

# Global Tropics Hazards And Benefits Outlook

June 17, 2014

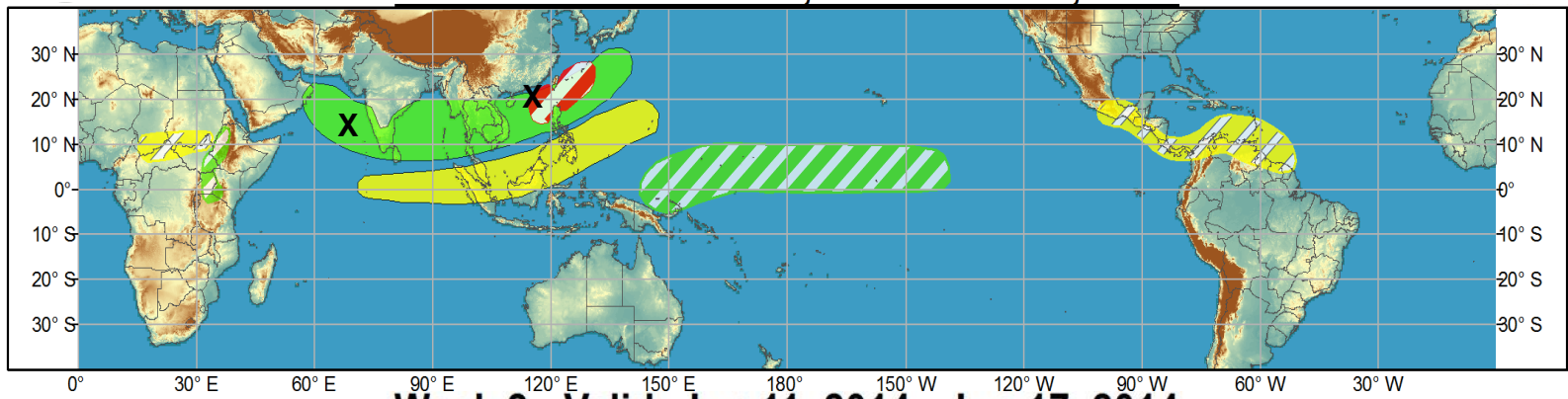
Adam Allgood

## Outline

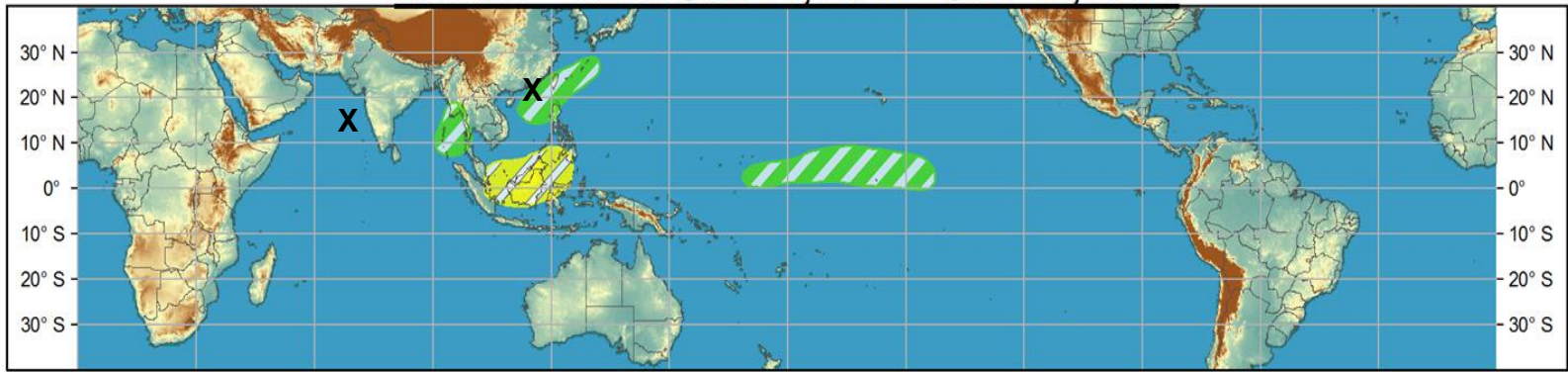
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

# Outlook Review

**Week 1 - Valid: Jun 11, 2014 - Jun 17, 2014**



**Week 2 - Valid: Jun 11, 2014 - Jun 17, 2014**

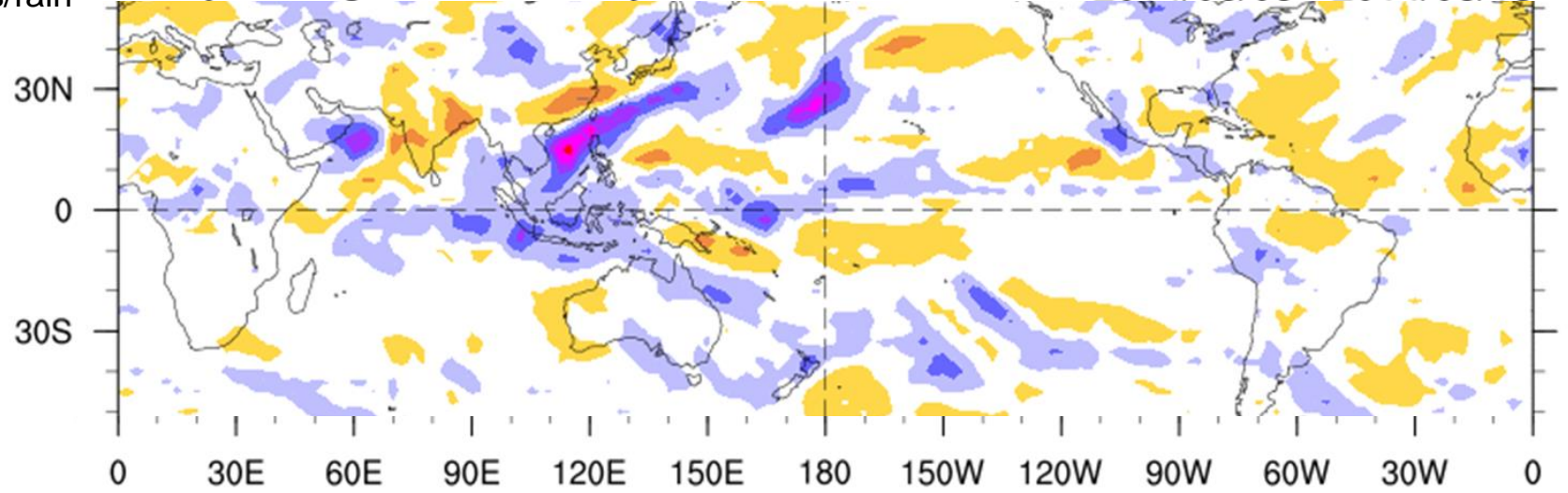


Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain

**7-Day Average OLR Anomaly**

2014/06/09 - 2014/06/15



# Synopsis of Climate Modes

## **ENSO:**

- The chance of El Niño is 70% during the Northern Hemisphere summer and reaches 80% during the fall and winter
- ENSO Alert System Status: [El Niño Watch](#)

## **MJO and other subseasonal tropical variability:**

- Although there was a strong projection of an enhanced convective phase over the western Maritime Continent on the MJO indices, little to no eastward propagation was evident. The indices are likely responding to enhanced monsoonal flow along the Meiyu front coupled with low-level easterly anomalies near the Date Line.
- There is considerable spread among the dynamical model MJO forecasts, with some weakening the signal and others building a signal over the central Pacific during Week-2

## **Extratropics:**

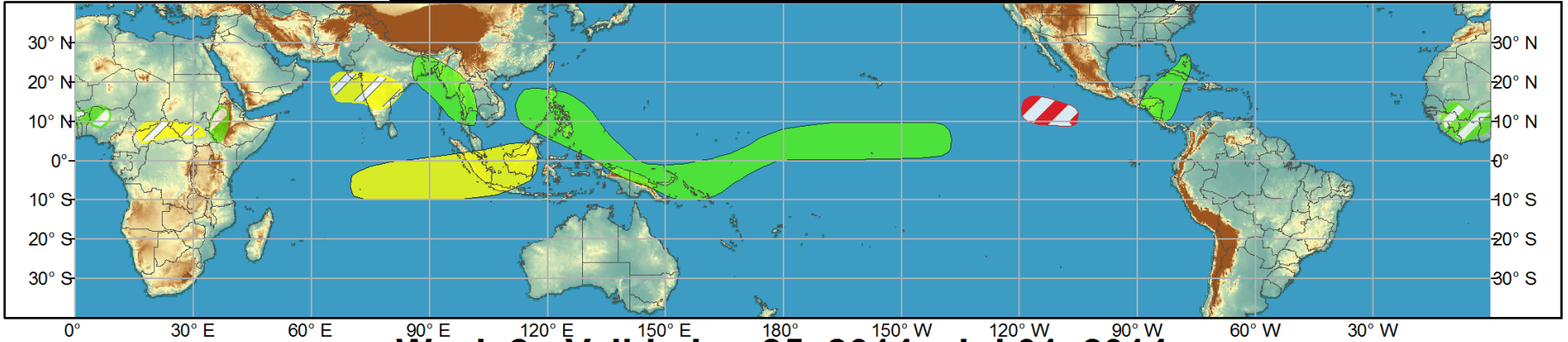
- Although enhanced convection over SE Asia and the far western Pacific isn't necessarily MJO related, current and forecasted conditions for the CONUS seem consistent with both direct and time lagged composites of U.S. temperature and precipitation anomalies given an MJO enhanced phase over the Maritime Continent.



# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Jun 18, 2014 - Jun 24, 2014

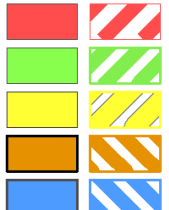


## Week 2 - Valid: Jun 25, 2014 - Jul 01, 2014



**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.
- 7-day mean temperatures in the lower third of the historical range.

