



ERAD 2012
Toulouse France
25-29 June 2012

ERAD 2012

Programme



Sunday, 24 June 2012

17:00 – 19:00 Distribution of conference packages to registered participants and Welcome cocktail at Hôtel d'Assézat (Place d'Assézat, downtown Toulouse).

Note: This ceremony is only open to people who have already registered online. There will be NO on-site registration at Hôtel d'Assézat.

Monday, 25 June 2012

08:00 **Bus transfer to Météo-France**
See conference booklet for details

09:00 **Registration & Welcome coffee** (offered by **BARON SERVICES**)
Centre International de Conférences of Météo-France (CIC)

10:00 **Introduction**
Cochairs: Olivier Bousquet and Pierre Tabary, Météo-France
Location: amphitheater

10:00 **Welcome address**
M. Olivier Gupta, Deputy Head of Météo France

Session 1 Quantitative Precipitation Estimation (Part I)

(Plenary) *Chair : Alexander Ryzhkov, CIMMS/NSSL*
Location : amphitheater

10:30 1.1 To provide accurate rainfall rates with quantified errors. (keynote)
Anthony Illingworth, University of Reading

11:00 1.2 Rainfall estimation from an operational S-band dual-polarization radar in the monsoon dominant environment
Gyuwon Lee, Dept. Astronomy and Atmospheric Sciences, Kyungpook National University, Daegu, Soohyun Kwon, Choong-Ke Lee

11:15 1.3 The new French Operational Polarimetric Radar Rainfall Product
Jordi Figueras i Ventura, Météo France, Fadela Kabeche, Béatrice Fradon, Abdel-Amin Boumahmoud, Pierre Tabary

11:30 1.4 Comparison of polarimetric techniques for operational precipitation estimation in complex orography scenarios
Gianfranco Vulpiani, Presidency of the Council of Ministers – Department of Civil Protection, M. Montopoli, A. Gioia, P. Giordano, F.S. Marzano

11:45 1.5 VPR Correction of Brightband Effects in Radar QPEs Using Polarimetric Radar Observations
Youcun Qi, National Severe Storms Laboratory (NOAA/NSSL), Pengfei Zhang, Jian Zhang

12:00 1.6 Rainfall estimation in mountainous regions using X-band polarimetric weather radar
PC Shakti, National Research Institute for Earth Science and Disaster Prevention, M. Maki, S. Shimizu, T. Maesaka, D.-S. Kim, D.-I. Lee, H. Iida

12:15 1.7 X-band polarimetric radar based QPE and Rainfall statistics in West African Precipitation for Hydrological Applications and Satellite Validation : overview of the objectives and issues.
Marielle Gosset, GET-IRD, Frederic Cazenave, Modeste Kacou

12:30 - 13:30 **Lunch break**

Poster session Group I (day 1)

13:30 - 15:00 *Quantitative Precipitation Estimation - Data Quality - Microphysics - Nowcasting - Spaceborne Radar - Air Traffic Management - Cloud Radar*

See dedicated poster program p. 15
Location : marquee

Session 2 Microphysics (Part I)

(Plenary) *Chair : Alexis Berne, Ecole Polytechnique de Lausanne*
Location : amphitheater

- 15:00 2.1 *Polarimetric signatures of dry and melting hail at different radar wavelengths*
Alexander Ryzhkov, CIMMS/NSSL, S. Ganson, M. Kumjian, R. Kaltenboeck
- 15:15 2.2 *C-Band dual polarimetric observations of snow events in southern Canada.*
Sudesh Boodoo, Environment Canada, D. Hudak, V. N. Bringi, L. Bliven, G. J. Huang, N. Donaldson, M. Leduc
- 15:30 2.3 *Precipitation type assessment using polarimetric C-band radar and limited area model*
Roberto Cremonini, 1) Arpa Piemonte, Italy; 2) University of Helsinki, Finland, R. Bechini, V. Chandrasekar, V. Campana
- 15:45 2.4 *Identification of snow and rain at the surface using polarimetric radar*
Martin Hagen, Deutsches Zentrum fuer Luft- und Raumfahrt, Oberpfaffenhofen, Alice Dalphiné
- 16:00 2.5 *Hydrometeor classification using polarimetric radars : intercomparison and hail detection*
Hassan Al-Sakka, Météo France, Magalie Buguet, Stephen Frasier, Karine Bouyer, Béatrice Fradon, Abdel-Amin Boumahmoud and Pierre Tabary
- 16:15 2.6 *BALTRAD dual polarization hydrometeor classifier*
Rashpal S Gill, Danish Meteorological Institute (DMI), Martin B. Soerensen, Thomas Boevith, Jarmo Koistinen, Markus Peura, Daniel Michelson, Roberto Cremonini

16:30 - 17:00 **Coffee break** (offered by EEC)

Session 3A Quantitative Precipitation Estimation (Part II)

(Parallel) *Chair : Daniel Sempere-Torres, UPC/CRAHI*
Location : amphitheater

- 17:00 3A.1 *The Radar Quality Control and Quantitative Precipitation Estimation Inter-comparison Project*
Paul Joe, Environment Canada
- 17:15 3A.2 *On Characterizing the Errors in Quantitative Precipitation Estimates*
Alan Seed, Bureau of Meteorology, Sandy Dance
- 17:30 3A.3 *Close-range radar rainfall estimation and error analysis*
Remco van de Beek, Hydrology and Quantitative Water Management, Wageningen University, Hidde Leijnse, Pieter Hazenberg, and Remko Uijlenhoet
- 17:45 3A.4 *Radar-gauge combination by ordinary and external drift kriging: A systematic application for hourly QPE in Switzerland*
Rebekka Erdin, MeteoSwiss, Christoph Frei, Reinhard Schiemann, Ioannis Sideris, Hans R. Künsch
- 18:00 3A.5 *Comparison of gauge-radar merging methods for obtaining UK rainfall*
Alan Hewitt, UK Met Office, Selena Georgiou, Nicolas Gaussiat, Shona Hogg, Martyn Sunter

18:15 3A.6 Real-time spatiotemporal merging of radar and raingauge measurements in Switzerland.
Ioannis Sideris, *MeteoSwiss, Marco Gabella, Rebekka Erdin, Urs Germann*

Session 3B Cloud Radar

(Parallel)

Chair : Pavlos Kollias, McGill University
Location: Prudhomme room

- 17:00 3B.1 Radar detection of cloud properties in a monsoon environment
Peter May, *Centre for Australian Weather and Climate Research, A partnership between the Bureau of Meteorology and CSIRO, A. Protat, G. Penide, V. Kumar, V.N. Bringi and M. Thurai*
- 17:15 3B.2 Capability of scanning polarimetric cloud radar measurements for identifying ice hydrometeor habits and shapes.
Sergey Matrosov, *CIRES, University of Colorado and NOAA ESRL, G.G. Mace, R. Marchand, M.D. Shupe, A.G. Hallar, and I. McCubbin*
- 17:30 3B.3 New insights into orographic precipitation using an airborne profiling Doppler cloud radar
Bart Geerts, *University of Wyoming, Qun Miao, Yang Yang, Xia Chu*
- 17:45 3B.4 A CDR-based rain rate estimation algorithm for zenith-pointing cloud radars at Ka band
Michele Galletti, *Brookhaven National Laboratory, Dong Huang, Pavlos Kollias*
- 18:00 3B.5 Collocated UHF and Ka band radar measurements for rain profile retrievals at ARM SGP facility
Frederic Tridon, *Earth Observation Sciences, Department of Physics and Astronomy, University of Leicester, Leicester, Alessandro Battaglia, Pavlos Kollias, Edward P. Luke*
- 18:15 3B.6 A method for extraction of cloud microphysical properties using a continuous wavelet transform of cloud radar spectra
Guo Yu, *Pennsylvania State University, Johannes Verlinde, Eugene E. Clothiaux, Giovanni Botta, Kultegin Aydin, Alexander Avramov, Andrew S. Ackerman, and Ann M. Fridlind*

18:30 - 20:30 **Icebreaker** (offered by VAISALA)

20:30 **Bus transfer to Toulouse**

08:00 **Bus transfer to Météo-France**
See conference booklet for details

Session 4A Microphysics (Part II)

(Parallel) *Chair : Dmitri Moisseev, University of Helsinki*
Location : amphitheater

- 09:00 4A.1 Verification of Dual-wavelength Radar Estimates of Liquid Water Content Using Microwave Radiometer Measurements
Scott Ellis, NCAR/EOL, *Jothiram Vivekanandan and Paquita Zuidema*
- 09:15 4A.2 A triple frequency approach to retrieve microphysical snowfall parameters
Stefan Kneifel, University of Cologne, *R. Bennartz, M.S. Kulie, J. Leinonen, D. Moisseev, T. Nousiainen, J. Tyynelä*
- 09:30 4A.3 Statistical Parametrization of the Backscattering Properties of Snowflakes
Jussi Leinonen, Finnish Meteorological Institute, *D. Moisseev, T. Nousiainen, J. Tyynelä*
- 09:45 4A.4 Stochastic space-time disaggregation of rainfall into DSD fields
Marc Schleiss, EPFL-LTE, *Alexis Berne*
- 10:00 4A.5 Multi-beam raindrop size distribution retrievals on the Doppler spectra
Christine Unal, Delft University of Technology
- 10:15 4A.6 Ensemble Retrievals
Isztar Zawadzki, McGill University

Session 4B Air Traffic Management

(Parallel) *Chair : Martin Hagen, DLR*
Location : Prudhomme room

- 09:00 4B.1 Test of an X-band Doppler polarimetric radar combined with a Doppler LIDAR for wind shear detection at Nice Airport
Clotilde Augros, Météo France, Radar Center, *Pierre Tabary, Dominique Davrinche, Eric Schwartz*
- 09:15 4B.2 Microwave radar remote sensing of volcanic ash clouds for aviation hazard and civil protection applications: the 2011 Grímsvötn eruption case study
Frank S. Marzano, CETEMPS / DIET - Sapienza University of Rome, *M. Lamantea, M. Montopoli, D. Cimini, S. Di Fabio, E. Picciotti, G. Vulpiani, M. Herzog, H. Graf*
- 09:30 4B.3 Nowcasting near-ground winter precipitation for aviation: a simple approach based on radar observation and NWP model outputs
Shinju Park, Hydrometeorological Innovate Solutions S.L., *Rafael Sánchez-Diezma, Thomas Gerz, and Felix Keis*
- 09:45 4B.4 Radar Sensors for Wind & Wake-Vortex Monitoring on Airport : First results of SESAR P12.2.2 XP0 trials campaign at Paris CDG Airport
Frederic Barbaresco, Thales Air Systems, *P. Brovelli, P. Currier, O. Garouste, M. Klein, P. Juge, Y. Ricci, J.Y. Schneider*
- 10:00 4B.5 Simulation of the Radar Cross-Section of Wake Vortices in clear air
Danielle Vanhoenacker-Janvier, ICTEAM, Université catholique de Louvain (UCL), *K. Djafri, R. della Faille de Leverghem, B. van Swieten, F. Barbaresco*
- 10:15 4B.6 Progress toward a volumetric in-flight icing hazard detection system for airports which incorporates operational dual-polarization S-band radar data
David Serke, National Center for Atmospheric Research, *Scott Ellis, Andrew L. Reehorst, John Hubbert, David Albo, Andrew Weekley Daniel Adriaansen Andrew Gaydos and Marcia K. Politovich, Christopher Johnston*

10:30 - 11:00 **Coffee break** (offered by **METEK**)

Session 5 Spaceborne Radars

(Plenary)

Chair : Frank Marzano, University of L'Aquila
Location : amphitheater

- 11:00 5.1 Precipitation Estimation Using Combined Radar/Radiometer Measurements Within the GPM Framework (**keynote**)
Arthur Y. Hou, NASA Goddard Space Flight Center, USA
- 11:30 5.2 New Constraints on the Global Distribution of Snowfall from CloudSat
Tristan L'Ecuyer, University of Wisconsin-Madison, Norman Wood, Mark Kulie, Ralf Bennartz
- 11:45 5.3 Error analysis of spaceborne precipitation radar estimates using NOAA/NSSL National Mosaic QPE products
Pierre-Emmanuel Kirstetter, University of Oklahoma and NOAA/National Severe Storms Laboratory, Y. Hong, J. J. Gourley, J. Zhang, M. Schwaller, W. Petersen, E. Amitai
- 12:00 5.5 Observing convection from space: assessment of performances for next-generation Doppler radars on Low Earth Orbit
Alessandro Battaglia, Earth Observation Science, Department of Physics and Astronomy, University of Leicester, Leicester, UK, Simone Tanelli, Pavlos Kollias, Tomasz Augustynek, Ousmane Sy
- 12:15 5.5 Multiple wavelength perspective of precipitation and drop size distribution characteristics in MC3E
Stephen Nesbitt, University of Illinois, K Gleicher, G Heymsfield, A Heymsfield, A Bansemmer, A Neumann, M Poellot, S Collis, P Kollias

12:30 - 13:30

Lunch break

Poster session Group I (day 2)

- 13:30 - 15:00 Quantitative Precipitation Estimation - Data Quality - Microphysics - Nowcasting - Spaceborne Radar - Air Traffic Management - Cloud Radar

See detailed poster program p. 15
Location : marquee

Session 6 Quantitative Precipitation Estimation (Part III)

(Plenary)

Chair : Anthony Illingworth, University of Reading
Location : amphitheater

- 15:00 6.1 Dallas Fort Worth Urban Demonstration Network
V.Chandra Chandrasekar, Colorado State University, Brenda Philips
- 15:15 6.2 A real-time procedure for adjusting radar data using raingauge information II: Initial performance of the PMM procedure
Chris Collier, National Centre for Atmospheric Science, University of Leeds, John Black, John Powell and Richard Mason
- 15:30 6.3 Investigation of the unusual polarimetric signatures of a mountainous convective event
Jacopo Grazioli, Ecole Polytechnique Fédérale de Lausanne (EPFL) - Environmental Remote Sensing Laboratory (LTE), Alexis Berne
- 15:45 6.4 Variability of differential phase at X band
Silke Trömel, Meteorological Institute of the University of Bonn, Bonn, Alexander Ryzhkov, Matthew Kumjian, Clemens Simmer, Ali Tokay, Jan-Bernd Schroer

- 16:00 6.5 Design and test of an X-band optimal rain rate estimator in the frame of the RHYTMME Project
Fadela Kabeche, Météo-France, Jordi Figueras I Ventura, Béatrice Fradon, Abdel-Amin Boumahmoud, Stephen Frasier, Pierre Tabary
- 16:15 6.6 Influence of the DSD variability at the radar subgrid scale on radar power laws
Joël Jaffrain, EPFL-LTE, **Alexis Berne**

16:30 - 17:00 **Coffee break** (offered by **CNR**)

Session 7 Microphysics (Part III)

(Plenary)

Chair : Remko Uijlenhoet, Wageningen University
Location : amphitheater

- 17:00 7.1 Taking the Microphysical Fingerprints of Storms with Dual-Polarization Radar
Matthew Kumjian, Cooperative Institute for Mesoscale Meteorological Studies, The University of Oklahoma, and NOAA/OAR/National Severe Storms Laboratory, Alexander V. Ryzhkov, Silke Trömel, and Clemens Simmer
- 17:15 7.2 Inference of dominating snow growth processes from radar observations
Dmitri Moisseev, University of Helsinki, Larry Bliven, Pablo Saavedra, Susanna Lautaportti, Alessandro Battaglia, V. Chandrasekar
- 17:30 7.3 Microphysics in West African squall lines : space-time variability of the dominant particle type analyzed with an Xband polarimetric radar and an Hydrometeor Identification Scheme.
Frederic Cazenave, LTHE - IRD, **Marielle Gosset**
- 17:45 7.4 Microphysical properties of localized convective precipitation observed by X-band polarimetric radar and disdrometer networks in the Tokyo Metropolitan area, Japan
Sung-A Jung, Pukyong National University, Masayuki Mali, Dong-In Lee, Dong-Soon Kim, Su-Kyung Kim, and Shyuichi Tsuchiya
- 18:00 7.5 Comparison rainfall microphysics estimates from dual-polarization X-band with a 2D video disdrometer, a Parsivel disdrometer and a Micro Rain Radar
Marios Anagnostou, National Observatory of Athens, Institute of Environmental Research and Sustainable Development (IERSD), Athens, Greece, John Kalogiros, Joel Van Baele, Emmanouil N. Anagnostou, Frank S. Marzano, and Anastasios Papadopoulos
- 18:15 7.6 Observation of high resolution vertical profiles of X-band weather radar observables during snowfall in the Swiss Alps
Marc Schneebeli, École Polytechnique Fédérale de Lausanne (EPFL), Environmental Remote Sensing Laboratory (LTE), Lausanne, Alexis Berne

18:30 **Bus transfer to Toulouse**

19:30 **Cocktail at City Hall** (offered by **TOULOUSE MUNICIPALITY**)

Wednesday, 27 June 2012

08:00 **Bus transfer to Météo-France**
See conference booklet for details

Session 8A Data Quality

(Parallel) *Chair : Daniel Michelson, SMHI*
Location : amphitheater

- 09:00 8A.1 **Interaction Between Beam Blockage and Vertical Reflectivity Gradients**
Norman Donaldson, *Environnement Canada*,
- 09:15 8A.2 **An introduction to the Met Office radar data quality management system (RDQMS)**
Selena Georgiou, *The Met Office*, Dawn Harrison, Nicolas Gaussiat, Robert Scovell
- 09:30 8A.3 **Improving the quality of European weather radar composites with the BALTRAD toolbox**
Anders Henja, *Swedish Meteorological and Hydrological Institute*, Daniel Michelson
- 09:45 8A.4 **Differential Reflectivity Calibration For Simultaneous Horizontal and Vertical Transmit Radars**
John Hubbert, *National Center for Atmospheric Research (NCAR)*, M. Dixon, R. Ice, D. Saxon, A. Heck
- 10:00 8A.5 **Correcting attenuation in operational radars from both heavy rain and the radome using the observed microwave emission**
Robert Thompson, *Dept of Meteorology, University of Reading*, Anthony Illingworth, Tim Darlington, James Ovens
- 10:15 8A.6 **Data quality in BALTRAD+ Project**
Jan Szturc, *Institute of Meteorology and Water Management*, Katarzyna Ośródkka, Daniel Michelson, Günther Haase, Markus Peura, Rashpal Gill, Martin B. Sørensen, Anna Jurczyk

