

Global Tropics Hazards And Benefits Outlook

April 2, 2013

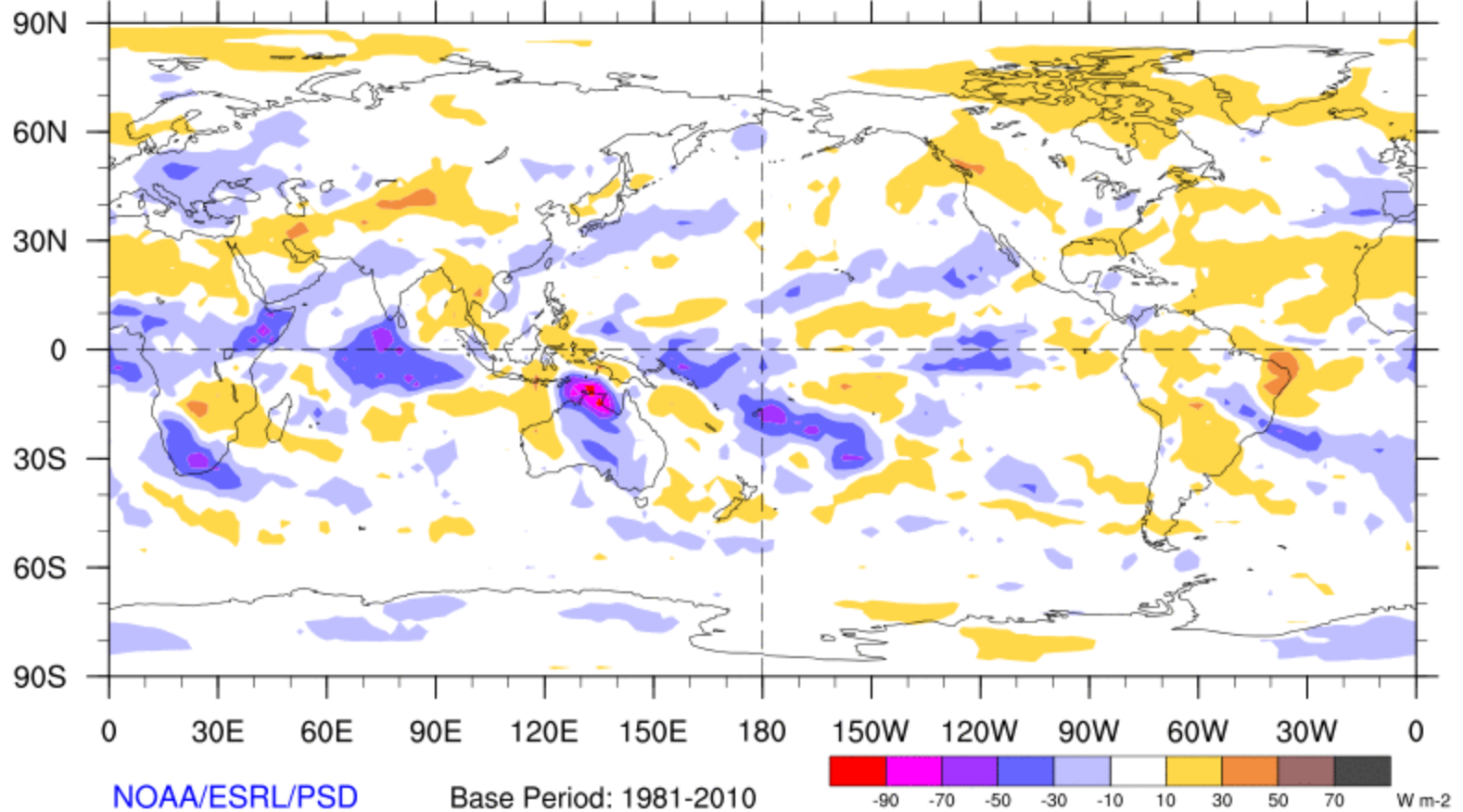
Matthew Rosencrans

Outline

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

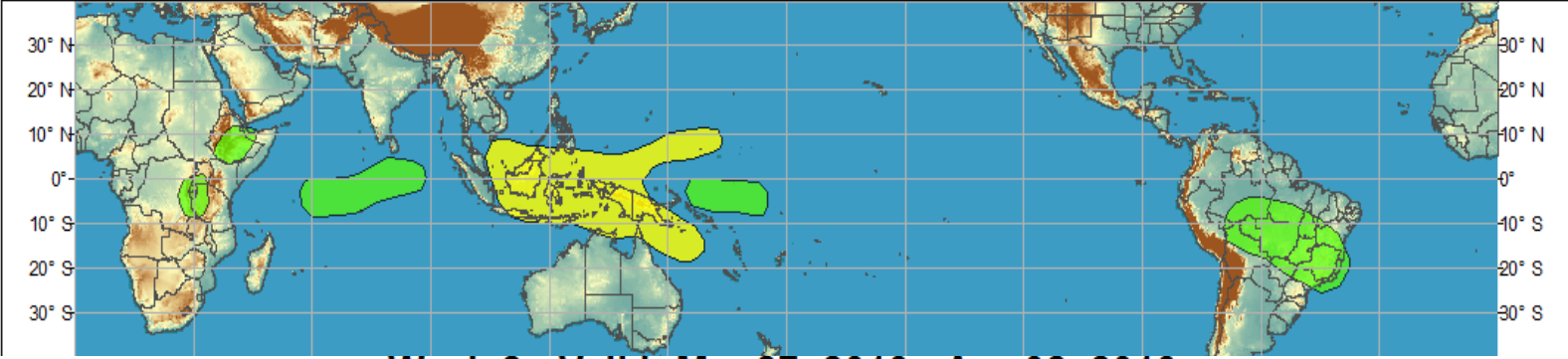
7-Day Average OLR Anomaly

2013/03/25 - 2013/03/31

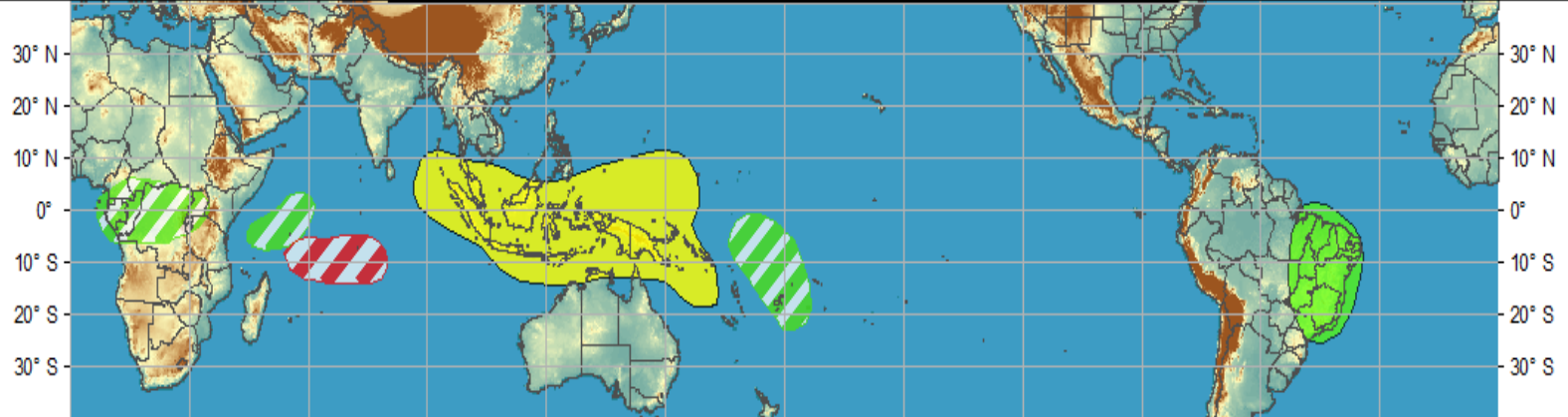




Week 1 - Valid: Mar 27, 2013 - Apr 02, 2013



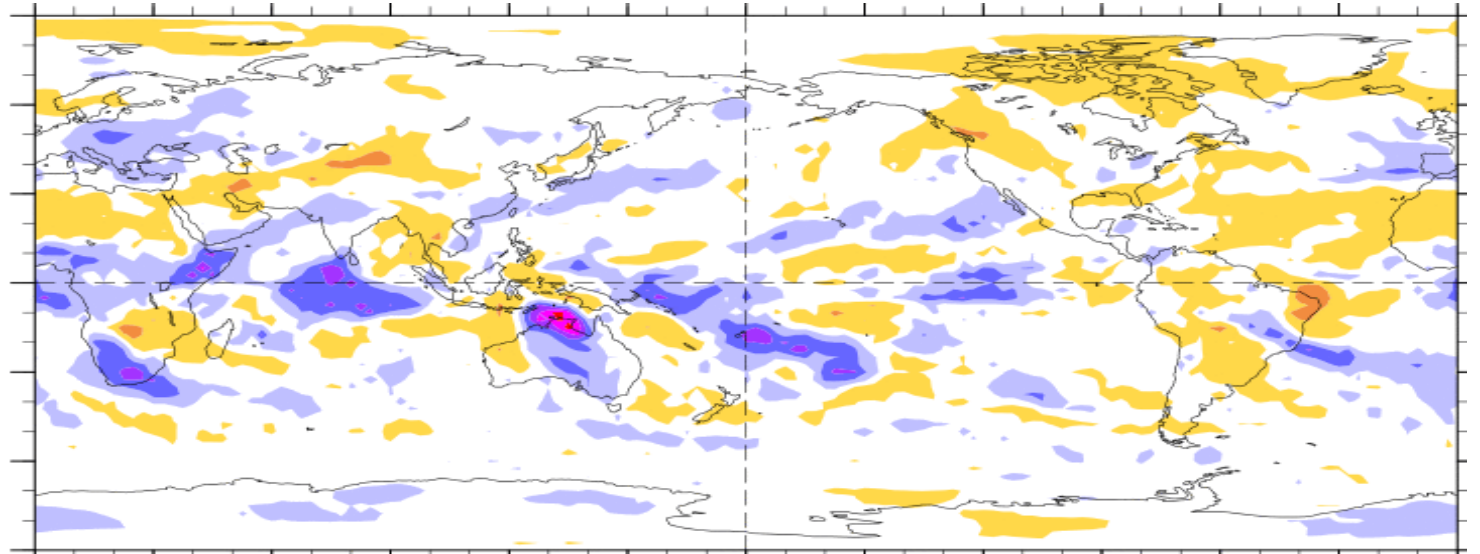
Week 2 - Valid: Mar 27, 2013 - Apr 02, 2013



Outlook Review

Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO:

- ENSO-neutral conditions are favored to continue through Northern Hemisphere spring 2013

MJO and other subseasonal tropical variability:

- The MJO remained active over the past week, although some observational indicators are less coherent than in previous weeks as other subseasonal variability are playing a large role in the pattern of anomalous tropical convection. The MJO enhanced phase is centered over the eastern Indian Ocean.

- Dynamical model MJO index forecasts generally support continued eastward propagation. The statistical tools also support continued MJO activity, although those reflect a weaker signal.

