

Global Tropics Hazards And Benefits Outlook

7/4/2017

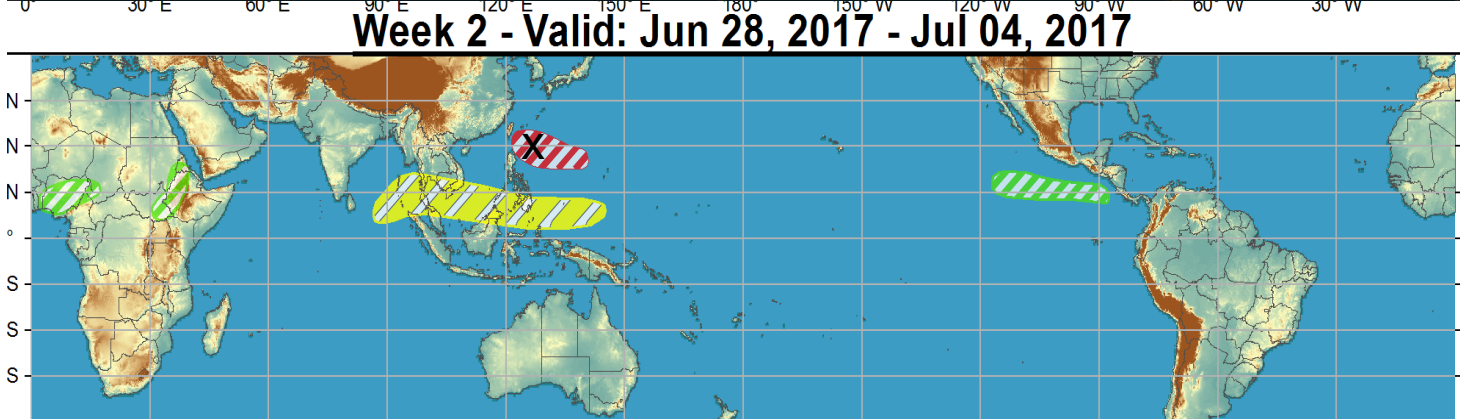
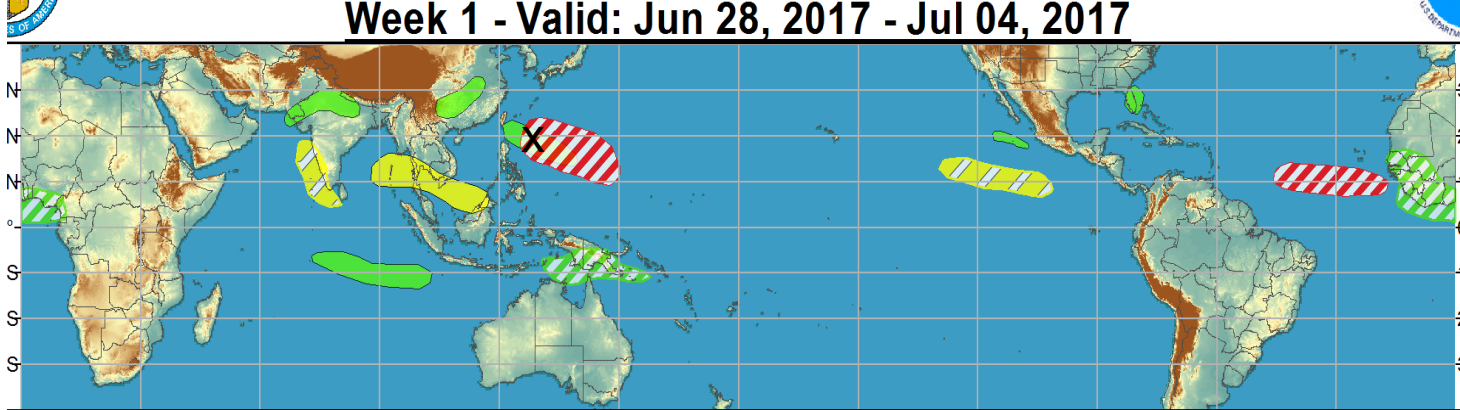
Dan Harnos

Outline

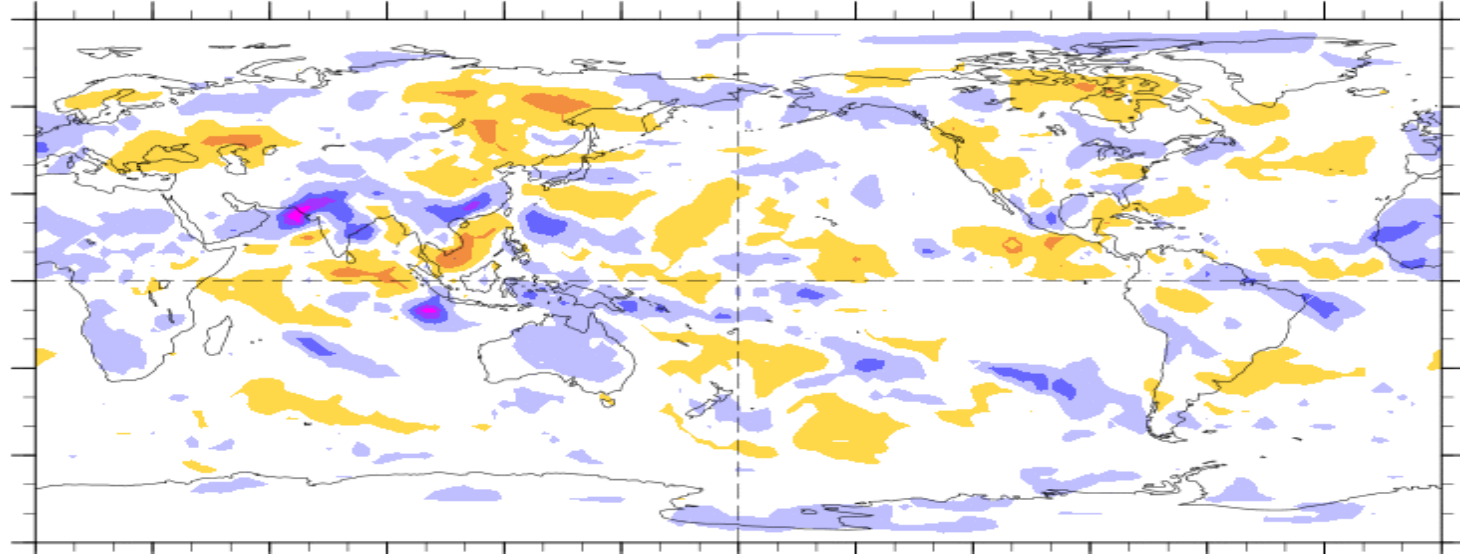
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

TS Nanmadol
Peak: 60 mph
July 2 - present



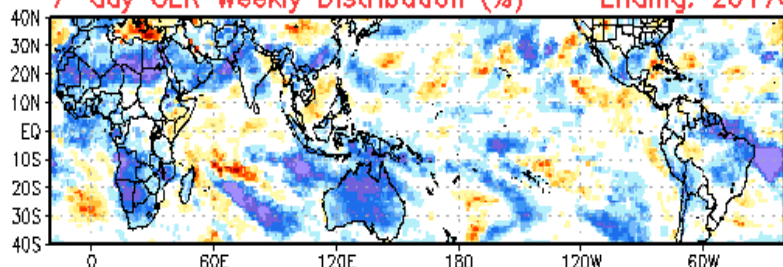
7-Day Average OLR Anomaly 2017/06/26 - 2017/07/02



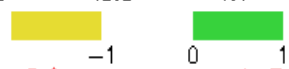
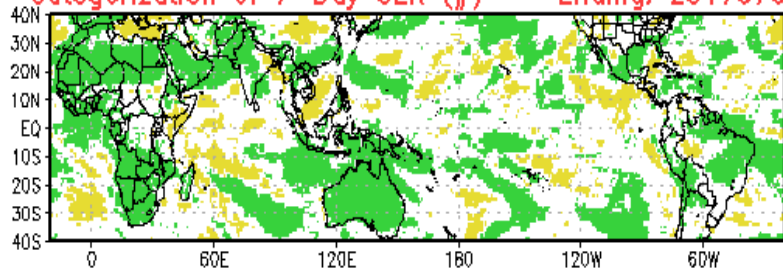
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

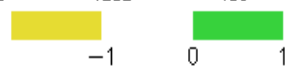
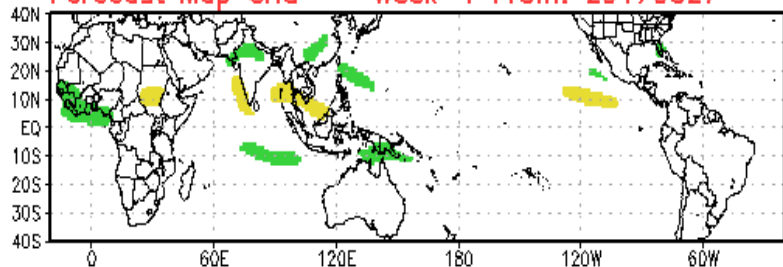
7-day OLR Weekly Distribution (%) -- Ending: 20170704



