

The MJO remained active over the past week, although some observational indicators continued to become less coherent and eastward propagation of the signal remained very minor. The enhanced convective phase is centered across the western Hemisphere but there were multiple areas of enhanced convection across the global Tropics and included parts of Africa, the southwest Indian Ocean (IO), the south-central Pacific and northern South America. The primary area of suppressed convection was oriented from the eastern IO across parts of the Maritime continent. Other subseasonal tropical variability and tropical cyclone activity continue to contribute to making the MJO signal less clear then earlier in the month. Tropical cyclone Felleng developed across the southwest IO which was at odds with the current MJO phase.

The MJO index (RMM) has paused the last 10 days across the western Pacific but there is reasonable agreement for renewed eastward propagation during the period across RMM Phase 1 by the end of the forecast two week period. Although there is some spread in the RMM forecasts, we favor a continuation of the MJO with the enhanced convective phase shifting to Africa over the next 2 weeks.

The current outlook for Week-1 remains largely based on the ongoing MJO signal expected to reside in RMM phases 8/1 during the period, augmented by GFS and CFS rainfall forecasts where deemed helpful. Enhanced probabilities of above-median rainfall are forecast for parts of the south-central Pacific Ocean and associated Islands consistent with MJO composites and forecast guidance. Tropical cyclone Felleng is likely to produce very heavy rainfall and strong winds for parts of northeast Madasgascar and nearby waters and islands in the southwest IO. Strong signals in model guidance favor below-median rainfall for parts of southern Africa and northeast Brazil, with both of these areas at odds with current and upcoming MJO phase. The MJO and model guidance favor below-median rainfall for a region from the eastern IO across northern Australia to Papua New Guinea. A eastward extended South Pacific Convergence Zone (SPCZ) in parts associated with the MJO favors a continued threat for tropical cyclogenesis for the south central Pacific Ocean.

For Week-2, below median rainfall is favored across the MC and parts of the western Pacific associated with the eastward movement of the MJO. Drier-than average conditions are also favored for Hawaii consistent with MJO composites and the CFS rainfall forecasts. Enhanced convection is expected to develop late during the Week-2 period across the western IO associated with the MJO and likely atmospheric Kelvin wave activity that often leads the MJO convective envelope. The large scale environment, as indicated by model guidance, appears favorable for tropical development across the southwest IO also during this period but confidence is lower.

As a result of the multiple areas of anomalous tropical convection, predictability is lowered and the uncertainty has increased for much of February as compared to earlier in the month of January. MJO associated convection would favor, on average, a continuation of a ridge-trough pattern across the U.S. from west to east. This is currently at odds with the forecast extended range model guidance for the first part of February, however. A strong southern stream typical during the upcoming phases of the MJO is generally indicated in model guidance. If the MJO remains active, the dominant player for anomalous tropical convection and enhanced convection once again organizes across the Indian Ocean, chances become elevated for a mean trough along the west coast and ridging across the east beginning in late February. This would favor above (below) normal temperatures across the eastern (western) U.S. and a more active pattern with elevated precipitation for the west coast.