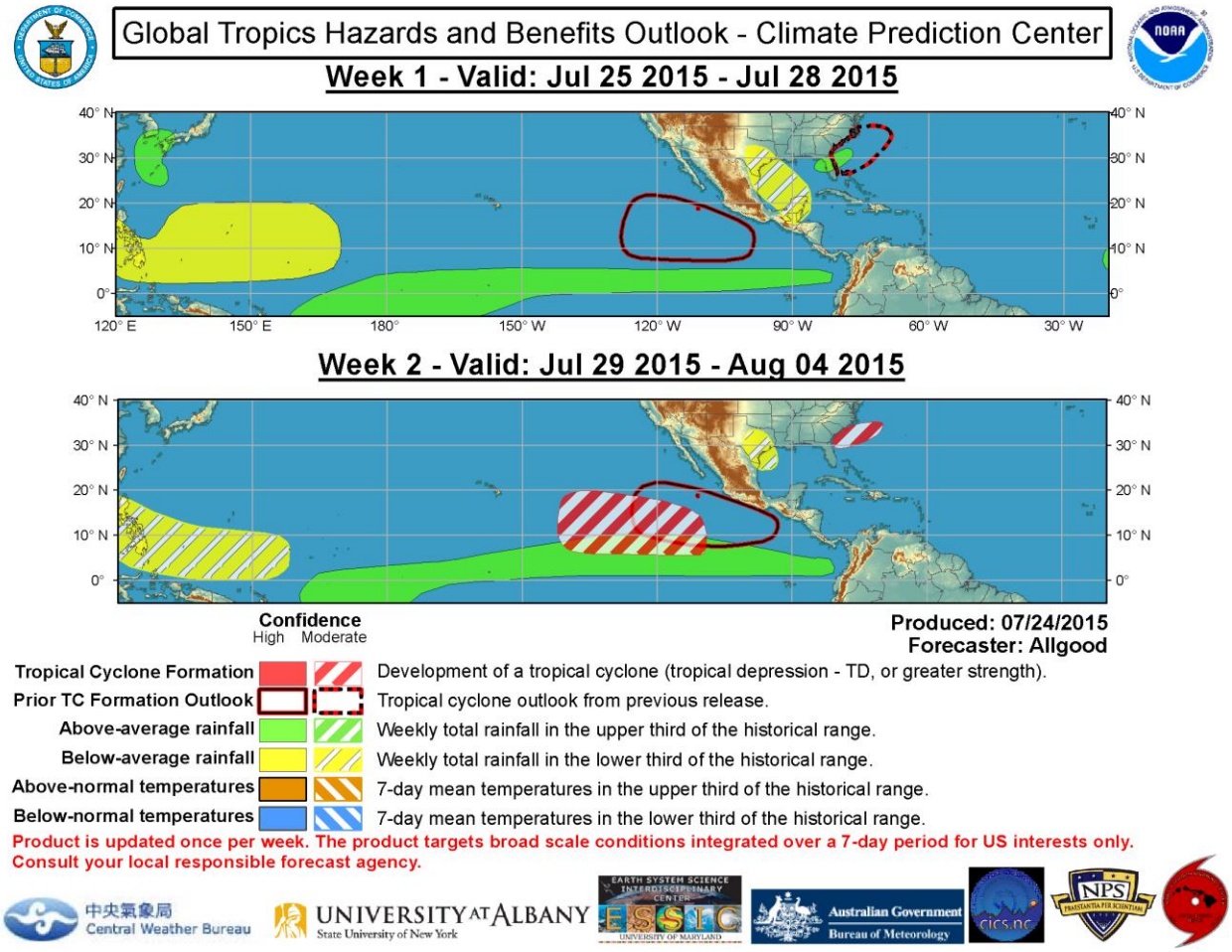

During the past several days, the MJO signal weakened substantially as the enhanced phase became increasingly incoherent over Africa, and no additional eastward propagation of suppressed convective anomalies over the Pacific occurred. A strong burst of convection was observed near and just east of the Date Line, possibly due to constructive interference between a Kelvin Wave and the El Nino base state. The overall spatial pattern of velocity potential anomalies has become increasingly incoherent as the base state becomes more dominant.