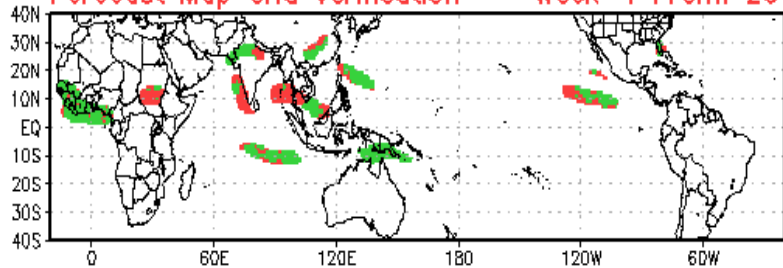
Categorization of 7-Day OLR (#) -- Ending: 20170704



Forecast Map Grid -- Week-1 From: 20170627

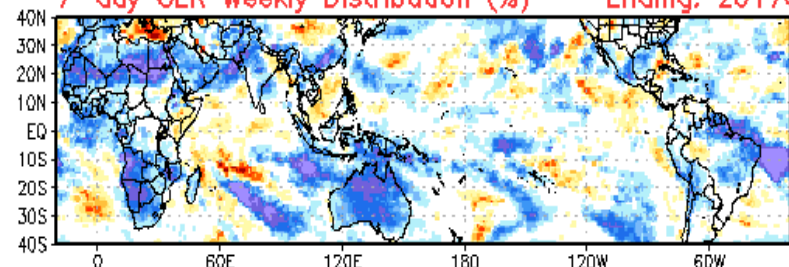


Forecast Map Grid Verification -- Week-1 From: 20170627

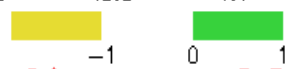
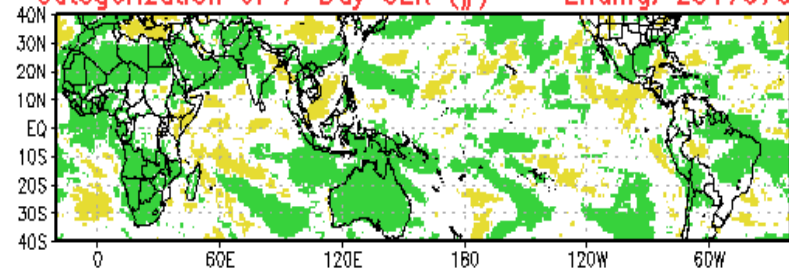


Hit: Green, Miss: Red
Heidke Skill Score: 44.7854

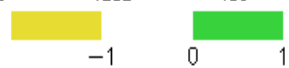
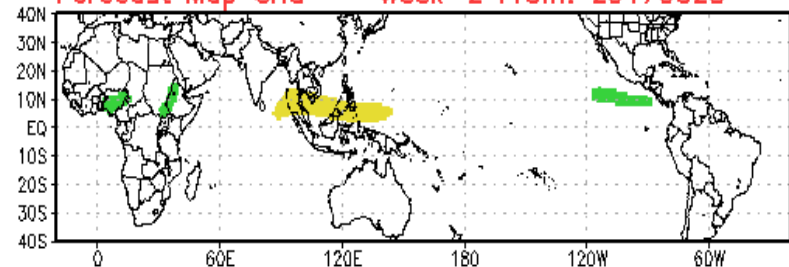
7-day OLR Weekly Distribution (%) -- Ending: 20170704



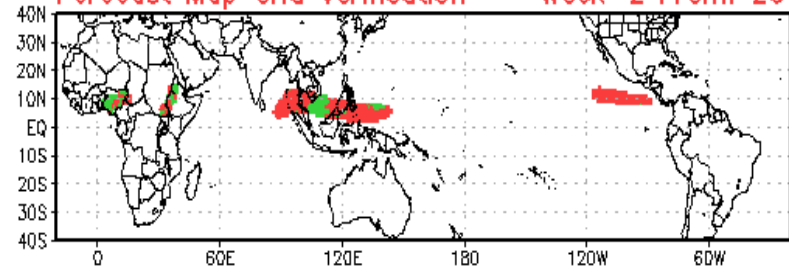
Categorization of 7-Day OLR (#) -- Ending: 20170704



Forecast Map Grid -- Week-2 From: 20170620



Forecast Map Grid Verification -- Week-2 From: 20170620



Hit: Green, Miss: Red
Heidke Skill Score: -13.3634

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is favored (50-55%) through Northern Hemisphere fall 2017.
- The next ENSO diagnostic discussion release will be next Thursday (13 July).

MJO and other subseasonal tropical variability:

- The RMM index shows continued weakness of the MJO, while overall tropical convective anomalies are weak and fairly incoherent.
- Low frequency enhancement of convection is stationary over the Maritime Continent, while another region has drifted slowly eastward from near the Prime Meridian in late April to ~140W at present (too slow to be considered the MJO).
- Ensemble guidance is mixed regarding the intraseasonal state of the global tropics, but consistent in not forecasting an emerging MJO signal over the coming two weeks.

Extratropics:

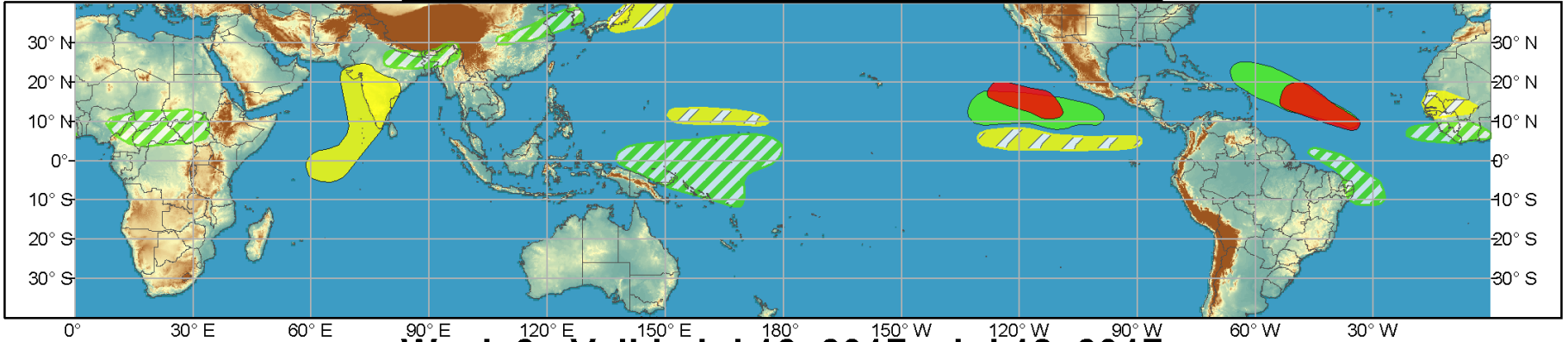
- The extended range temperature and precipitation forecasts for the extratropics and U.S. are not likely to be impacted by MJO activity, but could be influenced by tropical cyclone activity (i.e. recurving Tropical Storm Nanmadol).



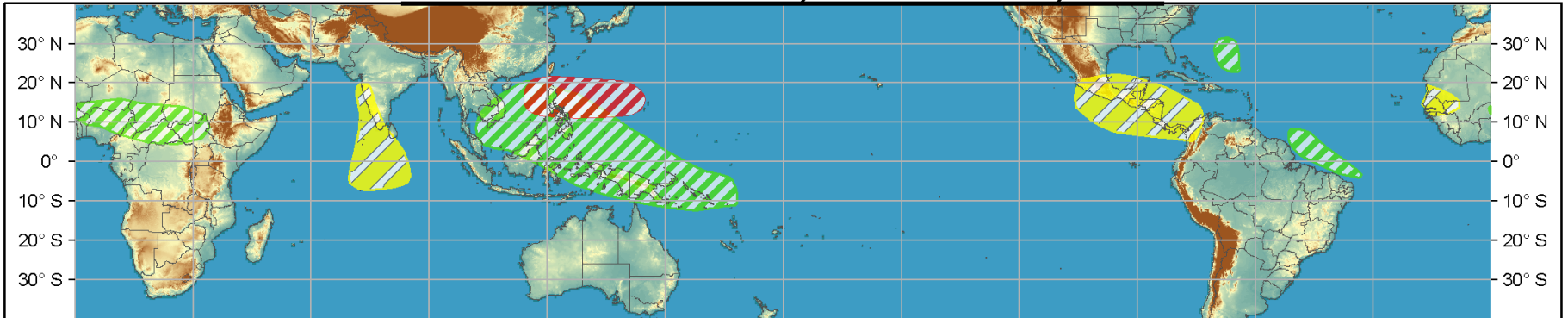
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jul 05, 2017 - Jul 11, 2017



Week 2 - Valid: Jul 12, 2017 - Jul 18, 2017



Confidence

High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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Produced: 07/04/2017

