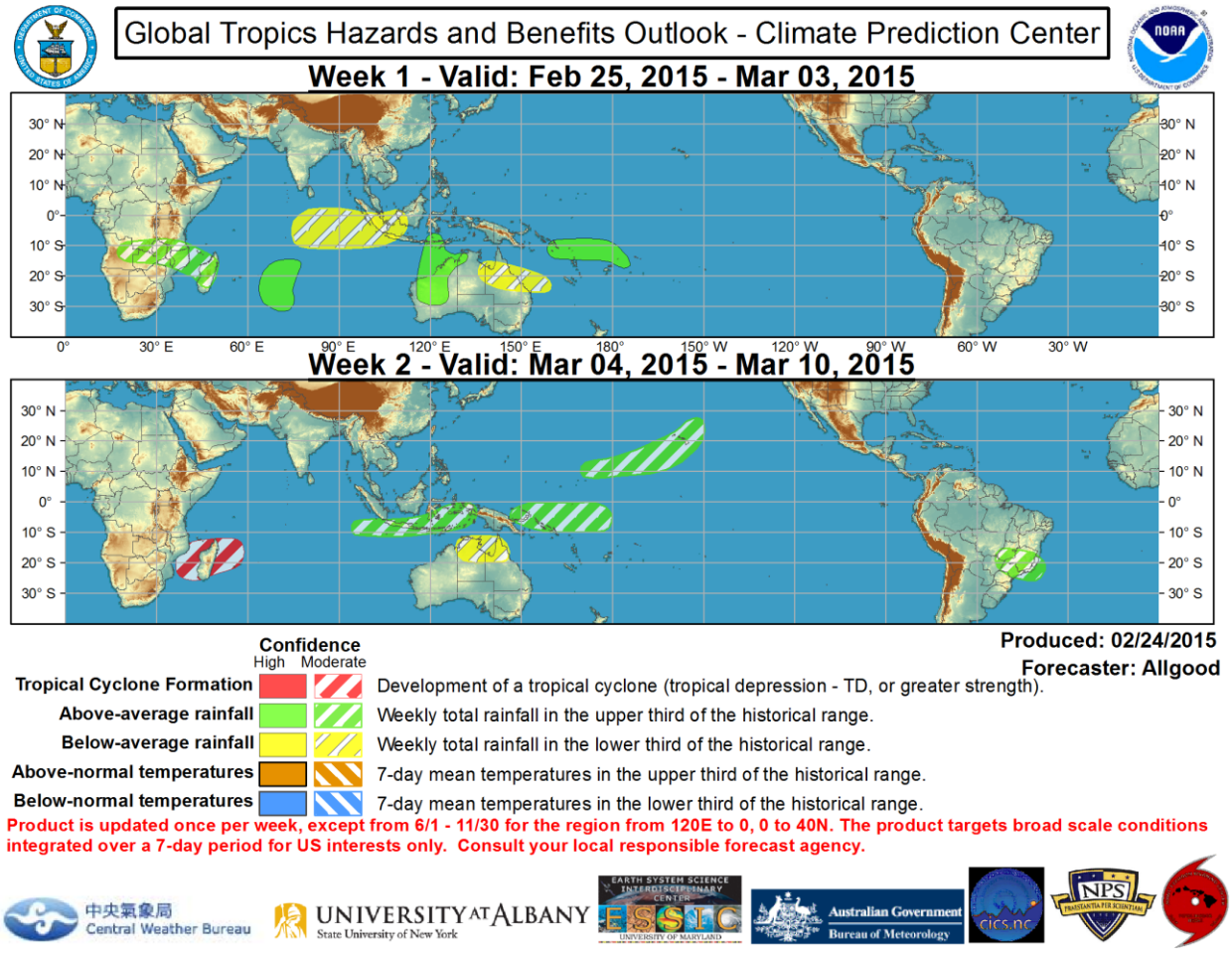

There was no coherent MJO signal during the past week. The RMM-based MJO Index depicted a weak convective signal over the western Pacific with no eastward propagation, while the CPC velocity potential based index had very low amplitude. Spatial upper-level velocity potential patterns exhibit discontinuous areas of negative anomalies (associated with an enhanced convective signal) over the eastern Pacific, South America, and western Africa, with a more robust positive anomaly field (associated with a suppressed signal) over the Indian Ocean. Other modes of tropical convective anomalies are apparent in the OLR field, including Kelvin Wave activity over the Maritime Continent and Equatorial Rossby Wave activity over the eastern Indian Ocean. Destructive interference among these modes has led to a generally weak and incoherent global tropical convective pattern in recent days.

There is considerable spread among the dynamical model MJO Index forecasts. The GFS solutions favor a continuation of a weak MJO signal through Week-2, while the ECMWF ensembles, UKMET, and Canadian all depict a potential for a strengthening MJO signal over the Maritime Continent during Week-2. The statistical tools generally favor a weak MJO signal during the upcoming two weeks, although the Constructed Analog forecast depicts increasing signal over the eastern Indian Ocean by the end of Week-2. Based on recent observations and the dynamical and statistical models, the MJO is not

anticipated to be a significant contributor to the global tropical convective pattern during Week-1, but there may be some MJO-related contribution during Week-2 towards enhanced convection over parts of the eastern Indian Ocean, Maritime Continent, and equatorial far western Pacific.

Tropical Cyclone Marcia developed over the Coral Sea on 18 February, attaining Category-3 intensity on the Saffir-Simpson scale before making landfall near Rockhampton, Queensland and causing significant damage. Tropical Storm Fourteen developed over the south-central Indian Ocean, south of Diego Garcia, on 24 February. Current forecasts from the Joint Typhoon Warning Center bring this tropical cyclone southwestward and then southward over open water while strengthening to Category-1 intensity well east of La Reunion. During Week-1, no additional tropical cyclogenesis is anticipated. During Week-2, large scale conditions are forecast to become increasingly favorable for tropical cyclogenesis over the far southwestern Indian Ocean near Madagascar and the Mozambique Channel.

Forecasts for areas of above or below normal precipitation in this outlook were based primarily on consensus among the dynamical models. During Week-1, enhanced convection is forecast over parts of southeastern Africa and Madagascar. Enhanced convection associated with Tropical Storm Fourteen is likely across the south-central Indian Ocean, while enhanced monsoonal convection is anticipated across the Timor Sea, much of Western Australia, and far northwestern Northern Territory. Enhanced convection is also favored over the southwestern Pacific near 10S, from 160E to the Date Line, while suppressed convection is forecast over the eastern Indian Ocean, far western Maritime Continent, and northeastern Australia.

During Week-2, enhanced (suppressed) convection is forecast over southern and central Indonesia and the southwestern Pacific (Northern Territory and northern Queensland). Additionally, dynamical models are in good agreement favoring a plume of tropical moisture extending from 10N straddling the Date Line northeastward towards Hawaii, where precipitation would be welcome following a dry rainy season to date. An area of enhanced convection is also favored over southeastern Brazil.