

# Global Tropics Hazards And Benefits Outlook

October 23, 2012

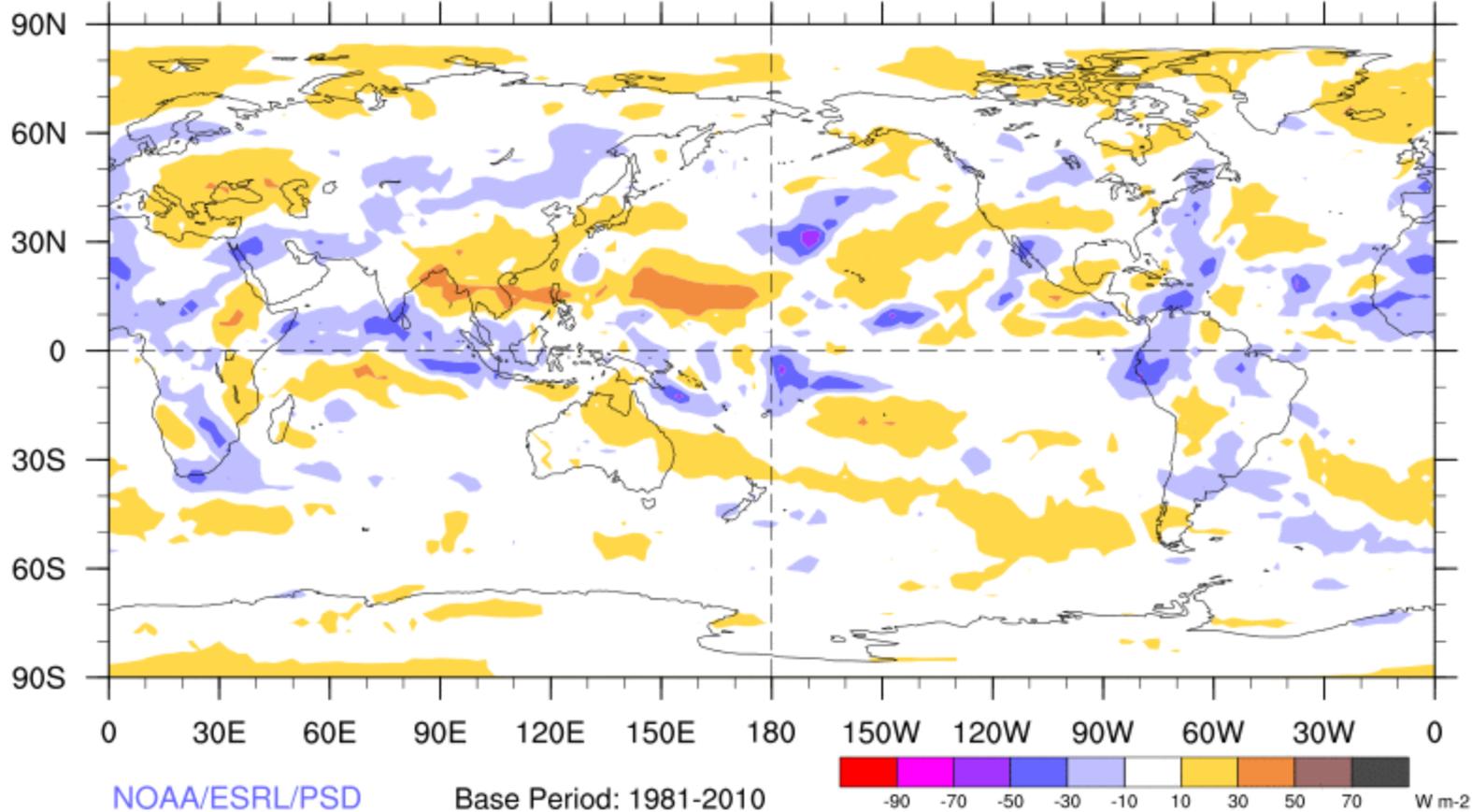
Jon Gottschalck

## Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion

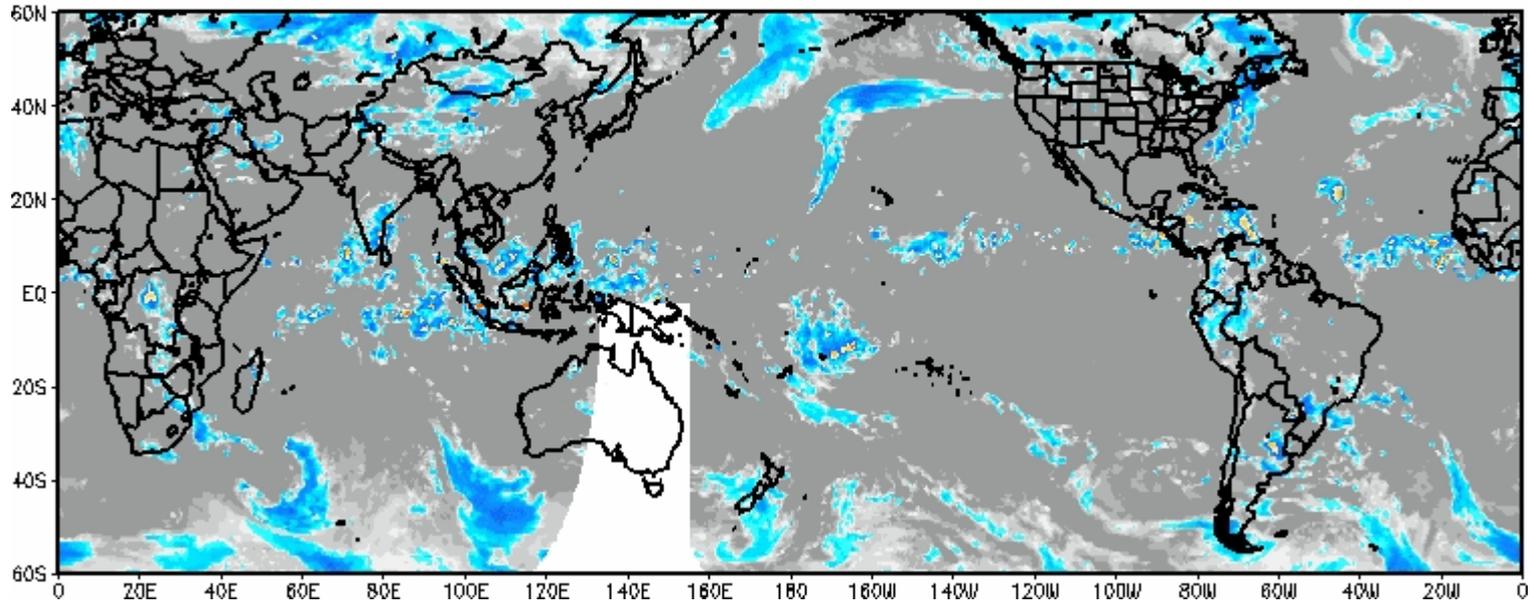
# 7-Day Average OLR Anomaly

2012/10/15 - 2012/10/21



# Weekly Satellite Review

IR Temperatures  
0900 UTC 20 OCT 2012

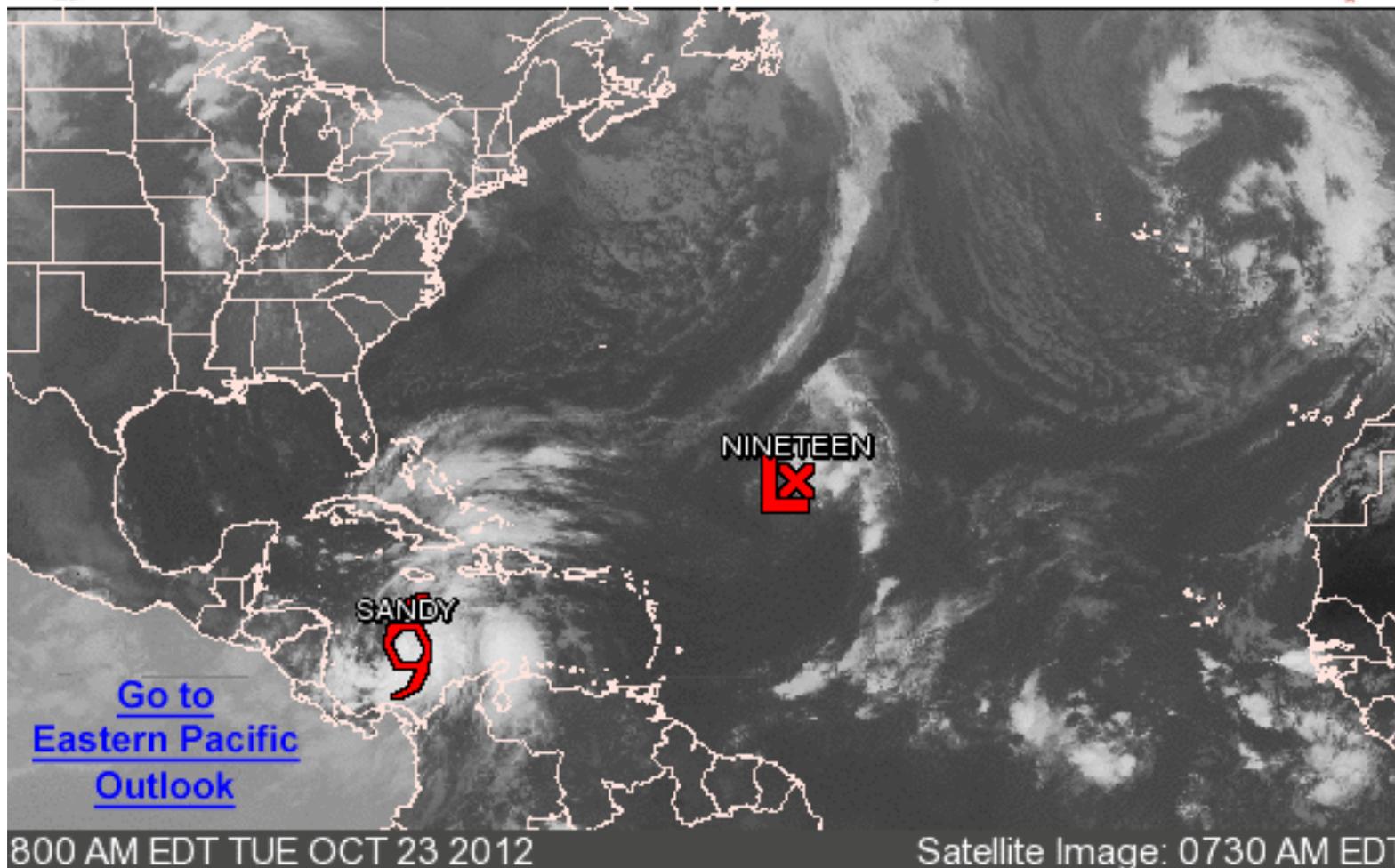


# Tropical Cyclone Review



## Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



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%

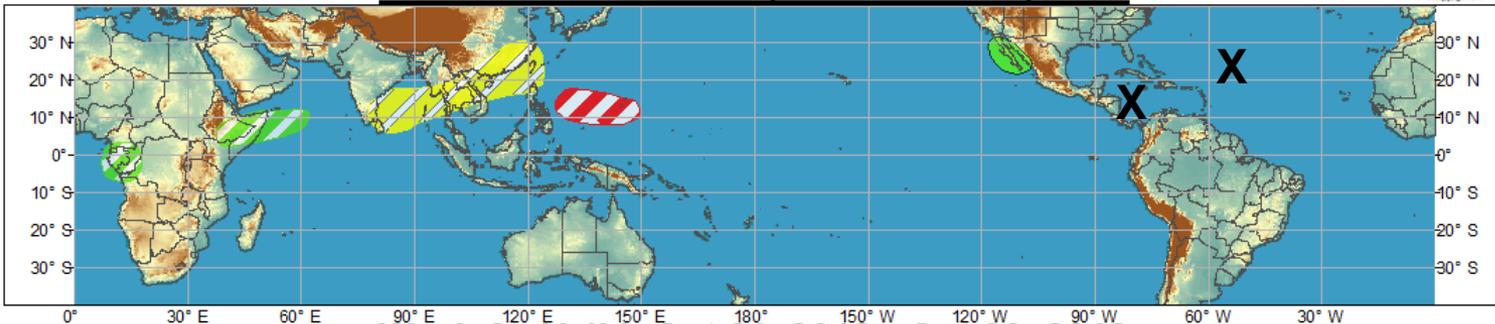
 High >50%



# Global Tropical Hazards/Benefits Outlook - Climate Prediction Center



**Week 1 - Valid: Oct 17, 2012 - Oct 23, 2012**

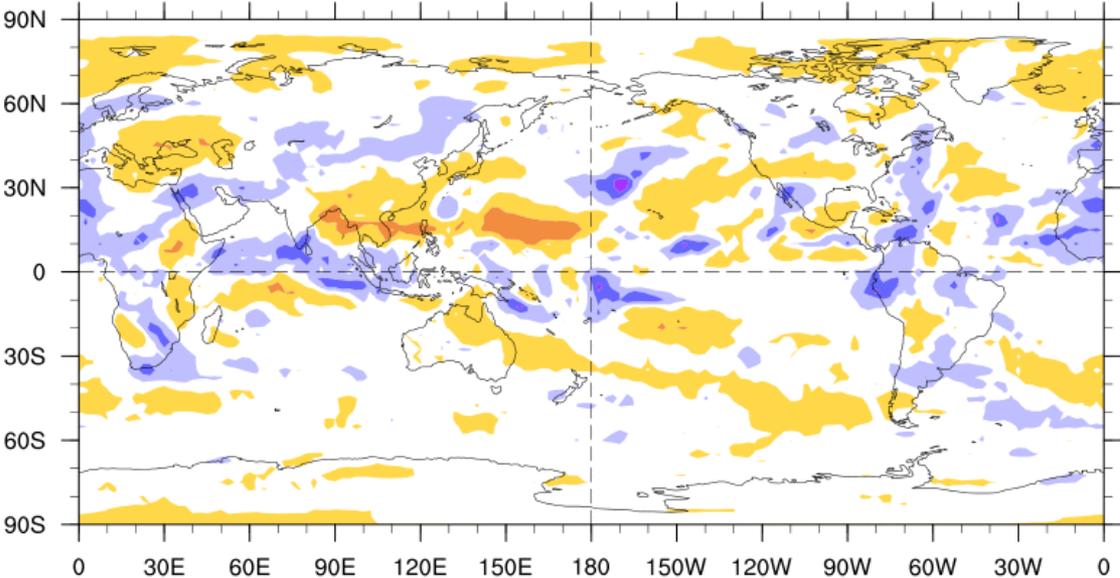


**Week 2 - Valid: Oct 17, 2012 - Oct 23, 2012**



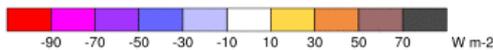
7-Day Average OLR Anomaly

2012/10/15 - 2012/10/21



NOAA/ESRL/PSD

Base Period: 1981-2010



## Outlook Review

# Synopsis of Climate Modes

## ENSO:

- Borderline ENSO-neutral / weak El Niño conditions are expected to continue into Northern Hemisphere winter 2012-13, possibly strengthening during the next few months.

