

Global Tropics Hazards And Benefits Outlook

2/21/2017

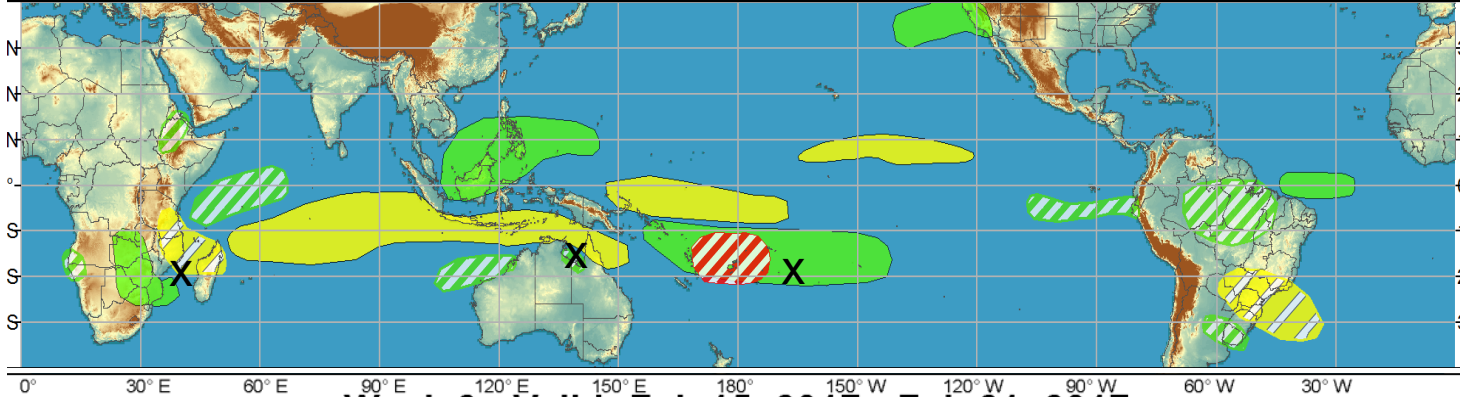
Matthew Rosencrans

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

Week 1 - Valid: Feb 15, 2017 - Feb 21, 2017

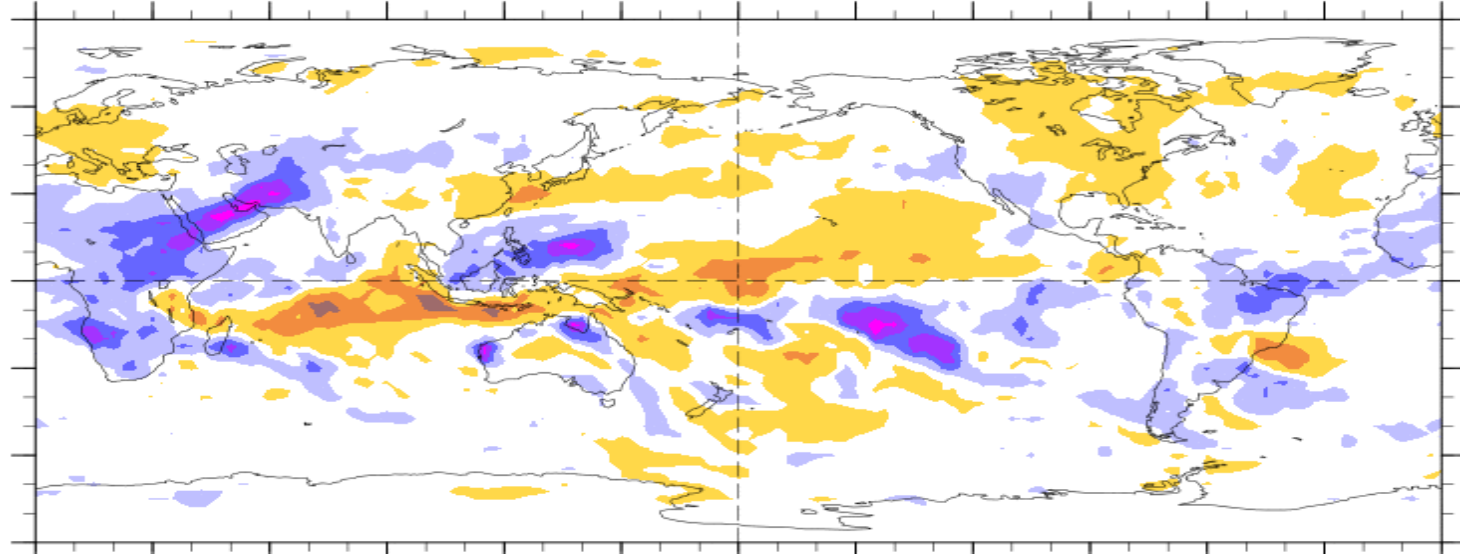


Week 2 - Valid: Feb 15, 2017 - Feb 21, 2017



7-Day Average OLR Anomaly

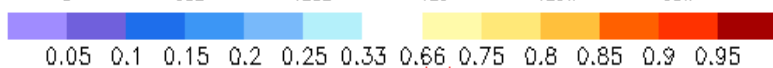
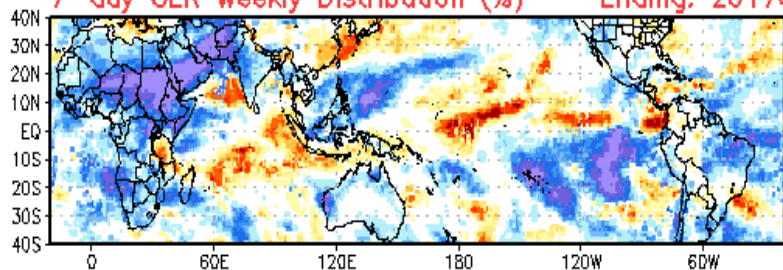
2017/02/13 - 2017/02/19



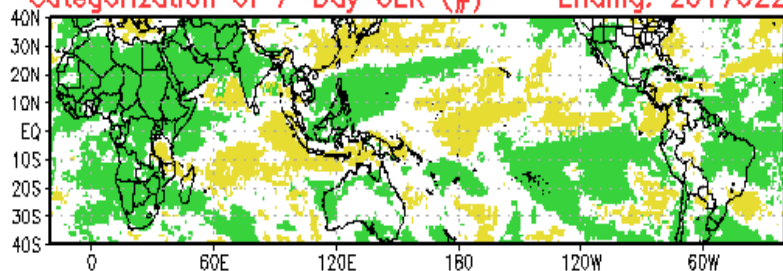
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

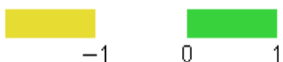
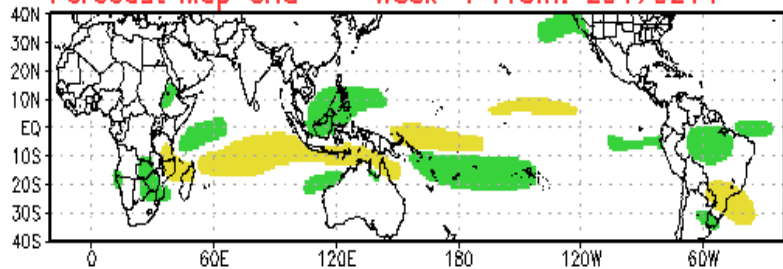
7-day OLR Weekly Distribution (%) -- Ending: 20170221



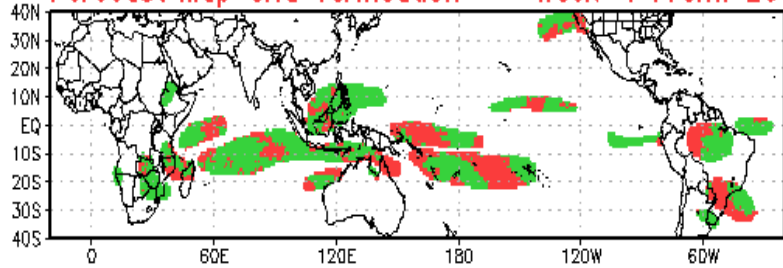
Categorization of 7-Day OLR (#) -- Ending: 20170221



Forecast Map Grid -- Week-1 From: 20170214

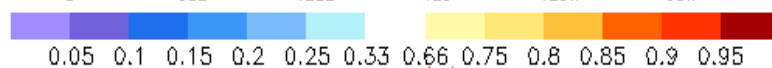
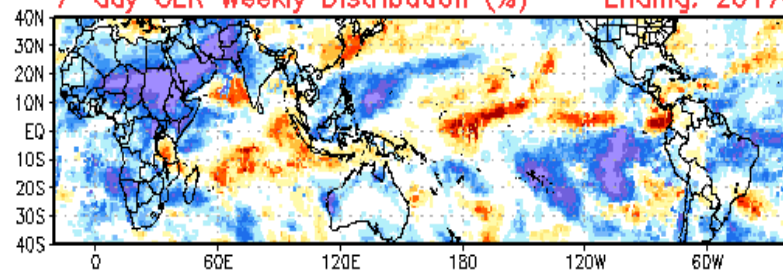


