Program

Only title, main author and abstract ID are listed for each paper in the Program section.
The abstract ID can be used to find the full submission in the Abstract section.

October 3 (Thursday), 2013

08:10 - 09:00	**Registration**	Lobby (1F)
09:00 - 09:15	**Opening Ceremony**	Kihada Hall (1F)
	Chair: Hirohiko Ishikawa (GCOE-ARS / DPRI, KU)	
09:00 - 09:05	**Opening Address** Naoto Oshiman (Director of DPRI, KU)	
09:05 - 09:10	**Opening Address** Toshitaka Tsuda (Director of RISH, KU)	
09:15 - 10:00	**Opening Special Talk**	Kihada Hall (1F)
	Chair: Hirohiko Ishikawa (GCOE-ARS / DPRI, KU)	
09:15 - 10:00	**Entropic Balance Theory and Variational Field Lagrangian Formalism** Yoshi K. Sasaki (George Lynn Cross Research Professor Emeritus, OU)	ID: O01
10:00 - 10:10	**Taking a Ceremonial Photograph**	Kihada Hall (1F)
10:10 - 10:30	**Coffee Break**	Lobby (1F)
10:30 - 12:10	**Special Session: Earth-Science Challenges and Beyond (1)**	Kihada Hall (1F)
	Chair: Eiichi Nakakita (DPRI, KU)	
10:30 - 10:55	**Extreme Weather Variations in the Stratosphere-Troposphere Coupled System: Past, Present and Future** Shigeo Yoden (Graduate School of Science, KU)	ID: O02
10:55 - 11:20	**Global COE Project:** **A Research and Educational Challenge to Extreme Weather and its Over-sea Activities** Hirohiko Ishikawa (GCOE-ARS / DPRI, KU)	ID: O03
11:20 - 11:45	**Overview of the University of Oklahoma Research Program** Robert D. Palmer (Associate Vice President for Research / Tommy C. Craighead Chair of SoM, OU)	ID: O04
11:45 - 12:10	**Research in the School of Meteorology: The Upcoming PECAN Project on Nocturnal, Continental Convection and Future Long-term Directions** David B. Parsons (SoM / Mark and Kandi McCasland Chair of Meteorology, OU)	ID: O05
12:10 - 13:30	**Lunch Break**	

13:30 - 15:15	**Session: Advanced Remote Sensing Development and Observations (1)**	Kihada Hall (1F)
	Chair: Jun-Ichi Furumoto (RISH, KU)	
13:30 - 13:45	**Polarimetric NEXRAD and Its Utilization for Operations and Research Present and Future** Alexander Ryzhkov (Cooperative Institute for Mesoscale Meteorological Studies, OU / NOAA/OAR/NSSL, USA)	ID: O06
13:45 - 14:00	**Detection of Potentially Hazardous Convective Clouds with a Dual-Polarized C-band Weather Radar** Ahoro Adachi (Meteorological Research Institute, Japan)	ID: O07
14:00 - 14:15	**Fuzzy Logic Classification of Three-Body Scattering from S-band Polarimetric Radar Measurements** Vivek Mahale (ARRC / SoM, OU)	ID: O08
14:15 - 14:30	**3D Compact X-Band Weather Radar System in Urban Area** Toshiaki Takaki (FURUNO ELECTRIC CO., LTD., Japan)	ID: O09
14:30 - 14:45	**The Quality RhoHV Using Multilag Moment Processor on a Solid-State Weather Radar** B. L. Cheong (ARRC / ECE, OU)	ID: O10
14:45 - 15:00	**Development and Observation of the Phased Array Radar at X band** Tomoo Ushio (Osaka University, Japan)	ID: O11
15:00 - 15:15	**Quantitative Ash Estimation by Operational Weather Radar** Masayuki Maki (Kagoshima University, Japan)	ID: O12
15:15 - 15:35	**Coffee Break**	Lobby (1F)
15:35 - 17:35	**Session: Advanced Remote Sensing Development and Observations (2)**	Kihada Hall (1F)
	Chair: Tian-You Yu (ARRC / ECE / SoM, OU)	
15:35 - 15:50	**Observations of the 20 May 2013 Newcastle-Moore, Oklahoma EF-5 Tornado Using the PX-1000 Solid-State Polarimetric X-band Radar** J. M. Kurdzo (ARRC / SoM / ECE, OU)	ID: O13
15:50 - 16:05	**Convective-Stratiform Separation Reviled by Video Disdrometer and Polarimetric Radar Observations – The Bayesian Approach** Petar Bukovcic (Cooperative Institute for Mesoscale Meteorological Studies / SoM / ARRC, OU)	ID: O14
16:05 - 16:20	**Clear Air Echoes from S-band Weather Radars - A Renewed Look** Eric Jacobsen (ARRC, OU)	ID: O15
16:20 - 16:35	**Aerosol Particles and Trace Gases Profiling Experiments Using a Combination of In-situ and Remote Sensing Measurements over Shigaraki, Japan** Masanori Yabuki (RISH, KU)	ID: O16
16:35 - 16:50	**Development of the Rotational Raman Lidar for Temperature Measurement with a Multispectral Detector** Kenichi Yoshikawa (RISH, KU)	ID: O17
16:50 - 17:05	**PWV Variation Associated with Cold Outflow Observed by Dense GNSS Network** Yoshinori Shoji (Meteorological Research Agency, Japan)	ID: O18

