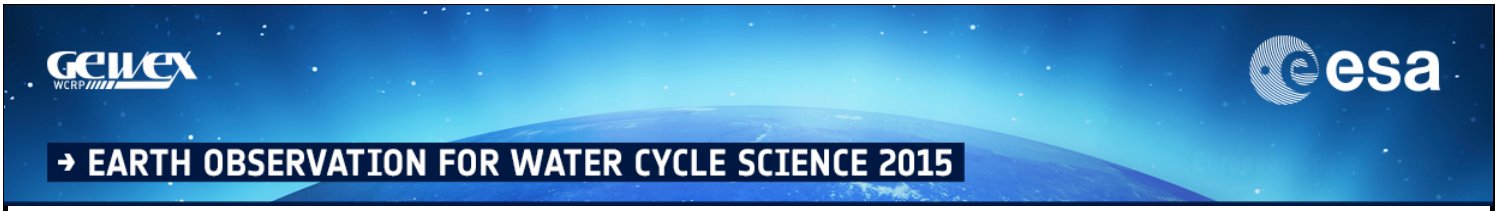


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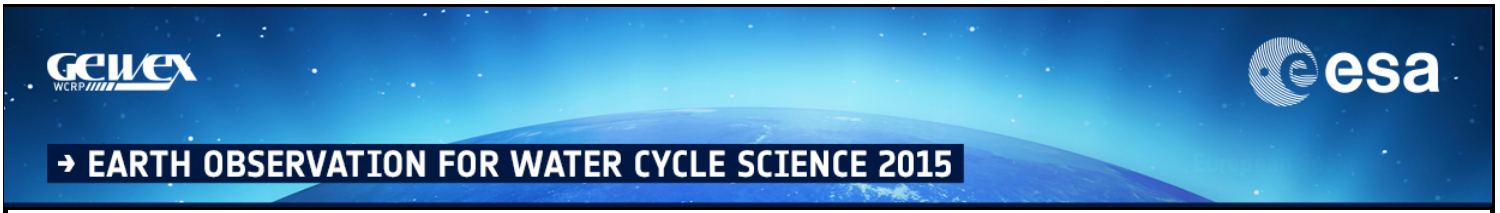
| **Day 1 -20 October- (Big Hall)** | | | |
| **Welcome and Introduction** | | | |
| 09:00 | 09:20 | Welcome and introductory words | Mike Rast, ESA |
| 09:20 | 09:45 | Key note: GEWEX scientific priorities and plans | Peter van Ovelen, GEWEX |
| 09:45 | 10:10 | Key note: Scientific priorities and knowledge gaps in water cycle research | Graeme Stephens, GEWEX/NASA |
| 10:10 | 10:35 | Key note: NASA activities and plans in water cycle research | Matthew Rodell, NASA |
| 10:35 | 11:00 | Key note: EC activities and plans in water cycle research | Marco Gemmer, EC |
| *11:00* | *11:30* | *Coffee Break* | |
| **Overview of the global water cycle -***Chairs: Kevin Trenberth, Wouter Dorigo* | | | |
| 11:30 | 11:50 | Closing the global water cycle: recent results from analyzing long-term Climate Data Records | Eric Wood, presented by Amanda Siemann, Princeton University, United States |
| 11:50 | 12:10 | Co-variability of top-of-atmosphere radiation, temperature and precipitation: observations and models | Kevin Trenberth, NCAR United States |
| 12:10 | 12:30 | Trends in means and extremes of ESA CCI soil moisture | Wouter Dorigo, Vienna University of Technology Austria |
| 12:30 | 12:50 | The oceanic source regions of the global water cycle | Raymond Schmitt, Woods Hole Oceanographic Institution United States |
| 12:50 | 13:10 | Can GRACE observe an intensification of the global water cycle? | Annette Eicker, University of Bonn, Germany |
| *13:10* | *14:10* | *Lunch* | |
| **New and future EO Missions 1/2** *-Chairs: Matthias Drusch, Michael Rast* | | | |
| 14:10 | 14:30 | The Global Precipitation Measurement (GPM) mission and the earth's water cycle | Gail Skofronick-Jackson, NASA Goddard Space Flight Center United States |
| 14:30 | 14:50 | The NASA Soil Moisture Active Passive Mission (SMAP) Status and Early Results | Dara Entekhabi, MIT United States presented by Simon Yueh, JPL United States |
| 14:50 | 15:10 | SMOS THE WATER CYCLE MISSION: AN OVERVIEW | Yann KERR, CESBIO France |
| 15:10 | 15:30 | The Megha-Tropiques Mission: status and review after 4 years | Remy Roca, CNRS France |
| 15:30 | 15:50 | The EarthCARE mission: An Active View on Aerosols, Clouds and Radiation | Presented by Jonas von Bismark, ESA |
| *15:50* | *16:20* | *Coffee Break* | |
| **New and future EO Missions 2/2** *-Chairs: Peter van Oevelen, Graeme Stephens* | | | |
| 16:20 | 16:40 | A GLOBAL WATER CYCLE OBSERVATION MISSION (WCOM) | Jiancheng Shi, Institute of Remote Sensing and Digital Earth China, People's Republic of |
| 16:40 | 17:00 | The problem of retrieving snowfall: Are multi-frequency radars a way forward? | Stefan Kneifel, University of Cologne Germany |
| 17:00 | 17:20 | A New International Snow Mission Concept: Current Activities and Roadmapping | Edward Kim, NASA United States presented by Juha Lemmetyinen, FMI Finland |
| 17:20 | 17:40 | Planetary Boundary Layer (PBL) Retrieval from Space: Challenges and Imperatives | Joseph Santanello, NASA United States |
| **17:40** | **18:00** | **Round Table discussion: Science and operational gaps for future water cycles missions** *(Michael Rast, Matthias Drusch, Graeme Stephens, Peter van Oevelen)* | |
| **18:00** | **19:30** | **Poster session and cocktail** | |