Forecast Map Grid Verification -- Week-1 From: 20170214

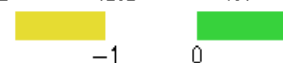
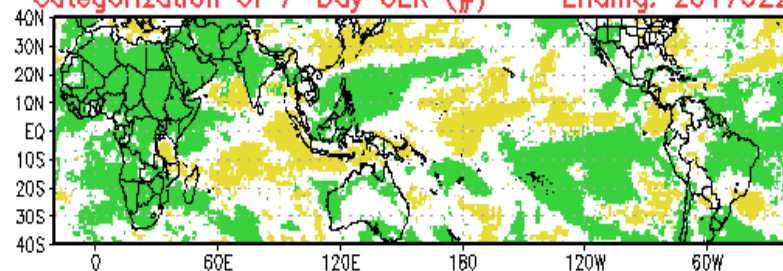


Hit: Green, Miss: Red
Heidke Skill Score: 46.0922

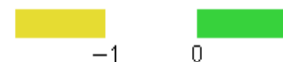
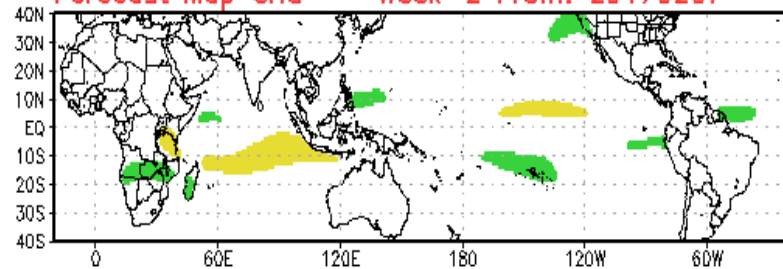
7-day OLR Weekly Distribution (%) -- Ending: 20170221



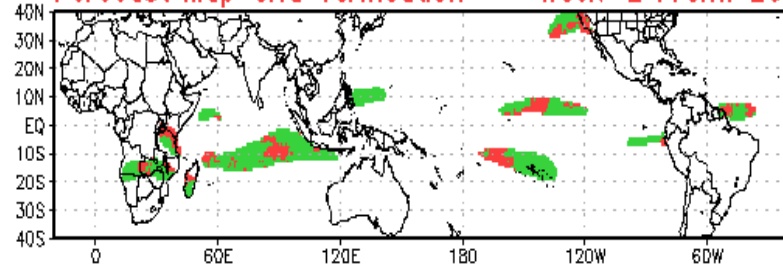
Categorization of 7-Day OLR (#) -- Ending: 20170221



Forecast Map Grid -- Week-2 From: 20170207



Forecast Map Grid Verification -- Week-2 From: 20170207



Hit: Green, Miss: Red
Heidke Skill Score: 57.5028

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 present over Africa
- Dynamical and statistical models indicate eastward propagation early, but depending on signal strength in Week-1, some models weaken the signal during Week-2.
- Destructive interference between the background state and the intraseasonal signal is forecast to continue, but this is complicated by the evolving low-frequency pattern.

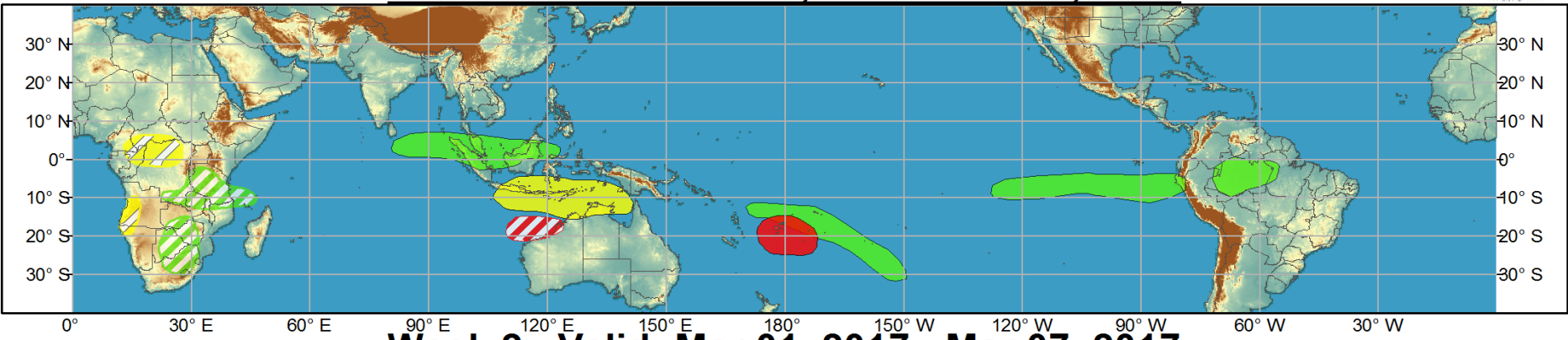
Extratropics:

- Some influence of the MJO on the global circulation have been observed, and the latest forecasts for North America have some resemblance to patterns associated with MJO variability, some key parts are not quite aligned.

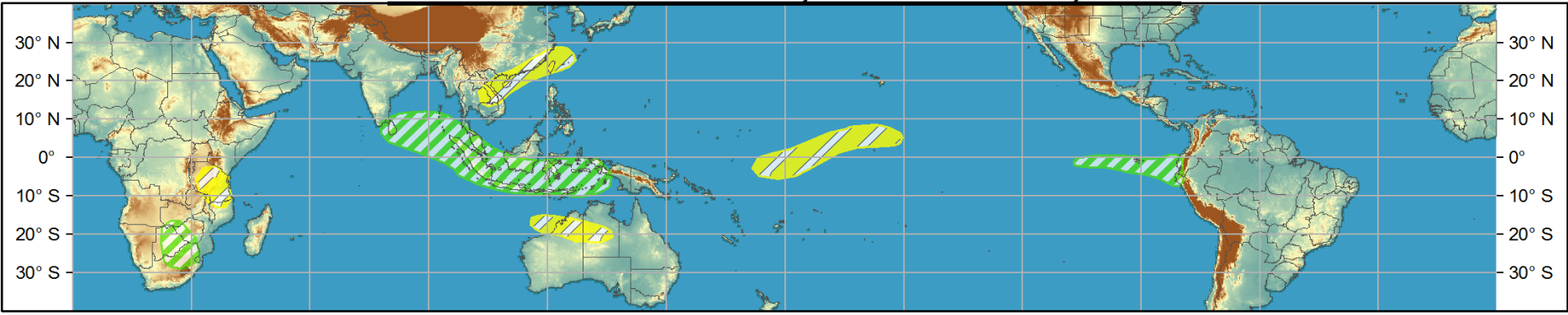


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

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



Week 2 - Valid: Mar 01, 2017 - Mar 07, 2017



Produced: 02/21/2017

Forecaster: Rosencrans

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.