Session 8B Nowcasting

(Parallel) *Chair : Urs Germann, MeteoSwiss*
Location : Prudhomme room

- 09:00 8B.1 **Probabilistic rainfall warning system with an interactive user interface**
Jarmo Koistinen, *Finnish Meteorological Institute*, Tuomo Lauri, Harri Hohti, Janne Kauhanen, Juha Kilpinen, Vesa Kurki, Pertti Nurmi, Pekka Rossi, Miikka Jokelainen, Mari Heinonen, Tommi Fred, Dmitri Moisseev
- 09:15 8B.2 **Nowcasting of orographic rainfall by means of radar data sequences: limits of predictability**
Loris Foresti, *Centre for Australian Weather and Climate Research*, Luca Panziera, Pradeep Venkata Mandapaka, Alexei Pozdnoukhov, Urs Germann, Alan Seed
- 09:30 8B.3 **An approach to the use of NWP forecasts to improve an ensemble nowcasting technique**
Marc Berenguer, *CRAHI-UPC*, Daniel Sempere-Torres
- 09:45 8B.4 **The use of radar data for the nowcasting of convection**
Jean-Marc Moisselin, *Météo-France*, Pascal Brovelli, Isabelle Bernard Bouissières
- 10:00 8B.5 **Lightning detection and prediction evaluation by microwave ground based radar and infrared space-born integrated approach**
Mario Montopoli, *Univ. of Cambridge, UK and Univ. of L' Aquila Italy (CETEMPS)*, D. Cimini, E. Picciotti, S. Di Fabio and F. S. Marzano
- 10:15 8B.6 **Kalman filtering based probabilistic nowcasting of object oriented tracked convective storms**
Pekka J Rossi, *Finnish Meteorological Institute*, V. Chandrasekar, Vesa Hasu

10:30 - 11:00 **Coffee break (offered by GAMIC)**

Session 9 Signal Processing (Part I)

(Plenary)

*Chair : Paul Joe, Environnement Canada
Location : amphitheater*

- 11:00 9.1 Signal processing challenges in phased-array radar meteorology (**keynote**)
Stephen Frasier, University of Massachusetts
- 11:30 9.2 Rapid scanning with phased array radars – issues and potential resolution
Dusan Zrnic, NOAA/NSSL, V.M. Melnikov, R.J. Doviak
- 11:45 9.3 Validation of the refractivity measurement from non-coherent dual-polarisation operational weather radar of the ARAMIS network
Lucas Besson, Météo France - DSO/CMI, Jacques Parent-du-Chatelet
- 12:00 9.4 Measuring snowfall with a low-power K-band radar (Micro Rain Radar) in polar regions
Maximilian Maahn, University of Cologne, Maximilian Maahn, Pavlos Kollias, Stefan Kneifel, Irinia Gorodetskaya, Gerhard Peters and Clemens Simmer
- 12:15 9.5 Countrywide rainfall maps from a commercial cellular telephone network
Aart Overeem, Hydrology and Quantitative Water Management Group, Wageningen University, Hidde Leijnse, Remko Uijlenhoet,

12:30 - 13:30 **Lunch break**

Poster session Group II (day 1)

- 13:30 - 15:00 *Hydrological Studies - Signal Processing - Numerical Weather Prediction – Networking - Radar Case studies - Non Meteorological Use of Radars*
- See detailed poster program p. 22
Location : marquee*

15:00 - 16:00 **Coffee break** (offered by EDF)

16:00 **Bus transfer to Toulouse**

17:00 – 19:00 **Cruise on Garonne River**

19:30 **Gala Dinner** (offered by SELEX-GEMATRONIK)

08:00 **Bus transfer to Météo-France**
See conference booklet for details

Session 10 Networking (Part I)

(Plenary) *Chair : Christopher Collier, University of Leeds*
Location : amphitheater

- 09:00 10.1 **The French operational radar network and products**
Jean-Louis Champeaux, Météo France, Direction des Systèmes d'Observation, CMR, Jean-Luc Chèze, Pierre Tabary
- 09:15 10.2 **Advanced weather radar networking with BALTRAD+**
Michelson Daniel, Swedish Meteorological and Hydrological Institute,
- 09:30 10.3 **EUMETNET OPERA Radar Data Centre - Odyssey: An operational service and future plans**
Stuart Matthews, UK Met Office, Nicolas Gaussiat, Robert Scovell, Daniel Idziorek, Karine Bouyer
- 09:45 10.4 **Next generation radar precipitation measurement in the Swiss Alps: strategy and first results**
Urs Germann, MeteoSwiss, Marco Gabella, Marco Boscacci, Ioannis Sideris, Maurizio Sartori, Alessandro Hering, Lorenzo Clementi, Marco Sassi
- 10:00 10.5 **Measurements of a network of mobile radars for flood applications during the field campaign of the HydroRad project**
John Kalogiros, NOAA, National Observatory of Athens, Athens, M. N. Anagnostou, F. S. Marzano, E. Picciotti, G. Cinque, M. Montopoli, L. Bernardini, E. N. Anagnostou, A. Volpi, and A. Telleschi
- 10:15 10.6 **Tokyo Metropolitan Area Convection Study for Extreme Weather Resilient Cities (TOMACS)**
Masayuki Maki, National Research Institute for Earth Science and Disaster Prevention, R. Misumi, S. Suzuki, T. Kobayashi, A. Adachi, I. Nakamura, and TOMACS members

10:30 - 11:00 **Coffee break** (offered by **NOVIMET**)

Session 11 Hydrological Studies

(Plenary) *Chair : Brice Boudevillain, LTHE*
Location : amphitheater

- 11:00 11.1 **A perspective on radar hydrology based on space-time scales (keynote)**
Guy Delrieu, LTHE
- 11:30 11.2 **Usefulness of radar QPE for mediterranean flash flood ensemble forecasting**
Béatrice Vincendon, Météo-France, GAME/CNRM, CNRS, Véronique Ducrocq, Olivier Nuissier, Benoît Vié
- 11:45 11.3 **A Hydrologically Relevant Framework for QPE Evaluation and Probabilistic Flood Prediction**
Zachary Flamig, Atmospheric Radar Research Center, Jonathan Gourley, Yang Hong, Manos Anagnostou
- 12:00 11.4 **A contemporary demonstration system for flash flood forecasting in the US**
Jonathan Gourley, NOAA/National Severe Storms Laboratory, Yang Hong, Kenneth Howard, Zachary Flamig
- 12:15 11.5 **RHYTMME Project : Risk Management based on a Radar Network**
Samuel Westrelin, Météo-France, P. Mériaux, P. Tabary, Y. Aubert

12:30 – 13:00 **Lunch break**

Poster session Group II (day 2)

13:30 - 15:00 *Hydrological Studies - Signal Processing - Numerical Weather Prediction – Networking - Radar Case studies - Non Meteorological Use of Radars*

See detailed poster program p. 22
Location : marquee

Session 12 Radar Case Studies

(Plenary) *Chair : Jarmo Koistinen, FMI*
Location : amphitheater

- 15:00 12.1 Rapid-scan, polarimetric, mobile Doppler radar observations at X-band of an EF-5 tornado in Oklahoma on 24 May 2011
Howard Bluestein, School of Meteorology, University of Oklahoma, Jeffrey C. Snyder, Jana B. Houser, and Andrew L. Pazmany
- 15:15 12.2 Daily and annual cycles of precipitation and convection over the continental United States
Frederic Fabry, McGill University,
- 15:30 12.3 Multiple-Doppler and In Situ Studies of the Hurricane Boundary Layer
Karen Kosiba, Center for Severe Weather Research, Joshua Wurman
- 15:45 12.4 Relationships between lightning activity, microphysics and kinematics in thunderclouds : a case of study observed by S and C band radars in the South of France (HyMex SOP area)
Magalie Buguet, Laboratoire d'Aérodynamique, OMP, Université Paul Sabatier, Sylvain Coquillat, Serge Soula, Christelle Barthe, Olivier Bousquet, Michel Chong, Eric Defer
- 16:00 12.5 Characterization of precipitation features in the Southeastern United States using high spatial and temporal resolution quantitative precipitation estimates derived from the National Mosaic and Multi-sensor QPE (NMQ/Q2)
Olivier Prat, Cooperative Institute for Climate and Satellites-NC (CICS-NC), NCSU/NOAA/NCDC, Asheville, NC, Brian R. Nelson, and Scott Stevens
- 16:15 12.6 GBVTD-retrieved near-surface vortex structure in a tornado and tornado-like vortices observed by a W-band radar during VORTEX2
Robin Tanamachi, Center for Analysis and Prediction of Storms (CAPS), Mingjun Wang, Ming Xue, Howard B. Bluestein, Krzysztof A. Orzel, Stephen J. Frasier

16:30 - 17:00 **Coffee break** (offered by IRSTEA)

Session 13A Networking (Part II)

(Parallel) *Chair : Hidde Leijnse, KNMI*
Location : amphitheater

- 17:00 13A.1 Deployment Considerations and Hardware Technologies for Realizing X-Band Radar Networks
Robert A. Palumbo, Eric Knapp, Ken Wood, David J. McLaughlin, University of Massachusetts
- 17:15 13A.2 The Doppler On Wheels (DOW) dual-frequency, dual-polarization and Rapid-Scan mobile radar network
Joshua Wurman, Center for Severe Weather Research,
- 17:30 13A.3 Towards wind farms and meteorological radar coexistence: guidelines for mitigating impacts and examples of operational corrections,
Daniel Sempere-Torres, Centre de Recerca Aplicada en Hidrometeorologia (CRAHI), Marc Berenguer, Alberto Pattazzi, Santiago Salsón
- 17:45 13A.4 Gap-filling, X-band radars as part of the RHYTMME program : an opportunity to retrieve real-time, multiple-Doppler wind fields in previously inaccessible regions of southeast France
Jeffrey Beck, Météo-France/CNRM, Olivier Bousquet

- 18:00 13A.5 Precipitation and Attenuation Estimates from a High Resolution Weather Radar Network (PATTERN) – Development of Retrievals for a Radar Network
Nicole Feiertag, Meteorological Institute, University of Hamburg, Marco Clemens, Katharina Lengfeld, Felix Ament
- 18:15 13A.6 Performance of the National Network of LAWR X-Band radars in El Salvador during the 1500 mm rainfall in October 2011
N. E. Jensen, DHI, R. Ceron, L. Menjivar, E. Escobar

Session 13B Signal Processing (Part II)

(Parallel)

Chair : Stephen Frasier, University of Massachusetts

Location : Prudhomme room

- 17:00 13B.1 The separation of noise and signal components in Doppler RADAR returns
Michael Dixon, National Center for Atmospheric Research, Boulder, Colorado, John Hubbert
- 17:15 13B.2 New Weather-Surveillance Capabilities for NSSL's Phased-Array Radar
Sebastian Torres, National Severe Storms Laboratory, Ric Adams, Chris Curtis, Eddie Forren, Igor Ivic, David Priegnitz, John Thompson, and David Warde
- 17:30 13B.3 Strobe Waveform for Rapid Scanning Polarimetric Weather Radars
Andrew Pazmany, ProSensing Inc., James B. Mead, Jeffrey C. Snyder and Howard B. Bluestein
- 17:45 13B.4 SiPRÉ, a software simulator of the perturbation of radars by wind turbines
G rard Bobillot, Onera, Lalaina Rasoanaivo, Pierre Nguyen, Eric Chaumette, Philippe Fargette, Jean-Fran ois Petex, Sophie Langlet
- 18:00 13B.5 Multi Polarization Measurements concerning various aspects of the STAR mode
Jens Reimann, DLR, Martin Hagen
- 18:15 13B.6 Multi-PRI and SMPRF software update for weather radars
Joern Sierwald, Eigenor
- 18:30 **Bus transfer to Toulouse**

08:00 **Bus transfer to Météo-France**
See conference booklet for details

Session 14 Numerical Weather Prediction

(Plenary) *Chair : Olivier Caumont, Météo-France*
Location : amphitheater

- 09:00 14.1 Operational assimilation of radar data at convective scale in AROME France : current status and international cooperations
Thibaut Montmerle, CNRM/GAME (Météo-France/CNRS), AEMET – Spain
- 09:15 14.2 Assimilation of Radar Doppler Wind
David Simonin, UK Met Office, Sue Ballard, Zhihong Li
- 09:30 14.3 Assimilation of ground-based rainfall observations in ECMWF's global 4D-Var system
Philippe Lopez, ECMWF
- 09:45 14.4 The strengths and weaknesses of using radar for long-term monitoring of precipitation forecast skill
Marion Mittermaier, Met Office
- 10:00 14.5 Operational radar refractivity retrieval and its potential use in Numerical Weather Prediction models.
John Nicol, Dept of Meteorology, University of Reading , Anthony Illingworth, Tim Darlington, James Ovens, Nicolas Gaussiat
- 10:15 14.6 Optimization and evolution of the assimilation of radar data in the AROME model at Météo-France
Eric Wattrelot, Météo-France/CNRM/GAME

10:30 - 11:00 **Coffee break** (offered by **BARON SERVICES**)

Session 15 Non Meteorological Use of Weather Radar

(Plenary) *Chair : Jonathan Gourley, NOAA/NSSL*
Location : amphitheater

- 11:00 15.1 Monitoring and forecasting airborne animal migration by radar meteorologists - a new task ? (keynote)
Felix Liechti, Swiss Ornithological Institute
- 11:30 15.2 The response of birds to abrupt natural hazards as observed using weather radar
Phillip B. Chilson, University of Oklahoma, Amy Daniel, Stephen B. Cocks, Daniel Berkowitz, Valery Melnikov, Winifred F. Frick, Andrew Wood, and Jeffrey F. Kelly
- 11:45 15.3 Bird migration monitoring across Europe using weather radar
Martin de Graaf, Royal Netherlands Meteorological Institute (KNMI), H. Leijnse, A. Dokter, J. Shamoun-Baranes, H. van Gasteren, J. Koistinen, and W. Bouten
- 12:00 15.4 Use of archived radar products for investigating influence of meteorological cues on animal behaviors in the aerosphere
Winifred Frick, Ecology and Evolutionary Biology, University of California, Santa Cruz, Phillip M. Stepanian, Jeffrey F. Kelly, Daniel E. Scipión, Sarah M. Stough, Charles M. Kuster, Thomas H. Kunz, Kenneth W. Howard and Phillip B. Chilson
- 12:15 15.5 Quantifying Animal Phenology in the Aerosphere Using Weather Radar
Jeffrey F. Kelly, University of Oklahoma, J. Ryan Shipley, Winifred F. Frick, Kenneth W. Howard, Thomas H. Kunz and Phillip B. Chilson

12:30

Closing ceremony

Cochairs: Olivier Bousquet and Pierre Tabary, Météo-France
Location : amphitheater

13:00

Lunch

13:00 - 14:00

Bus transfer to Toulouse & Airport

POSTER PROGRAMME GROUP I

Monday 25 June & Tuesday 26 June, 13:30 – 15:00

Location : marquee

Quantitative Precipitation Estimation - Data Quality - Microphysics - Nowcasting - Spaceborne Radar - Air Traffic Management - Cloud Radar

Quantitative Precipitation Estimation (QPE)

- 1 QPE Operational Bias Correction of Hourly Radar Precipitation Estimate using Rain Gauges
Roberta Amorati, ARPA Emilia-Romagna Servizio IdroMeteoClima, Pier Paolo Alberoni, Anna Fornasiero
- 2 QPE RAINSCANNER@BCN: An experiment to assess the hydrological value of a portable X-band radar
Marc Berenguer, CRAHI-UPC, Shinju Park, Daniel Sempere-Torres, Jens Didszun, Marcus Pool, Monika Pfeifer
- 3 QPE Rain rate estimation combining rain gauge, radar and microwave link data
Blandine Bianchi, EPFL - LTE, Alexis Berne
- 4 QPE A real-time procedure for adjusting radar data using raingauge information I: System description
John Black, University of Leeds and Hydro-Logic Ltd , John Powell, Chris. Collier and Richard Mason
- 5 QPE Adaptive estimation of rainfall from bright band with polarimetric radar
Lesya Borowska, NSSL, NOAA, Dusan Zrnica
- 6 QPE Distributions functions of rainfall estimates from polarimetric measurements at X-band in tropical Brazil
Roberto Calheiros, IPMet/- UNESP - Voluntary Researcher, Maria Andrea Lima, Ana Maria Gomes, Carlos Frederico de Angelis, Luiz Augusto Toledo Machado, Izabelly Carvalho da Costa, Jojhy Skuragi, Paulo Sergio Borges
- 7 QPE The french radar QPE : operational algorithm, case studies and perspectives
Jean-Louis Champeaux, Météo-France, Valérie Vogt, Catherine Brossard
- 8 QPE Improving the fine scale rainfall estimates of a local area weather radar. Case of X-Band radar at Leuven, Belgium
Laurens Cas Decloedt, University of Leuven , Patrick Willems
- 9 QPE Validation of attenuation, beam blockage, and calibration estimation methods using two dual polarization X band weather radars
Malte Diederich, Meteorological Institute of the University of Bonn, Alexander Ryzhkov, Clemens Simmer, Kai Mühlbauer
- 10 QPE The challenge to estimate extreme precipitation for locations without rain gauges
Thomas Einfalt, Hydro & meteo GmbH & Co. KG, Inga Frerk
- 11 QPE C-Band polarimetric Quantitative Precipitation Estimation in the Lake Michigan region
Raquel Evaristo, Valparaiso University, Teresa Bals-Elsholz, Adam Stepanek
- 12 QPE Radar-based statistics of point and areal rainfall
Edouard Goudenhoofd, Royal Meteorological Institute, Laurent Delobbe
- 13 QPE X-band polarimetric radar data set of alpine precipitation
Jacopo Grazioli, Ecole Polytechnique Fédérale de Lausanne (EPFL) - Environmental Remote Sensing Laboratory (LTE), Marc Schneebeli, Danny Scipion, Alexis Berne
- 14 QPE Raincell based identification of the vertical profile of reflectivity as observed by weather radar and its possibility for precipitation uncertainty estimation
Pieter Hazenberg, Hydrology and Quantitative Water Management, Wageningen University, **Hidde Leijnse**, Paul Torfs, Remko Uijlenhoet
- 15 QPE Uncertainties in radar rainfall fields due to the Z-R relationships adjustment schemes
Lili Huang, College of Resources and Environment, Anhui Agricultural University, Christian Salles, Marie-George Tournoud, Chu Yin, Julie Carreau and Claire Rodier

