

# Global Tropics Hazards And Benefits Outlook

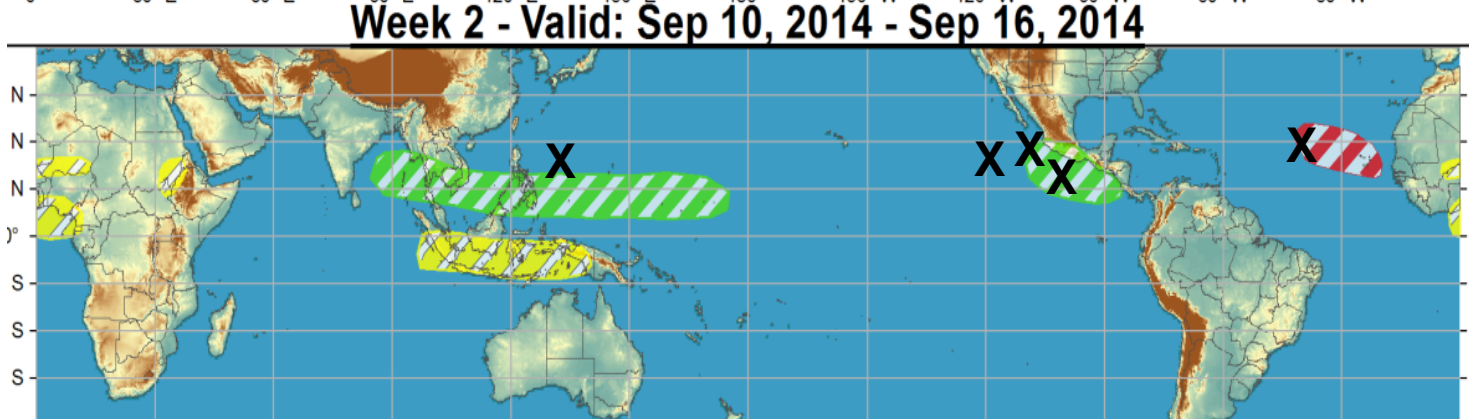
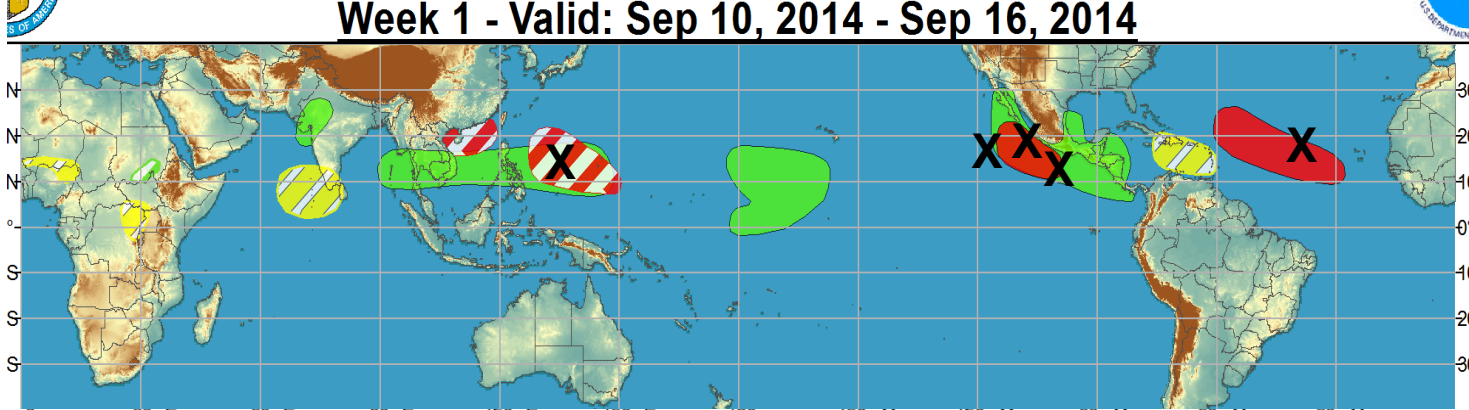
September 16, 2013

Matthew Rosencrans

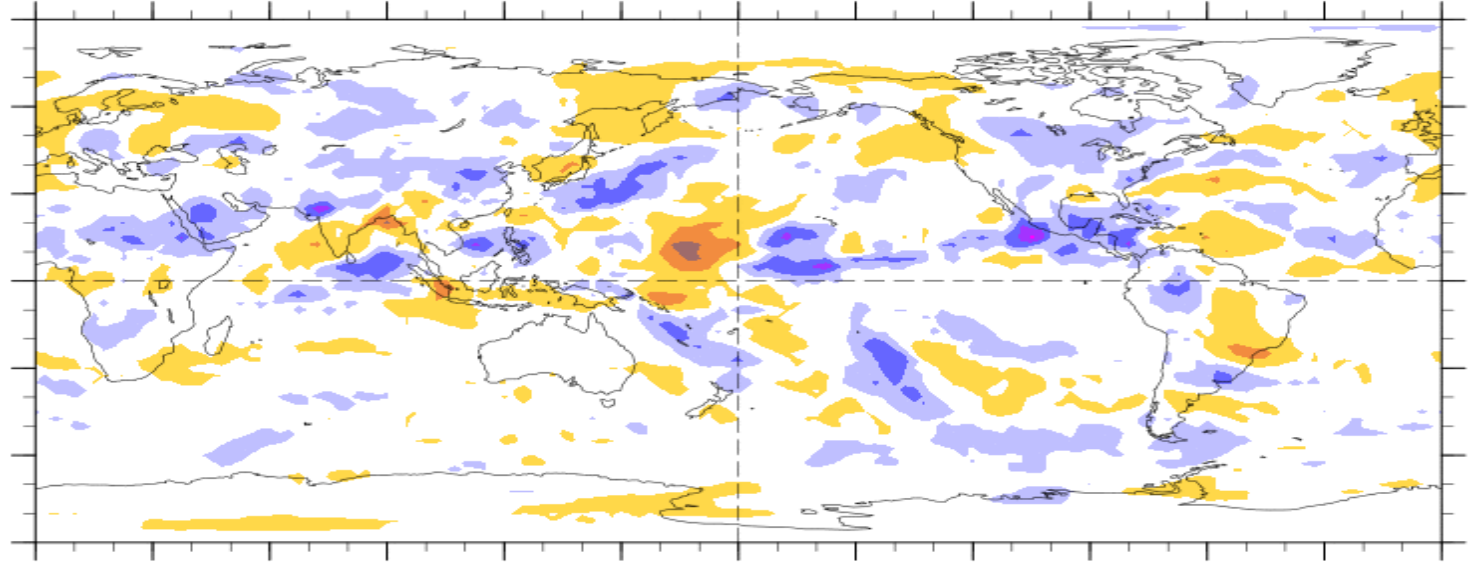
## Outline

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

# Outlook Review



7-Day Average OLR Anomaly 2014/09/08 - 2014/09/14



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 at 60-65% during the Northern Hemisphere fall and winter.

## MJO and other subseasonal tropical variability:

- The MJO remained weak with atmospheric circulation not coherent with a robust MJO. Equatorial Rossby waves, Kelvin Waves, and vacillations in the Asian Monsoon are impacting the overall pattern.
- Dynamical model MJO index forecasts depict little to no movement, potential just the index aligning to the base state and little MJO activity. The statistical tools show eastward propagation but little to no signal strength.

