

Friday 11 July

8:00-10:00

Plenary Oral Session 12:IN and CCN

Chairperson: Gabor Vali

- 8:00-8:15 12.1 **Invited: Michael Kamphus, Stephan Borrmann, Saskia Walter, Joachim Curtius, J. Schneider, S. Mertes, E. Weingartner**
Mass spectrometric analysis of small ice crystal residuals in mixed phase clouds during the CLACE projects
- 8:15-8:30 12.2 **Heike Wex, Tabea Hennig, Sonia Kreidenweis, Markus Petters, Diana Rose, Imre Salma, Frank Stratmann**
Connecting hygroscopicity to activation: hygroscopic growth at high relative humidities, slightly soluble substances, surface tension and other effects
- 8:30-8:45 12.3 **James G. Hudson, Stephen Noble**
Cloud Condensation Nuclei Sizes
- 8:45-9:00 12.4 **Cynthia H. Twohy, Andrew J. Heymsfield, Aaron Bansemer, Susan Van Den Heever, Bruce Anderson**
Interaction of Saharan Dust with Liquid and Ice Clouds
- 9:00-9:15 12.5 **Gourihar R. Kulkarni, Steven Dobbie, Jim McQuaid, Mike Smith**
Experimental observations of heterogeneous ice nucleation of mineral dust using a newly developed static thermal gradient diffusion chamber
- 9:15-9:30 12.6 **Jeffrey L. Collett, Lynn Mazzoleni, Xinhua Shen, Pierre Herckes, Taehyoung Lee, Suresh Raja, Kalliat T. Valsaraj**
Carbonaceous aerosol processing by clouds and fogs
- 9:30-9:45 12.7 **John A. Ogren, Elisabeth Andrews**
Cloud-Processing and Aerosol Optical Properties at a Polluted Continental Site
- 9:45-10:00 12.8 **Frank Stratmann, Heike Wex, David Topping, Gordon McFiggans**
Sensitivities of modelled hygroscopic growth and activation on surface tension and the amount of soluble substance in aerosol particles

10:00-10:30

Coffee Break

10:30-12:15

Plenary Oral Session 13: INSTRUMENTATION AND APPLICATIONS OF CLOUD PHYSICS

Chairperson: Darrel Baumgardner

- 10:30-10:45 13.1 **Invited: Patrick Chuang, Ewe Wei Saw, Jennifer Small, Raymond Shaw, Chad Sipperley, Gregory Payne, William Bachalo**
Performance of a Phase Doppler Interferometer for Cloud Microphysical Measurements
- 10:45-11:00 13.2 **Zhaonan Zhang, Bryan Monosmith**
The Development of Airborne CoSSIR for Ice Cloud Measurements
- 11:00-11:15 13.3 **Zhengjun Su**
A new IM3 isothermal cloud chamber for the investigation on cloud physics
- 11:15-11:30 13.4 **Joël Van Baelen, Yves Pointin, Wolfram Wobrock, Andrea Flossmann, Gerhard Peters**
PREPHIX : PREcipitations and microPhysical studies with a High resolution X-band radar: Calibration with a bin microphysical model and supporting measurements
- 11:30-11:45 13.5 **Daren Lu, Wenxing Zhang, Juan Huo**
Ground-based VIS/IR All Sky Images for Observation of Cloud and Aerosol Characteristics
- 11:45-12:00 13.6 **Dong Huang, Yangang Liu, Warren Wiscombe**
Retrieving three-dimensional cloud structure using a tomography method
- 12:00-12:15 13.7 **Jacob P. Fugal, Raymond A. Shaw**
Ice Particle Size Distributions Measured with an Airborne Digital In-line Holographic Instrument

