

Global Tropics Hazards And Benefits Outlook

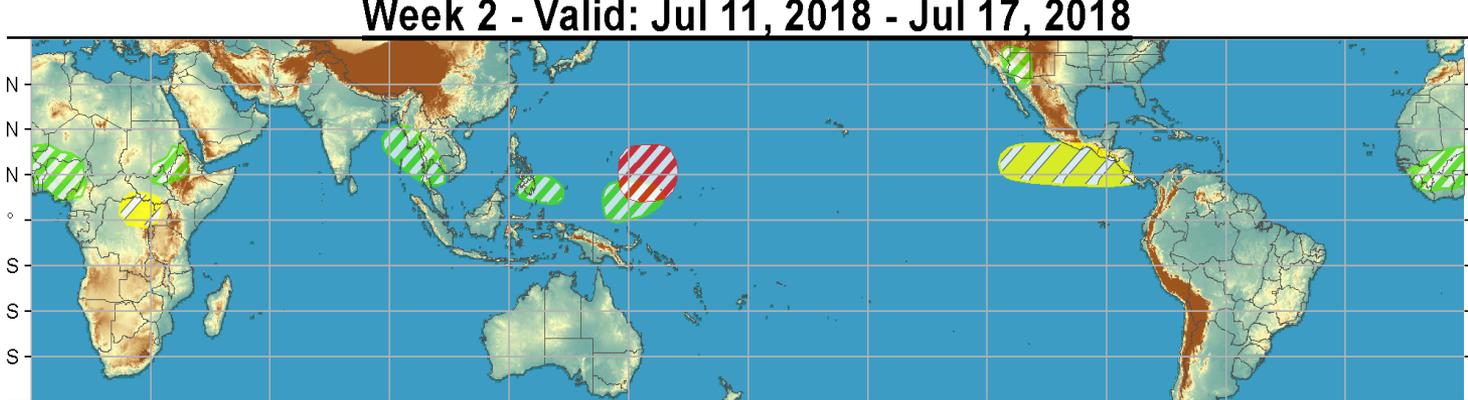
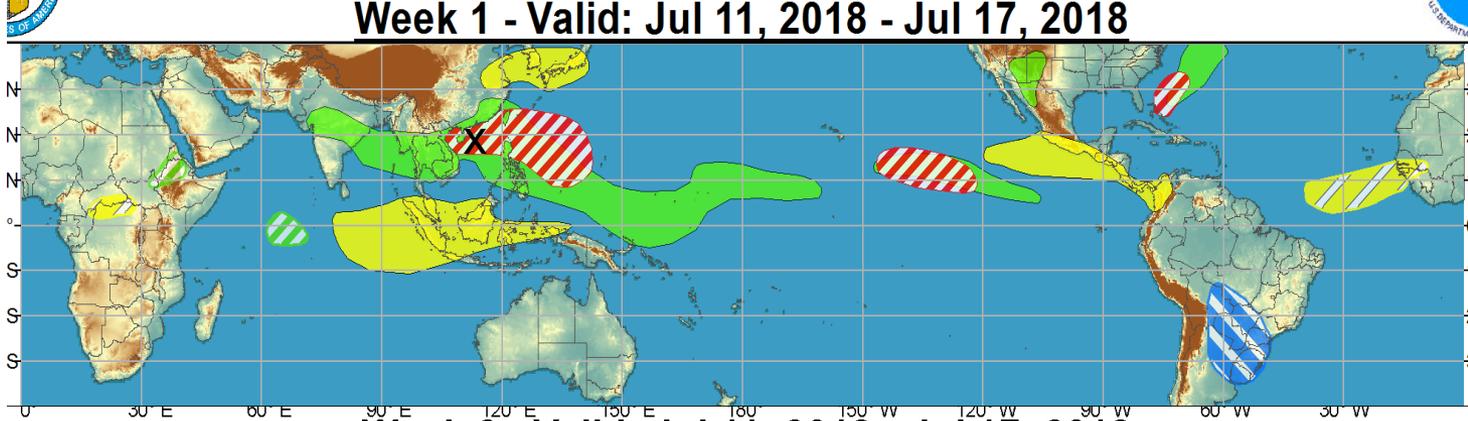
07/17/2018

Kyle MacRitchie

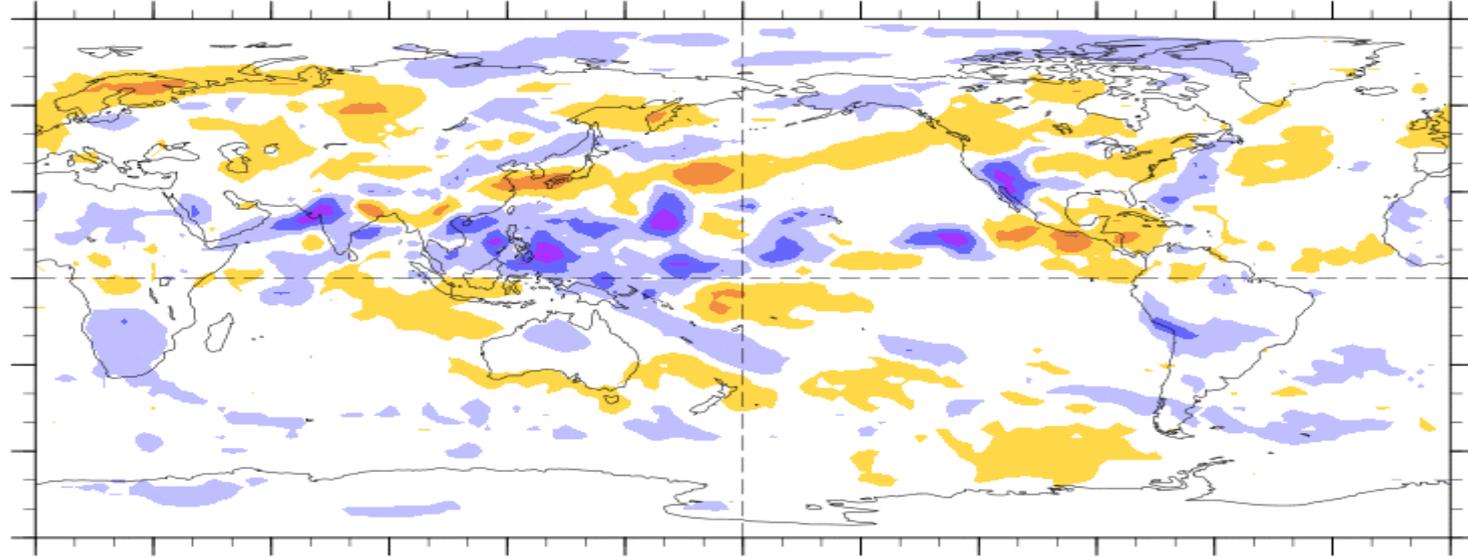
Outline

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

Outlook Review



7-Day Average OLR Anomaly 2018/07/09 - 2018/07/15



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (July 12, 2018 Update)

- ENSO Alert System Status: [El Niño Watch](#)
- ENSO-neutral is favored through Northern Hemisphere summer 2018, with the chance for El Niño increasing to about 65% during fall, and to about 70% during winter 2018-19.

MJO and other subseasonal tropical variability:

- The stagnant MJO signal in Phase 5 will likely propagate into Phase 6 during Week-1.
- Models are uncertain about how to handle the MJO from there. Some weaken it quickly during Week-2 and others propagate it at a fairly large amplitude through Phase 7.

