

The amplitude of both the RMM-based and CPC velocity potential-based MJO indices increased during the past two days, with the enhanced phase developing over the eastern Indian Ocean and western Maritime Continent. This activity is seemingly unrelated to and out of phase with the previous MJO event that peaked in October, and there is currently no eastward propagation of the signal. There is a robust equatorial Rossby wave (ERW) clearly evident in the OLR, low-level wind, and even the upperlevel velocity potential fields that is likely contributing to this projection on the MJO indices. Constructive interference among the Rossby wave, the base state, and more transient Kelvin wave activity may also be further enhancing this signal. MJO index forecasts from the ECMWF and GEFS ensembles are in general agreement that Kelvin wave activity over the next several days will likely cause a rapid eastward progression of the index across the Maritime Continent. Following that, a slower evolution of the intraseasonal signal is favored over the West Pacific during Week-2. While it is uncertain whether the current confluence of modes will result in a more canonical intraseasonal signal, based on these forecasts, the MJO may play a role in the evolution of the global pattern later in the Week-2 period. The mid-latitude pattern is actually fairly consistent with a typical response to an East Indian Ocean MJO event, with considerable mass transport from the tropics feeding into the East Asian Jet.

No new tropical cyclones formed during the past week. Due in part to the robust ERW, an active week is anticipated for the Indian Ocean. A disturbance east of Sri Lanka has a moderate potential for development as it moves near or south of the Indian subcontinent and into the Arabian Sea over the next several days. During the middle part of the week, a second disturbance is forecast to move from the Gulf of Thailand to the Bay of Bengal, and there is a high potential for tropical cyclogenesis, with most GEFS ensemble members bringing the potential system west-northwestward towards eastern India. South of the equator, there are two disturbances south of Indonesia that both have a potential to become tropical cyclones. One system, located near 100E, has a moderate potential for development, and meager model support. The second system, located to the east near 110E, has a high potential for formation, with most GEFS members projecting a southerly track towards Western Australia. In the West Pacific, there is a moderate potential for tropical cyclone development in the vicinity of Guam later in Week-1, with the threat shifting westward towards the Philippines during Week-2. Additionally, there is a low to moderate potential for development along the SPCZ, well to the west of American Samoa. During late Week-2, enhanced convection is anticipated to develop north of Madagascar, with a low potential for tropical cyclone development.

Forecasts for above- and below-normal precipitation were made primarily using dynamical model consensus as a guide, with some consideration of Phase-6 MJO composites for Week-2. During Week-1, a large swath of enhanced convection, partly associated with potential tropical cyclones, is forecast extending across much of the central and northeastern Indian Ocean Basin, and parts of the central Maritime Continent. A zone of subsidence away from these convective centers of action favors suppressed rainfall across the south-central Indian Ocean. Enhanced rainfall is anticipated across much of eastern Australia, and along a frontal zone extending from the coast of Vietnam northeastward into the North Pacific. Across the central Pacific, enhanced rainfall in the vicinity of a trough is favored for Hawaii, with suppressed convection closer to the Equator. Enhanced convection is also favored east of the Bahamas in the North Atlantic, and there is good model support for a dipole of suppressed (enhanced) rainfall across northeast Brazil (northern Argentina, Paraguay, and south-central and eastern Brazil).

During Week-2, suppressed convection is favored across the western and central equatorial Indian Ocean, with enhanced convection shifting to the West Pacific. An eastward progression of the pattern will eventually ease enhanced rainfall across Hawaii, although there is a potential for Week-2 accumulations to also be above-normal due to rainfall early in the period. The base state continues to favor suppressed convection across the equatorial central Pacific. In the Western Hemisphere, dynamical models favor enhanced (suppressed) precipitation across northeastern Brazil (northern South America and southern Brazil).

Forecasts over Africa are made in consultation with CPCs international desk, and can represent localscale conditions in addition to global-scale variability.