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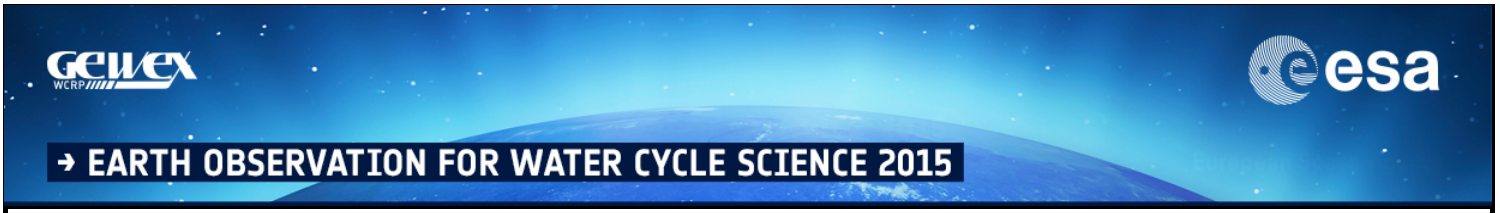
| **Day 2 -21 October- (Big Hall)** | | | |
| 09:00 | 09:25 | Wake-up key note: EUMETSAT Satellite Application Facility on Support to Operational Hydrology and Water Management (H-SAF) | Daniele Biron, Centro Nazionale Meteorologia e Climatologia Aeronautica |
| **Precipitation (1/2)** - *Chairs: Christian Kummerow, Robert Adler* | | | |
| 09:25 | 09:45 | Global precipitation satellite products: current status and verification | Chris Kidd, UMD/ESSIC & NASA/GSFC United States |
| 09:45 | 10:05 | Satellite rainfall error characteristics over a complex terrain region | Viviana Maggioni, George Mason University United States |
| 10:05 | 10:25 | Advances in Satellite Precipitation Retrieval Algorithms Over Land | Nai-Yu Wang, NOAA/NESDIS/STAR/IMSG United States |
| 10:25 | 10:45 | Uncertainties in Satellite-based Global Precipitation Observations | Yudong Tian, NASA GSFC United States |
| 10:45 | 11:05 | Analysis and comparison of global precipitation datasets with gridded products from passive microwave retrieval algorithms in the GPM era | Anna Cinzia Marra, CNR-ISAC Italy |
| *11:05* | *11:35* | *Coffee Break* | |
| **Precipitation (2/2)** *-Chairs: Chris Kidd, Vincenzo Levizzani* | | | |
| 11:35 | 11:55 | Filling the antarctic precipitation gap with satellites | Tristan L'Ecuyer, University of Wisconsin United States |
| 11:55 | 12:15 | Means and variations in global precipitation during the satellite era (1979-2014) | Robert Adler, U. of Maryland United States |
| 12:15 | 12:35 | Advances in Quantifying the Role of Frozen Precipitation in Polar Energy and Water Cycles | Tristan L'Ecuyer, University of Wisconsin United States |
| 12:35 | 12:55 | Rainfall estimation by using SMOS soil moisture observations: a detailed scientific analysis | Luca Brocca, Research Institute for Geo-Hydrological Protection (IRPI), CNR Italy |
| 12:55 | 13:15 | New observations from GPM – old problems with process understanding | Christian Kummerow, Colorado State University United States |
| *13:15* | *14:15* | *Lunch* | |
| **Clouds and Aerosols in the water cycle** *-Chairs: Susan van den Heever, Daniel Rosenfeld* | | | |
| 14:15 | 14:35 | Aerosol: An Active Agent in Perturbing the Water Cycles | Zhanqing Li, U. of Maryland United States |
| 14:35 | 14:55 | Satellite observations of aerosols controlling cloud depth for rain initiation and its implications | Daniel Rosenfeld, HUJI Israel |
| 14:55 | 15:15 | Towards a life-cycle based analysis of aerosol-precipitation interactions from space | Philip Stier, University of Oxford United Kingdom |
| 15:15 | 15:35 | The Modulation of Aerosol Impacts on Convective Clouds and Precipitation | Susan van den Heever, Colorado State University United States |
| 15:35 | 15:55 | Physical properties of mesoscale high-level cloud systems in relation to their atmospheric environment deduced from Vertical Sounders | Claudia Stubenrauch, LMD France |
| *15:55* | *16:25* | *Coffee Break* | |
| **Water Vapour** *-Chairs: Marc Schroder, Juergen Fischer* | | | |
| 16:25 | 16:45 | The Envisat ERS-1/ERS-2 Microwave Radiometer time series: Toward fundamental and essential climate data records | Ralf Bennartz, Vanderbilt University United States |
| 16:45 | 17:05 | The GEWEX water vapor assessment (G-VAP) – interim results from inter-comparisons and stability analysis | Marc Schröder, DWD Germany |
| 17:05 | 17:25 | Spatially high-resolution decadal trend analysis of Total Column Water Vapour above land surfaces using MERIS | Juergen Fischer, Free University Berlin Germany |
| 17:25 | 17:45 | An assessment of upper-troposphere and lower-stratosphere water vapor in GEOS5, MERRA, and ECMWF analysis and reanalyses using Aura MLS observations | Jonathan Jiang, NASA Jet Propulsion Laboratory United States |
| **17:45** | **18:05** | **Round Table Discussion: The atmospheric component of the water cycle** *(Christian Kummerow, Robert Adler, Chris Kidd, Vincenzo Levizzani, Susan van den Heever, Daniel Rosenfeld, Juergen Fischer, Marc Schroder)* | |

