

Global Tropics Hazards And Benefits Outlook

2/28/2017

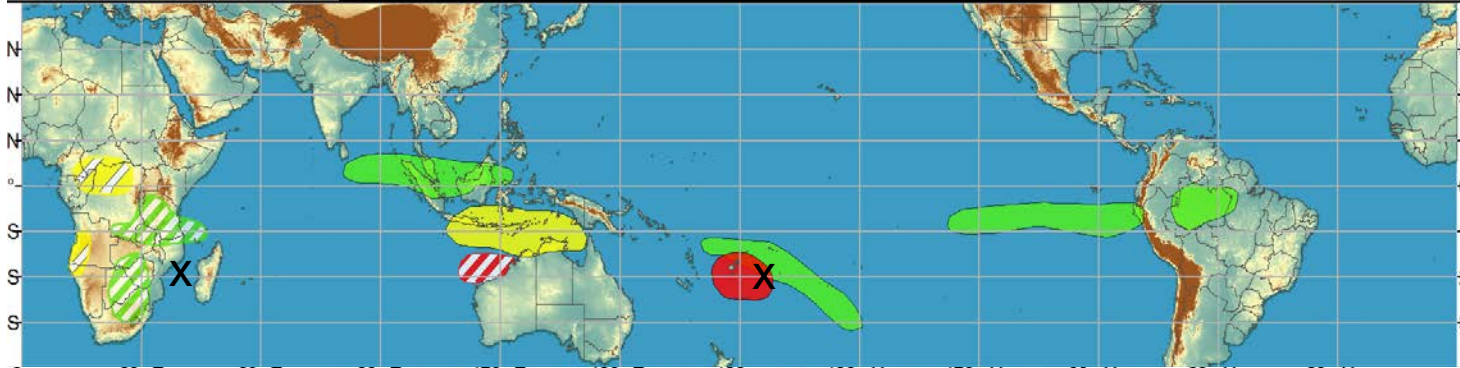
Stephen Baxter

Outline

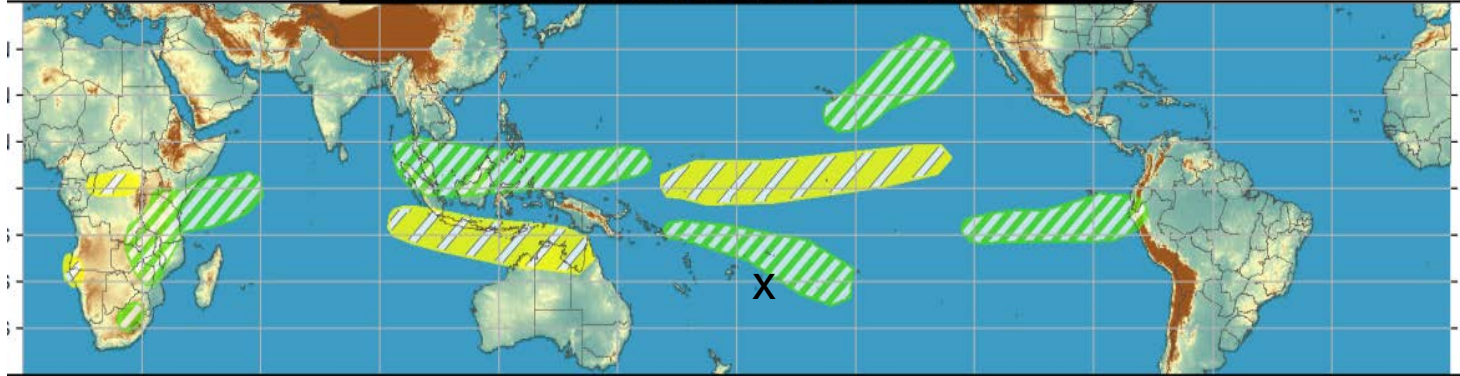
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Week 1 - Valid: Feb 22, 2017 - Feb 28, 2017

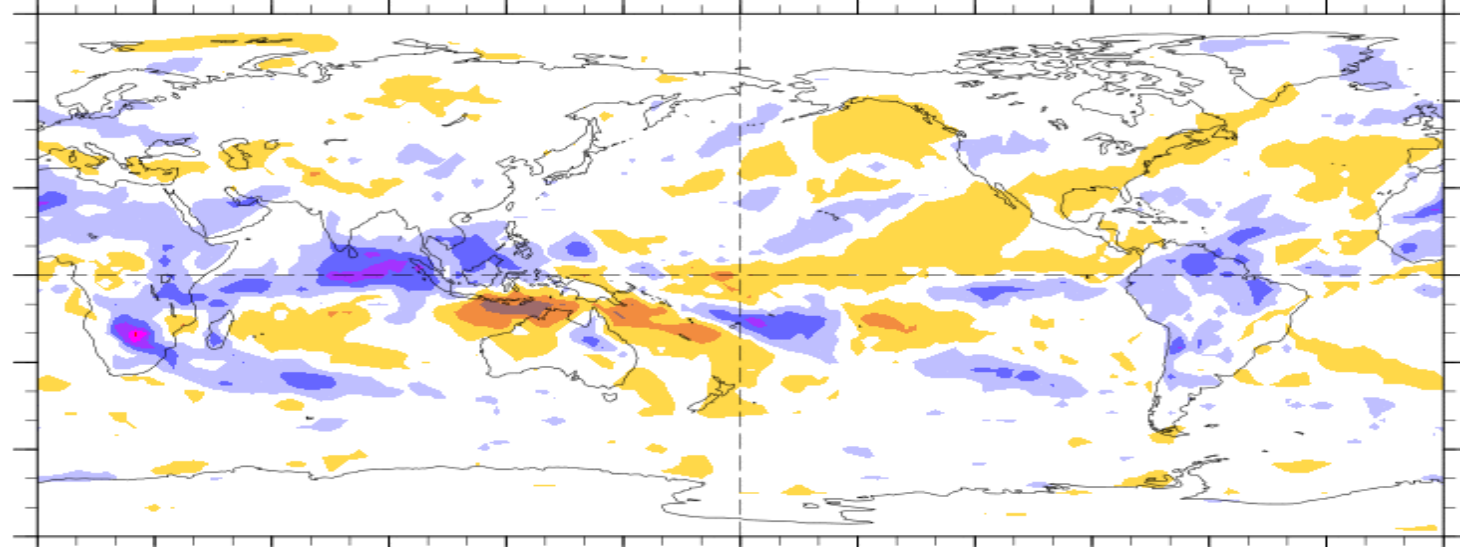


Week 2 - Valid: Feb 22, 2017 - Feb 28, 2017



7-Day Average OLR Anomaly

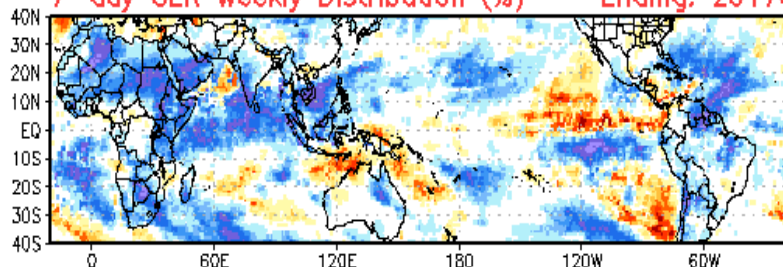
2017/02/20 - 2017/02/26



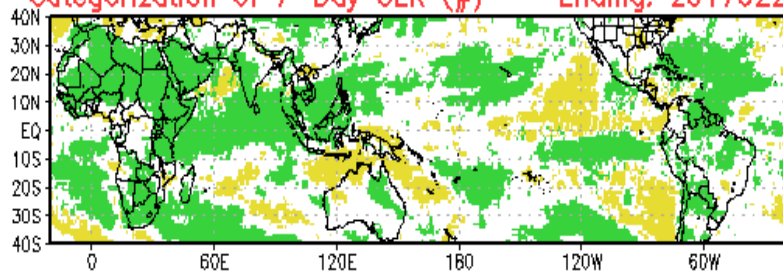
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

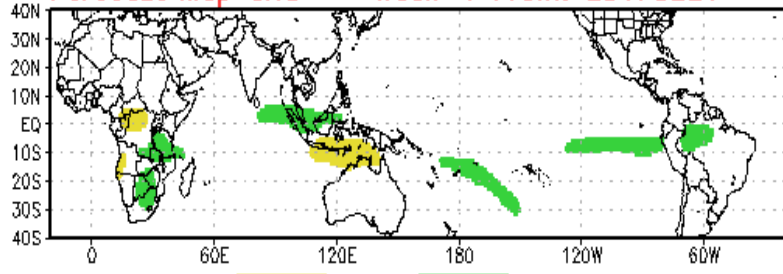
7-day OLR Weekly Distribution (%) -- Ending: 20170228



