaped storms in Central Europe
Setvák, Martin – Czech Hydrometeorological Institute

15:20  Application of Meteosat SEVIRI channel difference 0.6 - 1.6 µm in convective cells detection
Strelec Mahovic, Natasa – Meteorological and Hydrological Service

15:35  A cloud model interpretation of satellite observed features atop severe storms
Wang, Pao – University of Wisconsin-Madison

15:50  Physical, statistical and temporal analysis approaches for cloud identification using MSG-SEVIRI data
Ricciardelli, Elisabetta - Institute of Methodologies for Environmental Analysis, National Research Council (IMAA – CNR), Italy

16:05  **COFFEE BREAK - POSTER VIEWING**

SESSION 5 Continued                 Parallel (SPECTRUM B)
Nowcasting
Chairperson:
Piotr Struzik  -  Inst. Of Meteorology and Water Management, Krakow, Poland

16:30  GOES derived product images: Past, present and future
Schmit, Tim - NOAA/NESDIS

16:45  The use of satellite products for monitoring fog over Romania
Bancila, Gabriela – National Administration of Meteorology, Bucharest, Romania

17:00  Nowcasting of 2m - air temperature based on MSG-SEVIRI and TERRA-MODIS measurements
Schroedter-Homscheidt, Marion - German Aerospace Centre (DLR)

17:15  Understanding satellite-observed mountain wave signatures using high-resolution numerical model output
Bedka, Kristopher - University of Wisconsin-Madison

SESSION 3 Continued            In Parallel (SPECTRUM C)
Oceanography
Chairperson:
Lars-Anders Breivik  -  Norwegian Meteorological Institute

15:00  Sea ice analysis using variational assimilation of satellite-derived sea ice concentration
Caya, Alain - Environment Canada

15:15  Monitoring of sea-ice drift in the arctic ocean testing before implementation in the ocean and sea ice satellite application facility
Lavergne, Thomas - Norwegian Meteorological Institute (NMI)

15:30  Sea-ice drift velocity for the sea of Okhotsk derived from MTSAT-1R imagery
Miyakawa, Takuya - Japan Meteorological Agency

15:45  **COFFEE BREAK - POSTER EXHIBIT VIEWING**

SESSION 3 Continued            In Parallel (SPECTRUM C)
Oceanography
Chairperson:
Hans Bonekamp  -  EUMETSAT

16:30  The GOCI Instrument on COMS Mission – the first Geostationary Ocean Colour Imager
Faure, François - ASTRIUM SAS Satellite

16:45  Calibration and validation of ASCAT backscatter
Anderson, Craig - EUMETSAT

17:00  The SeaWinds data processor
Vogelzang, Jur - Royal Netherlands Meteorological Institute (KNMI)

17:15  High-resolution ASCAT Scatterometer winds near the coast
Portabella, Marcos - Royal Netherlands Meteorological Institute (KNMI)
WEDNESDAY 10 SEPTEMBER

Sessions 4, 6 and 8 are in parallel

SESSION 4 Continued (SPECTRUM A - MAIN)
Climate Monitoring with Operational Satellites
Chairperson:
Jörg Schulz - Deutscher Wetterdienst

08:30 Keynote Address
Using CO2 slicing to infer global cloud cover (improving algorithm applications and overcoming instrument idiosyncrasies)
Menzel, Paul - University of Wisconsin-Madison

08:50 Climatological evaluation of fog/low stratus distribution based on Meteosat 8/9 SEVIRI data
Cermak, Jan - Philipps-University Marburg, Germany

09:05 On the sensitivity of satellite-derived cloud properties to sensor resolution and broken clouds
Denek, Hartwig - Royal Netherlands Meteorological Institute (KNMI)

09:20 CM-SAF arctic cloud studies during the 2007 polar summer extreme sea ice anomaly event
Karlsson, Karl-Göran - Swedish Meteorological and Hydrological Institute (SMHI)

09:35 Intercomparison of daytime cloud optical and microphysical parameters
Walther, Andi - CIMSS/University of Wisconsin-Madison

09:50 Multi annual cloud analysis from Meteosat data using image segmentation
Huckle, Roger - IMK-Forschungszentrum Karlsruhe

