

# Global Tropics Hazards And Benefits Outlook

8/7/2018

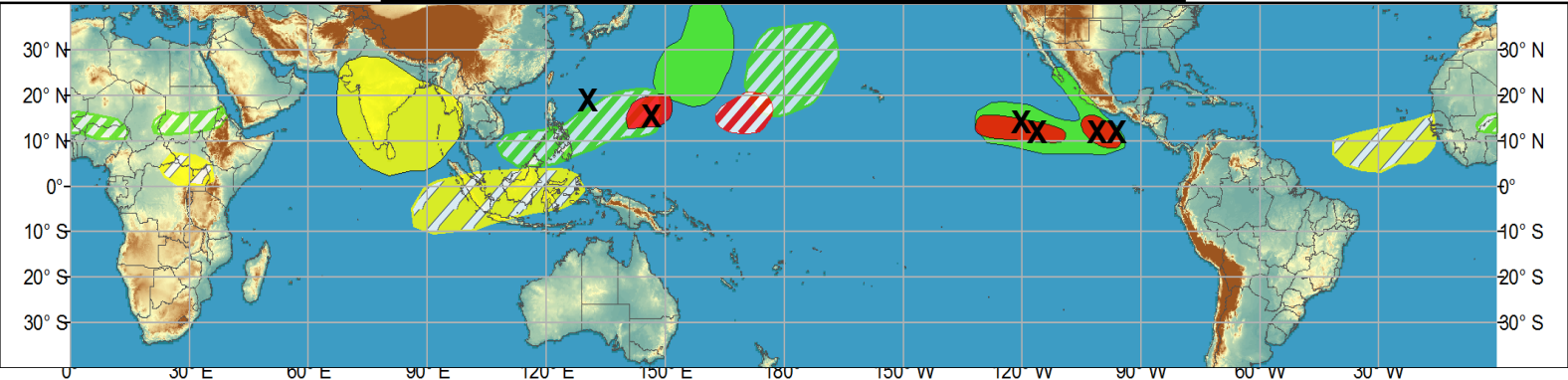
Adam Allgood

## 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

**Week 1 - Valid: Aug 01, 2018 - Aug 07, 2018**



**Week 2 - Valid: Aug 01, 2018 - Aug 07, 2018**

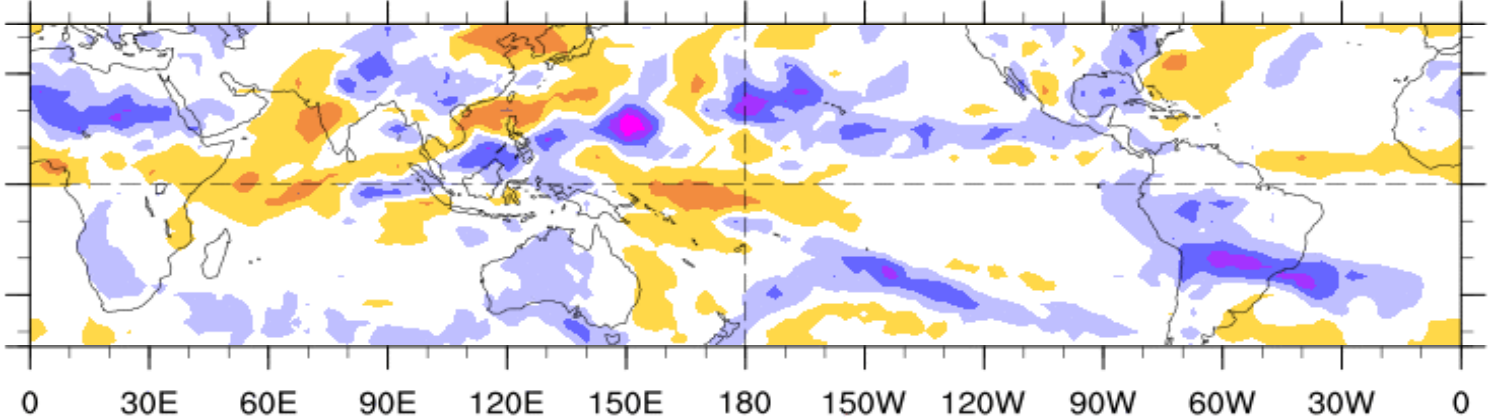


**7-Day Average OLR Anomaly**

**2018/07/30 - 2018/08/05**

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 convective pattern broadly resembles a West Pacific MJO event, but there has been little eastward propagation of the signal.
- Dynamical models generally depict weak MJO evolution. The GEFS tracks a robust Kelvin Wave to the Indian Ocean and strengthens the signal, while the ECMWF maintains a weak signal (monthly ECMWF brings depicts renewed West Pacific signal in late August)

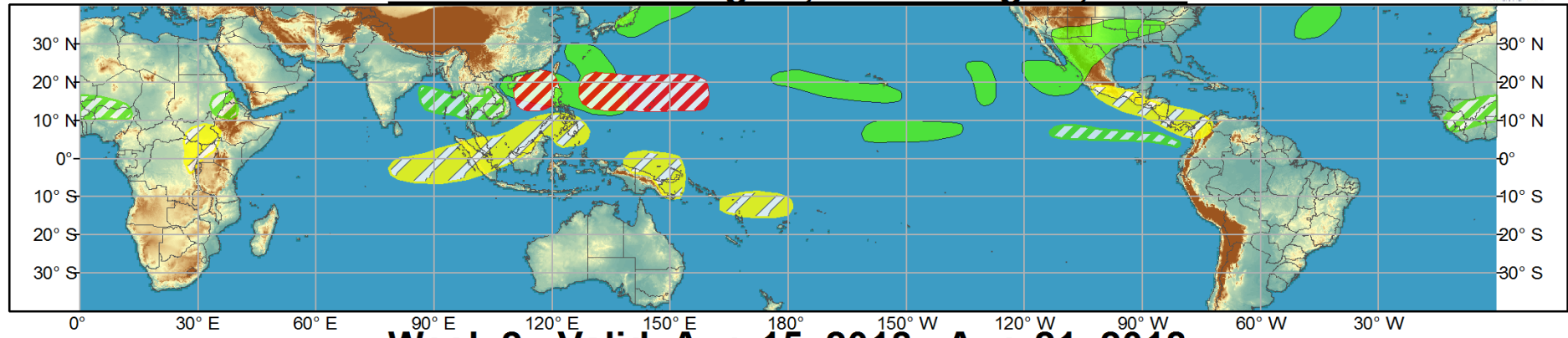
## **Extratropics:**

- A recurving Typhoon Shanshan may help feed into troughing near Alaska, resulting in wet conditions and below-average temperatures.
- Weak MJO and the potential for continued West Pacific activity does not favor an uptick in Atlantic TC activity during late August.