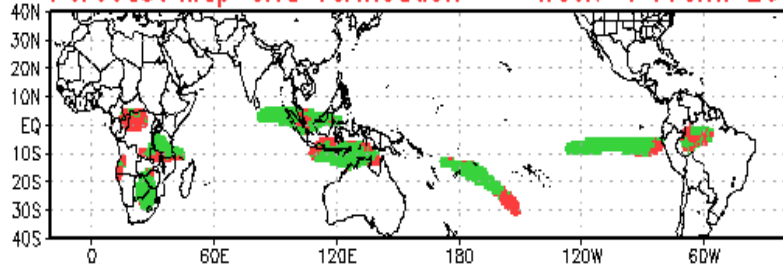
Categorization of 7-Day OLR (#) -- Ending: 20170228



Forecast Map Grid -- Week-1 From: 20170221

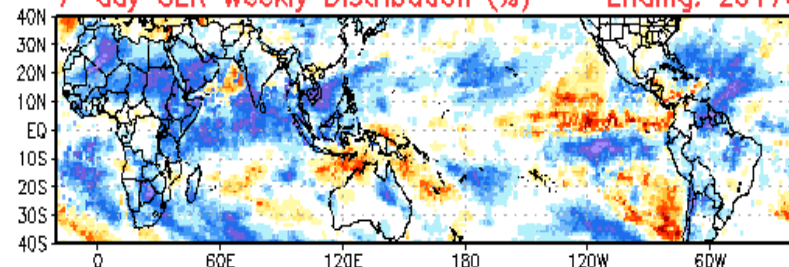


Forecast Map Grid Verification -- Week-1 From: 20170221

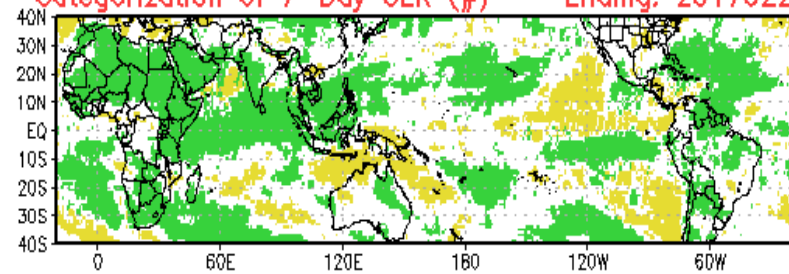


Hit: Green, Miss: Red
Heidke Skill Score: 57.8793

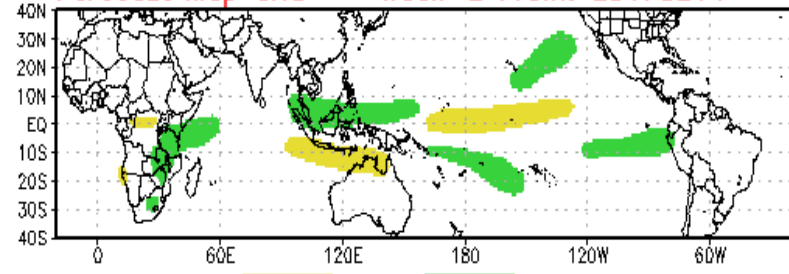
7-day OLR Weekly Distribution (%) -- Ending: 20170228



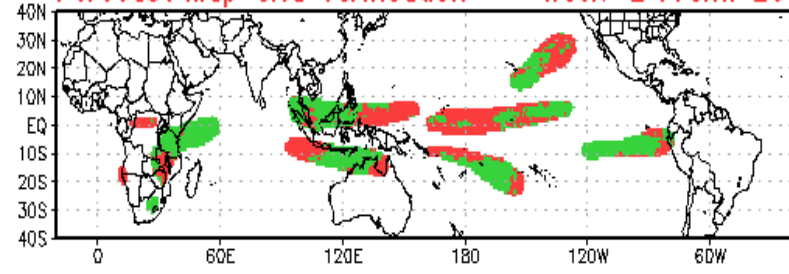
Categorization of 7-Day OLR (#) -- Ending: 20170228



Forecast Map Grid -- Week-2 From: 20170214



Forecast Map Grid Verification -- Week-2 From: 20170214



Hit: Green, Miss: Red
Heidke Skill Score: 35.1071

Synopsis of Climate Modes

ENSO:

- **Final La Niña Advisory was issued (9 Feb 2017)**
- **ENSO-neutral conditions are expected to continue through summer.**

MJO and other subseasonal tropical variability:

- Strong signal currently centered over Indian Ocean.
- Dynamical models indicate rapid weakening of the signal over the next several days.
- Some constructive interference between the background state and the intraseasonal signal is forecast early in the period, but uncertainty increases during Week-2.

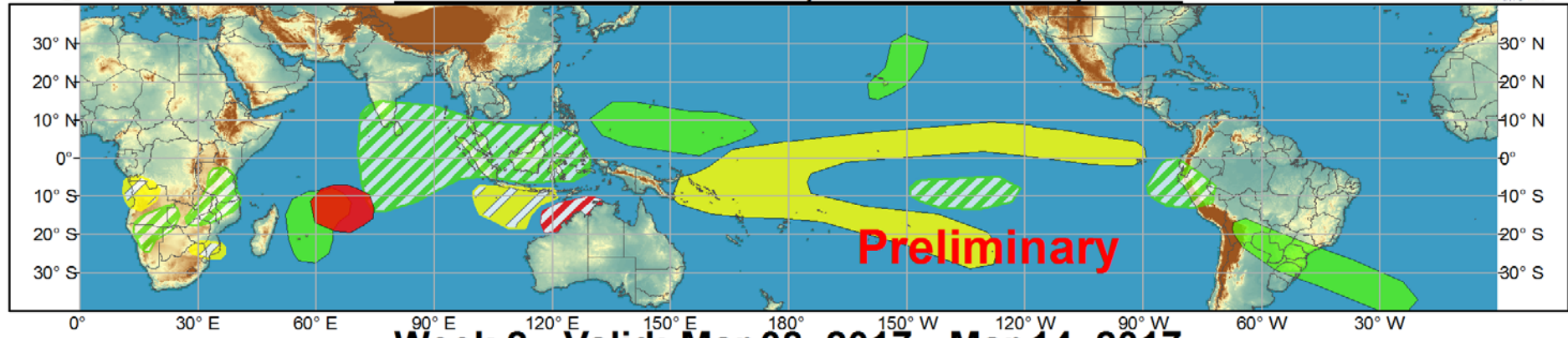
Extratropics:

- The influence of the MJO on the extratropics has been difficult to detect, but recent observations suggest that enhanced convection over the Indian Ocean may be producing a response over southern Asia.
- Current MJO forcing would favor a warmer-than-normal outcome over much of east-central North America in the 2-3 weeks time frame.

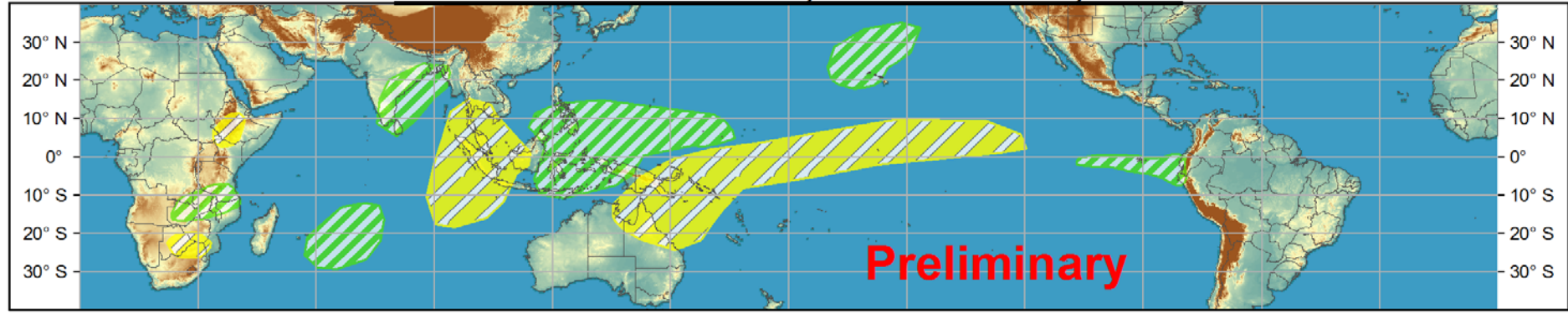


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Mar 01, 2017 - Mar 07, 2017



Week 2 - Valid: Mar 08, 2017 - Mar 14, 2017



Produced: 02/28/2017
Forecaster: Baxter

	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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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.

