new ideas …

session 2

focus !

- **How to make better use of data capabilities?**
  - **need to use observations in a more systematic way**
  - **at least focus on particular regions or seasons**
    - **with interpretation by mesoscale models ?**
  - **possibly look at individual sites**
    - **with interpretation by LES models ?**
  - **collaborate with other communities**
  - **actively participate in planning focused of (long-term) experimental setups**
  - **commit to data-use**

local global is not good enough

- stratify global data for analysis (space, time)
- how ?
  - test model performance ‘at the slowest pitch’ - the best sampled regions (US, EU)
- how can we dig deeper into the models and validating model?
  - isolate process in space and time
  - identify cancellation of error cases

future sub-groups items (1)

- how to reduce uncertainty in forcing ?
  - which variables and relationships are essential ?
- how to understand temporal trends
  - commitment of ALL models to do the ‘hindcast’
  - use model (ensemble) to understand / interpret
- what are near/far away source differences
  - why do model underestimate Arctic Haze
  - missed biogenic sources? transport ? emissions?
  - do we have data ? (Barrow since 1988 sufficient?)

future sub-groups items (2)

- how to improve the emission inventories?
  - is inverse modeling a solution for corrections?
  - collaborate…
- how does climate sensitivity relate to (aerosol) radiative forcing?
  - update Jeff Kiehl's approach with AeroCom models
- how to test aerosol-precip. assumptions?
  - single well equipped sites hold more quantitative promise than Cloudsat data
  - stratify data on precip type according to model

tools

- **better inventory (description) of modeling**
  - **aerosol modules**
  - **climate modeling host**
  - **model input (e.g. emissions)**
  - **ancillary data**
- **can we come up with a more appropriate set of metrics?**
  - **co-variance**
  - **quantitative scores**

… but how to avoid mis-conceptions