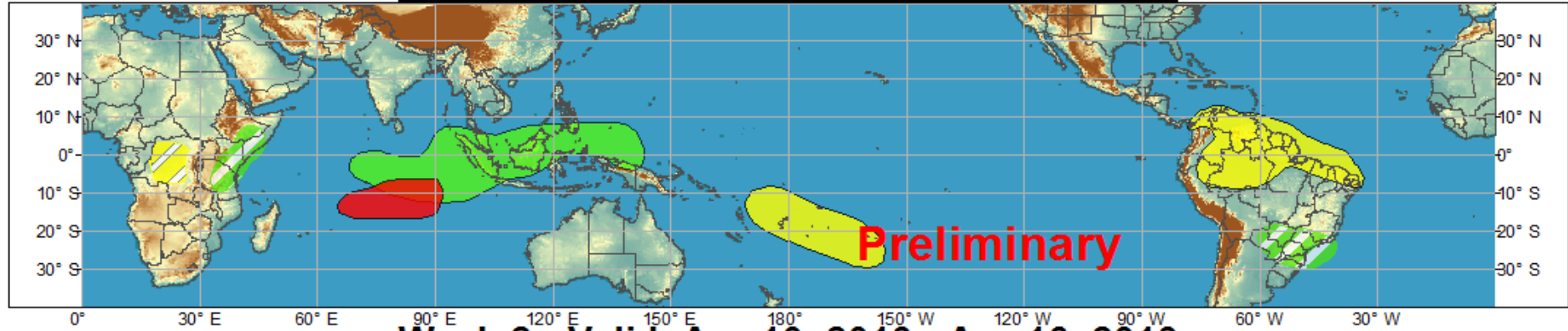
Extratropics:

- The extended range forecast for the U.S. aligns well with the typical circulation patterns based on the current and forecast phases of the MJO. These include a trend towards above-normal temperatures across the eastern U.S. and a more active across the central U.S.

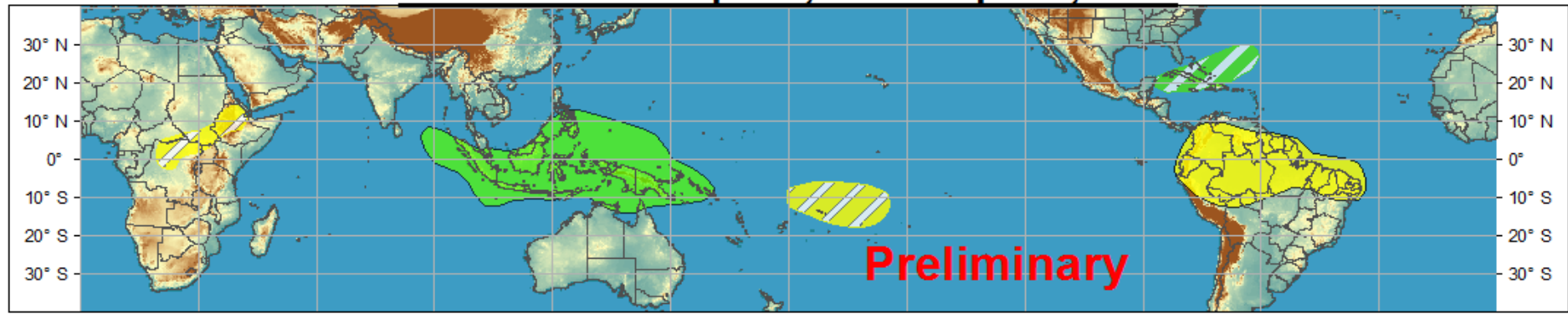


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Apr 03, 2013 - Apr 09, 2013



Week 2 - Valid: Apr 10, 2013 - Apr 16, 2013



Confidence
High Moderate

- Tropical Cyclone Formation**
- Above-average rainfall**
- Below-average rainfall**
- Above-normal temperatures**
- Below-normal temperatures**



- Development of a tropical cyclone that eventually reaches tropical storm/cyclone strength.
- Weekly total rainfall in the upper third of the historical range.
- Weekly total rainfall in the lower third of the historical range.
- 7-day mean temperatures in the upper third of the historical range.
- 7-day mean temperatures in the lower third of the historical range.

