

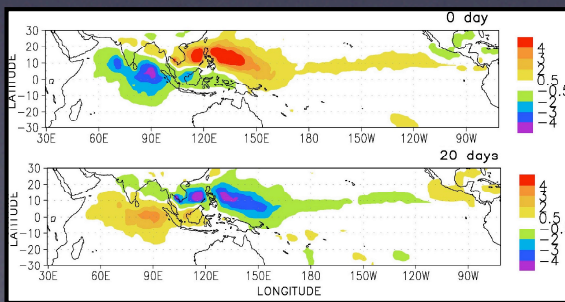
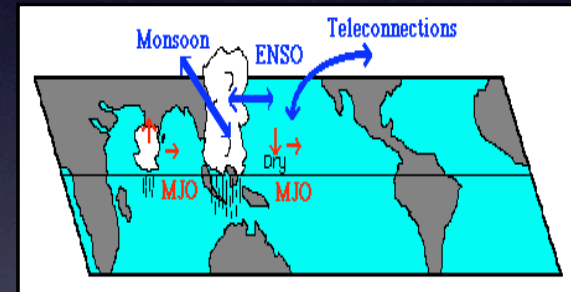
KT to Climate/NWP Centers

KT Agenda

- CAM diagnostics -- presentation to AMWG
- Experience from CLIVAR MJO group on engaging NWP centers
- First steps toward exploration of MJO-ENSO:
Fidelity of surface fluxes / implied ocean transport
- Experimental frameworks for understanding differences between standard/MMF physics

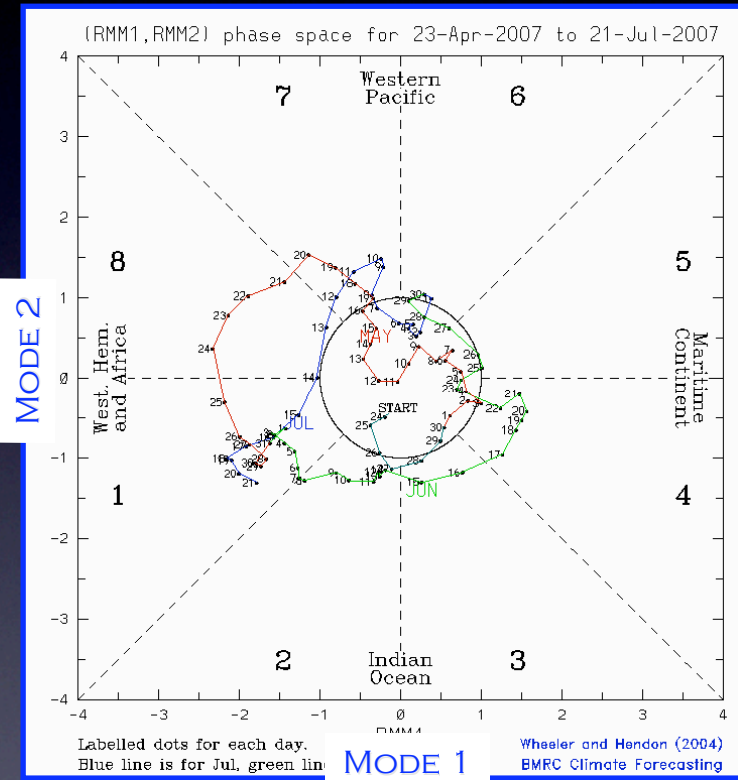
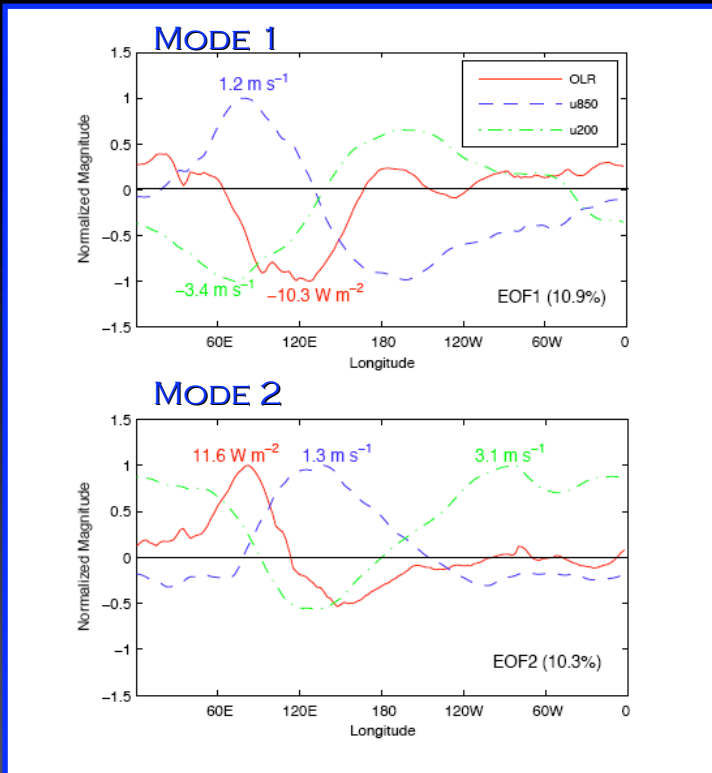
US CLIVAR MJO WORKING GROUP: EFFORTS TO IMPROVE SUBSEASONAL SIMULATIONS & ESTABLISH PREDICTIONS