- P12.1 **A.Laaksonen, T. Raatikainen, T. Latham and A. Nenes**
Is it possible to determine the critical droplet diameter experimentally from CCN counter data?
- P12.2 **Amar Hamed, Mihaela Mircea, Stefano Decesari, Maria-Cristina Facchini, Jorma Joutsensaari, Veli-Matti Kerminen, Ari Laaksonen**
Observations and modeling of nucleation mode aerosol evolution during fog episodes in Po Valley
- P12.3 **Andreas Tilgner, Ralf Wolke, Hartmut Herrmann**
CAPRAM modelling of the physico-chemical cloud processing of tropospheric aerosols
- P12.4 **Anthony J. Prenni, Matthew T. Parsons, Markus D. Petters, Paul J. DeMott, Sonia Kreidenweis**
Ice Nuclei Measurements in the Amazon Basin
- P12.5 **Ashley L. Shackelford, Will Cantrell**
Organic Compounds as Deposition Nuclei Before and After Oxidation
- P12.6 **Athanasios Nenes, Akua Asa-Awuku, Sara Lance, James N. Smith, Hafflidi Jonsson, Richard C. Flagan, John H. Seinfeld**
Mixing state, droplet growth kinetics and aging of ambient polluted CCN.
- P12.7 **Atsushi Saito, Masataka Murakami**
Measurement of natural ice nuclei by continuous-flow thermal-diffusion-chamber type ice nucleus counter
- P12.8 **Björn Nillius, Heinz Bingemer, Ruprecht Jaenicke, Thomas Wetter, Bundke Ulrich**
Development of a new airborne Ice nuclei Counter
- P12.9 **Duan Ying, Wu Zhihui, Shi Lixin, Jiang Yan**
The Primary Study on Distribution Characteristics of Aerosol and CCN under Clear Sky Weather Condition in Summer Using Aircraft Detect over The Bohai-Sea Gulf Area, China
- P12.10 **Fabio L. Gonçalves, Jorge A. Martins, Maria A. Silva Dias, Heidi Bauer, Maria Alves**
Fungi spores as ice nuclei and their impacts on rainfall amount over SÃO PAULO City
- P12.11 **Gianni Santachiara, Lorenza Di Matteo, Franco Prodi**
Atmospheric particles acting as Ice Forming Nuclei in different size ranges
- P12.12 **Heike Wex, Markus Petters, Sonia Kreidenweis, Eva Hallbauer, Frank Stratmann**
Closing the gap between hygroscopic growth and activation for secondary organic aerosol (SOA)
- P12.13 **Holger Klein, Ulrich Bundke, Lothar Schuetz, Thomas Wetter, Heinz Bingemer**
The variability of ice nucleating aerosols over Central Europe
- P12.14 **Jonathan Crosier, Martin Irwin, Paul Williams, Michael Flynn, Gordon McFiggans, Hugh Coe, Tom Choularton**
In-situ characterisation of submicron aerosol physical, chemical and hygroscopic properties at the Supersite Hornsgrinde during the COPS field campaign
- P12.15 **Jong H. Kim, Seong S. Yum, James G. Hudson**
Measurement of Aerosol hygroscopicity and cloud condensation nuclei at a remote northeast Asian coastal site in Gosan, Korea in summer 2006 and spring 2007
- P12.16 **Joonas Vanhanen, Tatu Anttila, Antti-Pekka Hyvärinen, Heikki Lihavainen, Yrjö Viisanen, Markku Kulmala**
Ternary mixture of sodium chloride, succinic acid and water; surface tension and its influence on cloud droplet activation.
- P12.17 **Karin Ardon, Zev Levin, Eliezer Ganor, Holger Klein, Heinz Bingemer**
The effect of air pollution on ice nuclei concentration in Israel
- P12.18 **Katsuya Yamashita, Takuya Tajiri, Akihiro Hashimoto, Masataka Murakami, Narihiro Orikasa, Atsushi Saito**
Nucleation and growth of droplets simulated in the dynamic cloud chamber and the microphysical parcel model