Tropical Depression Twelve developed just east of the Philippines, and is anticipated to weaken over the next several days. Tropical Storm Felicia developed over the eastern Pacific, and is also anticipated to weaken during the remainder of the Week-1 period. No additional tropical cyclogenesis is anticipated over the eastern Pacific during the remainder of Week-1. During Week-2, dynamical models indicate reduced potential for tropical cyclone development south of Mexico, but Kelvin Wave activity and the background El Nino state favor a moderate potential for tropical cyclone development over the east-central Pacific. There is still a potential for weak tropical cyclogenesis along a front off of the U.S. Southeast coast, but any development is more likely to occur beyond the remaining Week-1 period.

Forecasts for above or below normal rainfall were adjusted to reflect the latest model guidance.

The original discussion from July 21 follows.

The MJO remained generally coherent but weak during the past week, with both the RMM and CPC velocity potential indices showing the enhanced phase over the Western Hemisphere. The spatial pattern of upper-level velocity potential anomalies has retained a Wave-1 structure, but with decreased separation between the enhanced and suppressed phases, which may be contributing to the weaker projection on the CPC index. The low frequency El Nino background state continues to favor robust upper-level divergence over the eastern Pacfic, even as the MJO suppressed phase has propagated to the western and central Pacific. Low-level zonal wind anomalies also continue to reflect the ENSO signal, with westerlies prevalent across most of the Pacific basin.

Dynamical model MJO index forecasts depict a wide range of solutions, with the GFS forecasting an increase in amplitude over the Indian Ocean, several Canadian ensemble members returning convection fairly quickly to the Pacific, and other models maintaining enhanced convection over the eastern Pacific and Western Hemisphere. Persistent westerly wind anomalies aloft across Africa and the western Indian Ocean are not favorable for permitting the atmospheric ventilation necessary for significant Indian ocean convection; however, the upper-level subseasonal signal is likely to continue propagating eastward. Destructive interference between the MJO and the El Nino will also increase as the former signal continues propagating eastward. Therefore, enhanced convective anomalies associated with the MJO are expected to remain weak during the next two weeks, but a remnant intraseasonal signal is still anticipated to propagate eastward across the Indian Ocean and Maritime Continent.

No new tropical cyclones developed during the previous 7 days, but Typhoon Halola remains active over the northwestern Pacific, and may impact southern Japan during the next several days. During the next two weeks, the eastern Pacific is anticipated to remain active, with a potential for several tropical cyclones forming during the period. A disturbance near 15N and 112W has a 90 percent chance of formation, according to the National Hurricane Center. Dynamical models favor additional cyclogenesis east of the existing disturbance later in the Week-1 period, with the southwestern portion of the East Pacific basin favored for development during Week-2. Several dynamical models also indicate a

moderate potential for a weak tropical or subtropical cyclone forming off the southeastern U.S. coast along a frontal boundary. If further eastward propagation of the MJO signal over the Indian Ocean materializes, vertical shear across the tropical Atlantic may relax, which would make conditions more conducive for tropical cyclogenesis. The potential for development across this region remains fairly low at this time, however, so no shape was depicted on this outlook. No additional tropical cyclogenesis is anticipated over the West Pacific.

During Week-1, enhanced rainfall is forecast along the forecast track of Typhoon Halola south of Japan. Dynamical models also favor areas of enhanced convection across parts of Pakistan, South Asia, Southeast Asia, and southeastern China. Consistent with the MJO and El Nino signals and suppression in the wake of Halola, suppressed convection is forecast across the western Maritime Continent, South China Sea, Philippines, and the northwestern Pacific. Enhanced convection is expected to continue across the remainder of the equatorial Pacific. Heavy rainfall along a frontal boundary is forecast for parts of the Southeast U.S., while generally suppressed convection is anticipated across the western Gulf of Mexico and Caribbean basin.

During Week-2, areas of enhanced rainfall are anticipated to continue across parts of South Asia. Dynamical models favor a continuation of suppressed convection across the South China Sea, Philippines, and northwestern Pacific, with a more mixed anomaly field across the Maritime Continent as the remnant intraseasonal signal begins destructively interfering with the El Nino signal. Widespread enhanced convection is forecast to persist across the central and eastern Pacific, with suppressed rainfall continuing across the southwestern Gulf of Mexico.

Forecasts for enhanced or suppressed rainfall across Africa are provided in collaboration with CPC's Africa Desk and are based on MJO composites and regional scale anomaly features.