

# Global Tropics Hazards And Benefits Outlook

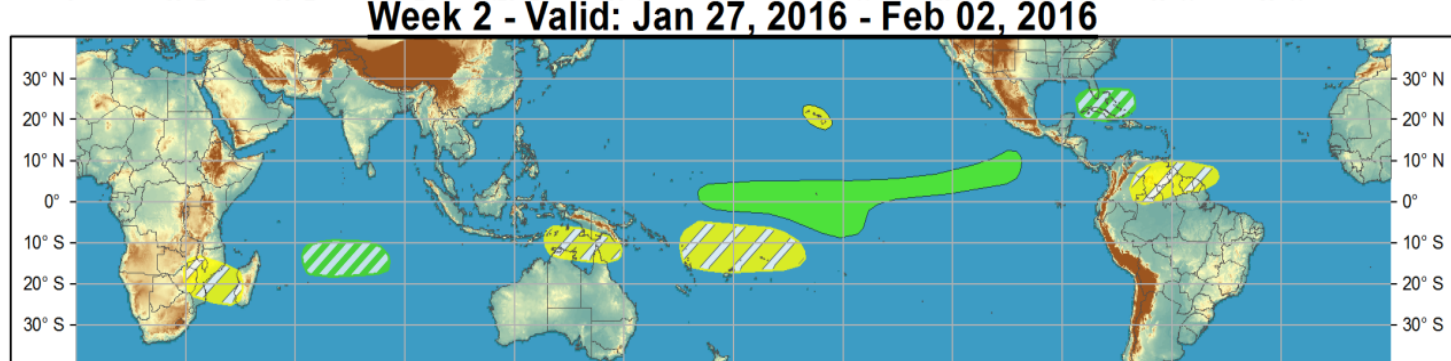
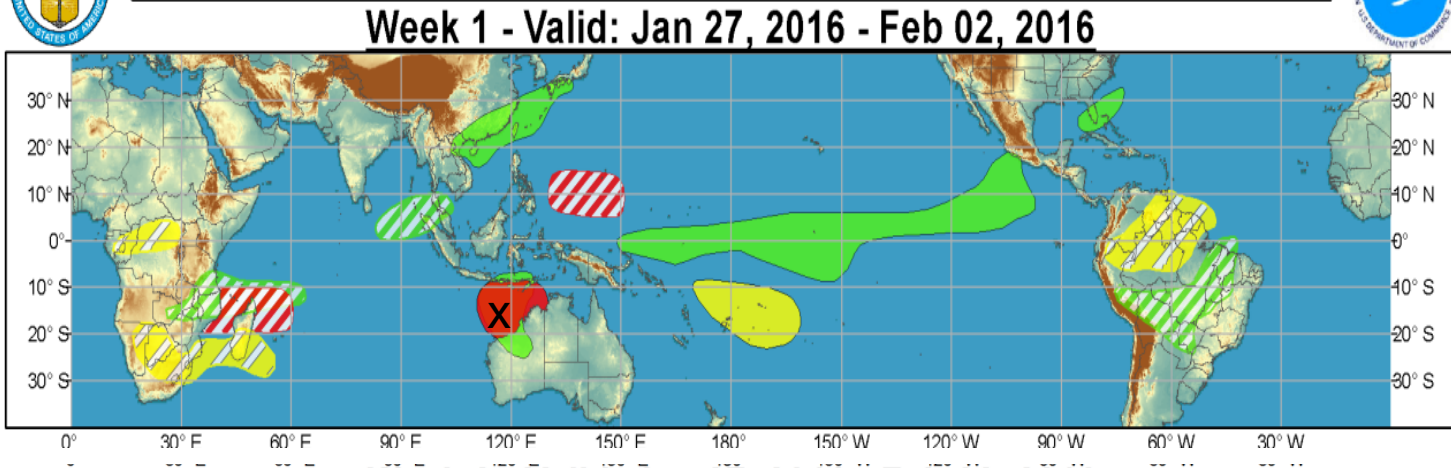
February 2, 2016

Brad Pugh

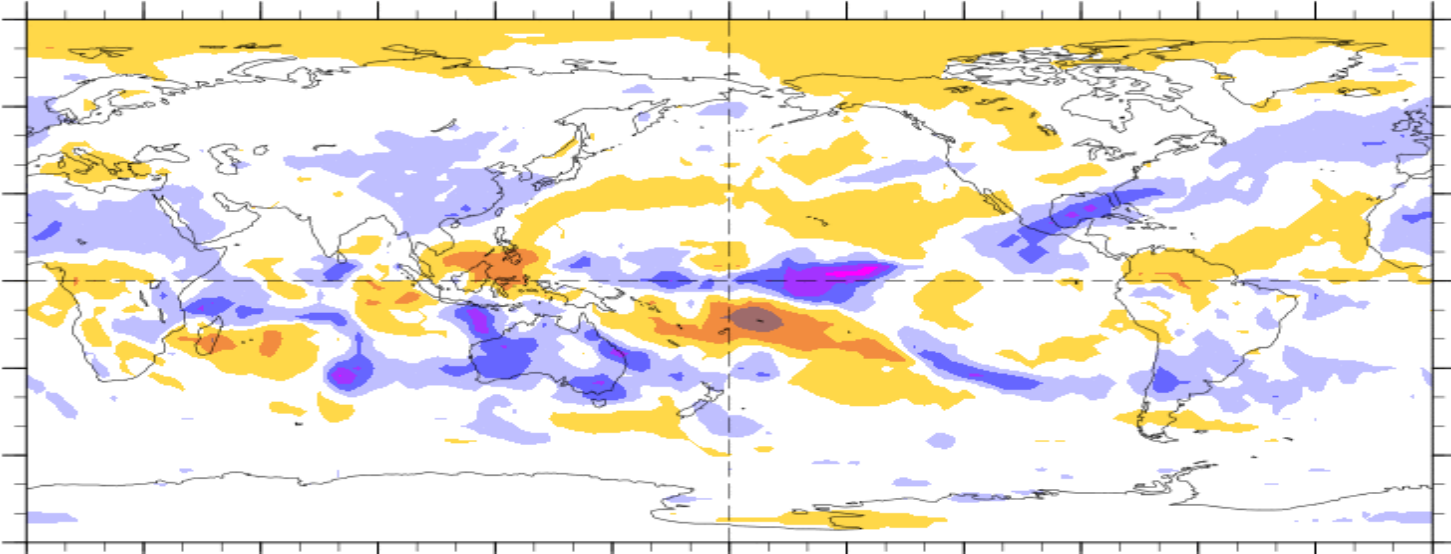
## Outline

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

# Outlook Review



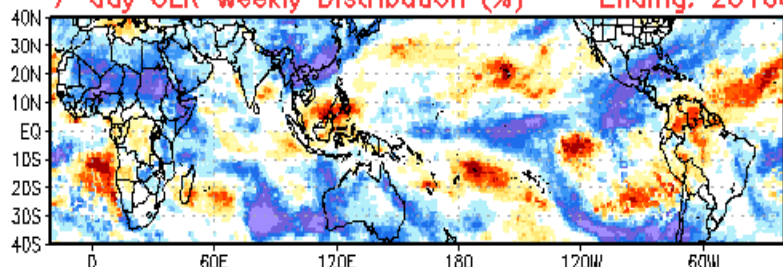
7-Day Average OLR Anomaly 2016/01/25 - 2016/01/31



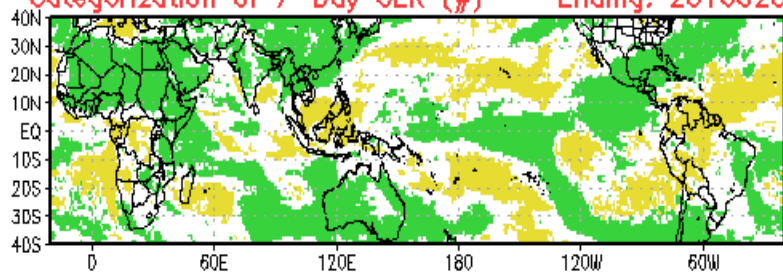
Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain

