

Global Tropics Hazards And Benefits Outlook

February 17, 2015

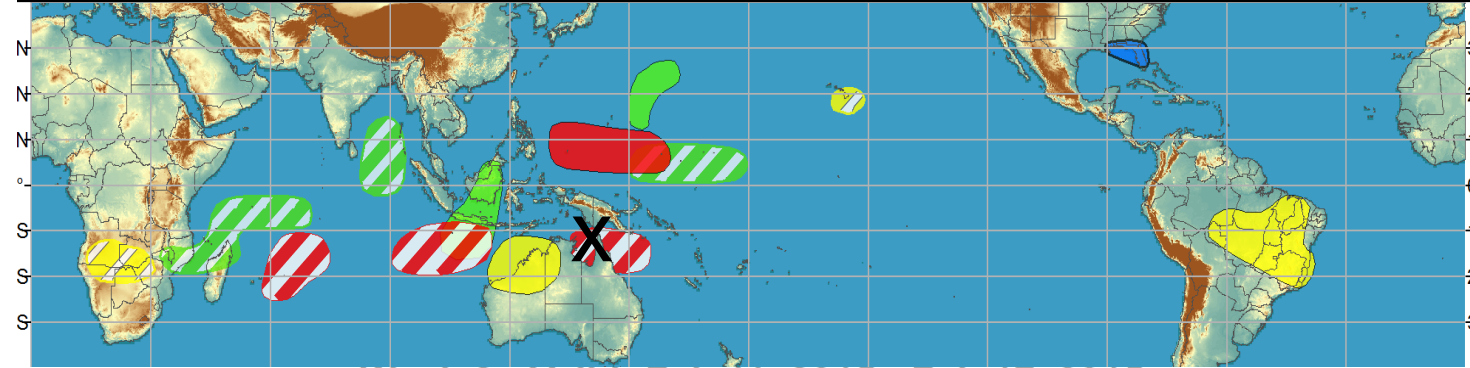
Matthew Rosencrans

Outline

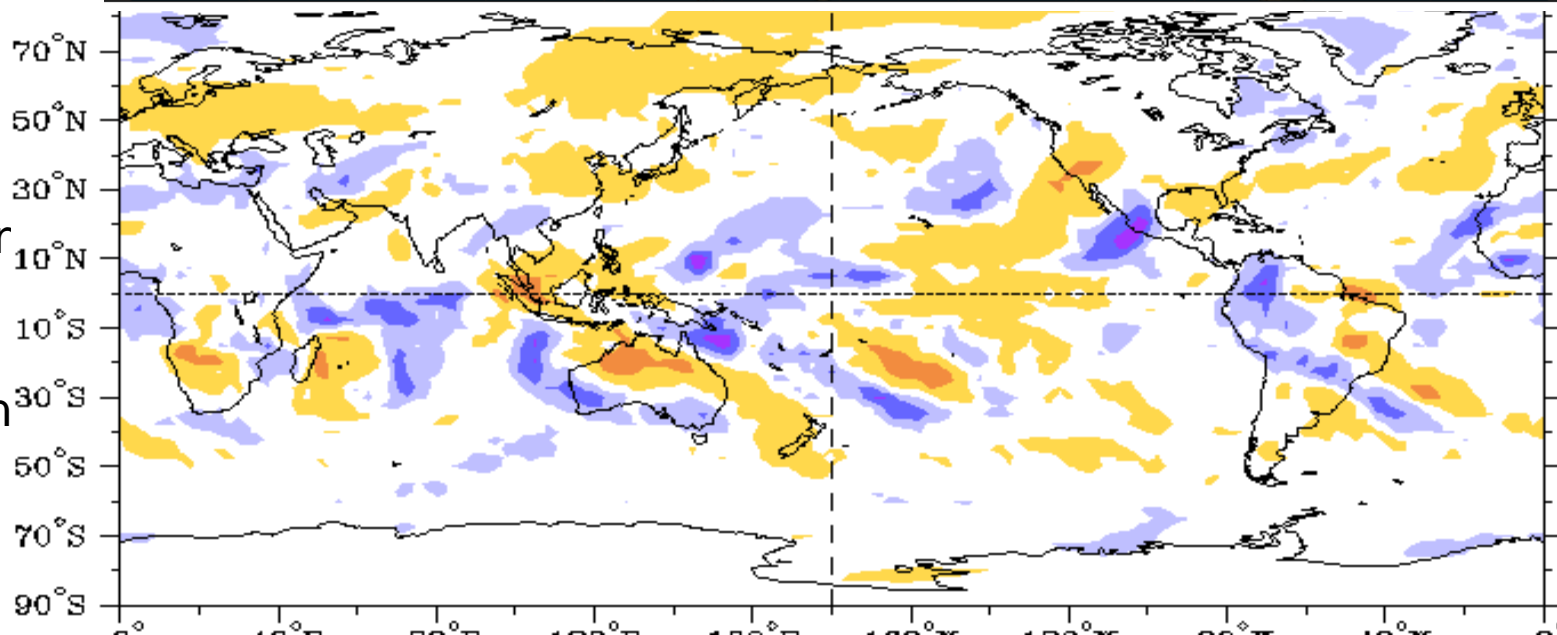
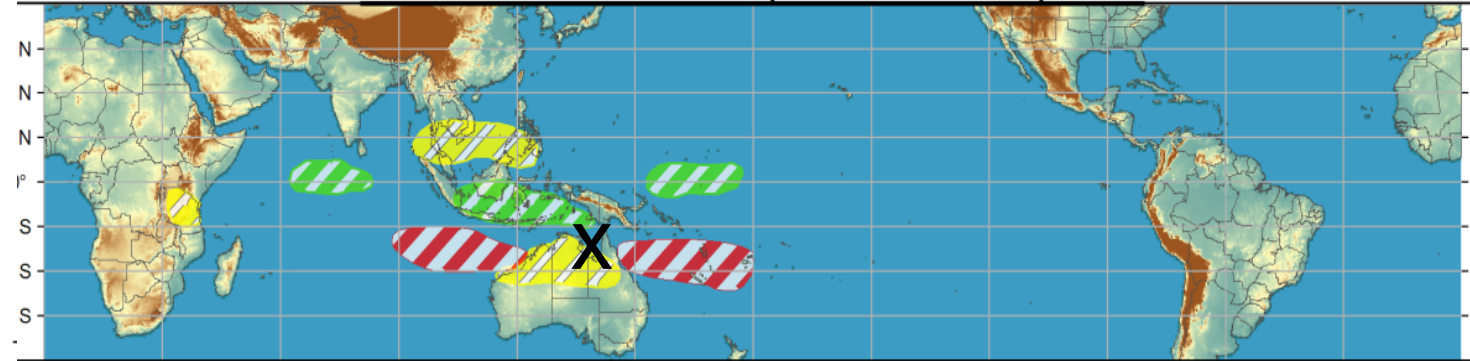
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Week 1 - Valid: Feb 11, 2015 - Feb 17, 2015



Week 2 - Valid: Feb 11, 2015 - Feb 17, 2015



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO:

- Current: ENSO-neutral (El Niño Watch)
- Outlook: There is an approximately 50-60% chance of El Niño within the late Northern Hemisphere winter and early spring, with ENSO-neutral slightly favored thereafter.

MJO and other subseasonal tropical variability:

- The MJO was weak during the past week. Equatorial Rossby waves and the low-frequency background state are also contributing.
- Most dynamical model MJO index forecasts depict little to no signal during the next 2 weeks.

Extratropics:

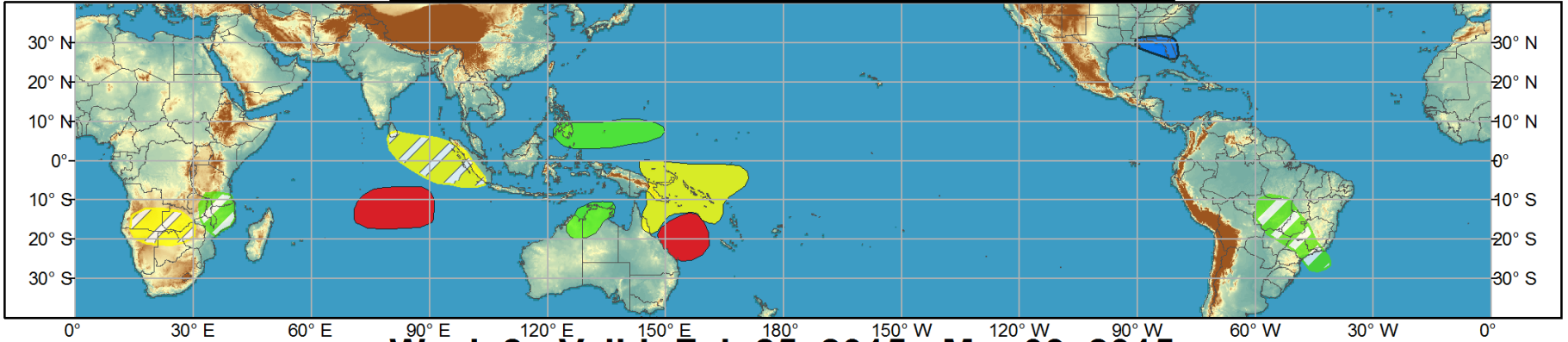
- The extended range forecast for the U.S. is not likely to be largely impacted directly by the MJO. As convection over the West Pacific interacts with the East Asian Jet, some changes to the pattern over the U.S. could materialize in March. Internal, mid-latitude variability is likely to drive much of the pattern of the CONUS through day 10.