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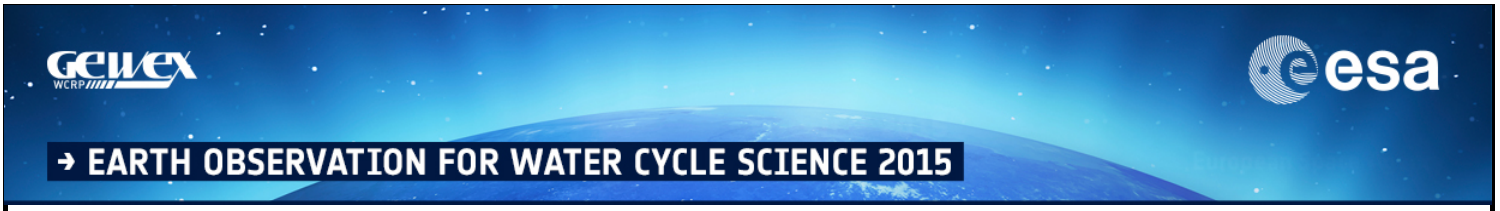
| **Day 2 -21 October- (Magellan Room)** | | | |
| 09:00 | 09:25 | Wake-up Key Note: WCRP and Earth Observation needs in context of Capacity Development | Boram Lee, WCRP Switzerland |
| **GroundWater** *-Chairs: Matthew Rodell, Martin Fuchs* | | | |
| 09:25 | 09:45 | Observing Water Cycle Extremes with GRACE | Matthew Rodell, NASA Goddard Space Flight Center United States |
| 09:45 | 10:05 | Assessing the potential to increase the spatial resolution of water storage variations from a combination of GRACE and GOCE | Christoph Haberkorn, Deutsches Geodätisches Forschungsinstitut der TU München Germany |
| 10:05 | 10:25 | The use of GRACE satellite data to validate the global hydrological cycle as simulated by a global climate model | Marie-Estelle Demory, NCAS-Climate, University of Reading United Kingdom |
| 10:25 | 10:45 | Using satellite gravimetry for validating the water cycle in global and regional atmospheric reanalyses | Anne Springer, Institute of Geodesy and Geoinformation, University of Bonn Germany |
| 10:45 | 11:05 | Assimilation of GRACE-derived total water storage grids into the WaterGAP Global Hydrological Model – Status and Perspectives | Jürgen Kusche, University of Bonn, Germany |
| *11:05* | *11:35* | *Coffee Break* | |
| **Surface Waters** *-Chairs: Selma Cherchali, Nick van de Giesen* | | | |
| 11:35 | 11:55 | Water level variations within the Lower Mekong River network derived by satellite | Eva Boergens, DGFI-TUM Germany |
| 11:55 | 12:15 | The performance of multi satellite altimetry missions for river monitoring | Shirzad Roohi, Ph.D student Germany |
| 12:15 | 12:35 | Analysis of the hydrological conditions of the Yangtze River's connecting lakes based on 15 years of DRAGON EO time series and fields measurements | YESOU Herve, SERTIT University of Strasbourg France |
| 12:35 | 12:55 | Observation of Hydrological Cycle Components on the Tibetan Plateau by Multisensoral Remote Sensing Methods | Volker Hochschild, University of Tuebingen Germany |
| 12:55 | 13:15 | Reservoir operational rules derived from Sentinel products | Nick van de Giesen, Delft University of Technology |
| *13:15* | *14:15* | *Lunch* | |
| **Water cycle of the Terrestrial Cryosphere** *-Chairs: Chris Derksen, Matias Takala* | | | |
| 14:15 | 14:35 | Snow Water Equivalent Processing system with improved resolution over Europe and hydrological applications | Matias Takala, Finnish Meteorological Institute Finland |
| 14:35 | 14:55 | Toward improving the representation of the water cycle at High Northern Latitudes | William Lahoz, NILU Norway |
| 14:55 | 15:15 | Quantifying the impacts of spaceborne radar performance on snow detection and intensity retrieval | Norman Wood, University of Wisconsin, SSEC United States |
| 15:15 | 15:35 | Characterization of northern hemisphere snow water equivalent datasets, 1981–2010 | Chris Derksen, Environment Canada Canada |
| 15:35 | 15:55 | Validation of active microwave soil moisture and soil freeze retreivals over a sub-arctic boreal forest site - case study at the Sodankylä, Finland CAL-VAL site | Tuomo Smolander, Finnish Meteorological Insitute Finland |
| *15:55* | *16:25* | *Coffee Break* | |
| **The Water Cycle of Oceans** *-Chairs: Jacqueline Boutin, Nicolas Reul* | | | |
| 16:25 | 16:45 | Rainfall Imprint on SMOS Sea Surface Salinity | Jacqueline Boutin, CNRS France |
| 16:45 | 17:05 | Salty-ocean water cycle variability and change | Paul Durack, Lawrence Livermore National Laboratory United States |
| 17:05 | 17:25 | RAINFALLS CELLS DETECTION BY MEANS OF MSG SEVIRI IMAGE PREDICTION AND NEURAL NETWORKS | Simone Peronaci, University of Rome "Tor Vergata, Italy |
| 17:25 | 17:45 | SMOS for water cycle in the ocean: an overview of results and potential | Nicolas Reul, IFREMER, France |
| **17:45** | **18:05** | **Round Table Discussion: Surface and sub-surface waters** *(Matthew Rodell, Martin Fuchs, Selma Cherchali, Nick van de Giesen, Chris Derksen, Matias Takala)* | |




