International Conference on Clouds and Precipitation 2021

Icebreaker session

Day 0 | 1 August 2021 | 1300:1500 UTC

The Icebreaker session allows initial interactions and exchanges in an informal environment.

The ice breaker session is traditionally conducted previous day of the ICCP conferences. The ICCP 2021 offers a new virtual experience where all participants can meet and have conversation.

The ice breaker session is arranged in the virtual space with a welcoming atmosphere of Indian art and culture. Please enjoy the unique virtual experience in the company of ICCP participants.

Inaugural Program

Day 1 | 2 Aug | 0530:0600 PM

Invocation (by Dr. Medha Deshpande IITM, Pune)
Introduction by Dr. Thara Prabhakaran (2 minutes)

Welcome address (2 minutes)
Director, IITM, Prof. Ravi S. Nanjundiah

Inaugural Address (4 minutes)
Honourable Secretary, Department of Science and Technology (DST)
Ministry of Science and Technology
Ministry of Earth Sciences, Govt. of India
Prof. Ashutosh Sharma

Speech (2 minutes) by Director General, India Meteorological Department
Dr. M. Mohapatra
Speech (2 minutes) National Organizing Committee Chair
Prof. G. S. Bhat

Address(4 minutes) by the President, ICCP Commission
Prof. Andrea Flossmann

Vote of thanks by Dr. Thara Prabhakaran (2 minutes)

Oral Program | Day 1 | 2 Aug 2021						
Day 1	**Plenary talk by Prof. Ravi S Nanjundiah** **Title: Indian studies on clouds at IITM** **Moderator: Dr. Thara Prabhakaran**				**2 Aug**	**1230:1300 UTC**
	Parallel I Monsoon 1 **Chairs: Prof. G. S. Bhat (Chair)** **Dr. P. Pradeepkumar (Co-Chair)** **Moderator: Dr. Padmakumari B**		**Parallel II Polar 1** **Dr. Annica M L Ekman (Chair)** **Dr. Paul DeMott (Co-Chair),** **Moderator: Dr. Supriyo Chakravarti**			
	Author	Title	Author	Title		
1	Abhishek Kumar Jha	The relationship of radar-derived storm-scale convective cloud ensemble and large-scale environment for an Indian Monsoon Trough Region	Greg McFarquhar	Aerosol-cloud-precipitation interactions in mixed-phase clouds over the Southern Ocean: Results from MARCUS, MICRE and SOCRATES	2 Aug	1300:1305 UTC
2	Kandula V Subrahmanyam	A comprehensive study on the vertical structure of various cloud type distribution and associated dynamics over the Indian summer monsoon region using CloudSat observations	Tim Carlsen	Spaceborne evidence of biological ice-nucleating particles influencing cloud phase	2 Aug	1305:1310 UTC
3	Mahen Konwar	Analysis of microphysical cloud structure in high resolution in-situ measurements	Tatsuya Seiki	Improvements in super-cooled liquid water simulations of low-level mixed-phase clouds over the Southern Ocean using a single-column model	2 Aug	1310:1315 UTC
4	Siddharth Gumber	Chemical Processing and Non-ideality in CAIPEEX Microphysics	Israel Silber	Crystal-Clear Evidence of Ice Crystal Habit Modulation of Arctic Supercooled Water Occurrence	2 Aug	1315:1320 UTC
5	Olivier Pauluis	Objective identification of convective regimes during the Indian Summer Monsoon	Bart Geerts	A case study of cloud and precipitation processes in post-frontal mesoscale convection over the Southern Ocean	2 Aug	1320:1325 UTC
	Discussion		Discussion			1325:1335 UTC

Oral Program | Day 1 | 2 Aug 2021						
	Parallel I Monsoon 2 **Dr. A.K. Sahai (Chair)** **Dr. A. K Kamra (Co-Chair)** **Moderator: Dr. Anoop Mahajan**		**Parallel II Polar 2** **Dr. Paul DeMott (Chair)** **Dr. Luisa Ickes (Co-Chair), Dr. Ravichandran(Co-Chair)** **Moderator: Dr. Yogesh Tiwari**			
11	Vivekananda Hazra	Performance evaluation of cloud microphysical parameterizations for monsoon Low pressure systems over the Indian region	Susanne Glienke	Dependencies between ice number concentrations and ice water content in mixed phase clouds during ACME-V	2 Aug	1335:1340 UTC
12	Ushnanshu Dutta	Role of cloud microphysics on the simulation of Tropical Intraseasonal Oscillations: Monsoon and MJO	Barbara Dietel	Phase distribution of midlevel clouds over the Southern Ocean from combined active and passive satellite observations	2 Aug	1340:1345 UTC
13	Paromita Chakraborty	Assessing the predictability of Indian summer monsoon by NCMRWF global ensemble prediction system	Yishi Hu	A Modeling Case Study of Mixed-phase Convective Clouds in the Marine Boundary Layer over the Southern Oceans in MARCUS	2 Aug	1345:1350 UTC
14	Kaustav Chakravarty	Characteristic features of the morphology of clouds and microphysics of precipitation during inter-seasonal phases of monsoon over Mumbai - an urban coastal city of India	Ines Bulatovic	The importance of Aitken mode particles in the high Arctic: Large-eddy simulation study	2 Aug	1350:1355 UTC
15	Yogesh Prasaad Madras Sethuraman	Downward flux of raindrops in and below clouds	Francisco Lang	Identification and Characterization of Open and Closed Mesoscale Cellular Convection over the Southern Ocean	2 Aug	1355:1400 UTC
	Discussion		Discussion			1400:1410 UTC