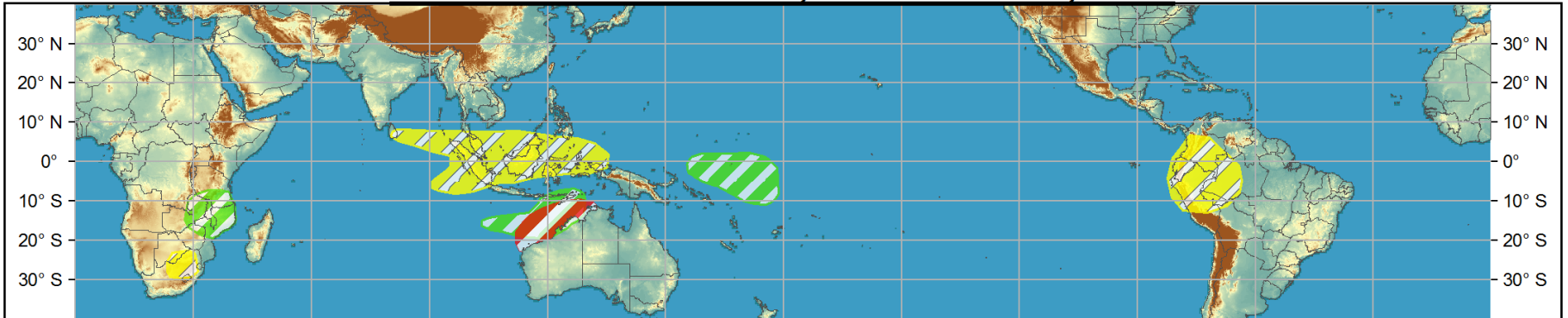
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Feb 18, 2015 - Feb 24, 2015



Week 2 - Valid: Feb 25, 2015 - Mar 03, 2015



Confidence
 High Moderate

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- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
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- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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Produced: 02/17/2015

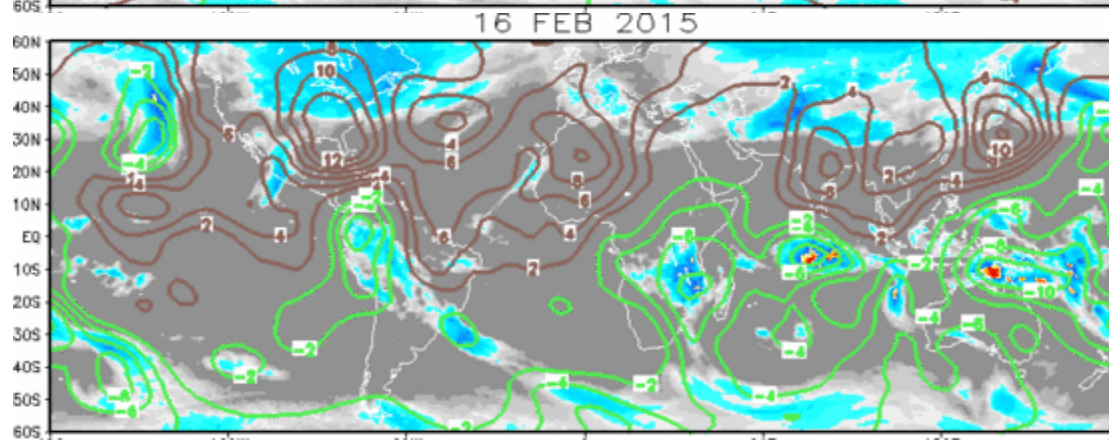
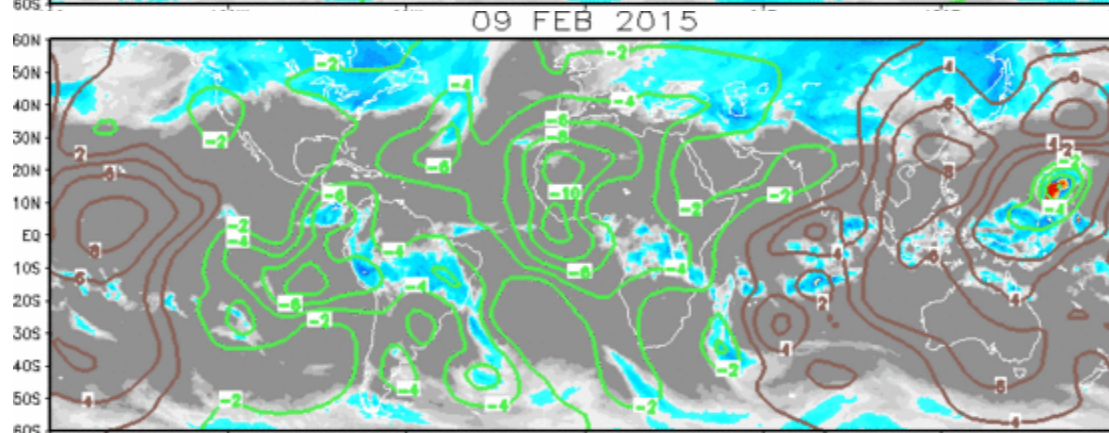
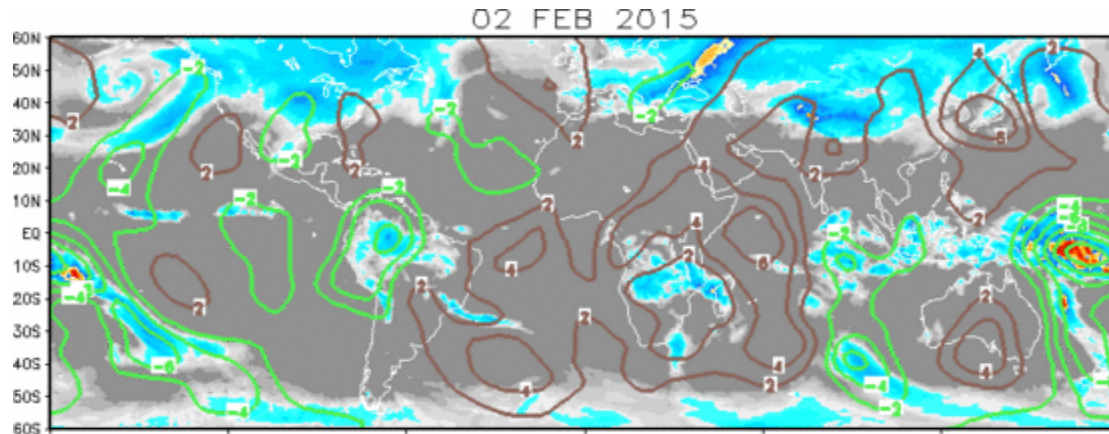
Forecaster: Rosencrans

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IR Satellite & 200-hpa Velocity Potential Anomalies

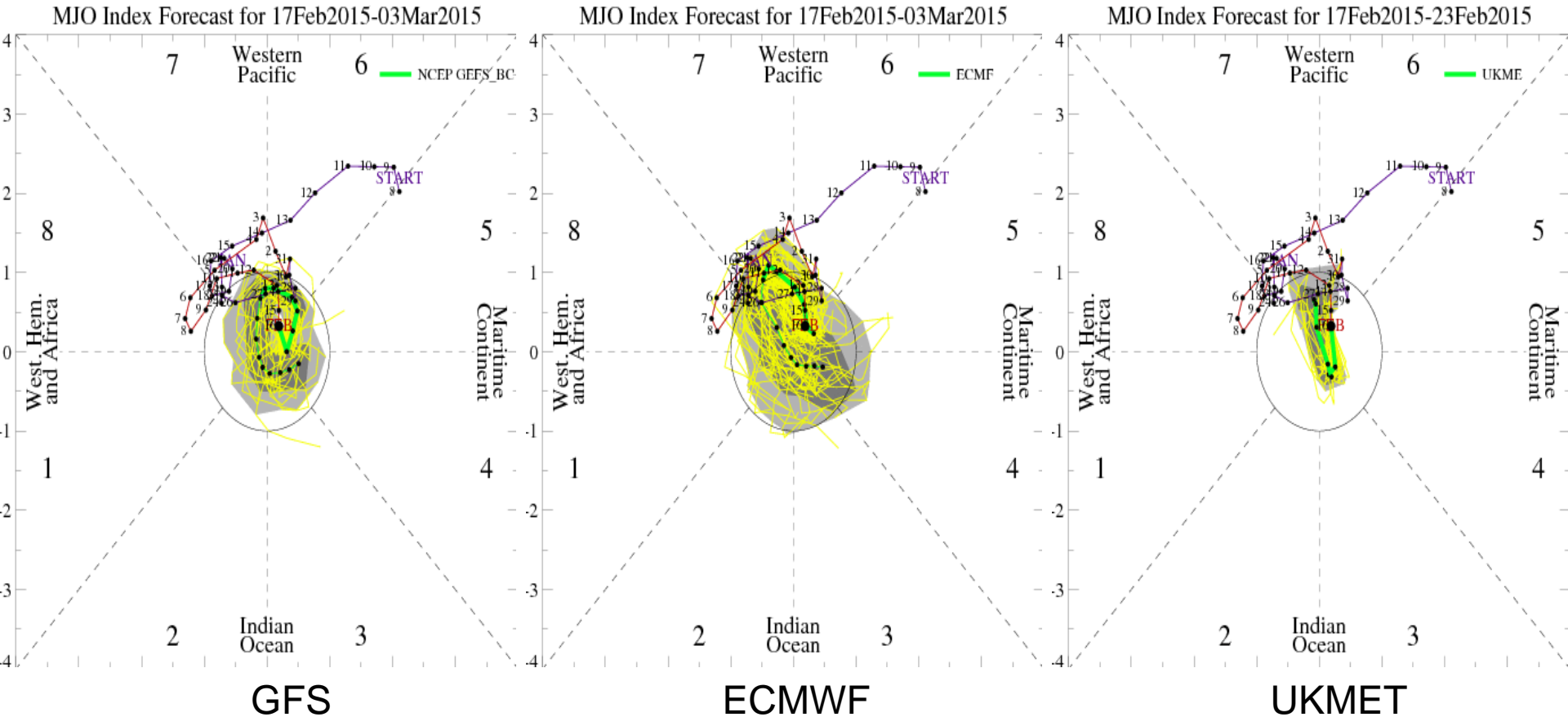
Green: Enhanced Divergence Brown: Enhanced Convergence



