

Wednesday 9 July

8:00-10:00

Plenary Oral Session 6: MIXED PHASE CLOUDS

Chairperson: TBD

- 8:00-8:15 6.1 **Invited: Andrew Heymsfield, Paul Field, Dave Rogers, Jeffrey Stith, Jeffrey French, Samuel Haimov, Paul DeMott**
Ice Initiation in Mixed-Phase Orographic Wave Clouds during ICE-L
- 8:15-8:30 6.2 **Chris D. Westbrook, Anthony J. Illingworth, Ewan J. O'Connor, Robin J. Hogan**
Investigating mixed-phase cloud microphysics using Doppler lidar and radar
- 8:30-8:45 6.3 **Keith N. Bower, Thomas W. Choullarton, Paul Connolly, Jonathan Crosier, Hugh Coe, Martin W. Gallagher, William Morgan**
Aerosol Impacts on the Microphysics of Mixed Phase Cloud
- 8:45-9:00 6.4 **Alexei Korolev**
Rates of the Phase Transformation in Mixed phase Clouds
- 9:00-9:15 6.5 **Masataka Murakami, Narihiro Orikasa**
How does Asian dust storm affect the microphysical structures of orographic snow clouds?
- 9:15-9:30 6.6 **Monika E. Bailey, George A. Isaac, Stewart G. Cober, Alexei V. Korolev, J W Strapp**
Vertical Profiles in Freezing Precipitation from In-Situ Measurements in Winter Stratiform Clouds
- 9:30-9:45 6.7 **Takuya Tajiri, Katsuya Yamashita, Masataka Mukarami, Narihiro Orikasa, Atsushi Saito, Tomohiro Nagai, Tetsu Sakai,**
Laboratory experiments of mixed-phase cloud formation
- 9:45-10:00 6.8 **Anthony E. Morrison, Steven T. Siems, Michael J. Manton, Alex Nazarov**
On the evaluation of the WRF model's ability to represent mixed phase clouds over the Southern Ocean

10:00-10:30

Coffee Break

10:30-12:15

Plenary Oral Session 7: SEVERE STORMS

Chairperson: TBD

- 10:30-10:45 7.1 **Invited: Tsutomu Takahashi**
Videoprobe studies of ice crystals in tropical clouds and precipitation particle evolution in rainbands and squall lines
- 10:45-11:00 7.2 **Tetsuya Takemi**
Environmental stability control of the precipitation structure and intensity in convective systems
- 11:00-11:15 7.3 **Robert M. Rauber, Andrea Smith, Greg M. McFarquhar, Joseph A. Grim, Michael Timlin, Brian F. Jewett, David P. Jorgensen**
Microphysical and Thermodynamic Structure and Evolution of the Trailing Stratiform Regions of Mesoscale Convective Systems during BAMEX
- 11:15-11:30 7.4 **Brian W. Golding**
Causes of the Boscastle extreme rainfall event in August 2004
- 11:30-11:45 7.5 **Daniel Rosenfeld**
Anthropogenic aerosols invigorating hail storms
- 11:45-12:00 7.6 **Ricardo Hallak, Jorge A. Martins, Leila D. Martins, Edmilson D. de Freitas, Caroline Mazzoli da Rocha, Augusto Pereira Filho**
High-resolution numerical simulation of thunderstorms and the low-level water vapor spatial distribution role in convection initiation
- 12:00-12:15 7.7 **Vlado Spiridonov, Sampan Thaikruawan, Mladjen Curic**
Numerical simulations of severe tropical and continental storm

