

Global Tropics Hazards And Benefits Outlook

8/6/2019

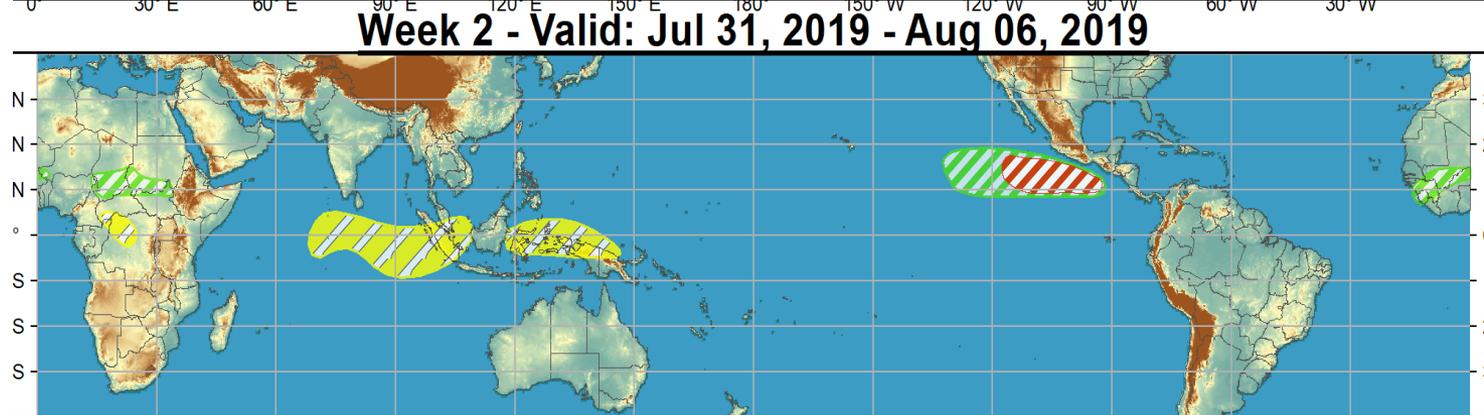
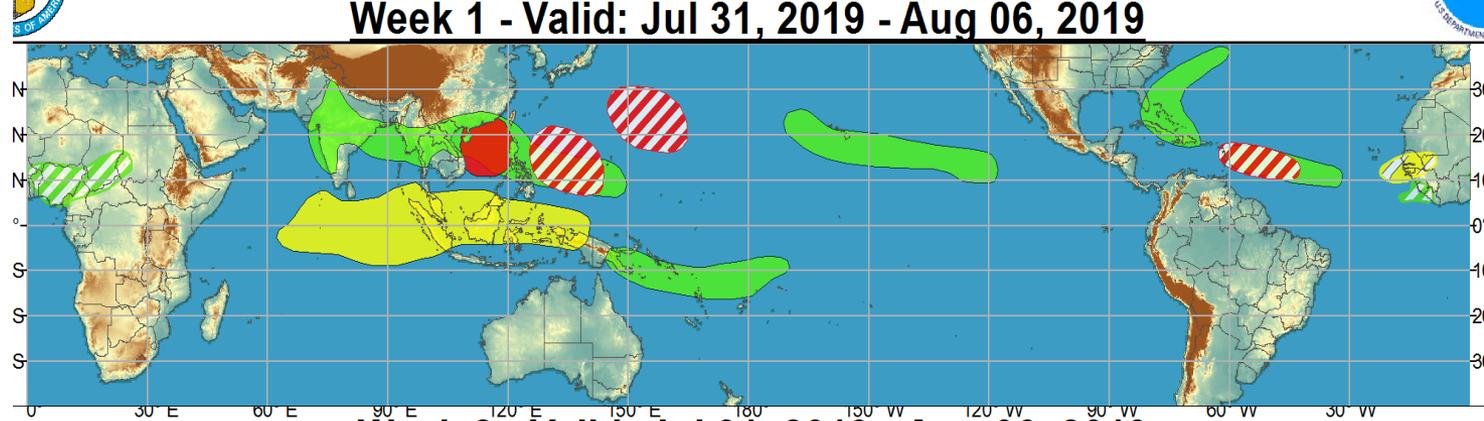
Kyle MacRitchie

Outline

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

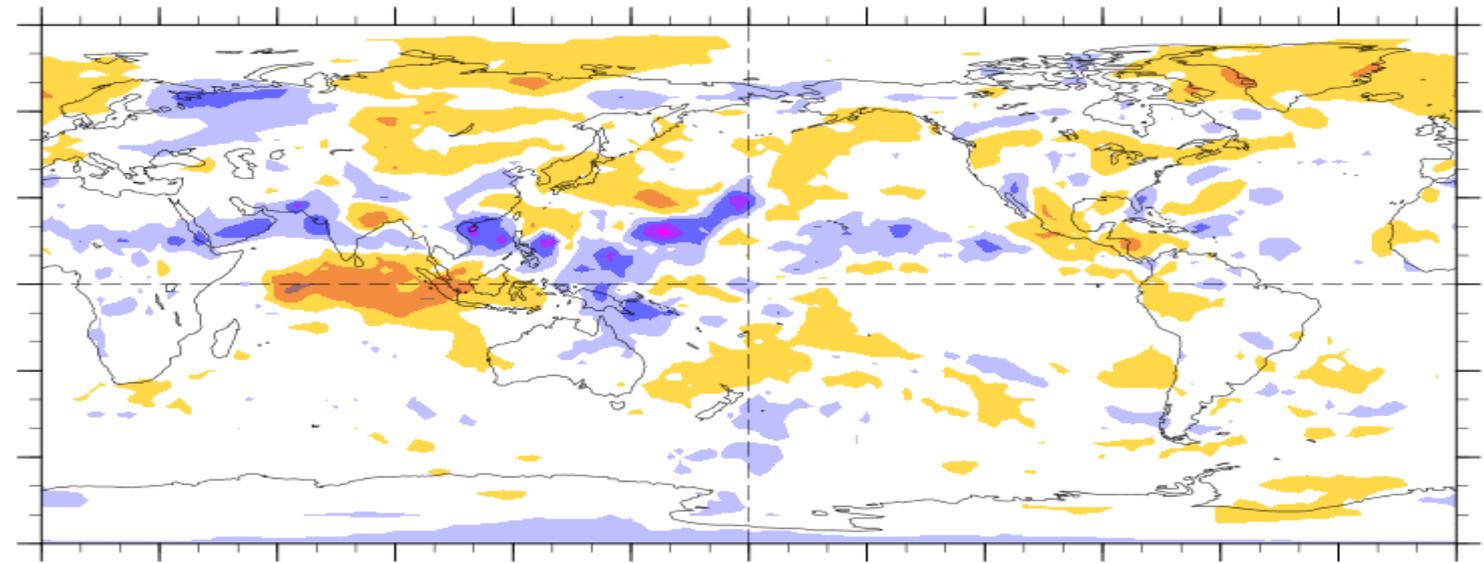
Outlook Review

Francisco
Lekima
Krosa



7-Day Average OLR Anomaly

2019/07/29 - 2019/08/04



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (as of July 11, 2019 – next update on Thursday, August 8th)

- ENSO Alert System Status: [El Niño Advisory](#)
- A transition from El Niño to ENSO-neutral is expected in the next month or two, with ENSO-neutral most likely to continue through Northern Hemisphere fall and winter.