## Extratropics:

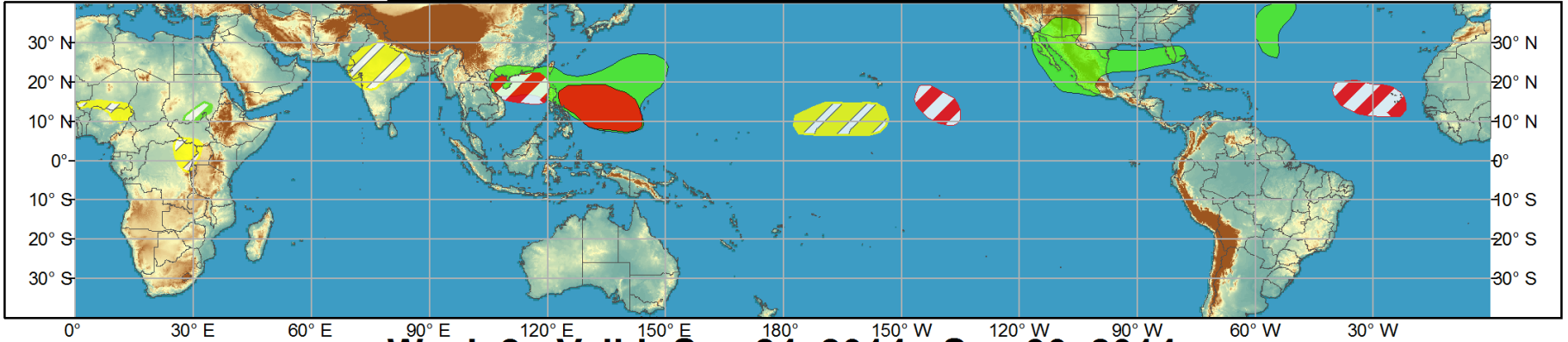
- The extended range forecast for the U.S. aligns well with the typical circulation patterns based on the current and forecast phases of the MJO. These include above normal rains along the southern tier. Potential tropical cyclone formation near Hawaii, could bring high waves and rains to Hawaii during late Week-1.



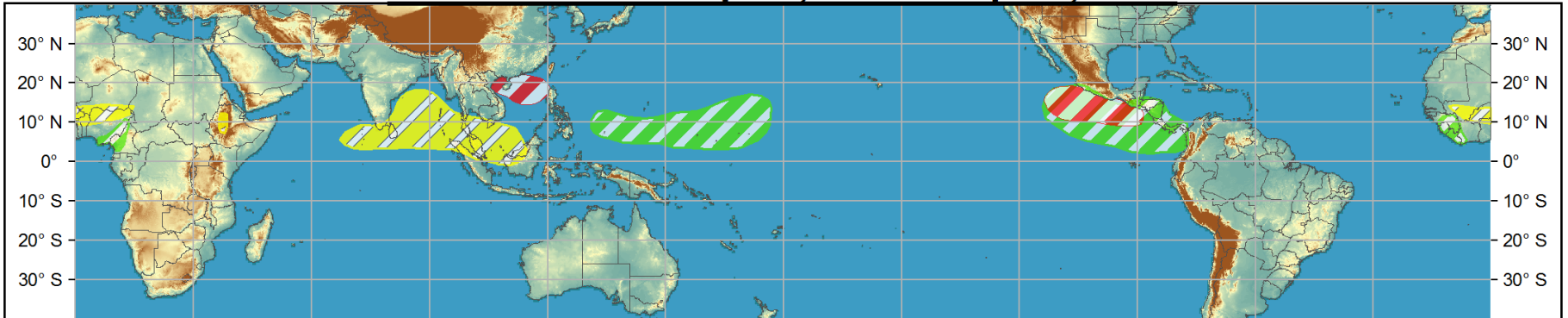
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Sep 17, 2014 - Sep 23, 2014

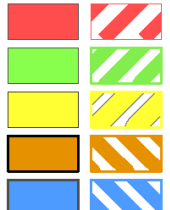


## Week 2 - Valid: Sep 24, 2014 - Sep 30, 2014



**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: 09/16/2014

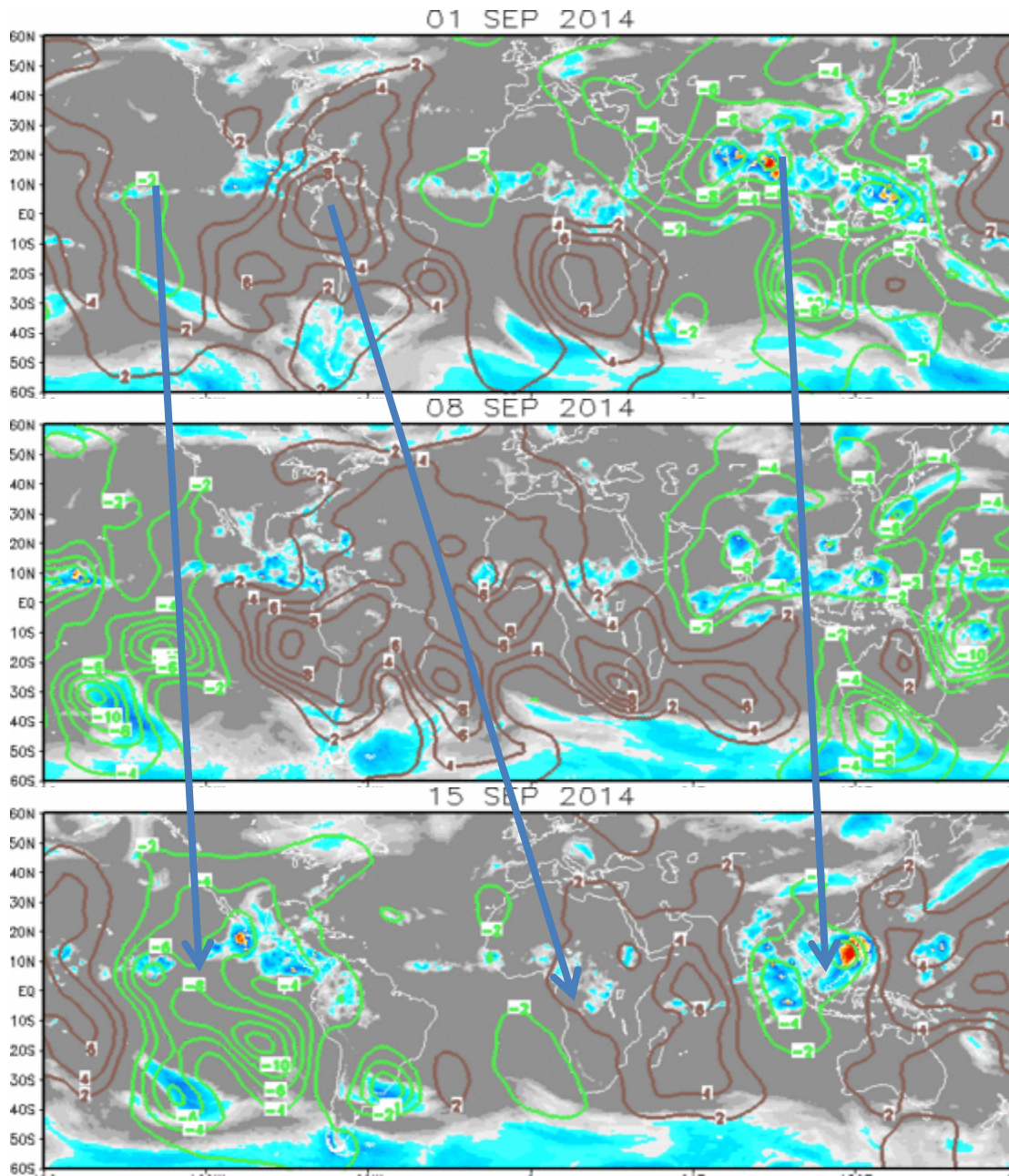
Forecaster: Rosencrans

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.

