

# Global Tropics Hazards And Benefits Outlook

September 2, 2014

Stephen Baxter

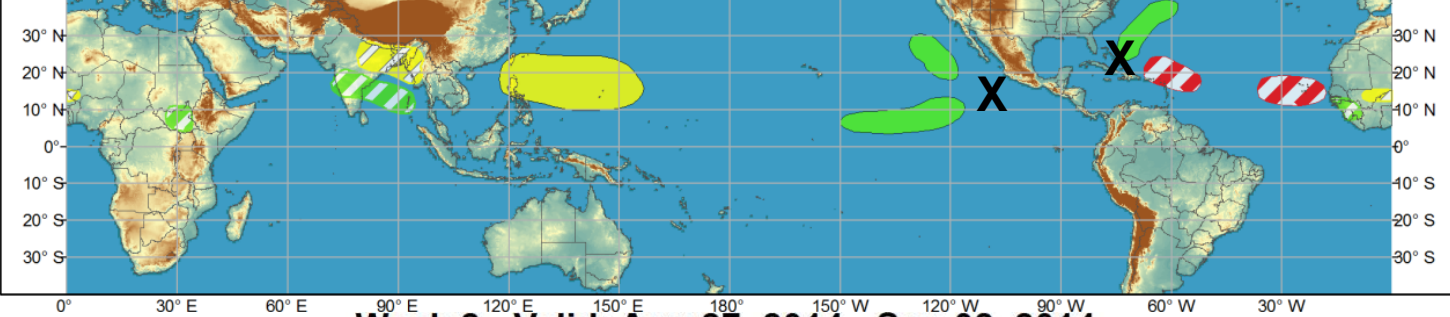
## Outline

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 27, 2014 - Sep 02, 2014

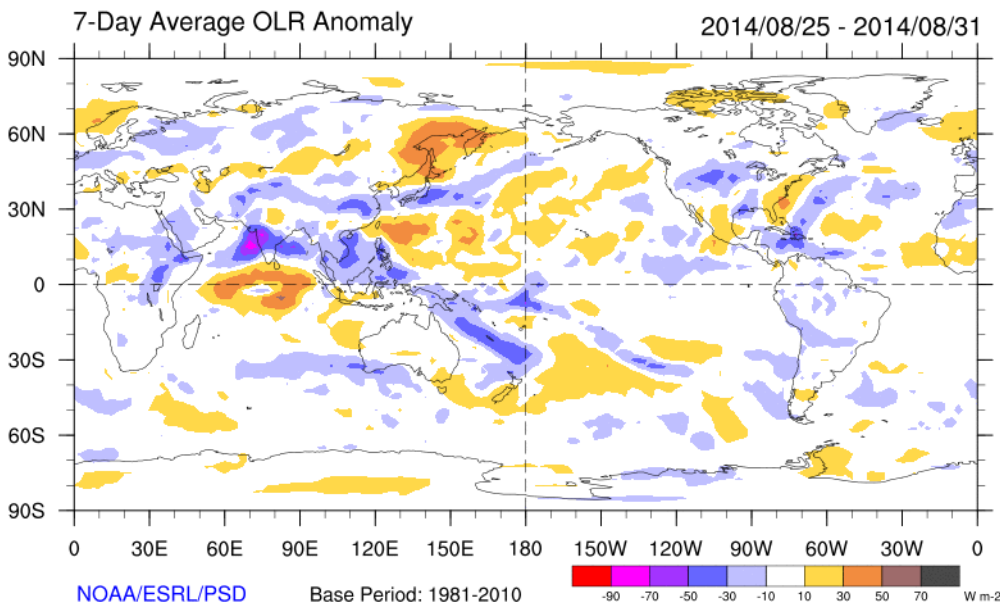


Week 2 - Valid: Aug 27, 2014 - Sep 02, 2014



Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain



# Synopsis of Climate Modes

## ENSO:

- Current: ENSO-neutral
- Outlook: The chance of El Niño is about 65% during the NH fall and early winter.

## MJO and other subseasonal tropical variability:

- The MJO remained fairly weak with both the CPC and RMM indices not indicating a robust MJO. However, there is some evidence of a more organized, eastward-propagating signal of late, with the enhanced phase currently over the northeastern IO and Maritime Continent.
- Dynamical model MJO index forecasts generally support continued eastward propagation but a weak signal (GFS is still an outlier).
- Therefore, a weak MJO is expected to impact the global tropics, along with Rossby waves and atmospheric Kelvin waves.

## Extratropics:

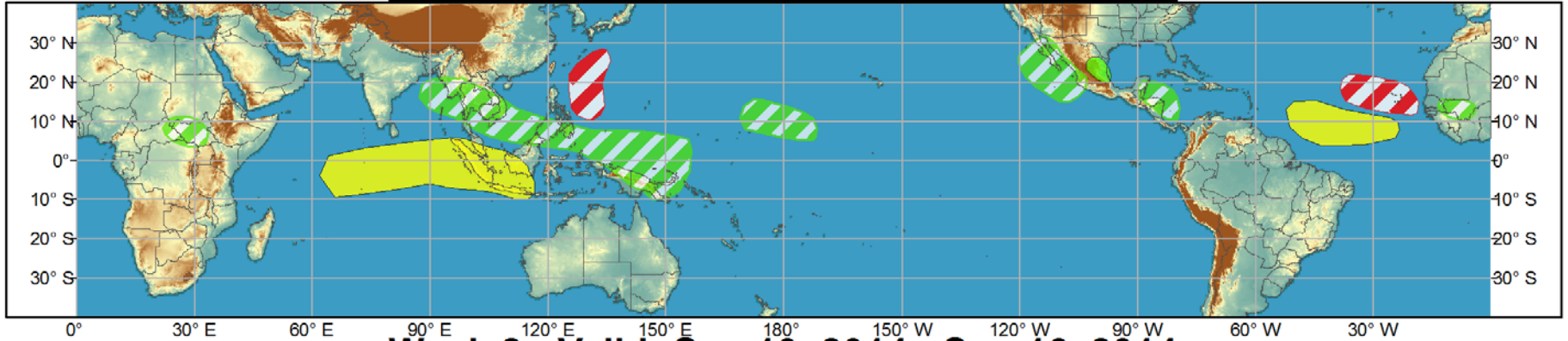
- There seems to be little in the way extratropical teleconnections from the observed pattern of tropical convection. Though there is some organization in the pattern of tropical convection, the midlatitudes continue to be impacted more by regionally-varying short wavelength, high-amplitude waves.