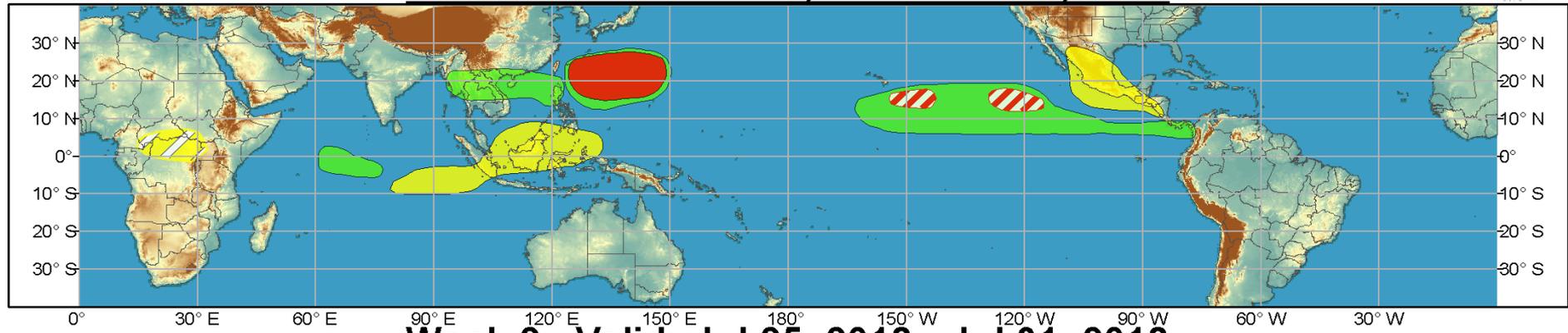
Extratropics:

- Should an MJO event continue over the Pacific, it will probably help to accelerate the base state transition towards El Niño conditions.
- Tropical cyclone activity will continue to influence both the tropical and extratropical patterns.

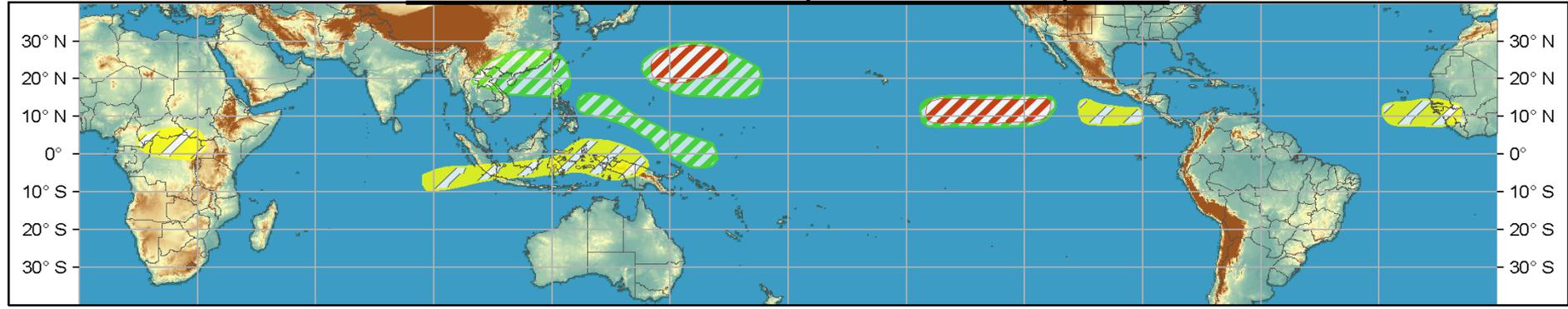


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 18, 2018 - Jul 24, 2018



Week 2 - Valid: Jul 25, 2018 - Jul 31, 2018



Confidence

High Moderate

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- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
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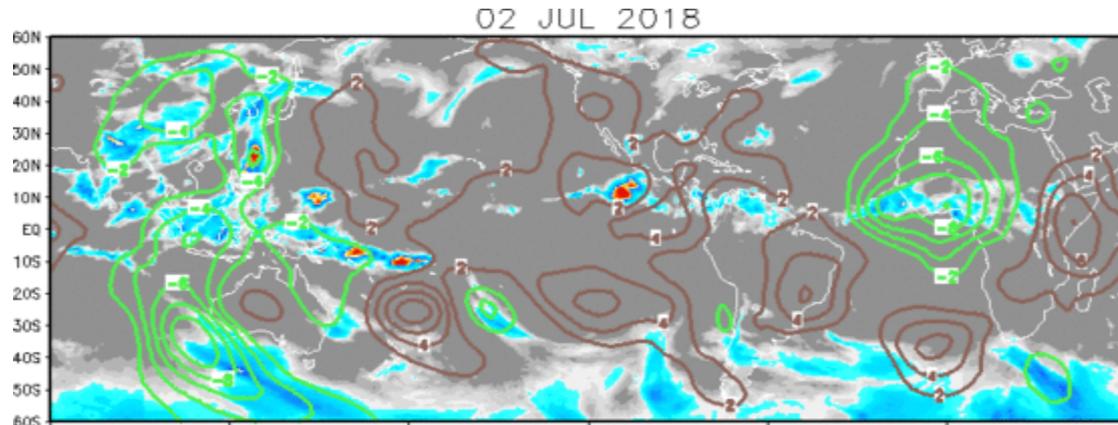


IR Satellite & 200-hpa Velocity Potential Anomalies

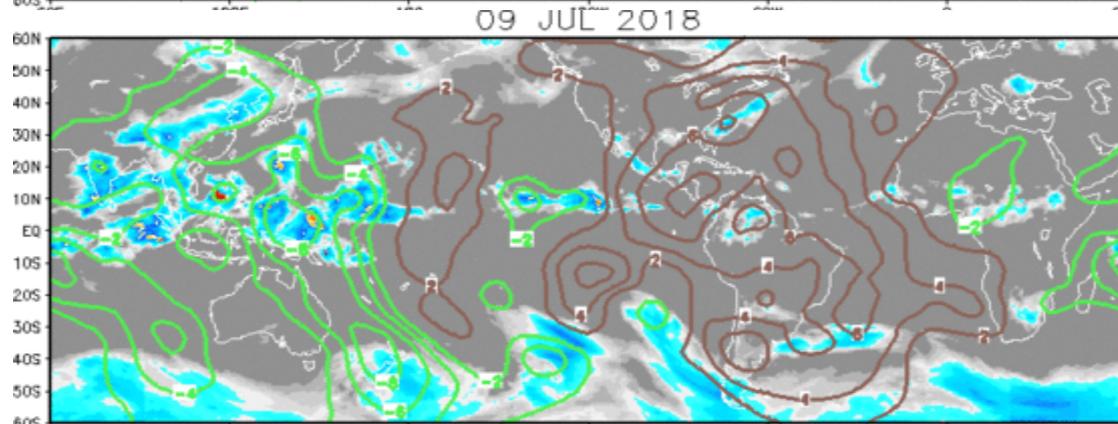
Green: Enhanced Divergence

Brown: Enhanced Convergence

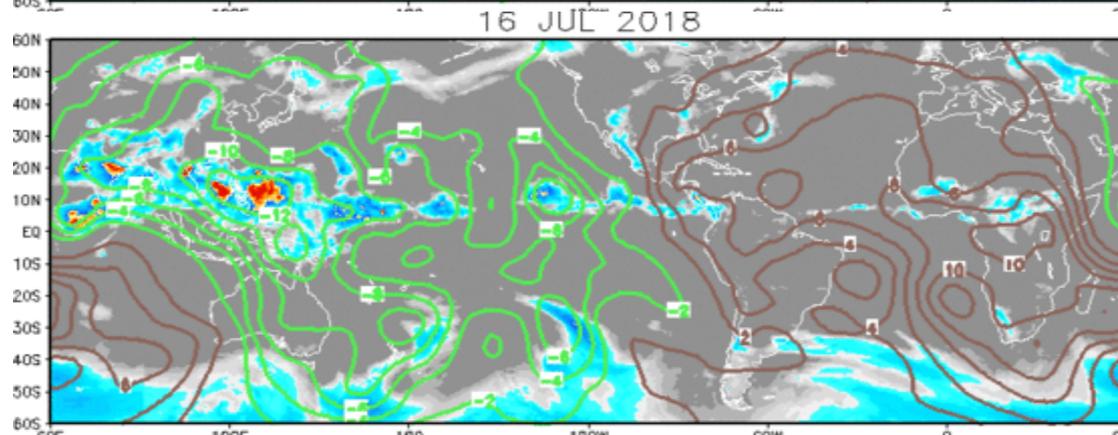
Wave-1/Wave-2. Enhanced convection over western Pacific and Americas to Africa.