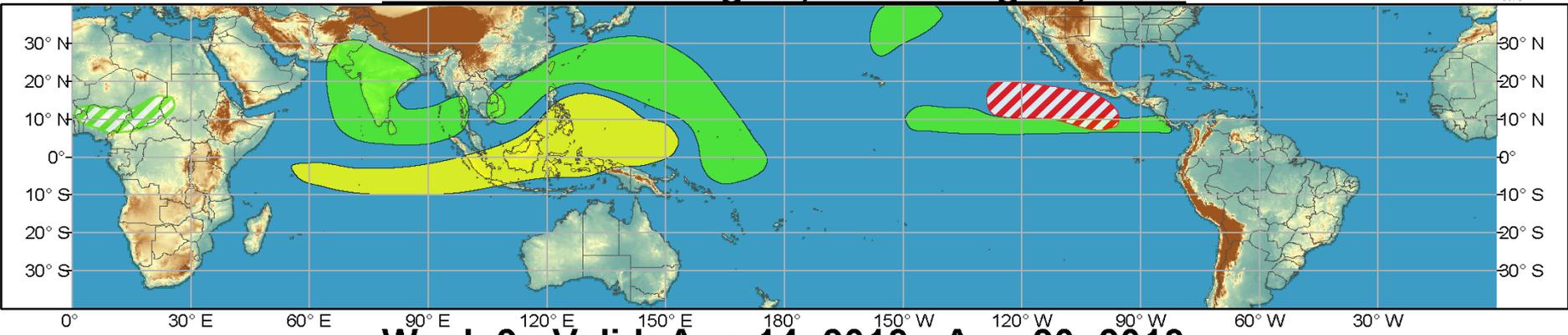
MJO and other subseasonal tropical variability:

- The MJO was weak over the past week.
- The MJO is forecast to remain weak during the GTH forecast period.
- Equatorial Rossby wave is over western Pacific, partially responsible for three storms.
- Kelvin wave over East Pacific Week 1/2 may enhance odds for TC development.

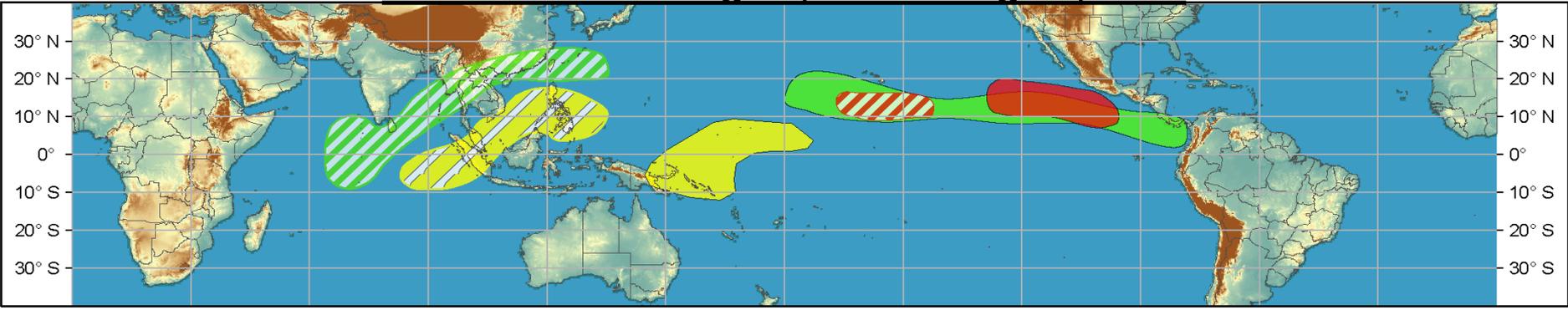


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 07, 2019 - Aug 13, 2019



Week 2 - Valid: Aug 14, 2019 - Aug 20, 2019



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.
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- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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Produced: 08/06/2019

Forecaster: MacRitchie

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

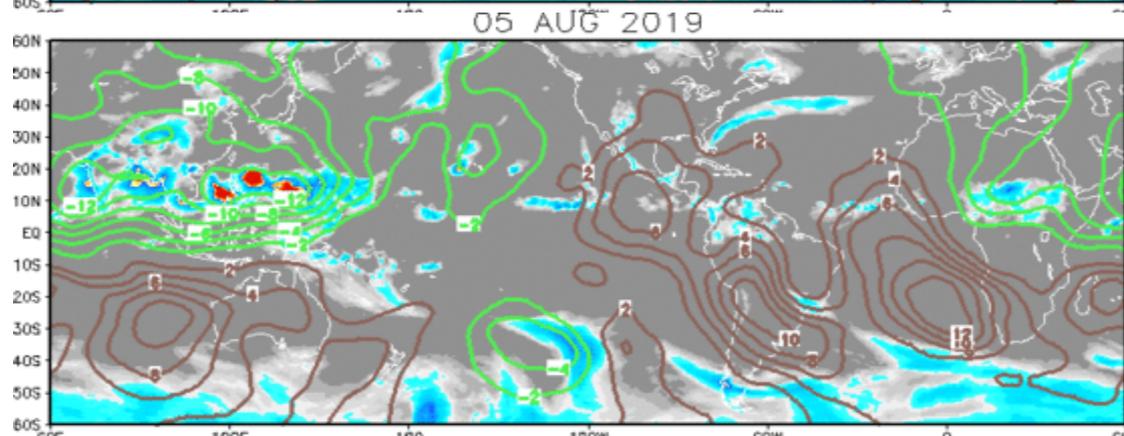
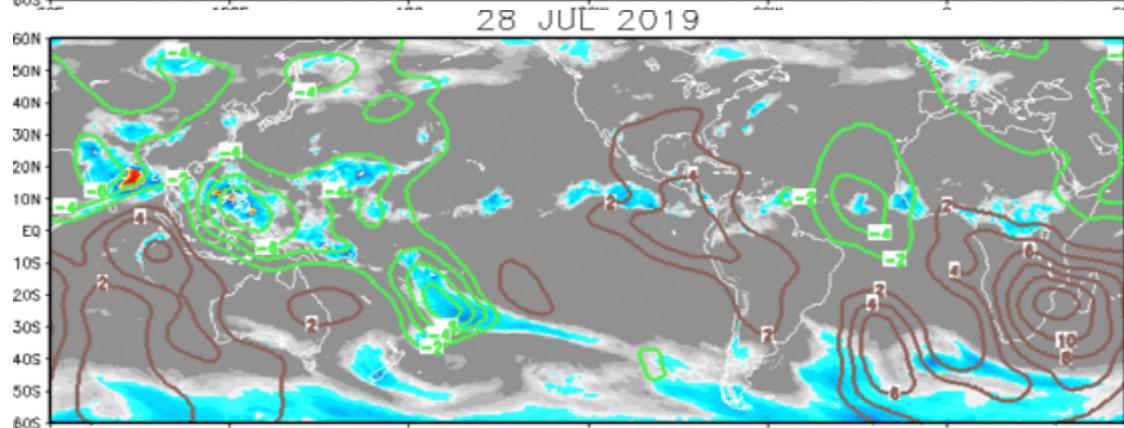
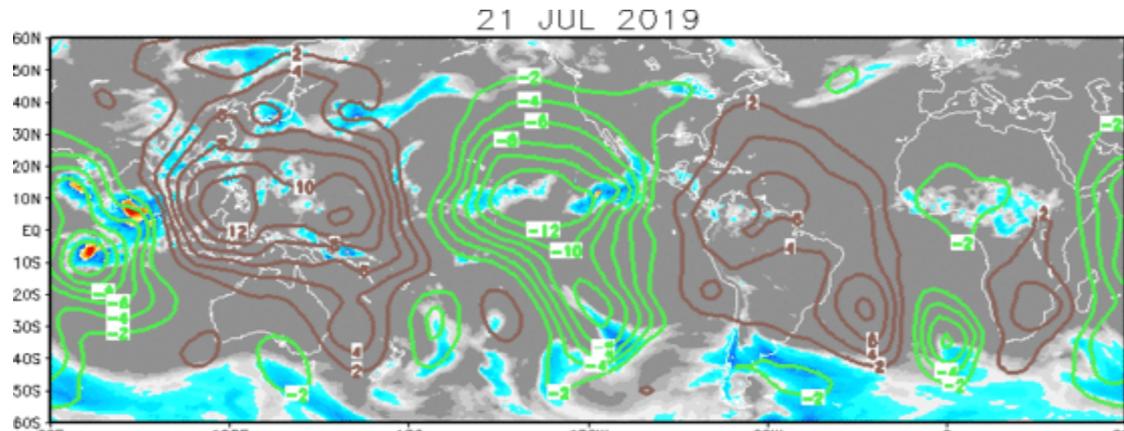
Green: Enhanced Divergence

