

Global Tropics Hazards And Benefits Outlook

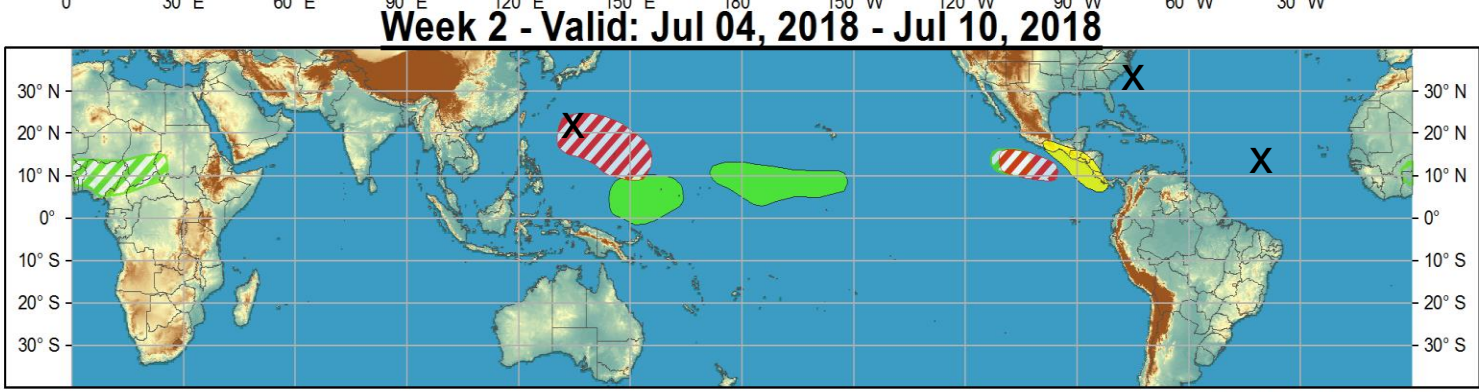
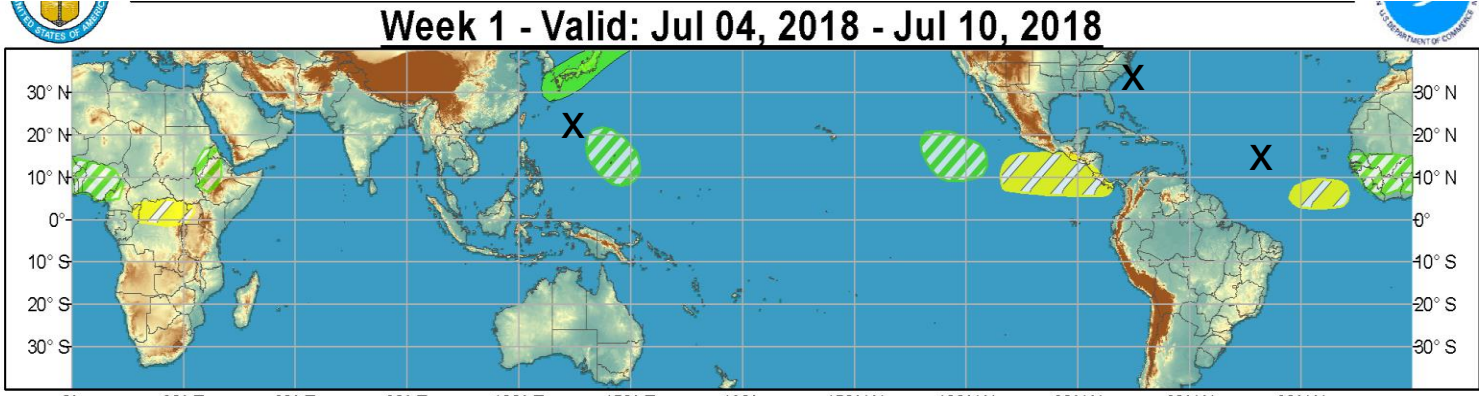
7/10/2018

Adam Allgood

Outline

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

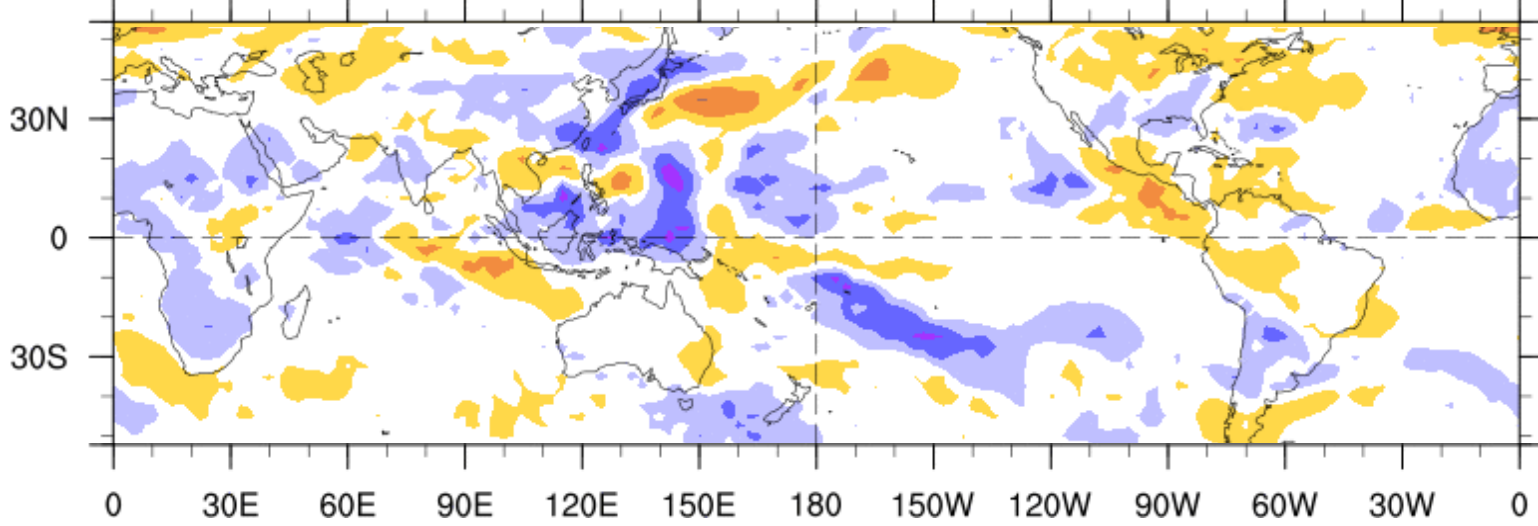
Outlook Review



7-Day Average OLR Anomaly 2018/07/02 - 2018/07/08

Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: [El Niño Watch](#)
- ENSO-neutral is favored through Northern Hemisphere summer 2018, with the chance for El Niño increasing to 50% during fall, and ~65% during winter 2018-19

MJO and other subseasonal tropical variability:

- An MJO signal appears to be emerging over the Maritime Continent, with little eastward propagation (appears to be due to extratropical forcing).
- Dynamical and statistical models depict a slow evolution of this signal, with propagation to the far West Pacific by Week-2. Some ECMWF ensembles show a highly amplified event.

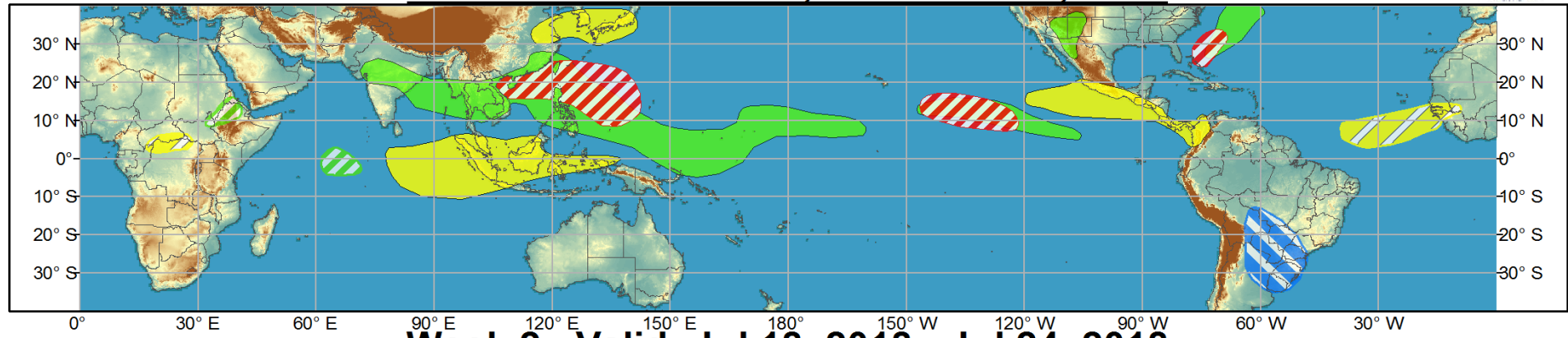
Extratropics:

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

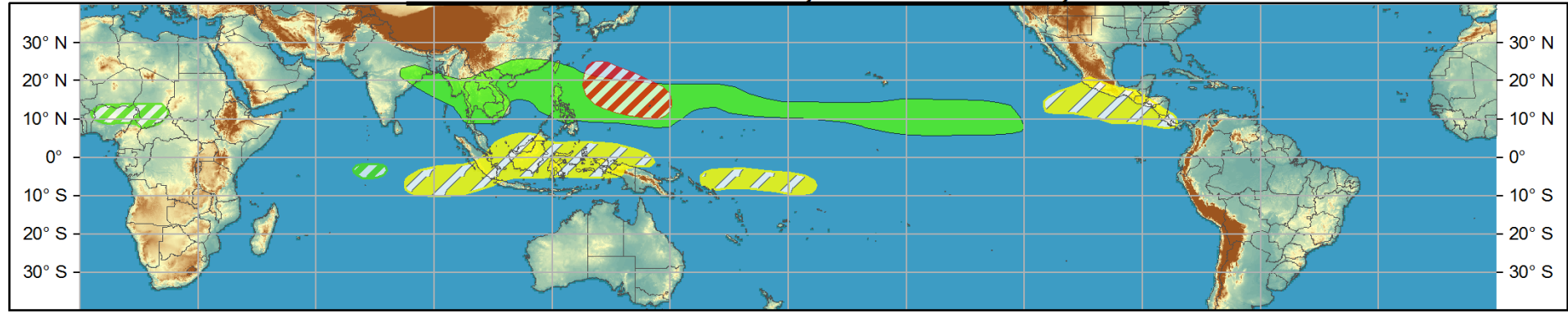


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 11, 2018 - Jul 17, 2018



Week 2 - Valid: Jul 18, 2018 - Jul 24, 2018



Produced: 07/10/2018

Forecaster: Allgood

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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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

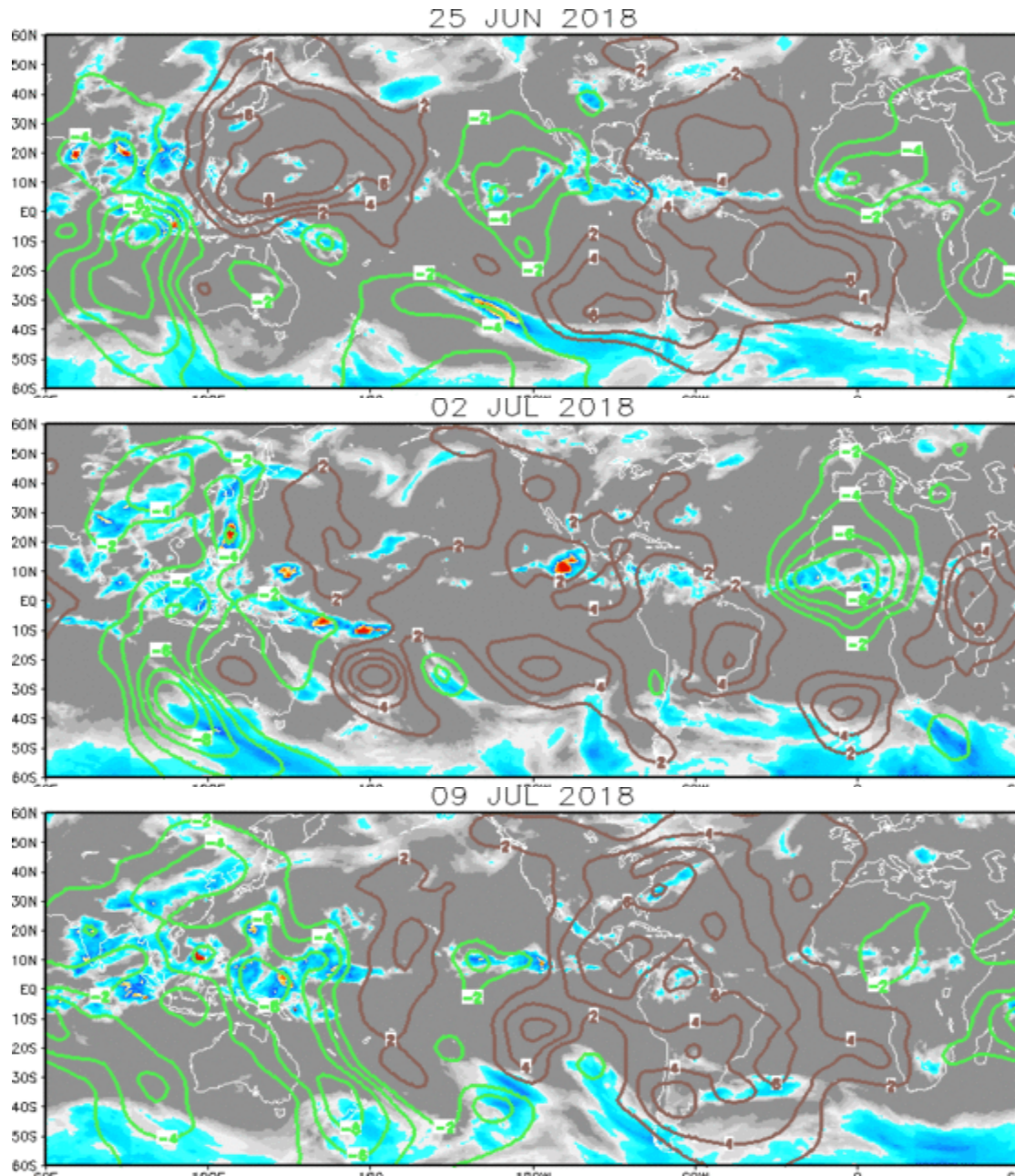
Green: Enhanced Divergence

Brown: Enhanced Convergence

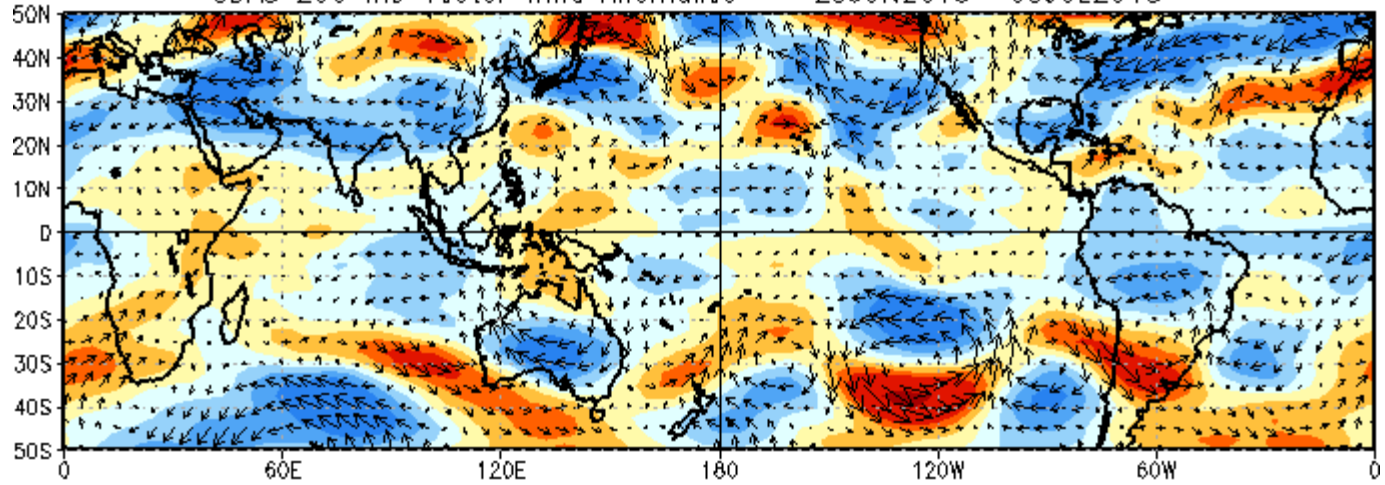
Wave-2 pattern not consistent with robust MJO activity. Robust Kelvin wave activity over the East Pacific...

