

# Global Tropics Hazards And Benefits Outlook

7/24/2018

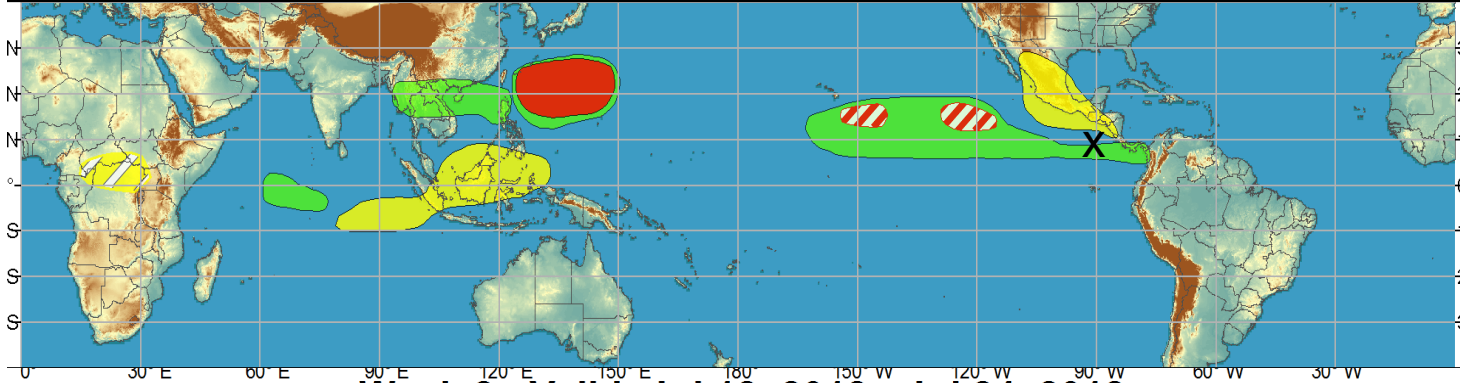
Matthew Rosencrans

## Outline

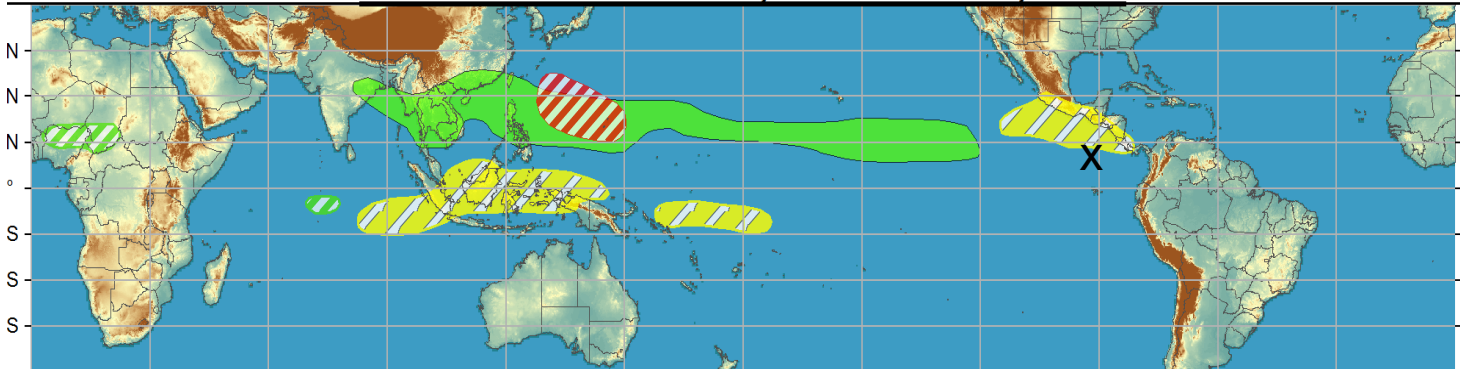
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

# Outlook Review

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

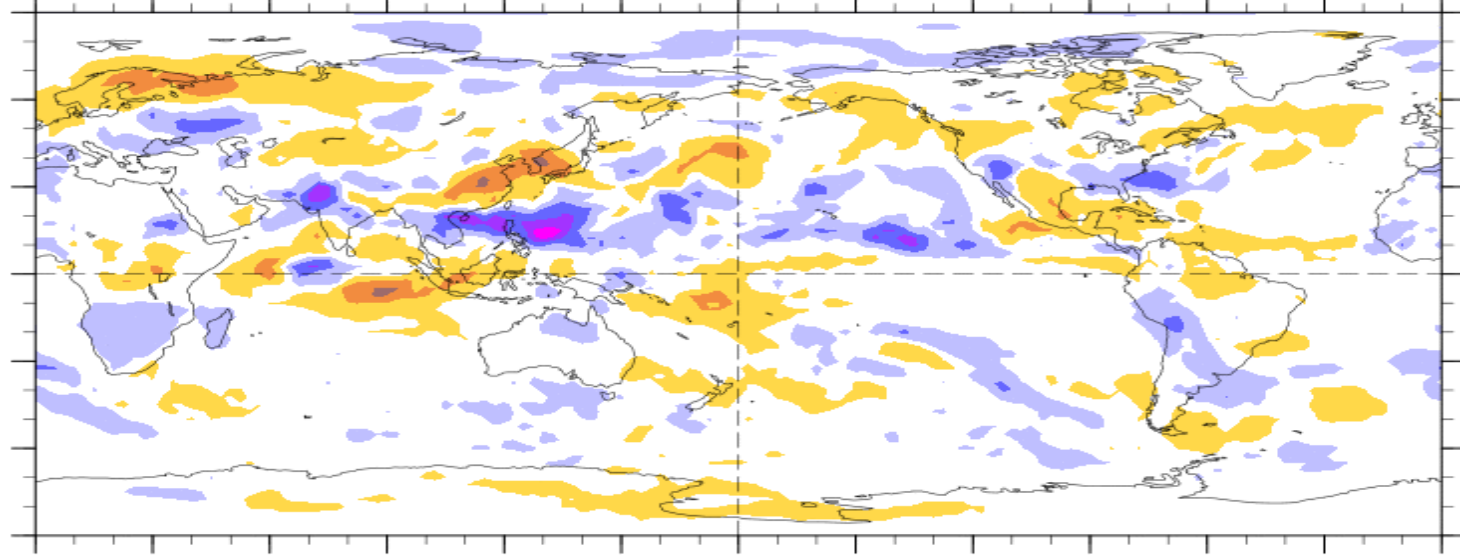


**Week 2 - Valid: Jul 18, 2018 - Jul 24, 2018**



7-Day Average OLR Anomaly

2018/07/16 - 2018/07/22



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 MJO remained of moderate strength, and propagated to the Western Pacific.
- Dynamical models indicate a weakening of the signal in Week-1, then some models keep a weak signal in Week-2 while others continue to weaken the signal. Statistical models maintain a moderate signal. The official outlook favors a continued signal.

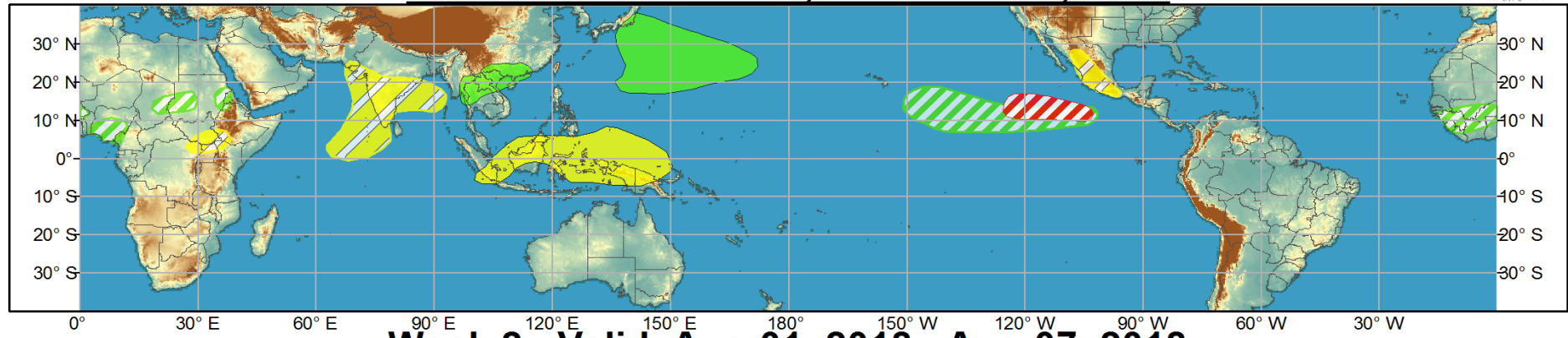
## **Extratropics:**

- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by MJO activity. Though moisture may stream into the Southwest in Week-2.



# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

## Week 1 - Valid: Jul 25, 2018 - Jul 31, 2018



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



### Confidence

	High	Moderate
Tropical Cyclone Formation		
Above-average rainfall		
Below-average rainfall		
Above-normal temperatures		
Below-normal temperatures		

- Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Weekly total rainfall in the upper third of the historical range.
- Weekly total rainfall in the lower third of the historical range.
- 7-day mean temperatures in the upper third of the historical range.
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Produced: 07/24/2018

Forecaster: Rosencrans

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

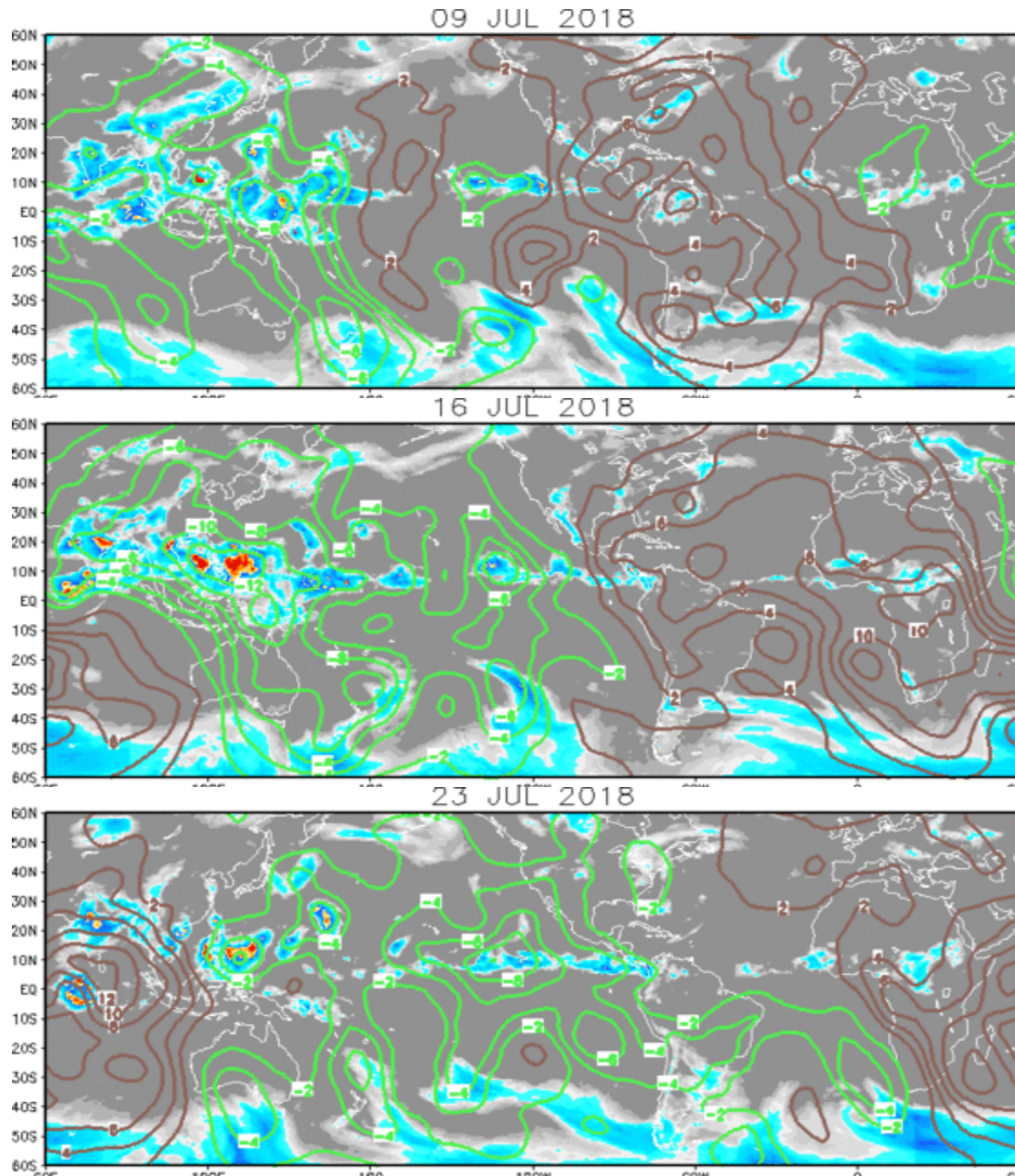
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-2 not projecting onto MJO.  
Enhanced convection over western Pacific and Southern Africa.

Wave-2 with an MJO projection.  
Enhanced convection over southwest Pacific and Americas to Africa.

Wave-1 with a moderate MJO projection.

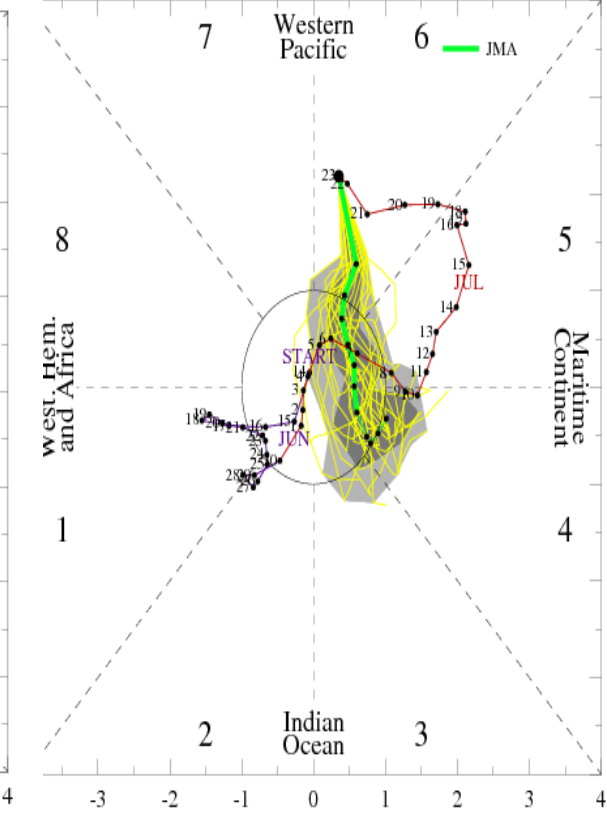
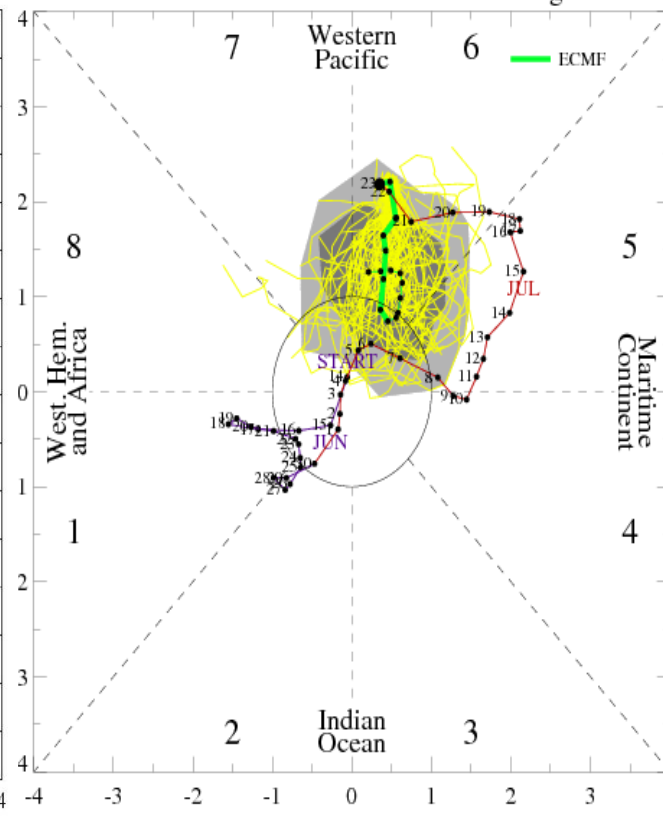
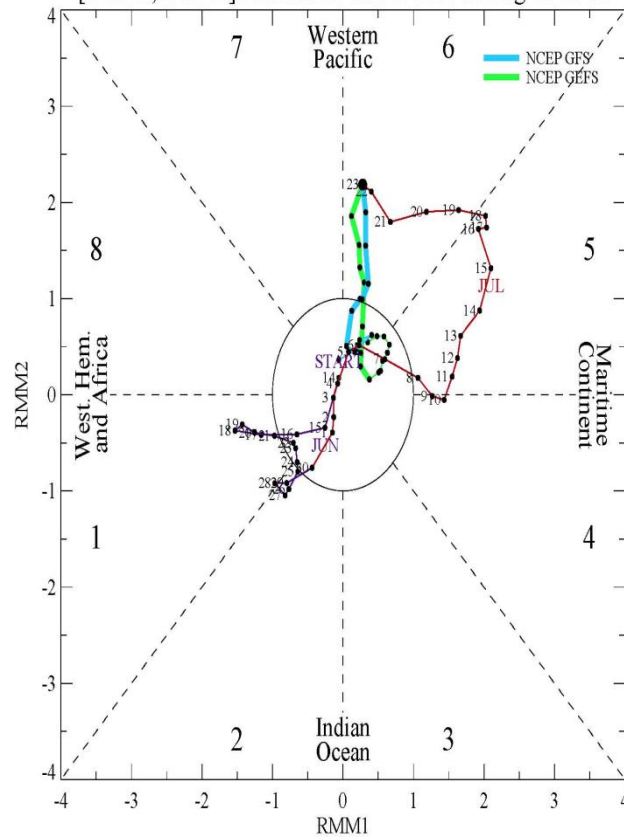