- 16 QPE Retrieving QPE uncertainty information based on regression trees
Stephan Jacobi, University of Potsdam, Tobias Pilz, Maik Heistermann
- 17 QPE Sensitivity analysis of polarimetric attenuation correction algorithms
Samuel Jolivet, , **A. Berne**
- 18 QPE Quantitative Precipitation Estimation (QPE) based on an Xband polarimetric Radar in West Africa : a comparison of methods based on self-consistency and comparison with rain gages and disdrometers .
Modeste Kacou, IRD LAPA-MF -/ Cote d'Ivoire, Marielle Gosset, Frederic Cazenave, Delfin Ochou, Augustin Kadjo
- 19 QPE Validation of rainfall estimation with the NIMR X-POL Radar
Miyoung Kang, National Institute of Meteorological Research/KMA, Seon-Yong Lee, Kyung-Yeub Nam, Young-Jean Choi, Cheol-Hwan You
- 20 QPE A comparative evaluation of three geostatistical radar-rain gauge combination methods in Switzerland
Denise Keller, Federal Office of Meteorology and Climatology MeteoSwiss, Zürich , David Masson, Rebekka Erdin, Ioannis Sideris, Urs Germann, Marco Gabella, Christoph Frei
- 21 QPE Use of the Dual Kalman Filter for Real-time Decision of G/R Ratio
Jungho Kim, Korea Univ, Jungsoo Yoon, Chulsang Yoo
- 22 QPE Marine X-band radar based rainfall estimate applied to local weather information system
Min-Seong Kim, Kwang-Ho Jin, Park-Sa Kim, Kwang-Ho Kim, Dae-II Seo, Dong-Hwan Kwang, Byung-Hyuk Kwon
- 23 QPE Estimation and Validation of Accumulated Precipitation using Radar Data in Korea
Hye-Young Ko, National Institute of Meteorological Research/Korea Meteorological Administration, Kyung-Yeub Nam, Jae-Cheon Choi and Young-Jean Choi
- 24 QPE A 10-year (1997–2006) reanalysis of quantitative precipitation estimation over France
Olivier Laurantin, Météo-France, Pierre Tabary, Pascale Dupuy, Guy L'Henaff, Christophe Merlier, Jean-Michel Soubeyroux
- 26 QPE Non-negative KDP Estimation by Monotone Increasing PHIDP Assumption below Melting Layer
Takeshi Maesaka, National Research Institute for Earth Science and Disaster Prevention, Koyuru Iwanami and Masayuki Maki
- 27 QPE Statistical characterization of C-band single-polarization radar retrieval space-time error in complex orography
Frank S. Marzano, CETEMPS / DIET - Sapienza University of Rome, M. Montopoli, S. Di Fabio, G. Vulpiani, E. Picciotti
- 28 QPE Evaluation of precipitation estimation using radar and precipitation forecast models in Korea
Kyung-Yeub Nam, KMA, Ha-Young Yang, Jin-Yim Jeong, and Young-Jean Choi
- 29 QPE Rainfall estimation using X-band dual-polarimetric measurements: Correction for rain attenuation and validation of various estimators
Young-A Oh, Dept. Astronomy and Atmospheric Sciences, Kyungpook National University, GyuWon Lee, Kyung-Yeub Nam
- 30 QPE Rainfall rate retrieval with IDRA, the polarimetric X-band radar at Cabauw, Netherlands
Tobias Otto, TU Delft, H.W.J. Russchenberg
- 31 QPE Improving the Accuracy of Time-cumulated Radar-based Rainfall Estimates in the Event of a Flood
Kurtulus Ozturk, Turkish State Meteorological Service, Firat Bestepe, Mehmet Zeybek
- 32 QPE Korean national QPE technique development: Analysis of current QPE results and future plans
Jong Seo Park, Radar data analysis Division, Weather radar center, Korea Meteorological Administration, Hyang Suk, Park, Joo Wan Cha, Mi-Kyung Suk
- 33 QPE Establishment of probabilistic quantitative precipitation estimates in the Cévennes region, France
Savina Partheni, LTHE, Guy Delrieu
- 34 QPE Development of the NASA Wallops Precipitation Science Research Facility
Walt Petersen, NASA Wallops Flight Facility, A. H. Hou
- 35 QPE - Combining radar and rain gauges rainfall estimates using conditional merging: a case study
Alberto Pettazzi, MeteoGalicia, Santiago Salsón Casado

- 36 QPE Modified conditional merging, test and applications of a method for combining radar and raingauge data
*Flavio Pignone, CIMA Research Foundation, **Nicola Rebora**, Francesco Silvestro*
- 37 QPE Correction of Radar QPE Errors for Non-Uniform VPRs in Mesoscale Convective Systems Using TRMM Observations
***Youcun Qi**, National Severe Storms Laboratory (NOAA/NSSL), USA, Jian Zhang, Yang Hong*
- 38 QPE Comparison of data merging algorithms for improving QPE for Civil Protection purposes in Italy
***Nicola Rebora**, CIMA Research Foundation, Gianfranco Vulpiani, Flavio Pignone, Francesco Silvestro*
- 39 QPE A test bed for verification of a methodology to correct the effects of range dependent errors on radar estimates
*Stefano Sebastianelli, Dipartimento di Ingegneria Civile, Edile e Ambientale, Sapienza Università di Roma, Rome, Fabio Russo, Elisa Adirosi, Francesco Napolitano, **Luca Baldini***
- 40 QPE Rain heterogeneity studies and specific Z-R relationships determination with x-band and k-band radars to improve rain rate retrieval over urban basins.
***Joël Van Baelen**, Laboratoire de Météorologie Physique (LaMP, CNRS / Université Blaise Pascal Clermont Ferrand II), Frédéric Tridon, Guillaume Mioche, Yves Pointin*
- 41 QPE Scaling properties of rainfall in space and time and their impact on rain rate estimation from weather radar
***Sébastien Verrier**, Université de Versailles Saint-Quentin-en-Yvelines, CNRS-INSU, LATMOS, Laurent Barthes, Cécile Mallet*
- 42 QPE Recent developments on precipitation analysis at Italian Met. Service
***Antonio Vocino**, CNMCA, Italian Air-Force National Meteorological Centre, Pratica di Mare (Rome, Italy), Marco Petracca*
- 44 QPE Towards a 10-year Climatology of Radar-based Precipitation Analyses
***Tanja Winterrath**, Deutscher Wetterdienst, Elmar Weigl, Mario Hafer, Andreas Becker*
- 45 QPE The Error Structure of the Radar Reflectivity and the Correction of the Range Dependent Error
***Jungsoo Yoon**, Korea Univ, Jungh Kim, Changhyun Jun, Chulsang Yoo*
- 46 QPE A real-time algorithm for merging radar QPEs with rain gauge and orographic precipitation climatology
*Jian Zhang, National Severe Storms Laboratory (NOAA/NSSL), **Youcun Qi**, Kenneth Howard*

DATA QUALITY (DQ)

- 47 DQ An operational radar monitoring tool
***Hans Beekhuis**, KNMI, Hidde Leijnse*
- 48 DQ Precipitation and Attenuation Estimates from a High Resolution Weather Radar Network (PATTERN) - Algorithms for the removal of clutter in a network environment of low-cost X-band radars
***Marco Clemens**, Meteorological Institute, University of Hamburg, Katharina Lengfeld, Nicole Feiertag, Felix Ament*
- 49 DQ Reducing weather radar measurement uncertainty with the use of digital data filtering
*Ioannis Daliakopoulos, Technical University of Crete, **Ioannis K. Tsanis***
- 50 DQ A fast marching method approach to identify sea clutter in weather radar data
***Christoffer A. Elo**, The Norwegian Meteorological Institute*
- 51 DQ Adaptive clutter filtering using statistical radar data and atmospheric propagation conditions
***Iñigo Hernáez**, Adasa Sistemas, Environmental Quality Division, María de las Mercedes Maruri, Javier López Azcona*
- 52 DQ Hints for laying out quality insurance plan for weather radar data
***Guy Jacquet**, RHEA, Groupe KISTERS, Alain Kapfer, Abdellatif Djerboua*
- 53 DQ Toward a physically-based identification of Vertical Profiles of Reflectivity from Volume Scan Radar Data
***Pierre-Emmanuel Kirstetter**, University of Oklahoma and NOAA/National Severe Storms Laboratory , H. Andrieu, B. Boudevillain, G. Delrieu*

- 54 DQ [An Objective Method of Creating a Clutter Bypass Map](#)
Valliappa Lakshmanan, University of Oklahoma,
- 55 DQ [Image Processing of Weather Radar Reflectivity Data: Should It be Done in Z or dBZ?](#)
Valliappa Lakshmanan, University of Oklahoma,
- 56 DQ [Wet Radome Attenuation Mitigation Method Using Ground Clutter Targets](#)
Tuomo Lauri, Finnish Meteorological Institute, Mikko Kurri
- 57 DQ [A Bayesian Algorithm for Tangential Deconvolution of Weather Radar Images](#)
Jussi Leinonen, Finnish Meteorological Institute, V. Chandrasekar, D. Moisseev
- 58 DQ [Anomalous propagation: Examination of ducting conditions and anaprop events in SW-Germany](#)
Malte Neuper, Karlsruhe Institut of Technology (KIT) -- Institute for Meteorology and Climate Research, Jan Handwerker
- 59 DQ [Removal of geometrical non-meteorological radar echoes](#)
Katarzyna Osrodka, Institute of Meteorology and Water Management, Jan Szturc, Anna Jurczyk
- 61 DQ [Rack - a program for anomaly detection, product generation, and compositing](#)
Markus Peura, Finnish Meteorological Institute,
- 62 DQ [wradlib - An Open Source Library for Weather Radar Data Processing](#)
Thomas Pfaff, University of Stuttgart, Maik Heistermann, Stephan Jacobi
- 63 DQ [Characterization tools for estimate radar signals with partial obstructions](#)
Juan Antonio Romo, University of Basque Country, Mercedes Maruri Machado, Ivan Iglesias, Sabina Ustamujic.
- 64 DQ [Use of a radar quality index to mitigate the effects of attenuation at C-band in the UK composite](#)
Caroline Sandford, UK Met Office, Nicolas Gaussiat
- 65 DQ [Estimation of Attenuation in a Low Melting Layer at 5.6 GHz for Unrimed and Rimed Snow](#)
Annakaisa von Lerber, Aalto University, D. Moisseev, J. Leinonen and J. Koistinen, M. Hallikainen
- 66 DQ [A new dynamic approach for the detection and removal of artefacts in radar reflectivity observations](#)
William Winter, Met Office, Nicolas Gaussiat

Microphysics (MIC)

- 67 MIC [Impact of seasonal variation of raindrop size distribution \(DSD\) on DSD retrieval methods based on polarimetric radar measurements](#)
Jyothi K Amar, ISTRAC,ISRO, T. Narayana Rao, S.Vijaya Bhaskara Rao
- 68 MIC [Polarimetric radar signatures in the ice region of stratiform systems and surface precipitation](#)
Renzo Bechini, Colorado State University, Fort Collins CO 80523, USA, 2) Arpa Piemonte, Sistemi Previsionali, Torino, Italy, **V. Chandrasekar**, L. Baldini
- 69 MIC [New Z-R relationships derived from raindrop size distribution data provided by laser didrometers](#)
Sorin Burcea, National Meteorological Administration,
- 70 MIC [Giant raindrops from sub-tropical convective precipitation system: a case study](#)
Wei-Yu Chang, ASP, EOL, NCAR,
- 71 MIC [Raindrop Size Distribution Retrievals with VHF Wind Profilers](#)
Bronwyn Dolman, ATRAD Pty Ltd, **Peter May**
- 72 MIC [On the significance of measured raindrop size distributions](#)
Jan Handwerker, Karlsruhe Institute of Technology,
- 73 MIC [Polarization signatures from simultaneous transmission of horizontal and vertical polarization radar data in ice crystals](#)
John Hubbert, National Center for Atmospheric Research (NCAR)
- 75 MIC [Comparison of polarimetric radar signatures in hailstorms simultaneously observed by C-band and S-band radars](#)
Rudolf Kaltenboeck, Austrocontrol, Alexander Ryzhkov

- 76 MIC Validation of Hydrometeor Classification Method for X-band Polarimetric Radars using In Situ Observational Data of Hydrometeor Videosonde
Takeharu Kouketsu, Hydrospheric Atmospheric Research Center, Nagoya Univerity, Hiroshi Uyeda, Mariko Oue, Tadayasu Ohigashi, Taro Shinoda, Haruya Minda, Kazahisa Tsuboki and Eichi Nakakita
- 77 MIC C-band dual-polarization radar and microwave radiometer observations of winter precipitation during LPVEx
Susanna Lautaportti, University of Helsinki, Dmitri Moisseev, Pablo Saavedra, Alessandro Battaglia, V. Chandrasekar,
- 78 MIC Aspect ratios and flutter angles of ice cloud particles retrieved from polarimetric radar data
Valery Melnikov, University of Oklahoma,
- 79 MIC Differential phase upon scattering by Rayleigh particles
Andrei Melnikov, PrecMach Inc, Vladimir Shabanov
- 80 MIC Snow algorithm for dual polarized X-band radar
Emmanuel Moreau, NOVIMET, E. Le Bouar, J. Testud, P. Tabary, S. Westrelin, P. Bernard, L. Merindol
- 81 MIC C-band dual-polarization weather radar hail signatures observed in South Finland.
Ljubov Nevvonen, Finnish Meteorological Institute, D. Moisseev, V.Chandrasekar, H.Pohjola
- 82 MIC A new microphysical characterization of complex snowflakes and mixed-phased particles scattering properties for improving microwave radar retrievals
Davide Ori, Alma Mater Studiorum - Università di Bologna, Maestri Tiziano, Rizzi Rolando, Montopoli Mario, Cimini Nico, Marzano Frank Silvio
- 84 MIC Estimation of light precipitation parameters by combining observation from C-band dual-polarized radar, K-band radar and the passive microwave radiometer ADMIRARI during the LPVEx campaign
Pablo Saavedra Garfias, Meteorological Institut, University of Bonn, Luca Baldini, Nicolleta Roberto, Alessandro Battaglia, Dmitri Moisseev, Ali Tokay, Clemens Simmer
- 85 MIC Bayesian estimation of bulk microphysical parameters of rain using dual polarized Doppler weather radar
Senaka Samarasekera, University of Melbourne, Mark Moreland, William Moran, Peter Farrell, Peter May, Guan Wen, Xuezhi Wang, Doug Gray, Marian Viola
- 86 MIC X-band radar technology and multifractal drop size distributions
Daniel Schertzer, Université Paris-Est, Ecole des Ponts ParisTech, Leesu, Ioulia Tchiguirinskaia, Shaun Lovejoy
- 87 MIC Modeling of X-band radar backscatter properties of snowfall using data from a 2-D video disdrometer
Marc Schneebeli, École Polytechnique Fédérale de Lausanne (EPFL), Environmental Remote Sensing Laboratory (LTE), Lausanne, Alexis Berne
- 88 MIC Studies of the spatial variability of alpine snowfall using an X-band polarimetric radar
Danny Scipion, École Polytechnique Federal de Lausanne (EPFL) – Environmental Remote Sensing Laboratory (LTE), Lausanne, Rebecca Mott, Michael Lehning, and Alexis Berne
- 89 MIC Characterization of supercooled and mixed phase clouds using airborne dual-frequency radar and G-band radiometer
Mengistu Wolde, National Research Council of Canada, Dave Hudak and Andrew Pazmany

Nowcasting (NOW)

