13th AeroCom workshop

September 29 – October 2, 2014
Sheraton, Steamboat Springs, CO

hosts: **Gannet Hallar** / **Ian McCubbin** / **John Ogren**
co-organizers: Michael Schulz / Stefan Kinne / Mian Chin

presentations

- **oral presentations** … are allotted **20 min**
  - this should allow for 10 minutes of discussions
- **poster presentation**s … can be introduced by 2 (powerpoint) slides
  - posters will hang during the entire meeting

Sunday, September 28, 2014 *AeroCom*

16:00 – 18:30 **optional visit of the Storm Peak Aerosol Lab** *contact I. McCubbin*

… at the Sheraton Pool Deck *(under a tent)*

18:30 - … **AeroCom registration**

19:00 - … **DRI welcome reception** *dinner (heavy appetizers will be served)*

Monday, September 29, 2014 *AeroCom*

8:00 – 9:00 **AeroCom registration**

9:00 – 10:30 **SESSION 1** **welcome / AeroSAT workshop summary**
I. McCubbin *welcome and logistics*
M. Schulz *AeroCom achievements and goals of this workshop*
T. Holzer-Popp and R.Kahn *AeroSAT meeting highlights*

10:30 – 11:00 coffee-break (and **hang-up posters**)

chair: ***J. Ogren***

11:00 – 12.40 **SESSION 2** **remote sensing from space**
A. Sayer *Recent progress in the NASA 'Deep Blue' aerosol retrieval algorithms*
R. Levy *Creating a consistent dark-target AOD record from MODIS and VIIRS*
A. Lyapustin *A New High-Resolution Aerosol Dataset from Algorithm MAIAC*
O. Torres *Assessment of OMI decadal record on aerosol absorption*

12:40 – 14:00 lunch
(all–poster authors: make sure that S. Kinne has your 2 slide ppt summary)

chair: ***J. Ogren***

14:00 – 15.00 **SESSION 3** **applying remote sensing from space**
D. Winker *Retrievals and validation of above-cloud aerosol properties*
N. Schutgens *On the use of remote sensing observations for AEROCOM*

15:00 – 16:00 **poster introduction**
max 2 slides / 2 minutes poster introduction *in alphabetic order*

16:30 – 17:00 extended coffee-break (to scan all posters)

chair: ***J. Redemann***

17:00 – 18:30 **SESSION 4** **ground-based observations**
A. Smirnov *Version 3 AERONET processing – data product assessment*
G. Schuster *Understanding the absorption Angstrom exponent of AERONET data*
J. Ogren *Climatology and variability of aerosol properties from In-situ monitoring*

Tuesday, September 30, 2014 *AeroCom*

chair: ***M. Chin***

8:30 – 10:10	**SESSION 5**	**aerosol type (1) – biomass burning aerosol**
	R. Kahn	*MISR Aerosol Type Strengths and Limitations*
	M. Petrenko	*AeroCom Biomass Burning Emissions Experiment: method and status*
	C. Ichoku	*Top-Down Biomass-Burning Aerosol Emissions: the FEERv1 data-set*
	B. Johnson	*Simulation of biomass burning aerosols in HadGEM3*
10:10 – 10:40	coffee-break	

chair: ***M. Chin***

10:40 – 12.00	**SESSION 6**	**aerosol type (2) – dust**
	D. Kim	*A multi-model analysis versus remote-sensing data of North African dust*
	C. Perez	*New methods to predict regional variations of the mineral and chemical composition of dust aerosols*
	Y. Balkanski	*Intercomparison of total and soluble iron deposition in AeroCom models*
12:00 – 13:00	lunch	

chair: ***M. Schulz***

13:00 – 13.30	**G. Frost**	*Emissions for global modeling - trends and uncertainties*
13:30 – 14.30	**D. Fahey**	***Reflections on aerosols and climate … and the future***

14:30 – 17:00 **poster viewing time** / relax

'observation' poster authors should be at their posters

17:00 – **excursion to lake (-house) and conference dinner**

A Shuttle will pick-up at 5:00 pm at Sheraton Hotel and Resort and return you to the hotel after dinner.