# MJO Observation/Forecast

[RMM1, RMM2] forecast for Jul-24-2018 to Aug-07-2018

MJO Index Forecast for 24Jul2018-07Aug2018

MJO Index Forecast for 24Jul2018-01Aug2018



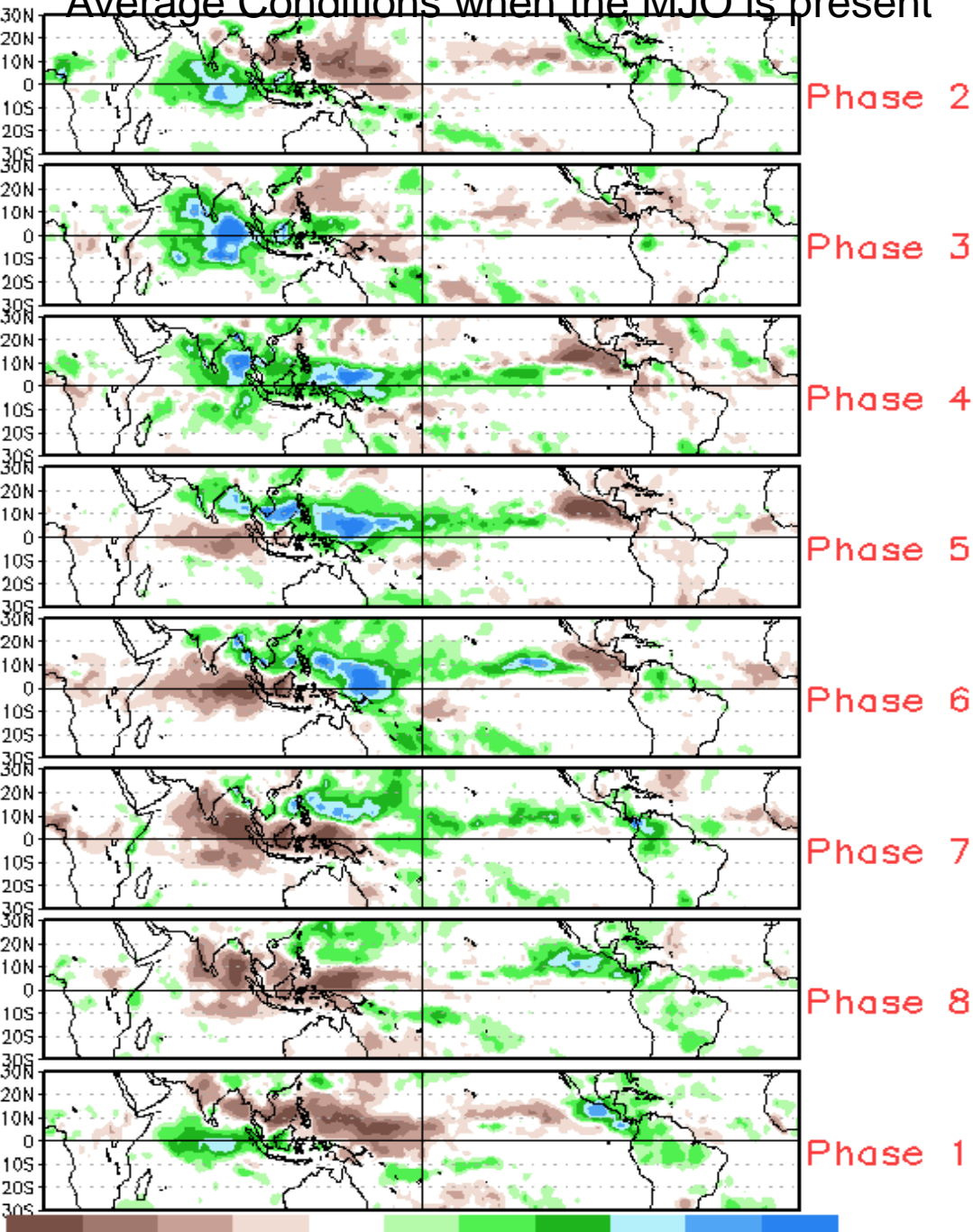
GEFS

ECMWF

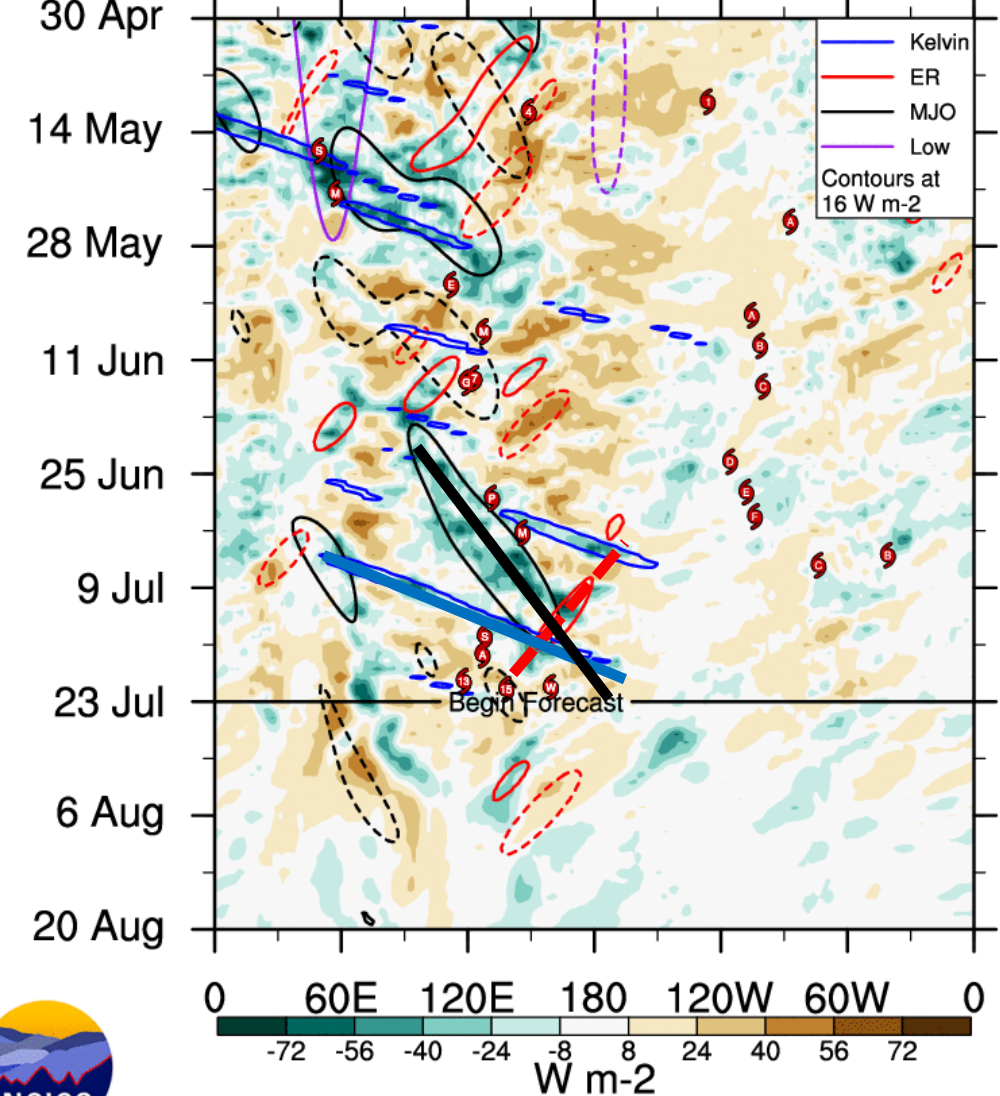
JMA

Wheeler-Hendon based analyses of model forecasts indicate propagation to the east. Divergence in how the models handle interaction with westward moving modes.

# Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



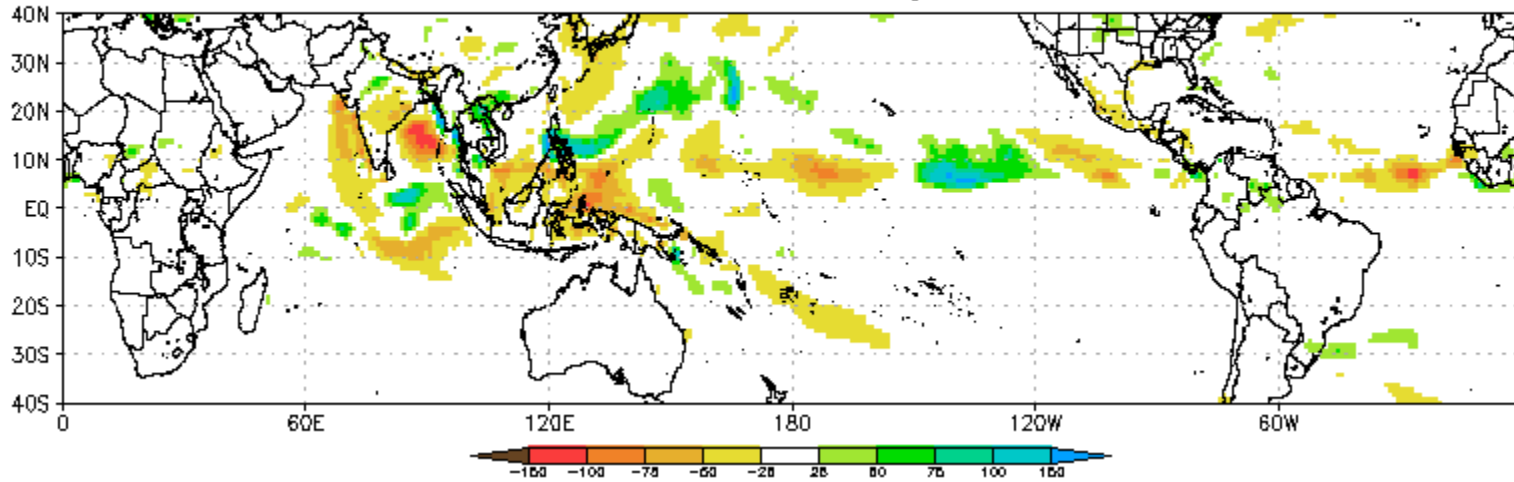
**MJO, Rossby wave** and **Kelvin wave** having an influence

**Low-frequency pattern** less of an influence

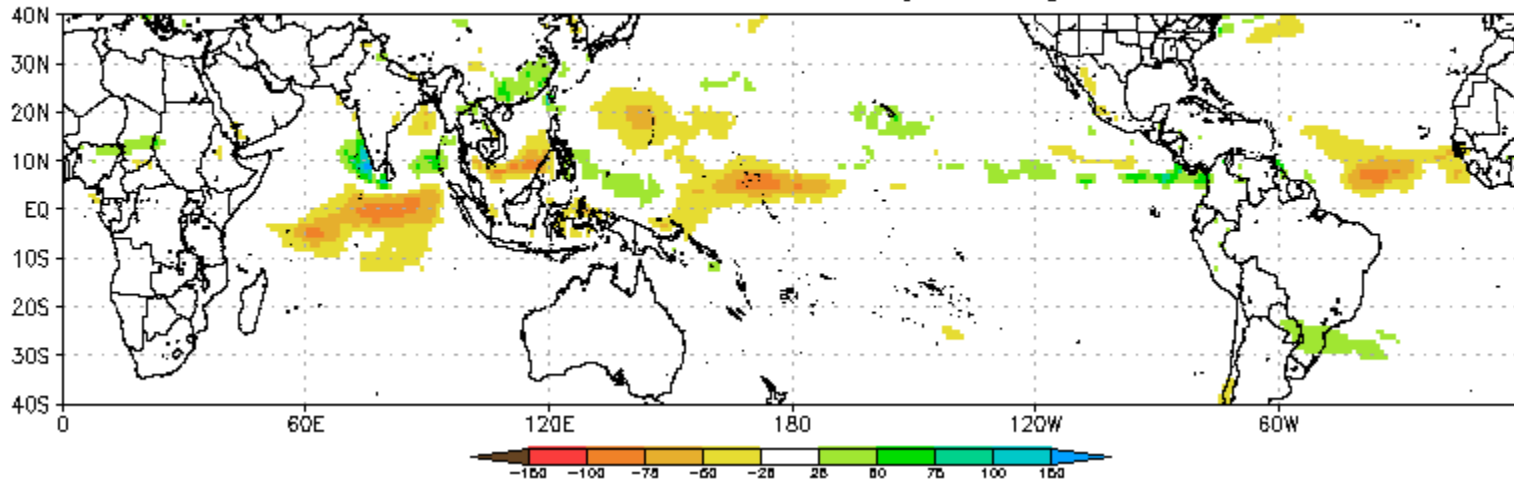




CFS Precipitation Anomalies (mm) Issued 23Jul2018  
Week-1 Forecast Ending 31Jul2018