12:15-13:15

Buffet Lunch

13:15-14:30

Poster Session P6: MIXED PHASE CLOUDS

Chairperson: TBD

- P6.1 **Anatoly N. Nevzorov**
Some peculiarities of freezing of metastable water, influencing cloud ice development
- P6.2 **André Ehrlich, Manfred Wendisch, Eike Bierwirth, Jean-Francois Gayet, Guillaume Mioche, Astrid Richter, Roland Neuber**
Measurements of cloud top reflectance over Arctic mixed-phase clouds
- P6.3 **Axel Seifert, Susanne Crewell**
A revised cloud microphysical parameterization for operational numerical weather prediction using the COSMO model
- P6.4 **Boryana Tsenova, Rumjana Mitzeva, Clive Saunders**
Parameterization of thunderstorm charging including the cloud saturation effect
- P6.5 **Bruce Gandrud, Darrel Baumgardner, Andrew Heymsfield, David Rogers, Jeff Stith, Cynthia Twohy**
Ice cloud performance of the Cloud Droplet Probe during ICE-L
- P6.6 **Chao-Tzuen Cheng, Wei-Chyung Wang, Jen-Ping Chen**
Simulations of the Effects of Cloud Condensation Nuclei on Precipitations in Convection Systems
- P6.7 **Darrel Baumgardner, Gregory L. Kok**
Droplet Freezing and Signs of Small Scale Particle Clustering in Mountain Wave Clouds
- P6.8 **David C. Rogers, Paul J. DeMott, Andrew Heymsfield, Jeffrey Stith**
Airborne Measurements of Ice Concentrations in Wave Clouds
- P6.9 **Laurent Deguillaume, Maud Leriche, Marie Monier, Francois Champeau, Nadine Chaumerliac**
Modeling physicochemical processes involved in cloud formation to study their impacts on the evolution of atmospheric chemical composition
- P6.10 **Gerardo Montoya**
A Comparative Analysis of the Rain predicted in the Northern South America Using Two Moment Ice and Rain Microphysical scheme
- P6.11 **Gijs de Boer, Tempei Hashino, Gregory J. Tripoli, Edwin W. Eloranta**
On Immersion Freezing as a Nucleation Mechanism in Mixed-Phase Stratus
- P6.12 **Gong D. Li**
The Numerical Analysis About Water Vapor Budget and Transform During a Spring Heavy Rain Process in Shandong Region in China
- P6.13 **Gong Zhang, Greg M. McFarquhar**
Cloud microphysical properties of arctic mixed-phase stratus: impacts on surface radiation
- P6.14 **Gregory Thompson, William Cooper, Paul DeMott, Roy M. Rasmussen**
Sensitivities of ice nucleation to dust/mineral aerosol particles and application to mesoscale numerical weather prediction of cloud systems observed during PACDEX and ICE-L
- P6.15 **Ji F. Wen, Ning Luo, Lei Meng**
The microphysical characteristics of fog in the rime and glaze
- P6.16 **Jiwen Fan, Mikhail Ovtchinnikov, Jennifer Comstock, Alexander Khain**
Modeling Mixed-Phase Arctic Clouds and Associated Ice Formation
- P6.17 **Johanne Gabrielle Dorais, Éric Girard, Ping Du**
Evaluation of four bulk microphysics schemes for the simulation of arctic mixed-phase clouds observed during M-PACE
- P6.18 **John Hanesiak, Ronald Stewart, Kent Moore, Peter Taylor, Mengistu Wolde, Walter Strapp**
Storm Studies in the Arctic (STAR): Preliminary Results