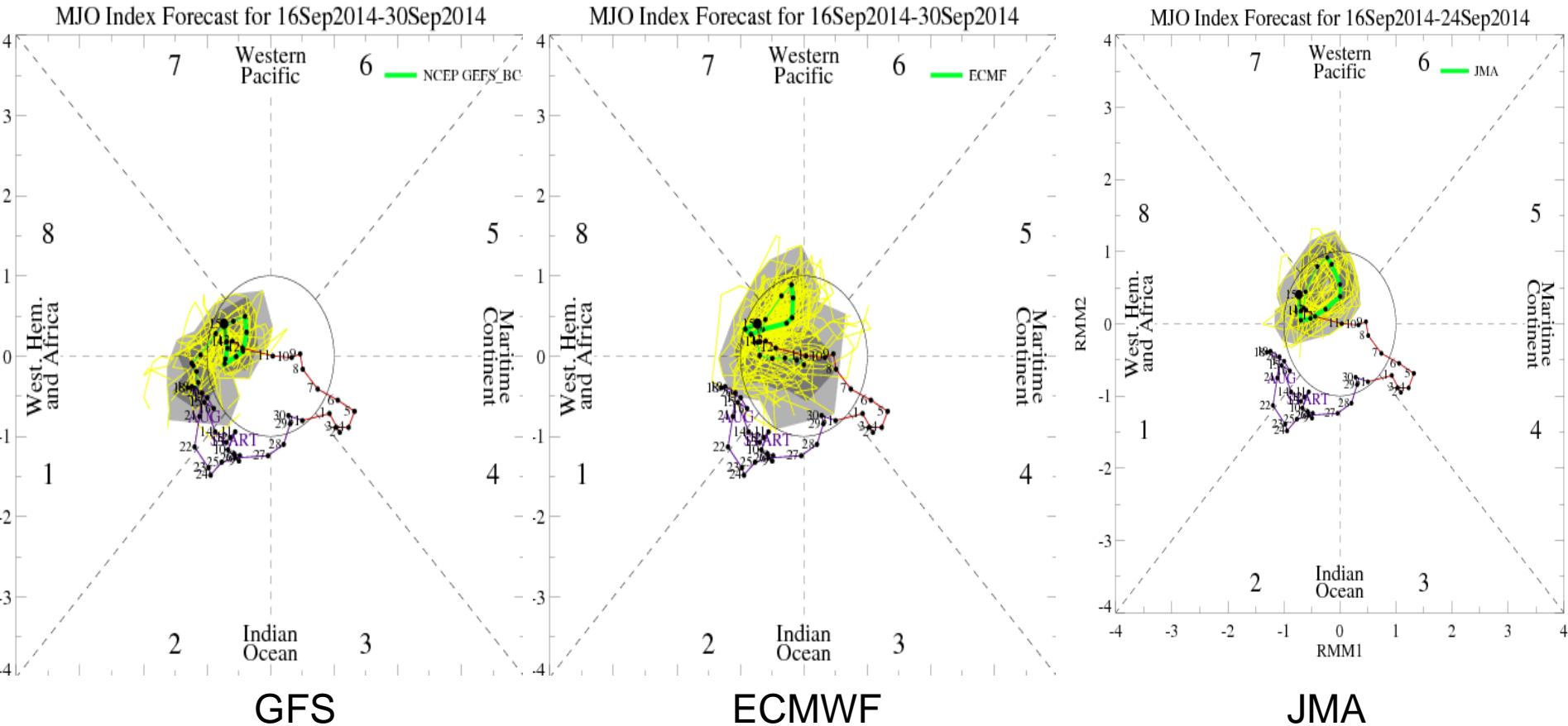


# IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence    Brown: Enhanced Convergence



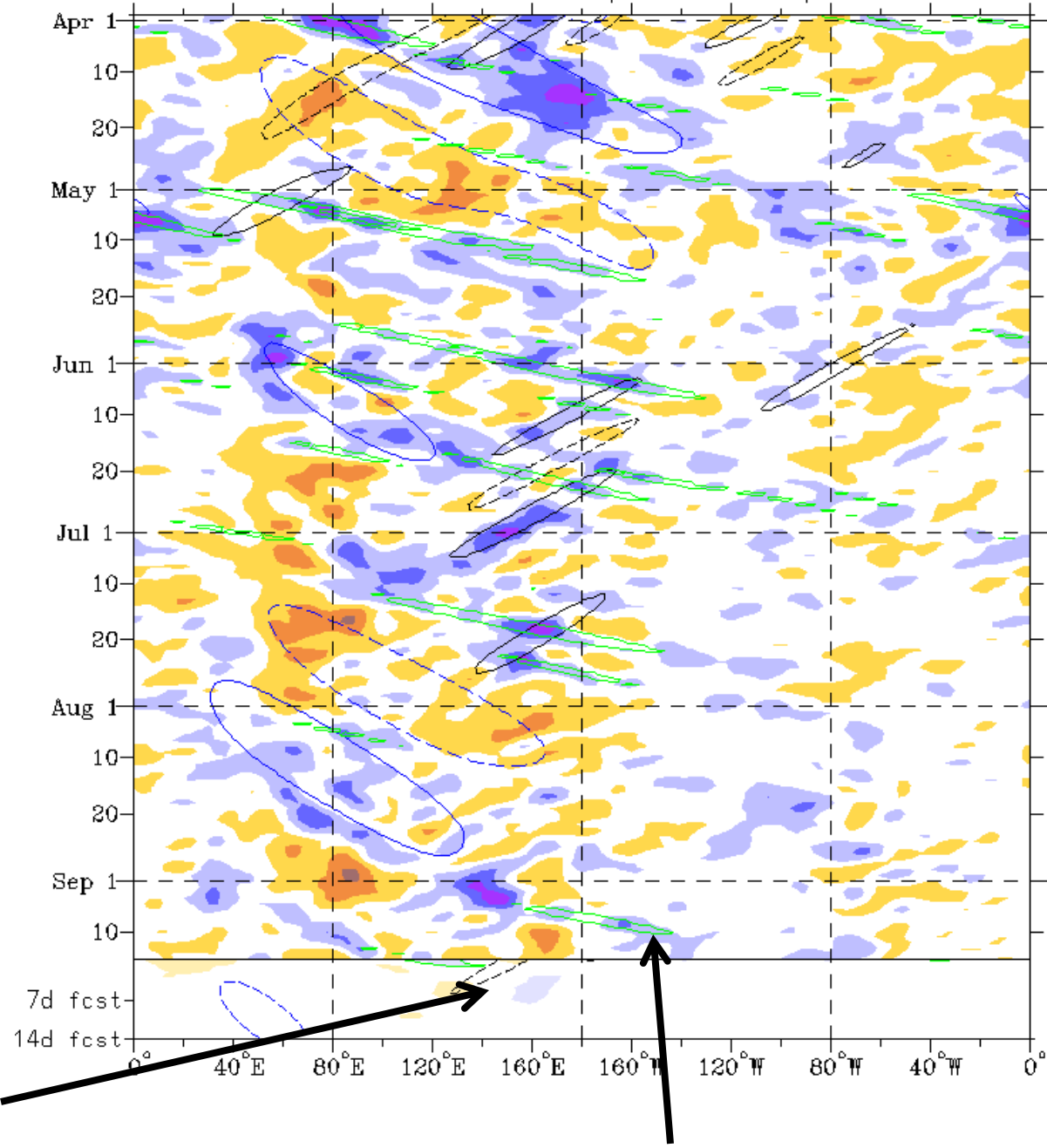
# MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate no coherent signal.

Models indicate convection aligns with MJO phase 7-8.





Weak, active phase of the MJO forecast to impact Indian Ocean and Maritime Continent.

