ERAD 2012

Programme

SELEX-SI Gematronik
VAISALA
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EDF
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RÉGION MIDI-PYRÉNÉES
METEO FRANCE
Toujours un temps d'avance

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 Disater 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 polarimentric 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 Dalphinet*

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 AustralianWeather and Climate Research, A pertnership 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**

Tuesday, 26 June 2012

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 Bansemer, 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, *C ooperative 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.Saxion, 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 Ośródka, 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 Massashussetts*
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**)

Thursday, 28 June 2012

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, *NOA, 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 Usefullness 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 lighning activity, microphysics an 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'Aérologie, OMP, Université Pual 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
Gérard Bobillot, *Onera, Lalaina Rasoanaivo, Pierre Nguyen, Eric Chaumette, Philippe Fargette, Jean-François 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**

Friday, 29 June 2012

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 Zrnic*

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 Goudenhoofdt, *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-Il 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 Insitute, 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 Univertity, 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, Schaun 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 Carbunaru, 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
Olver 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 Ośródka*

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 Simultaneaous 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, practial 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
Vasiliy 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 Innovetive 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. Gourbeyre*

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*

POSTER PROGRAMME GROUP 2

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 Calianno, 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 prediflood project
*Jean Philippe Naulin (IFSTTAR), Eric Gaume, Olivier Payrastre, **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 Dommanget, 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 Llort,** HYDS, Rafael Sánchez-Diezma, Álvaro Rodríguez, Miquel Ferrer, Marc Berenguer, Daniel Sempere-Torres*

160 HS Dam and basin management through an integrated platform
***Xavier Llort,** 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 Zrnic, 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. Chandarasekar*

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 Caracterization 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 & Atmorpheric 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 Osródka, 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 Hernáez, 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 Hydrometeorlogical 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 Carbunaru, 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, *Eusklamet / 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, *Karlsruher 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 Meteoroloical 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, Miroljub 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 Filgueira 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 Rejfek, *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*

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

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 Miroljub	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**
09		Registration & Coffee	**Session 4A** MIC - II / **Session 4B** ATM / **Session 8A** DQ / **Session 8B** NOW		**Session 10** NET - I	**Session 14** NWP
10		***Opening ceremony***				
11		**Keynote I** (QPE)	Coffee break	Coffee break	Coffee break	Coffee break
12		**Session 1** QPE - I	**Keynote II** (SAT) / **Session 5** SAT	**Keynote III** (SP) / **Session 9** SP - I	**Keynote IV** (HS) / **Session 11** HS	**Keynote V** (NMUR) / **Session 15** NMUR
13		Lunch break	Lunch break	Lunch break	Lunch break	***Closing ceremony***
14		**Poster session** Group I	**Poster session** Group I	**Poster session** Group II	**Poster session** Group II	Lunch break
15						**Bus transfer to Toulouse or to airport**
16		**Session 2** MIC - I	**Session 6** QPE - III	Coffee break	**Session 12** RCS	
17		Coffee break	Coffee break	**Bus transfer to Toulouse**	Coffee break	
18	**Registration & cocktail at Hôtel d'Assezat** downtown Toulouse	**Session 3A** QPE - II / **Session 3B** CR	**Session 7** MIC - III		**Session 13A** NET - II / **Session 13B** 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
DQ Data Quality

NOW Nowcasting
SP Signal Processing
NWP Numerical Weather Prediction

NET Networking
RCS Radar Case Studies
NMUR Non Meteorological Use of Radars

HS Hydrological Studies