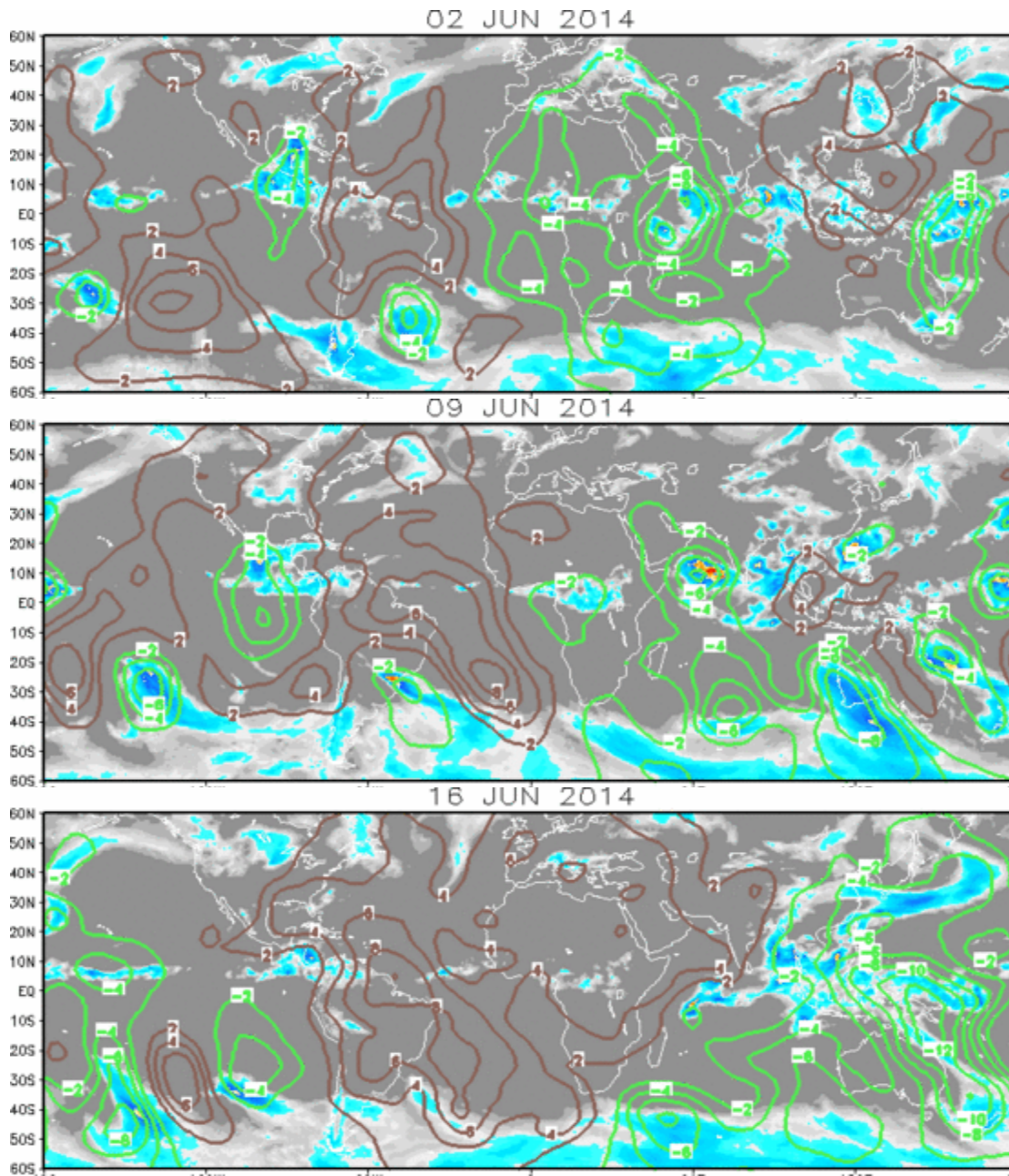
Produced: 06/17/2014  
Forecaster: Allgood

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.



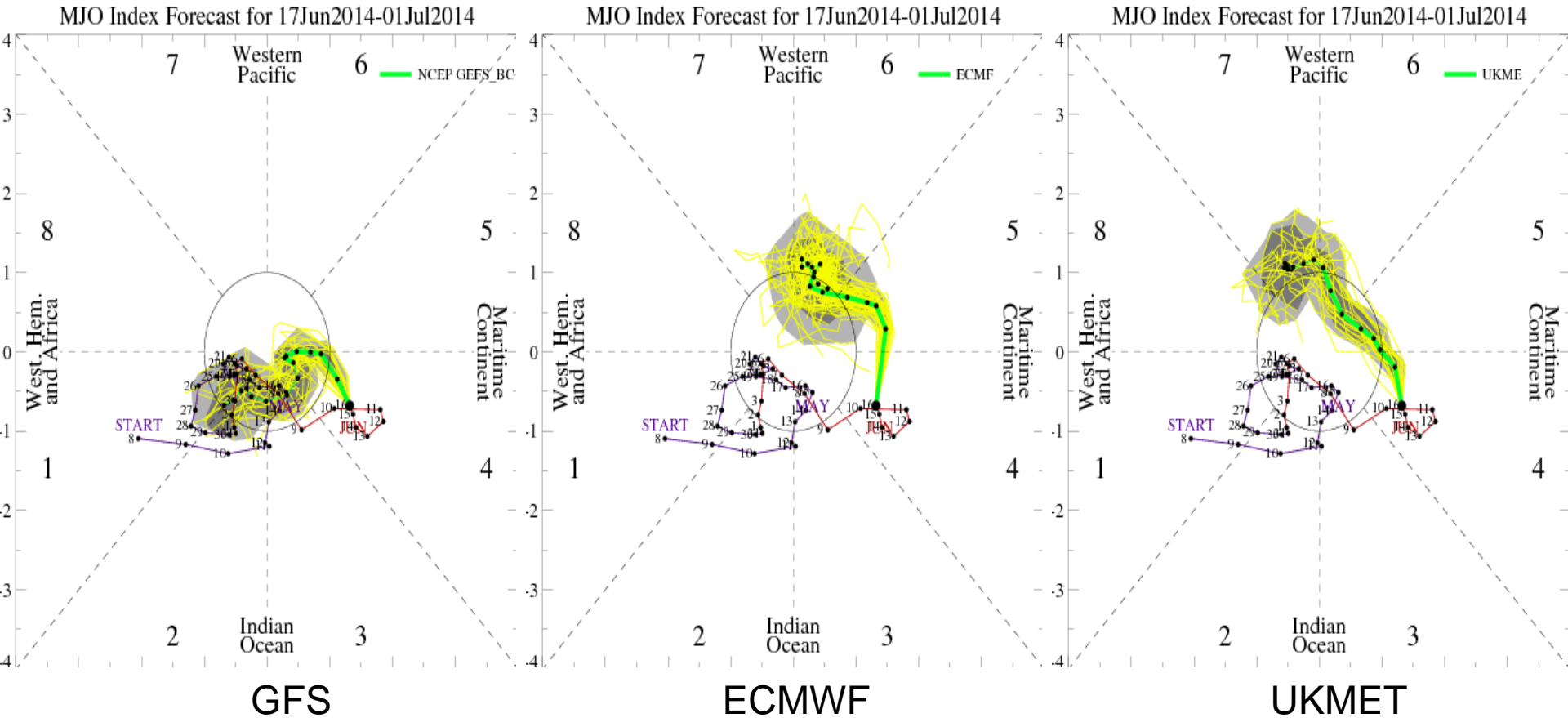
# IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence    Brown: Enhanced Convergence

