

# **AeroCom achievements and goals of the 15th AeroCom workshop**

Michael Schulz, Stefan Kinne, Mian Chin

# AeroCom: Aerosol comparisons between observations and models



1<sup>st</sup> AeroCom: June 2003, Paris



2<sup>nd</sup> AeroCom: March 2004, Ispra

3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>,



14<sup>th</sup> AeroCom (+AerChemMIP): October 2015, Rome

# What is AeroCom?

- AeroCom is an open international initiative of scientists who are interested in understanding aerosol effects on climate with global models that are evaluated by satellite and other platform data
- More than 20 modeling groups have participated in coordinated model experiments, and many observational groups have contributed their data and expertise to the AeroCom activities
- Between 2003 and 2015, 14 AeroCom workshops took place, 8 in Europe, 5 in USA, and 1 in Asia (Japan)
- This year, the 15<sup>th</sup> AeroCom workshop takes place in Beijing, which is the second one in Asia and the first one in China
- AeroCom has become an prominent international aerosol research community, attracting many scientists contributing to AeroCom activities and many international entities seeking collaboration with AeroCom

# What has AeroCom achieved?

I believe the most important achievement of AeroCom is pursuing good, interesting joint international aerosol science projects in good humor and respect.  
– Michael Schulz

- Established very close and intimate collaborations between modeling and observational community
- Three phases of AeroCom model experiments with various focus (model diversity, aerosol direct and indirect radiative forcing, microphysics, decadal trends, vertical profiles, biomass burning, nitrate, organics, dust, long-range transport of pollutants (HTAP and Fukushima), in-situ, UTLs, etc.)
- Experiment is initiated by anyone who has idea(s) and if a few modeling groups agreed, it becomes an AeroCom model experiment – very democratic

# What has AeroCom achieved?

- Yearly control simulations contributed to AeroCom
- Many model output and observation data have archived in the AeroCom server, and interactive tools to compare data and model have been developed
- Continuous model evaluation with consistent methods using historic and new data (e.g., new aircraft experiments of ORACLE and ATom and new satellite data from Suomi-NPP and Himawari)
- Close coordination with CMIP6 via AerChemMIP
- Michael Schulz gets to stay in Norway this week to prepare a BAMS paper on AeroCom (time best-spent!)

# What are the goals for this AeroCom?

- Engaging Asian modeling/observation community to be more actively involved in AeroCom with new ideas
- Updating the analysis of AeroCom phase II/III experiments and discussing the new proposed experiments
- Discussing the near future plans and directions (for example, how to quantify the effective radiative forcing through aerosol-radiation interaction ( $ERF_{ARI}$ ) and aerosol-cloud interaction ( $ERF_{ACI}$ ); link to AerChemMIP)

Haha, hope you enjoy  
this week in Beijing  
while I am doing some  
deep thinking in my  
office...



...And meanwhile, check  
<http://aerocom.met.no> so  
you will see what Mian  
had forgotten to tell  
you...