

Global Tropics Hazards And Benefits Outlook

6/30/2020

Dan Harnos

Outline

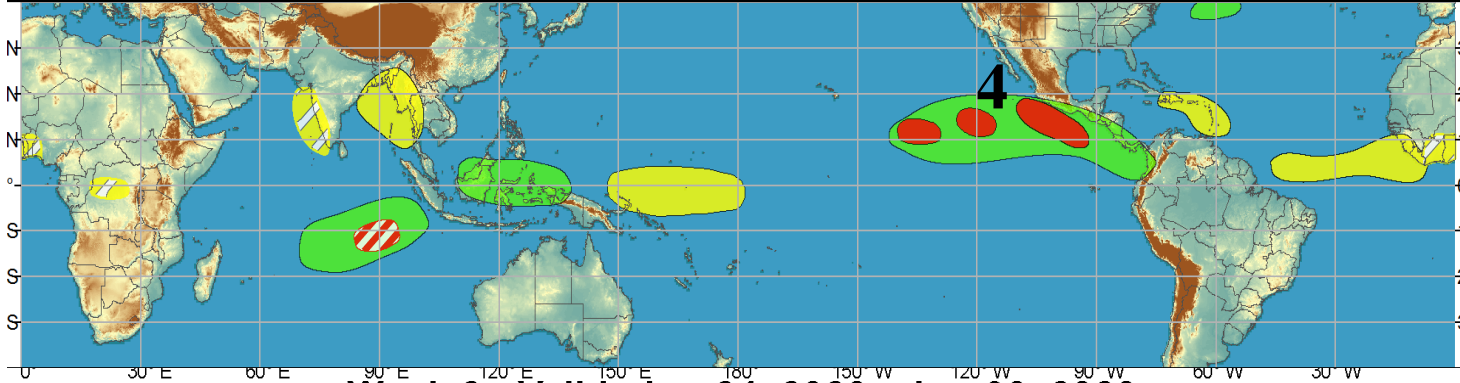
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

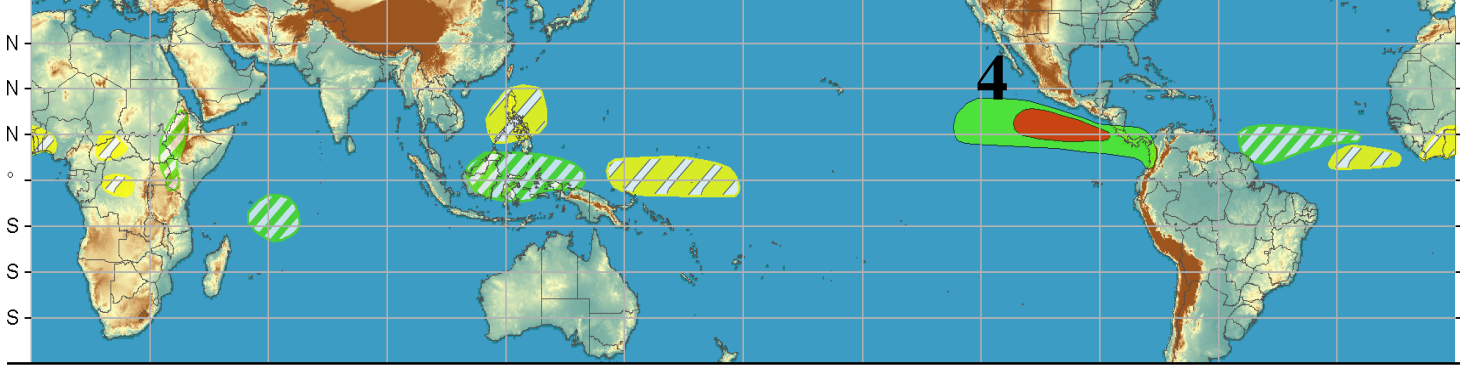
TD Four

6/30-Present
35 mph winds

Week 1 - Valid: Jun 24, 2020 - Jun 30, 2020

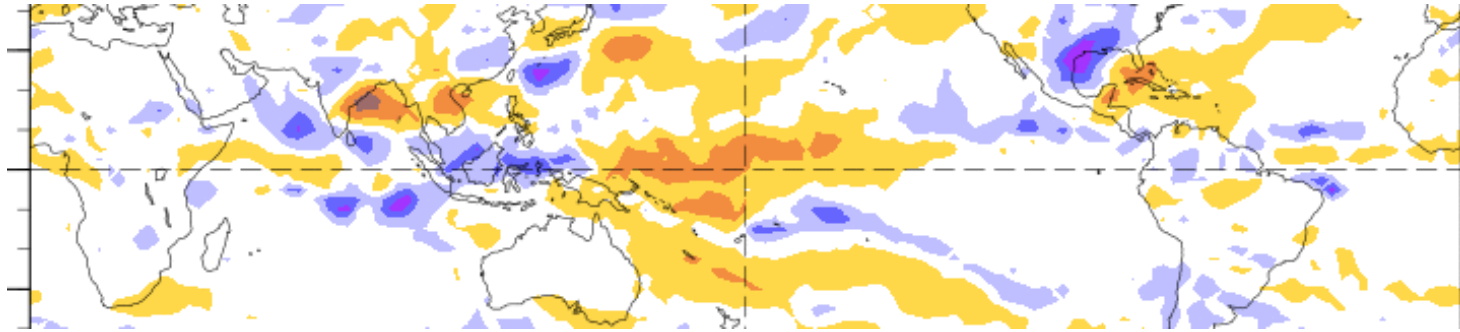


Week 2 - Valid: Jun 24, 2020 - Jun 30, 2020



Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO: (June 11, 2020 Update)

- ENSO Alert System Status: Not Active
- There is a ~60% (from 65%) chance of ENSO-neutral during Northern Hemisphere summer 2020, with roughly equal chances (~40-50%) of La Nina or ENSO-neutral during the autumn and winter 2020-2021.

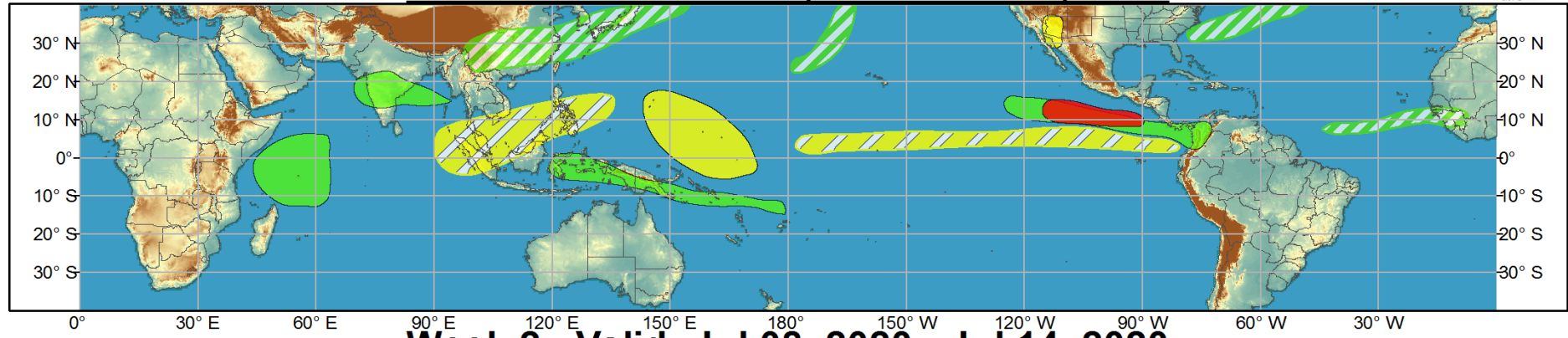
MJO and other subseasonal tropical variability:

- Multiple modes of variability (Kelvin waves, equatorial Rossby waves) are apparent in objective filtering, while there is some suggestion of a slower-moving mode that could be the MJO that is not coming out of these identification methods.
- The MJO may emerge over the western Indian Ocean during the next few days, but there is uncertainty about whether this feature would remain stationary or have more typical eastward propagation.
- The low frequency state and periodic Kelvin waves crossing the East Pacific favor multiple chances for tropical cyclone formation during the next two weeks.