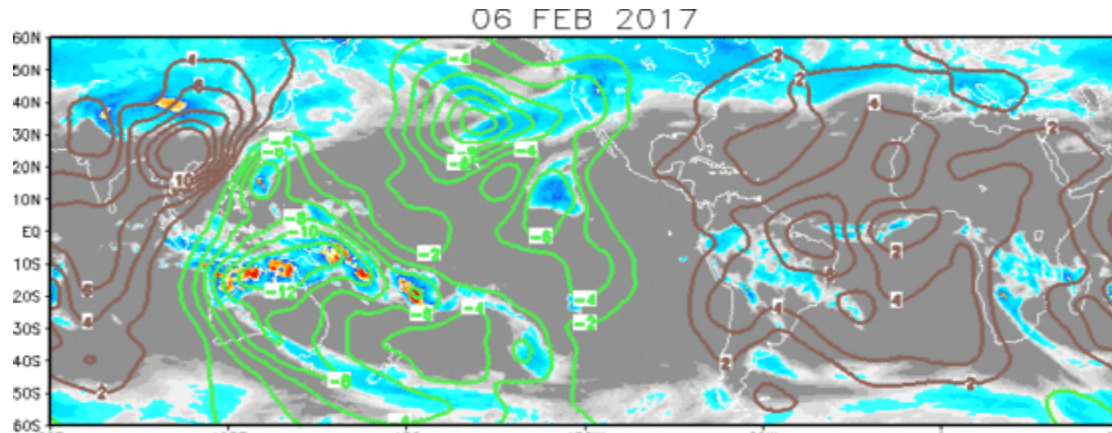


IR Satellite & 200-hpa Velocity Potential Anomalies

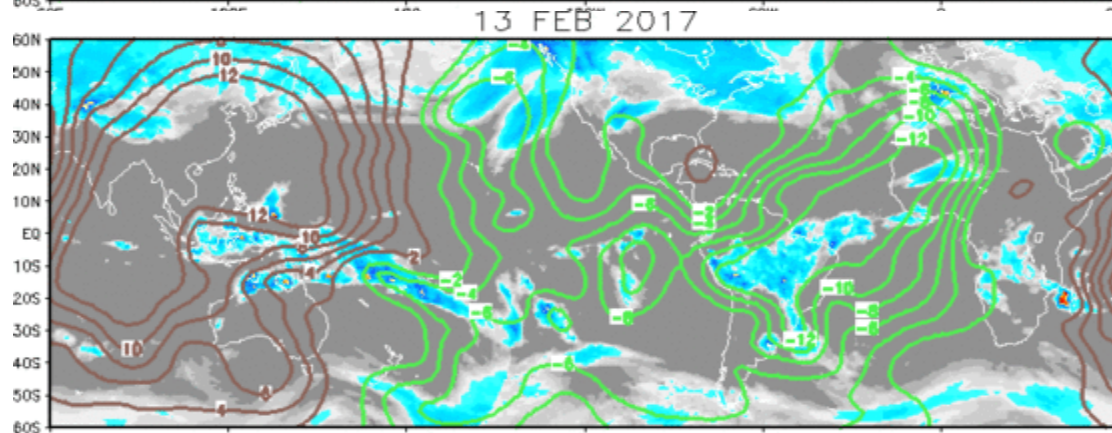
Green: Enhanced Divergence

Brown: Enhanced Convergence

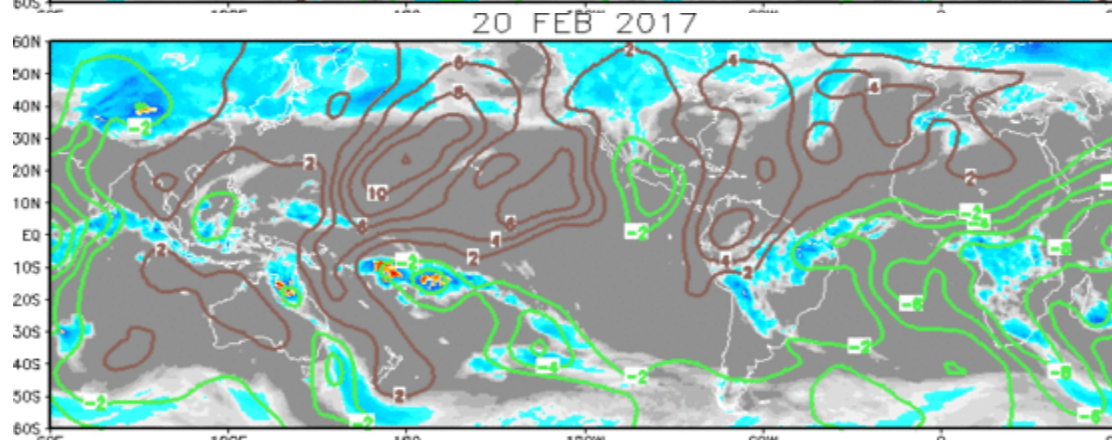
Wave-1 with enhanced phases over Central Pacific.



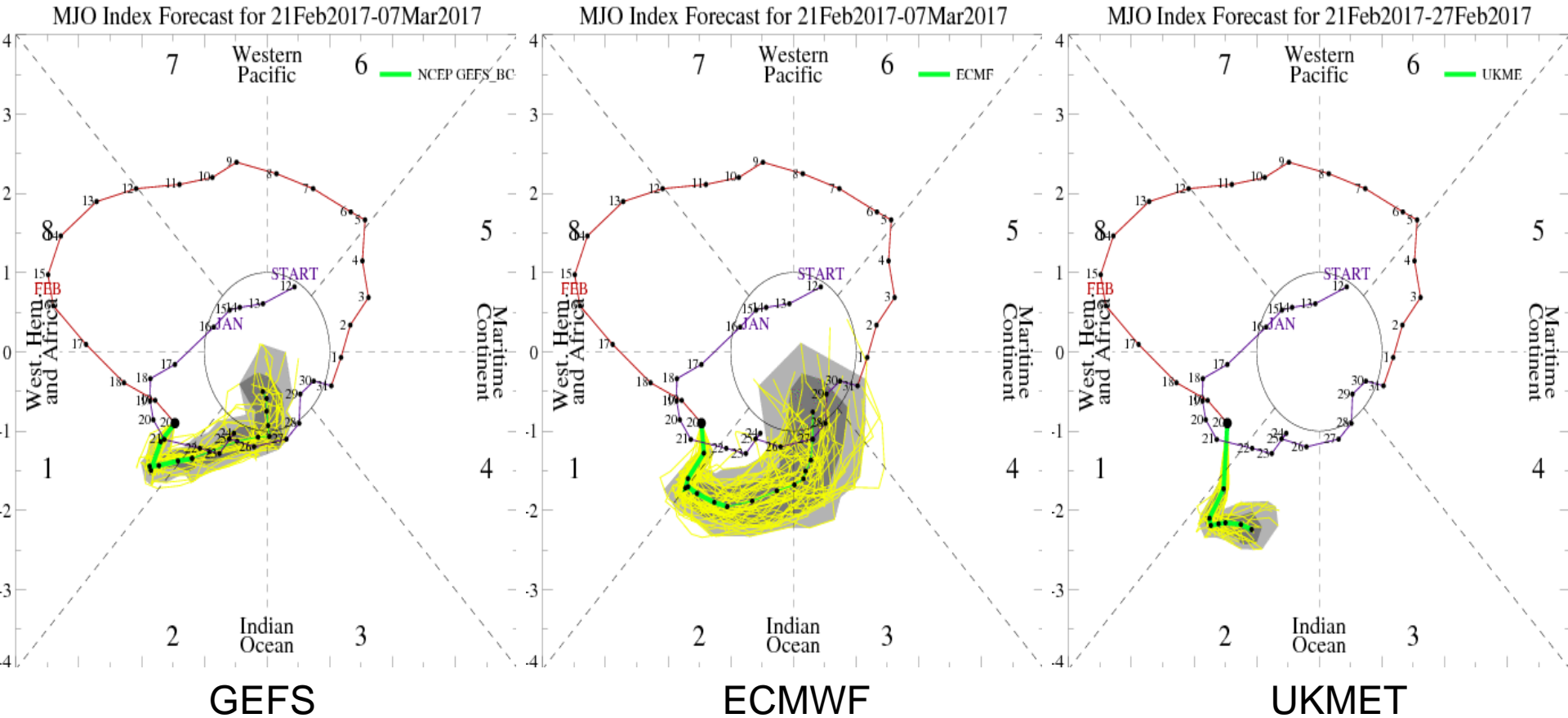
Wave-1 with enhanced phase over Americas



Wave-1, with some noise, with enhanced phase over Africa.

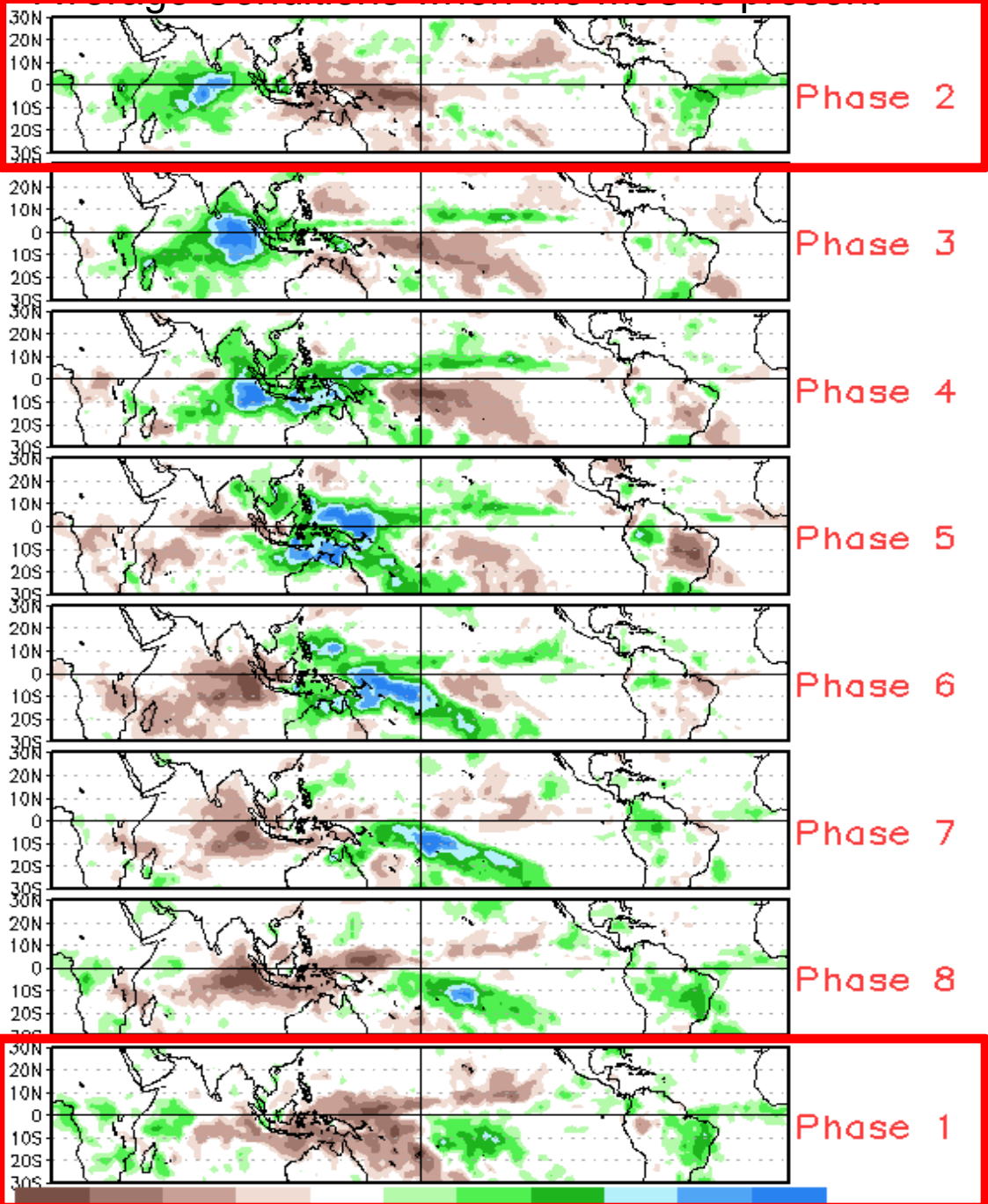


MJO Observation/Forecast



Minor model differences through Week-1, then model disagreement increases.