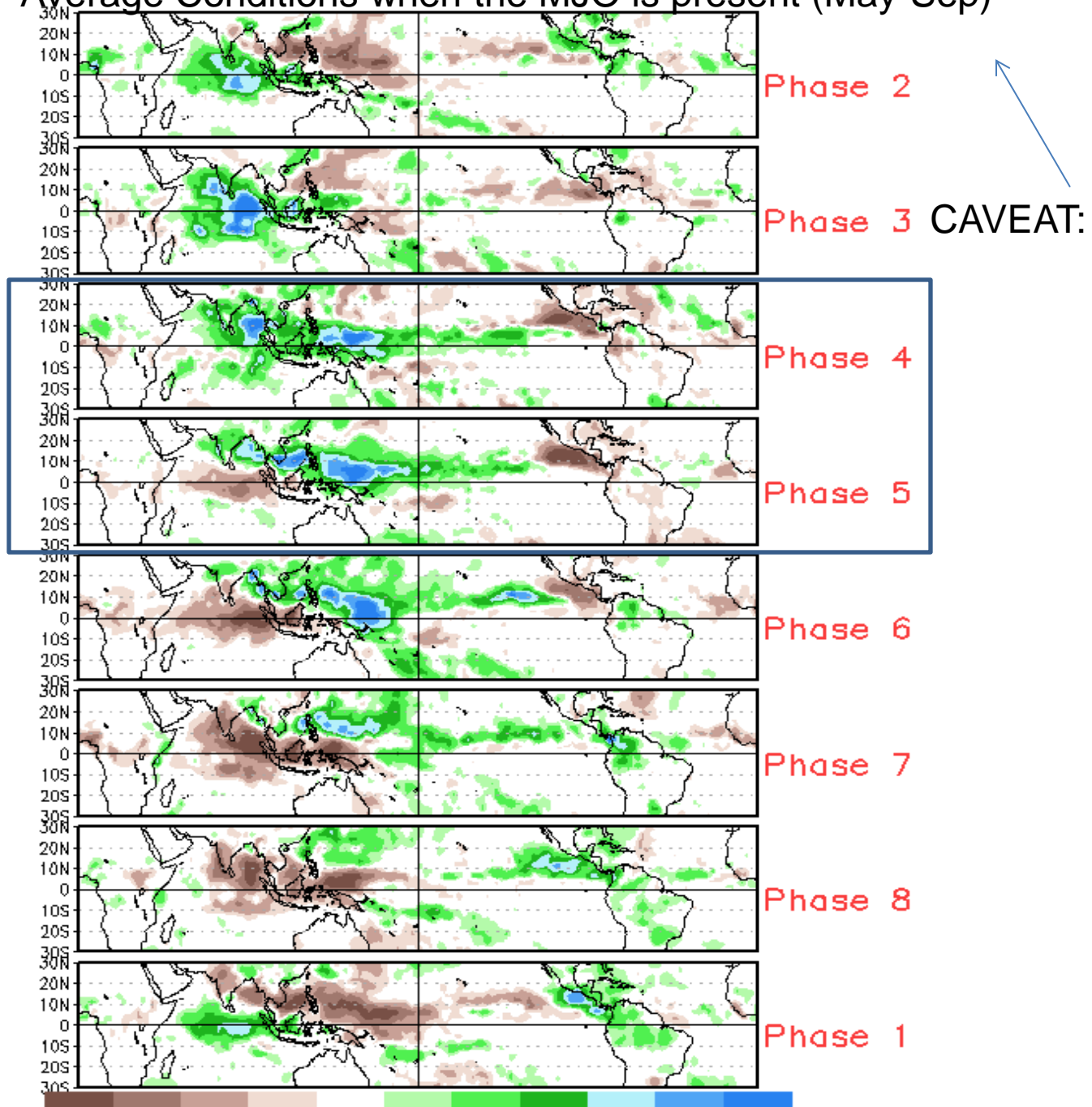


Coherent,  
Wave-1 pattern

# MJO Observation/Forecast



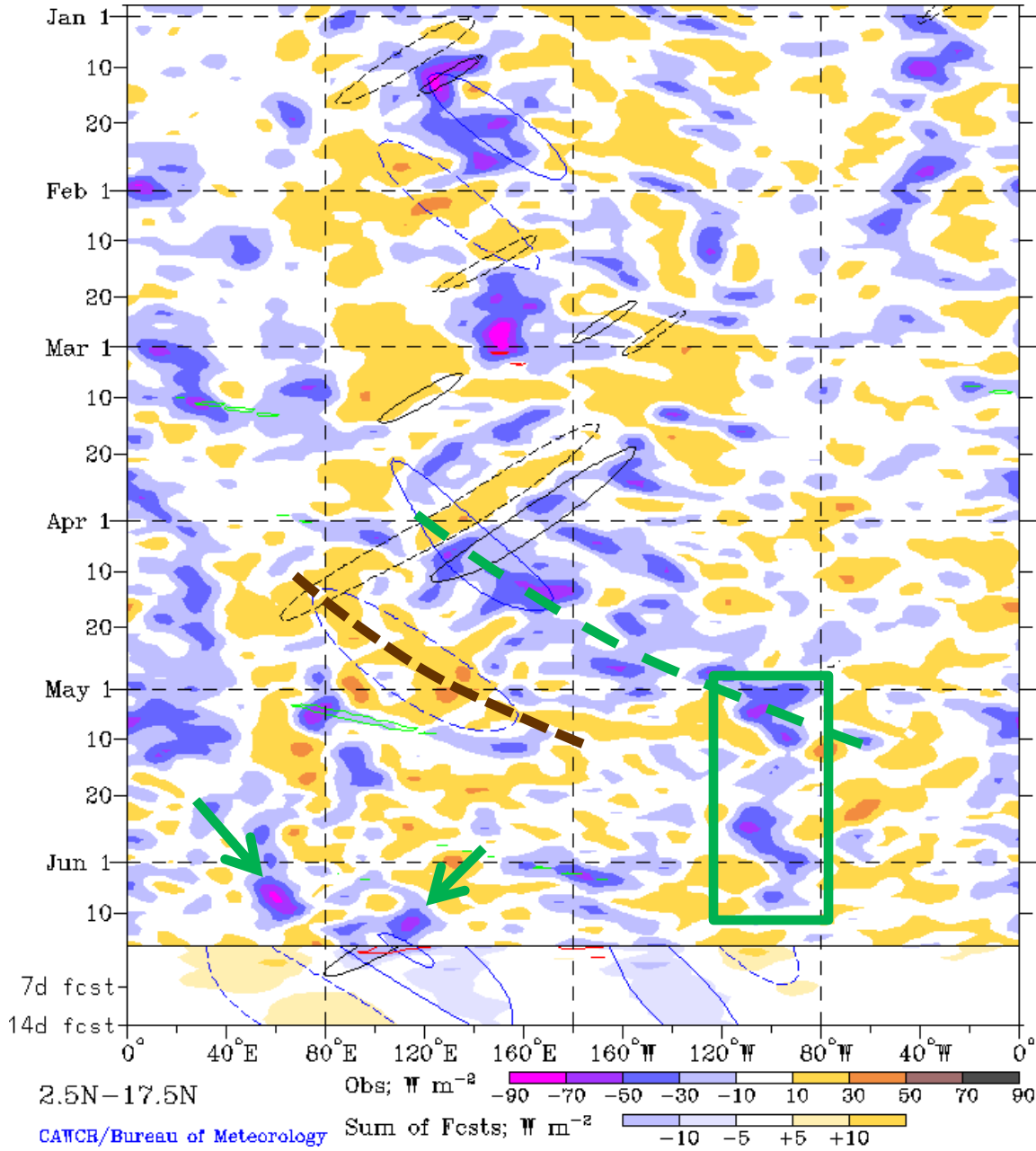
# Average Conditions when the MJO is present (May-Sep)



Dashed lines – MJO activity

Green Box – persistent enhanced convection over the EPAC, including TCs

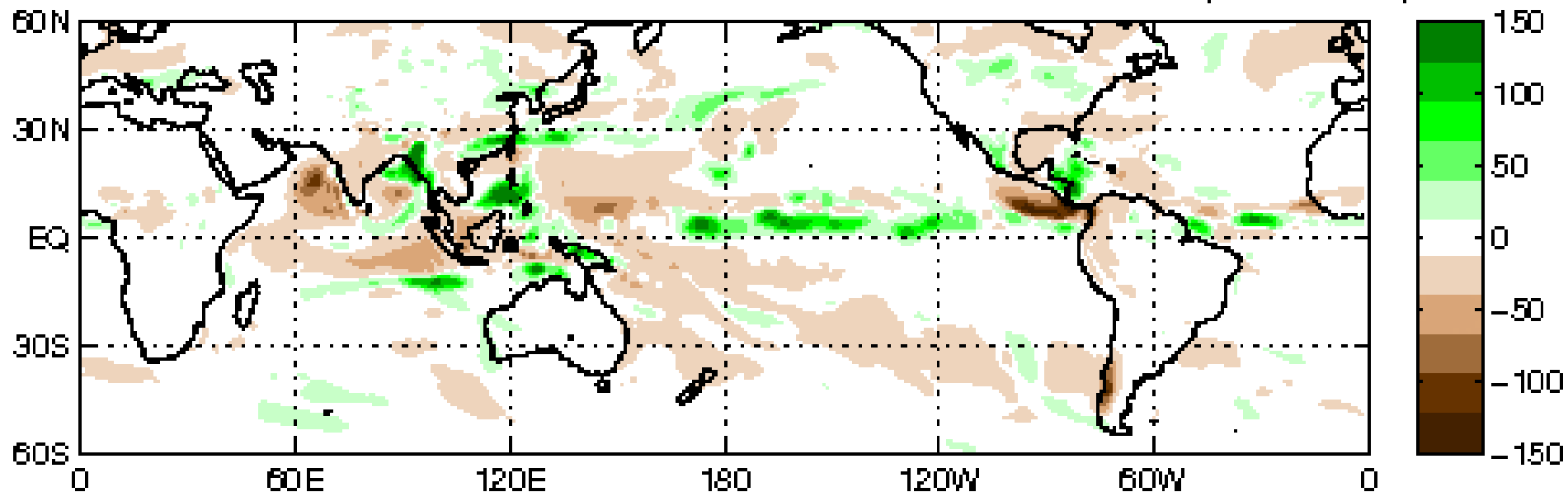
Arrows – enhanced convection, smaller scale than robust MJO activity, likely signals from TS Nanauk (left) and TS Hagibis/monsoon flow (right)



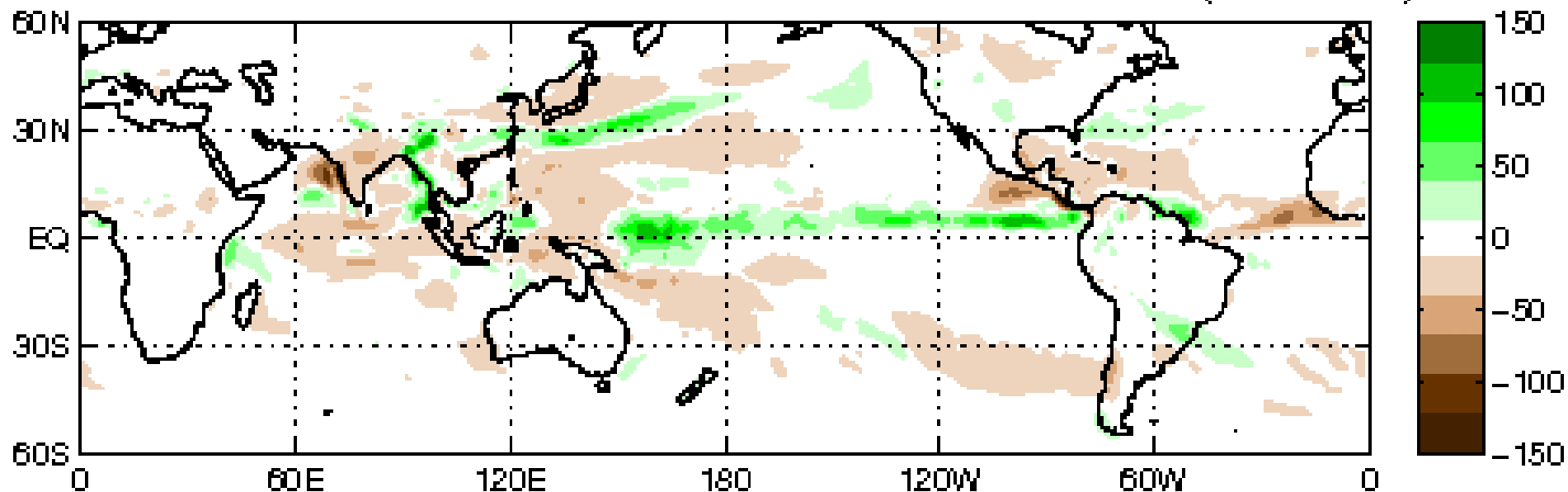
Decreased signal over the central Pacific during May and June



