

# Global Tropics Hazards And Benefits Outlook

September 9, 2014

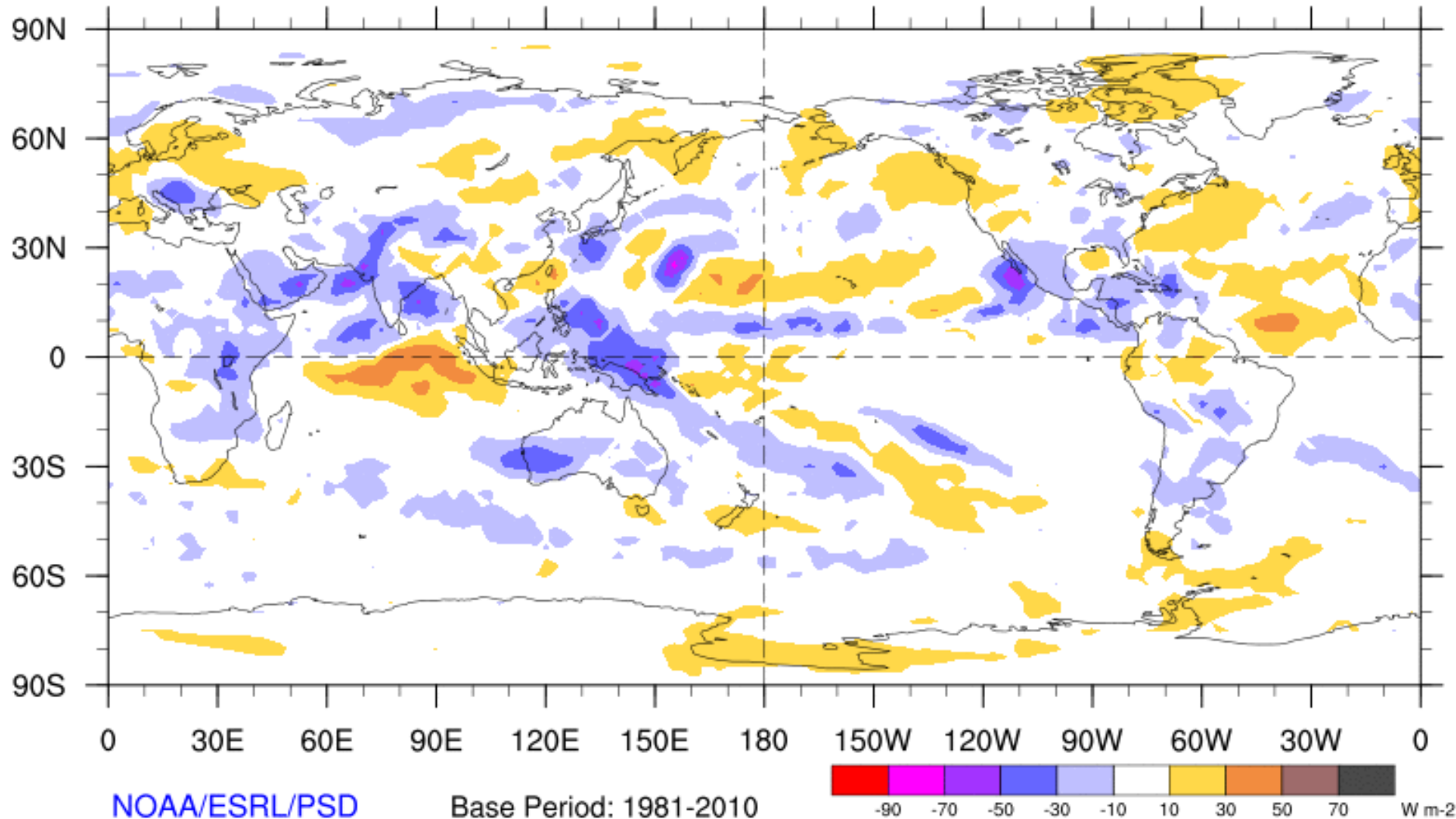
Adam Allgood

## Outline

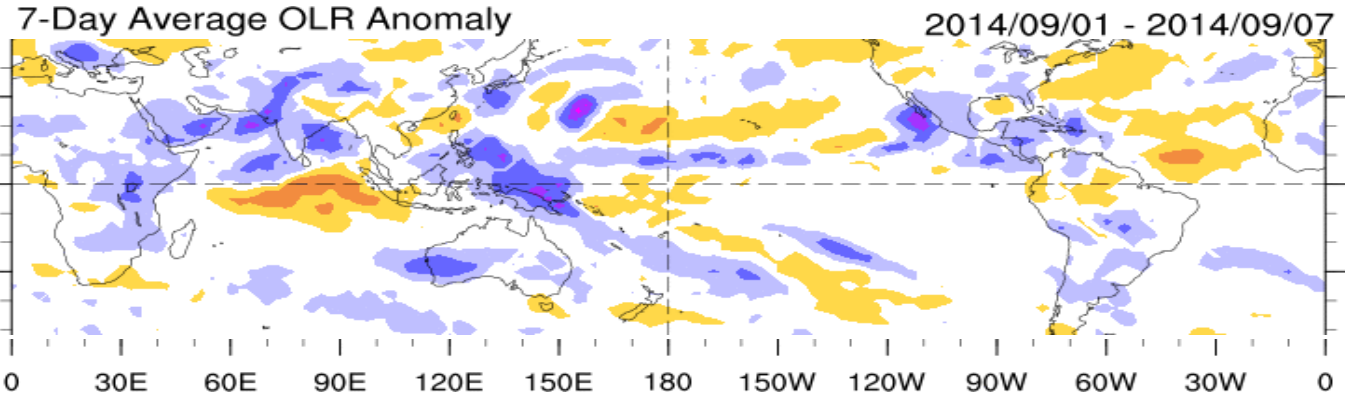
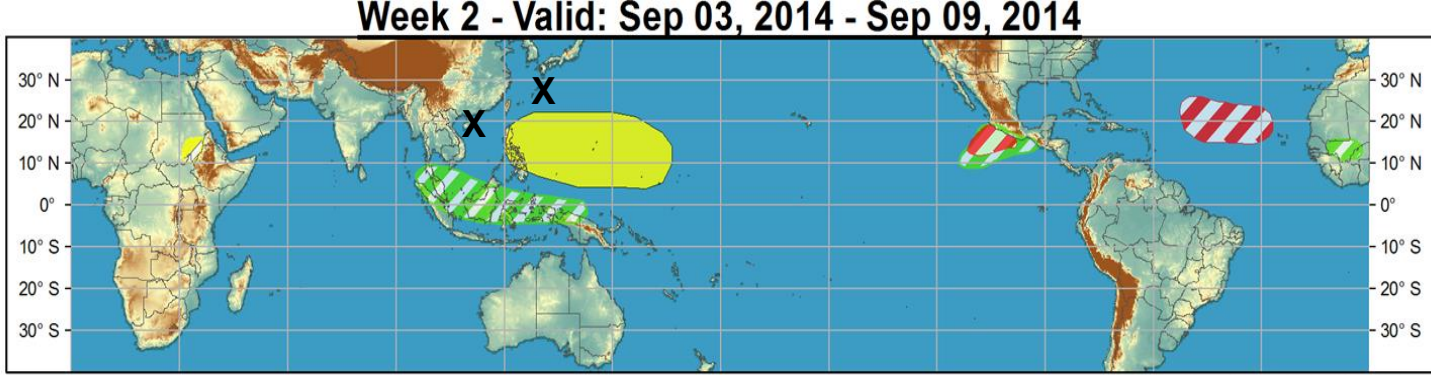
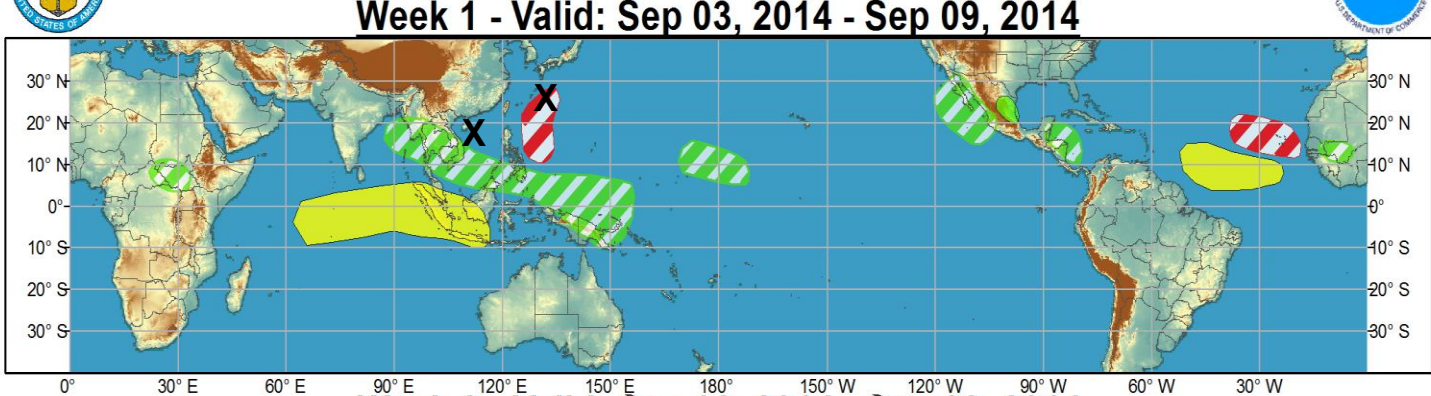
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

# 7-Day Average OLR Anomaly

2014/09/01 - 2014/09/07



# Outlook Review



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 NH fall and winter.

## MJO and other subseasonal tropical variability:

- The MJO was more coherent during the past several weeks, with an envelope of enhanced (suppressed) convection propagating from the Indian Ocean to the Maritime Continent (Pacific to the Western Hemisphere). The amplitude of the RMM Index has diminished over the past two days.
- Dynamical model MJO index forecasts generally do not support the continued evolution of this signal. Instead, the GFS and ECMWF increase RMM index amplitude over the Western Hemisphere, with some models suggesting development of a second intraseasonal signal over the I.O.
- Other modes (tropical cyclones, Kelvin Waves, mid-latitude intrusions into the tropics) are strongly influencing the pattern.