## MJO and other subseasonal variability:

- Some evidence that the MJO has become better organized (centered across Africa).
- Model MJO index forecasts show a weak signal with only minor eastward propagation.
- It remains too early to say whether a more coherent long-lived MJO emerges
- Poor model skill of MJO index forecasts during October.
- High uncertainty during the next 2 weeks on whether a coherent MJO develops.

## Extratropics:

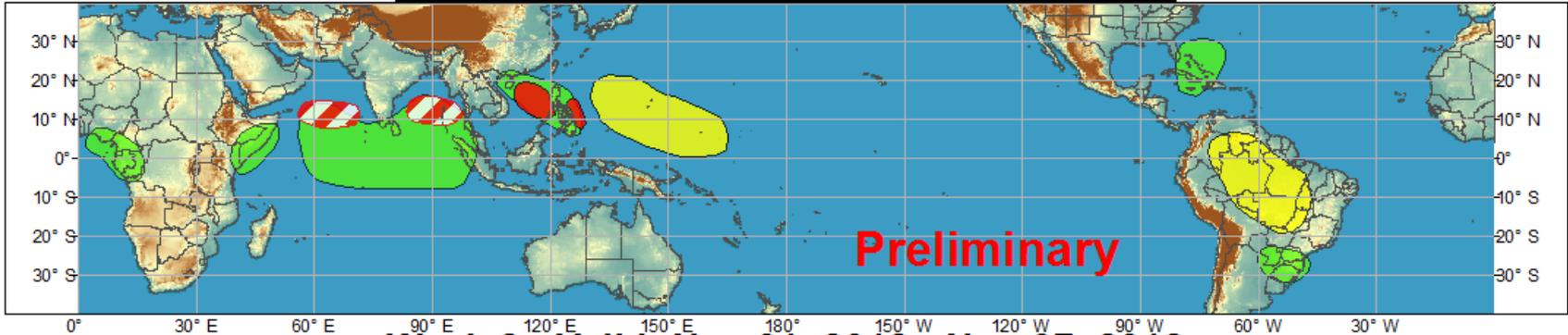
- Sandy needs to be closely monitored for any impact to eastern seaboard this weekend
- AO index continues to run negative and is the primary driver for recent and forecast cold air intrusions across parts of the U.S.



# Global Tropical Hazards/Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Oct 25, 2012 - Oct 31, 2012



## Week 2 - Valid: Nov 01, 2012 - Nov 07, 2012



### Confidence

High Moderate

<b>Tropical Cyclone Formation</b>	 	Development of a tropical cyclone that eventually reaches tropical storm/cyclone 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.
<b>Below-normal temperatures</b>	 	7-day mean temperatures in the lower third of the historical range.