**Day 3 -22 October- (Big Hall)**

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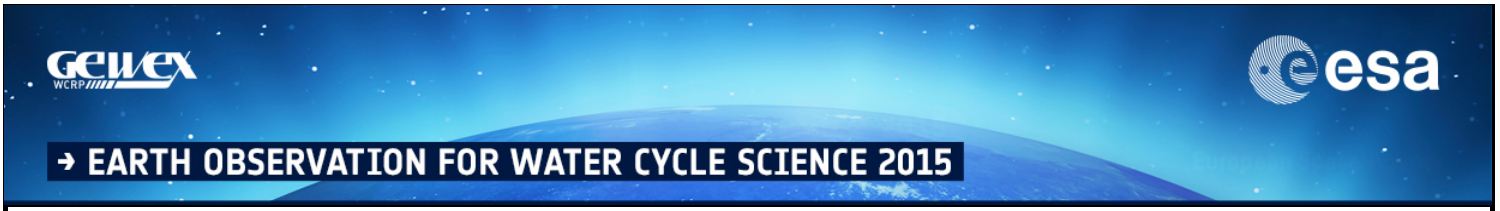
| **Fluxes (1/2)** *-Chairs: Diego Miralles, Carol Anne Clayson* | | | |
| 09:00 | 09:20 | Evaluation of observation-driven evaporation models: final results of the WACMOS-ET project | Diego G. Miralles, VU Amsterdam / Ghent University Netherlands |
| 09:20 | 09:40 | Characterizing the effects of temporal upscaling on remote sensing-based estimates of evapotranspiration | Joseph Alfieri presented by William Kustas , USDA-Agricultural Research Service Hydrology and remote Sensing Lab United States |
| 09:40 | 10:00 | A thermal-based remote sensing modeling system for estimating evapotranspiration from field to global scales | William Kustas, USDA-Agricultural Research Service Hydrology and remote Sensing Lab United States |
| 10:00 | 10:20 | Analysis of a global, terrestrial sensible heat flux dataset and global energy budget closure (ID:134) | Amanda Siemann, Princeton University, United States |
| *10:20* | *10:50* | *Coffee Break* | |
| **Fluxes (2/2)** *-Chairs: Carlos Jimenez, Bill Kustas* | | | |
| 10:50 | 11:10 | Benchmarking process-based evaporation models in the framework on the GEWEX LandFlux project | Ali Ershadi presented by Matthew McCabe, KAUST Saudi Arabia |
| 11:10 | 11:30 | A global SMOS-based evaporation product | Brecht Martens, Laboratory for Hydrology and Water Management - Ghent University Belgium |
| 11:30 | 11:50 | Variability and uncertainty of global air-sea evaporation | Carol Anne Clayson, WHOI United States |
| 11:50 | 12:10 | Ocean Heat Flux Project | Abderrahim Bentamy, IFREMER France |
| 12:10 | 12:30 | Ocean surface freshwater fluxes from the HOAPS satellite climatology | Axel Andersson, Deutscher Wetterdienst, Satellite based Climate Monitoring Germany |
| 12:30 | 12:50 | **Round Table Discussion: Heat Fluxes** *(Matthew McCabe, Diego Miralles, Carol Anne Clayson, Carlos Jimenez, Bill Kustas)* | |
| *12:50* | *13:50* | *Lunch* | |
| **Soil Moisture (1/2)** *-Chairs: Wolfgang Wagner, Susanne Mecklenburg* | | | |
| 13:50 | 14:10 | Impacts of SMOS data in Environment Canada's Regional Deterministic Prediction System | Marco Carrera, Environment Canada Canada |
| 14:10 | 14:30 | Modeling the effects of variable soil moisture | Ian Baker, Colorado state University United States |
| 14:30 | 14:50 | SMOS and Hydrology | Yann KERR, CESBIO France |
| 14:50 | 15:10 | Long time series of soil moisture retrieved from AMSR-E and SMOS observations | Nemesio Rodriguez-Fernandez, CESBIO (CNRS) France |
| 15:10 | 15:30 | Analyzing SMAP fusion algorithms with airborne active and passive L-band microwave remote sensing | Carsten Montzka, Research Center Juelich Germany |
| *15:30* | *16:00* | *Coffee Break* | |
| **Soil Moisture (2/2)** *-Chairs: Yann Kerr, Mariko Burgin* | | | |
| 16:00 | 16:20 | Performance of remotely sensed soil moisture products over Australia and implications for their application | Chiara Holgate, Vrije Universiteit, Amsterdam Australia |
| 16:20 | 16:40 | Intercomparison of SMAP L2/L3 Soil Moisture with Synergistic Satellite Products: First Results and Evaluation | Mariko Burgin, JPL/Caltech United States |
| 16:40 | 17:00 | Evaluating soil moisture constraints on surface fluxes globally: CMIP5 vs. satellite observations of land surface temperature | Phil Harris, Centre for Ecology & Hydrology United Kingdom |
| 17:00 | 17:20 | Towards Global Monitoring of Soil Moisture at 1 km Spatial Resolution using Sentinel-1: Initial Results | Wolfgang Wagner, Vienna University of Technology Austria |
| 17:20 | 17:40 | Assessing the potential of CCI soil moisture products for data assimilation in rainfall-runoff modelling: a case study for the Niger River | Christian Massari, National Research Council, CNR Italy |
| **17:40** | **18:00** | **Round Table Discussion: Soil moisture** *(Wolfgang Wagner, Susanne Mecklenburg, Yann Kerr, Mariko Burgin)* | |
| **18:00** | **19:30** | **Poster session and cocktail** | |

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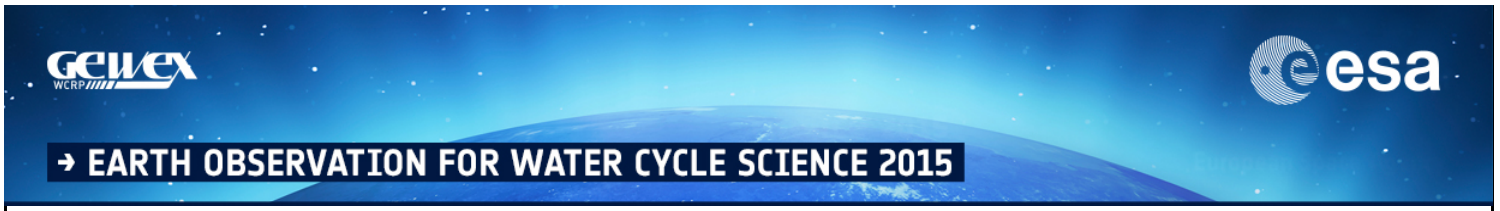
| **Day 4 -23 October- (Big Hall)** | | | |
| 09:00 | 09:25 | Wake-up Key Note: Using Remote Sensing Data as Constrain to Global Climate Models | Sonia Seneviratne, ETH Zurich, Switzerland |
| **Droughts and Floods** *-Chairs: Sonia Seneviratne, Josep Santanello* | | | |
| 09:25 | 09:45 | Microwave remote sensing of drought onset and recovery over global major river basins | Xing Yuan, Institute of Atmospheric Physics, Chinese Academy of Sciences China, People's Republic of |
| 09:45 | 10:05 | Global satellite remote sensing observations of land-atmosphere interactions for understanding drought mechanisms | Joshua Roundy presented by Joseph Santanello, Hydrological Sciences Branch Goddard Space Flight Center United States |
| 10:05 | 10:25 | Implementation of a national drought monitoring and forecasting system | Ramona Magno, IBIMET-CNR, Italy |
| 10:25 | 10:45 | Estimating soil moisture variability and uncertainty at field scale for applications in flood hydrology | Philip Marzahn, Department of Geography, LMU Munich Germany |
| 10:45 | 11:05 | Semi-automatic flood mapping in the boreal forest zone using X-band SAR and LiDAR data | Juval Cohen, Finnish Meteorological Institute Finland |
| *11:05* | *11:35* | *Coffee Break* | |
| **Hydrology and Modelling** *-Chairs: Philippe Drobinski , Hans Lievens* | | | |
| 11:35 | 11:55 | Basin-scale runoff prediction: an Ensemble Kalman Filter framework based on global hydrometeorological datasets | Christof Lorenz, Institute of Meteorology and Climate Research, Karlsruhe Institute of Technology Germany |
| 11:55 | 12:15 | Assimilation of SMOS soil moisture and brightness temperature products into a land surface model | Hans Lievens, Ghent University Belgium |
| 12:15 | 12:35 | REC: Crop irrigation management by multi-sensor remote sensing approach | Maria Jose Escorihuela, isardSAT Spain |
| 12:35 | 12:55 | Satellite smart irrigation forecast using LANDSAT data and meteo-hydrological modelling | Chiara Corbari, Politecnico di Milano Italy |
| 12:55 | 13:15 | Combining datasets of satellite retrieved products: application to the Mississippi basins and potential extension to the global scale | Simon Munier, Estellus France |
| *13:15* | *14:15* | *Lunch* | |
| **EO, Reanalysis and Modelling** *-Chairs: Patricia de Rosnay, Sonia Seneviratne* | | | |
| 14:15 | 14:35 | Precipitation and global land surface hydrology in the MERRA-2 and MERRA-Land reanalysis datasets | Rolf Reichle, NASA/GSFC United States |
| 14:35 | 14:55 | NCA-LDAS: An integrated terrestrial water analysis system for development, evaluation, and dissemination of climate indicators | Christa Peters-Lidard presented by Sujay Kumar, NASA/GSFC Hydrological Sciences Lab United States |
| 14:55 | 15:15 | eartH2Observe: Global Earth Observation for integrated water resource assessment | Jaap Schellekens, Deltares Netherlands |
| 15:15 | 15:35 | Assimilation of land surface satellite data for operational Numerical Weather Prediction at ECMWF | Patricia de Rosnay, ECMWF United Kingdom |
| **15:35** | **15:55** | **Final Discussion and Closure** *(Sonia Seneviratne and Peter van Oevelen)* | |