- P6.19 **Julie Cozic, Bart Verheggen, Ernest Weingartner, Urs Baltensperger, Stephan Mertes, Keith Bower, Dan Cziczo**
Partitioning of Aerosol Particles in Mixed-Phase Clouds at a High Alpine Site
- P6.20 **Liang Liao, Robert Meneghini**
Simulations of Radar Signatures in Melting Layer
- P6.21 **Narihiro Orikasa, Masataka Murakami, Atsushi Saito**
Characteristics of orographic mixed-phase clouds during JCSEPA field campaigns
- P6.22 **Ning Luo, Ji F. Wen, Ai I. Min, Sheng J. Niu**
Doppler radar echo analysis on a typical stratiform and convective mixed precipitation system in Guizhou
- P6.23 **Paquita Zuidema, Paul Lawson, Brad Baker, Bryan Pilon, Qizu Mo**
In-situ and remote observations of Arctic July ice and mixed-phase clouds during SHEBA
- P6.24 **Patric Seifert, Albert Ansmann, Ina Mattis, Detlef Mueller, Ulla Wandinger**
10 years of lidar observations of mixed phase clouds with focus on temperature and aerosol properties
- P6.25 **Paul J. DeMott, Anthony Prenni, Cynthia Twohy, Jeffrey Stith, David Rogers, Andrew Heymsfield, Sonia Kreidenweis**
Ice Nuclei Measurements in Clean Through Perturbed Aerosol Conditions: Results from PACDEX and ICE-L
- P6.26 **Paul R. Field, ICE-L science team**
Contrasting the heterogeneous ice nucleation in two lee wave clouds observed during the ICE-L campaign
- P6.27 **Ping Du, Eric Girard, Johanne Dorais**
Simulations of Mixed-Phase Clouds observed during SHEBA : Evaluation of four bulk microphysics schemes
- P6.28 **Roy M. Rasmussen, Greg Thompson, Kyoko Ikeda**
Simulation of Freezing Drizzle Formation in Extratropical Cyclones during IMPROVE II
- P6.29 **Takuya Tajiri, Katsuya Yamashita, Masataka Murakami, Narihiro Orikasa, Atsushi Saito, Tomohiro Nagai, Tetsu Sakai**
Laboratory simulations of mixed-phase clouds and nucleated ice crystals detection
- P6.30 **Trude Storelvmo, Jon Egill Kristjansson, Ulrike Lohmann**
Modeling of the Wegener-Bergeron-Findeisen effect for global climate models
- P6.31 **Vaughan T. Phillips, Constantin Andronache**
Effects from dust and soot on the glaciation and precipitation production of convective clouds in a tropical Atlantic hurricane
- P6.32 **Victor C. Zarraluqui, Guillermo Montero-Martinez, Ernesto Caetano, Fernando García-García**
An analysis of TRMM data for single precipitation events in the Mexico Basin.
- P6.33 **Wang Jia, Bai K. Wa, Wang K. Fa, Zong P. Cheng**
Analysis on cloud seeding experiment and physical process of an artificial rain dispersal experiment by numerical simulation
- P6.34 **Wolfram Wobrock, Céline Planche, Delphine Leroy, Andrea I. Flossmann**
Comparison between radar and distrometer measurements and precipitation fields simulated by a 3D cloud model with detailed microphysics for a medium convective case in the Cévennes region
- P6.35 **Yann Dufournet, Christine Unal, Herman Russchenberg**
Towards the retrieval of ice crystals properties within mixed-phase clouds using dual polarization spectral radar measurements
- P6.36 **Yue Chen, Tian-Yu Chen, An-Ping Sun**
Design and Implement of Orographic Clouds Field Observation in a China NSFC Key Program
- P6.37 **Yue Q. Shi, Xiao F. Lou, Xue J. Deng**
Mesoscale and Microscale Simulations of Cold Front Clouds in South China
- P6.38 **Zhiqiang Cui, Keneth Carslaw, Alan Blyth**
Cloud Resolving Model with Bin-resolved mixed-phase microphysics