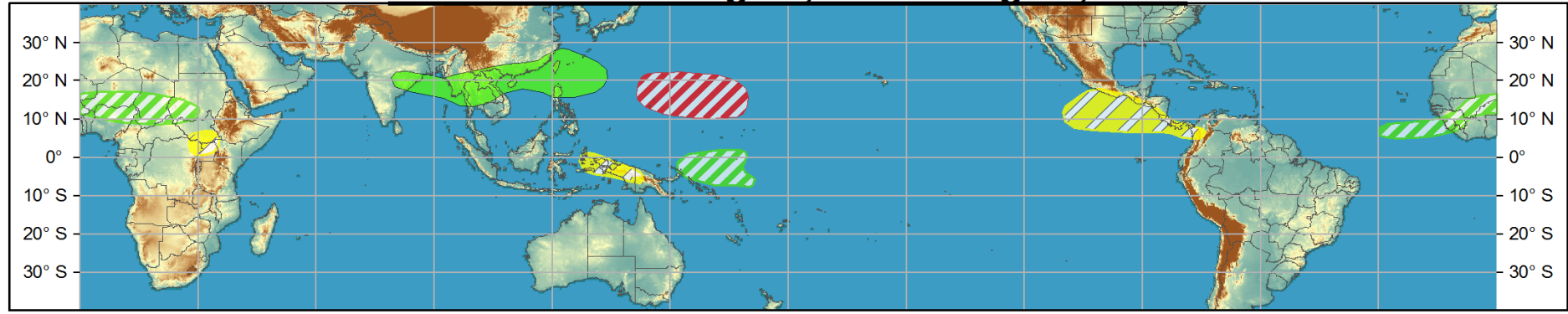


# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

## Week 1 - Valid: Aug 08, 2018 - Aug 14, 2018



## Week 2 - Valid: Aug 15, 2018 - Aug 21, 2018



**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: 08/07/2018**  
**Forecaster: Allgood**

**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

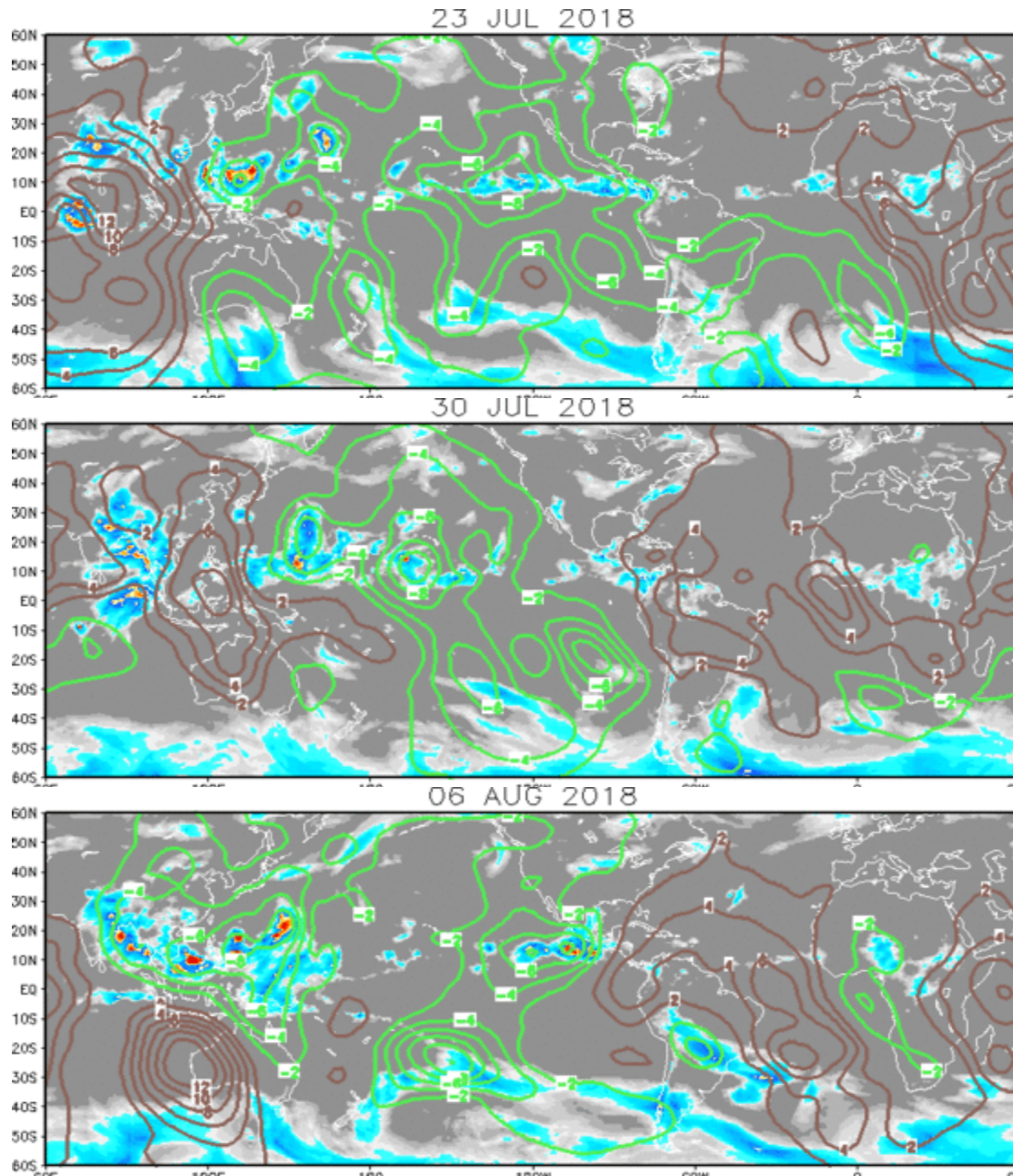
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-1 pattern, enhanced convection over the Pacific.

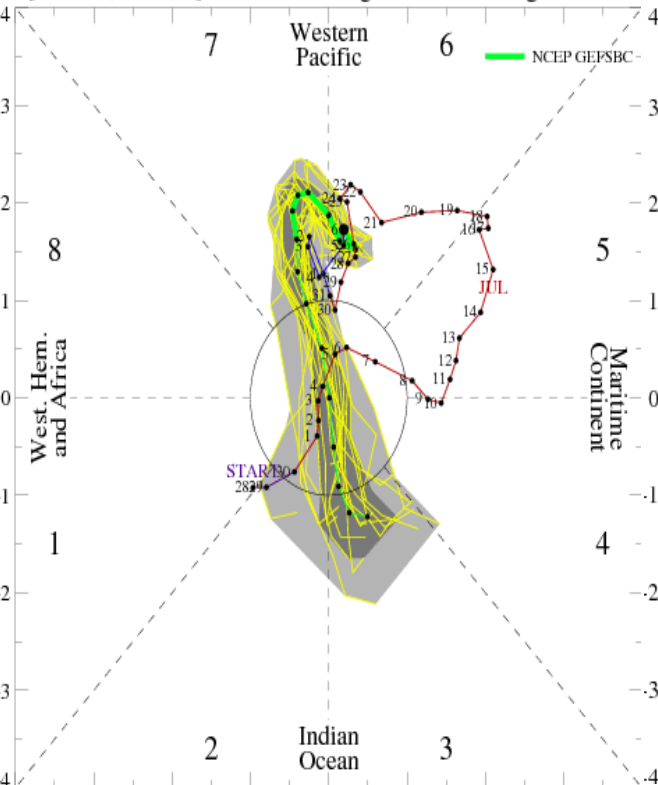
Slightly less organized pattern, note enhanced signal remains stationary over the Pacific.

Convectively coupled Kelvin wave reaches the Maritime Continent. East Pacific enhancement (split signals?)