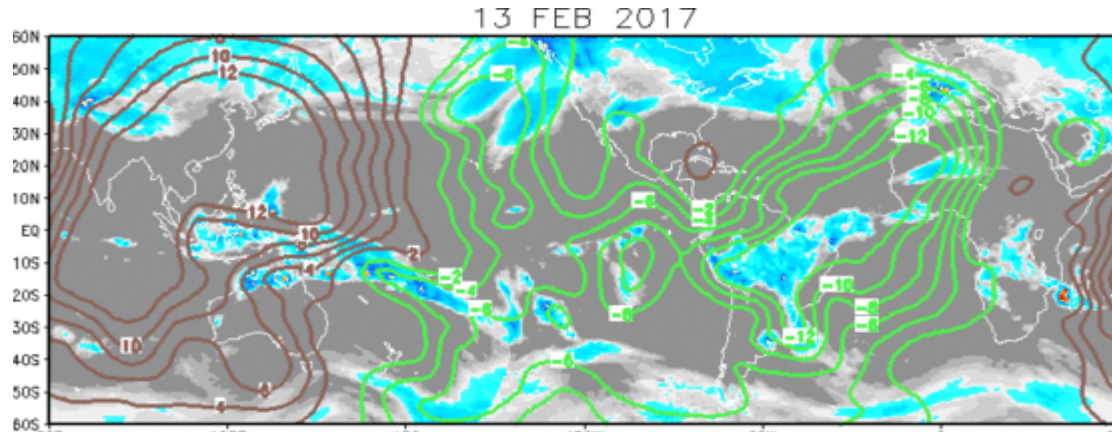


IR Satellite & 200-hpa Velocity Potential Anomalies

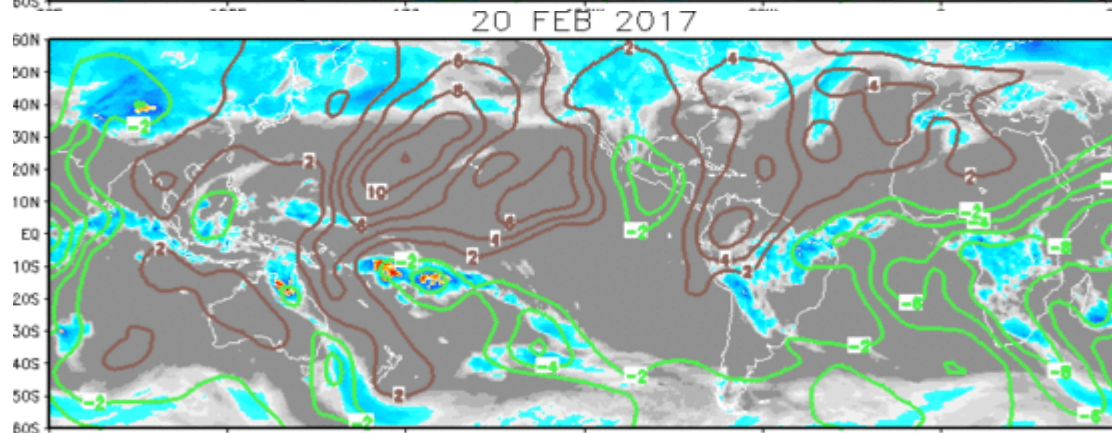
Green: Enhanced Divergence

Brown: Enhanced Convergence

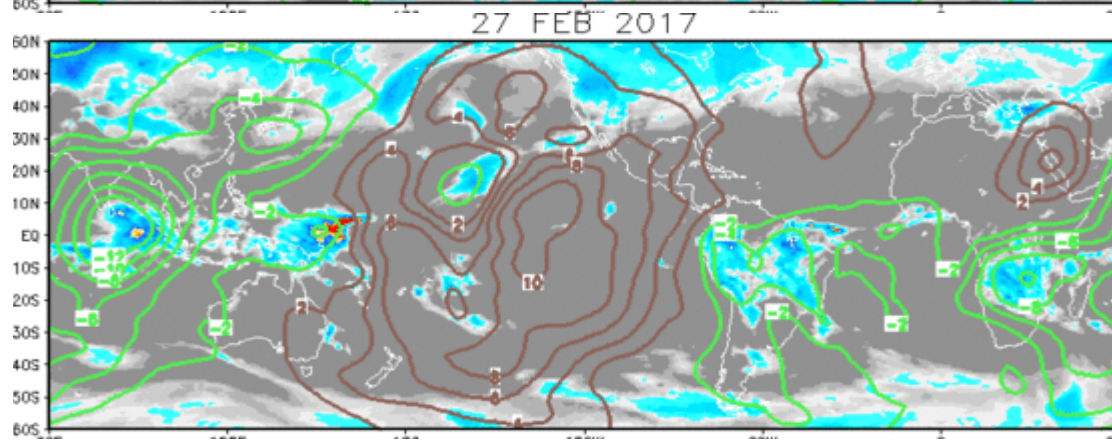
Wave-1 with enhanced phase over Western Hemisphere.



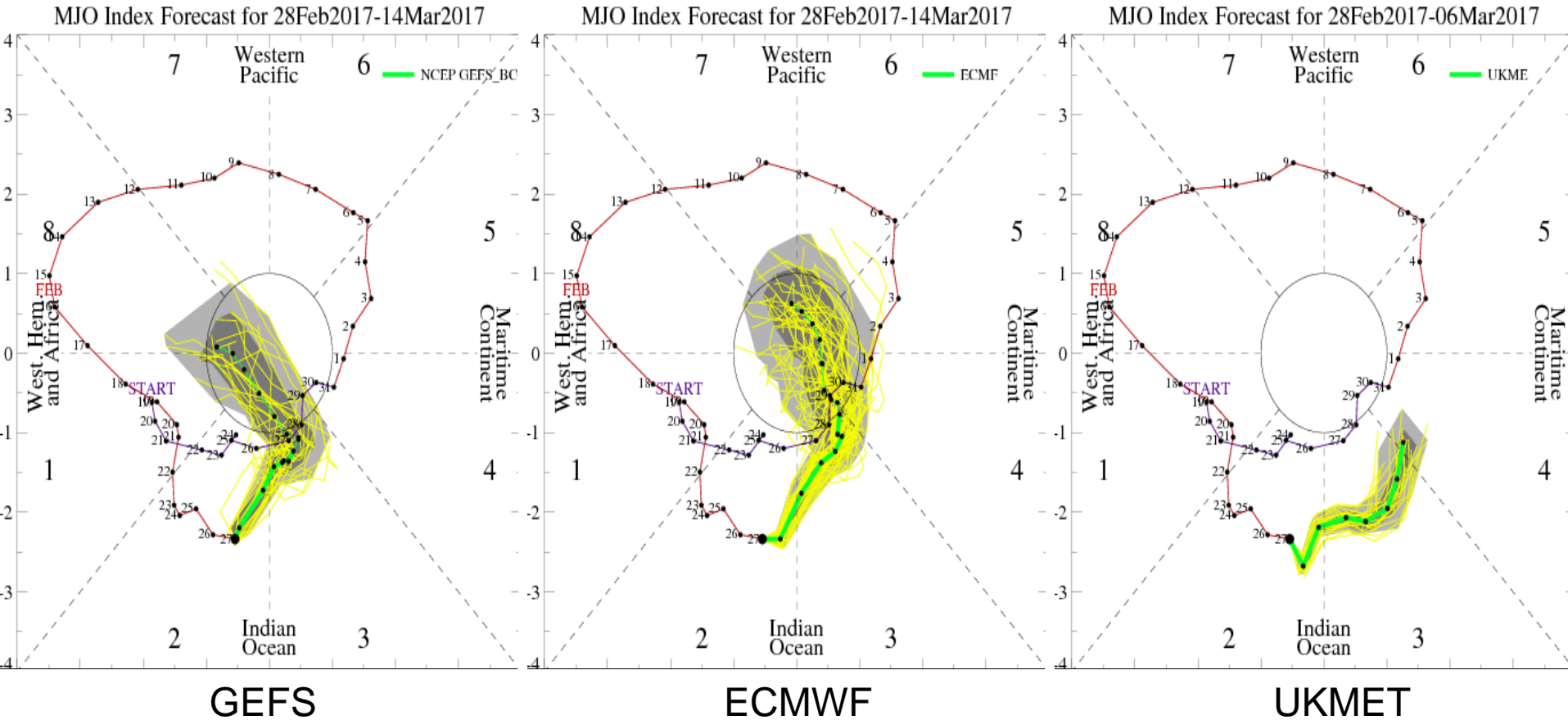
Wave-1 with some noise and an enhanced phase centered over Africa.