## Extratropics:

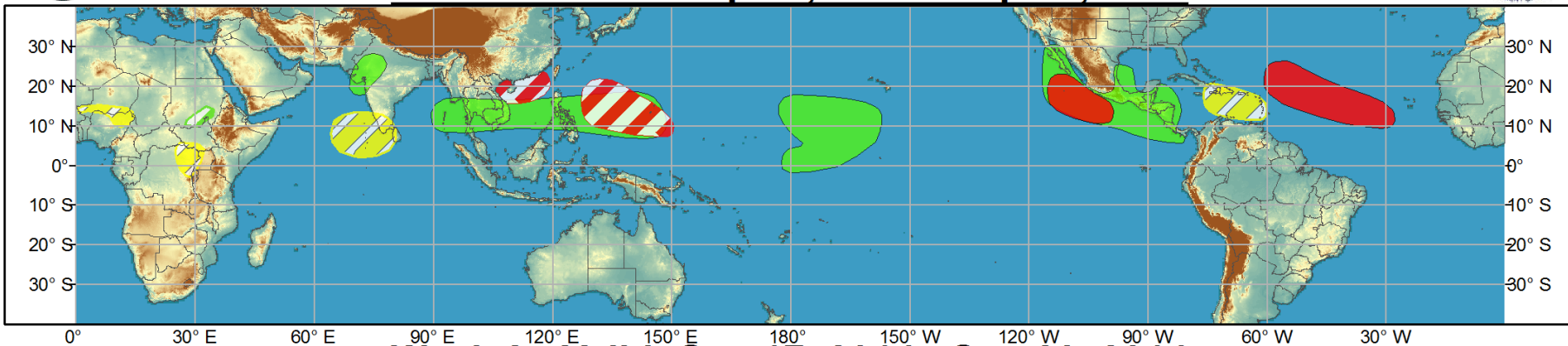
- The extended range forecast for the U.S. indicates an amplified pattern, with ridging (troughing) over the western U.S. (central and eastern CONUS). Tropical cyclone activity over the eastern Pacific may promote additional Gulf moisture surges.



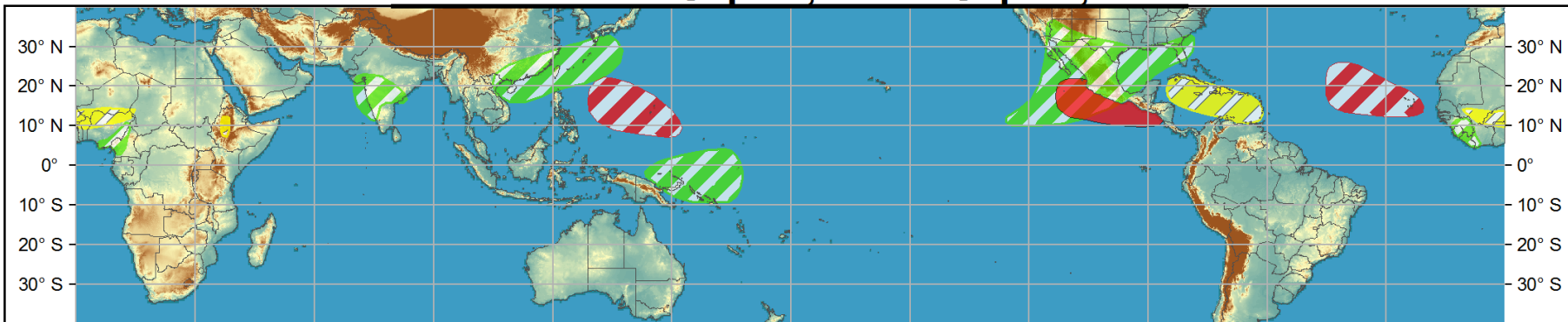
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center













## Week 1 - Valid: Sep 10, 2014 - Sep 16, 2014



## Week 2 - Valid: Sep 17, 2014 - Sep 23, 2014



		Confidence		
		High	Moderate	
<b>Tropical Cyclone Formation</b>			Development of a tropical cyclone (tropical depression - TD, or greater strength).	
<b>Above-average rainfall</b>			Weekly total rainfall in the upper third of the historical range.	
<b>Below-average rainfall</b>			Weekly total rainfall in the lower third of the historical range.	
<b>Above-normal temperatures</b>			7-day mean temperatures in the upper third of the historical range.	
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Produced: 09/09/2014

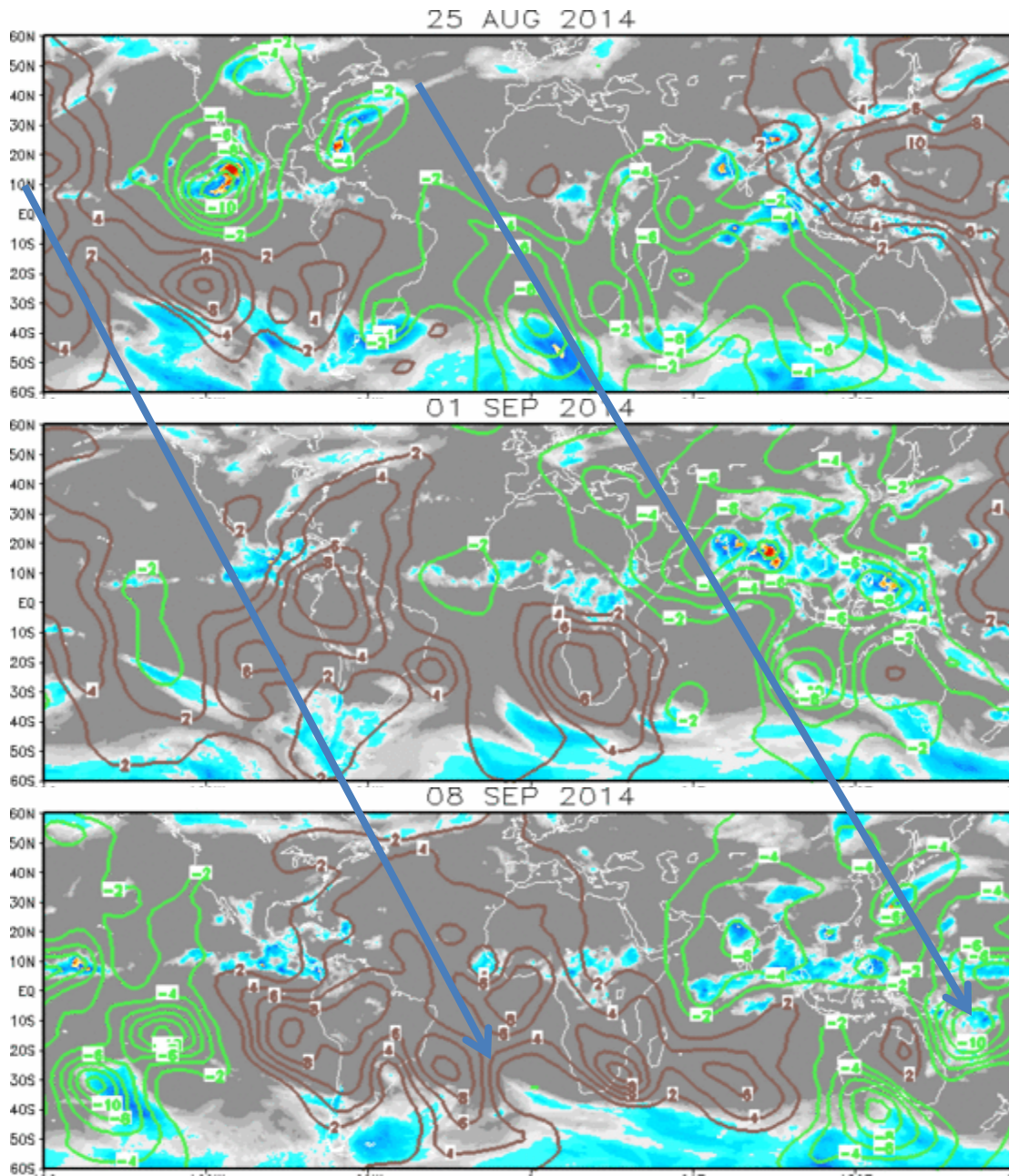
Forecaster: Allgood

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.

