

***Radar Observations of MJO/Wave Interactions During  
DYNAMO/CINDY2011/AMIE***

Amanda DePasquale, Courtney Schumacher, and Anita Rapp  
Texas A&M University, College Station, TX

The Madden-Julian Oscillation (MJO) commonly initiates over the Indian Ocean and propagates into the western Pacific as a series of convective events. These convective events may interact with other convectively-coupled waves, like Kelvin and Equatorial Rossby waves. In situ radar data and sounding data collected during the DYNAMO/CINDY2011/AMIE field campaign from October 2011 to February 2012 in the central Indian Ocean are used to study the interaction between these waves and the MJO in terms of atmospheric and cloud properties. The focus will be on characterizing the precipitation and atmospheric characteristics during each wave type alone and in the presence of other waves. Analyzed radar products include rain rate, convective-stratiform classification, and echo top heights. Sounding data includes profiles of wind speed and direction and relative humidity. Characteristics of waves filtered using different thresholds and methods are compared and composited. With a better understanding of the interaction between the initiation of the MJO and Kelvin and Equatorial Rossby waves, the prediction of precipitation and cloud properties of the MJO can be improved.