SESSION: (A1) Mechanisms of S2S predictability

(A1-06)

The characteristics of Kelvin waves in the atmosphere-ocean coupled system

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We use the technique developed in Baranowski at al (2017) that allows to identify the individual Kelvin waves in the observed TRMM precipitation to evaluate prediction skill of the individual Kelvin waves and Kelvin wave climatological characteristics in the set of forecasts using the new coupled Navy global prediction model. While the variability in the coupled model in the Kelvin wave portion of the spectrum appears to be well represented, the features of the individual waves are of interest as well. In particular, our earlier work shows that the interaction of Kelvin waves with the local circulations over the Maritime continent could have an impact on propagation of the Kelvin waves and possibly MJO through the Maritime Continent, depending on the time of the day the waves reach Sumatra and Borneo. In this work we examine Kelvin wave characteristics in the coupled model forecasts to establish how their intensity, the location of the origin and decay and interaction with the Maritime continent compares to observations and how these characteristics are linked with MJO propagation and MJO prediction skill.