...helped to promote tropical cyclone development. The remnant MJO suppressed phase appears more organized than the enhanced phase

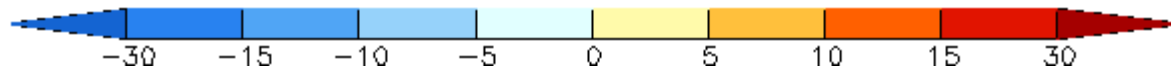
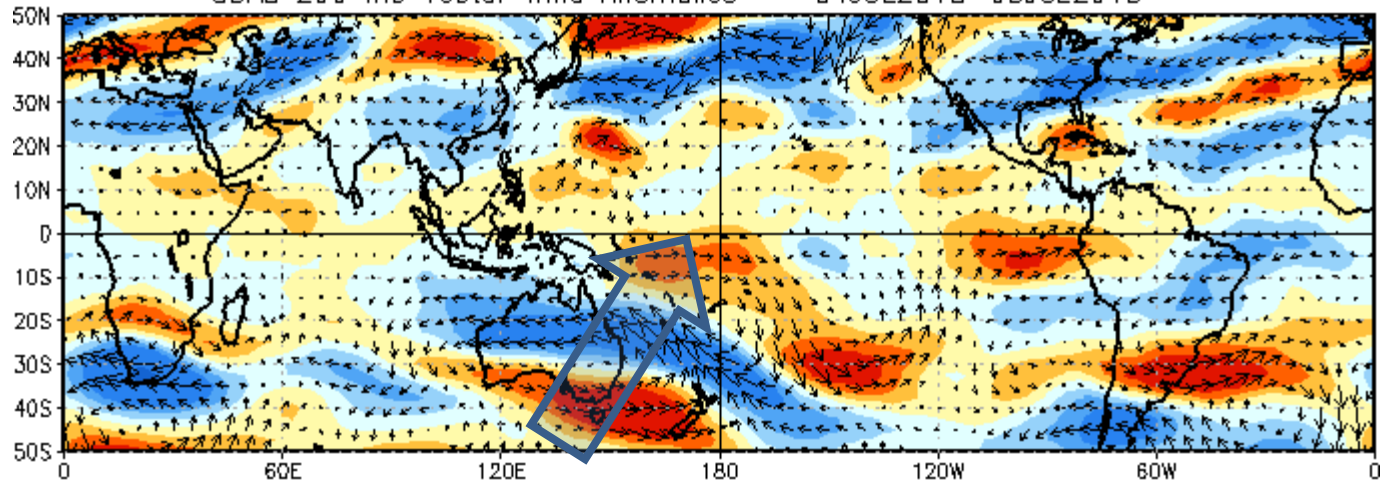
Recently the upper-level pattern has been much more consistent with MJO-like circulation patterns. Note the connection between the tropics and extratropics east of Australia.



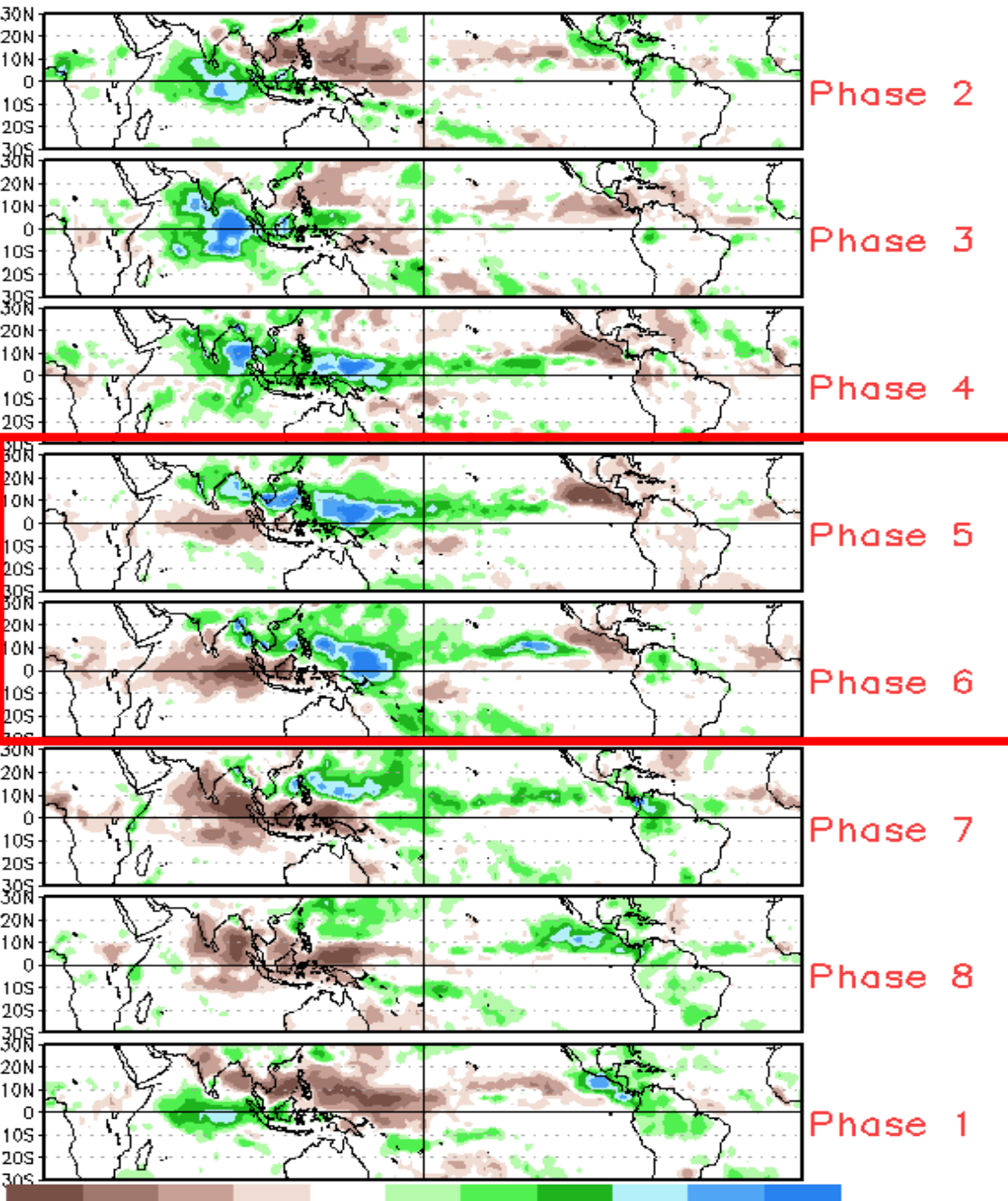
CDAS 200 mb Vector Wind Anomalies -- 29JUN2018- 03JUL2018



CDAS 200 mb Vector Wind Anomalies -- 04JUL2018-08JUL2018



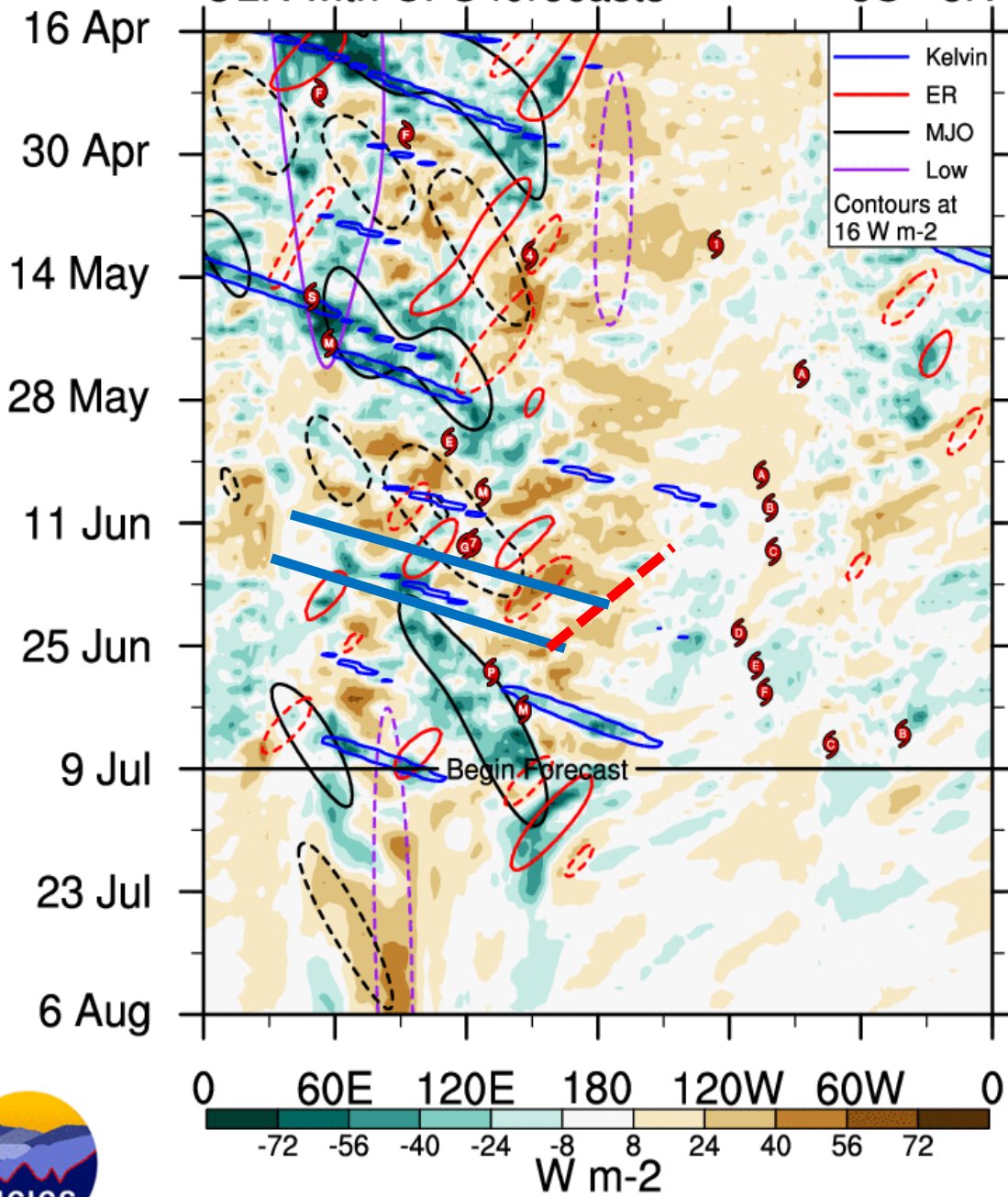
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts

5S - 5N

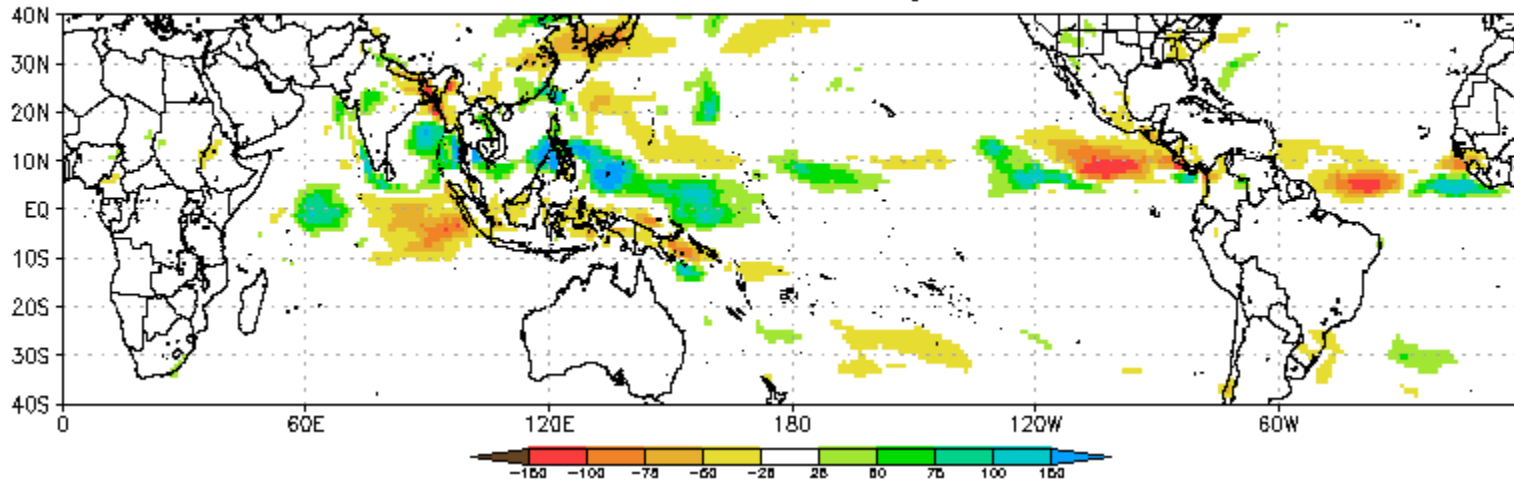


MJO activity shows up in recent OLR anomalies

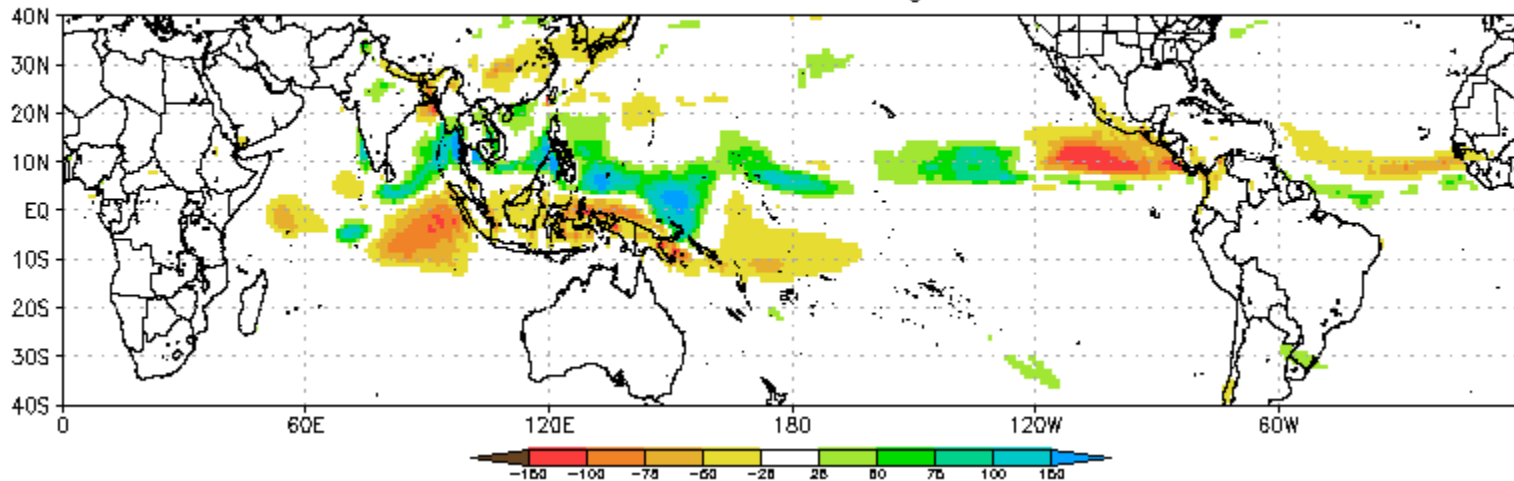
CFS forecasts are quite stationary



CFS Precipitation Anomalies (mm) Issued 09Jul2018
Week-1 Forecast Ending 17Jul2018

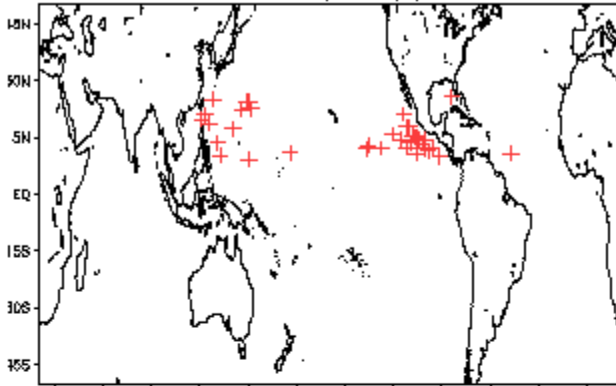


CFS Precipitation Anomalies (mm) Issued 09Jul2018
Week-2 Forecast Ending 24Jul2018