**CFS: Anom. PREC Week1: 17-Jun-2014 to 23-Jun-2014 (mm/week)**

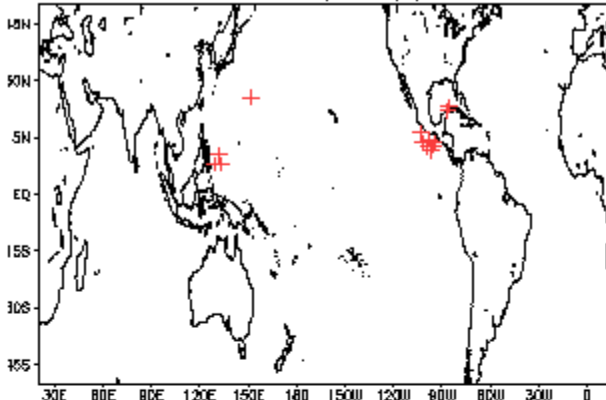


**CFS: Anom. PREC Week2: 24-Jun-2014 to 30-Jun-2014 (mm/week)**

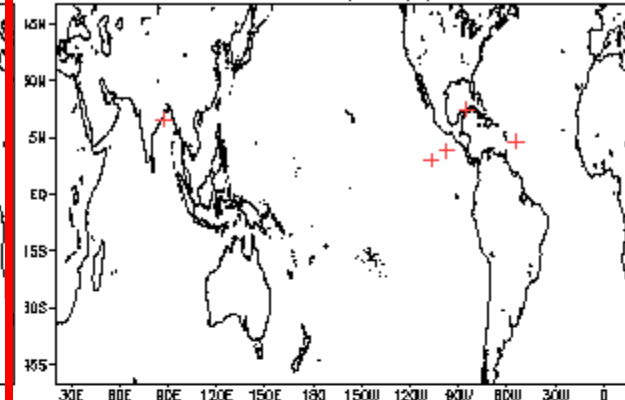


# June Tropical Storm Formation by MJO phase

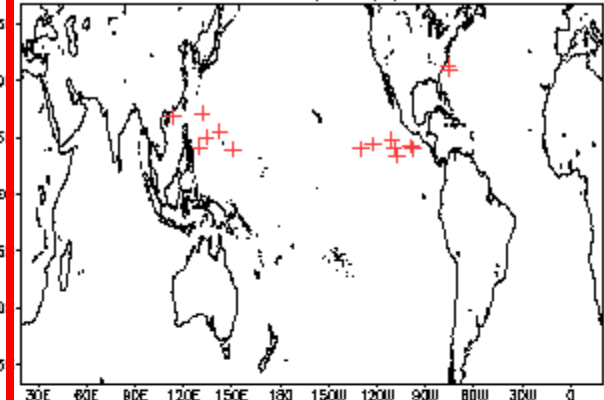
Phase 1 (104 days) 14 storms



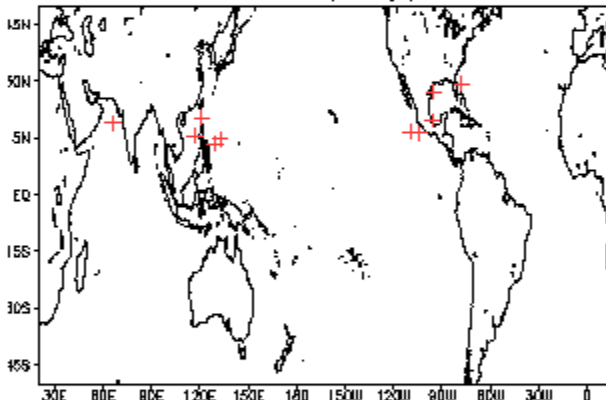
Phase 4 (80 days) 6 storms



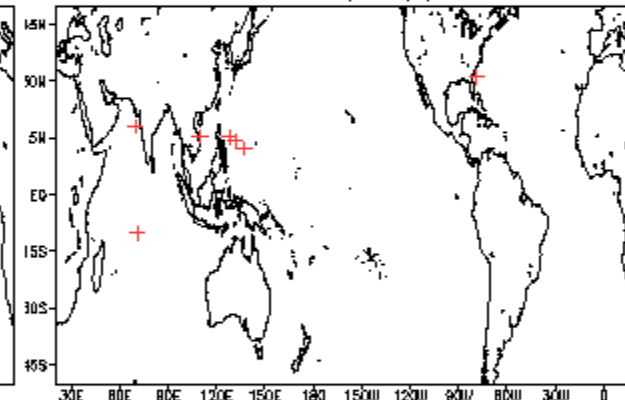
Phase 7 (45 days) 16 storms



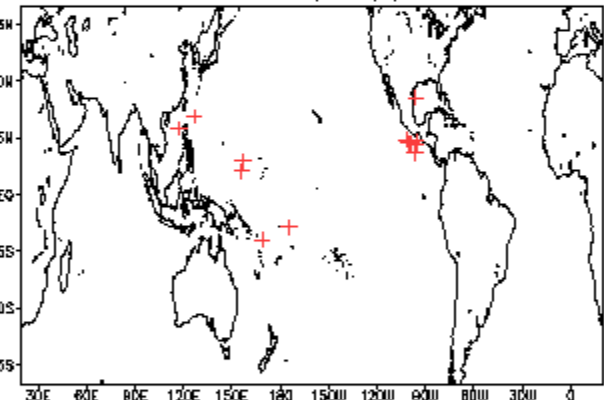
Phase 2 (82 days) 11 storms



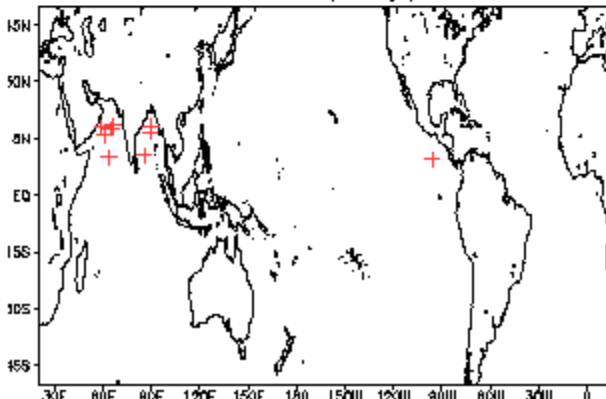
Phase 5 (77 days) 8 storms



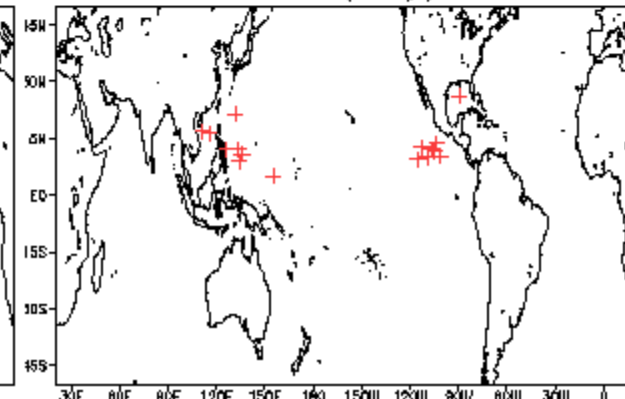
Phase 8 (70 days) 15 storms



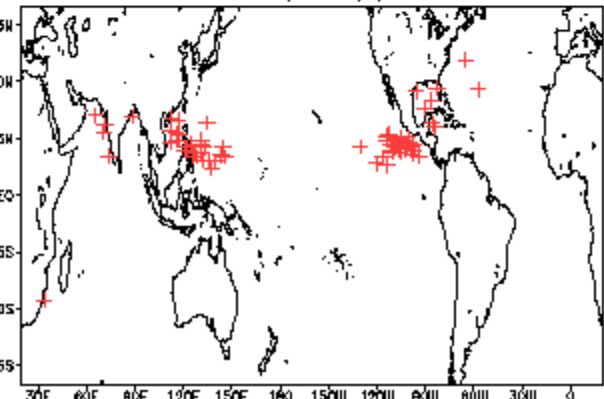
Phase 3 (57 days) 10 storms



Phase 6 (82 days) 17 storms



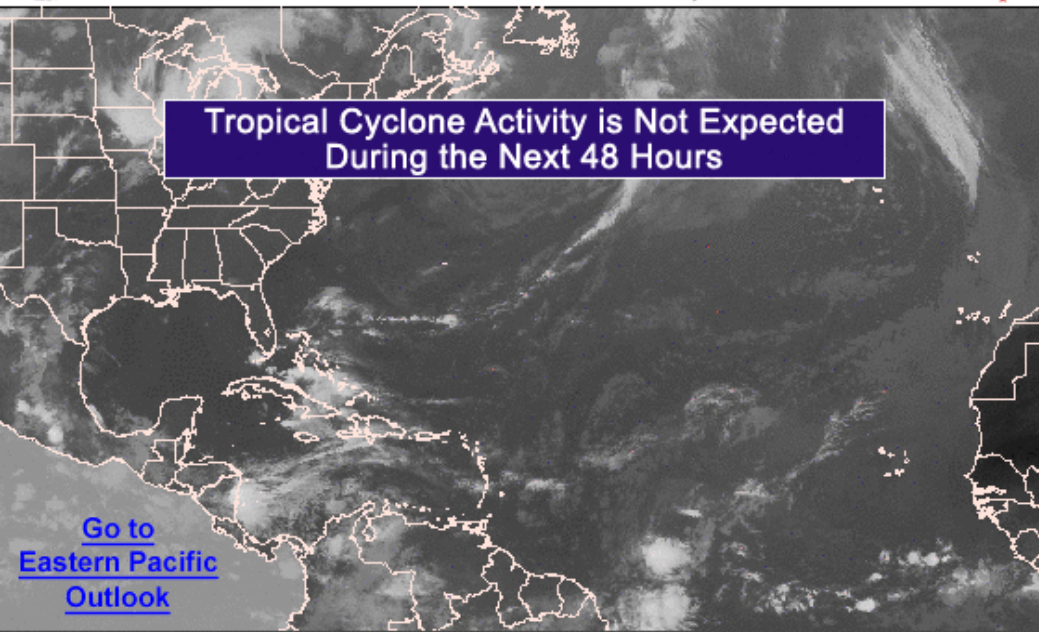
Null (423 days) 71 storms





# Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



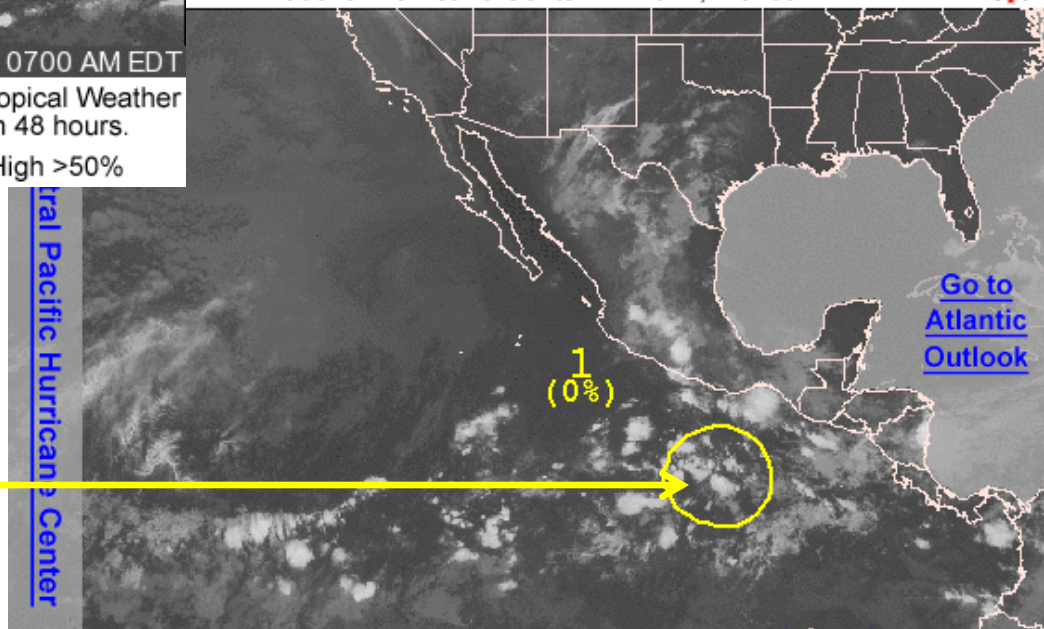
800 AM EDT TUE JUN 17 2014 Satellite Image: 0700 AM EDT

Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
  Medium 30-50%
  High >50%

# Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



500 AM PDT TUE JUN 17 2014 Satellite Image: 0400 AM PDT

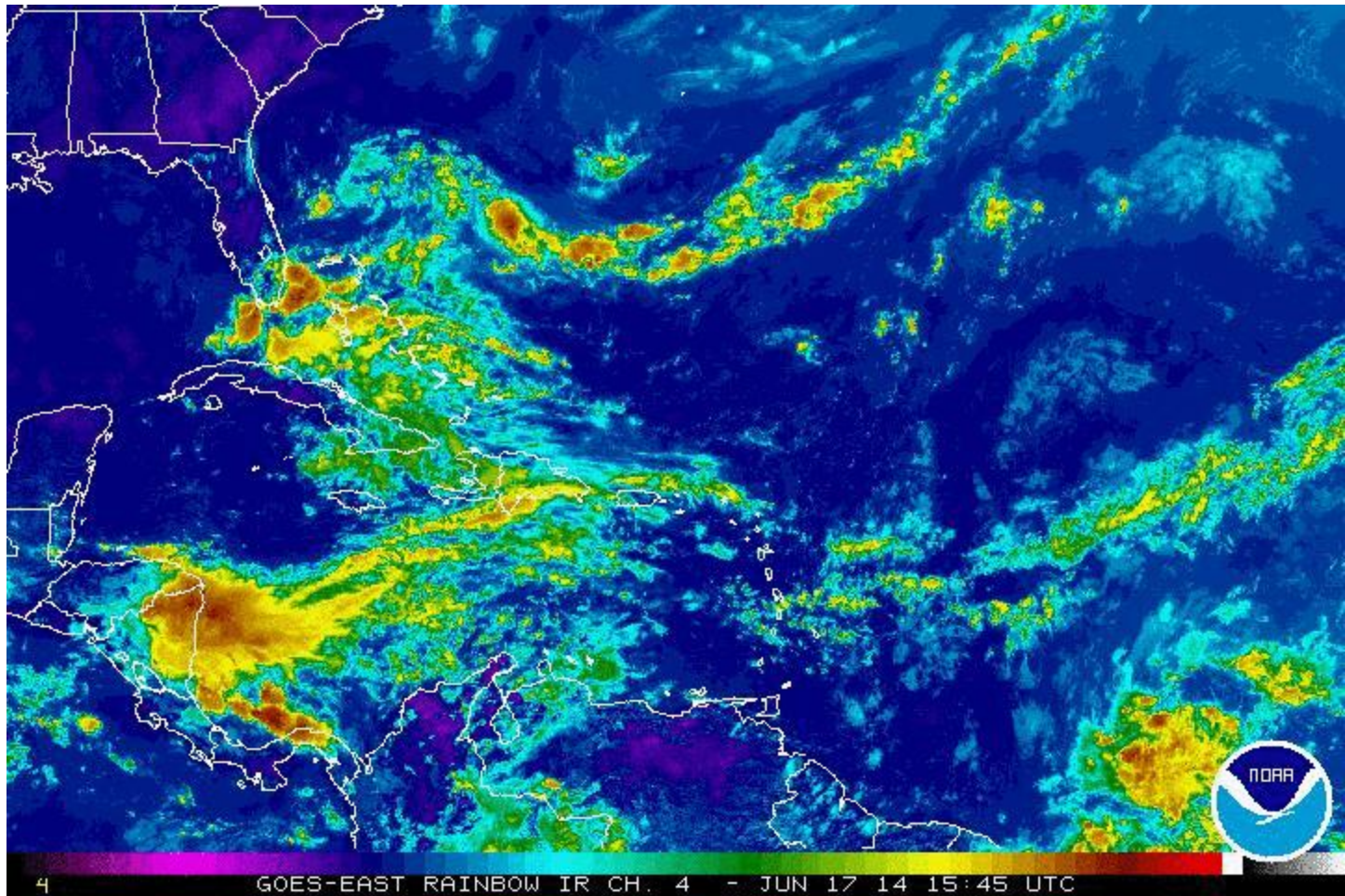
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
  Medium 30-50%
  High >50%

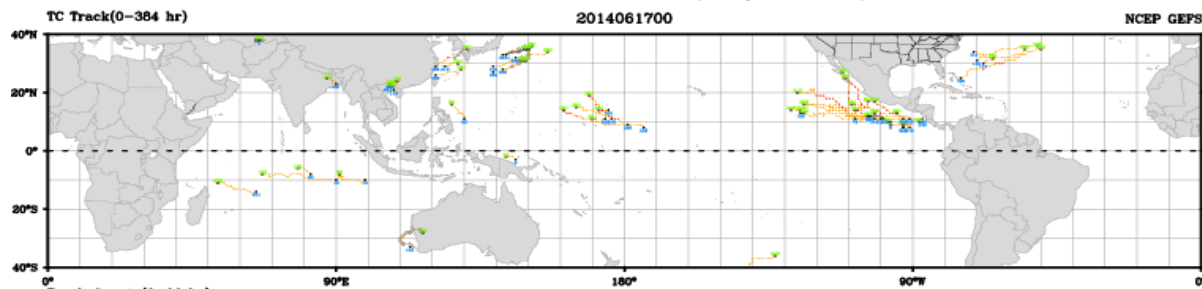
30% (moderate) chance of development through Day-5



1  
(0%)

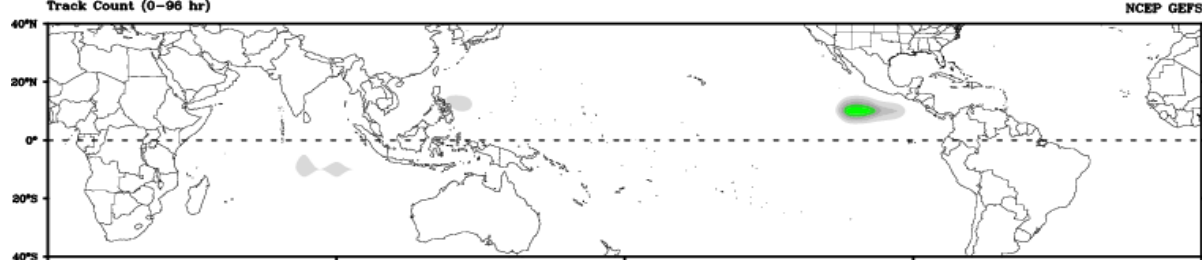


Mid/upper level trough from NW Bahamas through Central America – no TC development but enhanced convection

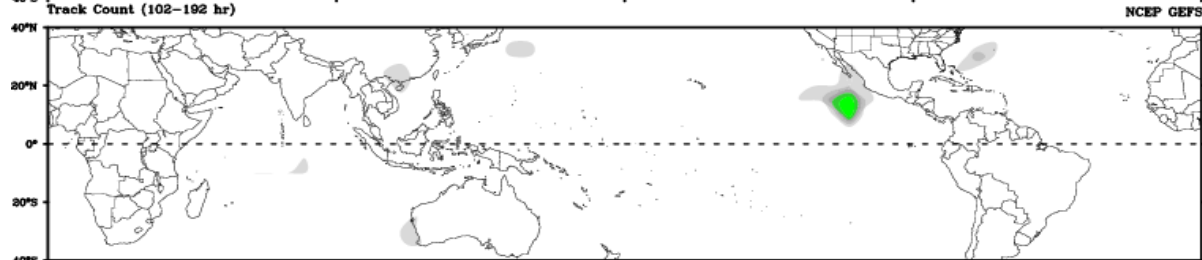


TC Genesis favored over EPAC during Week-1 (existing wave), then again late in the Week-2 period.

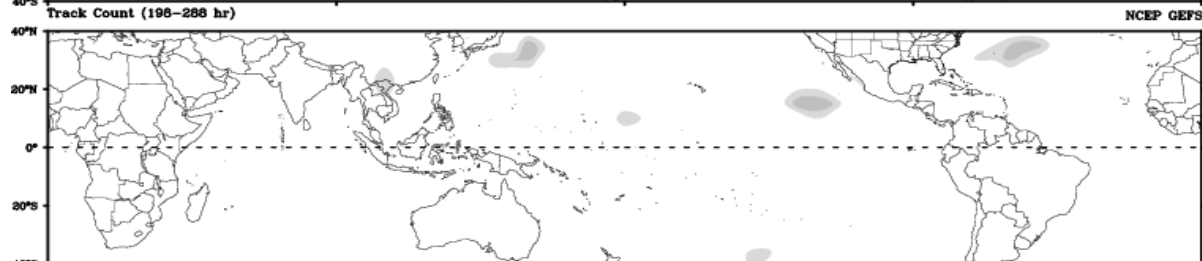
Days 1-4



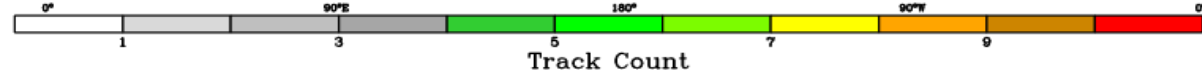
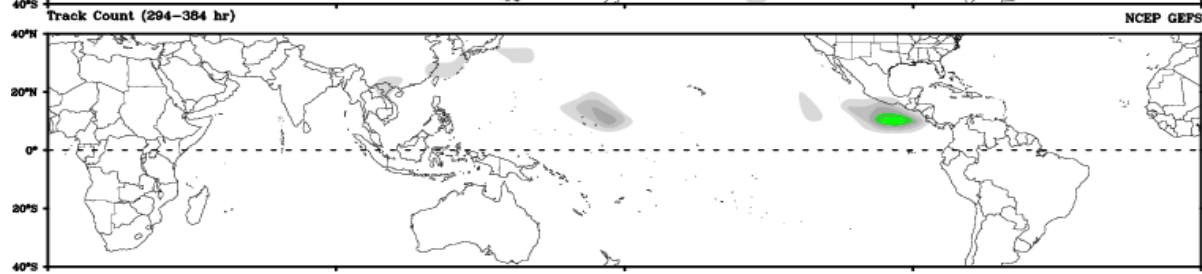
Days 5-8