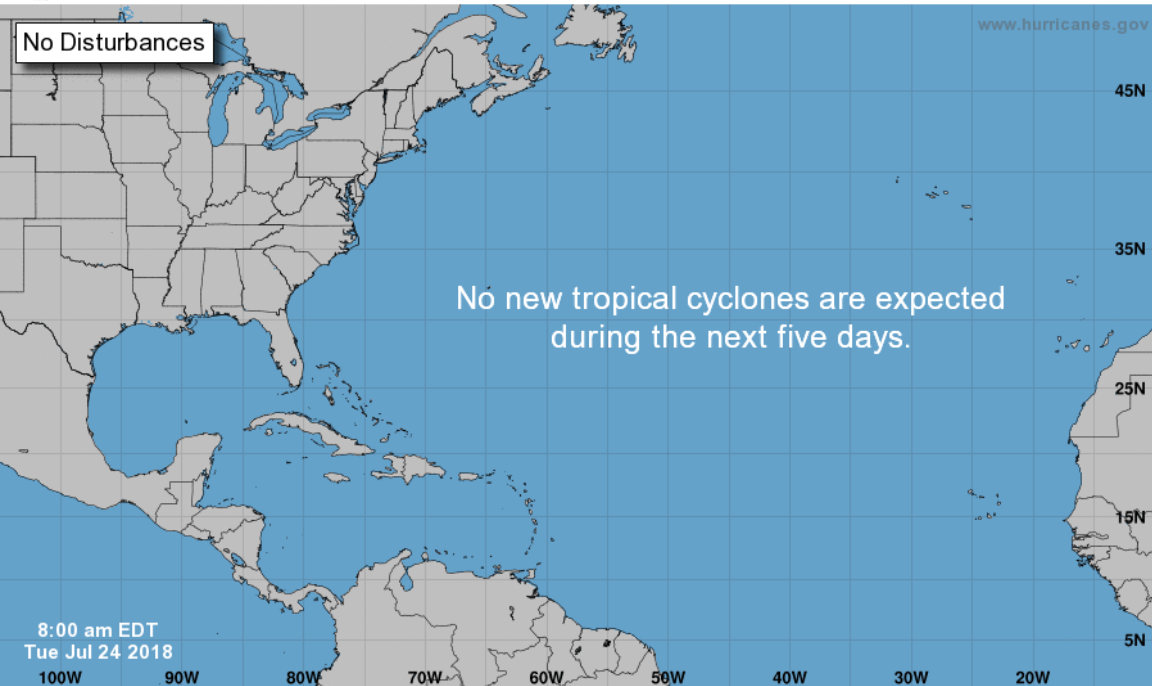
CFS Precipitation Anomalies (mm) Issued 23Jul2018  
Week-2 Forecast Ending 07Aug2018





# Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT  
Tue Jul 24 2018

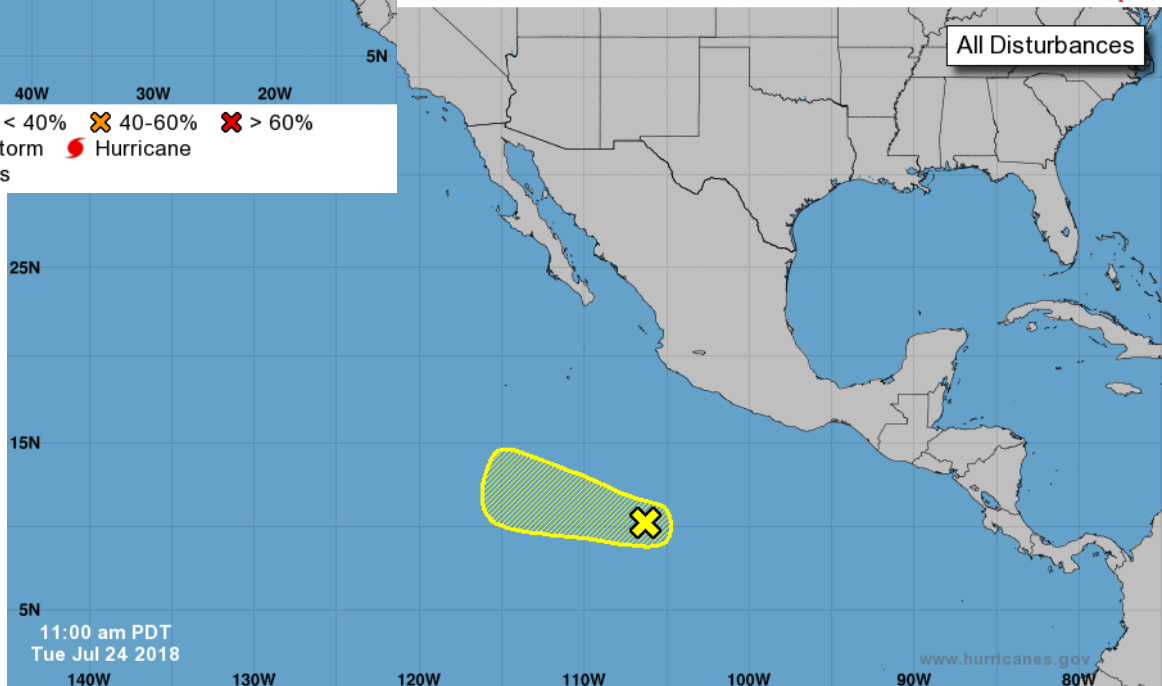
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

# Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

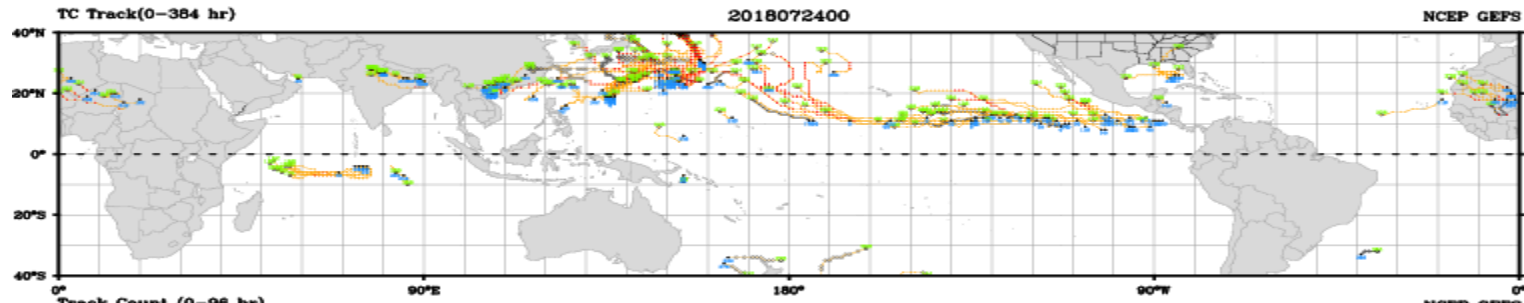


11:00 am PDT  
Tue Jul 24 2018

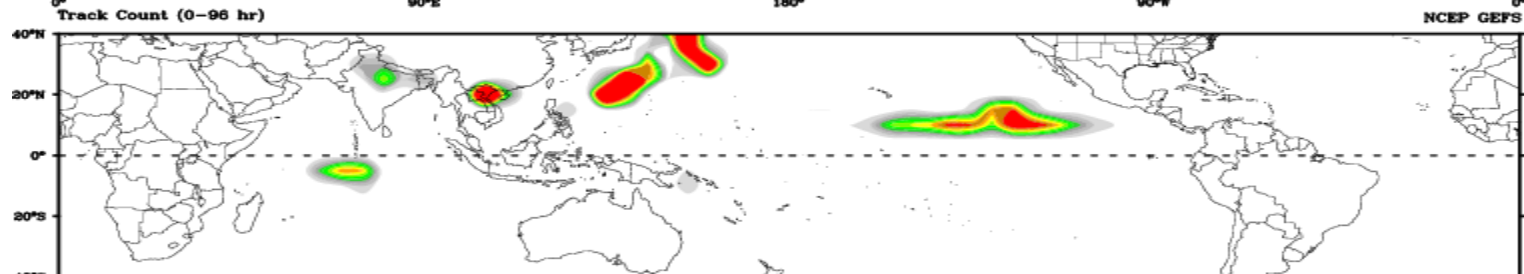
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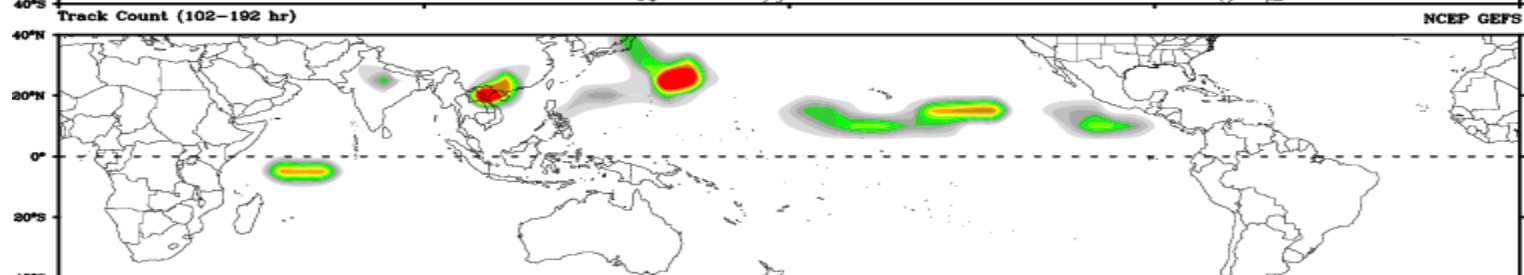
Post-Tropical Cyclone or Remnants