Average Conditions when the MJO is present



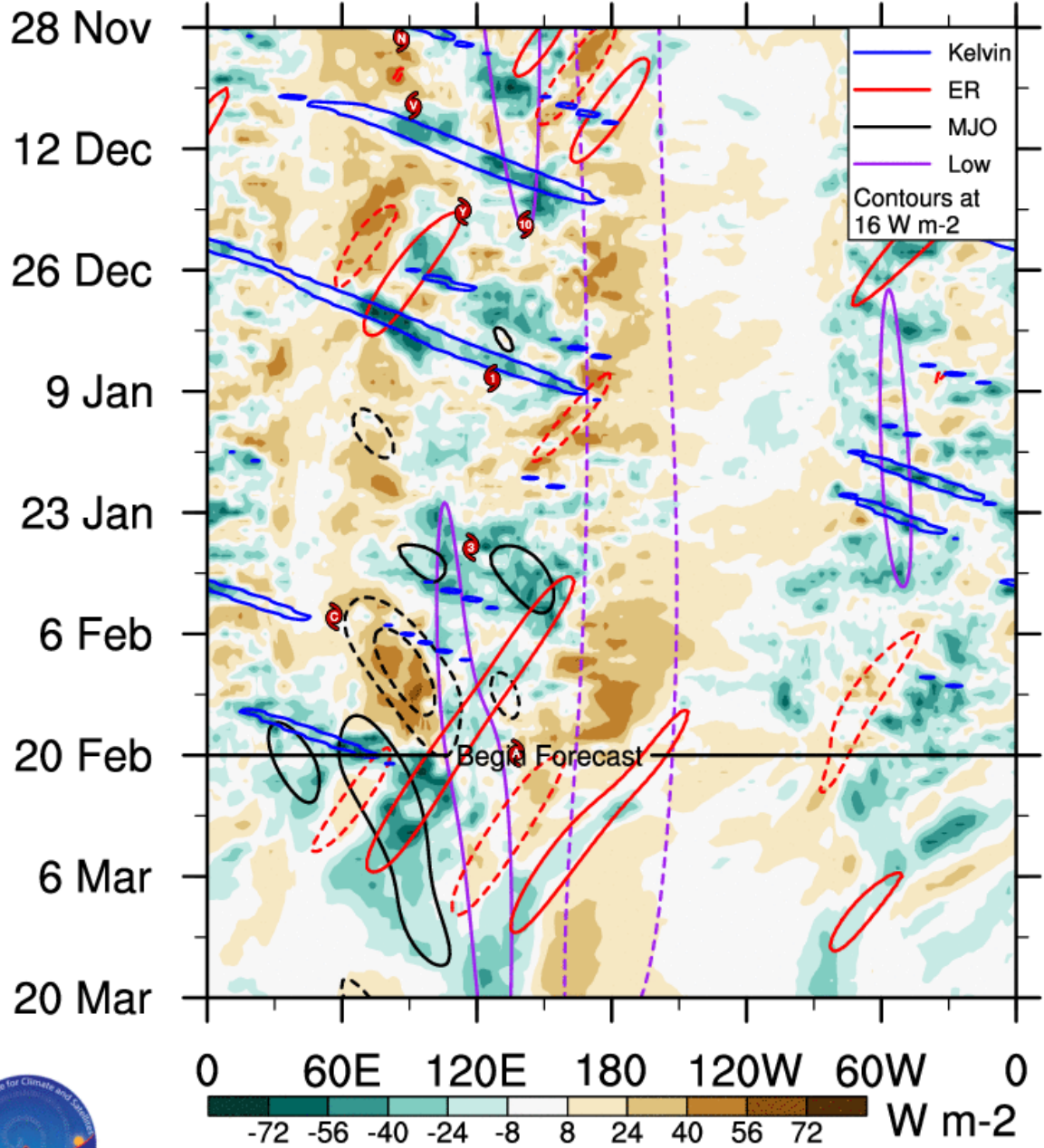
Phases 1/2 anticipated during Week-1.

Some models keep a Phase 3 signal in Week-2.

CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts

5S - 5N



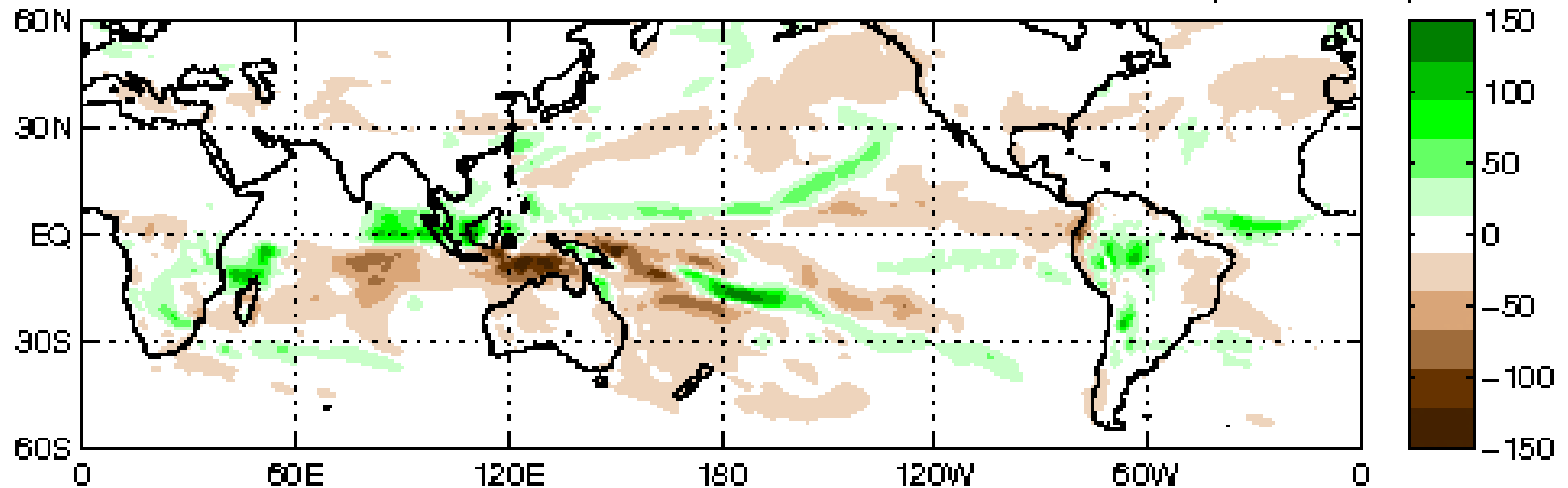
Convective signal moving into the Indian Ocean.

Some influence from Rossby Waves complicating the overall pattern.

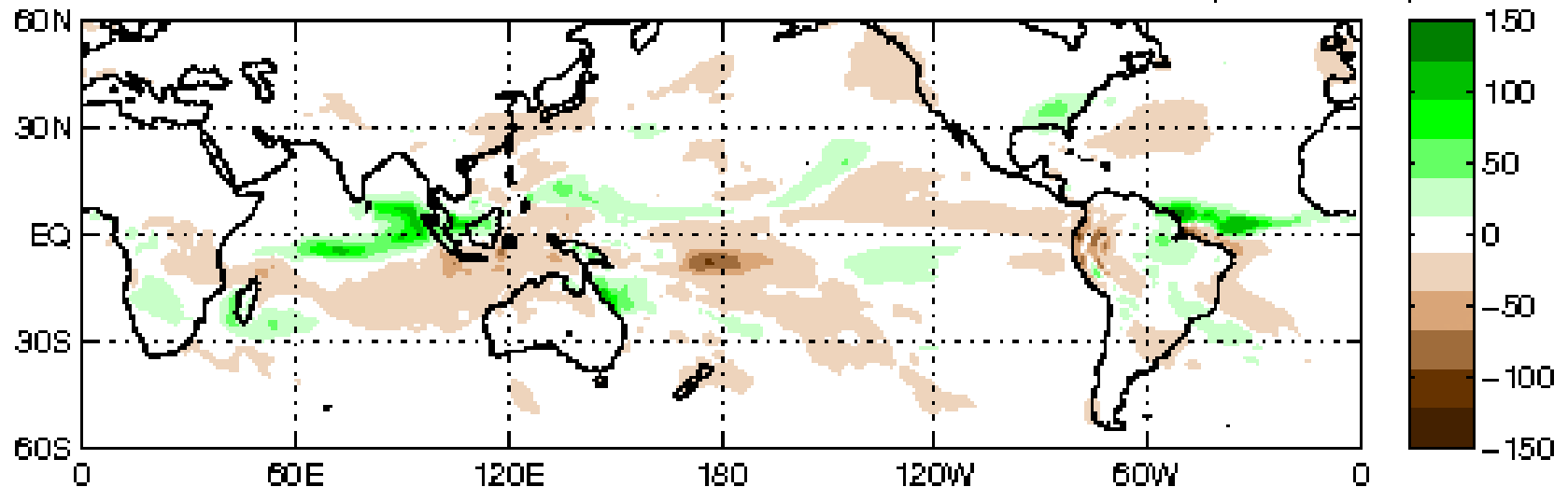
MJO likely to move into Indian Ocean, interaction with Indian Ocean Dipole and Rossby Waves.



