MJO Breakout Session

Guang Zhang: The MJO in a conventional GCM

- Shallow convection is an essential moistening agent for MJO and its denial in a conventional GCM creates vastly different MJO simulation

Jim Benedict: Effects of a Slab Ocean Model on MJO Structure in the SPCAM

- Analysis of SP-CAM coupled to slab ocean indicates improvements in coherence and phase relationships among moist variables compared to uncoupled SP-CAM.

Charlotte DeMott and Cristiana Stan: The Asian Monsoon in SpCCSM

- SpCCSM improves Asian monsoon simulation, mean and annual cycle of precipitation, eastward and poleward propagation periodicity, space-time spectral characteristics, SST-precipitation covariability

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Duane Waliser: Boreal summer MJO, SP-CAM cloud profiles, YOTC/ WCRP MJO task force, DYNAMO, etc

- The study brings out the role of CRM in simulating MJO in SP approach (EOF-based approach) CRMs demonstrate transition from shallow to deeper modes of clouds as MJO evolves. EOF-based approach has some issues.

- Analysis of Asian monsoon in SP-CAM. Northward propagation and spatial scale of monsoon intraseasonal variability unrealistic. Hence, coupling seems to produce more realistic boreal summer intraseasonal variability, as demonstrated by Charlotte's results.

- Opportunity for CMMAP synergies with WCRP- CLIVAR /WWRP - YOTC MJO Task Force and other activities

- Lessons for MJO improvements from ECMWF, BMRC, and NCEP

Discussion

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- Renewal proposal plan
- Cristiana: Initial MJO diagnosis in SP-CCSM. Simulation looks realistic and further diagnosis of the MJO in SP-CCSM is warranted.
- Need for refinement of analysis to examine how CRM cloud populations vary as a function of MJO phase, esp. role of higher order heating modes
- Need for more emphasis on the momentum budget and influence of multi-scale interactions on the momentum budget