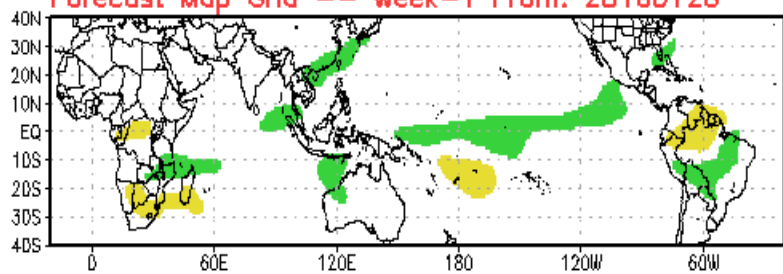
7-day OLR Weekly Distribution (%) -- Ending: 20160202



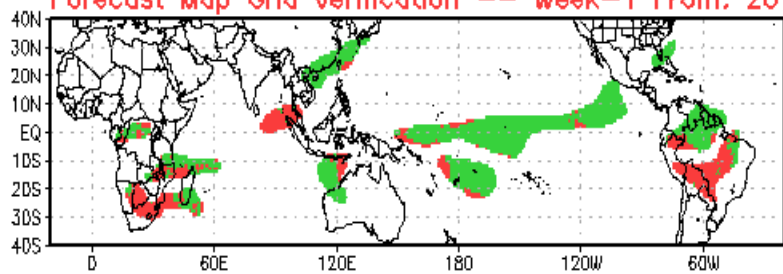
Categorization of 7-Day OLR (#) -- Ending: 20160202



Forecast Map Grid -- Week-1 From: 20160126

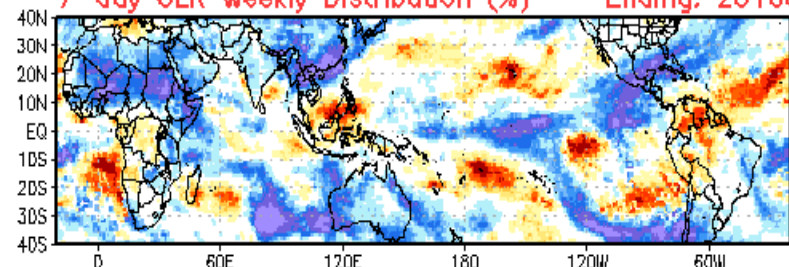


Forecast Map Grid Verification -- Week-1 From: 20160126

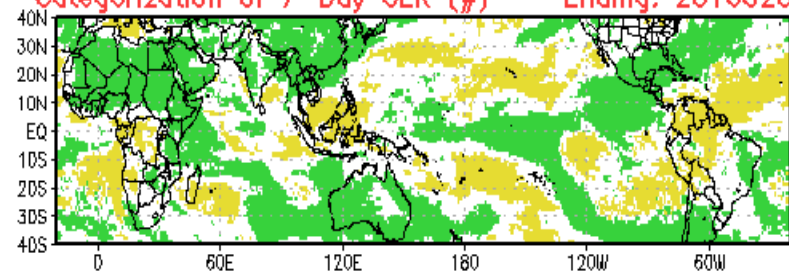


Hit: Green, Miss: Red  
Heidke Skill Score: 53.2614

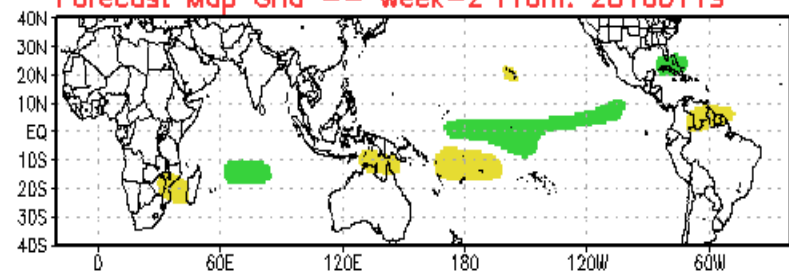
7-day OLR Weekly Distribution (%) -- Ending: 20160202



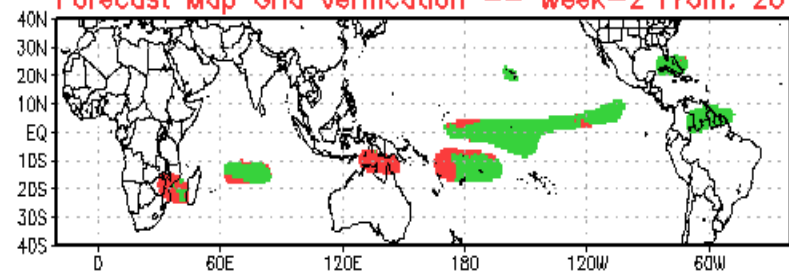
Categorization of 7-Day OLR (#) -- Ending: 20160202



Forecast Map Grid -- Week-2 From: 20160119



Forecast Map Grid Verification -- Week-2 From: 20160119



Hit: Green, Miss: Red  
Heidke Skill Score: 59.7703

# Synopsis of Climate Modes

## ENSO:

- Current: [El Niño Advisory](#)
- A strong El Niño is expected to gradually weaken through spring 2016, and to transition to ENSO-neutral during late spring or early summer.
- Next CPC update on Thursday, Feb 11

## MJO and other subseasonal tropical variability:

- MJO was weak during late January due in part to destructive interference with the background state of El Niño.
- The preferred dynamical model MJO index forecast depicts a strengthening MJO signal with eastward propagation across the Maritime Continent during the next two weeks.

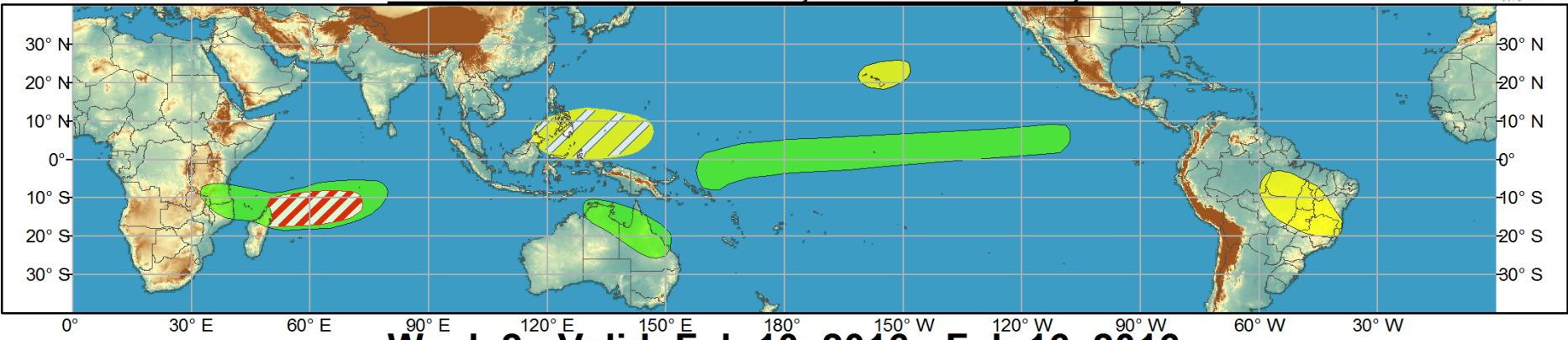
## Extratropics:

- The Week-2 temperature outlook is likely to be affected by an amplifying pattern featuring a ridge (trough) over western (eastern) North America.