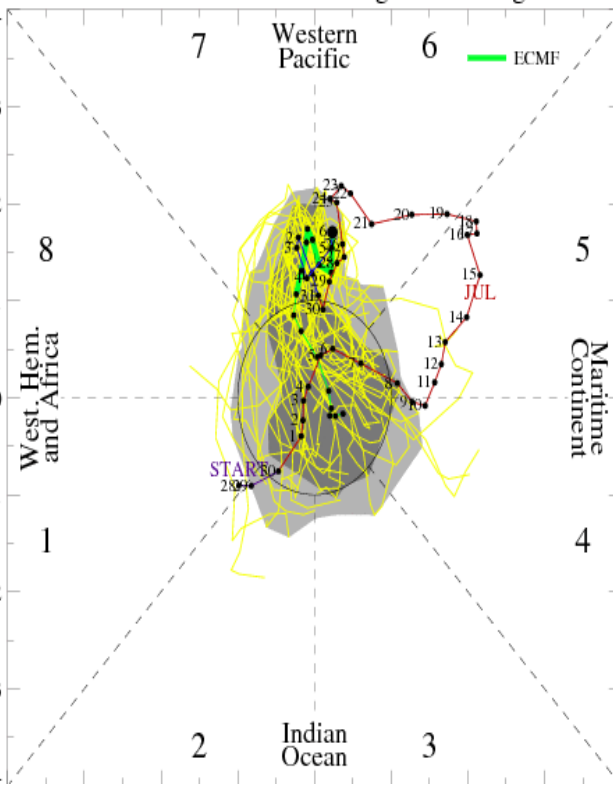
# MJO Observation/Forecast

[RMM1, RMM2] forecast for Aug-07-2018 to Aug-21-2018



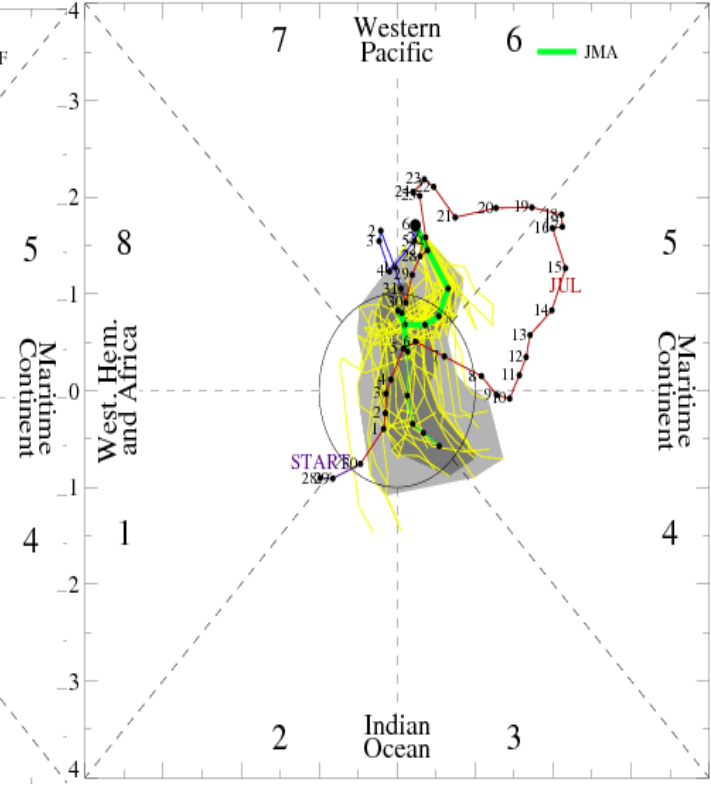
GEFS

MJO Index Forecast for 07 Aug 2018-21 Aug 2018



ECMWF

MJO Index Forecast for 07 Aug 2018-15 Aug 2018



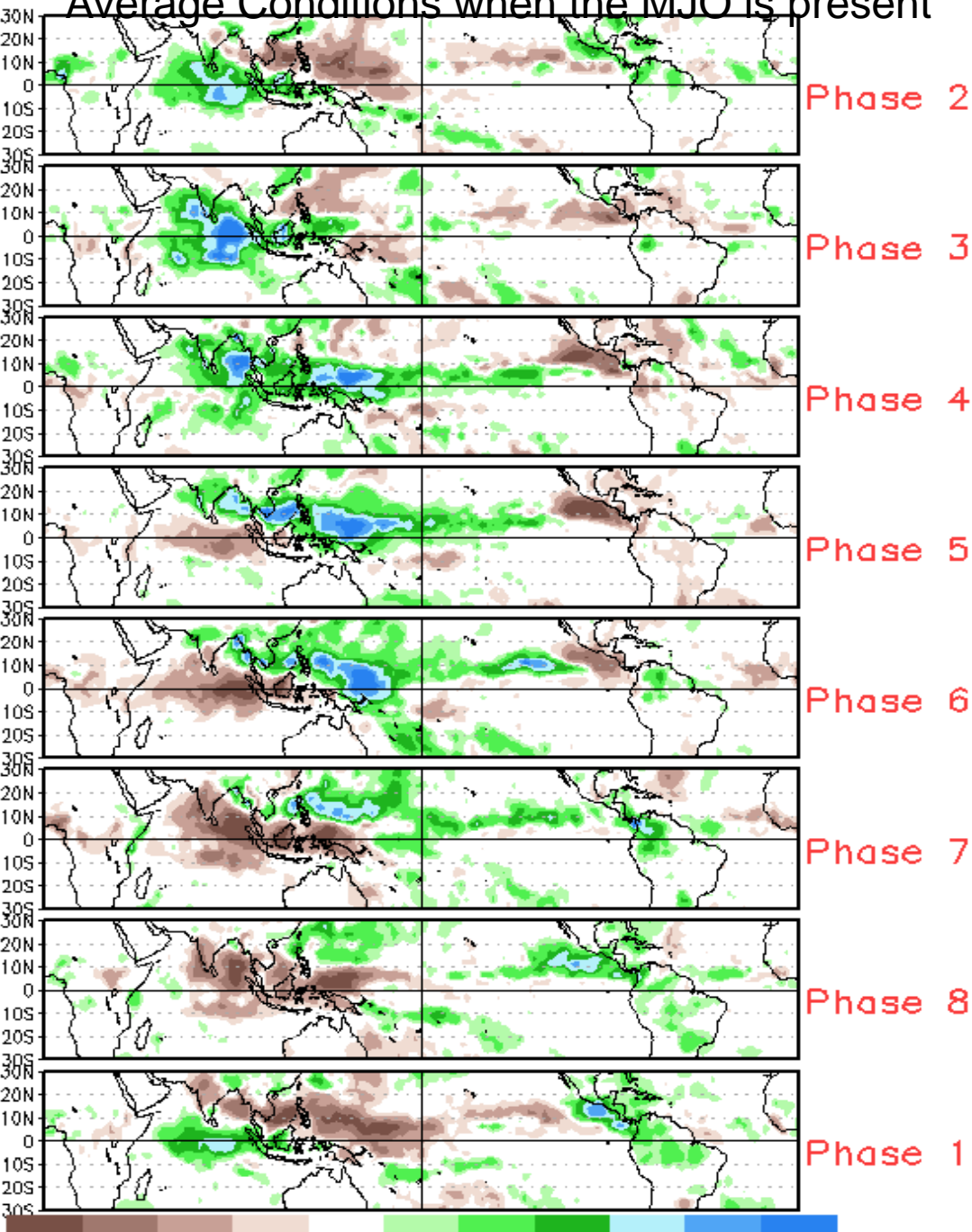
JMA

GEFS – weak signal crosses the Western Hemisphere, intensification over the Indian Ocean (tracking Kelvin wave?)

ECMWF – Weak signal

JMA – weak signal, hint of Kelvin wave?

# Average Conditions when the MJO is present

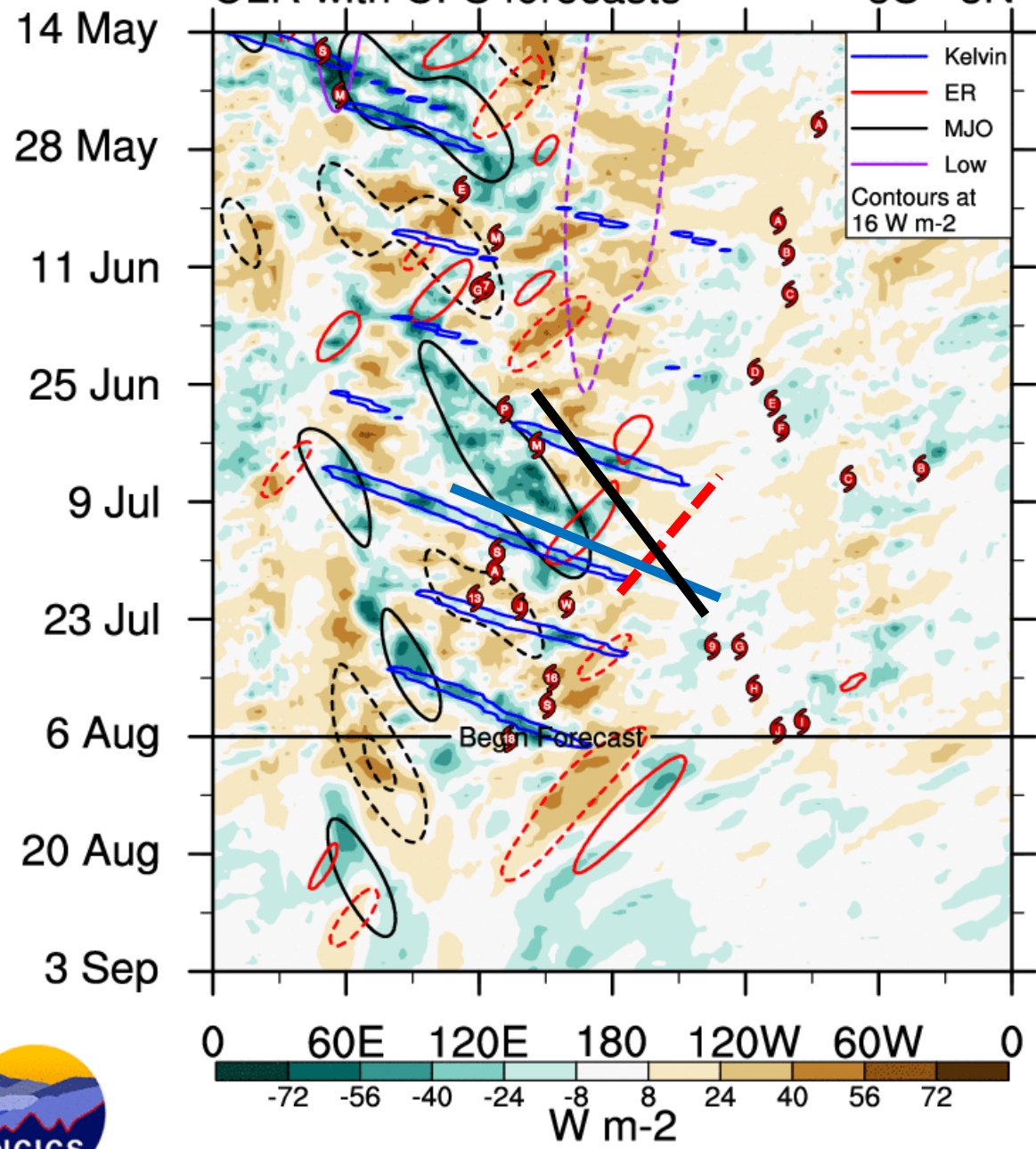


CAVEAT: These panels are representative of robust MJO events.