Forecaster: D.Harnos

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



IR Satellite & 200-hpa Velocity Potential Anomalies

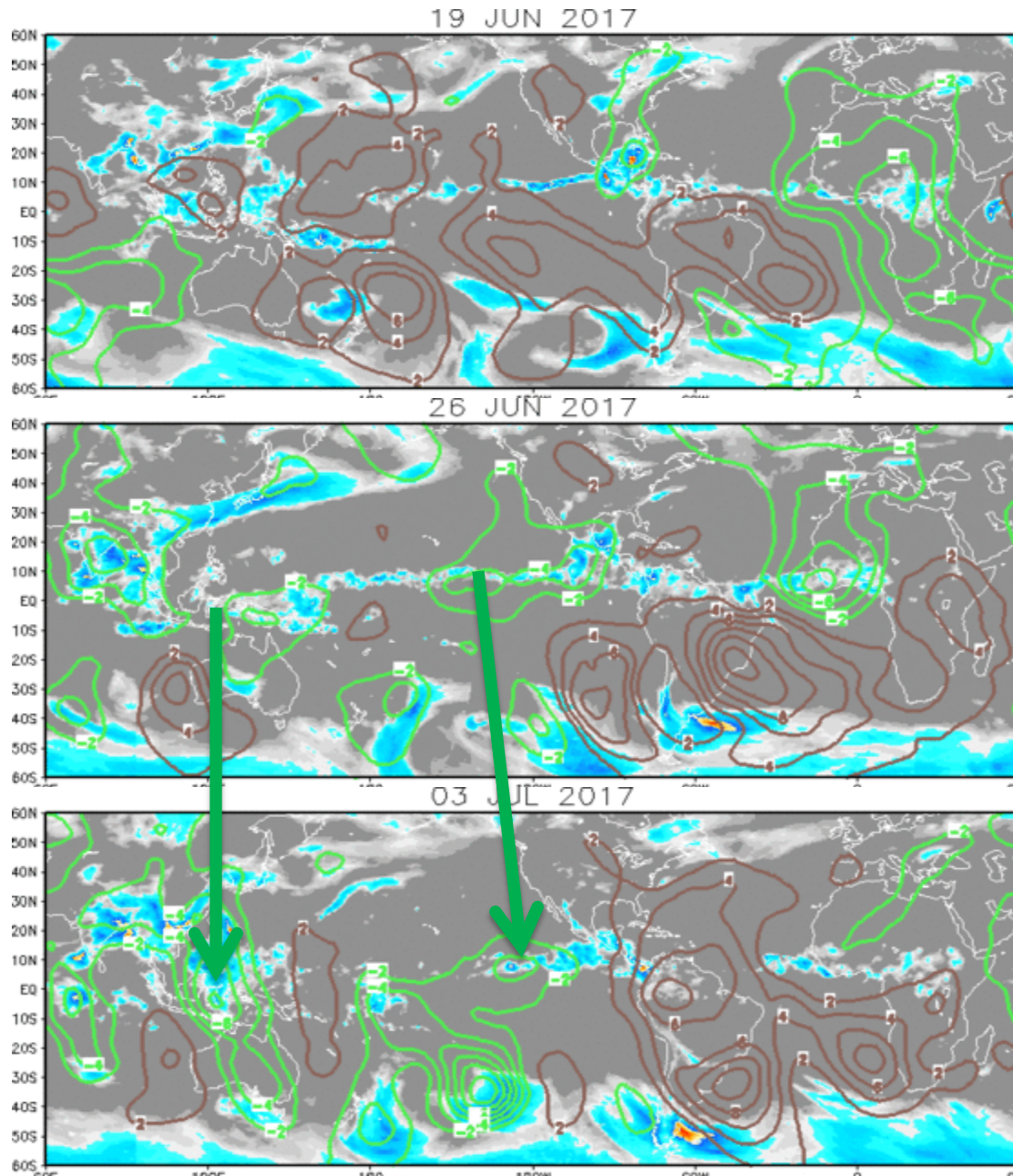
Green: Enhanced Divergence

Brown: Enhanced Convergence

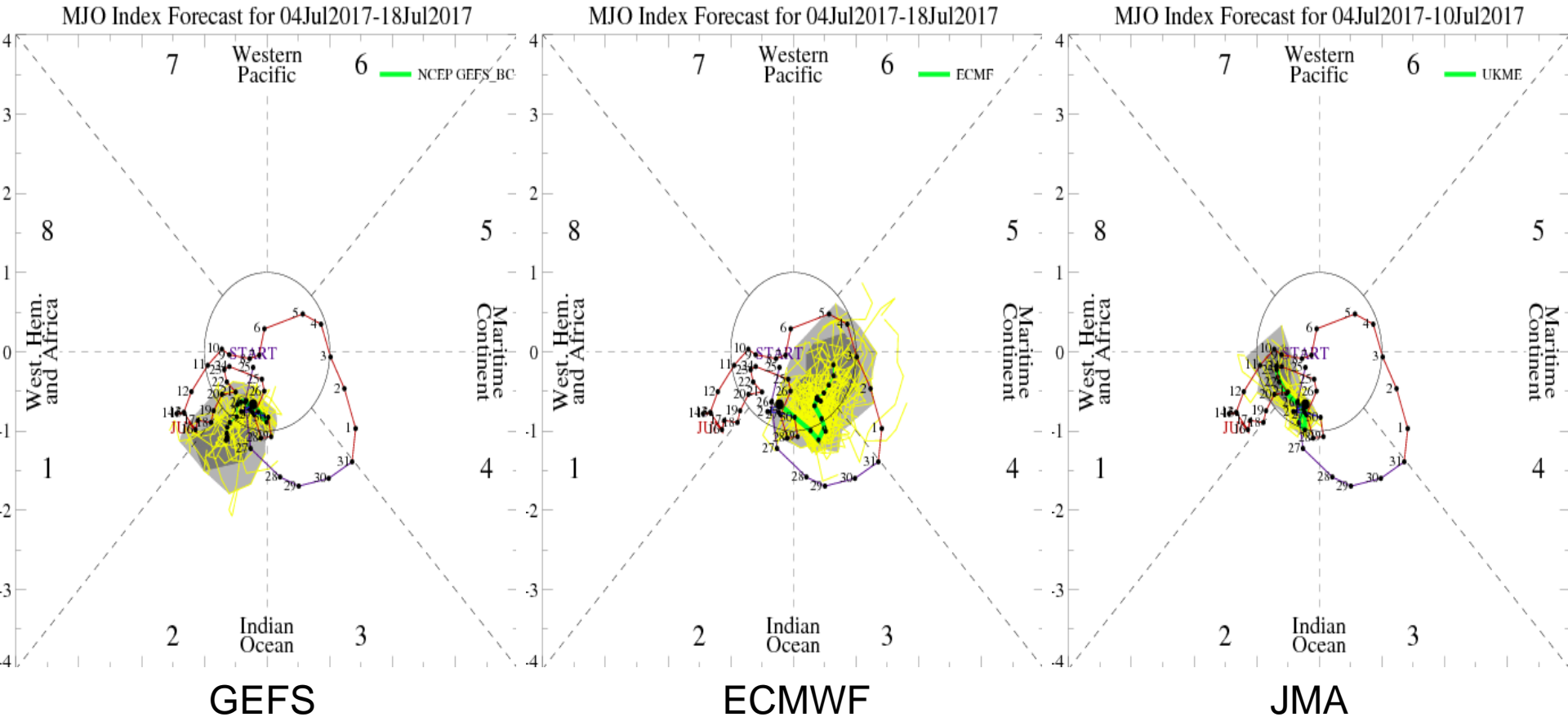
Pattern not consistent with MJO.

High wave number, not consistent with MJO. Highlights other modes of variability.

Up to a wave-5 pattern, inconsistent with organized MJO. Lower frequency signals apparent over Maritime Continent and entering East Pacific.