10:05 Climatic analysis and categorization of the mesoscale convective systems in the Mediterranean basin during the warm season with the use of Meteosat satellite imagery
Kolios, Stavros - Aegean University, Greece

10:20 COFFEE BREAK - POSTER/EXHIBIT VIEWING

SESSION 4 Continued (SPECTRUM A - MAIN)
Climate Monitoring with Operational Satellites
Chairperson:
Jörg Schulz - Deutscher Wetterdienst

11:00 Impact of drizzle and 3D cloud structure on remote sensing of effective radius
Zinner, Tobias - German Aerospace Center (DLR)

11:15 Validation of satellite-derived cloud liquid water path: improvements to the method
Greuell, Wouter - Royal Netherlands Meteorological Institute (KNMI)

11:30 Identification of air traffic induced cirrus using a new day-and night-time MSG cirrus detection algorithm
Mannstein, Hermann - German Aerospace Center (DLR)

11:45 Validation of cloud property retrievals from MTSAT-1R imagery using MODIS observations
Choi, Yong-Sang, Seoul National University

12:00 Intercomparison cloud products from GOME-2 L1 and SCIAMACHY
Wang, Ping - Royal Netherlands Meteorological Institute (KNMI)

12:15 Satellite cloud retrievals from combined analysis of the Ring effect and the absorptions of O2 and O4
Wagner, Thomas - Max Planck Institute for Chemistry, Mainz

12:30 - 14:00 SNACK LUNCH

Followed by a PANEL DISCUSSION on Jason-2 starting at 12:40

14:15 - 15:00 PLENARY
Tom Whittaker/ hans Peter Roesli McIdas

12:30 - 18:00 POSTER VIEWING

GALA DINNER
19:00 - 23:00 (departure from Darmstadtium at 18:00)
SESSION 6
Data services for real time application
Chairperson:
Sally Wannop - EUMETSAT

08:30  
Keynote Address
Plans for evolution of EUMETSAT operational services from Meteosat, Metop and Jason-2
Rattenborg, Mikael - EUMETSAT

08:50  
Evolution of the EUMETSAT Advanced Retransmission Service (EARS)
Soerensen, Anders Meier – EUMETSAT

09:05  
Metop data recovery from Antarctica – An update on EUMETSAT and NPOESS cooperation to reduce Metop data latency
Wilczynski, Peter - NOAA/NPOESS PEO

09:20  
Metop-A AHRPT Failure Mitigation
Monham, Andrew - EUMETSAT

09:35  
Standardized data access services for GOME-2/Metop atmospheric trace gas products
Heinen, Torsten - German Aerospace Center (DLR), German Remote Sensing Data Center (DFD)

09:50  
COFFEE BREAK – POSTER VIEWING

SESSION 7
Advanced Sounding
Chairperson:
Thierry Phulpin - CNES

11:00  
Using AEROSE-domain SEVIRI and IASI data for sounding products from the GOES-R advanced baseline imager
Nalli, Nicholas - Perot Systems Corporation

11:15  
Error assessment and validation of the IASI temperature and water vapor profile retrievals
Pougatchev, Nikita - Space Dynamics Lab

11:30  
 Raw sampling data from GRAS
Marquardt, Christian – EUMETSAT

11:45  
Atmospheric sounding with imaging FTS: Design and performance of an airborne precursor
Friedl-Vallon, Felix – IMK Forschungszentrum Karlsruhe

11:45 - 14:00
SNACK LUNCH
08:30  Mapping the daily risk of fire in continental Portugal
Calado, Teresa - University of Lisbon, Portugal

08:45  The operational MSG/SEVIRI fire radiative power products generated at the land SAF
Govaerts, Yves - EUMETSAT

09:00  Active fire monitoring over Bulgaria:
Validation of SEVIRI FIR product
Stoyanova, Julia - National Institute of Meteorology and Hydrology, Bulgaria

09:15  Fire detection and monitoring over Africa
Amraoui, Malik - University of Trás-os-Montes and Alto Duoro, Portugal

09:30  Land surface emissivity rationale for a validation programme
DaCamara, Carlos - University of Lisbon, Portugal

09:45  Assessment of urban heat island using land surface temperature derived from MTSAT-1R and ground observation data over South Korea
Suh, Myoung-Seok - Kongju National University

