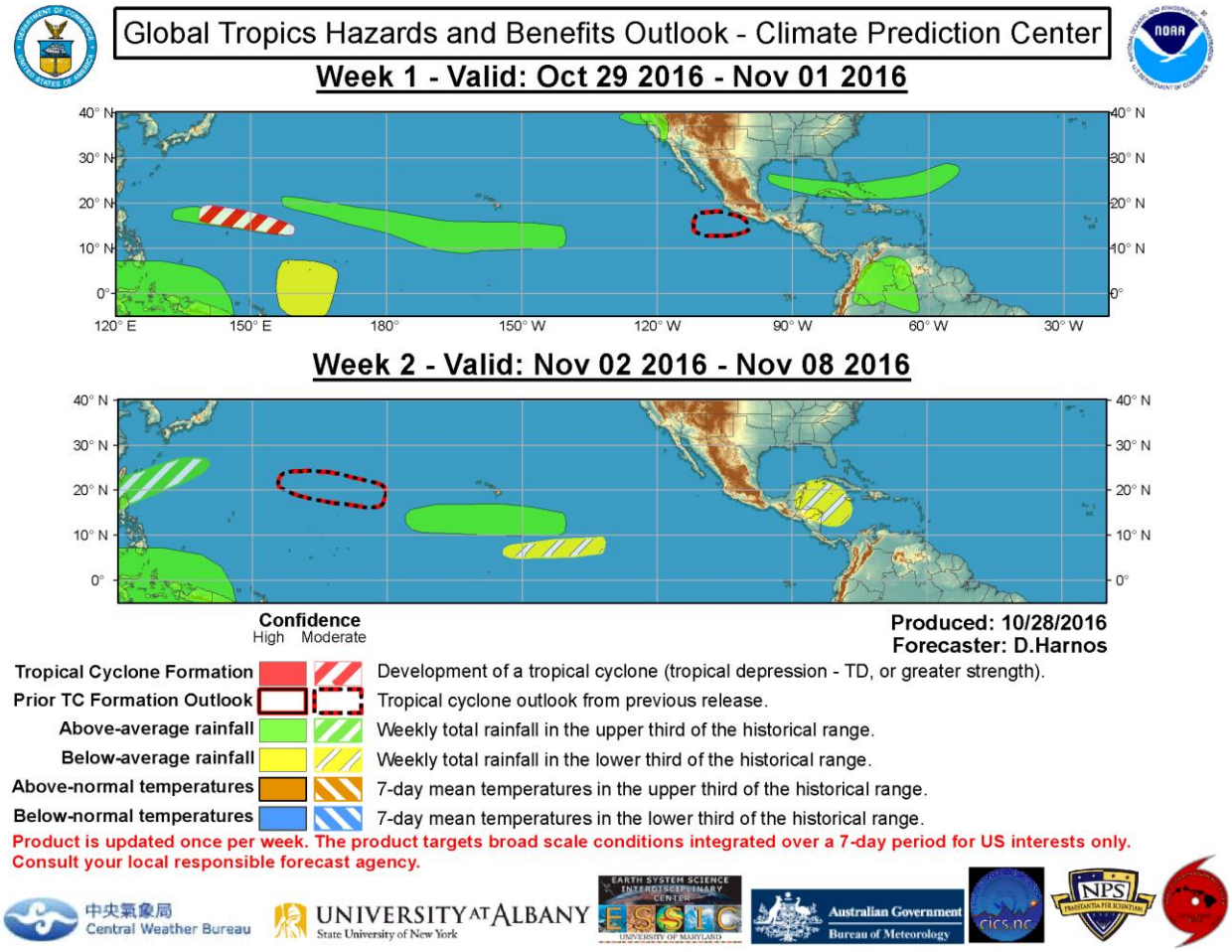

The most recent dynamical model guidance has begun to congeal around a solution depicting an emerging MJO in the West Pacific (RMM phases 6 or 7) during the Week-2 period. If this solution were to verify, tropical teleconnectivity via extension of the East Asian jet into the North Pacific appears possible, along with a wave-1 structure at 200-hPa with enhanced divergence (convergence) over the East Pacific, Americas, and Atlantic (Indian Ocean and South Asia). Timing of such emergence and any circulation adjustment is uncertain, but would be most likely towards the end of the Week-2 period. Subsequent outlooks will have to monitor this situation as it represents the potential for a noteworthy shift in the mid-latitude circulation relative to present conditions.

In the East Pacific, Hurricane Seymour has been declared post-tropical by the National Hurricane Center (NHC) as of October 28. While the system intensity has waned, some of its moisture could reach into the southwestern U.S. during the Week-1 period. Tropical Storm 3 (Kyant), in the Bay of Bengal, has also weaknened since Tuesday. The Joint Typhoon Warning Center is forecasting little to no intensification of these remnants prior to landfall along the east coast of India in the next 36 hours. Tropical cyclone development potential in Week-1 for the East Pacific also appears to have waned, resulting in the removal of the moderate tropical cyclogenesis risk shape from the original forecast in this basin.