MJO Observation/Forecast



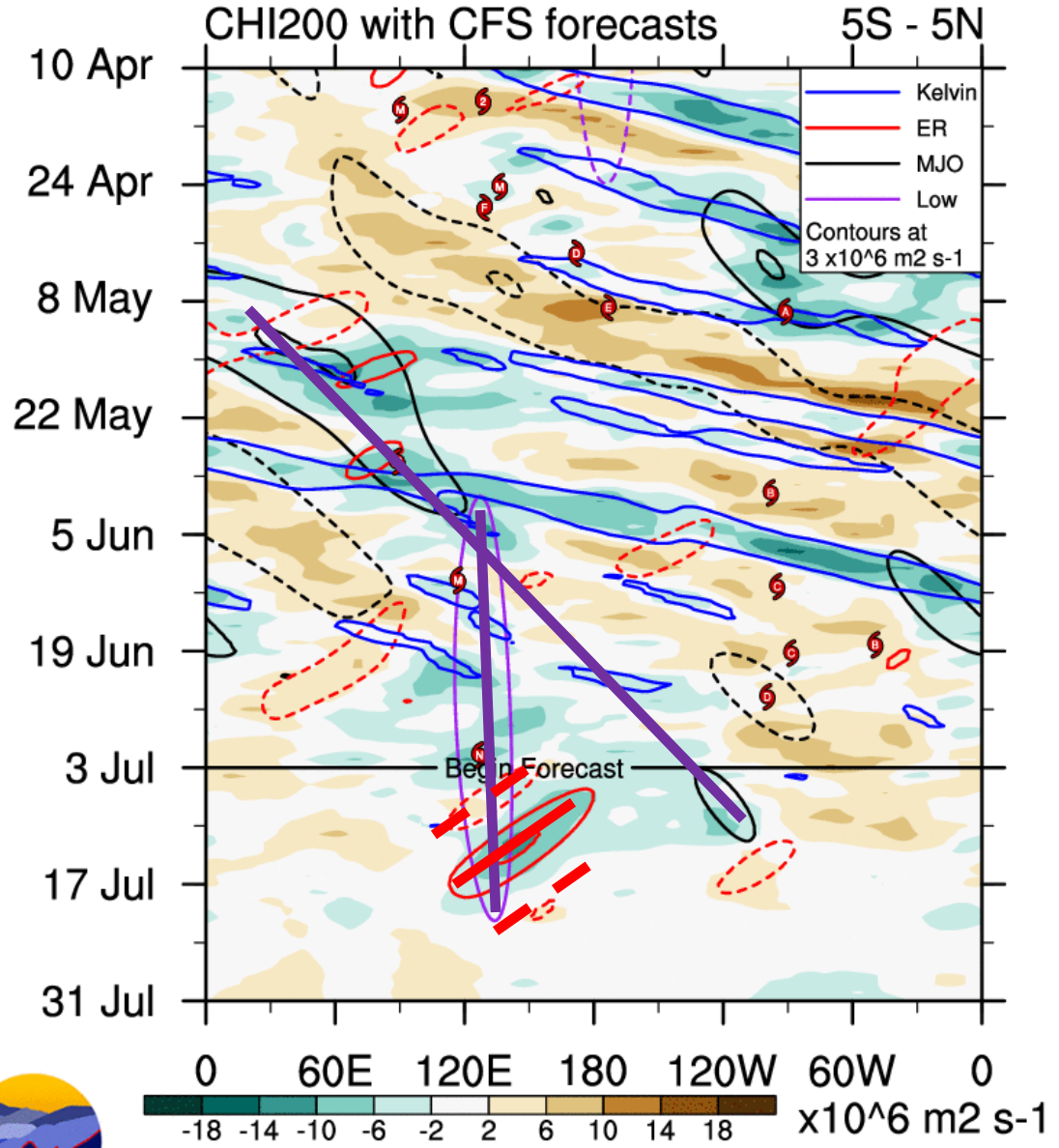
GEFS loops back towards a signal emerging over the western Indian Ocean. This signal appears tied to the changing low frequency state, rather than intraseasonal activity.

ECMWF shows weak intraseasonal signal drifting slowly eastward toward Maritime Continent.

JMA forecasts uncharacteristic westward propagation of a weak signal.

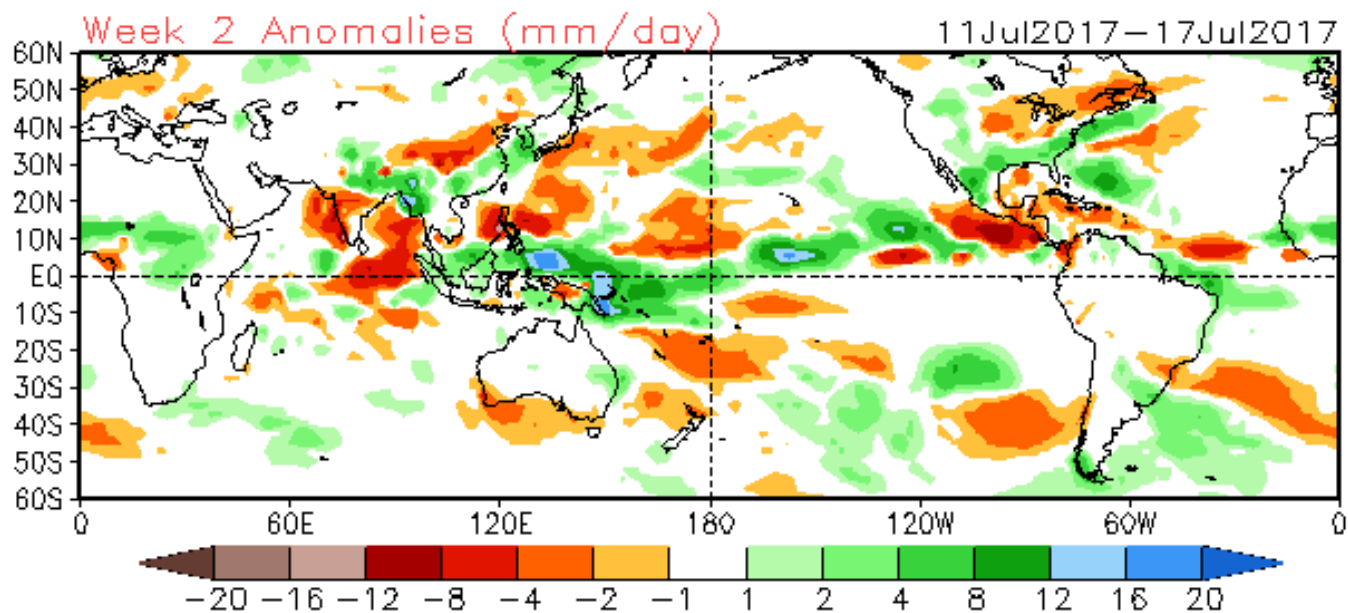
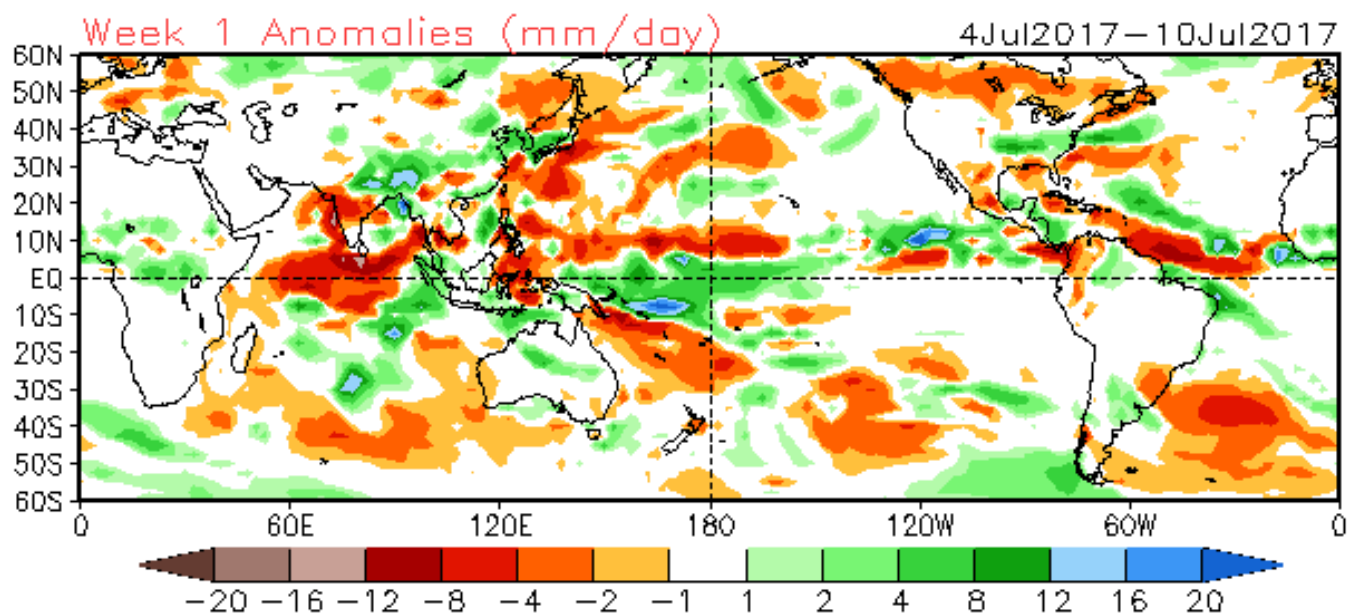
The **Low-frequency pattern** is stationary and enhancing convection over Maritime Continent, with another signal pushing eastward into the E. Pacific.

A series of **equatorial Rossby waves** are forecast to suppress/enhance convection across the West Pacific, but the CFS has a tendency to overdo these features.



