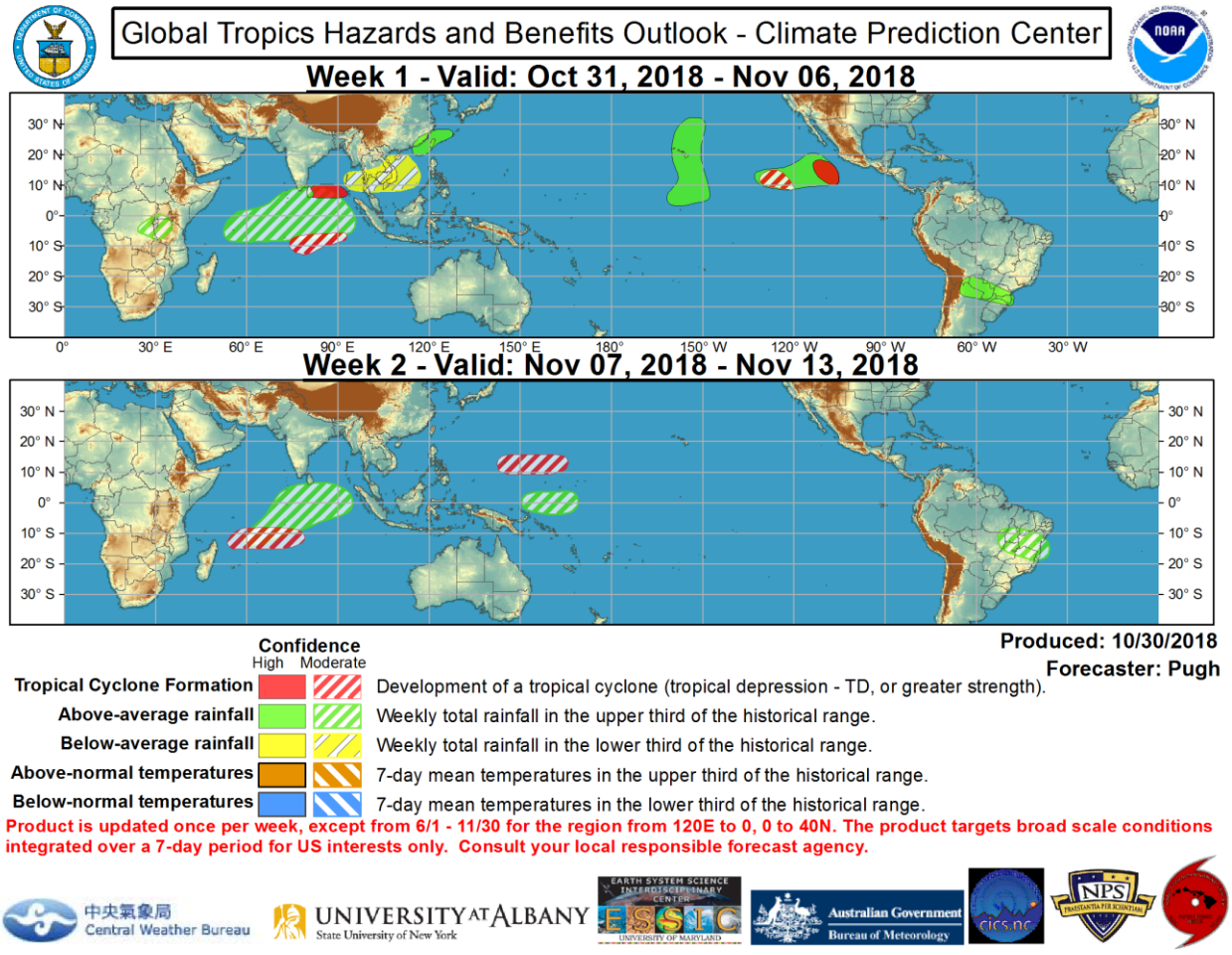

The MJO was incoherent during mid to late October with the spatial pattern of 200-hPa velocity potential (VP) anomalies remaining disorganized and small in magnitude. However, during the final days of October, a more coherent pattern of 200-hPa anomalies developed with upper-level divergence (convergence) centered over the central Pacific (western Maritime Continent). The MJO RMM index depicted a slight increase in its amplitude in Phase 8 during the final week of October.

Dynamical model forecasts are in good agreement in a strengthening of the MJO as it propagates east over the Western Hemisphere during Week-1. Spread among the GFS and ECMWF ensemble members is small during the next week but increases on the amplitude of the MJO when it enters the Indian Ocean during Week-2. This increasing spread may be due to destructive interference later in Week-2 with the emerging El Nino. Based on good model agreement and relatively low spread among ensemble members, forecast confidence is high in a robust MJO propagating east from the Western Hemisphere to the Indian Ocean during early to mid-November.

The precipitation outlook during the next two weeks is based on guidance from the CFS, ECMWF, and GFS models, MJO composites for phases 8/ 1 for Week-1 and 2/3 for Week-2 , and influence from ongoing and predicted tropical cyclones. Based on these factors, above-average rainfall is favored across parts of Africa, South America, the central and east Pacific, southeast China, Taiwan, and the Indian Ocean during Week-1. Below-average rainfall, albeit with moderate confidence, is forecast for parts of the Maritime Continent and South China Sea during the first week of November. Above-average rainfall is forecast to persist across parts of South America and the Indian Ocean through Week-2. Coverage of predicted anomalous convection during Week-2 is less than MJO precipitation composites since destructive interference with the emerging El Nino is expected to occur later in Week-2.

On October 23, Major Hurricane Willa (Category-3 with maximum sustained winds of 120mph) made landfall near Isla Del Bosque in the Sinaloa state of Mexico. Willa weakened as it tracked inland across the Sierra Madre range. Meanwhile, Super Typhoon Yutu became the strongest tropical cyclone to date in 2018. Yutu reached its maximum intensity with sustained winds of 180mph on October 24 and its eyewall passed over Saipan and Tinian of the Northern Mariana Islands. Yutu continued on a westward track but weakened as it made landfall in Luzon of the Philippines on October 29. A tropical cyclone developed in the subtropical Atlantic (25.7N/51.4W) on October 28, and Oscar became the 8th hurricane of the 2018 Atlantic season.

The enhanced phase of a developing MJO along with above normal sea surface temperatures favors tropical cyclone development in the east Pacific during Week-1. The National Hurricane Center is currently monitoring three distinct disturbances along 10N and between 130-105W. Highest confidence exists with the easternmost disturbance. The GFS model remains consistent that there is an elevated chance of that a pair of tropical cyclones develop in the eastern half of the Indian Ocean during the first week of November. Confidence is higher that a tropical cyclone develops to the southeast of Sri Lanka. During Week-2, the elevated chance of tropical cyclone development shifts to the southwest Indian Ocean. The west Pacific is expected to become more favorable for tropical cyclone development by mid-November if a Kelvin wave progresses east ahead of the MJO entering the Indian Ocean.

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