AeroCom / Aerosat workshop 2023, Richland, WA, USA - Final Programme vOct9

Oral ShortOral Poster	Start time PDT	Name	Presentation title
		Monday 16th October	
		Welcome and AeroCom Experiments Session / Moderator : Michael Schulz	
O	Mon / 09:00	**Susannah Burrows/Andrew Gettelmann**	Host welcome remarks
O	Mon / 09:05	**Steve Ghan**	Welcome remarks
O	Mon / 09:15	**Ruby Leung**	Energy Exascale Earth System Model
O	Mon / 09:40	**Michael Schulz**	AeroCom introductory remarks
O	Mon / 09:45	**Mian Chin**	Two-decadal trends and interannual variability of CO and aerosols in the UTLS and their connections to surface emissions, convective transport efficiency, and Asian summer monsoon dynamics - Report of AeroCom experiment
O	Mon / 10:00	**Mariya Petrenko**	Constraining Model Biomass Burning Source Strength and Injection Height Using Satellite Observations Project Update
	Mon / 10:15	**Break (15 min) and Informal Discussions (15 min)**	
		AeroCom Experiments Session / Moderator : Hongbin Yu	
O	Mon / 10:45	**Dongchul Kim**	Dust source attribution to the global land and ocean regions
O	Mon / 11:00	**Jasper Kok**	Derivation of a historical dust emission inventory to estimate dust radiative forcing using global aerosol models
O	Mon / 11:15	**Huisheng Bian**	Observationally constrained analysis of sulfur cycle in the marine atmosphere with NASA ATom measurements and AeroCom model simulations
O	Mon / 11:30	**Edward Gryspeerdt**	Cloud focused diagnostics for AeroCom simulations
O	Mon / 11:35	**Michael Schulz**	Short update on AeroCom control experiment
	Mon / 11:40	**Discussion**	Status of AeroCom experiments and database
	Mon / 12:00	**Working Lunch and Poster Viewing**	
		AeroCom Indirect Effect Session / Moderator : Susannah Burrows	
O	Mon / 13:00	**Harri Kokkola**	Correlations between cloud condensation nuclei and cloud droplet number concentrations in global models and observation
O	Mon / 13:15	**Johannes Muelmenstaedt**	Does the droplet number–liquid water path 'inverted v' tell us what we think it does? Causal and confounding mechanisms for observational constraints on ERFaci adjustments
O	Mon / 13:30	**Matthew Christensen**	Quantifying the Impact of Aerosols on Clouds in E3SM: Insights from a Lagrangian Framework
O	Mon / 13:45	**Andrew Gettelman**	Reducing Ship Emissions Accelerates Global Warming
O	Mon / 14:00	**Daniel McCoy**	Leveraging perturbed parameter ensembles to understand how aerosol-cloud-precipitation processes imprint on the global energy budget
O	Mon / 14:15	**Daniel Grosvenor**	Evaluating aerosols in the next UK Earth System Model
	Mon / 14:30	**Discussion**	
	Mon / 14:45	**Break (15 min) and Informal Discussions (15 min)**	

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		AeroCom Aerosol modelling Session I / Moderator : Kostas Tsigaridis	
O	Mon / 15:15	**Kostas Tsigaridis**	The future chemistry and climate impacts of large, fully-reusable methane-fueled rockets
O	Mon / 15:30	**Minghuai Wang**	Improving BC mixing state and CCN activity representation with machine learning in the Community Atmosphere Model Version 6 (CAM6)
O	Mon / 15:45	**Yunpeng Shan**	Aerosol radiative forcing in E3SM: improvements from aerosol wet removal treatment and parameter tuning
O	Mon / 16:00	**Jin-Ho Yoon**	Aerosol-Induced atmospheric response through differential heating and teleconnection
O	Mon / 16:15	**Mingxuan Wu**	Evaluation of nitrate aerosols in E3SM and comparisons with CESM and AeroCom III models
	Mon / 16:30	**Discussion**	
	Mon / 17:00	**Group Networking**	
		Tuesday 17th October	
		AeroCom Aerosol modelling Session II / Moderator : Michael Schulz	
O	Tue / 09:00	**Michael Schulz**	Progress to build a GeneralIzed Aerosol / Chemistry iNTerface (GIANT)
	Tue / 09:15	**Discussion**	Discussion on GIANT and Aerosol Modelling Progress