CFSv2 Weeks 1 & 2 Precipitation

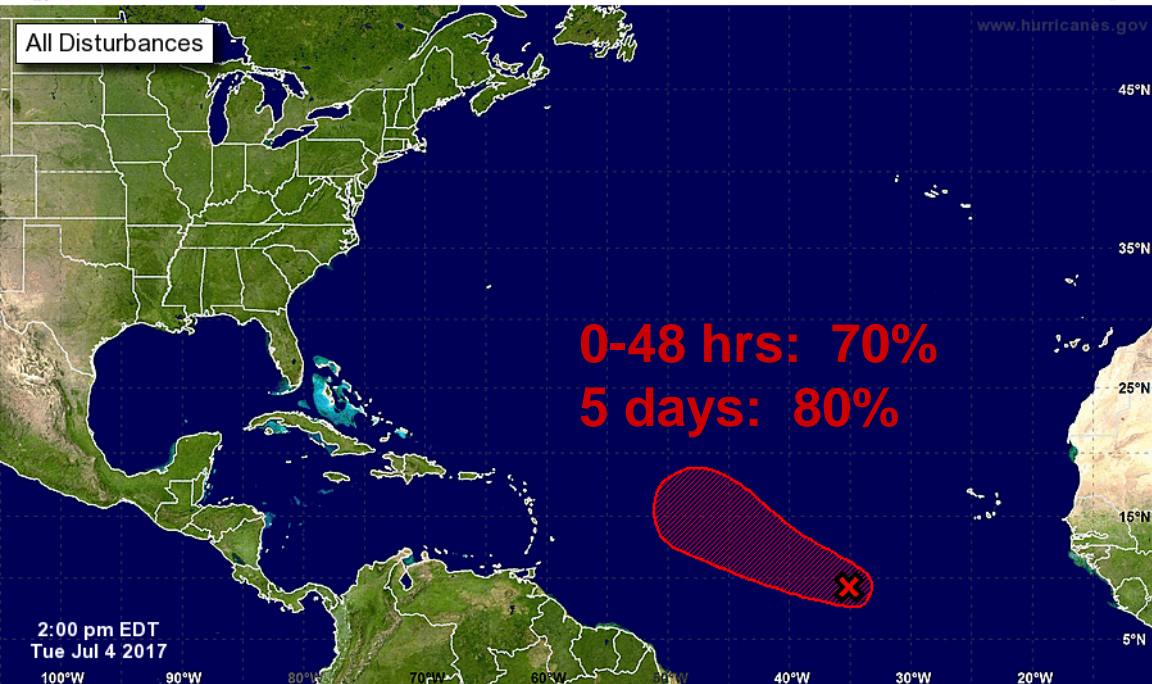
16 Member Ensemble Mean Forecast from 03Jul2017





Five-Day Graphical Tropical Weather Outlook

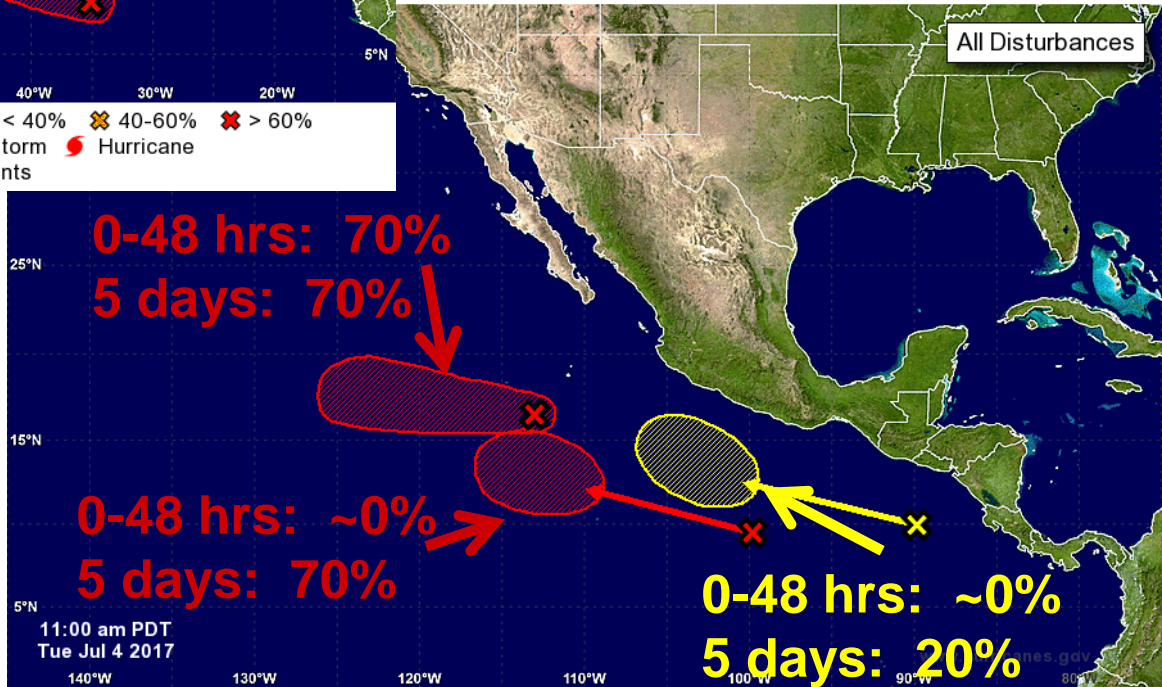
National Hurricane Center Miami, Florida



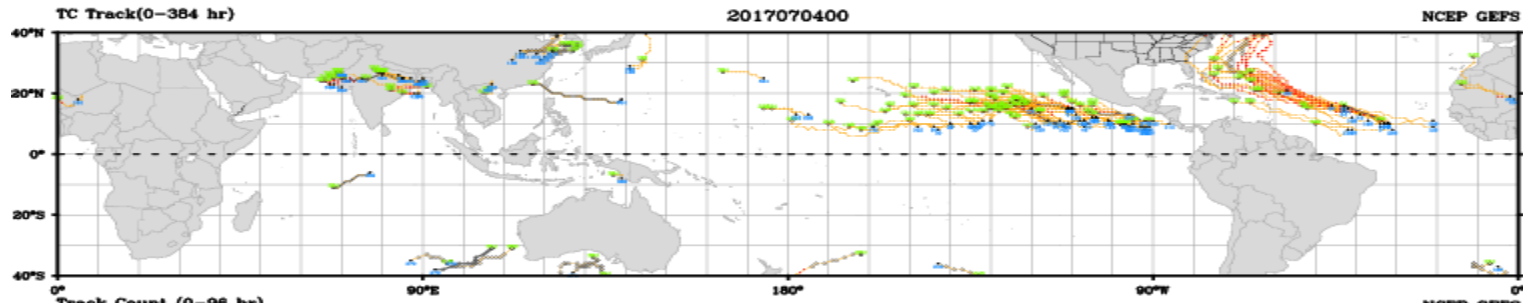
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane
 Post-Tropical Cyclone Remnants

Graphical Tropical Weather Outlook

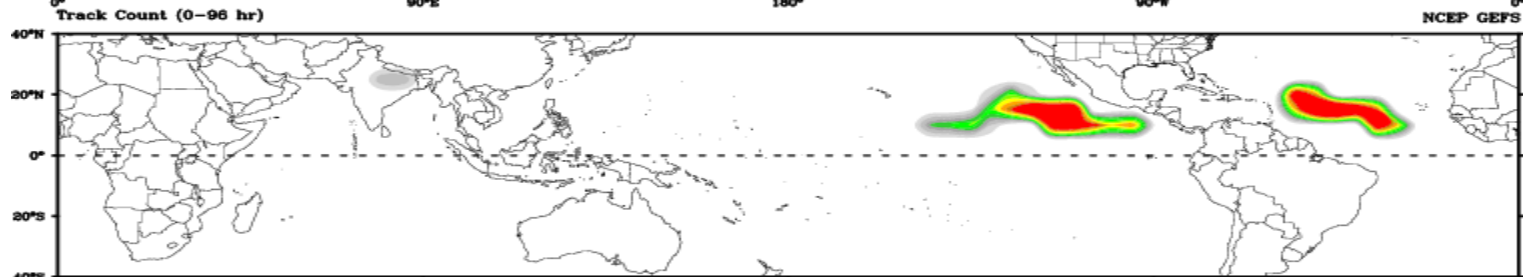
National Hurricane Center Miami, Florida



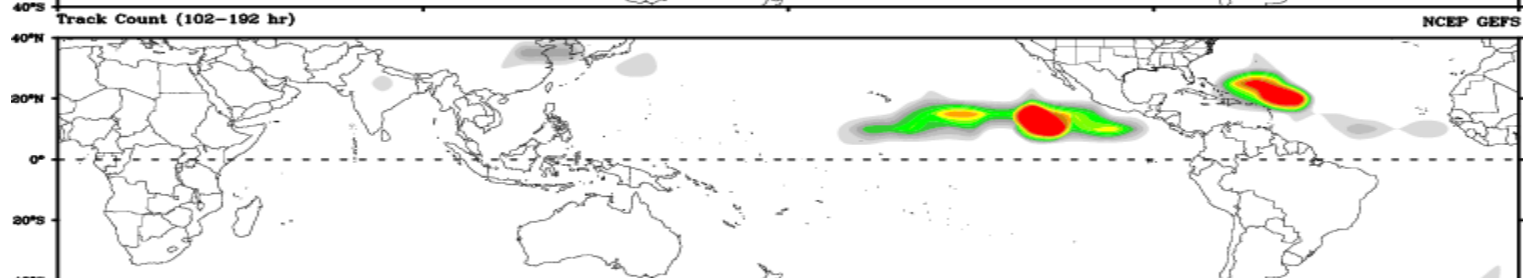
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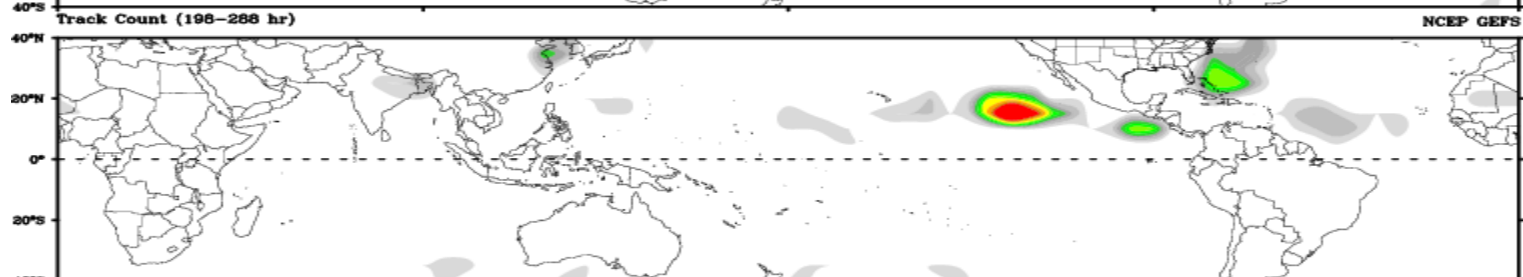
Days 1-4