- 1) DEVELOP MJO WG WEB SITE. *DONE.*
DIAGNOSTICS LINK, MEETING & TELECON UPDATES, THEME PAGES
- 2) DIAGNOSTICS FOR ASSESSING MODEL SIMULATIONS OF THE MJO. TRACKING PROGRESS HAS BEEN DIFFICULT.
DONE. JOURNAL ARTICLE FORTHCOMING. (WG - LEAD)
- 3) DIAGNOSTICS APPLICATION TO MODELS. *ANALYSIS AND JOURNAL ARTICLE UNDERWAY - (D. KIM AND WG LEAD).*
- 4) PREDICTION TARGETS AND METRICS FOR MJO FORECASTS. *DESIGNED, NOW BEING IMPLEMENTED. BAMS-LIKE ARTICLE PLANNED.*
- 5) WORKSHOP/EXPERIMENTATION PLANNING. *DONE - NOVEMBER 2007, IRVINE, CA.*



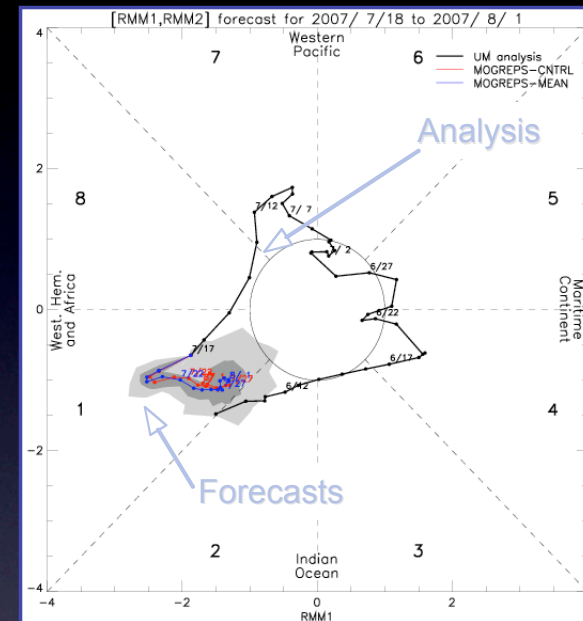
<http://www.cgd.cornell.edu/mjo/>