Base state
and transient
features
evident.

Inconsistent
with robust
MJO activity.

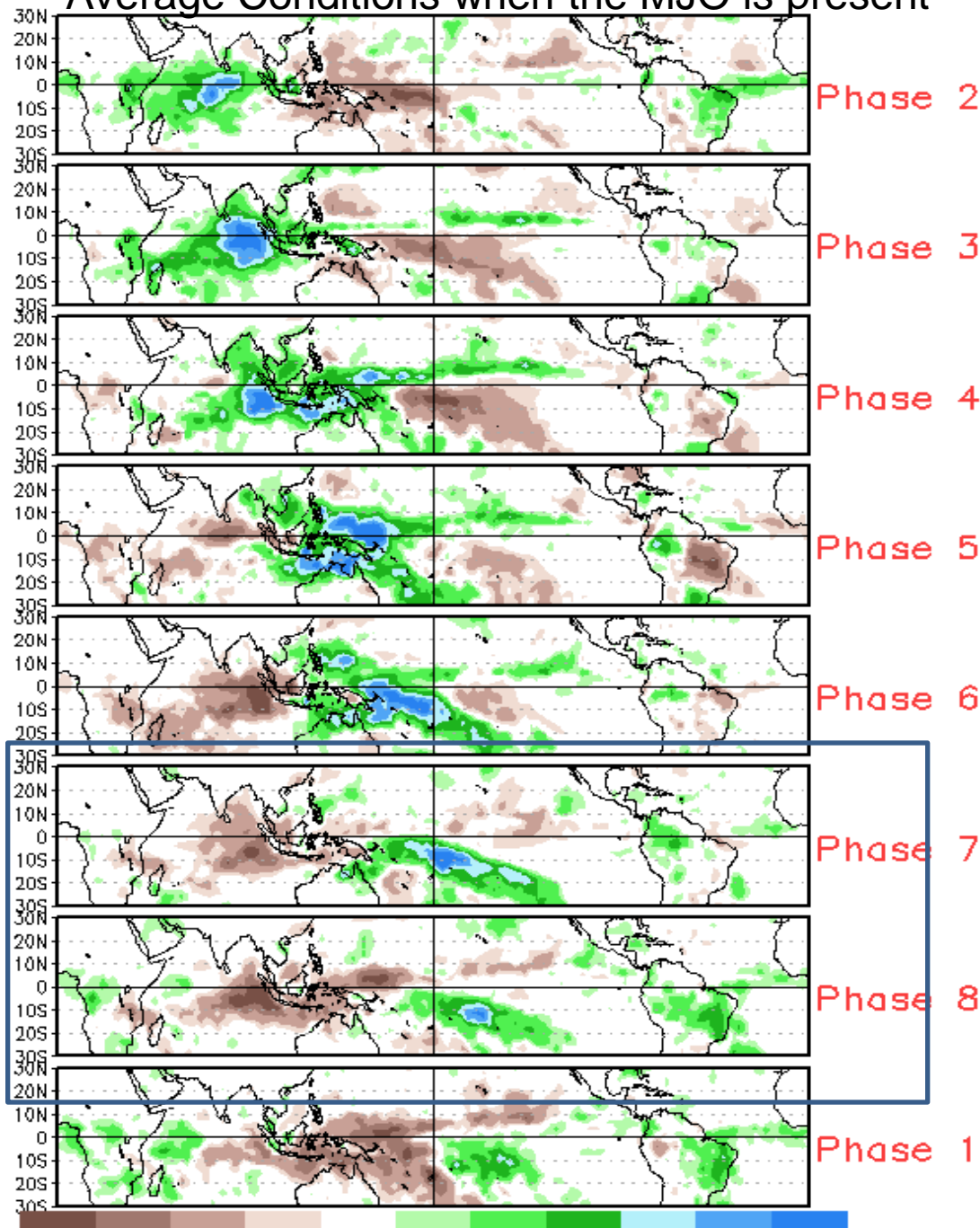
MJO Observation/Forecast



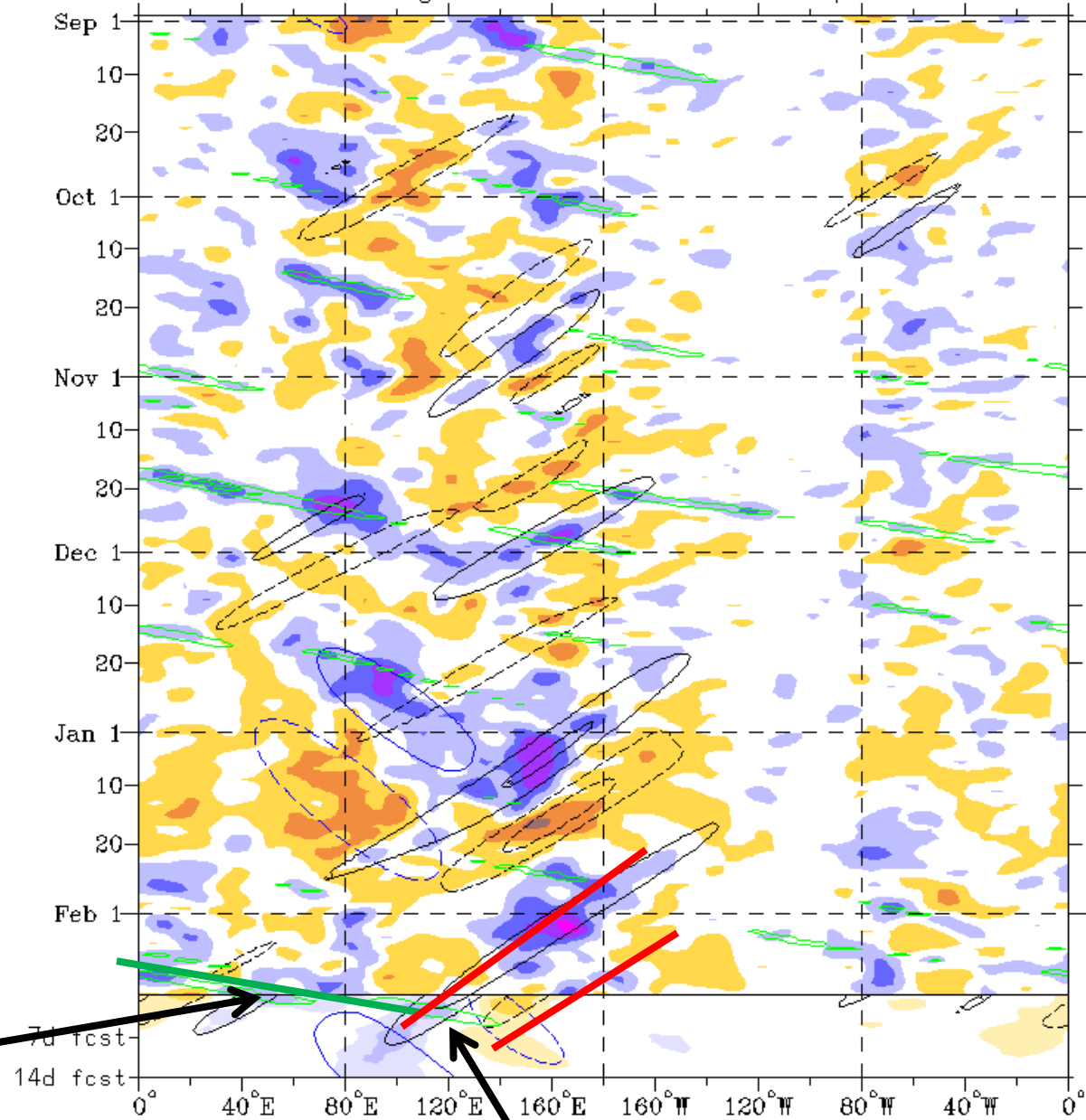
Wheeler-Hendon based analyses of model forecasts are inconsistent with robust MJO activity.