- 90 NOW Predictability assessment of nowcasts in high-impact heavy precipitation events
Joan Bech, *Dep. Astronomy and Meteorology, University of Barcelona, Marc Berenguer*
- 91 NOW The correlation between the Three Body Scatter Signature and hail reports in SE Romania
Aurora Bell, *National Meteorological Administration, Daniel Carbutaru, Bogdan Antonescu, Sorin Burcea*
- 92 NOW Use of C-band radars in nowcast applications at the German Weather Service (DWD)
Tim Böhme, *Deutscher Wetterdienst*,
- 93 NOW Real-time weather radar information in support of risk-management: the example of a gas pipeline in the Swiss Alps
Lorenzo Clementi, *MeteoSwiss, Marco Gabella*
- 94 NOW NIMR X-band dual polarization radar data display and analysis system
Sol-Ip Heo, *National Institute of Meteorological Research/KMA, Seon-Yong Lee, Kyung-Yeub Nam, and Young-Jean Choi*
- 95 NOW Improving a blending technique by giving more importance to the growth and decay of the NWP models
Oliver Hernández, *Hydrometeorological Innovative Solutions SL, Marc Berenguer, Daniel Sempere-Torres, Rafael Sanchez-Diezma*
- 96 NOW Model for object-oriented nowcasting of convective cells based on multi-source data (SCENE)
Anna Jurczyk, *Institute of Meteorology and Water Management, Jan Szturc, Katarzyna Ośródk*
- 97 NOW Preliminary results of use of INCA system in the Czech Hydrometeorological Institute
Hana Kyznarova, *Czech Hydrometeorological Institute, Prague, Milan Salek, Petr Novak*
- 98 NOW Detecting Convective Initiation using Radar Images
Valliappa Lakshmanan, *University of Oklahoma, John S. Kain*
- 99 NOW A Blending Approach for Radar Echo Extrapolation Using TREC Vectors and Model-Predicted Winds
Qiaoqian Liang, *Guangdong Meteorological Observatory, Yerong Feng, Wenjian Deng*
- 100 NOW Quantitative expression of uncertainty in nowcasting heavy convective precipitation in Central Europe by extrapolation methods
Jan Mejsnar, *Institute of Atmospheric Physics, AS, Z. Sokol, P. Pesice*
- 101 NOW The operational platform for rainfall monitoring and forecasting X-TREM
Guillaume Mioche, *Laboratoire de Météorologie Physique, Joël van Baelen, Emmanuel Buisson*
- 102 NOW Comparing the characteristics of the STEPS nowcast ensemble to short-range deterministic NWP
Marion Mittermaier, *Met Office, Clive Pierce*
- 103 NOW Operational use of a dual-polarization weather radar in Finland.
Ljubov Nevvonen, *Finnish Meteorological Institute, E. Saltikoff, T. Erkkilä*
- 104 NOW Combining Satellite, Radar and NWP data for severe convection Nowcasting over the Alpine area
Luca Nisi, *MeteoSwiss, Paolo Ambrosetti, Lorenzo Clementi, Stefano Zanini*
- 105 NOW Improvement and verification of the operational nowcasting algorithm at ARPA-SIMC
Virginia Poli, *ARPA Emilia-Romagna, Servizio IdroMeteoClima, Pier Paolo Alberoni*
- 106 NOW The nowcasting system INCA-BE in Belgium and its performance in different synoptic situations
Maarten Reyniers, Royal Meteorological Institute of Belgium, Laurent Delobbe
- 107 NOW Radar and Nowcasting in flood prevention: Return of experience in November in France
Alix Roumagnac, *Predict Services, Karine Moreau*
- 109 NOW Hail warning and hail climatology in DWD
Joerg Seltmann, *DWD, Hohenpeissenberg Observatory, P. Lang, M. Frech*
- 110 NOW Testing radar-based hail detection criteria
Katerina Skripnikova, *Institute of Atmospheric Physics ASCR, Prague*
- 111 NOW Radar- and satellite derived descriptors as proxies of the precipitation process
Kathrin Wapler, *German Weather Service (DWD), Offenbach, Silke Trömel, Hartwig Deneke, Malte Diederich, Ákos Horváth, Fabian Senf, Clemens Simmer, Jürgen Lorenz Simon*

- 112 NOW The DWD Quantitative Precipitation Nowcasting Systems – A Verification Study for Selected Flood Events
Tanja Winterrath, Deutscher Wetterdienst, Thomas Reich, Wolfgang Rosenow, Klaus Stephan

Spaceborne Radar (SAT)

- 113 SAT Analysis of vertical profiles in West-African Precipitating systems based on TRMM PR and ground based radar.
Matias Alcoba, GET, Marielle Gosset
- 114 SAT Sensitivity of Doppler velocity measurements for EarthCARE-like system parameters
Tomasz Augustynek, Earth Observation Science, Department of Physics and Astronomy, University of Leicester, Leicester, UK, Ousmane Sy, Alessandro Battaglia, Simone Tanelli, Pavlos Kollias
- 115 SAT On the opportunistic use of geostationary satellite signals to estimate rain rate in the purpose of radar calibration
Laurent Barthes, UVSQ - LATMOS, Cécile Mallet
- 116 SAT Use of TRMM satellite data for validation of weather radar
Douglas Ferreira, Sistema de Proteção da Amazônia (SIPAM), Vanda Maria Sales de Andrade, Renata Silva de Loureiro, Jaci Maria Bilhalva Saraiva
- 117 SAT Notional studies for future geostationary Doppler radars
Neil Humpage, Earth Observation Science, Department of Physics and Astronomy, University of Leicester, Alessandro Battaglia, Simone Tanelli, Pavlos Kollias
- 118 SAT Marine Stratocumulus Clouds Detection Using Satellite Borne Radars: Performance of Different Radar Configurations
Pavlos Kollias, McGill University, Simone Tanelli, Alessandro Battaglia, Edward Luke and Ousmane Sy
- 119 SAT W-band space and C-band ground radars analysis for investigating cloud microphysical characteristics
Anna Cinzia Marra, Institute of Atmospheric Sciences and Climate (ISAC) of the Italian National Research Council (CNR), UOS Lecce, Gian Paolo Marra, Agata Moscatello, Annarita Turnone, Indira Lavanya Althada and Franco Prodi
- 120 SAT Precipitation signature on X-band spaceborne synthetic aperture radar imagery: interpretation and analysis
Saverio Mori, DIET - Sapienza University of Rome, L. Pulvirenti, M. Chini, M. Montopoli, N. Pierdicca, J.A. Weinman, F.S. Marzano
- 121 SAT Sampling uncertainties of precipitation estimates from satellites using a climatological radar rainfall data set
Aart Overeem, Hydrology and Quantitative Water Management Group, Wageningen University, Hidde Leijnse, Remko Uijlenhoet
- 122 SAT Simultaneous observations of rain cells by cosmo skymed constellation and weather radars using difference scanning strategy
Nicoletta Roberto, Istituto di Scienze dell'Atmosfera e del Clima, CNR, Baldini L., Gorgucci E., Chandrasekar V.
- 123 SAT Spatial variability of raindrop size distributions during MC3E
Jan-Bernd Schröer, Meteorological Institute, University of Bonn -/ Bonn, Ali Tokay, Walter A. Petersen, David B. Wolff, Patrick Gatlin, Matthew Wingo, and Lawrence D. Carey

Air Traffic Management (ATM)

- 124 ATM Modality of using meteorological radar data in air traffic management
Alexandru Hozoc, Romanian Air Traffic Services - ROMATSA, Catalin Bondor
- 125 ATM Airborne Radar Retrieved Three Dimensional Wind Fields for Turbulence Detection
Fadela Kabeche, Météo France (formerly Ph.D student within Thales), Yvon Lemaître, Stéphane Kemkemian, Jean-Paul Artis

- 126 ATM Image processing for weather radar data correction for aeronautical meteorology.
Rudolf Kaltenboeck, Austrocontrol, Croonen Gerardus, Ganster Harald], Gruber Manfred , Hennermann Karin , Kerschbaum Markus, Nowak Christoph, Mayer Heinz, Mayer Stefan, Uray Martina
- 127 ATM Weather radar data quality enhancement in aeronautical applications through polarimetric measurements
Alexander Lialiushkin, Institute of Radar Meteorology (IRAM), Tatiana Bazlova, Nikolay Bocharnikov, Alexander Solonin
- 128 ATM Simulations of a Doppler Radar for monitoring wake vortices in rainy weather
Zhongxun LIU, ISAE, University of Toulouse, Nicolas Jeannin, François Vincent, Xuesong Wang
- 129 ATM Weather extractors for ATC - radars
The GAMIC GWSP Doppler extractor, practical experiences, limits and future
Martin Malkomes, GAMIC, Dietmar Veerkamp, Matthias Toussaint, Karl-Josef Müller
- 130 ATM Operational use of automated weather radar systems "MeteoCell" with Air Traffic Management systems
Vasily Olenev, Institute of Radar Meteorology (IRAM), Tatiana Bazlova, Nikolay Bocharnikov, Alexander Solonin
- 131 ATM MEDUSA, a Meteorological Decision Support System for Aviation
Rafael Sanchez-Diezma, Hydrometeorological Innovative Solutions, Thomas Gerz, Martin Hagen, Caroline Foster, Felix Keis, Álvaro Rodríguez, Ólver Hernández, Shinju Park
- 132 ATM Towards the Detection of Aircraft Icing Conditions Using Operational Dual-polarimetric Radar
Ellis Scott, NCAR/EOL, David Serke, John Hubbert, David Albo, Andrew Weekly, Marcia Politovich, Andrew Gaydos, Daniel Adriaansen, Earle R. Williams, David J. Smalley, and Michael F. Donovan

Cloud Radars (CR)

- 133 CR MIRA-36 Cloud Radar Observation of Fog
Matthias Bauer-Pfundstein, Metek GmbH, Gerhard Peters
- 134 CR Medium power cloud radar
Matthias Bauer-Pfundstein, Metek GmbH, Gerhard Peters
- 135 CR Calibration of ARM Cloud Radars
Nitin Bharadwaj, Pacific Northwest National Laboratory, Kevin Widener, Jim Mead, Brian Simakauskas
- 136 CR Comparisons of measured cloud reflectivity at 95 GHz with forward modeled reflectivity using in-situ particle size distributions
Emmanuel Fontaine, Laboratoire de Météorologie Physique, Université Blaise Pascal, Clermont-Ferrand, J. Delanoe, A. Schwarzenboeck, R. Dupuy, N. Viltard, A. Protat, C. Duroure, W. Wobrock and C. Goubeyre
- 137 CR Beam-pointing angle calibration of the Wyoming Cloud Radar on the Wyoming King Air aircraft
Samuel Haimov, University of Wyoming, Alfred Rodi
- 138 CR Hole-punch clouds over Helsinki, Finland
Ewan O'Connor, University of Reading, UK and FMI, Finland, Hirsikko, A., P. Jokinen, D. Moisseev and J. Leinonen
- 140 CR Improved signal processing of the ARM program 915 MHz wind profilers
Frederic Tridon, Earth Observation Sciences, Department of Physics and Astronomy, University of Leicester, Leicester, Alessandro Battaglia, Pavlos Kollias, Edward P. Luke
- 141 CR Development and Observation of the Ku-band Broadband Radar (BBR) Network
Tomoo Ushio, Osaka University,
- 142 CR Coherent on Receiving and Processing of Non-coherent 35-GHz Radar for Cloud and Precipitation
Zhi-Huo XU, Xiamen Meteorological Administration, Xue-Ming Zhou, Zhao Shi

Wednesday 27 June & Thursday 28 June, 13:30 – 15:00

Location: marquee

Hydrological Studies / Signal Processing / Numerical Weather Prediction / Networking - Radar Case Studies / Non Meteorological Use of Radars

Hydrological Studies (HS)

- 145 HS Hydrological analysis of the extreme precipitation event of June 2011 in the Parma basin, Italy
Pier Paolo Alberoni, ARPA - SIMC Emilia-Romagna, A.Agnetti, R. Amorati, S. Pecora, G. Ricciardi, F. Tonelli, E. Zenoni
- 147 HS The use of radar data in operational hydrology
Lucie Brezková, Czech Hydrometeorological Institute, Martin Jonov, Petr Janál, Miloš Starý
- 148 HS Forecasting flash flood impacts utilizing anthropogenic exposure factors
Martin Caliano, LTHE (University of Grenoble, CNRS), **JJ. Gourley**, I. Ruin
- 149 HS The development and use of a comprehensive US-wide flash flood database for evaluating forecasting tools
Race Clark, University of Oklahoma and NOAA/National Severe Storms Laboratory, Jonathan J. Gourley, Zachary Flamig
- 150 HS Influence of rainfall spatial variability on rainfall runoff modelling: case study on a peri-urban catchment
Isabelle Emmanuel, Ifsttar, Herve Andrieu, Bernard Flahaut
- 151 HS Flash flood modelling for ungauged catchments
Pierre-André Garambois, IMFT, Hélène Roux - Denis Dartus
- 152 HS Six-year continuous hydrological simulation of water resources using C-band radar QPE data at Skjern river catchment, Denmark
Xin He, Geological Survey of Denmark and Greenland, Flemming Vejen, Jens Christian Refsgaard, Karsten H. Jensen
- 153 HS A first step in the integration of radar information on a operational tool for monitorization and surveillance in potential flash flood events.
Roberto Hernandez, Euskalmet / Tecnalia - Meteo Unit, J. Moreno, K. Otxoa de Alda, M. Maruri, J. Egaña, **S. Gaztelumendi**
- 154 HS The use of artificial intelligence methods for flash flood forecasting
Petr Janál, Czech Hydrometeorological Institute, Miloš Starý
- 155 HS Development of a flash flood warning system dedicated to road network monitoring : the predflood project
Jean Philippe Naulin (IFSTTAR), Eric Gaume, Olivier Payrastra, **Isabelle Emmanuel**
- 156 HS Interpretation of flash flood forecasts from the perspective of end users
Martin Jonov, Czech Hydrometeorological Institute, Lucie Brezková, Petr Janál
- 157 HS Use of radar QPE as an input to rainfall-runoff model: the case of the Rhone River (France)
Sébastien Legrand, Compagnie Nationale du Rhône, Etienne Dommaget, Benjamin Graff, Guillaume Bontron
- 158 HS Using the radar rainfall error for probabilistic forecasting
Sara Liguori, University of Bristol, **Miguel Rico-Ramirez**
- 159 HS A simplified radar-based EWS for urban flood warning
Xavier Llor, HYDS, Rafael Sánchez-Diezma, Álvaro Rodríguez, Miquel Ferrer, Marc Berenguer, Daniel Sempere-Torres
- 160 HS Dam and basin management through an integrated platform
Xavier Llor, HYDS, Rafael Sánchez-Diezma, David Sancho, Miquel Ferrer, Olver Hernández, Marc Berenguer, Daniel Sempere-Torres
- 161 HS Can we improve streamflow simulation by using higher resolution rainfall information?
Florent Lobligeois, IRSTEA, Vazken Andréassian, Charles Perrin, Cécile Loumagne

- 162 HS RAINPOL a web platform for hydro meteorological monitoring from an X-band dual polarization radar
Emmanuel Moreau, NOVIMET, J. Testud, D. Organde, P. Arnaud, P. Javelle and M. Fiquet
- 163 HS Using QPE in Hydrological Modeling in Middle Mountain Area ?
Laetitia Moulin, EDF-DTG, Victor Baron, Pierre Bernard, Rémy Garçon Thibault Mathevet
- 164 HS Flood Runoff Simulation Using Grid-based Radar Rainfall and Vflo Model
Hui-seong Noh, Inha University, Byung-sik Kim, Na-rae Kang, Hung-soo Kim
- 165 HS Integrated hydro-meteorological forecasts application in an operational environment
Agnes Sakal, University of Technology Sydney, **Alan Seed**, James E Ball
- 166 HS Inputs of X-band radars to high resolution urban water management
Daniel Schertzer, University Paris-Est, Ecole des Ponts ParisTech, Leesu, F. Blanchet, I. Tchiguirinskaia
- 167 HS Statistical downscaling of CLM precipitation data with an analogue method using radar data of radar Essen (DWD)
Alrun Tessendorf, hydro & meteo GmbH & Co. KG, Thomas Einfalt, Markus Quirmbach
- 168 HS A new warning service for heavy precipitation risk-management
Renaud Tzanos, Météo-France - DPrévi/PI, Pascal Brovelli
- 169 HS Spatial estimation of rain kinetic energy from radar reflectivity factor and/or rain rate based on a scaling formulation of DSD
Nan YU, LTHE (University of Grenoble, CNRS, IRD), **Brice Boudevillain**, Guy Delrieu, Michel Estèves, Sahar Hachani, Remko Uijlenhoet

Signal Processing (SP)

- 170 SP Efficiency of Atmospheric Radar Signal Processing Using Eigen Value Decomposition Method
VK Anandan, ISTRAC, Indian Space Research Organisation, Bangalore, VN Sureshbabu
- 171 SP An Engineering Illustration of the dual polarization upgrade for the WSR-88D
Mrinal Balaji, Baron Services, Inc, **John R. Ellis**, William H. Walker, Darrin R. Cartwright, James H. Lee, Mrinal S. Balaji, James H. Romines
- 172 SP A Mobile Doppler Dual-Polarisation X-band Radar for Microphysics and Hydrometeorological Research
Lindsay Bennett, National Centre for Atmospheric Science, School of Earth and Environment, University of Leeds, Christopher G. Collier and Alan M. Blyth
- 173 SP X band addition to the CSU-CHILL radar facility
V.Chandra Chandrasekar, Colorado State University, V. N. Bringi, S. A. Rutledge, Dave Brunkow, Francesc Junyent, Pat Kennedy, Jim George and Robert Bowie
- 174 SP Evaluation of X-band Radar Technologies within Opera 3 project
Roberto Cremonini, Arpa Piemonte, P. Tabary, J. Sugier, M. Frech, P.P. Alberoni, L. Baldini, A Huuskonen, A. Vocino
- 176 SP Zenith/Nadir Pointing Cloud Radars: Linear or Circular Polarization ?
Michele Galletti, Brookhaven National Laboratory, Dong Huang, Pavlos Kollias
- 177 SP Degree of Polarization at Simultaneous Transmission: Applications for Scatterers with Azimuthal Symmetry
Michele Galletti, Brookhaven National Laboratory,
- 178 SP X-band radar in the gap between K- and C-Band
Jan Handwerker, Karlsruhe Institute of Technology,
- 179 SP Control of the polarization of a hybrid polarimetric weather radar to reduce Zdr bias
Markus Hille, Selex Systems Integration GmbH, Ronald Hannesen, Frank Gekat
- 180 SP Assessment of Censoring Using Coherency Based Detectors on Dual-Polarized Weather Radar
Igor Ivic, University of Oklahoma/National Severe Storms Laboratory, Reino Keranen, Dusan Zrnica, V. Chandrasekar
- 182 SP Use of weather radar data for dimensioning Fade Mitigation Techniques in wireless telecommunication networks
Nicolas Jeannin, ONERA, Laurent Castanet, Florent Christophe, Frédéric Lacoste