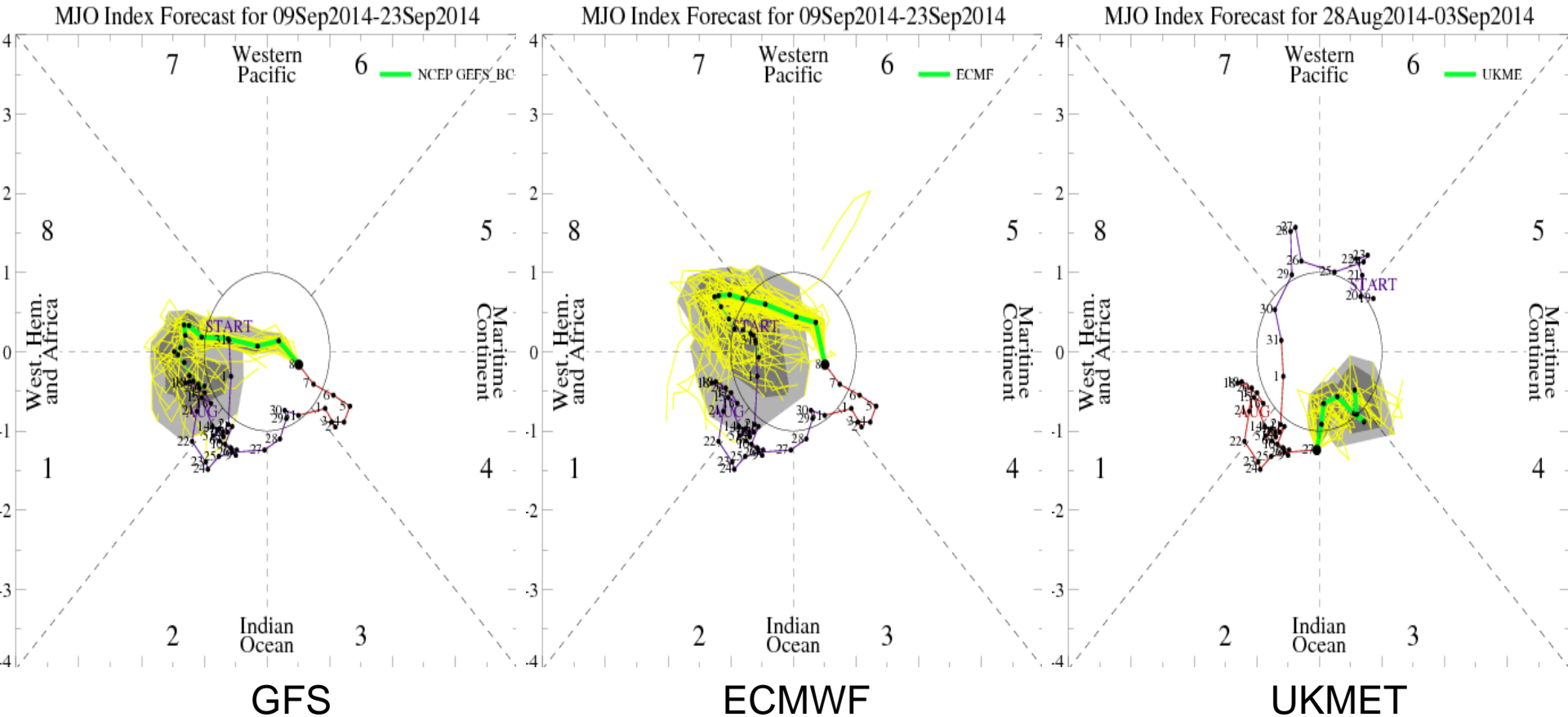


# IR Satellite & 200-hpa Velocity Potential Anomalies

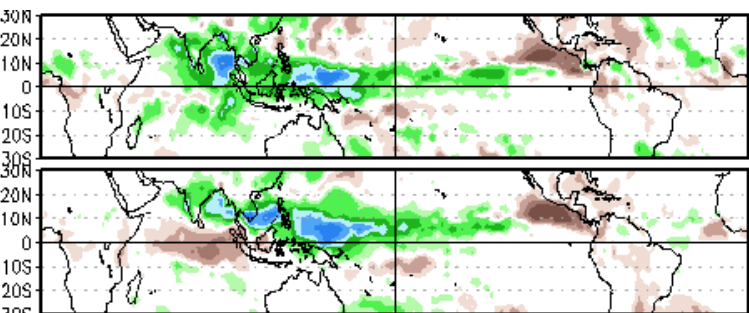
Green: Enhanced Divergence    Brown: Enhanced Convergence



# MJO Observation/Forecast

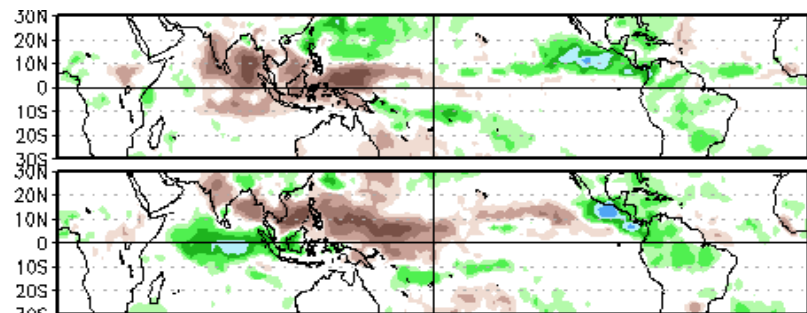


- GFS and CFS both increase RMM amplitude in Phase-8 (Epac/Wrn Hemisphere)
- Influence from tropical cyclone activity on the RMM Index is likely
- GFS model indicates the evolution of a new intraseasonal signal towards the I.O.
- ECMWF brings less convection into the I.O. (e.g., Kelvin Waves)



Phase 4

Phase 5

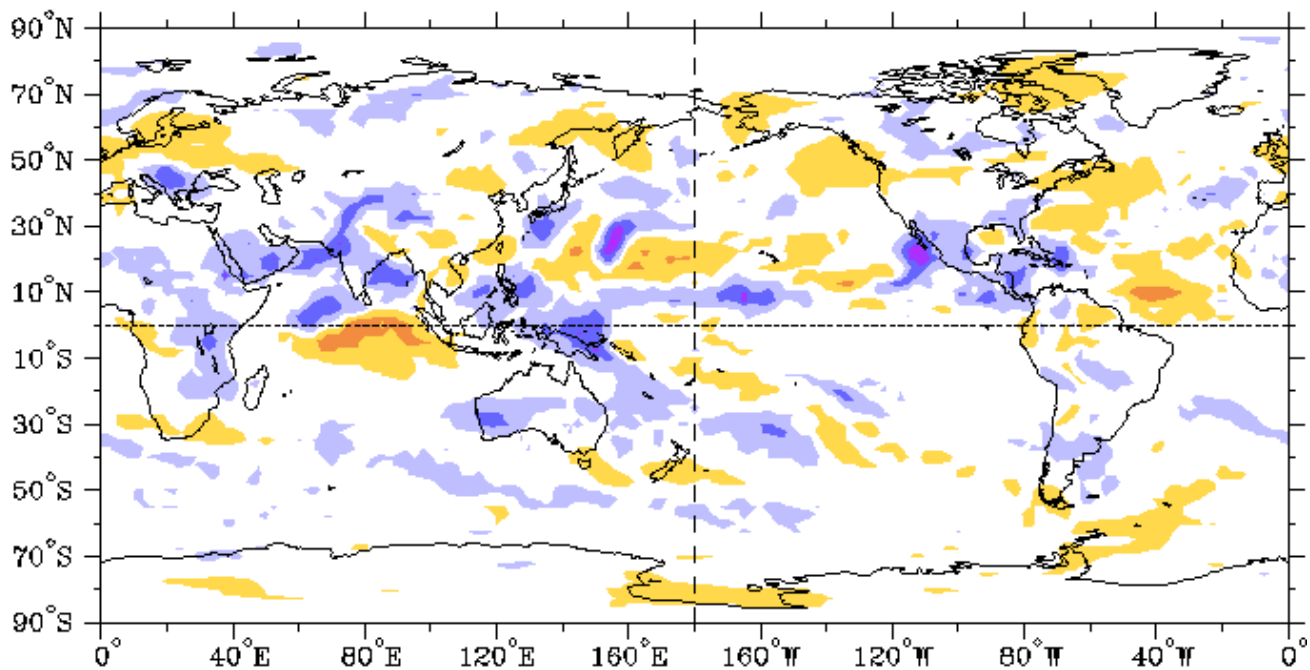
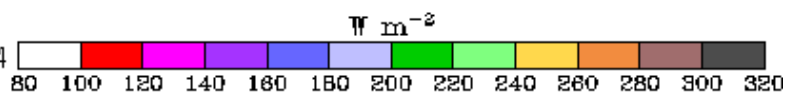


Phase 8

Phase 1

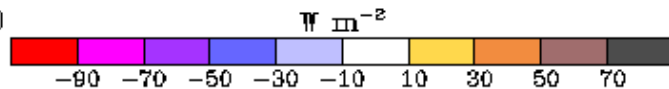
OLR Totals

Avg of 2-Sep-2014 - 8-Sep-2014



OLR Anomalies (Base period 1979-2010)

Avg of 2-Sep-2014 - 8-Sep-2014

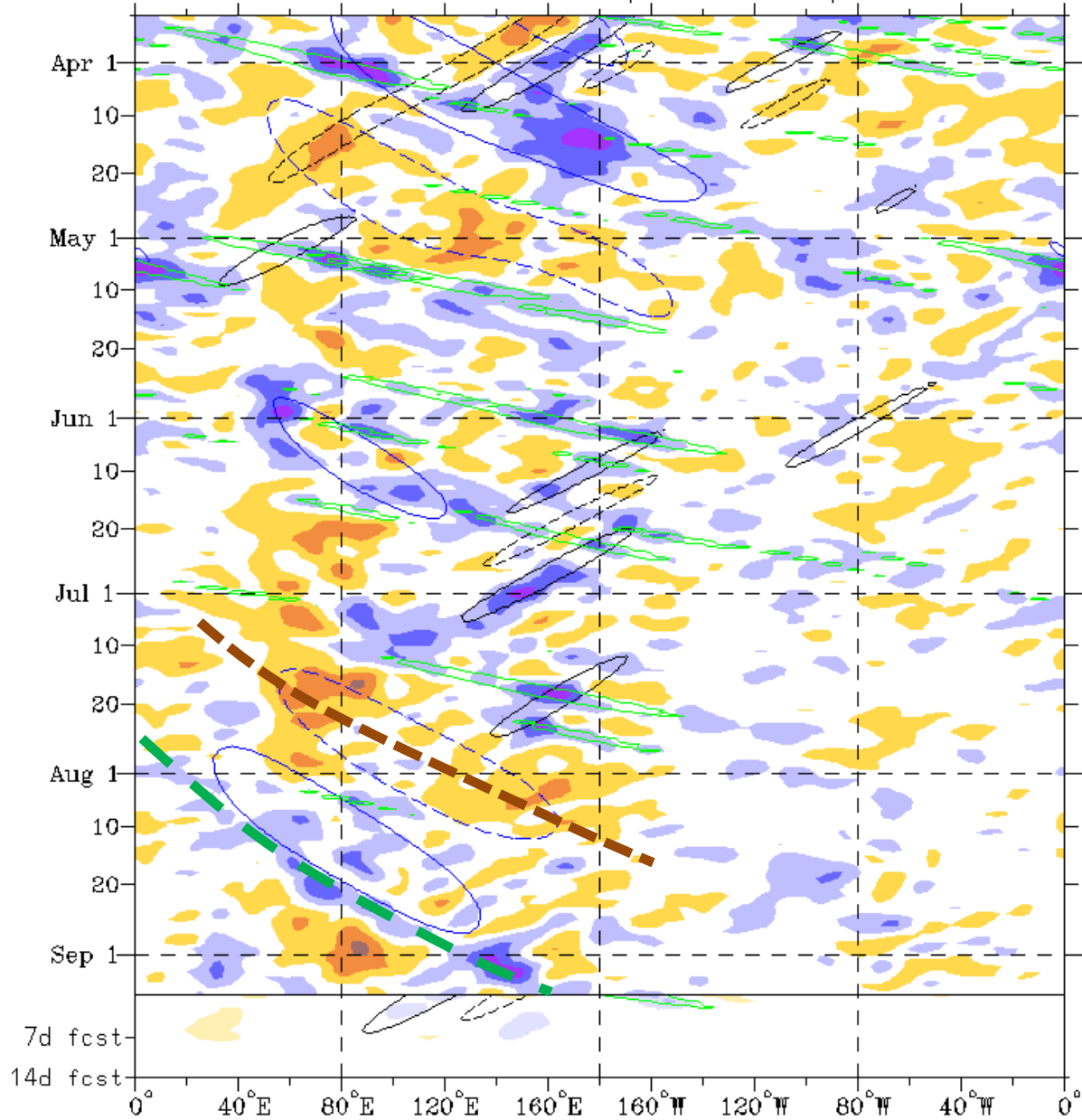




Weak MJO signal propagated from the Indian Ocean to the Maritime Continent (dashed lines).