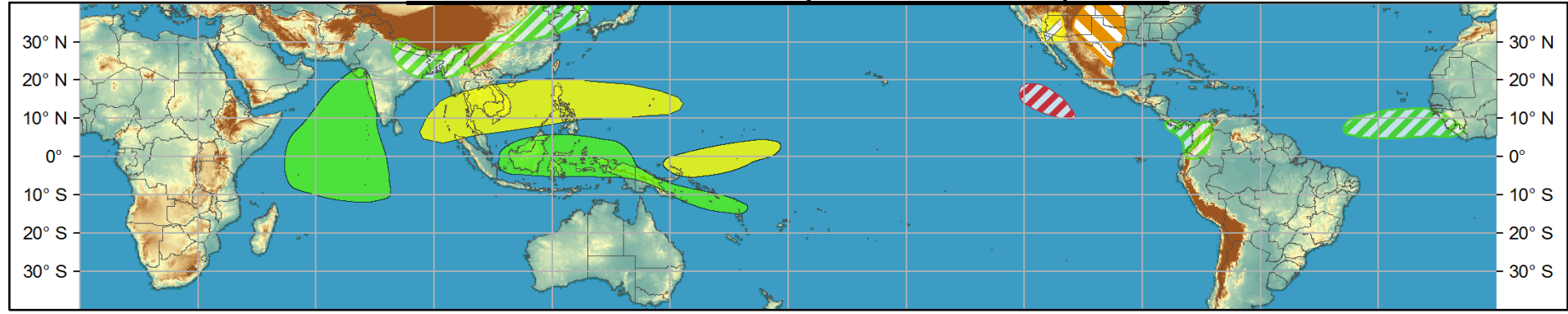


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 01, 2020 - Jul 07, 2020



Week 2 - Valid: Jul 08, 2020 - Jul 14, 2020



Produced: 06/30/2020
Forecaster: Harnos

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.
		Below-normal temperatures 7-day mean temperatures in the lower third of the historical range.

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IR Satellite & 200-hpa Velocity Potential Anomalies

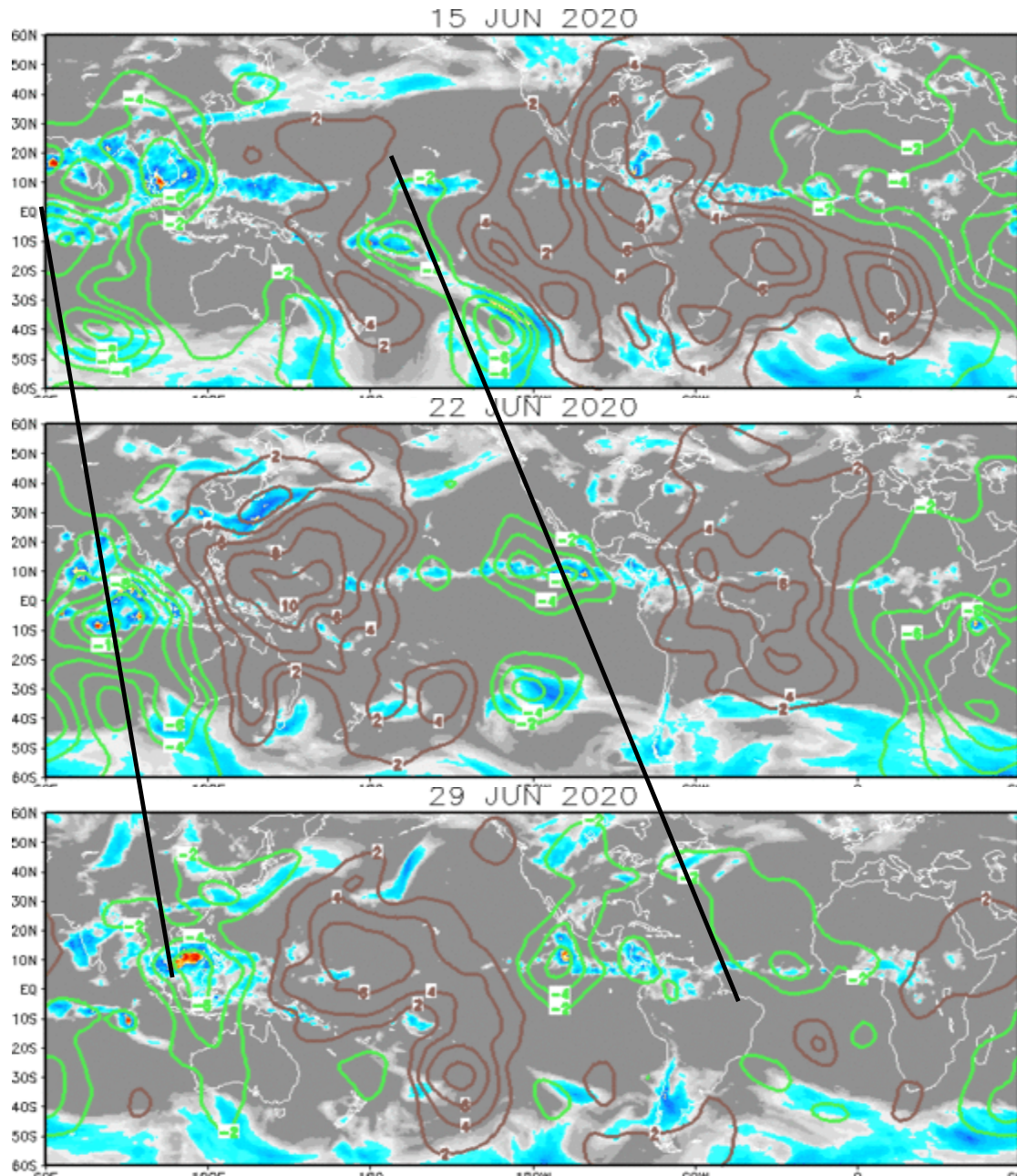
Green: Enhanced Divergence

Brown: Enhanced Convergence

A broad wave-1 pattern exists with enhanced convection over Africa and the Indian Ocean, but its suppressed phase is disrupted by a Kelvin wave over the Pacific.