- 183 SP Evaluation of the Enhanced Detection Capability of the Dual-Polarization Weather Radar
Reino Keränen, Vaisala Oyj, Jason Selzler, V. Chandrasekar
- 184 SP A new approach to Spaced Antenna Drift Technique to derive the, atmospheric winds
Shridhar Kumar, ISTRAC, Indian Space Research Organisation, Bangalore, VK Anandan and Toshitaka Tsuda
- 185 SP Long term monitoring of data quality from an operational S-band dual-polarization radar
Soohyun Kwon, Dept. Astronomy and Atmospheric Sciences, Kyungpook National University, Daegu, Young-A Oh, Gyuwon Lee¹, and Choong-Ke Lee
- 186 SP The new KNMI clutter mitigation scheme - from pulse-based to post-processing
Hidde Leijnse, Royal Netherlands Meteorological Institute, Hans Beekhuis, Aline Kraai, Rudolf van Westrhenen, and Paul de Valk
- 187 SP Combined double frequency method for profiling of rain parameters
Anna Linkova, Usikov Institute of Radiophysics and Electronics of National Academy of Sciences of Ukraine, Khlopov G., Voitovych O., Belov Ye., Khomenko S., Rudnev G.
- 188 SP Modeling of the Doppler spectrum width from profiling radars
Edward Luke, Brookhaven National Laboratory, Christopher Williams, Ming Fang, Pavlos Kollias
- 189 SP ENIGMA IV and FROG-MURAN - The "state of the art" signal and data processing., Performance and data quality achieved with modern weather radars
Martin Malkomes, GAMIC, Matthias Toussaint, Dietmar Veerkamp
- 190 SP Measurement of Doppler Radar signature of Wind Turbines at high resolution in distance
Jean-Paul Marcellin, ONERA, Anil Cheraly, Jean-François Petex, Huy-Khang Phan
- 191 SP Characterization of the differential reflectivity of euskalmet polarimetric weather radar
María de las Mercedes Maruri, Basque Meteorology Agency (EUSKALMET) / TECNALIA- Meteo Unit / UPV-EHU, Juan Antonio Romo, Arkaitz Etxezarreta, Iñigo Hernáez
- 192 SP Using IQ-Data for the evaluation of Doppler spectra and identification of clutter and anaprop at X band
Kai Mühlbauer, Meteorological Institute of the University of Bonn, Malte Diederich, Silke Trömel, Clemens Simmer
- 193 SP Micro Rain Radar Noise Estimation
Piet Markmann, Metek GmbH, Gerhard Peters, Max Maahn, Stefan Kneifel
- 194 SP Dual-polarization spectral filter for radio frequency interference suppression
Laura Rojas, University of Helsinki, Dmitri N. Moisseev, V. Chandrasekar, Jason Selzler, Reino Keränen.
- 195 SP Post beam steering techniques as a means to extract horizontal winds from Atmospheric radars
VN Sureshbabu, ISTRAC, Indian Space Research Organisation, Bangalore, VK Anandan and Toshitaka Tsuda
- 199 SP The new real-time measurement capabilities of the profiling TARA radar
Christine Unal, Delft University of Technology, Yann Dufournet, Tobias Otto, Herman Russchenberg
- 200 SP Automated real-time mitigation of ground clutter contamination for Dual-Polarization Doppler weather radars
David Warde, Cooperative Institute for Mesoscale Meteorological Studies, The University of Oklahoma and NOAA/OAR National Severe Storms Laboratory, Sebastian M. Torres
- 201 SP Precipitation estimate of a heavy rain event using a C-band solid-state polarimetric radar
Hiroshi Yamauchi, Meteorological Research Institute - Japan Meteorological Agency, Ahoro Adachi, Osamu Suzuki, Takahisa Kobayashi
- 202 SP Modeling and Simulation of China New Generation Doppler Weather Radar System
Xue-ming ZHOU, Xiamen Meteorological Administration, **XU Zhi-huo**

Numerical Weather Prediction (NWP)

- 25 NWP An Improve of Polarimetric Radar Rainfall Estimates
Huan Li, Institute of Remote Sensing Applications, Chinese Academy of Sciences & Atmospheric Radar Research Centre, The University of Oklahoma, Yang Hong, Shuai Gao, Zheng Niu

- 203 NWP Impact of Korea Local Radar Processing System (KLRPS) on analysis and very short range forecast
Kwang-deuk Ahn, National Institute of Meteorological Research, Korea Meteorological Administration, Yo-Han Cho, Sung-Hwa Jung, GyuWon Lee and Yong Hee L
- 204 NWP Observation Operator for polarimetric variables
Clotilde Augros, Météo France, Radar Center, Pierre Tabary, Olivier Caumont
- 205 NWP Comparison between weather radar refractivity change observations and mesoscale numerical weather prediction analyses
Olivier Caumont, Météo-France, CNRM-GAME, Anouck Foray, Lucas Besson, Jacques Parent du Châtelet
- 206 NWP The Value of Accuracy and Density of Radar Observation for Data assimilation
Weiguang Chang, McGill University, Isztar Zawadzki
- 207 NWP SAARC STORM Pilot Field Experiment 2011 and Mesoscale Data Assimilation Impacts
Mohan Kumar Das, SAARC Meteorological Research Centre (SMRC), Sujit K. Debsarma and Someshwar Das
- 208 NWP Efficient radar forward operator for data assimilation and model verification (1)
Dorit Epperlein, Karlsruhe Institute of Technology (KIT), Yuefei Zeng, Ulrich Blahak
- 209 NWP A radar-based study to evaluate the capability of high resolution Operational NWP systems for tornado watches issuance
Alexandre Flouttard, Météo-France, Toulouse, Olivier Bousquet, Thibaut Montmerle, Joshua Wurman
- 210 NWP Observation and verification of some 2011 heavy rain events in Western Mediterranean
Ana Genovés, AEMET
- 211 NWP Variational assimilation of radar reflectivity data at the Met Office
Lee Hawkness-Smith, Met Office, Nicolas Gaussiat, Helen Buttery, Cristina Charlton-Perez, Sue Ballard
- 212 NWP Efficient implementation of inverse variance-covariance matrices in variational data assimilation systems
Dominik Jacques, J. S. Marshall Radar Observatory McGill University, Isztar Zawadzki
- 213 NWP Ensemble Kalman filter assimilation of radar reflectivity data: observing system simulation experiments
Bogumi Jakubiak, University of Warsaw, Katarzyna Osródko, Anna Jurczyk, and Jan Szturc
- 214 NWP A very-short range precipitation forecasting using VDRAS and KLAPS for World Expo 2012 Yeosu in Korea
Eun-Hee Kim, National Institute of Meteorological Research, Korea Meteorological Administration, Kwang-Deuk Ahn, Hee-Chun Lee and Yong-Hee Lee
- 216 NWP A comparison of two techniques combining rain-gauge and radar measurements at high resolutions and its application to precipitation forecasts verification
Carole Legorgeu, Laboratoire de Météorologie Physique, UMR 6016 CNRS/UBP, Julien Pergaud, Wolfram Wobrock
- 217 NWP Usefulness of the X-band radar reflectivity data for verification of precipitation events forecasted by numerical weather prediction models
Aleksandra Ewa Kardas, University of Warsaw, ICM, Bartosz Niezgodka, Bogumil Jakubiak
- 215 NWP Impact of Doppler Radial Velocity Data Assimilation on Typhoon Simulation
Pay-Liam Lin, Department of Atmospheric Sciences, National Central University, Hsin-Hung Lin
- 218 NWP Radar data assimilation using a modular programming approach with the Ensemble Kalman Filter: preliminary results.
Ida Maiello, Centre of Excellence CETEMPS -Department of Physics, University of L'Aquila, L. Delle Monache, G. Romine, E. Picciotti, F.S. Marzano, R. Ferretti
- 219 NWP Assessing the Improvement of Severe Weather Prediction Over Western Africa in WRF by 3DVAR Data Assimilation System using Conventional and Radiance observational Data
Pascal Moudi Igri, University of Yaounde I, Department of Physics, Appolinaire Derbetini Vondou, Francois Mkankam Kamga
- 220 NWP Validation of Multiple-Doppler Analysis of Convective Clouds Using the ARM Precipitation Radar Network During MC3E
Kirk North, McGill University, Scott Collis, Scott Giangrande and Pavlos Kollias

- 222 NWP Radar-based QPE used for the modeller oriented QPF verification by traditional and spatial techniques
Daniela Rezacova, Institute of Atmospheric Physics ASCR, Prague, Petr Zacharov, Zbynek Sokol
- 223 NWP Long term evaluation of LHN data assimilation of radar derived precipitation rates
Klaus Stephan, German Weather Service,
- 224 NWP Assimilation of radial wind information measured by Doppler Radar of DWD
Klaus Stephan, German Weather Service, Christoph Schraff, Ulirisch Blahak, Kathleen Helmert, Karolin Eichler, Daniel Leuenberger,
- 225 NWP EnKF assimilation of high-resolution, mobile Doppler radar data of the 4 May 2007 Greensburg, Kansas supercell storm into a numerical cloud model
Robin Tanamachi, Center for Analysis and Prediction of Storms (CAPS), Louis J. Wicker, David C. Dowell, Daniel T. Dawson II, Howard B. Bluestein, Ming Xue
- 226 NWP EnKF assimilation of storm-scale, mobile Doppler radar data into high-resolution analyses of a weakly tornadic supercell
Robin Tanamachi, Center for Analysis and Prediction of Storms (CAPS), Ming Xue, Youngsun Jung, Keith A. Brewster, Michael I. Biggerstaff
- 227 NWP Efficient radar forward operator for data assimilation and model verification (2)
Yuefei Zeng, Institute for Meteorology and Climate Research, Karlsruhe Institute of Technology (KIT), Dorit Epperlein, Ulrich Blahak
- 304 NWP Mediterranean storm forecast in complex orography: investigating microphysical aspects using polarimetric radar data and WRF simulations
Sabrina Gentile, Department of Physics/CETEMPS, University of L'Aquila, L'Aquila, **M. Montopoli**, R. Ferretti, S. Di Fabio, E. Picciotti, G. Vulpiani, F.S. Marzano

NETWORKING (NET)

- 228 NET Improving the quality of polarimetric X-Band radar data using Micro Rain Radar
Hassan Al-Sakka, Météo-France, Direction des Systèmes d'Observation, Jean-Marie Donier, Thierry Douffet, Olivier Garrouste, Stephen Frasier, Jeffrey Beck and Olivier Bousquet
- 229 NET Wind Turbine Impact Evolution and Beam Blockage Analysis on the Doppler Weather Radar Network of the Meteorological Service of Catalonia.
Oriol Argemí, Meteorological Service of Catalonia, A. Belmonte, X. Fabregas, J. Bech, N.Pineda, T.Rigo
- 230 NET ARM radar facility for climate study
Nitin Bharadwaj, Pacific Northwest National Laboratory, Kevin Widener, Scott Collis, Karen Johnson
- 231 NET The ARM end-to-end geophysical retrieval system
Scott Collis, Argonne National Laboratory, Scott Giangrande, Kirk North, Nitin Bharadwaj and Pavlos Kollias
- 232 NET Assessment of precipitation observations by a heterogeneous network of X- and K-band radars
Stephen Frasier, U. Massachusetts, Jeff Beck, Fadela Kabeche, Jordi Figueras i Ventura, Hassan Al-Sakka, Béatrice Fradon, Abdel-Amin Boumahmoud, Olivier Bousquet and Pierre Tabary
- 233 NET Impact of operational wind farms in the United Kingdom on weather radar products
Dawn Harrison, Met Office
- 234 NET Operational chain of weather radar algorithms and ongoing developments at Deutscher Wetterdienst (DWD)
Kathleen Helmert, Deutscher Wetterdienst, Offenbach, P. Tracksdorf
- 235 NET EUMETNET OPERA: Achievements of OPERA-3 and challenges ahead
Asko Huuskonen, Finnish Meteorological Institute, Laurent Delobbe, Bernard Urban and the OPERA group
- 236 NET History of radar meteorology in the Slovak Republic.
Miriam Jarosova, AMS SHMU
- 237 NET New generation of dual polarized weather radars in Austria.
Rudolf Kaltenboeck, Austrocontrol

- 238 NET Validation of Composite Polarimetric Parameters and Rainfall Amounts from an X-band Polarimetric Radar Network in the Tokyo Metropolitan Area
D.-S KIM, National Research Institute for Earth Science and Disaster Prevention, M. Maki, T. Maesa and S. Tsuchiya
- 239 NET Optimization of scanning strategy for the radar network operated by Korea Meteorological Administration (KMA)
GyuWon Lee, Dept. Astronomy and Atmospheric Sciences, Kyungpook National University, Young-A Oh, Sung-Hwa Jung, Bok-Haeng Heo, and Bongjae Kuk, Kyung-Eak Kim
- 240 NET Considerations for compositing radar data from 3 countries
Guido Lempio, Hydro & Meteo GmbH & Co.KG, Luebeck, Thomas Einfalt, Arnold Lobbrecht
- 241 NET Precipitation and Attenuation Estimates from a High Resolution Weather Radar Network (PATTERN) – Design of the Experiment
Katharina Lengfeld, Meteorological Institute, University of Hamburg, Marco Clemens, Nicole Feiertag, Felix Ament
- 242 NET Impact of wind turbines on french weather radar network
Richard Lorandel, Météo France, Jean-Louis Champeaux, Jean.Claude Heinrich, Pierre Tabary
- 243 NET Optimization of the operation strategy and parameters of the Euskalmet weather radar
María de las Mercedes Maruri, Basque Meteorology Agency (Euskalmet) - TECNALIA, Meteo Unit, Iñigo Hernández, Santiago Gaztelumendi
- 244 NET Radar inter-calibration analysis: potential use for weather radar networks
Mario Montopoli, Univ. of Cambridge, UK and Univ. of L' Aquila Italy (CETEMPS), V. Romaniello, E. Gorgucci, E. Picciotti, L.Baldini and F.S. Marzano
- 245 NET Utilization of Exchange of Weather Radar Data in the Czech Hydrometeorological Institute
Petr Novak, Czech Hydrometeorological Institute, Petr Frolík, Lucie Bezková, Hana Kyznarová
- 246 NET Exploiting X-band dual-polarization mini-radar network and hydro-meteorological forecast models in Moldova territory during the field campaign of HydroRad project
Errico Picciotti, Himet-Cetemps, Marzano F.S., Cinque G., Montopoli M., Bernardini L., De Sanctis K., Anagnostou E., Anagnostou M., Fessas Y., Volpi A., Telleschi A., Kalogiros J., Cazac V., Pace R.
- 247 NET Evolution of the UK Radar processing system (Radarnet)
Matt Probert, UK Met Office
- 248 NET Effective Radar Algorithm Software Development at the DWD
Nils Rathmann, Deutscher Wetterdienst, Offenbach, Michael Mott
- 249 NET 3D Radar reflectivity mosaics based on a variational method
Jordi Roca-Sancho, Centre de Recerca Aplicada en Hidrometeorologia, Universitat Politècnica de Catalunya, Barcelona, Marc Berenguer, Daniel Sempere-Torres
- 250 NET Weather radar network of the Amazon Protection System, Brazil
Ivan Saraiva, Sistema de Proteção da Amazônia, Gustavo Guterres Ribeiro, Mauro Mendonça da Silva
- 251 NET The wind turbine problem in Germany
Joerg Seltmann, DWD, Hohenpeissenberg Observatory, Diesner, C., Stephan, K., Lang, P., Frech, M.
- 252 NET ESTABLISHMENT OF THE WEB BASED WMO RADAR DATABASE (WRD)
Oguzhan Sireci, Turkish Meteorological Service, Dr. Paul Joe, Kamuran Akyildiz
- 253 NET New Quality Assurance Algorithms for the DWD Polarimetric C-Band Weather Radar Network
Manuel Werner, Deutscher Wetterdienst, Offenbach, Joerg Steinert

Radar Case Studies (RCS)

- 255 RCS The effect of forest fires over the located rain on the eastern Amazon
Kézia Araújo, Amazon Protection System (SIPAM), Vanda M. S de Andrade, Jaci M. B Saraiva
- 256 RCS Case study of a severe storm refractivity signature with an operational radar and the Fabry algorithm modified for a magnetron transmitter
Lucas Besson, Météo France - DSO/CMI, Frédéric Fabry, Jacques Parent-du-Chatelet