17:05 - 17:20	**High-resolution Precipitable Water Vapor Retrieval Using High-elevation Slant Delays from a Dense Network of GPS and QZSS Receivers**	
	Eugenio Realini (RISH, KU)	ID: O19
17:20 - 17:35	**A Study on a Humidity Estimation Method Using the Side-lobe Emission from a Wind Profiling Radar**	
	Shigeru Inaka (RISH, KU)	ID: O20

October 4 (Friday), 2013

08:05 - 08:30	**Registration**	Lobby (1F)
08:30 - 10:10	**Special Session: Earth-Science Challenges and Beyond (2)**	Kihada Hall (1F)
	Chair: David B. Parsons (SoM, OU)	
08:30 - 08:55	**Recent Progresses with Data Assimilation for Severe Weather Prediction at the Center for Analysis and Prediction of Storms** Ming Xue (CAPS / SoM, OU)	ID: O21
08:55 - 09:20	**Advanced Radar Research Center – Challenges and Innovations in Radar** Tian-You Yu (ARRC / ECE / SoM, OU)	ID: O22
09:20 - 09:45	**Towards Building Up an Adaptation Strategy against Climate Change** Eiichi Nakakita (DPRI, KU)	ID: O23
09:45 - 10:10	**Characteristics of Atmospheric Gravity Waves Observed Using the MU (Middle and Upper Atmosphere) Radar and GPS Radio Occultation** Toshitaka Tsuda (RISH, KU)	ID: O24
10:10 - 10:30	**Coffee Break**	Lobby (1F)
10:30 - 11:30	**Session: Advanced Remote Sensing Development and Observations (3)**	Kihada Hall (1F)
	Chair: Hiroyuki Hashiguchi (RISH, KU)	
10:30 - 10:45	**Synergistic Use of MST Radars, Radiosondes and Radio Occultations for Identifying and Quantifying Turbulence in the Free Atmosphere** Lakshmi Kantha (University of Colorado / RISH, KU)	ID: O25
10:45 - 11:00	**Atmospheric Turbulence Parameters Estimated from Concurrent Balloon and MU Radar Measurements** Hubert Luce (South-Toulon Var University, France)	ID: O26
11:00 - 11:15	**Development of Range-imaging Boundary Layer Radar** Masayuki K. Yamamoto (RISH, KU)	ID: O27
11:15 - 11:30	**NFL-MaP: NMQ-FLASH-Landslide Monitoring and Prediction System over the US** Yang Hong (ARRC, OU)	ID: O28
11:30 - 11:50	**Special Seminar**	Kihada Hall (1F)
	Chair: Hiroyuki Hashiguchi (RISH, KU)	
11:30 - 11:50	**Issues and Challenges in Developing a Multi-mission Phased Array Radar (MPAR) for Weather and Aircraft Surveillance** Dick Doviak (NOAA/OAR/National Severe Storms Laboratory, USA)	ID: O29
11:50 - 13:00	**Lunch Break / Lunch Time Meeting between OU and KU faculty at Seminar Room 1 (1F)**	