Produced: 10/23/2012

Forecaster: Gottschalck

Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



**Tropical Storm Sandy**  
 Tuesday October 23, 2012  
 8 AM EDT Intermediate Advisory 4A  
 NWS National Hurricane Center

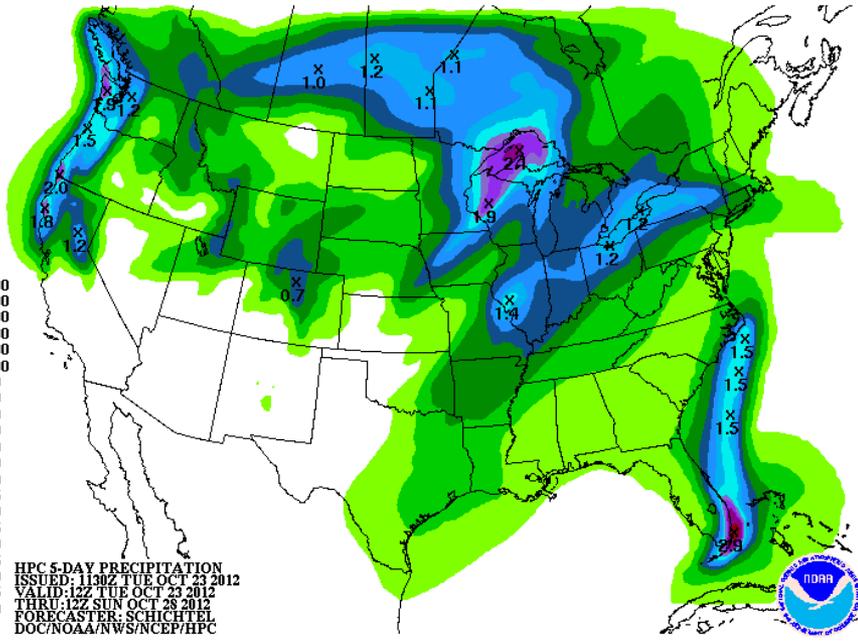
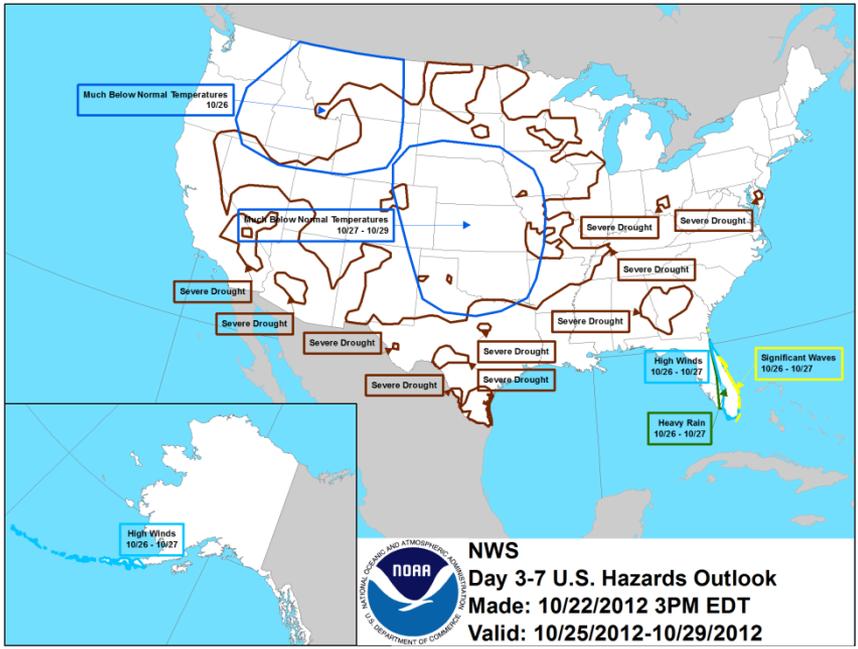
**Current Information:** ●  
 Center Location 13.4 N 77.9 W  
 Max Sustained Wind 45 mph  
 Movement NNE at 3 mph

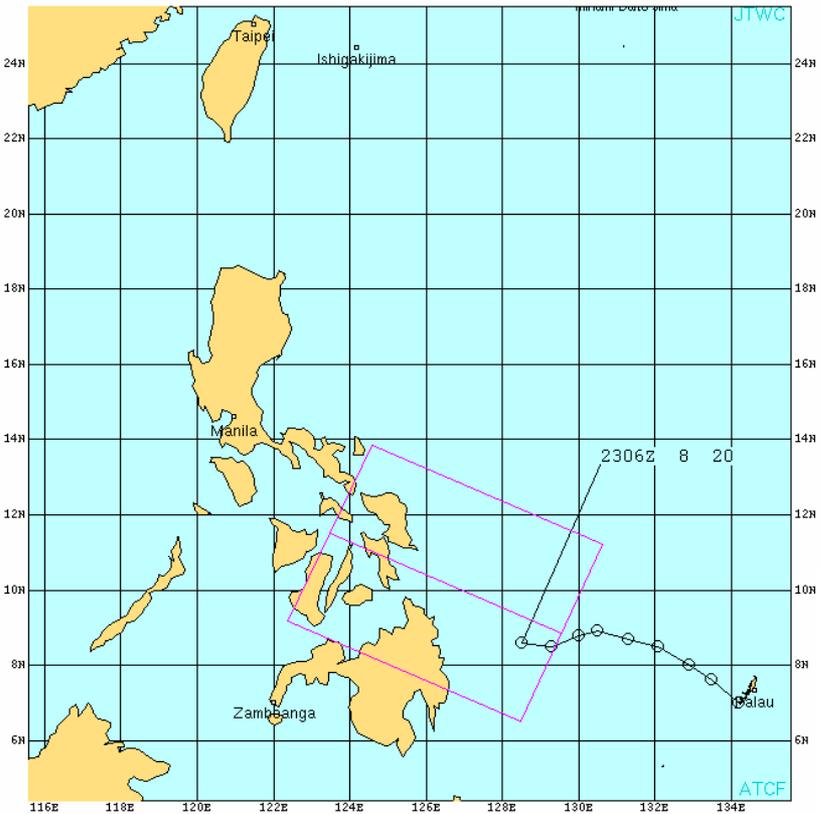
**Forecast Positions:**  
 ● Tropical Cyclone ○ Post-Tropical  
 Sustained Winds: D < 39 mph  
 S 39-73 mph H 74-110 mph M > 110mph†

