

The MJO remained active during the past week though several observational indicators depict a notably less coherent and considerably weaker signature than previous weeks, a trend that began a couple of weeks ago. The RMM index and the CPC velocity potential MJO index both show weak projections on MJO activity. The former showing little eastward propagation over the last 10 days centered across the central Pacific (i.e., Phase 7). Viewing other observations such as time longitude diagrams of raw anomalous 200-hPa velocity potential and equatorial OLR, any enhanced convective phase of the MJO is now most likely located across the Americas.

Further complicating the pattern of anomalous tropical convection continues to be a robust equatorial Rossby wave (ERW) interfering with the MJO signal across the Indian Ocean (IO) and Maritime continent (MC) regions. This further contributes to the less clear MJO signature and high uncertainty beyond Week-1 for main centers of action for anomalous tropical convection.

Nearly all the dynamical model forecasts of the MJO index show continued weakening of the MJO signal in Week-1 so there is good agreement overall over the next several days. There is high spread, however,

entering Week-2 with the NCEP, JMA, Taiwan Central Weather Bureau and to a lesser extent the UK Met Office indicating a stronger projection of the RMM index once again over the western Pacific, while the ECMWF solutions showing a continued incoherent MJO signal.

For Week-1, the constructive interference of the weakening suppressed convective phase of the MJO and the suppressed phase of the ERW favors reasonable confidence for below median rainfall for areas in the eastern Indian Ocean, northern Australia, parts of the southern and western MC and a region near the Philippines. Areas along the equator are not highlighted due to more active precipitation expected in these areas. Residual MJO influence, above average SSTs and model guidance support a continuation of a very active southwest Pacific Island region with favored tropical cyclone development in two separate areas. General anomalous convergence indicated by model guidance, tropical cyclone 8S and potential further tropical cyclone development prior to or very early on in ther period favors above-median rainfall in the south-central IO. Despite residual MJO phase, strong model support favors below-median rainfall across interior Brazil during Week-1. Tropical moisture from a residual MJO influence along with a shortwave trough favors a plume of moisture into the northwest Mexico and parts of the Southwest CONUS.

At the current time, it is unclear, at what strength, if any, the MJO will emerge after interference with the strong active ERW previously described and also to what degree and impact the more persistent enhanced convection in the western Pacific will have moving forward. Uncertainty in the anomalous tropical convective pattern is quite high in Week-2 so highlighted areas of anomalous precipitation are quite modest at best. A high confidence area of below median rainfall is indicated for areas across northern Australia and with a slightly lower confidence for persistence of above-median rainfall and favorable conditions for tropical cyclone development for portions of the western Pacific in Week-2. Good model agreement between the CFS and ECMWF support a dipole of drier (wetter) than average conditions for northern South America (southeast Brazil).