Produced: 04/01/2013

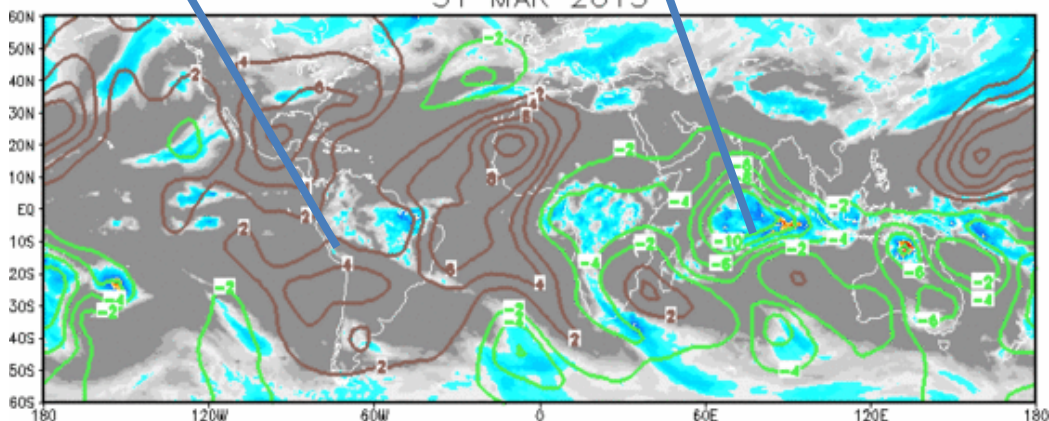
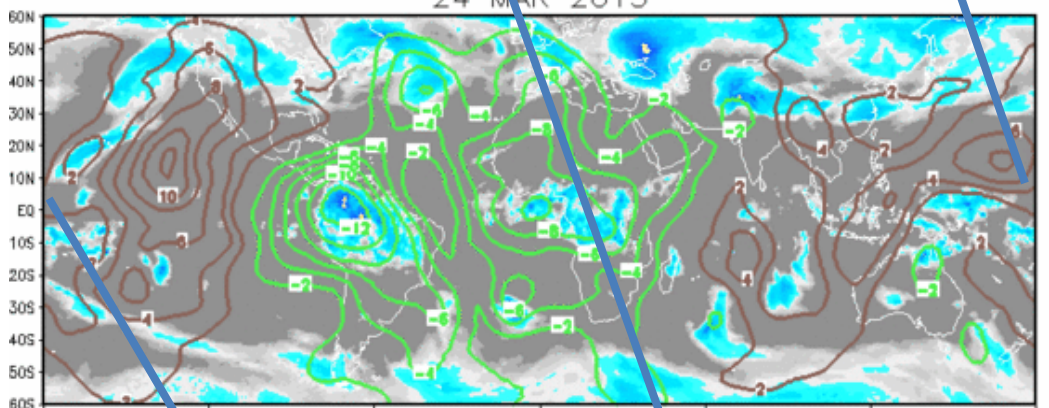
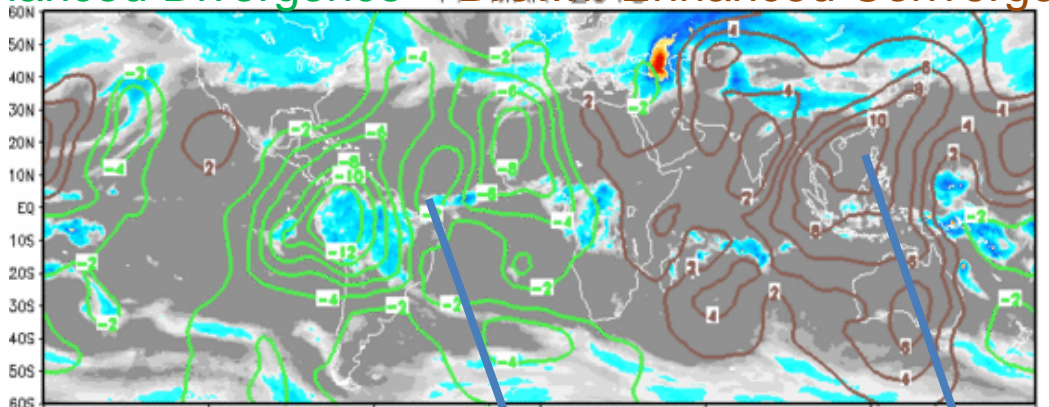
Forecaster: Rosencrans

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.



IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

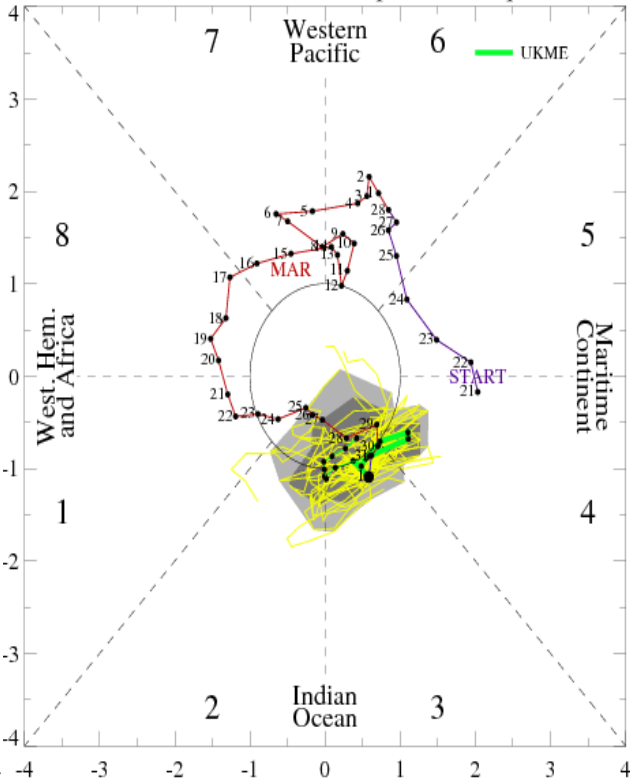
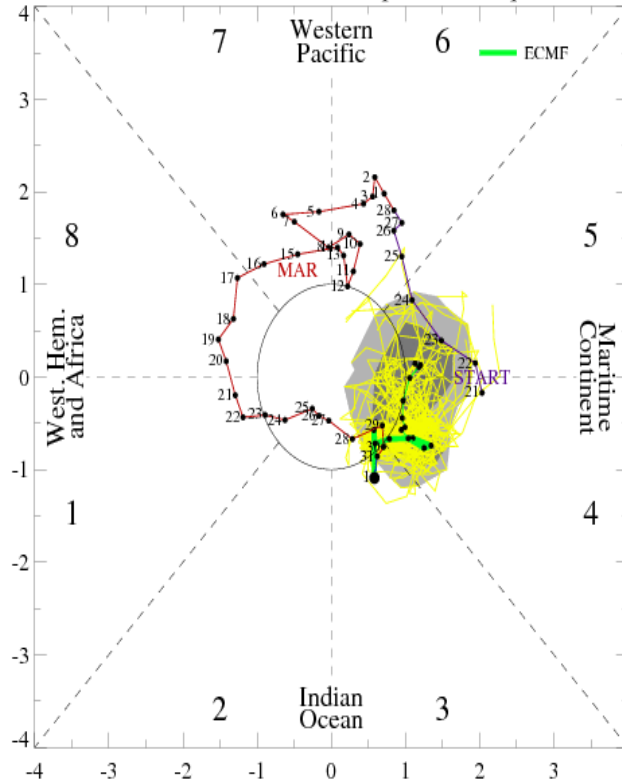
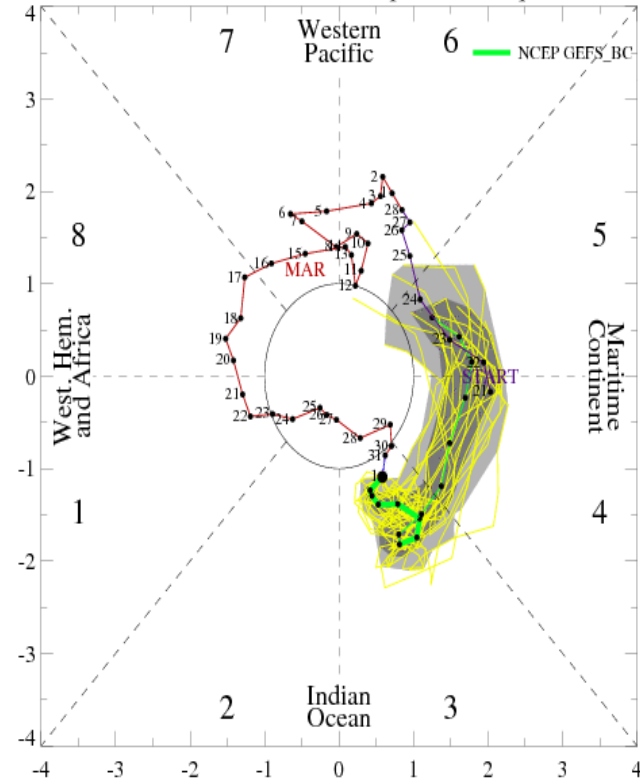