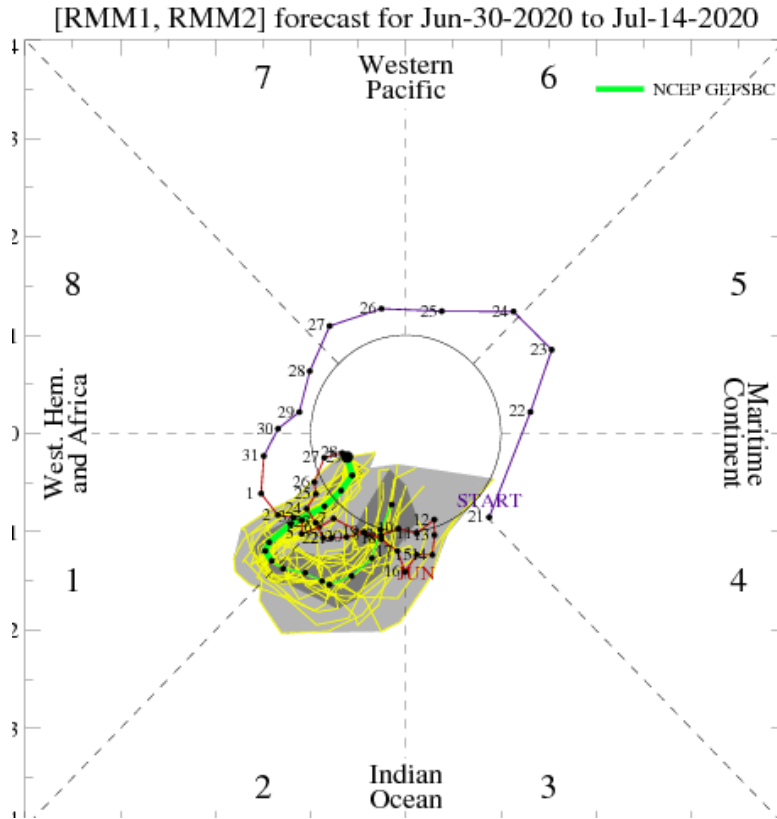
The wave-1 pattern remains broken up by the Kelvin wave now over the East Pacific.

Continued eastward progression of both features, but the Indian Ocean center remains more slowly evolving relative to the Kelvin wave.

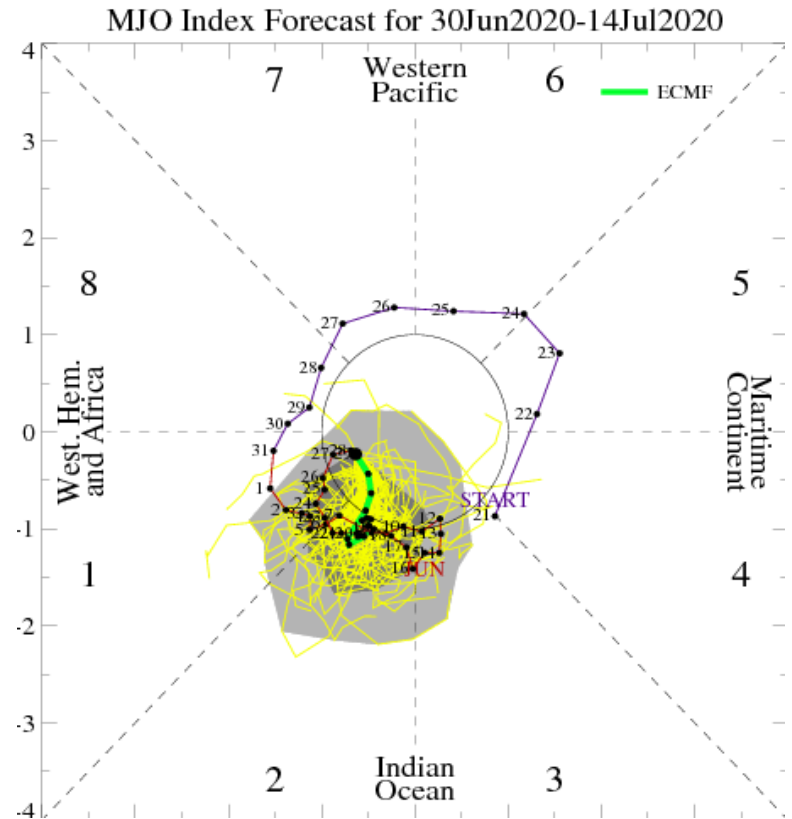


MJO Observation/Forecast

GEFS



ECMWF



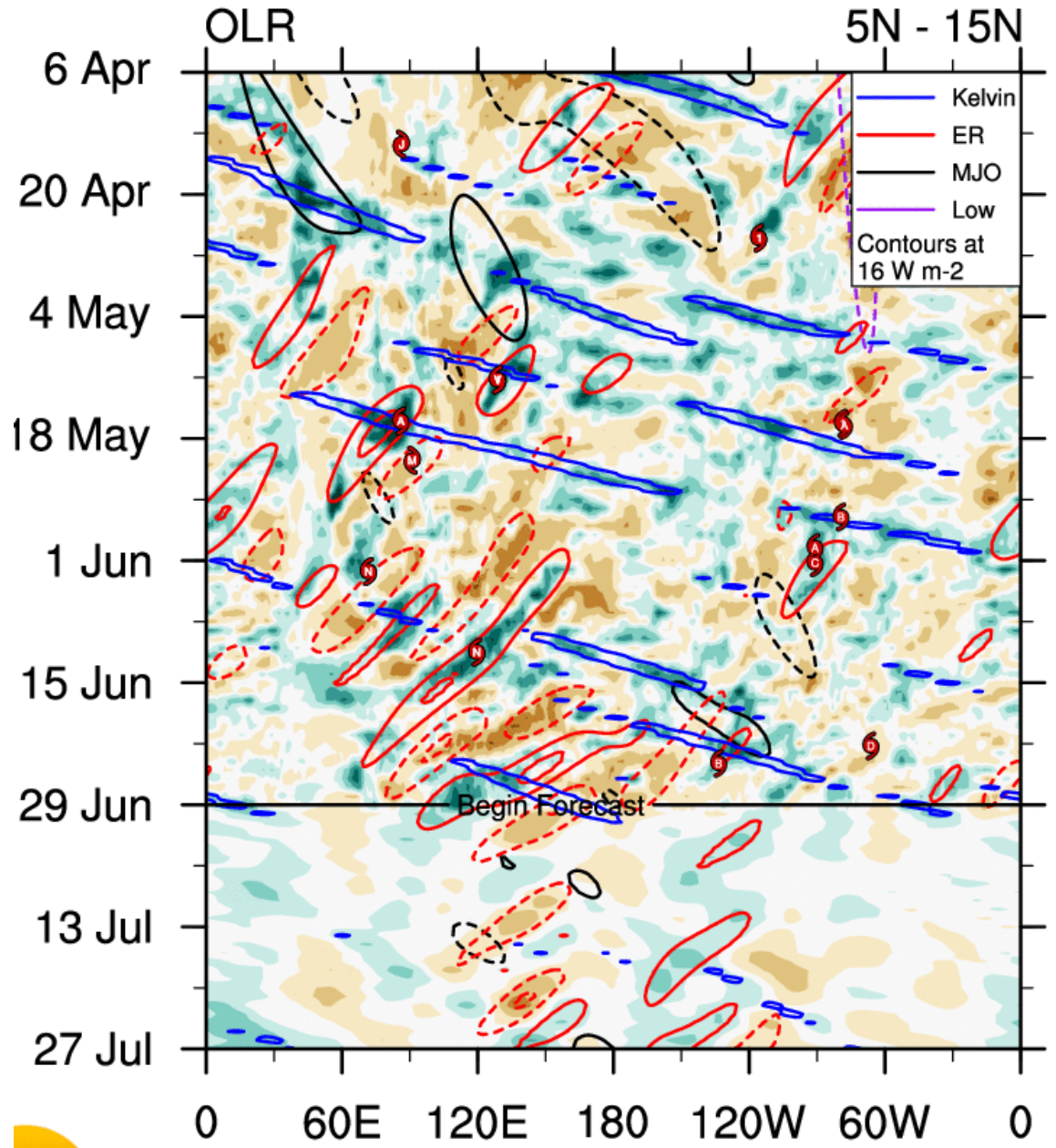
Both the GEFS and ECMWF show a building signal over the western Indian Ocean this week.