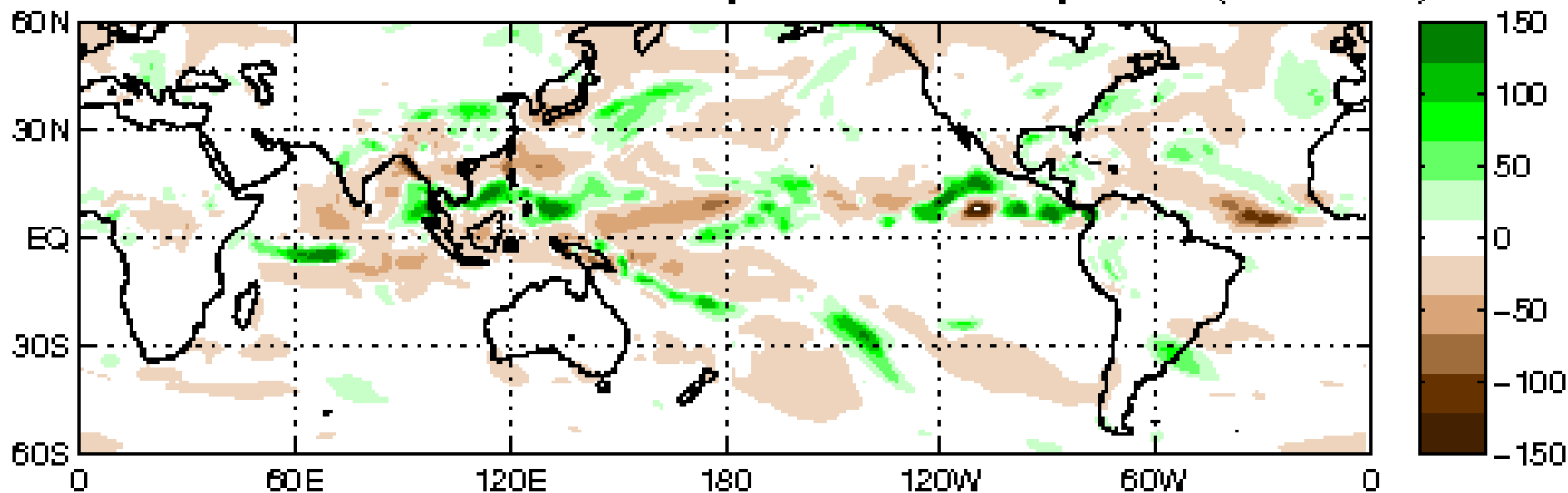
Other modes are present (KW from 40-80 E, KW over central Pacific)

Convection/tropical cyclone activity over the eastern Pacific is strongly evident on the 2.5N – 17.5N analysis