CFS: Anom. PREC Week: 1: 22-Feb-2017 to 28-Feb-2017 (mm/week)



CFS: Anom. PREC Week: 2: 01-Mar-2017 to 07-Mar-2017 (mm/week)



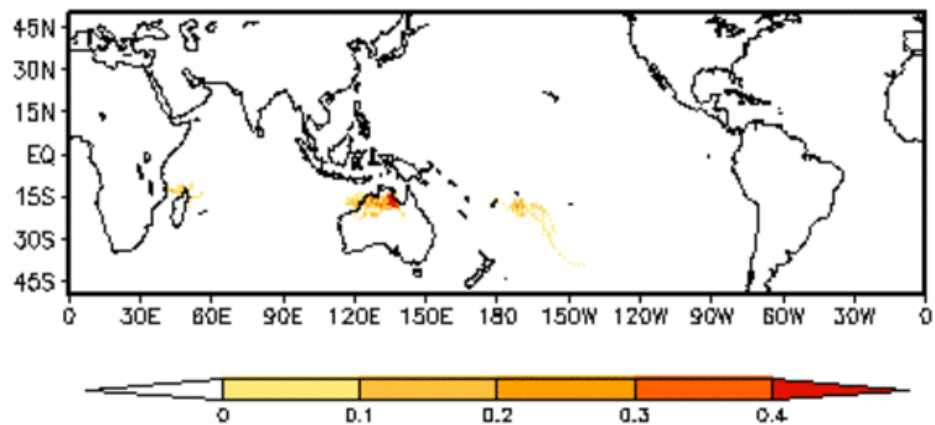
CFSv2 45-D

Week 1: 0

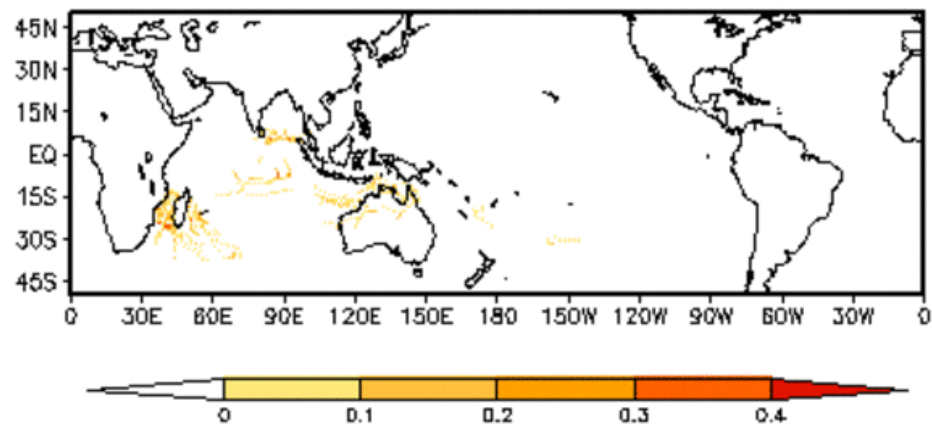
CFSv2 45-Da

Week 2: 02

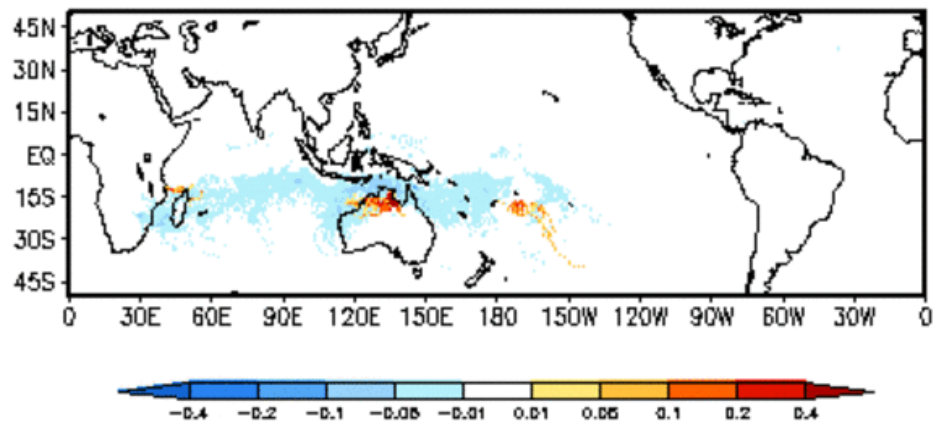
a) Forecast Tracks



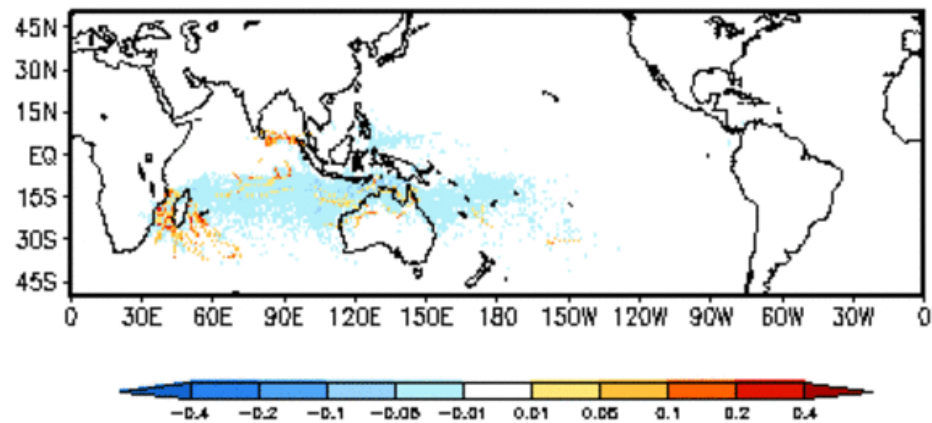
a) Forecast Tracks

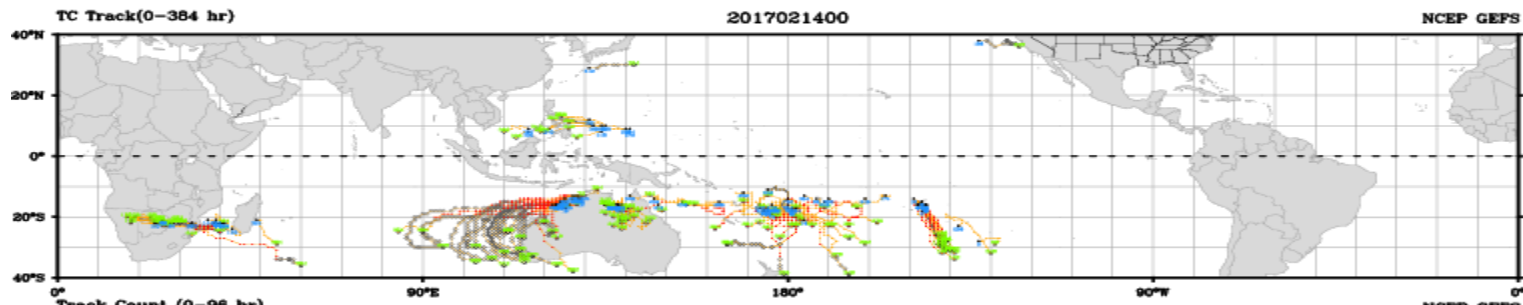


c) Track Anomaly

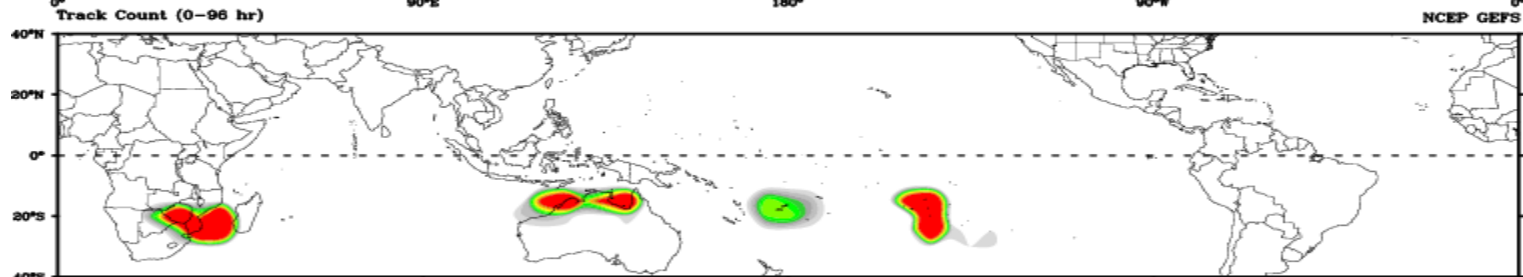


c) Track Anomaly

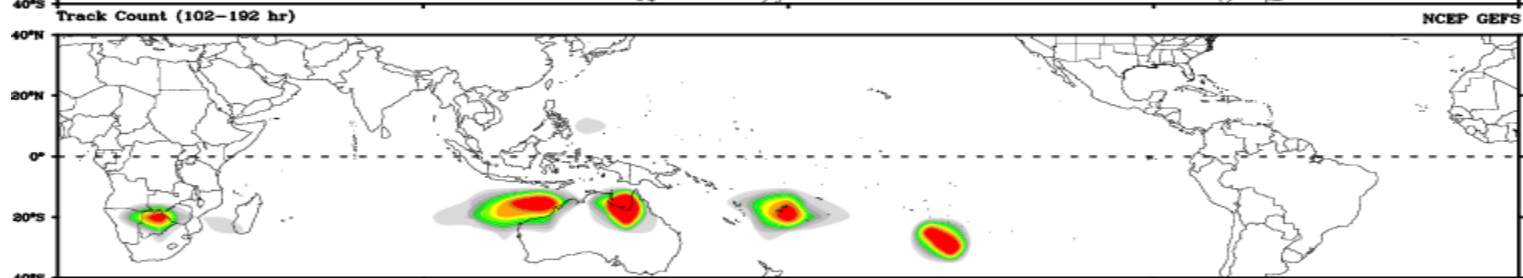




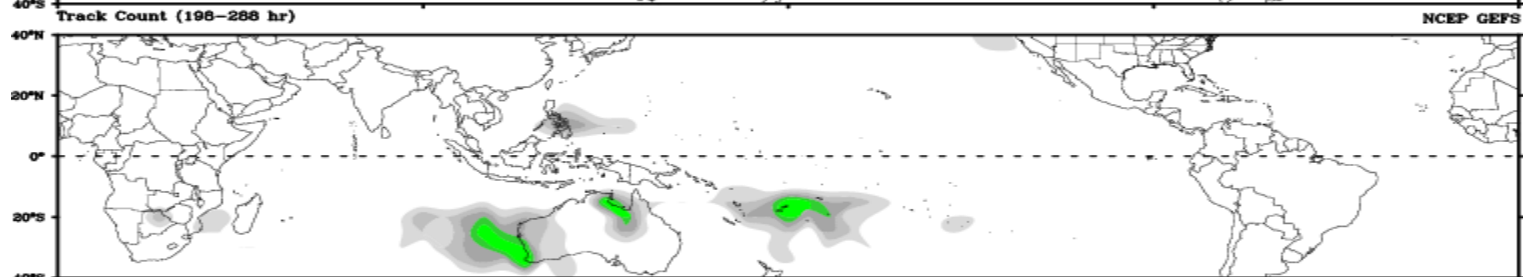
Days 1-4



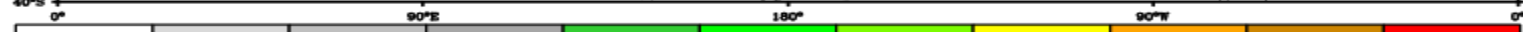
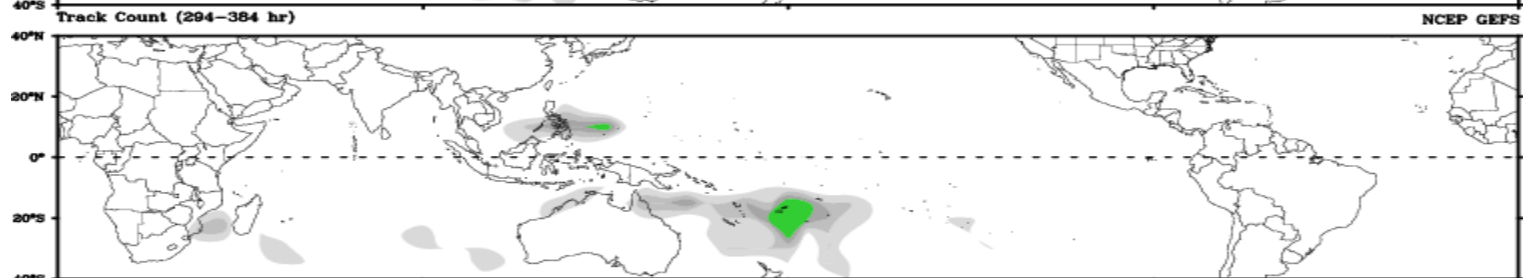
Day 5-8