MJO Observation/Forecast

MJO Index Forecast for 02Apr2013-16Apr2013

MJO Index Forecast for 02Apr2013-16Apr2013

MJO Index Forecast for 02Apr2013-16Apr2013

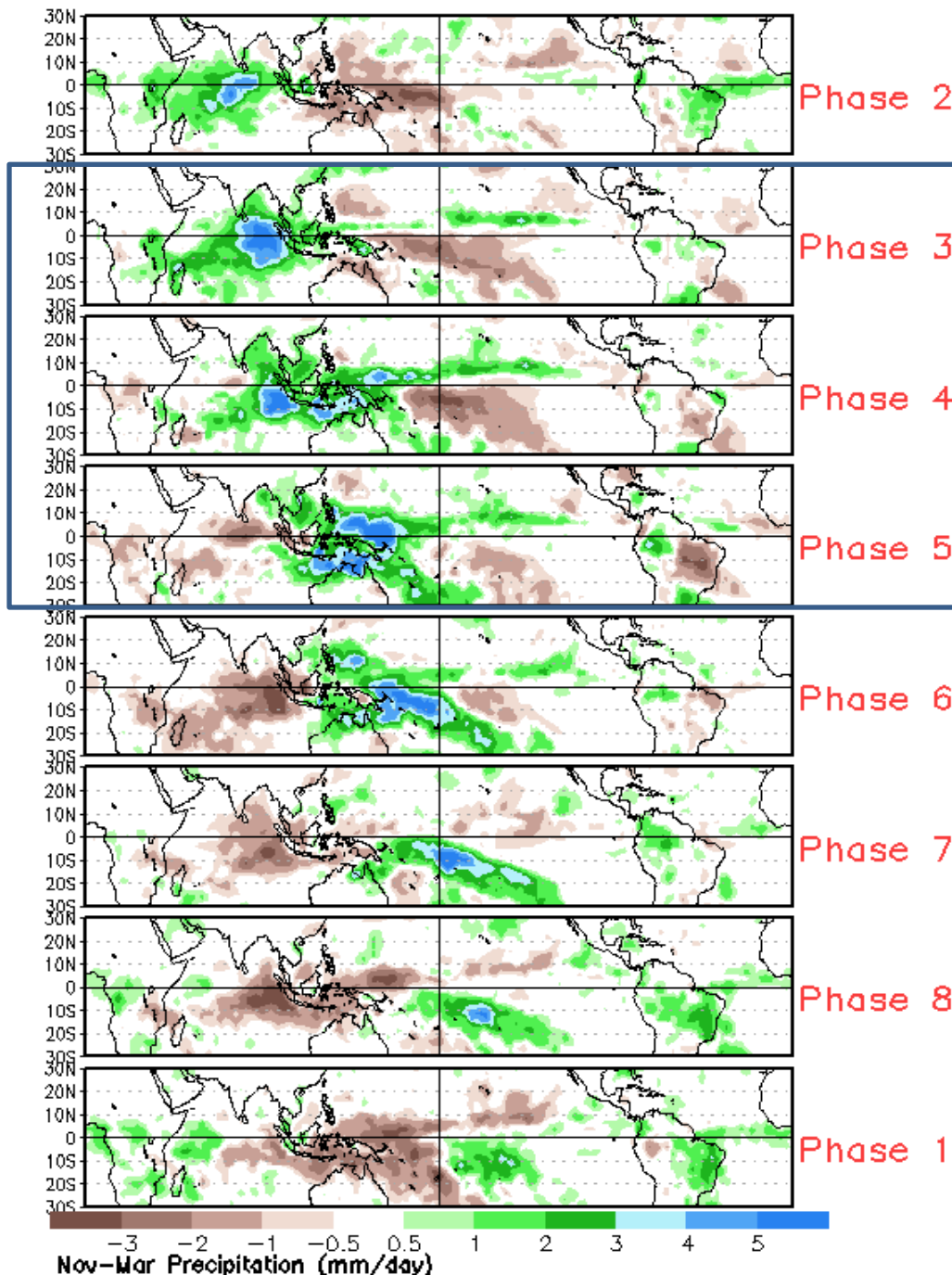


GFS

ECMWF

UKMET

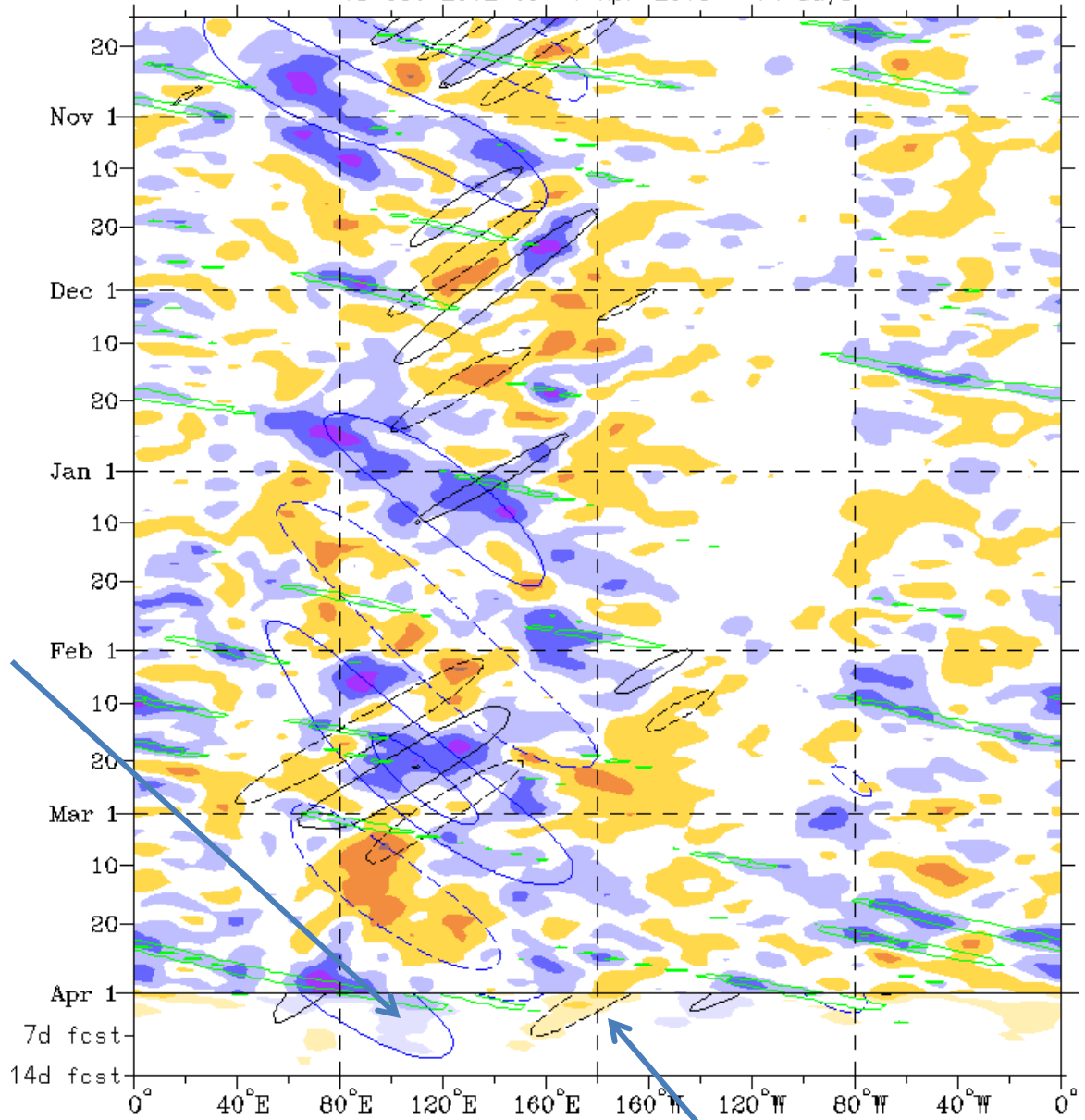
Average Conditions when the MJO is present (Nov-Mar)



CAVEAT:
Connection of
downstream
precipitation
patterns to MJO
phase is not as
robust during
spring.



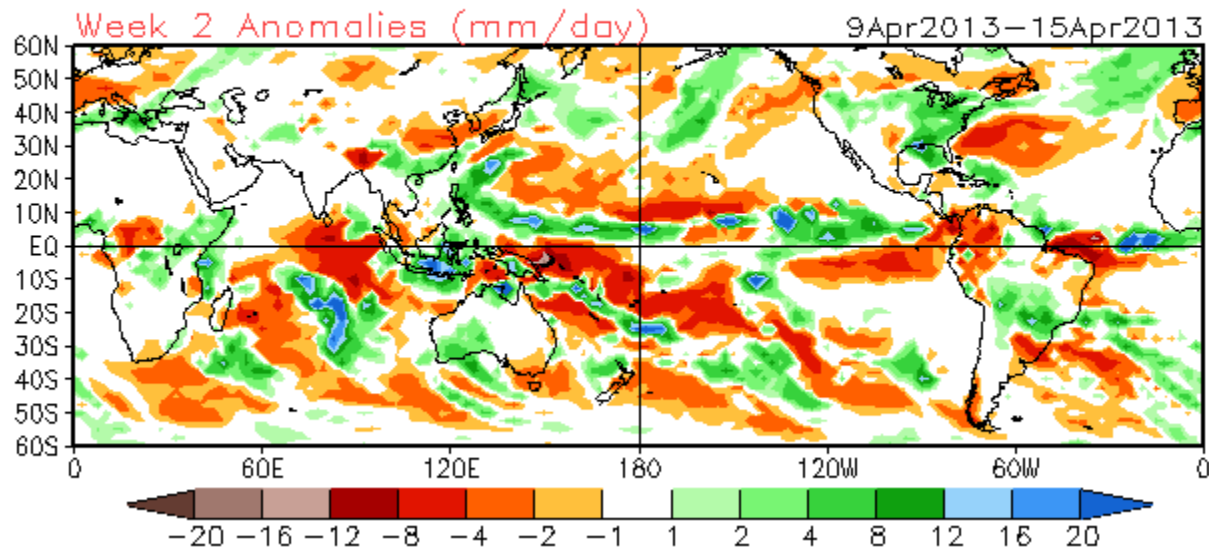
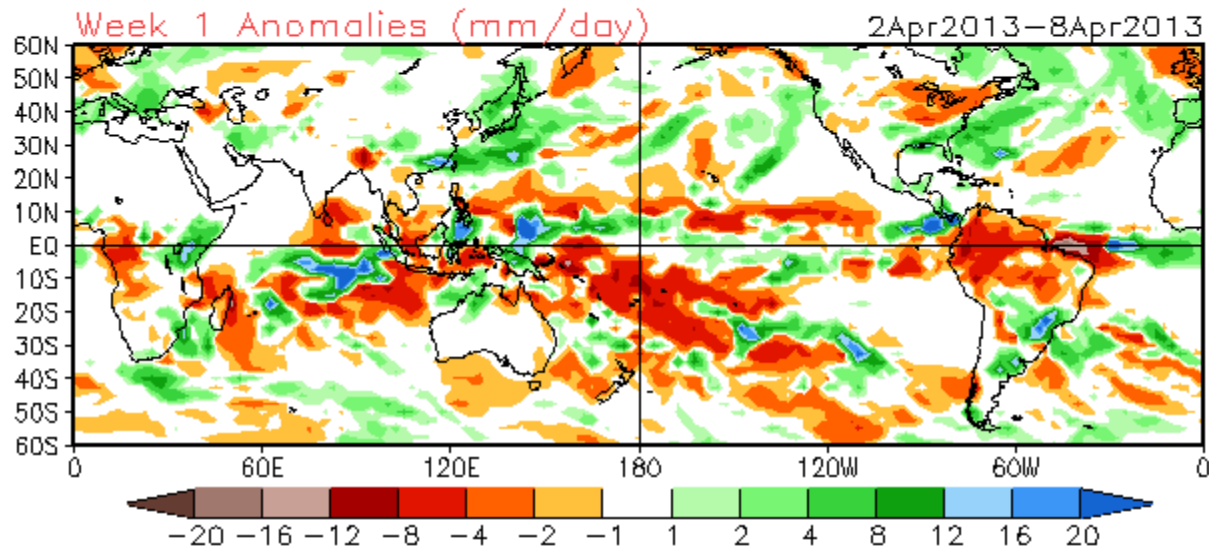
15-Oct-2012 to 1-Apr-2013 + 14 days



Atmospheric Kelvin waves and active phase of the MJO forecast to impact Indian Ocean and Maritime Continent.