Oral Program | Day 1 | 2 Aug 2021						
	Parallel I Monsoon 3 **Dr. Odran Sourdeval (Chair)** **Dr. Suryachandra Rao(Co-Chair),** **Dr. Rajeev Mehajan (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**		**Parallel II Polar 3** **Dr. Paul Field (Chair)** **Gillian Young (Co-Chair)** **Moderator: Dr. Bipin Kumar**			
21	Sukanya Patra	Characteristics of monsoon warm clouds and its role on the rainfall	Yi Huang	Wintertime In-situ Cloud Microphysical Properties of Mixed-phase Clouds over the Southern Ocean	2 Aug	1410:1415 UTC
22	Martina Krämer	Tropical tropopause layer (TTL) cirrus and humidity in the Asian monsoon anticyclone and the surrounding tropics	John D'Alessandro	Spatial heterogeneity of liquid, ice and mixed phase low-level clouds over the Southern Ocean derived using in situ observations acquired during SOCRATES	2 Aug	1415:1420 UTC
23	Gary Lloyd	The Origin of the ice phase in Tropical Maritime Convection	Ethan Schaefer	Characterization of Supercooled Large Drop Environments over the Southern Ocean: Results from SOCRATES	2 Aug	1420:1425 UTC
24	Yongjie Huang	Microphysical Processes Producing High Ice Water Contents (HIWCs) in Tropical Convective Clouds: Results from Simulations based on the HAIC-HIWC Field Campaign	Wei Wu	Microphysical properties of mixed-phased clouds over the Southern Ocean observed during SOCRATES field campaign	2 Aug	1425:1430 UTC
25	Shang Wu	Entrainment and Decoupling Processes in Non-Drizzling Marine Stratocumulus	Daniel Partridge	Sources of cloud-active aerosols over Antarctica	2 Aug	1430:1435 UTC
	Discussion		Discussion			1435:1445 UTC

Oral Program | Day 1 | 2 Aug 2021						
	Parallel I Mixed **Dr. Martina Kraemer (Chair)** **Peter Spichtinger (Co-Chair)** **Moderator: Dr. Mahen Konwar**		**Parallel II Cirrus** **Alfons Schwarzenboeck (Chair)** **Dr. J. R. Kulkarni (Co-Chair),** **Dr. G. Pandithurai (Co-Chair)** **Moderator: Dr. Subratakumar Das**			
31	Andrew Heymsfield	Survival of Snow in the Melting Layer: Relative Humidity Influence	Annica M L Ekman	A Sensitivity Study of Arctic Air-Mass Transformation Using Large Eddy Simulation	2 Aug	1445:1450 UTC
32	Corinna Hoose	A space-based perspective of the impact of fire plumes on the thermodynamic cloud phase transition over the Amazonian forest	David Mitchell	Does climate sensitivity depend on ice nuclei concentration?	2 Aug	1450:1455 UTC
33	Alexander Khain	Why are Arctic stratocumulus clouds mixed-phase?	Minghui Diao	Cirrus Cloud Formation and Evolution Based on Global Aircraft Observations and Simulations	2 Aug	1455:1500 UTC
34	Paul J. Connolly	Cloud-Resolving Model Simulations of ice formation processes in mixed-phase layer clouds	Tim Lüttmer	Ice formation pathways in warm conveyor belts	2 Aug	1500:1505 UTC
35	Tempei Hashino	Exploring Doppler velocity spectra to characterize ice nucleation and microphysical processes for Arctic mixed-phase clouds	Amit Kumar Pandit	Balloon Measurements of Cirrus Clouds over Hyderabad during BATAL Campaign	2 Aug	1505:1510 UTC
	Discussion		Discussion			1510:1520 UTC

Day 1 | Poster Program | 2 Aug 2021 | 1530:1630 UTC

ipostersessions

Monsoon clouds and precipitation | Polar clouds

Mixed phase clouds | Cirrus

Day 1 | ICCP Commission Event | 2 Aug | 1630:1730 UTC

ICCP Commission 2016-2020

Prof. Andrea Flossmann - President

Prof. Greg McFarquhar - Vice President **Dr. Darrel Baugardner - Secretary-Treasurer**

Dr. Rachel Albrecht Brazil	Dr. Heike Wex Germany
Dr. Paul Connoly UK	Dr. Seong Soo Yum Korea
Dr. Corinna Hoose Germany	Dr. Paul Field UK
Dr. Martina Krämer Germany	Dr. C. Franklin Australia
Dr. Chunsong Lu China	Dr. Ismail Gultepe Canada
Dr. Hugh Morrison USA	Dr. Ilan Koren Israel
Dr. Narihiro Orikasa Japan	Dr. Ottmar Möhler Germany
Dr. Alfons Schwarzenboeck France	Dr. Vistor Petrov Russia
Dr. Philip Stier UK	Dr. Thara Prabhakaran India
Dr. Trude Storelvmon USA	Dr. Robert Rauber USA
Dr. Julie Thériault Canada	Prof. Rob Wood USA
Dr. Susan Van den Heever USA	Dr. Huiwen Xue China