Brown: Enhanced Convergence

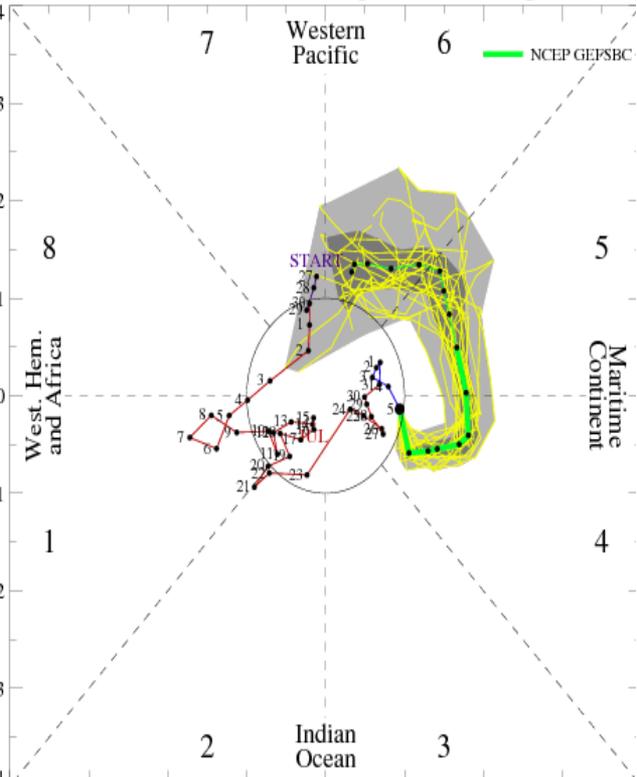
Amplified Wave-2 pattern.

The pattern weakened substantially, mainly anchored by convection in the western Pacific.

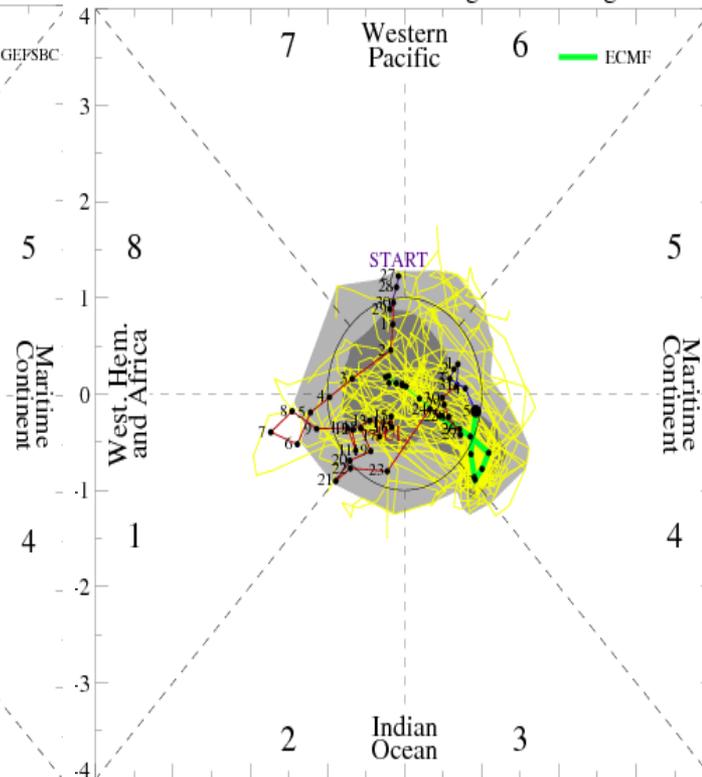
The convection in the western Pacific amplified and created an unusual north/south dipole over the region.



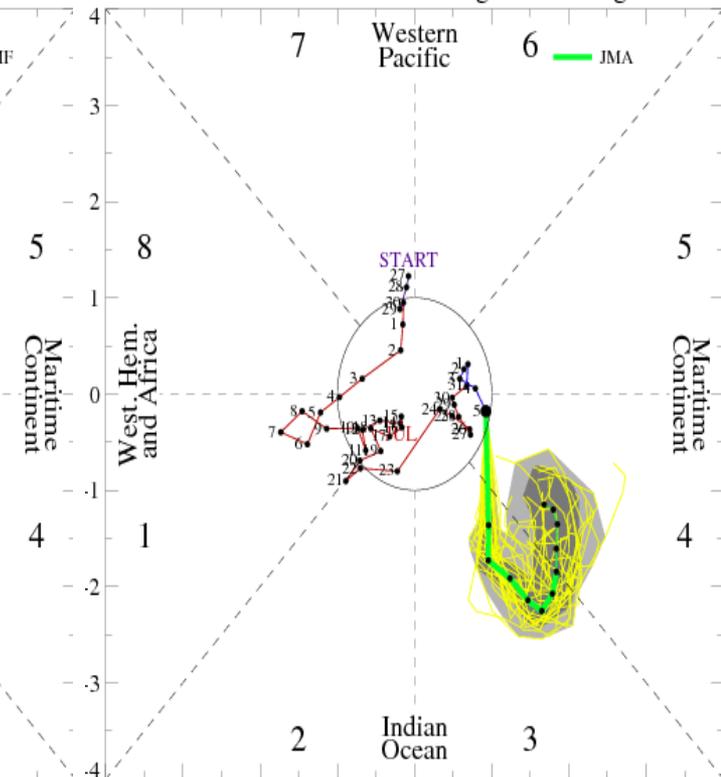
[RMM1, RMM2] forecast for Aug-06-2019 to Aug-20-2019



MJO Index Forecast for 06Aug2019-20Aug2019

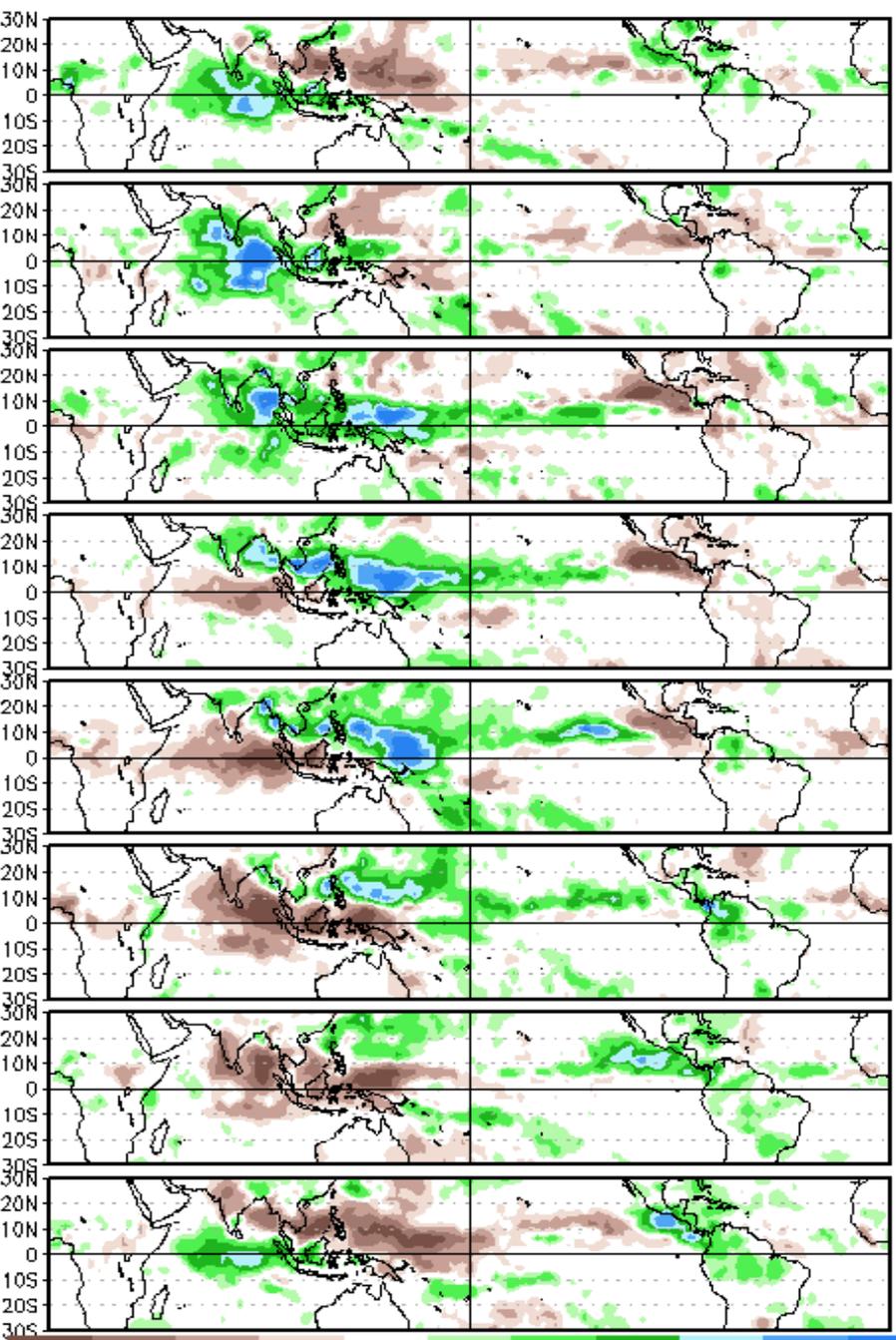


MJO Index Forecast for 06Aug2019-14Aug2019



Which to believe?

