

The interaction of the Madden-Julian Oscillation (MJO) and a Kelvin Wave (KW) caused destructive interference in the MJO in the Wheeler-Hendon framework. The signal fell into the unit circle for about a week in late August, but the core MJO signal for the convectively active phase moved over the Indian Ocean. During the next two weeks, the KW and the MJO are more likely to constructively interfere, with some potential reinforcement from the seasonal time-scale variability. The resultant outlook, from combining the likely interactions and dynamical model outlooks, is for the active phase of the MJO to be centered over the Maritime Continent, though the strength is uncertain. The GEFS is the most bullish on a strong MJO event with enhanced convection over the Maritime Continent, with the ECMWF consistently indicating a weaker expression. The subsident phase in the GEFS is strong as well over the Western Hemisphere, during the peak of the Atlantic Hurricane season.

Hurricane Larry formed and is out over the open waters of the Atlantic. Hurricane Larry is the third major hurricane of the Atlantic hurricane season. Hurricane Larry is forecast to remain over water, though impacts to Bermuda and the Canadian Maritime provinces cannot be ruled out. Over the West Pacific, Typhoon Chanthu and Tropical Storm Conson developed on August 6th. Typhoon Chanthu is currently forecast to move toward Taiwan and southern mainland China, with peak winds in excess of

110 knots at the time of landfall. Tropical Storm Conson is forecast to move toward Hainan and potentially into Vietnam before the end of the outlook period. Heavy rains are likely for the affected regions of these tropical cyclones in the next 7 days.

During the next week, tropical cyclone formation is possible close to the coast of Africa and a moderate confidence area is issued in the outlook. The National Hurricane Center (NHC) is monitoring an area for potential development off the west coast of Mexico, with a 90% chance of formation in the next 5 days. An area of low confidence for formation is along the Gulf Coast of the U.S. that extends into the northwest Atlantic off the Southeast coast. The NHC maintains a 30% chance of formation during the next 5 days. Later in Week-2, tropical cyclone formation odds are enhanced over the South China Sea, after a brief lull from the predicted passage of Tropical Storm Conson. Guidance also supports a moderate confidence for TC formation over the western Gulf of Mexico and the eastern Main Development Region during the week-2 period.

During Week-1, the predicted signal over the Maritime Continent is likely to result in sustained convection from South Asia to the equatorial West Pacific. The enhanced rainfall predicted over South Asia will likely have a northward movement through the week. The Week-2 map has little coverage, due to the uncertain strength of the MJO and potential for a KW to rapidly progress through the pattern. The most consistent signals are for enhanced rain over the Maritime Continent, while the signal over Southeast Asia is likely to be heavily influenced by tropical cyclone formations. A break in the ITCZ over the east Pacific is likely to result in dry conditions, especially if a tropical storm develops early in Week-1.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF guidance, and anticipated TC tracks. For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC and can represent local-scale conditions in addition to global scale variability.