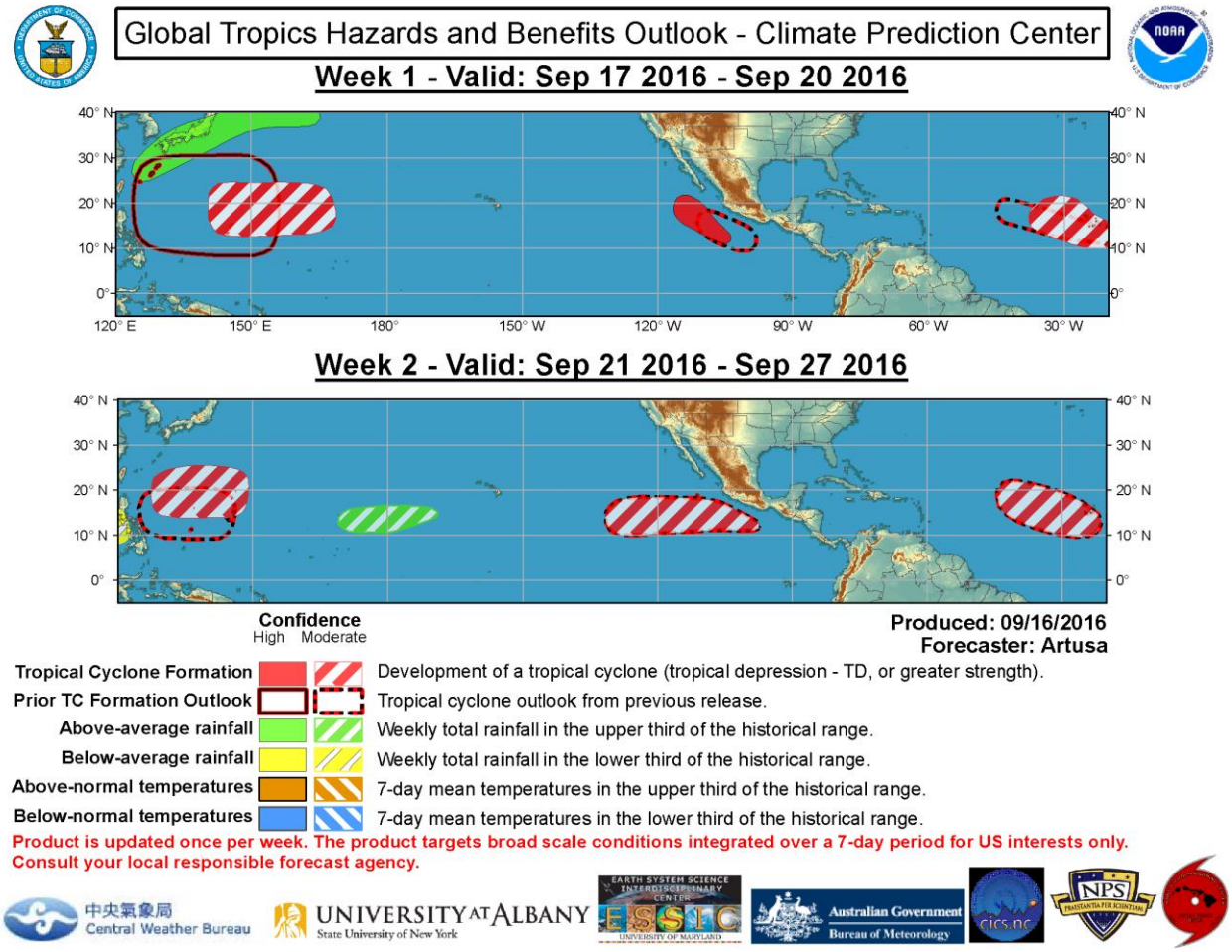

The global tropics are currently very active, and are expected to remain active through the Week-2 period. In the western North Pacific, Typhoon Malakas (18W) is predicted by the Joint Typhoon Warning Center (JTWC) to continue its northwesterly heading, recurve just east of Taipei, and move across southern Japan before weakening. A swath of predicted above-average rainfall (high confidence) is indicated along the projected track of Malakas, extending eastward over the western North Pacific. The 0z ECMWF and 6z GFS runs both show tropical waves undercutting the subtropical ridge across the Pacific during Week 1, with tropical cyclogenesis possible (moderate confidence) over the western North Pacific within an area bounded by about 12N-25N/140E-170E. Over the tropical eastern Pacific, tropical cyclogenesis is considered highly likely during the next 5 days by the National Hurricane Center (NHC), with the region of interest being several hundred miles off the west coast of Mexico. In the eastern Atlantic, NHC predicts a moderate chance of tropical cyclogenesis from near the African coast to about 35W, and from about 10N-22N.

During Week-2, there is a moderate risk of tropical cyclone (TC) formation over the western North Pacific, perhaps a bit farther west than the predicted cyclogenesis region for Week-1. CFS and ECMWF rainfall forecasts are in agreement on an area of above-average rainfall from about 10N-17N/170E-

170W. Confidence in this area is considered moderate. Other favored tropical cyclogenesis areas include the eastern Pacific (about 10N-18N/95W-130W), and the eastern and central Atlantic (about 10N-23N/20W-45W), both of which are assigned moderate confidence. These predicted areas of potential TC formation are in large part supported by Taiwan's Central Weather Bureau's TC Tracker tool, the 0z ECMWF run, and the 6z GFS run.

--------- The original forecast discussion is shown below ---------

The MJO remained weak over the past 7-days, with the RMM-based index remaining very near the origin while the velocity potential-based index supported broad, weak ascent from the eastern Atlantic to the Maritime Continent region, and corresponding subsidence from the west-central Pacific to the central Atlantic. A weak intraseasonal signal over the western Pacific during the last few weeks has shown little eastward propagation. This signal appears to be tied to the influence of the monsoon trough and embedded tropical cyclone (TC) activity in this region. Dynamical model MJO Index forecasts for the next two weeks predict the emergence of an MJO signal of weak to moderate amplitude over the vicinity of the eastern Indian Ocean, the Maritime Continent, and western Pacific. Some of these forecasts depict significant zonal propagation of this signal, while others depict modest eastward progression.