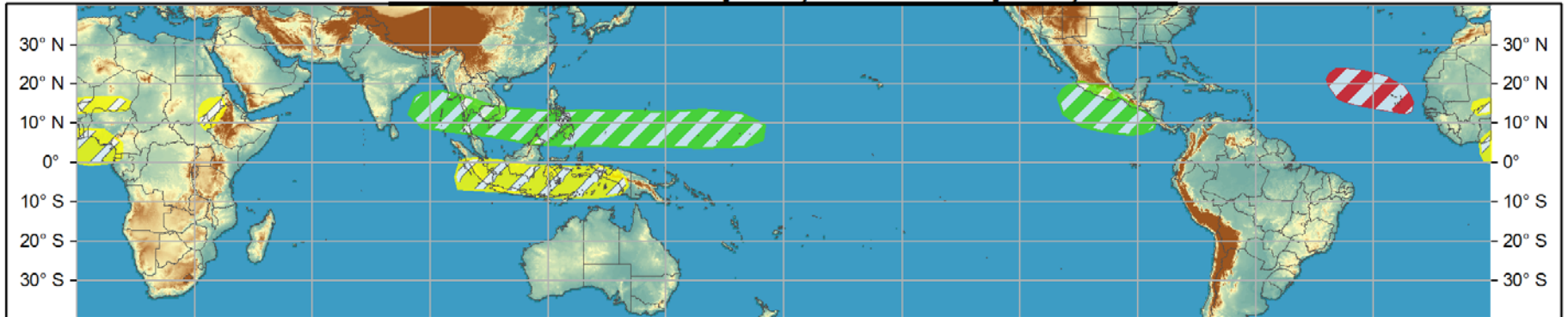
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Sep 03, 2014 - Sep 09, 2014



## Week 2 - Valid: Sep 10, 2014 - Sep 16, 2014



**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: 09/02/2014  
Forecaster: Baxter

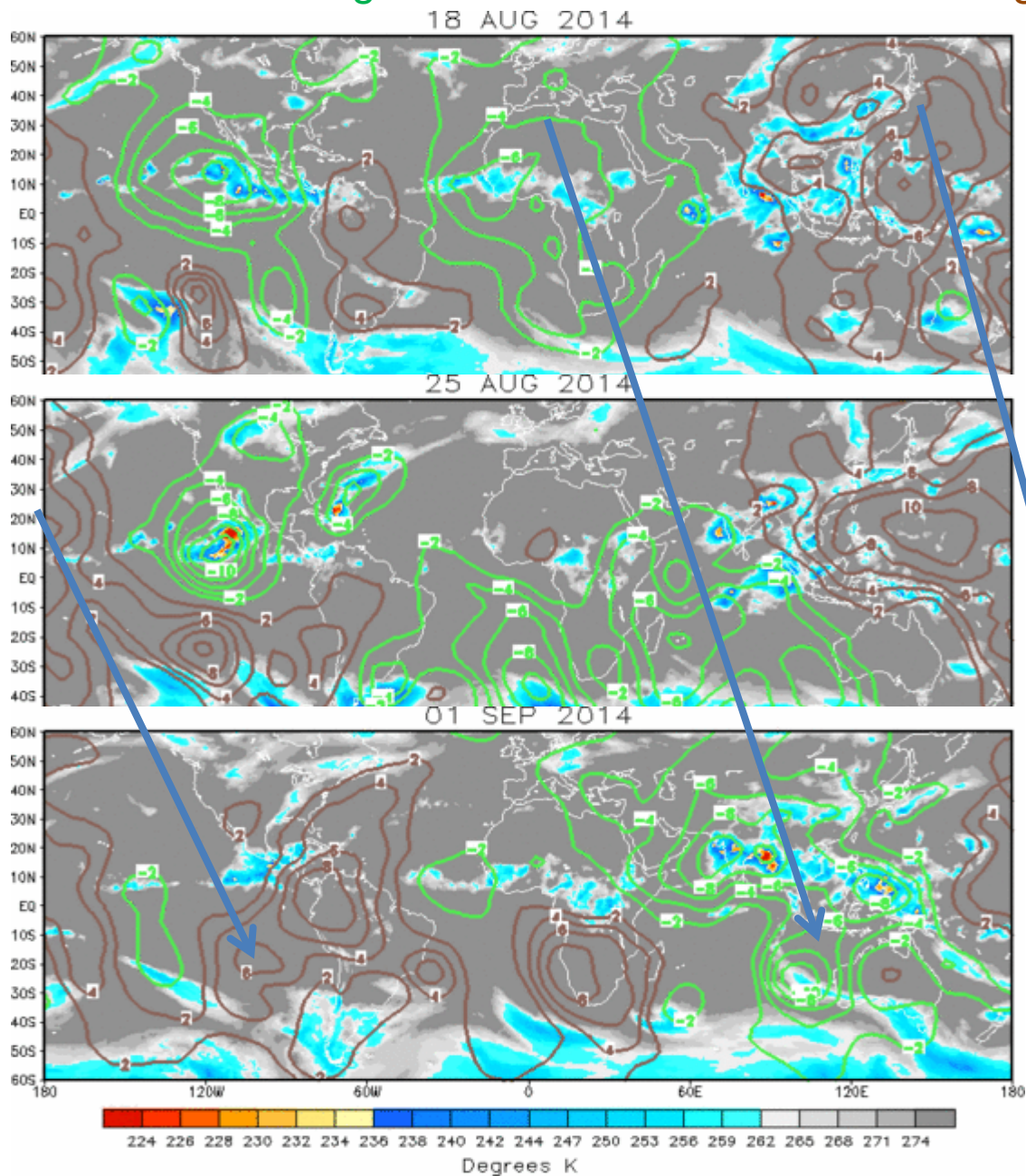
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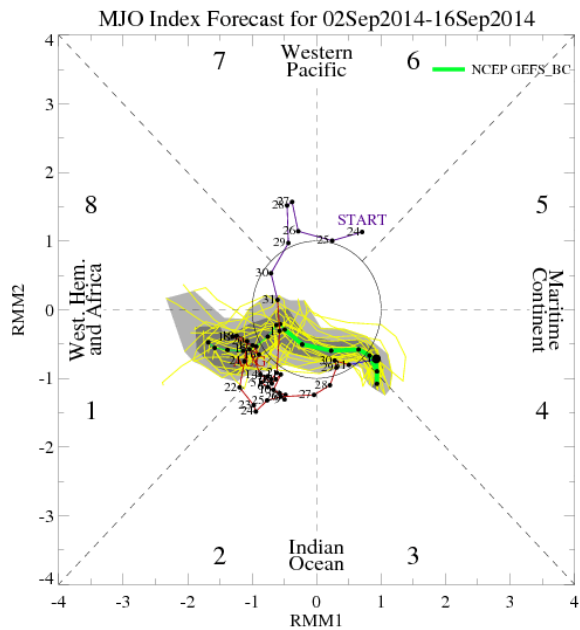