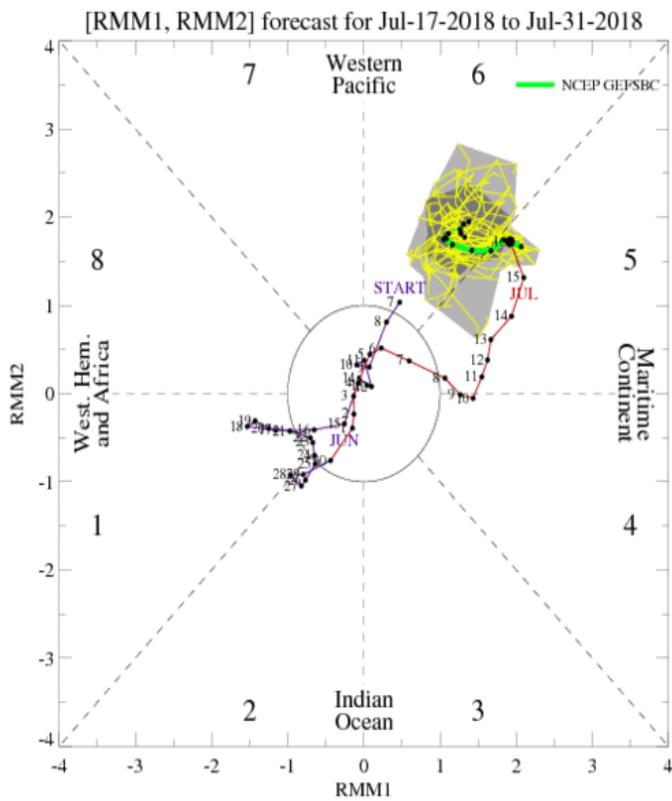
Wave-1 with a moderate MJO projection.



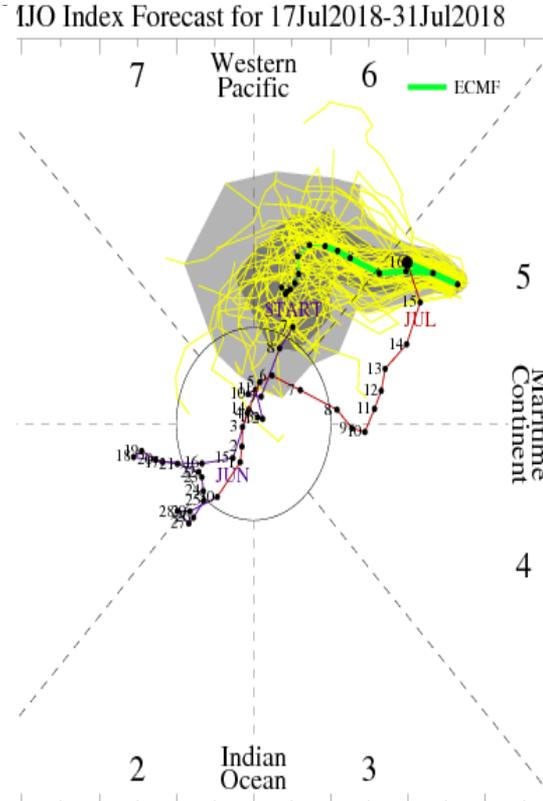
Significant convection over the Indian Ocean and Maritime Continent.