10:00  Applications of the 8,7-SEVIRI sensor
Verschuur, Henk - EUMETSAT

10:15  COFFEE BREAK - POSTER VIEWING

11:00  Operational land surface albedo derived from Meteosat Second Generation and Metop observations
Roujean, Jean-Louis - MétéoFrance

11:15  Towards an active fire monitoring product for the Meteosat-8 rapid scanning service
Joro, Sauli - EUMETSAT

11:30  Global monitoring of annual vegetation cycles using DOAS UV/VIS satellite observations
Eigemeier, Ellen - Max Planck Institute for Chemistry, Mainz

11:45  Validation activities preparation for SMOS (Soil Moisture and Ocean Salinity) land products
Lopez-Baeza, Ernesto - University of Valencia, Spain
THURSDAY MORNING  11 SEPTEMBER

Sessions 9, 10 and 11 are in parallel

SESSION 9                         (SPECTRUM A – MAIN)
Activities for learning in meteorology
Chairperson:
Vesa Nietosvaara - Finnish Meteorological Institute

08:30  Keynote Address
The WMO Virtual Laboratory for Satellite Meteorology - A model for the WMO Education and Training Programme?
Wilson, Jeff - WMO

08:50  Connecting research and education through international EUMETCAL working groups
Sundius, Carola - Finnish Meteorological Institute (FMI)

09:05  The COMET Program: Extending satellite meteorology training resources to the international atmospheric science community
Spangler, Timothy - UCAR/COMET (presented by Dills, Patrick)

09:20  The globalisation of training in the application of meteorological satellite data
Gärtner, Volker - EUMETSAT

09:35  Modernisation of forecaster’s training at BTZ Langen
Jacobs, Wilfried – German Meteorological Service (DWD)

09:50  The role of blended learning methods for EUMETSAT’s training activities
Bridge, Gordon – EUMETSAT (presented by Gärtner, Volker)

10:05  COFFEE BREAK – POSTER VIEWING

SESSION 9 Continued                 (SPECTRUM A – MAIN)
Activities for learning in meteorology
Chairperson:
Vesa Nietosvaara - Finnish Meteorological Institute

11:00  Preparing for GOES-R+ user training and education
Mostek, Anthony - NOAA/NWS

11:15  Use of weather event simulation in training
Gadal, Jaymie - Meteorological Service of Canada

11:30  Comprehensive training workshops for international direct broadcast users
Huang, Hung Lung Allen - University of Wisconsin – Madison

12:00  Continuous meteorological training in Southern Africa and the use of Visit View
Jordaan, Winifred - South African Weather Service
Wilson, Jeff - WMO

12:15  SATREP online - A new concept to train satellite meteorology in combination with NWP
Schipper, Jarno - Zentralanstalt für Meteorologie und Geodynamik (ZAMG), Austria

12:30 – 14:00  LUNCH BREAK
SESSION 10  Parallel (SPECTRUM B)
Hydrometeorology
Chairperson:
Vincenzo Levizzani - CNR-ISAC

08:30  Keynote Address
Satellite-derived precipitation verification activities of the International Precipitation Working Group (IPWG)
Arkin, Phillip - University of Maryland

08:50  International Precipitation Working Group (IPWG): Inter-comparison of regional precipitation products
Kidd, Chris - University of Birmingham

09:05  Evaluation of GPM-era satellite precipitation estimates for hydrological applications
Turk, F. Joseph - Naval Research Laboratory

09:20  Validation of rain rate estimates from SEVIRI using weather radar observations
Roebeling, Rob - Royal Netherlands Meteorological Institute (KNMI)

09:35  Rain rate retrieval using 183-WSL algorithm
Laviola, Sante - ISAC-CNR (presented by Levizzani, Vincenzo)

09:50  Validation of the NOAA/AMSU satellite-derived rainrate products in the West Black-Sea basin in Turkey
Komuscu, Ali Umran - Turkish State Meteorological Service (TSMS)

10:05  COFFEE BREAK – POSTER VIEWING

SESSION 10  Parallel (SPECTRUM B)
Hydrometeorology
Chairperson:
Vincenzo Levizzani - CNR-ISAC