Days 9-12



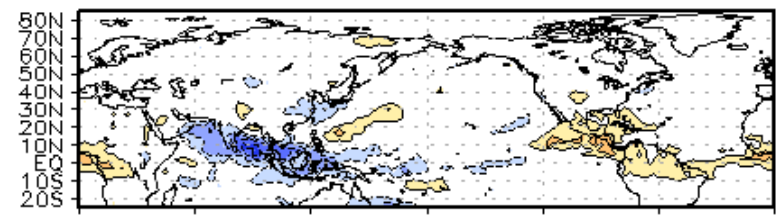
Days 13-15



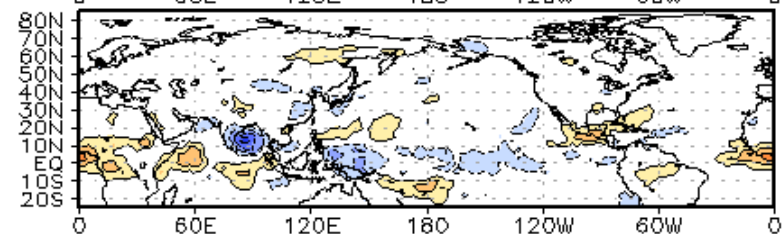
Some ensemble members develop a TC during late Week-2 NW of the Date Line (low confidence)

# Connections to U.S. Impacts

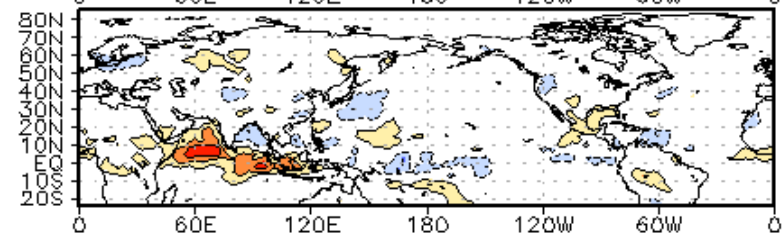
WHMJO Phase 4 olr Lagged Composite (mjj)



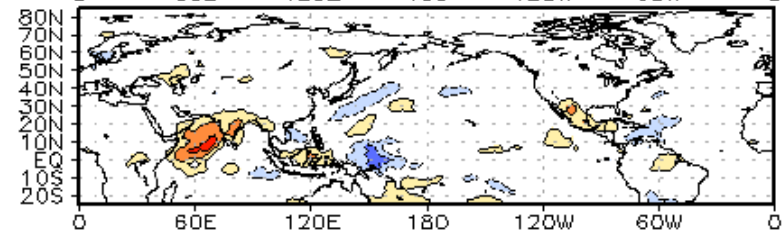
D = 0



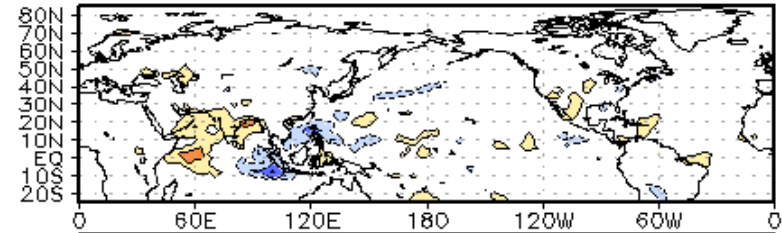
D = 5



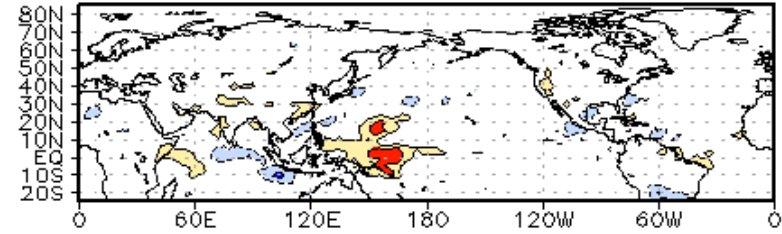
D = 10



D = 15

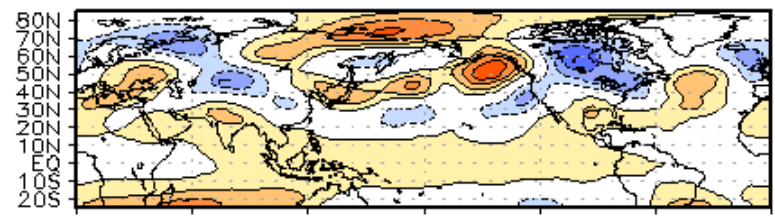


D = 20

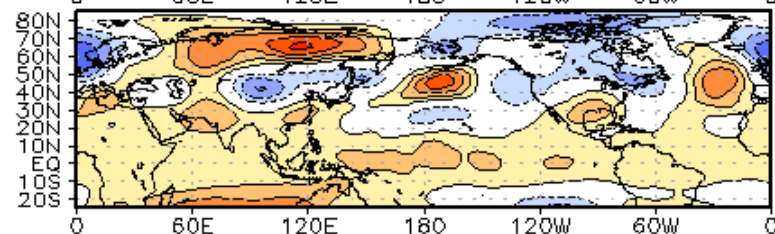


D = 25

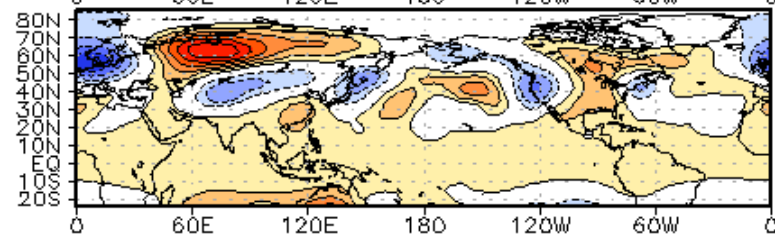
WHMJO Phase 4 z200 Lagged Composite (mjj)