Wednesday, October 1, 2014

AeroCom

chair: ***S. Ghan***

8:30 – 10:00	**SESSION 7**	**aerosol and clouds - 1**
	G. Thomas	*A posteriori discrimination of aerosol and cloud from satellite retrievals*
	G. Ban-Weiss	*Evaluating clouds, aerosols, and their interactions in three global models*
	X. Liu	*AeroCom inter-comparison of aerosol indirect effects in ice-clouds*

10:00 – 10:30 coffee-break

chair: ***S. Ghan***

10:30 – 12:00	**SESSION 8**	**aerosol and clouds - 2**
	S. Ghan	*Multi-model analysis of aerosol effects on clouds in climate models*
	A. Gettelman	*Putting clouds and their uncertainties back in aerosol-cloud-Interactions*
	G. Feingold	*Lessons from higher resolution LES modeling*

12:00 – 13:30 lunch

13:30 – 16:30 **poster time** / relax

'modeling' poster authors should be at their posters

chair: ***S. Kinne***

16:30 – 18.30	**SESSION 9**	**AeroCom Phase III / HTAP2 Experiment**
	N. Kristiansen	*Measured and modelled aerosol lifetimes from Fukushima tracers*
	T. Takemura	*Relative contributions of regional emissions to aerosol radiative forcing*
	M. Chin	*Aerosol source attributions and source-receptor relationships across NH*
	O. Kalashnikova	*Constraining aerosol surface loadings by combining multiangular and polarimetric remote sensing with chemical transport modeling*

Thursday, October 2, 2014

AeroCom

chair: ***J.Ogren***

8:30 – 10:00	**SESSION 10**	**aerosol type (3) – size, optical properties, nitrate and altitude**
	P. Yu	*Aerosol Composition, Size Distribution and Optical Properties Simulated by a Sectional Aerosol*
	H. Bian	*AeroCom III nitrate experiment: Integrated assessment of multi-model simulations and data from ground stations, aircrafts, and satellite*
	R. Ferrare	*Comparisons of Airborne HSRL and Modeled Aerosol Profiles*
10:00 – 10:30	coffee-break	

chair: ***J.Ogren***

10:30 – 12.00	**SESSION 11**	**aerosol direct radiative forcing and observations**
	J. Redemann	*A-Train aerosol observations – preliminary comparisons with AeroCom models and pathways to observationally based all-sky estimates fo the direct radiative forcing*
	Z. Zhang	*Shortwave direct radiative effects of 'above cloud' aerosols over oceans derived from 6 years of CALIOP and MODIS observations*
	R. Wang	*Reducing uncertainty in black-carbon climate forcing using a new inventory and high-resolution model*

chair: ***M. Chin***

12:00 – 12:30	**SESSION 12**	
	M. Schulz	*wrap-up and outlook*
12:30 – 13:30	lunch	

chair: ***M. Schulz***

13:30 – 14.45	**SESSION 13**	**towards the next IPCC assessment; Overview on initiatives**
	P. Stier	*Radiative forcing working group AeroCom*
	M. Schulz	*AerChemMIP – AeroCom&CCMI draft plan for CMIP6*
	D. Feldman	*Diagnostics from the Radiative Forcing Model Intercomparison Project*
	R. Pincus	*RF-MIP overview (outcome of the Hamburg Sep 3-5 meeting)*
14:45 – 15:00	**short** coffee break	
15:00 – 16:00	**SESSION 14**	***AeroCom / AirChemMIP / RF-MIP cooperation***
	work groups	*on aerosol diagnostics and experiment design*
16:30 – 18:30	**optional outing to the Steamboat Hot Springs**	

contact I. McCubbin

AeroCom observation posters

author attendance on Tuesday afternoon

Arola, Antti
Assessment of cloud related fine mode AOD enhancements based on AERONET SDA product

Dunne, Eimar
Comparison of AeroCom models with marine observations

Fairlie, Duncan
Persistence of ash in the tropical stratosphere following the eruption of Mt. Kelud, 2014