	Tue / 10:30	**Break (15 min) and Informal Discussions (15 min)**	
		AeroCom Short Oral Session I / Moderator : Duncan Watson-Parris	
SO	Tue / 11:00	**Calvin Howes**	Identifying and Reducing Uncertainties in Smoke-Stratocumulus Interactions in Multiple Climate Models in the Southeastern Atlantic Using Field Campaign Observations
SO	Tue / 11:00	**Ciara Donegan**	Analyzing Earth system model sensitivity to shifts in shipping SO2 emissions
SO	Tue / 11:00	**Noah Prime**	A global anthropogenic emissions inventory of reactive gases and aerosols (1750 – 2022): an update to the Community Emissions Data System (CEDS)
SO	Tue / 11:00	**Julia Shuvalova**	The main cloud characteristics influencing variations of solar irradiance at ground according to the ICON model, CLOUDNET and BSRN observations
SO	Tue / 11:00	**Ruben Sousse**	Global simulations of nitric acid condensation on mineral dust aerosols using parameterizations of different complexity
SO	Tue / 11:00	**Natalia Chubarova**	Urban aerosol, its radiative and temperature effect using COSMO-ART model and measurements in a large megacity
SO	Tue / 11:00	**Malcolm Maas**	Combining Earth System Modeling and Machine Learning to Investigate Volcanic Sulfate Deposition in Polar Ice Cores
SO	Tue / 11:00	**Velle Toll**	Industrial aerosols glaciate liquid-water clouds, produce snow and reduce cloud cover
	Tue / 11:30	**Discussion**	
	Tue / 12:00	**Working Lunch and Poster Viewing**	

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AeroCom Aerosol Modelling Session II / Moderator : Andrew Gettelmann			
O	Tue / 13:00	**Hailong Wang**	New aerosol features and their coupling with atmospheric chemistry in preparing E3SM for CMIP7 and beyond
O	Tue / 13:10	**Hui Wan**	Combining physical understanding with mathematical theory to improve the numerics of process coupling in aerosol-climate models.
O	Tue / 13:20	**Kai Zhang**	Impact of new particle formation on the anthropogenic aerosol forcing estimate in E3SM
O	Tue / 13:30	**Laura Fierce**	Quantifying structural error in aerosol properties from reduced representation of particle distributions
O	Tue / 13:40	**ManishKumar Shrivastava**	New SOA Treatments Within the Energy Exascale Earth System Model (E3SM): Strong Production and Sinks Govern Atmospheric SOA Distributions and Radiative Forcing
O	Tue / 13:50	**Yan Feng**	Global Dust Cycle in the DOE E3SM version 3 (E3SMv3) Improvement in Emissions, Transport and Direct Radiative Forcing
O	Tue / 14:00	**Ian Baxter**	High latitude extreme poleward aerosol transport events (Aerosol Atmospheric Rivers) in E3SM and their impacts on the Arctic climate system during the MOSAiC field campaign.
O	Tue / 14:10	**Tianle Yuan**	Building a suite of machine learning models to predict PM2.5 from large-scale GEOS-GOCART model simulations and apply it to real data
O	Tue / 14:20	**Susannah Burrows**	Progress and challenges in simulating ice-nucleating particle concentrations for global climate models
	Tue / 14:30	**Break (15 min) and Informal Discussions (15 min)**	
AeroCom Short Oral Session II / Moderator : Mian Chin			
SO	Tue / 15:00	**Jie Gao**	Aerosol Effects on Heating in the Asian Monsoon Tropopause Layer
SO	Tue / 15:00	**Jonathon Wright**	Summary of the SPARC Reanalysis Intercomparison Project Phase 1 and Plans for Phase 2: Chemical & Aerosol Reanalyses, Tropospheric Circulation, Extreme Events, and More
SO	Tue / 15:00	**Shenglong Zhang**	Impacts of Anthropogenic Aerosol Emissions on the East Asian Winter Monsoon
SO	Tue / 15:00	**Abhinna Kumar Behera**	Retrieval of high spatial resolution black carbon sources: use of the adjoint GEOS-CHEM model in conjunction with WRF-CHEM calculations to improve the emission pattern in Europe
SO	Tue / 15:00	**Ruth Digby**	How much of the uncertainty in black carbon ERF can be attributed to uncertainty in its refractive index?