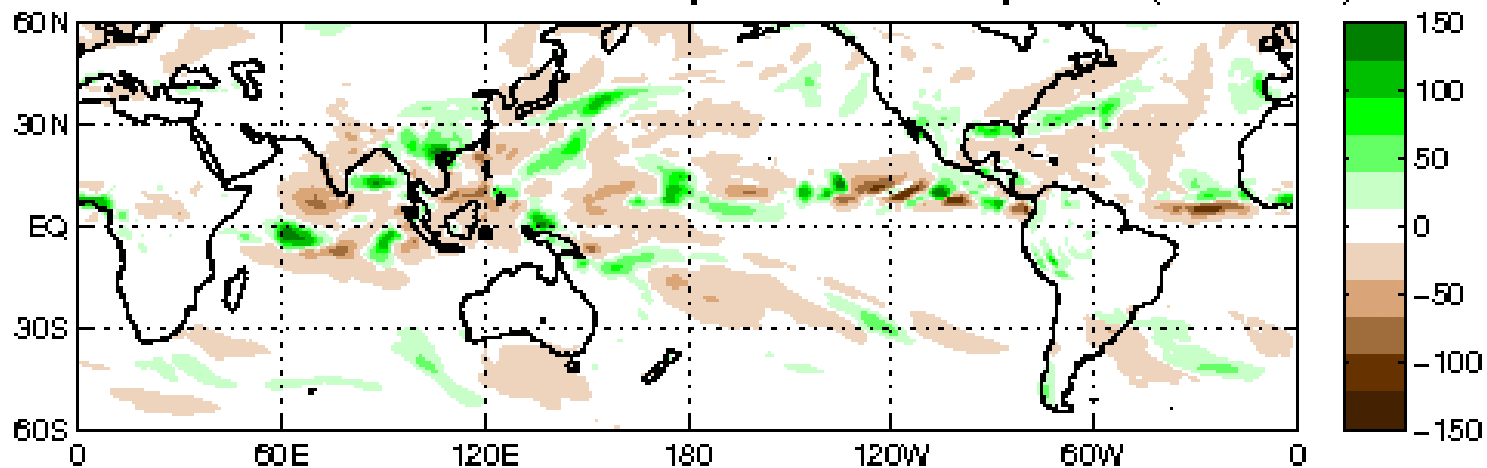
Evolving ENSO also contributing.

Equatorial Rossby Waves to impact western Pacific/Maritime Continent (with drier conditions)

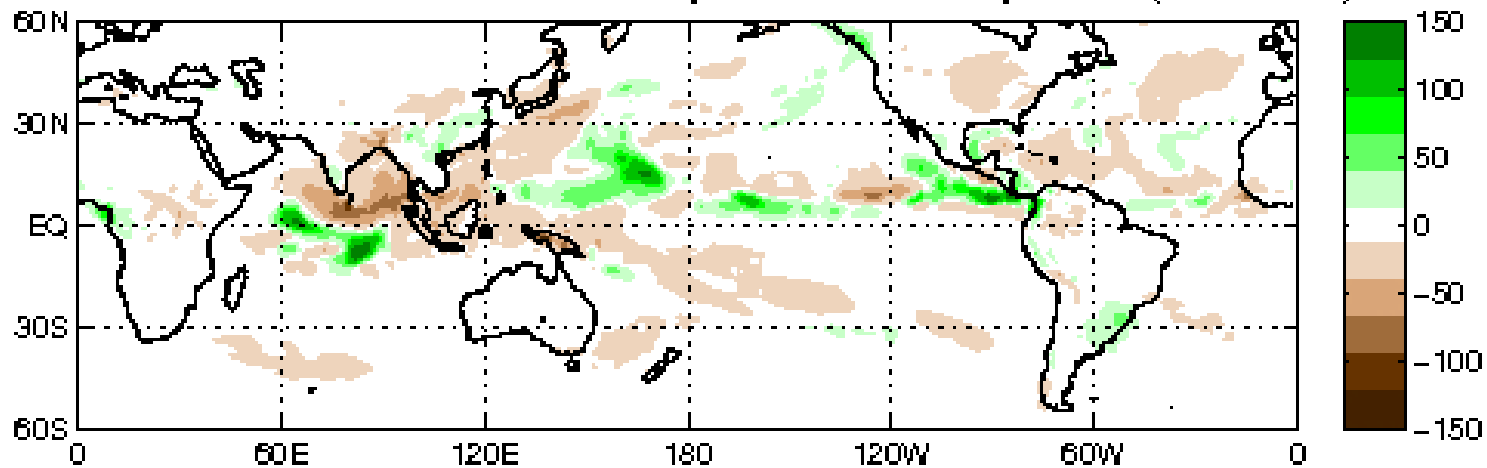
Kelvin Wave to impact ePAC and ATL.