# OLR with CFS forecasts

5S - 5N

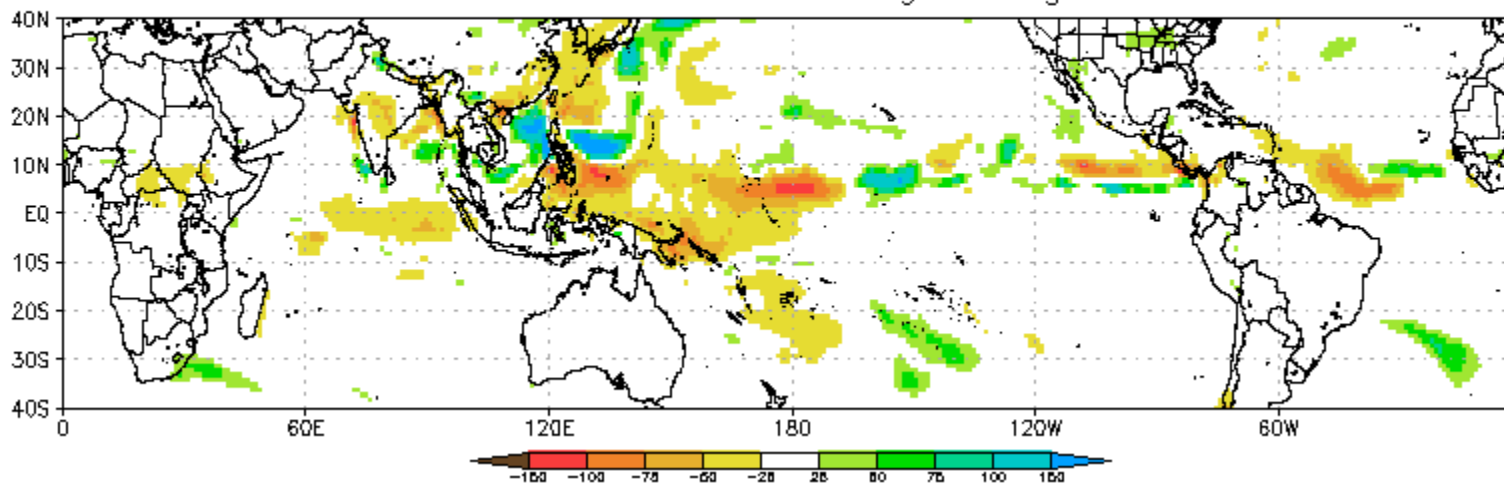


**Kelvin wave emerging over the West Pacific is the strongest signal**

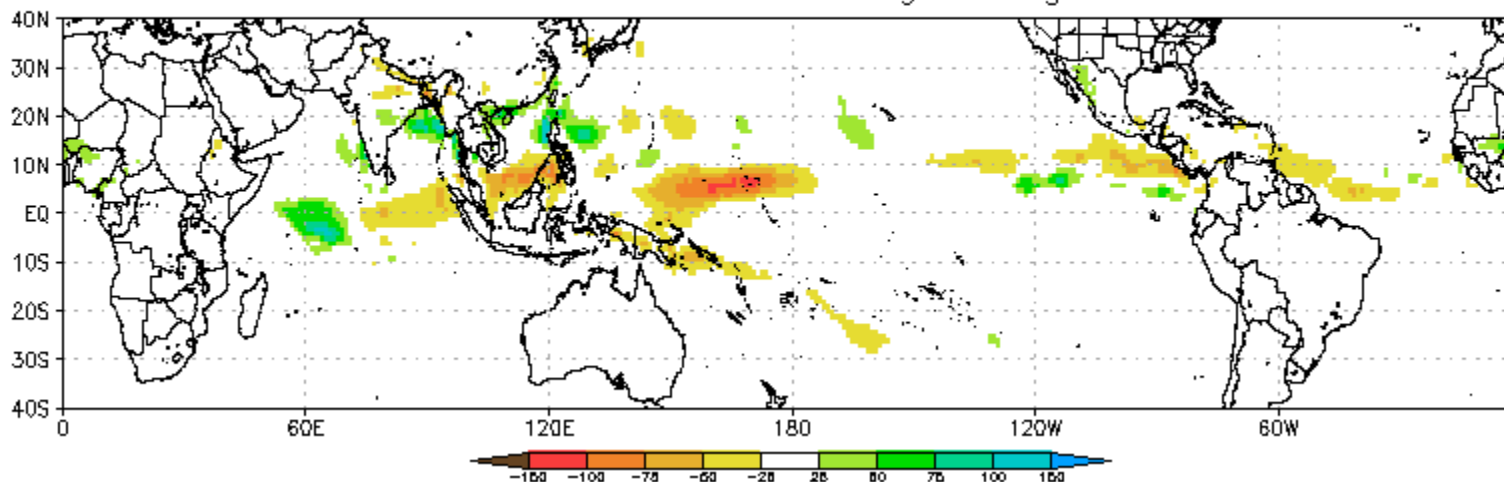




CFS Precipitation Anomalies (mm) Issued 06Aug2018  
Week-1 Forecast Ending 14Aug2018

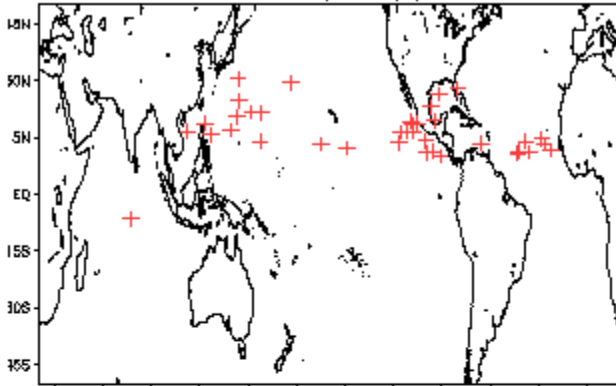


CFS Precipitation Anomalies (mm) Issued 06Aug2018  
Week-2 Forecast Ending 21Aug2018

