

Aerosol Modeling Breakout Session

Thursday, March 30

Objective:

- Provide information on the priorities and interests of aerosol modelers for the AL & CAPI Working Groups, e.g. how modeling can contribute to new focus groups

Address the Following Questions:

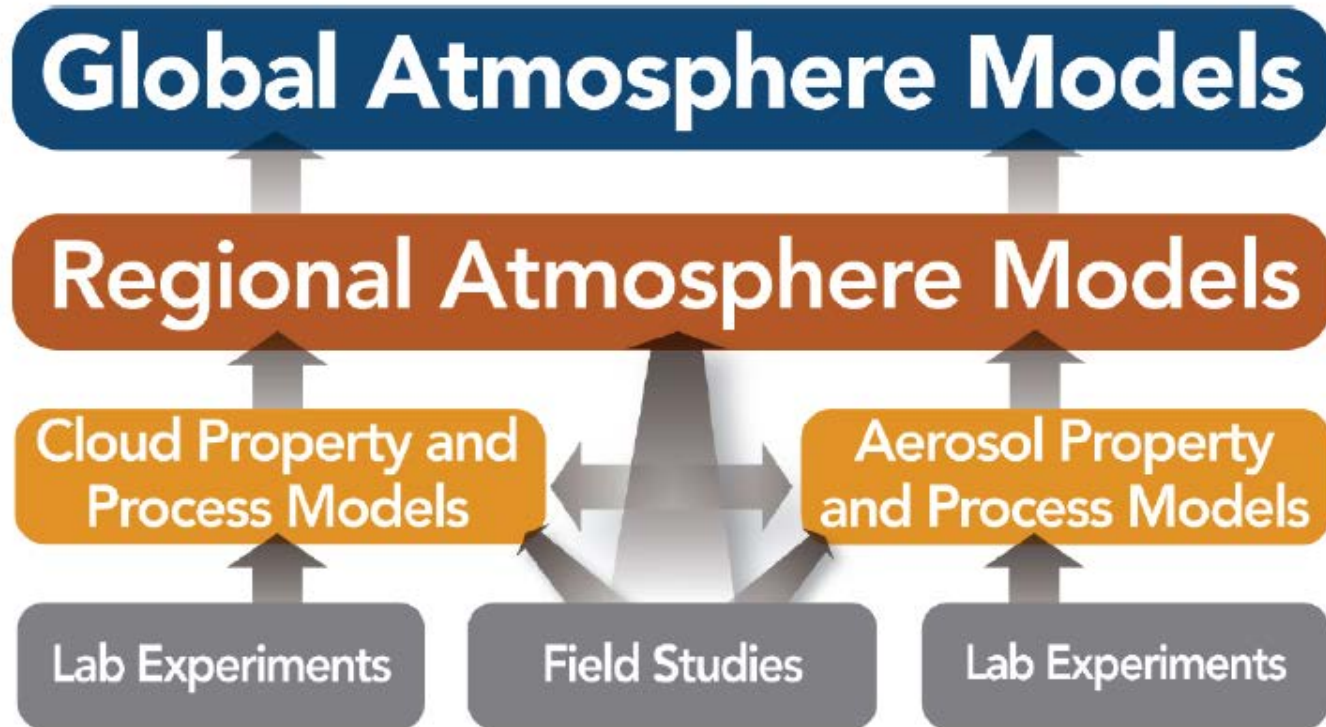
- What are the major science questions to be addressed by aerosol modelers over the next 2 – 3 years? Are these consistent with the ASR Science Plan?
- Are these science questions mesh with other activities being performed by the AL & CAPI Working Groups?
- Are the right measurements being collected by long-term monitoring / recent and proposed ACRF campaigns to develop and evaluate parameterizations? If not, what types of measurements would modelers like to obtain?

Short Talks:

- Rahul Zaveri: (PNNL)
- Bob McGraw: (BNL)
- Frank Binkowski (UNC)
- Yan Feng (ANL)
- Jerome Fast (PNNL)

Discussion

Discussion: Types of Models



from ASR Science Plan, adapted from Ghan and Schwartz (2007)

Discussion Topics

- **Modeling Frameworks:** What is the aerosol modeling framework being used? Should ASR adopt a common model framework? Do we need a new strategy of developing new aerosol process modules for climate models?
- **Inter-Comparison Studies:** Are there model inter-comparison studies several investigators would like to develop and work on?
- **Processes and Properties:** What processes of the aerosol lifecycle are most uncertain and relevant to climate modeling (e.g. new particle formation, aerosol aging, mixing state, optical and CCN properties, natural versus anthropogenic influences)? Which ones are investigators working on?
- **Integration with IOPs:** Are ACRF field campaigns being designed sufficiently to address modeling needs?
- **Process Modules:** What new aerosol modules do we expect ASR scientists to deliver in the next 2-3 years? How can this information be used to increase DOE's visibility in terms of climate research?
- **Larger Community:** What modeling issues related to climate modeling are ASR scientists addressing that are not being done by other programs? How does ASR aerosol modeling fit into or compliment efforts being conducted by other DOE modeling programs (e.g. ESM, SciDAC)?