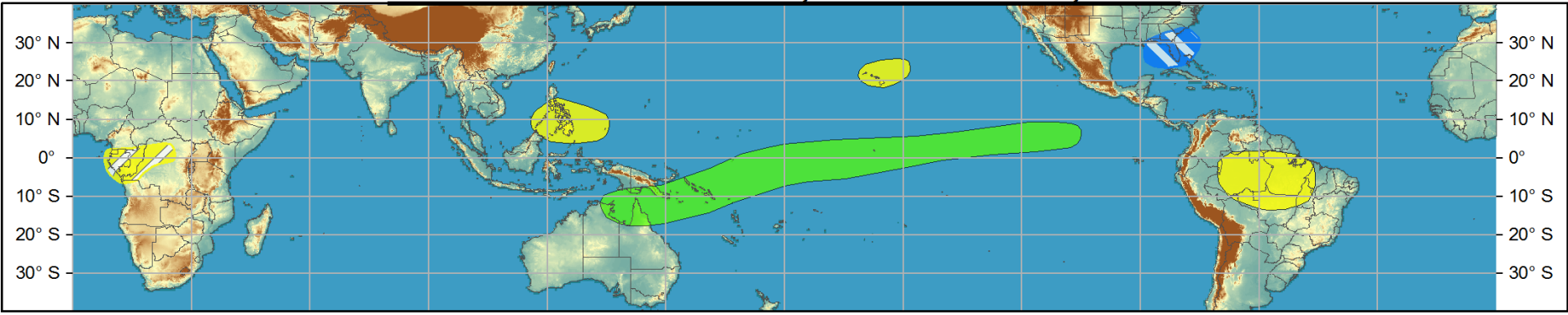


# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

## Week 1 - Valid: Feb 03, 2016 - Feb 09, 2016



## Week 2 - Valid: Feb 10, 2016 - Feb 16, 2016



Produced: 02/02/2016

Forecaster: Pugh

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.
		<b>Below-normal temperatures</b> 7-day mean temperatures in the lower third of the historical range.

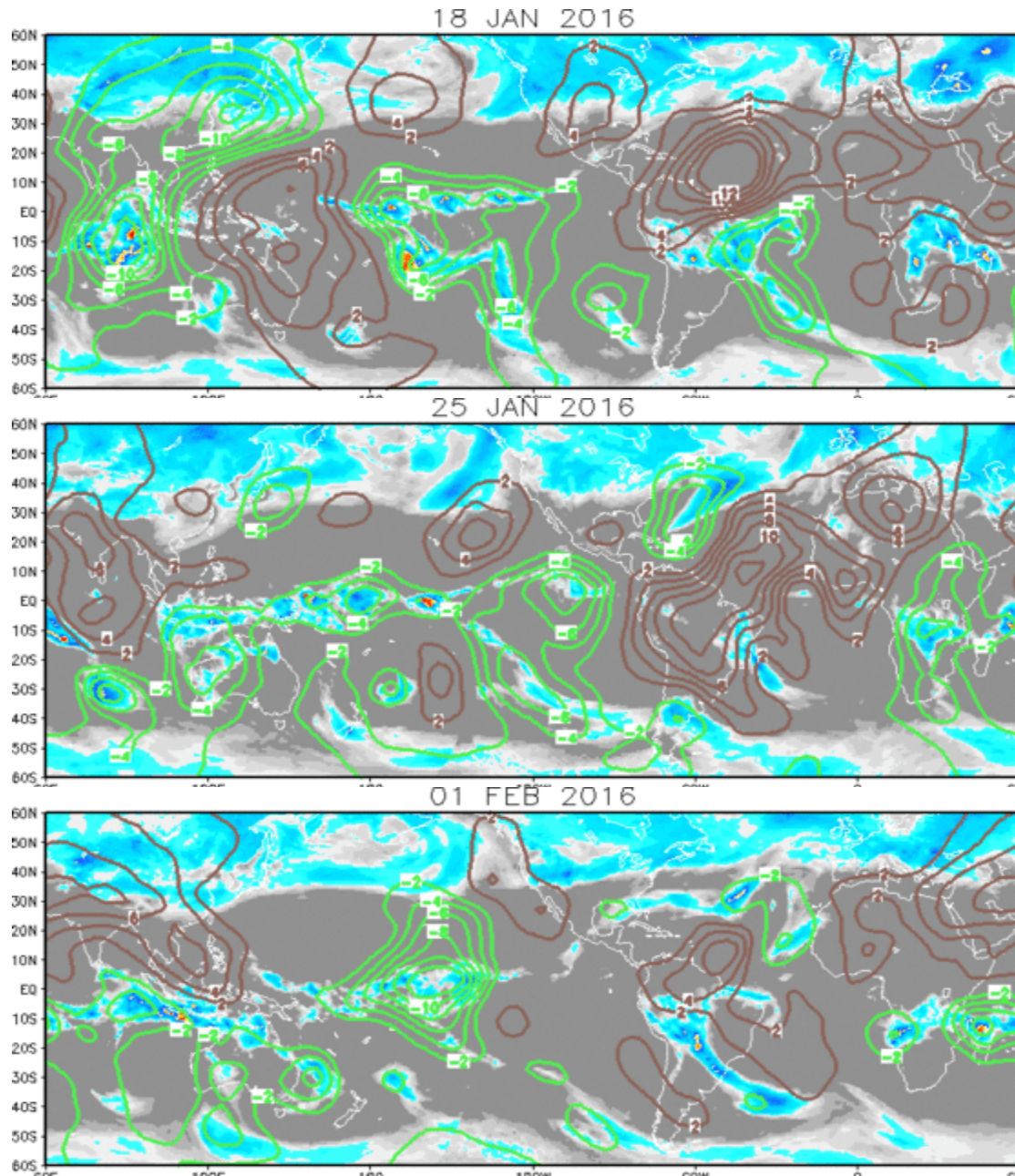
Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



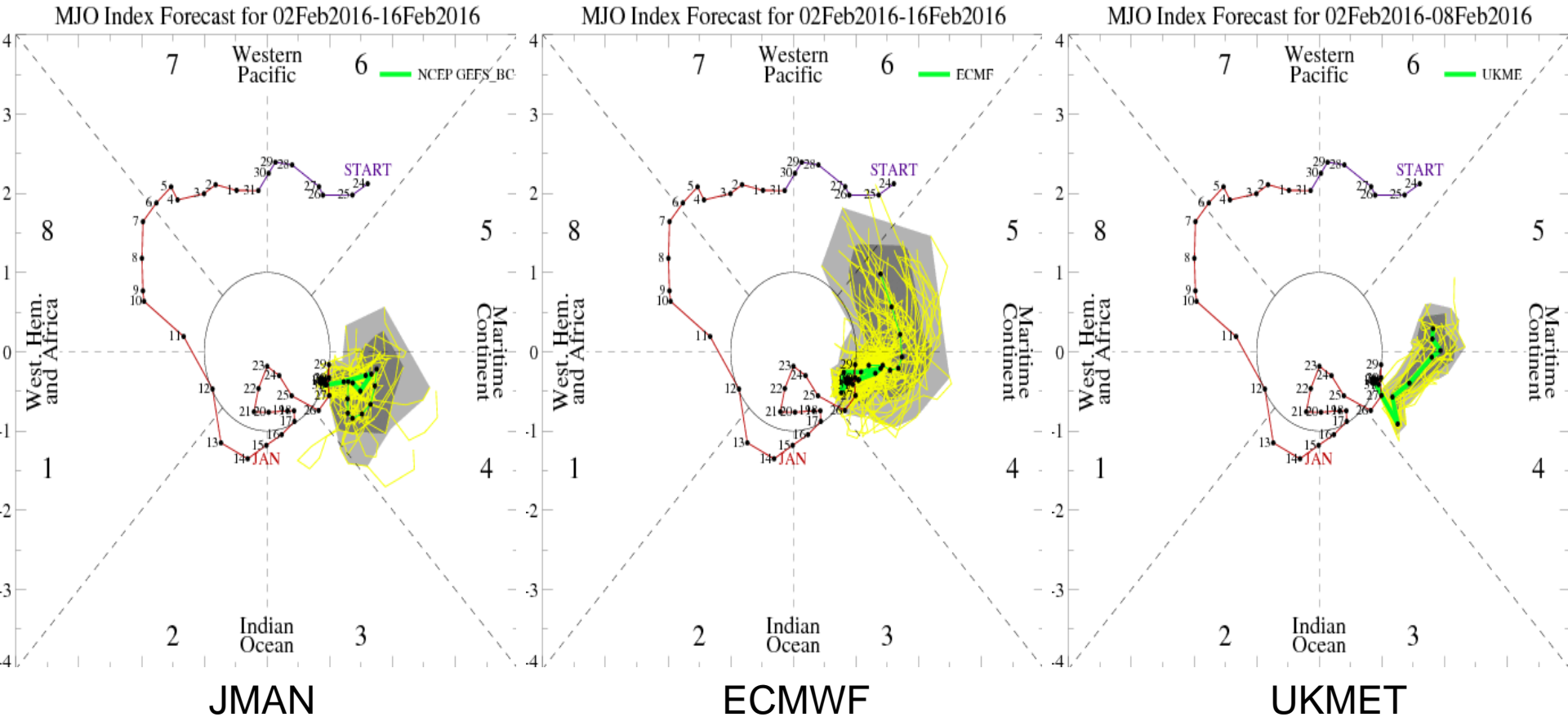
# IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence    Brown: Enhanced Convergence

A variable and incoherent pattern as the MJO weakens.