The GEFS is further west with this signal, and more progressive during Week-2.
The ECMWF is further east while remaining relatively stationary during Week-2.

Three **Kelvin waves** are analyzed in the OLR field.

Rossby wave activity in Eastern Hemisphere has shifted slowly eastward since early June.

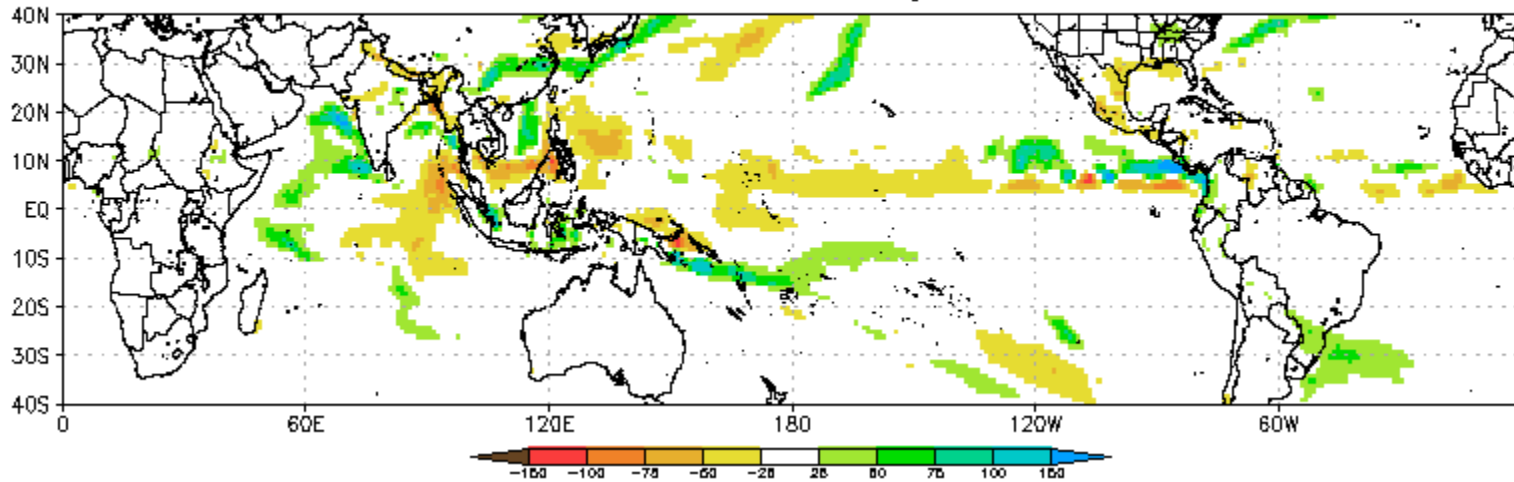
While not objectively analyzed, there appears to be a **low frequency** component with enhanced convection since mid-June starting near 60E, and currently over the Indian Ocean. Could this grow to become a new **MJO** event?



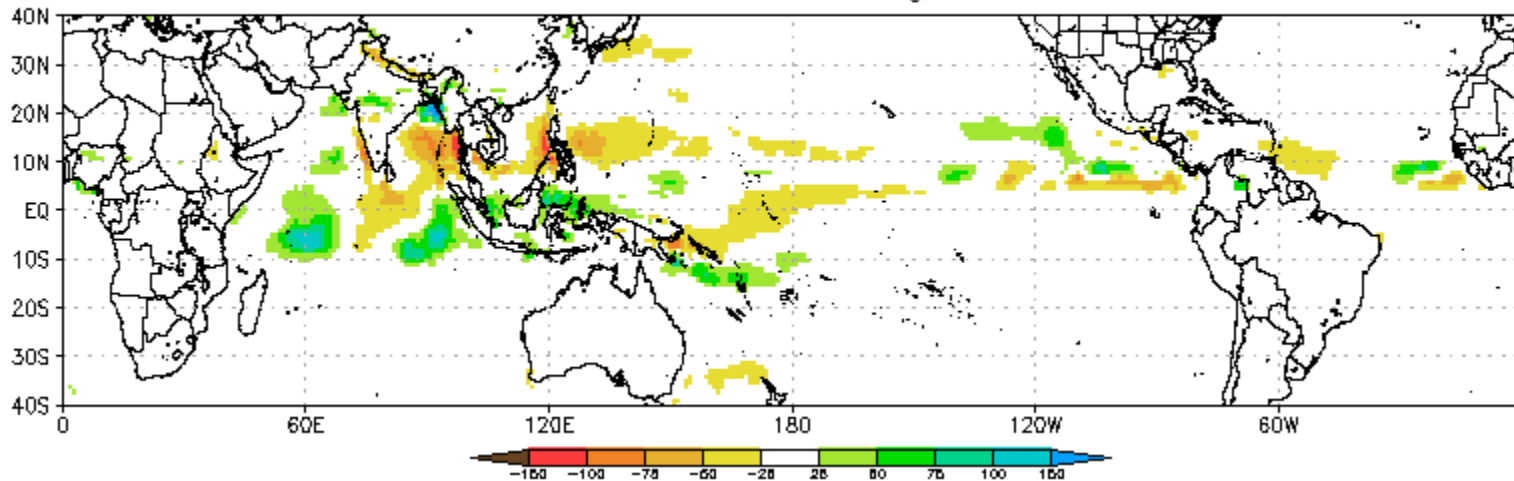
Green: Enhanced clouds/precipitation

Brown: Depressed clouds/precipitation

CFS Precipitation Anomalies (mm) Issued 29Jun2020
Week-1 Forecast Ending 07Jul2020



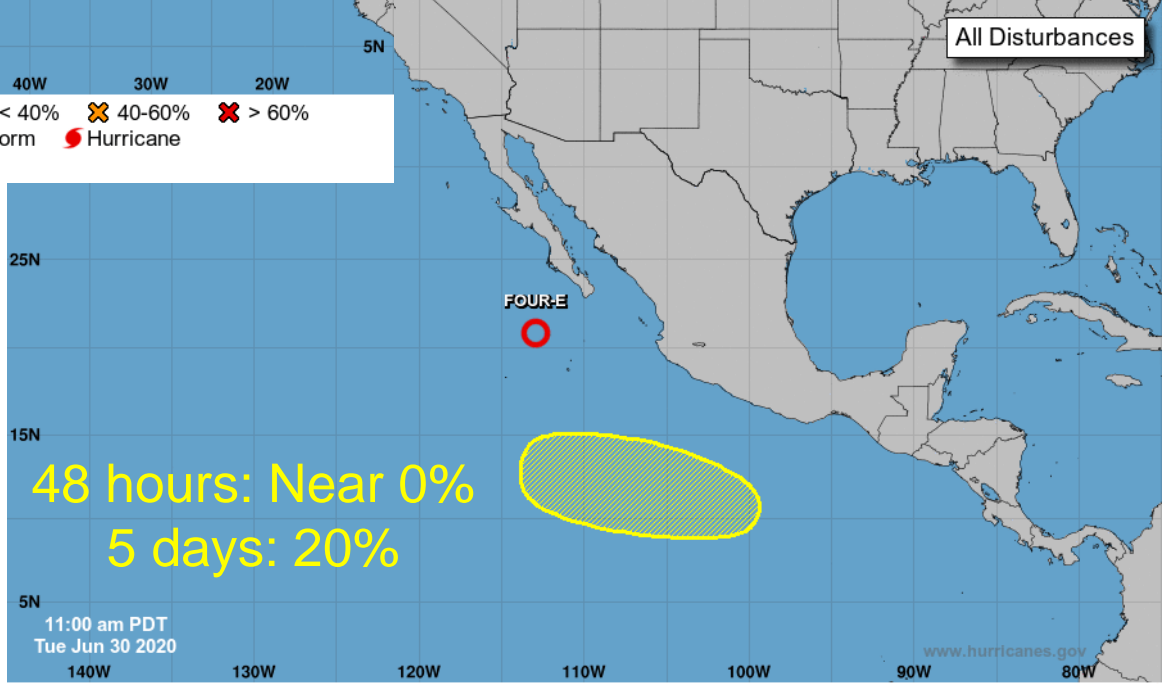
CFS Precipitation Anomalies (mm) Issued 29Jun2020
Week-2 Forecast Ending 14Jul2020





