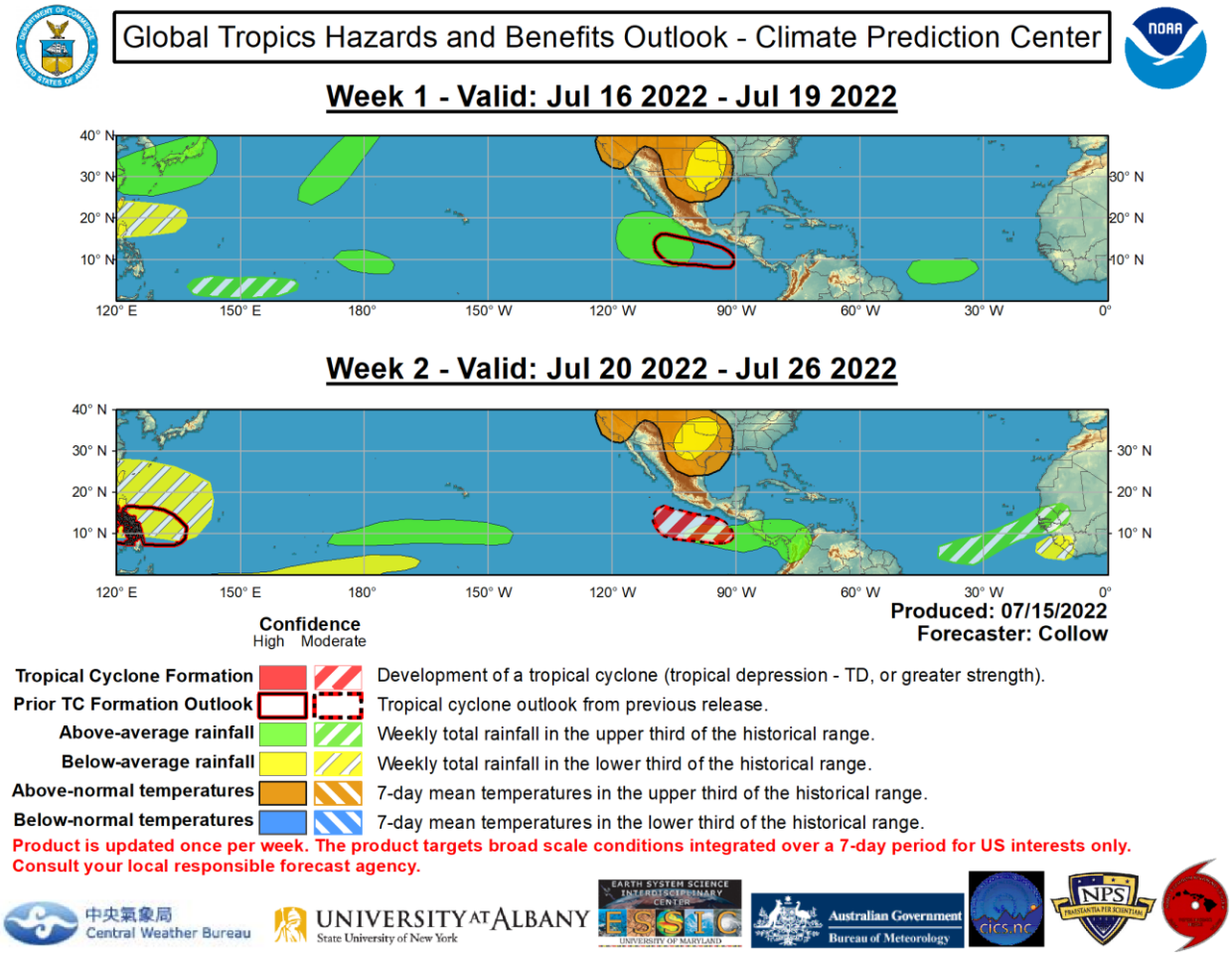

The Madden Julian Oscillation (MJO) continues to weaken where the intraseasonal signal is now situated along the unit circle in RMM space. Dynamical models depict further weakening of the signal during the next week, with the ECMWF and JMA ensembles indicating possible reemergence across Africa in week-2. Given the decaying MJO in the near-term, the low frequency La Nina state is forecast to become the dominant mode of variability in the tropics. A wave-1 asymmetry is noted in the upper-level velocity potential pattern, with enhanced convection across the Indian Ocean, Maritime Continent, and Western Pacific, and suppressed convection over much of the Western Hemisphere.