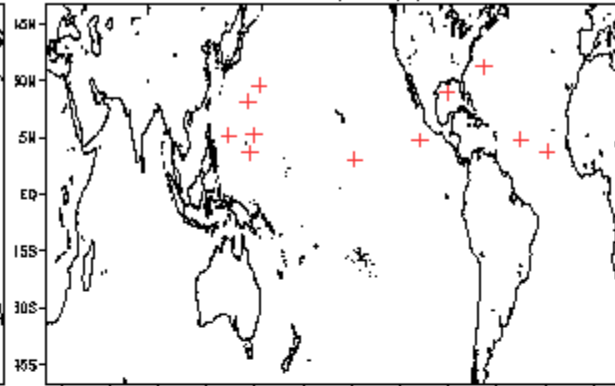


# August Tropical Storm Formation by MJO phase

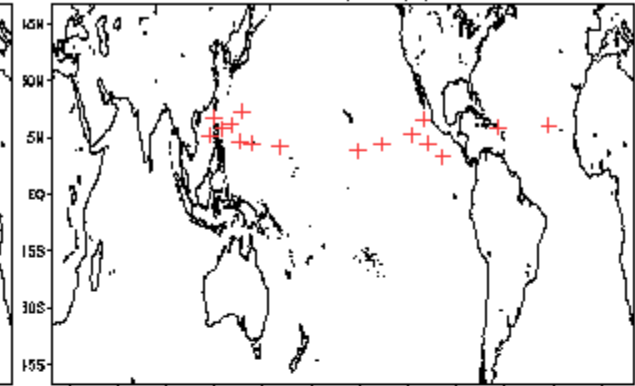
Phase 1 (101 days) 38 storms



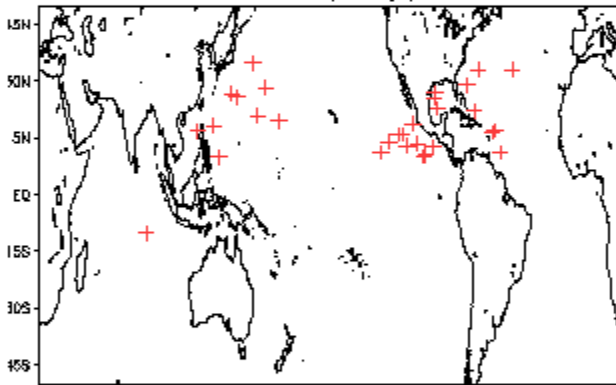
Phase 4 (40 days) 12 storms



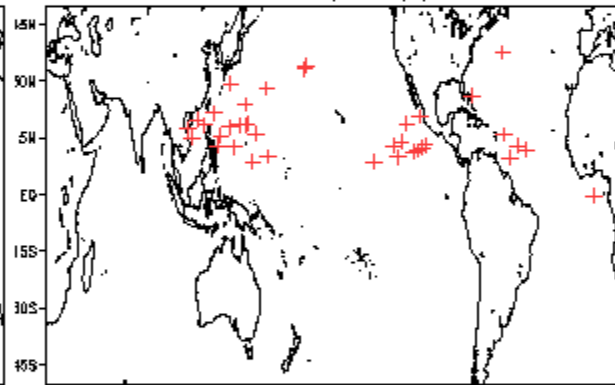
Phase 7 (43 days) 17 storms



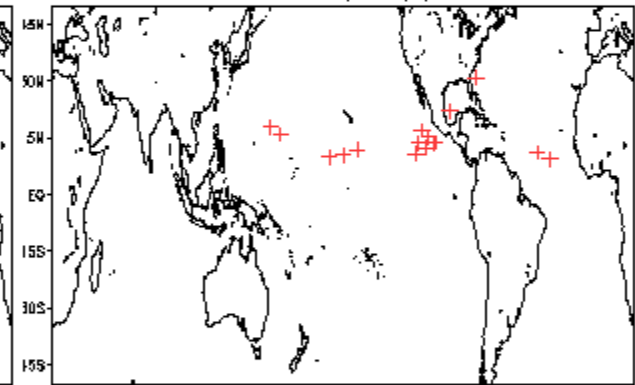
Phase 2 (79 days) 31 storms



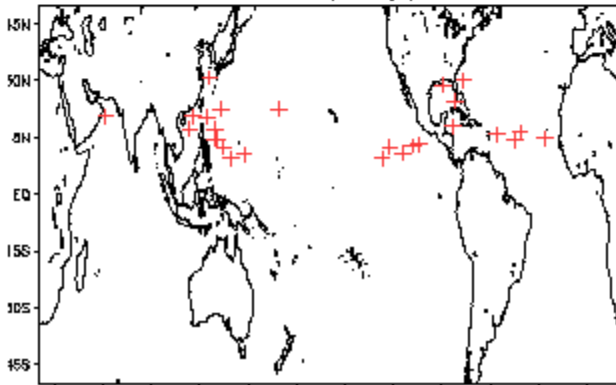
Phase 5 (117 days) 40 storms



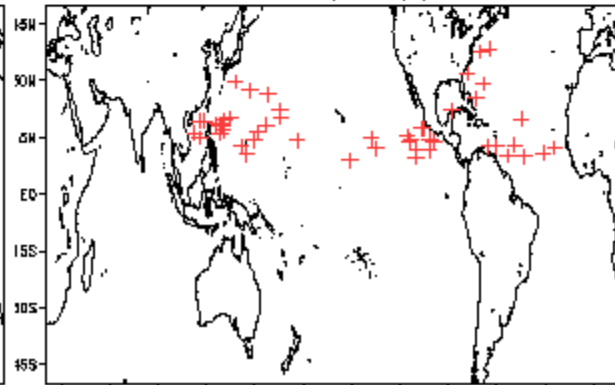
Phase 8 (25 days) 17 storms



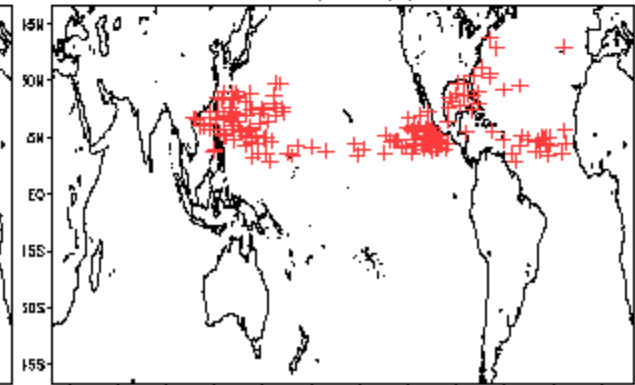
Phase 3 (51 days) 27 storms



Phase 6 (101 days) 50 storms



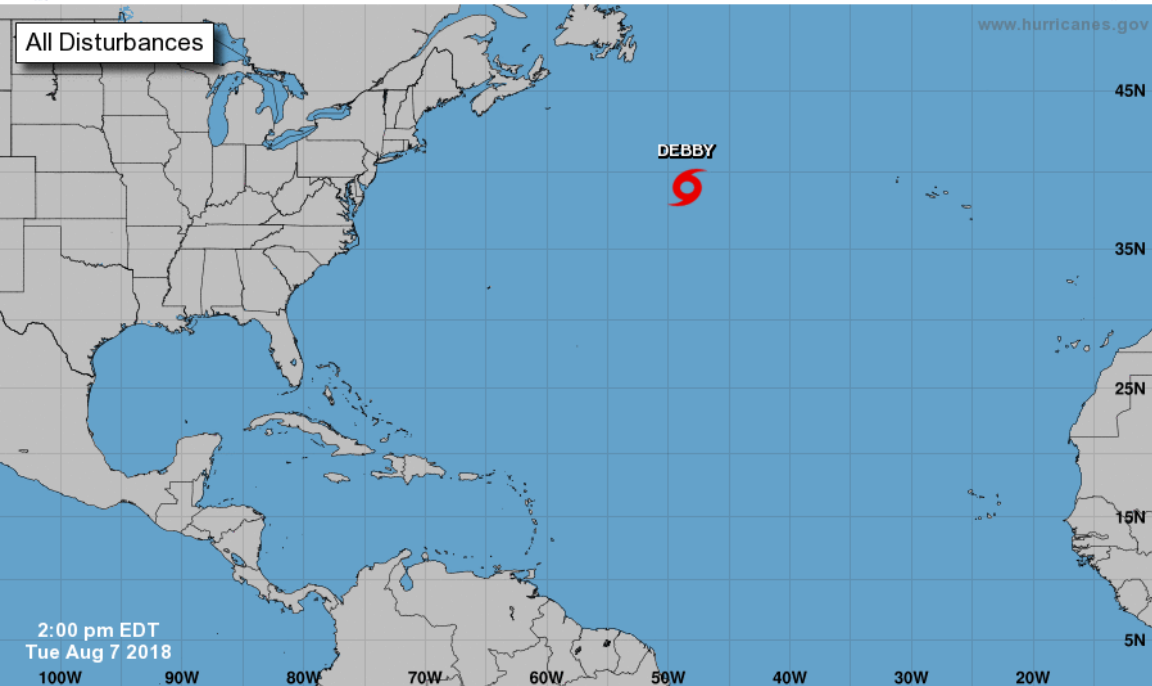
Null (466 days) 189 storms





# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



2:00 pm EDT  
Tue Aug 7 2018

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

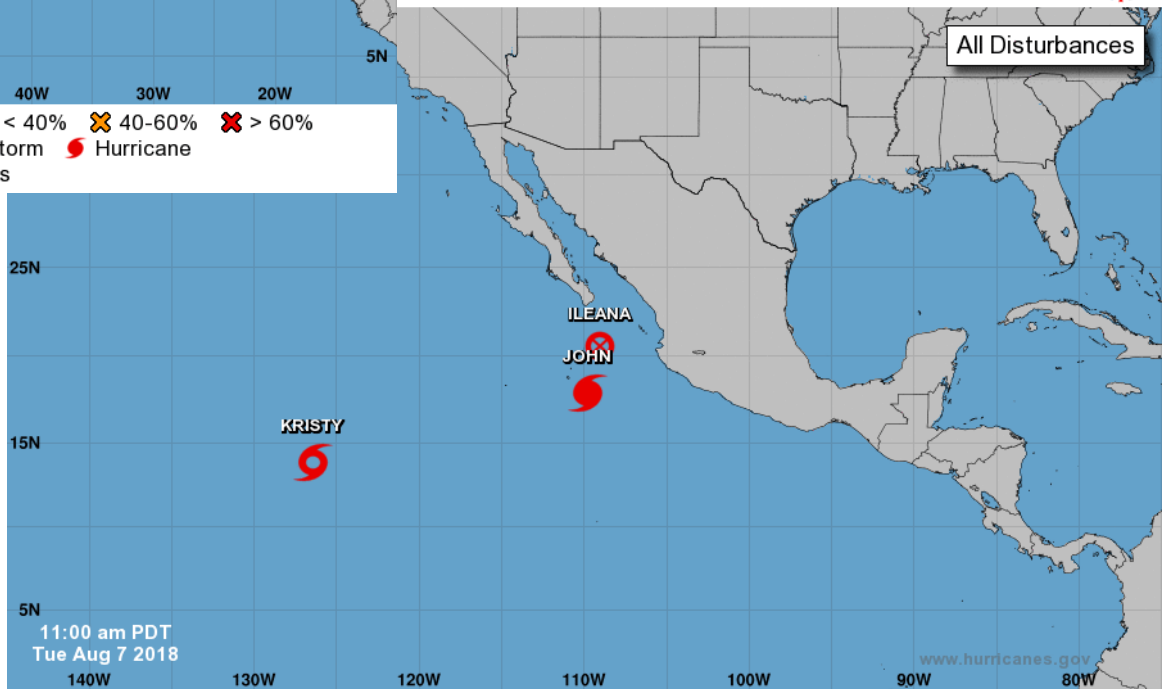
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

# Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



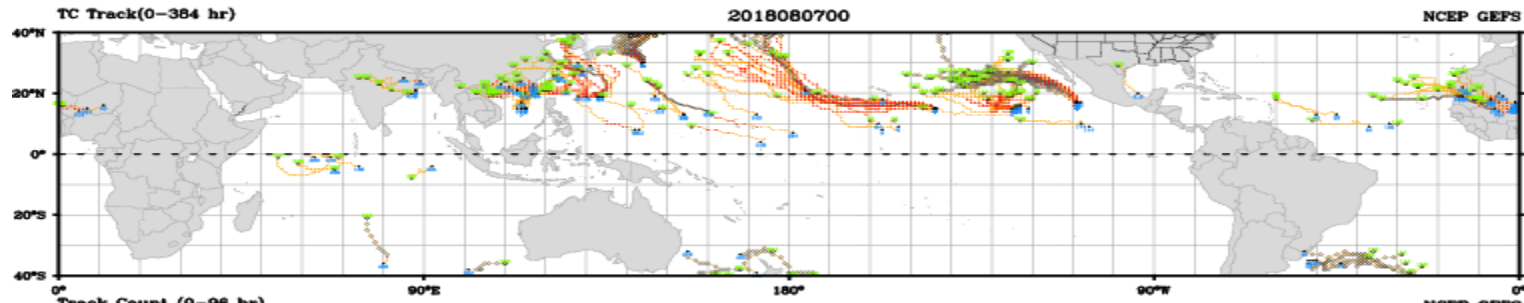
11:00 am PDT  
Tue Aug 7 2018

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

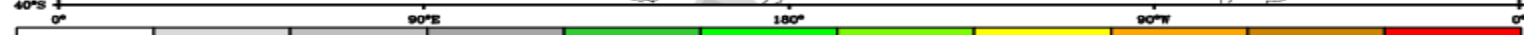
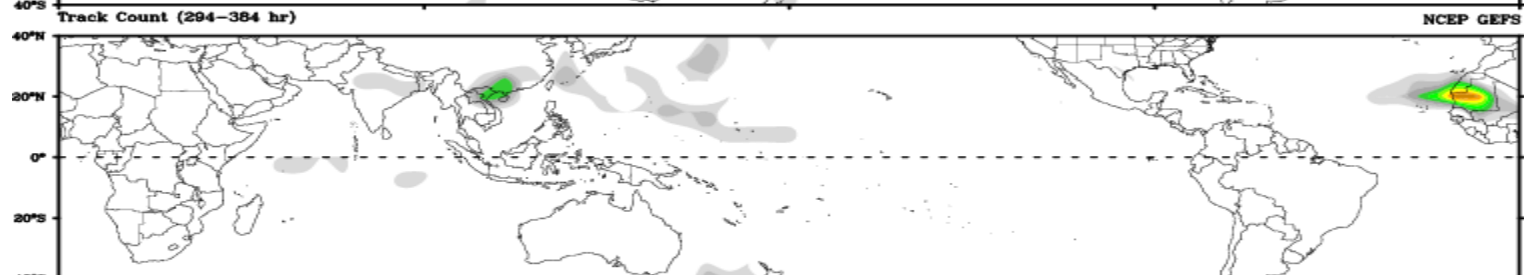
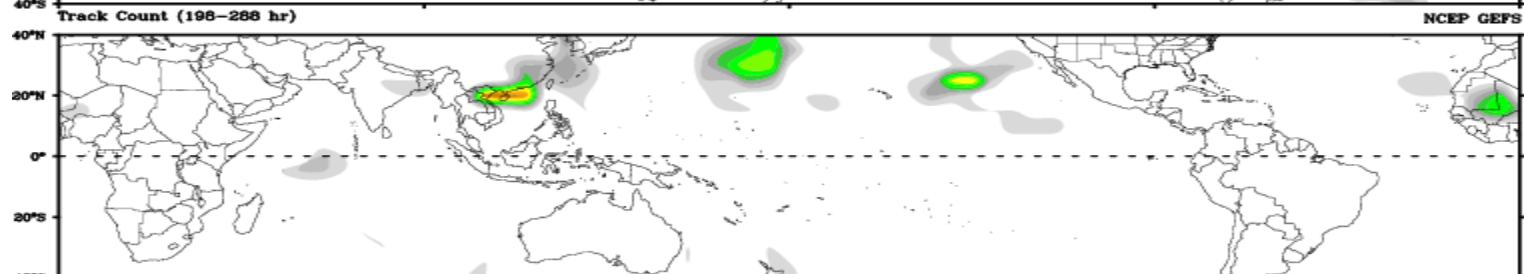
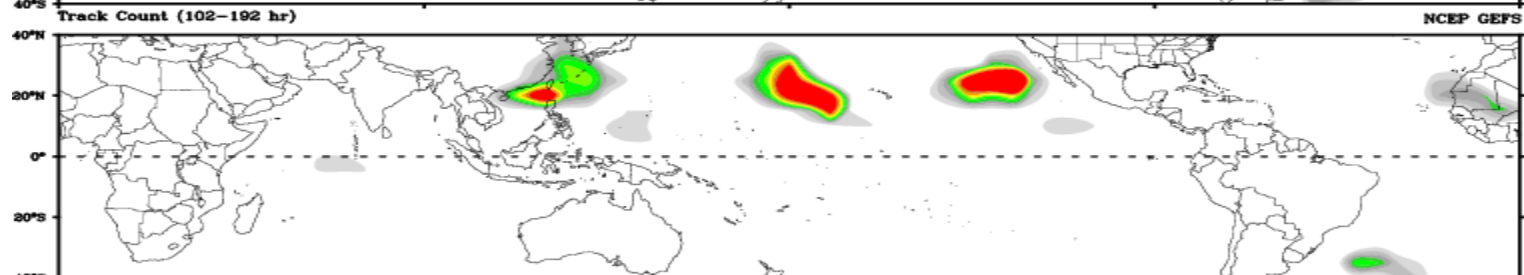
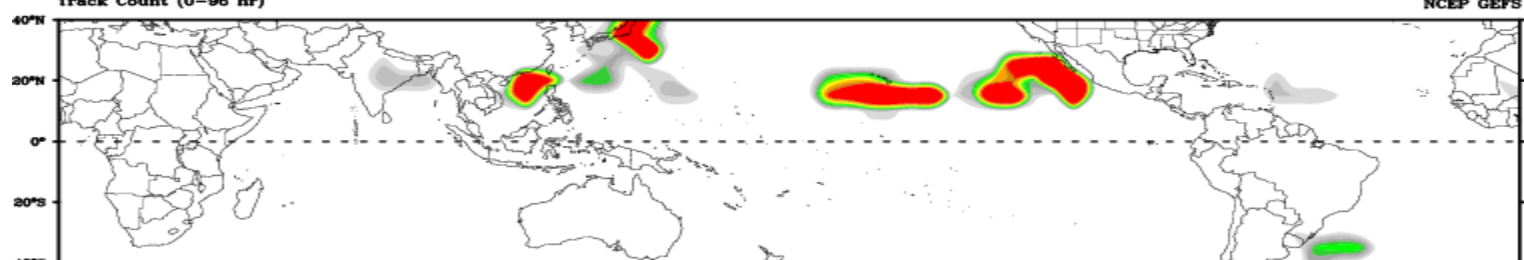