Day 1 https://youtu.be/fIF0cApKjbE

Oral Program | Day 2 | 3 Aug 2021						
Day 2	**Plenary talk by Prof. Andrea Flossmann** **Title : Memorial talk** **Moderator: Dr. Anoop Mahajan**				**3 Aug**	**1200:1230 UTC**
	Parallel I Aerosol-cloud 1 **Dr. Philip Stier (Chair)** **Prof. Satyajit Ghosh (Co-Chair),** **Dr. Sureshbabu(Co-Chair)** **Moderator: Mr. Murugavel P**		**Parallel II Turbulence 1** **Dr. Luchunsong (Chair)** **Dr. Lulin Xue (Co-Chair)** **Moderator: Dr. Mahen Konwar**			
41	Michel Flores	Sensitivity of warm clouds to large particles in measured marine aerosol size distributions	James G Hudson	Inhomogeneous Mixing and Drizzle	3 Aug	1230:1235 UTC
42	Jorgen B. Jensen	A criticism of the fundamentals of aerosol-cloud interactions in marine stratocumulus and other warm clouds: Aircraft observations of clouds and aerosols, numerical diffusion in models, and the case for autoconversion based on coarse-mode sea-salt aerosol	Sonia Lasher-Trapp	Entrainment in Simulated Supercell Thunderstorms	3 Aug	1235:1240 UTC
43	Graham Feingold	Aerosol effects on clouds and precipitation in the trade-wind cumulus regime: from BOMEX (1969) to EUREC4A/ATOMIC (2020)	McKenna Stanford	Impacts of a Stochastic Mixing Scheme on Simulated Deep Convection	3 Aug	1240:1245 UTC
44	Clare E. Singer	Quantifying Cloud Sensitivity to Aerosol Hygroscopicity using a Lagrangian Cloud Model	Marta Waclawczyk	Detection of temporal variations of turbulence in clouds based on in-situ measurements.	3 Aug	1245:1250 UTC
45	Paul Field	Cloud AeroSol Interacting Microphysics in the Unified Model regional configuration	Chunsong Lu	Observational, Numerical and Theoretical Analysis of Entrainment-Mixing Processes in Low-Level Clouds	3 Aug	1250:1255 UTC
	Discussion		Discussion			1255: 1305 UTC

Oral Program | Day 2 | 3 Aug 2021						
	Parallel I Aerosol-cloud 2 **Dr. Philip Stier (Chair)** **Dr. P.D Safai (Co-chair), Prof. Vinayak Sinha(Co-Chair)** **Moderator: Dr. Thara Prabhakaran**		**Parallel II Turbulence 2** **Dr. Luchunsong (Chair)** **Dr. Lulin Xue (Co-Chair)** **Moderator: Dr. Subratakumar Das**			
51	Wojciech W. Grabowski	Convective invigoration in polluted environments: truth or fiction?	Jakub L. Nowak	Coupled and decoupled stratocumulus-topped boundary layers in terms of turbulence properties	3 Aug	1305:1310 UTC
52	Philip Stier	A multi-model Lagrangian analysis of microphysics and aerosol effects on scattered deep convection	Lois Thomas	Diffusional growth of cloud droplets in homogeneous isotropic turbulence: DNS, scaled-up DNS, and stochastic model.	3 Aug	1310:1315 UTC
53	Ross Herbert	Isolating large-scale smoke impacts on cloud and precipitation processes over the Amazon with convection permitting resolution	Seong Soo Yum	Cloud microphysical relationships in warm clouds revisited – results from several recent aircraft field campaigns	3 Aug	1315:1320 UTC
54	Siddhant Gupta	Dependence of Cloud and Precipitation Properties over the South-East Atlantic on Aerosol Concentrations Above and Below Clouds	Sinan Gao	Vertical Distribution of Entrainment-Mixing Mechanisms Near Stratocumulus Tops	3 Aug	1320:1325 UTC
55	Odran Sourdeval	Satellite-based estimate of the climate forcing due to aerosol - ice cloud interactions	Dillon Dodson	Droplet Clustering and Turbulence in Stratocumulus Clouds	3 Aug	1325:1330 UTC
	Discussion		Discussion			1330:1340 UTC

Oral Program | Day 2 | 3 Aug 2021						
	Parallel I Aerosol-cloud 3 **Prof. Sue Van Den Heever (Chair)** **Dr. Adele Igel (Co-Chair)** **Moderator: Dr. Anoop Mahajan**		**Parallel II Turbulence 3** **Dr. Ilan Koren (Chair)** **Dr. Rama Govindarajan (Co-Chair)** **Moderator: Dr. Anupam Hazra**			
61	Edward Gryspeerdt	Satellite observations of the timescales of aerosol-cloud interactions	Bipin Kumar	Characteristics of high and low vorticity regions in a turbulent cloud under mixing scenario	3 Aug	1340:1345 UTC
62	Alyson Douglas	Using machine learning to establish cloud-aerosol-environment regimes	Gustavo Coelho Abade	Lagrangian stochastic microphysics at unresolved scales in turbulent cloud simulations	3 Aug	1345:1350 UTC
63	Paul Alan Barrett	Impact of biomass burning aerosol on precipitation and top of atmosphere radiation in transition cumulus boundary layers in the southern Atlantic	Sudarsan Bera	Observation of Turbulent-Mixing Effect on Cloud Microphysics at millimeter scale	3 Aug	1350:1355 UTC
64	chandan sarangi	Aerosol indirect effect might be playing a larger role than previously believed during Indian Summer Monsoon	Matthew Marcus Feist	Turbulent Regions in Convective Clouds	3 Aug	1355:1400 UTC
65	Andrew Gettelman	Climate impacts of COVID-19 Emissions Reductions via Aerosol-Cloud Interactions	Shivsai Ajit Dixit	Laboratory and large-eddy simulations of turbulence in monsoon low-level-jet	3 Aug	1400:1405 UTC
	Discussion		Discussion			1405:1415 UTC