DEVELOPING AN MJO FORECAST METRIC

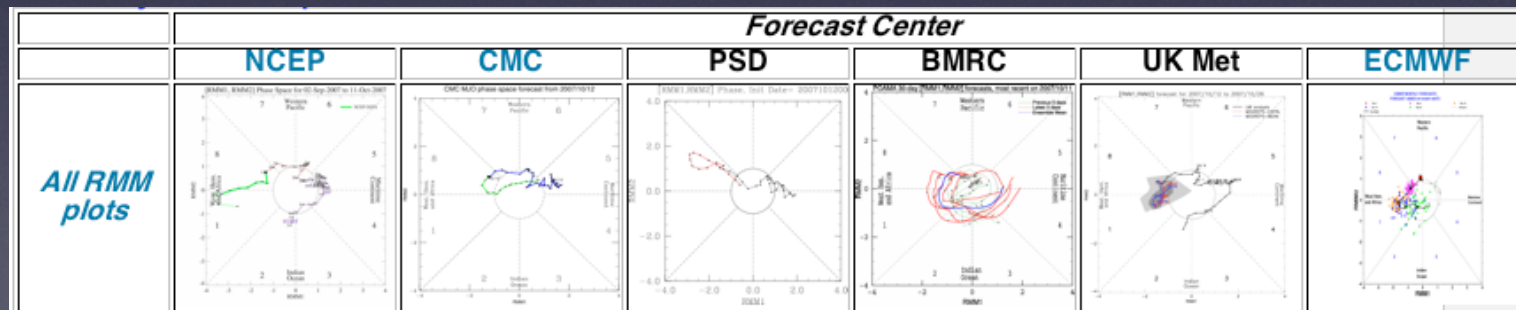


IMPLEMENTING THE MJO FORECAST METRIC INTO THE OPERATIONAL ENVIRONMENT

- This metric is now in use or will be adopted by a number of operational weather forecast centers (e.g., ECMWF, US, Canada, UK, Australia).
- Use of a common forecast metric allows for:
 - ✓ quantitative forecast skill assessment.
 - ✓ targeted model improvements.
 - ✓ even friendly competition to motivate further improvements.
 - ✓ developing a multi-model ensemble forecast of the MJO.

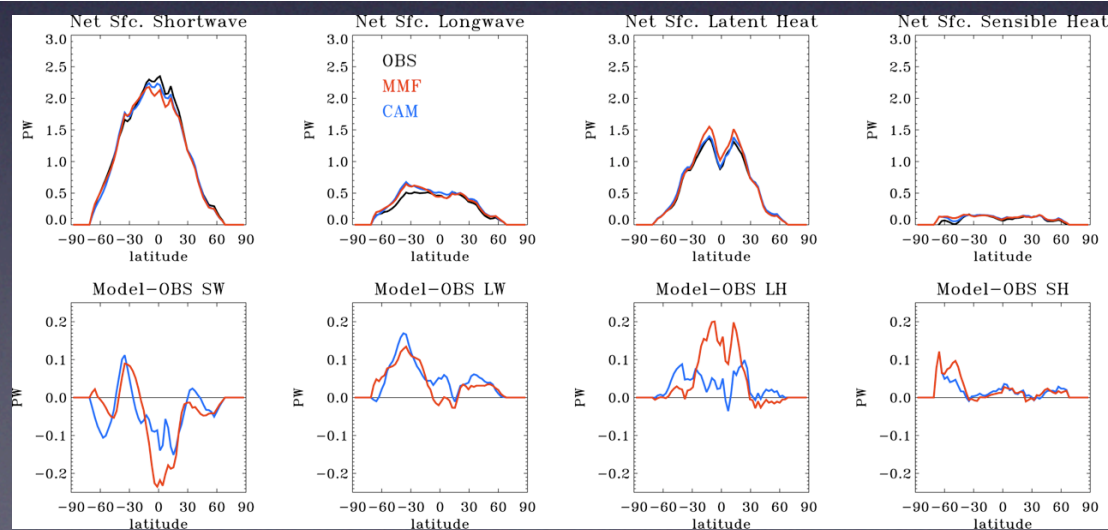
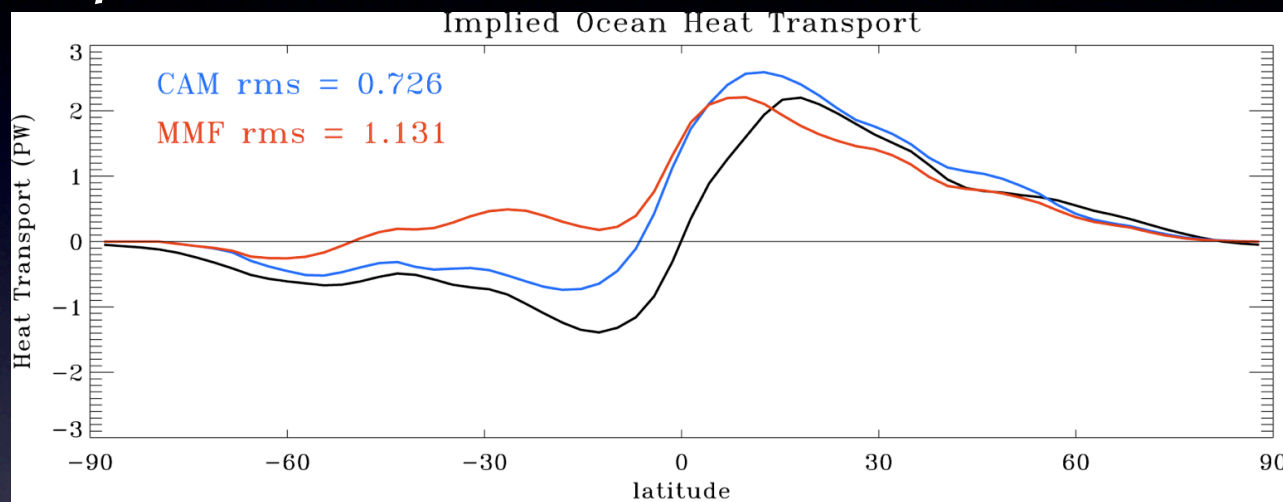