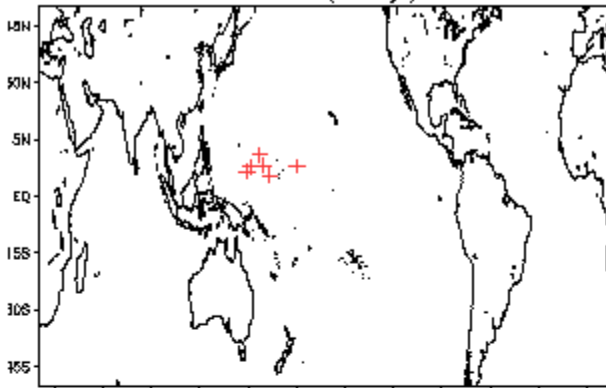
Indications of other modes of variability, including mid-latitude influence near the Date Line.

CFSv2 Weeks 1 & 2 Precipitation
16 Member Ensemble Mean Forecast from 01Apr2013

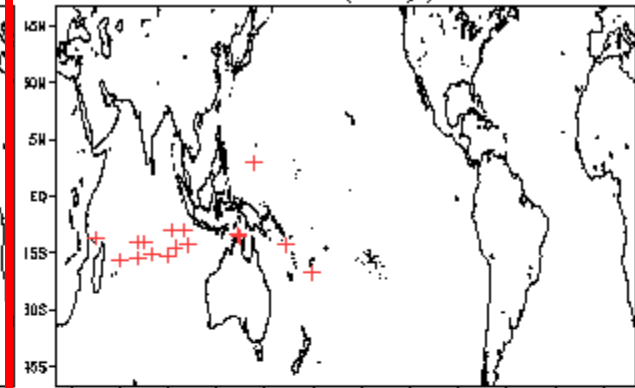


April Tropical Storm Formation by MJO phase

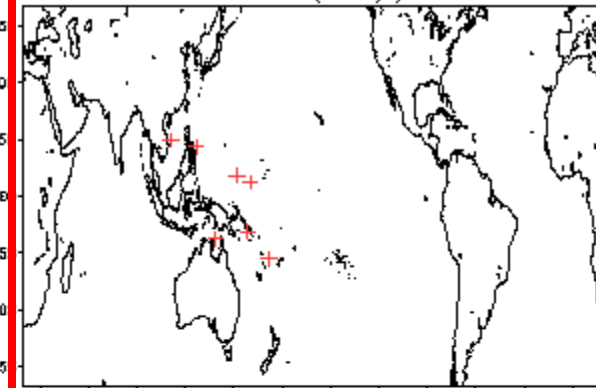
Phase 1 (70 days) 7 storms



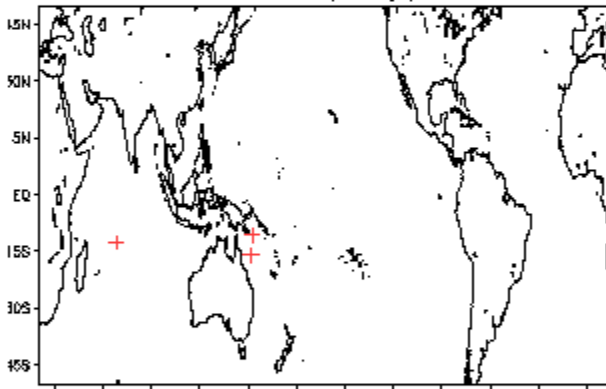
Phase 4 (95 days) 17 storms



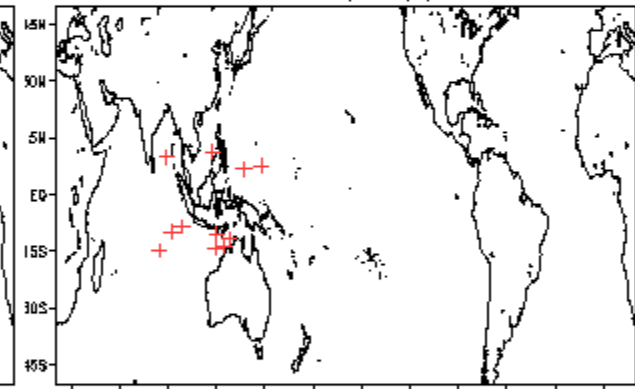
Phase 7 (87 days) 8 storms



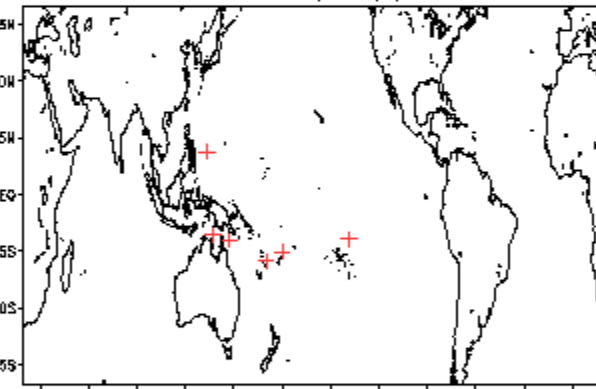
Phase 2 (65 days) 4 storms



