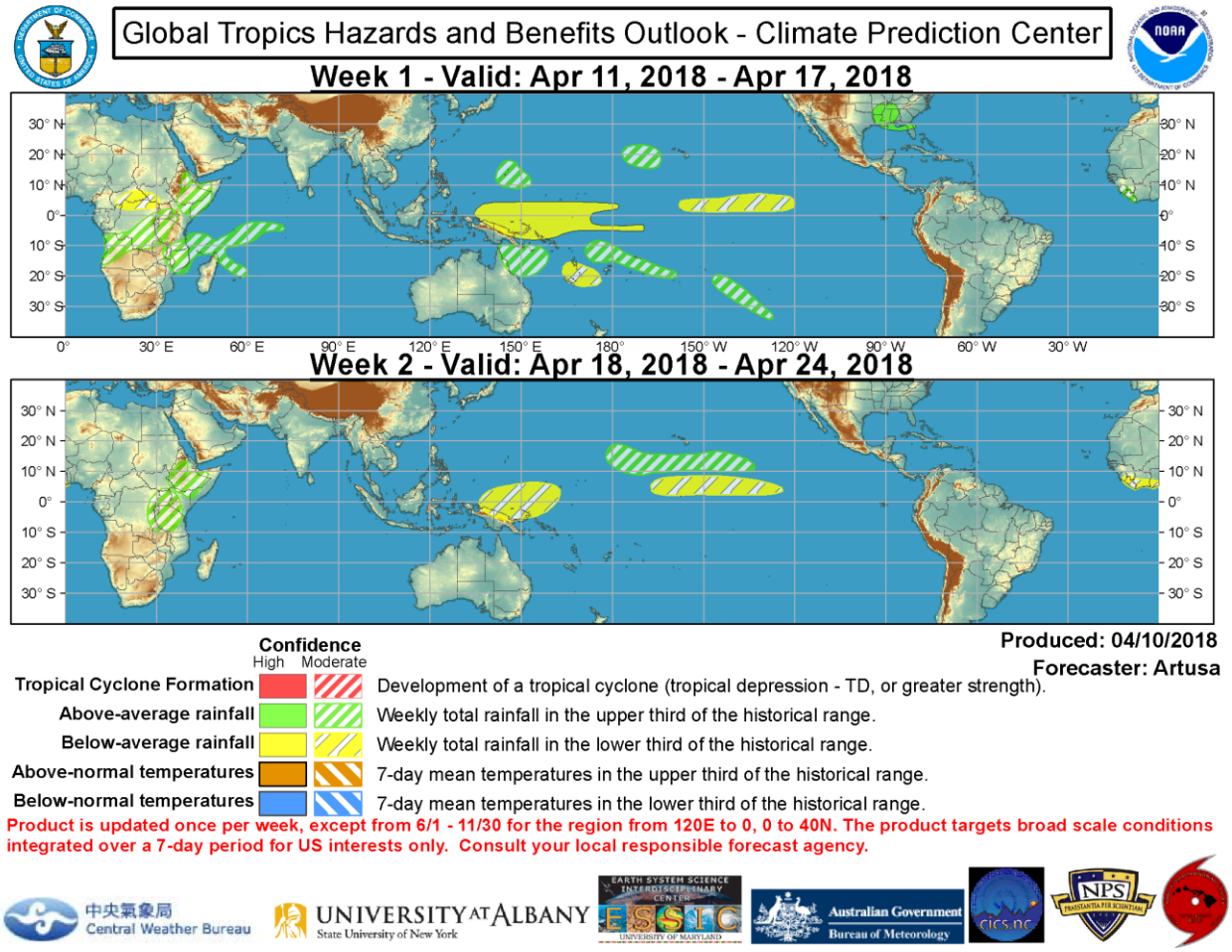

Two weeks ago, a weak MJO signal emerged from the unit circle (in RMM phase space) and amplified rapidly over the western Pacific (phase 7). During the most recent week, a strong MJO propagated eastward across the Western Hemisphere (phase 8). Dynamical models generally predict an eastward-propagating MJO signal across Africa and the western Indian Ocean (phases 1 and 2) during Week-1, followed by a rapid weakening of the signal back into the unit circle over the eastern Indian Ocean (phase 3) in Week-2. This is the general idea of the NCEP GEFS, Canadian, and ECMWF models. The very rapid eastward propagation that is anticipated by these solutions is more consistent with the phase speed of a Kelvin wave. In contrast, the CFS predicts a subseasonal signal that briefly retrogrades back into phase 8 before re-establishing eastward propagation later in Week-1 and throughout Week-2 across

Africa (phase 1). Of the four dynamical model solutions described here, only the CFS maintains an intraseasonal signal of significant amplitude, well outside the unit circle, during the two-week period.