Tropical Depression Six-E developed over the East Pacific during the morning of July 15 per the National Hurricane Center. This system is forecast to track west-northwestward, strengthening into a hurricane, but with no threat to land. The Central Pacific Hurricane Center is now issuing advisories on Darby, which has weakened to a tropical storm. The system is forecast to continue to weaken and dissipate to the south of Hawaii over the weekend, but may still bring periods of heavy rain and gusty winds to the Big Island and Maui as the system moves by to the south. Additional tropical cyclone (TC) development is possible over the East Pacific into week-2 (moderate confidence), mainly due to the potential for Kelvin Waves to propapage out of the main connective envelope over the Eastern Hemisphere. The

Atlantic continues to look quiet given suppressed convection and increased wind shear. Todayâ€™s models are not as robust with TC development across the Western Pacific in week-2 compared to earlier this week, and while there is still a slight chance of formation east of the Philippines, the probability is too low (10% per Joint Typhoon Warning Center) to continue to include in the outlook.

Forecasts for above- and below-average rainfall were updated to reflect the latest dynamical model guidance and analyses of various modes of tropical variability.

---------- Previous discussion from Jul 12, 2022 is below ----------

The Madden-Julian Oscillation (MJO) is weakening and becoming incoherent after a week of robust activity over the Indian Ocean and Maritime Continent. As the main convective envelope moved over the Maritime Continent over the last few days, eastward propagation stalled and the area of enhanced convection has become less organized. Despite the current phase of MJO and ongoing La Nina conditions resulting in constructive interference, the forecast for the MJO is rather muddled. The GEFS RMM-based MJO forecast depicts a continuing degradation of the MJO signal and a lot of uncertainty as to when and where organized convection will emerge. The ECMWF on the other hand favors a re-emergence of MJO-like convective activity over Africa in the week-2 time frame after a period of very weak signal in the RMM index.

The Eastern Pacific continues to be an area of enhanced tropical cyclone (TC) activity despite the recent MJO phase, which tends to suppress TCs in the Eastern Pacific and Atlantic Basins. On July 9, the National Hurricane Center (NHC) began issuing advisories on Tropical Storm Darby, which rapidly intensified and is currently a strong hurricane, located roughly 1300 miles west-southwest of the southern tip of Baja California. For the latest advisories on Hurricane Darby please refer to the NHC. Also in the East Pacific, there is an area of convection south of the coast of El Salvador that is forecast to organize, become a tropical depression (high confidence, 70% over 5-day period), and track generally westward over the next week. We are forecasting with moderate confidence (~40%) TC formation in the same area of the East Pacific during the week-2 period. There is moderate potential (40% over 5-day period) for TC formation in the northern Arabian Sea during the week-1 period. In the Western Pacific there is high confidence of TC formation for a broad area surrounding the Philippines during the week-2 period.

The precipitation outlook for the next two weeks is based on anticipated TC tracks, ongoing La Nina conditions, and consensus of GEFS, CFS, and ECMWF ensemble mean solutions. Suppressed rainfall

continues near and to the west of the Date Line due to ongoing La Nina conditions. Above-average rainfall is forecast for the Maritime Continent due to current MJO activity. Disorganized tropical convection in the northern Gulf of Mexico is forecast to bring above-normal precipitation for the southeastern U.S. for the week-1 period. Above-normal temperatures are forecast for Texas and western Australia for both the week-1 and week-2 forecast period.