2:00 pm EDT
Tue Jun 30 2020

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

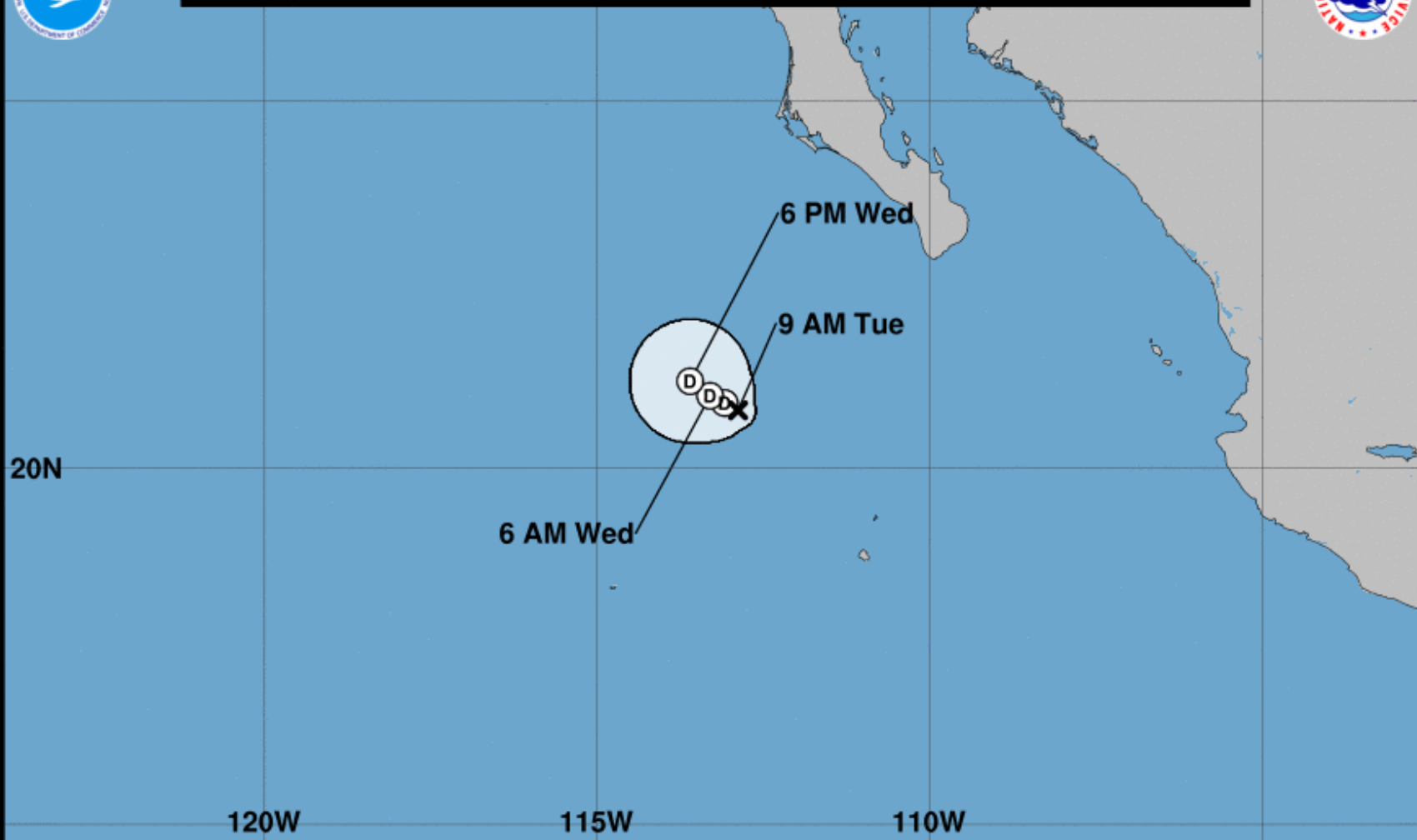


11:00 am PDT
Tue Jun 30 2020

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



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

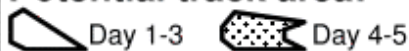


Tropical Depression Four-E
 Tuesday June 30, 2020
 9 AM MDT Advisory 3
 NWS National Hurricane Center

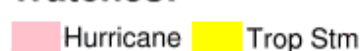
Current information: x
 Center location 20.8 N 112.9 W
 Maximum sustained wind 30 mph
 Movement NW at 2 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:



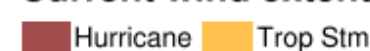
Watches:

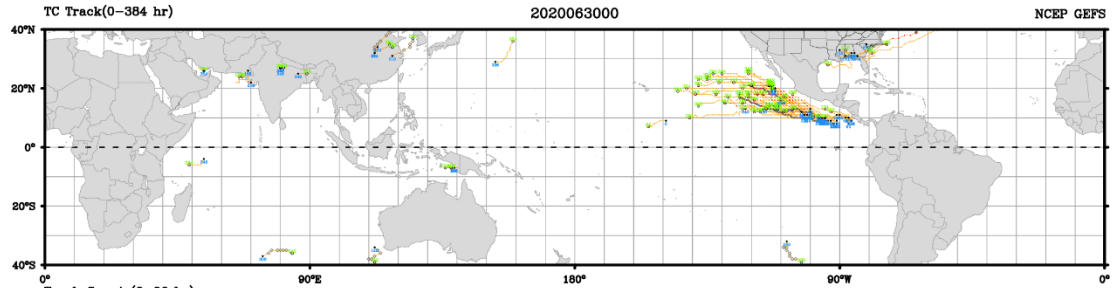


Warnings:

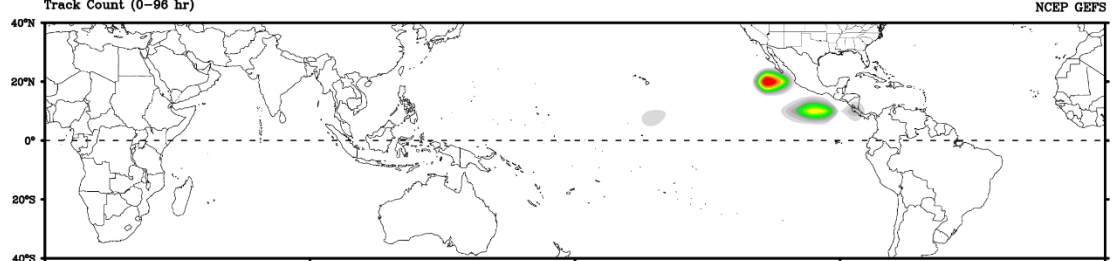


Current wind extent:

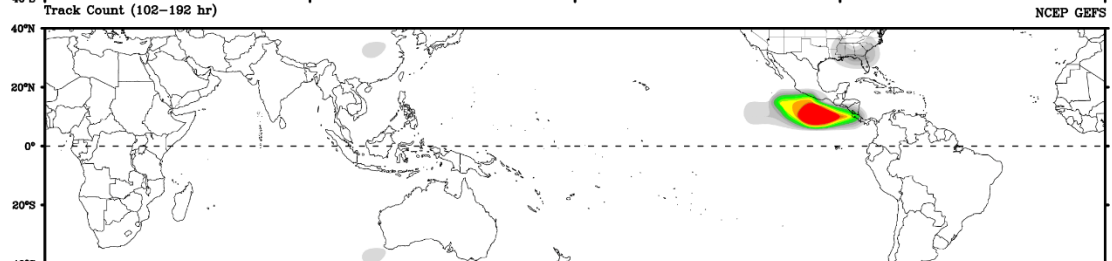




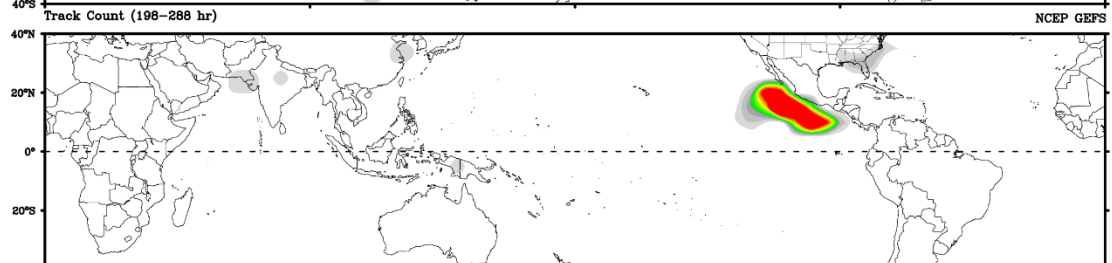
Days 1-4



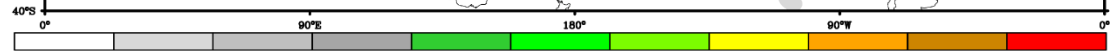
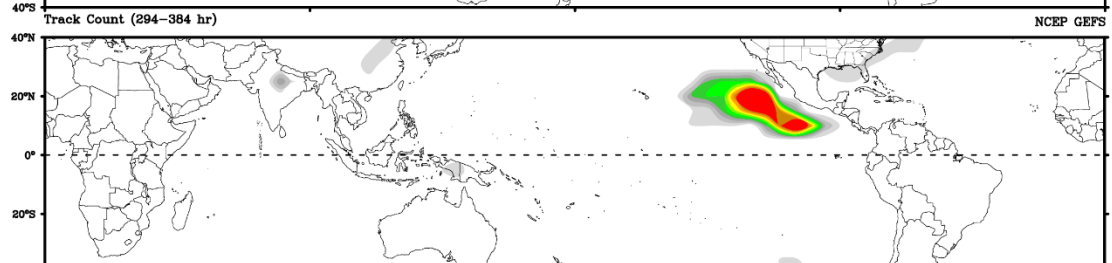
Day 5-8