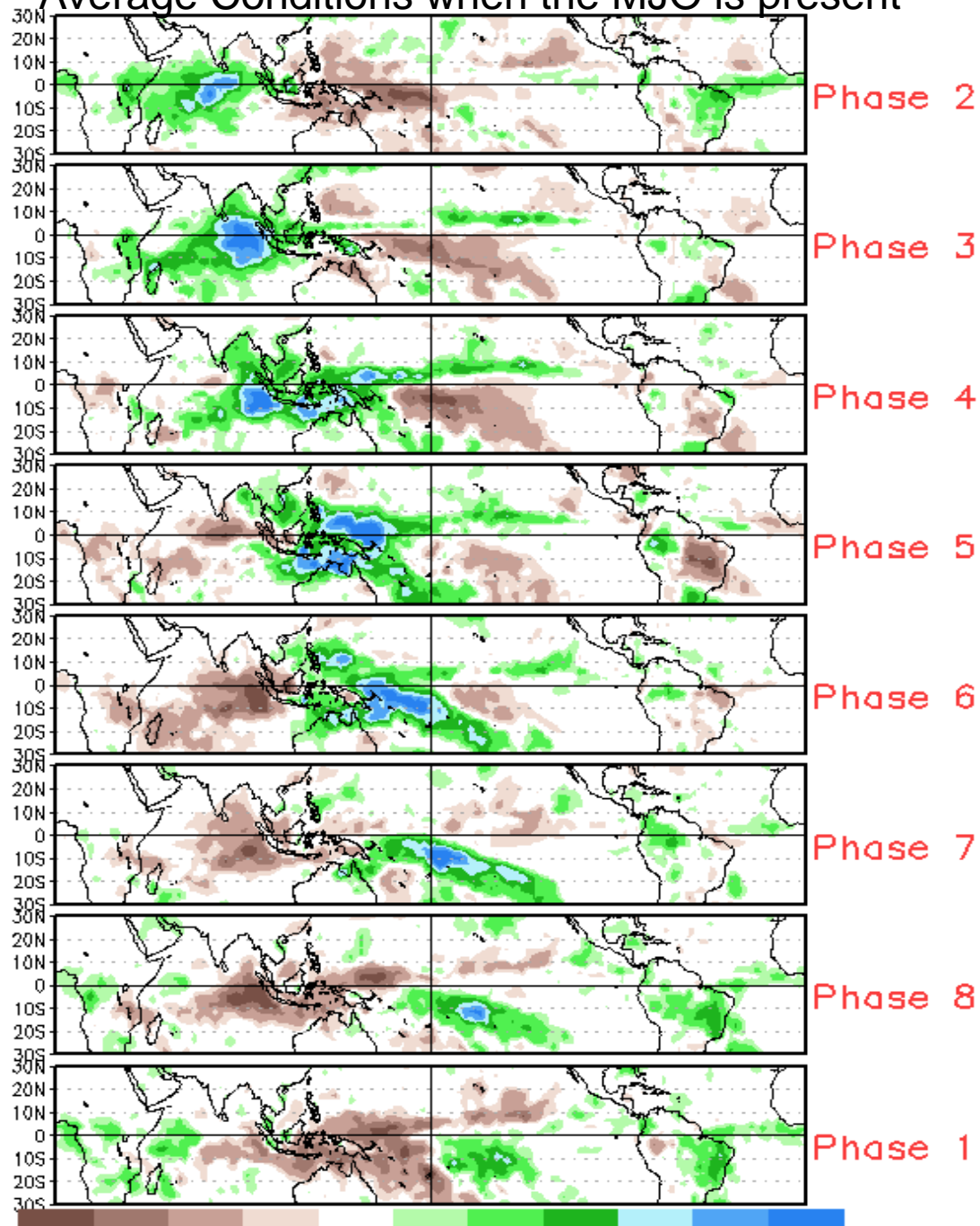


# MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate a strengthening signal but differ on eastward propagation.

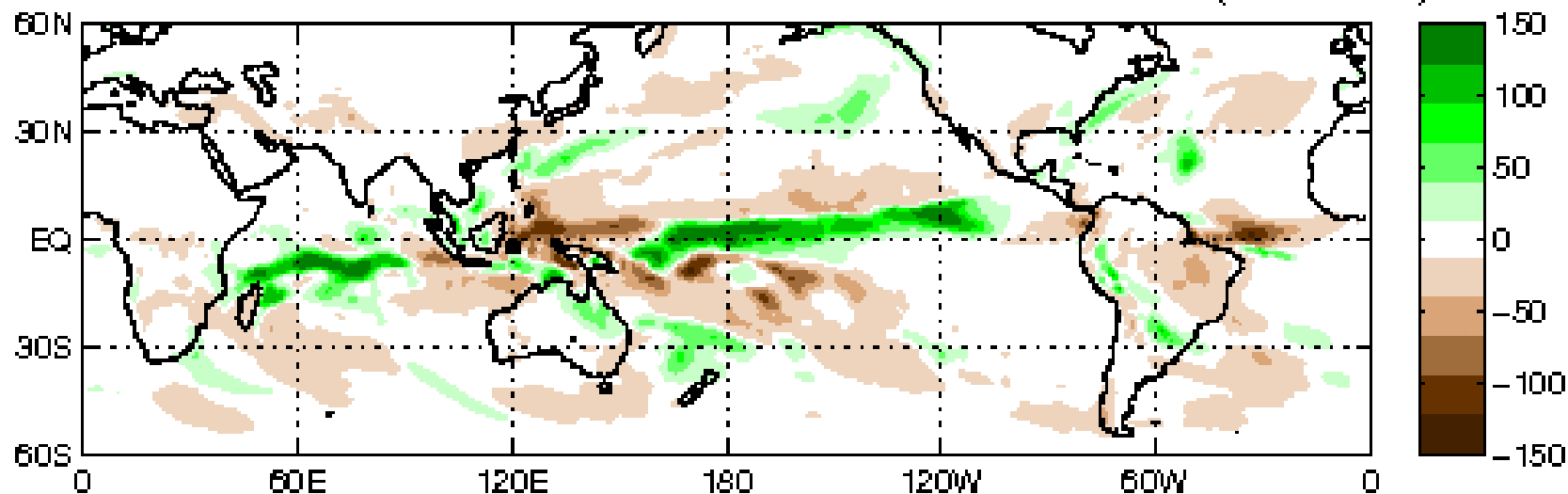
# Average Conditions when the MJO is present



