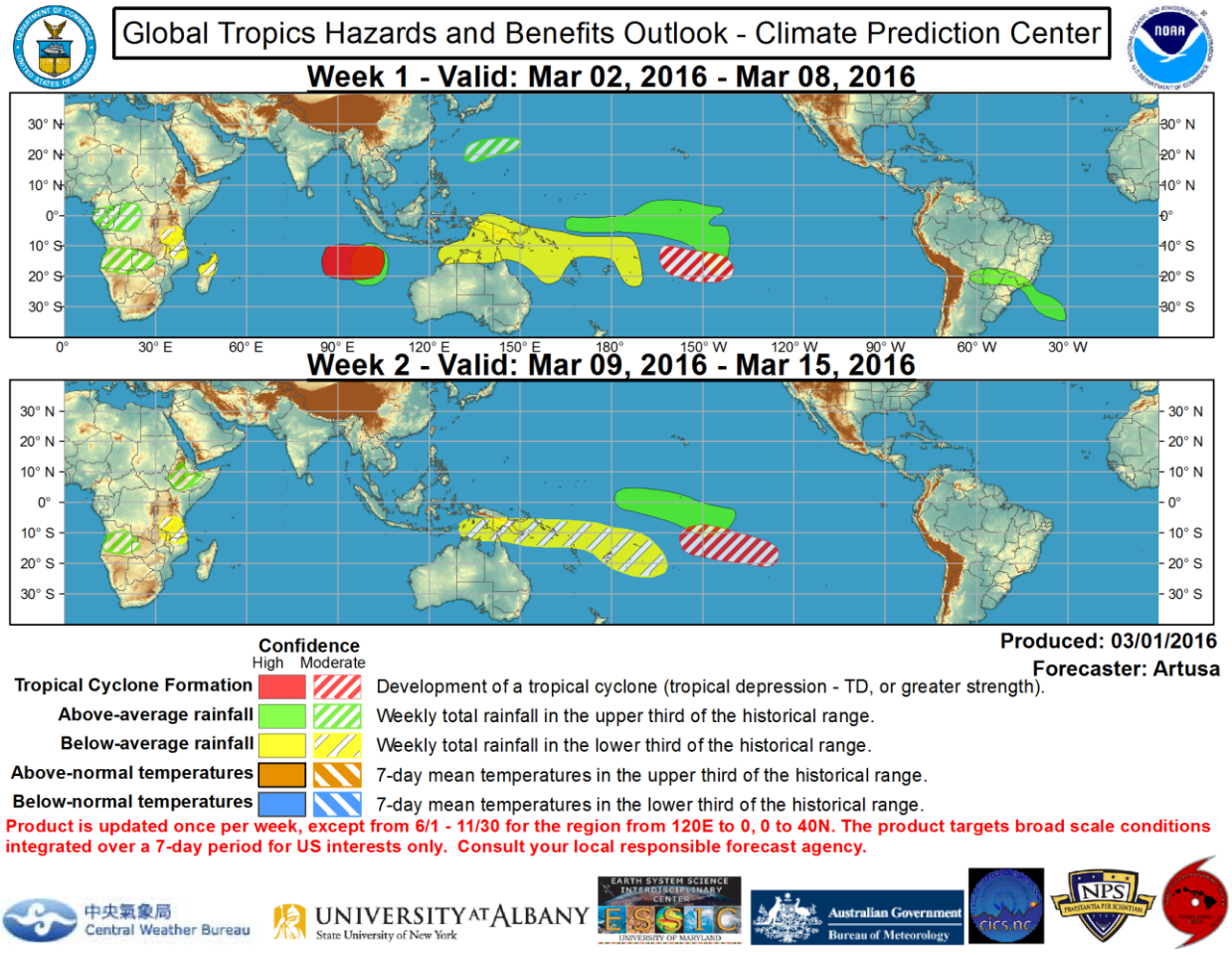

A brief review of the pattern of anomalous tropical convection over the past week depicts very strong enhanced convection centered near and east of the Date Line along and south of the Equator. Suppressed convection was observed across parts of southeast Africa, northern Australia, much of the Maritime Continent (MC), and eastern Brazil. Tropical Storm Yalo brought heavy rainfall and strong winds to the French Polynesia and Austral Islands in the South Pacific from February 25-26th.

The MJO remained active during the past week with the enhanced convective phase shifting to the central and eastern Pacific, while the suppressed convective phase is becoming centered across the eastern Indian Ocean (IO) and Maritime Continent. A coherent Wave-1 structure is indicated in depictions of 200-hPa velocity potential. Although the latest observations indicate a robust MJO signal, there is considerable uncertainty for the future evolution of this event as it continues to interact with the El Nino low frequency base state. Significant forecast spread exists in dynamical model forecasts of the RMM index over the next couple of weeks especially with regard to the rate of eastward

propagation of the enhanced phase, though most models agree on weakening the MJO signal with time. The MJO and ENSO background state are expected to constructively interfere for a significant portion of this period.

Confidence is high regarding potential development of a tropical cyclone over the low latitudes of the southern Indian Ocean northwest of Australia during Week-1. This may be associated with the presence of the Inter-Tropical Convergence Zone (ITCZ). Confidence is moderate for possible tropical cyclone activity over the central South Pacific, related to both MJO activity and the ENSO background state during Week-1 and Week-2.

During Week-1, the MJO is forecast to remain active, though weaken. The MJO and El Nino conditions favor above-median rainfall for areas of the central tropical Pacific, associated with an eastward displaced South Pacific Convergence Zone (SPCZ), in addition to potential tropical cyclone activity as noted earlier. Above-median rainfall is indicated northwest of Australia, in part related to possible tropical cyclone activity. There is high confidence for above-median rainfall across far southern Brazil, thought to be related to mid-latitude frontal activity. Finally, there is moderate confidence for above-median rainfall over the open waters south of Japan, likely related to mid-latitude frontal activity. Below-median rainfall is favored over part of the region normally influenced by the SPCZ. In this case, the favored area stretches from northern Australia and Papua New Guinea eastward across the tropical South Pacific to just east of the Date Line, due to enhanced subsidence associated with the MJO and the low frequency El Nino base state.

During Week-2, above-median rainfall is favored across the equatorial central Pacific, which is associated with a (predicted) eastward displacement of the SPCZ. Confidence is moderate for below-median rainfall over the area just northeast of the Coral Sea, a location more closely aligned with the typical, mean position of the SPCZ. Additional highlighted areas over Africa are made in consultation with CPC's international desk, and can represent local-scale conditions in addition to global-scale climate variability.

Enhanced convection associated with the MJO and the El Nino base state is expected to contribute to an enhanced subtropical jet stream across the southern contiguous U.S. during early March, bringing above median precipitation to much of California and the desert Southwest.