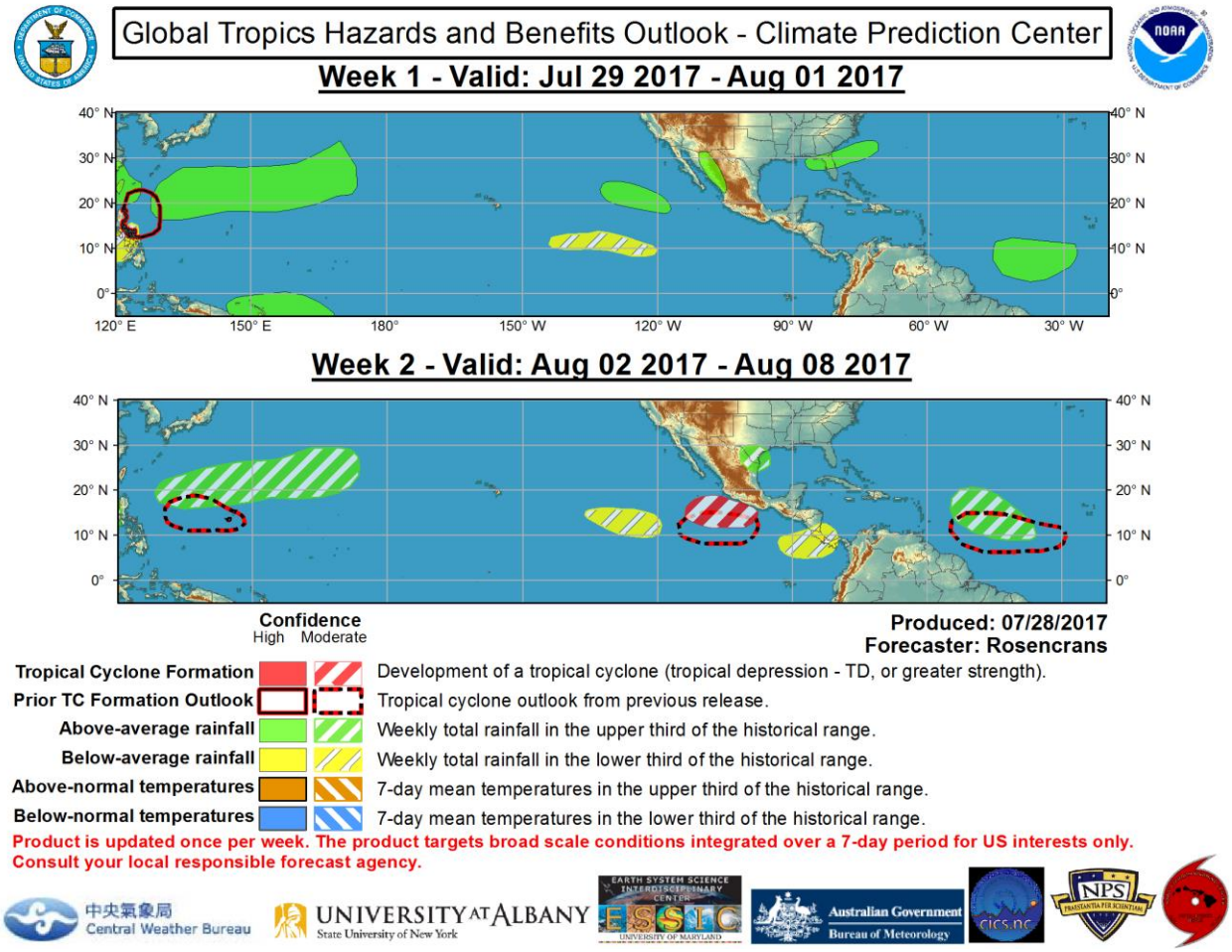


The MJO continued to be active, with the center of enhanced convection over the Western Pacific. Observations of OLR and winds, as well as dynamical forecasts, indicate that this signal is related to MJO timescale variability and other modes of variability, namely Kelvin Waves. Model forecasts based on observations and dynamical models indicate a breakdown of the MJO timescale components, with continued eastward propagation of the Kelvin wave portion and a spatially stagnant portion over the Western Pacific. The Kelvin wave it forecast to move eastward and potential seed tropical cyclone formation in the eastern Pacific. Some of that kelvin wave signal is forecast to move toward the Atlantic, but the timing with westward moving African Easterly Waves, is uncertain, so confidence in any formation is low and therefore the prior indicated hazard on the outlook image was removed.

The areas of above average rains were adjusted to reflect current tropical cyclone forecast tracks over the western Pacific and over the East Pacific. A stalled front is likely to support heavy rains over Florida during the early portion of the outlook period. During Week-2, above averagae rains are likely over Texas.

---------- Previous discussion from 07/25 follows ---------

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.