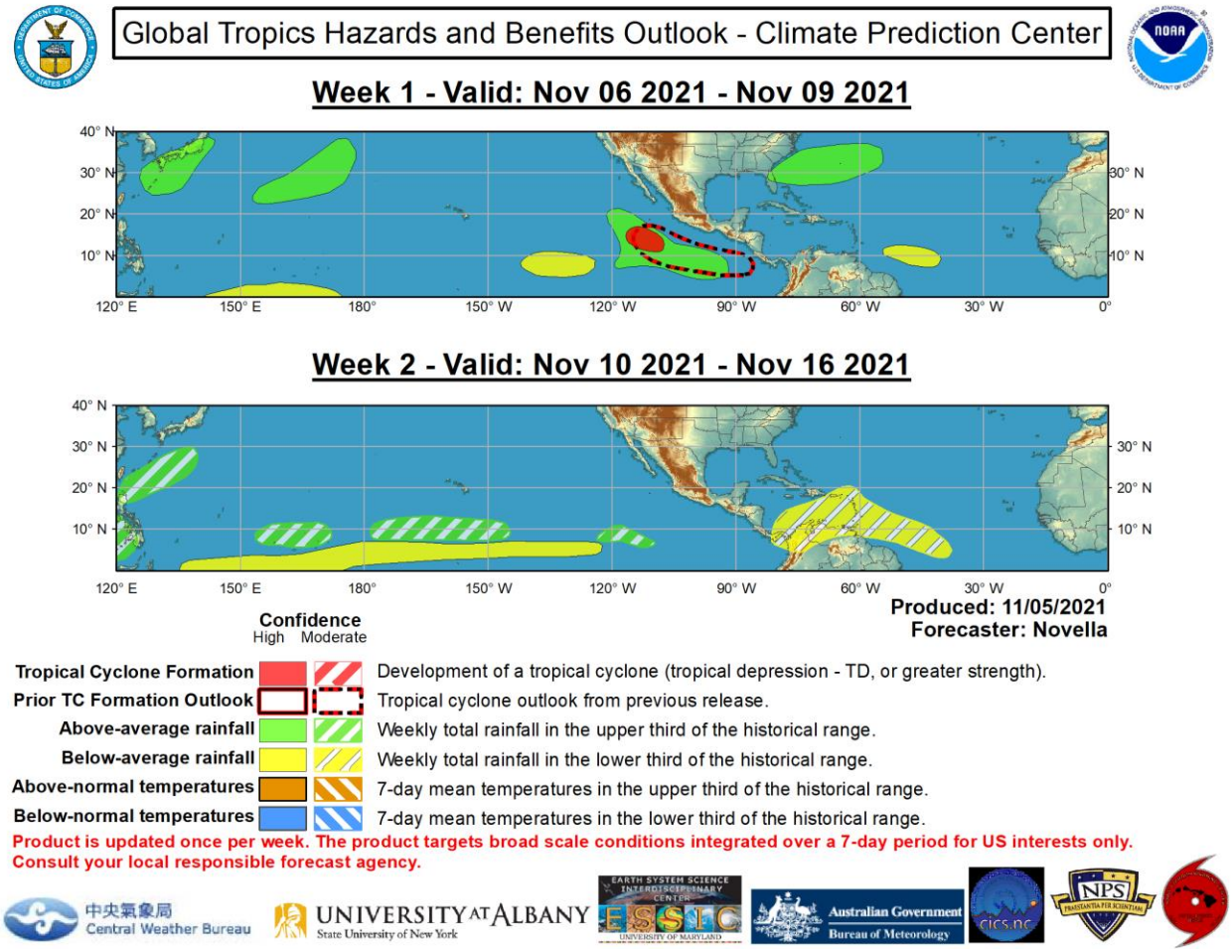

ï»¿There is little change to the tropical perspective since earlier this week. The RMM index shows a continued weak MJO signal, where it has remained within the unit circle since mid-October. While this signal has propagated eastward over the Indian Ocean during the last several days, this evolution is likely tied to the passage of a convectively coupled Kelvin wave which shifted eastward out of the western Hemisphere since late October. Objective tropical wave filtering of the latest dynamical model guidance favors this Kelvin wave to continue propagating eastward, where it looks to constructively interfere with the low frequency footprint over the Maritime Continent. This is reflected in the RMM forecasts which depict an increase in amplitude among many ensemble members over phases 4 and 5 during week-1. Beyond this time, there is general agreement in the dynamical models which bring the intraseasonal signal eastward into the western Pacific, but maintain a low amplitude in RMM space. As a result, other modes of tropical variability are more likely to be predominant drivers of tropical precipitation, as the large-scale environment appears to be more conducive for tropical cyclone (TC) development in the eastern Hemisphere through mid-November.