12:30 - 13:50	Poster Session	Hybrid Space (2F)
P01	**Development of Turbulence Detection and Prediction Techniques with Wind Profiler Radar for Aviation Safety** Hiroyuki Hashiguchi (RISH, KU)	ID: P01
P02	**Improvement of Vertical Resolutions in Wind Profiling Radars to Detect Detailed Vertical Structure of Wind Velocities, Temperature and Humidity** Jun-ichi Furumoto (RISH, KU)	ID: P02
P03	**Accuracy Assessment of Spectral Parameters for RIM WPRs** Tong Gan (RISH, KU)	ID: P03
P04	**Aerosol Size Distributions Derived From Multiple-Field-of-View (Multi-FOV) Lidar Techniques** Yutong Liu (RISH, KU)	ID: P04
P05	**Basic Research of Ionosphere Correction Models for Water Vapor Monitoring System with a Dense GNSS Network** Yuya Iwaki (RISH, KU)	ID: P05
P06	**Methods for Evaluating the Structure Function Parameter for Temperature using Unmanned Aerial Systems and Large Eddy Simulation** Charlotte Wainwright (ARRC / SoM, OU)	ID: P06
P07	**Comparison between Descending Reflectivity Cores (DRCs) Observed by Different Radars** Eiichi Sato (Meteorological Research Institute, Japan)	ID: P07
P08	**3D Structure Characteristics of DSD Growth in Heavy Rainfall Comparing with C-band and Xband Polarimetric Radar** Chiho Kimpara (DPRI, KU)	ID: P08
P09	**Improved Retrieval of Hydrometeor Mixing Ratios Using Polarimetric Radar Data and the Hydrometeor Classification Algorithm for Assimilation into Storm-Scale NWP Models** Jacob Carlin (SoM / Cooperative Institute for Mesoscale Meteorological Studies, OU)	ID: P09
P10	**Estimation of Ice-Water Mixing Ratios Using X-Band Polarimetric Radar Observation** Kohei Furuta (DPRI, KU)	ID: P10
P11	**Structure and Environment in Re-intensification after Extratropical Transition of Tropical Cyclones in the Western North Pacific** Nao Takamura (DPRI, KU)	ID: P11
P12	**Defining a New Framework for Monitoring the QBO** Samuel Lillo (SoM, OU)	ID: P12
P13	**Synoptic and Environment Condition of the 22 March 2013 Tornado Event in Brahmanbaria the Central East Part of Bangladesh** Fatima Akter (DPRI, KU)	ID: P13
P14	**Characteristics of Quasi-Stationary Mesoscale Convective Systems during the Warm Season in Japan** Takashi Unuma (DPRI, KU)	ID: P14
P15	**Exploration of Global Model Predictions of a High Impact Winter Weather Event Using the THORPEX Interactive Grand Global Ensemble (TIGGE)** Stacey M. Hitchcock (SoM, OU)	ID: P15