Day 9-12



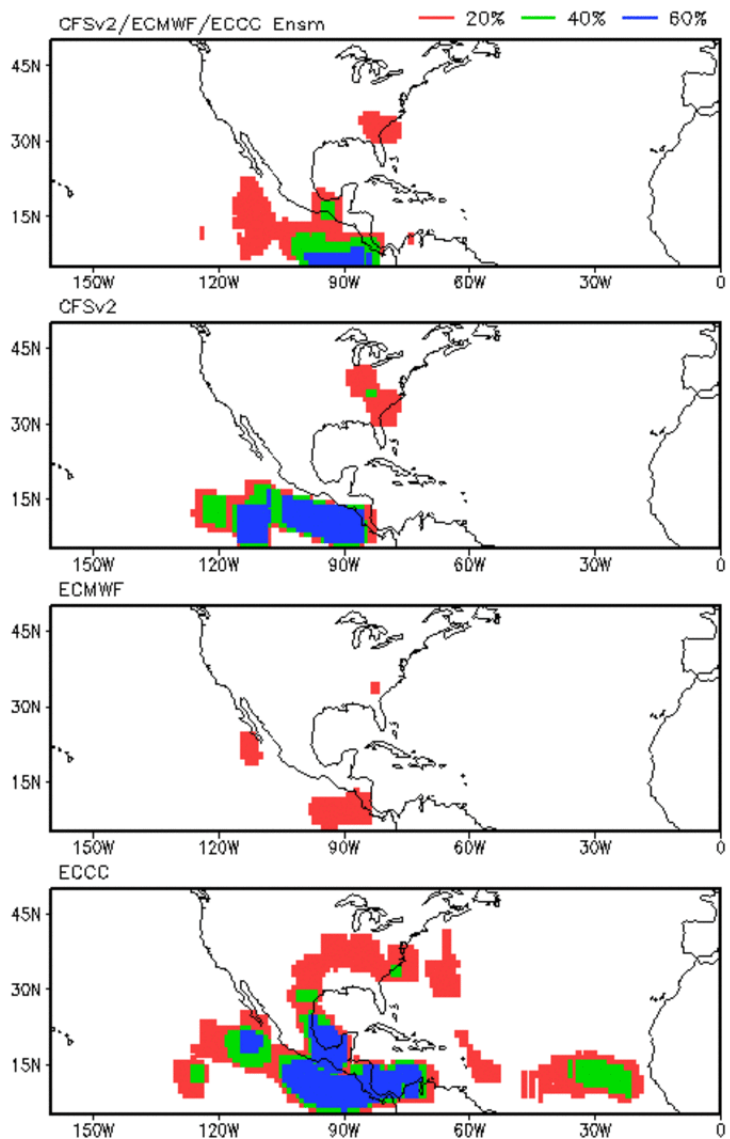
Day 13-15



Track Count

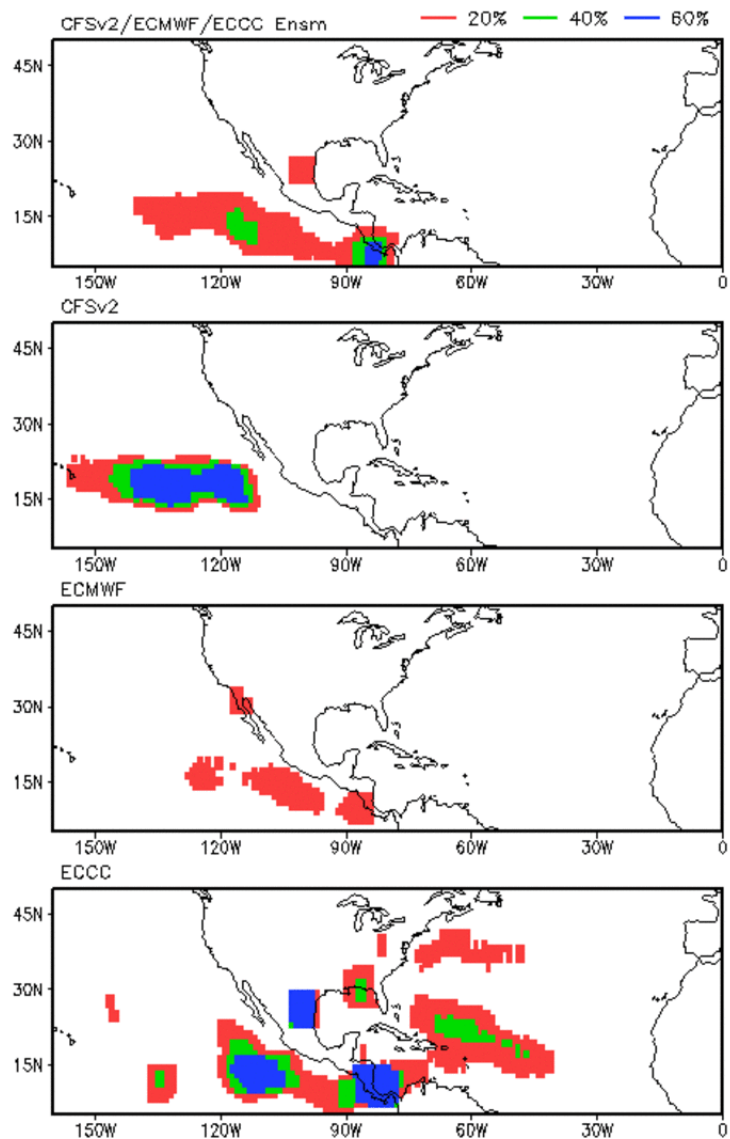
Storm Track Probabilities, IC=20200629

Week 1: 0701 - 0707

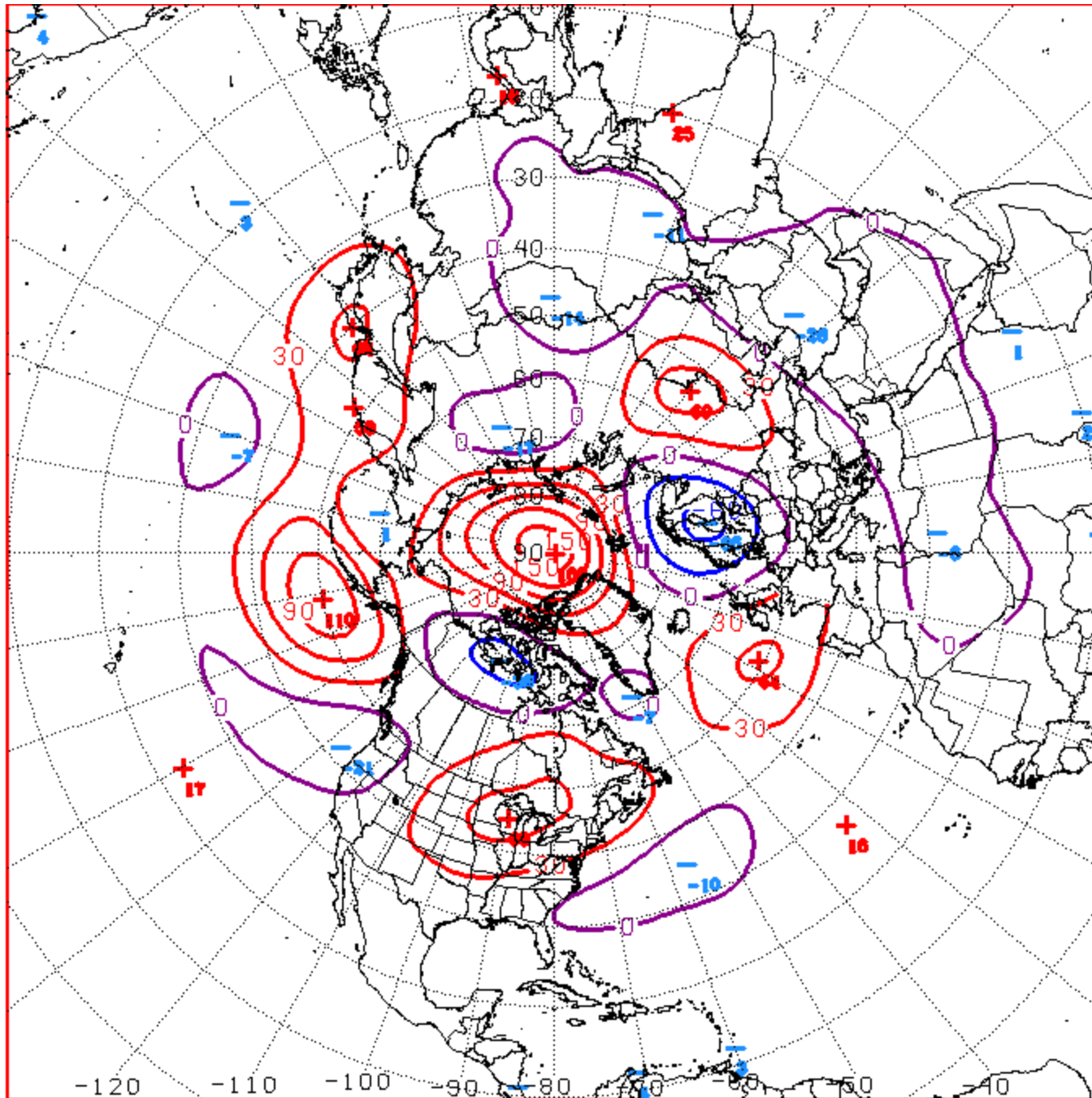


Storm Track Probabilities, IC=20200629

Week 2: 0708 - 0714

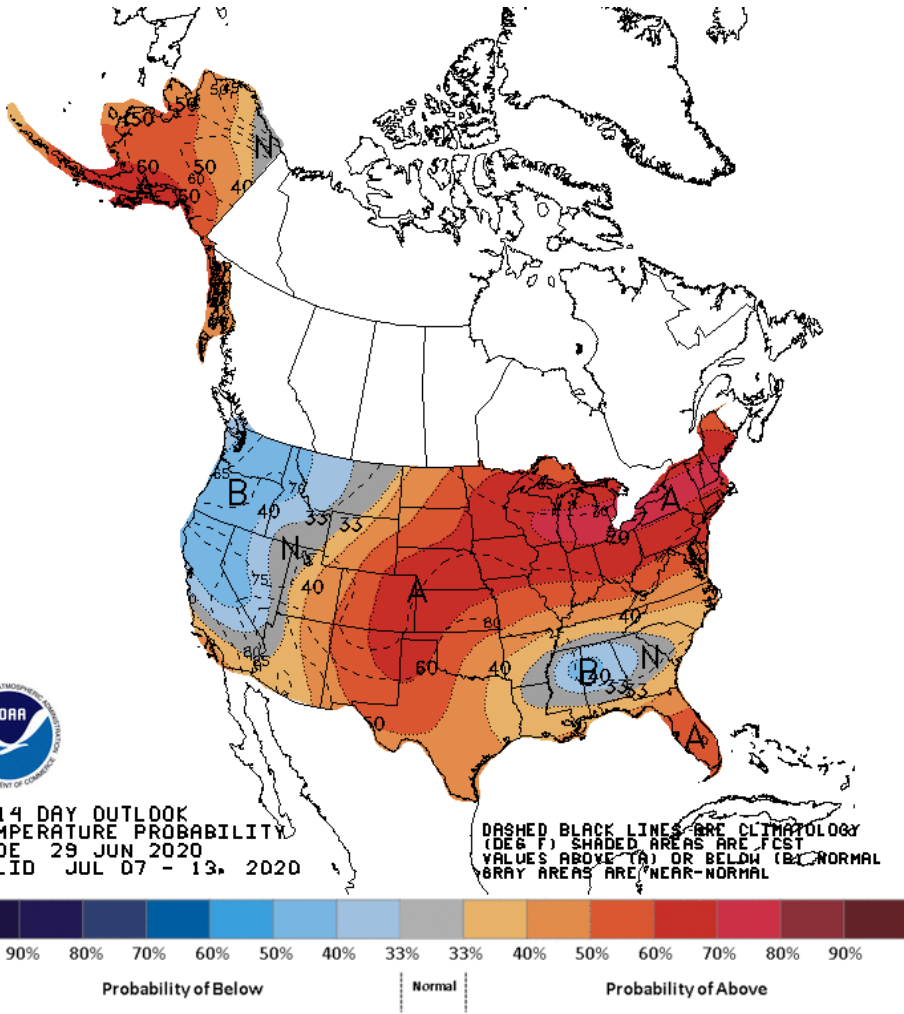


Connections to U.S. Impacts