- The GEFS forecasts the MJO to strengthen into Phase 4.
- The JMA forecasts the MJO to strengthen into Phase 3.
- Both of these are **probably** wrong because they are confusing enhanced trade winds for MJO signal. The ECMWF solution looks most reasonable.



Phase 2

Phase 3

Phase 4

Phase 5

Phase 6

Phase 7

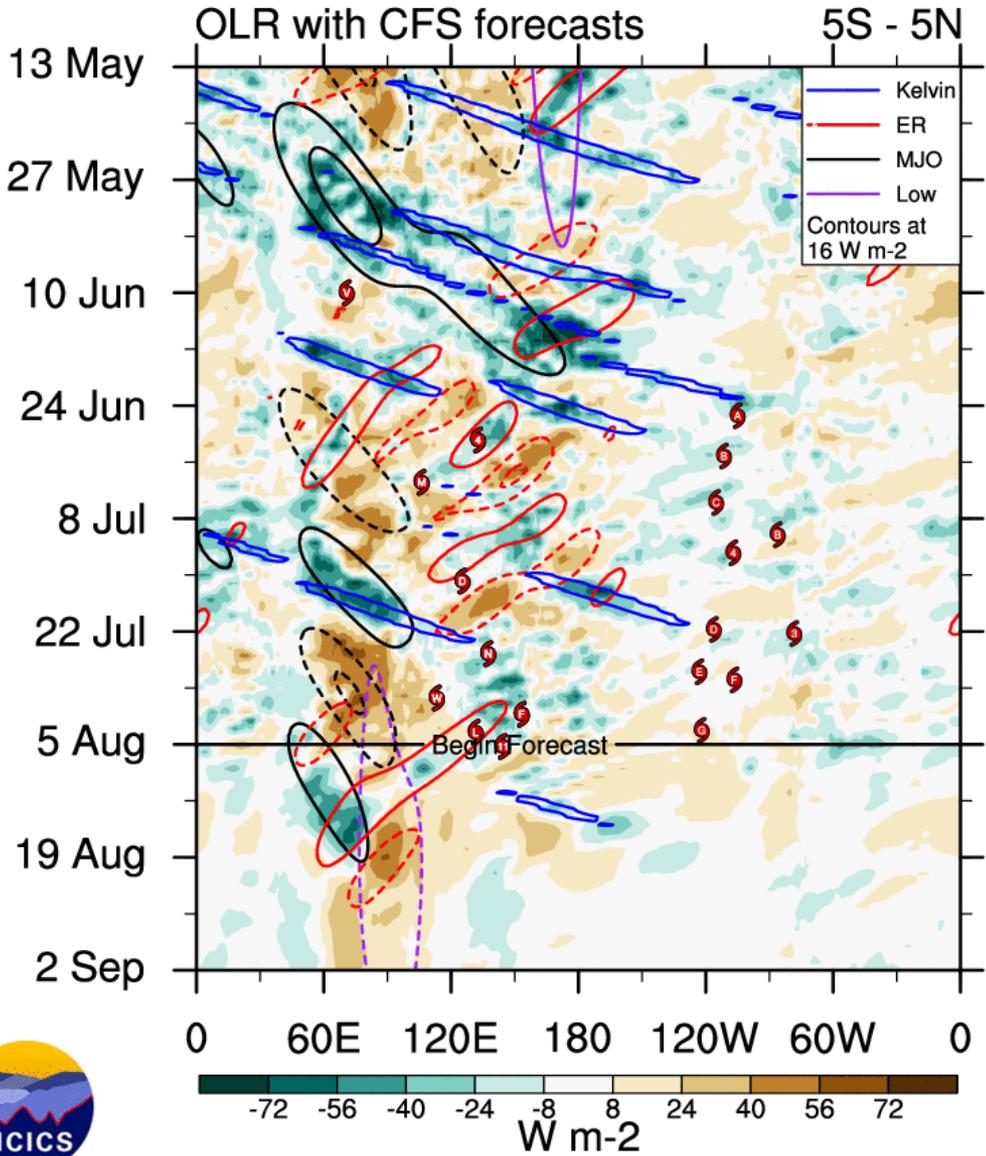
Phase 8

Phase 1



Currently: Weak **MJO** and **Kelvin** wave signals, active equatorial **Rossby** wave.

Forecast: **Kelvin wave** development in eastern and central Pacific (could fuel TC development)



ncics.org/mjo

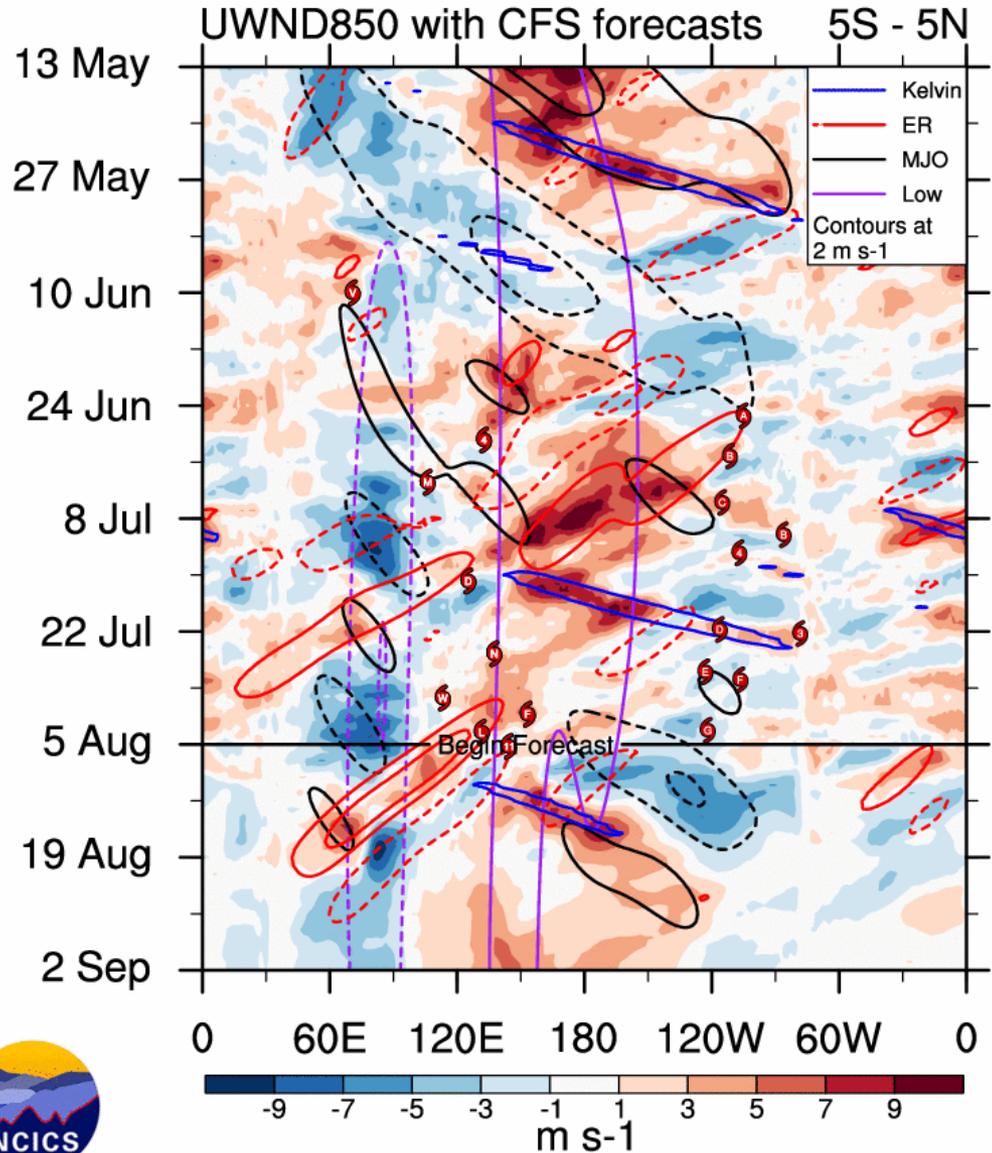
Tue 2019-08-06 1512 UTC

Carl Schreck (cjschrec@ncsu.edu)

CAVEAT: These panels are representative of robust MJO events.