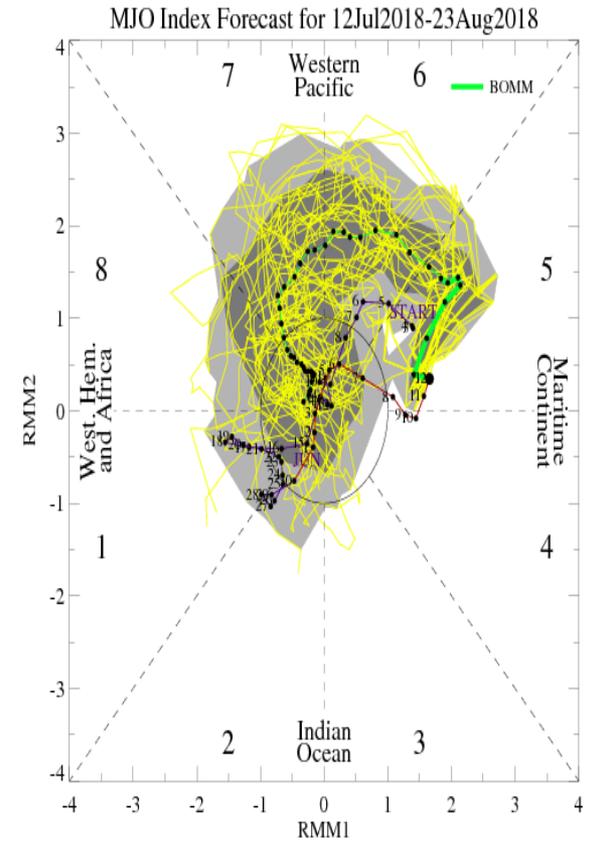
MJO Observation/Forecast



GEFS



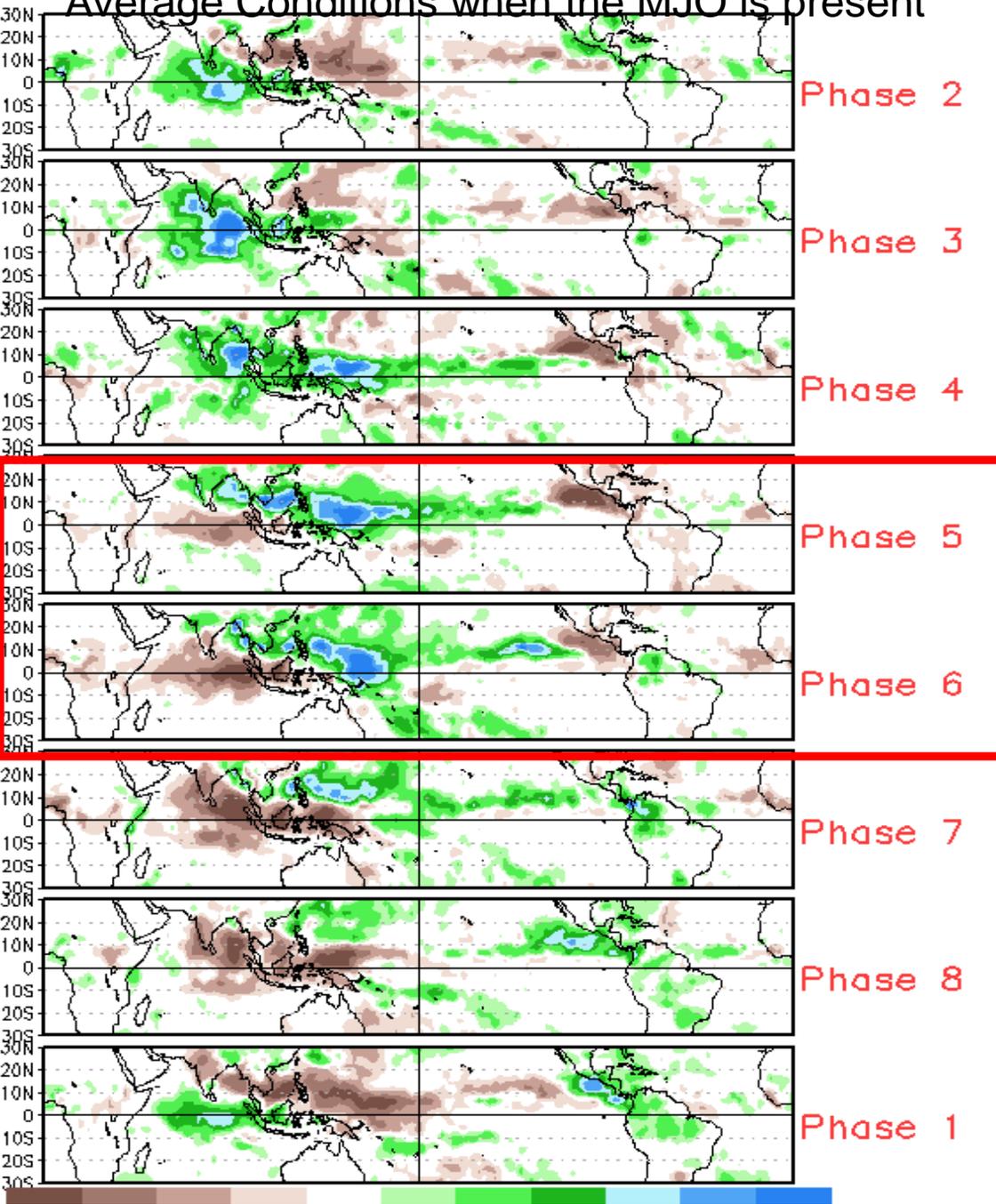
ECMWF



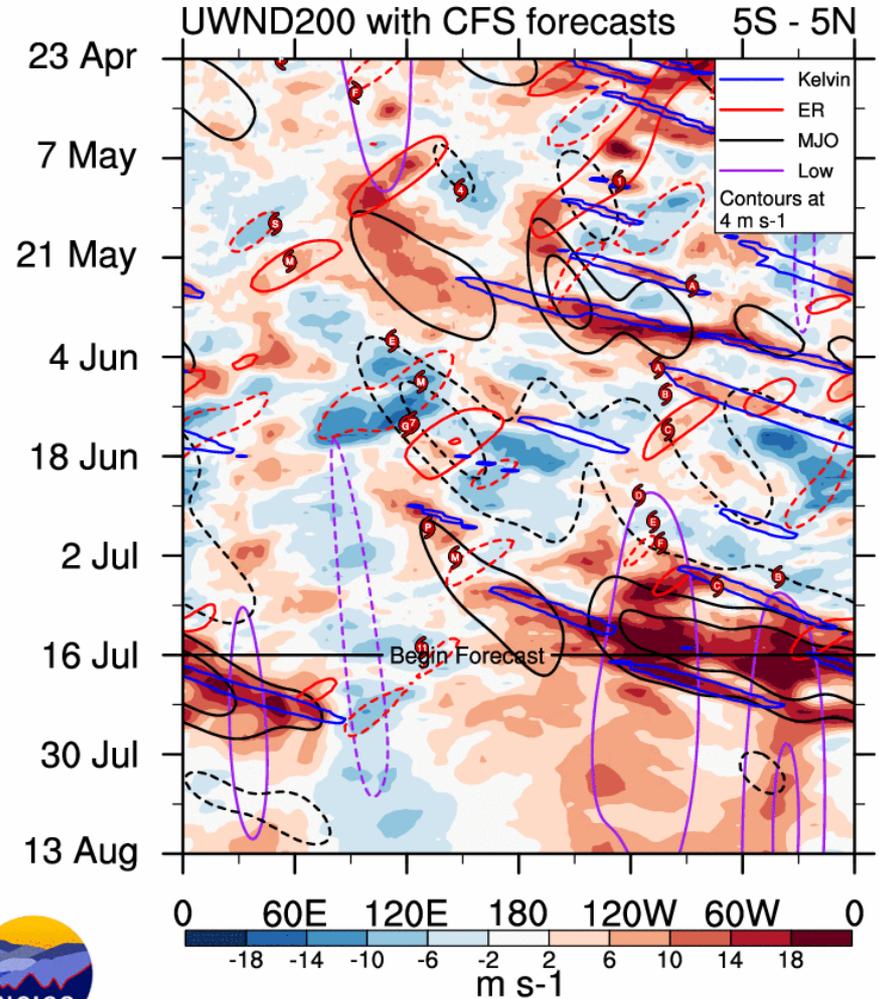
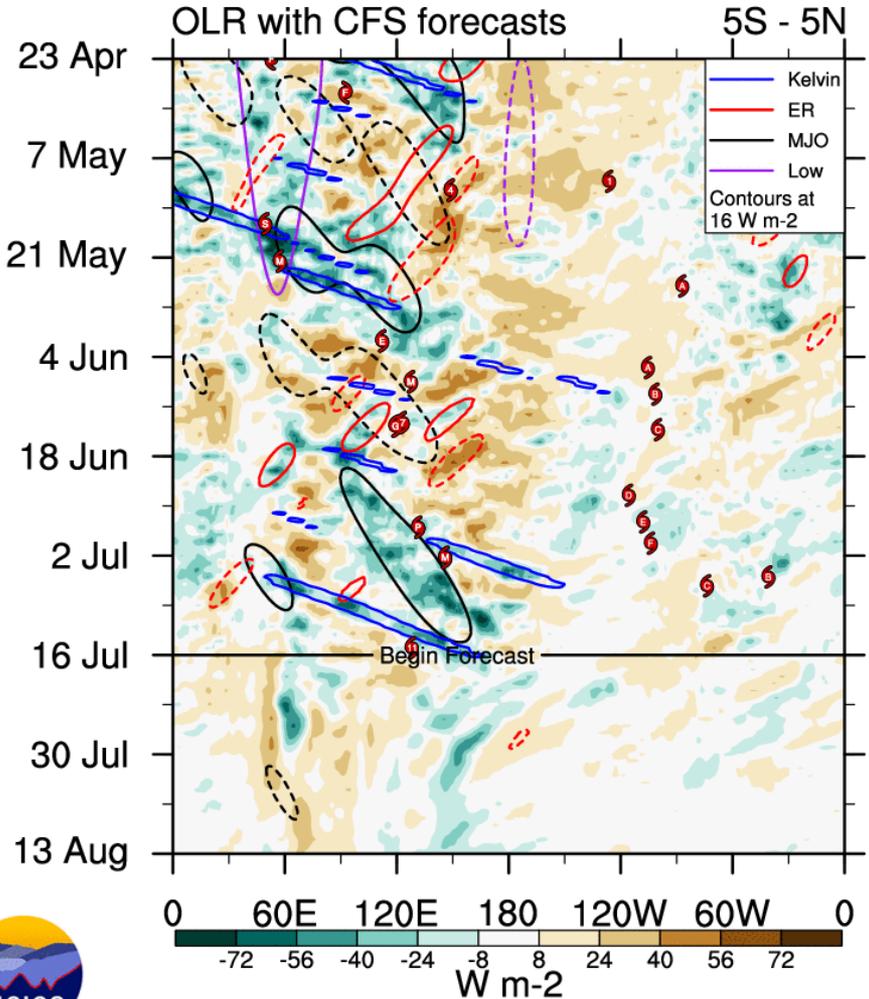
BOMM

Models are uncertain about how the MJO will progress. Spread ranges from The MJO fizzling out during Week-1 in Phase 6 to amplifying and continuing over the Western Pacific.

Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



ncics.org/mjo

Tue 2018-07-17 1600 UTC

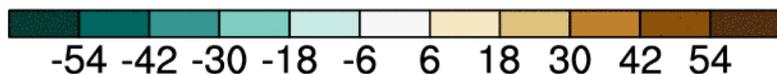
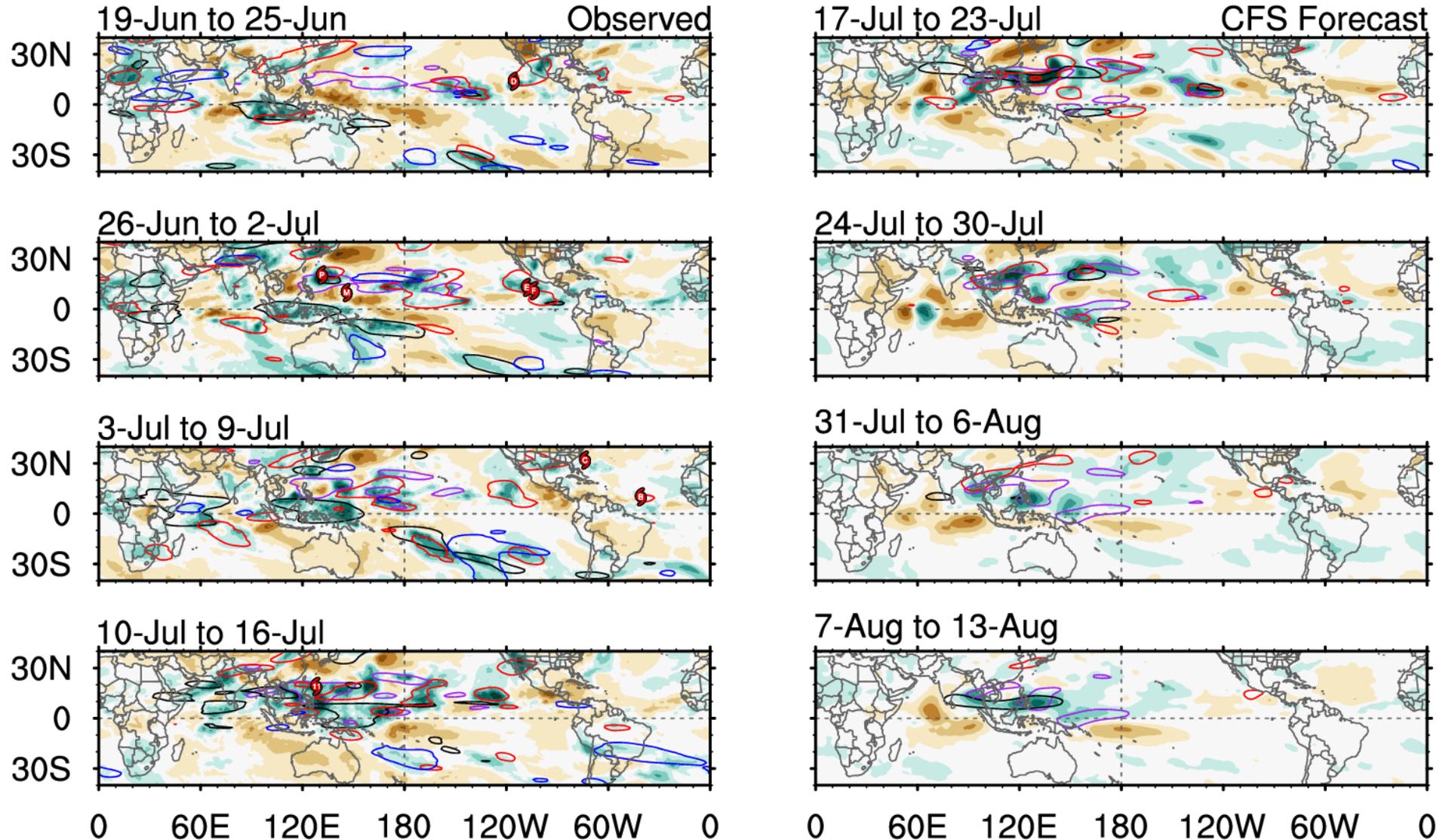
Carl Schreck (cjschrec@ncsu.edu) ncics.org/mjo



Tue 2018-07-17 1016 UTC

Carl Schreck (cjschrec@ncsu.edu)

- The **MJO** is most apparent in upper-level wind field.
- Light **Rossby wave** activity
- Stronger **Kelvin wave** activity all across the globe.



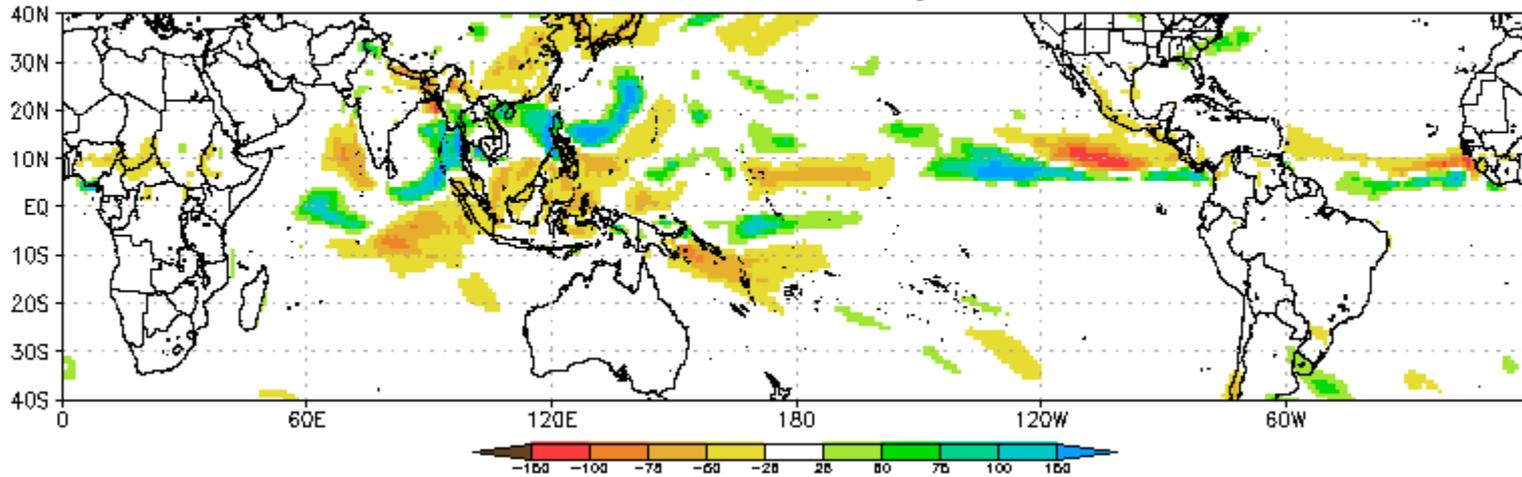
W m⁻²

— MJO — Kelvin x2
 — Low — ER

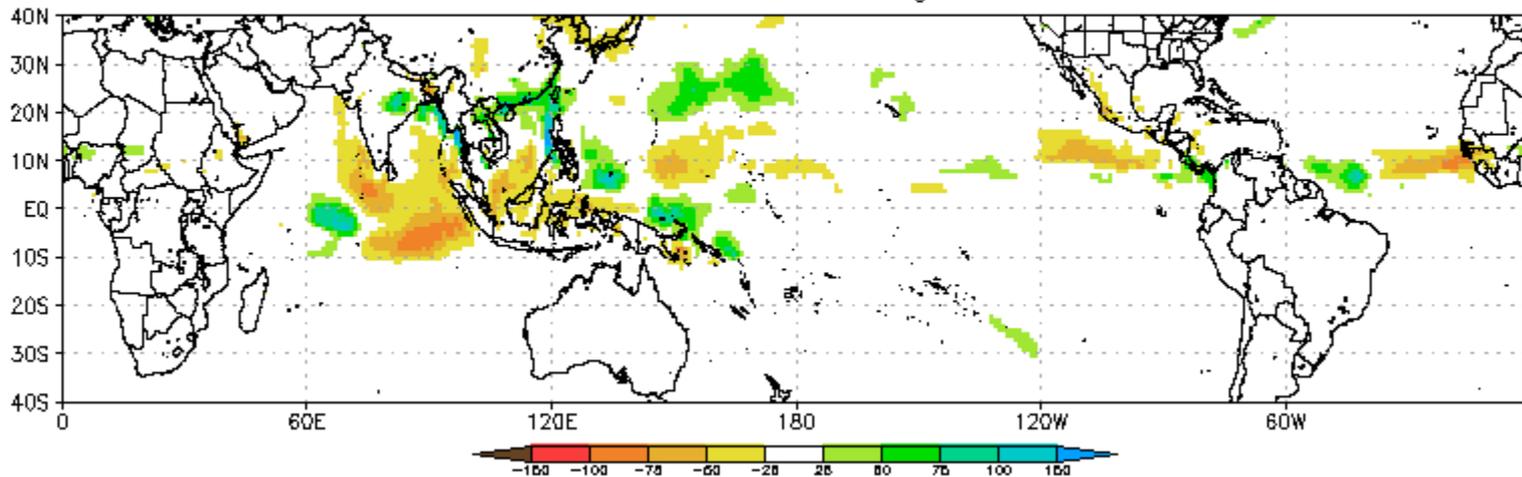
Contours at -12, -36 W m⁻²

7-day OLR with CFS forecasts

CFS Precipitation Anomalies (mm) Issued 16Jul2018
Week-1 Forecast Ending 24Jul2018



CFS Precipitation Anomalies (mm) Issued 16Jul2018
Week-2 Forecast Ending 31Jul2018