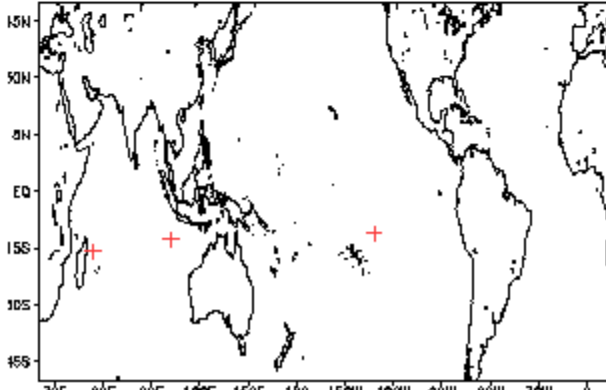
Phase 5 (77 days) 12 storms



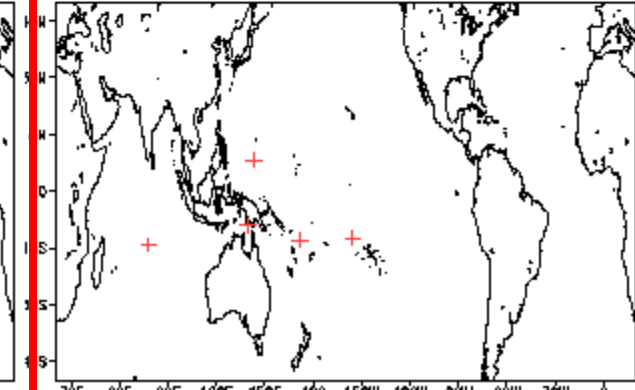
Phase 8 (75 days) 7 storms



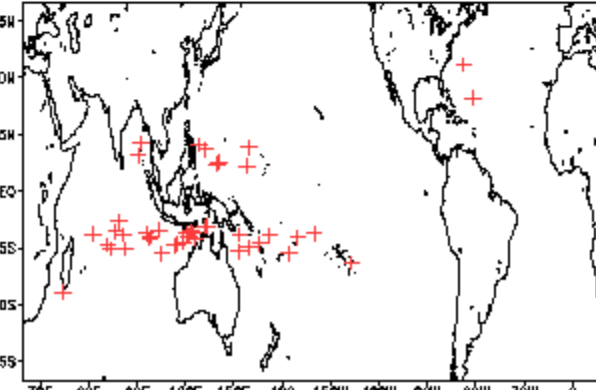
Phase 3 (68 days) 4 storms



Phase 6 (65 days) 8 storms



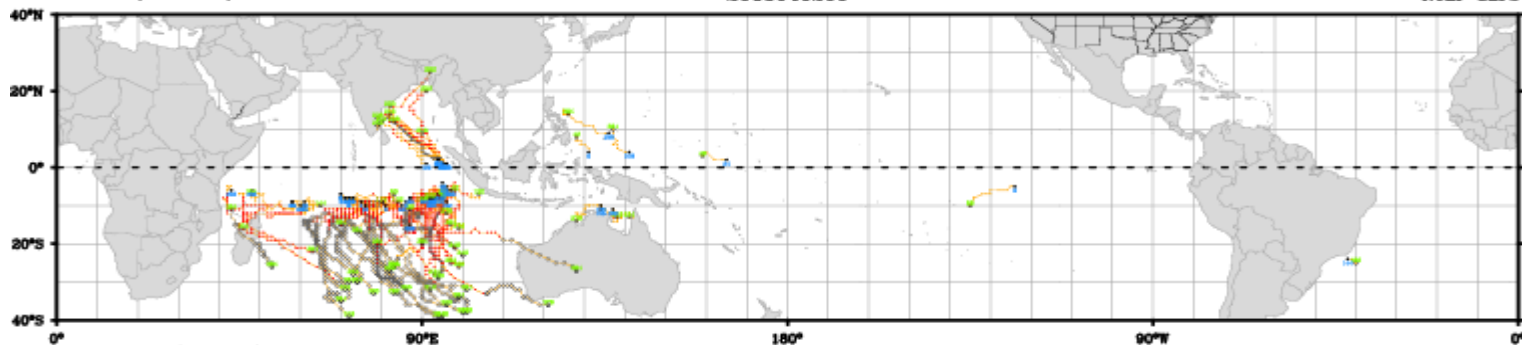
Null (388 days) 43 storms



TC Track(0-384 hr)

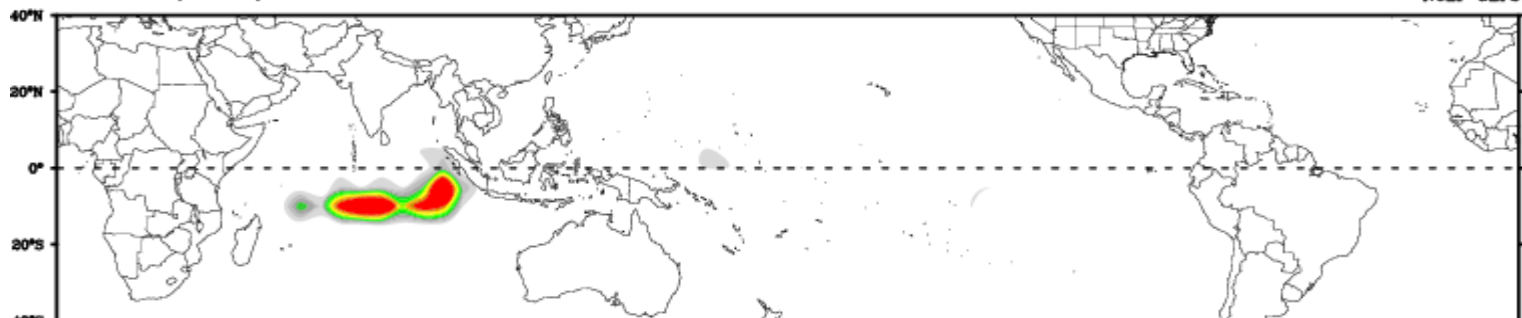
2013040200

NCEP GEFS



Track Count (0-96 hr)

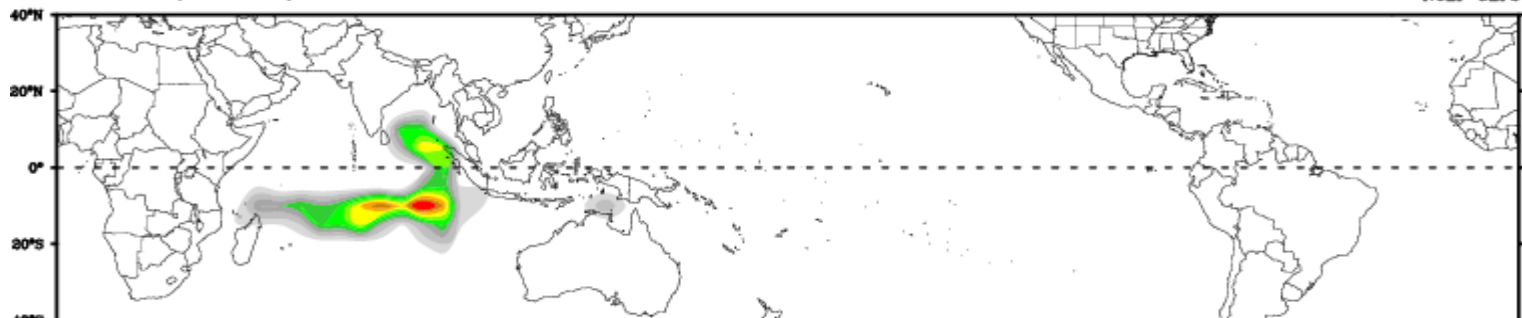
NCEP GEFS



Days 1-4

Track Count (102-192 hr)

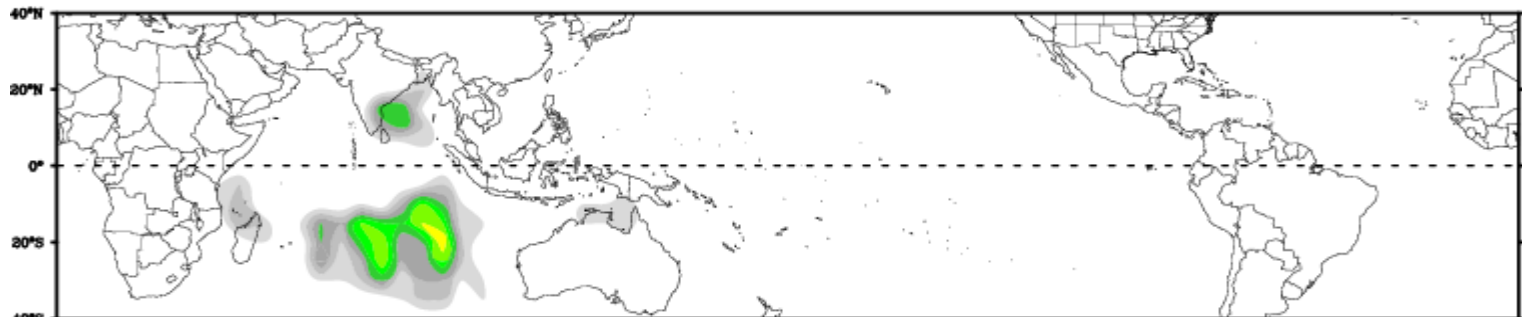
NCEP GEFS



Day 5-8

Track Count (198-288 hr)

