- SCM Testbed: applications, additions, improvements

- SCM experiment design, ensemble forcings, case vs. long term (use of nudging, periodic reinitialization)

- Evaluation/Intercomparison strategies

- Parameter sensitivity study, other models, which fundamental quantities must be included in the metric?

- Scale analysis

- Convective/stratiform partitioning

- Others?
Fast Physics Testbed for the FASTER Project

- New parameterizations
- Regime-based simulations
- New analysis products
- Interactive simulation and evaluation/visualization

Select a model
- CAM5/BAM
- CAM5/MAM3
- CESM/CAM4
- CAM4
- CAM3.1
- GFDL
- GISS
- CAM Dev

Select physics schemes
- User modules for CAM Dev: C:\Documents and Settings\[Browse...\] Upload&Build

More model options

Select forcing data
- IOP
- Continuous Forcing
- Ensemble Forcing
- Regime
- User data: C:\Documents and Settings\[Browse...\] Upload

Select the starting time
- 2009-06-01 00:00:00
- 2009-06-01 00:20:00
- 2009-06-01 00:40:00
- 2009-06-01 01:00:00
- 2009-06-01 01:20:00
- 2009-06-01 01:40:00

Select the ending time
- 2009-06-01 00:00:00
- 2009-06-01 00:20:00
- 2009-06-01 00:40:00
- 2009-06-01 01:00:00
- 2009-06-01 01:20:00
- 2009-06-01 01:40:00

Start SCM Experiment
- 00:00:19
- 2009-06-02 09:00:00
Parallel coordinate view of 1024 realizations, with quasi Monte Carlo parameter sampling

Parallel coordinate, Müller, Zhang, and FASTER
What is optimal time scale for effective evaluation of long-term simulations?
Convective/stratiform partitioning (cloud and precipitation)

have been directly and exclusively based on what model convective and large-scale cloud parameterization tell us.

Is it meaningful to shift to sub-column sampling,
use sub-column thermodynamic and hydrometeor profiles
to compute radar reflectivity, classify as NSSL’s NMQ
(National Mosaic & Multi-sensor QPE) does
then evaluate against similar radar products
- SCM Testbed: applications, additions, improvements

- SCM experiment design, ensemble forcings, case vs. long term
  (*use of nudging, periodic reinitialization*)

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- Parameter sensitivity study, other models, which fundamental quantities
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- Others?