Day 9-12

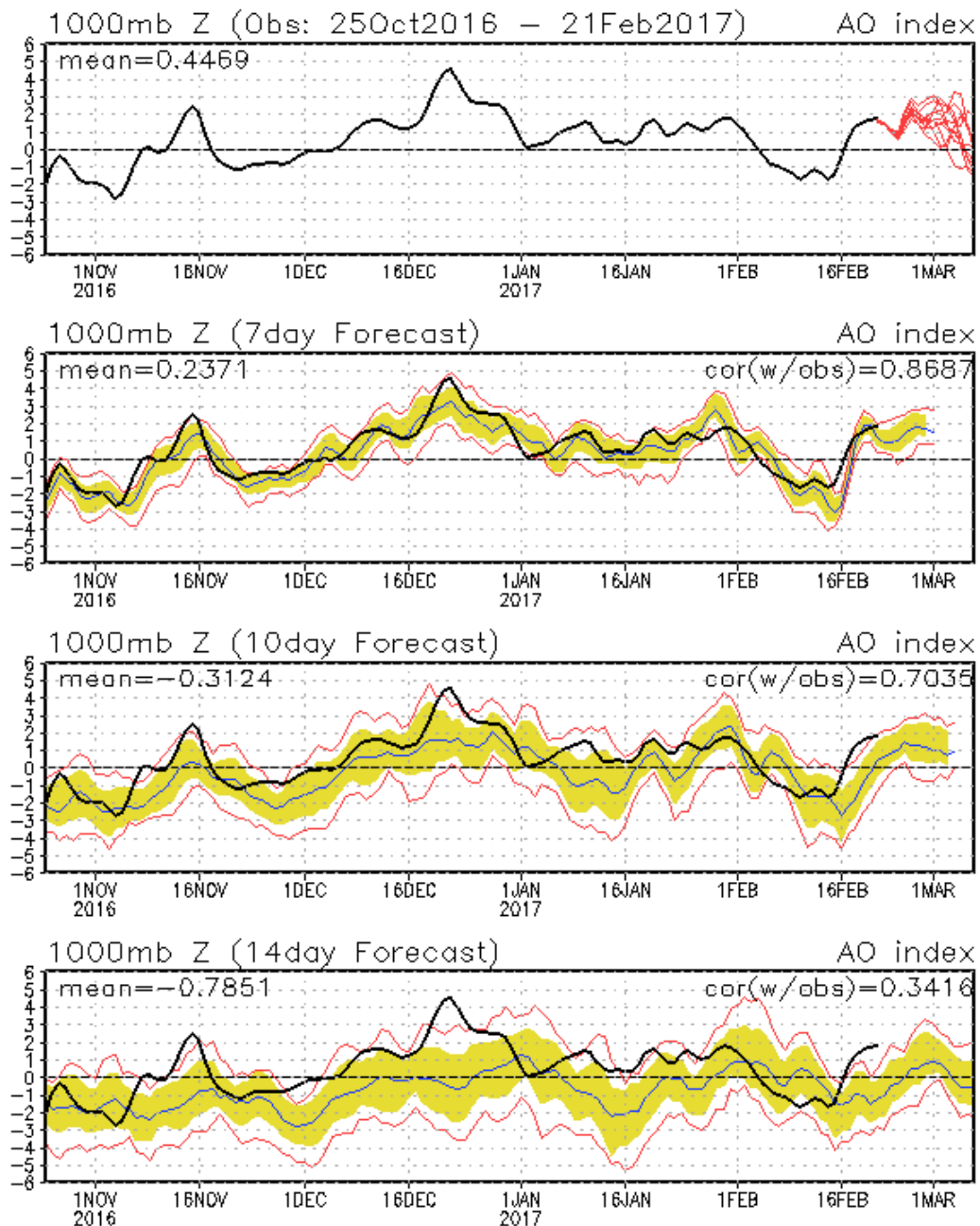


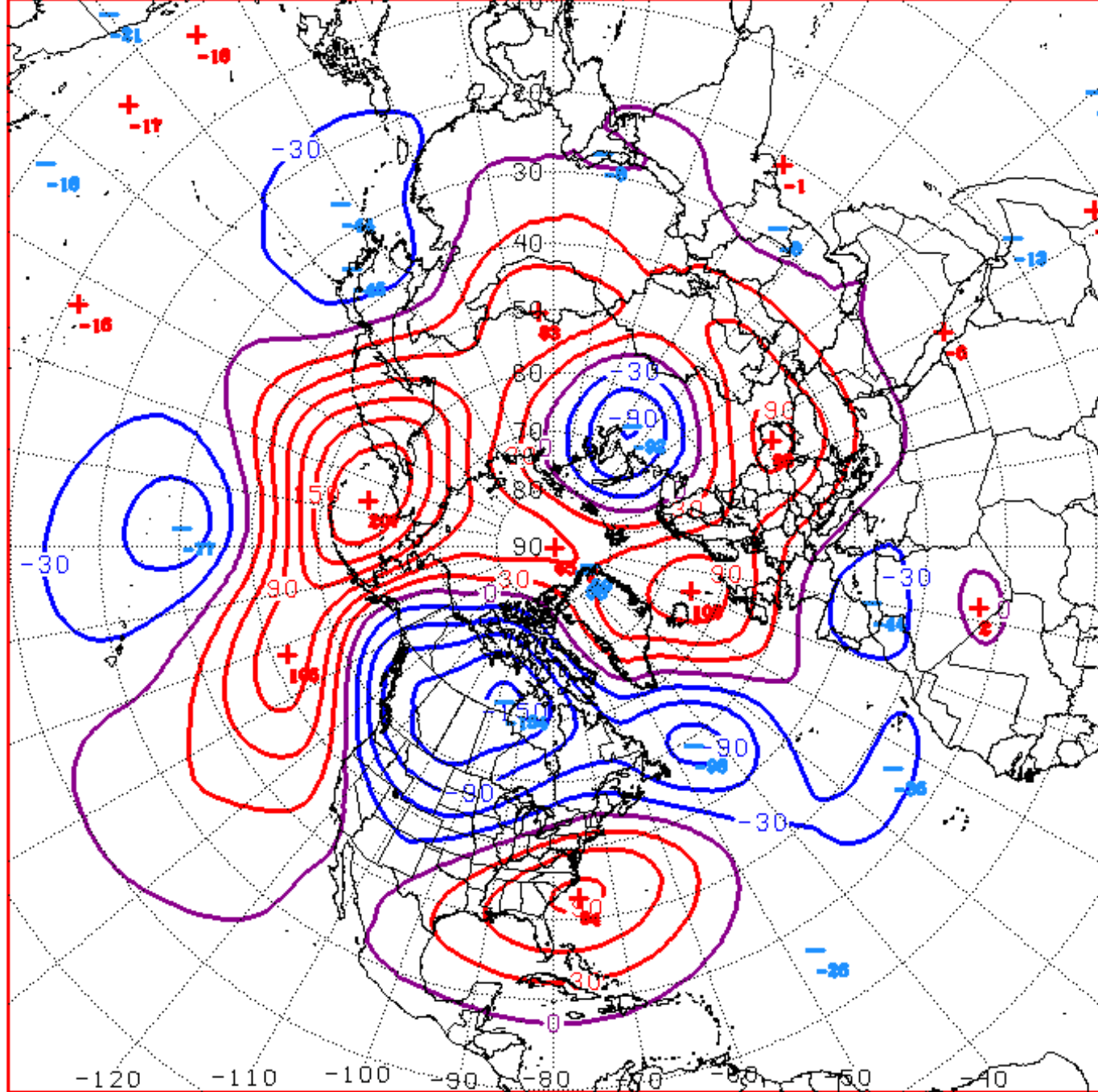
Day 13-15



Connections to U.S. Impacts

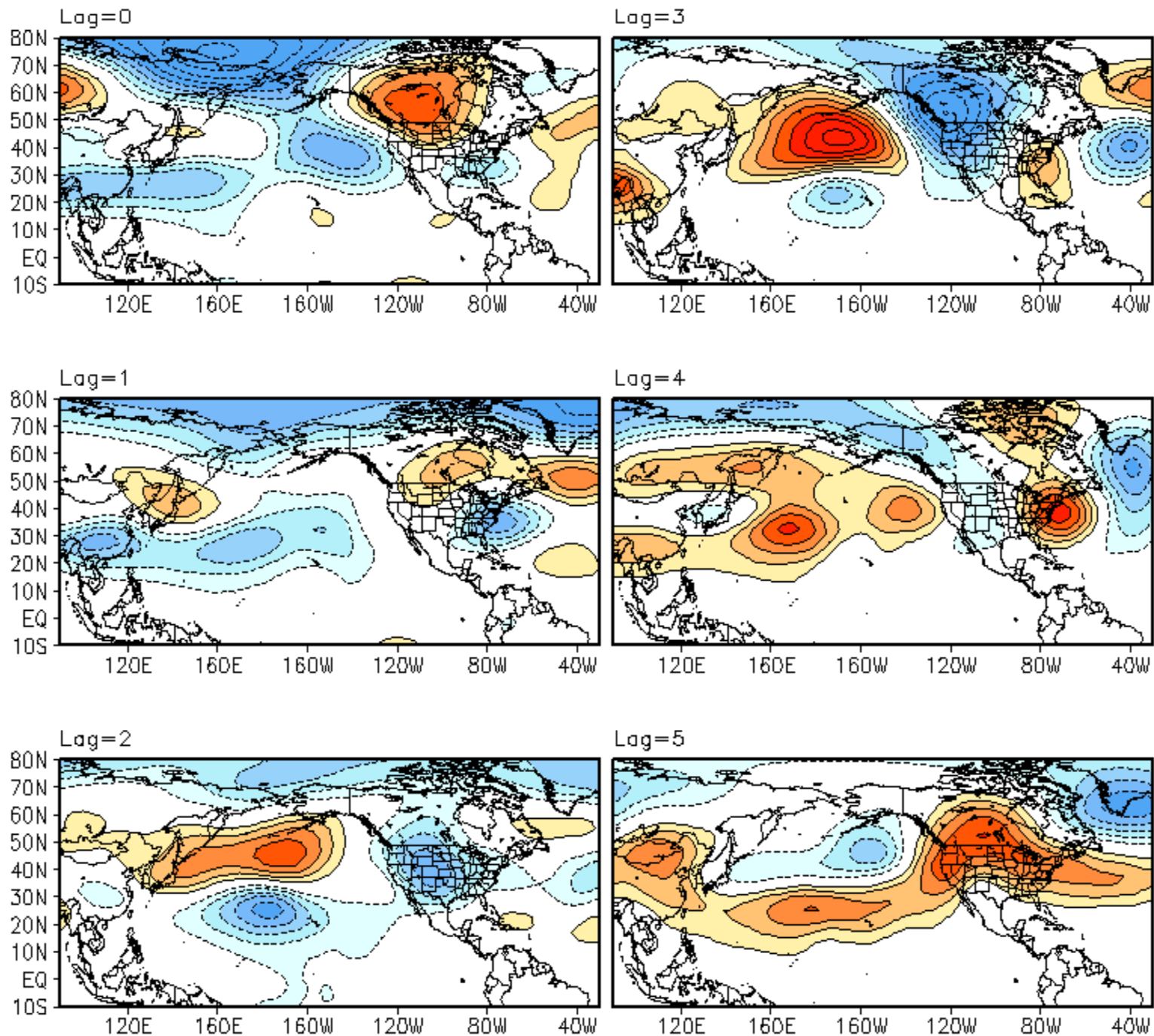