**Day 1 -20 October**

| **Aerosols, Clouds and Precipitation - Posters** | | |
|---|---|---|
| 1 | Beyond CloudSat, TRMM, and GPM: A next generation mission concept for clouds and precipitation (ID:236) | Gail Skofronick-Jackson, NASA Goddard Space Flight Center, United States |
| 2 | Long term cloud change imprinted in seasonal cloud variation: another evidence of high climate sensitivity (ID:41) | Jonathan Jiang, NASA Jet Propulsion Laboratory, United States |
| 3 | Feasibility study for a Raman Lidar based estimation of HDO/H2O atmospheric profiles: preliminary results. (ID:217) | Gian Luigi Liberti, ISAC-CNR, Italy |
| 4 | The CHUVA Project: Understanding the Water Cycle across Brazil (ID:256) | Daniel Vila, CPTEC/INPE, Brazil |
| 5 | Clouds variability over Europe: from lidar observations to regional simulation (ID:92) | Meriem Chakroun, UVSQ/IPSL/Sorbonnes Universités/UPMC;LATMOS, France |
| 6 | Uncertainty of Microphysics Schemes in CRMs (ID:228) | Wei-Kuo Tao, NASA, United States |
| 7 | Satellite evidence for convective invigoration by aerosol (ID:235) | Johannes Mülmenstädt, Universität Leipzig, Germany |
| 8 | DEVELOPMENT OF NEXT GENERATION OF SPACEBORNE CLOUD AND PRECIPITATION RADARS (ID:240) | Simone Tanelli, Jet Propulsion Laboratory, California Institute of Technology, United States |
| 9 | Retrieving atmospheric precipitation from synthetic aperture radar imagery at X and Ka bands for high-spatial resolution hydrometeorological applications (ID:16) | Saverio Mori, DIET - La Sapienza, Italy |
| 10 | Verification study of CDRD and PNPR passive microwave precipitation retrieval algorithms using spaceborne precipitation radars (ID:23) | Giulia Panegrossi, CNR - ISAC, Italy |
| 11 | Improved Satellite Rainfall Estimates using Kalpana-1 Data over Indian Land Region and its Comparison with IMSRA, TRMM 3B42-RT and TRMM 3B42-RP products (ID:60) | Ramsankaran RAAJ, Department of Civil Engineering, India |
| 12 | Characterization of the precipitation from satellite over East Africa during last decades (ID:71) | Elsa Cattani, CNR-ISAC, Italy |
| 13 | The Passive Microwave Neural Network Precipitation Retrieval (PNPR) for the cross-track scanning ATMS radiometer (ID:86) | Paolo Sanò, Institute of Atmospheric Sciences and Climate (ISAC), Italian National Research Council (CNR), Italy |
| 14 | Measuring high-latitude precipitation and falling snow from space (ID:105) | Ralf Bennartz, Vanderbilt University, United States |
| 15 | A new source for satellite ground validation? Measuring rainfall from cellular communication networks (ID:122) | Aart Overeem, Hydrology and Quantitative Water Management Group, Wageningen University / Royal Netherlands Meteorological Institute, Netherlands |
| 16 | Satellite detection of warm rain and the impact of aerosol (ID:123) | Zhanqing Li, University of Maryland, United States |
| 17 | Remote Sensing Microphysical Processes From Space: A Feasibility Study (ID:129) | Jay Mace, University of Utah, United States |
| 18 | Gaps and Opportunities of Assimilating Multi-Frequency Passive Microwave Satellite Observations within a Mesoscale Model for Improving the Predictability of Extreme Rainfall Events in Developing Regions (ID:133) | Mohamed Rasmy Abdul Wahid, International Centre for Water Hazard and Risk Managementunder the auspices of UNESCO (ICHARM), Japan |
| 19 | An update on oceanic and high latitude precipitation estimates from space and reanalysis (ID:139) | Ali Behrangi, NASA JPL, United States |