Only signal is slight, short-lived uptick in convection over West Pacific in Week-1.

Average Conditions when the MJO is present



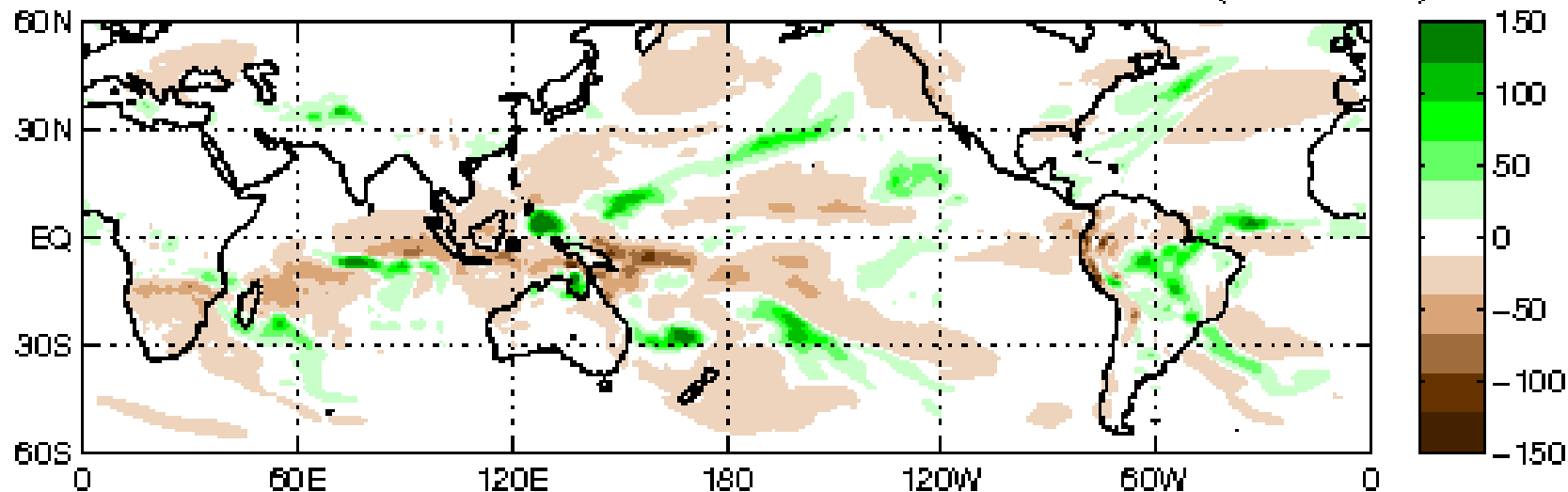
CAVEAT: These panels are representative of robust MJO events.



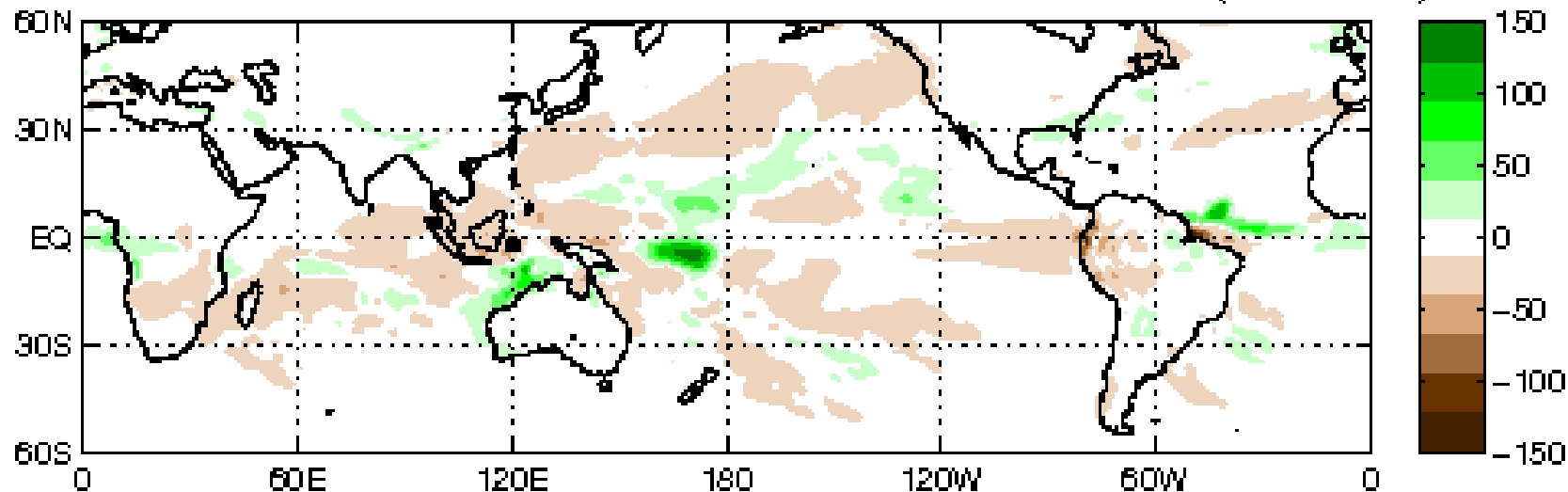
Kelvin Wave to impact Africa and Indian Ocean.

Equatorial Rossby Waves to impact the West Pacific and Maritime Continent.

CFS: Anom. PREC Week: 1: 18-Feb-2015 to 24-Feb-2015 (mm/week)

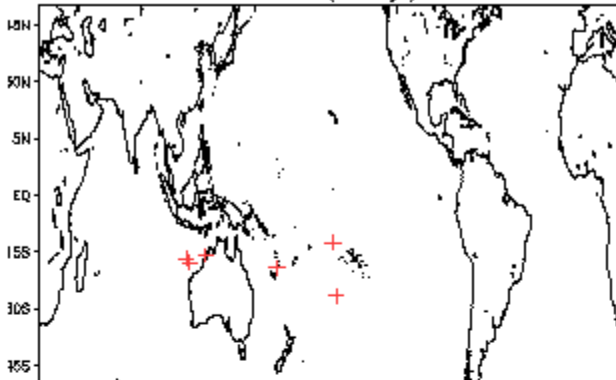


CFS: Anom. PREC Week: 2: 25-Feb-2015 to 03-Mar-2015 (mm/week)