AO: Observed & ENSM forecasts



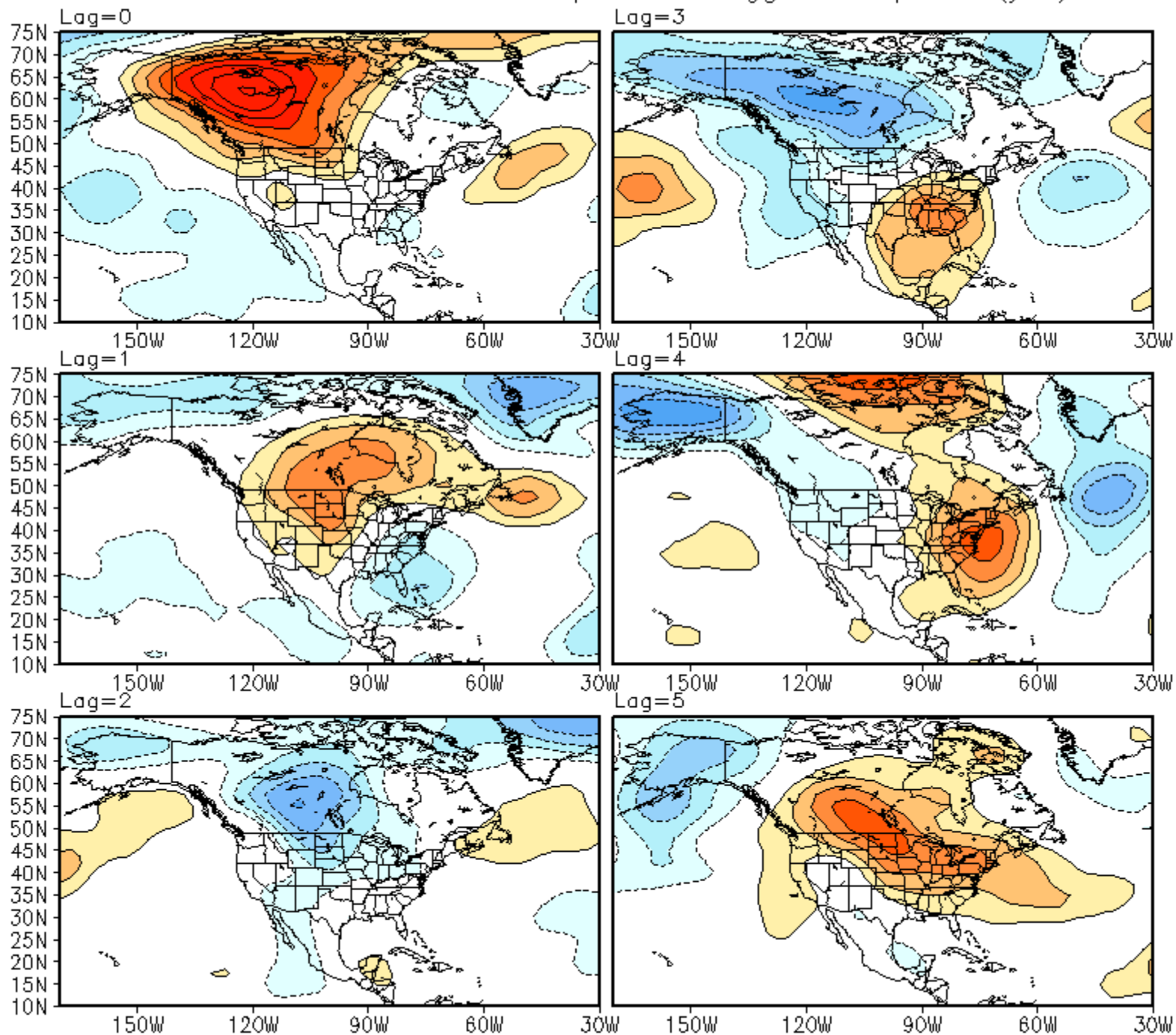


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE FEB 21 2017 1339 UTC CNTD MAR 04 2017