# IR Satellite & 200-hpa Velocity Potential Anomalies

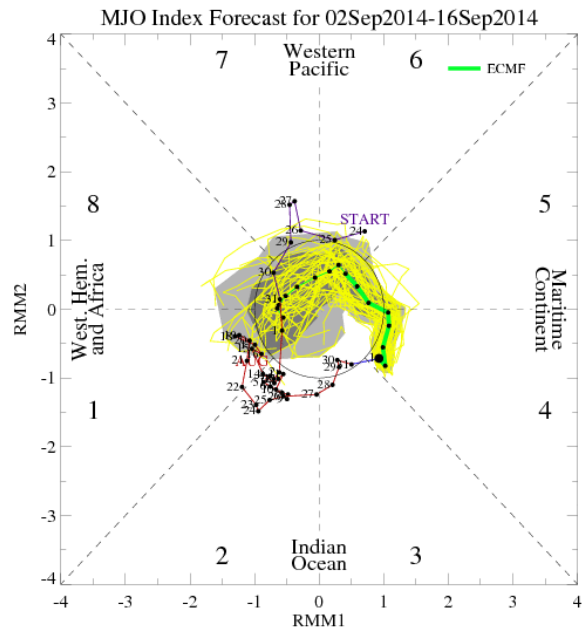
Green: Enhanced Divergence    Brown: Enhanced Convergence



