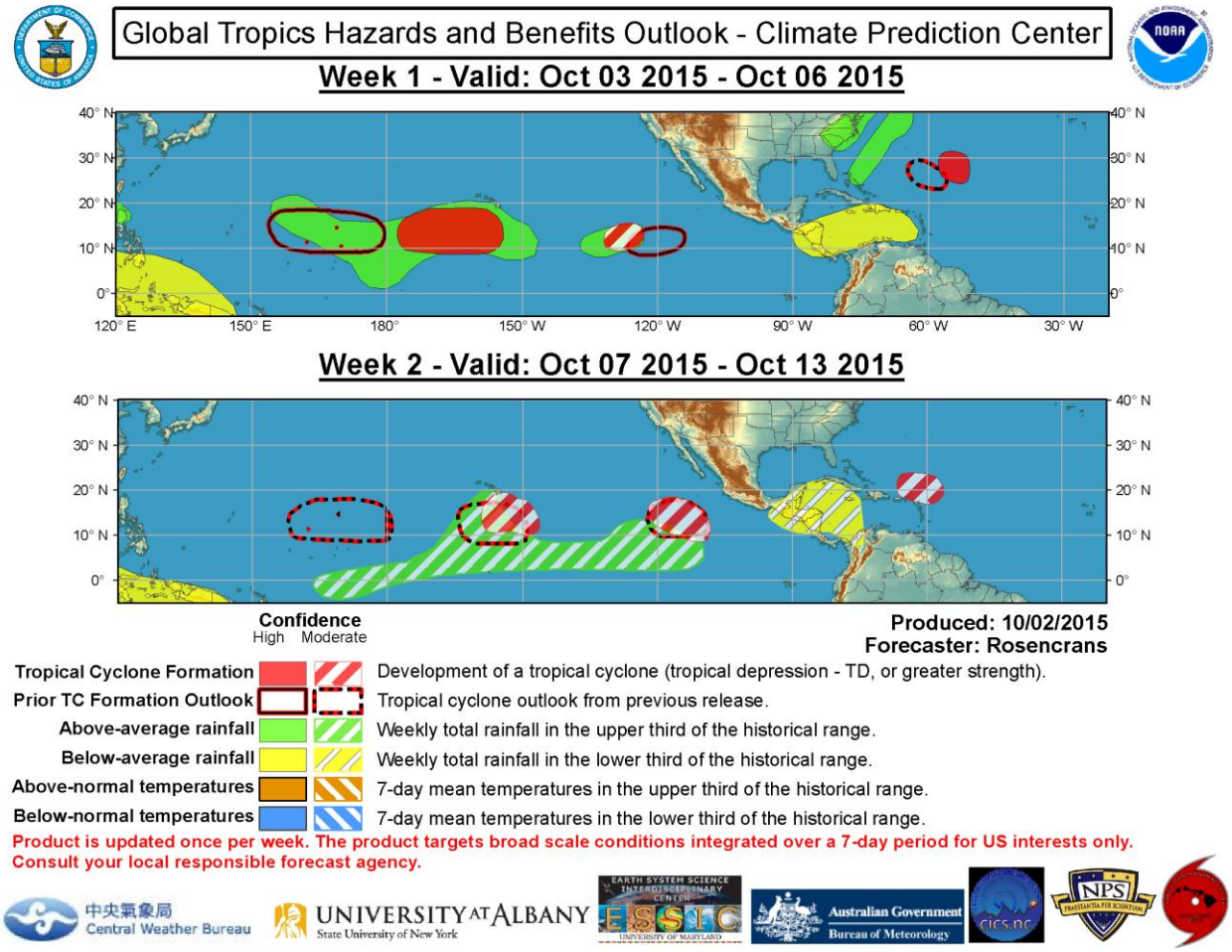

The MJO remained weak during the past few days, with most variations in tropical convection being modulated by ENSO and tropical cyclones. Specifically, Hurricane Joaquin has been meandering near the Bahamas for the last few days, and is now forecast to move north-northeastward. Two tropical cyclones developed over the West Pacific, with Tropical Storm Mujigae near the Philippines and Tropical Depression Choi-wan near Wake Island.

A Kelvin wave is moving across the central and eastern Pacific, and is likely to influence convection during the next week. The ongoing El Nino is also forecast to continue through the Northern Hemisphere winter of 2015-2016.

During the next 4 days, the threat of tropical cyclone formation is enhanced over the Central Pacifc, from about the Date Line to 150W, 10 - 20N, as well as over the East Pacific near 130W. Enhanced favorability over both regions is likely related to the ongoing El Nino and Kelvin wave forecast to move through the area. There is also a disturbance over the central Atlantic Ocean, with an 80 percent chance

of formation during the next 5 days. Above average rains are likely near the forecasted paths of the tropical cyclones, and over the Central Pacific due to the ongoing El Nino.

After those 4 days, the largest threat of tropical cyclone formation shifts to southeast of Hawaii. Some models are also indicating a low to moderate threat of tropical cyclone formation near the northern Lesser Antilles. The areas of above/below median rainfall reflect the ongoing El Nino.

---------- Previous Discussion Follows ----------

The ongoing, strong El Nino continues to remain the major contributor to large scale tropical convective anomalies. The Wheeler-Hendon RMM MJO index indicates no MJO signal, while the CPC Velocity Potential index features a pattern consistent with the background state.

Most dynamical models depict little to no signal over the next 2 weeks, with the GEFS being the exception. The GEFS depicts a westward moving signal over the central Pacific, moving to the western Pacific by Week-2. The signal is not related to MJO activity, and likely related to tropical cyclone activity over the central and western Pacific.

Tropical Storm Joaquin developed over the western Atlantic, and is forecast to move northward, potentially having a major impact on the CONUS form the Mid-Atlantic to the Northeast. Tropical Storm Niala formed south of Hawaii while Hurricane Marty developed near the southern coast of Mexico. Typhoon Dujuan develoepd over the west Pacific and made landfall along the east coast of Taiwan, bringing heavy rains to the island.

During Week-1, tropical cyclone formation odds are increased over the West Pacific, from about 155E to the Date Line, 10N - 20N. Over the East Pacific, tropical cyclone formation is likely near 120W, while over the Atlantic, the odds of formation are slightly enhanced near 60W. Some models have a weak signal for tropical cyclone development over the Bay of Bengal during Week-1. The climatological peak is later October through early December, and the signal is weak, so no specific hazard is depicted. The central and eastern Pacific are the areas with the highest odds of formation during Week-2.

Patterns of anomalous rainfall during the upcoming week are based on ENSO and dynamical models, which indicate above average rains over Southern India, the Central Pacific including the southernmost islands of Hawaii, and the East Pacific due to tropical cyclone activity. Below average rainfall is forecast over the Maritime Continent and the Caribbean, consistent with ENSO conditions. Some of the signal over the East Pacific is also being derived from statistical tools indicating the passage of a Kelvin Wave during Week-1. Above-average rainfall favored for parts of the East Coast and western Atlantic is related to Tropical Storm Joaquin and anomalous easterly flow/moisture.

During Week-2, below average rains are likely over the Maritime Continent and Caribbean, although there is less certainty over the Caribbean as the Kelvin wave over the East Pacific late in Week-1 could mitigate some ENSO impacts. CFS and GFS models both indicate heavy rains near Vietnam, but the European Center models do not, so the area is highlighted for above average rains, but with a lower confidence. Over the central and eastern Pacific, above average rains would be consistent with the ENSO state and forecast tropical cyclone activity.

Forecasts for Africa are done in collaboration with CPC's Africa Desk and based on model forecast guidance and regional scale anomaly features.