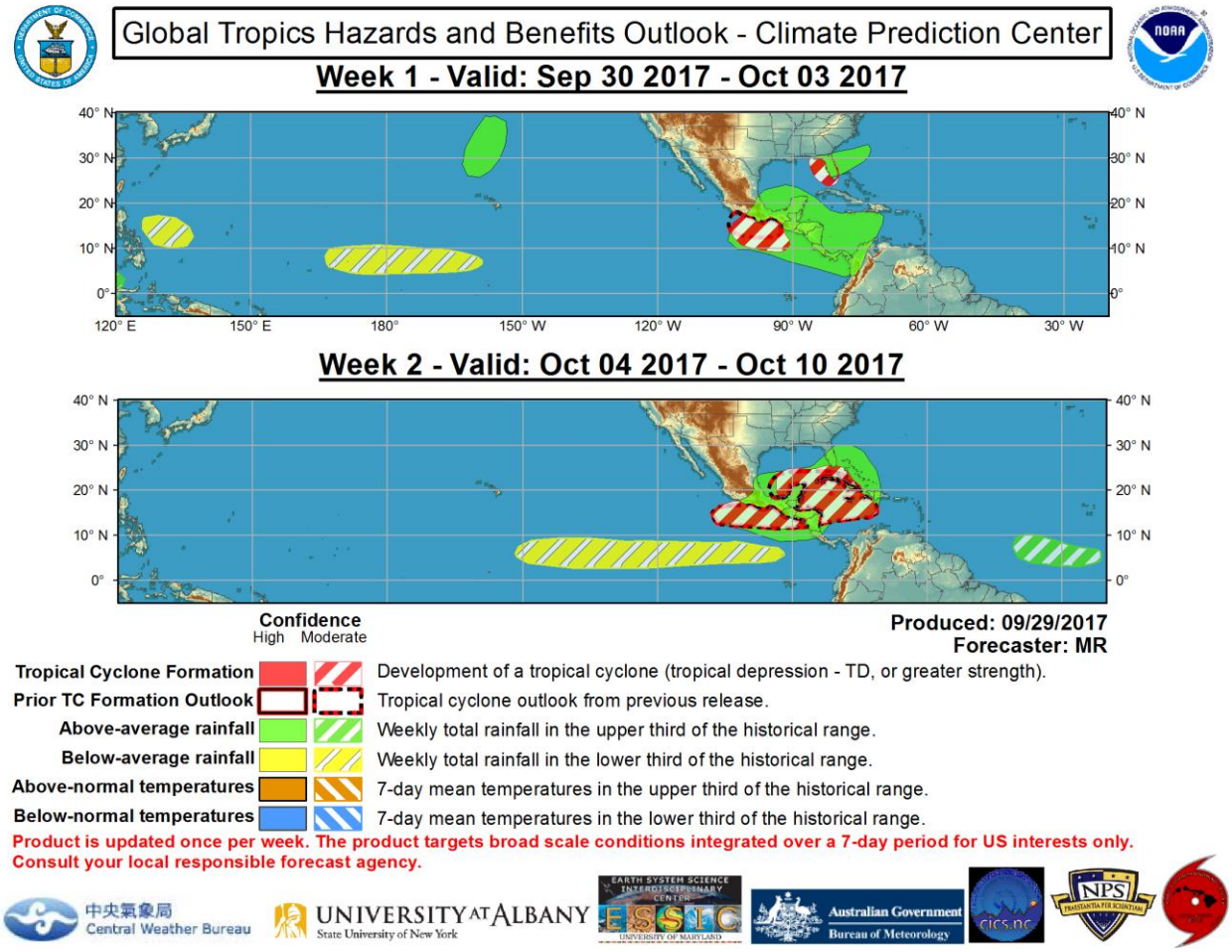

The MJO remained weak with other modes of variability impacting the pattern. An atmospheric Kelvin wave is impacting the Atlantic, while another is predicted to traverse the Maritime Continent. An equatorial Rossby wave that was impacting the Maritime Continent has moved westward, and the dry phase is now emerging over the western Pacific.

No new tropical cyclones developed during the past 3 days. Tropical Storms Maria and Lee continue to churn over the Atlantic. During the next 5 days, there is a 40 percent chance of tropical cyclone formation over the eastern Gulf of Mexico. The National Hurricane Center also indicates a 20 percent chance of tropical cyclone formation near the Bahamas/Cuba, and over an area a couple hundred miles from the southern coast of Mexico, during the next 5 days. The signal over the East Pacific continues through the period, intensifying during days 5-8. The odds of formation over from the western Caribbean to near Florida and over the Bay of Campeche remain elevated during the entire period.

Shapes for above average rain have been modified to reflect predicted tropical cyclone activity. Of note, is a recent dearth of western Pacific tropical cyclone activity, which likely to continue for at least the next 14 days.

---------- Previous discussion, from Sept 26, follows ----------

The MJO remained weak during the past week. Any remaining projection is over the eastern Maritime Continent/West Pacific, though an Equatorial Rossby Wave is moving across the Maritime Continent and interfering with the remaining signal. Some methods of analysis are also indicating a Kelvin Waves moving to the east, one centered over the Western Pacific and the other moving across the Atlantic.

Hurricanes Maria and Jose are currently moving northward over the western Atlantic Ocean. Hurricane Norma dissipated near Baja California and Tropical Depression 22W moved across Hainan province. During the next 2 weeks, tropical cyclone formation odds are enhanced near the West Coast of Mexico, likely in response to the Kelvin Wave over the Western Pacific moving to the east. Some models indicate potential tropical cyclone formations further west, near 120W, but that signal peaks early in the period and there is low confidence in that region, as compared to further east where the signal is more consistent. Across the Atlantic, no tropical cyclone formations are likely in Week-1, while there is an emerging signal across the western Caribbean and Bay of Campeche into Week-2. For the western Pacific, the odds of formation in the next 2 weeks look low, with the only signals across the South China Sea during Week-2.

During Week-1, the remaining MJO signal and the Equatorial Rossby Wave signal are likely to contribute to both dry conditions across the Indian Ocean and wet conditions over the Maritime Continent. The slowly evolving background state is likely to continue favoring below normal convection near the central Pacific. The potential impact of Kelvin wave moving across the eastern Pacific and into the Atlantic later in Week-1 favors above normal precipitation over Central America and the Caribbean. Frontal activity is likely to support above average rains over Texas. Later in Week-1 and into Week-2, a stationary front could serve as a focusing mechanism for precipitation over Florida.

During Week-2, above average rains are likely to continue over Central America, with increasing odds for tropical cyclone formation for a region straddling the land mass, largely in the predicted wake of the

Kelvin Wave. The ERW is likely to extend precipitation westward over the Maritime Continent and Indian Ocean, though certainty in that is low as models diverge greatly on where the strongest anomalies in atmospheric convection are likely to develop. The slowly evolving background state is likely to continue favoring below normal convection near the central Pacific, though east of the Week-1 position due to the subsidence behind the Kelvin wave.

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