

**MJO Breakout Session, CMMAP Team Meeting, Tuesday January 11, 2011**

- 1:30-1:50 Rachel McCrary: Modeling the West African Monsoon  
*Rachel presented some preliminary results on the ability of SP-CAM to accurately simulate the west African monsoon system, and showed some promising initial results detailing improvements in African easterly wave activity with implementation of the MMF versus conventional versions of CAM.*
- 1:50-2:05 Walter Hannah: Moisture Sensitivity Parameters and the MJO  
*Walter presented work based on his M.S. thesis, describing efforts that increase moisture sensitivity in a version of CAM3/RAS, and hence improve the MJO. A diagnosis is done of why increasing a minimum entrainment threshold produces a better MJO. Essentially, the diabatic heating profile in general becomes more bottom heavy, especially in dry atmospheres. Convection is less efficient at drying the column, allowing moisture sources such as surface evaporative feedbacks and extra moisture convergence provided by cloud-radiative feedbacks to grow moisture anomalies and destabilize the MJO.*
- 2:05-2:25 Duane Waliser: Multi-model comparison of ISV in the eastern pacific  
*A multi-model (10 models, 3 coupled, 7 uncoupled) comparison was done to examine model fidelity for reproducing the two dominant tropical eastern north Pacific ISV modes – ~40 day and 25 day modes. The former has both eastward and northward components and the latter is dominated by northward propagation. Of the models examined, CMMAP and the GFDL HiRAM performed the best.*
- 2:25-2:45 Eric Maloney: A Systematic Relationship between Intraseasonal Variability and Mean State Bias in AGCM Simulations (paper led by Daehyun Kim)  
*A systematic relationship between strong intraseasonal variability in atmospheric GCMs and mean state tropical precipitation biases is documented. Application of process-oriented diagnostics to assess why some models produce better variability than others is also undertaken. Diagnostics related to precipitation versus saturation fraction and relative humidity composited by precipitation rate do not change consistently between strong and weak variability models. Other diagnostics such as moist static energy budgets may provide more promise for discerning physical reasons for strong and weak MJO simulations.*
- 2:45-2:50 Charlotte DeMott: Convectively coupled waves in SP-CCSM.  
*Presented a brief diagnosis of equatorial Rossby wave and mixed Rossby-gravity wave structure in the SP-CCSM as compared to conventional version of the model.*
- 2:50-3:10 Eric Maloney: Discussion on YOTC MJO Task Force diagnostics

*A chief objective of the MJO Task Force is to develop process-oriented diagnostics that provide more telling insight into why a particular model produces a good/bad MJO. A number of these are being developed and evaluated, with initial efforts focused on diagnostics such as precipitation versus column saturated fraction, moist static energy budget, and relative humidity composited relative to precipitation.*

3:10-3:25 Duane Waliser: Advertisement for YOTC meeting in Beijing and Diabatic heating intercomparison project discussion

*Discussion on the virtue and plans for performing a multi-model evaluation of diabatic heating associated with the MJO, and dovetailing these plans with YOTC / MJO Task Force plans with GEWEX/GCSS help/coordination to examine a number of MJO/CCEW case studies via hindcast experiments that occurred during YOTC with a number of relatively high resolution models.*