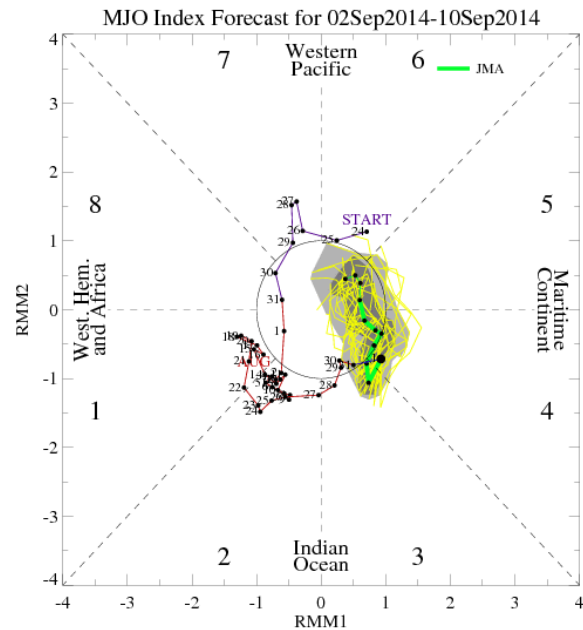
# MJO Observation/Forecast



GFS

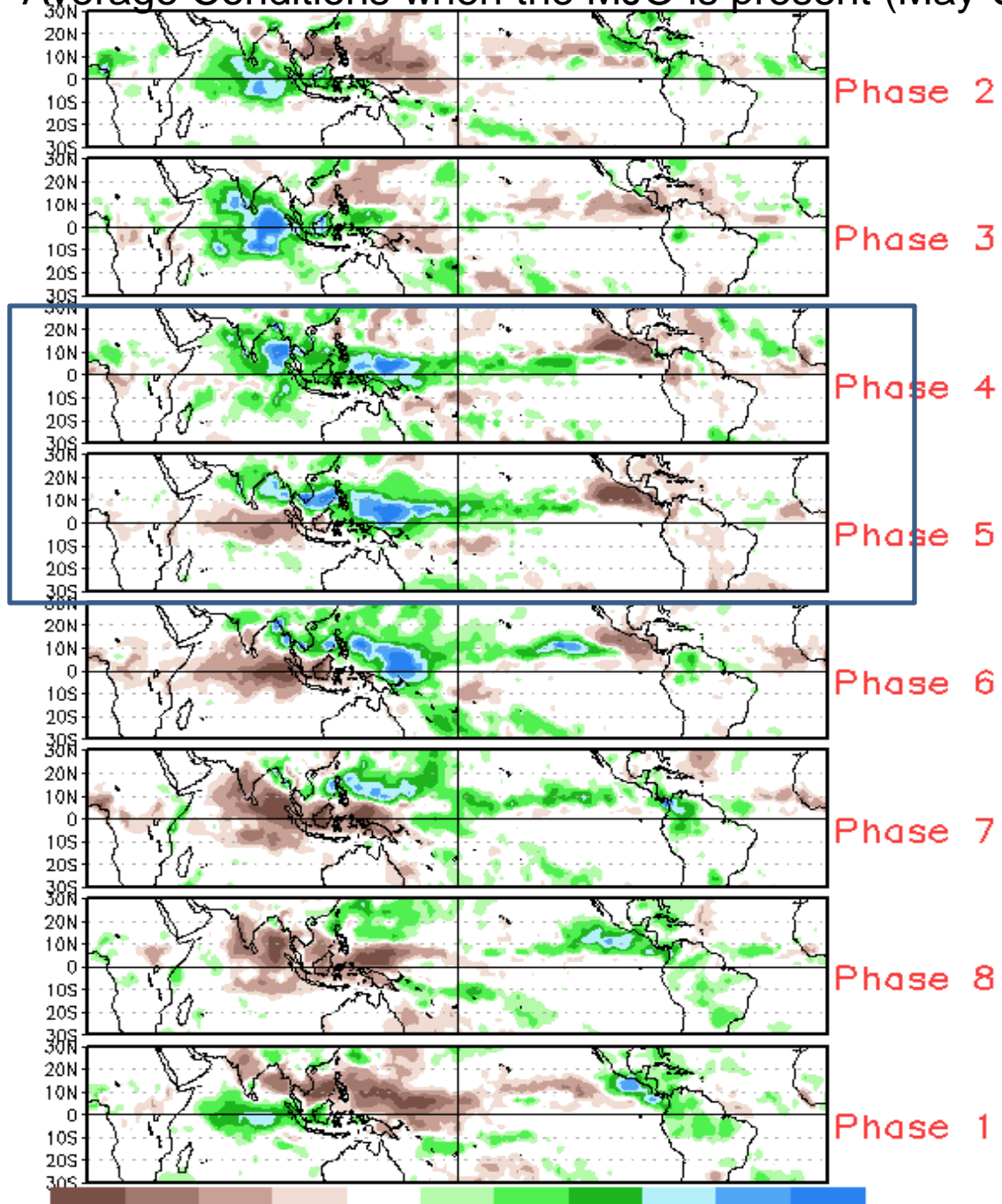


ECMWF



JMA

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



Phase 2

Phase 3

Phase 4

Phase 5

Phase 6

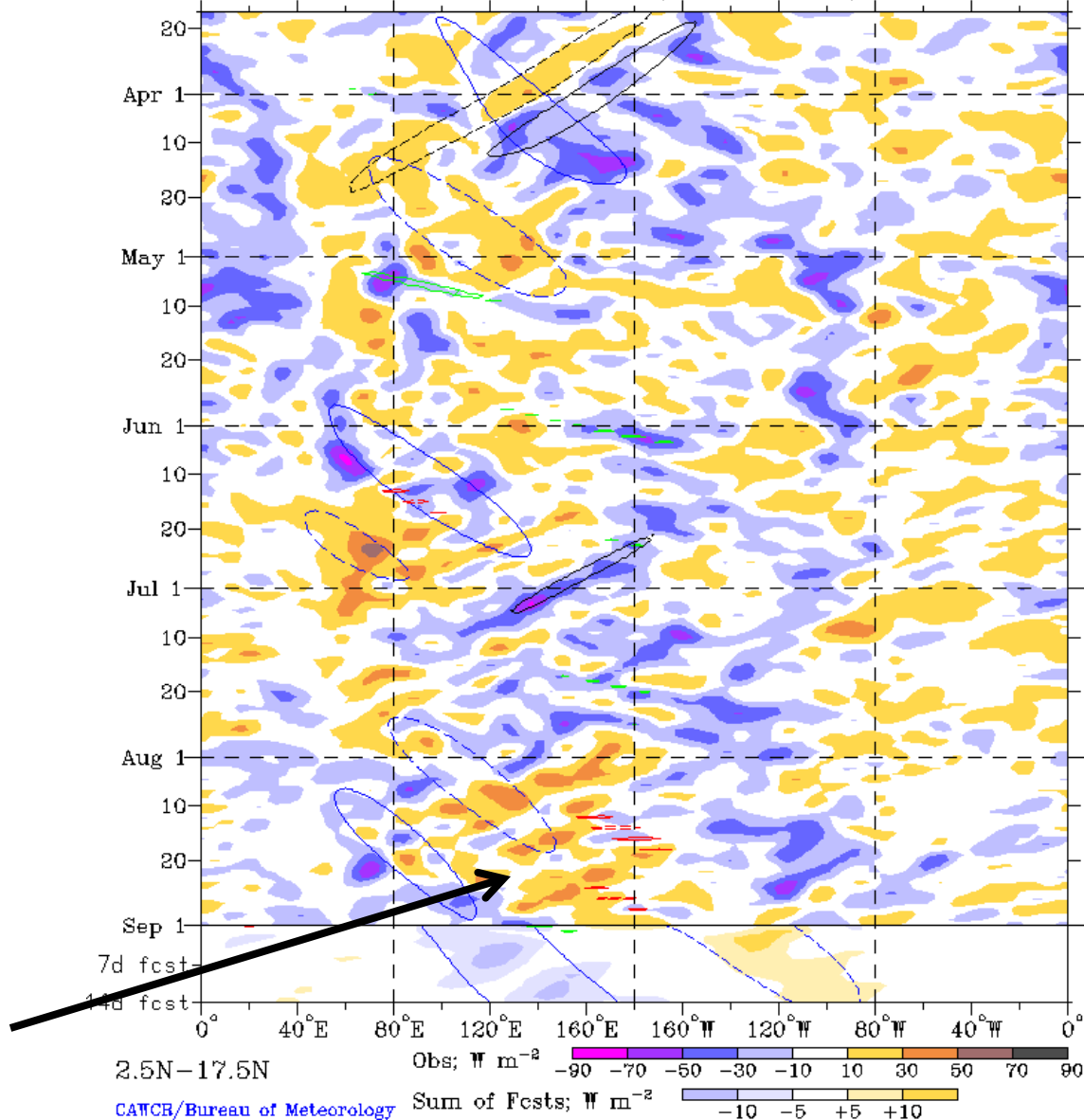
Phase 7

Phase 8

Phase 1

CAVEAT: These panels are representative of robust MJO events.