Oral Program | Day 2 | 3 Aug 2021						
	Parallel I High impact Weather **Dr. Theriault Julie (Chair)** **Dr. Mathieu Lachapelle (Co-Chair)** **Moderator: Dr. Mahen Konwar**		**Parallel II Orography** **Dr. Hugh Morrison(Chair)** **Dr. Melissa Cholette (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**			
71	Charmaine Franklin	Sub-km ensemble simulations of a severe thunderstorm and tornado outbreak	Jan Henneberger	A quest for the origin of ice crystals and their growth to snowflakes in mountain regions	3 Aug	1415:1420 UTC
72	Jason Milbrandt	Improving the Simulation of Hail using Triple-Moment Ice in the Predicted Particle Properties (P3) Microphysics Scheme	Sarah Tessendorf	Microphysical analysis of generating cells in wintertime orographic clouds observed during SNOWIE	3 Aug	1420:1425 UTC
73	Subrat Kumar Panda	Sensitivity Analysis of Cloud Microphysics in the Simulation of Cloudbursts over Uttarakhand Himalayas using WRF Modelling System	Yi Huang	Characteristics and processes of wintertime precipitation over the Australian Alps: Insights from a recent field campaign	3 Aug	1425:1430 UTC
74	Medha Deshpande	Variations of Satellite Measured Brightness Temperatures Associated with Intensity Changes of Tropical Cyclones over the North Indian Ocean	Adam Joseph Majewski	Precipitation Enhancement in the Presence of Turbulent Layers in Mixed Phase Orographic Clouds	3 Aug	1430:1435 UTC
75	Jiwen Fan	Urbanization-induced land and aerosol impacts on storm propagation and hail characteristics	Haonan Chen	Orographic precipitation physics as observed by dual-polarization radar: Understanding the impacts of Atmospheric Rivers	3 Aug	1435:1440 UTC
	Discussion		Discussion			**1440-1450 UTC**

Day 2 | Poster Program | 3 Aug 2021 | 1500:1600 UTC
ipostersessions **Aerosol-Cloud interaction | Turbulence | High Impact Weather** **Orographic clouds**
Day 2 | Panel discussion | 3 Aug | 1600:1700 UTC
Topic: The Missing In situ and remote sensing observations: What properties, in what location and season, and at what spatial and temporal scales? How do these missing measurements impact our understanding of cloud processes?
Chair: Prof. Andrea Flossmann **Panelists: Prof. Greg McFarquhar Dr. Darrel Baugardner** **Professor. V Chandrashekar**
Day 2 https://youtu.be/JP3vSaY44fU

Oral Program | Day 3 | 4 Aug 2021						
Day 3	**Plenary talk by Prof. William Cotton** **Title: A review of my career associated with aerosol impacts on deep convection** **Chair: Andrea Flossmann** **Chair Moderator: Dr. Thara Prabhakaran**					**1200:1230 UTC**
	Parallel I Remote sensing 1 **Prof. Greg McFarquhar (Chair)** **Dr. Yi Huang (Co-Chair)** **Moderator: Dr. Mahen Konwar**		**Parallel II Primary-secondary 1** **Dr. Ottmar Moehler (Chair)** **Dr. Larissa Lacher (Co-Chair)** **Moderator: Dr. Yogesh Tiwari**			
81	Yujun Qiu	Tibetan Plateau cloud structure and cloud water content derived from millimeter cloud radar site observations in summer	Paul DeMott	Combining observations and modeling to understand global ice nucleating particle sources and impacts	4 Aug	1230:1235 UTC
82	Jae In Song	Climatology of Melting Layer Heights estimated from Cloud radar observations at various locations	Alexei Korolev	Observation of secondary ice production at cold temperatures	4 Aug	1235:1240 UTC
83	Leonie von Terzi	A new view on the dendritic growth zone with spectral polarimetric and multifrequency radar observations	Luisa Ickes	Arctic marine ice nucleating aerosol: a laboratory study of microlayer samples and phytoplankton cultures	4 Aug	1240:1245 UTC
84	Audrey TEISSEIRE	Attribution of riming and aggregation to the evolution of hydrometeor shape and orientation in mixed-phase clouds with SLDR-mode scanning cloud radar	Guangyu Li	A Lognormal-Distribution-Based Parameterization of Atmospheric Background Concentration of Ice Nucleating Particles in the Arctic	4 Aug	1245:1250 UTC
85	Stefan Kneifel	Long-term statistics of riming derived from ground-based cloud radar datasets	Hannah Frostenberg	The Chance of Freezing – Parameterising temperature dependent freezing including randomness of INP concentrations	4 Aug	1250:1255 UTC
	Discussion		Discussion			1255:1305 UTC

Oral Program | Day 3 | 4 Aug 2021						
	Parallel I Remote-sensing 2 **Dr. Rachel Albrecht (Chair)** **Dr. Odran Sourdeval (Co-Chair)** **Moderator: Dr. Subrata K Das**		**Parallel II Primary-secondary 2** **Dr. Corinna Hoose (Chair)** **Dr. Anupam Hazra (Co-Chair), Prof. Sarin (Co-Chair)** **Moderator: Dr. Supriyo C**			
91	Roelof Theunis Bruintjes	Radar analyses of first echoes of convection and In-situ measurements over the United Arab Emirates and retrieval of polarimetric variables	Luis Antonio Ladino Moreno	Ice Nucleating Particles Variability at a High-Elevation Tropical Monitoring Station: Planetary Boundary Layer vs. Free Troposphere	4 Aug	1305:1310 UTC
92	Martin Radenz	High frequency of ice formation stratiform clouds – revisiting effects of turbulence, coupling and instrument sensitivity	Paul J. Connolly	Laboratory investigations of supercooled drop collisions with ice surfaces	4 Aug	1310:1315 UTC
93	Sachin Deshpande	Comparison of cloud-resolving model simulations with ground-based radar observations over the Western Ghats of India	Joerg Christian Karl Gerhard Wieder	Diurnal Changes in Ice Nucleating Particle Concentrations over the Swiss Alps Compared to in the Arctic	4 Aug	1315:1320 UTC
94	Davide Ori	Constraining ice microphysics parameterization in the ICON model using triple-frequency Doppler cloud radar observations and ice particle modeling	Jayachandra n V	Contrasting CCN characteristics observed during the Indian Summer Monson at a rain shadow region: Role of carbonaceous aerosols	4 Aug	1320:1325 UTC
95	Alexander Khain	Spectral-Bin Cloud Microphysics – structure of a simulated mesoscale convective system as seen by coupling with dual polarimetric forward radar simulator	Ottmar Möhler	A comprehensive set of parameterizations for primary ice formation in clouds as derived from AIDA cloud simulation experiments	4 Aug	1325:1330 UTC
	Discussion		Discussion			1330:1340 UTC