Since Tuesday's release, the NHC has begun monitoring a surface low east of the Yucatan, but gives this system a near 0% chance of development through the next 5 days. While not expected to develop, forecast above-normal rains with this system were extended across a more extensive area of the northern Caribbean relative to the prior outlook. The other major change was a shift of the West Pacific tropical cyclogenesis shape from Week-2 to Week-1 for a region between 140-160E and 15-20N, that includes the Northern Mariana Islands. The GEFS in particular provides a robust signal here for tropical cyclone development and accompanying heavy rains for a system forecast to track westward towards the Philippines. A moderate confidence area of below-average rainfall was also added to the western Caribbean in Week-2, which would be supported by the potential emergence of the MJO in the West Pacific. Other adjustments to the Week-1 and Week-2 forecasts are generally modest and driven by adjustments in dynamical model output or antecedent events timing out relative to the current forecast period. Since the original forecast underscored the ongoing low frequency variability that is expected to continue, the forecast remains largely on track.

---------- The previous discussion follows below. ----------

Over the prior week, minimal intraseasonal influences continued to be exhibited in both the Wheeler-Hendon and CPC velocity potential based indices. Instead, the low frequency background state appears to be driving the pattern throughout the tropics and subtropics, with the ongoing negative Indian Ocean Dipole (IOD) event and possibly developing La Nina yielding the most robust circulation responses in recent days. Outside of the Maritime Continent and West/Central Pacific, circulation anomalies are extremely benign, indicative of the weak forcing throughout the tropics aside from the aforementioned low frequency signals. Given this weakness and lack of robust signals in dynamical or statistical MJO guidance, continued weakness of intraseasonal activity is favored during the forecast period.

Tropical Storm 3 developed in the Bay of Bengal on October 25. Dynamical model guidance forecasts this system to track towards Andhra Pradesh in India, with limited intensification anticipated before landfall. In the East Pacific, Major Hurricane Seymour developed on October 23 near 13N/104W. As of 8 AM EDT on October 25, the National Hurricane Center estimates Seymour to have 100 kt winds, with some modest strengthening forecast today before subsequent rapid weakening anticipated within 48 hours. Dynamical model guidance expects Seymour to track west or northwestward into the Pacific as it weakens, but bring heavy rains along its track.

In the wake of Tropical Storm 3 in the Bay of Bengal, dynamical model guidance suggests a moderate risk of tropical cyclone (TC) development from a disturbance forecast to pass over the Malay Peninsula

near the middle of Week-1. The GEFS suggests this TC may curve northward in the Bay of Bengal, with a forecast track that would approach Bangladesh late in Week-1. Regardless of cyclogenesis potential, heavy rains are likely with this system in the northern Bay of Bengal and adjacent coastal areas. Similarly, behind Hurricane Seymour in the East Pacific, there is a moderate chance of TC formation to the south/southwest of the Mexican states of Colima, Michoacan, and Guerrero during Week-1 where anomalously warm SSTs and low wind shear are forecast. Week-2 appears quiet for TC activity, aside from potential development in the West Pacific between approximately 160E and the antimeridan near 20N. Ensemble guidance suggests anomalously low surface pressure for this area in Week-2.

For Week-1 the greatest forecast confidence related to rainfall lies in areas impacted by low frequency variability. This includes enhanced precipitation over the Maritime Continent associated with the ongoing IOD event, enhanced rainfall south of Hawaii associated with anomalously warm SSTs, and suppressed rainfall to the east of the Maritime Continent due to persistent anomalous 200-hPa westerlies over the Indian Ocean that are focusing the subsidence response from Maritime Continent convection over this area. High confidence in above-average rains is also forecast with an anticipated cold front for the Caribbean, tropical Pacific moisture impacting California, and a northward surge of subtropical air into Colombia, Ecuador, and Peru. High confidence for below-average rainfall exists across southern India and Sri Lanka and portions of the southern Indian Ocean associated with the aforementioned strong westerlies aloft. Less confident regions for Week-1 are generally due to dynamical model consensus.

In Week-2 low frequency signals are expected to continue above-average rains over the Maritime Continent and south of Hawaii. Lesser confidence exists for the westerlies to persist across the Indian Ocean, resulting in the below-average rainfall region over Micronesia dropping to moderate confidence during Week-2. Remaining regions forecast for above- or below-average rains in Week-2 are due to dynamical model agreement. The anomalous precipitation forecast for the Bay of Bengal in Week-2 is reminiscent of a potential tropical cyclone track, and bears monitoring despite insufficient confidence to forecast an explicit TC hazard.

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