Abridged history of AeroCom

1st AeroCom: June 2003, Paris

2nd AeroCom: March 2004, Ispra

17th AeroCom/6th AeroSat: September 2018, College Park Maryland

What have we achieved?

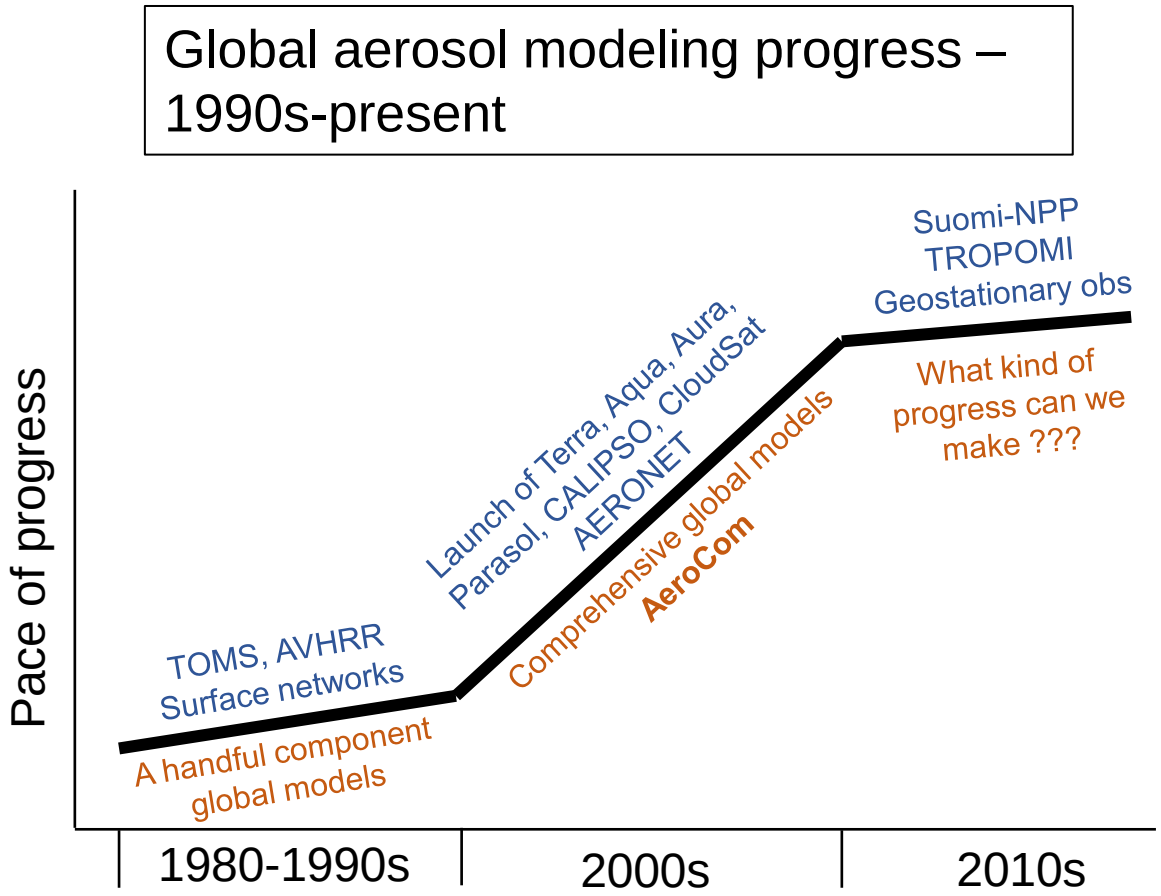
- Having established a community with strong scientific motivation and common interest
- Encouraging honesty in assessing the quality of work and promoting collaborations
- AeroCom is running by the participants through proposing/organizing model experiments and analysis
- Providing community scientific basis for high level assessments (e.g., IPCC)
- Providing helpful inputs to other communities for a wide range of information and helping formulating future observation strategies
- **"I believe the most important achievement of AeroCom is pursuing good, interesting joint international aerosol science projects in good humor and respect."** – Michael Schulz

What issues remain unresolved since the inception of AeroCom 16 years ago?

(Repeating 3 times for important issues)

- **Diversity, diversity, diversity**
- Vertical profile, vertical profile, vertical profile
- Composition, composition, composition
- Removal, removal, removal
- Microphysics, microphysics, microphysics
- Mixing state, mixing state, mixing state
- Particle size, particle size, particle size
- Optical property, optical property, optical property
- Humidification, humidification, humidification
- Aerosol-cloud interaction, aerosol-cloud interaction, aerosol-cloud interaction
- Etc., etc., etc.

How can we move forward for advancing aerosol modeling?



- The launch of the Terra and A-train satellites in the 2000s and the fast expansion of AERONET sites have made the breakthrough aerosol observing capabilities
- These observations had pushed extraordinary advancement of global aerosol model development and helped continuous model improvements
- Now the model progress seems to be incremental and have plateaued, because there is no breakthrough advancement of satellite observability, leaving some key model elements to remain unconstrained

Now with a suite of model experiments and analysis proposed every year, what can we learn and how should we move forward beyond comparison/inter-comparison?

This workshop will

- Continue to show scientific results with AeroCom models to lead the way for further studies
- Report the progress and status of proposed model experiments
- Suggest new experiment/analysis
- Discuss issues/difficulties/how to move forward