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Jul 17 2018

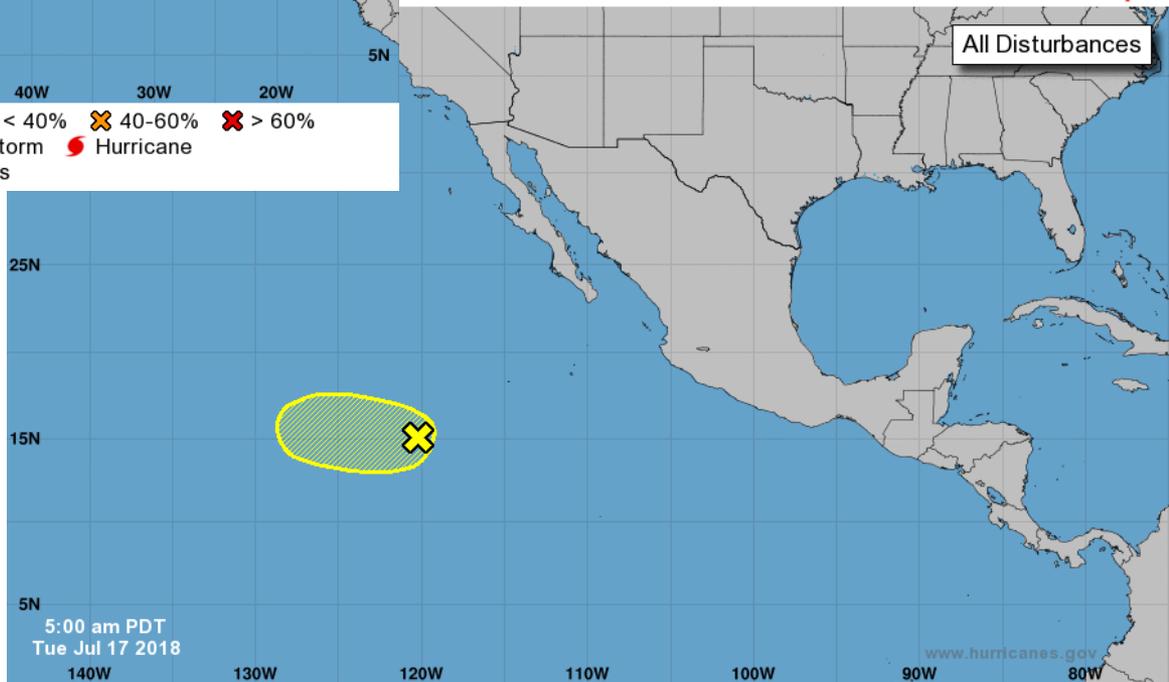
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

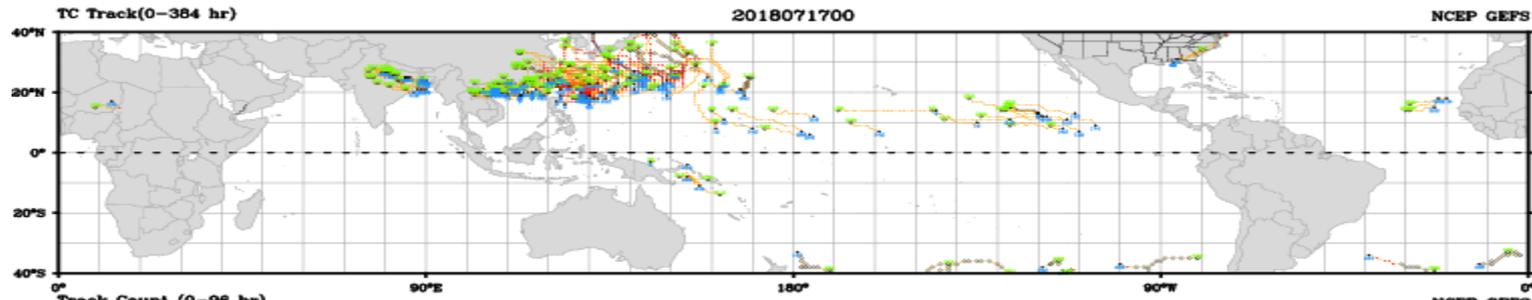
National Hurricane Center Miami, Florida



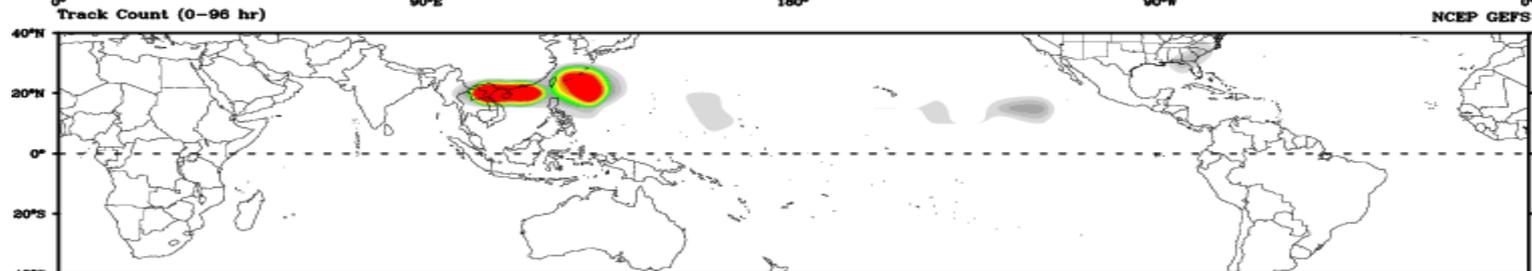
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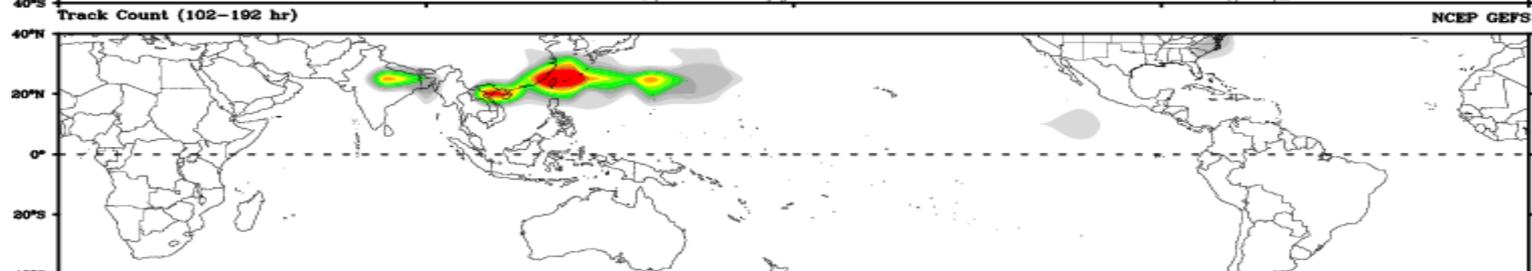
Post-Tropical Cyclone or Remnants