11:00  Keynote Address
Explaining systematic biases in rainfall estimates by lightning measurements
Rosenfeld, Daniel - Hebrew University of Jerusalem

11:20  Combining geostationary observations and the megha-tropiques data for understanding the energy and water cycle in the tropics
Roca, Rémy – Laboratoire de Météorologie Dynamique (LMD)

11:35  A new technique for detecting precipitation at mid-latitudes during daytime using Meteosat Second Generation SEVIRI
Thies, Boris - Philipps-University of Marburg

11:50  Error structure characterisation of geostationary and polar satellite precipitation products developed within the Hydrology SAF project
Puca, Silvia – Dipartimento della Protezione Civile (presented by Bozena, Lampeta IMWM)

12:05  Synergistic Use of Scatterometer and ScanSAR data for extraction of surface soil moisture information in Australia
Sabel, Daniel - Vienna University of Technology

12:15 – 14:00  LUNCH BREAK
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>08:30</td>
<td><strong>Keynote Address</strong> Monitoring of atmospheric composition using the thermal infrared IASI/Metop sounder</td>
<td>Clerbaux, Cathy - Université Paris 6, CNRS, Service d’Aéronomie/IPSL, France</td>
</tr>
<tr>
<td>08:50</td>
<td>GOME-2 mission and product validation status</td>
<td>Munro, Rosemary - EUMETSAT</td>
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<tr>
<td>09:05</td>
<td>Upcoming O3M-SAF trace-gas column products: GOME-2 tropospheric NO2, total BrO and SO2</td>
<td>Valks, Pieter - German Aerospace Center (DLR)</td>
</tr>
<tr>
<td>09:20</td>
<td>Monitoring system performance by using operational products, residuals, and sensitivities</td>
<td>Flynn, Lawrence - NOAA</td>
</tr>
<tr>
<td>09:35</td>
<td>Retrieval of water vapour columns from GOME-2</td>
<td>Noël, Stefan - University of Bremen</td>
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<tr>
<td>09:50</td>
<td>The CEOS Atmospheric Composition Constellation (ACC): An example of an Integrated Earth Observing System for GEOSS and operational monitoring</td>
<td>Hilsenrath, Ernest - NASA Headquarters</td>
</tr>
<tr>
<td>10:05</td>
<td>GMES sentinels 4 and 5 - Atmospheric composition monitoring from space</td>
<td>Ingmann, Paul - ESA/ESTEC</td>
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<tr>
<td>10:20</td>
<td><strong>COFFEE BREAK</strong> - POSTER VIEWING</td>
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<tr>
<td>11:00</td>
<td><strong>Keynote Address</strong> Advances in monitoring of volcanic eruption hazards</td>
<td>Krueger, Arlin – University of Maryland Baltimore County</td>
</tr>
<tr>
<td>11:20</td>
<td>Development of a global fire/aerosol operational product as part of the CEOS atmospheric composition constellation</td>
<td>Al-Saadi, Jassim - NASA Langley Research Center</td>
</tr>
<tr>
<td>11:35</td>
<td>The impact of geostationary satellite aerosol optical depth observations on air quality forecasts</td>
<td>Segers, Arjo - Netherlands Organisation for Applied Scientific Research - TNO</td>
</tr>
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</table>
**THURSDAY AFTERNOON  11 SEPTEMBER**

**Sessions 9, 10 and 11 are in parallel (from 15:00)**

14:00 - 14:45
PLENARY - T. Spangler
The weather enterprise in the United States: A public-private partnership

**SESSION 9 Continued  (SPECTRUM A - MAIN)**
Activities for learning in meteorology
Chairperson:
Volker Gaertner - EUMETSAT

15:00 Experiences on running a blended learning course for operational forecasters
Nietosvaara, Vesa - Finnish Meteorological Institute (FMI)

15:15 "Mini Courses" - A new element for distant learning
Zwatz-Meise, Veronika - Zentralanstalt für Meteorologie und Geodynamik (ZAMG), Austria

15:30 Evaluating e-learning material: Possibilities and pitfalls. Experiences from the EUMETTrain User Survey
Zwatz, Christian - Zentralanstalt für Meteorologie und Geodynamik (ZAMG), Austria

