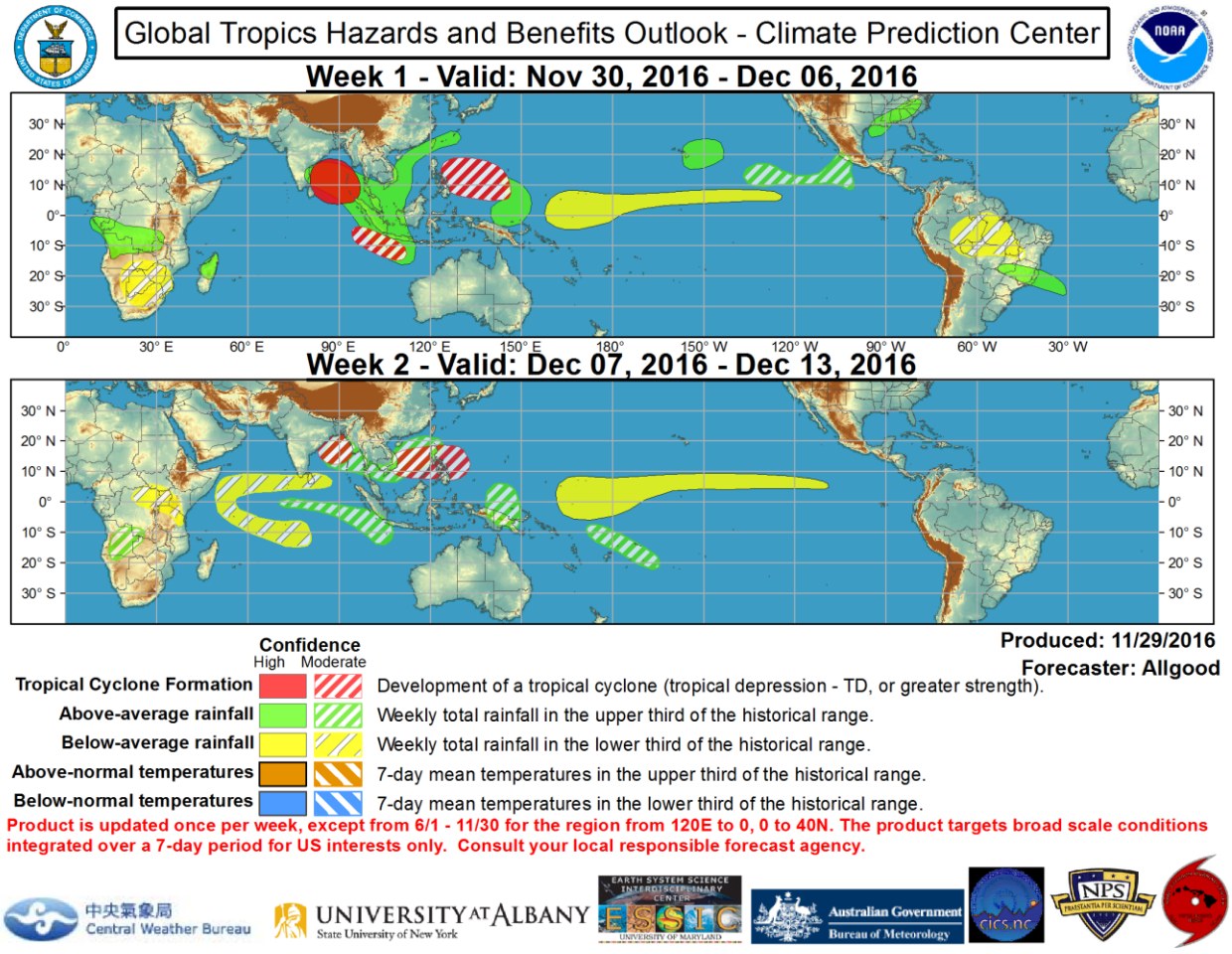

The RMM-based MJO index weakened during the past week after eastward propagation of the index ceased. The amplitude of the CPC velocity potential based MJO index has weakened as well. A pair of Kelvin waves (KW) is evident over the Maritime Continent and West Pacific, and the latter KW appears to be constructively interfering with an equatorial Rossby wave (ERW). The resulting enhanced convection over the West Pacific is likely interfering with the projection of the lower frequency intraseasonal signal on the MJO indices. Dynamical model MJO index forecasts generally depict a weak signal over the next several weeks, with some GFS and ECMWF ensemble members suggesting renewed MJO activity over the Indian Ocean to the Maritime Continent by Week-2. Given the competing convective signals over the eastern Indian Ocean and the West Pacific and continued influence from the low frequency La Nina base state, the future evolution of the global tropical convective pattern is unclear. Persistent West Pacific convection has the potential to influence the downstream midlatitude pattern, favoring cold air intrusions into eastern North America. Enhanced convection over the eastern Indian Ocean and Maritime Continent, however, would have the opposite effect.

Tropical Storm Otto emerged over the East Pacific after making landfall over southeastern Nicaragua as a Category-2 hurricane, but quickly dissipated. Tropical Storm Tokage formed near the Philippines on 24

November and weakened while meandering over the South China Sea. Over the Bay of Bengal, Tropical Storm Kyant formed on 25 November, but also quickly dissipated. During Week-1, there is a high potential for new tropical cyclogenesis over the Bay of Bengal early in the period. Tropical cyclone formation is also possible over the southeastern Indian Ocean near Sumatra or Java, but confidence is moderate based on dynamical model support. Dynamical models strongly favor tropical cyclone development over the West Pacific between Guam and the Philippines, but confidence was kept moderate in this outlook due to a lack of any incipient disturbances evident in satellite imagery. Elsewhere, there is a disturbance currently near the Solomon Islands that has a low potential for development. During Week-2, additional tropical cyclogenesis is possible over the Bay of Bengal and the West Pacific or South China Sea. Based on dynamical model guidance, tropical cyclogenesis over the South China Sea could occur at an unusually low latitude.

Forecasts for areas of enhanced or suppressed precipitation were based primarily on dynamical model guidance, potential KW and ERW activity, and the low frequency base state. Enhanced convection is likely from the Bay of Bengal southeastward across the western Maritime Continent. Frontal activity may focus enhanced precipitation across parts of the South China Sea and Taiwan as well. Enhanced precipitation due to Kelvin and Rossby wave interactions over the West Pacific is forecast to persist north of New Guinea, while La Nina conditions support suppressed rainfall across much of the tropical central Pacific. Areas of enhanced convection are favored across western Hawaii and parts of the East Pacific basin. Additionally, widespread much needed rainfall is anticipated over parts of the southeastern CONUS. Consistent with any remnant intraseasonal signal, suppressed convection is favored across north-central Brazil.

During Week-2, suppressed (enhanced) rainfall is anticipated over the western Indian Ocean and central Pacific (eastern Indian Ocean, Southeast Asia, near New Guinea, and across parts of the southwestern Pacific), reflecting a generally stationary pattern in the global tropics.

Forecast shapes over Africa are made in consultation with the International Desk at CPC, and often reflect more regional scale variability in addition to large-scale climate factors.