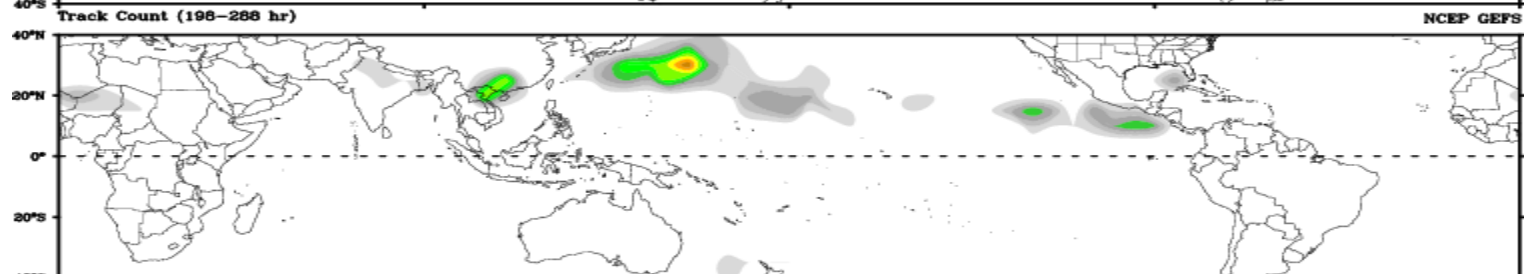
Days 1-4



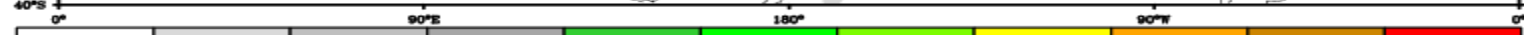
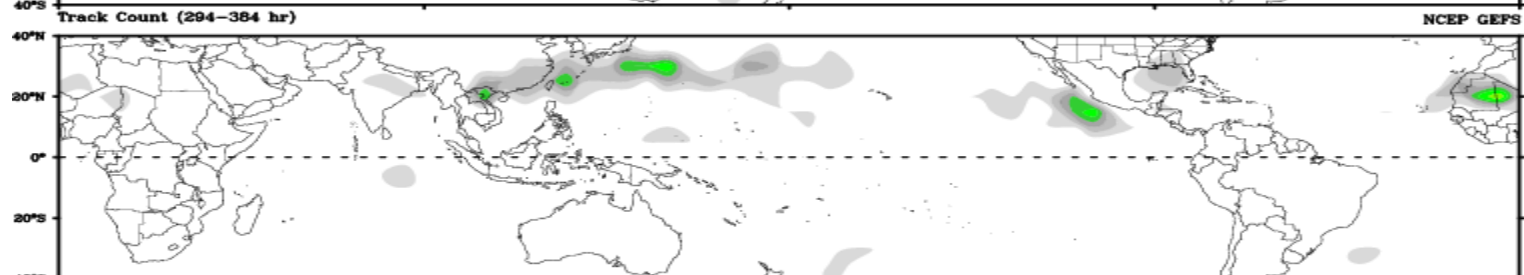
Day 5-8



Day 9-12

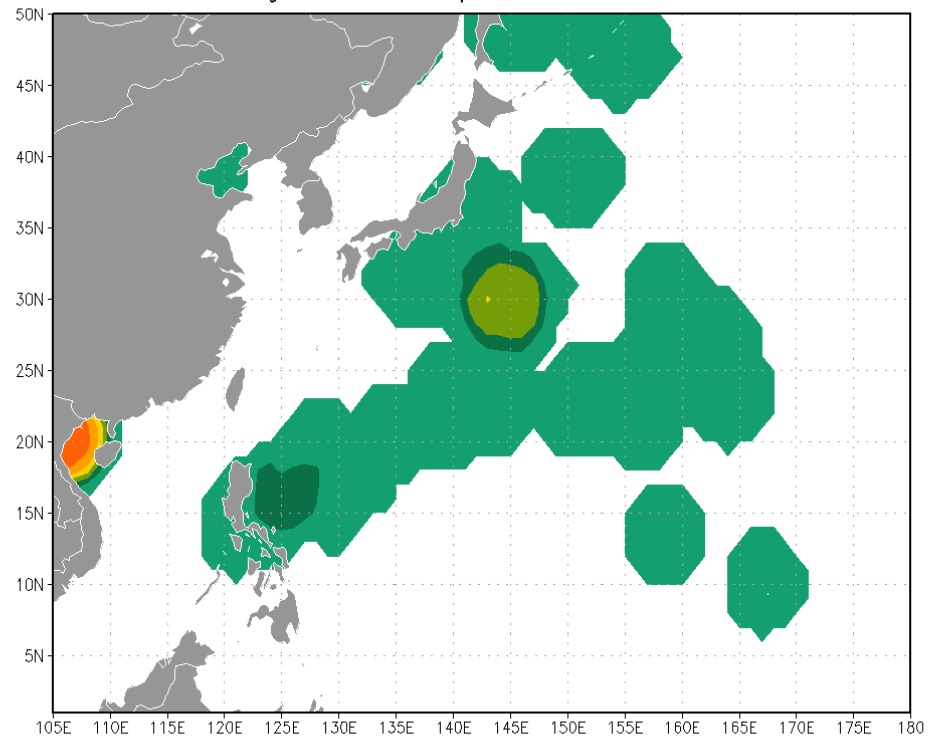


Day 13-15

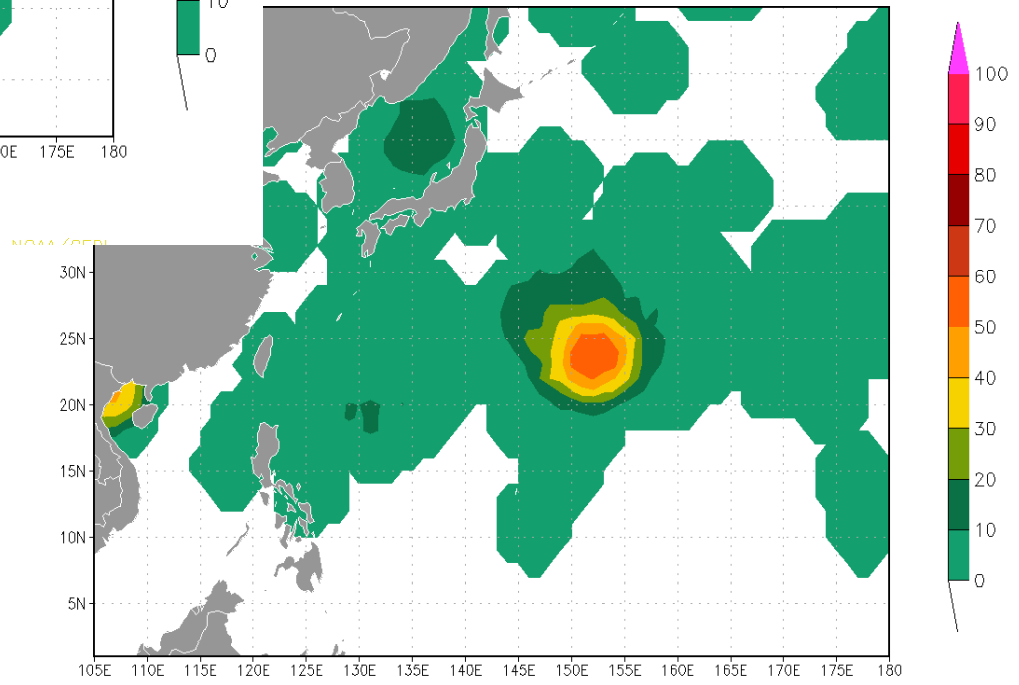


Ensemble-based Probability (%) of TC genesis  
using these global ensembles: NCEP ECMWF