- P12.19 **Li J. Wang**
Analyze to the Silver Content of Artificial Precipitation
- P12.20 **Lixin Shi, Yupeng Deng, Yan Jiang, Zhijun Zhao, Zuohui Qi, Xiaobo Dong, Ying Duan**
Measurements of Cloud Condensation Nuclei over North China
- P12.21 **Mildred L. Frias**
Cloud condensation nuclei (CCN) closure during a campaign in the region of Mexico City
- P12.22 **Sanna C. Ekström, Barbara Nozière, Hans-Christen Hansson, Peter Tunved, Tomas Alsberg, Malin Hultberg**
Cloud activation efficiency of compounds from a biological origin
- P12.23 **Silvia Henning, Heike Wex, Alexei Kiselev, Frank Stratmann, LExNo team**
Laboratory study on CCN efficiency of aerosol particles simulating wood combustion particles
- P12.24 **Stephan Mertes, Bart Verheggen, Michael Kamphus, Saskia Walter, Julie Cozic, Martin Ebert, Johannes Schneider**
Physico-chemical characterisation of ice particle residuals in tropospheric mixed-phase clouds based on ice particle collection using the counterflow virtual impactor technique
- P12.25 **Stephen Noble, James G. Hudson**
CCN Scavenging and Drizzle
- P12.26 **Suzanne Crumeyrolle**
The impact of the mesoscale convective systems (MCS) on aerosol physical and chemical properties, focusing on hygroscopicity, during the AMMA campaign
- P12.27 **Thomas Chubb, Steven Siems, Michael Manton**
Sources of Atmospheric Aerosols During Wintertime Precipitation Events in the Snowy Mountains
- P12.28 **Trude Eidhammer, Paul J. DeMott, David C. Rogers, Anthony J. Prenni, Markus Petters, Sonia M. Kreidenweis**
Ice initiation by aerosol particles: Comparing model parameterizations and observations in a parcel framework
- P12.29 **Xincheng Ma, Qiang Zhang, Mengyu Huang**
The influence which subsidence inversion in the spring had on aerosol over Beijing region
- P12.30 **Yan Yin, Ying Duan, Yu Zhang, Lixin Shi, Yunchuan Li**
Vertical and Spectral Distributions of Aerosol Particles over Shijiazhuang Area, Northern China
- P12.31 **Zsófia Jurányi, Martin Gysel, Jonathan Duplissy, Ernest Weingartner, Silvia Henning, Frank Stratmann, Urs Baltensperger**
Cloud forming potential of secondary organic aerosol

13:15-14:30

Poster Session 13: INSTRUMENTATION AND APPLICATIONS OF CLOUD PHYSICS

Chairperson: TBD

- P13.1 **Adekunle T. Adediji, Moses O. Ajewole, Clemens Simmer**
Anomalous propagation of Microwave Radio Signals in Akure, South West Nigeria
- P13.2 **Aili S., Yimei H.**
Study of method on automaticaly analyse seeding area by using the data from new generation radar network
- P13.3 **Alexei Korolev**
New Airborne Extinction Probe
- P13.4 **Alexei Korolev, J W. Strapp, George Isaac, Ed Emery**
Improved Airborne Hot-Wire Measurements of Ice Water Content in Clouds
- P13.5 **Bjørn Egil K. Nygaard, Jón Egill Kristjánsson, Lasse Makonnen, René Cattin**
How accurately can in-cloud icing be predicted by current NWP models?
- P13.6 **Christine Brandau, Herman Russchenberg, Wouter Knap**