Outgoing longwave radiation (OLR) anomalies were negative (indicative of above average convection) in late March and early April from the Coral Sea southeastward along the South Pacific Convergence Zone (SPCZ), and from just east of the Philippines east-northeast past the Hawaiian Islands to the West Coast of the contiguous United States. This latter region of negative OLR anomalies is associated with an unusually strong, late-season atmospheric river that transported copious amounts of subtropical moisture to the U.S. West Coast states, resulting in beneficial rains for the reservoirs in northern and central California, and contributed to mountain snowpack across the Sierras. Two areas of positive OLR anomalies (associated with below average convection) were noted over the tropical Indian Ocean, and the central and east-central tropical Pacific. The latter region of positive OLR anomalies is related to the waning La Nina low-frequency dry signal. Finally, during the latest few days, convection has flared up over Africa, likely related to the MJO signal.

Tropical Cyclone (TC) 19P (Keni), is currently (Apr 10) moving east-southeastward away from Fiji in the South Pacific. Satellite-derived Dvorak intensity estimates place Keni's peak winds near 85 knots, with gusts of 105 knots. There are several areas of potential TC development that the Joint Typhoon Warning Center (JTWC) is monitoring for the Week-1 period. JTWC suspects the remnants of TC 17P, currently over the Coral Sea, may re-intensify to a TC during Week-1. However, this area is not placed on the map since it pertains to remnants of a TC. Two other regions of possible TC formation in

Week-1, both of low confidence, include the waters surrounding northern Madagascar, and east of the Philippines (5N-15N, 130E-150E). There is too much uncertainty in the Week-2 time frame to highlight any potential TC formation regions.

In Week-1, above average rainfall is forecast from northern Mozambique eastward across the Comoros Islands, northern Madagascar, and nearby waters. There is also a low risk of TC development near northern Madagascar, but this risk is too low to warrant a TC area on the map. Above average rainfall is also predicted over portions of the Coral Sea, partly due to the moderate TC risk in that region, along segments of the SPCZ in the South Pacific, and in two relatively small-scale regions in the North Pacific. One of these two small-scale regions of predicted above average rainfall is located just west of Hawaii, and is attributed to the development of an inverted surface trough on the southern periphery of a zonally elongated ridge positioned north of Hawaii. The latest ECMWF and GFS ensemble means indicate these features during Week-1. A final area of predicted above average rainfall is forecast for the Lower Mississippi Valley, the central Gulf Coast region, and northern Florida (high confidence). This is largely due to a baroclinic system that is anticipated to approach the region, preceded by abundant Gulf moisture (1.5-2.5 inches). Below average rainfall areas are forecast over the near-equatorial region near and east of New Guinea (5N-8S, 135E-170W, high confidence), the New Caledonia/Vanuatu area in the Southwest Pacific, and just north of the Equator in the east-central Pacific. These areas of below average rainfall are favored by GFS and ECMWF precipitation guidance. The last area noted (east-central Pacific) may be related to the waning La Nina low-frequency signal. Unless noted otherwise, precipitation anomaly areas are of moderate confidence.

In Week-2, there are only three precipitation anomaly areas specified across the oceanic areas of the global oceanic tropics, and are consistent with ECMWF and GFS precipitation forecasts. Above average rainfall is indicated north of the Equator, from near the Date Line eastward to about 135W. This appears to be related to a broad, zonally-elongated area of low surface pressure. Below average rainfall is favored along and northeast of New Guinea, and just north of the Equator from 165W-125W. All precipitation anomaly areas are of moderate confidence.

Forecasts over Africa are made in consultation with the CPC international desk and can represent local scale conditions in addition to global scale variability.