**Potential Track Area:**  
 Day 1-3 Day 4-5

**Watches:**  
 Hurricane Trop.Storm

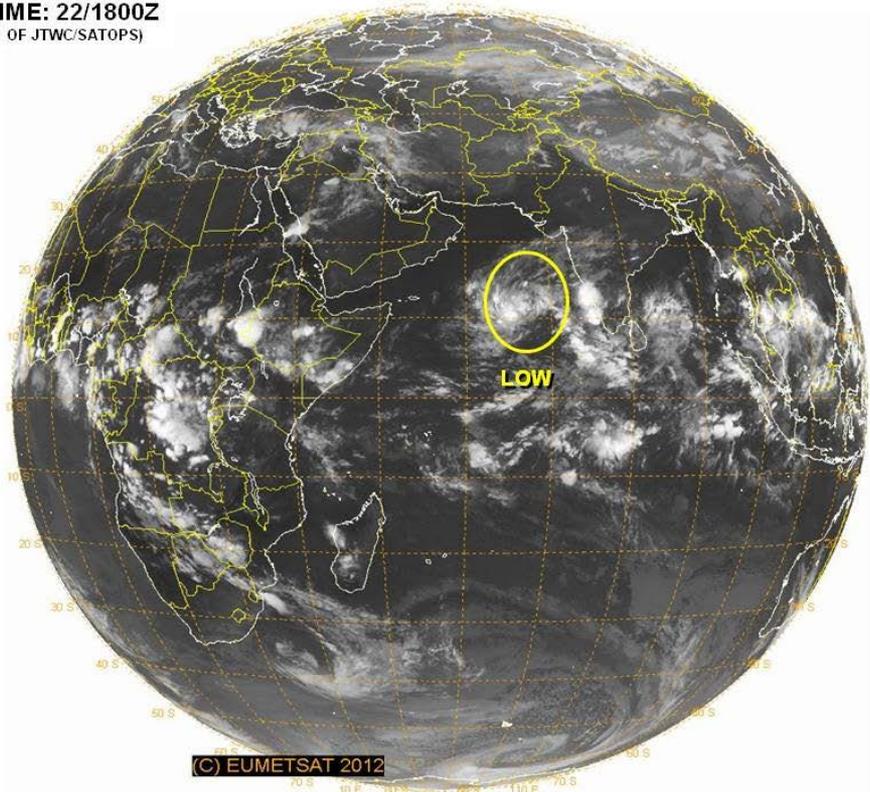
**Warnings:**  
 Hurricane Trop.Storm





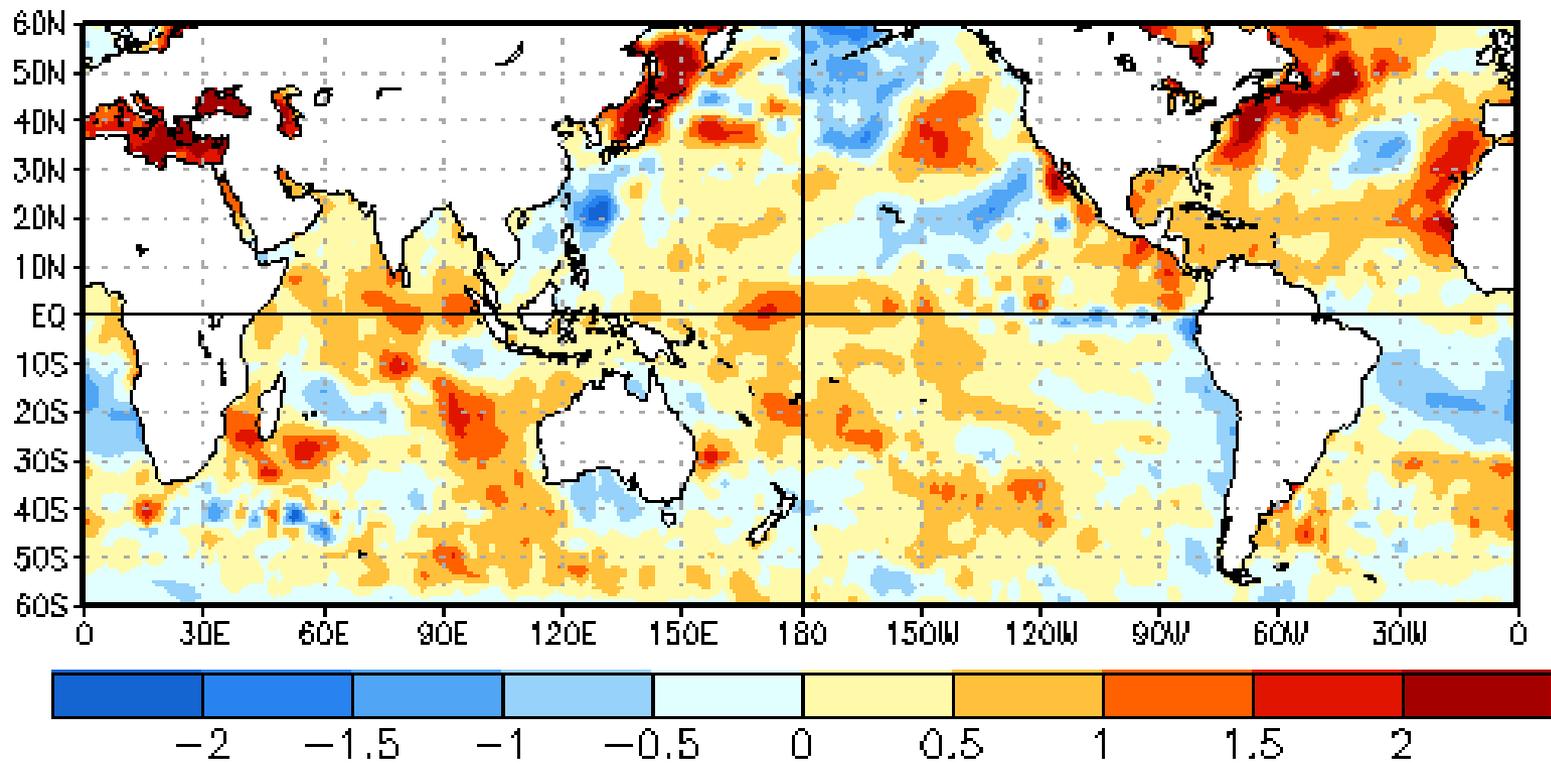
TROPICAL CYCLONE FORMATION ALERT  
 WTSN21 FOTW 231030  
 230600Z POSITION: NEAR 8.6N 128.5E  
 MOVING WESTWARD AT 08 KNOTS  
 MAXIMUM SUSTAINED WINDS: 23 KNOTS