For forecasts during the 48–120h period from initial time = 2018072400

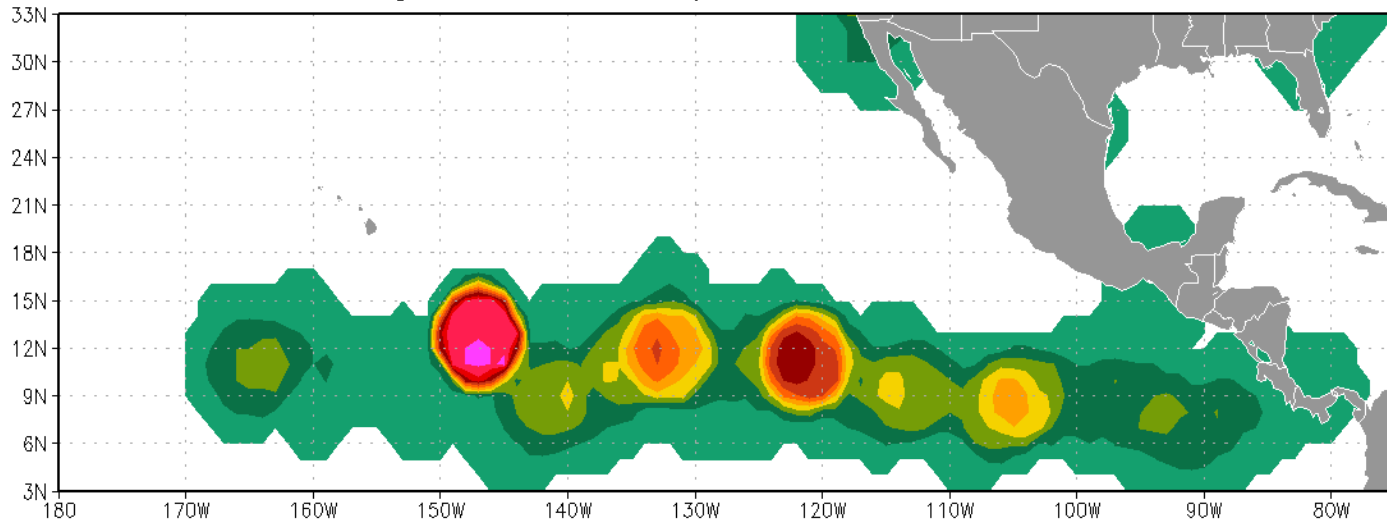


Ensemble-based Probability (%) of TC genesis  
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during the 120–240h period from initial time = 2018072400



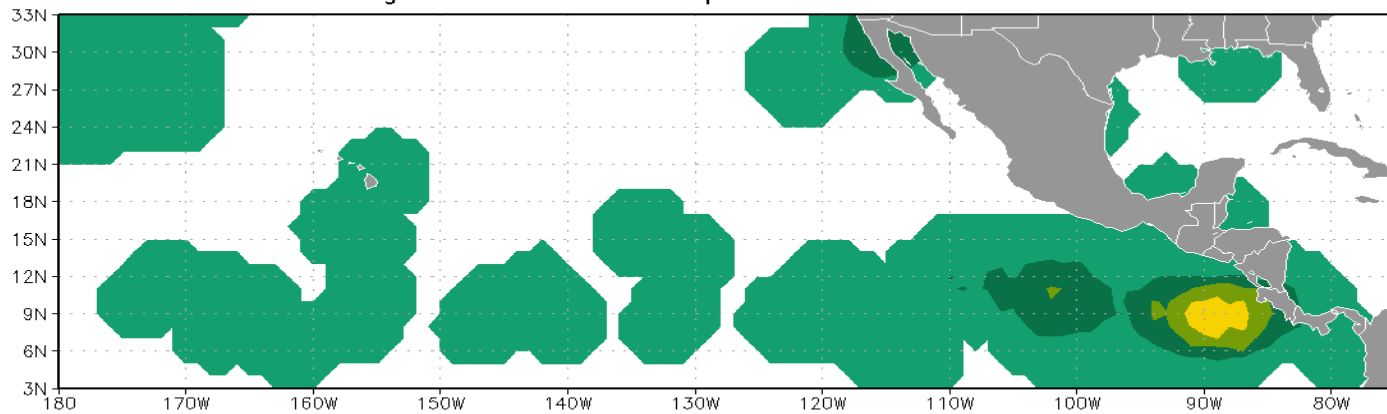
Ensemble-based Probability (%) of TC genesis  
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For forecasts during the 00–120h period from initial time = 2018072400

