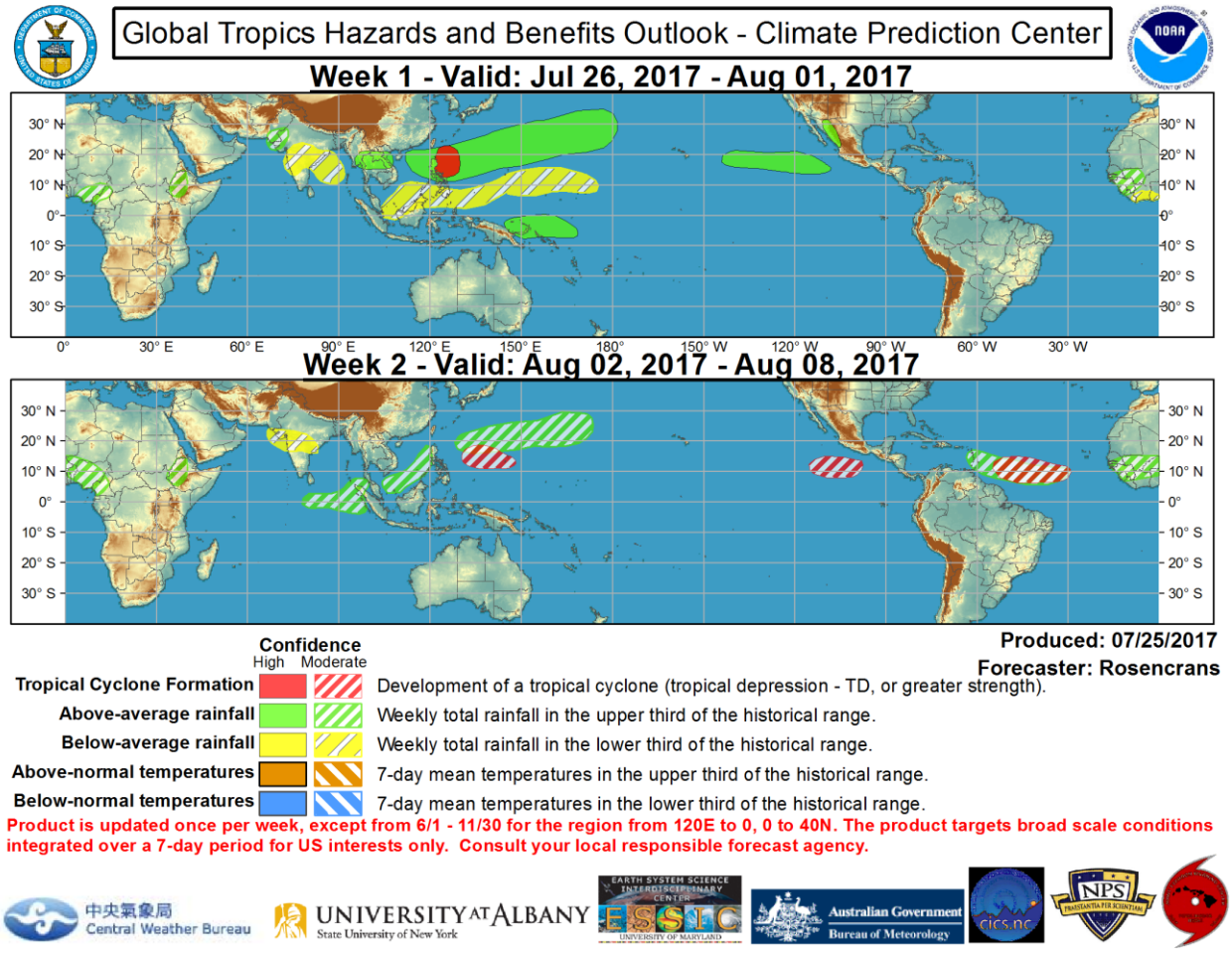

During the past week, the atmosphere became more consistent with a weak MJO, with a convectively enhanced phase over the Maritime Continent. Both the RMM-based MJO index and the CPC velocity potential index indicate enhancement of vertical motions near 120-140E. Hovmoeller diagrams of OLR indicate a broad, eastward moving anomaly in the same region, though the frequency-wavenumber analysis applied to that OLR data attributes the convection to a a mix of westward moving features (Equatorial Rossby Waves), MJO, and eastward moving Kelvin waves. Dynamical and statistical guidance point to a continued propagation of the coherent signal through Week-1, with the ECMWF forecasting a signal turning back to the west slightly earlier. During Week-2, many of dyamical models latch on to the westward moving features, while the statistical models indicate little to no signal. Based on recent observations, statistical guidance, and dynamical model guidance, propagation of a weak, but coherent, MJO signal is favored over the upcoming week, but then in Week-2, the signal is likely to stagnate and become unrelated to MJO.

Tropical cyclone activity went through an uptick during the last week. Typhoon Noru, Tropical Storms Kulap, Roke and Sonca all developed over the western Pacific. Over the eastern Pacific Hurricanes Hilary and Irwin developed, while Tropical Storm Greg continued to churn. During the next week, tropical

cyclone formation odds are enhanced near the Philippines, with the strongest signal early in Week-1. Later in Week-1, a tropical wave currently near 95W is the potential seed for a tropical cyclone over the eastern Pacific. From a large scale perspective, the Kelvin wave over the central Pacfic in analyses, is likely to slightly increase the odds for tropical cyclone formation over the eastern Pacific later in Week-1 and into early Week-2. The signal in the Atlantic peaks in early Week-2.

Above-average rainfall is most likely over the western Pacific, near the predicted paths of the multiple tropical cyclones, which includes the likely landfall of tropical storm Sonca on the Vietnam coast. Additionally, the large scale circulation features are likely to support above-average rains near Papua New Guinea. Subsidence around the tropical cyclones are likely to suppress convection in portions of the western Pacific. A low-level cyclonic circulation is likley to move westward over Northern India, supporting rainfall early in Week-1 near Pakistan, with suppressed rainfall over southern India. A potential gulf surge is also likely to increase rainfall over northwest Mexico.

During Week-2, the dry signal over India is likely to shift northward, while the wet signal remains over much of the Maritime Continent due to the ERW and remaining MJO signal. Additionally, model outlooks indicate robust easterly wave activity over the tropical Atlantic, heightening the threat of heavy rains for some of the Lesser Antilles.

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