Real-time filtering superimposed upon 1-2-1 filt, R21, OLR Anoms  
 MJO blue CINT=10; n1ER black CINT=10; Kelvin green CINT=15  
 Negative contours solid, positive dashed (excluding Kelvin)  
 17-Mar-2014 to 1-Sep-2014 + 14 days



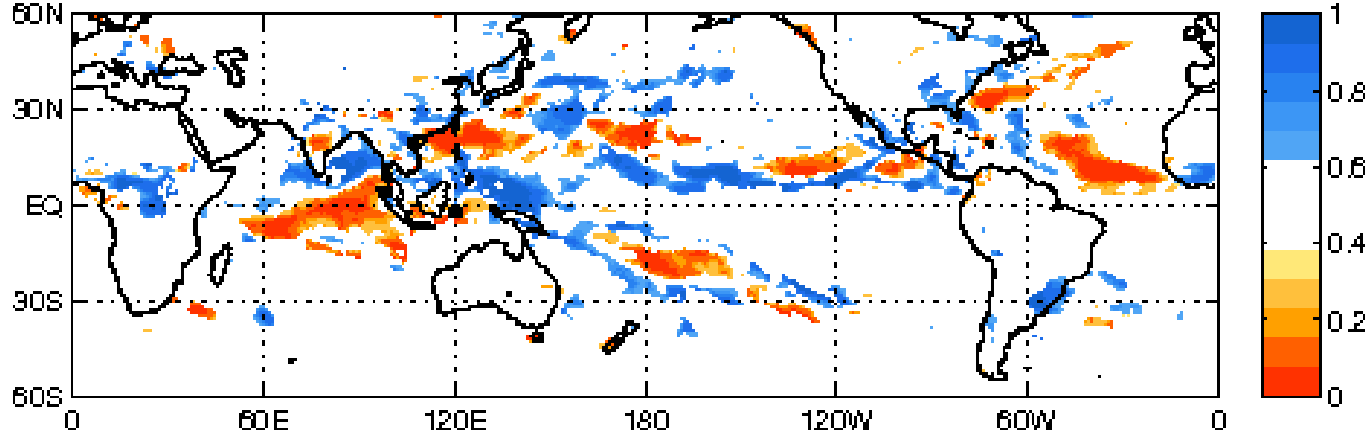
Weak, active phase of the MJO  
 forecast to impact Maritime  
 Continent and West Pacific.