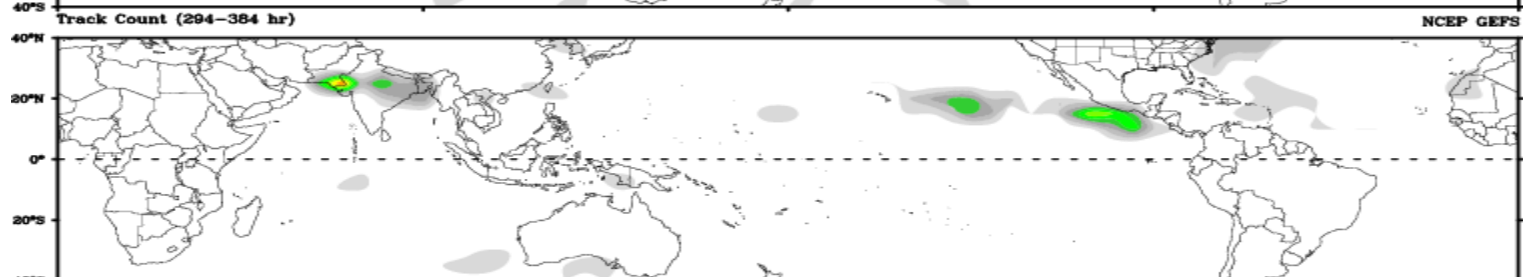
Days 5-8



Days 9-12



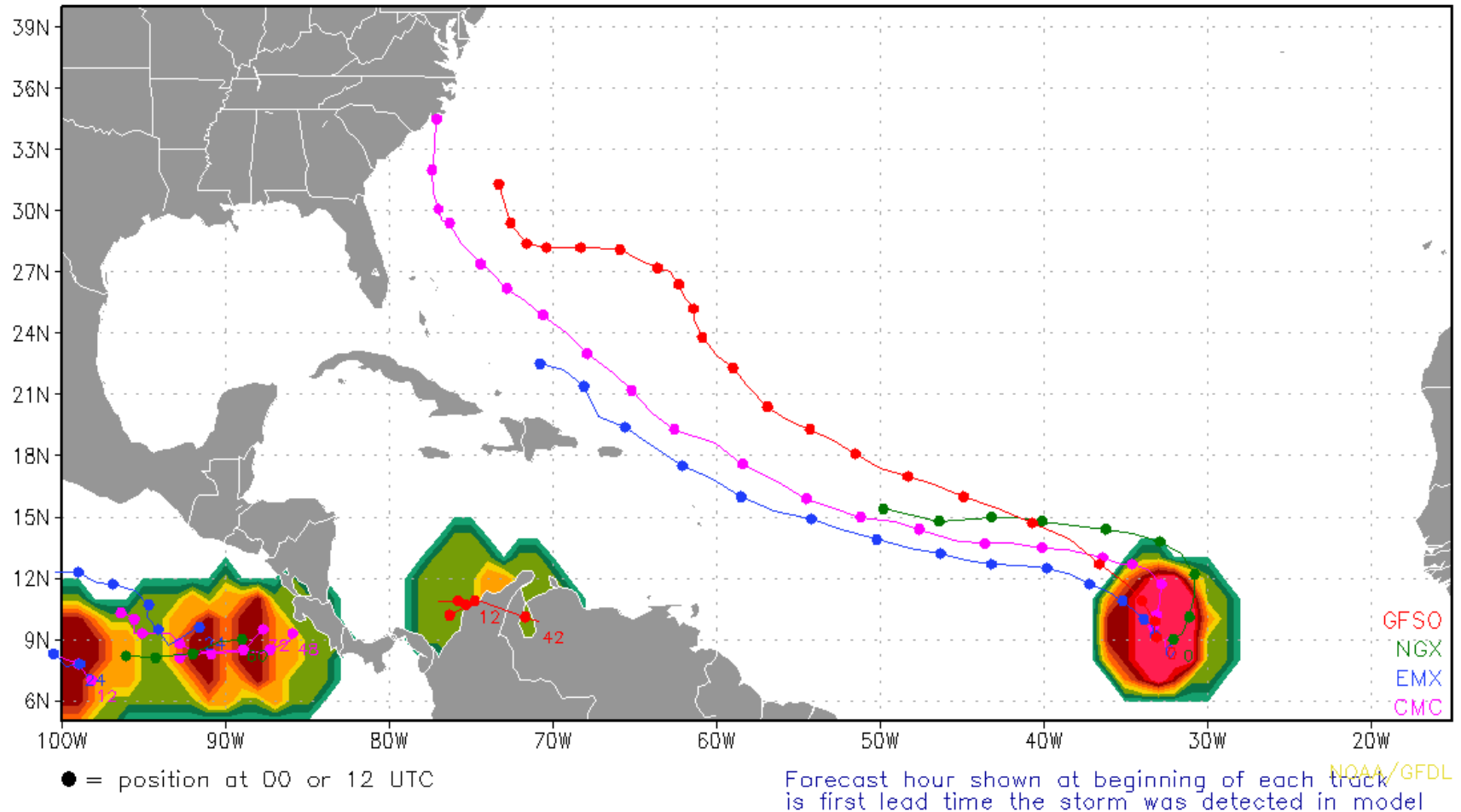
Days 13-15



Days 1-5

Consensus-based Probability (%) of TC genesis
using deterministic models: GFS, NAVGEM, CMC, ECMWF

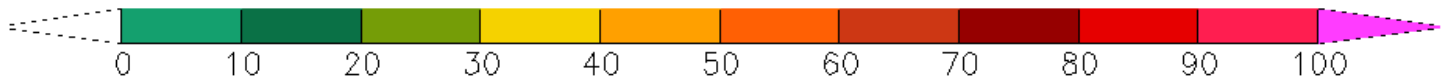
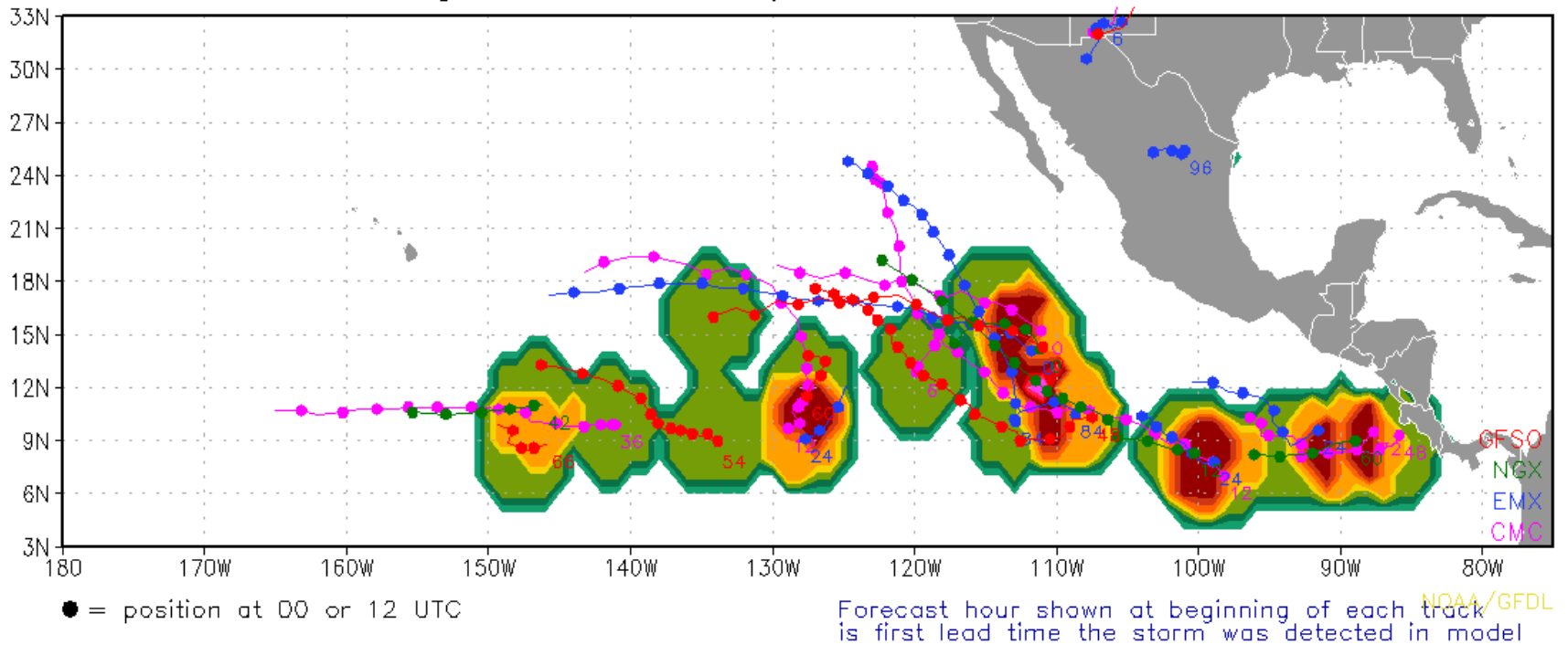
For forecasts during the 00-120h period from initial time = 2017070400