- 257 RCS C-Band dual polarimetric observations of snow events with and without lightning over the Great Lakes region in southern Canada.
Sudesh Boodoo, Environment Canada, D. Hudak, N. Donaldson, M. Leduc, L. Bliven.
- 258 RCS Low-Level Divergence Measurements During MC3E
Paloma Borque, Department of Atmospheric and Oceanic Sciences, McGill University, Pavlos Kollias, Kirk North, Scott Giangrande, Scott Collis
- 260 RCS Relationship between convective precipitation and lightning activity in southeastern Romania
Sorin Burcea, National Meteorological Administration, Daniel Carburaru, Aurora Bell
- 261 RCS The 2011 summer season experiment carried out by ARPA Emilia-Romagna for the management of severe weather events: evaluation of the implemented procedures and case studies analysis.
Miria Celano, ARPA-SIMC, P.P. Alberoni, A. Fornasiero, R. Foraci, P. Mezzasalma and S. Nanni
- 262 RCS Using Euskalmet Radar data for analysis of a persistent precipitation case
Joseba Egaña, Euskalmet / Tecnalia - meteo unit, **Santiago Gaztelumendi**, Virginia Palacio, Ivan R. Gelpi, Kepa Otxo de Alda, Roberto Hernandez, Mercedes Maruri
- 263 RCS A study of a very heavy precipitation case in Basque Country: the 30th May 2011 event.
Santiago Gaztelumendi, Euskalmet / Tecnalia - meteo unit, J. Egaña, I.R Gelpi, K. Otxoa de Alda, M. Maruri, R. Hernandez.
- 264 RCS Spatio-temporal multifractal comparison of 4 rainfall events at various locations: radar data and meso-scale simulations
Auguste Gires, Université Paris-Est, Ecole des Ponts ParisTech, LEESU, Tchiguirinskaia I., Schertzer D.
- 265 RCS Use of radar data for analysis of hailstorm in Valjevo city (west part of Serbia) on 19th June 2010
Vesna Ivkov, Republic Hydrometeorological Service of Serbia
- 266 RCS Three-Dimensional Classification of Precipitation Types using Reflectivity from Wind Profiler and Weather Radar Networks
Sung-Hwa Jung, Department of Astronomy and Atmospheric Sciences, GyuWon Lee, Young-A Oh, Su-Hyang Lee, Kwang-Deuk Ahn, and Yong-Hee Lee
- 267 RCS A linear array of pressure and wind sensors for high resolution in situ measurements in winter tornadoes
Kenichi Kusunoki, Meteorological Research Institute, Eiichi Sato, Shigeru Onogi, Sadao Saito, Hanako Inoue, Wataru Mashiko, Kenichi Shimose, Masahide Nishihashi, Kenichiro Arai, Hiroyuki Morishima, and Keiji Adachi
- 268 RCS Proximity soundings in rapid succession within winter tornadic storm during the Shonai Area Railroad Weather Project
Kenichi Kusunoki, Meteorological Research Institute, Hanako Inoue, Syugo Hayashi, Shunsuke Hoshino, Masahide Nishihashi, Kenichi Shimose, Kenichiro Arai, Wataru Mashiko, Masako Kusume, Hiroyuki Morishima, Keiji Adachi
- 269 RCS Radar and surface mesonet observations of convection initiation associated with seabreeze front and outflow boundary
Kenichi Kusunoki, Meteorological Research Institute, Sadao Saito and Hanako Inoue
- 270 RCS Observation of storm merger and subsequent tornadogenesis over the Kanto Plain in Japan
Kenichi Kusunoki, Meteorological Research Institute,
- 271 RCS The orographic effect on tracks of convective cells - A case study at the Swabian Jura
Miriam Kuttig, Karlsruhe Institute of Technology, Jan Handwerker
- 272 RCS Establishment of a Multiple-Doppler Radar Wind Retrieval System and Its Application to the Analysis of the Typhoon Nari at its landfall
Seon-Yong Lee, National Institute of Meteorological Research, Young-Jean Choi, Mi-Young Gang and Sol-Ip Heo
- 273 RCS Severe Storm in the metropolitan region of Belem: A Case Study
Jorge Lopes, SIPAM, **Jaci Saraiva**, Carlos Simoes
- 274 RCS Extreme events occurred in 2009 in the Eastern Amazon Oriental
Renata Loureiro, Sistema de Proteção da Amazônia (SIPAM), Vanda Maria Sales de Andrade, Douglas Batista da Silva Ferreira, **Jaci Maria Bilhalva Saraiva**
- 275 RCS Characterizing the diurnal cycle of precipitation over complex Alpine orography using four-dimensional radar observations
Pradeep Mandapaka, MeteoSwiss, **Urs Germann**, Luca Panziera

- 276 RCS Systematic investigations of intense convective precipitation events in Austria based on radar cell tracking
Vera Meyer, Zentralanstalt für Meteorologie und Geodynamik, Andreas Schaffhauser
- 277 RCS Case studies of severe thunderstorms
Malte Neuper, Karlsruhe Institut of Technology (KIT) - Institute for Meteorology and Climate Research, Jan Handwerker
- 278 RCS An observational look at quasi-stationary lines of heavy orographic rainfall over the Southern Alps
Luca Panziera, MeteoSwiss, Curtis James, **Urs Germann**
- 281 RCS A Multivariate Analysis of Lake-Effect Snow Events in Western New York
Gustavo Pereira, State University of New York College at Brockport, Matthew S. Muscato, State University of New York at Brockport
- 282 RCS Evolution of Two Summer Bow Echoes in Central and Southern Serbia
Maja Rabrenovic, Ministry of Interior, Sector for Emergency Management, Miroљub Zaric
- 283 RCS Assessing the accuracy of weather radar to track intense rain cells and to analyse the relationships with topography and land cover in the area of Greater Lyon area, France
Florent Renard, Université Jean Moulin Lyon 3 - CNRS UMR 5600 Environnement Ville Société, Jacques COMBY
- 284 RCS A case study of heavy and persistent rainfall, 4-7 November 2011.
Miriam Ruiz, Euskalmet / Tecnalia - Meteo Unit, J. Egaña , **S. Gaztelumendi** , M. Maruri , R. Hernandez , I.R. Gelpi
- 285 RCS X band polarimetric & Doppler Radar observations of heavy precipitation events over the Mediterranean region (France)
Jean-François Rysman, LATMOS/IPSL/UVSQ-P6/CNRS, Y. Lemaître and E. Moreau
- 286 RCS Study of Hail Storm features in Mesoscale Convective Systems over South East Asia by TRMM – Precipitation Radar and Microwave Imager
Sanjay Sharma, Kohima Science College, Jotsoma, Devajyoti Dutta, Rakesh Mohan Gairol
- 287 RCS Analysis of a storm through radar and rawinsonde sounding for equatorial region
Mirlen Tassia Figueira da Silva, Amazon Protection System (SIPAM), Vanda M. S de Andrade, Jaci M.B.Saraiva
- 288 RCS Analysis of two extremes in the western Amazon.
Mauro Silva, Sistema de Proteção da Amazônia, Ivan Saraiva, Gustavo Guterrez Ribeiro
- 289 RCS Preliminary results from the ROTATE-2012 Radar and In Situ Study of Low Level Wind Structure of Tornadoes
Joshua Wurman, Center for Severe Weather Research, Karen Kosiba
- 290 RCS Polarimetric Doppler Radar Observations of Low-Reflectivity Ribbons in Supercells
Jeffrey Snyder, University of Oklahoma, Howard Bluestein, Vijay Venkatesh, and Stephen Frasier
- 291 RCS Hailstorm over North Bulgaria on 21.05.2008
Ivaylo Zamfirov
- 292 RCS How Can East Asian Wintermoon Influence the Pacific Storm Track?
Man Zhang, College of Atmospheric Sciences, Nanjing University of Information Science & Technology, Nanjing 210044, China, Xiaofeng Xu, Wenjun Zhang, and **Youcun Qi**

Non Meteorological Use of Weather Radars (NMUR)

- 293 NMUR Interesting non-meteorological, Dual Polarimetric data from DYNAMO/CINDY over the Indian Ocean
John Hubbert, UCAR/EOL, Mike Dixon
- 294 NMUR Migrating insects observed by weather radar in traps
Matti Leskinen, University of Helsinki, **Dmitri Moisseev**, Jarmo Koistinen, Irmeli Markkula
- 295 NMUR Channelling effect of the coastline and radar observed insect migration
Matti Leskinen, University of Helsinki, Hannu Savijärvi, Kauri Mikkola, **Susanna Lauportti**
- 296 NMUR Weather radar observations of Underwing moth immigrations to Finland
Matti Leskinen, University of Helsinki, Kauri Mikkola, **Laura Rojas**

- 298 NMUR [Wheat disease forecasting using weather radar observations](#)
*Abdeslam Mahtour, Université de Liège, M. El Jarroudi, **L. Delobbe**, L. Hoffmann, H. Maraite and B. Tychon*
- 299 NMUR [Synergistic use of ash dispersal model, microwave radar simulators and remote observations to study explosive volcanic ash eruptions](#)
***Mario Montopoli**, Univ. of Cambridge, UK and Univ. of L' Aquila Italy (CETEMPS), A. Hoffmann, M. Herzog, H. Graf and F. S. Marzano*
- 300 NMUR [Fire detection by C-Band dual polarization Radar](#)
***Alberto Pettazzi**, MeteoGalicia, Santiago Salsón Casado*
- 302 NMUR [Radar based passive measurement of vehicle speed in optical spectrum](#)
***Lubos Rejtek**, University of Pardubice, Vladimir Brazda*
- 303 NMUR [A Time-Series Polarimetric Radar Simulator for Biological Applications](#)
***Phillip M. Stepanian**, University of Oklahoma, Atmospheric Radar Research Center, Phillip B. Chilson*

Ackerman Andrew S.	3B.6
Adachi Ahoro	10.6 - 201 SP
Adachi Keiji	267 RCS - 268 RCS
Adams Ric	13B.2
Adirosi Elisa	39 QPE
Adriaansen Daniel	4B.6 - 132 ATM
Agnetti A.	145 HS
Ahn Kwang-Deuk	203 NWP - 214 NWP - 266 RCS
Akyildiz Kamuran	252 NET
Alberoni Pier Paolo	1 QPE - 105 NOW - 145 HS - 174 SP - 261 RCS
Albo David	4B.6 - 132 ATM
Alcoba Matias	113 SAT
Al-Sakka Hassan	2.5 - 228 NET - 232 NET
Althada Indira Lavanya	119 SAT
Amar Jyothi K	67 MIC
Ambrosetti Paolo	104 NOW
Ament Felix	13A.5 - 48 DQ - 241 NET
Amitai E.	5.3
Amorati Roberta	1 QPE - 146 HS
Anagnostou Emmanouil N.	7.5 - 10.5 - 246 NET
Anagnostou Marios	7.5 - 10.5 - 11.3 - 246 NET
Anandan VK	170 SP - 184 SP - 195 SP
Andrade Vanda	254 RCS
Andréassian Vazken	161 HS
Andrieu Hervé	53 DQ - 150 HS
Antonescu Bogdan	91 NOW
Arai Kenichiro	267 RCS - 268 RCS
Araújo Kézia	255 RCS
Argemí Oriol	229 NET
Arnaud P.	162 HS
Artis Jean-Paul	125 ATM
Aubert Y.	11.5
Augros Clotilde	4B.1 - 204 NWP
Augustynek Tomasz	5.4 - 114 SAT
Avramov Alexander	3B.6
Aydin Kultegin	3B.6
Azcona Javier López	51 DQ
Balaji Mrinal S.	171 SP
Baldini Luca	39 QPE - 68 MIC - 84 MIC - 122 SAT - 174 SP - 244 NET
Ball James E	165 HS
Ballard Sue	14.2 - 211 NWP
Bals-Elsholz Teresa	11 QPE
Bansemer A	5.5
Barbaresco Frederic	4B.4 - 4B.5
Baron Victor	163 HS
Barthe Christelle	259 RCS
Barthes Laurent	41 QPE - 115 SAT
Battaglia Alessandro	3B.5 - 5.4 - 7.2 - 77 MIC - 84 MIC - 114 SAT - 117 SAT - 118 SAT - 140 CR
Bauer-Pfundstein Matthias	133 CR - 134 CR
Bazlova Tatiana	127 ATM - 130 ATM
Bech Joan	90 NOW - 229 NET
Bechini Renzo	2.3 - 68 MIC
Beck Jeffrey	13A.4 - 228 NET - 232 NET
Becker Andreas	44 QPE
Beekhuis Hans	47 DQ - 186 SP
Bell Aurora	91 NOW - 260 RCS
Belmonte A.	229 NET
Belov Ye	187 SP
Bennartz R.	4A.2 - 5.2
Bennett Lindsay	172 SP
Berenguer Marc	8B.3 - 13A.3 - 2 QPE - 90 NOW - 95 NOW - 159 HS - 160 HS - 249 NET
Berkowitz Daniel	15.2
Bernard Bouissières Isabelle	8B.4

Bernard Pierre	80 MIC - 163 HS
Bernardini L	10.5 - 246 NET
Berne Alexis	4A.4 - 6.3 - 6.6 - 7.6 - 3 QPE - 13 QPE - 17 QPE - 87 MIC - 88 MIC
Besson Lucas	9.3 - 205 NWP - 256 RCS
Bestepe Firat	31 QPE
Bezková Lucie	245 NET
Bharadwaj Nitin	135 CR - 230 NET - 231 NET
Bianchi Blandine	3 QPE
Biggerstaff Michael I.	226 NWP
Black John	6.2 - 4 QPE
Blahak Ulrich	208 NWP - 227 NWP - 224 NWP
Blanchet F.	166 HS
Bliven Larry	2.2 - 7.2 -
Blustein Howard B.	12.1 -12.6 - 13B.3 - 225 NWP - 290 RCS
Blyth Alan M.	172 SP
Bobillot Gérard	13B.4
Bocharnikov Nikolay	127 ATM - 130 ATM
Boevith Thomas	2.6
Böhme Tim	92 NOW
Bondor Catalin	124 ATM
Bontron Guillaume	157 HS
Boodoo Sudesh	2.2 - 257 RCS
Borges Paulo Sergio	6 QPE
Borowska Lesya	5 QPE
Borque Paloma	258 RCS
Boscacci Marco	10.4
Botta Giovanni	3B.6
Boudevillain Brice	53 DQ - 169 HS
Boumahmoud Abdel-Amin	1.3 - 2.5 - 6.5 - 232 NET
Bousquet Olivier	13A.4 - 209 NWP - 228 NET - 232 NET - 259 RCS
Bouten W.	15.3
Bouyer Karine	2.5 - 10.3
Bowie Robert	173 SP
Brazda Vladimir	302 NMUR
Brewster Keith A.	226 NWP
Brezková Lucie	147 HS - 156 HS
Bringi V.N.	3B.1 - 173 SP
Brossard Catherine	7 QPE
Brovelli Pascal	4B.4 - 8B.4 - 168 HS
Brunkow Dave	173 SP
Buguet Magalie	2.5 - 259 RCS
Buisson Emmanuel	101 NOW
Burcea Sorin	69 MIC - 91 NOW - 260 RCS
Buttery Helen	211 NWP
Calheiros Roberto	6 QPE
Calianno Martin	148 HS
Campana V.	2.3
Carbunaru Daniel	91 NOW - 260 RCS
Carey Lawrence D.	123 SAT
Carreau Julie	15 QPE
Cartwright Darrin R.	171 SP
Carvalho da Costa Izabelly	6 QPE
Casado Santiago Salsón	35 QPE - 300 NMUR
Castanet Laurent	182 SP
Caumont Olivier	204 NWP - 205 NWP
Cazac V	246 NET
Cazenave Frederic	1.7 - 7.3 - 18 QPE
Celano Miria	261 RCS
Ceron R.	13A.6
Cha Joo Wan	32 QPE
Champeaux Jean-Louis	10.1 - 7 QPE - 242 NET
Chandrasekar V. Chandra	2.3 - 6.1 - 7.2 - 8B.6 - 57 DQ - 68 MIC - 77 MIC - 81 MIC - 122 SAT - 173 SP - 180 SP - 183 SP - 194 SP
Chang Weiguang	206 NWP
Chang Wei-Yu	70 MIC

Charlton-Perez Cristina	211 NWP
Chaumette Eric	13B.4
Cheraly Anil	190 SP
Chèze Jean-Luc	10.1
Chilson Phillip B.	15.2 - 15.4 - 15.5 - 303 NMUR
Chini M.	120 SAT
Cho Yo-Han	203 NWP
Choi Jae-Cheon	23 QPE
Choi Young-Jean	19 QPE - 23 QPE - 28 QPE - 94 NOW - 272 RCS
Chong Michel	259 RCS
Christophe Florent	182 SP
Chu Xia	3B.3
Cimini D.	4B.2 - 8B.5
Cimini Nico	82 MIC
Cinque G.	10.5 - 246 NET
Clark Race	149 HS
Clemens Marco	13A.5 - 48 DQ - 241 NET
Clementi Lorenzo	10.4 - 93 NOW - 104 NOW
Clothiaux Eugene E.	3B.6
Cocks Stephen B.	15.2
Collier Christopher G.	6.2 - 4 QPE - 172 SP
Collis Scott	5.5 - 220 NWP - 230 NET - 231 NET - 258 RCS
Comby Jacques	283 RCS
Coquillat Sylvain	259 RCS
Cremonini Roberto	2.3 - 2.6 - 174 SP
Croonen Gerardus	126 ATM
Currier P.	4B.4
Curtis Chris	13B.2
da Silva Ferreira Douglas Batista	274 RCS
Daliakopoulos Ioannis	49 DQ
Dalphinnet Alice	2.4
Dance Sandy	3A.2
Daniel Amy	15.2
Darlington Tim	8A.5 - 14.5
Dartus Denis	151 HS
Das Mohan Kumar	207 NWP
Das Someshwar	207 NWP
Dawson Daniel T.	225 NWP
de Alda K. Otxoa	263 RCS
de Alda Kepa Otxo	262 RCS
de Andrade Vanda Maria Sales	60 DQ - 116 SAT - 255 RCS - 274 RCS - 279 RCS - 287 RCS -
de Angelis Carlos Frederico	6 QPE
de Graaf Martin	15.3
de Loureiro Renata Silva	116 SAT
De Sanctis K. -	246 NET
de Valk Paul	186 SP
Debsarma Sujit K.	207 NWP
Decloedt Laurens Cas	8 QPE
Defer Eric	259 RCS
Delanoe J.	136 CR
della Faille de Leverghem R.	4B.5
Delle Monache L.	218 NWP
Delobbe Laurent	12 QPE - 235 NET - 298 NMUR
Delrieu Guy	11.1 - 33 QPE - 53 DQ - 169 HS
Deneke Hartwig	111 NOW
Deng Wenjian	99 NOW
Derbetini Vondou Appolinaire	219 NWP
Di Fabio S.	4B.2 - 8B.5 - 27 QPE - 304 NWP
Didszun Jens	2 QPE
Diederich Malte	9 QPE - 192 SP - 111 NOW
Diesner - C.	251 NET
Diezma Rafael Sanchez-	95 NOW
Dixon Michael	8A.4 - 13B.1 - 293 NMUR
Djafri K.	4B.5
Djerboua Abdellatif	52 DQ