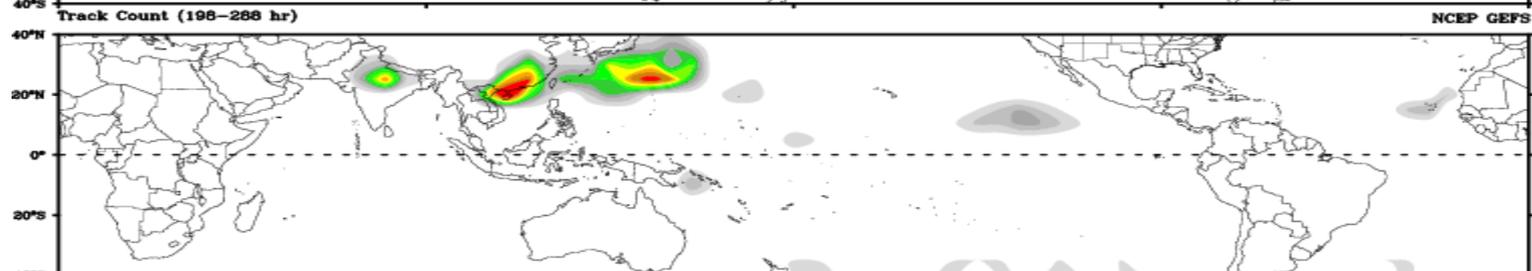
Days 1-4



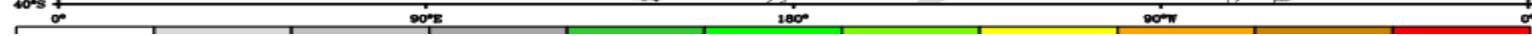
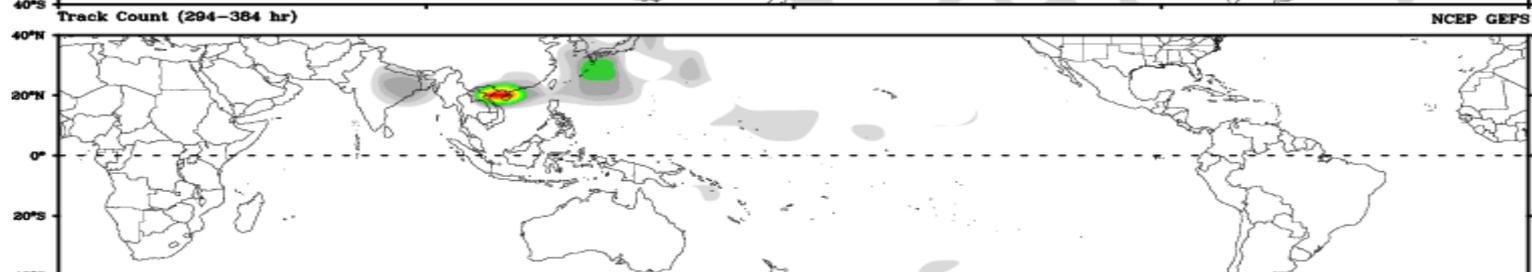
Day 5-8