**VALID TIME: 22/1800Z**  
 (PRODUCT OF JTWC/SATOPS)



# SST Observations

17 OCT 2012

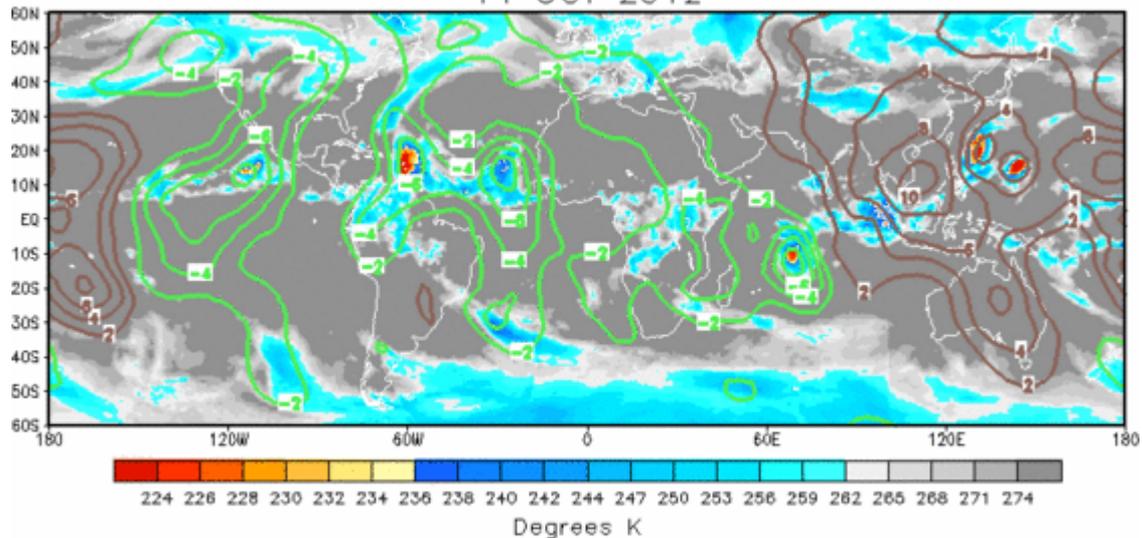


# IR Satellite & 200-hpa Velocity Potential Anomalies

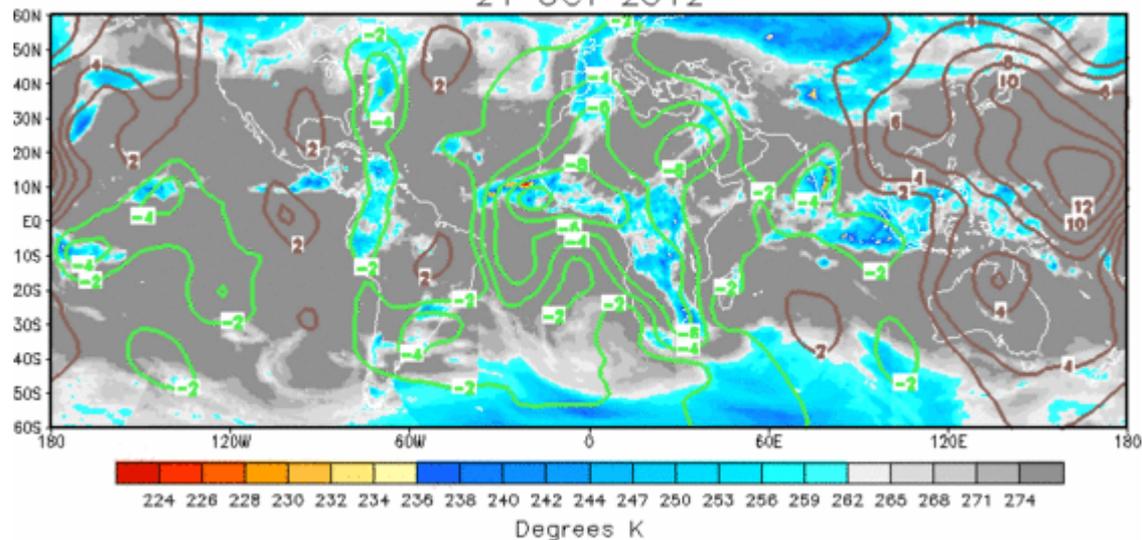
Green: Enhanced Divergence

Brown: Enhanced Convergence

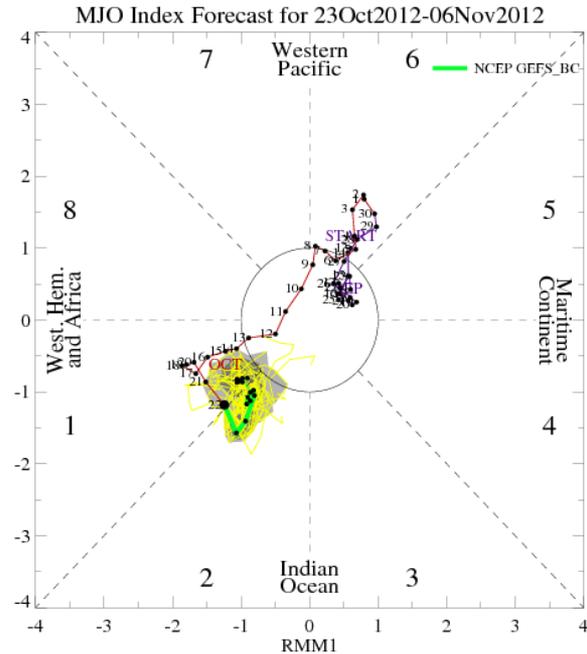
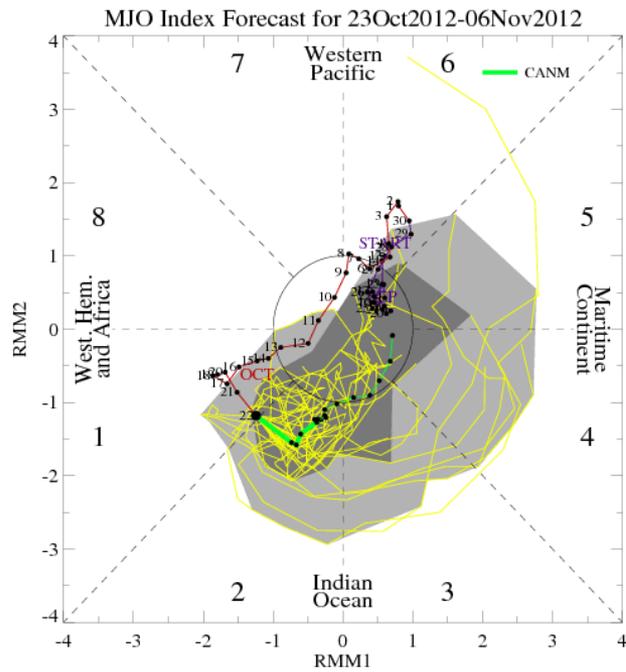
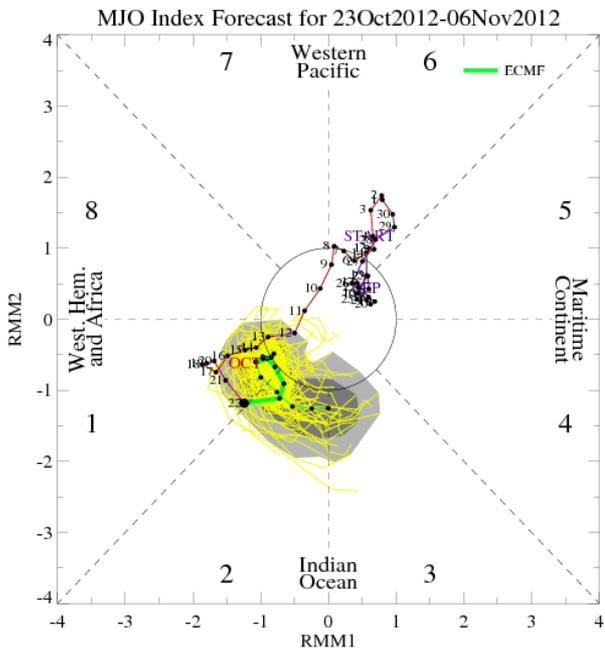
14 OCT 2012



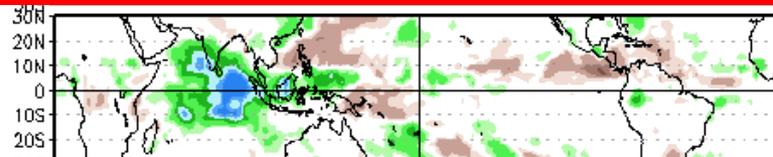
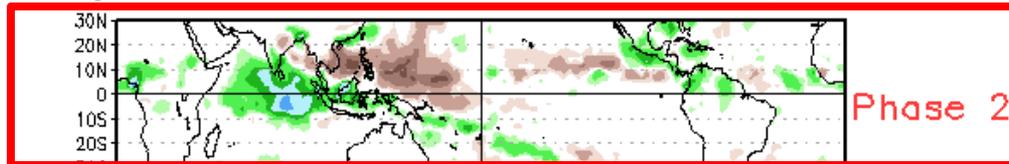
21 OCT 2012



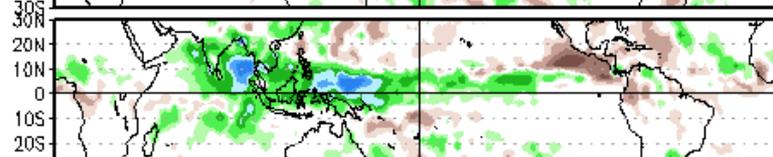
# MJO Observation/Forecast



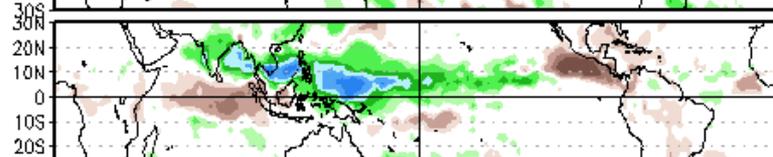
# Average Conditions when the MJO is present (May-Sep)