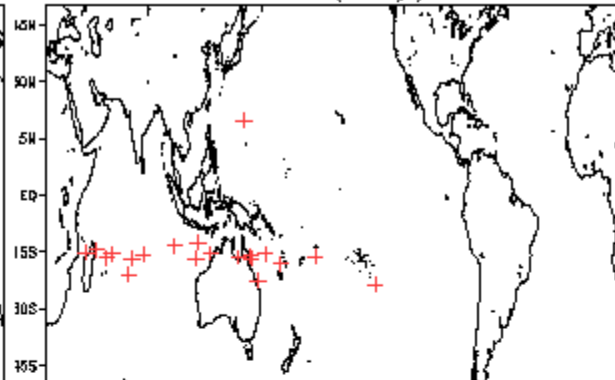


February Tropical Storm Formation by MJO phase

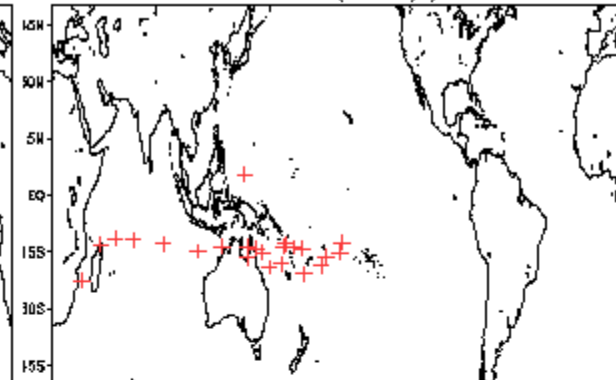
Phase 1 (41 days) 7 storms



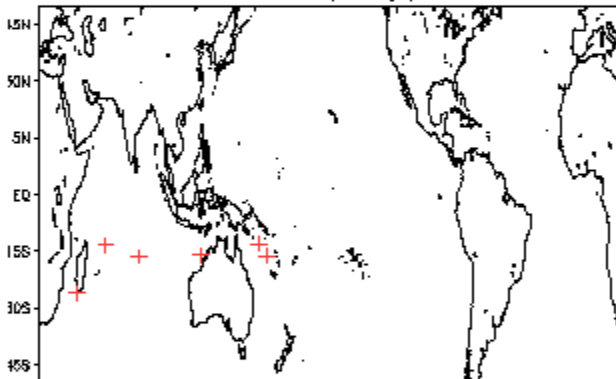
Phase 4 (92 days) 21 storms



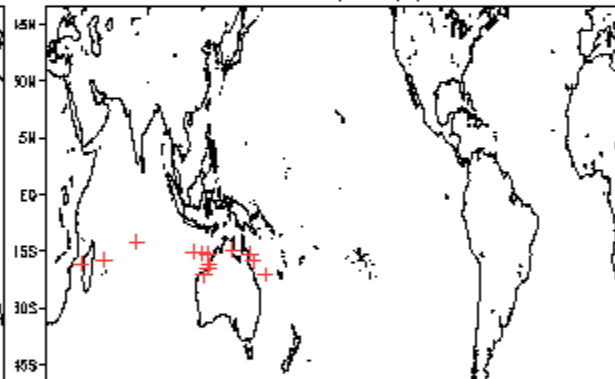
Phase 7 (125 days) 24 storms



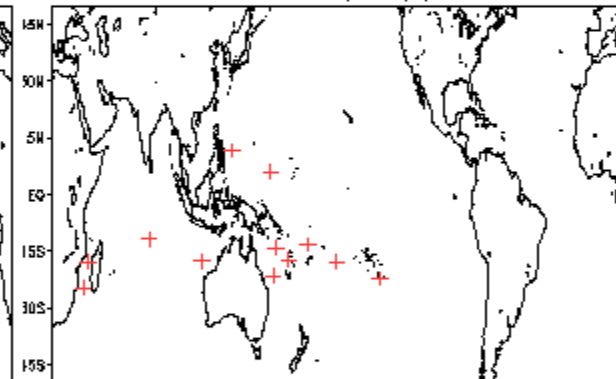
Phase 2 (51 days) 7 storms



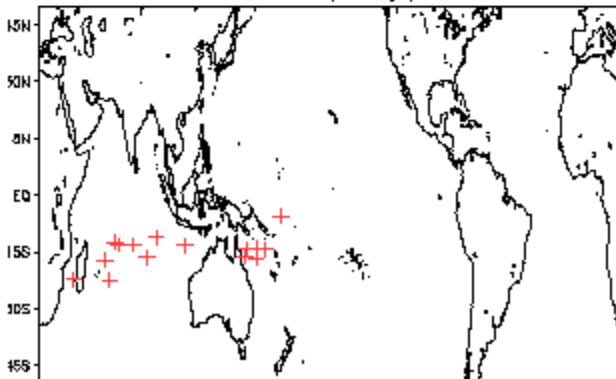
Phase 5 (70 days) 14 storms



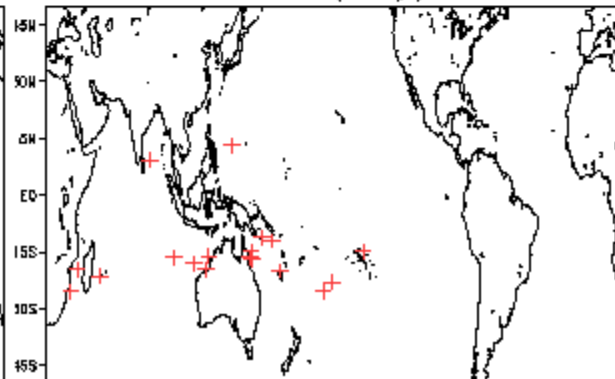
Phase 8 (84 days) 13 storms



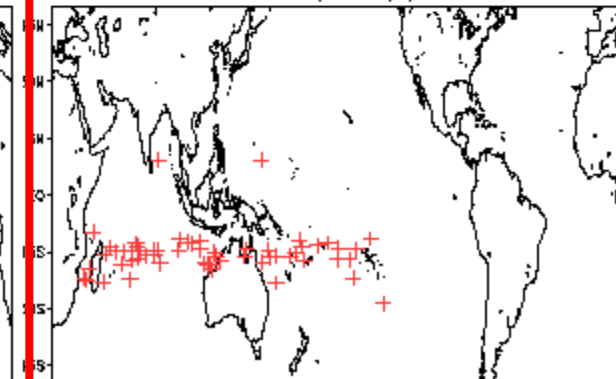
Phase 3 (89 days) 16 storms

