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## Understanding predictability of the MJO in S2S ensemble

*Tuesday, 2 April 2019 16:00 (15 minutes)*

Predictability of the MJO, especially the initiation and eastward propagation of the large-scale convection and precipitation over the Indian Ocean and West Pacific warm pool across the Maritime Continue, is extensively investigated using the S2S ensemble. The model forecasts are compared with the Large-scale Precipitation Tracking (LPT) of the MJP using the 20-years TRMM-GPM precipitation data from 1998-2018 base on the method described in Kerns and Chen (2016, JRG-Atmosphere). In this study we first examine the model predictions of the overall global tropical convection statistics including the monsoons, ITCZ, and the MJO from 19980-2018. There is a wide range of seasonal and interannual variability of the MJO. The predictability of the MJO convective initiation and eastward propagation is assessed using model predictions of over 200 MJO events are evaluated using the LPT data at leadtimes from 4-45 days. The predictability of the MJO as measured by the RMM index is relatively longer and invariant than the MJO convective initiation and eastward propagation in terms of precipitation. The model predicative skill decrease with increasing in leadtime, especially after 10 days. The predictive skill is particularly low across the Maritime Continent. The model captures the stronger MJO during the boreal winter DJF better than the summer JJA. We are currently extending the analysis to the surface wind using the satellite based CCMP data from 1998-2018. A more comprehensive analysis will be presented at the workshop.

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