Oral Program | Day 3 | 4 Aug 2021						
	Parallel I Remote-sensing 3 **Dr. Rachel Albrecht (Chair), Dr. A. K. Patra (Co-Chair)** **Moderator: Dr. Anoop Mahajan**		**Parallel II Primary-secondary 3** **Dr. Corinna Hoose (Chair), Dr. Cunbo Han (Co-Chair)** **Dr. S. Ramachandran (Co-Chair)** **Moderator: Dr. Padmakumari**			
101	Tatsuya Seiki	Near-global three-dimensional hail signals detected by using GPM-DPR observations	Robert O David	Do immersion mode ice-nucleating particles really matter for precipitation?	4 Aug	1340:1345 UTC
102	Karina McCusker	Analysis of multi-frequency ice cloud observations collected during the PICASSO campaign	Heike Wex	Ice Nucleating Particles in Southern Chile and their connection to clouds	4 Aug	1345:1350 UTC
103	Arka Mitra	Validation and Quantification of Biases in Satellite-Derived Cloud Top Height (CTH) through Inter-comparison of Nearly Co-incident Satellite Data and Radiative Transfer Simulations	Luis Antonio Ladino Moreno	Ice Nucleating Abilities of Urban and Biomass Burning Aerosol Particles over Mexico	4 Aug	1350:1355 UTC
104	Julian Hofer	Lidar Observations of SpatioTemporal Contrasts in Clouds and Aerosols (LOSTECCA) in Lauder, New Zealand	Alexei Kiselev	Shattering of freezing drizzle droplets: conceptual model based on thermal imaging and high-speed microscopy observations	4 Aug	1355:1400 UTC
105	Michael Schäfer	Introduction to the new airborne thermal infrared imager VELOX for remote sensing of cloud and surface properties	Paul Lawson	Microphysics of Coalescence and Secondary Ice Production: Synthesis of Results from Five Field Campaigns	4 Aug	1400:1405 UTC
	Discussion		Discussion			1405:1415 UTC

Oral Program | Day 3 | 4 Aug 2021						
	Parallel I Mesoscale **Prof. Andrea flossmann (Chair)** **Dr. Parvinder Maini (Co-Chair)** **Moderator: Mr. Murugavel**		**Parallel II secondary** **Dr. Paul Field (Chair)** **Dr. Kalli Furtado (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**			
111	Akkisetti MadhuLatha	Observational aspects of tropical mesoscale convective systems over southeast India	Zhipeng Qu	Role of secondary ice production in the modelling of tropical convection	4 Aug	1415:1420 UTC
112	Soumya Samanta	Dissecting the microphysical features of a monsoon cloud cluster over Indian region using polarimetric radar observation and numerical simulation	Gillian Young	Evaluating Arctic clouds modelled with the Unified Model and Integrated Forecasting System	4 Aug	1420:1425 UTC
113	Xiaoran Ouyang	Clouds' organization in the transition from cloud streets to open cells in a Cyprus Low	Wolfram Wobrock	A numerical study for the evaluation of cloud physical properties during the HyMeX IOP7a event: Role of the ice initiation	4 Aug	1425:1430 UTC
114	Annika Oertel	Towards understanding the role of uncertainty in microphysical processes for cloud and precipitation formation in an extratropical cyclone	Kenji Suzuki	Development of a new cloud/precipitation particle imaging radiosonde	4 Aug	1430:1435 UTC
115	Jiwen Fan	Toward improving simulation of mesoscale convective systems with regionally refined model and super parameterization	Daniel R. McAdams	Analysis of Validation Test Flight data from a Holographic Cloud Particle Imager (HCPI)	4 Aug	1435:1440 UTC
	Discussion		Discussion			1440: 1450 UTC

Day 3 | Poster Program | 4 Aug 2021 |1500:1600 UTC
ipostersessions **Remote sensing | Primary and secondary ice and cloud condensation nuclei** **Secondary Ice Production| Mesoscale cloud Systems**
Day 3 | Panel Discussion | 4 Aug 2021 | 1600:1700 UTC
Topic: How can we improve clouds in the models?
Chair: Hugh Morrison **Panelists: Dr. Jason Milbrandt | Dr. Lulin Xue | Dr. Wojtek Grabowski** **Dr. Adele Igel | Dr. Axel Seifert | Dr. Paul Field | Dr. Kalli Furtado** **Prof. Corinna Hoose | Prof. Sue van den Heever**
Day 3 https://youtu.be/P2t-e6sznaM

Oral Program | Day 4 | 5 Aug 2021						
Day 4	**Plenary Talk by Dr. Zamin Kanji , (Co-lead Luis Antonio Ladino Moreno and Karin Ardon-Dryer) Topic: Has Diversity, Equity, and Inclusion influenced science and research in the cloud physics community? Chair: Andrea Flossmann , Moderator: Dr. Thara Prabhakaran**				**5 Aug**	**1200:1230 UTC**
	Parallel I climate 1 Dr. Trude Storelvmo (Chair) Prof. Mohankumar (Co-Chair), Prof. U.C. Mohanty (Co-Chair) Moderator: Dr. B. Padmakumari B		**Parallel II Basic 1 Dr. Orikasa (Chair) Dr. Sisi Chen (Co-Chair) Moderator: Dr. Anupam Hazra**			
121	Ulrike Lohmann	Higher climate sensitivity and stronger cloud feedbacks in the ECHAM6.3 global climate model with a prognostic cloud fraction scheme	Lulin Xue	Summary of the 10th International Cloud Modeling Workshop	5 Aug	1230:1235 UTC
122	J. Steven Dobbie	Response of deep convective clouds to potential future climate thermodynamical changes in vertical atmospheric structure	Logan Mitchell Roy	Numerical Simulation of a Warm Rain Event Using a New Lagrangian Cloud Microphysics Model: Comparison with two X-band Polarimetric Radars in Korea	5 Aug	1235:1240 UTC
123	Philip Stier	Energetic regulation of microphysical aerosol effects on precipitation on regional scales	Yign Noh	Parameterizations of Microphysical Processes in a Double-Moment Scheme of a Warm Cloud Based on Lagrangian Cloud Model Simulations	5 Aug	1240:1245 UTC
124	Ulrike Lohmann	New evidence of soot particles affecting past and future cloud formation and climate	Hugh Morrison	A new observationally-constrained statistical-physical framework to improve the bulk parameterization of microphysics and rigorously quantify uncertainty	5 Aug	1245:1250 UTC
125	Hailong Wang	Understanding roles of cloud and precipitation in the recent Arctic warming through radiative feedbacks	Susan van den Heever	Identifying Limitations in Microphysical Parameterizations Through the Use of Disdrometer Observations	5 Aug	1250:1255 UTC
	Discussion		Discussion			1255:1305 UTC