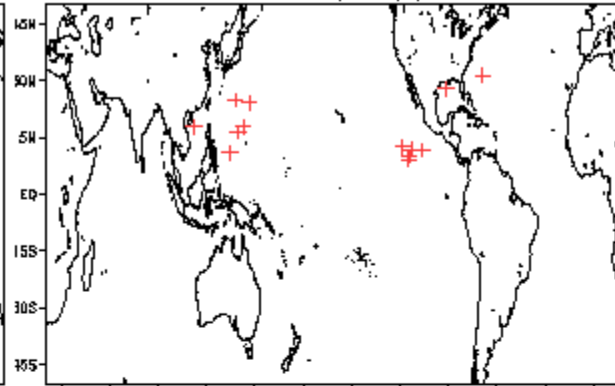


July Tropical Storm Formation by MJO phase

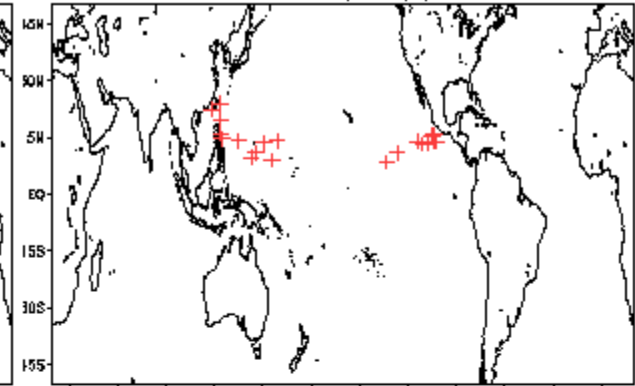
Phase 1 (144 days) 37 storms



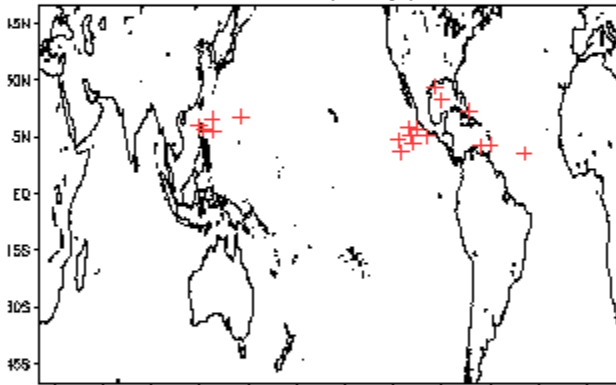
Phase 4 (40 days) 14 storms



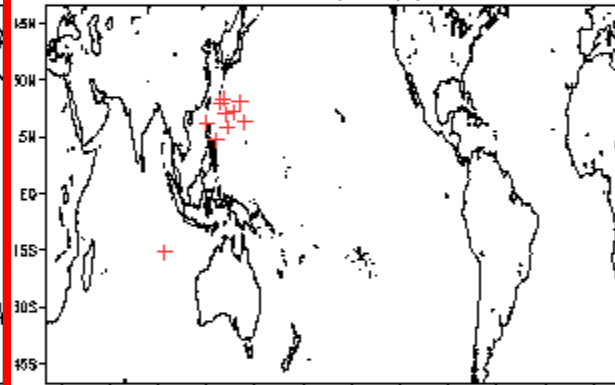
Phase 7 (87 days) 21 storms



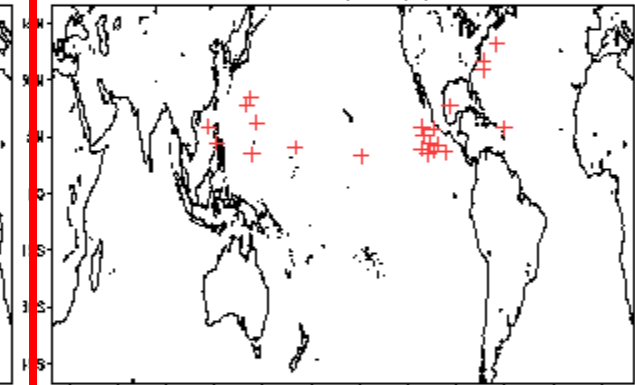
Phase 2 (74 days) 20 storms



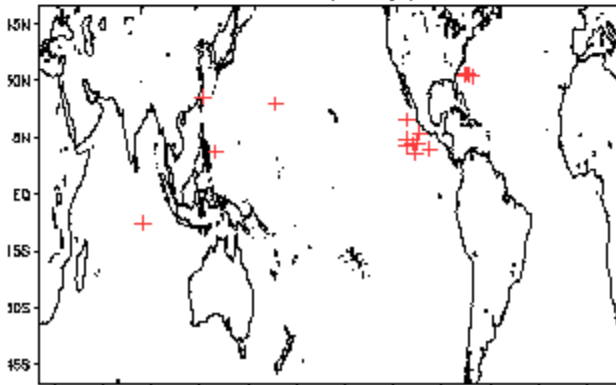
Phase 5 (63 days) 11 storms



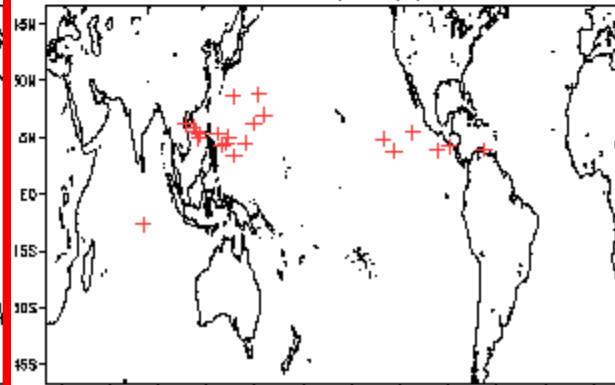
Phase 8 (61 days) 24 storms



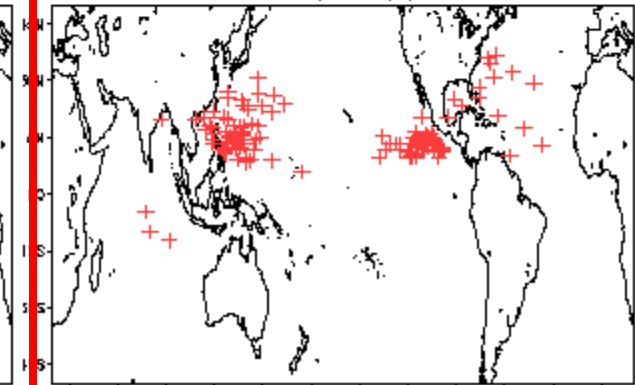
Phase 3 (49 days) 17 storms



Phase 6 (60 days) 23 storms



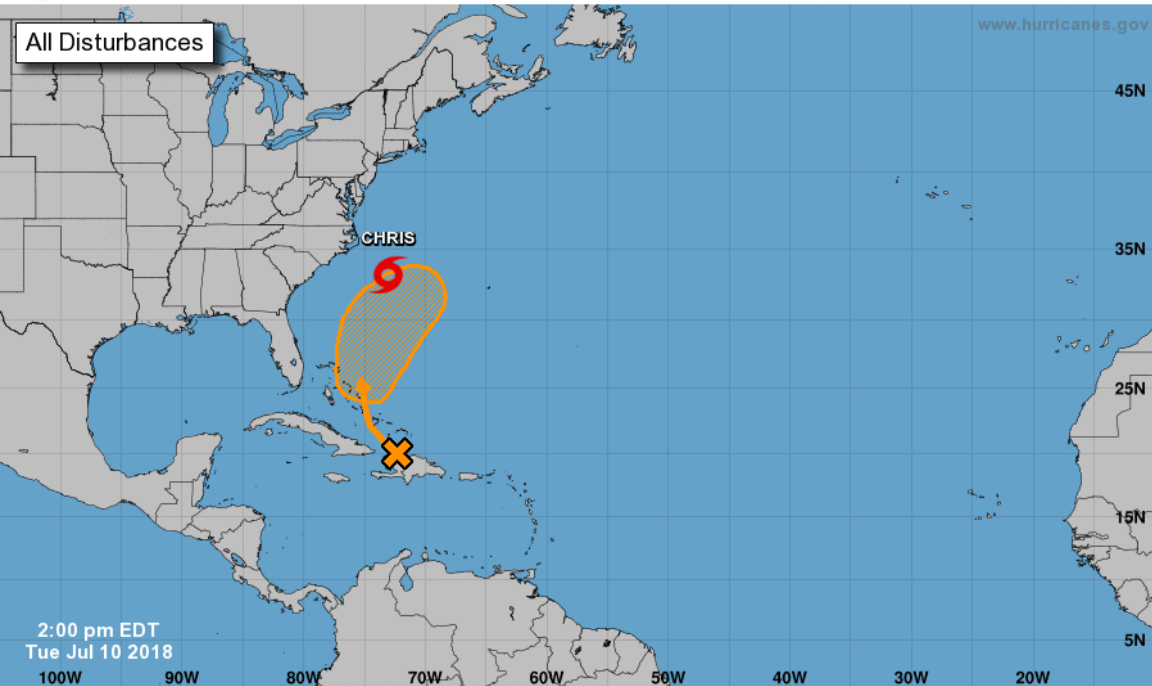
Null (480 days) 130 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



2:00 pm EDT
Tue Jul 10 2018

100W 90W 80W 70W 60W 50W 40W 30W 20W

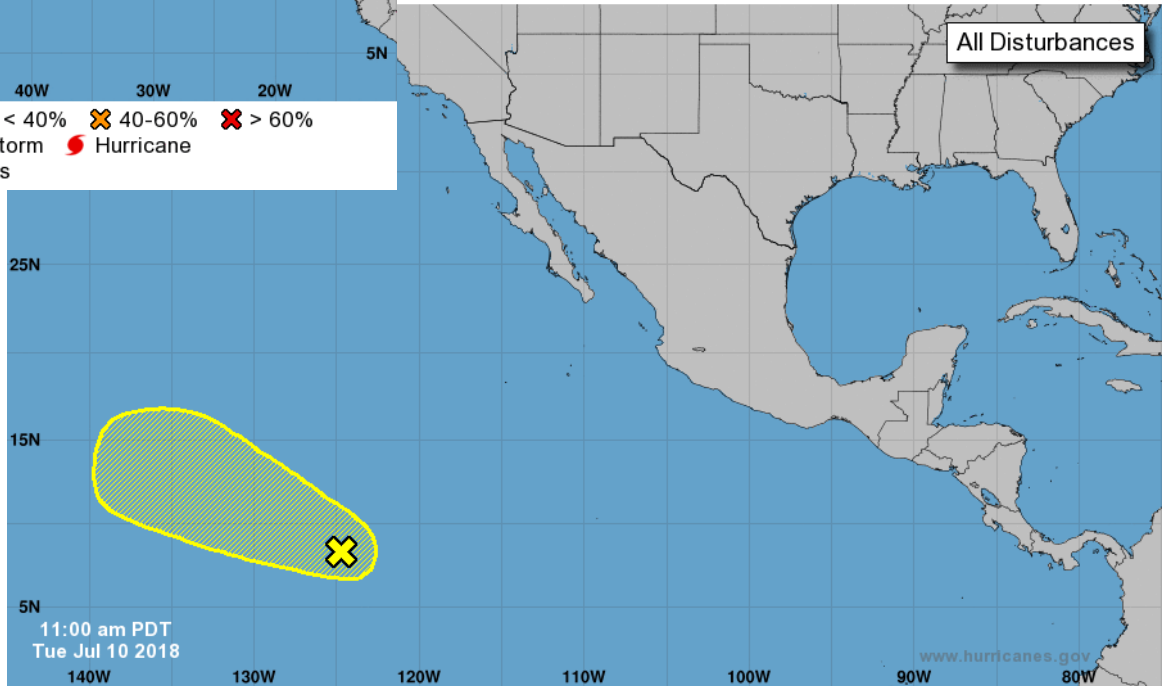
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