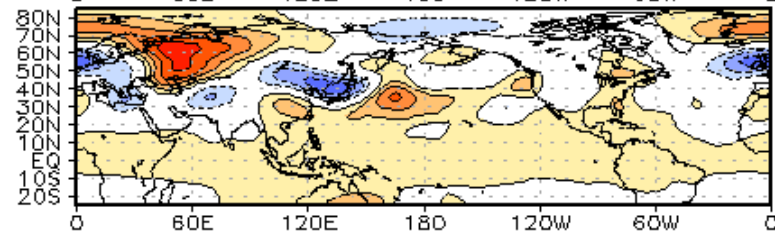
D = 0



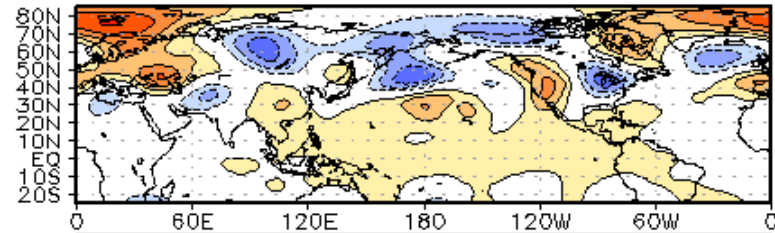
D = 5



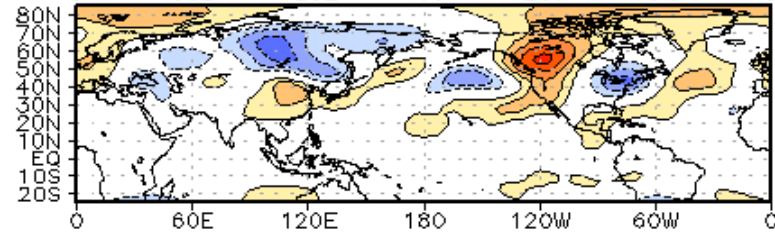
D = 10



D = 15

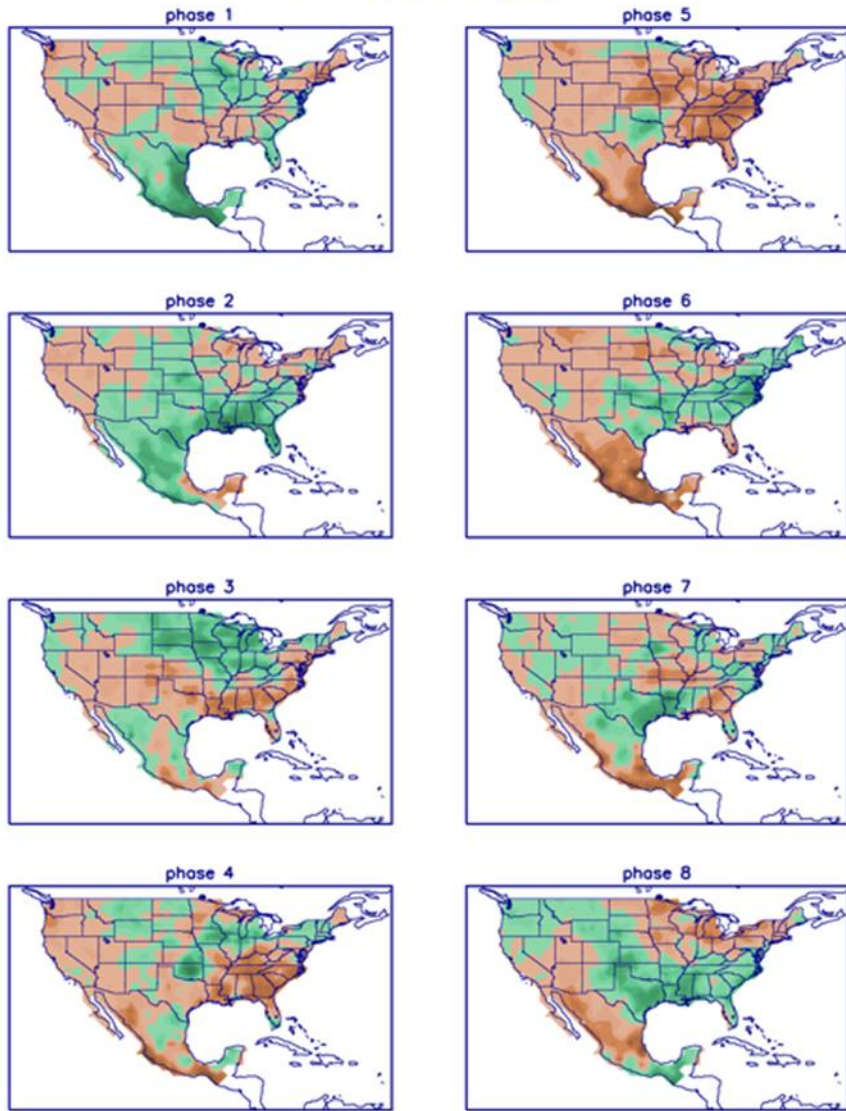


D = 20

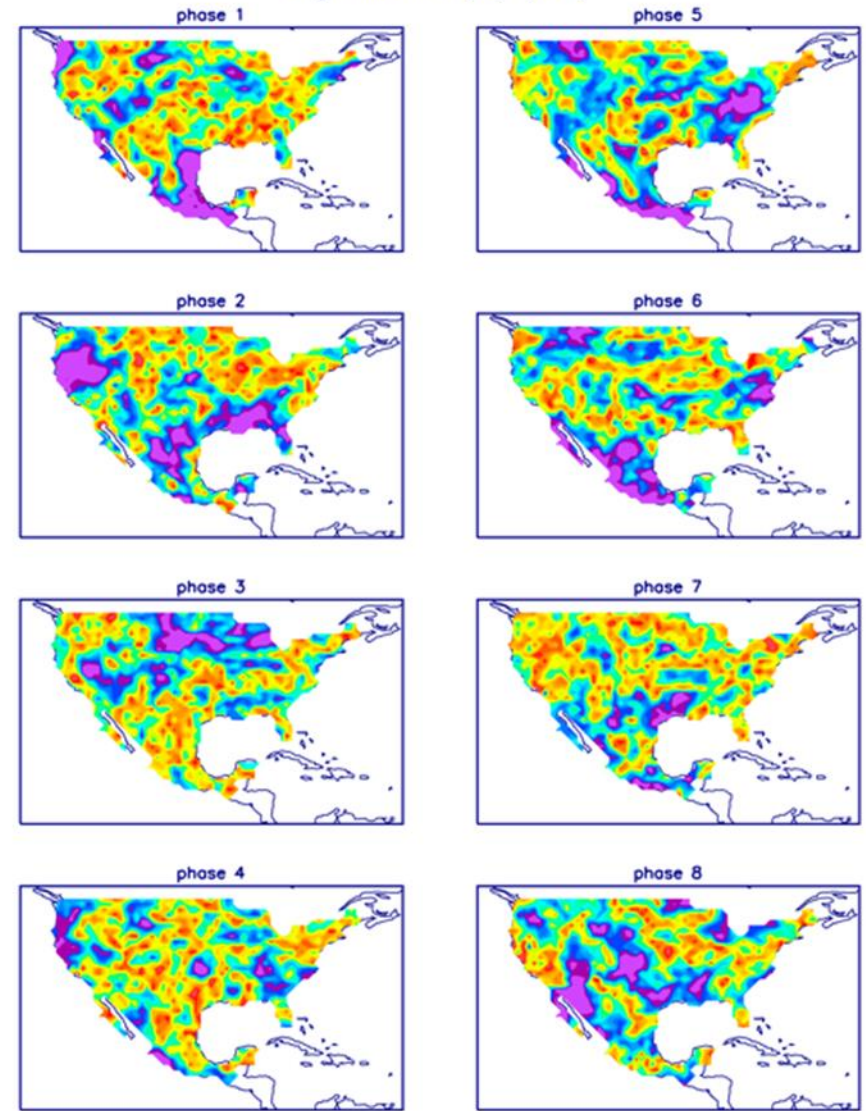


D = 25

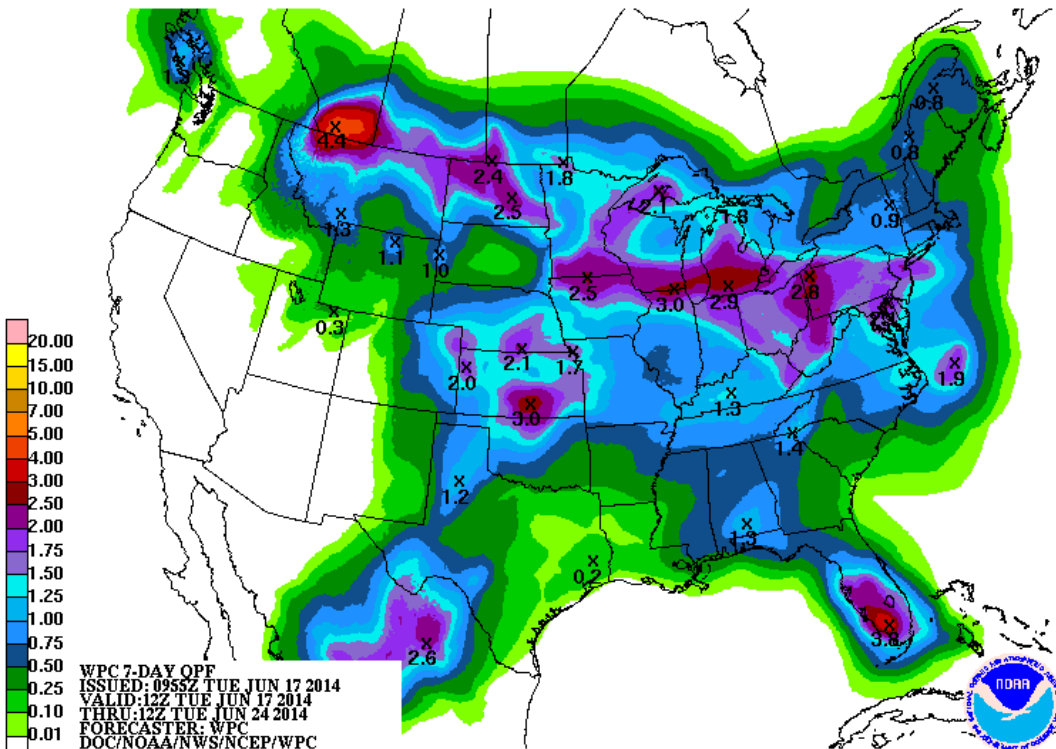
P composites (JJA)



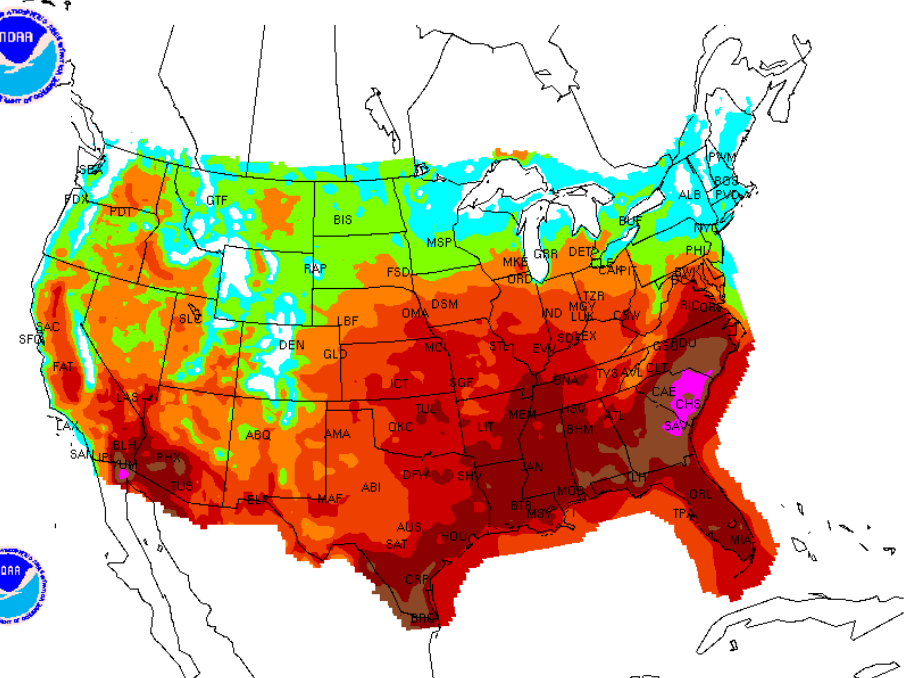
Significance (%) (JJA)