Day 9-12

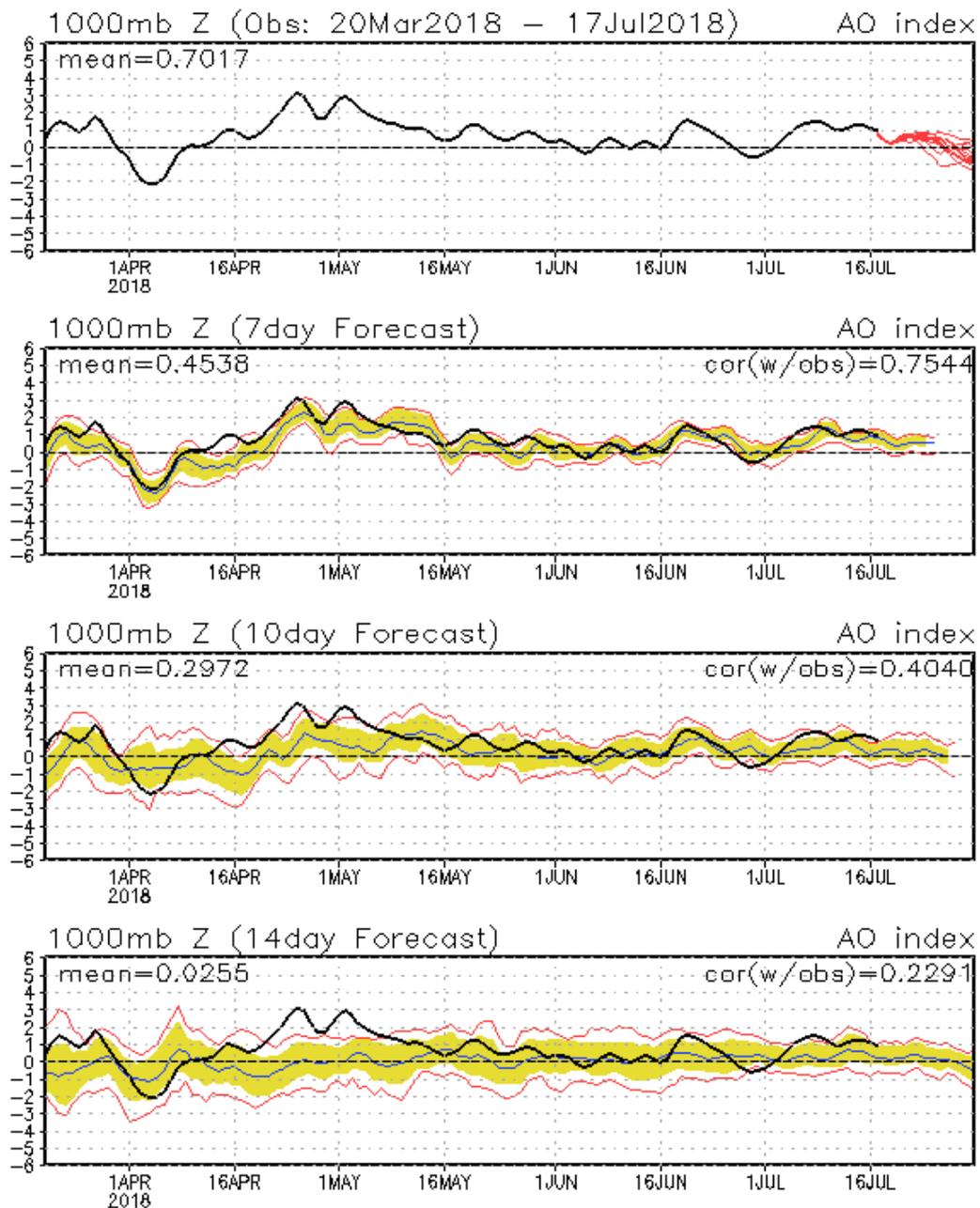


Day 13-15

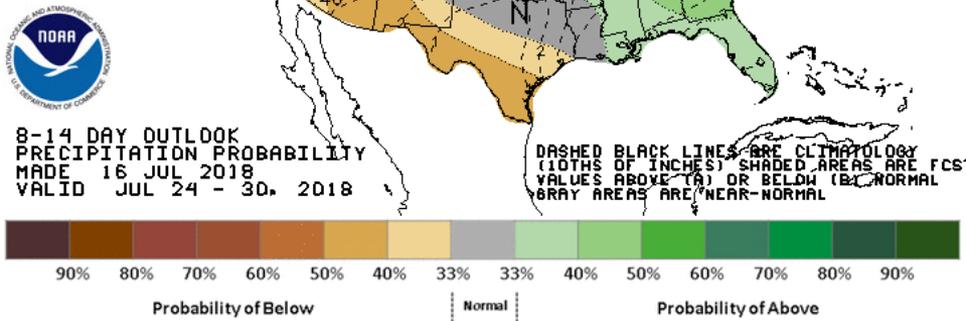
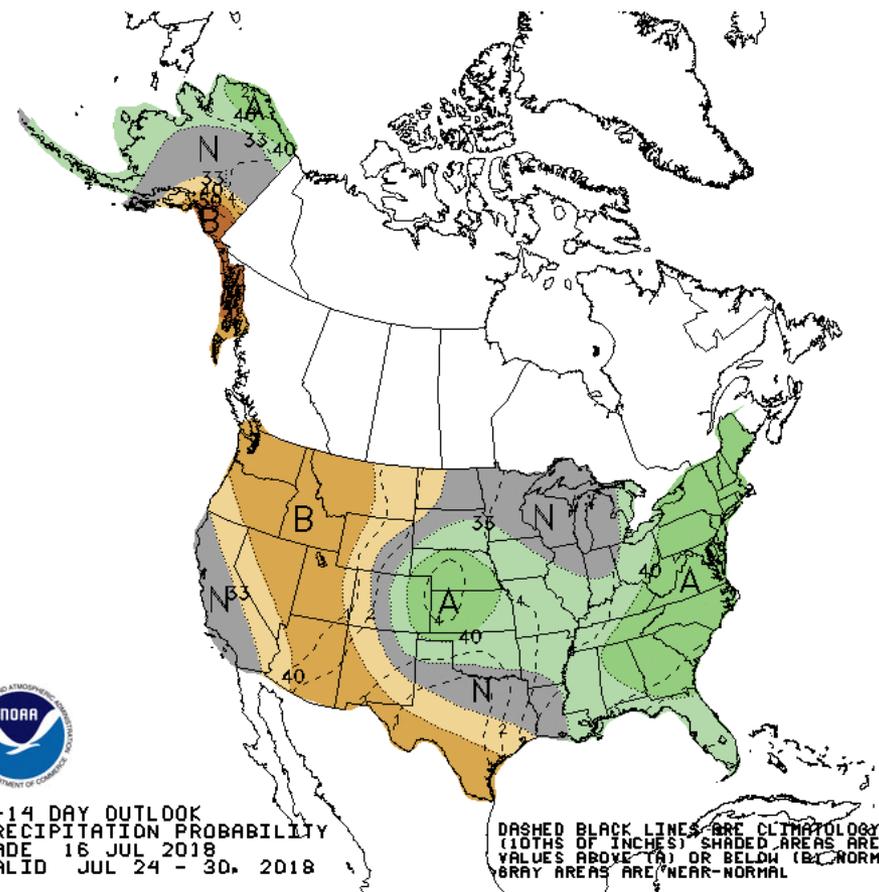
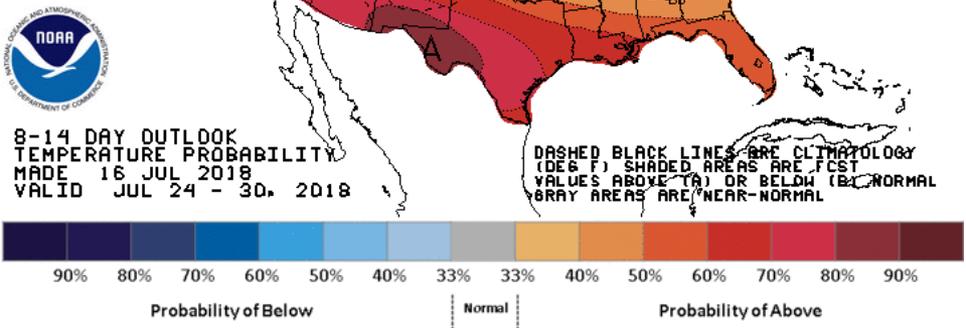
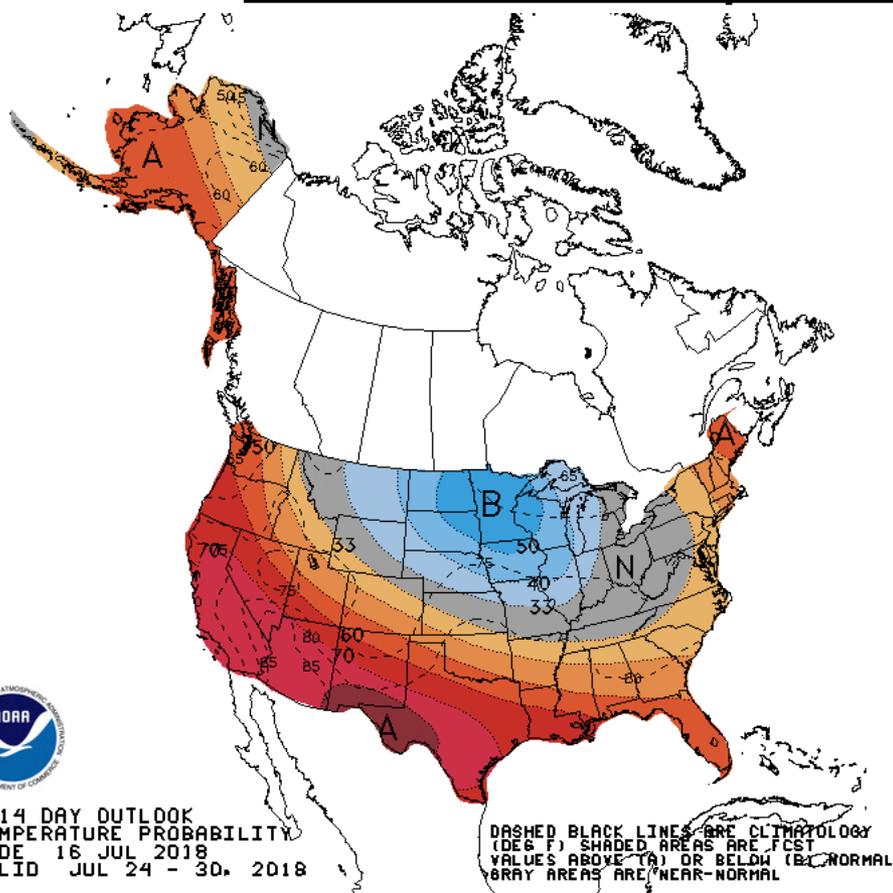


Connections to U.S. Impacts

AO: Observed & ENSM forecasts



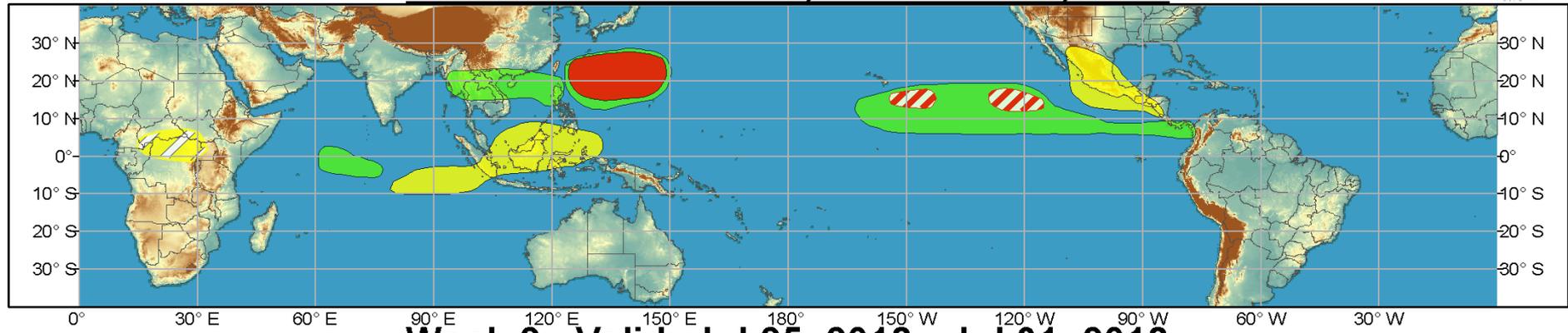
Week 2 – Temperature and Precipitation



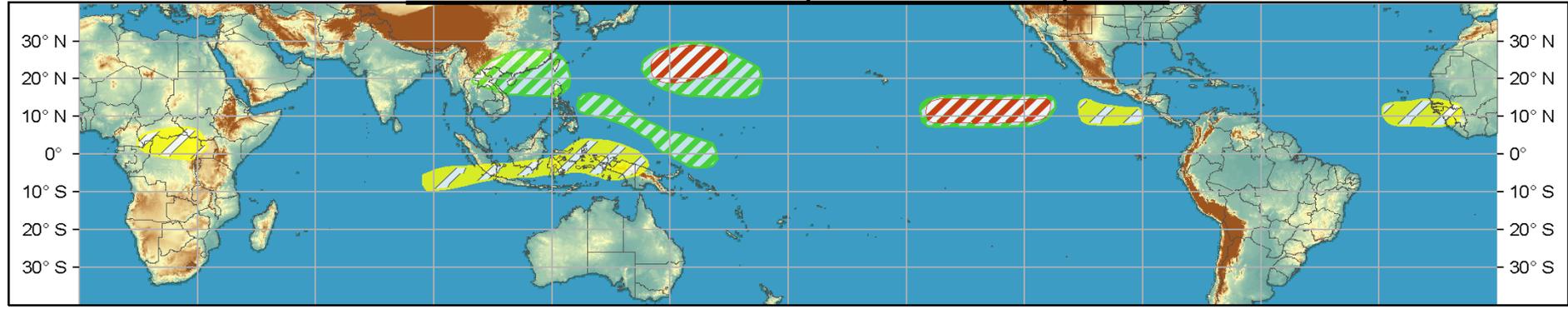


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