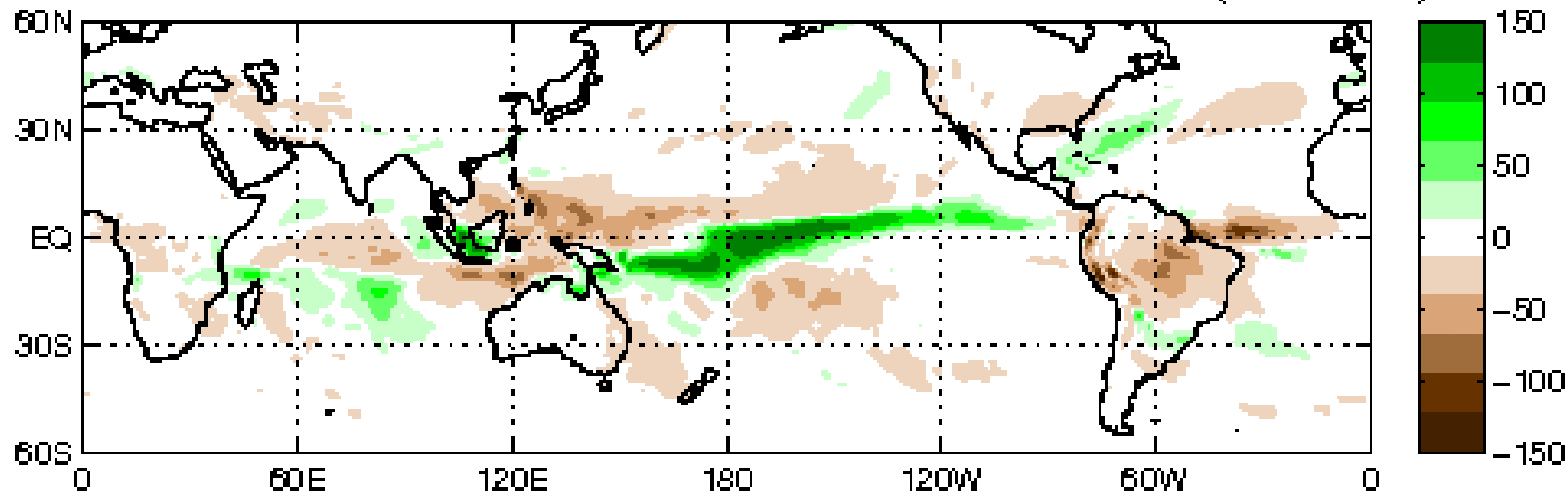
CAVEAT: These panels are representative of robust MJO events, with all phases of ENSO.



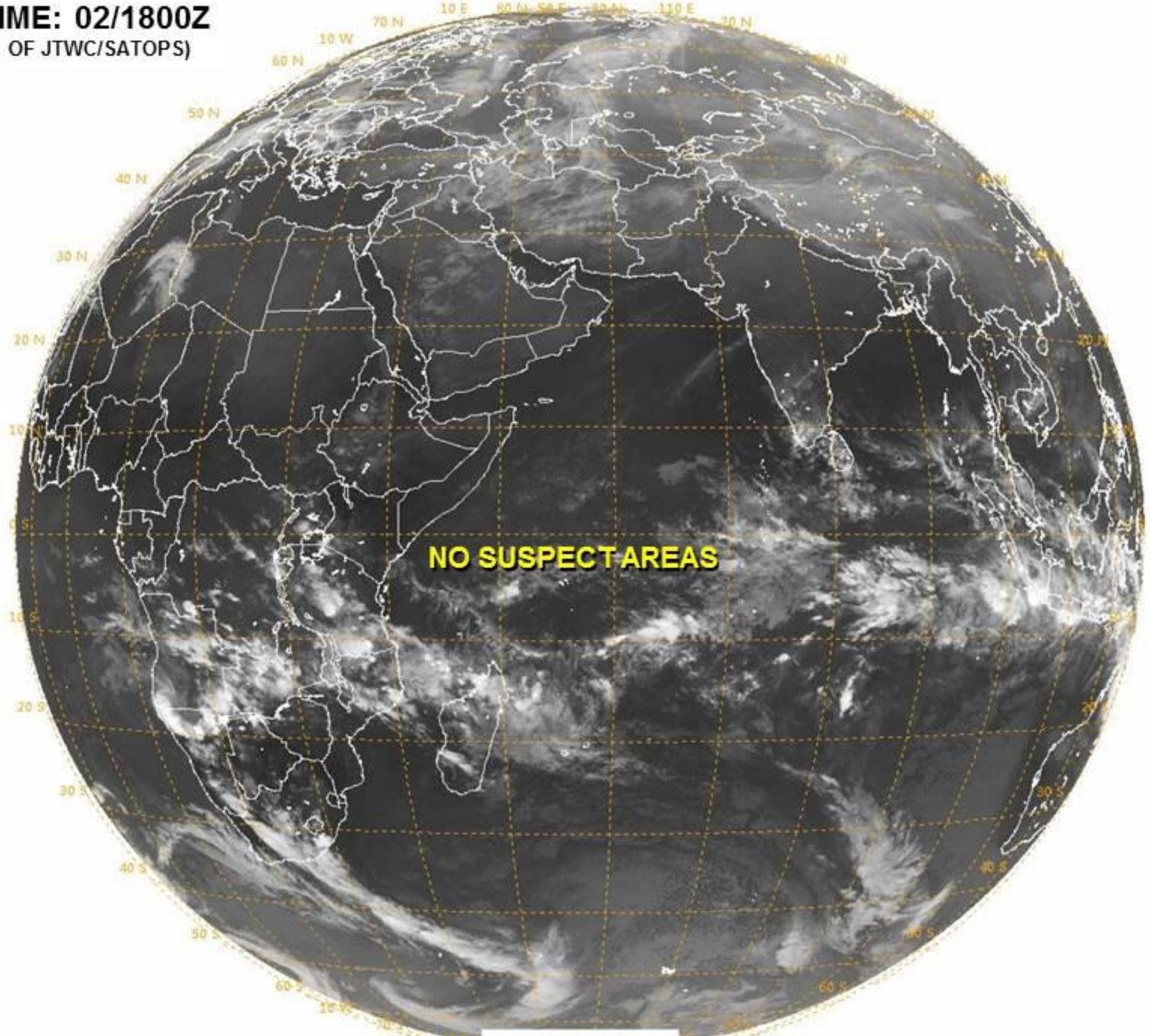
**CFS: Anom. PREC Week: 1: 03-Feb-2016 to 09-Feb-2016 (mm/week)**



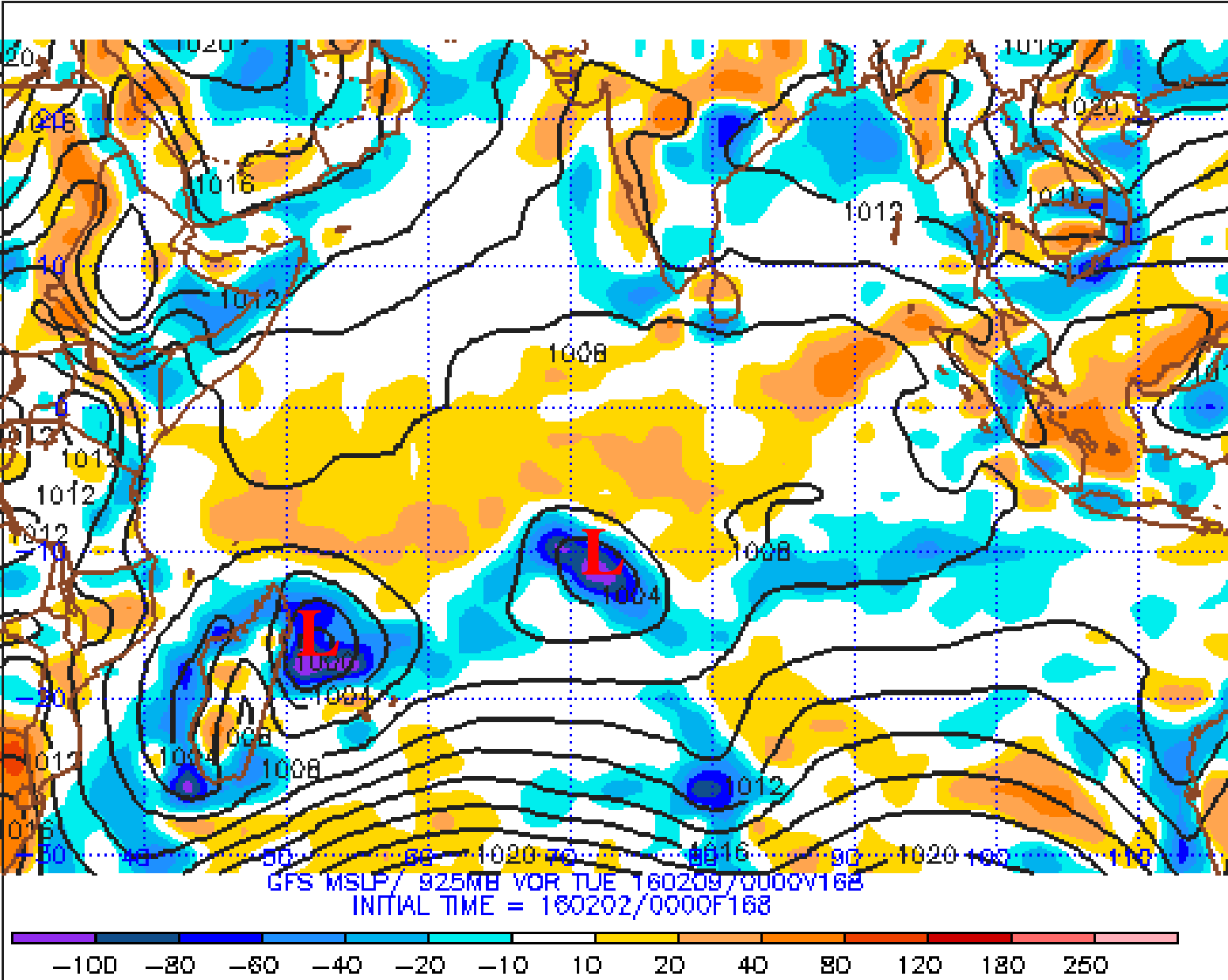
**CFS: Anom. PREC Week: 2: 10-Feb-2016 to 16-Feb-2016 (mm/week)**