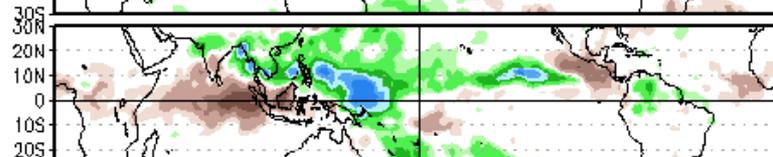
Phase 3



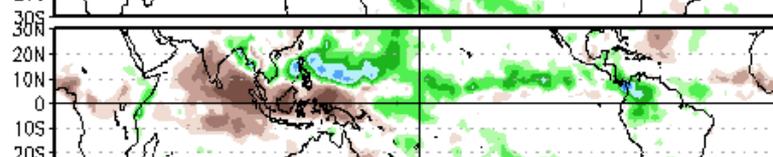
Phase 4



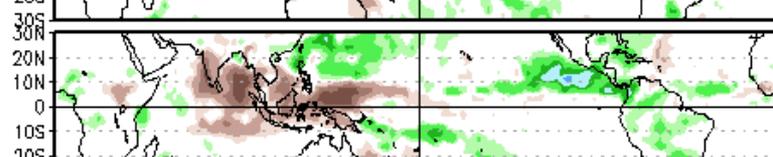
Phase 5



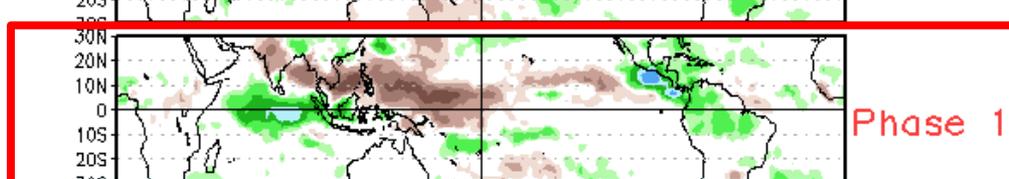
Phase 6

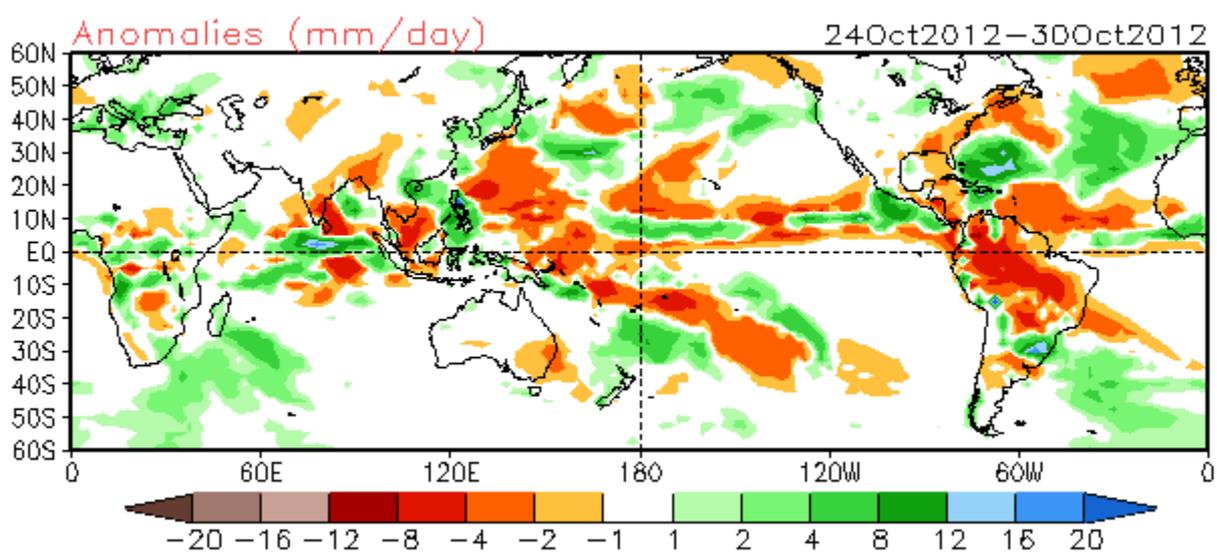


Phase 7

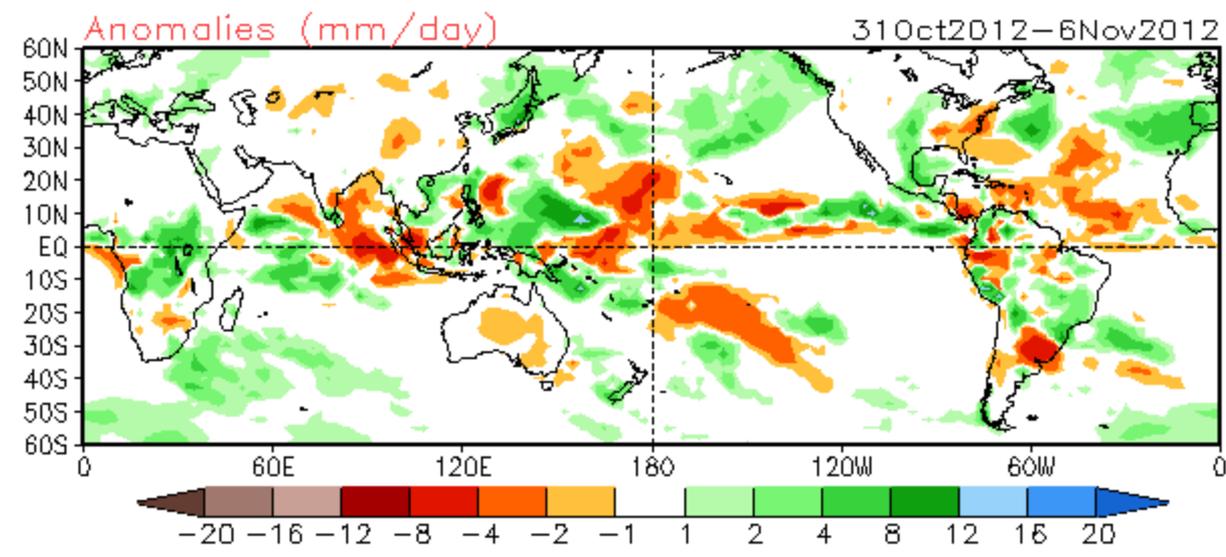


Phase 8



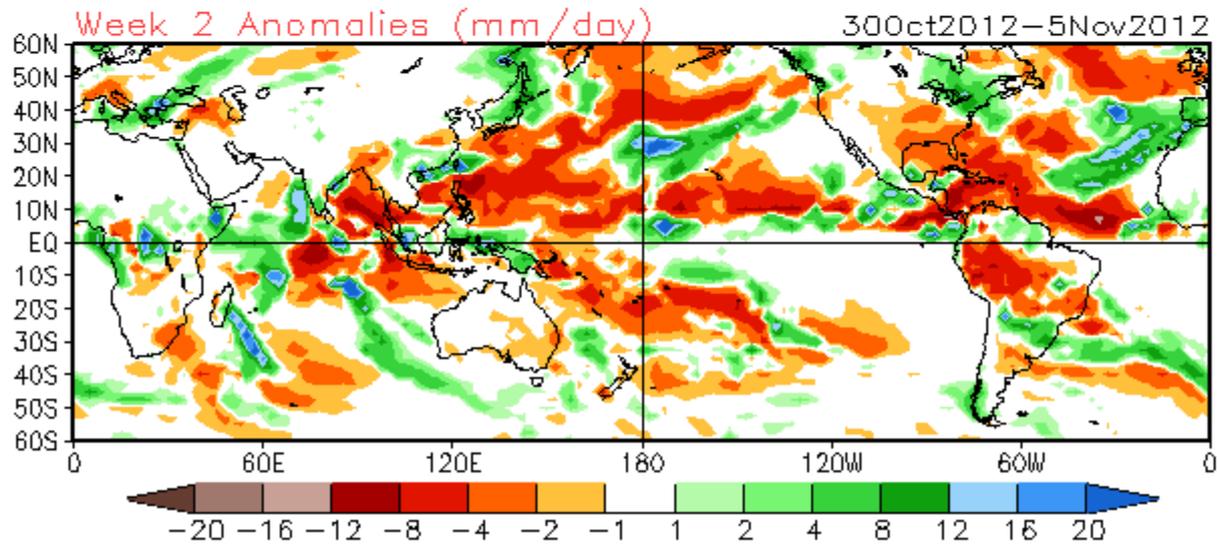
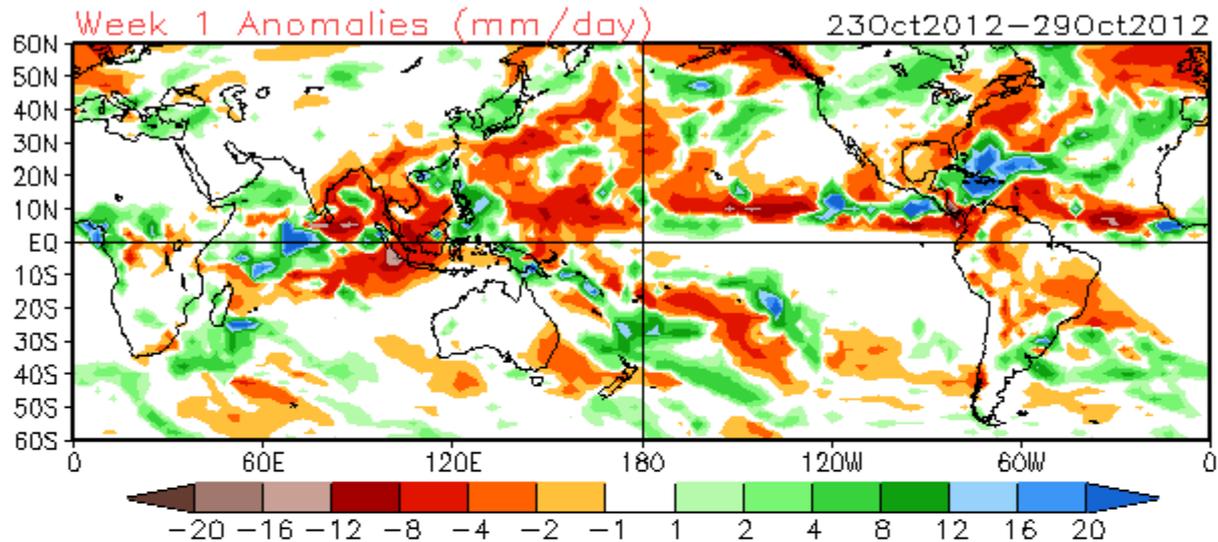


GFS – Week-1



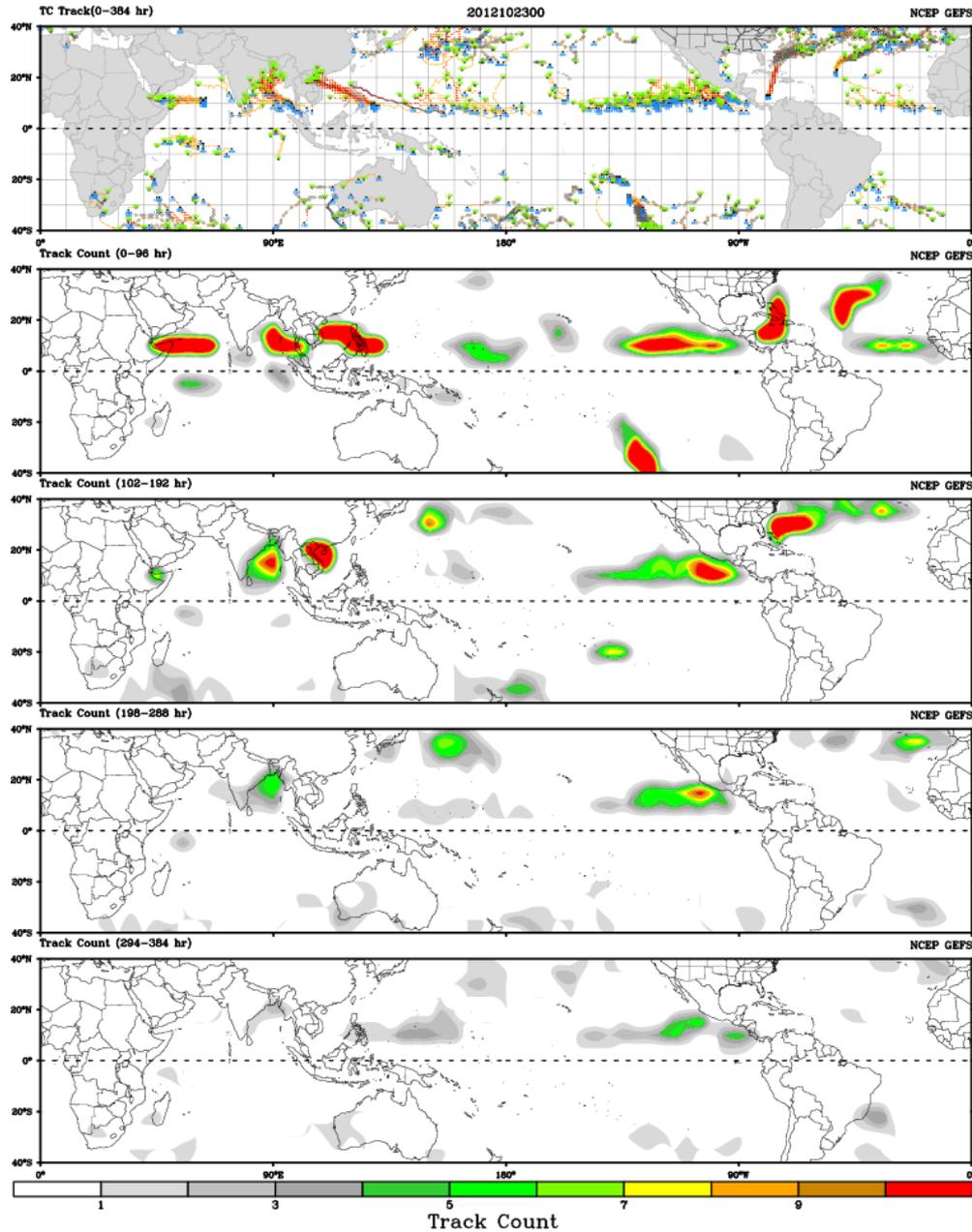
GFS – Week-2

CFSv2 Weeks 1 & 2 Precipitation  
16 Member Ensemble Mean Forecast from 22Oct2012