Currently: Weak **MJO** and **Kelvin** wave signals, active equatorial **Rossby** wave.

Forecast: **Kelvin wave** development in eastern and central Pacific (could fuel TC development)

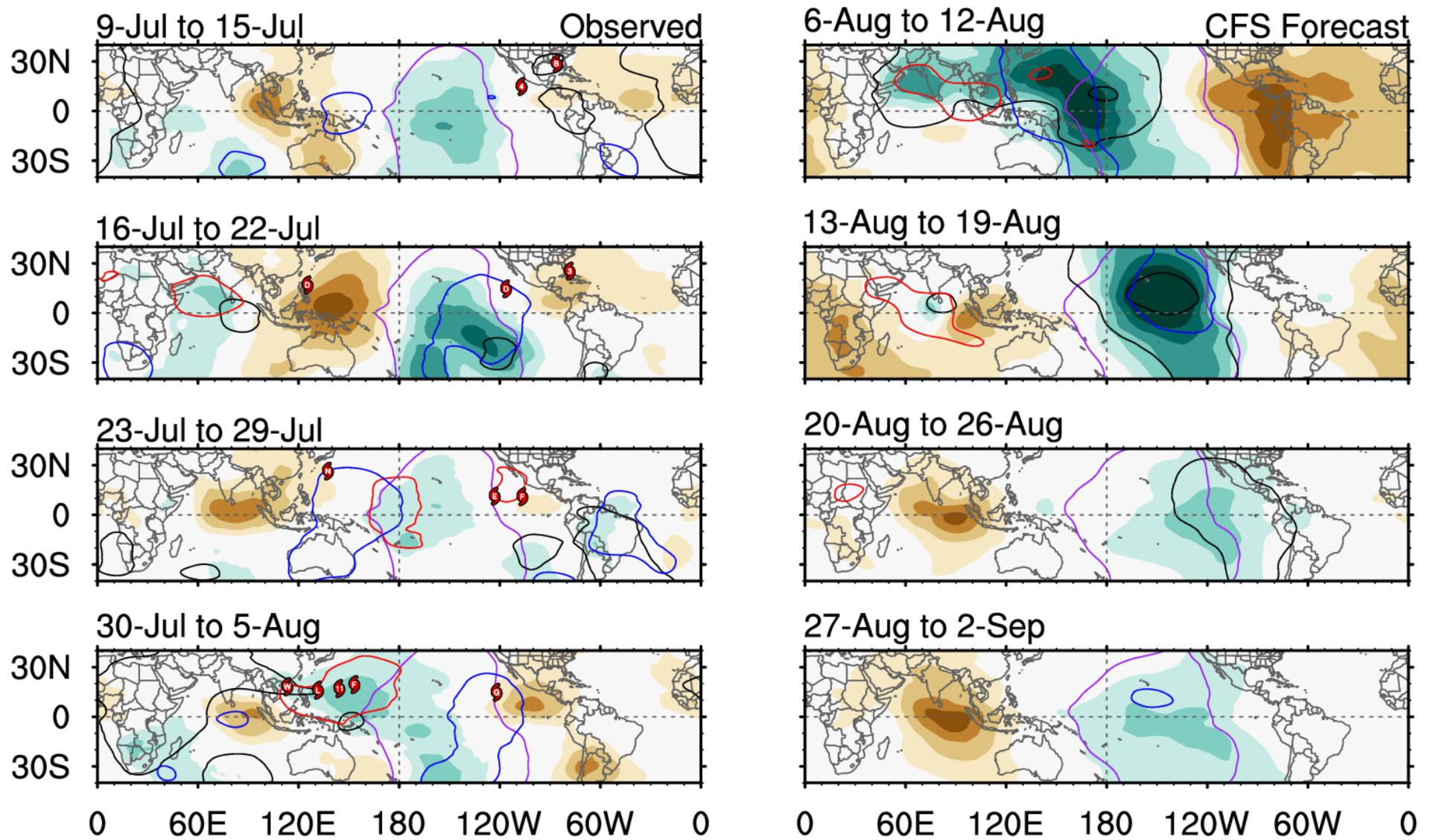


ncics.org/mjo

Tue 2019-08-06 1011 UTC

Carl Schreck (cjschrec@ncsu.edu)

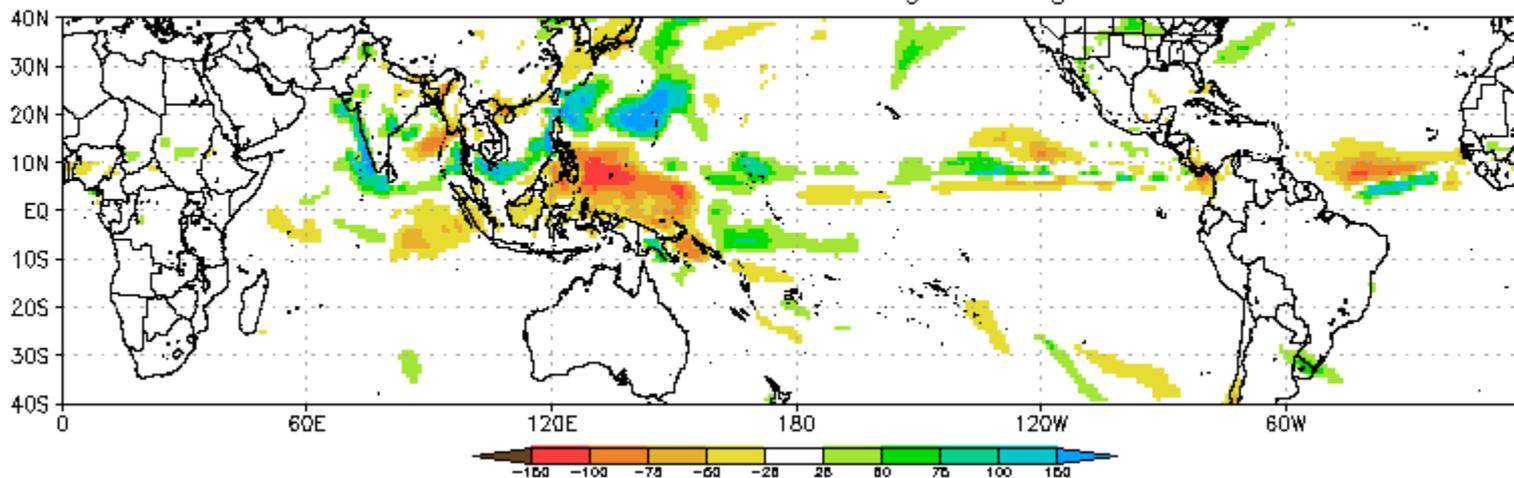
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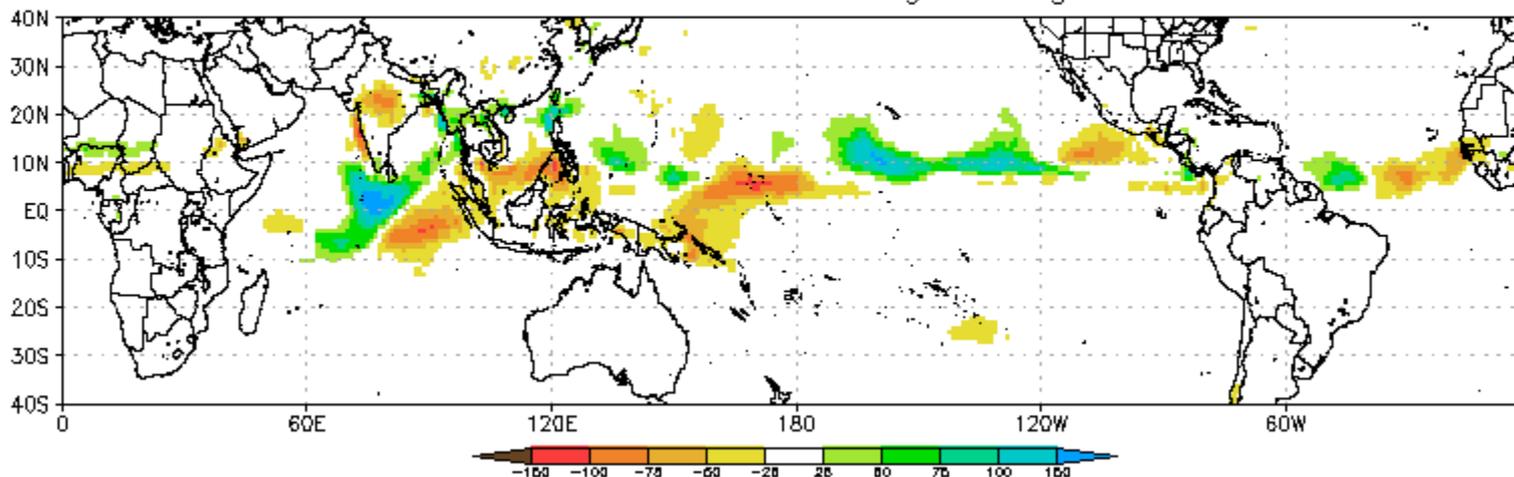
— MJO — Kelvin x2
 — Low — ER
 Contours at 1, 3 $\times 10^6 \text{ m}^2 \text{ s}^{-1}$