The global tropics have been active this past week with respect to TC activity, and they are forecast to remain fairly active during the next two weeks. During Week-1, there is a high likelihood of TC development across the northwestern portion of the western Pacific basin, related to the proximity of the monsoon trough and expected increase in amplitude of the MJO signal in this region. The National Hurricane Center anticipates a medium chance (40%) of TC development over the far eastern Pacific within the next 5 days. Ocean surface temperatures are forecast to be warm enough to initiate and support convection. There is a medium chance (50%) of TC development over the eastern and central low-latitude Atlantic during the same period.

During Week-1, moderate likelihood areas of above-average rainfall are forecast from near Taiwan east-northeastward across southern Japan and continuing well out over the North Pacific, and from central Australia southeastward to the central Tasman Sea. The first area of predicted above-average rainfall is associated with TC activity, while the second area is associated with mid-latitude frontal activity. There

is a moderate likelihood of below-average rainfall across the equatorial region of the Indian Ocean. This is generally the area where the ECMWF and CFS rainfall forecasts are in agreement.

For Week-2, moderate probabilities of enhanced rainfall are given for the vicinity of Malaysia and western Indonesia, and for the low latitude eastern Pacific. The first area of anticipated enhanced rainfall is based on an expected, strengthening MJO signal, and has support from both the CFS and ECMWF rainfall predictions. The second area is related to potential TC activity. Moderate probabilities of deficit rainfall are given from far southern India generally eastward across parts of Southeast Asia to the Philippines, and from near Papua New Guinea southeastward across Vanuatu, Fiji, Tonga, and American Samoa in the South Pacific. Moderate probabilities of deficit rainfall are also indicated just north of the equator in the east-central and eastern Pacific. These regions of predicted below-average rainfall are based on locations of subsidence, and are in agreement with both the CFS and ECMWF models.

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