Days 1-5

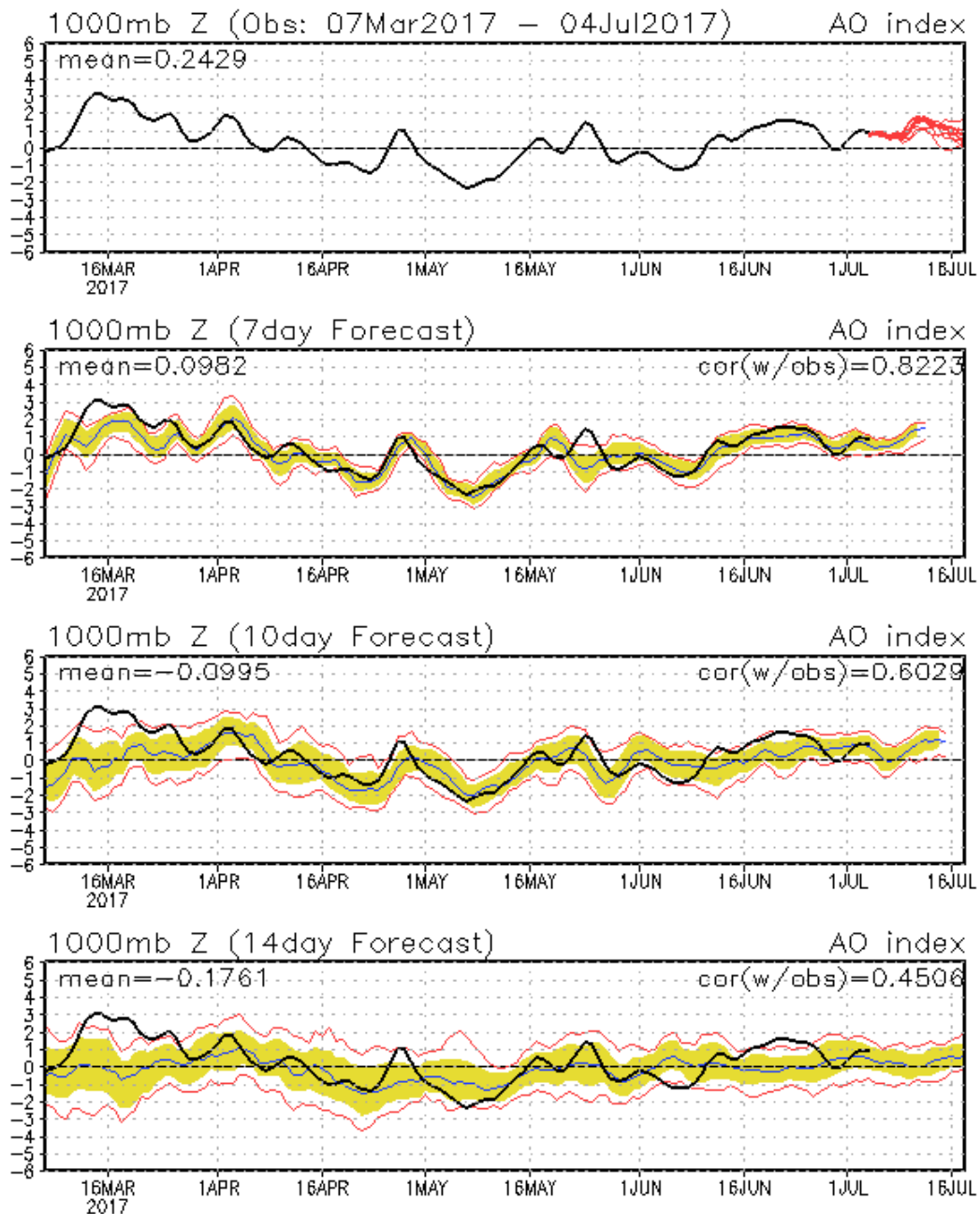
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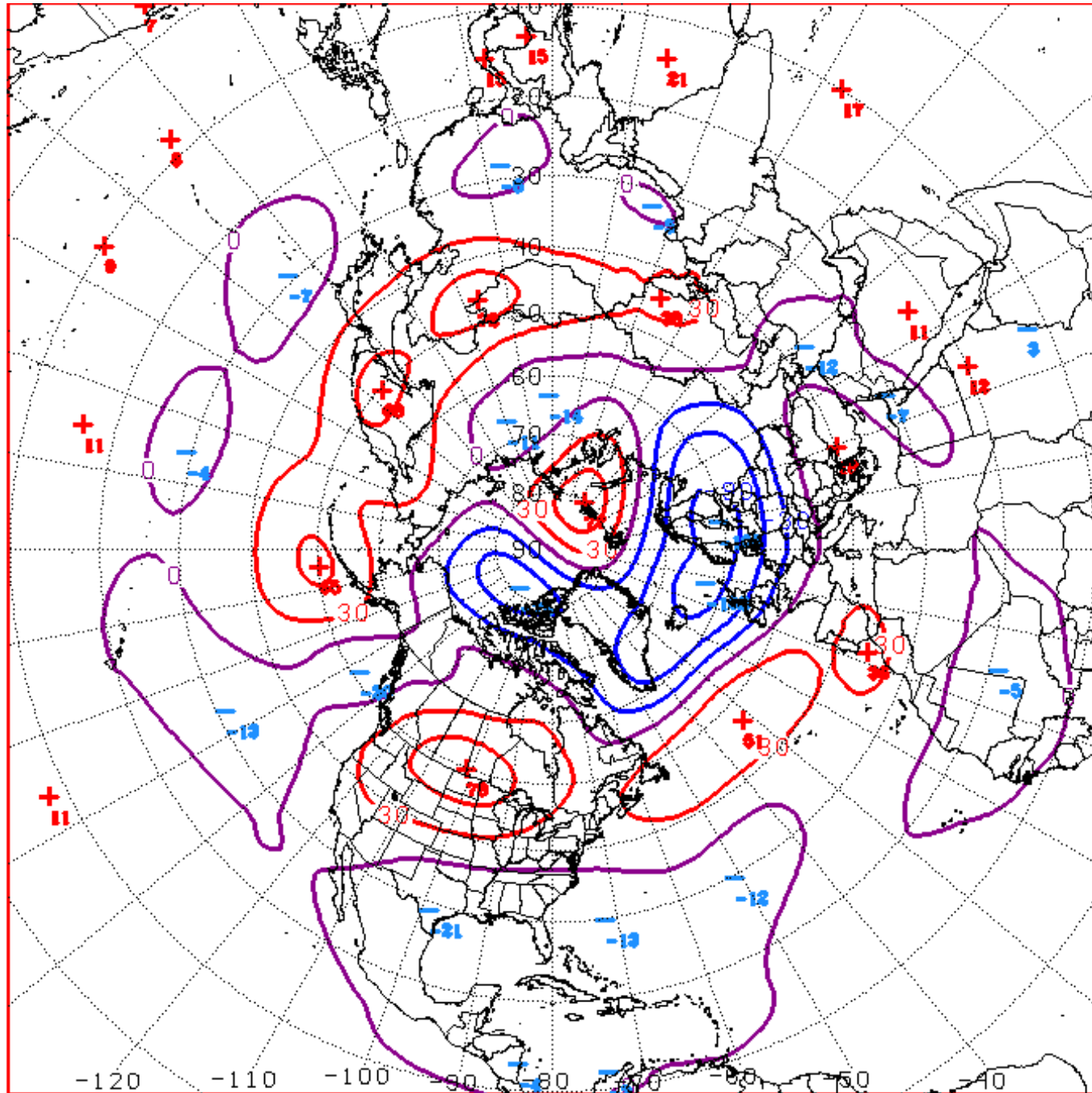
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Connections to U.S. Impacts