Days 1-4

Day 5-8

Day 9-12

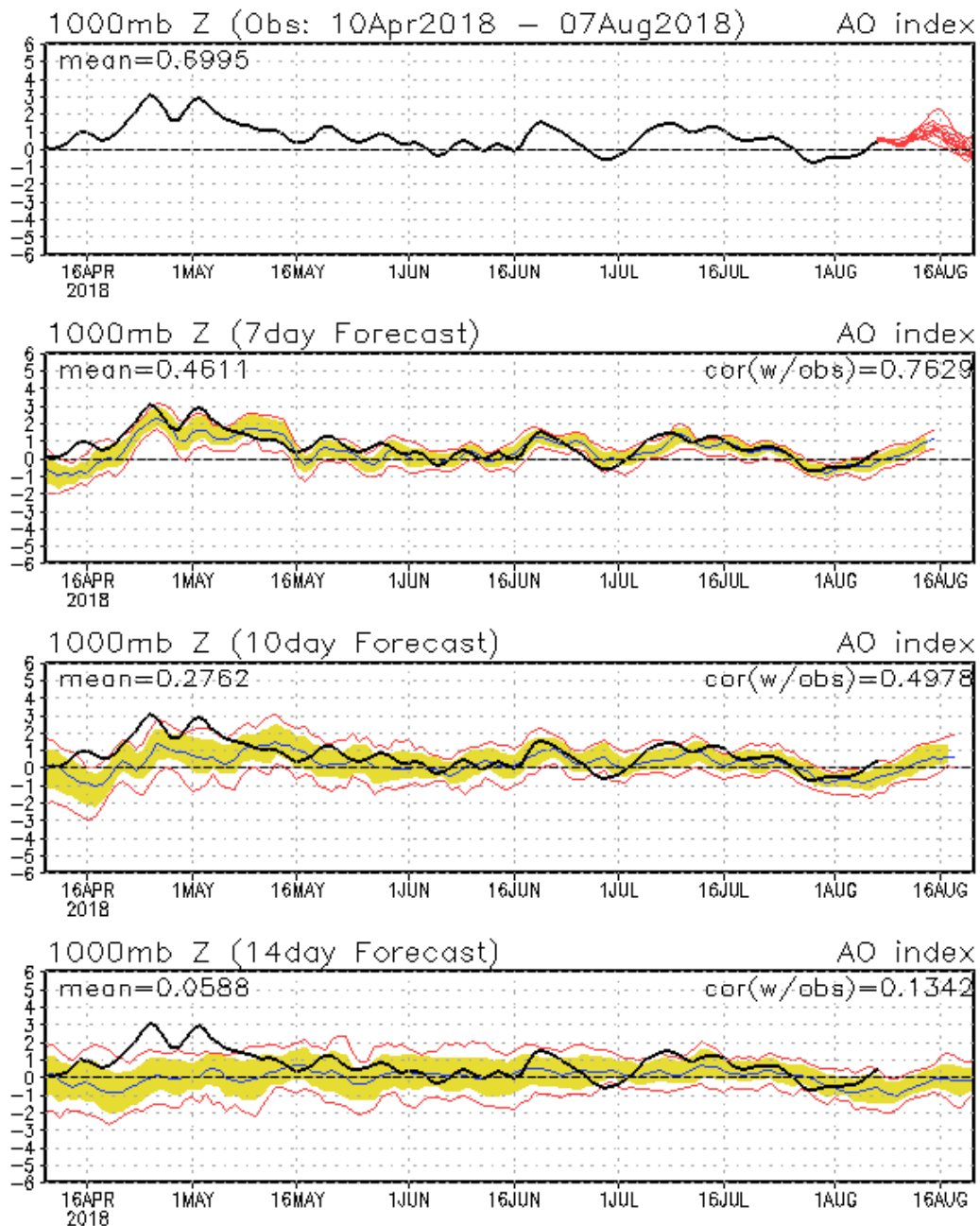
Day 13-15

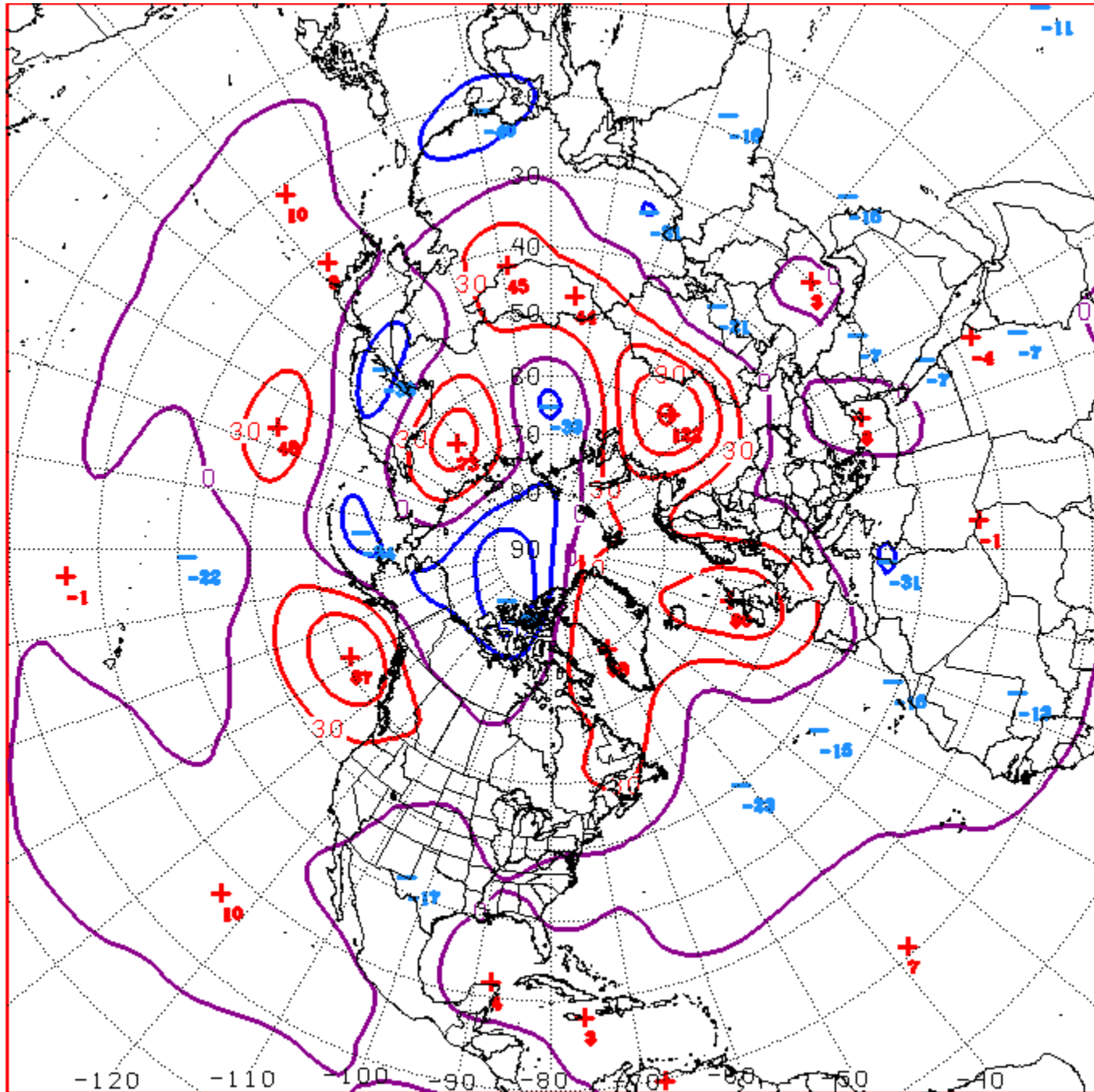




# Connections to U.S. Impacts

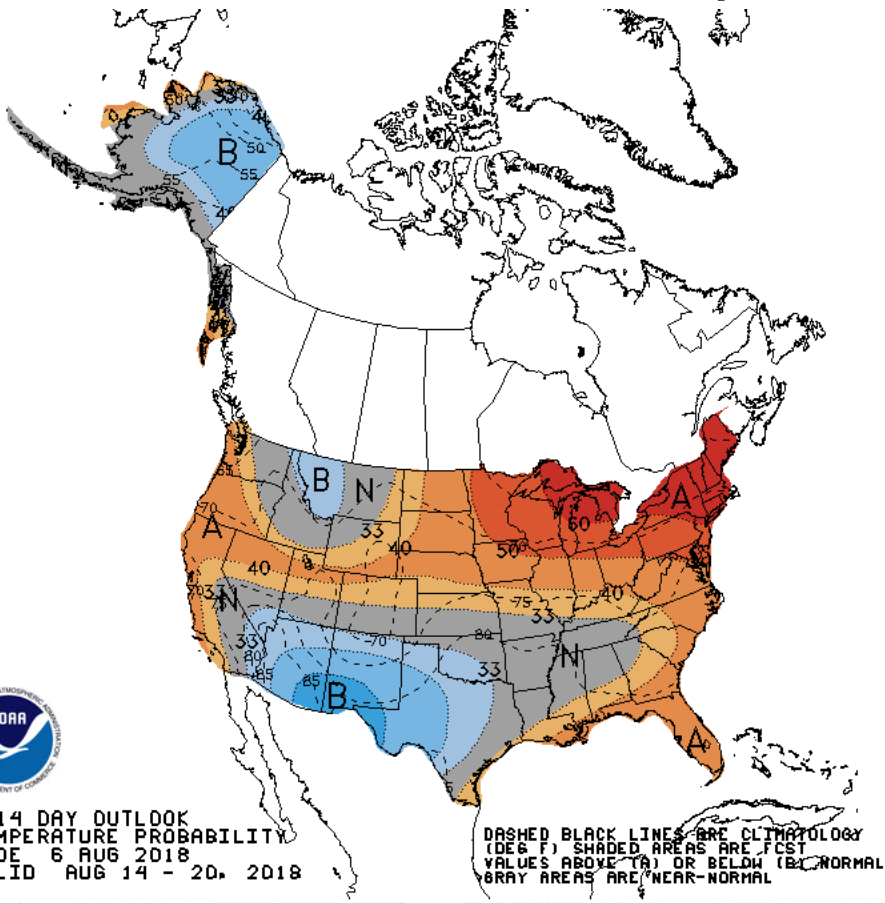
## AO: Observed & ENSM forecasts



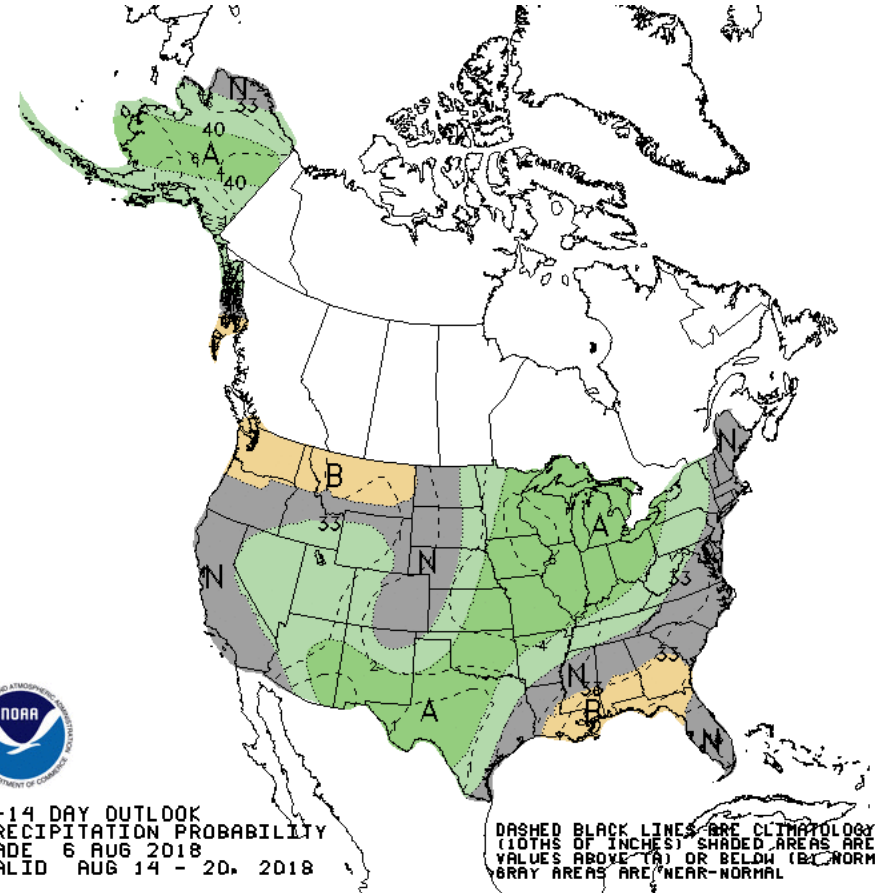
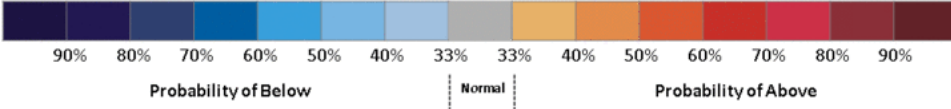


D+11 500 MB ANOMALIES FROM 06Z ENSM  
 CPC MAP MADE AUG 07 2018 1225 UTC CNTD AUG 18 2018