Wave-1 with enhanced phase over Africa and the Indian Ocean.

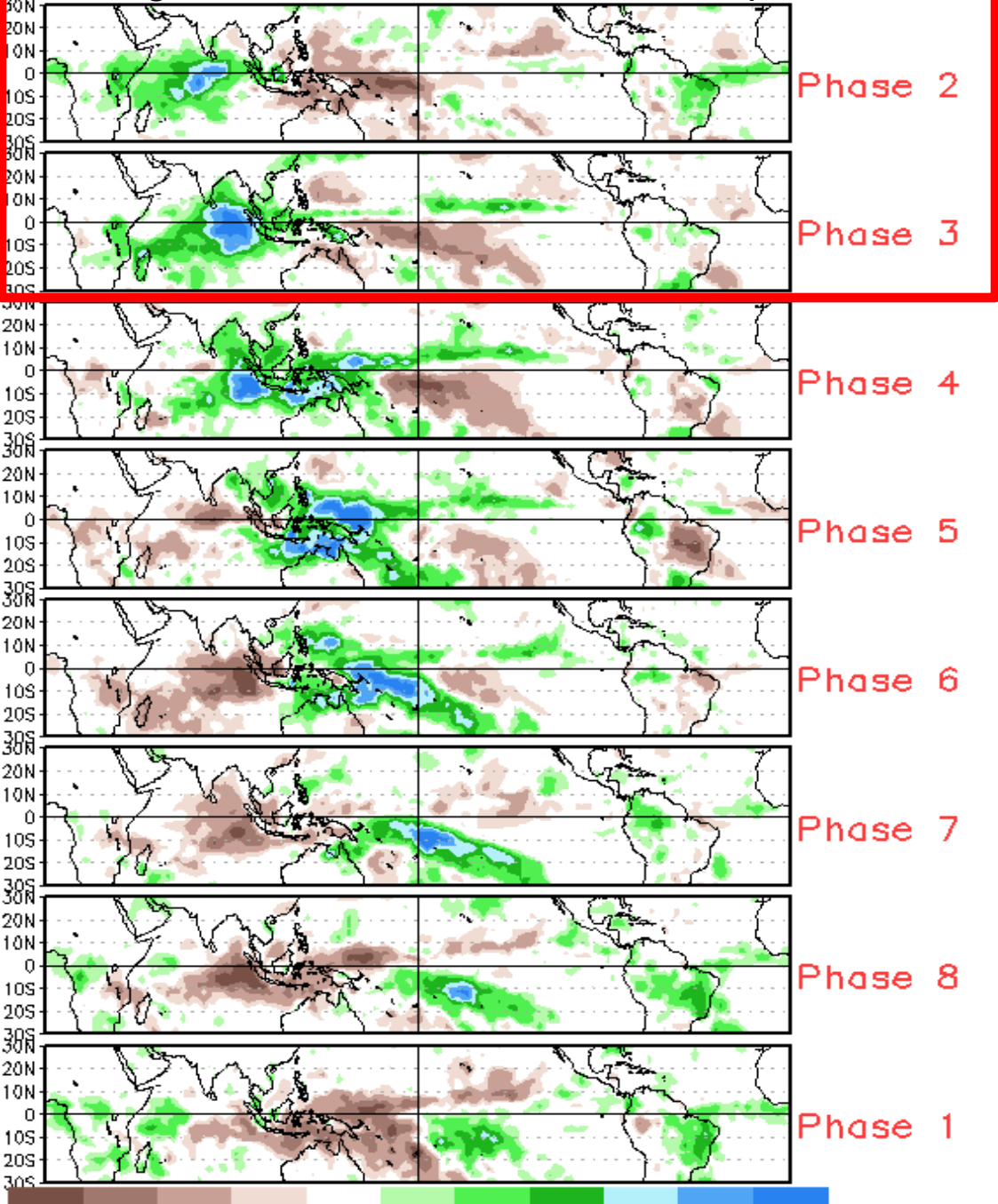


MJO Observation/Forecast



Excellent model agreement between the GEFS and ECMWF. The UKMET is the outlier among the dynamical model solutions.

Average Conditions when the MJO is present



Phases 2/3 anticipated during Week-1.

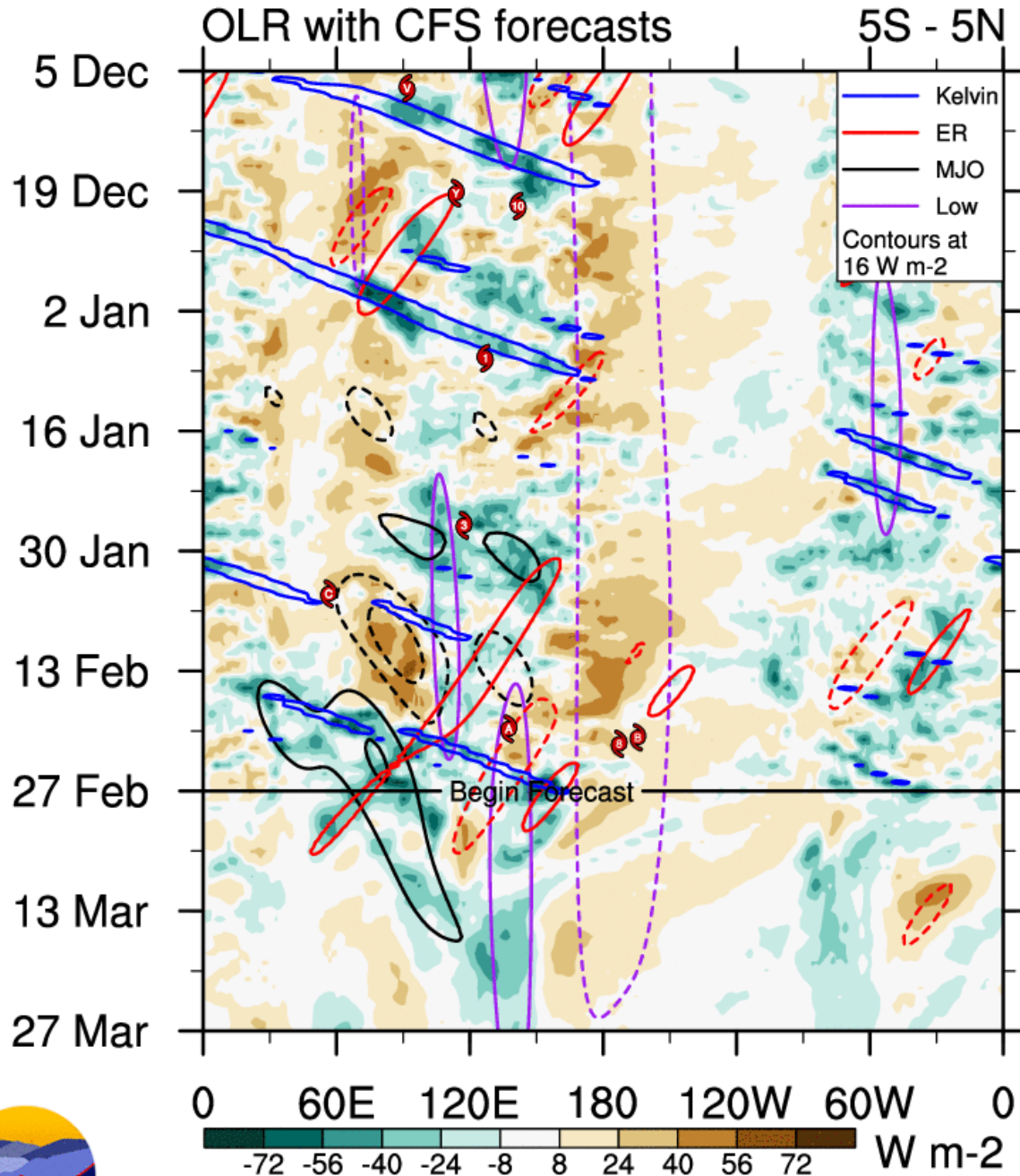
Uncertainty increases in Week-2.

CAVEAT: These panels are representative of robust MJO events.