Fillmore, David
Regional Aerosol Optical Depth Trends and Interannual Variability with MATCH, CCCM and MODIS

Huttunen, Jani
Aerosol direct radiative effect efficiency, aerosol optical properties and surface albedo - comparison between simulations of models and results derived with measurements

Jethva, Hiren
Retrieval, Inter-comparison, and Validation of Above-cloud Aerosol Optical Depth from A-train Sensors

Kinne, Stefan
The MPI-M Aerosol Climatology (MAC)

Knobelspiesse, Kirk
Progress in airborne polarimeter intercomparison for the NASA Aerosols-Clouds-Ecosystems (ACE) mission

Kristiansen, Nina
Measured and modelled aerosol lifetimes from Fukushima tracers

Munchak, Leigh
Global and regional validation of the Collection 6 MODIS dark target aerosol products, and comparison to Collection 5

Petrenko, Maksym
Joint Accuracy Assessment of Aerosol Retrievals from Multiple Satellite Sensors and GEOS-5 model

Povey, Adam
ORAC (the optimal retrieval of aerosol and cloud)

Randles, Cynthia
The MERRAero Aerosol Reanalysis: Evaluation and Climate Study Applications

Robert, Charles
The stratospheric aspects the Aerosol_CCI project

Schwarz, Joshua
AeroCom suite performance on BC vertical profiles in source regions

Shinozuka, Yohei
Aircraft- and ground-based assessment of relationships between CCN concentration and aerosol optical depth

Sundström, Anu-Maija
Decadal changes in CERES short wave clear-sky TOA fluxes; what can we say about aerosol contribution?

Ventress, Lucy (via A.Povey)
Validation of retrieved volcanic ash properties from the Infrared Atmospheric Sounding Interferometer (IASI)

Xue, Yong
A Consistent Aerosol Optical Depth (AOD) Dataset over China

AeroCom modeling posters

author attendance on Wednesday afternoon

Dhomse, Sandip
Aerosol microphysics simulations of the Mt. Pinatubo eruption with the UKCA composition-climate model

Jiang, Yiquan
Wild fire climate effects simulated by NCAR Community Earth System Model

Kirkevag, Alf
Preliminary estimates of Aerosol Effective Radiative Forcing in CAM5-Oslo

Kristjansson, Jon Egill
Climate Engineering and the Hydrological Cycle

Kuehn, Thomas
Aerosol climate impact and its regional modulations in the 2000ies.

Mann, Graham
Pinatubo Emulation in Multiple Models (POEMs): planned co-ordinated experiments for the SPARC "Stratospheric Sulphur and it's Role in the Climate initiative" (SSiRC)

Michou, Martine
Development and basic evaluation of a prognostic aerosol scheme in the CNRM Climate Model

Mielonen, Tero
The inclusion of brown carbon aerosols in the ECHAM6-HAM aerosol-climate model

Pitkanen, Mikko
Estimate of the radiative effect of brown carbon using AERONET products AeroCom

Rumbolt, Steve
Ammonium Nitrate in UKESM1

Shi, Xiangjung
Estimating anthropogenic aerosol indirect effects of cirrus clouds using CAM5.1 with different ice nucleation parameterizations

van Weele, Michiel
Clear-sky and all-sky direct forcing estimates based on TM5 and a doubling-adding radiative transfer model using observed clouds

Xi, Xin
Top-down estimates of SO2 degassing volcano emissions using in situ SO2 measurements and the WRF-STILT model, a case study at the Turrialba Volcano

Yu, Fangqun
Seasonal variations of new particle formation at Storm Peak Laboratory: Key parameters controlling atmospheric nucleation and global implications

Zhang, Hua
Improvements of cloud microphysics in the aerosol-climate model BCC_AGCM 2.0.1_CUACE/Aero: evaluation against observations, and updated aerosol indirect effects

Zhang, Jiachen
Investigating the Vertical Distribution and Source Attribution of Black Carbon over the Pacific Ocean