Oral Program | Day 4 | 5 Aug 2021						
	Parallel I Climate 2 **Dr. Trude Storelvmo (Chair),** **Dr. Ashis K. Mitra(Co-Chair)** **Moderator: Dr. Supriyo Chakravarti**		**Parallel II Basic 2** **Dr. Victor Petrov (Chair),** **Prof. Jaywant Arakeri (Co-Chair)** **Moderator: Dr. Anoop Mahajan**			
131	Miguel Perpina	How will the convection and the altitude of opaque clouds evolve at the end of the 21st century in the tropics in a warmer climate?	Subharthi Chowdhuri	Subharthi Chowdhuri Quantifying the role of non-linear dynamics associated with wind-gusts on surface layer turbulence: A novel approach	5 Aug	1305:1310 UTC
132	Tomoki Ohno	Importance of the cloud-altitude change to the high-cloud response to sea surface temperatures	Moumita Bhowmik	Cloud Droplets Growth due to Ostwald Ripening in Turbulent Environment	5 Aug	1310:1315 UTC
133	Steven Siems	Characteristics of Marine Boundary Layer Clouds over the Southern Ocean	Anubhab Roy	Cloud droplet collision efficiencies - the role of non-continuum hydrodynamic interactions	5 Aug	1315:1320 UTC
134	Konstantinos	IN SITU GROUND BASED MEASUREMENTS OF LOW LEVEL CLOUDS IN NORTHERN FINLAND DURING 10 YEARS OF PALLAS CLOUD EXPERIMENTS.	Bogdan Rosa	Numerical modeling of collision statistics of cloud droplets taking into account effects of two-way momentum coupling and gravity	5 Aug	1320:1325 UTC
135	Guy Dagan	Combined constraint of the atmospheric energy and water budgets on the spatial scale of precipitation changes under climate change	Yangang Liu	Dissecting Physical Mechanisms for Increasing Droplet Sizes with Decreasing Droplet Concentration in Turbulent Clouds	5 Aug	1325:1330 UTC
	Discussion		Discussion			1330:1340 UTC

Oral Program | Day 4 | 5 Aug 2021						
	Parallel I Weathermod 1 **Dr. Robert M Rauber (Chair), Dr. Sisi Chen (Co-Chair)** **Moderator: Dr. Yogesh Tiwari**		**Parallel II Basic 3** **Dr. Xue (Chair), Dr. Padmakumari B (Co-Chair)** **Moderator: Dr. Subratakumar Das**			
141	Andrea Flossmann	A summary of the WMO/WWRP Peer Review Report on Global Precipitation Enhancement Activities	Jerry Harrington	The Development of Facets on Crystal Surfaces and their Impact on Vapor Growth	5 Aug	1340:1345 UTC
142	Darrel G Baumgardner	An Algorithm for Hygroscopic Cloud Seeding	Wolfram Wobrock	Modeling of the ice particle size distribution in the temperature range from 0 to -20°C: A comparison of model simulations with in-situ observations	5 Aug	1345:1350 UTC
143	Roelof Burger	Storm based randomized weather modification studies are more complicated than we thought	Mathieu Lachapelle	Measurements and formation mechanisms of ice pellets	5 Aug	1350:1355 UTC
144	Thara Prabhakaran	The cloud seeding science experiment: CAIPEEX	Andrew Janiszeski	Idealized Modeling Study of the Vertical Organization of Falling Snow/Ice Particles within a 3-Dimensional Wind Field	5 Aug	1355:1400 UTC
145	Lulin Xue	Simulated Cloud Properties and Seeding Effect in a SNOWIE Case	Jehoshua Ehud Gavze	Gravitational collision of small non-spherical particles: swept volumes of prolate and oblate ellipsoids in calm air	5 Aug	1400:1405 UTC
	Discussion		Discussion			1405:1415 UTC

Oral Program | Day 4 | 5 Aug 2021						
	Parallel I Weathermod 2 **Dr. Robert M Rauber (Chair), Dr. Sisi Chen (Co-Chair)** **Moderator: Dr. Anoop Mahajan**		**Parallel II Basic 4** **Dr. Hugh Morrison (Chair), Dr. Adele Igel (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**			
151	Juha Tonttila	Effects of hygroscopic seeding on mixed-phase processes and rain formation in convective clouds	Chris Westbrook	New experiments on sedimentation of snowflakes using 3D-printed analogues	5 Aug	1415:1420 UTC
152	Troy Zaremba	Updrafts in Orographic Cloud Systems over the Payette Mountains of Idaho	Janaani Sri	Janaani Sri Investigating the vertical velocity and mass-flux characteristics over the rain shadow region using ground-based observations	5 Aug	1420:1425 UTC
153	Katja Friedrich	Quantifying snowfall from orographic cloud seeding	JIMING SUN	A numerical investigation for the cloud droplet spectrum broadening with Lagarangian simulations	5 Aug	1425:1430 UTC
154	Masataka Murakami	Numerical Simulation on Realistic Hygroscopic Seeding from Below Cloud Base Using Simple Seeding Scheme	Pijush Patra	Cloud droplet collision efficiencies - rapid settling regime	5 Aug	1430:1435 UTC
155	Kaylee Heimes	The impact of fine scale updrafts and downdrafts on the trajectories of ice particles created by seeding orographic clouds in observed and modeled flow	G S Bhat	Rain drop size distribution at very large sample sizes	5 Aug	1435:1440 UTC
	Discussion		Discussion			1440:1450 UTC