11:00 am PDT
Tue Jul 10 2018

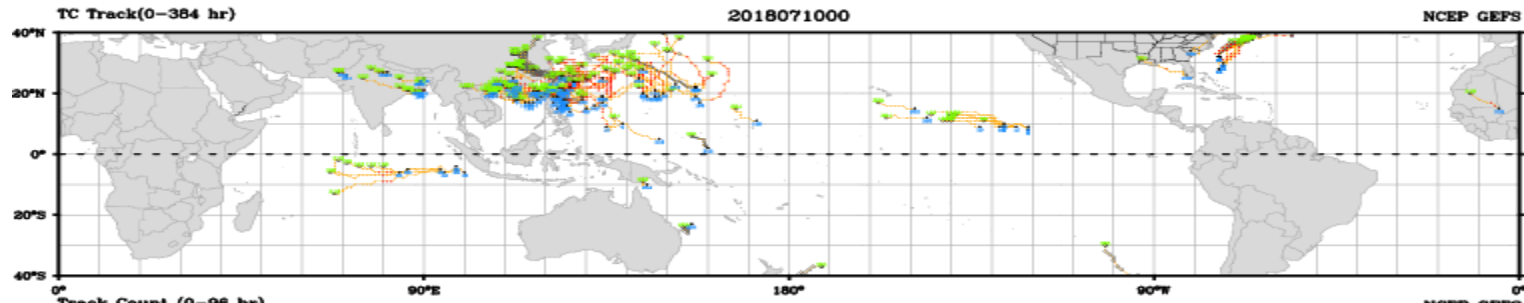
140W 130W 120W 110W 100W 90W 80W

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

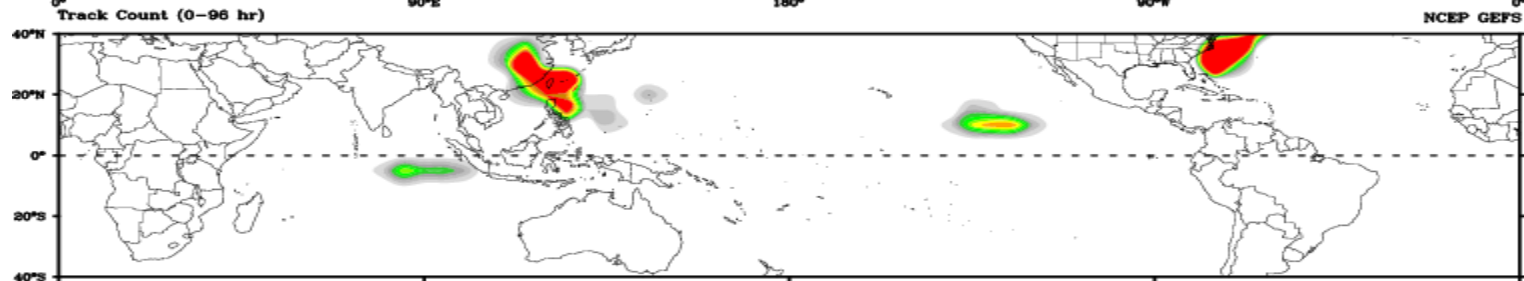
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