**CFS: Anom. PREC Week: 1: 16-Sep-2014 to 22-Sep-2014 (mm/week)**

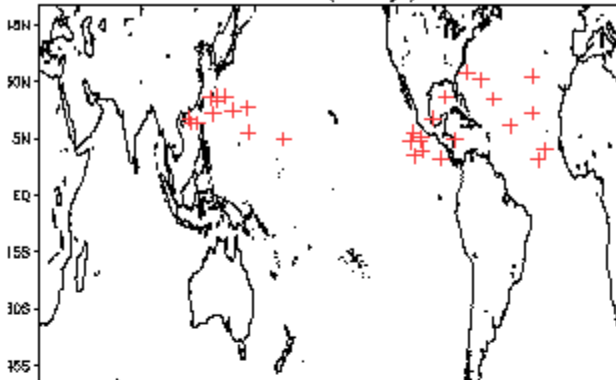


**CFS: Anom. PREC Week: 2: 23-Sep-2014 to 29-Sep-2014 (mm/week)**

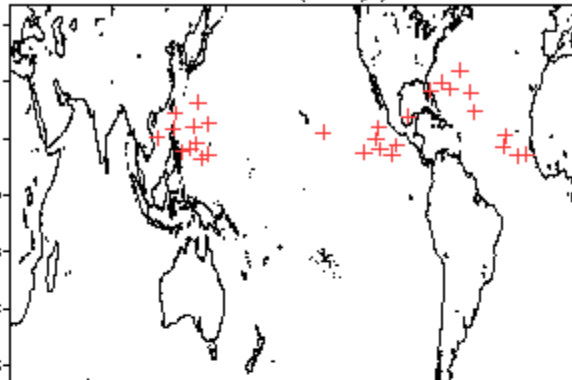


# September Tropical Storm Formation by MJO phase

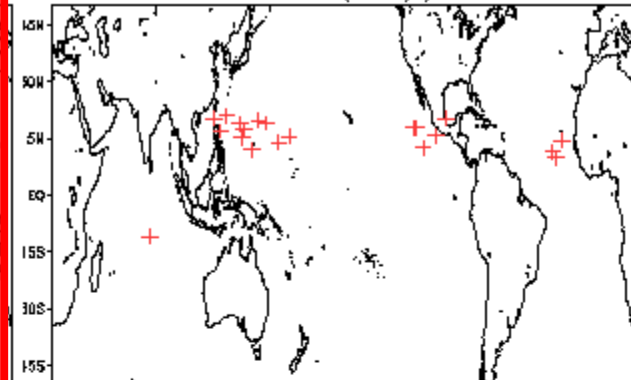
Phase 1 (81 days) 31 storms



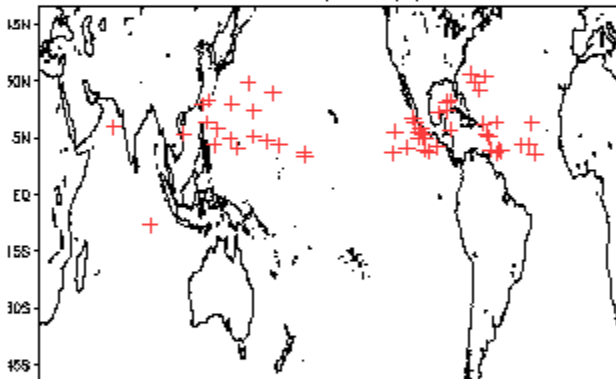
Phase 4 (70 days) 30 storms



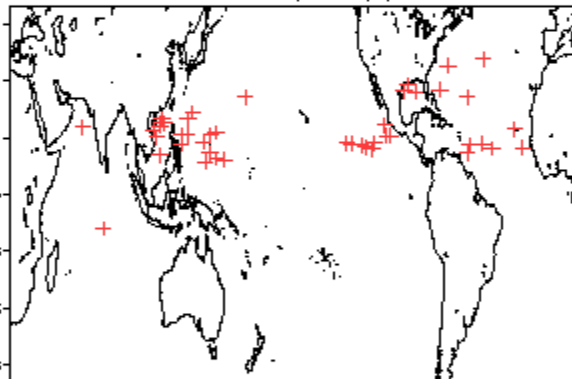
Phase 7 (38 days) 22 storms



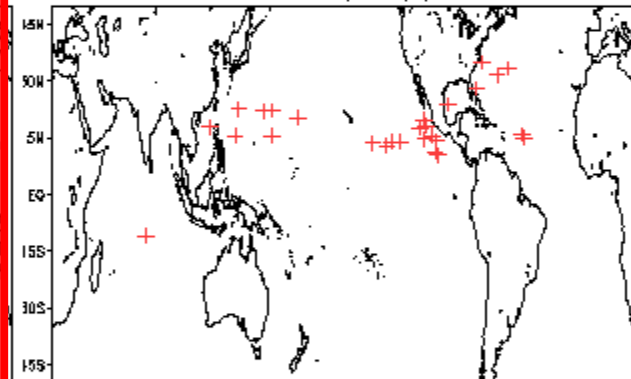
Phase 2 (122 days) 56 storms



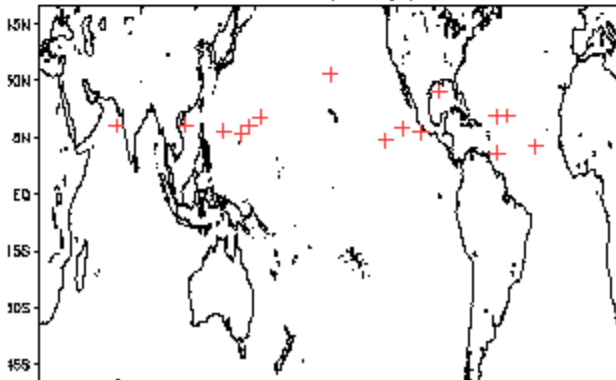
Phase 5 (106 days) 45 storms



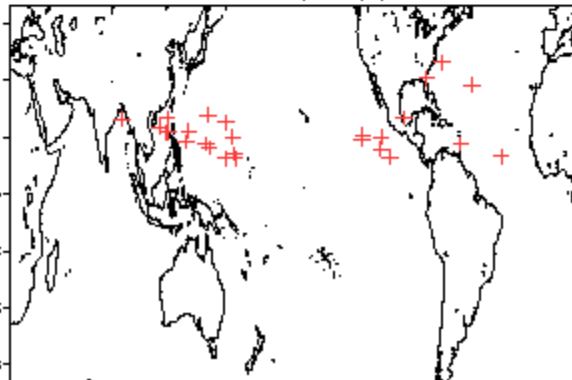
Phase 8 (67 days) 29 storms



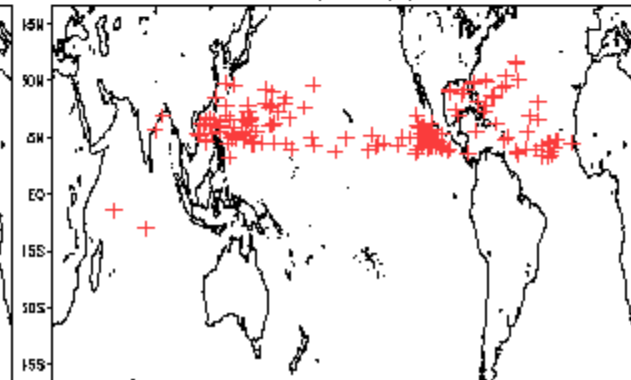
Phase 3 (51 days) 16 storms



Phase 6 (61 days) 27 storms



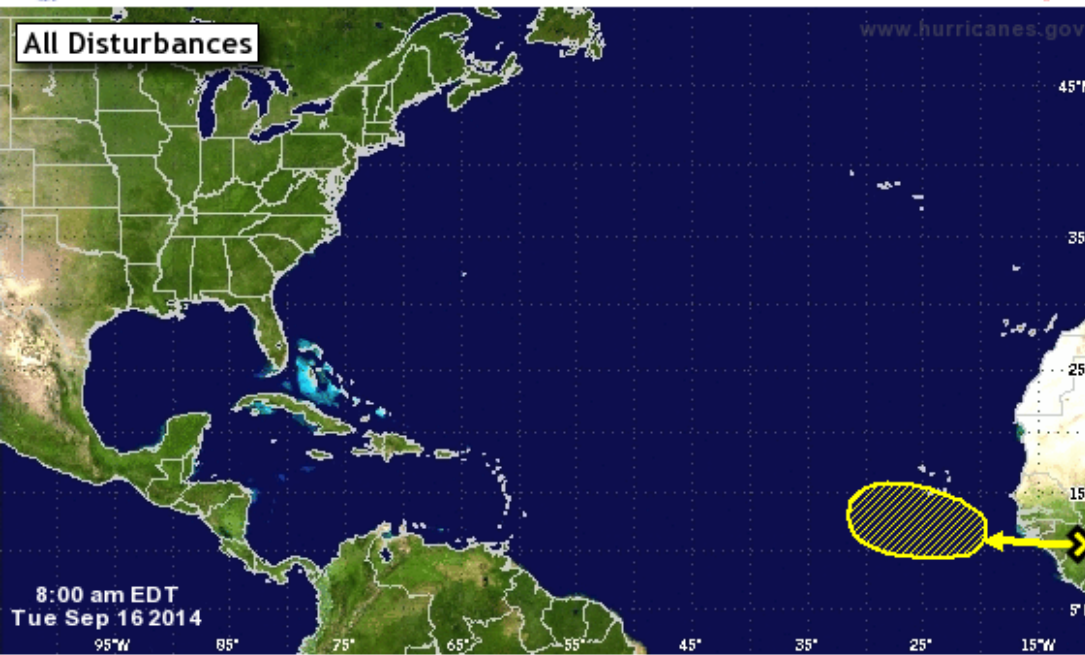