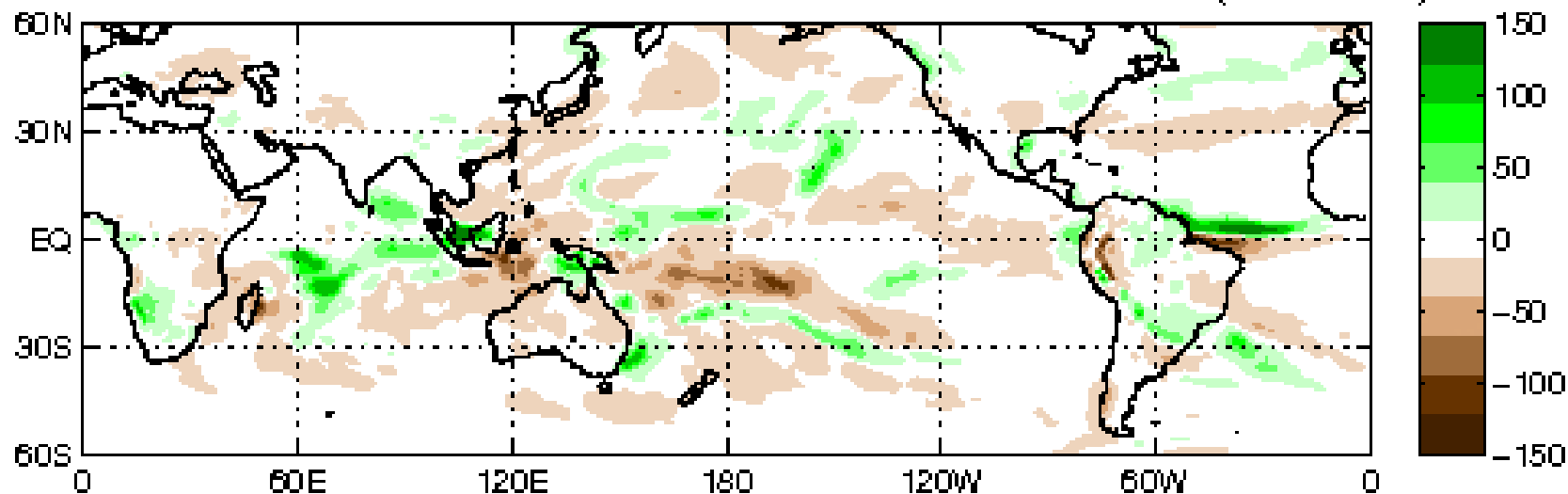
Convective signal now centered over the Indian Ocean

Some influence from Rossby Waves complicating the overall pattern.

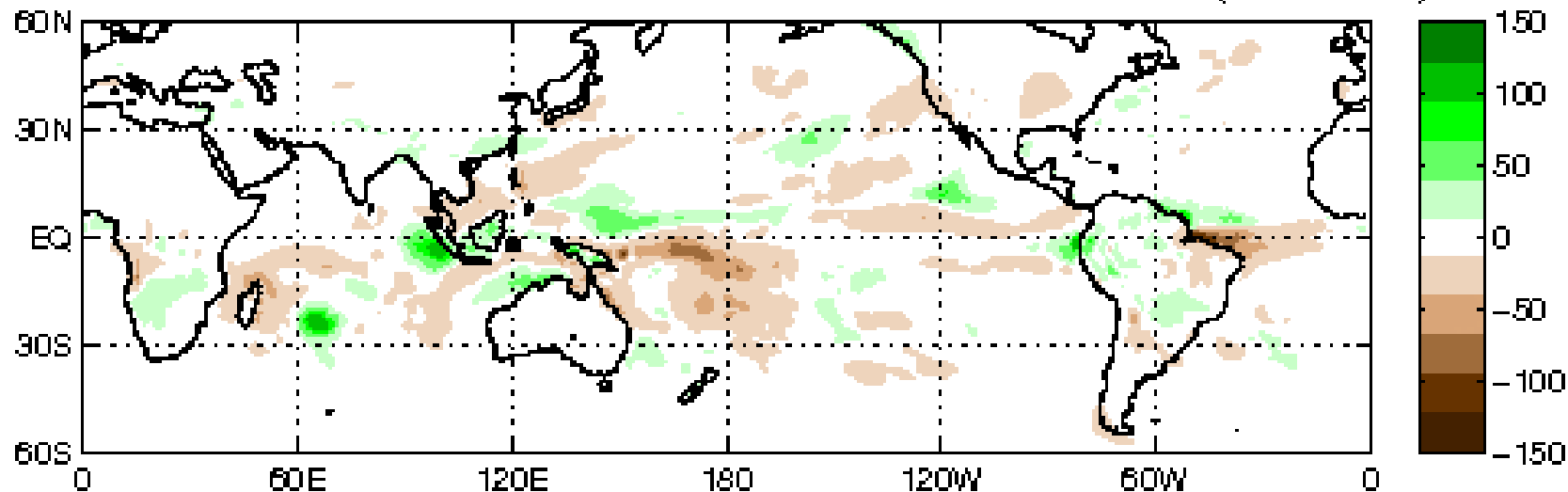
Additionally, an atmospheric Kelvin wave has enhanced convection over far western Pacific.

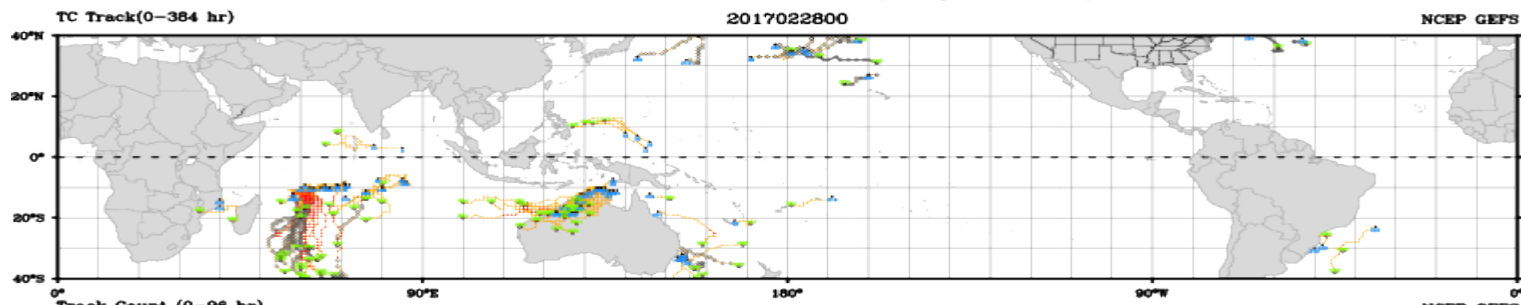


CFS: Anom. PREC Week: 1: 01-Mar-2017 to 07-Mar-2017 (mm/week)

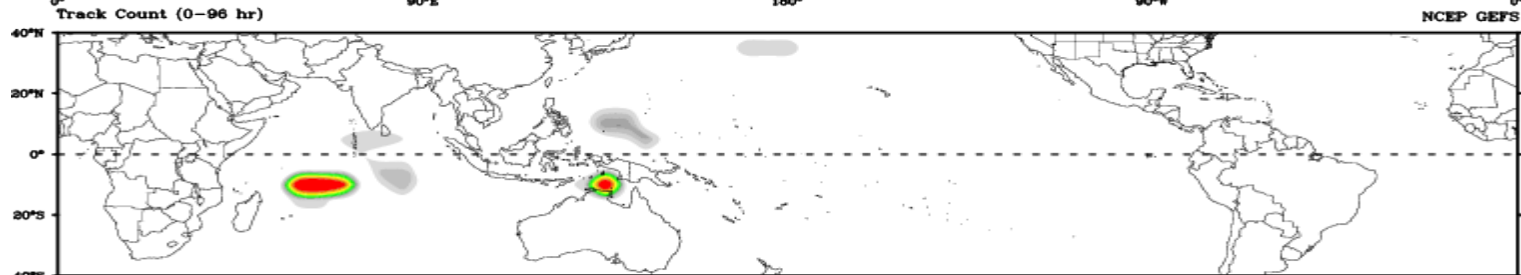


CFS: Anom. PREC Week: 2: 08-Mar-2017 to 14-Mar-2017 (mm/week)