- P7.1 **Aglika S. Savtchenko, Rumjana Mitzeva, Tsvetelina Dimitrova**
A combined analysis of lightning activity and radar reflectivity in severe thunderstorms
- P7.2 **Antônio P. Queiroz, Luiz A. Machado**
Analysis of severe weather using S band radar in southeastern Brazil
- P7.3 **Debin Su, Daren Lu, Jinli Liu, Shu Duan, Jin Li**
Case Study of Local Severe Weather Observed by Multi-sensor Observation Network
- P7.4 **Debin Su, Dongchang Yu, Chenyun Sun**
A Very-short-range Interactive Prediction System for Regional Severe Weather Warning Service
- P7.5 **Fang J. Zhang, Ji F. Wen, Li N. Zhou**
Numerical simulation on hailformation in the mountainous region of Guizhou
- P7.6 **Fidel Rodríguez-Wüthrich, Covadonga Palencia, Dario Giaiotti, Fulvio Stel, Roberto Fraile**
Hailstone size: relationship to meteorological variables
- P7.7 **Ganna Pirnach, Vitalii Shpyg**
Simulation of microphysical and thermodynamical features of clouds and heavy precipitation passed over Carpathian Mountains during flash flood
- P7.8 **Greg M. McFarquhar and Henian Zhang**
Impacts of Saharan Dust Acting as CCN on the Evolution of an Idealized Tropical Cyclone
- P7.9 **Haiguang Zhou**
Three Dimensional Structure Evolution Feature of the Heavy Rainfall Caused by Typhoon Krosa Landing with Dual-Doppler Radar
- P7.10 **Heike Noppel, Ulrich Blahak, Axel Seifert, Klaus D. Beheng**
Simulations of a severe hail storm using an advanced 2-moment cloudmicrophysical scheme
- P7.11 **Jerry M. Straka, Matthew S. Gilmore**
A multi-moment, multi-hydrometeor class, bulk microphysics parameterization scheme. Part I: Description
- P7.12 **Matthew S. Gilmore, Jerry M. Straka**
A multi-moment, multi-hydrometeor class, bulk microphysics parameterization scheme. Part II: Preliminary results
- P7.13 **Matthew S. Gilmore, Lee M. Cronce, Jerry M. Straka, Robert B. Wilhelmson**
Embryo differences between simulated High and Low Plains Hailstorms
- P7.14 **Jie Cao, Shouting Gao**
New insights into Q vector analysis and its applications in torrential rain events
- P7.15 **Bin Li**
Analyses on Observed Characteristic of a Strong Storm with Doppler Radar Data
- P7.16 **Miguel González-Colino, Elisabeth Alonso-Blanco, María Fernández-Raga, Ana I. Calvo, Covadonga Palencia, Roberto Fraile**
Trends in hydrometeor frequency in Spain
- P7.17 **Paola V. Salio, Yanina Garcia Skabar, Matilde Nicolini**
Flash Flood Event over Central Argentina: a case study
- P7.18 **Rachel I. Albrecht, Carlos A. Morales, Maria Assuncao F. da Silva Dias**
One Dimension Cloud Model with Electrification Scheme: The dependence of the CCNs on the development of the electrical charge centers
- P7.19 **Ruijun Jin, Fuchun Ma, Hui Meng**

The Application of New Generation Weather Radar in Weather Modification in Tianjin

P7.20 **Ulrich C. Blahak**

Towards a better representation of high density ice particles in a state-of-the-art two-moment bulk microphysical scheme

P7.21 **Xiaofeng Lou, Guanfang He, Zhijin Hu**

The mitigation of heavy rainfall with seeding simulations

P7.22 **Zhimin Zhou, Xueliang Guo**

A 3D modeling study on multi-layer distribution and formation mechanism of electrical charging in a severe thunderstorm

13:15-14:30

Poster Session P8: CLOUDS AND CLIMATE

Chairperson: TBD

P8.1 **Cyril J. Morcrette**

Evaluation of a GCM prognostic cloud scheme using CRM data.

P8.2 **Guang J. Zhang, Xiaoliang Song**

Understanding the Causes of Double ITCZ in NCAR CCSM3

P8.3 **Ulrike Lohmann, Daniel Rosenfeld,**

Global effects of anthropogenic aerosols on precipitation

P8.4 **Johannes Quaas**

Clouds in the ECHAM5 GCM

P8.5 **Yangang Liu, Peter H. Daum, Seong S. Yum, Jian Wang**

Use of Microphysical Relationships to Discern Growth/Decay Mechanisms of Cloud Droplets

P8.6 **Johannes Karlsson, Gunilla Svensson**

The simulation of Arctic clouds and their radiative properties for present-day climate in the CMIP3 multi-model dataset.