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| 20 | Developing and validating regional scale remote sensing products for water cycle study in northwest China (ID:140) | Xin Li, Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China, People's Republic of |
| 21 | Bayesian based Error Reduction in Satellite based Rainfall Estimates over a Part of Krishna River Basin, India (ID:153) | Ramsankaran RAAJ, Department of Civil Engineering, India |
| 22 | GPM in The Netherlands: first year of rainfall retrievals (ID:157) | Manuel Felipe Rios Gaona, Wageningen University, Netherlands |
| 23 | Using Earth Observation data to identify the influence of land surface properties on rainfall (ID:174) | Christopher Taylor, Centre for Ecology and Hydrology, United Kingdom |
| 24 | Optimizing a high density rain gauge monitoring network in central south africa (ID:179) | Reinhardt Hauptfleisch, North West University Potchefstroom, South Africa |
| 25 | Light Precipitation Retrieval over land by using of 118GHz from FY-3C/MWHTS joint with MWTS-II and MWRI (ID:183) | Songyan GU, NSMC, China, People's Republic of |
| 26 | Linking subtropical shallow convection, moisture transport, and ITCZ characteristics in the Pacific (ID:197) | Anita Rapp, Texas A&M University, United States |
| 27 | Performance assessment of a triple-frequency spaceborne cloud–precipitation radar concept using a global cloud-resolving model (ID:211) | Matthew Lebsock, Jet Propulsion Laboratory, United States |
| 28 | Improving Radar Rainfall Estimates in Africa (ID:232) | Jaun van Loggerenberg, North West University, South Africa |
| 29 | Extreme Precipitation Links with Mesoscale Oscillation Patterns, Low Level Jets and Climate Change (ID:247) | SEVINC A. SIRDAS, ISTANBUL TECHNICAL UNIVERSITY, Turkey |
| 30 | Orographic precipitation at global and regional scales: Observational uncertainty and evaluation of global high-resolution model simulations | Reinhard Schiemann, NCAS Climate, University of Reading, UK |
| 31 | Real Time Monitoring of Global Precipitation from Space: New Technologies Applied to Heavy Rainfall Risk Reduction (ID:257) | Daniel Vila, CPTEC/INPE, Brazil |
| **Water Vapour - Posters** | | |
| 32 | Climatology of free tropospheric humidity: Extension into the SEVIRI era, evaluation and exemplary analysis (ID:10) | Marc Schröder, DWD, Germany |
| 33 | Airborne measurement of water vapour and total water by a photoacoustic instrument (ID:30) | Zoltan Bozoki, MTA-SZTE Research Group on Photoacoustic Spectroscopy, Hungary |
| 34 | Low-level wind reversals in the Gulf of Lion area: observation and assessment of their impact on the water vapour distribution and variability (ID:31) | Paolo Di Girolamo, Scuola di Ingegneria, Università della Basilicata, Italy |
| 35 | Two Decades of Water Vapour Total Column from ATSRs using the Advanced Infra-Red Water Vapour Estimator (AIRWAVE) tool (ID:33) | Stefano Casadio, SERCO c/o ESA/ESRIN, Italy |
| 36 | What information do stable water isotopes give? (ID:74) | Obbe Tuinenburg, LMD, Paris/Utrecht University, France |
| 37 | Variability of integrated water vapour and liquid water path measurements at Lampedusa island in the period 2009-2014. (ID:85) | Giandomenico Pace, ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Italy |
| 38 | Low-cost multi-constellation GNSS receivers for atmospheric water vapour sensing (ID:108) | Eugenio Realini, Geomatics Research & Development (GReD) srl, Italy |
| 39 | Validation of COSMIC water vapor profiles using Raman lidar measurements (ID:110) | FABIO MADONNA, CNR-IMAA, Italy |
| 40 | Quantifying the value of redundant measurements using information theory (ID:111) | FABIO MADONNA, CNR-IMAA, Italy |
| 41 | GAIA-CLIM: Improving satellite sub-orbital calibration and validation opportunities (ID:159) | FABIO MADONNA, CNR-IMAA, Italy |
| 42 | GCOS Reference Upper Air Network profiles (ID:161) | FABIO MADONNA, CNR-IMAA, Italy |

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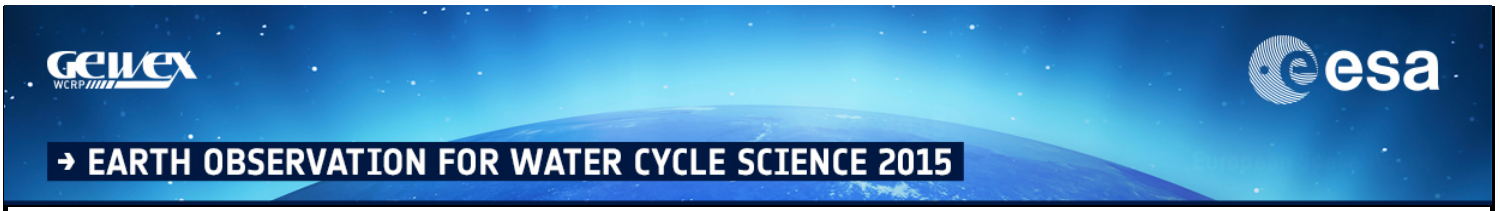
| 43 | Universal retrieval for total columnar water vapour for cloud-free day-scenes from measurements in the near infra-red (ID:181) | Hannes Diedrich, Freie Universität Berlin, Germany |
| 44 | Integrated water vapor – can the field campaign data, high-resolution reanalysis, and satellite data capture its varability? (ID:199) | Sandra Steinke, Institute for Geophysics and Meteorology, University of Cologne, Germany |
| 45 | Water Vapor Sounding of the Cloudy Boundary Layer Using a Differential Absorption Radar Technique (ID:209) | Matthew Lebsock, Jet Propulsion Laboratory, United States |
| **Capacity Building - Posters** | | |
| 46 | Developing capacity for climate research (ID:73) | Samuel Benedict, WCRP, United States |
| 47 | Earth Observation in Support of Sustainable Water Resource Management in Africa The TIGER initiative – Looking After Water in Africa (ID:249) | Benjamin Koetz, ESA, Italy |
| **Groundwaters - Posters** | | |
| 51 | Groundwater storage variations in the North China Plain from GRACE gravity satellites (ID:142) | Wei Feng, Institute of Geodesy and Geophysics, Chinese Academy of Sciences, China, People's Republic of |
| 52 | European gravity service for improved emergency management - a near-real time and daily satellite gravity data product service for early warning of flood and drought (ID:156) | Ben Gouweleeuw, GFZ German Research Centre for Geosciences, Germany |
| 53 | Assessing global hydrological variability from GRACE: Trends, seasonal variability, intra-annual anomalies and extremes | Vincent Humphrey, ETH Zurich, Switzerland |
| **Cryosphere - Posters** | | |
| 54 | Estimation of Moisture Content of Active Soil Layer in Regions with Permafrost by Using «GRACE» Data (ID:36) | Tamara Burenina, V.N. Sukachev Institute of Forest Siberian Branch the Russian Academy of Sciences, Russia |
| 55 | An intercomparison of two passive microwave algorithms for snowfall detection (ID:70) | Sante Laviola, CNR-ISAC, Italy |
| 56 | Landscape freeze/thaw retrievals from Soil Moisture Active Passive (SMAP) L-band radar measurements (ID:113) | Chris Derksen, Environment Canada, Canada |
| 57 | Hydro-validation of GlobSnow SWE in Northern Finland using a Hydrological Model (ID:135) | Jaakko Ikonen, Finnish Meteorological Institute, Finland |
| 58 | Application of SAR Polarimetry and its role in Arctic area (ID:189) | Maurizio Sarti, Institute of Agro-Environmental & Forest Biology (IBAF) - National Research Council (CNR), Italy |
| 59 | Monitoring the hydrological regime in snow areas (ID:13) | Maria J. Polo, Andalusian Institute for Earth System Research-University of Cordoba, Spain |
| **Oceans - posters** | | |
| 60 | Improving Sea Surface Height Estimation Using Spatio-Temporal Altimeter Waveform Retracking via Sparse Representation and Condition Random Fields (ID:124) | Ribana Roscher, Freie Universität Berlin, Germany |
| 61 | The oceanic shipboard precipitation measurement network for surface validation - OceanRAIN (ID:147) | Christian Klepp, CliSAP/CEN, University Hamburg, Germany |
| 62 | A Fundamental Climate Data Record of SSM/I & SSMIS (ID:175) | Axel Andersson, Deutscher Wetterdienst, Satellite based Climate Monitoring, Germany |
| 63 | The roles of tropical SST structure in rainfall distribution and systematic model errors | Richard Carbone, National Center for Atmospheric Research United States |
| **Water Quality - Posters** | | |
| 64 | Sentinel-2 to support environmental directives for monitoring water quality of lakes (ID:207) | Antoine Mangin, ACRI-HE, France |