7-day CHI850 with CFS forecasts

CFS Precipitation Anomalies (mm) Issued 05Aug2019
Week-1 Forecast Ending 13Aug2019



CFS Precipitation Anomalies (mm) Issued 05Aug2019
Week-2 Forecast Ending 20Aug2019





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 or Remnants

Graphical Tropical Weather Outlook

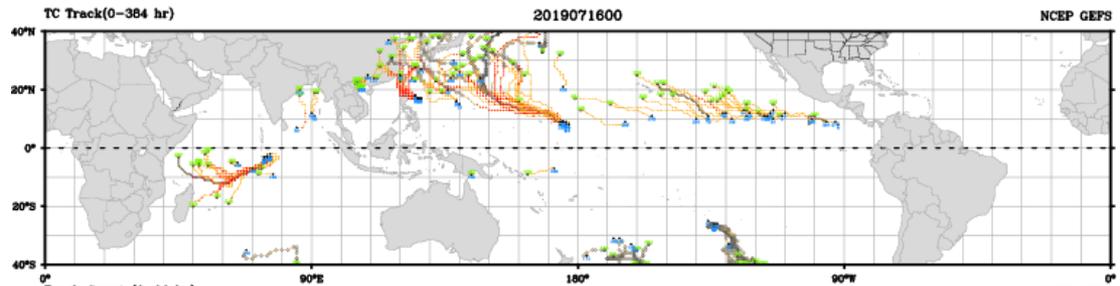
National Hurricane Center Miami, Florida



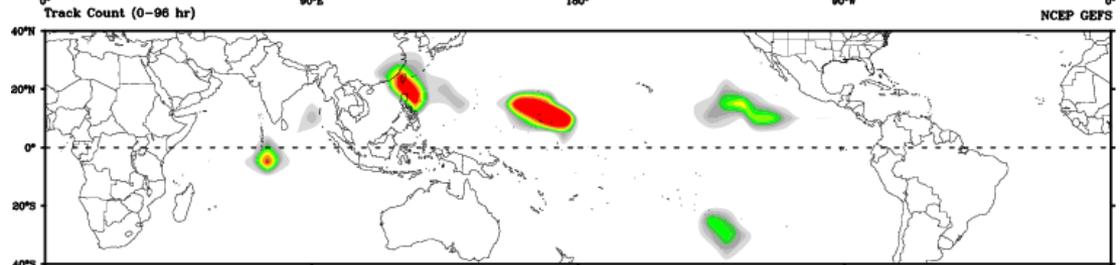
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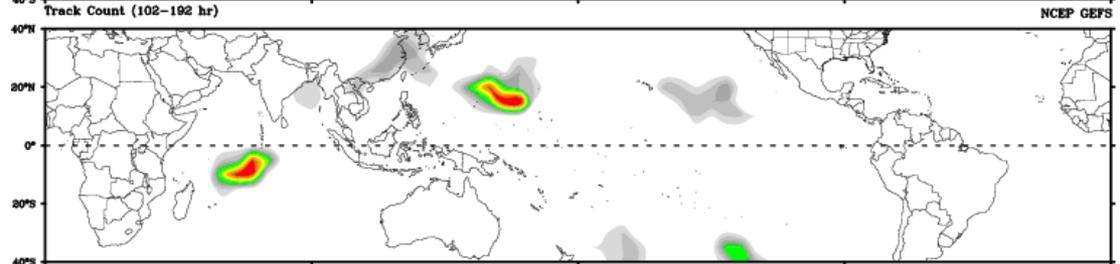
Post-Tropical Cyclone or Remnants