**VALID TIME: 02/1800Z**  
(PRODUCT OF JTWC/SATOPS)

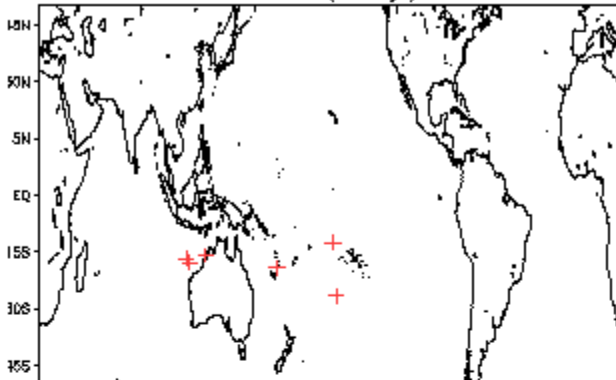


0Z GFS: Mean Sea Level Pressure, Feb 8

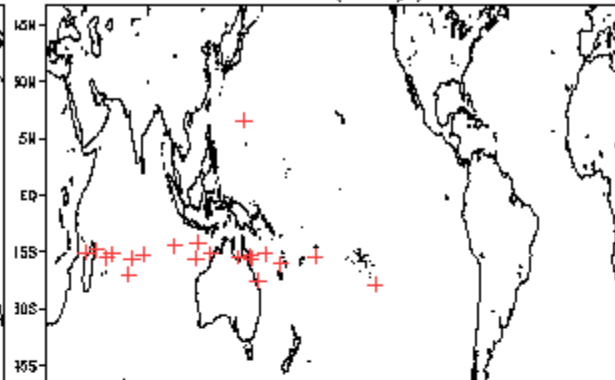


# February Tropical Storm Formation by MJO phase

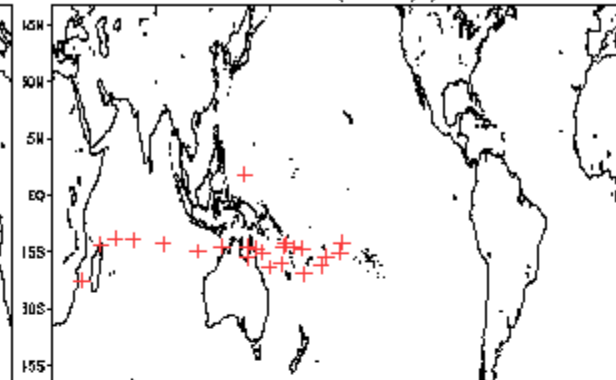
Phase 1 (41 days) 7 storms



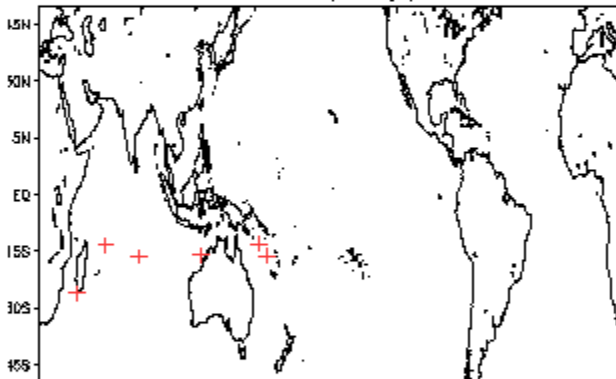
Phase 4 (92 days) 21 storms



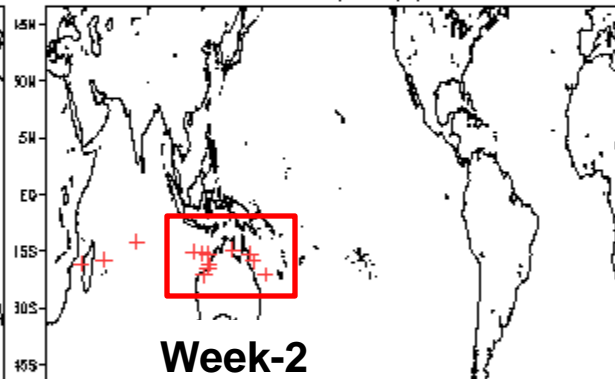
Phase 7 (125 days) 24 storms



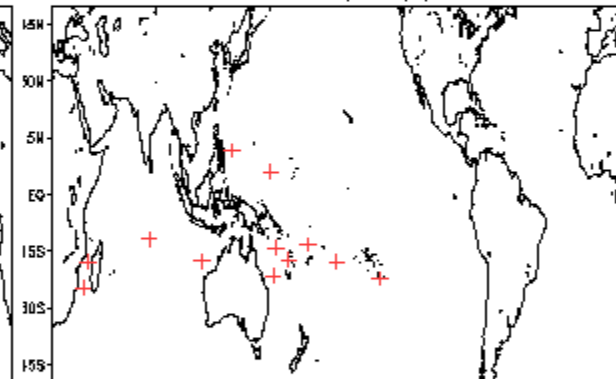
Phase 2 (51 days) 7 storms



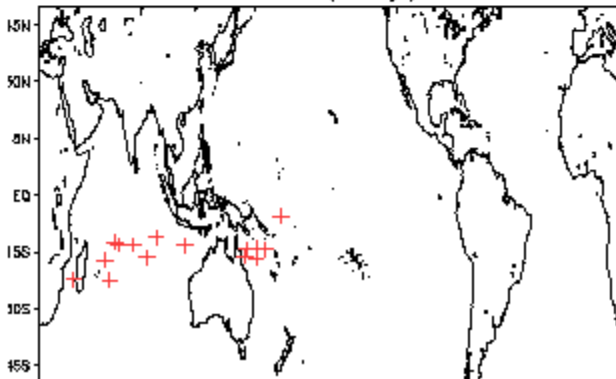
Phase 5 (70 days) 14 storms



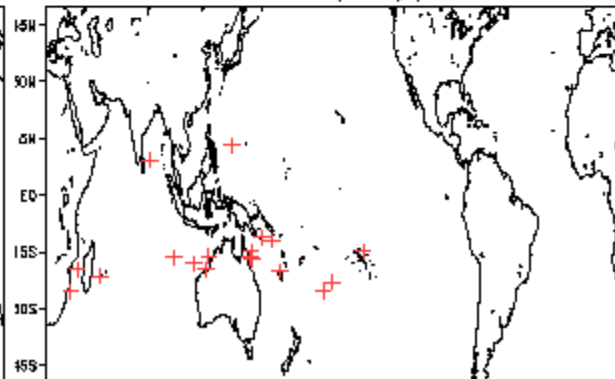