Null (393 days) 189 storms





# Experimental 5-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



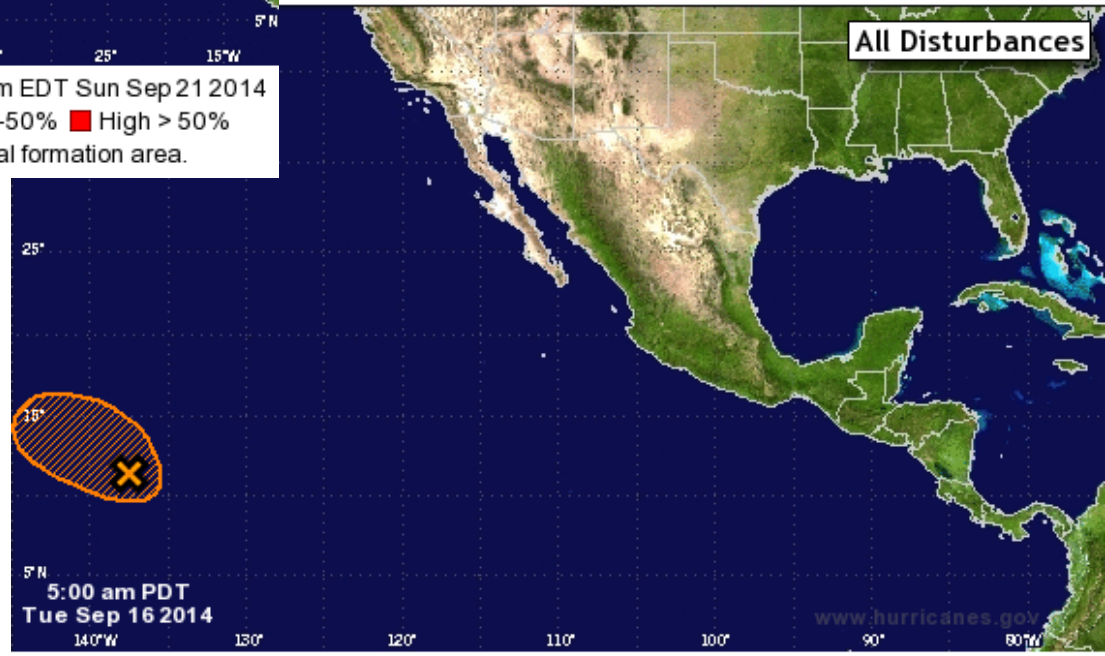
8:00 am EDT  
Tue Sep 16 2014

# Experimental 5-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Tropical Cyclone Formation Potential for the 5-Day Period Ending 8:00 am EDT Sun Sep 21 2014  
 Chance of Cyclone Formation in 5 Days: ■ Low < 30% ■ Medium 30-50% ■ High > 50%  
 X indicates current disturbance location; shading indicates potential formation area.

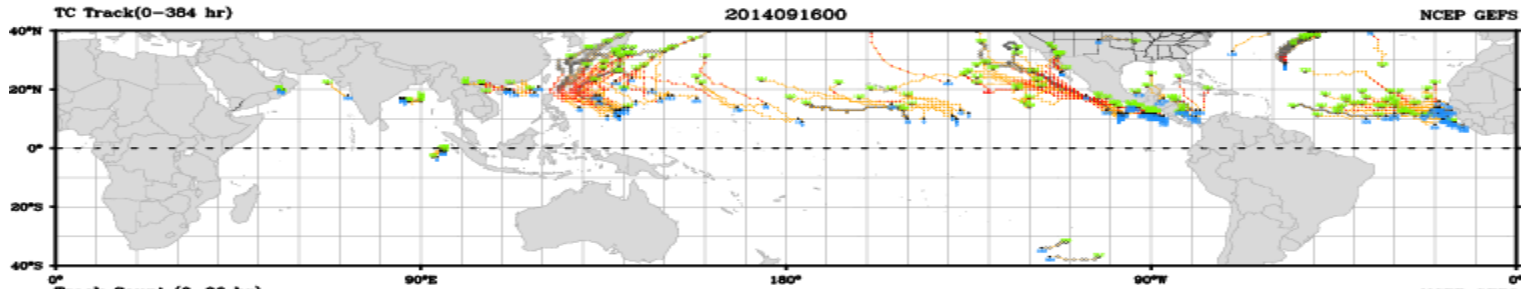


5:00 am PDT  
Tue Sep 16 2014

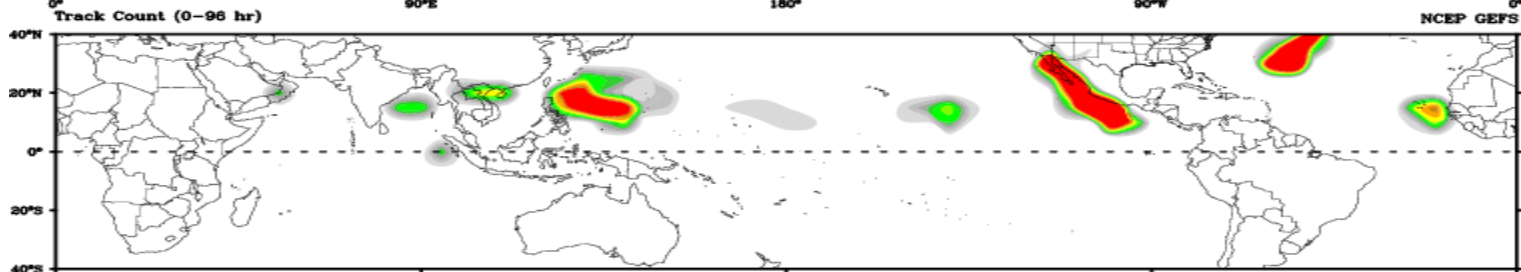
Tropical Cyclone Formation Potential for the 5-Day Period Ending 5:00 am PDT Sun Sep 21 2014  
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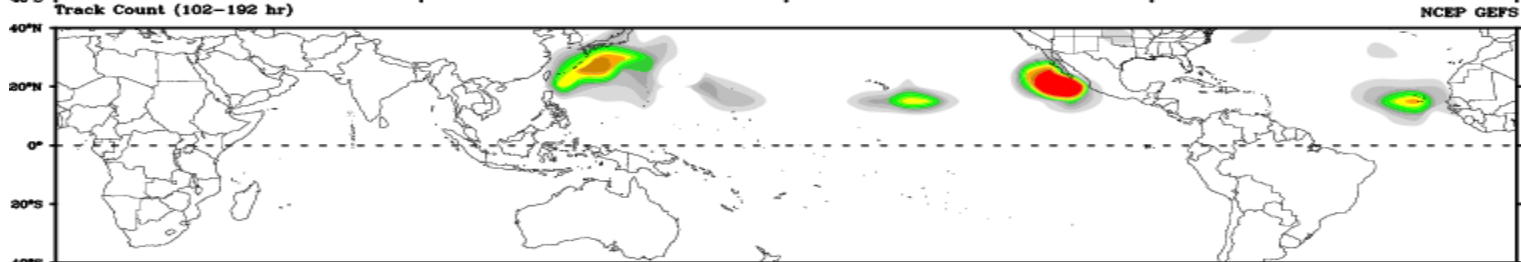
NCEP GEFS