- Evaluation of ground-based remotely sensed water cloud properties using aircraft in-situ measurements
- P13.7 **Darren O'Connor**
Development and Tests of a New Fast Forward Scattering Spectrometer Probe (FSSP)
- P13.8 **David C. Rogers**
An Observational Study of Cloud Particle Splash/Break-Up Artifacts on Air Sampling from Inlets
- P13.9 **Dmitri N. Moisseev, V. Chandrasekar, David Hudak**
Spectral decomposition of polarimetric radars and ice hydrometeor retrievals for C3VP
- P13.10 **Eugenio Gorgucci, Luca Baldini**
Rainfall Algorithm Invariant to the Weather Radar Operating Frequency and Immune to Variability in Raindrop Shape-size Model
- P13.11 **Frédéric Burnet, Jean-Louis Brenguier, Thierry Bourriane, Jean-Michel Etcheberry, Thierry Perrin**
The X-PROBE: A new airborne spectrometer for in situ measurement of cloud condensation nuclei and droplets
- P13.12 **Göran P. Frank, Bengt G. Martinsson**
An instrument for studies of the relation between cloud droplet size and dry residual particle size – The Droplet Aerosol Analyser
- P13.13 **Harald Saathoff, Volker Ebert, David W. Fahey, Ru-Shan Gao, Ottmar Möhler, Cornelius Schiller, The A. Team**
Intercomparison of Water Vapour Measurement Techniques
- P13.14 **Hongbin Li, Deping Zou, Wenyao Pu, Jun Song**
Determination of the optimal location and quantity of seeding material for rocket-based rain enhancement
- P13.15 **Ismail Gultepe, J. Milbrandt, S. Benjamin, G. A. Isaac, S. Cober, B. Hansen**
Visibility Parameterization for Forecasting Applications
- P13.16 **Jiang P. Pu, Ai J. Jiang, Zhan Y. Yao, Yi Kong, Dong Yuan, Jiong Lu, Mei Lv**
Rain Droplet Scale Spectrum & Drop Speed Distribution Observation and Its Analysis with Different Precipitation
- P13.17 **Jiping You, Yongji Feng**
Construction of a Ground Synthetic System for Cloud Physics Analysis Based on WebGIS
- P13.18 **Jonathan P. Wolfe, Jefferson R. Snider**
Development of a Temperature-dependent Radar Reflectivity versus Snowrate Relationship
- P13.19 **Jorgen B. Jensen, Stuart Beaton, Jeffrey L. Stith, Dave C. Rogers**
A system for the impactation and automated optical sizing of giant aerosol particles with emphasis on sea salt
- P13.20 **Jun Zhou, Chi H. Lei, Chong Wei, Xia Z. Hu, Jun Yang, Lei Ji**
Retrieval Method of Path-integrated LWC for Airborne Upward-Looking Microwave Radiometer Using Cloud Model
- P13.21 **Lei Ji, Wei Li, Heng C. Lei, Wen A. Xiao, Zhen Wang, Jun Zhou**
Study on the positioning of sounding balloon drifting in MM5
- P13.22 **Marat Z. Dosaev, Boris Y. Lokshin, Yuri D. Seliutski**
On estimation of efficiency of cloud seeding by unguided rockets
- P13.23 **Marc Wüest, Frank G. Wienhold, Ulrich Krieger, Martin Brabec, Thomas Peter**
A novel radiosonde payload to study upper tropospheric / lower stratospheric aerosol and clouds
- P13.24 **Maria Fernández-Raga, Ana I. Calvo, Jan J. Keizer, Roberto Fraile**
The kinetic energy of rain: application on soil erosion
- P13.25 **Mark Vaughan, Matthew McGill, Zhaoyan Liu, Yongxiang Hu, Ralph Kuehn**
Backscatter Color Ratios of Cirrus Clouds Measured by the Cloud Physics Lidar
- P13.26 **Mengistu Wolde, Andrew Pazmany, David Hudak**
Observations of supercooled clouds using airborne G-band radiometer and W-band radar

- P13.27 **Mika Komppula, Ronny Engelmann, Holger Baars, Heikki Lihavainen, Dietrich Althausen, Yrjö Viisanen**
First results of multi-wavelength lidar measurements close to New Delhi, India
- P13.28 **Naomi Kuba**
Effect of Hygroscopic Seeding on Warm Rain
- P13.29 **Ning Luo, Ji F. Wen, Jia Ran**
The Observation of Electric Wire Icing and its Weather Condition in Guizhou
- P13.30 **Peter A. Taylor, Mark Gordon, Sergiy Savelyev, P-Y Li, Sumita Biswas**
Field studies and modelling of Drifting and Blowing Snow
- P13.31 **Qian Chen, Sheng-Jie Niu, Hua-Ying Yu**
Z-R Relationships from the Particle Size and Velocity (PARSIVEL) Optical Disdrometer and its Application in Estimating Areal Rainfall
- P13.32 **Qingtao Qing, Hesheng Zhou, Jiandong Feng, Meiting Hou**
A Preliminary Analysis of the Feasibility of Cloud Seeding over the Headwaters of the Rivers in China
- P13.33 **Ran Jia, Sheng-Jie Niu, Ning Lou, Ji-Fen Wen**
The Relation Between Power Line Icing and Meteorological Conditions in GuiZhou, China
- P13.34 **Richard Cotton, Paul H. Kaye, Edwin Hirst, Josph Ulanowski**
Performance testing of the Small Ice Detector Mk2 (SID-2) in liquid and ice clouds
- P13.35 **Roger Marchand**
A Comparison of Cloud Radar Profiles of Cloud Occurrence with Multiscale Modeling Framework (MMF) Simulated Radar Profiles as a Function of the Large-Scale Atmospheric State
- P13.36 **S.A. Vladimirov**
Some numerical experiments on modification of precipitation formation in warm convective clouds by seeding with soluble particles
- P13.37 **Sadiel Novo**
Radar tracking method for cloud seeding experimental units over Cuba
- P13.38 **Sante Laviola, Vincenzo Levizzani**
Rain rate retrieval using the 183-WSL algorithm
- P13.39 **Stewart G. Cober, George A. Isaac**
Characterizing Cloud Environments to Support the Development of Aircraft Icing Certification Standards for the Regulatory Authorities
- P13.40 **Thorsten Reinhardt, Susanne Crewell, Christoph Selbach, Veronika Breininger**
Evaluation of Regional Precipitation Forecasts Using Multi-Dimensional Remote-Sensing Observations
- P13.41 **Wiebke Frey, Marian de Reus, Heike Eichler, Rolf Maser, Britta Mey, Manfred Wendisch, Stephan Borrmann**
AIRcraft Towed Sensor Shuttle (AIRTOSS): a tandem measurement platform for cloud-radiation studies
- P13.42 **William A. Cooper, Jeffrey K. Stith, David C. Rogers, Jorgen B. Jensen**
The NSF/NCAR Gulfstream GV: A New Research Aircraft for Studies of Clouds
- P13.43 **Yi I. Wang**
Analysis on the Precipitation Enhancement Potential Area of Cyclone
- P13.44 **YuXiang He**
Dual-Polarization Radar Retrieval Microphysical Vertical Structure in the Vicinity of the Melting Layer
- P13.45 **Zbigniew Ulanowski, Christopher Stopford, Evelyn Hesse, Paul H. Kaye, Edwin Hirst, Richard S. Greenaway, Martin Schnaiter**
Small Ice Detector 2: Characterization of Ice Crystals Using Analysis of Azimuthal Scattering Patterns
- P13.46 **Zhanyu Yao, Liang Peng**
Cloud Liquid Water Retrieval in Non-Precipitating Cloud with Satellite Microwave Data over Henan Region