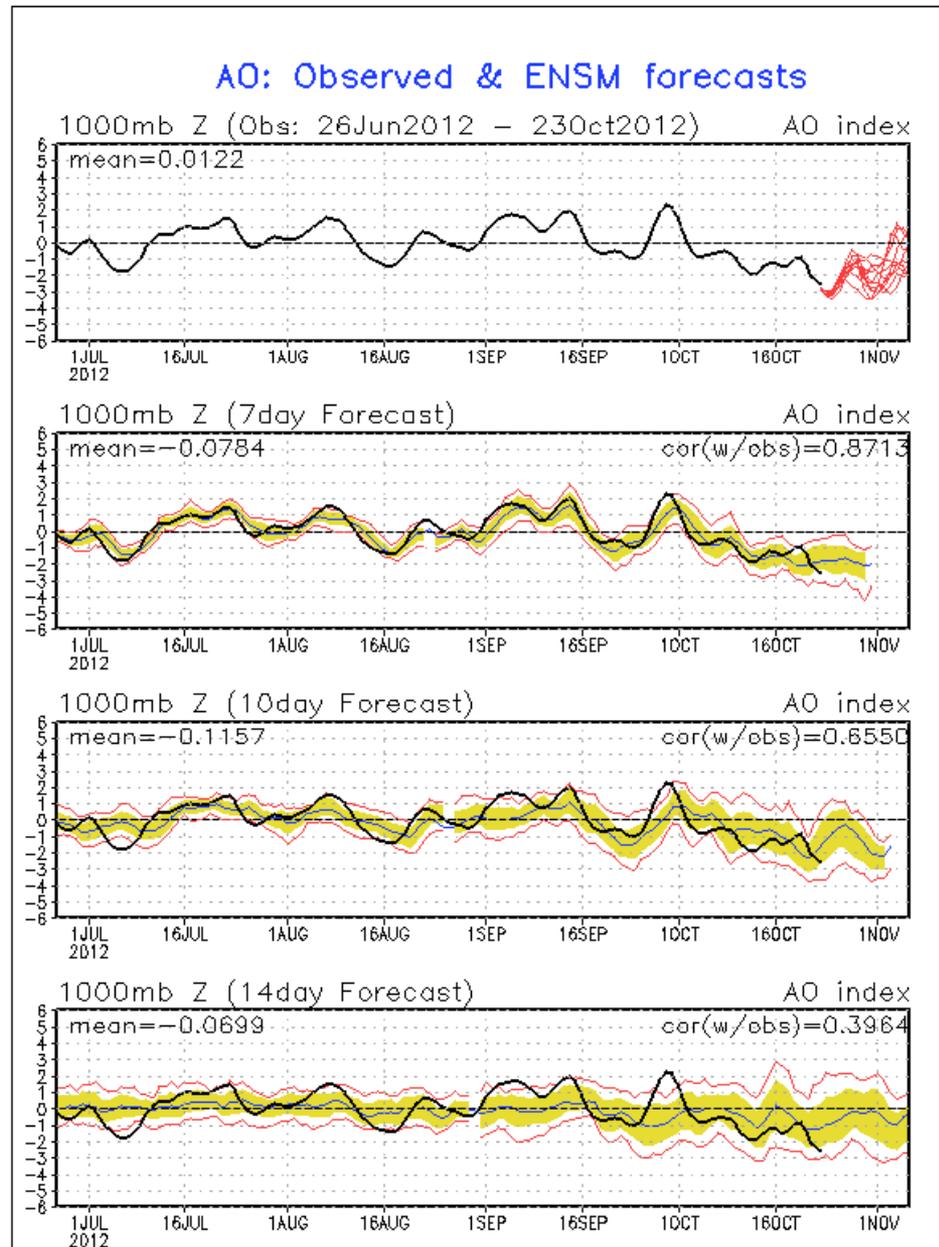


# Ensemble GFS TC Guidance

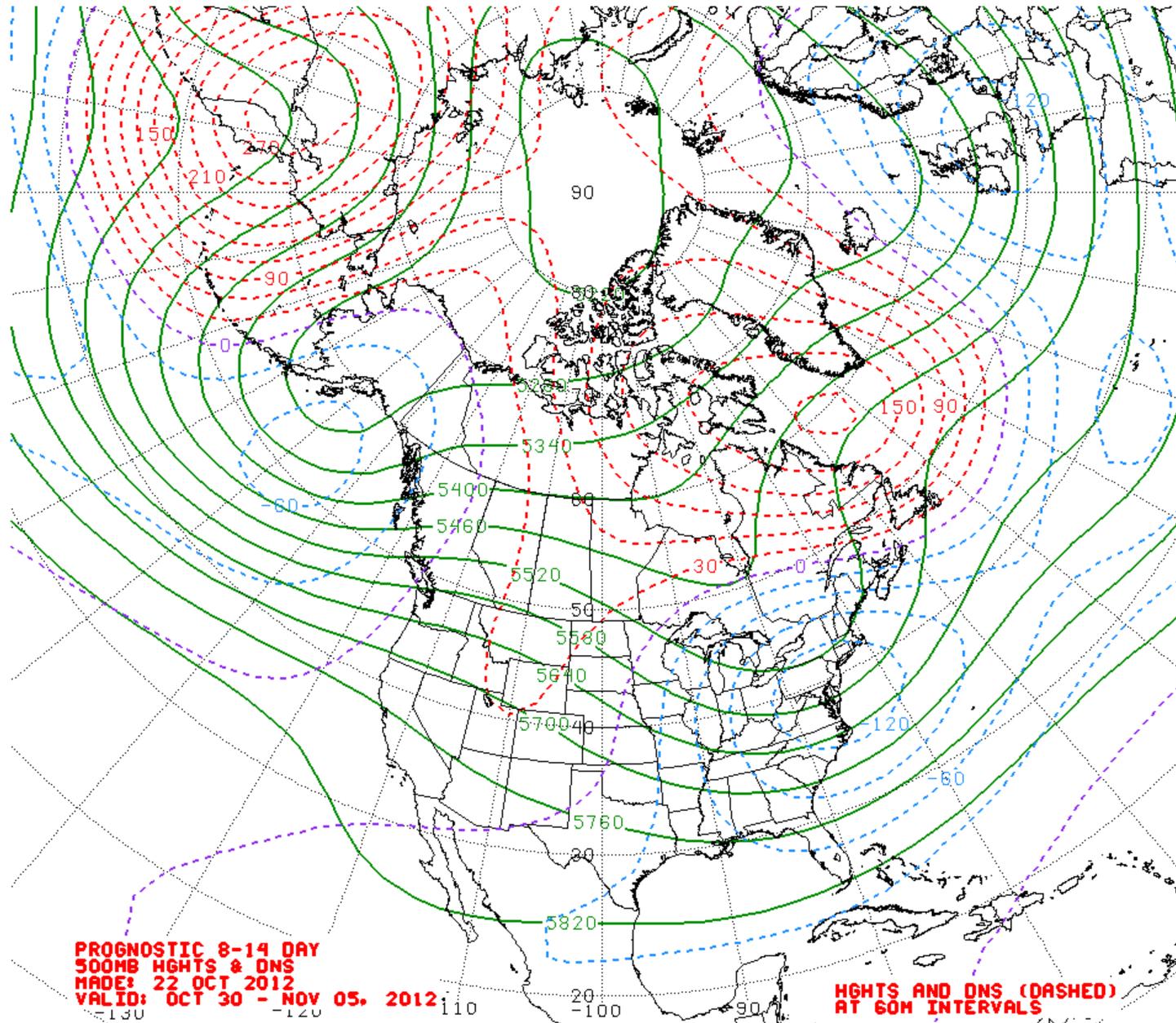
CWB TC Tracker for NCEP GEFS (Fuzzy\_Basic)