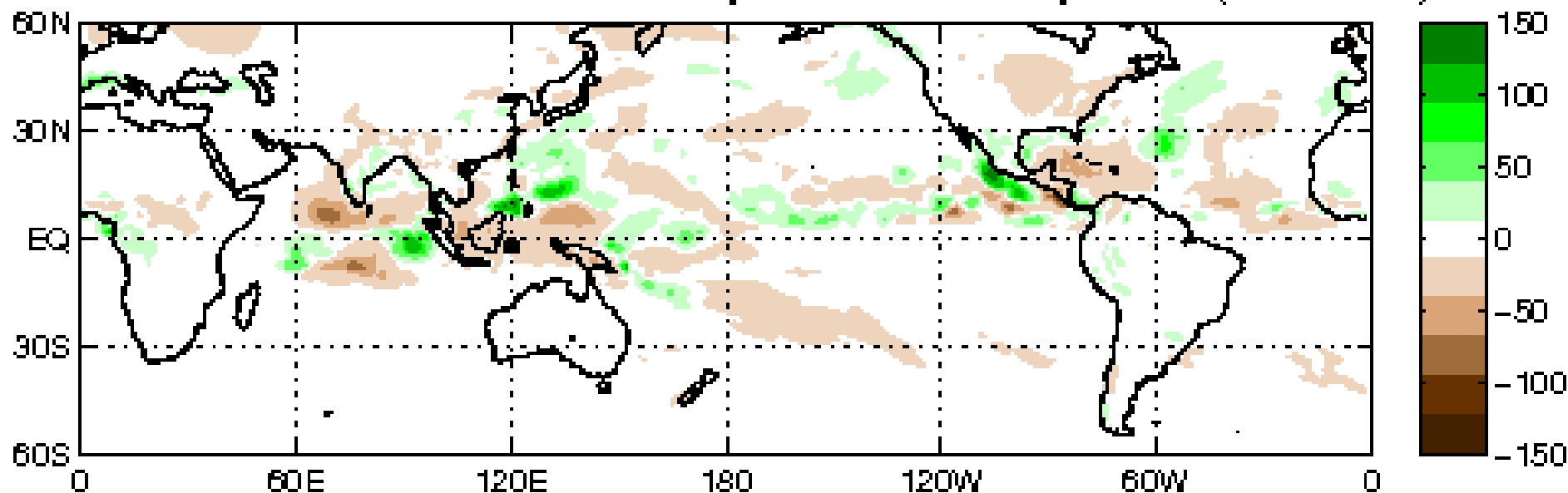


Note: Analysis is from 7.5N – 7.5S

**CFS: Anom. PREC Week: 1: 09-Sep-2014 to 15-Sep-2014 (mm/week)**

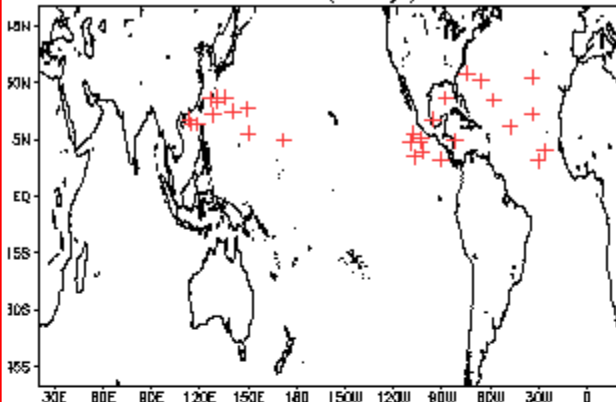


**CFS: Anom. PREC Week: 2: 16-Sep-2014 to 22-Sep-2014 (mm/week)**

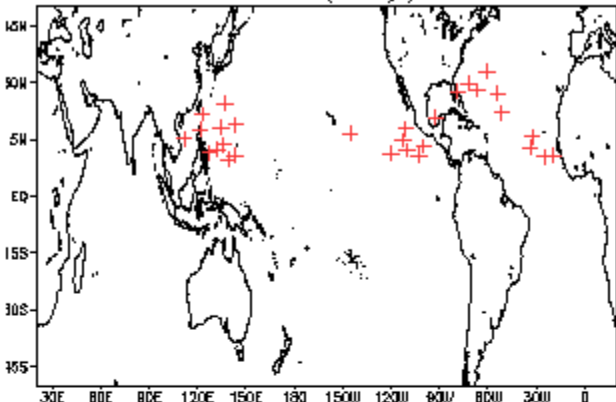


# September Tropical Storm Formation by MJO phase

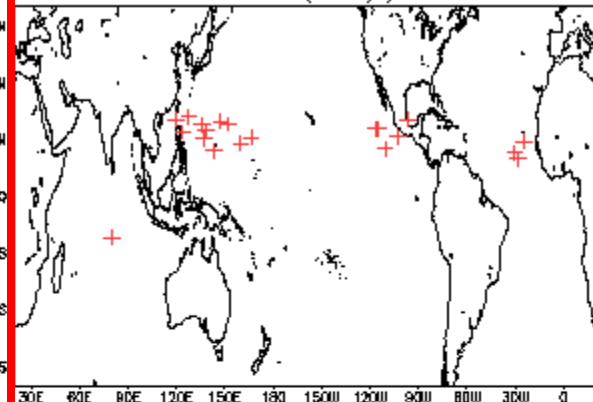
Phase 1 (81 days) 31 storms



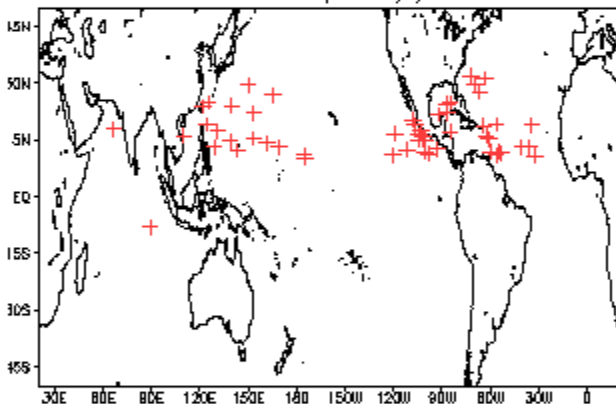
Phase 4 (70 days) 30 storms



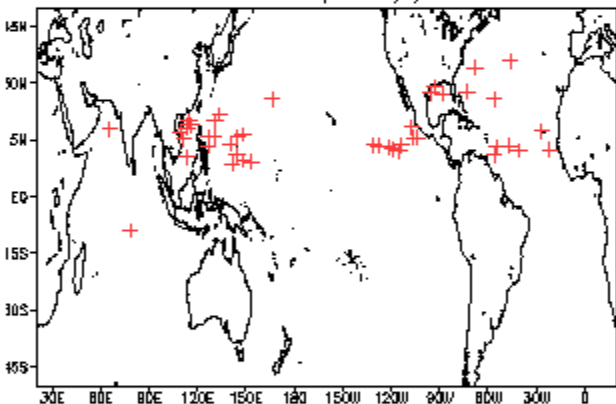
Phase 7 (38 days) 22 storms



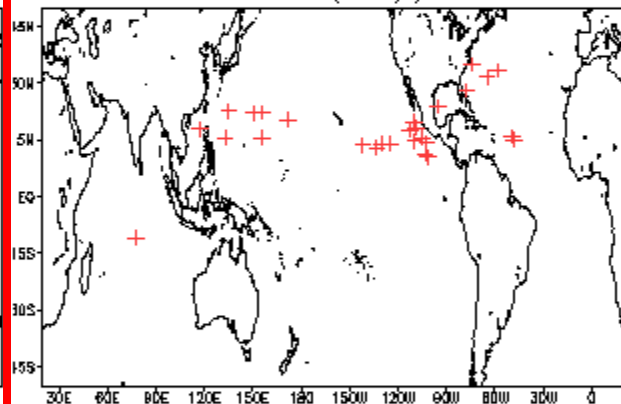
Phase 2 (122 days) 56 storms



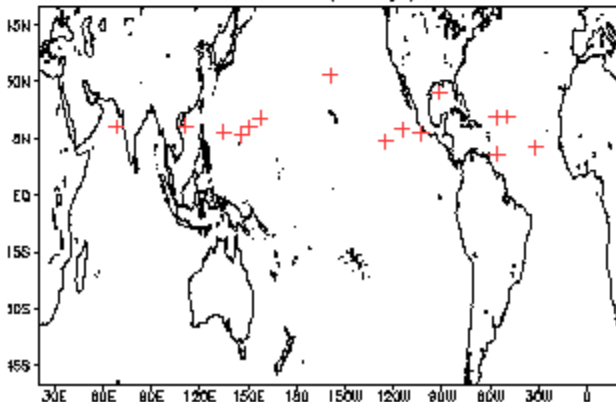
Phase 5 (106 days) 45 storms



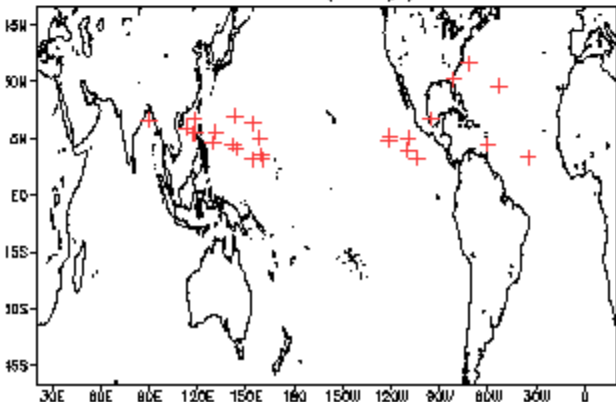
Phase 8 (67 days) 29 storms



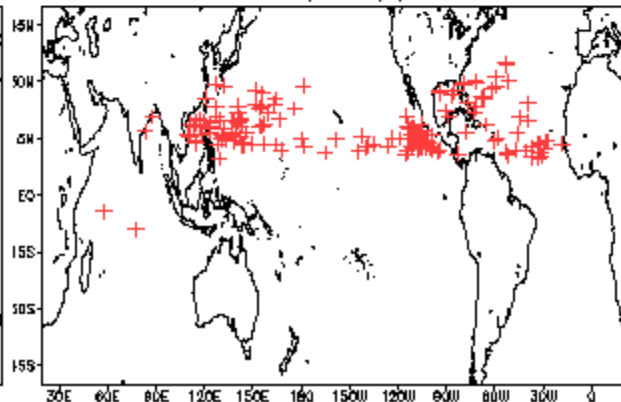
Phase 3 (51 days) 16 storms



Phase 6 (61 days) 27 storms



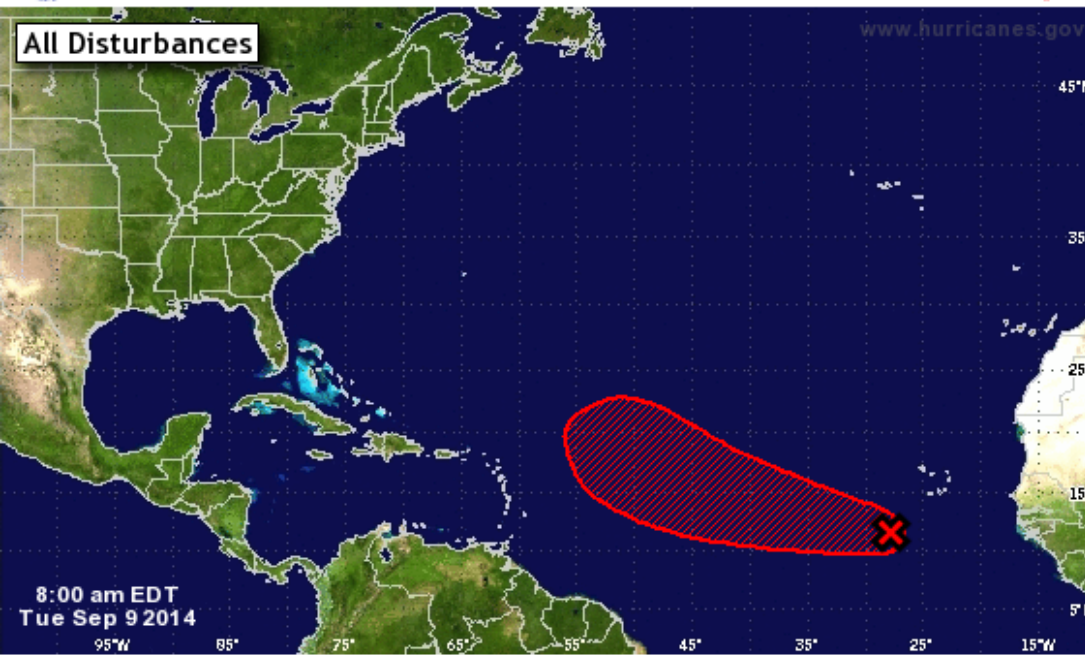
Null (393 days) 189 storms





# Experimental 5-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



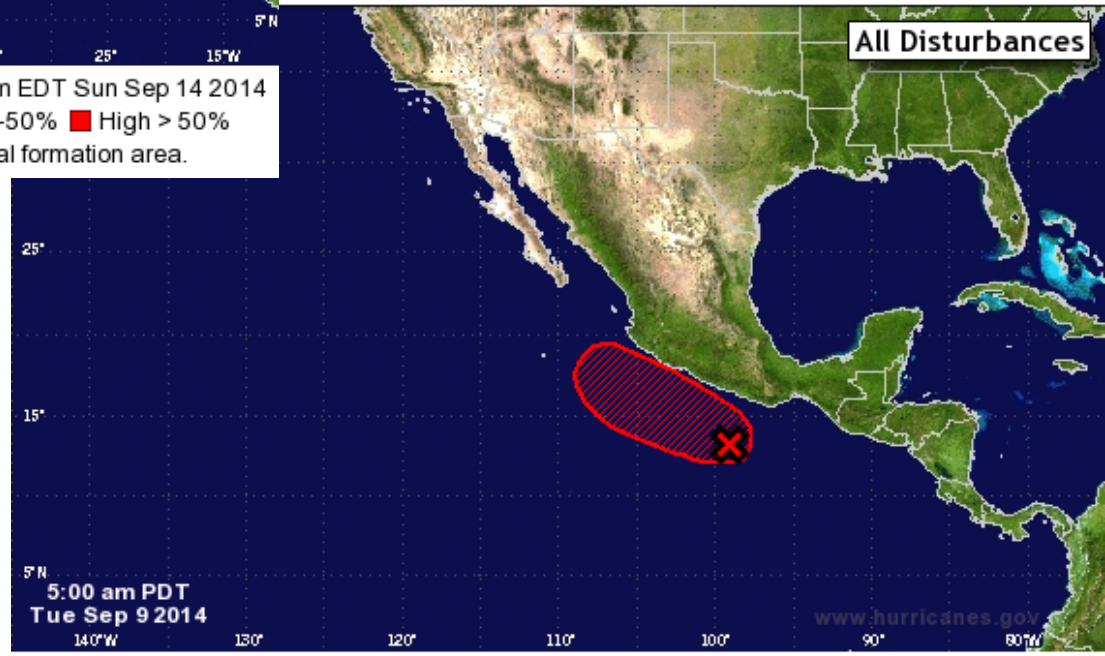
8:00 am EDT  
Tue Sep 9 2014

# Experimental 5-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



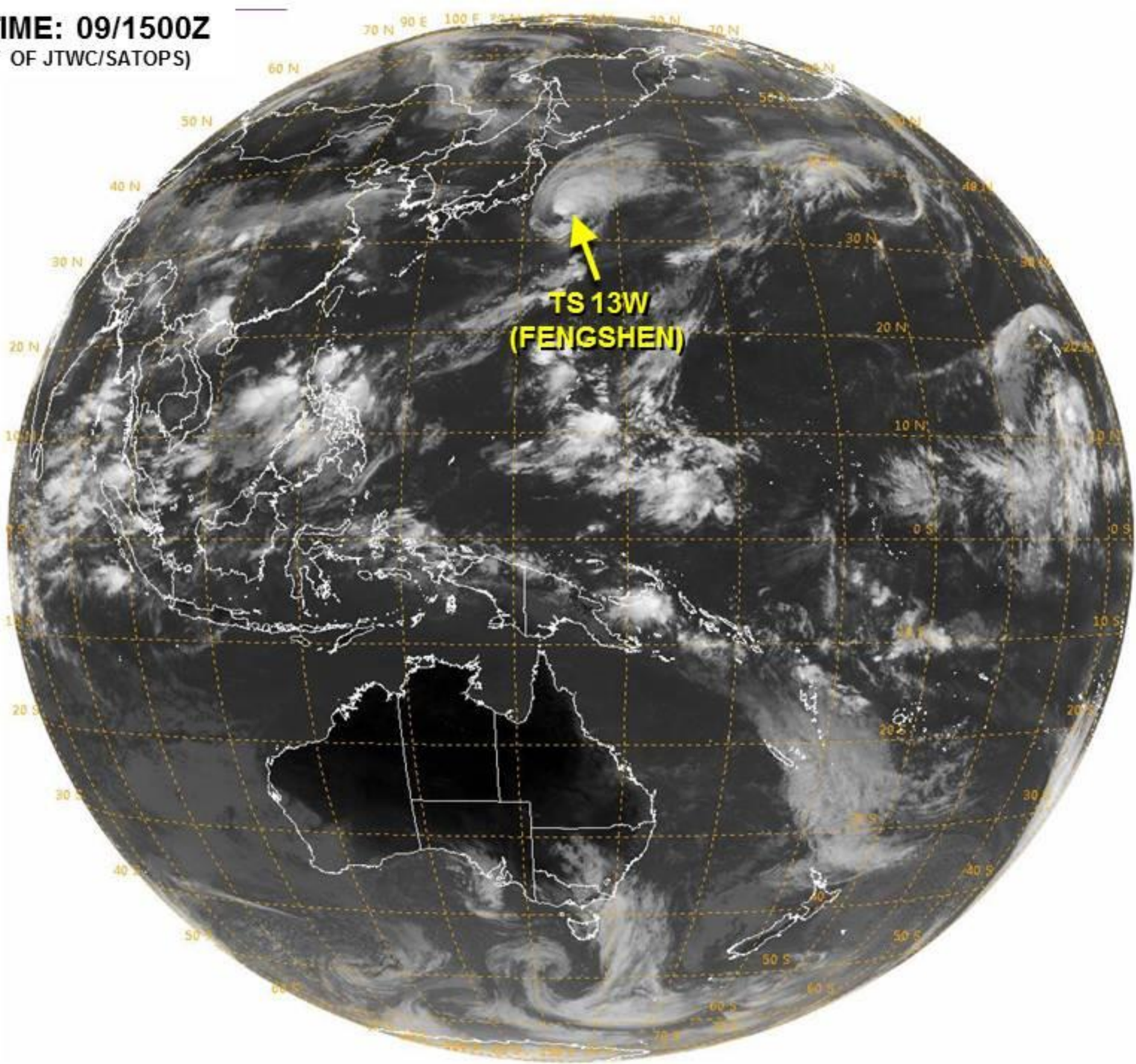
Tropical Cyclone Formation Potential for the 5-Day Period Ending 8:00 am EDT Sun Sep 14 2014  
 Chance of Cyclone Formation in 5 Days: ■ Low < 30% ■ Medium 30-50% ■ High > 50%  
 X indicates current disturbance location; shading indicates potential formation area.