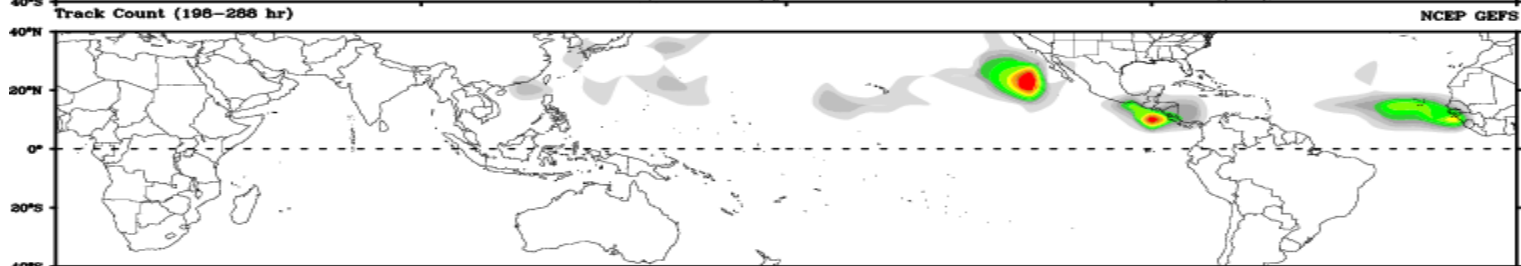
Days 1-4



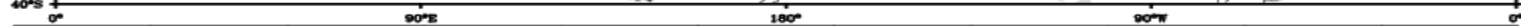
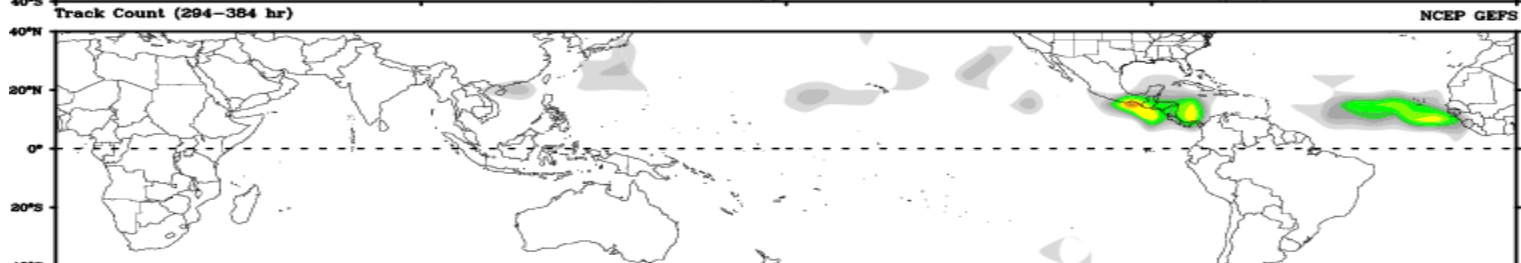
Day 5-8