Since the initial outlook release this week, Tropical Depression 18-E developed on 11/4 to the south of Central America. The National Hurricane Center (NHC) forecasts this system to become Tropical Storm

Sandra during the weekend, maintaining a westerly track over open waters next week. Elsewhere in the eastern Pacific, the NHC is also monitoring a broad area of low pressure near 110W with at least a 70% chance of formation during the next 5 days, and a high confidence area is posted in the updated outlook for days 1-4. Across the north-central Atlantic, Tropical Storm Wanda continues to maintain its intensity despite experiencing dry air entrainment which has limited convection within its circulation. The NHC forecasts Wanda to briefly track southward, and then accelerate northeastward and merge with an extratropical frontal system late this weekend. For days 5-11, no TC areas are added over the eastern Pacific and Atlantic basins, as guidance remains unsupportive of additional TC formation with suppressed convection favored throughout much of the Caribbean through mid-November.

Areas for forecast above and below normal precipitation have been modified to reflect the latest model guidance for the remaining outlook periods.

---------- Previous discussion released on November 2, 2021 follows ----------

The RMM-based MJO index has rapidly weakened over the last 2 weeks, and is currently within the RMM unit circle. Areas of enhanced and suppressed convection have been influenced by Kelvin and Rossby Wave activity, with a stationary convective envelope situated across the Maritime Continent, consistent with the low frequency La Nina base state. During the month of October, a robust Kelvin Wave emerged out of this convective envelope and propagated across the globe, and is now located over the equatorial eastern Atlantic and Africa.

Over the next 2 weeks, this Kelvin Wave is forecast to move over the Indian Ocean and back to the Maritime Continent where it may reinvigorate the MJO-index. The GEFS and ECMWF models indicate some renewed eastward propagation of the RMM-based MJO index, but it is rather uncertain if the strongest signal is due to the Kelvin Wave itself, rather than a true MJO event. Given the well established low frequency state, it is unlikely that the intraseasonal signal will be able to progress much farther than the Western Pacific before weakening again. The dynamical models are the most bullish with the MJO signal emerging over the Western Pacific in the next 2 weeks, with the constructed analog tool being weaker, and not indicating much propagation beyond the Maritime Continent.

Tropical Cyclone (TC) activity has generally been non-existent in all of the basins, mainly due in part to a suppressed MJO, in addition to enhanced wind shear at the higher latitudes. In the past week, a

departing storm over the northeastern U.S. contributed to the development of Subtropical Storm Wanda over the North Atlantic on 10/31. Wanda is now purely tropical, but is forecast to continue to track farther north and weaken over the next few days. Of note, Wanda is the final name on the 2021 list of names for the Atlantic Basin. All subsequent TCs will utilize a supplemental list of names as opposed to the Greek Alphabet that was used in the 2005 and 2020 seasons. More information can be found here: https://public.wmo.int/en/media/news/supplemental-list-of-tropical-cyclone-names-raiv.

As the aforementioned Kelvin Wave propagates across the Indian Ocean, TC development is possible in the eastern Arabian Sea as indicated by several GEFS and ECMWF ensemble members. Over the Eastern Pacific, a reduction in upper level westerlies along the equator may promote TC development as multiple areas of surface low pressure have formed over the basin and across Central America. The Atlantic is forecast to remain quiet, although an extratropical cyclone is forecast to develop over the western Atlantic in the next few days and it is not out of the question that this system could acquire some subtropical characteristics as it moves over the Gulf Stream. As of right now, the probability of TC development is too low to include on the graphic.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF guidance. The high confidence for above normal rainfall across parts of the Maritime Continent and Western Pacific is consistent with La Nina. Dry conditions are favored across the Equatorial Indian Ocean as well as in the central Atlantic. Above normal rainfall is anticipated across Central America during week-1, with further enhancement likely across the East Pacific persisting into week-2. Anomalous troughing in the South Atlantic favors an enhanced moisture feed into eastern South America prompting increased confidence for heavy rain across Brazil and surrounding areas. 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.