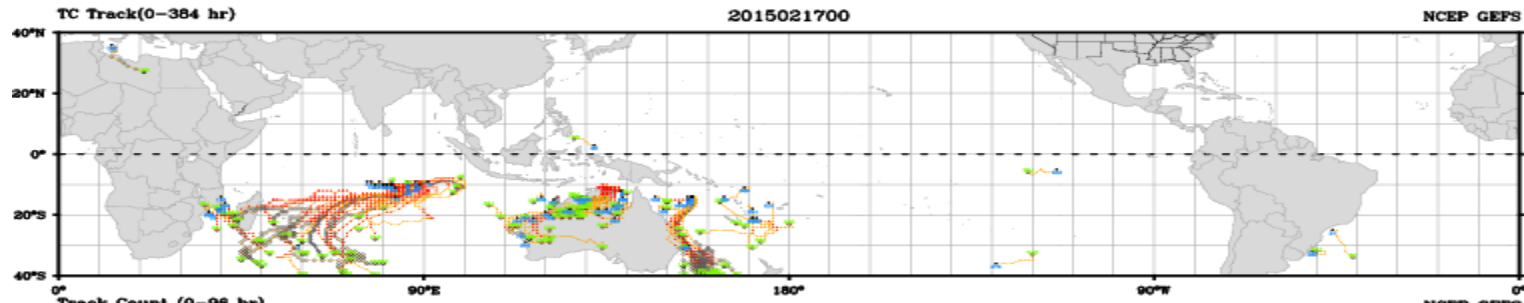


Phase 6 (92 days) 19 storms

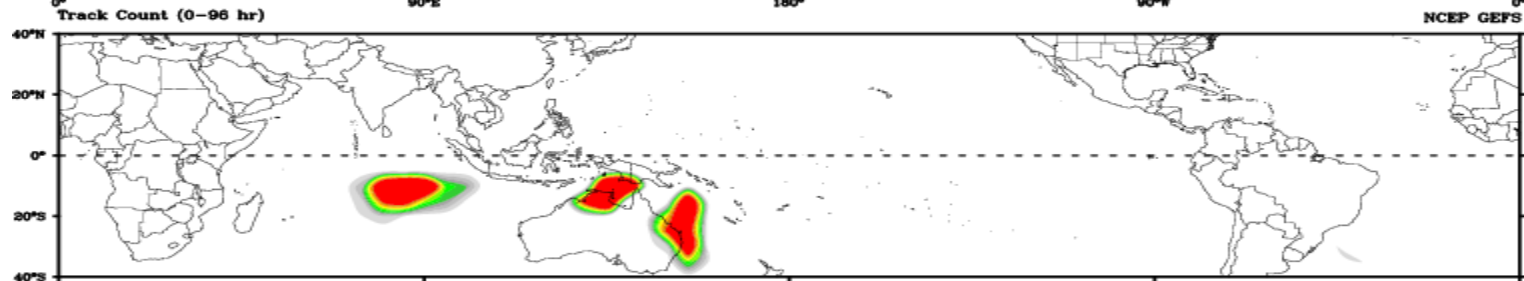


Null (308 days) 60 storms

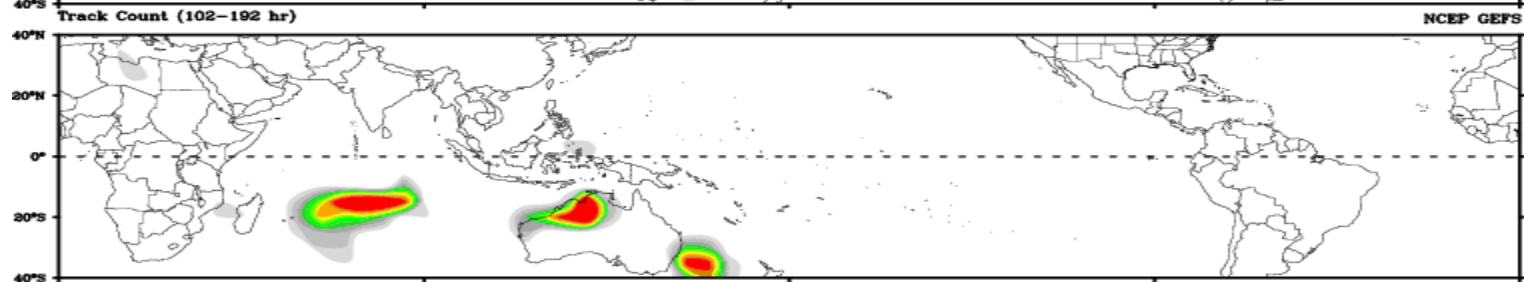




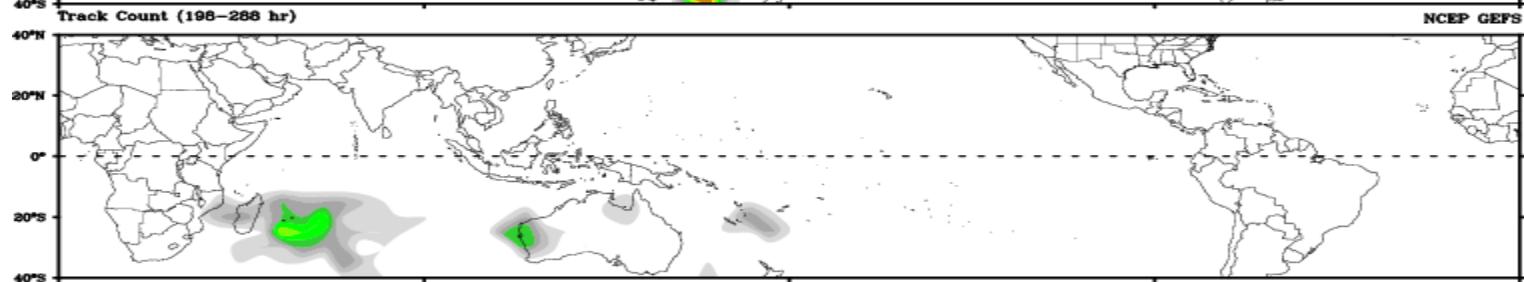
Days 1-4



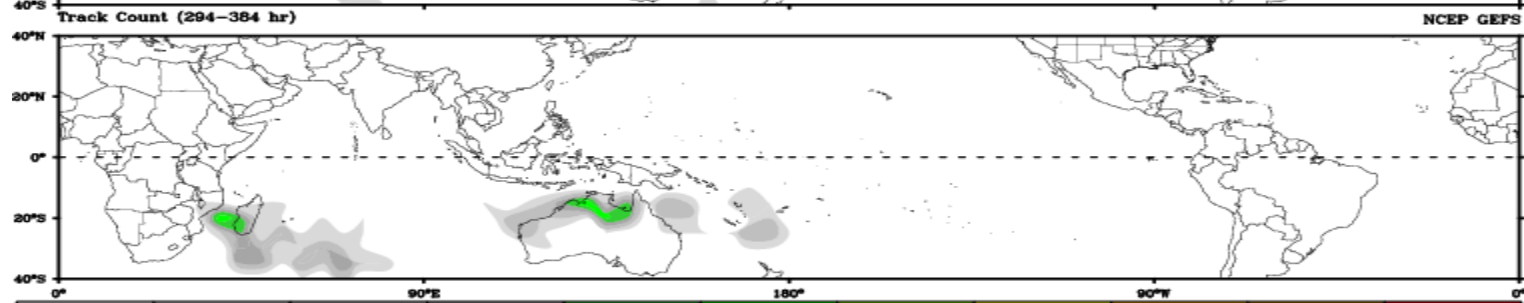
Day 5-8



Day 9-12

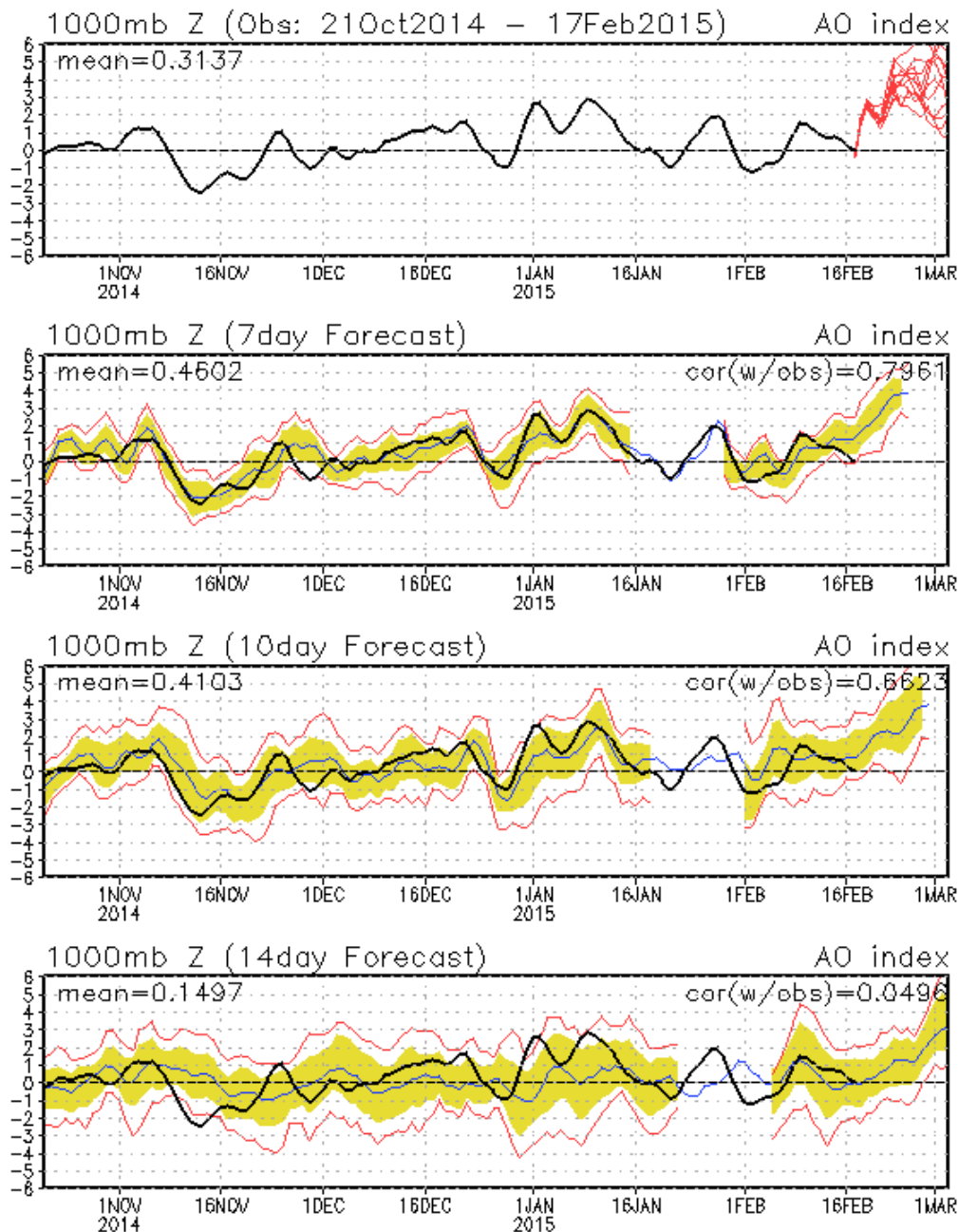


Day 13-15



Connections to U.S. Impacts

AO: Observed & ENSM forecasts

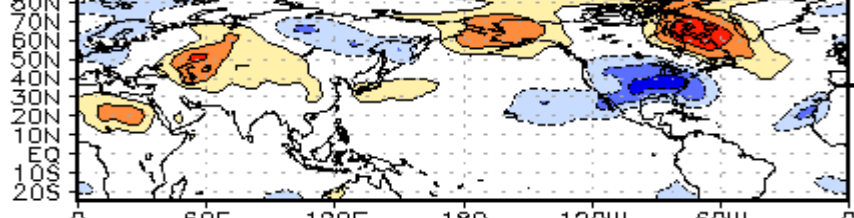
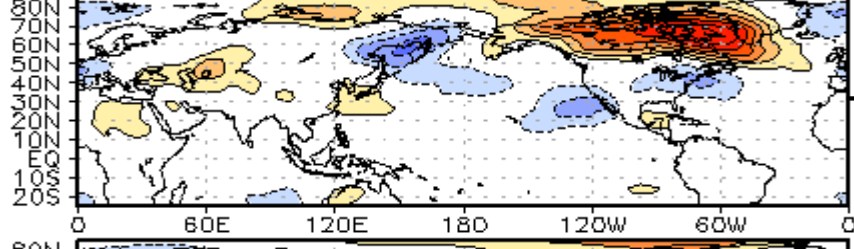
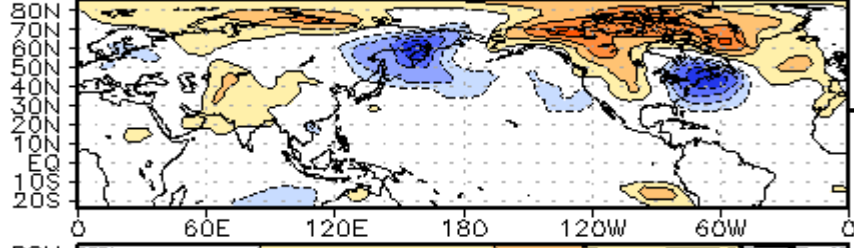
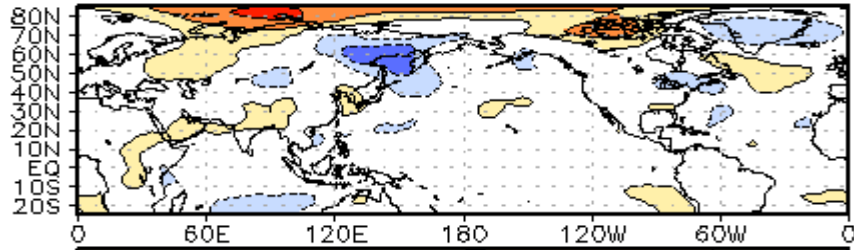
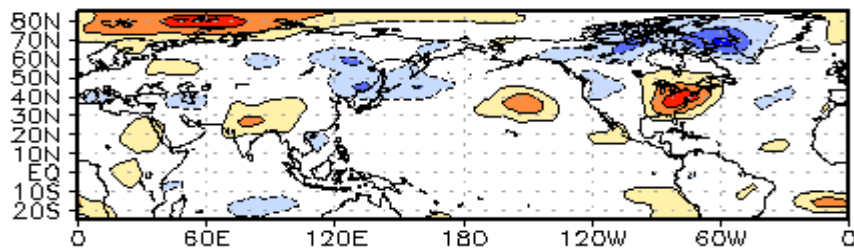