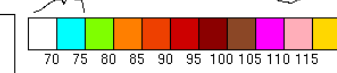


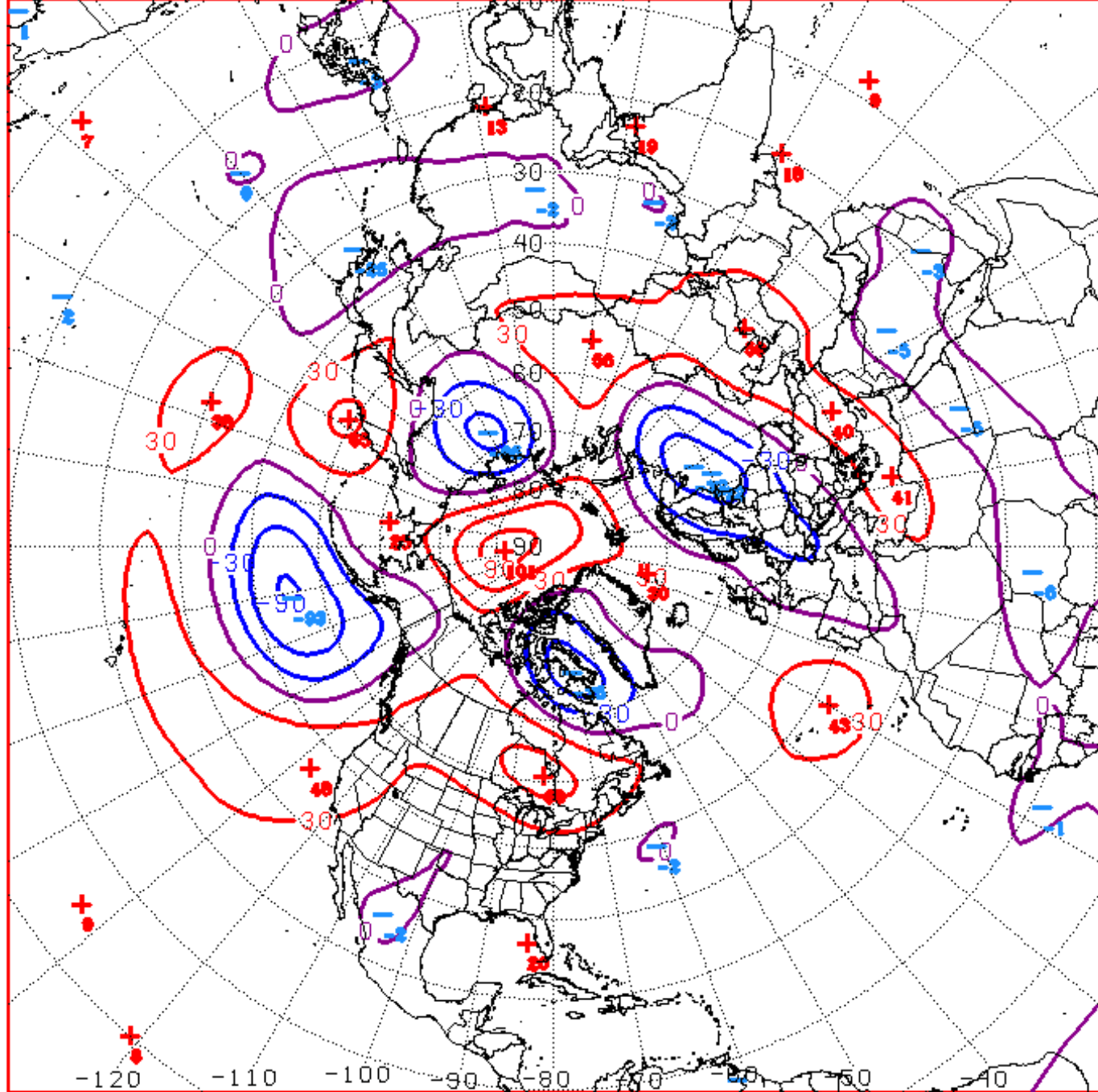


CLICK ON A CITY CODE FOR A TABLE OF FORECAST VALUES



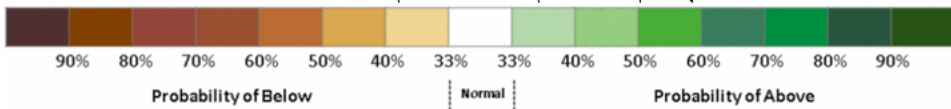
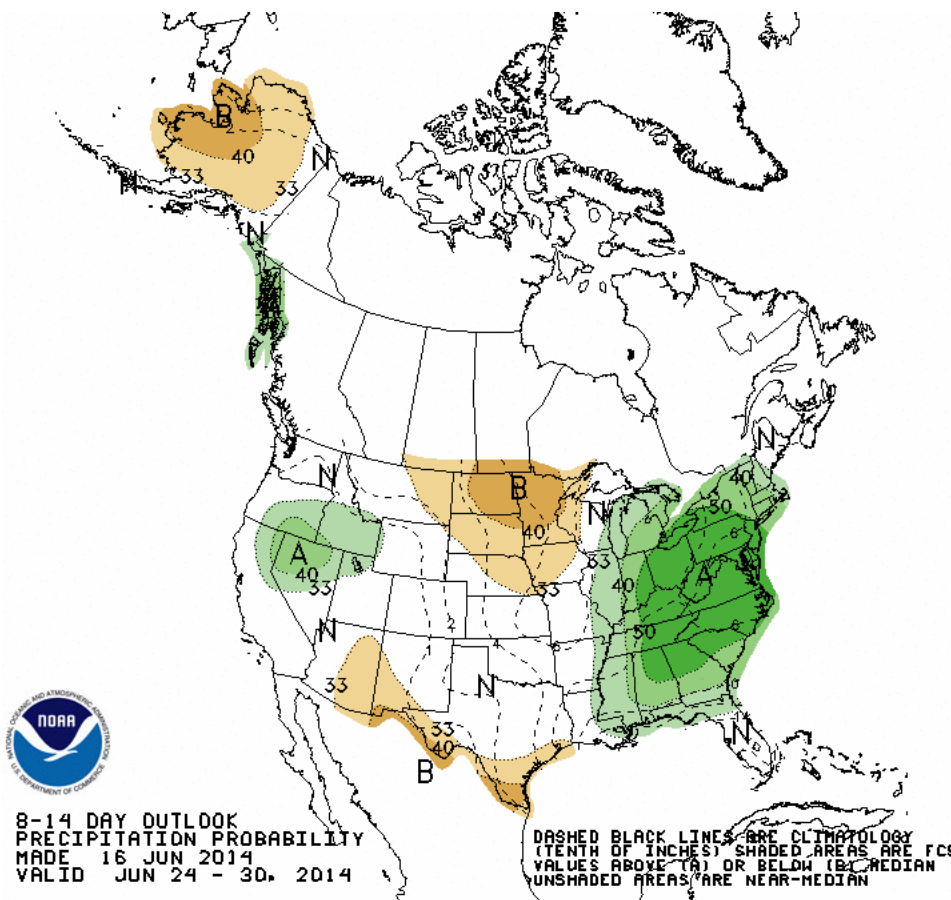
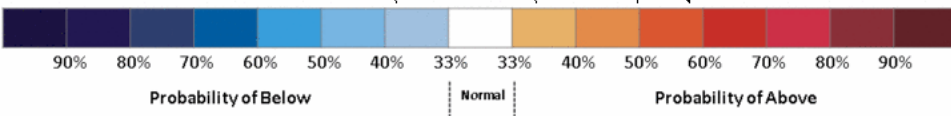
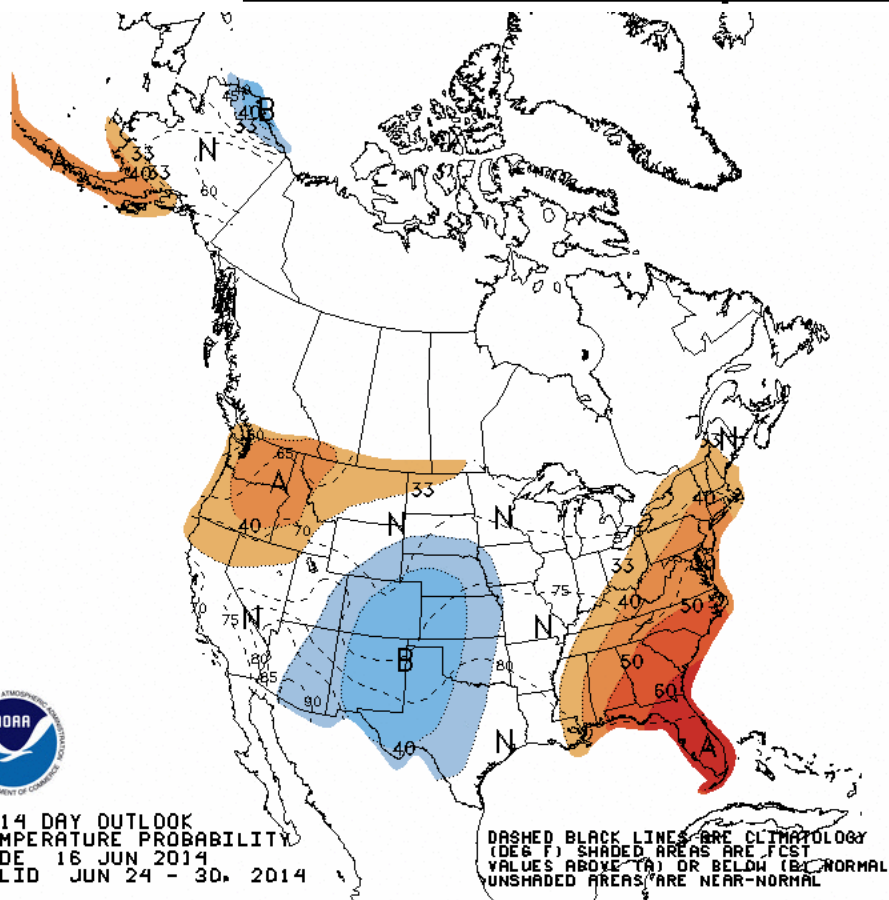
**DAY 5 FORECAST DAILY MAXIMUM HEAT INDEX (DEG F)**  
 ISSUED: 1536 UTC TUE JUN 17 2014  
 VALID: SUN JUN 22 2014  
 DOC/NOAA/NWS/NCEP  
 WEATHER PREDICTION CENTER





D+11 500 MB ANOMALIES FROM 00Z ECMM  
CPC MAP MADE JUN 17 2014 1103 UTC CNTD JUN 28 2014

# Week 2 – Temperature and Precipitation

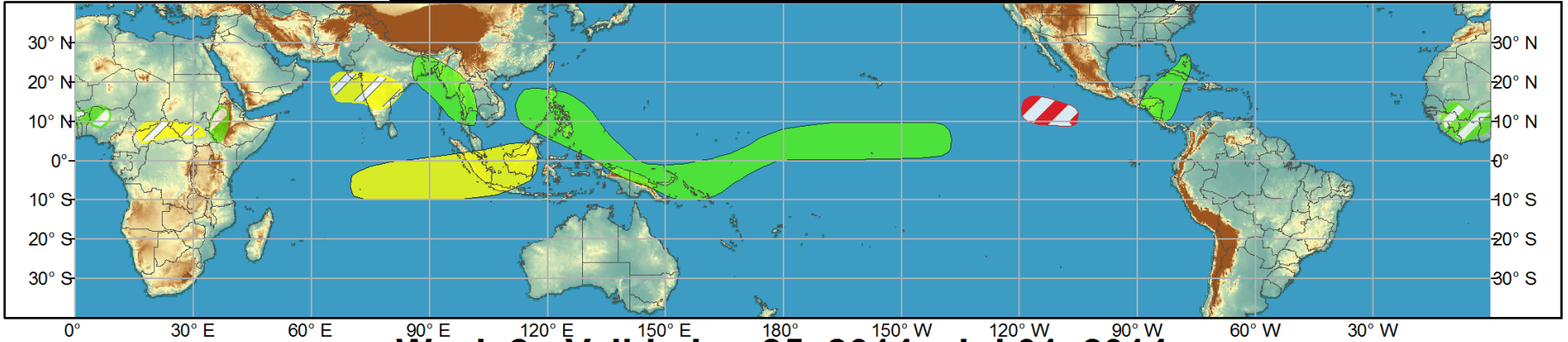




# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



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**Confidence**  
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- 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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