BASED ON WHEELER & HENDON 2004

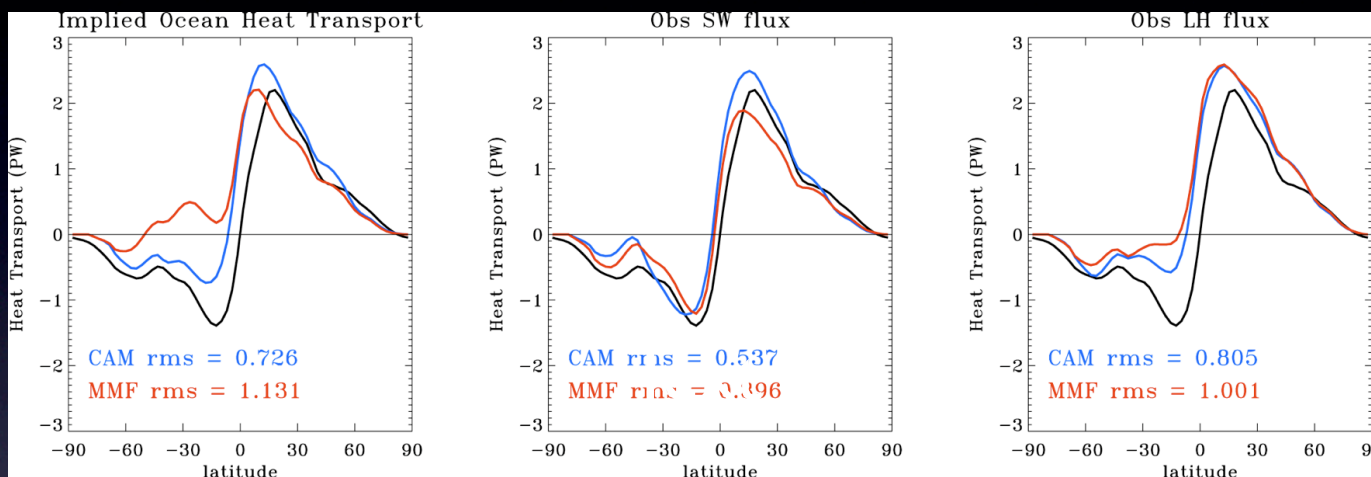


http://www.cdc.noaa.gov/monitoring/resources/figures/mjo_rmm.html

Implied Ocean Heat Transports and Surface Wind Stress in the Standard and Superparameterized CAM



Next steps



- Radiative effects
 - Reduce reflected SW from deep tropical clouds (reduce ice aloft?)
 - Improved marine Sc clouds--how?
- Latent heating issues
- Q3D CAM may help.

Experimental frameworks for understanding differences between standard/MMF physics

- How do MMF and standard physics differ throughout life cycle of MJO event?
- Methodology: run MMF and standard physics side-by-side on same atmosphere.
- Marat has developed methodology -- exploit for this problem in new runs
- Action items: Design experiments with Marat.
- Recommendation: Assign postdoc to this problem.