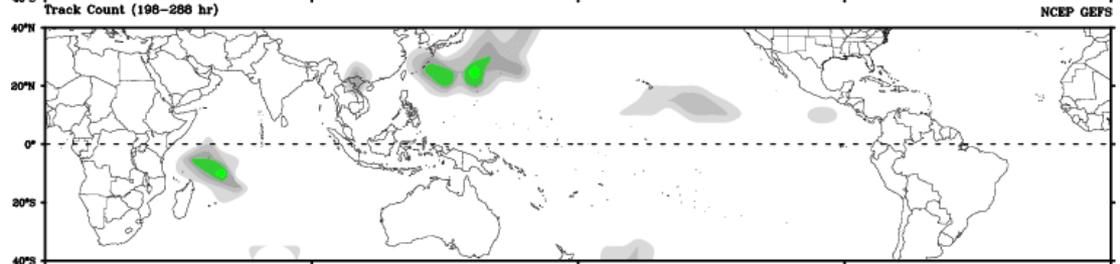
Days 1-4



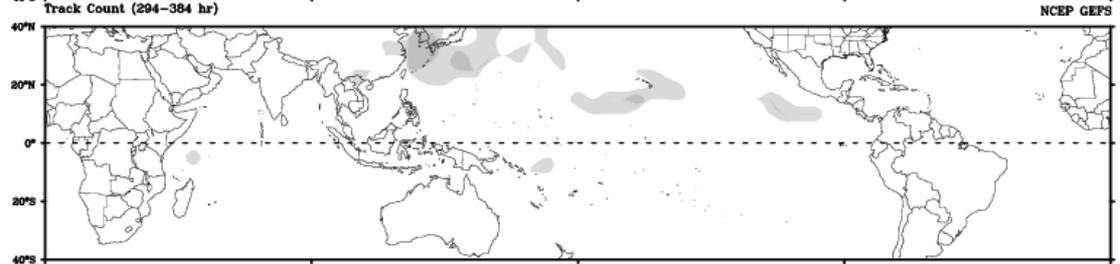
Day 5-8



Day 9-12

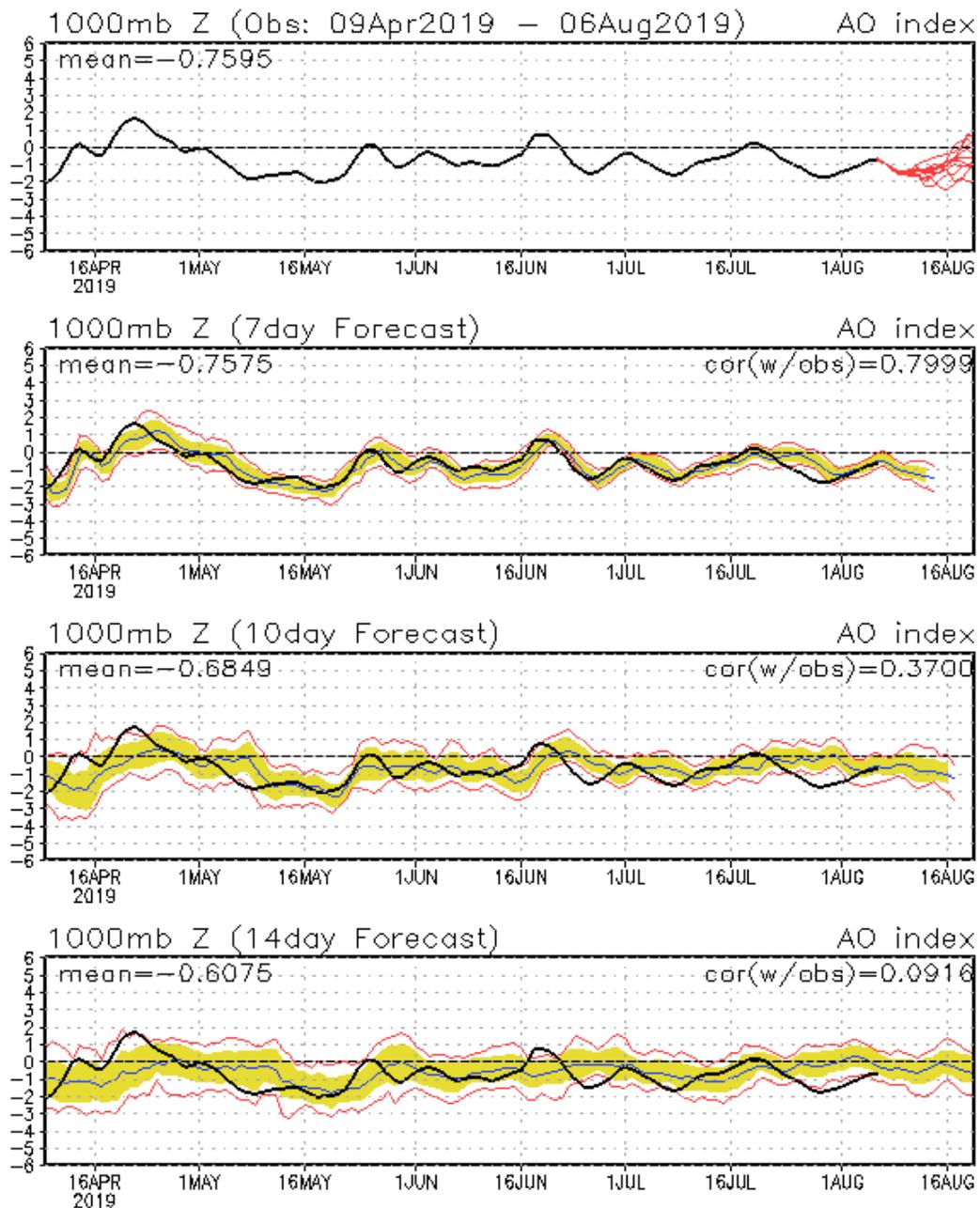


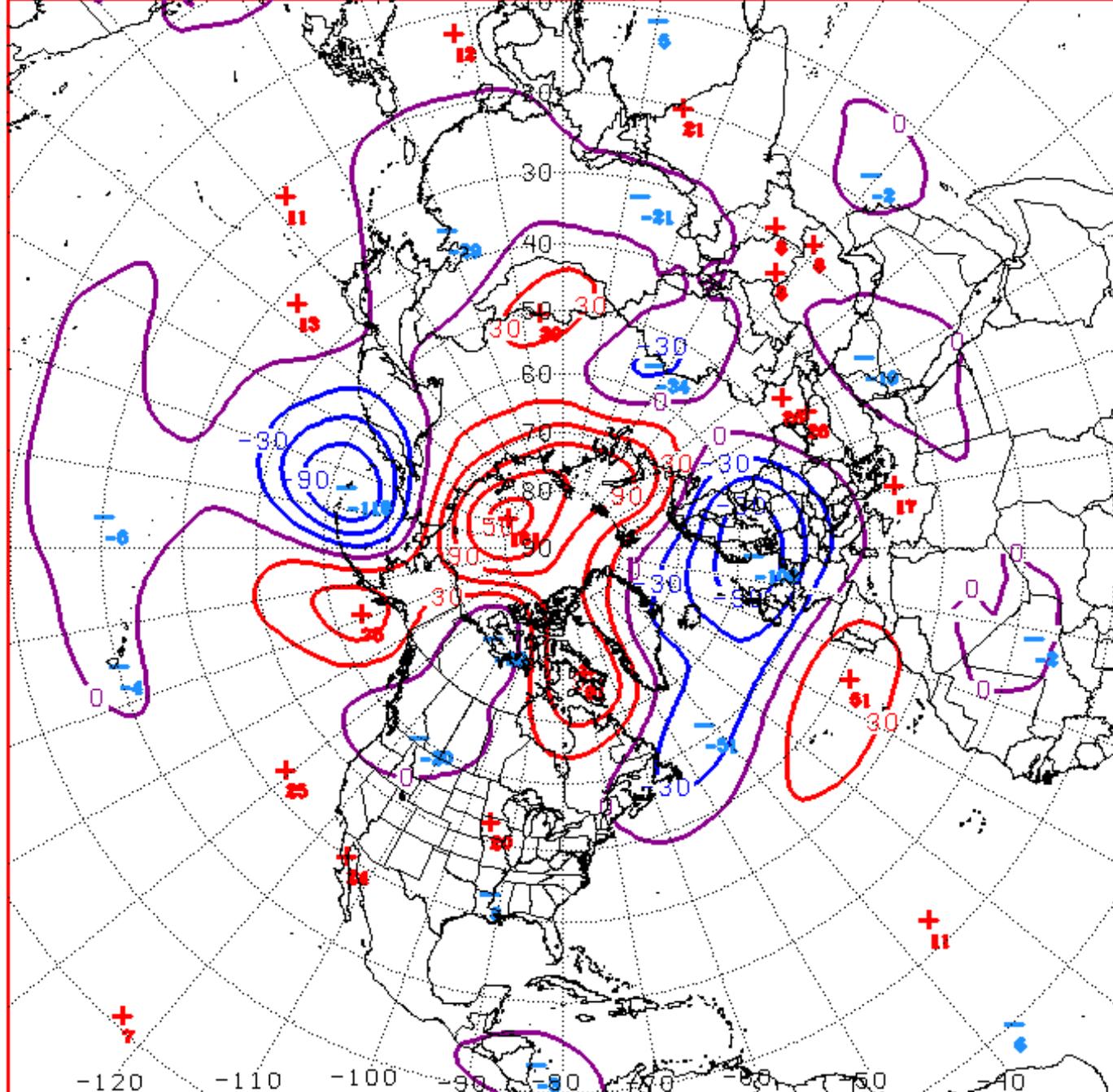
Day 13-15



Connections to U.S. Impacts

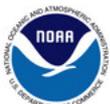
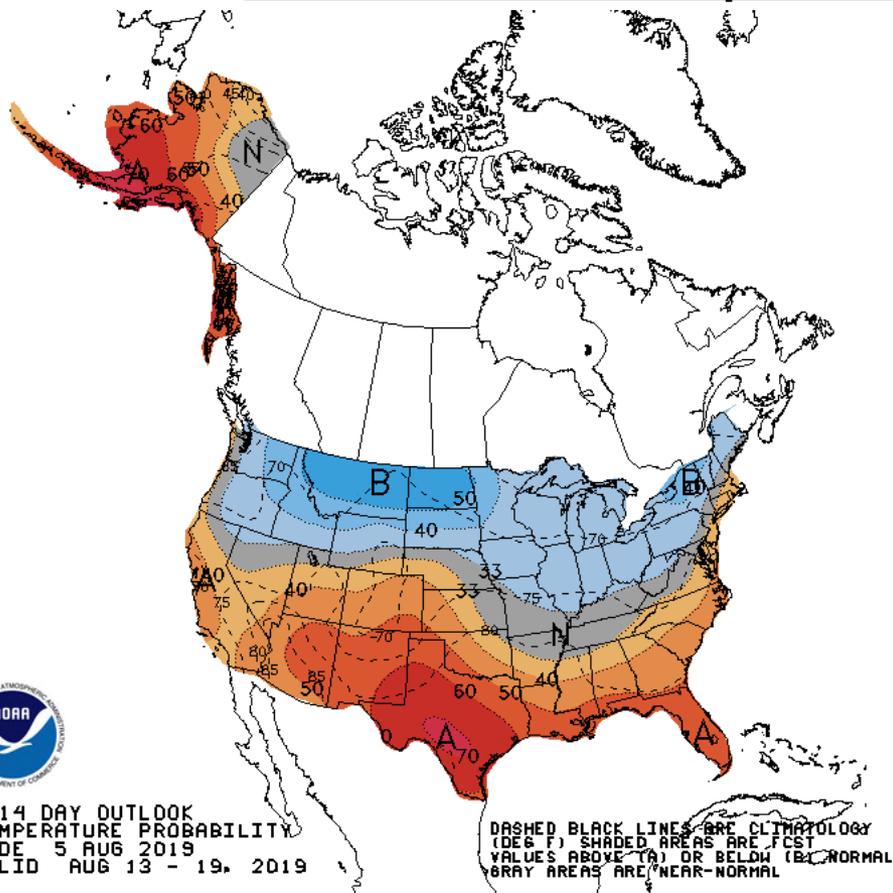
AO: Observed & ENSM forecasts