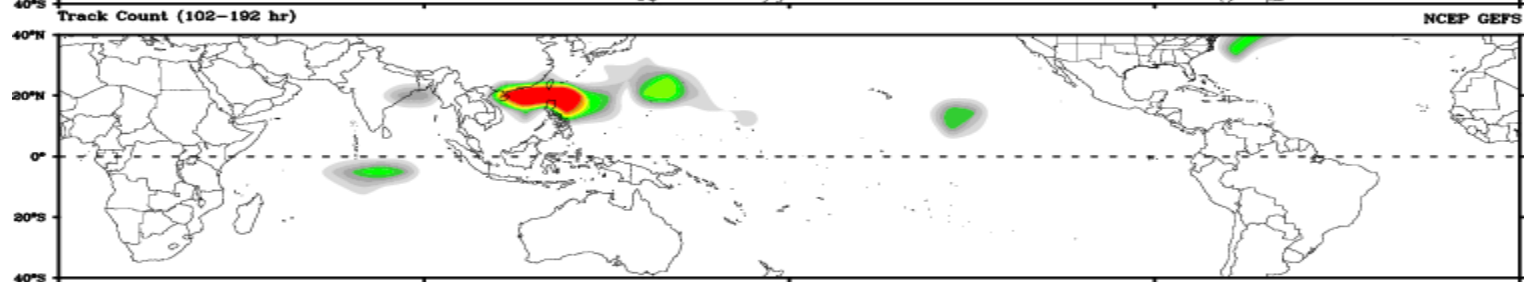
All Disturbances



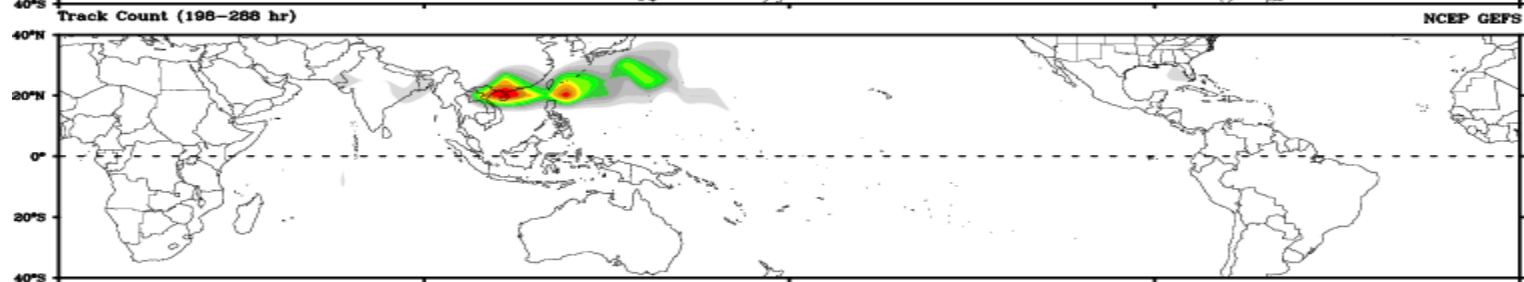
Days 1-4



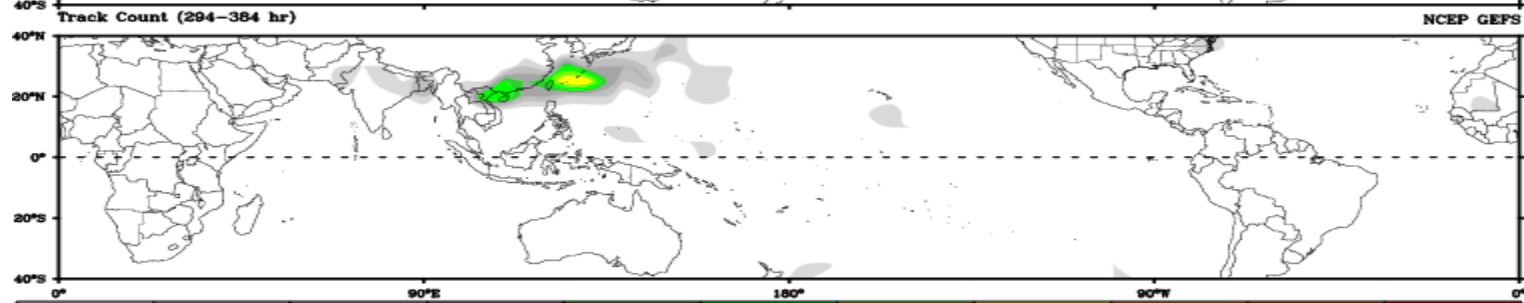
Day 5-8



Day 9-12

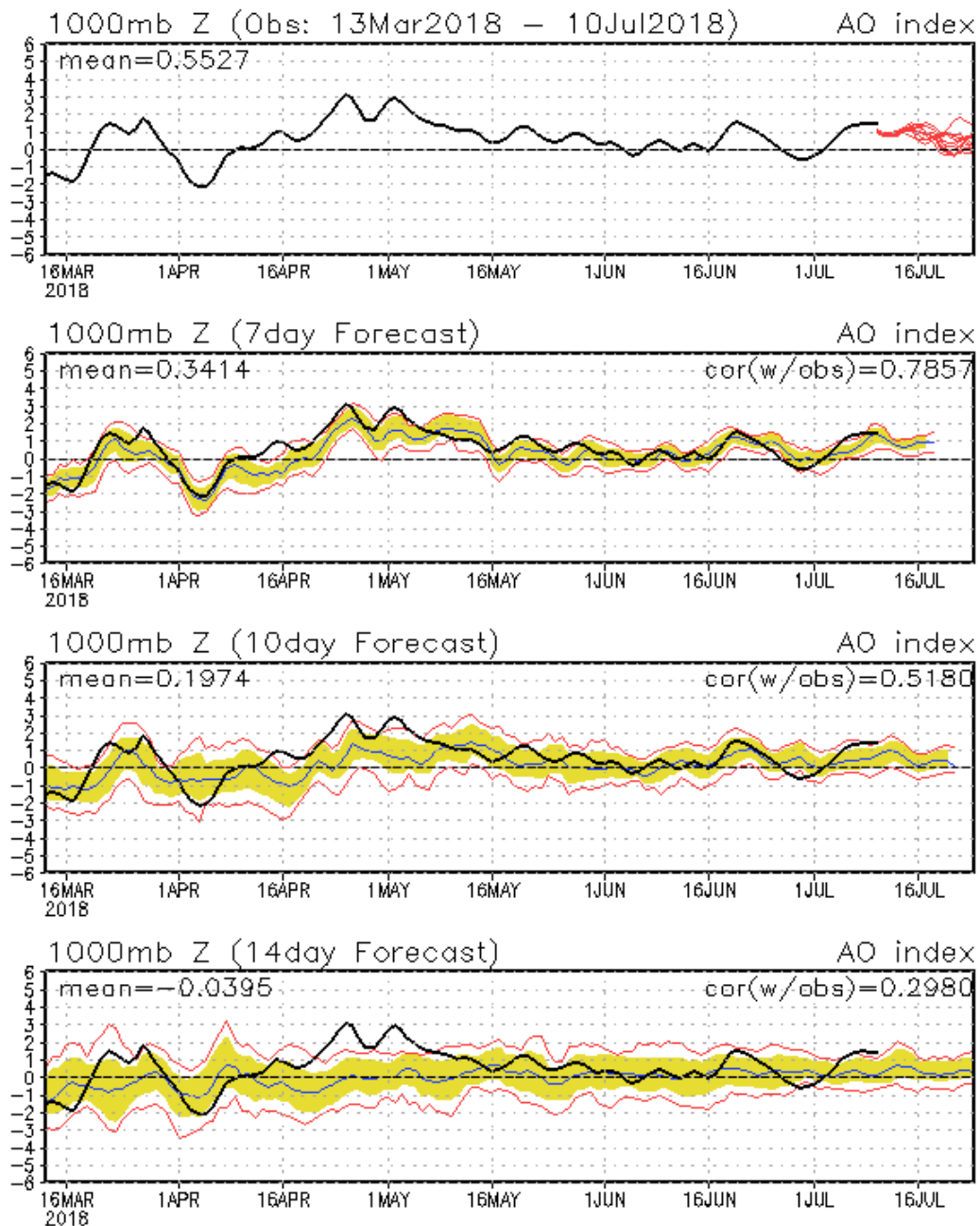


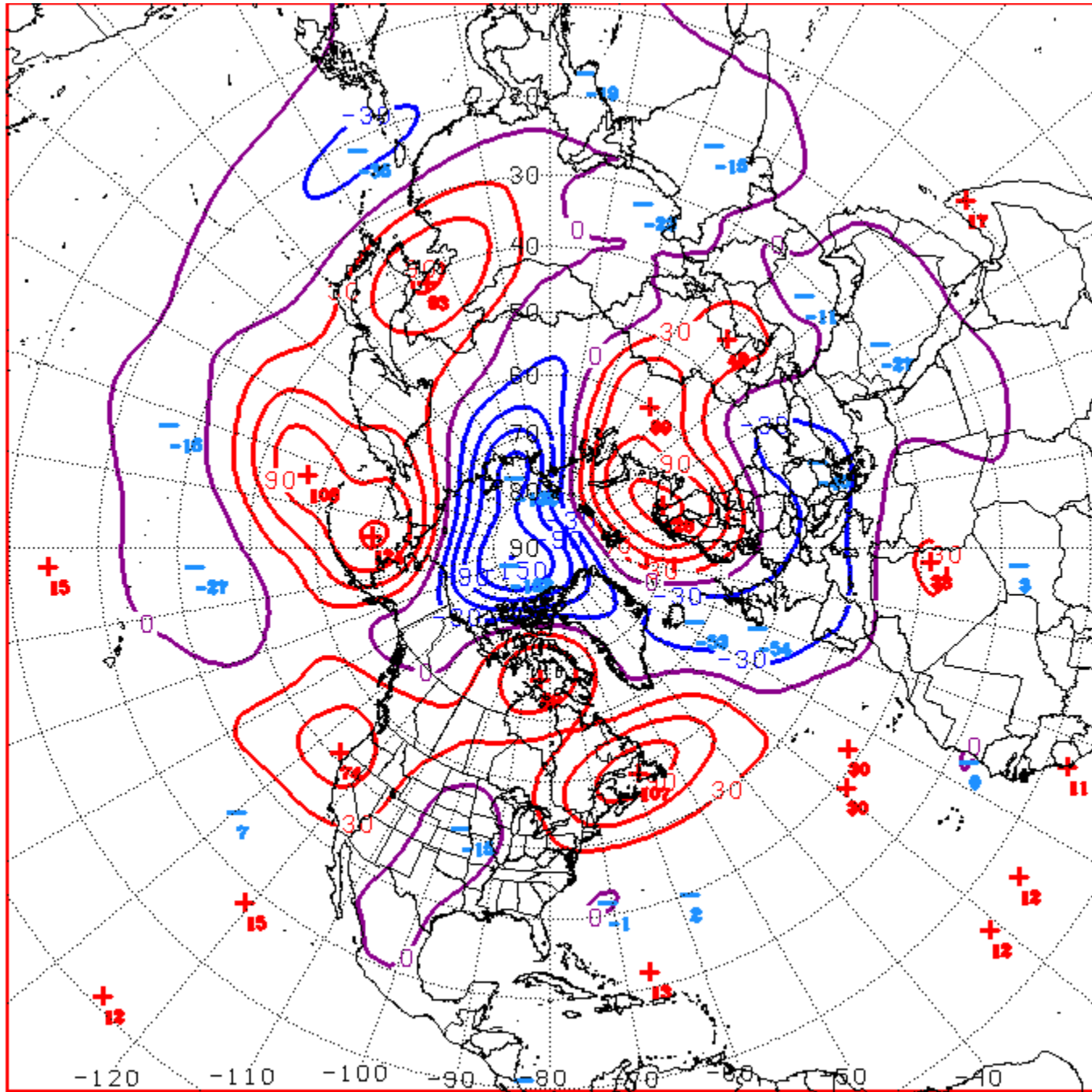
Day 13-15



Connections to U.S. Impacts

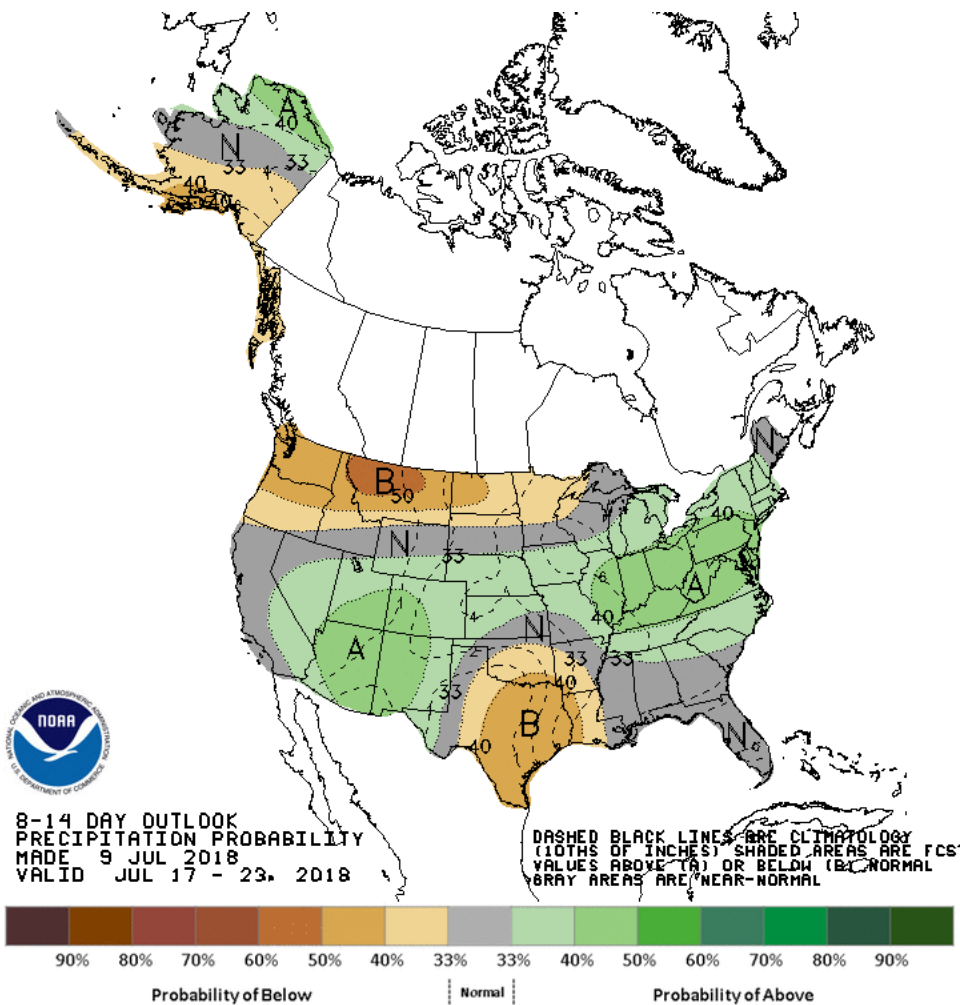