SO	Tue / 15:00	**Caroline Poulsen**	Evaluation of extreme smoke plumes during 2019/2020 Australian fires and future operational applications
SO	Tue / 15:00	**Naser Mahfouz**	Illuminating darkening clouds in climate models
AeroCom Poster Introduction Session I / Moderator : Mian Chin			
P	Tue / 15:30	**Yawen Liu**	A Strong Anthropogenic Black Carbon Forcing Constrained by Pollution Trends Over China
P	Tue / 15:30	**Adam Varble**	Differences Between E3SM Simulated and Observationally Retrieved Aerosol-Liquid Cloud Relationships are Modulated by Cloud Adiabaticity
P	Tue / 15:30	**Leighton Regayre**	Aerosol evaluation must account for model-observation uncertainties

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P	Tue / 15:30	**ManishKumar Shrivastava**	Shift in Peaks of PAH-Associated Health Risks From East Asia to South Asia and Africa in the Future
P	Tue / 15:30	**Qianqian Song**	Resolving dust mineralogy in climate model: impacts on Earth's Radiation and Climate
P	Tue / 15:30	**Taufiq Hassan**	Uncertainties of anthropogenic aerosol emission representation and the impact on the aerosol simulation in E3SM
	Tue / 16:00	**Break and Poster viewing session**	
	Wednesday 18th October		
	AeroCom Experiment Session II / Moderator : Duncan Watson-Parris / Michael Schulz		
O	Wed / 09:00	**Duncan Watson-Parris**	AerChemMIP2 : Deciphering the role of aerosols and chemically reactive gases in climate change
O	Wed / 09:15	**Kostas Tsigaridis /M. Schulz**	AeroCom phase IV - what can it be?
	Wed / 09:30	**Discussion**	Discussion AeroCom + AerChemMIP experiments
	Wed / 10:30	**Break (15 min) and Informal Discussions (15 min)**	
	AeroCom/Aerosat CCN session / Moderator : Athanasios Nenes		
	Wed / 11:00	**Athanasios Nenes**	Introduction
O	Wed / 11:05	**Edward Gryspeerdt**	Reducing forcing uncertainty through improved aerosol retrievals in clean environme
O	Wed / 11:15	**Christina S. McCluskey**	Process-level model diagnostics from in situ observations of aerosol abundance, composition, and cloud activation
	Wed / 11:30	**Discussion**	
	Wed / 12:30	**Working Lunch and Poster Viewing**	
	AeroCom/Aerosat general session and excursion		
O	Wed / 13:30	**Po-Lun Ma**	Enabling Aerosol-cloud interactions at GLobal convection-permitting scalES (EAGLES)
	Wed / 14:00	**Excursion**	
	Thursday 19th October		
	AeroCom/Aerosat aerosol type and profile measurement session / Moderator : Reed Espinosa (TBC)		
	Thu / 09:00	**Reed Espinosa (TBC)**	Introduction
O	Thu / 09:05	**Israel Silber**	ESM Process-Oriented Evaluation Using ARM Ground-Based Measurements and the Earth Model Column Collaboratory (EMC²)
O	Thu / 09:20	**John Shilling /James Mather**	Overview of Atmospheric Radiation Measurement (ARM) Aerosol Measurements
O	Thu / 09:35	**Lucia Mona / Nikos Papagiannopoulus**	Aerosol typing: updates from European and Italian initiatives
	Thu / 09:50	**Discussion**	

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	Thu / 10:30	**Break (15 min) and Informal Discussions (15 min)**	
AeroCom/Aerosat Short Oral Session I / Moderator : Rob Levy			
SO	Thu / 11:00	**Pavel Litvinov**	Land Surface BRDF Dataset from Sentinel-3/OLCI for Atmospheric Studies
SO	Thu / 11:00	**Ranjitkumar Solanki**	Effect of Lockdown on Aerosol Optical Depth using Satellite (MODIS Aqua and Terra), based observation over Surat
SO	Thu / 11:00	**Marta Luffarelli**	Combined AOT/COT product from satellite observations
SO	Thu / 11:00	**Andrew Sayer**	On spatial scales of variation in aerosol optical depth fields
SO	Thu / 11:00	**Zheng Lu**	CCNs and aerosols over the Eastern North Atlantic from DOE E3SM, NCAR CESM and AeroCom III models and implications for aerosol indirect forcing
	Thu / 11:15	**Discussion**	
	Thu / 12:00	**Working Lunch and Poster Viewing**	
AeroCom/Aerosat Constraining Models Session / Moderator : Ralph Kahn / Yves Balkanski			
	Thu / 13:00	**Ralph Kahn/Yves Balkanski**	Introduction Constraining models
O	Thu / 13:05	**Huisheng Bian**	Evaluating and Improving GEOS aerosol simulations using ORACLES Measurements
O	Thu / 13:20	**Jerome Fast**	Using CACTI Campaign Measurements Collected in Argentina to Evaluate Global Model Aerosol Predictions
O	Thu / 13:35	**Shuaiqi Tang**	Earth System Model Aerosol-Cloud Diagnostics Package (ESMAC Diags): Evaluate Climate Models using Field Measurements from Aircraft, Ship, Surface and Satellite
	Thu / 13:50	**Discussion**	
	Thu / 15:00	**Break (15 min) and Informal Discussions (15 min)**	
Aerosat Poster Introduction Session I / Moderator : Steve Ghan (TBC)			
P	Thu / 15:30	**Robert C Levy**	Long-term, consistent, global and regional AOD climate data records: joining MODIS and VIIRS.
