Dynamo Intraseasonal State Summary

See commentary on pages 2 and 4.

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Although the positive OLR anomalies present in the projections onto the MJO band are presently remarkable over the Indian basin, the sum of those signals and signals in other bands yields a net signal that has OLR anomalies closer to average. Most of the signal that presently offsets the suppressed MJO state is in the Kelvin band. The Kelvin band includes a positive OLR signal over the western Pacific within the local active convective phase of the MJO, while it also includes a strong negative OLR signal over the central Indian basin. Although convectively coupled Kelvin waves tend to move more quickly than the MJO, these are relatively long Kelvin waves, which yields a more substantial local residence time. Also, Kelvin waves of sufficient amplitude impact the base state through which they propagate because of the response to the heating in convection coupled to the waves. Thus this Kelvin wave event might prematurely erode the amplitude of the suppressed convective signal over the Indian basin. Needless to say, this interference is likely to be largely responsible for at least some of the erosion of the RMM PCs over the last few days.
Indian Ocean Dipole

OLR anomalies associated with the IOD have dramatically weakened, although some weak active convective signal apparently remains over the north western Indian basin.

MJO active convection has shifted eastward over the Pacific basin, with some negative OLR signal in the MJO band even over the western hemisphere. A tongue of positive OLR anomalies in the MJO band extends eastward across the equatorial Maritime Continent from the main region of suppressed convection in the MJO band over the Indian basin. This tongue of suppressed convection is extended eastward by suppressed convective anomalies in the Kelvin band over the western Pacific basin, while substantial enhanced convective signals in the Kelvin band are presently over the central and eastern Indian basin, where they dramatically offset the net amplitude of the suppressed MJO convective base state. Since potential vorticity signals associated with convection coupled to high amplitude Kelvin waves remains in the low to middle troposphere after Kelvin wave passage, this wave might continue to erode the overall amplitude of the local suppressed convective phase of the MJO over the next few days. Any active convection over the Indian basin over the next week to 10 days, however, is likely to migrate gradually poleward as the suppressed convective phase of the Kelvin wave presently over the Atlantic basin moves across the Indian Ocean.