Day 9-12

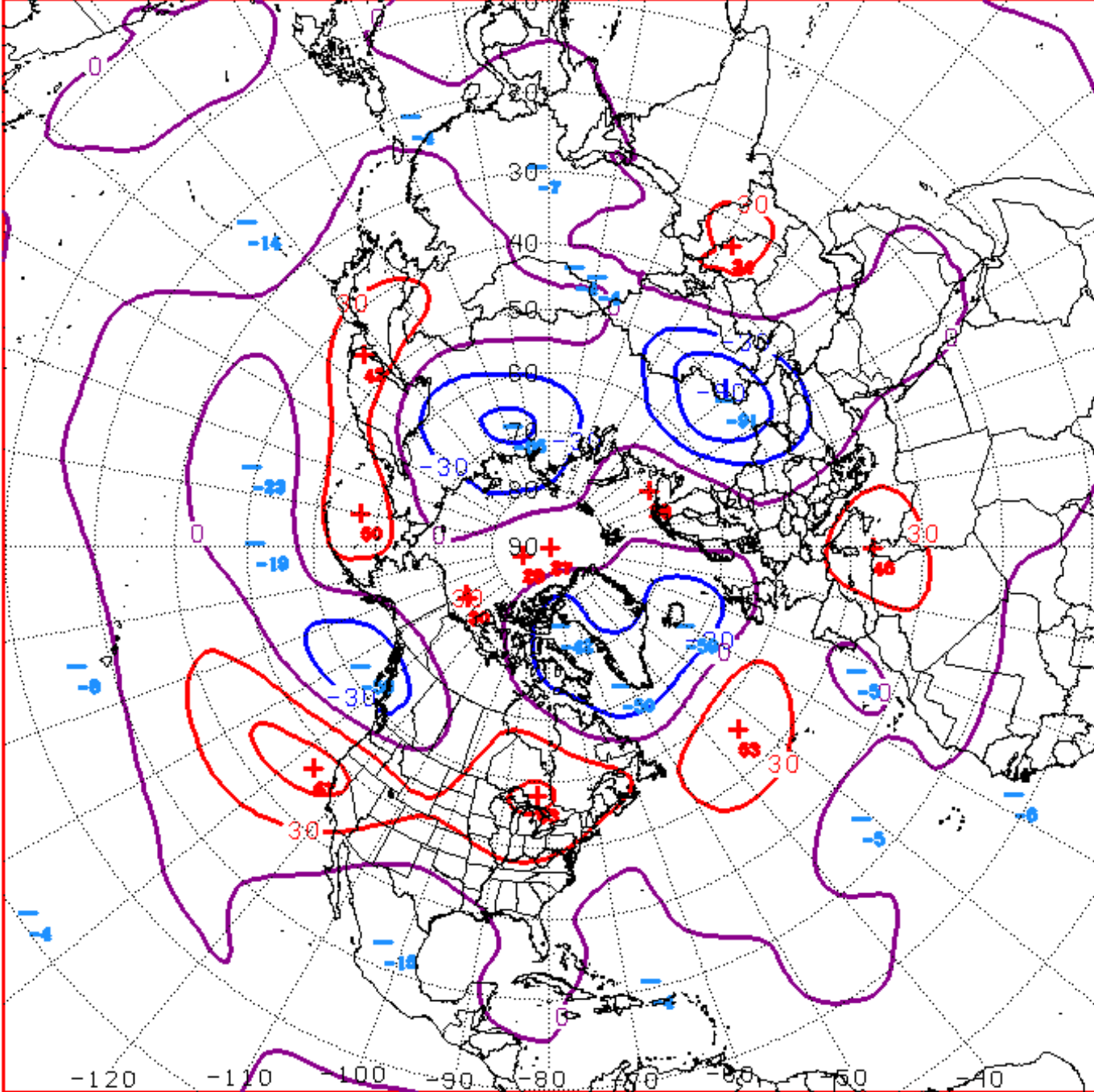


Day 13-15



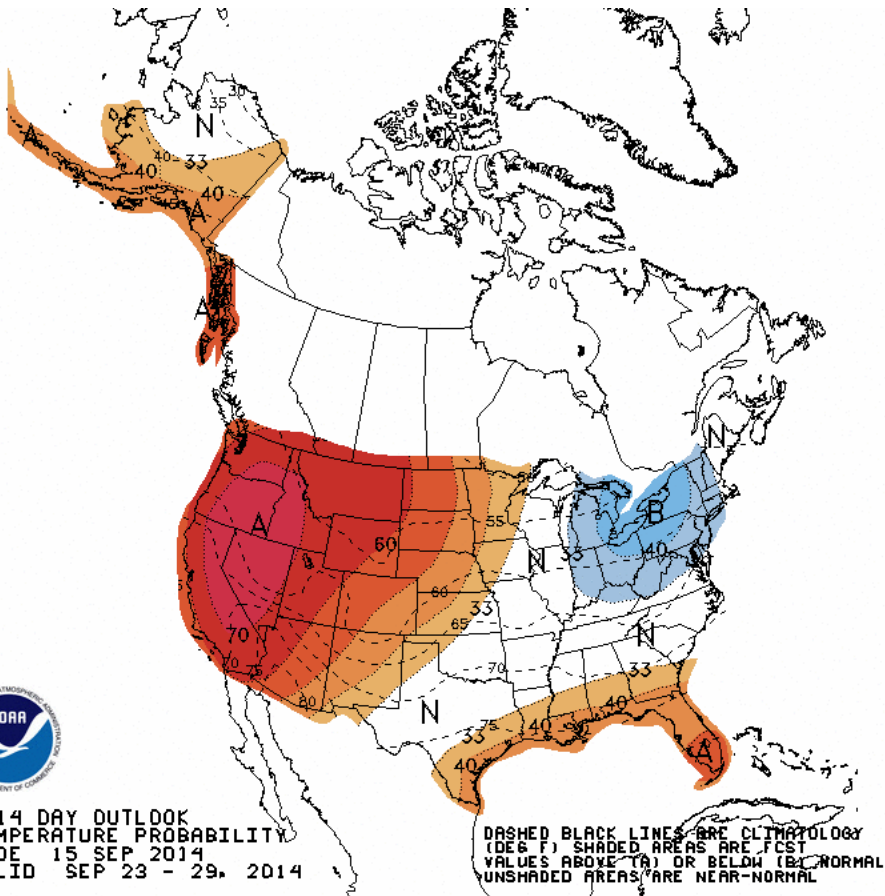
Track Count

# Connections to U.S. Impacts



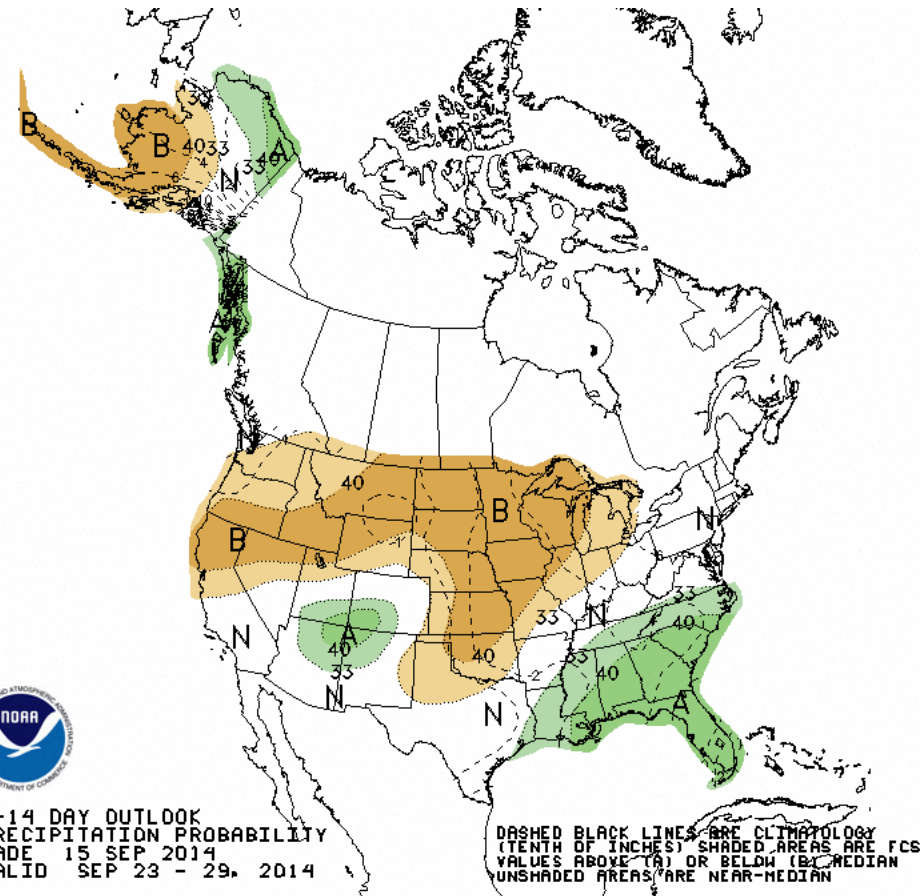
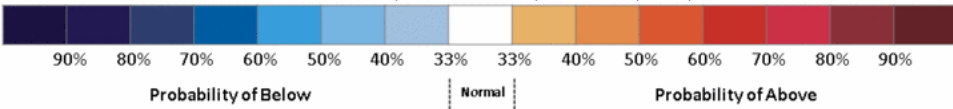
D+11 500 MB ANOMALIES FROM 00Z ECMM  
CPC MAP MADE SEP 16 2014 1044 UTC CNTD SEP 27 2014

# Week 2 – Temperature and Precipitation



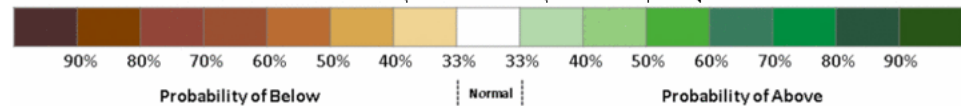
8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 15 SEP 2014  
VALID SEP 23 - 29, 2014

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL.



8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 15 SEP 2014  
VALID SEP 23 - 29, 2014

DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) MEDIAN. UNSHADED AREAS ARE NEAR-MEDIAN.

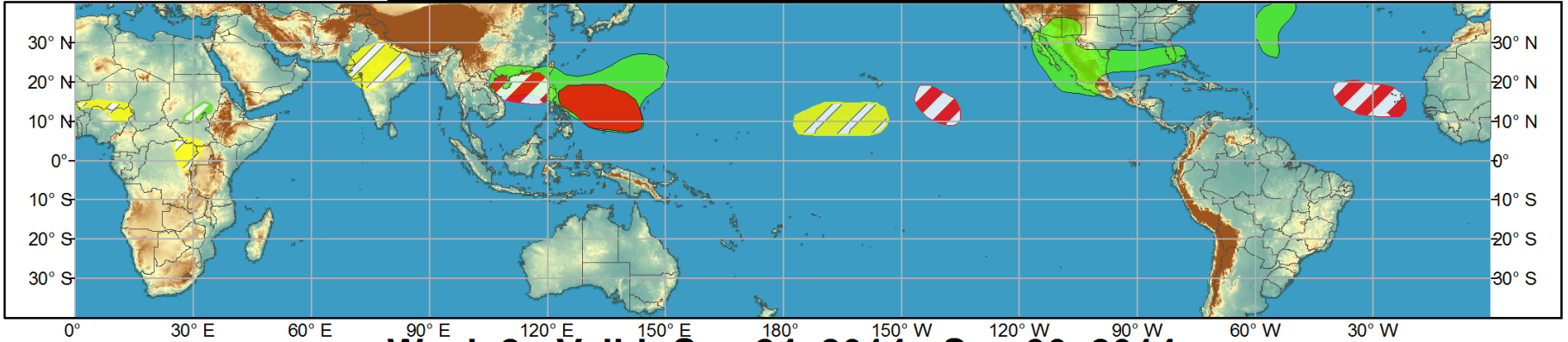




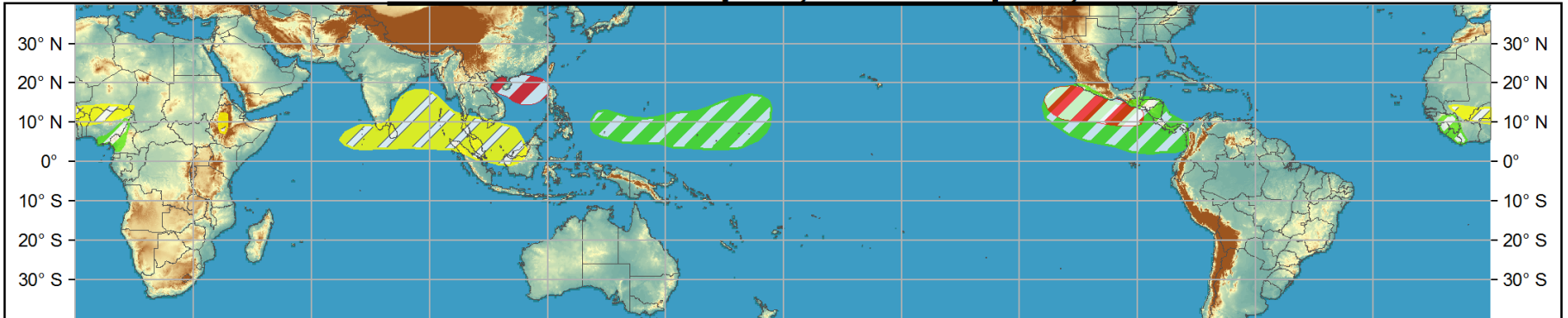
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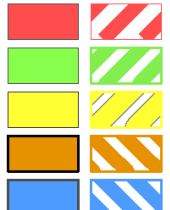


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