Lagged composites from MJO

5-day intervals

WHMJO Phase 6 z200 Lagged Composite (jfm)

WHMJO Phase 6 t850 Lagged Composite (jfm)

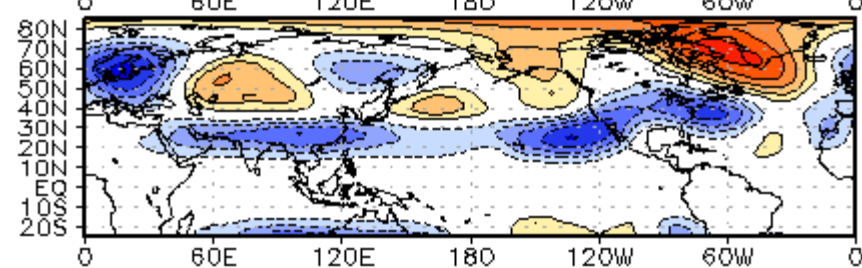
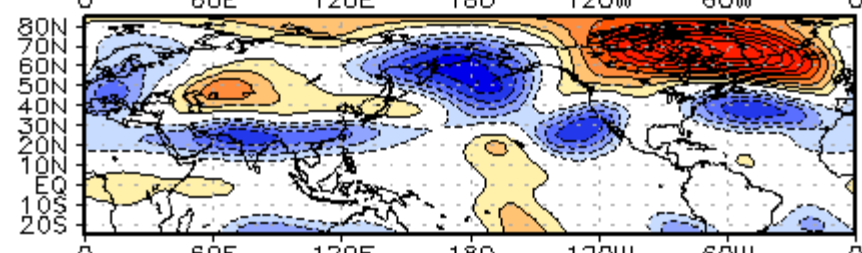
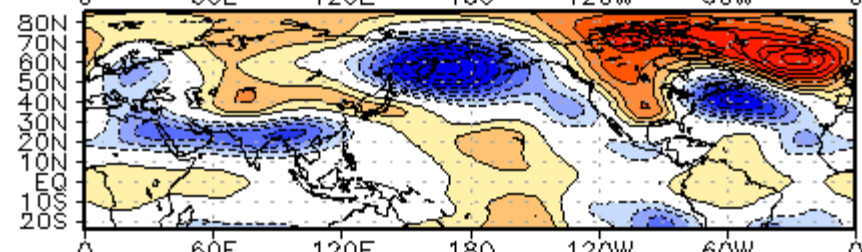
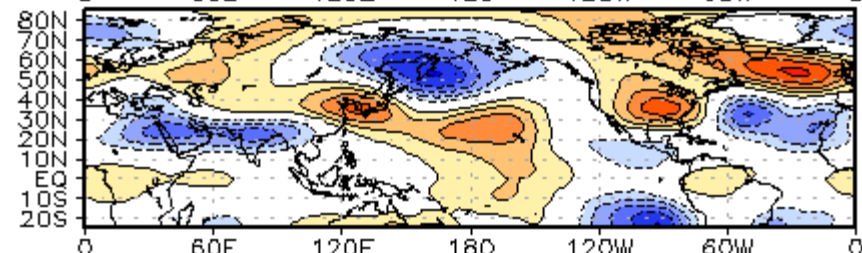
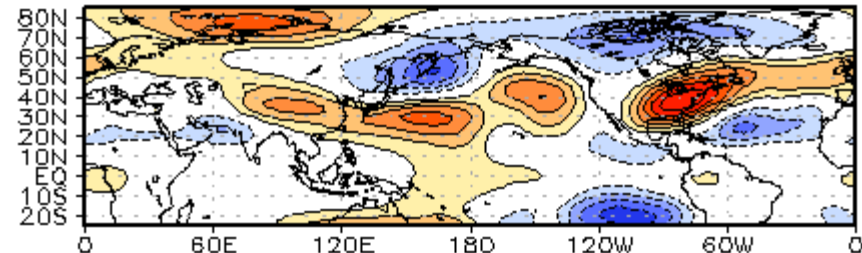