Evolving ENSO also  
 contributing.

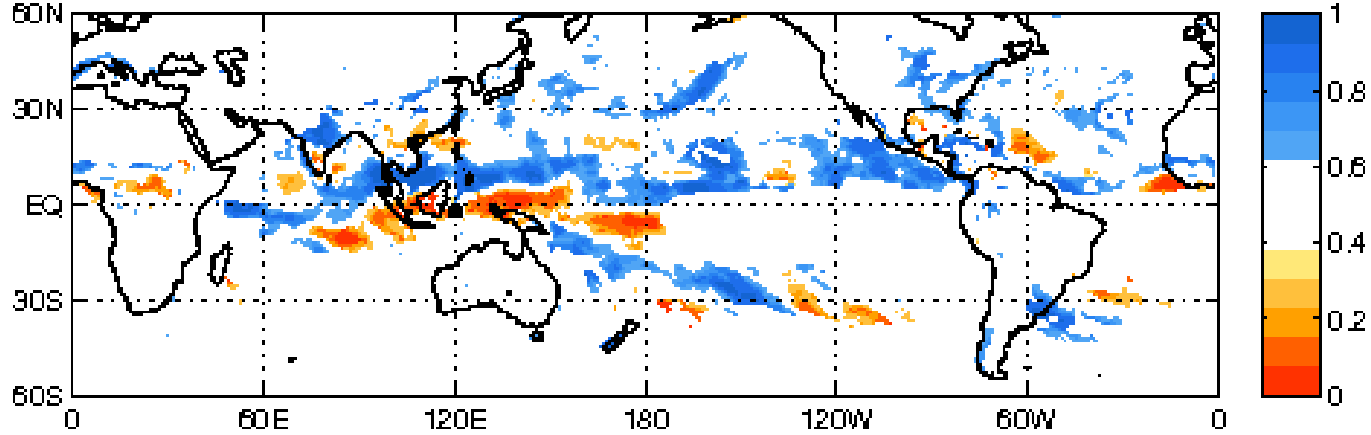
Equatorial Rossby Waves not  
 as impactful as in previous  
 weeks.



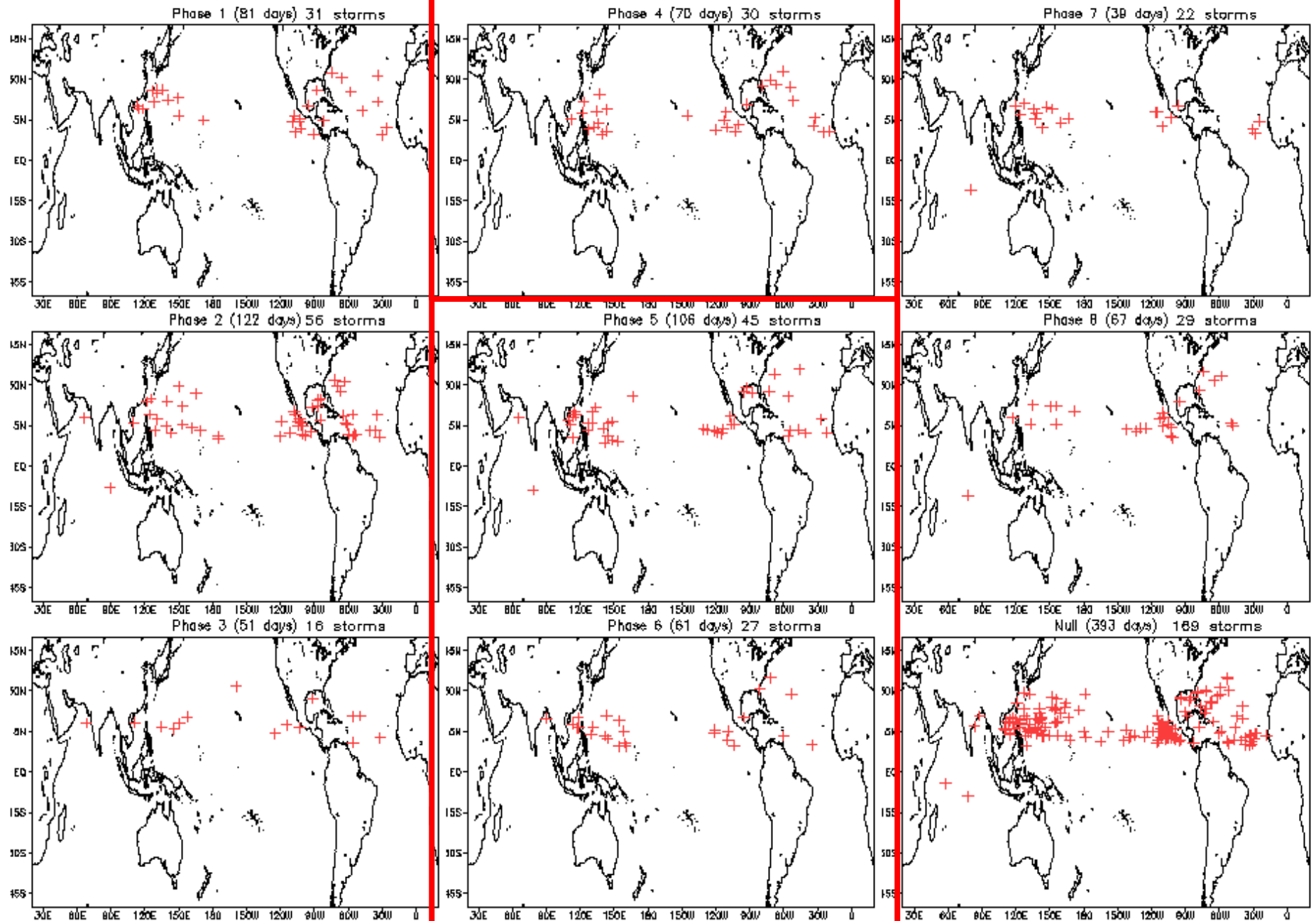
**CFS Prob. Fcst PREC Week: 1: 02-Sep-2014 to 08-Sep-2014**