**Day 3 -23 October**

**Soil Moisture - Posters**

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| 1 | Satellite soil moisture for improved understanding of terrestrial carbon dynamics (ID:152) | Wouter Dorigo, Vienna University of Technology, Austria |
| 2 | Satellite soil moisture observation for flood forecasting (ID:2) | Lu Zhuo, University of Bristol, United Kingdom |
| 3 | Comparison of country scale model calculated soil moisture with field measured data (ID:54) | Olga Nitcheva, Bulgarian Institute of Meteorology and Hydrology, Bulgaria |
| 4 | Comparing the ensemble and extended kalman filters for in situ soil moisture assimilation with contrasting soil conditions (ID:65) | David Fairbairn, Meteo France, France |
| 5 | Evaluating the utility of satellite soil moisture retrievals over irrigated areas and the ability of land data assimilation methods to correct for unmodeled processes. (ID:52) | Sujay Kumar, NASA GSFC, United States |
| 6 | Application of HydroAlgo to AMSR-E and AMSR2 data for the retrieval of soil moisture in Central Italy (ID:69) | Simonetta Paloscia, CNR-IFAC, Italy |
| 7 | Investigation of the incoming METOP SCA mission capabilities in monitoring the hydrological cycle (ID:72) | Simonetta Paloscia, CNR-IFAC, Italy |
| 8 | Impact of Soil Moisture Assimilation on Land Surface Model Spinup and Coupled Land-Atmosphere Prediction (ID:77) | Joseph Santanello, NASA, United States |
| 9 | Comparison of Different Sampling Methods for Representing Uncertainty in Soil Moisture Data Assimilation Using EnKF (ID:141) | Ramsankaran RAAJ, Department of Civil Engineering, India |
| 10 | What is the potential of differential interferometry for soil moisture retrieval? (ID:155) | Simon Zwieback, ETH Zurich, Switzerland |
| 11 | Impact of satellite rainfall and soil moisture products on landslides and floods prediction over the Italian territory (ID:158) | Luca Ciabatta, CNR, Italy |
| 12 | On assessing the uncertainties of high resolution SAR soil moisture products (ID:162) | Giuseppe Satalino, CNR-ISSIA, Italy |
| 13 | Error covariance in the assimilation of satellite soil moisture products (ID:173) | Luigi Renzullo, CSIRO, Australia |
| 14 | Multi--source soil moisture estimations in southern South America (ID:184) | Omar Müller, Faculta de Ingeniería y Cs. Hídrica, Universidad Nacional del Litoral (FICH/UNL), Argentina |
| 15 | Testing simple local regression equations to derive long-term global soil moisture datasets from passive microwave observations (ID:185) | Amen Al-Yaari, POSTDOC, France |
| 16 | Large-scale drivers of soil moisture dynamics (ID:193) | Nadine Nicolai-Shaw, ETH Zurich, Switzerland |
| 17 | A radiative transfer based approach to merge SMOS and AMSR-E soil moisture retrievals into one consistent record (ID:196) | Robin van der Schalie, Tranmissivity B.V., Netherlands |
| 18 | Continuous mapping of soil moisture in the Alps through an integration of ASAR WS, Sentinel-1, and hydrological models (ID:200) | Felix Greifeneder, EURAC Research Bolzano, Italy |
| 19 | A new SMOS soil moisture product available in near-real-time (ID:204) | Nemesio Rodriguez-Fernandez, CESBIO (CNRS), France |
| 20 | Assessing a Bayesian multitemporal soil moisture retrieval on a regional scale with SMAP radar data (ID:212) | Fabio Fascetti, Sapienza, Italy |
| 21 | The evolution of land surface temperature during european dry spells (ID:216) | Sonja Folwell, Centre for Ecology and Hydrology, United Kingdom |

