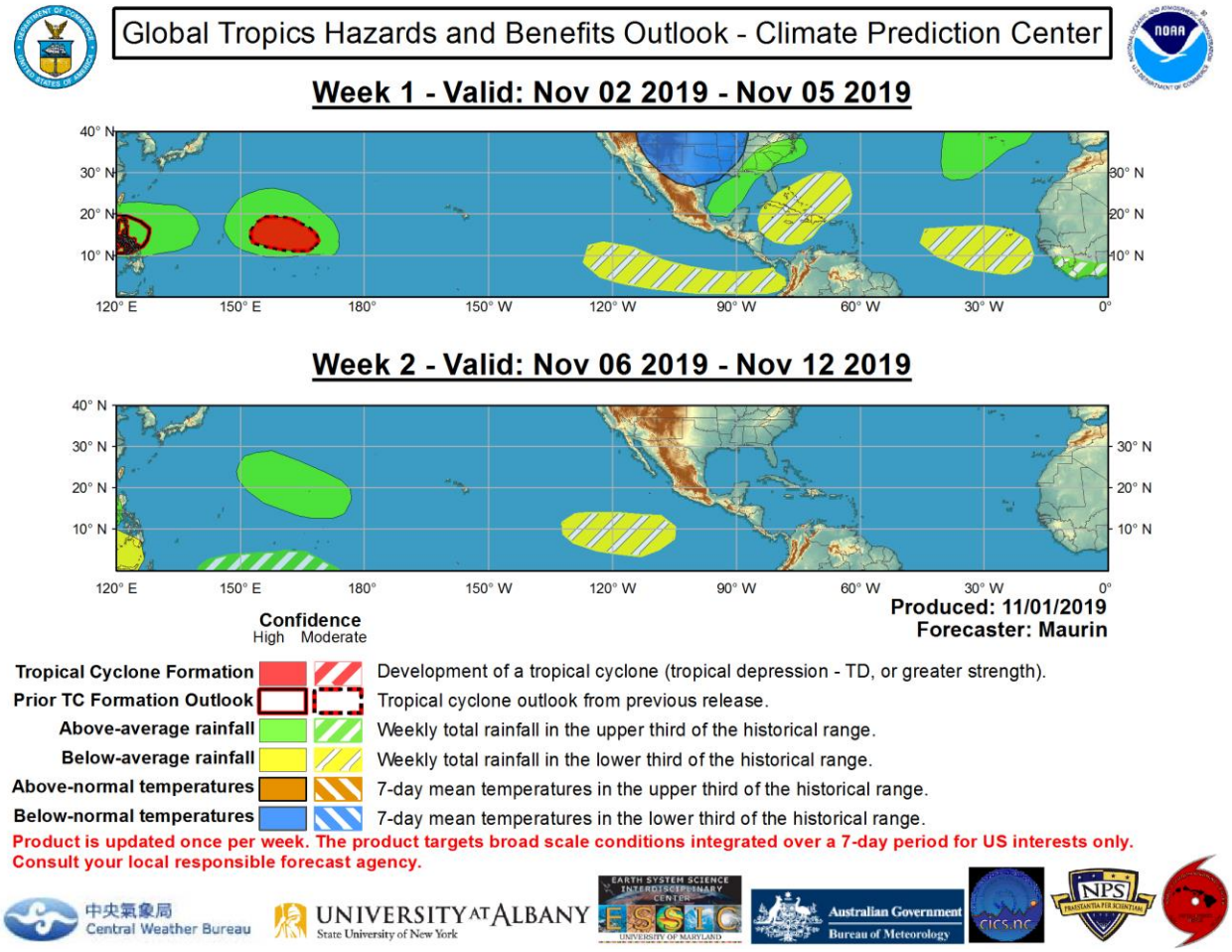

Over the past couple of days, the MJO has tracked through the eastern Indian Ocean (Phase 3) and is starting to re-emerge from the unit circle over the Maritime Continent (Phase 4). Although it has maintained a weak signal, it continued to propagate eastward. The MJO appears to be following a path more similar to the ECMWF forecast from earlier this week, gaining strength after interacting with the strong IOD suppressed region in the eastern Indian Ocean. Most models are now forecasting a moderate signal through the next week and a half, landing in the western and central Pacific through week-2.

