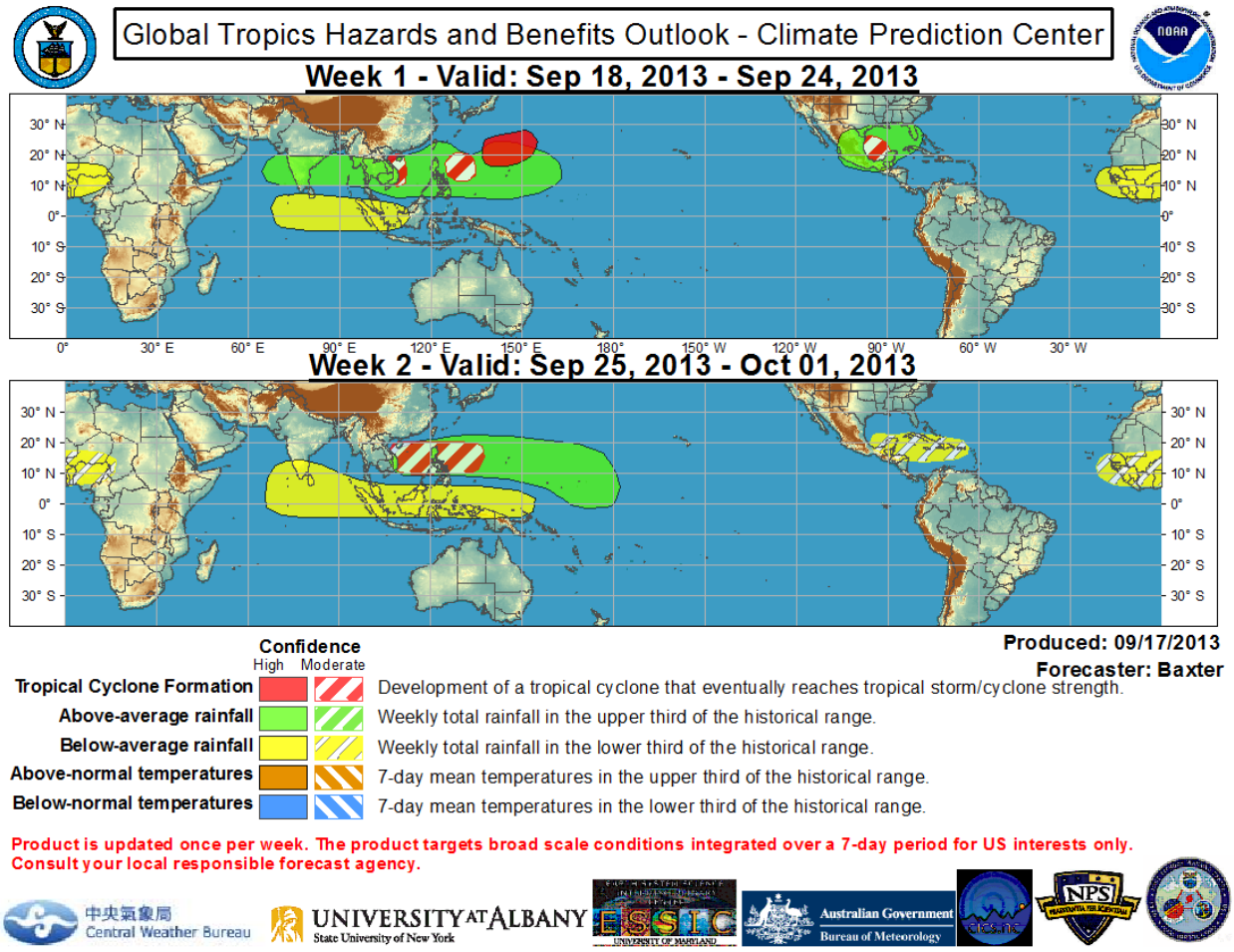

The MJO remained active during the past week with eastward propagation from the Indian Ocean to the Maritime Continent. The velocity potential at 200-hPa reveals a coherent pattern wave-1 structure, with large scale upper-level divergence across the Maritime Continent and upper-level convergence across much of the Western Hemisphere. The Wheeler and Hendon MJO index is currently in Phase 5, after a brief stint of low-amplitude projection due to interference from other subseasonal variability include tropical cyclones (TCs). The CPC MJO index, which projects velocity potential onto a leading extended EOF pattern, appears to have accurately captured the evolution of the current MJO event.

Dynamical model forecasts of the Wheeler and Hendon MJO index indicate a slow propagation from Phase 5 to Phase 6 over the next two weeks. A combination of the ECMWF, GEFS, and UKMET MJO index forecasts is preferred, which is also consistent with the constructed analog statistical tool. Other subseasonal variability remains imported against the background MJO. An atmospheric Kelvin wave is moving eastward across the central Pacific, while another Kelvin wave may be poised to move eastward from the dominant convective center across the Maritime Continent. Additionally, constructive interference between an equatorial Rossby wave and the MJO may enhance convection across parts of the Western Pacific and Maritime Continent over the next several days.

The precipitation outlooks for both Week-1 and Week-2 are based on MJO composites blended with dynamical guidance from the bias-corrected GFS and CFSv2 ensemble. Additionally, with an active MJO, equatorial Rossby wave, and Kelvin waves, statistical guidance that projects those modes onto the OLR field was also utilized. Confidence is high for Week-1 in the forecast precipitation anomaly shapes across the domain. In spite of large scale subsidence, ongoing and forecast TC activity across parts of Central and North America and the Gulf of Mexico enhances odds of above-average rainfall in that region.

High confidence carries over into Week-2 for much of the main MJO region from the Indian Ocean to the Date Line. The area of enhanced convection is forecast to take on a more canonical northwest-southeast tilt over time, while subsidence expands rapidly eastward along the Equator across the Maritime Continent into the western Pacific. Moderate confidence is indicated across the Western Hemisphere where odds of below-average precipitation are enhanced due to the suppressed phase of the MJO.

Hurricane Ingrid formed in the Bay of Campeche in the past week, bringing heavy rains and flooding to parts of Mexico. At the same time Tropical Storm Manuel, a fairly weak system, formed briefly in the East Pacific before bringing heavy rains to parts of western Mexico. In the West Pacific, Tropical Storm Man-yi formed early in the past week and recurved, making landfall in Japan. Tropical Storm Usagi formed recently and is forecast to move toward Taiwan while strengthening.

For Week-1, TC formation is favored across parts of the West Pacific basin. High confidence is indicated near 20N, 140E, while a disturbance just east of Vietnam could develop before moving over land at the very beginning of the period. Late in Week-1 there is moderate confidence for development east of the Philippines. Another disturbance in the Atlantic basin is forecast to move into the southern Gulf of Mexico over the next few days, where a tropical cyclone could develop. The main threat with this system would be deep tropical moisture that could head northward toward the U.S. Gulf Coast bringing above-average rainfall.

For Week-2 the only area of enhanced odds for TC development is across parts of the West Pacific and South China Sea. The expected evolution of the MJO is generally supportive of development in this region.