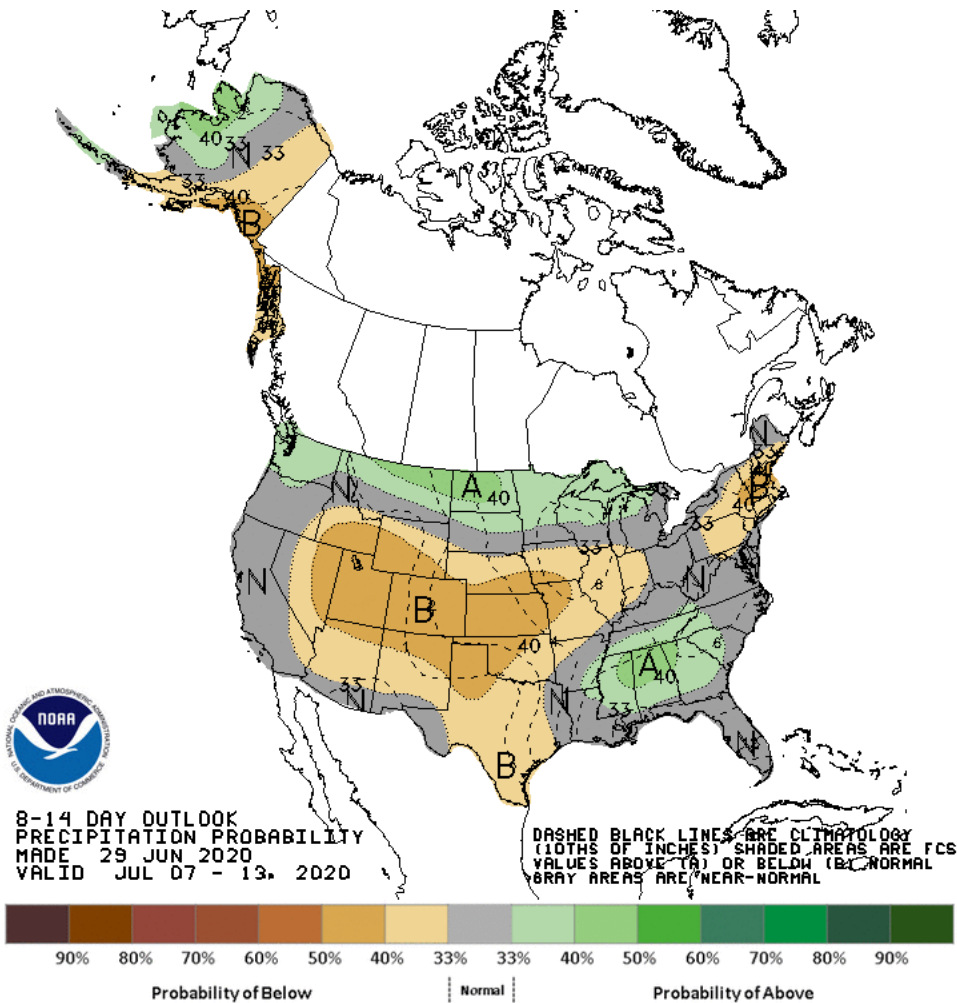


D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JUN 30 2020 1511 UTC CNTD JUL 11 2020

Week 2 – Temperature and Precipitation



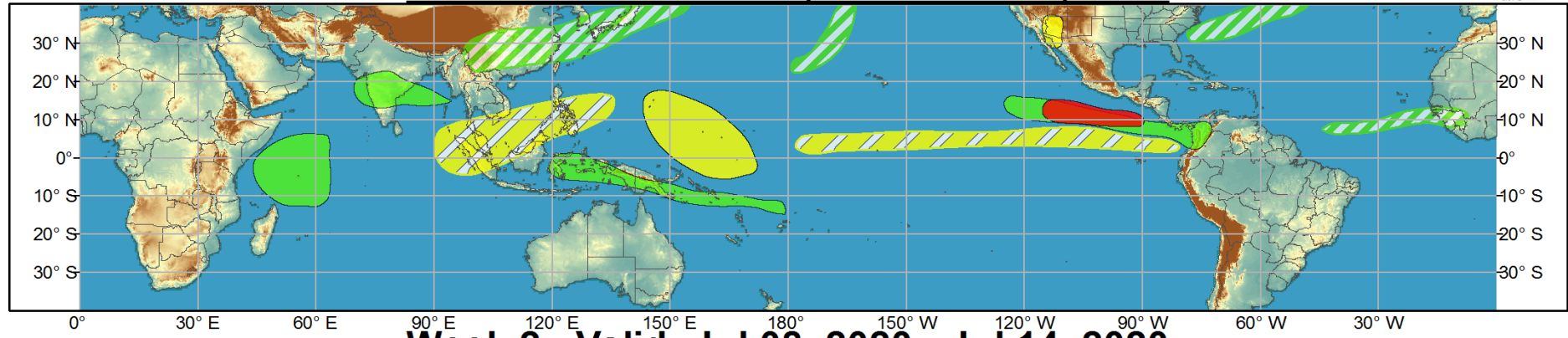
Likely warmer/drier across Tennessee Valley today.



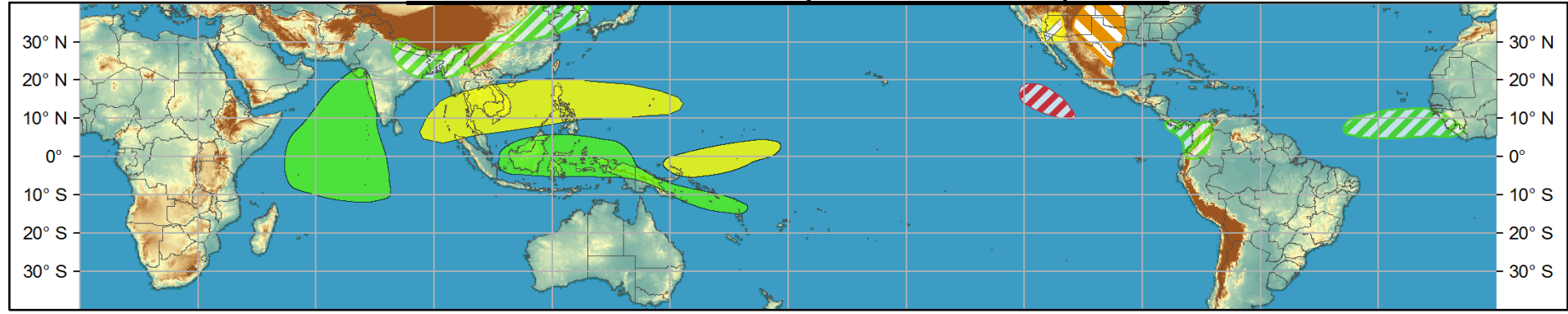


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