P16	**Assimilation of Pseudo Geostationary Lightning Mapper Data at the Storm Scale Using the EnKF** Blake J. Allen (SoM, OU)	ID: P16
P17	**Assimilation Experiments of Refractivity Data Obtained by JMA-operational Doppler Radar** Hiromu Seko (Meteorological Research Institute / JAMSTEC, Japan)	ID: P17
P18	**Probabilistic Flash Flood Forecasting using Stormscale Ensembles** Jill Hardy (SoM, OU)	ID: P18
P19	**Assessment of Flood Forecasting Accuracy Using High-Resolution Ensemble NWP Rainfall during the Largest Flood Event in 2011, Japan** Wansik Yu (DPRI, KU)	ID: P19
P20	**Utilization of Vertical Vorticity Information with Doppler Velocity into the Risk Forecasting of Localized Severe rainfall's Baby Cell** Ryuta Nishiwaki (RISH, KU)	ID: P20
P21	**Simulation of Electromagnetic Scattering of Non-Spherical Ice Particles by Using Videosonde and C-Band Radar** Mariko Ogawa (Kobe University, Japan)	ID: P21

14:00 - 15:30	**Session: Understanding and Prediction of High-Impact Weather (1)** Chair: Masahito Ishihara (GCOE-ARS, KU)	Kihada Hall (1F)
14:00 - 14:15	**Organization Aspects of Convective Systems Causing Severe Rainfalls and Tornadoes in the Japan Area during 2006 to 2012** Masahito Ishihara (GCOE-ARS, KU)	ID: O30
14:15 - 14:30	**Development of a Technique to Identify the Stage of Storm Life Cycle using X-band Polarimetric Radar** Aritoshi Masuda (DPRI, KU)	ID: O31
14:30 - 14:45	**Using Varied Microphysics to Account for Uncertainty in Warm-Season QPF in a Convection-Allowing Ensemble** Jeffrey D. Duda (ARRC / SoM, OU)	ID: O32
14:45 - 15:00	**Hydrometeor Distributions in the Different Developing Stages of Baiu Monsoon Clouds Observed by Continuous Videosonde Soundings** Kenji Suzuki (Yamaguchi University, Japan)	ID: O33
15:00 - 15:15	**The Analysis and Prediction of Microphysical States and Polarimetric Radar Variables in a Mesoscale Convective System and Real Time Storm Scale Ensemble Forecast Using Advanced Multi-Moment Microphysics Schemes** Bryan J. Putnam (CAPS / ARRC / SoM, OU)	ID: O34
15:15 - 15:30	**Academic-Industrial Collaboration Study on the Observational Database for Elucidation of the Localized Katabatic Wind** Hiroto Sakamoto (RISH, KU)	ID: O35

15:30 - 15:50	**Coffee Break**	Lobby (1F)

15:50 - 17:20	**Session: Understanding and Prediction of High-Impact Weather (2)** Chair: Xuguang Wang (SoM / CAPS, OU)	Kihada Hall (1F)
15:50 - 16:05	**Estimation of Flying Debris' Velocity in a Tornado Occurred in Tsukuba-city on May 6, 2012 by Using Numerical Simulation** Takashi Maruyama (DPRI, KU)	ID: O36

16:05 - 16:20	**Vertical Structure of the Tsukuba F3 Tornado on 6 May 2012 as Revealed by a Solid-state Polarimetric Radar** Hiroshi Yamauchi (Meteorological Research Institute, Japan)	ID: O37
16:20 - 16:35	**Rapid-Scan, Mobile, Polarimetric, Doppler-Radar Observations of Supercell Tornadoes** Howard B. Bluestein (SoM, OU)	ID: O38
16:35 - 16:50	**Understanding the Importance of Surface Drag in Tornadogenesis through High-Resolution Real Data Simulations** Alexander D. Schenkman (CAPS, OU)	ID: O39
16:50 - 17:05	**High Resolution Numerical Study of Migrating Strong Downslope Wind Hira-Oroshi in Japan** Kuniaki Higashi (RISH, KU)	ID: O40
17:05 - 17:20	**Downscaling Simulations from Mesoscales to District-Scales by Merging NWP and CFD Models** Tetsuya Takemi (DPRI, KU)	ID: O41