- P13.47 **Zhaorong Li, Tianyu Chen**
Recently Water Vapor and Its Transport Features and over East-central Region of Northwest China
- P13.48 **Zhien Wang, Perry Wechsler, Jeff French, Alfred Rodi, Samuel Haimov, Gabor Vali, Andrew L. Pazmany**
The New Integrated Cloud Observation Capabilities of Wyoming King Air by Combining Radar, lidar, Microwave Radiometer and In Situ Measurements
- P13.49 **Zhong L. Zhi, Liu L. Ping**
A 35-GHz Radar for Cloud and Precipitation Studies in China
- P13.50 **J W. Strapp, James T. MacLeod, Lyle E. Lillie, Alexei V. Korolev**
Calibration of Ice Water Content in a Wind Tunnel / Engine Test Cell Facility

14:45-16:45

Plenary Oral Session 13: INSTRUMENTATION AND APPLICATIONS OF CLOUD PHYSICS (continued)

Chairperson: TBD

- 14:45-15:00 13.8 **Laurent Sauvage, Simone Lolli, Patrick Chazette, Joseph Sanak**
An innovative eye safe and compact EZ LIDARTM for Pollution and Cloud monitoring
- 15:00-15:15 13.9 **Jean Pierre Cariou, Rémy Parmentier, Laurent Sauvage, Christine Aussibal**
An operational compact heterodyne pulsed Doppler lidar for high accuracy wind profiling in the boundary layer
- 15:15-15:30 13.10 **Anna K. Jagodnicka, Tadeusz Stacewicz, Grzegorz Karasiński, Michał A. Posyniak**
Simple method of Aerosol Particle Size Distribution retrieving from multiwavelength lidar signals
- 15:45-16:00 13.11 **Scott M. Ellis, Jothiram Vivekanandan**
Cloud Liquid Water Content and particle size Retrievals Using Dual-frequency Radar Measurements
- 16:00-16:15 13.12 **Yasushi Fujiyoshi, Kazuhisa Yamashita, Chusei Fujiwara, Motomi Kikuta, Mikio Nakanishi**
Overview of turbulent and layer structures in the lower troposphere observed by a 3D-scanning Doppler Lidar
- 16:15-16:30 13.13 **Ewan J. O'Connor, Anthony J. Illingworth**
Comparison of observed cloud properties at the COPS AMF site in Germany with their representation in operational models
- 16:30-16:45 13.14 **Uwe Feister, Hans Möller, Theo Sattler, Janet E. Shields**
Comparison of macroscopic cloud data from ground-based measurements using VIS/NIR and IR instruments at Lindenberg, Germany

END OF CONFERENCE