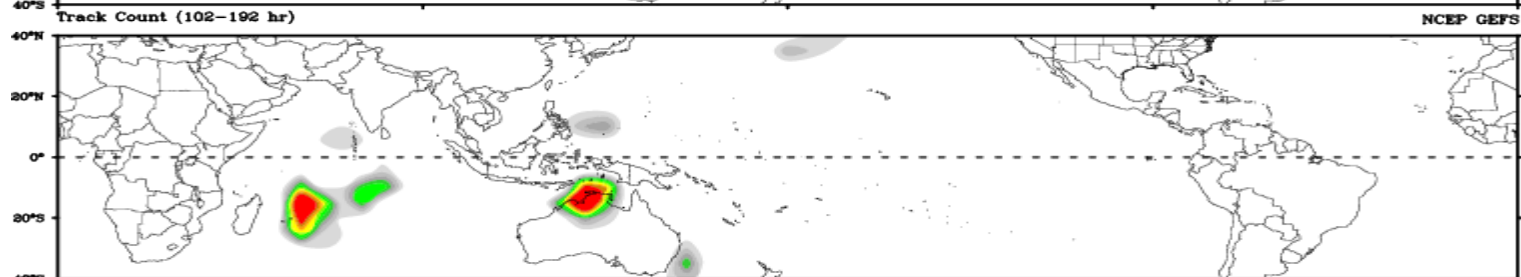




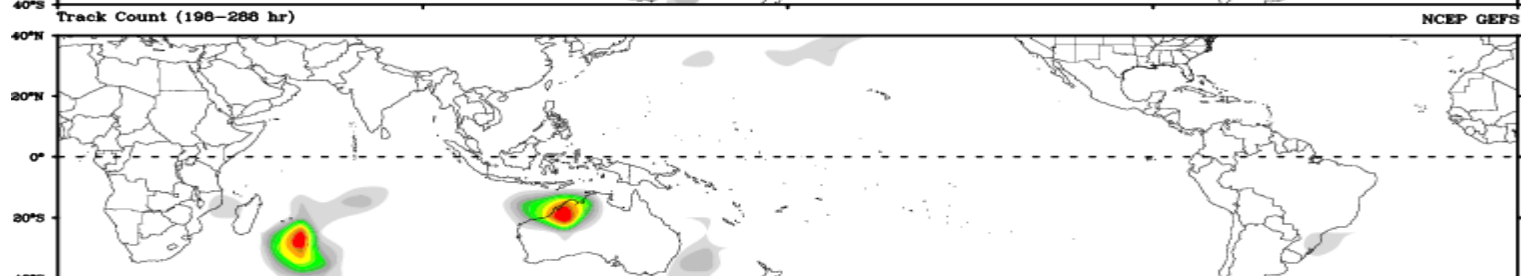
Days 1-4



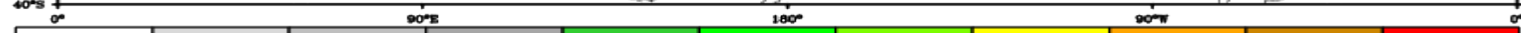
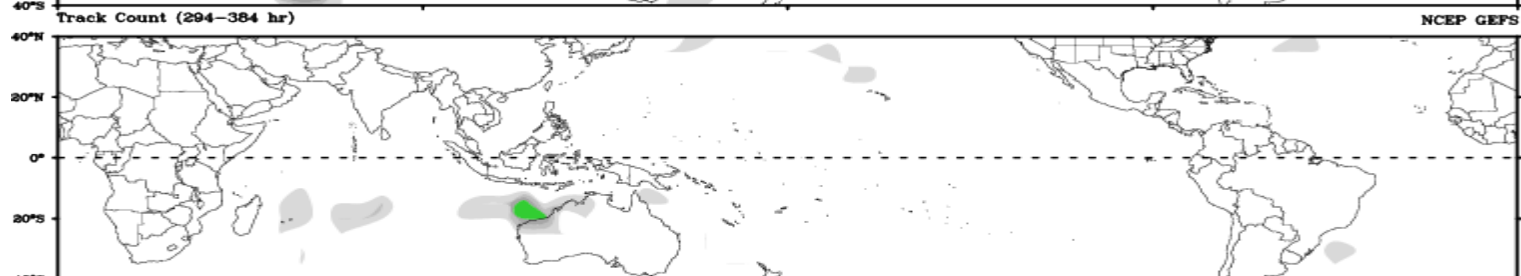
Day 5-8