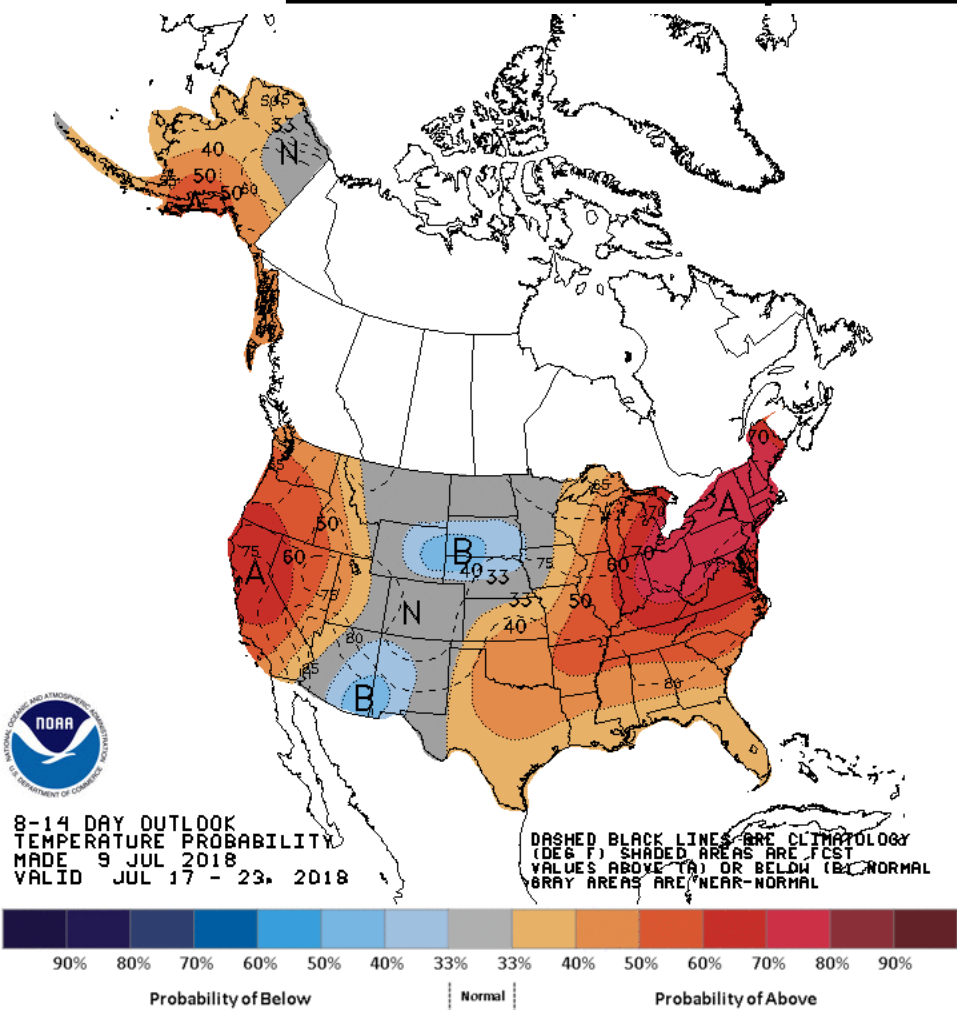
AO: Observed & ENSM forecasts





D+8 500 MB ANOMALIES FROM 06Z ENSM
 CPC MAP MADE JUL 10 2018 1227 UTC CNTD JUL 18 2018

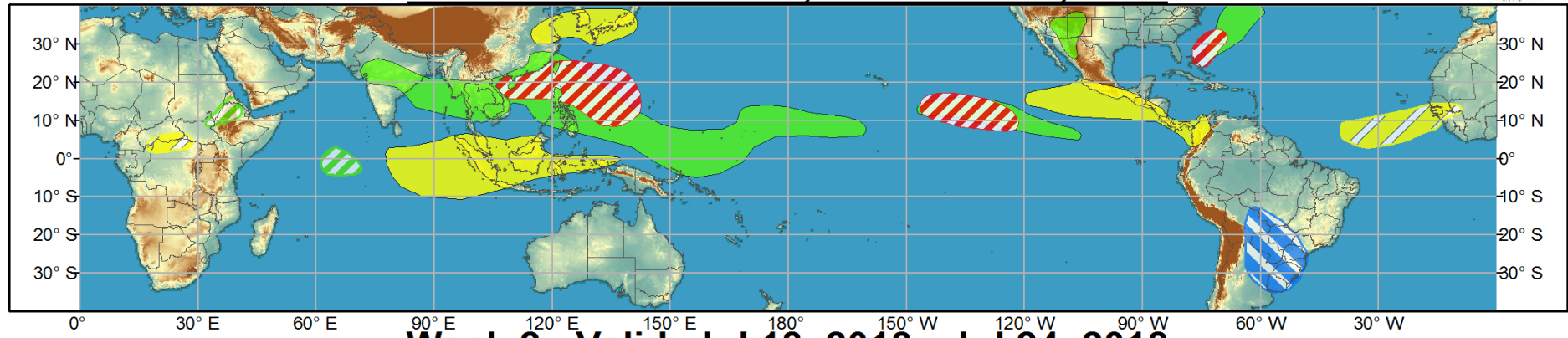
Week 2 – Temperature and Precipitation



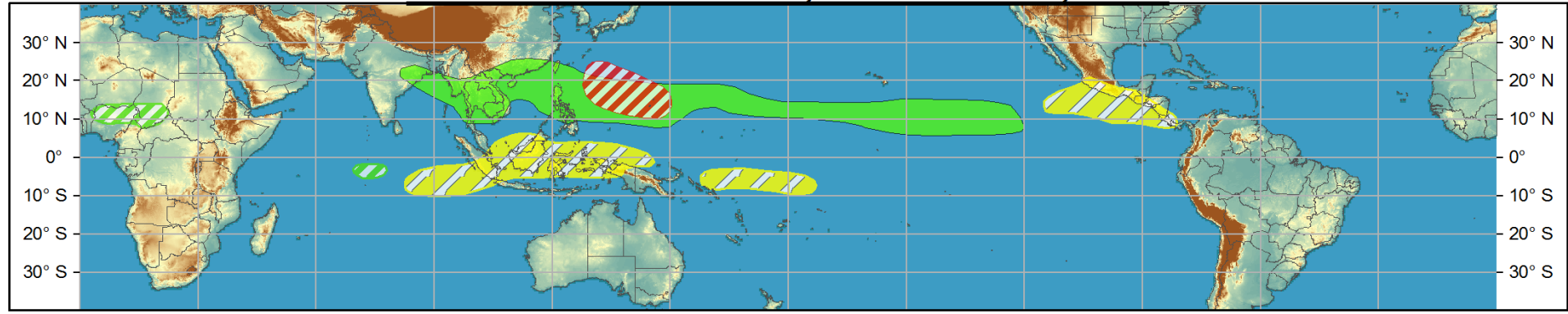


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