With the MJO signal gaining strength as the convective envelope propagates toward the western Pacific, this is expected to keep the western Pacific basin active. Tropical Storm Matmo formed on Wednesday in the South China Sea, but quickly made landfall in Vietnam, with the remnant low now over Thailand. The Joint Typhoon Warning Center continues to monitor a disturbance near 160 E, where models are forecasting a closed low forming over the weekend. Over the South China Sea, another formation looks likely toward the middle of next week and is better supported by the models now. That forecast has been upgraded to high confidence. Tropical Cyclone Maha also formed this week in the Arabian Sea. Chances for any activity over the eastern Pacific and Atlantic remain low, consistent with climatology of

these basins for early November. Some of the precipitation forecasts have been shifted from moderate to high confidence with the expected tropical activity.

Full discussion from Tuesday follows below.

A downturn in MJO activity has been seen over the past week, with the signal stalling over the Indian Ocean in Phase 2 and a drastic decrease in signal strength on the Wheeler-Hendon diagram after a period of renewed eastward propagation seen since the beginning of October. Interactions with the anomalously strong Indian Ocean Dipole are a likely cause of this stall and weakening of the MJO signal as the convective envelope starts to shift toward the enhanced region of suppression in the eastern Indian Ocean and western Maritime Continent. Chances for renewed MJO activity are good as the convective envelope moves toward the western Pacific and away from the destructive interference with the IOD. Model forecasts of the MJO signal depict a continued eastward propagation of the signal, but at a very weak strength in week-1. The ECMWF forecasts a resurgence of the MJO in week-2, near the western Pacific around Phase 6. The GEFS shows a similar pattern, but with less of an uptick in signal strength and a faster phase speed, emerging in Phase 7. The strongly positive IOD is also forecast to remain a player for the Indian Ocean, as well as the tropics, over the next two weeks.

The eastern hemisphere is likely to continue to be active with tropical cyclones throughout the next two weeks. Tropical Cyclone Kyarr is ongoing in the Arabian Sea, where it became a category 4 storm earlier this week. The enhanced convective region of the IOD over the northwestern Indian Ocean is likely to support another tropical cyclone formation off the western coast of India in the next few days. Model consensus gives high confidence to this tropical cyclogenesis forecast. The Joint Typhoon Warning Center is also monitoring another region in the western Pacific for cyclogenesis. Both the GEFS and ECMWF show a formation west of the Philippines either today or tomorrow. Models also show a potential second tropical cyclone forming out of the same region this weekend as well. Further east, another region of enhanced convection centered near 160 E could support cyclogenesis, though models have not been as consistent on this formation throughout the past few runs. Due to this, confidence in this forecast remains moderate. With the convective signal of the MJO forecast to re-emerge over the western Pacific in week-2, the western Pacific basin is likely to remain active throughout week-2. Models indicate a possibility for cyclogenesis again in the South China Sea. Currently, no tropical cyclone activity is expected over the Eastern Pacific and Atlantic basins. Peak season for these two basins is ramping down, and conditions are likely to lead to a quiet November in terms of tropical cyclones.

With the strong IOD signal, precipitation patterns over the Indian Ocean in week-1 are expected to be enhanced in the northwestern part of the basin, with suppressed rainfall to the southeast near the Equator and extending over the western Maritime continent. There are several regions in the western Pacific that are likely to receive above normal rainfall, especially in areas where cyclogenesis is probable. Rossby wave activity is forecast to support above average rainfall near Papua New Guinea and the Solomon Islands. Models indicate below average rainfall elsewhere in the South Pacific, central Pacific, and eastern Pacific for week-1. With the quiet week expected for the tropical Atlantic, below average rainfall is forecast in the Caribbean and the central Atlantic. Remnants of TC Pablo are likely to cause enhanced precipitation over the North Atlantic. Over the continental U.S., a deep trough is forecast to descend over the central U.S. during week-1, causing below normal temperatures. A surge of Gulf moisture is forecast to enhance frontal activity along the eastern U.S., causing heavy rain for the Southeast and Mid-Atlantic. In the Southern Hemisphere, a drying signal consistent with MJO is likely for central Brazil. On the southern Brazil-Uruguayan border, MCS activity is forecast, with heavy rains likely over the weekend and possibly lasting into week-2.

Precipitation in week-2 is fairly consistent with week-1 patterns, with some shifts as the MJO signal is forecast to move toward Phases 6/7. The enhanced convection over the western Pacific is expected to be more widespread, causing larger areas of above normal precipitation from the western Maritime Continent into the western Pacific. In the northwestern Pacific, strong cyclonic flow is expected to support above average rainfall between 20-30 N.

Forecasts over Africa are made in consultation with the CPC International Desks and may reflect local and regional weather impacts.