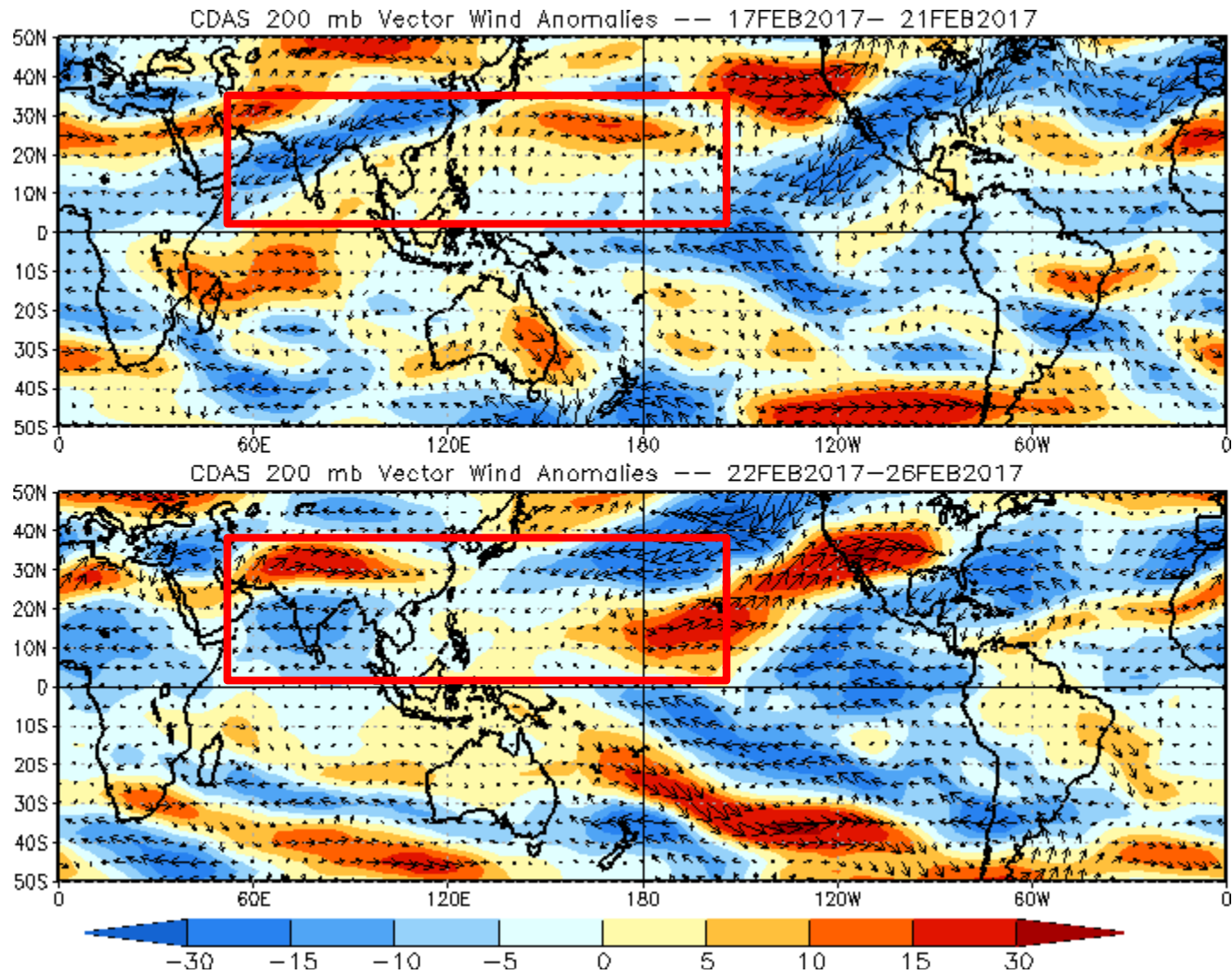
Day 9-12



Day 13-15

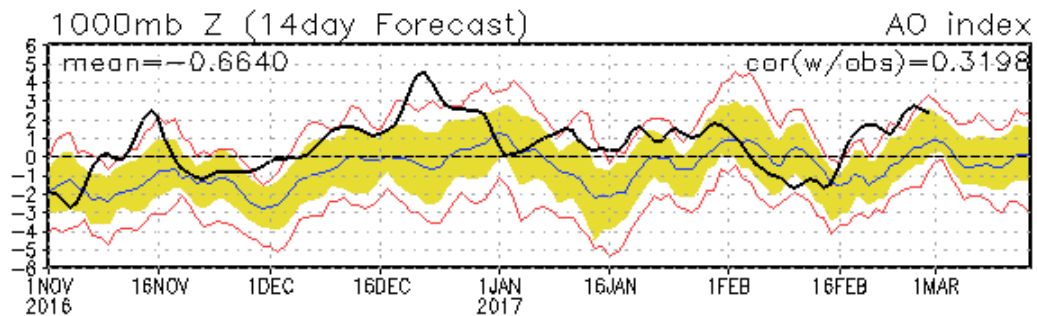
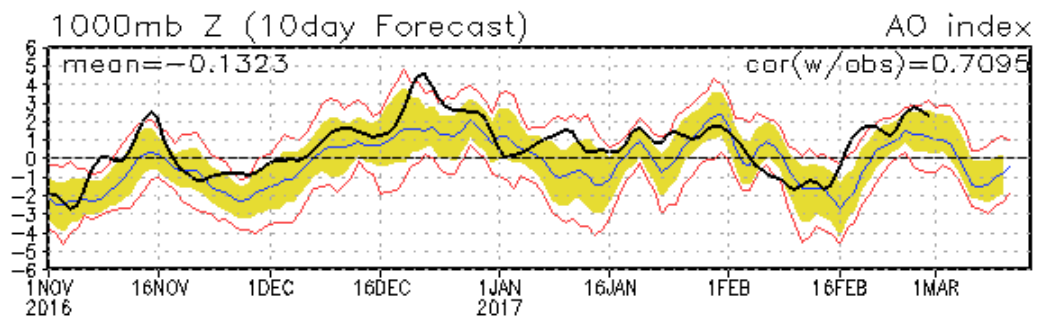
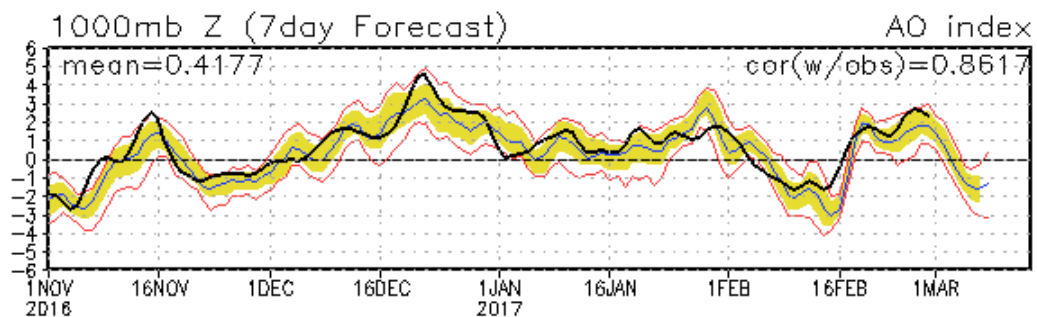
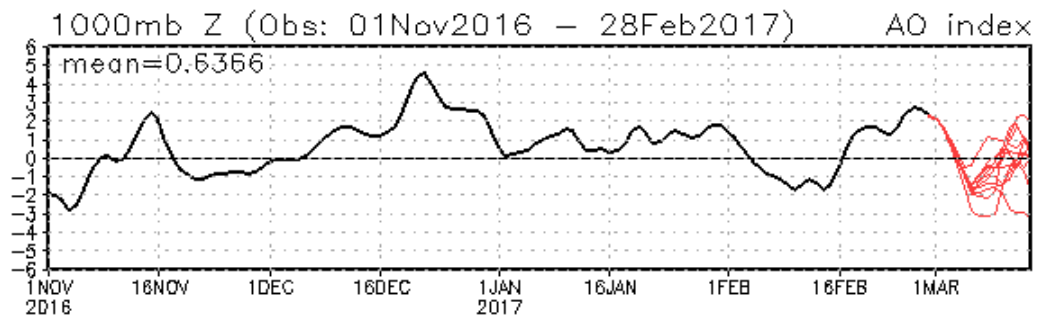


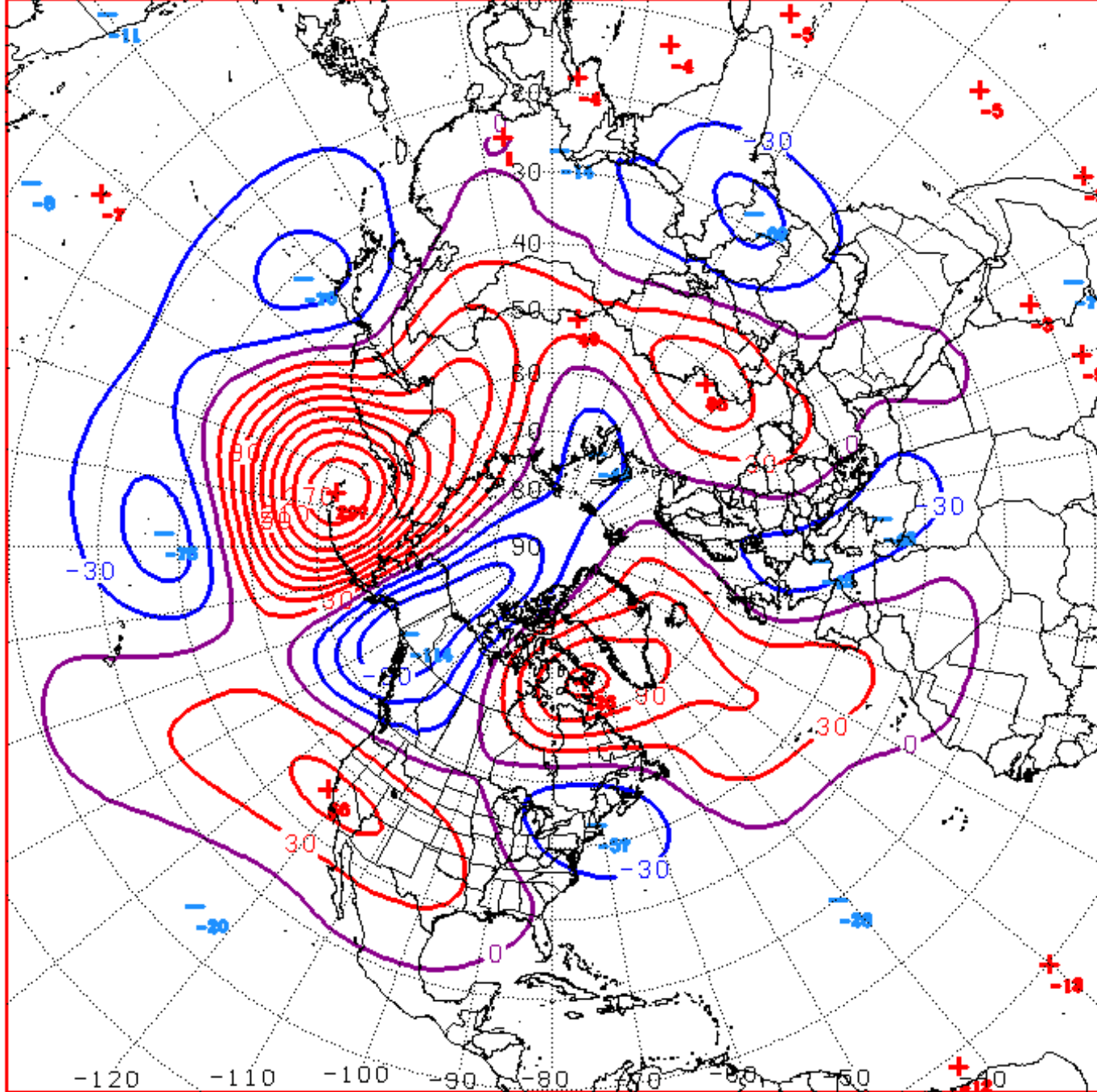
Connections to U.S. Impacts



Total reversal in 200-hPa zonal wind anomaly pattern. This reversal is too rapid to be attributed to MJO forcing, but the most recent pattern is consistent with the enhanced convective phase centered over the Indian Ocean.

