

Aerosol Working Group

January 2006

Topic 1: How to proceed with results we have now

- Papers with working microphysics modules
 - Stand alone with current working version
 - Depends on availability of Xiaohong (he is interested, but depends on priorities in new job)
 - Two possibilities if he is not available:
 - Thanos could examine in context of indirect effects
 - Mian could analyze the results and use her new data sets to evaluate differences from different met fields

Topic 2: Gocart integration

- Issue: what scientific differences need to be explored between Gocart modules and the current GMI mass-only aerosol model? (may be only slight differences)
- Next steps:
 - Minghuai Wang (at U. of Mich) will exchange our aerosol optical properties lookup table with Mian and Mian will make off-line comparisons with optical properties
 - Mian will run the Gocart model with one of the GMI cases and examine whether there are any important differences that should be explored more
 - Hongyu Liu will examine GMI rainout/washout and recommend changes

Topic 3: Scientific interests and long term strategy

- Indirect aerosol/cloud interactions/forcing
- Direct aerosol forcing
- Aerosol/chemistry coupling
- Stratospheric aerosol

- Coupling with climate models

- Tool box:
 - UMaer microphysics
 - AER microphysics
 - TOMAS microphysics
- More representative Met fields:
 - GFDL model (Hongyu will explore)
 - CAM model (Phil will look into)
 - GISS E (can we get Drew Shindell to provide?)

Realities of where we are and what this implies for priorities:

- Aerosol/chemistry coupling is close to being complete – if nitrate module added Michigan will analyze differences and write up results (but depends on tropospheric model write-up timing?).
- Debra will be ready to supply AER model for integration into GMI in about 6 months (preference for COMBO model)
- Peter needs to complete box model intercomparison and modifications to his dust module
- After 2 and 3 complete then microphysics module intercomparison can be started