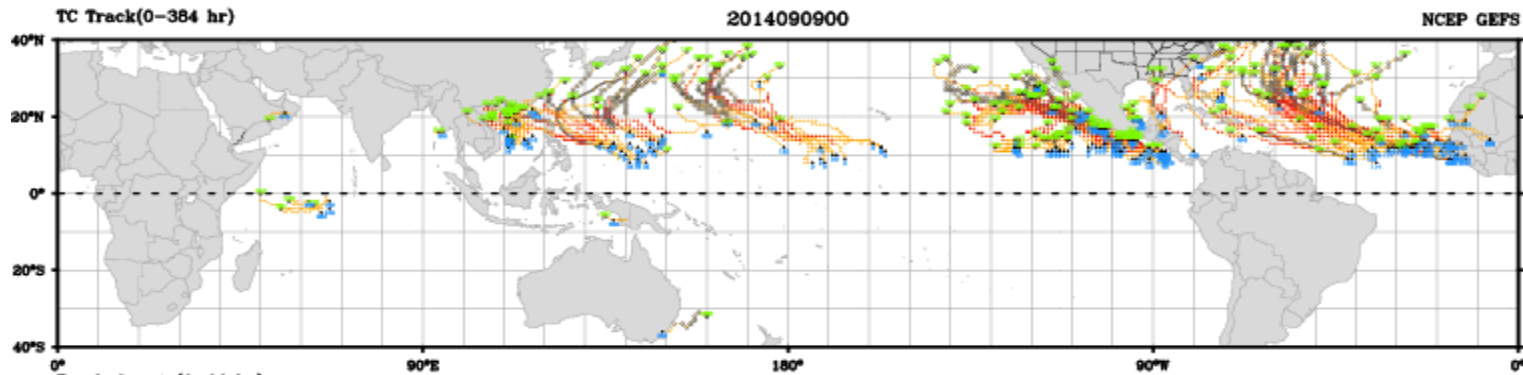


5:00 am PDT  
Tue Sep 9 2014

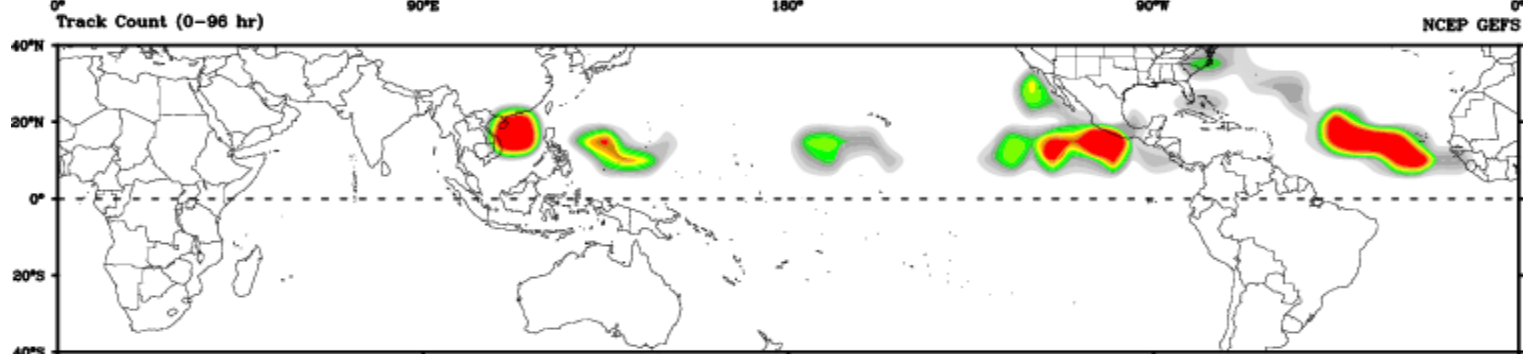
Tropical Cyclone Formation Potential for the 5-Day Period Ending 5:00 am PDT Sun Sep 14 2014  
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**VALID TIME: 09/1500Z**  
(PRODUCT OF JTWC/SATOPS)