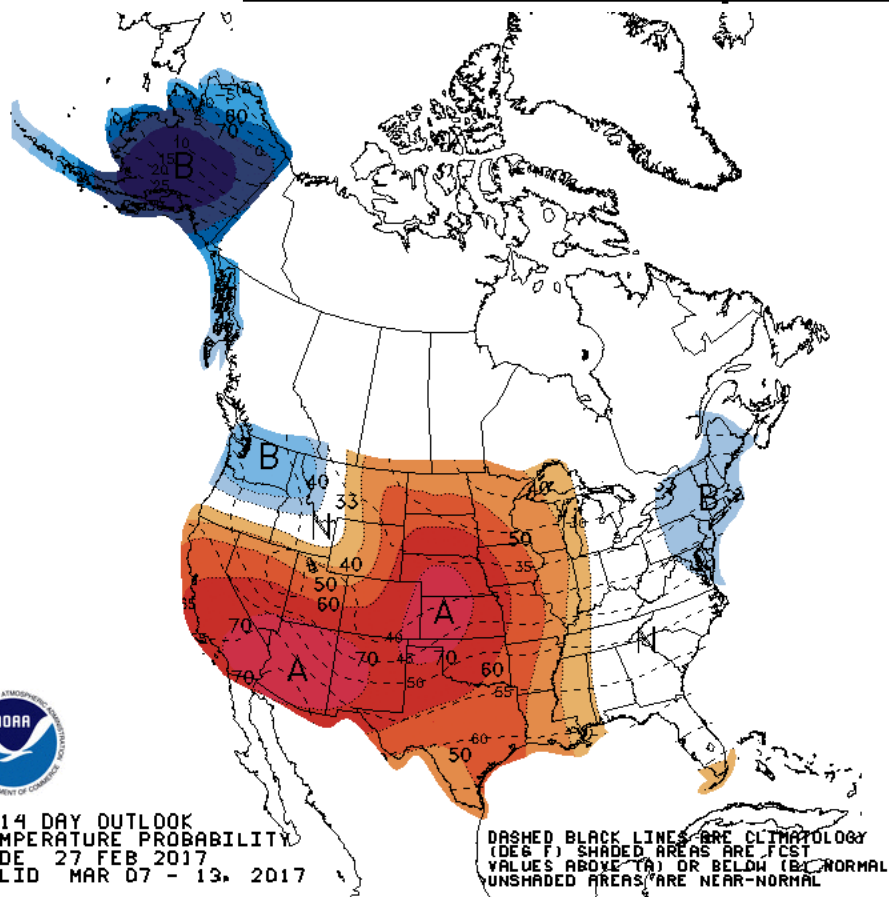
AO: Observed & ENSM forecasts





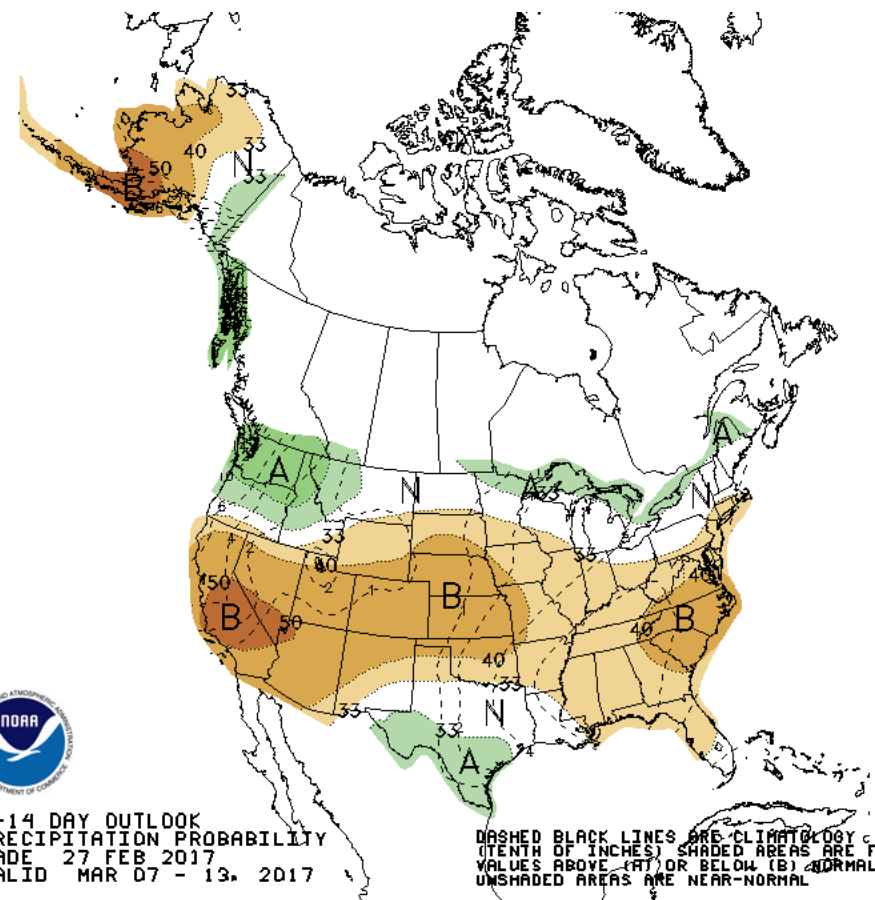
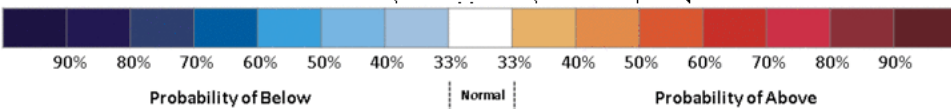
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE FEB 28 2017 1336 UTC CNTD MAR 11 2017

Week 2 – Temperature and Precipitation



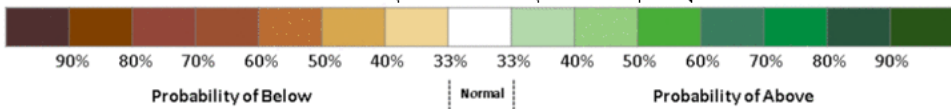
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 27 FEB 2017
VALID MAR 07 - 13, 2017

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 27 FEB 2017
VALID MAR 07 - 13, 2017

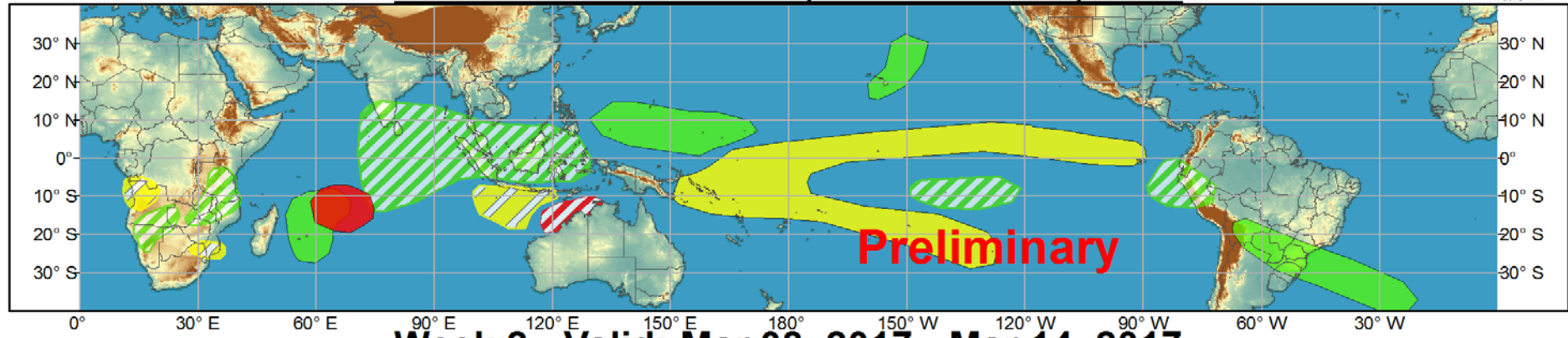
DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL.



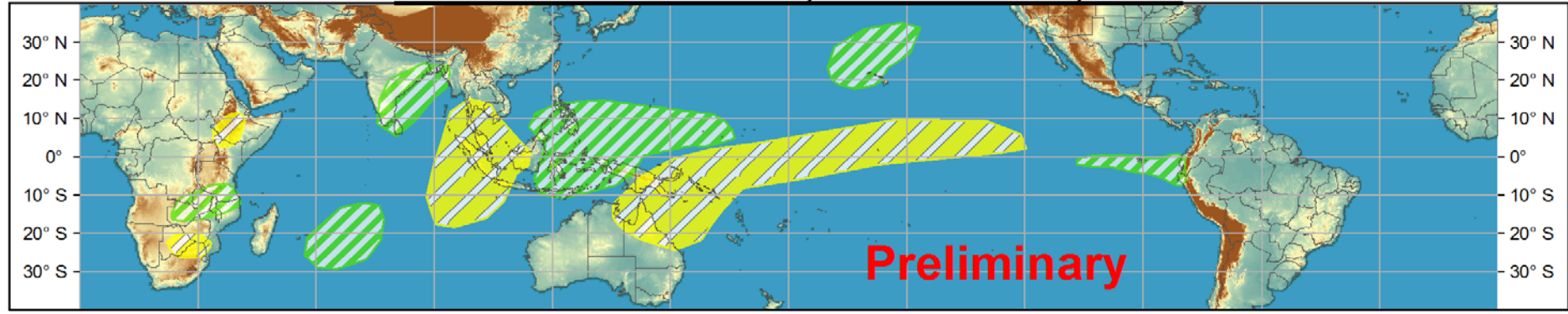


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