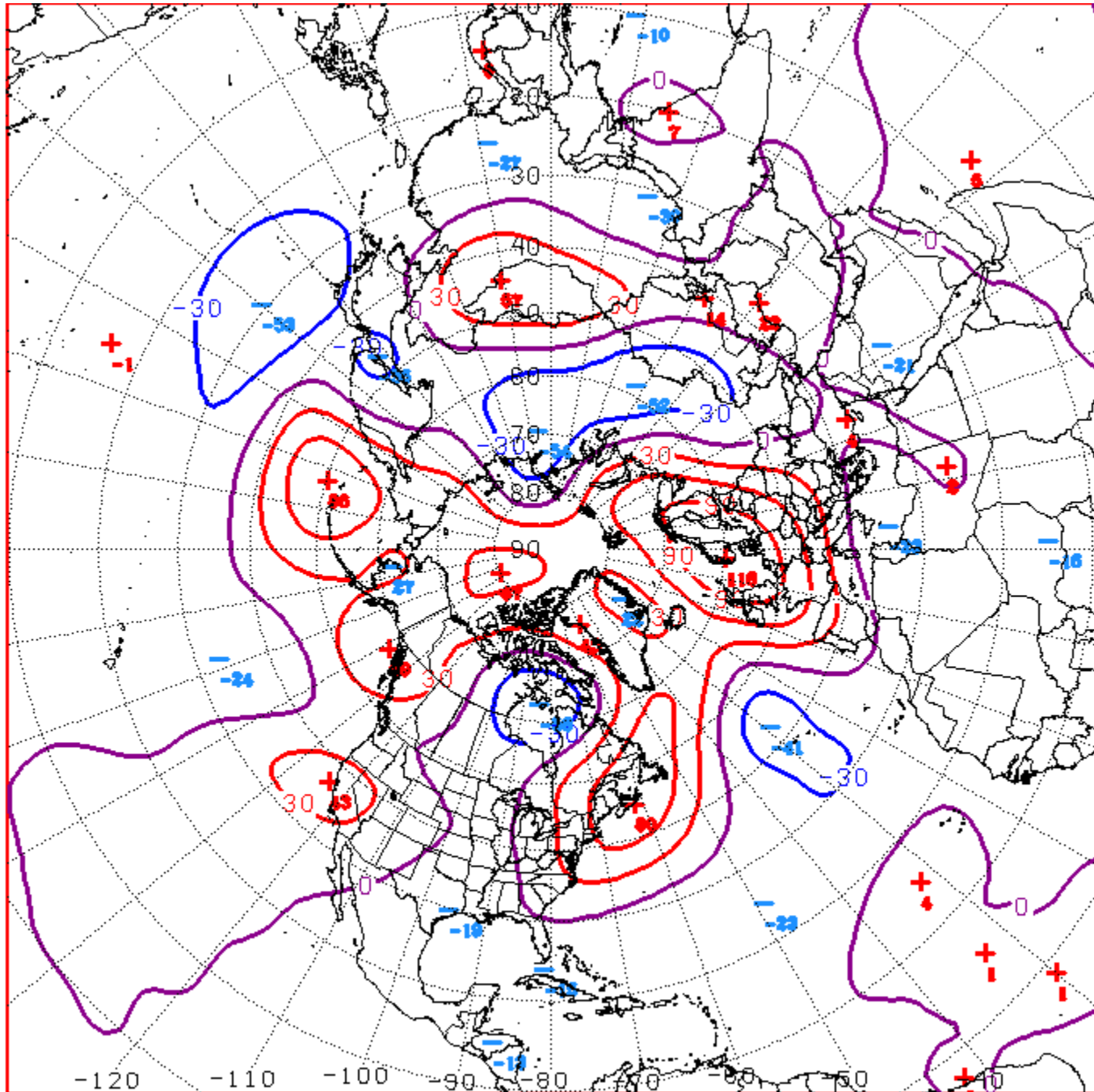


Ensemble-based Probability (%) of TC genesis  
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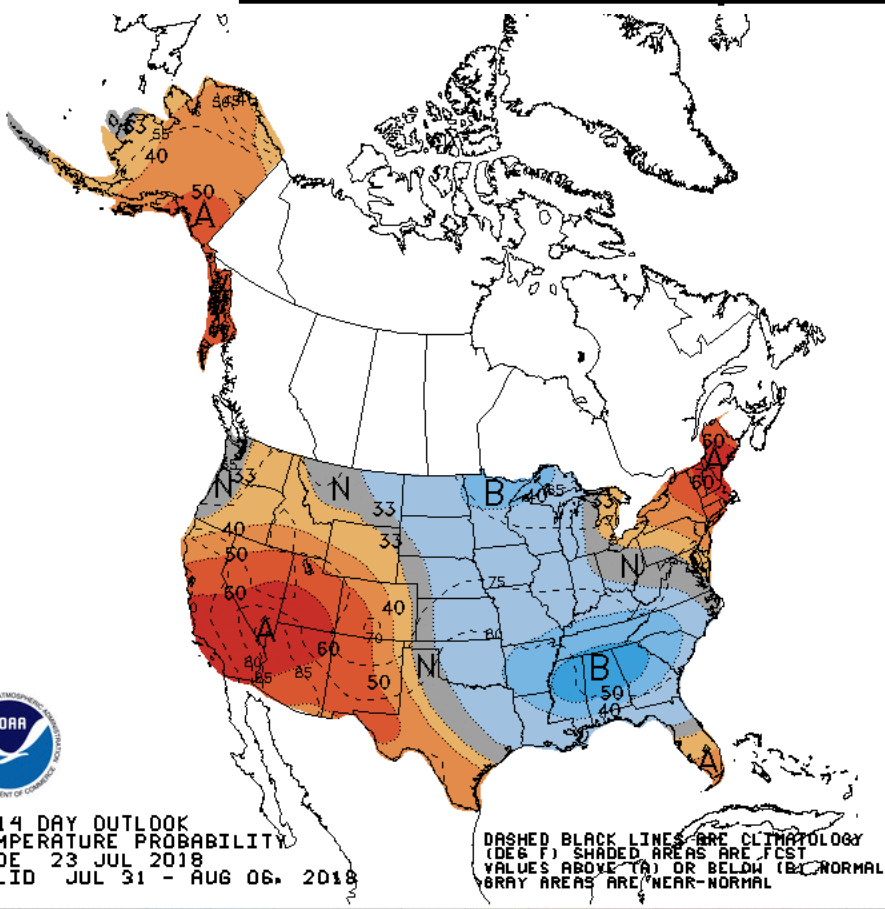


# Connections to U.S. Impacts

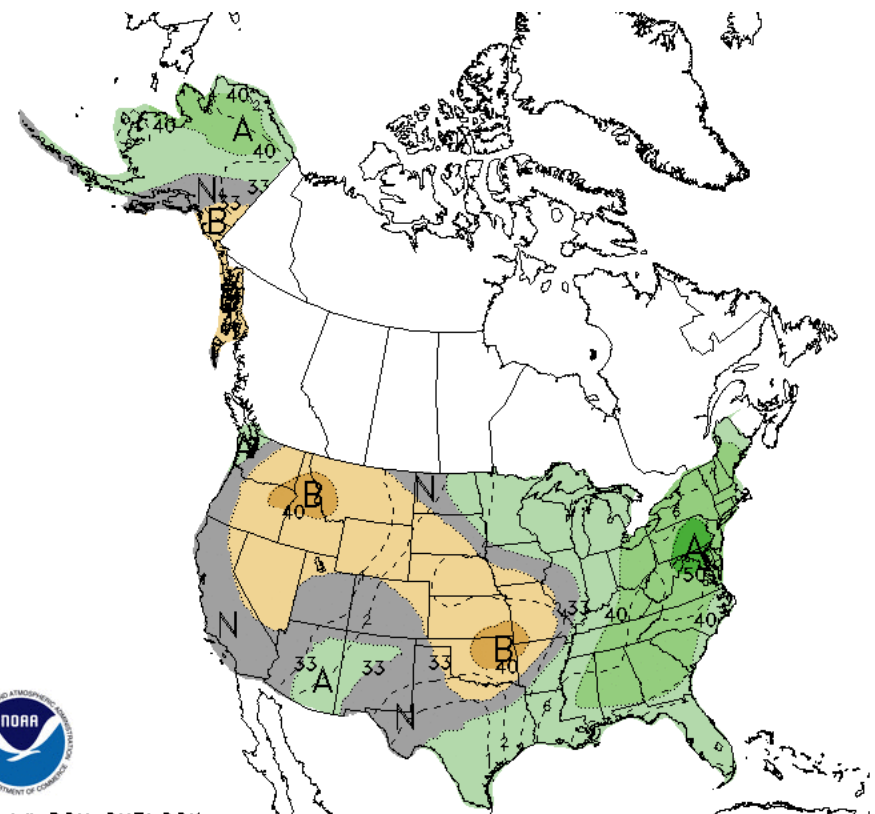
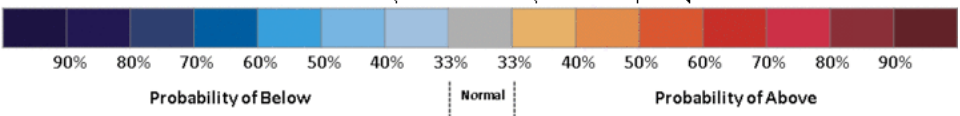


D+11 500 MB ANOMALIES FROM ALZ ENSM  
CPC MAP MADE JUL 24 2018 1346 UTC CNTD AUG 04 2018

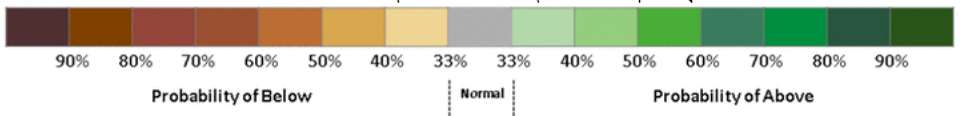
# Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 23 JUL 2018  
VALID JUL 31 - AUG 06, 2018



8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 23 JUL 2018  
VALID JUL 31 - AUG 06, 2018

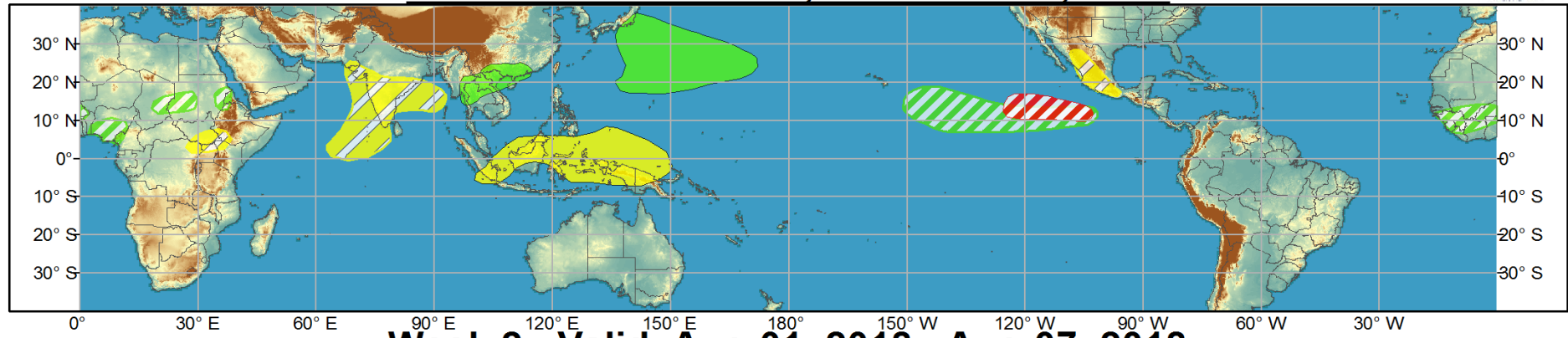






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