**CFS Prob. Fcst PREC Week: 2: 09-Sep-2014 to 15-Sep-2014**



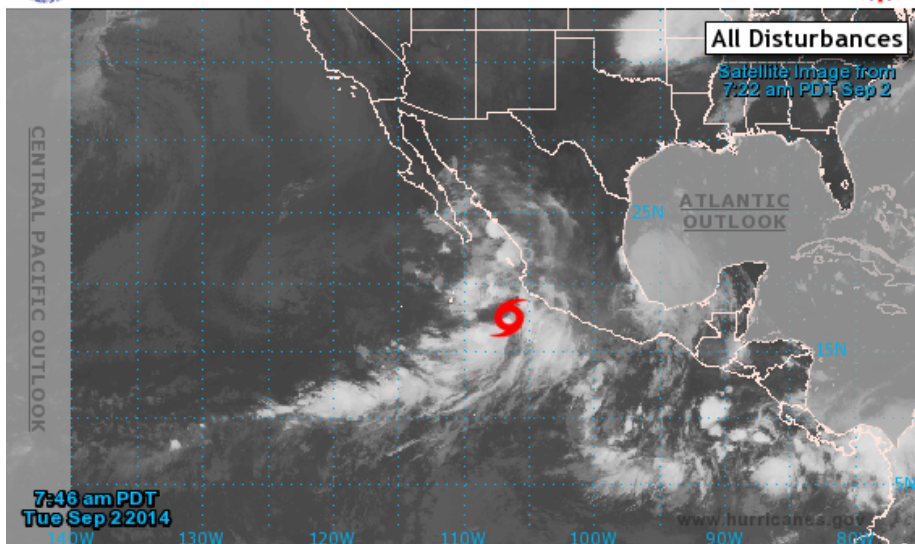
# September Tropical Storm Formation by MJO phase





# 2-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and 2-Day Cyclone Formation Chance: < 30% 30-50% > 50%

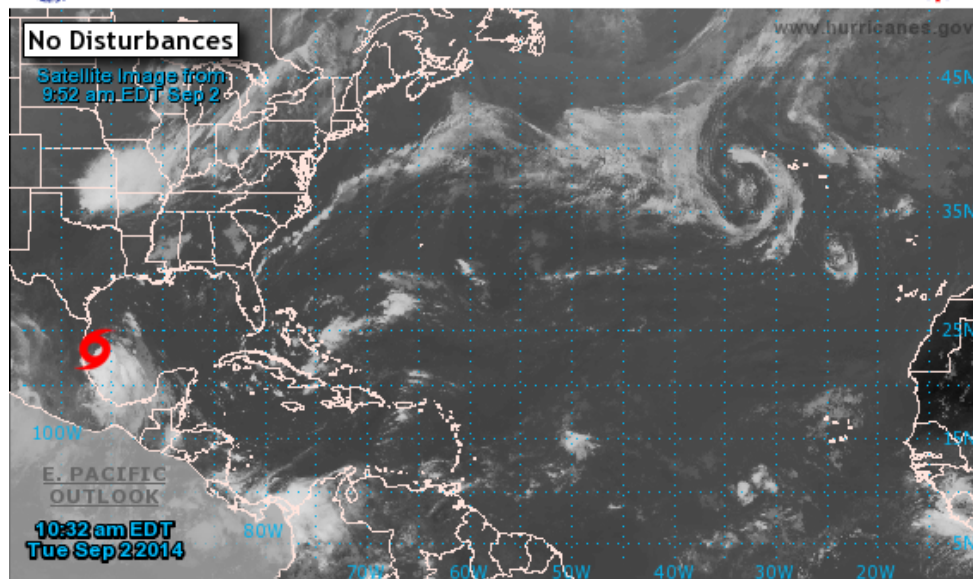
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants



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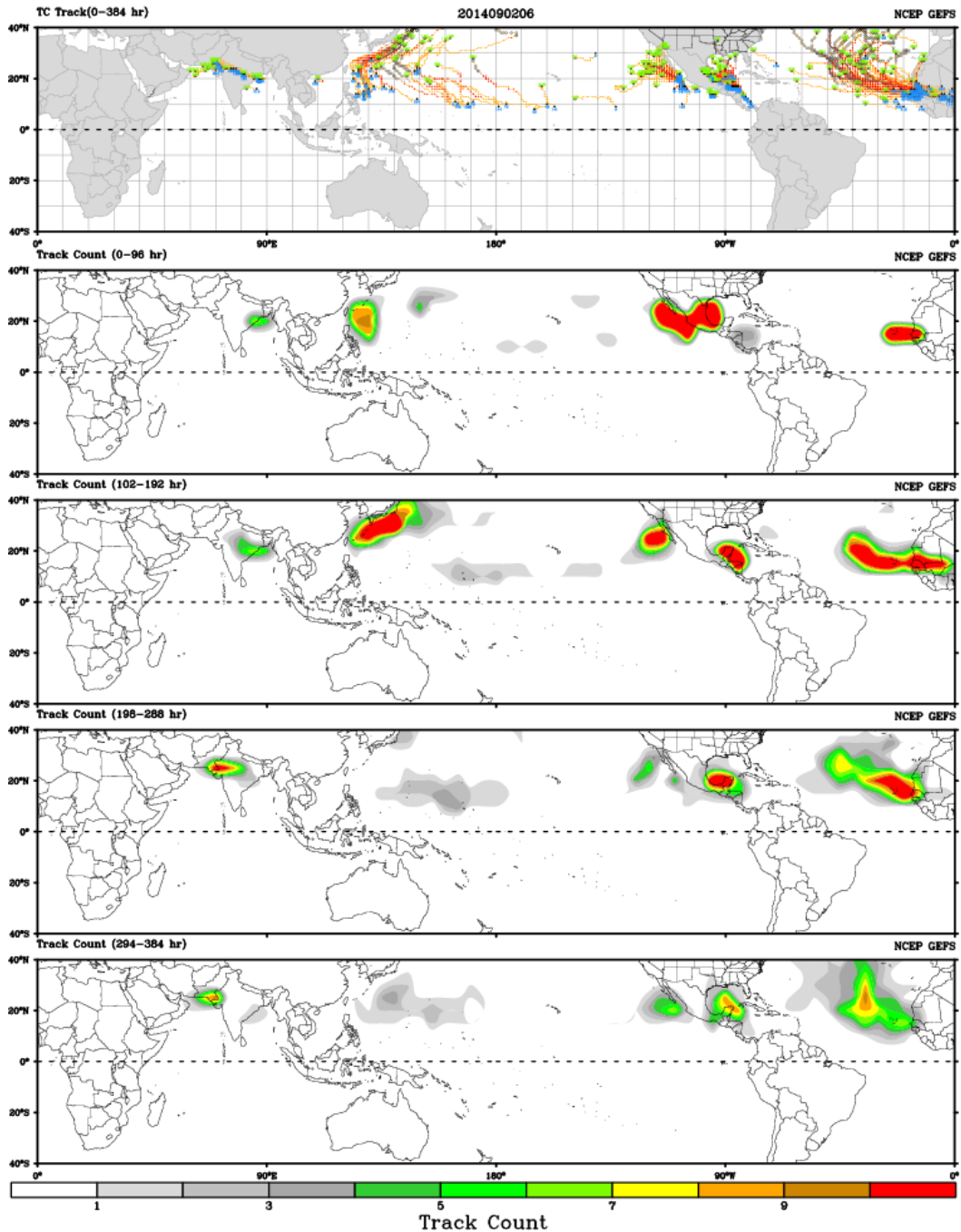