Day 4 | Poster Program | 5 Aug 2021 | 1500:1600 UTC
ipostersessions Clouds and Climate | Weather Modification Basic Cloud and Precipitation Physics
Day 4 | Panel discussion | 5 Aug 2021 | 1600:1700 UTC
Topic **Diversity and women in cloud physics**
Prof. Zamin Kanji | Prof. Andrea Flossmann **Dr. Luis Antonio Ladino Moreno | Dr. Karin Ardon-Dryer** **Dr. Rama Govindarajan | Prof. Corinna Hoose | Prof. Sue van den Heever**
Day 4 https://youtu.be/GHp8QA1dRm4

Oral Program | Day 5 | 6 Aug 2021						
Day 5	**Plenary talk by Dr. Alexei Korolev Future of Lab Studies** **Chair: Dr. Darrel Baugardner** **Moderator: Dr. Mahen Konwar**				**6 Aug**	**1200:1230 UTC**
	Parallel I Lab 1 **Dr. Heike Wex (Chair), S.Harmann (Co-Chair)** **Moderator: Dr. Subratakumar Das**		**Parallel II Warm clouds** **Dr. Seong Soo Yum (Chair), Dr. Fan Yang (Co-Chair)** **Moderator: Dr. Anoop Mahajan**			
161	Raymond Arthur Shaw	Cloud-aerosol-turbulence interactions: Science priorities and concepts for a large-scale laboratory facility	Piotr Dziekan	How giant aerosols affect precipitation in marine cumulus and stratocumulus clouds	6 Aug	1230:1235 UTC
162	Sisi Chen	Cloud Chamber Simulation Case for the International Cloud Modeling Workshop: Modeling Aerosol-Cloud-turbulence Interactions in the Pi Chamber	Geet George	Large-scale vertical motion and its influence on cloudiness	6 Aug	1235:1240 UTC
163	Prasanth Prabhakaran	Role of supersaturation fluctuations in the activation of cloud droplets	Yayun Qiao	Cloud Droplet Spectral Broadening from Turbulent Supersaturation Fluctuations during CACTI	6 Aug	1240:1245 UTC
164	Theo MacMillan	Evaluating cloud droplet spectrum broadening with an analysis of coherent structures in Rayleigh-Benard convection	Paul Alan Barrett	In situ observations of trade cumulus and stratus clouds and boundary layers in the north Atlantic during the EUREC4A-UK field campaign.	6 Aug	1245:1250 UTC
165	Alexander Theis	A wind tunnel study on the microphysics of melting hail; size distribution of the shed drops	Mampi Sarkar	Analyzing Shallow Cloud Precipitation within the Northeast Pacific Ocean	6 Aug	1250:1255 UTC
	Discussion		Discussion			1255:1305 UTC

Oral Program | Day 5 | 6 Aug 2021						
	Parallel I Measurements **Dr. Darrel Baumgardner (Chair)** **Dr. Luis Antonio Ladino Moreno (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**		**Parallel II Convective cloud 1** **Prof. S. K. Dash (Chair), Dr. Partha Mukhopadhaya (Co-Chair), Dr. Mahesh kumar (Co-Chair)** **Moderator: Dr. Anupam Hazra**			
171	Jeffrey Russell French	The Next Generation Wyoming King Air Research Aircraft	Shin-ichiro Shima	Report of the isolated cumulus congestus case from the International Cloud Modeling Workshop 2021: comparison between Eulerian bin and Lagrangian particle-based microphysics	6 Aug	1305:1310 UTC
172	Vanessa Przybylo	Automated Classification of Cloud Particle Imagery through the Use of Convolutional Neural Networks	Tom Dror	Organized Shallow Continental (Green) Cumulus	6 Aug	1310:1315 UTC
173	Phil Rosenberg	Improving Droplet Size Distribution Measurements from Grayscale Optical Array Probes Using a Shape Factor Method	Andrew Barrett	Using Microphysical Piggybacking to explain the sensitivity of simulated convection to the choice of microphysics scheme	6 Aug	1315:1320 UTC
174	Jothiram Vivekanandan	Stratocumulus Clouds: Remote Estimation of Liquid Droplet Size and Liquid Water Content	Nicolas maury	Use of Large Eddy simulations to design a sampling strategy of cumulus cloud by a fleet of UAV	6 Aug	1320:1325 UTC
175	Ali Abshaev	Stimulation of artificial updrafts in the near ground atmosphere	Subin Thomas	A microphysics independent flux for Cloudy Rayleigh Benard convection systems	6 Aug	1325:1330 UTC
	Discussion		Discussion			1330:1340 UTC

