

Combined meeting of the CMMAP boundary layer and AGCM parameterization improvement working groups

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Discussion Points

- The need for the two working groups to function as a whole.
- The importance of having a limited set of goals and clear strategies.
- The need to use these goals and strategies as a basis for all our work.
- The importance of having a good start. That is if in the next six months all that we achieve is develop consensus on our goals and strategies, and develop more concrete implementation plans (tactics) then this would provide a solid foundation for the future. Of course we anticipate doing more.
- The importance of prioritizing our work in ways that leverages existing efforts within GCSS, ARM, and as a result of CPT.

Key CMMAP PBL goals!

- a) Better climate simulations than conventional GCMs, including surface winds and turbulent/radiative fluxes.
- b) Low-cloud feedbacks on climate sensitivity, continuing on clouds CPT
- d) Developing capacity for studying boundary layer cloud-aerosol-precipitation interaction (a GCSS BLCWG theme).

Secondary CMMAP PBL goals

Better treatment of small-scale land surface/PBL interactions.

Strategies

Work in the context of past and ongoing **GCSS** cases to define appropriate form of CRM (resolution/parameterizations) for use in MMF (Henderson/Khairoutdinov/Lappen/Xu)

Using existing CESS and future Aqua-Planet runs to study cloud feedbacks in MMF (Stevens/Bretherton)

Evaluate deep cumulus and cumulus/PBL parameterizations versus MMF in the context of the ARM diurnal cycle over land study. (Klein)

Development/testing of more sophisticated Cloud/Aerosol interactions through interactions with Microphysics working group and GCSS studies.

Broaden concept of MMF through studies using regional nesting (i.e., WRF), embedded LES, GxCRM studies. (Bretherton, Moeng, Stevens)

Work to integrate MMF MJO evaluation studies with broader MJO community specifically Clivar MJO working group and channel WRF activity (CMMAP/NCAR, CSU)