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Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

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CWB TC Tracker for NCEP GEFS (Fuzzy\_AllCriteria)



Days 1-4

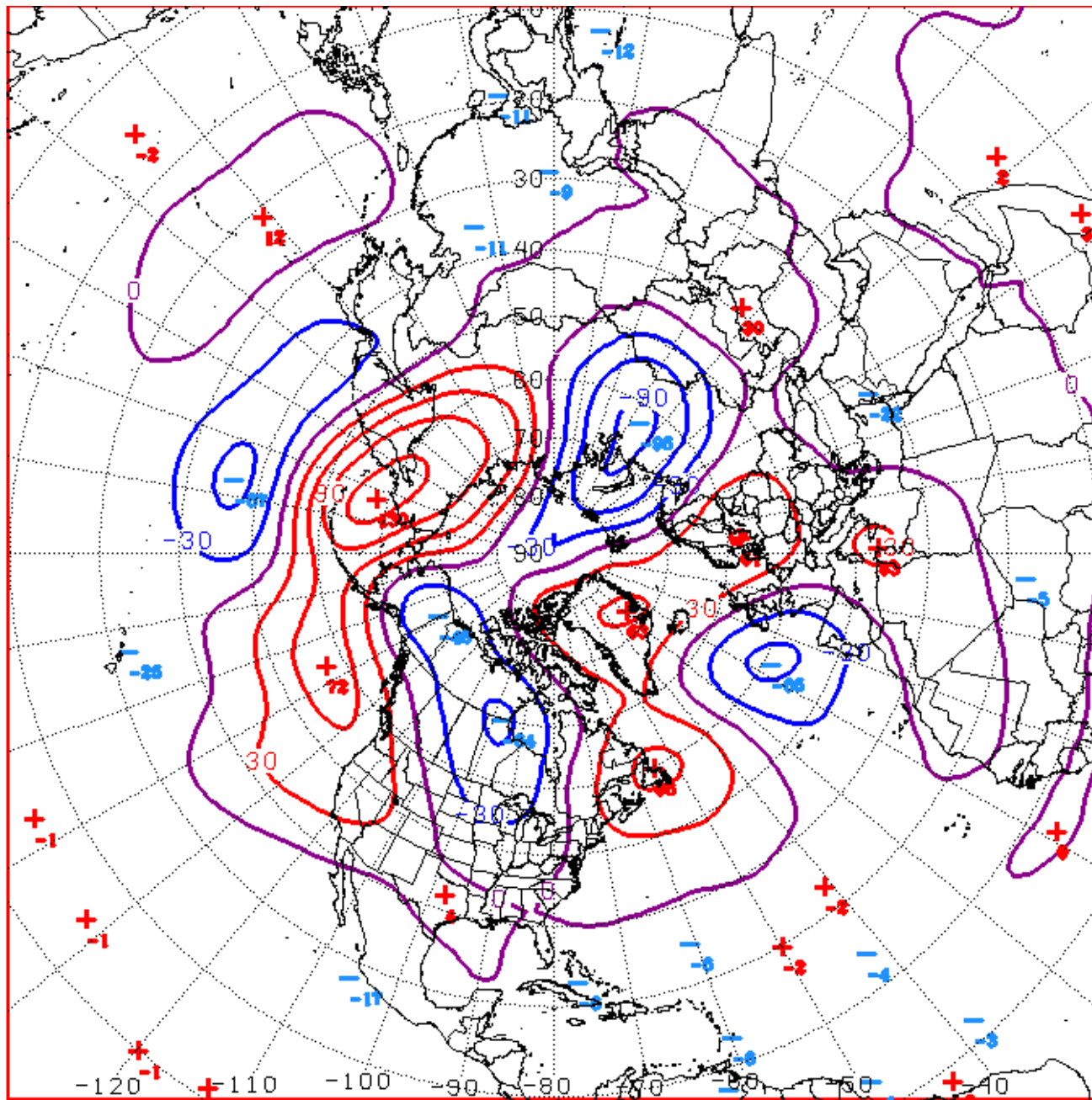
Day 5-8

Day 9-12

Day 13-16

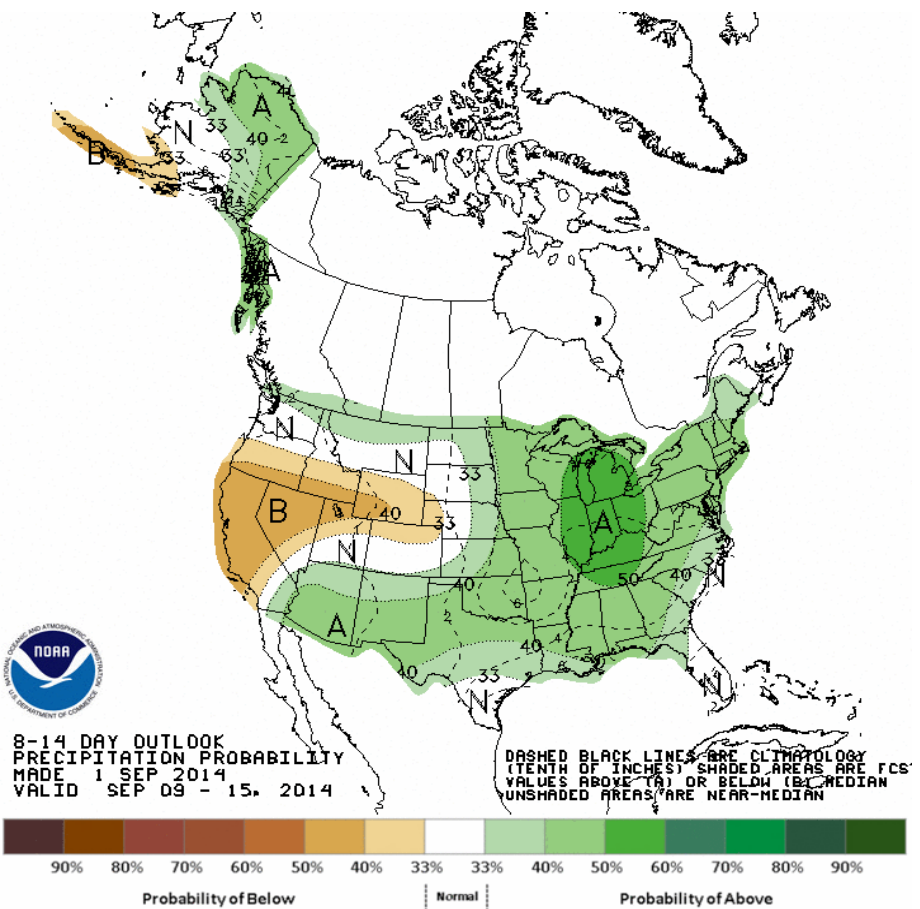
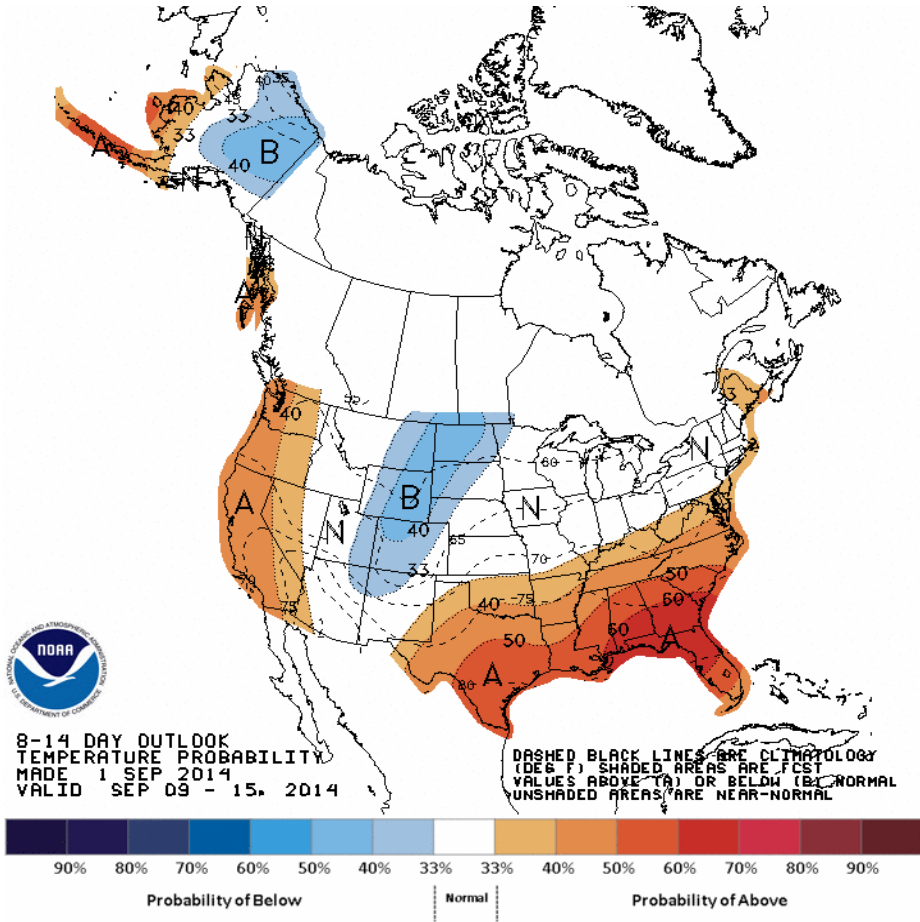


# Connections to U.S. Impacts



D+11 500 MB ANOMALIES FROM 00Z ECMM  
CPC MAP MADE SEP 02 2014 1055 UTC CNTD SEP 13 2014

# Week 2 – Temperature and Precipitation

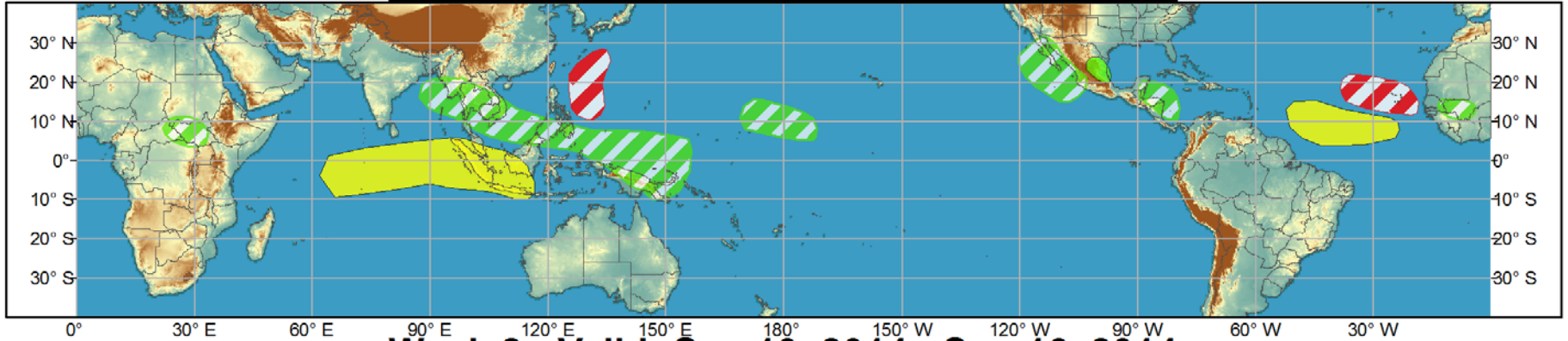




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