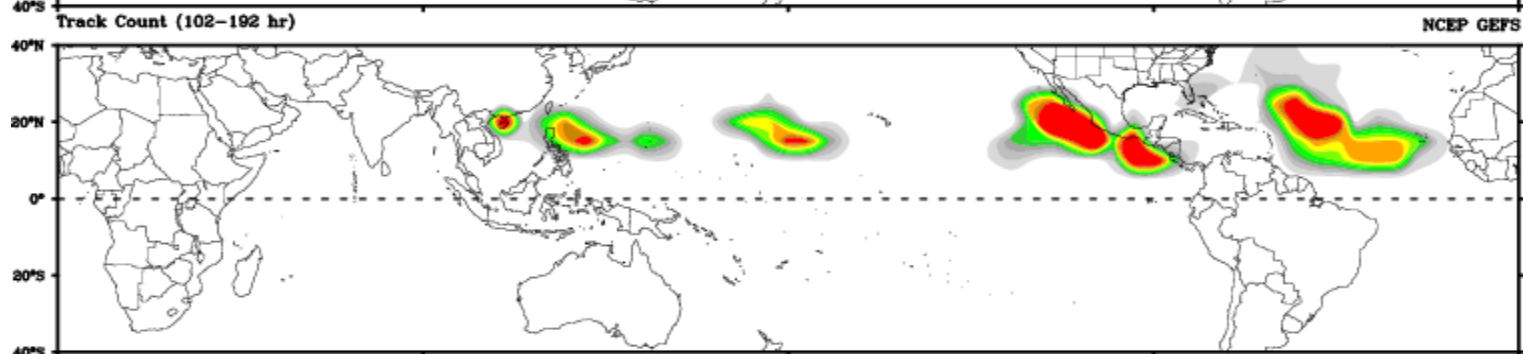




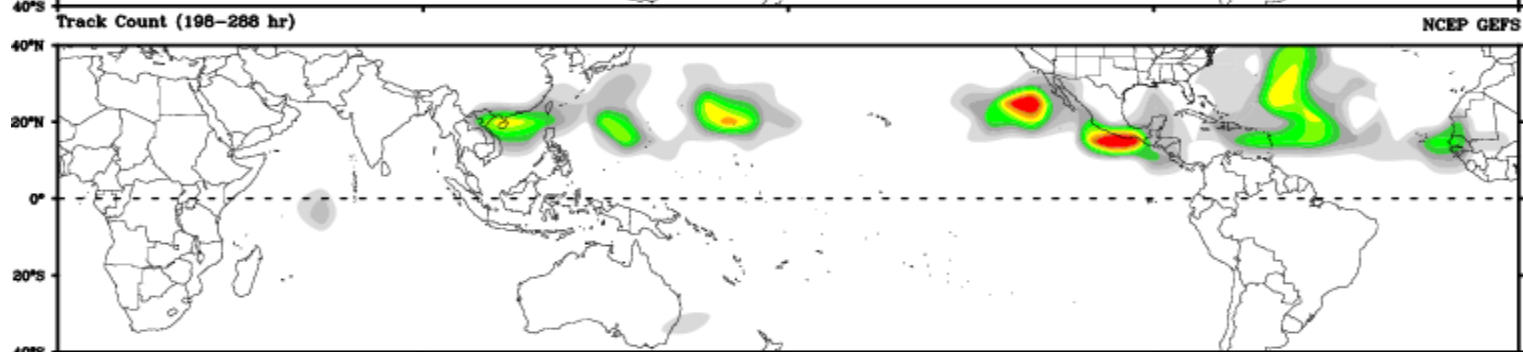
Days 1-4



Day 5-8

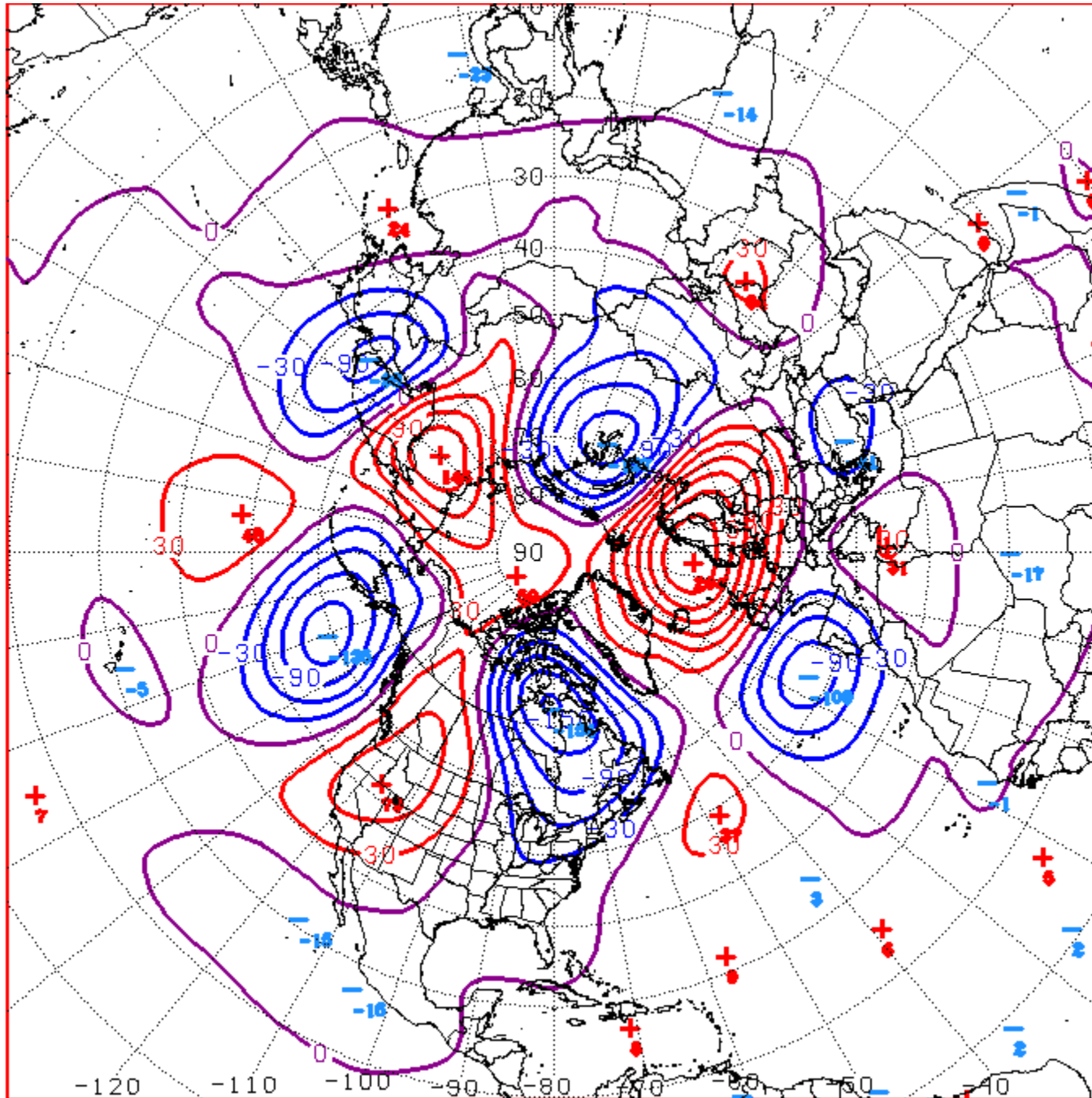


Day 9-12



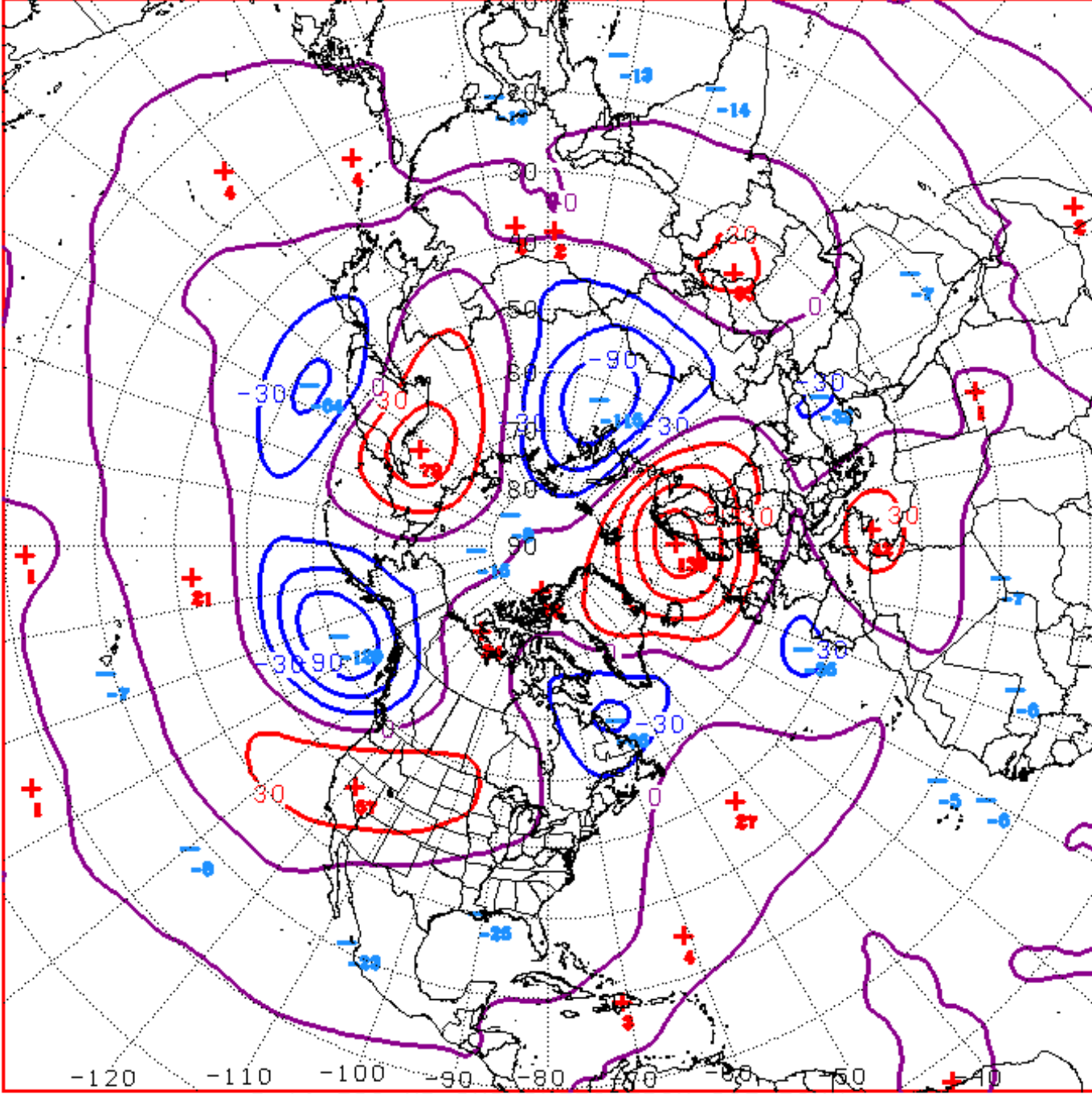
Day 13-15

# Connections to U.S. Impacts

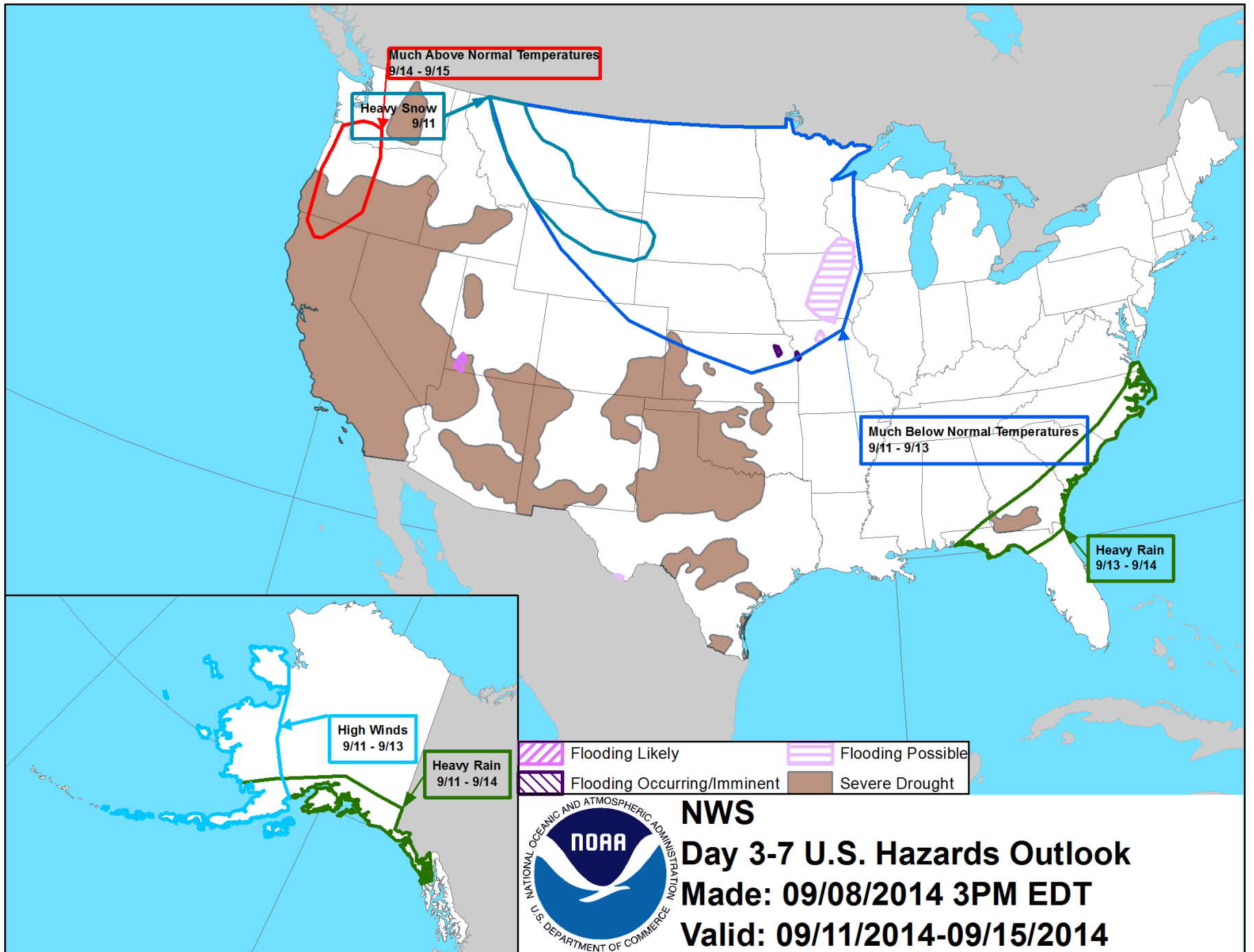


D+8 500 MB ANOMALIES FROM 00Z ECMM  
CPC MAP MADE SEP 09 2014 1047 UTC CNTD SEP 17 2014





D+11 500 MB ANOMALIES FROM 00Z ECMM  
CPC MAP MADE SEP 09 2014 1049 UTC CNTD SEP 20 2014



Much Above Normal Temperatures  
9/14 - 9/15

Heavy Snow  
9/11

Much Below Normal Temperatures  
9/11 - 9/13

Heavy Rain  