Oral Program | Day 5 | 6 Aug 2021						
	Parallel I Fog 1 **Dr. Darrel Baumgardner (Chair), Dr. Luis Antonio Ladino Moreno (Co-Chair)** **Moderator: Dr. Mahen Konwar**		Parallel II Convective cloud 2 **Dr. Paul Connolly (Chair)** **Dr. S. D. Pawar (Co-Chair), Dr. Orit Altaratz(Co-Chair)** **Moderator: Dr. Padmakumari B**			
181	Dipti Swapnil Hingmire	Widespread fog over the Indo-Gangetic Plains and possible links to boreal winter teleconnections	Ashok Kumar Gupta	Warm and Cold Rain Process in Cold-base Deep Convective Clouds	6 Aug	1340:1345 UTC
182	Sandeep Dnyandeo Wagh	Microphysical Structure of Warm Fog in Polluted Boundary Layer	Sean Freeman	Tropical Deep Convective Cloud Processes and Variability in the Different Thermodynamic and Aerosol Environments of CAMP2Ex and PISTON	6 Aug	1345:1350 UTC
183	Maroua FATHALLI	Fog by stratus lowering: experimental and modelling case study	Mickael David Chekroun	Data-driven stochastic modelling of cloud fields dynamics, and multiscale organization	6 Aug	1350:1355 UTC
184	Otto Klemm	Fog trends before the backdrop of climate change and increasing air quality	SUBHADEEP HALDER	Soil moisture-atmosphere feedbacks during pre-monsoon and monsoon convection over the Indian region	6 Aug	1355:1400 UTC
185	Daniel Kenneth Edward Smith	Sub-km scale numerical weather prediction of radiation fog	Carlos Augusto Morales Rodriguez	Electrical and precipitation features associated with different IC to CG ratios over South America	6 Aug	1400:1405 UTC
	Discussion		Discussion			1405:1415 UTC

Oral Program | Day 5 | 6 Aug 2021						
	Parallel I Fog 2 **Dr. Ismail Gultepe (Chair)** **Dr. Junshik Um (Co-Chair)** **Moderator: Dr. Thara Prabhakaran**		**Parallel II Electricity** **Dr. Paul Connolly (Chair), Dr. Vaughan Phillip (Co-Chair), Dr. Orit Altaratz (Co-Chair)** **Moderator: Dr. Anoop Mahajan**			
191	Benoît Vié	LES of LANFEX fog using LIMA: Disentangling local and non-local processes interactions	Dr. Vidya S.Pawar	On the relationship between Convective Available Potential Energy and Lightning during Indian Summer Monsoon	6 Aug	1415:1420 UTC
192	David Richter	A Lagrangian cloud model for the study of marine fog	Chandrima Mallick	Simulation of lightning potential index (LPI) and lighting flash counts using multi moment bulk cloud microphysical scheme	6 Aug	1420:1425 UTC
193	Charlotte Wainwright	Understanding the sensitivity of marine fog to microphysical processes via large-eddy simulation	Rohit Chakraborty	Long term variability of lightning occurrences and intensity over India and its relationship with instability parameters and aerosols	6 Aug	1425:1430 UTC
194	A. Jayakumar	Recent developments in Delhi 330m modeling	Yousuke Sato	Numerical study of the lightning frequency in tropical cyclone using a metrological model coupled with a lightning component	6 Aug	1430:1435 UTC
195	Mahendra Narayan Patil	Turbulent fluxes of heat and momentum in the atmospheric boundary layer during fog events over urban and rural stations	liangtao xu	How does the melting impact charge separation in squall line?	6 Aug	1435:1440 UTC
	Discussion		Discussion			1440:1450 UTC

Day 5 | Poster Program | 6 Aug 2021 |1500:1600 UTC		
	ipostersessions Laboratory, wind tunnel and cloud chamber studies of microphysical processes | Warm clouds Measurement techniques | Convective cloud Fog and visibility | Electricity	
Day 5 | Panel Discussion | 1600:1700 UTC		
Lab studies related to cloud formation, evolution and aerosol interaction: What studies, observations and instrumentation are needed?		
Prof. Alexei Korolev (Chair) **Dr. Heike Wex | Dr. Birabel Sinha | Dr. Paul Connolly** **Dr. Zamin A Kanji | Dr. Nandakumar K | Dr. Shivsai Dixit** **Dr. Ottmar Möhler | Prof. Raymond Shaw**		
Day 5 https://youtu.be/NMH-uYh_Fqo		

Please join with Airmeet Link

https://www.airmeet.com/event/0c0e5c10-db01-11eb-a645-b58f7ebb6670

Invocation

(Music: Ms. Chandrima Chakrabarty playing Sarod)

Address by the ICCP President

Prof. Andrea Flossmann

Remarks by the ICCP Secretary

Dr. Darrel Baumgardner

Remarks from ICCP LOC Chair

Dr. Thara Prabhakaran

"New Beginning"

Welcoming the new ICCP Commission

Address by the new ICCP commission President

Prof. Greg McFarquhar

"The vision of ICCP commission"

"Song of the day" by Dr. Medha Deshpande

YouTube Link:- https://youtu.be/FjxDFHuN3is

ICCP Additional Events

10th International Cloud Modelling Workshop | 26-30 July 2021		
Workshop website: https://iccp2020.tropmet.res.in/Cloud-Modeling-Workshop-2020		
July 26 (Monday)	ICMW opening session Pi chamber case **YouTube Link: https://youtu.be/qFhyT8LscSI**	1230-1300 UTC 1300-1600 UTC
July 27 (Tuesday)	Single congestus cloud case **YouTube Link: https://youtu.be/03WgWoDTHSI**	1300-1600 UTC
July 28 (Wednesday)	COPE convective system case **YouTube Link: https://youtu.be/BshfoL4XefI**	1300-1600 UTC
July 29 (Thursday)	CAIPEEX monsoon convective case **YouTube Link: https://youtu.be/g9BFpMfVyPc**	1300-1600 UTC
July 30 (Friday)	Summary of the ICMW and discussion **YouTube Link: https://youtu.be/Kgef2YlrGqY**	1300-1600 UTC

Short Course | 7 Aug 2021		
Website: https://iccp2020.tropmet.res.in/fnd/assets/Radar_course_flyer.pdf		
7 Aug 2021	**Radar** Course by Prof. Chandrashekar and Dr. Renzo Bechini	14:30 to 17:30 UTC