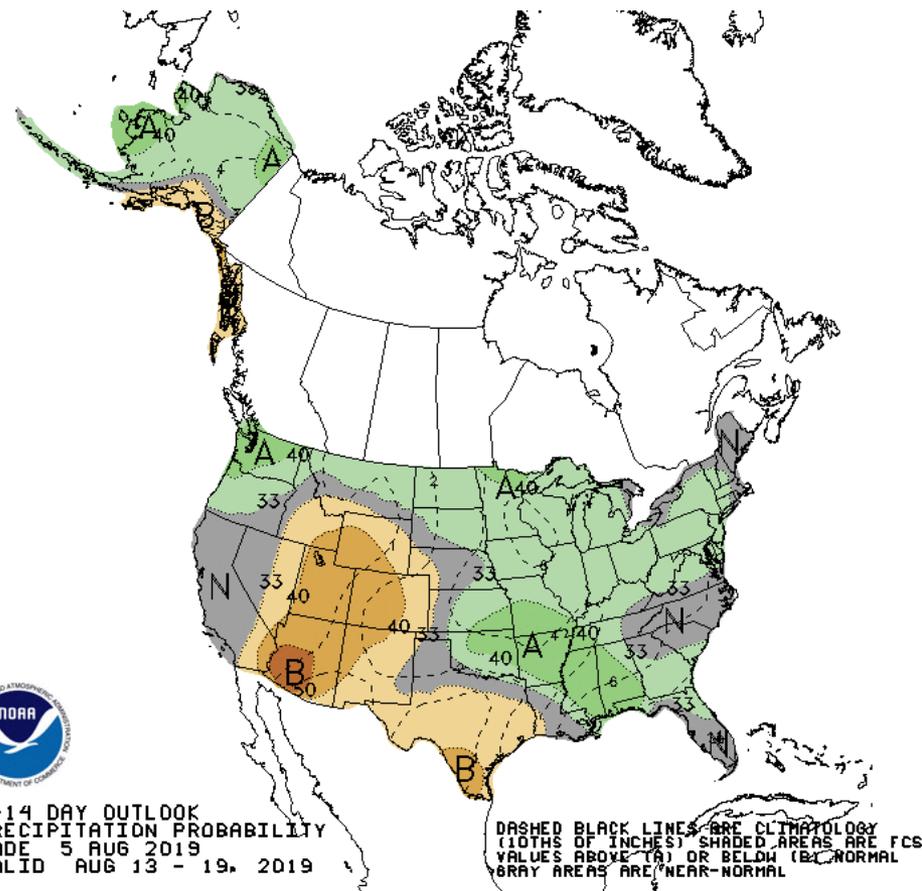
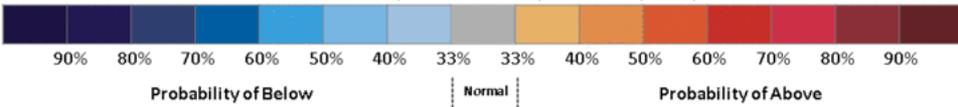
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE AUG 06 2019 1311 UTC CNTD AUG 17 2019

Week 2 – Temperature and Precipitation



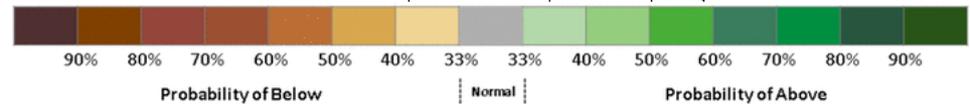
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 5 AUG 2019
VALID AUG 13 - 19, 2019

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 5 AUG 2019
VALID AUG 13 - 19, 2019

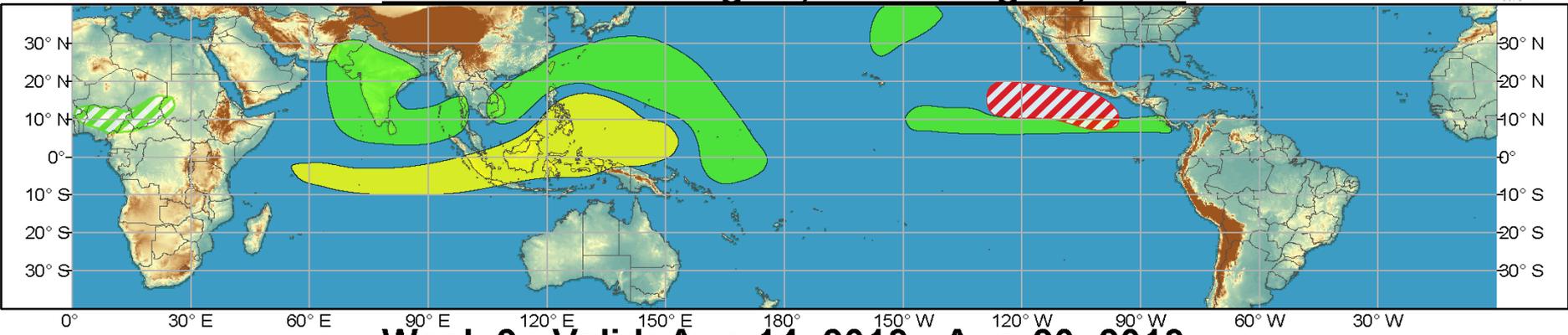
DASHED BLACK LINES ARE CLIMATOLOGY (TENTHS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



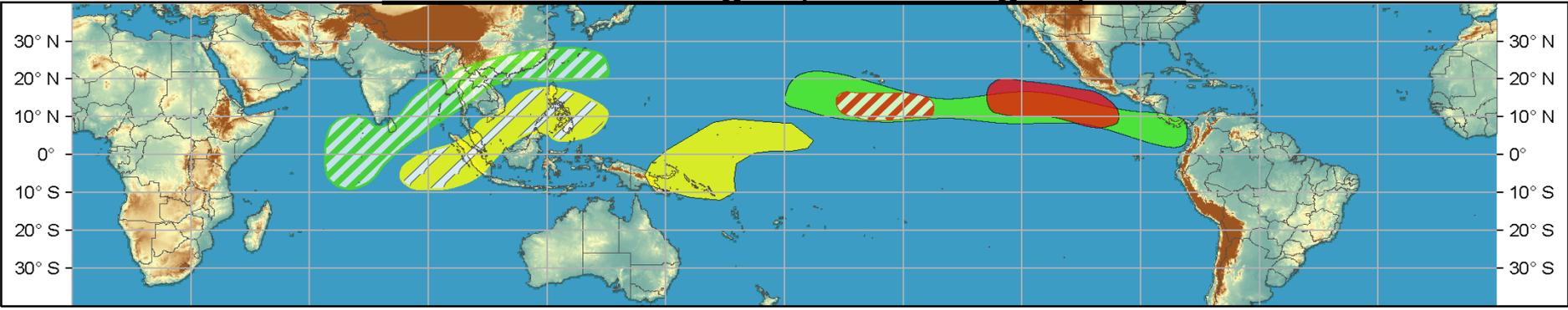


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