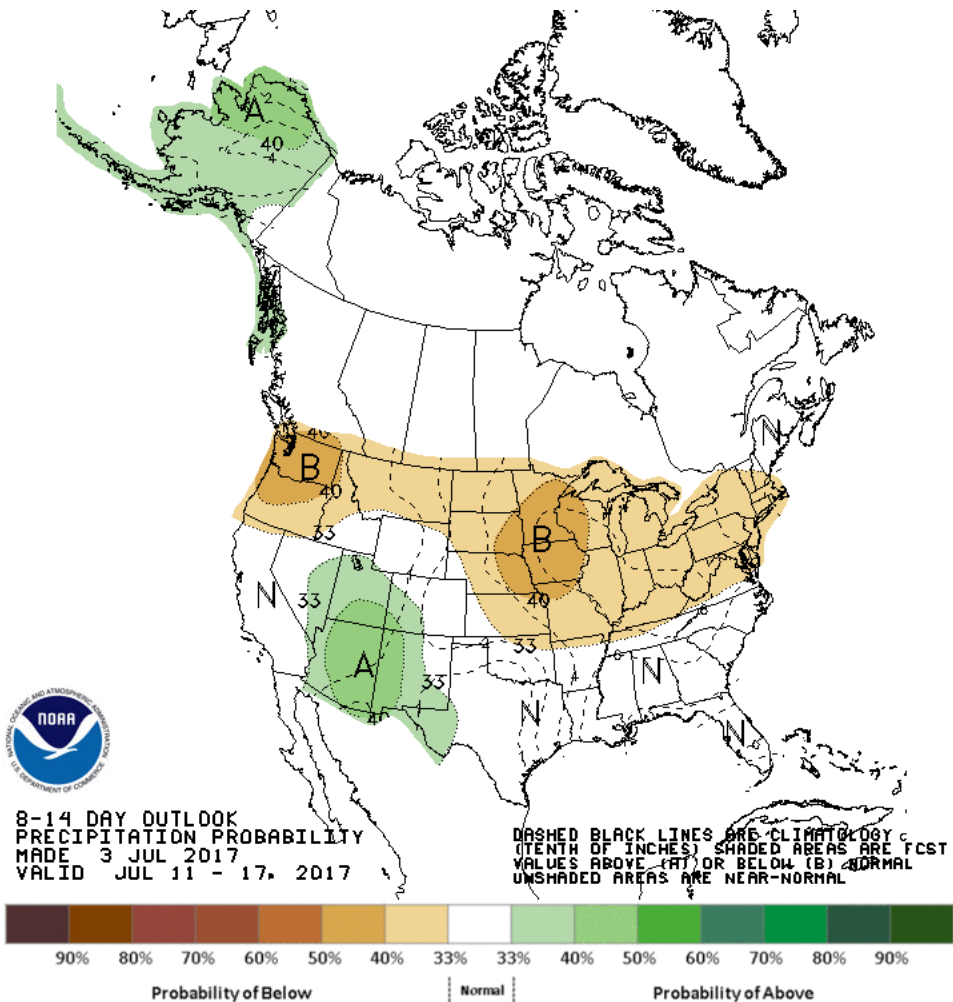
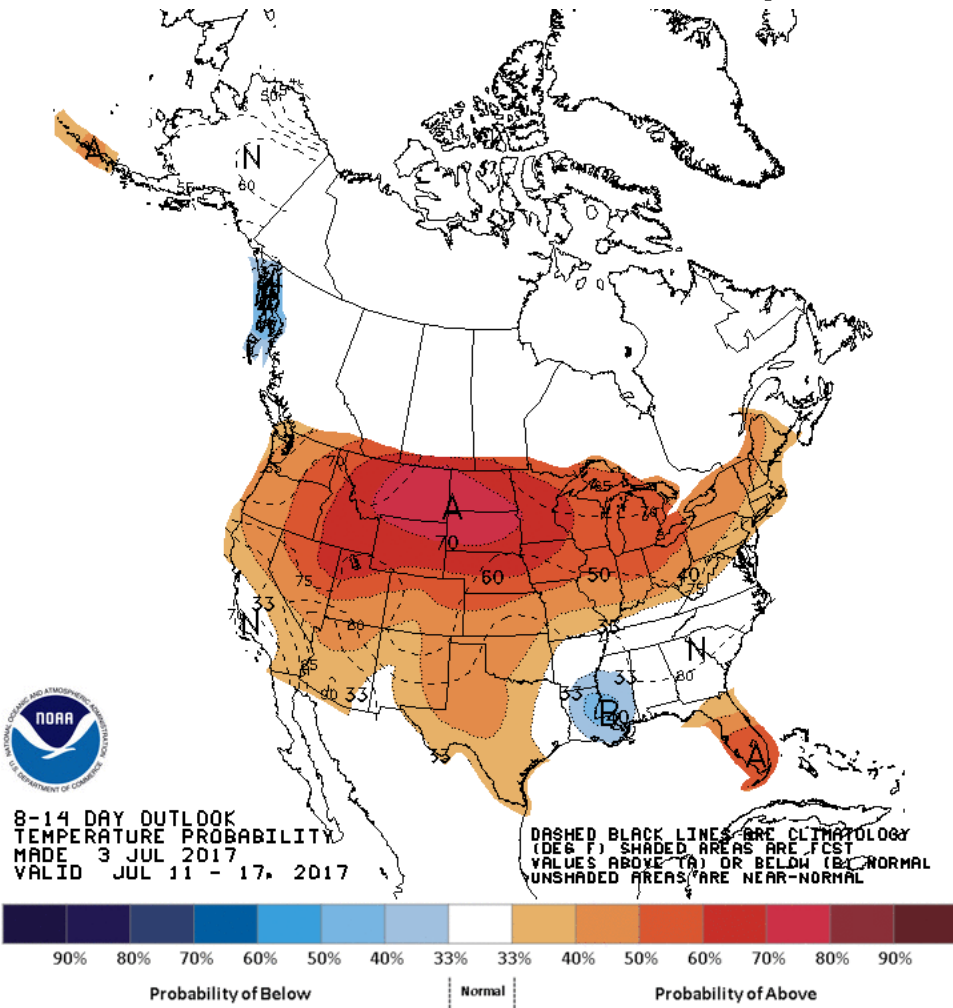
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUL 04 2017 1344 UTC CNTD JUL 15 2017

Week 2 – Temperature and Precipitation

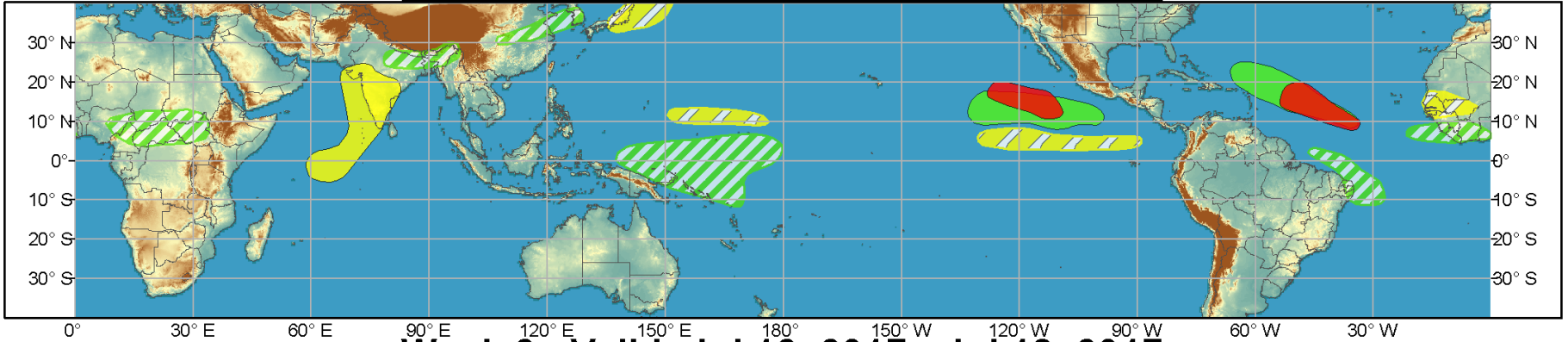




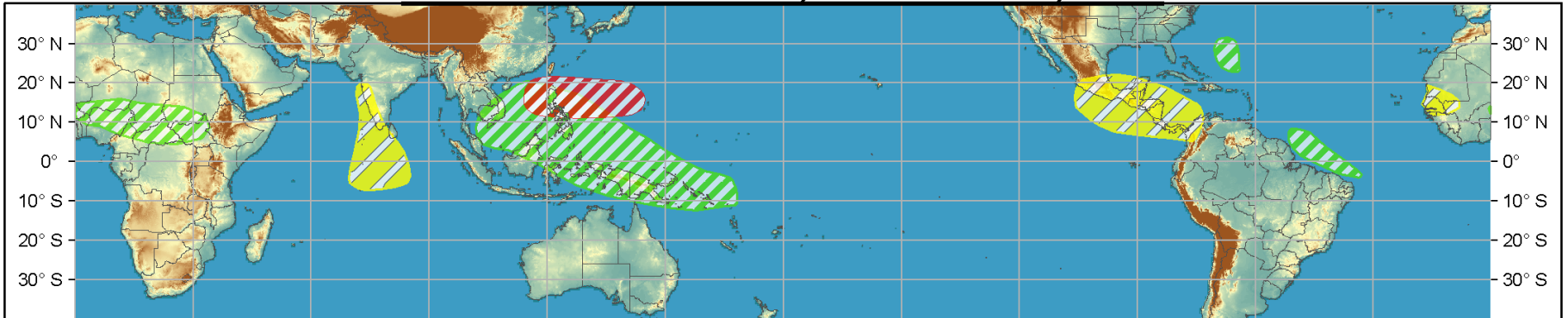
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