MJO/Convective Transitions Breakout Report

Chuck Long, Chidong Zhang, Steve Krueger

Status

- DYNAMO and CINDY data released to the community last April.
- Still some data products issues being worked (ex: SMART-R/S-PolKa area precip cross-calibration, needed for finalizing forcing data set).
- We are now starting to address science issues.
- Particularly several efforts integrating models and observations.

Issues

- **Mid-level moistening:**
  - **role convective detrainment versus advection from other sources (ITCZ)**
  - **composite analysis by MJO phase seems to support discharge-recharge.**
  - **time lag from precip max of individual MJO events (instead of composite) does not.**
- **Hydrometeor distributions**
  - **How to compare with models**
- **Model sensitivity to microphysics parameterization**
- **Model forcing data sets**
  - **Comparison of Xie ECMWF+Precip constraint to Johnson Sondes-based**
  - **Model result differences between the two?**

Tie-ins with other groups

- Transition from isolated convection to more organized (Mesoscale Convective Organization)
- The roles of cold pools and entrainment (Entrainment and Cold Pools groups)
- Factors governing shallow to deep transitions on MJO scale (S2D Group)
- Case study #1: November MJO case (Warm Low Clouds Group)

Year of Maritime Continent

- International campaign to study Maritime Continent
- Target 2017
- Propose second AMIE-Manus
  - Have radars working to:
    - Characterize the cloud populations associated with MJO phase
    - Produce a 6-month model forcing data set
- AMF, Aerosol Facility, and Mobile C-Band Deployment in Maritime Continent
    - Pameungpeuk (7.64S, 107.69E)
    - Pontianak (0.00S, 109.37E)