P	Thu / 15:30	**Caterina Mogno**	Investigating the relationship between modeled PM2.5 concentrations and surface aerosol optical properties in the NASA GEOSCCM
P	Thu / 15:30	**Damao Zhang**	Aerosol Vertical Distributions Observed with ARM Ground-based Remote Sensing Measurements
P	Thu / 15:30	**Evgueni Kassianov**	Ground-based spectral radiation measurements with extended wavelength range for aerosol-cloud-surface studies
P	Thu / 15:30	**Jianyu Zheng**	Thermal infrared dust optical depth and coarse-mode effective diameter over oceans retrieved from collocated MODIS and CALIOP observations
P	Thu / 15:30	**Marcin Witek**	Towards better MISR aerosol retrievals over land: An ensemble approach
P	Thu / 15:30	**Marcin Witek/Robert Nelson**	Expanding the coverage of MISR aerosol retrievals over shallow, turbid, and eutrophic waters
P	Thu / 15:30	**Minseok Kim**	Aerosol Data Fusion Using Maximum Likelihood Estimation and Deep Neural Network with Korean Geostationary Satellite Instruments: GEMS, AMI, and GOCI-II
P	Thu / 15:30	**Reed Espinosa**	Exploring the Impact of Imperfect Particle Shape Assumptions on Synergistic Lidar and Polarimeter Aerosol Retrieval Performance

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P	Thu / 15:30	**Sarah Smith**	A Solar Zenith Angle Dependency on Passive versus LiDAR Sensor AOD Retrieval Biases
	Thu / 16:00	**Break and Poster viewing session**	
	Friday 20th October		
	Aerosat Data records, trends, events Session / Moderator : Larisa Sogacheva		
	Fri / 09:00	**Larisa Sogacheva**	Introduction
O	Fri / 09:05	**James Gleason**	NASA perspective on prospects for continuing the aerosol data records in upcoming
O	Fri / 09:20	**Allison Collow**	Challenges in Observing, Modeling, and Forecasting the June 2023 Smoke Event over the Northeast United States
	Fri / 09:35	**Discussion**	
	Fri / 10:30	**Break (15 min) and Informal Discussions (15 min)**	
	Aerosat Lower Boundary Condition, Land Session / Moderator : Thomas Popp		
	Fri / 11:00	**Thomas Popp**	Introduction
O	Fri / 11:05	**Peter North**	New products of global aerosol for SLSTR and (A)ATSR (1995 - 2023)
	Fri / 11:20	**Discussion**	
	Fri / 12:15	**Working Lunch and Poster Viewing**	
	Aerosat New products/Approaches Session / Moderator : Peter North (TBC) / Andrew Sayer		
	Fri / 14:00	**Andrew Sayer**	Introduction
O	Fri / 14:05	**Jason Blake Cohen**	Merging Satellites and In-situ Observations in an Inverse Probabilistic MIE Model and Mass-Conserving Framework to Estimate Atmospheric Column BC
O	Fri / 14:15	**Li Pei**	Three-dimensional aerosol reconstruction by combined active and passive satellites
O	Fri / 14:25	**Oleg Dubovik**	The multi-instrument synergy retrievals developed based on the GRASP algorithm platform
O	Fri / 14:35	**Peng Xian**	Intercomparison of Aerosol Optical Depths and surface particulate matter concentration from four reanalyses and their multi-reanalysis-consensus for climate studies
	Fri / 14:45	**Discussion**	
	AeroCom Aerosat WrapUp Session		
	Fri / 15:30	**Michael Schulz**	AeroCom wrap up
	Fri / 15:45	**Ralph Kahn / Thomas Popp / Larisa Sogacheva**	AeroSat wrap up