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| 22 | A neural network soil moisture retrieval algorithm for SMAP active/passive microwave observations (ID:218) | Jana Kolassa, NASA Goddard Spaceflight Center, Oak Ridge Associated Universities, United States |
| 23 | Progress in the community effort “Joint Assessment of Soil Moisture Indicators (JASMIN) for southeastern South America” (ID:219) | E. Hugo Berbery, University of Maryland, United States |
| 24 | First results from the SMAP Level 4 Surface and Root Zone Soil Moisture (L4_SM) data assimilation product (ID:227) | Rolf Reichle, NASA/GSFC, United States |
| 25 | Towards a New Observational Record of L-band Microwave Vegetation Parameters (ID:221) | Maria Piles, Universitat Politècnica de Catalunya, Spain |
| **Floods and Droughts - Posters** | | |
| 26 | Search for an interpretation of significant trends of the MODIS drought severity index (ID:42) | Imre M. Janosi, Eotvos Lorand University, Department of Physics of Complex Systems, Hungary |
| 27 | Evaluation of a Remotely Sensed Evaporative Stress Index for Monitoring Patterns of Anomalous Water Use and Availability (ID:47) | Martha Anderson, USDA-ARS, United States |
| 28 | mapping drought hazard using SPI index and GIS( case study:Fars province,Iran) (ID:99) | Fatemeh bagheri, university, Turkey |
| 29 | Calibration and evaluation of a flood forecasting system: Utility of numerical weather prediction model, data assimilation and satellite-based rainfall (ID:49) | Ismail Yucel, Middle East Technical University, Turkey |
| 30 | Use of high resolution Synthetic Aperture Radar for real-time flood forecast (ID:182) | Javier García-Pintado, University of Reading, United Kingdom |
| 31 | VHR satellite imagery classification for flood mapping (ID:231) | Francesca Franci, University of Bologna, Italy |
| **Land Fluxes - Posters** | | |
| 32 | A Satellite-based Evapotranspiration Retrieval over Local-to-Global Scales in Support of Land Surface, Hydrological, Mesoscale, and Global Climate Models (ID:28) | Ali Yagci, GMU, United States |
| 33 | E.O.-based estimation of surface energy fluxes with different resistance schemes (ID:29) | Antonino Maltese, Università degli Studi di Palermo, Italy |
| 34 | Revisit of the global surface energy balance using the MEP model of surface heat fluxes and remote sensing observations (ID:53) | Jingfeng Wang, Georgia Institute of Technology, United States |
| 35 | A bi-weekly actual evapotranspiration dataset derived from NOAA-AVHRR images across the Iberian Peninsula and the Balearic Islands, 1981-2015 (ID:84) | Sergio M. Vicente-Serrano, Spanish National Research Council, Spain |
| 36 | Continental scale monitoring of sub-daily/daily evapotranspiration enhanced by the assimilation of variables derived from geostationary data (ID:151) | Nicolas Ghilain, Royal Meteorological Institute of Belgium, Belgium |
| 37 | Sensitivity of Penman-Monteith model to remote sensing input parameters (ID:126) | Lesley Gibson, Siya Mpehle CapeNature, South Africa |
| 38 | Decomposition of random errors inherent to HOAPS ocean surface flux parameters using multiple triple collocation analysis (ID:169) | Axel Andersson, Deutscher Wetterdienst, Satellite based Climate Monitoring, Germany |
| 39 | Progress on validation of the earth observation based global evapotranspiration products for local use in water resource management sector of South Africa (ID:177) | Abel Ramoelo, Council for Scientific and Industrial Research, South Africa |
| 40 | Evaluation of remote sensing-derived daily evapotranspiration estimates under contrasting natural ecosystems in South Africa (ID:186) | Nobuhle Majozi, CSIR/ University of Twente, South Africa |
| 41 | Relating trends in land surface-air temperature difference to soil moisture and evapotranspiration (ID:205) | Karen Veal, University of Leicester, United Kingdom |
| 42 | Daily Landsat-Scale Evapotranspiration Estimation over a Managed Pine Plantation in North Carolina, USA Using Multi-Satellite Data Fusion (ID:244) | Yun Yang, USDA ARS, United States |
| 43 | EO data for the assessment of biomass, humidity conditions and carbon balance (ID:255) | Katarzyna Dabrowska-Zielinska, Institute of Geodesy and Cartography, Poland |

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| 44 | Appraisal of the SEVIRI & MODIS Evapotranspiration Operational Products Accuracy in Europe: results from different ecosystems (ID:260) | George Petropoulos, Aberystwyth University, United Kingdom |
| **Modelling and Products - Posters** | | |
| 45 | Impacts of atmospheric forcing uncertainty and soil parameterization on the assimilation of remotely sensed variables in a land surface model (ID:48) | Emiliano Gelati, National Centre for Meteorological Research (Meteo France), France |
| 46 | Changes in the hydrological cycle: a Collaborative Programme of the European Climate Research Alliance (ID:103) | Elisa Palazzi, Institute of Atmospheric Sciences and Climate (CNR-ISAC), Italy |
| 47 | EUMETSAT Hydrological Satellite Application Facility, precipitation products generation system at C.N.M.C.A. (ID:80) | Daniele Biron, Centro Nazionale Meteorologia e Climatologia Aeronautica, Italy |
| 48 | Thematic Exploitation Platform for Hydrology (ID:176) | Bernat Martinez, project manager, Spain |
| 49 | How moisture recycling is related to the atmospheric moisture transport distance (ID:165) | Alexander Läderach, Institute for Atmospheric and Climate Science, Switzerland |
| **Hydrology - Posters** | | |
| 50 | Improved water flow forecast in remote mountainous areas using EO data integrated in hydrological model (ID:44) | Laura Moreno, Starlab SL, Spain |
| 51 | Cross-cutting validation of satellite products over France through their integration into a land surface model (ID:58) | Jean-Christophe Calvet, Meteo-France, France |
| 52 | THE USE OF EARTH OBSERVATION TECHNOLOGY TO MONITOR IRRIGATION IN SOUTH AFRICA (ID:88) | Mbali Mahlayeye, Department of Water Affairs South Africa, South Africa |
| 53 | Calibration of a hydrological model using river width derived from very high resolution satellite images (ID:101) | Wenchao Sun, College of Water Sciences, Beijing Normal University, China, People's Republic of |
| 54 | Towards observing basin scale water cycle: Heihe watershed allied telemetry experimental research (ID:143) | Xin Li, Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China, People's Republic of |
| 55 | Using a high-resolution numerical weather prediction model to improve satellite-based hydrologic simulations over mountainous regions (ID:144) | Efthymios Nikolopoulos, Innovative Technologies Center S.A., Greece |
| 56 | Assimilation of satellite-derived soil moisture products into a watershed scale distributed hydrological model: evaluations on hydrological predictions (ID:164) | Paola Laiolo, CIMA Research Foundation, Italy |
| 57 | Assimilating multi-source Remote Sensing Observations into CLM 4.5 within the Murray-Darling basin (ID:171) | Dominik Rains, Laboratory of Hydrology and Water Management, Ghent University, Belgium |
| 58 | Estimating weekly time series of hydrological information (LAI, ETa and soil moisture) using satellite remote sensing (ID:187) | Thomas Alexandridis, Aristotle University of Thessaloniki, Greece |
| 59 | River flow velocity estimation across Europe by using MODIS images (ID:206) | Angelica Tarpanelli, CNR-IRPI, Italy |
| 60 | Satellite calibration of a distributed hydrological model similarly to ground discharge measurements for the Yangtze river basin (ID:215) | Chiara Corbari, Politecnico di Milano, Italy |
| 61 | Database for Hydrological Time Series of Inland Waters (DAHITI) (ID:68) | Eva Boergens, DGFI-TUM, Germany |
| 62 | Support of Water Cycle Sciences with WaMaPro and Global WaterPack (ID:172) | Juliane Huth, German Aerospace Center (DLR), Germany |
| 63 | Overview of free high-resolution global river datasets (ID:238) | Gennadii Donchyts, Deltares, Netherlands |
| 64 | Global Evaluation of Streamflow Estimates from Ten Hydrological Models Using Observations from Thousands of Catchments (ID:245) | Hylke Beck, Joint Research Centre, Italy |