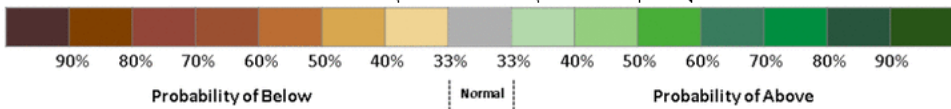
# Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 6 AUG 2018  
VALID AUG 14 - 20, 2018



8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 6 AUG 2018  
VALID AUG 14 - 20, 2018

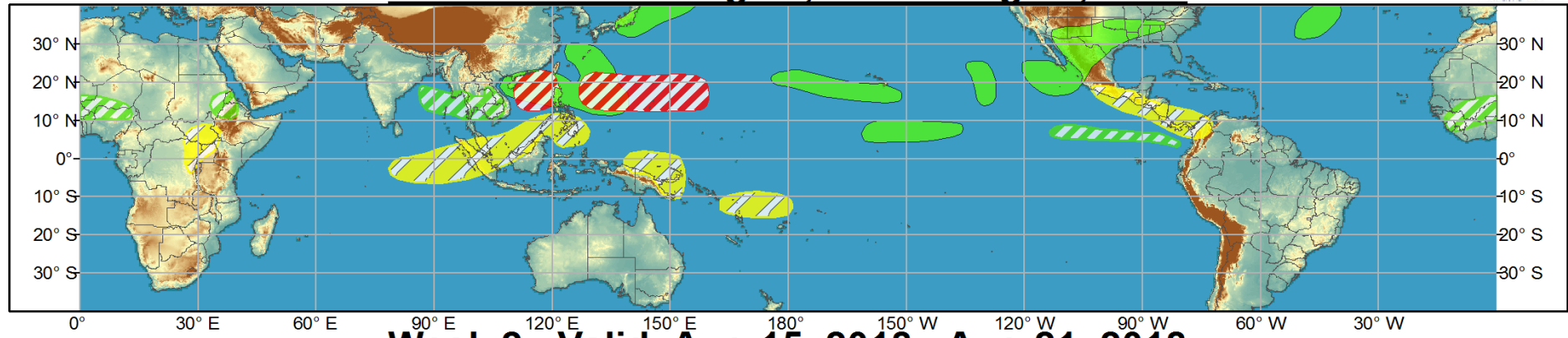




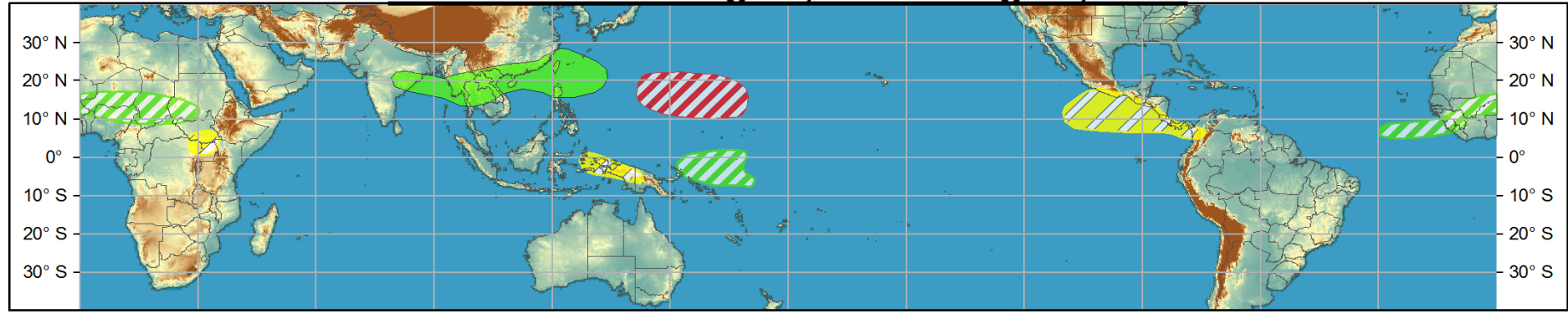


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