15:45 COFFEE BREAK - POSTER/EXHIBIT VIEWING

16:15 Computer Aided Learning in Weather Forecast Verification training
Nurmi, Pertti - Finnish Meteorological Institute (FMI)

16:30 The ASMETS training module for the African users on dust storms, convection and development of secondary lows
Verschuur, Henk - EUMETSAT

16:45 OPEN DISCUSSION until 18:00
### SESSION 10 continued

**Hydrometeorology**  
*Chairperson: Jochen Grandell - EUMETSAT*

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
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</thead>
</table>
| 15:00 | **Keynote Address**  
Application of water and energy cycle science and observations within the framework of GEWEX | van Oevelen, Peter - International GEWEX Project Office                    |
| 15:20 | Calibrating C/X-band microwave observations and a soil moisture retrieval algorithm toward a consistent global soil moisture data product | Zhan, Xiwu - NOAA-NESDIS-STAR                                             |
| 15:35 | Evapotranspiration assessment by LSA-SAF: methodology, status of validation and plans for the near future. | Gellens-Meulenberghs, Françoise – Royal Meteorological Institute, Belgium |
| 15:50 | **COFFEE BREAK - POSTER VIEWING**                                                          |                                                                           |

### SESSION 11 continued

**Atmospheric Composition**  
*Chairperson: Arlin Krueger - University of Maryland Baltimore County*

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<tr>
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<tbody>
<tr>
<td>15:00</td>
<td>Retrieval of aerosol optical parameters and vertical profile from satellite data: Combining SCIAMACHY measurements of reflectance and of absorption by O2 and O2-O2</td>
<td>Penning de Vries, Marloes – Max Planck Institute for Chemistry, Mainz</td>
</tr>
<tr>
<td>15:15</td>
<td>Monitoring absorbing aerosols with GOME-2</td>
<td>Stammes, Piet - Royal Netherlands Meteorological Institute (KNMI)</td>
</tr>
<tr>
<td>15:30</td>
<td>Optimal estimation and joint retrieval of aerosol load and surface reflectance using MSG/SEVIRI observations: Comparison with AERONET and MODIS aerosol products</td>
<td>Wagner, Sebastien - Wagner Consulting</td>
</tr>
</tbody>
</table>
| 16:15 | **Keynote Address**  
Satellite ozone observations: Stratospheric ozone trends in a changing climate | Weber, Mark - University of Bremen                                         |
| 16:35 | First Metop/GOME-2 chemical analysis of the 2007 Antarctic Ozone Hole                      | Ebertseder, Thilo - German Aerospace Center (DLR) (presented by Meyer-Arnek, Julian) |
| 16:50 | O3M-SAF pre-operational products: GOME-2 Total Column Ozone and NO2                       | Loyola, Diego – German Aerospace Center (DLR)                             |
| 17:05 | Vertical Ozone Profiles from GOME-2 on Metop-A                                            | Tuinder, Olaf - Royal Netherlands Meteorological Institute (KNMI)          |
| 17:20 | Ozone Profile climatology products from 8 years NNORSY-GOME Data Set                      | Kaptur, Jasmine - Zentrum für Sonnenenergie und Wasserstoffforschung Baden Württemberg (ZSW) |
Sessions 11 and 12 are in parallel

SESSION 12  
(SPECTRUM A - MAIN)  
Numerical Weather Prediction applications  
Chairperson:  
John Eyre – Met Office

08:30  Keynote Address  
Recent developments in the assimilation of satellite observations at ECMWF  
Bauer, Peter - ECMWF

08:50  The assimilation of data from the Metop satellite at the Met Office  
Eyre, John - Met Office

09:05  Recent developments in assimilation of satellite data in the MSC 4D-Var analysis and forecast system  
Macpherson, Stephen - Environment Canada

09:20  Progress toward the assimilation of AIRS cloudy infrared radiances at CMC  
Heilliette, Sylvain - Environment Canada

09:35  Assimilation of lower tropospheric sounding AMSU channels over land at the Met Office  
Srereekha Thonipparambil, Ravindranathan - Met Office

09:50  GRAS radio occultation measurements onboard Metop  
von Engeln, Axel - EUMETSAT

10:05  Latest results on the assimilation of GPS RO data at the Met Office  
Rennie, Michael - Met Office