Phase 8 (84 days) 13 storms



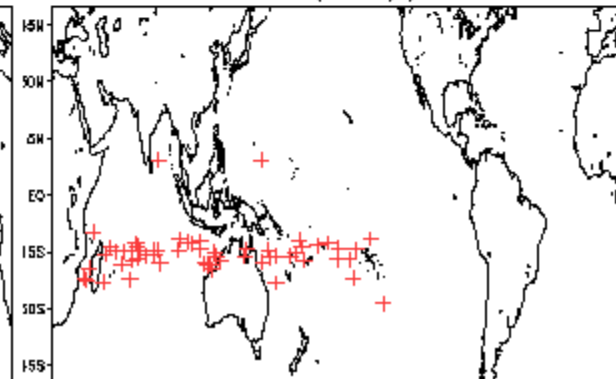
Phase 3 (89 days) 16 storms



Phase 6 (92 days) 19 storms

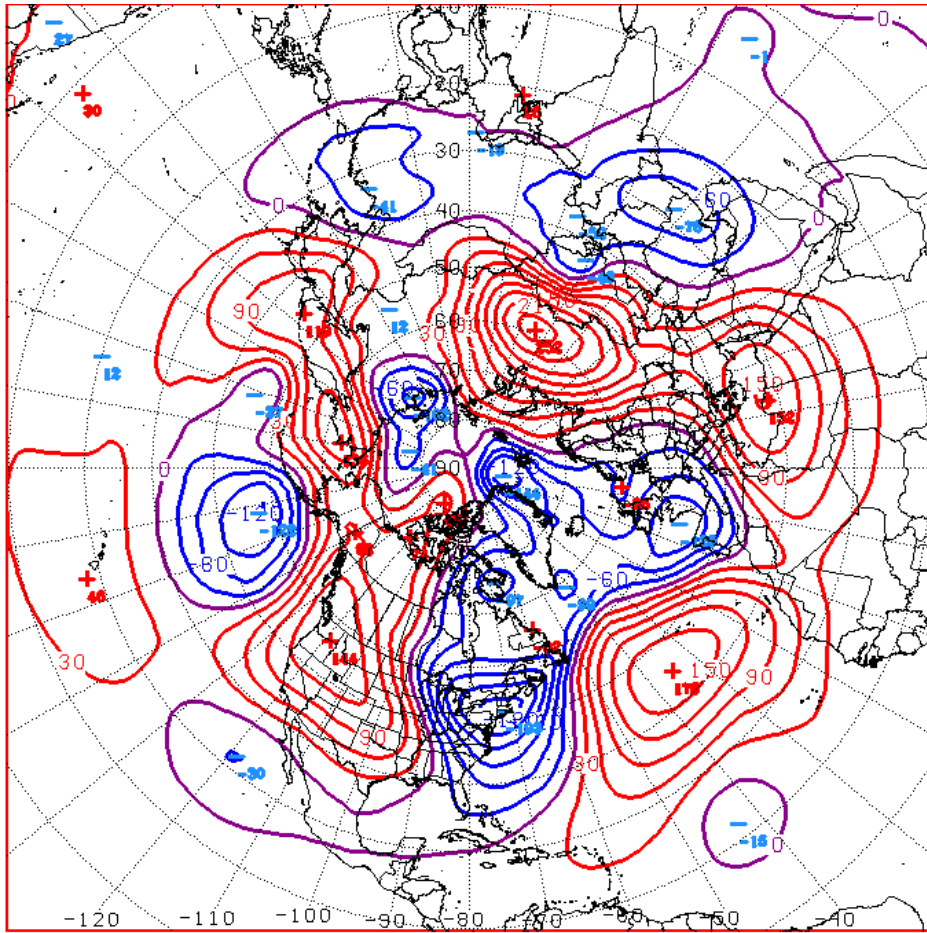


Null (308 days) 60 storms

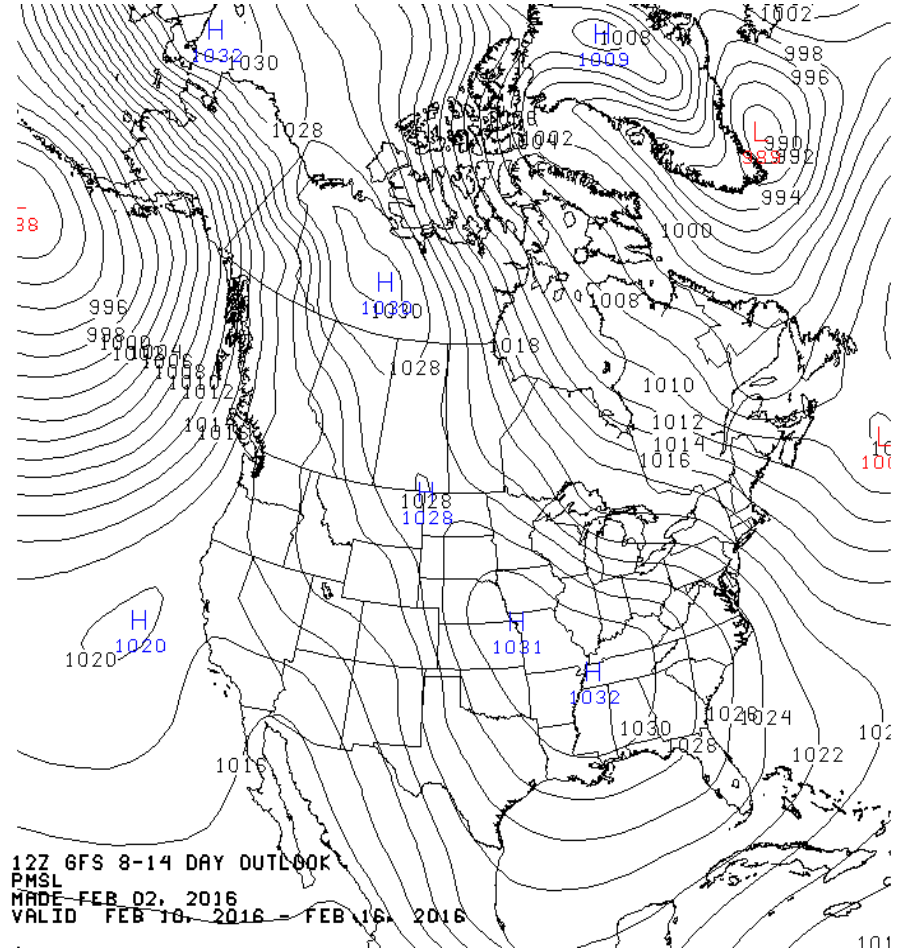


# Connections to U.S. Impacts

# 12Z GFS: D+11 500-hpa Height Anomalies and MSLP

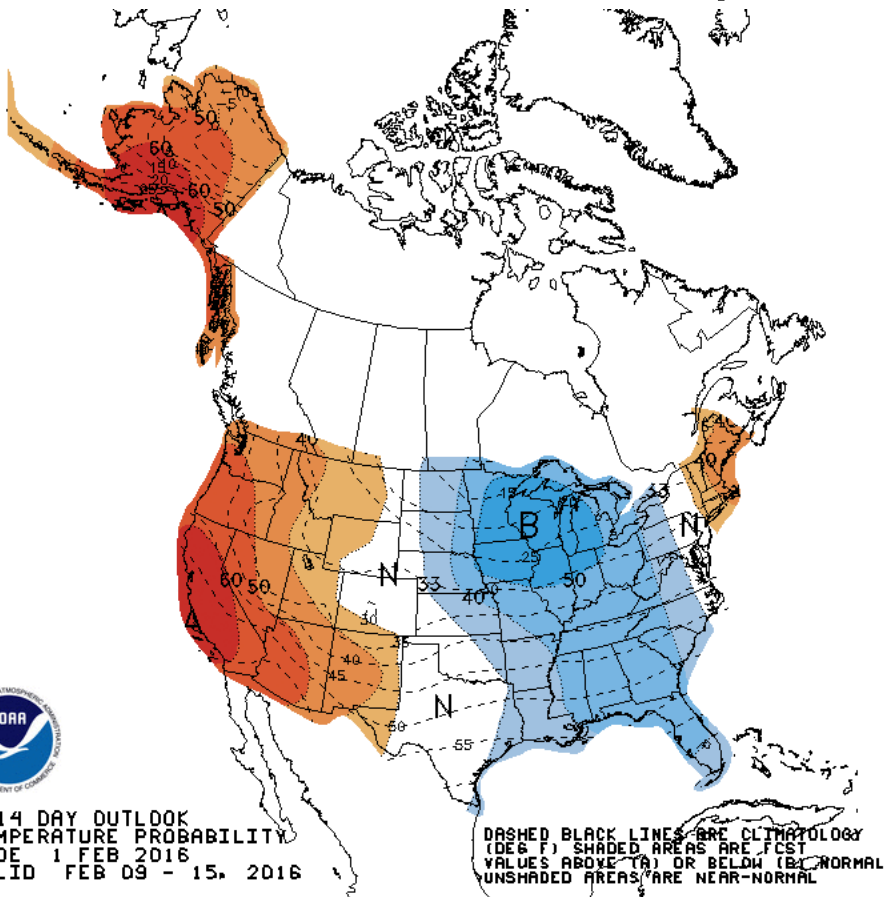


D+11 500 MB ANOMALIES FROM 12Z GFS  
 CPC MAP MADE FEB 02 2016 1704 UTC CNTD FEB 13 2016



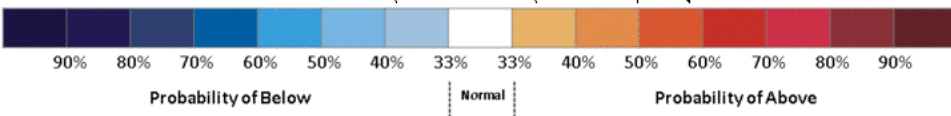
12Z GFS 8-14 DAY OUTLOOK  
 PMSL  
 MADE FEB 02, 2016  
 VALID FEB 10, 2016 - FEB 16, 2016