9/13 - 9/14

High Winds  
9/11 - 9/13

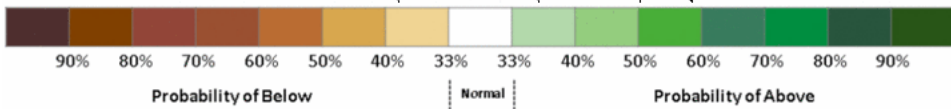
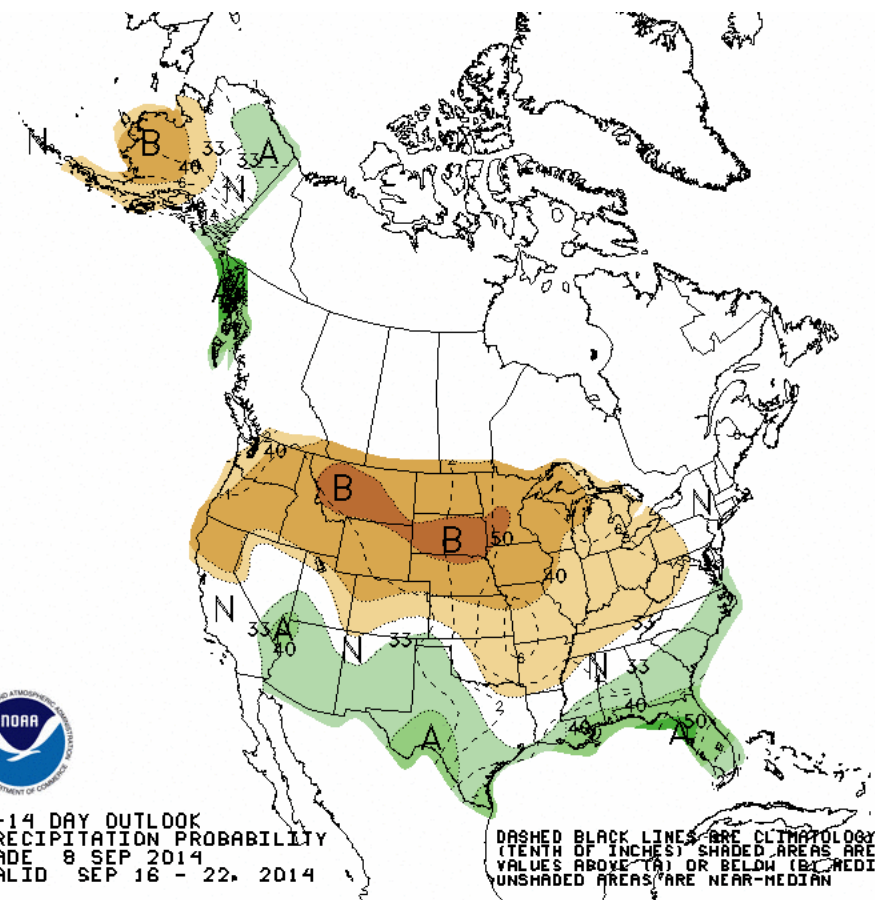
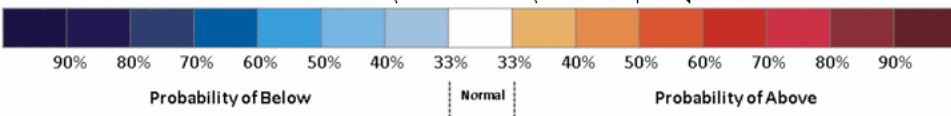
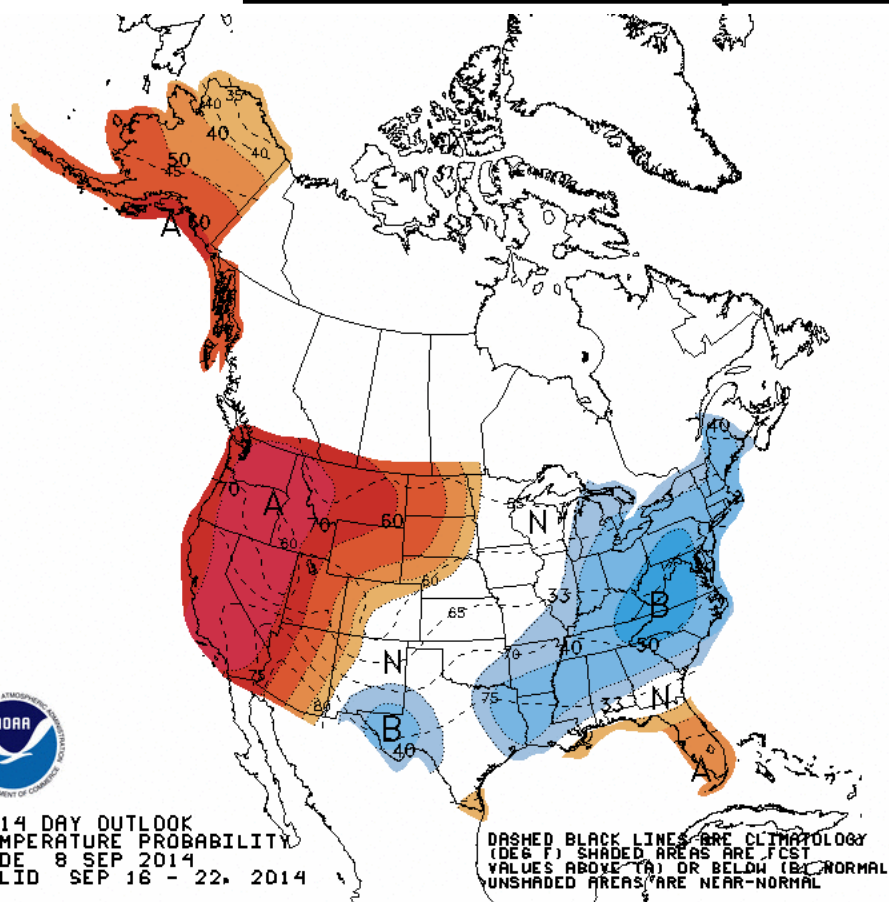
Heavy Rain  
9/11 - 9/14

- Flooding Likely
- Flooding Possible
- Flooding Occurring/Imminent
- Severe Drought



**NWS**  
**Day 3-7 U.S. Hazards Outlook**  
**Made: 09/08/2014 3PM EDT**  
**Valid: 09/11/2014-09/15/2014**

# Week 2 – Temperature and Precipitation

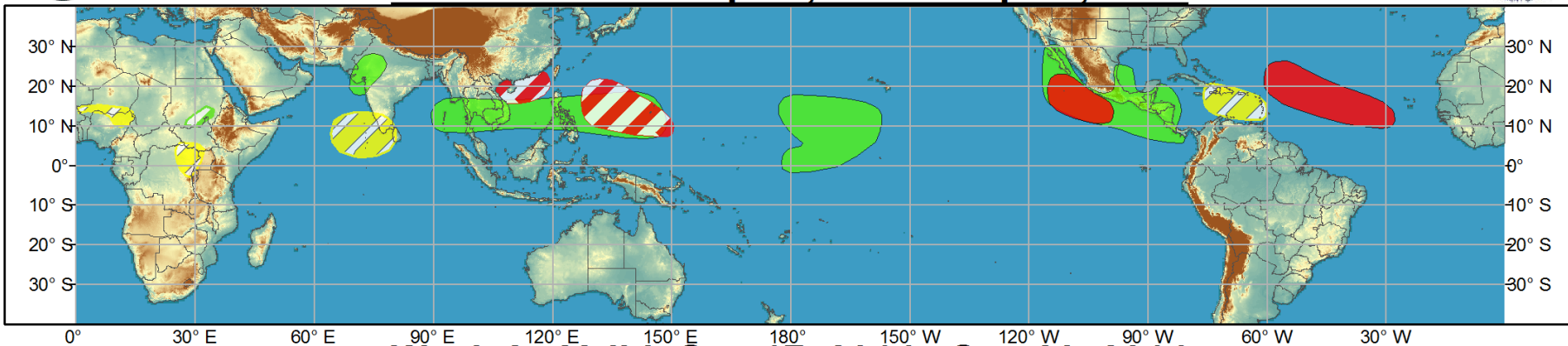




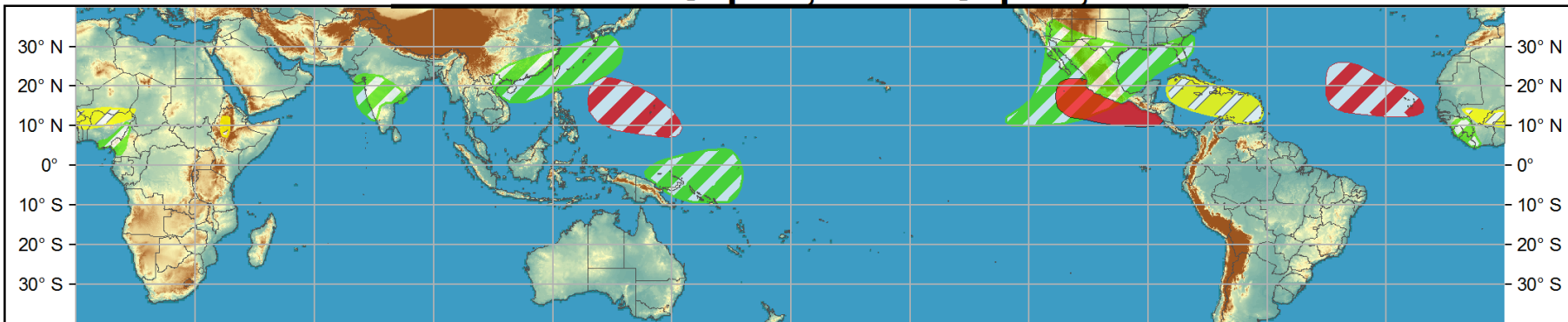
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