10:20  COFFEE BREAK – POSTER VIEWING

SESSION 12 continued  
(SPECTRUM A - MAIN)  
Numerical Weather Prediction applications  
Chairperson:  
John Eyre – Met Office

11:00  GRAS level 1B product validation with 1DVar retrievals  
Marquardt, Christian - EUMETSAT

11:15  Towards improved forecasts of atmospheric and oceanic circulations over the complex terrain of the eastern Mediterranean  
Chronis, Themis - Hellenic Center for Marine Research, Greece

11:30  Use of clear SEVIRI radiances in the Met Office meso-scale assimilation system  
Kelly, Graeme – Met Office

11:50 - 12:35  
PLENARY - Martin Miller  
NWP and satellite observations in 'The Year of Tropical Convection'

12:35 - 13:15  
SNACK LUNCH

AFTERNOON

SESSION 12 continued  
(SPECTRUM A - MAIN)  
Numerical Weather Prediction applications  
Chairperson:  
Peter Bauer - ECMWF

13:15  Assimilation of SEVIRI cloud top parameters in the Met Office regional forecast model  
Francis, Peter - Met Office

13:30  The Assimilation of infrared radiances in clear-sky and cloudy conditions in the HIRLAM model  
Stengel, Martin - Swedish Meteorological and Hydrological Institute (SMHI)

13:45  Use of satellite observation for constraining cloud parameterization in a numerical weather prediction model  
Chaboureau, Jean-Pierre - University of Toulouse and CNRS

14:00 - 15:00  
CLOSING CEREMONY
<table>
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<td>08:30</td>
<td><strong>Keynote Address</strong>&lt;br&gt;Atmospheric CO2 distributions using operational satellite measurements: the GEMS perspective.</td>
<td>Rayner, Peter - CEA</td>
</tr>
<tr>
<td>08:50</td>
<td>Greenhouse gases from SCIAMACHY/ENVISAT nadir observations: CO2 and CH4 during 2003-2005</td>
<td>Buchwitz, Michael - University of Bremen</td>
</tr>
<tr>
<td>09:05</td>
<td>Development of operational tropospheric NO2 product from Metop-A GOME-2 for air quality applications</td>
<td>Kondragunta, Shobha – NOAA/NESDIS (presented by Plynn, Lary)</td>
</tr>
<tr>
<td>09:20</td>
<td>Long-term monitoring of tropospheric NO2 with GOME-2</td>
<td>Bovensmann, Heinrich - University of Bremen</td>
</tr>
<tr>
<td>09:35</td>
<td>Satellite observations of tropospheric NO2 columns over South Eastern Europe</td>
<td>Zyrichidou, Irene - Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki, Greece (presented by Koukouli, Mariliza)</td>
</tr>
<tr>
<td>09:50</td>
<td><strong>COFFEE BREAK - POSTER VIEWING</strong></td>
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<tr>
<td>11:00</td>
<td>Detection and Monitoring of Sulphur Dioxide from satellite-based UV sensors</td>
<td>Krueger, Arlin – University of Maryland Baltimore County</td>
</tr>
<tr>
<td>11:15</td>
<td>Monitoring of volcanic SO2 and ash emissions from satellite</td>
<td>Van Geffen, Jos - BIRA-IASB</td>
</tr>
<tr>
<td>11:30</td>
<td>IASI measurements of biomass burning and volcanic plumes</td>
<td>Coheur, Pierre-François - Université Libre de Bruxelles</td>
</tr>
</tbody>
</table>
Note

The programme remains in a dynamic state and will be updated daily during the Conference if required.

Special thanks go to:

SPC Members

Peter Bauer (ECMWF)
Hans Bonekamp (EUMETSAT)
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Kenneth Holmlund (EUMETSAT)
Marianne König (EUMETSAT)
Vincenzo Levizzani (CNR)
Rosemary Munro (EUMETSAT)
Vesa Nietosvaara (FMI)
Thierry Phulpin (CNES)
Peter Schlüssel (EUMETSAT)
Lothar Schüller (EUMETSAT)
Jörg Schulz (DWD)
Roger Saunders (Met Office)
Piotr Struzik (Polish Met Service)
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Xiangquian Wu (NOAA)

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