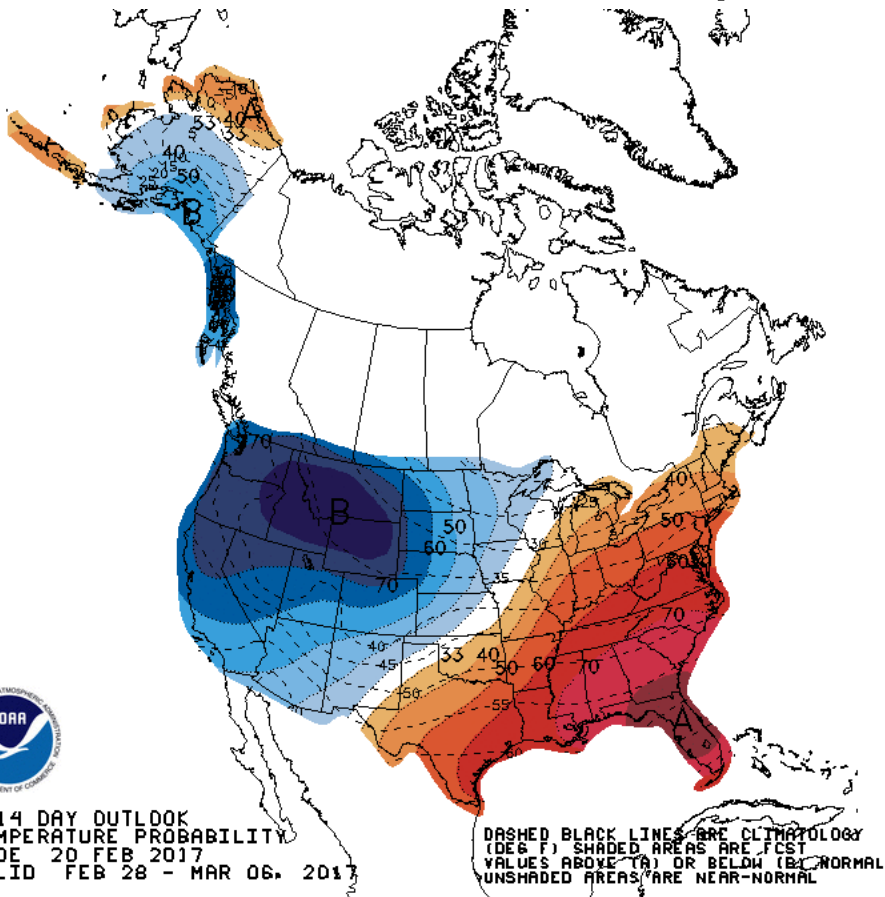
RMM Phase 1 200-hPa Height Lagged Composite (jfm)



RMM Phase 1 850-hPa Temperature Lagged Composite (jfm)

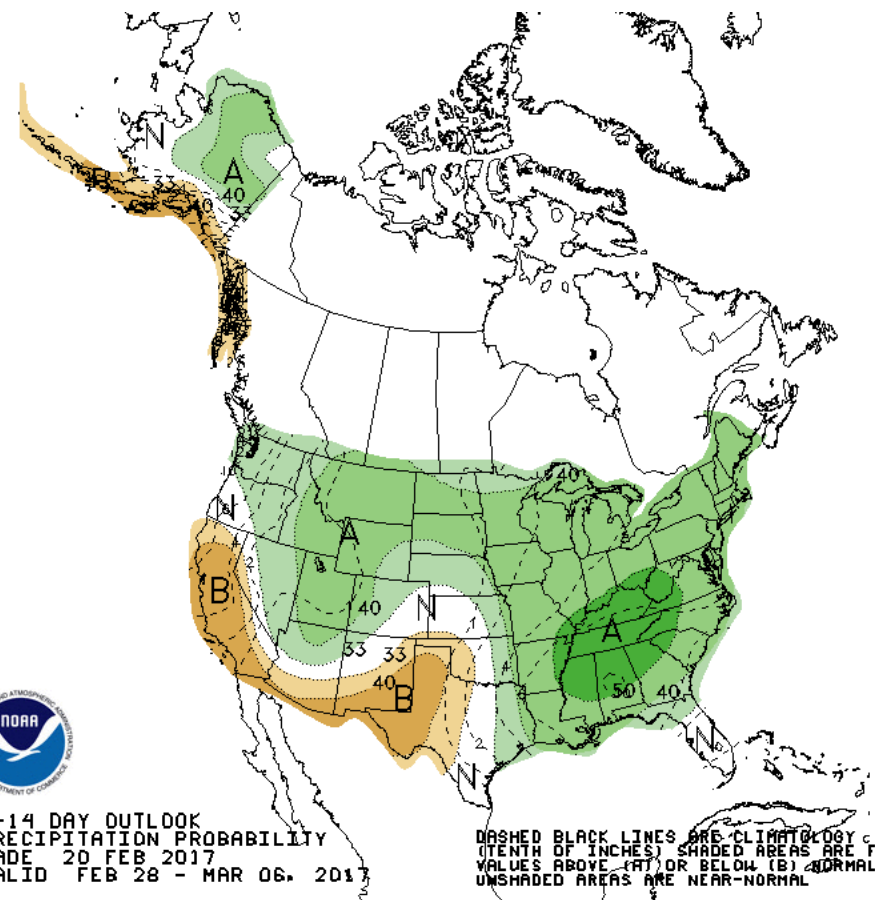
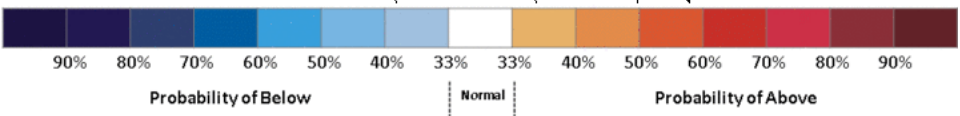


Week 2 – Temperature and Precipitation



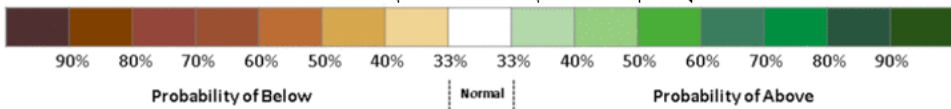
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 20 FEB 2017
VALID FEB 28 - MAR 06, 2017

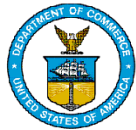
DASHED BLACK LINES ARE CLIMATE
(DEG F) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 20 FEB 2017
VALID FEB 28 - MAR 06, 2017

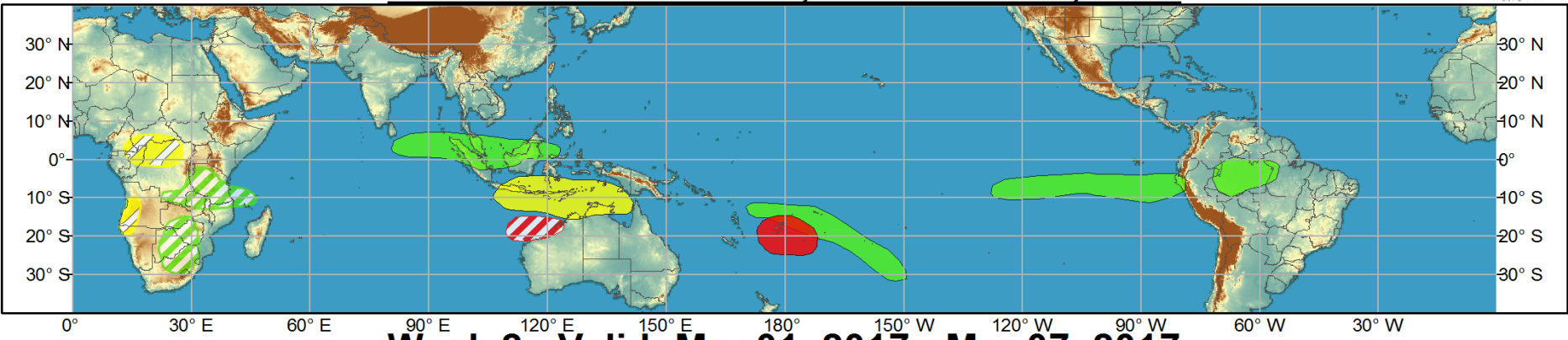
DASHED BLACK LINES ARE CLIMATE
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL



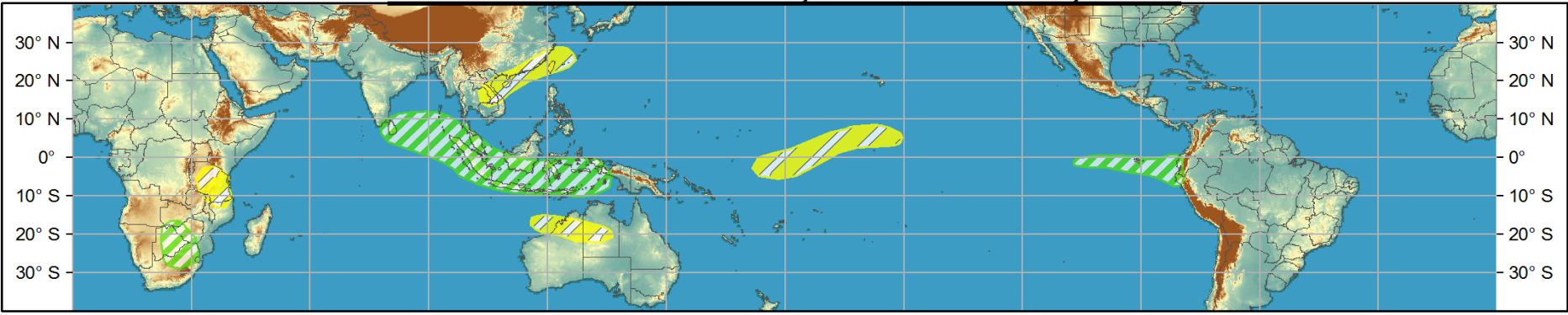


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