18:00 - 20:00	**Banquet**	Hybrid Space (2F)

October 5 (Saturday), 2013

08:05 - 08:30	**Registration**	Lobby (1F)

08:30 - 10:00	**Session: Understanding and Prediction of High-Impact Weather (3)**	Kihada Hall (1F)
	Chair: Ming Xue (CAPS / SoM, OU)	
08:30 - 08:45	**Ensemble Forecast Experiments of Tornados Occurred on 6th May 2012 using a Nested-LETKF System** Hiromu Seko (Meteorological Research Institute / JAMSTEC, Japan)	ID: O42
08:45 - 09:00	**Study on the Variability Characteristics of Precipitable Water Vapor Associated with Heavy Rainfall Using a Non-hydrostatic Model** Masanori Oigawa (RISH, KU)	ID: O43
09:00 - 09:15	**Data Assimilation of Ice-Water Mixing Ratios Estimated from Polarimetric Radar Observation** Kosei Yamaguchi (DPRI, KU)	ID: O44
09:15 - 09:30	**Recent Development and Progress on Hybrid Ensemble-Variational Data Assimilation for Global to Storm Scale Numerical Weather Prediction** Xuguang Wang (SoM / CAPS, OU)	ID: O45
09:30 - 09:45	**Simulation Experiment of Tornadoes Formed along Typhoon Rainbands Using a Cloud-Resolving Model** Kazuhisa Tsuboki (Nagoya University, Japan)	ID: O46
09:45 - 10:00	**Development of Nowcasting Method Based on Spatial Scale Analysis of Precipitation Distribution Observed by X-band Polarimetric Radar** Nozomu Takada (Meteorological Engineering Center, Inc., Japan)	ID: O47

10:00 - 10:20	**Coffee Break**	Lobby (1F)

10:20 - 11:50	**Session: Extreme Weather and Climate Variability for Mitigation**	Kihada Hall (1F)
	Chair: Tetsuya Takemi (DPRI, KU)	
10:20 - 10:35	**SDS of Precipitation with a Formatted Regression Frame** Sunmin Kim (DPRI, KU)	ID: O48
10:35 - 10:50	**Understanding Changes in the Arctic Atmosphere to Reductions in Sea Ice** Steven M. Cavallo (SoM, OU)	ID: O49
10:50 - 11:05	**A WRF Model Simulation of Changes in the Characteristics of Tropopause Polar Vortices Due to Sea Ice Loss** Dylan Lusk (SoM, OU)	ID: O50
11:05 - 11:20	**Simulation of an Arctic Summer Cyclone Using MPAS** Nicholas Szapiro (SoM, OU)	ID: O51

11:20 - 11:35	**Wave Information Sensitivity for Ocean Currents under Typhoon Condition** Junichi Ninomiya (DPRI, KU) ID: O52
11:35 - 11:50	**Investigating the Dynamics of Error Growth in ECMWF Forecast Busts** Sam Lillo (SoM, OU) ID: O53

11:50 - 12:00	**Closing Ceremony** Kihada Hall (1F)
	Chair: Eiichi Nakakita (DPRI, KU)
11:50 - 12:00	**Closing Address** Eiichi Nakakita (DPRI, KU)

12:15 - 16:30	**Technical Tour - A Visit to Phased Array Radar of Osaka University**
	Coordinator: Motohiro Honma (DPRI, KU)
12:15	Depart at Kyoto University's Uji Campus by tour bus, having lunch box
13:15	Arrive at Osaka University at Suita City in Osaka
13:15 - 14:30	**A Visit to X-band phased array radar introduced by Professor Ushio (Osaka University)**
14:30	Depart at Osaka University
15:30	Make a brief stop near the **Kiyomizu Temple**
16:00	Make a brief stop at **hotels near Kyoto Station OU faculty and students stay**
16:30	Arrive at Uji Campus, Kyoto University