# Week 2 – Temperature and Precipitation

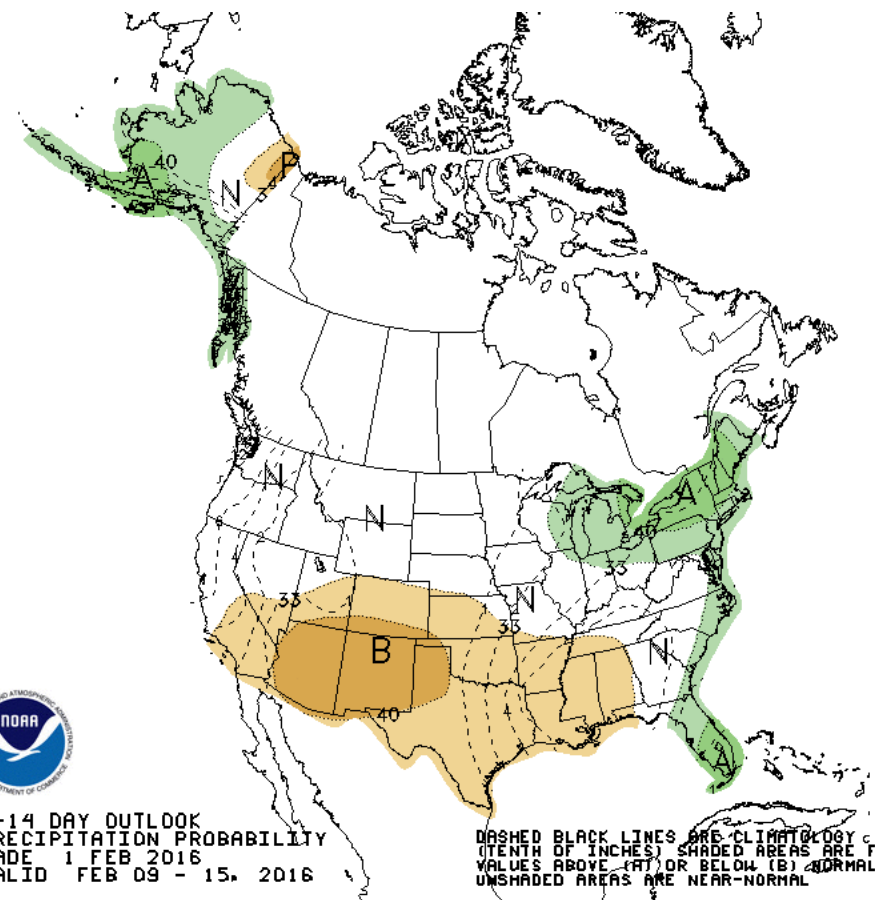


8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 1 FEB 2016  
VALID FEB 09 - 15, 2016

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

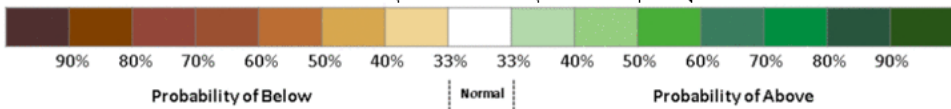


**Potential Damaging FL Freeze  
Feb 10-12**



8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 1 FEB 2016  
VALID FEB 09 - 15, 2016

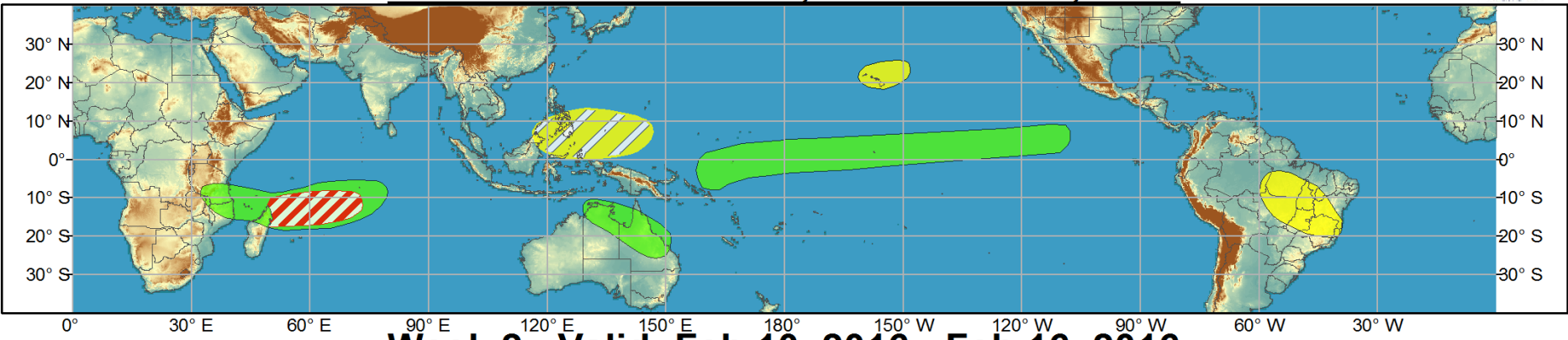
DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL



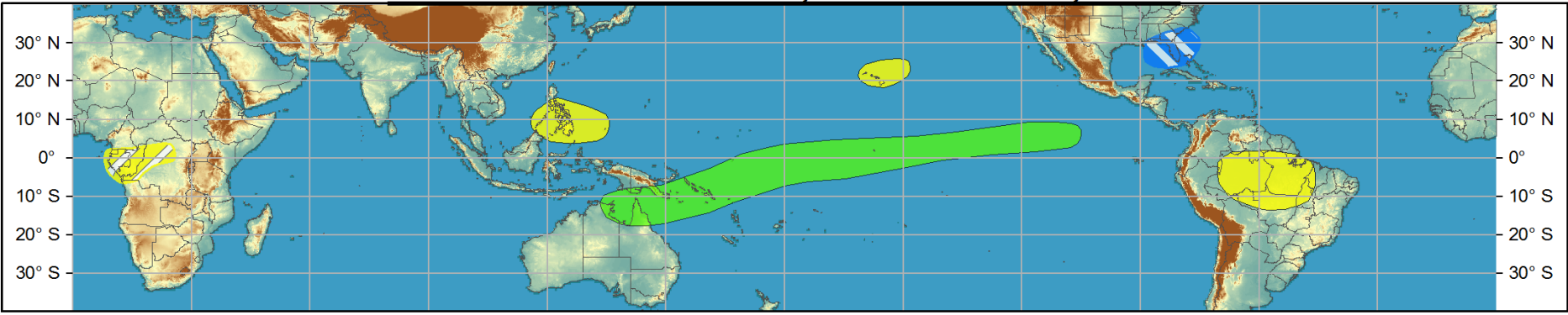


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