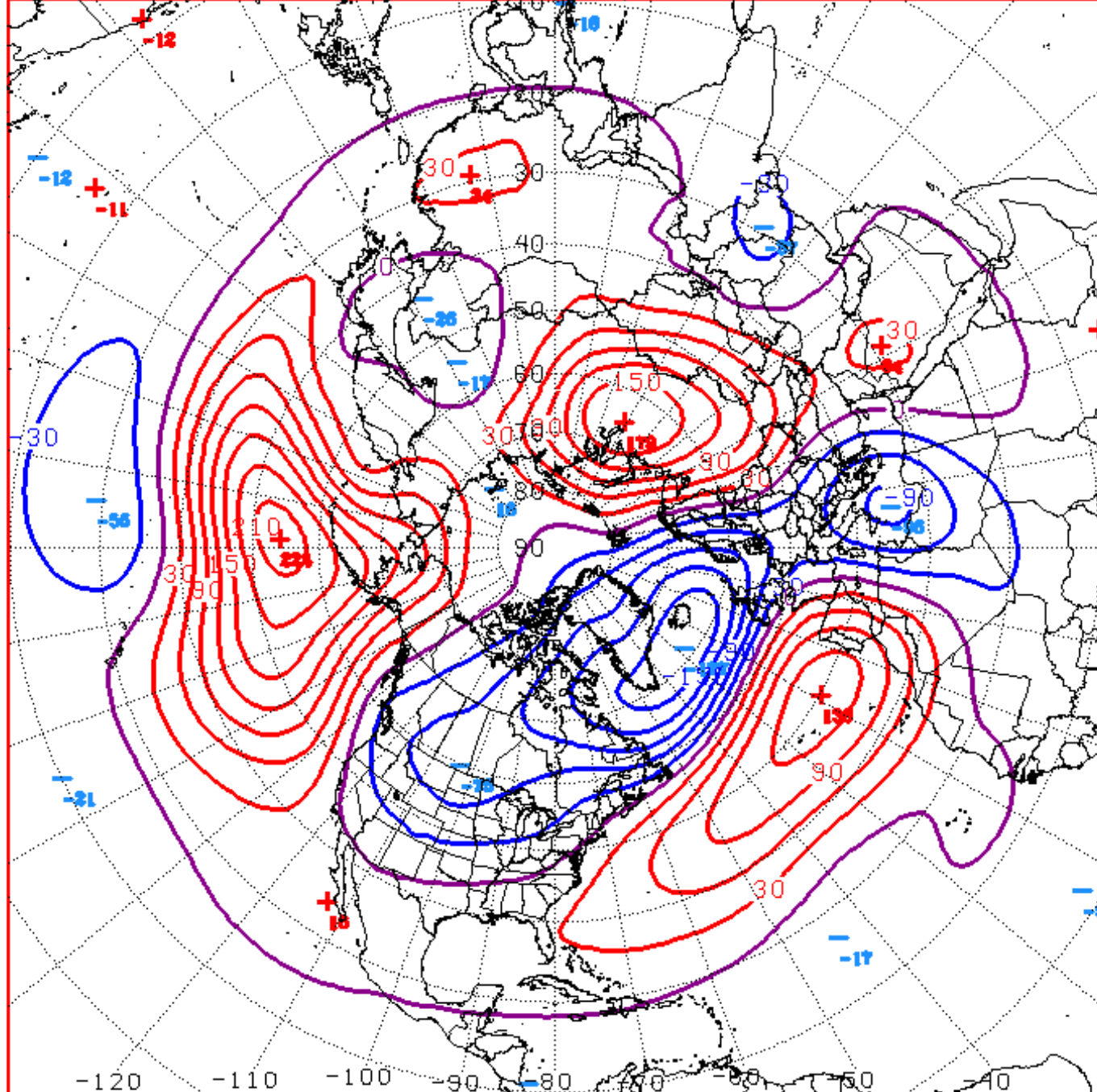
+5-day

+10-day

+15-day

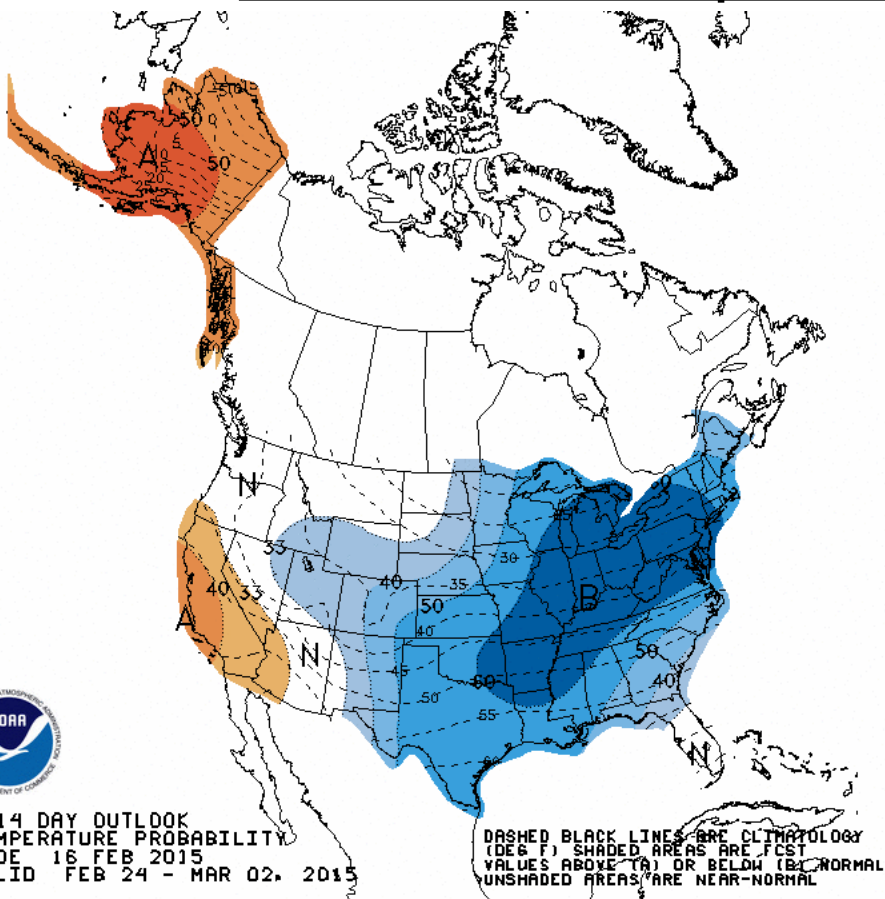
+20-day



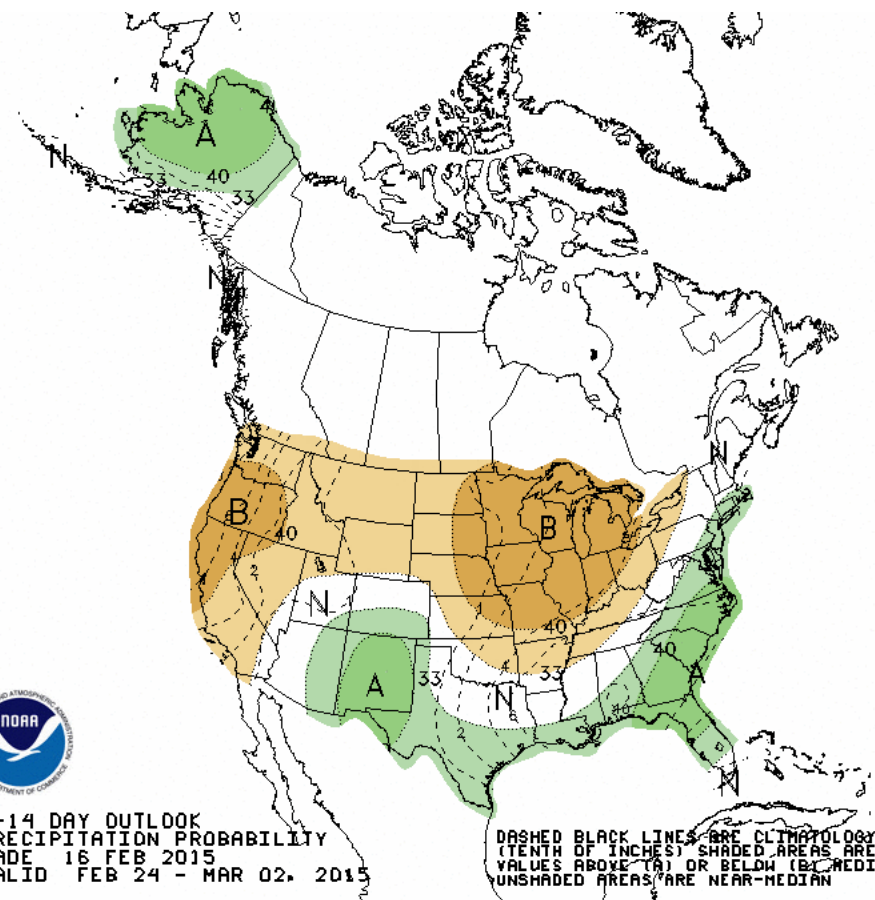
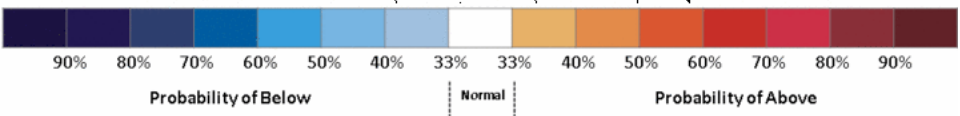


D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE FEB 17 2015 1041 UTC CNTD FEB 28 2015

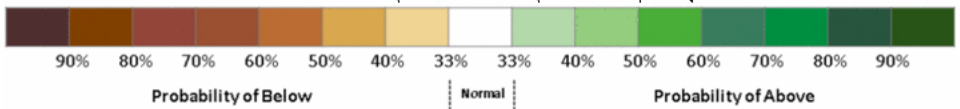
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 16 FEB 2015
VALID FEB 24 - MAR 02, 2015



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 16 FEB 2015
VALID FEB 24 - MAR 02, 2015

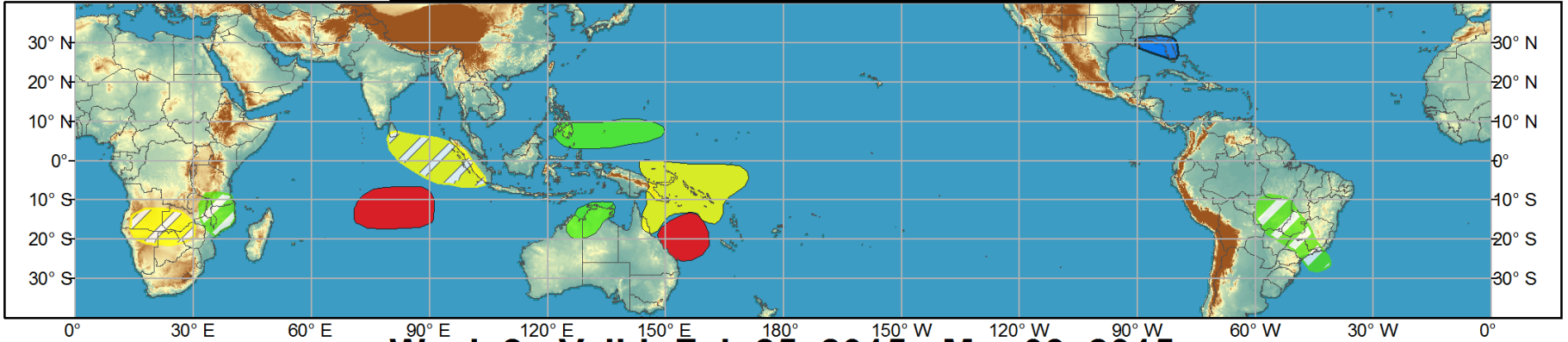




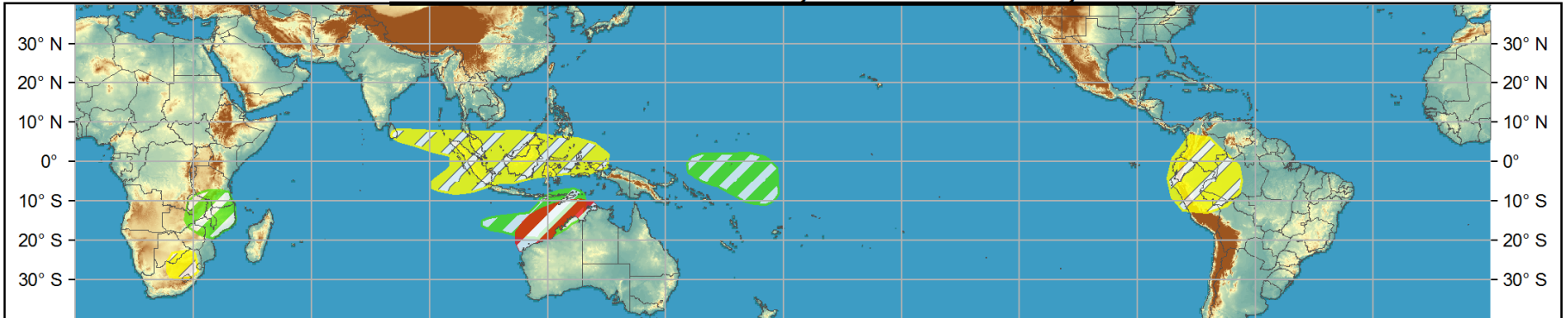
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