Dokter A.	15.3
Dolman Bronwyn	71 MIC
Dommanget Etienne	157 HS
Donaldson Norman	2.2 - 8A.1 - 257 RCS
Donier Jean-Marie	228 NET
Donovan Michael F.	132 ATM
Douffet Thierry	228 NET
Doviak R.J.	9.2
Dowell David C.	225 NWP
Ducrocq Véronique	11.2
Dufournet Yann	199 SP
Dupuy Pascale	24 QPE
Dupuy R.	136 CR
Durore C.	136 CR
Dutta Devajyoti	286 RCS
Egaña Joseba	153 HS - 262 RCS - 263 RCS - 284 RCS
Eichler Karolin	224 NWP
Einfalt Thomas	10 QPE - 167 HS - 240 NET
El Jarroudi M.	298 NMUR
Ellis John R.	171 SP
Ellis Scott	4A.1 - 4B.6 -
Elo Christoffer A.	50 DQ
Emmanuel Isabelle	150 HS - 155 HS
Epperlein Dorit	208 NWP - 227 NWP
Erdin Rebekka	3A.4 - 3A.6 - 20 QPE
Erkkilä T.	103 NOW
Escobar E.	13A.6
Estèves Michel	169 HS
Etxezarreta Arkaitz	191 SP
Evaristo Raquel	11 QPE
Fabregas X.	229 NET
Fabry Frederic	12.2 - 256 RCS
Fang Ming	188 SP
Fargette Philippe	13B.4
Farrell Peter	85 MIC
Feiertag Nicole	13A.5 - 48 DQ - 241 NET
Feng Yerong	99 NOW
Ferreira Douglas	116 SAT
Ferrer Miquel	159 HS - 160 HS
Ferretti R.	218 NWP - 304 NWP
Fessas Y.	246 NET
Figueras i Ventura Jordi	1.3 - 6.5 - 232 NET
Fiquet M.	162 HS
Flahaut Bernard	150 HS
Flamig Zachary	11.3 - 11.4 - 149 HS
Flouttard Alexandre	209 NWP
Fontaine Emmanuel	136 CR
Foraci R.	261 RCS
Foray Anouck	205 NWP
Foresti Loris	8B.2
Fornasiero Anna	1 QPE - 261 RCS
Forren Eddie	13B.2
Foster Caroline	131 ATM
Fradon Béatrice	1.3 - 2.5 - 6.5 - 232 NET
Frasier Stephen J.	2.5 - 6.5 - 9.1 - 12.6 - 228 NET - 232 NET - 290 RCS
Frech M.	109 NOW - 251 NET - 174 SP
Frei Christoph	3A.4 - 20 QPE
Frerk Inga	10 QPE
Frick Winifred F.	15.2 - 15.4 - 15.5
Fridlind Ann M.	3B.6
Frolík Petr	245 NET
Furusho Carina	150 HS
Gabella Marco	10.4 - 20 QPE - 93 NOW

Gairol Rakesh Mohan	286 RCS
Galletti Michele	3B.4 - 176 SP - 177 SP
Gang Mi-Young	272 RCS
Ganson S.	2.1
Ganster Harald	126 ATM
Gao Shuai	25 NWP
Garambois Pierre-André	151 HS
Garçon Rémy	163 HS
Garrouste Olivier	4B.4 - 228 NET
Gatlin Patrick	123 SAT
Gaume Eric	155 HS
Gaussiat Nicolas	3A.5 - 8A.2 - 10.3 - 14.5 - 64 DQ - 66 DQ - 211 NWP
Gaydos Andrew	4B.6 - 132 ATM
Gaztelumendi Santiago	153 HS - 243 NET - 262 RCS - 263 RCS - 284 RCS
Geerts Bart	3B.3
Gekat Frank	179 SP
Gelpi Ivan R.	262 RCS - 263 RCS - 284 RCS
Genovés Ana	210 NWP
Gentile Sabrina	304 NWP
George Jim	173 SP
Georgiou Selena	3A.5 - 8A.2
Germann Urs	3A.6 - 8B.2 - 10.4 - 20 QPE - 275 RCS - 278 RCS
Gerz Thomas	4B.3
Gerz Thomas	131 ATM
Giangrande Scott	220 NWP - 231 NET - 258 RCS
Gill Rashpal S	2.6 - 8A.6
Gioia A.	1.4
Giordano P.	1.4
Gires Auguste	264 RCS
Gleicher K	5.5
Gomes Ana Maria	6 QPE
Gorgucci E	122 SAT - 244 NET
Gorodetskaya Irinia	9.4
Gosset Marielle	1.7 - 7.3 - 18 QPE - 113 SAT
Goudenhoofd Edouard	12 QPE
Gourbeyre C.	136 CR
Gourley Jonathan	5.3 - 11.3 - 11.4 -148 HS - 149 HS
Graf H.	4B.2 - 299 NMUR
Graff Benjamin	157 HS
Gray Doug	85 MIC
Grazioli Jacopo	6.3 - 13 QPE
Gruber Manfred	126 ATM
Guerrero Carlos Geijo	14.1
Guterres Ribeiro Gustavo	250 NET
Haase Günther	8A.6
Hachani Sahar	169 HS
Hafer Mario	44 QPE
Hagen Martin	2.4 - 13B.5 - 131 ATM
Haghi Kevin	12.4
Haimov Samuel	137 CR
Hallar A.G.	3B.2
Hallikainen M.	65 DQ
Hamilton Robert	257 RCS
Han Dawei	74 MIC
Handwerker Jan	58 DQ - 72 MIC - 178 SP - 271 RCS - 277 RCS
Hannesen Ronald	179 SP
Harrison Dawn	8A.2 - 233 NET
Hasu Vesa	8B.6
Hawkness-Smith Lee	211 NWP
Hayashi Syugo	268 RCS
Hazenberg Pieter	3A.3 - 14 QPE
He Xin	152 HS
Heck A.	8A.4
Heinrich Jean.Claude	242 NET
Heistermann Maik	62 DQ - 16 QPE

Helmert Kathleen	224 NWP - 234 NET
Henja Anders	8A.3
Hennermann Karin	126 ATM
Heo Bok-Haeng	239 NET
Heo Sol-Ip	94 NOW - 272 RCS
Hering Alessandro	10.4
Hernáez Iñigo	51 DQ - 191 SP - 243 NET
Hernández Oliver	95 NOW - 131 ATM - 160 HS
Hernandez Roberto	153 HS - 262 RCS - 263 RCS - 284 RCS
Herzog M.	4B.2 - 299 NMUR
Hewitt Alan	3A.5
Heymsfield A	5.5
Heymsfield G	5.5
Hille Markus	179 SP
Hirsikko A.	138 CR
Hoffmann A.	299 NMUR
Hoffmann L.	298 NMUR
Hogg Shona	3A.5
Hohti Harri	8B.1
Hong Y.	5.3 - 11.4 - 25 NWP - 37 QPE
Horváth Ákos	111 NOW
Hoshino Shunsuke	268 RCS
Hou A. H.	34 QPE
Hou Arthur Y.	5.1
Houser Jana B.	12.1
Howard Kenneth W.	11.4 - 15.4 - 15.5 - 46 QPE
Hozoc Alexandru	124 ATM
Huang Dong	3B.4 - 176 SP
Huang Lili	15 QPE
Hubbert John	4B.6 - 8A.4 - 13B.1 - 73 MIC - 132 ATM - 293 NMUR
Hudak D.	2.2
Hudak Dave	89 MIC - 257 RCS
Humpage Neil	117 SAT
Huuskonen Asko	174 SP - 235 NET
Ice R.	8A.4
Idziorek Daniel	10.3
Iglesias Ivan	63 DQ
Iida H.	1.6
Illingworth Anthony	1.1 - 8A.5 - 14.5
Inoue Hanako	267 RCS - 268 RCS - 269 RCS
Islam Tanvir	74 MIC
Ivic Igor	13B.2 - 180 SP
Ivkov Vesna	265 RCS
Iwanami Koyuru	26 QPE
Jaci M.	254 RCS - 255 RCS
Jacobi Stephan	16 QPE - 62 DQ
Jacques Dominik	212 NWP
Jacques Parent-du-Chatelet	9.3
Jacquet Guy	52 DQ
Jaffrain Joël	6.6
Jakubiak Bogumi	213 NWP - 217 NWP
James Curtis	278 RCS
Janál Petr	147 HS - 154 HS - 156 HS
Jarosova Miriam	236 NET
Javelle P.	162 HS
Jeannin Nicolas	128 ATM - 182 SP
Jensen Karsten H.	152 HS
Jensen N. E.	13A.6
Jeong Jin-Yim	28 QPE
Jin Kwang-Ho	22 QPE
Joe Paul	3A.1 - 252 NET
Johnson Karen	230 NET
Johnston Christopher	4B.6
Jokinen P.	138 CR

Jolivet Samuel	17 QPE
Jonov Martin	147 HS - 156 HS
Juge P.	4B.4
Jun Changhyun	45 QPE
Jung Sung-A	7.4
Jung Sung-Hwa	203 NWP - 239 NET - 266 RCS
Jung Youngsun	226 NWP
Junyent Francesc	173 SP
Jurczyk Anna	8A.6 - 59 DQ - 96 NOW - 213 NWP
Kabeche Fadela	1.3 - 6.5 - 125 ATM - 232 NET
Kacou Modeste	1.7 - 18 QPE
Kadjo Augustin	18 QPE
Kain John S.	98 NOW
Kalogiros John	7.5 - 10.5 - 246 NET
Kaltenboeck Rudolf	2.1 - 75 MIC - 126 ATM - 237 NET
Kang Miyoung	19 QPE
Kang Na-rae	164 HS
Kapfer Alain	52 DQ
Kardas Aleksandra Ewa	217 NWP
Kauhanen Janne	8B.1
Keis Felix	4B.3 - 131 ATM
Keller Denise	20 QPE
Kelly Jeffrey F.	15.2 - 15.4 - 15.5
Kemkemian Stéphane	125 ATM
Kennedy Pat	173 SP
Keranen Reino	180 SP - 183 SP - 194 SP
Kerschbaum Markus	126 ATM
Khlopov G	187 SP
Khomenko S.	187 SP
Kilpinen Juha	8B.1
Kim Byung-sik	164 HS
Kim Dong-Soon	1.6 - 7.4 - 238 NET
Kim Eun-Hee	214 NWP
Kim Hung-soo	164 HS
Kim Jungho	21 QPE - 45 QPE
Kim Kwang-Ho	22 QPE
Kim Kyung-Eak	239 NET
Kim Min-Seong	22 QPE
Kim Park-Sa	22 QPE
Kim Su-Kyung	7.4
Kirk North	258 RCS
Kirstetter Pierre-Emmanuel	5.3 - 53 DQ
Klein M.	4B.4
Knapp Eric	13A.1
Kneifel Stefan	4A.2 - 9.4 - 193 SP
Ko Hye-Young	23 QPE
Kobayashi Takahisa	10.6 - 201 SP
Koistinen Jarmo	2.6 - 8B.1 - 15.3 - 65 DQ - 294 NMUR
Kollias P	
Kollias Pavlos	3B.4 - 3B.5 - 5.4 - 5.5 - 114 SAT - 117 SAT - 118 SAT - 140 CR - 176 SP - 188 SP - 220 NWP - 231 NET - 258 RCS
Kosiba Karen	12.3 - 289 RCS
Kouketsu Takeharu	76 MIC
Kraai Aline	186 SP
Kuk Bongjae	239 NET
Kulie Mark	4A.2 - 5.2
Kumar Shridhar	184 SP
Kumar V.	3B.1
Kumjian Matthew	2.1 - 6.4 - 7.1
Künsch Hans R.	3A.4
Kunz Thomas H.	15.4 - 15.5
Kurki Vesa	8B.1
Kurri Mikko	56 DQ
Kuster Charles M.	15.4
Kusume Masako	268 RCS

Kusunoki Kenichi	267 RCS - 268 RCS - 268 RCS - 269 RCS - 270 RCS
Kuttig Miriam	271 RCS
Kwang Dong-Hwan	22 QPE
Kwon Byung-Hyuk	22 QPE
Kwon Soohyun	1.2 - 185 SP
Kyznarova Hana	97 NOW - 245 NET
Lacoste Frédéric	182 SP
Lakshmanan Valliappa	54 DQ - 55 DQ - 98 NOW
Lamantea M.	4B.2
Lang P.	109 NOW - 251 NET
Langlet Sophie	13B.4
Lauportti Susanna	295 NMUR
Laurantin Olivier	24 QPE
Lauri Tuomo	8B.1 - 56 DQ
Lautaportti Susanna	7.2 - 77 MIC
Le Bouar E.	80 MIC
L'Ecuyer Tristan	5.2
Leduc Mike	2.2 - 257 RCS
Lee Choong-Ke	1.2 - 185 SP
Lee Dong-In	1.6 - 7.4
Lee Gyuwon	1.2 - 29 QPE - 185 SP - 203 NWP - 239 NET - 266 RCS
Lee Hee-Chun	214 NWP
Lee James H.	171 SP
Lee Seon-Yong	19 QPE - 94 NOW - 272 RCS
Lee Su-Hyang	266 RCS
Lee Yong Hee	203 NWP - 214 NWP - 266 RCS
Legorgeu Carole	216 NWP
Legrand Sébastien	157 HS
Lehning Michael	88 MIC
Leijnse H.	
Leijnse Hidde	3A.3 - 9.5 - 15.3 - 14 QPE - 47 DQ - 121 SAT - 186 SP
Leinonen Jussi	4A.2 - 4A.3 - 57 DQ - 65 DQ - 138 CR
Lemaître Yvon	125 ATM - 285 RCS
Lempio Guido	240 NET
Lengfeld Katharina	13A.5 - 48 DQ - 241 NET
Leskinen Matti	294 NMUR - 295 NMUR - 296 NMUR
Leuenberger Daniel	224 NWP
L'Henaff Guy	24 QPE
Li Huan	25 NWP
Li Zhihong	14.2
Lialiuskin Alexander	127 ATM
Liang Qiaoqian	99 NOW
Liechti Felix	15.1
Liguori Sara	158 HS
Lima Maria Andrea	6 QPE
Lin Hsin-Hung	215 NWP
Lin Pay-Liam	215 NWP
Linkova Anna	187 SP
Liu Zhongxun	128 ATM
Llort Xavier	159 HS - 160 HS
Lobbrecht Arnold	240 NET
Lobligeois Florent	161 HS
Lopes Jorge	273 RCS
Lopez Philippe	14.3
Lorandel Richard	242 NET
Loumagne Cécile	161 HS
Loureiro Renata	274 RCS
Lovejoy Shaun	86 MIC
Luke Edward	3B.5 - 118 SAT - 140 CR - 188 SP
Maahn Maximilian	9.4 - 193 SP
Mace G.G.	3B.2
Machado Toledo Luiz Augusto	6 QPE
Maesa T.	238 NET
Maesaka Takeshi	1.6 - 26 QPE

Maestri Tiziano	82 MIC
Mahtour Abdeslam	298 NMUR
Maiello Ida	218 NWP
Mäkelä Antti	8B.1
Maki Masayuki	1.6 - 7.4 - 10.6 - 26 QPE - 238 NET
Malkomes Martin	129 ATM - 189 SP
Mallet Cécile	41 QPE - 115 SAT
Mandapaka Pradeep Venkata	8B.2 - 275 RCS
Maraite H.	298 NMUR
Marcellin Jean-Paul	190 SP
Marchand R.	3B.2
Marco Gabella	3A.6
Markkula Irmeli	294 NMUR
Markmann Piet	193 SP
Marra Anna Cinzia	119 SAT
Marra Gian Paolo	119 SAT
Maruri María de las Mercedes	51 DQ - 63 DQ - 153 HS - 191 SP - 243 NET - 262 RCS - 263 RCS - 284 RCS
Marzano Frank Silvio	1.4 - 4B.2 - 7.5 - 8B.5 - 10.5 - 27 QPE - 82 MIC - 120 SAT - 218 NWP - 244 NET - 246 NET - 299 NMUR - 304 NWP
Mashiko Wataru	267 RCS - 268 RCS
Mason Richard	6.2 - 4 QPE
Masson David	20 QPE
Mathevet Thibault	163 HS
Matrosov Sergey	3B.2
Matthews Stuart	10.3
May Peter	3B.1 - 71 MIC - 85 MIC
Mayer Heinz	126 ATM
Mayer Stefan	126 ATM
McCubbin I.	3B.2
McLaughlin David J.	13A.1
Mead James B.	13B.3
Mead Jim	135 CR
Mejsnar Jan	100 NOW
Melnikov Andrei	79 MIC
Melnikov Valery M.	9.2 - 15.2 - 78 MIC
Mendonça da Silva Mauro	250 NET
Menjivar L.	13A.6
Mériaux Patrice	11.5
Merindol L.	80 MIC
Merlier Christophe	24 QPE
Meyer Vera	276 RCS
Mezzasalma P.	261 RCS
Miao Qun	3B.3
Michelson Daniel	2.6 - 8A.3 - 8A.6 - 10.2
Mikkola Kauri	295 NMUR - 296 NMUR
Minda Haruya	76 MIC
Mioche Guillaume	
Mioche Guillaume	40 QPE - 101 NOW
Misumi R.	10.6
Mittermaier Marion	14.4 - 102 NOW
Mkankam Kamga Francois	219 NWP
Moisseev D.	4A.2 - 4A.3 - 7.2 - 8B.1 - 57 DQ - 65 DQ - 81 MIC - 138 CR - 77 MIC - 84 MIC - 194 SP - 294 NMUR
Moisselin Jean-Marc	8B.4
Montmerle Thibaut	14.1 - 209 NWP
Montopoli Mario	1.4 - 4B.2 - 8B.5 - 10.5 - 27 QPE - 82 MIC - 120 SAT - 244 NET - 246 NET - 299 NMUR - 304 NWP
Moran William	85 MIC
Moreau E.	285 RCS
Moreau Emmanuel	80 MIC - 162 HS
Moreau Karine	107 NOW
Moreland Mark	85 MIC
Moreno J.	153 HS
Mori Saverio	120 SAT
Morishima Hiroyuki	267 RCS - 268 RCS