P8.7 **Huiwen Xue, Graham Feingold, Hailong Wang, Bjorn Stevens**

A Study of Aerosol Effects on the Development of Trade Cumulus Clouds Using Large Eddy Simulations

P8.8 **Hélène Chepfer, Sandrine Bony, Marjolaine Chiriaco, Jean-Louis Dufresne, Geneviève Sèze, Dave Winker**

Use of CALIPSO lidar observations to evaluate the cloudiness simulated by a climate model

P8.9 **Li Juan, Mao J. Tai, Yang I. Ying**

Influence of atmospheric ice nucleus concentrations on cold cloud radiant properties and cold cloud reflectivity changes in past years

P8.10 **Hee-Jung Yang, Greg M. McFarquhar, Chris A. Hostetler, Richard A. Ferrare**

Effects of dust layer on trade wind cumuli over the Gulf of Mexico: a modeling and observational study

P8.11 **Xiaoqing Wu, Liping Deng**

Effects of Cloud Systems on MJO and ENSO in a Coupled Climate Model

P8.12 **Samantha Melani, Andrea Antonini, Massimiliano Pasqui, Alberto Ortolani, Vincenzo Levizzani, Roberto Ginnetti**

A satellite and model study of rainfall associated with the West African Monsoon

P8.13 **Igor I. Mokhov, Alexander V. Chernokulsky, Mirseid G. Akperov, Herve Le Treut**

Cloudiness and cyclonic activity intercomparison in the Northern Hemisphere extratropics by satellite and reanalysis data and from model simulations

P8.14 **Boris Y. Grits, Anthony S. Wexler**

Variable Moment General Dynamic Equations for Global and Regional Aerosol Modeling

P8.15 **Libor Hejkrlik**

Analysis of lunar variation of precipitation on various time scales

P8.16 **Dennis L. Hlavka, Lin Tian, William Hart, Lihua Li, Matthew McGill, Gerald Heymsfield**

14:30-16:30

Plenary Oral Session 8: CLOUDS AND CLIMATE

Chairperson: TBD

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| 14:30-14:45 | 8.1 | Invited: George A. Isaac, Ismail Gulpepe, Alexei V. Korolev, Faisal S. Boudala, Stewart Cober
In-Situ Cloud Measurements and Climate Models |
| 14:45-15:00 | 8.2 | John Latham, Jack Chen, Philip Rasch, Laura Kettles, Alan Gadian, Keith Bower, Tom Chouarton
Negative Forcing Resulting from Enhancement of CCN Concentrations in Marine Stratocumulus Clouds: Application to Global Warming Mitigation Scheme |
| 15:00-15:15 | 8.3 | Rhea George, Robert Wood
The influence of aerosols on cloud properties and albedo variability in the Southeast Pacific |
| 15:15-15:30 | 8.4 | Akira T. Noda, Masaki Satoh, Hirofumi Tomita, Tomoe Nasuno, Shin-ichi Iga, Hiroaki Miura, Kazuyoshi Oouchi
Characteristics of the Boundary-layer Clouds in a Global 14 km-mesh Experiment by NICAM |
| 15:30-15:45 | 8.5 | Brian E. Mapes
A global survey of the cloud systems sampled by CloudSat |
| 15:45-16:00 | 8.6 | Trude Storelvmo, Ulrike Lohmann
Aerosol influence on clouds and precipitation in EC-EARTH |
| 16:00-16:15 | 8.7 | Surabi Menon, Susanna Bauer, Dorothy Koch, Robert McGraw, Igor Sednev
Effects of cloud nucleation schemes on cloud properties, precipitation and climate |
| 16:15-16:30 | 8.8 | Richard M. Forbes
Parameterization of cloud from global NWP to climate model resolution |

END OF SESSIONS

Ferry to Isla Mujeres, dinner and party at the beach

17:30-24:00