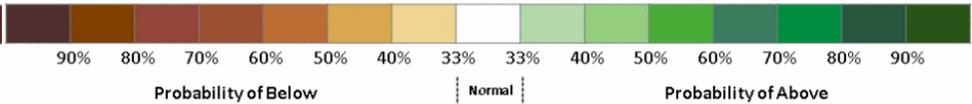
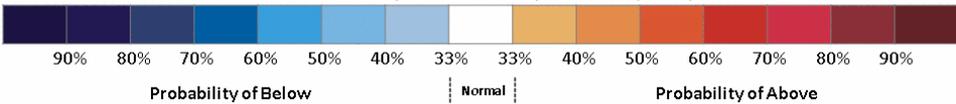
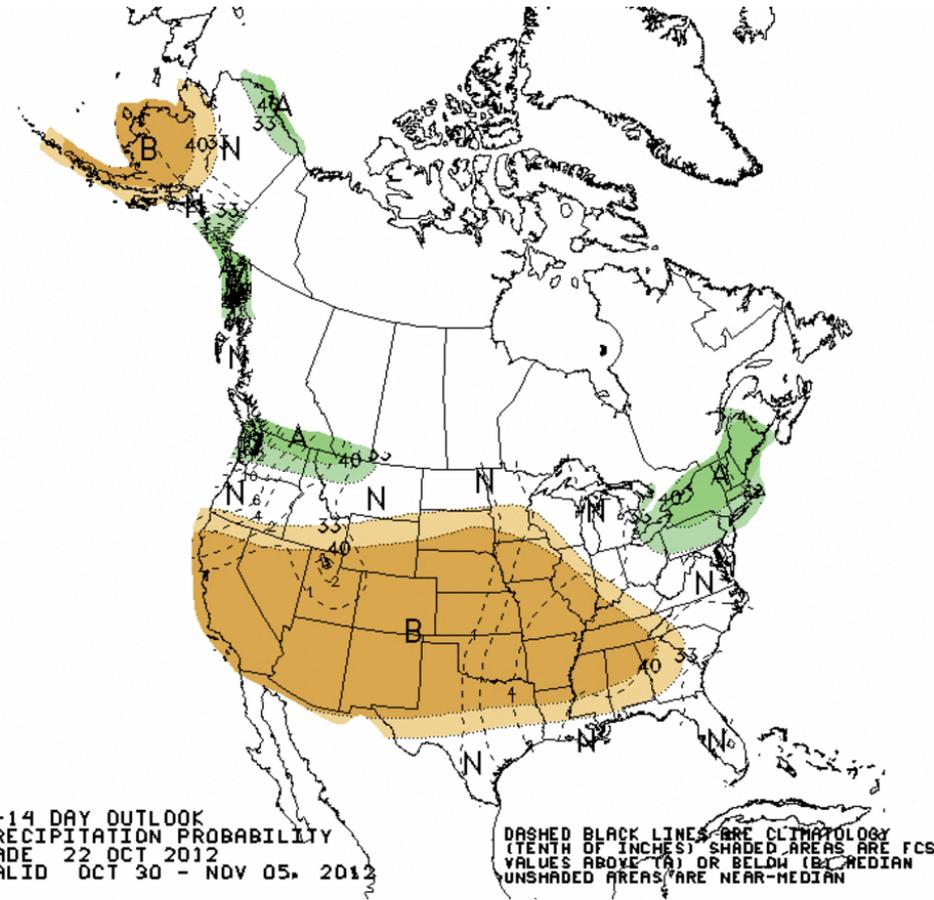
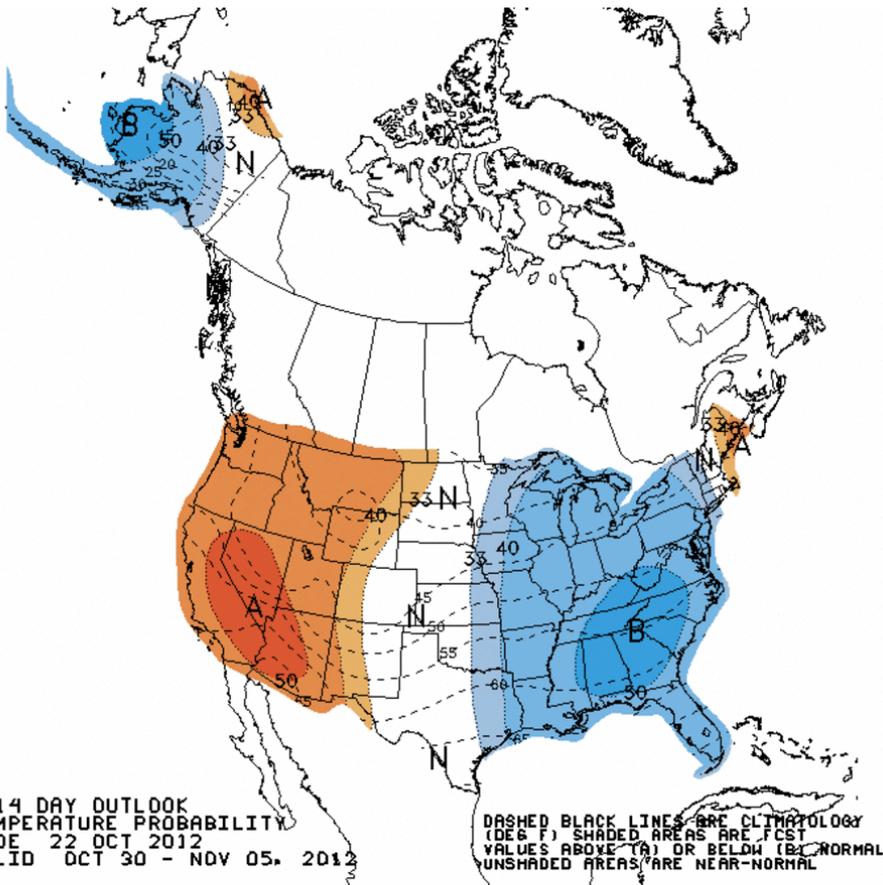
# Recent AO Observations and GEFS Forecast



# Week 2 500-hPa Manual Chart



# Week 2 -- Temperature and Precipitation

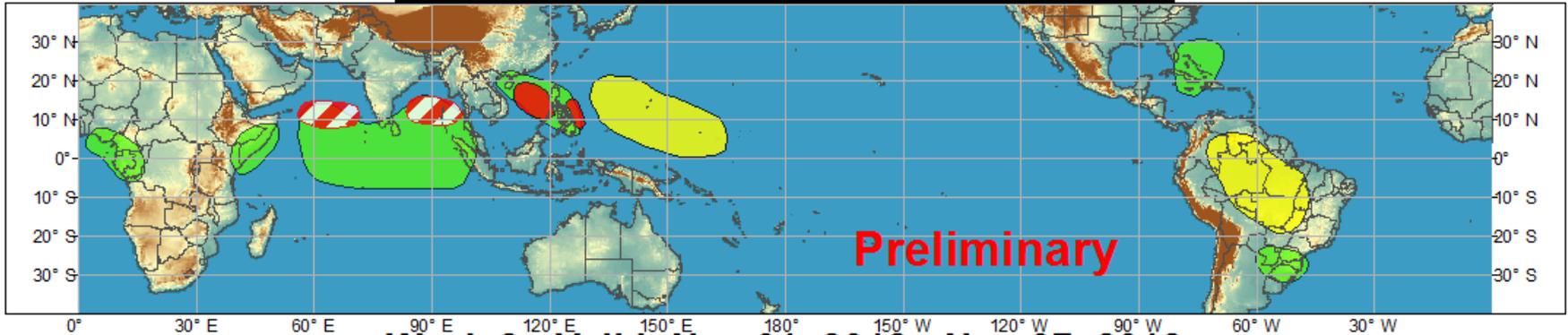




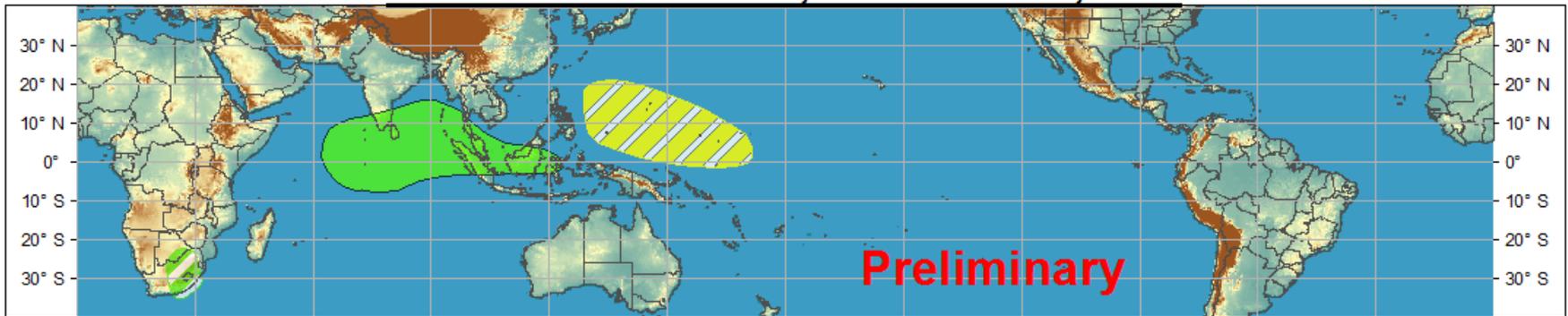
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## Week 1 - Valid: Oct 25, 2012 - Oct 31, 2012



## Week 2 - Valid: Nov 01, 2012 - Nov 07, 2012



### Confidence

High Moderate

**Tropical Cyclone Formation**



Development of a tropical cyclone that eventually reaches tropical storm/cyclone 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.

**Below-normal temperatures**



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

Produced: 10/23/2012

Forecaster: Gottschalk

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