Moscatello Agata	119 SAT
Mott Michael	248 NET
Mott Rebecca	88 MIC
Moudi Igri Pascal	219 NWP
Moulin Laetitia	163 HS
Mühlbauer Kai	9 QPE - 192 SP
Müller Karl-Josef	129 ATM
Muscato Matthew S.	281 RCS
Nakakita Eichi	76 MIC
Nakamura I.	10.6
Nam Kyung-Yeub	19 QPE - 23 QPE - 28 QPE - 29 QPE - 94 NOW
Nanni S.	261 RCS
Napolitano Francesco	39 QPE
Naulin Jean Philippe	155 HS
Nelson Brian R	12.5
Nesbitt Stephen	5.5
Neto Bernardino Simões	60 DQ - 280 RCS
Neumann A	5.5
Neuper Malte	58 DQ - 277 RCS
Nevvonen Ljubov	81 MIC - 103 NOW
Nguyen Pierre	13B.4
Nicol John	14.5
Niezugodka Bartosz	217 NWP
Nishihashi Masahide	267 RCS - 268 RCS
Nisi Luca	104 NOW
Niu Zheng	25 NWP
Noh Hui-seong	164 HS
North Kirk	220 NWP - 231 NET
Nousiainen T.	4A.2 - 4A.3
Novak Petr	97 NOW - 245 NET
Nowak Christoph	126 ATM
Nuissier Olivier	11.2
Ochou Delfin	18 QPE
O'Connor Ewan	138 CR
Oh Young-A	29 QPE - 185 SP - 239 NET - 266 RCS
Ohigashi Tadayasu	76 MIC
Olenev Vasiliy	130 ATM
Onogi Shigeru	267 RCS
Organde D.	162 HS
Ori Davide	82 MIC
Orzel Krzysztof A.	12.6
Osrodka Katarzyna	8A.6 - 59 DQ - 96 NOW - 213 NWP
Otto Tobias	30 QPE - 199 SP
Otxoa de Alda K	153 HS
Oue Mariko	76 MIC
Ovens James	8A.5 - 14.5
Overeem Aart	9.5 - 121 SAT
Ozturk Kurtulus	31 QPE
Pace R.	246 NET
Palacio Virginia	262 RCS
Palumbo Robert A.	13A.1
Panziera Luca	8B.2 - 275 RCS - 278 RCS
Papadopoulos Anastasios	7.5
Parent du Châtelet Jacques	205 NWP - 256 RCS
Park Hyang Suk	32 QPE
Park Jong Seo	32 QPE
Park Shinju	4B.3 - 2 QPE - 131 ATM
Parsons David	12.4
Partheni Savina	33 QPE
Pattazzi Alberto	13A.3
Payrastre Olivier	155 HS
Pazmany Andrew L.	12.1 - 13B.3 - 89 MIC
Pecora S.	145 HS

Penide G.	3B.1
Pereira Bernardino Simões	279 RCS
Pereira Carlos Simões	60 DQ - 279 RCS - 280 RCS - 254 RCS
Pereira Gustavo	281 RCS
Pergaud Julien	216 NWP
Perrin Charles	161 HS
Pesice P.	100 NOW
Peters Gerhard	9.4 - 133 CR - 134 CR - 193 SP
Petersen Walter A	5.3 - 34 QPE - 123 SAT
Petex Jean-François	13B.4 - 190 SP
Petracca Marco	42 QPE
Pettazzi Alberto	35 QPE - 300 NMUR
Peura Markus	2.6 - 8A.6 - 61 DQ
Pfaff Thomas	62 DQ
Pfeifer Monika	2 QPE
Phan Huy-Khang	190 SP
Philips Brenda	6.1
Picciotti Errico	4B.2 - 8B.5 - 10.5 - 27 QPE - 218 NWP - 244 NET - 246 NET - 304 NWP
Pierce Clive	102 NOW
Pierdicca N.	120 SAT
Pignone Flavio	36 QPE - 38 QPE
Pilz Tobias	16 QPE
Pineda N.	229 NET
Poellot M	5.5
Pohjola H.	81 MIC
Pointin Yves	40 QPE
Poli Virginia	105 NOW
Politovich Marcia K.	4B.6 - 132 ATM
Pool Marcus	2 QPE
Powell John	6.2 - 4 QPE
Pozdnoukhov Alexei	8B.2
Prat Olivier P.	12.5
Priegnitz David	13B.2
Probert Matt	247 NET
Prodi Franco	119 SAT
Protat A.	3B.1 - 136 CR
Pulvirenti L.	120 SAT
Pylkkö Pirkko	8B.1
Qi Youcun	1.5 - 37 QPE - 46 QPE - 292 RCS
Quirnbach Markus	167 HS
Rabrenovic Maja	282 RCS
Rao S.Vijaya Bhaskara	67 MIC
Rao T. Narayana	67 MIC
Rasoanaivo Lalaina	13B.4
Rathmann Nils	248 NET
Rebora Nicola	36 QPE - 38 QPE
Reehorst Andrew L.	4B.6
Refsgaard Jens Christian	152 HS
Reich Thomas	112 NOW
Reimann Jens	13B.5
Rejfeek Lubos	302 NMUR
Renard Florent	283 RCS
Reyniers Maarten	106 NOW
Rezacova Daniela	110 NOW - 222 NWP
Ribeiro Gustavo Guterrez	288 RCS
Ricci Y.	4B.4
Ricciardi G.	145 HS
Rico-Ramirez Miguel A.	74 MIC - 158 HS
Rigo T.	229 NET
Rizzi Rolando	82 MIC
Roberto Nicolleta	84 MIC - 122 SAT
Roca-Sancho Jordi	249 NET
Rodi Alfred	137 CR

Rodier Claire	15 QPE
Rodríguez Álvaro	131 ATM - 159 HS
Rojas Laura	194 SP - 296 NMUR
Romaniello V.	244 NET
Romine G.	218 NWP
Romines James H.	171 SP
Romo Juan Antonio	63 DQ - 191 SP
Rosenow Wolfgang	112 NOW
Rossi Pekka	8B.1 - 8B.6
Roumagnac Alix	107 NOW
Roux Hélène	151 HS
Rudnev G.	187 SP
Ruin I.	148 HS
Ruiz Miriam	284 RCS
Russchenberg Herman	30 QPE - 199 SP
Russo Fabio	39 QPE
Rutledge S. A.	173 SP
Rysman Jean-François	285 RCS
Ryzhkov Alexander V.	2.1 - 6.4 - 7.1 - 9 QPE - 75 MIC
Saavedra Garfias Pablo	7.2 - 77 MIC - 84 MIC
Saito Sadao	267 RCS - 269 RCS
Sakal Agnes	165 HS
Salek Milan	97 NOW
Salles Christian	15 QPE
Salsón Santiago	13A.3
Saltikoff E.	103 NOW
Samarasekera Senaka	85 MIC
Sánchez-Diezma Rafael	4B.3 - 131 ATM - 159 HS - 160 HS
Sancho David	160 HS
Sandford Caroline	64 DQ
Saraiva B	255 RCS
Saraiva B.	254 RCS
Saraiva Ivan	250 NET - 288 RCS
Saraiva Jaci Maria Bilhalva	116 SAT - 273 RCS - 274 RCS - 287 RCS
Sartori Maurizio	10.4
Sassi Marco	10.4
Sato Eiichi	267 RCS
Savijärvi Hannu	295 NMUR
Saxion D.	8A.4
Schaffhauser Andreas	276 RCS
Schertzer Daniel	86 MIC - 166 HS - 264 RCS
Schiemann Reinhard	3A.4
Schleiss Marc	4A.4
Schneebeli Marc	7.6 - 13 QPE - 87 MIC
Schneider J.Y.	4B.4
Schraff Christoph	224 NWP
Schroer Jan-Bernd	6.4 - 123 SAT
Schwaller M.	5.3
Schwarzenboeck A.	136 CR
Scipión Daniel E.	15.4 - 13 QPE - 88 MIC
Scott Ellis	132 ATM
Scovell Robert	8A.2 - 10.3
Sebastianelli Stefano	39 QPE
Seed Alan	3A.2 - 8B.2 - 165 HS
Seltmann Joerg	109 NOW - 251 NET
Selzler Jason	183 SP - 194 SP
Sempere-Torres Daniel	8B.3 - 13A.3 - 2 QPE - 95 NOW - 159 HS - 160 HS - 249 NET
Senf Fabian	111 NOW
Seo Dae-II	22 QPE
Serke David	4B.6 - 132 ATM
Shabanov Vladimir	79 MIC
Shakti PC	1.6
Shamoun-Baranes J.	15.3
Sharma Sanjay	286 RCS
Shi Zhao	142 CR

Shimizu S.	1.6
Shimose Kenichi	267 RCS - 268 RCS
Shinoda Taro	76 MIC
Shiple J. Ryan	15.5
Shupe M.D.	3B.2
Sideris Ioannis	3A.4 - 3A.6 -10.4 - 20 QPE
Sierwald Joern	13B.6
Silva Mauro	
Silva Mirlen	287 RCS - 288 RCS
Silvestro Francesco	36 QPE - 38 QPE
Simakauskas Brian	135 CR
Simmer Clemens	6.4 - 7.1 - 9.4 - 9 QPE - 84 MIC - 111 NOW - 192 SP
Simoës Carlos	273 RCS
Simon Jürgen Lorenz	111 NOW
Simonin David	14.2
Sireci Oguzhan	252 NET
Skripnikova Katerina	110 NOW
Skuragi Jojhy	6 QPE
Smalley David J.	132 ATM
Snyder Jeffrey C.	12.1 - 13B.3 - 290 RCS
Soerensen Martin B.	2.6
Sokol Zbynek	100 NOW - 222 NWP
Solonin Alexander	127 ATM - 130 ATM
Sørensen Martin B.	8A.6
Soubeyroux Jean-Michel	24 QPE
Soula serge	259 RCS
Starý Miloš	147 HS - 154 HS
Steinert Joerg	253 NET
Stepanek Adam	11 QPE
Stepanian Phillip M.	15.4 - 303 NMUR
Stephan Klaus	112 NOW - 223 NWP - 224 NWP
Stephan - K	251 NET
Stevens Scott	12.5
Stough Sarah M.	15.4
Sugier J.	174 SP
Suk Mi-Kyung	32 QPE
Sunter Martyn	3A.5
Sureshbabu VN	170 SP - 195 SP
Suzuki Osamu	201 SP
Suzuki S.	10.6
Sy Ousmane	5.4 - 114 SAT - 118 SAT
Szturc Jan	8A.6 - 59 DQ - 96 NOW - 213 NWP
Tabary Pierre	1.3 - 2.5 - 6.5 - 10.1 - 11.5 - 24 QPE - 80 MIC - 174 SP - 204 NWP - 232 NET - 242 NET
Tanamachi Robin	12.6 - 225 NWP - 226 NWP
Tanelli Simone	5.4 - 114 SAT - 117 SAT - 118 SAT
Tanessong Roméo S..	219 NWP
Tchiguirinskaia Ioulia	86 MIC - 166 HS - 264 RCS
Telleschi A.	10.5 - 246 NET
Tessendorf Alrun	167 HS
Testud J.	80 MIC - 162 HS
Thompson John	13B.2
Thompson Robert	8A.5
Thurai M.	3B.1
Tokay Ali	6.4 - 84 MIC - 123 SAT
Tonelli F.	145 HS
Torfs Paul	14 QPE
Torres Sebastian	13B.2
Torres Sebastian M.	200 SP
Tournoud Marie-George	15 QPE
Toussaint Matthias	129 ATM - 189 SP
Tracksdorf P.	234 NET
Tridon Frederic	3B.5 - 40 QPE - 140 CR
Trömel Silke	6.4 - 7.1 - 111 NOW - 192 SP
Tsanis Ioannis K.	49 DQ

Tsuboki Kazahisa	76 MIC
Tsuchiya Shyuichi	7.4 - 238 NET
Tsuda Toshitaka	184 SP - 195 SP
Turnone Annarita	119 SAT
Tychon B.	298 NMUR
Tyynelä J.	4A.2 - 4A.3
Tzanos Renaud	168 HS
Uijlenhoet Remko	3A.3 - 9.5 - 14 QPE - 121 SAT - 169 HS
Unal Christine	4A.5 - 199 SP
Uray Martina	126 ATM
Urban Bernard	235 NET
Ushio Tomoo	141 CR
Ustamujic Sabina	63 DQ
Uyeda Hiroshi	76 MIC
Van Baelen Joel	7.5 - 40 QPE - 101 NOW
Van de Beek Remco	3A.3
Van Gasteren H.	15.3
Van Swieten B.	4B.5
Van Westrhenen Rudolf	186 SP
Vanhoenacker-Janvier Danielle	4B.5
Veerkamp Dietmar	129 ATM - 189 SP
Vejen Flemming	152 HS
Venkatesh Vijay	290 RCS
Verlinde Johannes	3B.6
Verriet Sébastien	41 QPE
Vié Benoît	11.2
Viltard N.	136 CR
Vincendon Béatrice	11.2
Vincent François	128 ATM
Viola Marian	85 MIC
Vivekanandan Jothiram	4A.1
Vocino Antonio	42 QPE - 174 SP
Vogt Valérie	7 QPE
Voitovych O	187 SP
Volpi A.	10.5 - 246 NET
Von Lerber Annakaisa	65 DQ
Vulpiani Gianfranco	1.4 - 4B.2 - 27 QPE - 38 QPE - 304 NWP
Walker William H.	171 SP
Wang Junhong	12.4 -
Wang Mingjun	12.6
Wang Xuesong	128 ATM
Wang Xuezhì	85 MIC
Wapler Kathrin	111 NOW
Warde David	13B.2 - 200 SP
Wattrelot Eric	14.1 - 14.6
Weekley Andrew	4B.6 - 132 ATM
Weigl Elmar	44 QPE
Weinman J.A.	120 SAT
Wen Guan	85 MIC
Werner Manuel	253 NET
Westrelin Samuel	11.5 - 80 MIC
Wicker Louis J.	225 NWP
Widener Kevin	135 CR - 230 NET
Willems Patrick	8 QPE
Williams Christopher	188 SP
Williams Earle R	132 ATM
Wingo Matthew	123 SAT
Winter William	66 DQ
Winterrath Tanja	44 QPE - 112 NOW
Wobrock Wolfram	136 CR - 216 NWP
Wolde Mengistu	89 MIC
Wolff David B.	123 SAT
Wood Andrew	15.2

Wood Ken	13A.1
Wood Norman	5.2
Wurman Joshua	12.3
Wurman Joshua	13A.2 - 209 NWP - 289 RCS
Xu Xiaofeng	292 RCS
XU Zhi-Huo	142 CR - 202 SP
Xue Ming	12.6 - 225 NWP - 226 NWP
Yamauchi Hiroshi	201 SP
Yang Ha-Young	28 QPE
Yang Hong	11.3
Yang Yang	3B.3
Yin Chu	15 QPE
Yoo Chulsang	21 QPE - 45 QPE
Yoon Jungsoo	21 QPE - 45 QPE
You Cheol-Hwan	19 QPE
Yu Guo	3B.6
Yu Nan	169 HS
Zacharov Petr	222 NWP
Zamfirov Ivaylo	291 RCS
Zanini Stefano	104 NOW
Zaric Mirosljub	282 RCS
Zawadzki Isztar	4A.6 - 206 NWP - 212 NWP
Zeng Yuefei	208 NWP - 227 NWP
Zenoni E.	145 HS
Zeybek Mehmet	31 QPE
Zhang Jian	1.5 - 5.3 - 37 QPE - 46 QPE
Zhang Man	292 RCS
Zhang Pengfei	1.5
Zhang Wenjun	292 RCS
Zhou Xue-Ming	142 CR - 202 SP
Zrnic Dusan	4A.1 - 5 QPE - 9.2 - 180 SP

	Sun 24 June	Monday 25 June	Tuesday 26 June	Wednesday 27 June	Thursday 28 June	Friday 29 June
08	Bus transfer to Météo-France	Bus transfer to Météo-France	Bus transfer to Météo-France	Bus transfer to Météo-France	Bus transfer to Météo-France	Bus transfer to Météo-France
09	Registration & Coffee	Session 4A Session 4B	Session 8A Session 8B	Session 10 NET - I	Session 14 NWP	
10	Opening ceremony	Keynote I (QPE)	Coffee break	Coffee break	Coffee break	
11	Session 1 QPE - I	Keynote II (SAT)	Keynote III (SP)	Keynote IV (HS)	Keynote V (NMUR)	
12	Session 1 QPE - I	Session 5 SAT	Session 9 SP - I	Session 11 HS	Session 15 NMUR	
13	Lunch break	Lunch break	Lunch break	Lunch break	<i>Closing ceremony</i>	
14	Poster session Group I	Poster session Group I	Poster session Group II	Poster session Group II	Poster session Group II	Bus transfer to Toulouse or to airport
15						
16	Session 2 MIC - I	Session 6 QPE - III	Session 12 RCS			
17	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break	
18	Registration & cocktail at Hôtel d'Assezat downtown Toulouse	Session 3A Session 3B QPE - II CR	Session 7 MIC - III	Session 13A Session 13B NET - II SP - II		
19		Icebreaker ceremony CIC - Météo-France	Bus transfer to Toulouse	Cruise on Garonne river	Bus transfer to Toulouse	
20			Cocktail at Toulouse City Hall	Gala Dinner at Hôtel Dieu downtown Toulouse		
21		Bus transfer to Toulouse				

QPE Quantitative Precipitation Estimation
MIC Microphysics
CR Cloud Radars
ATM Air Traffic Management
SAT Space-borne Radars
SP Signal Processing
NWP Numerical Weather Prediction
NET Networking
RCS Radar Case Studies
NMUR Non Meteorological Use of Radars
HS Hydrological Studies