NCEP GEFS

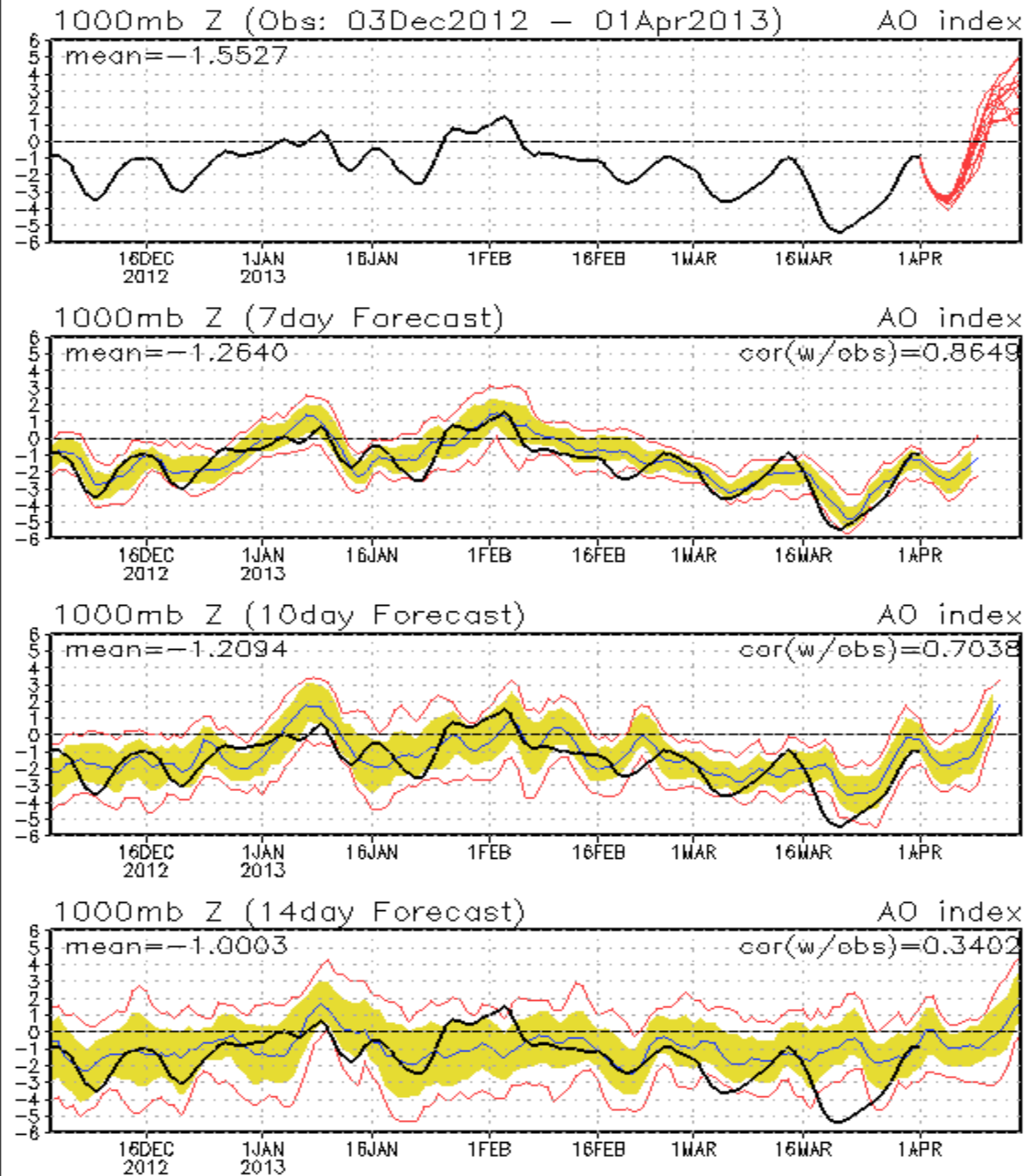


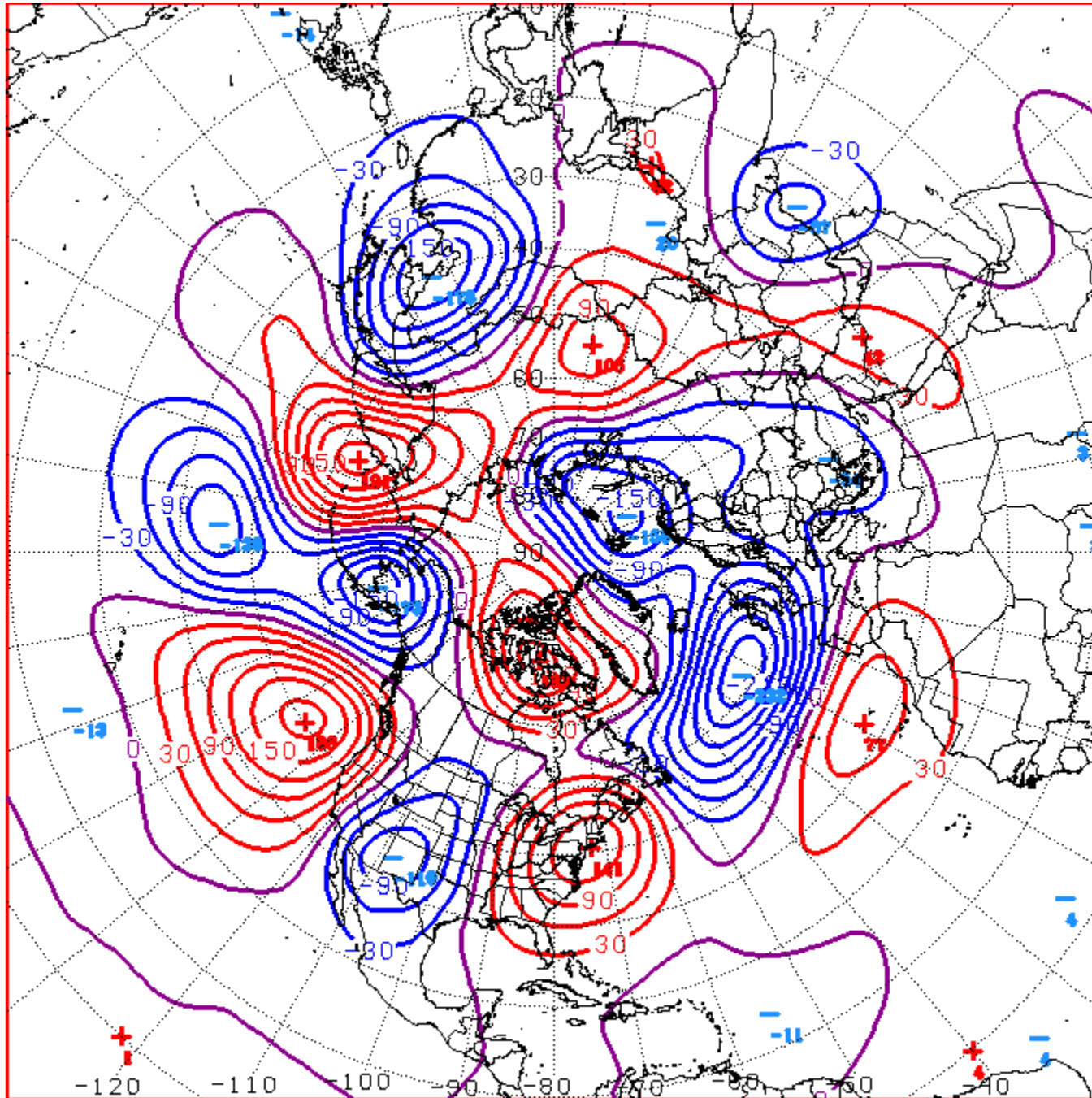
Day 9-12

Track Count (294-384 hr)

NCEP GEFS

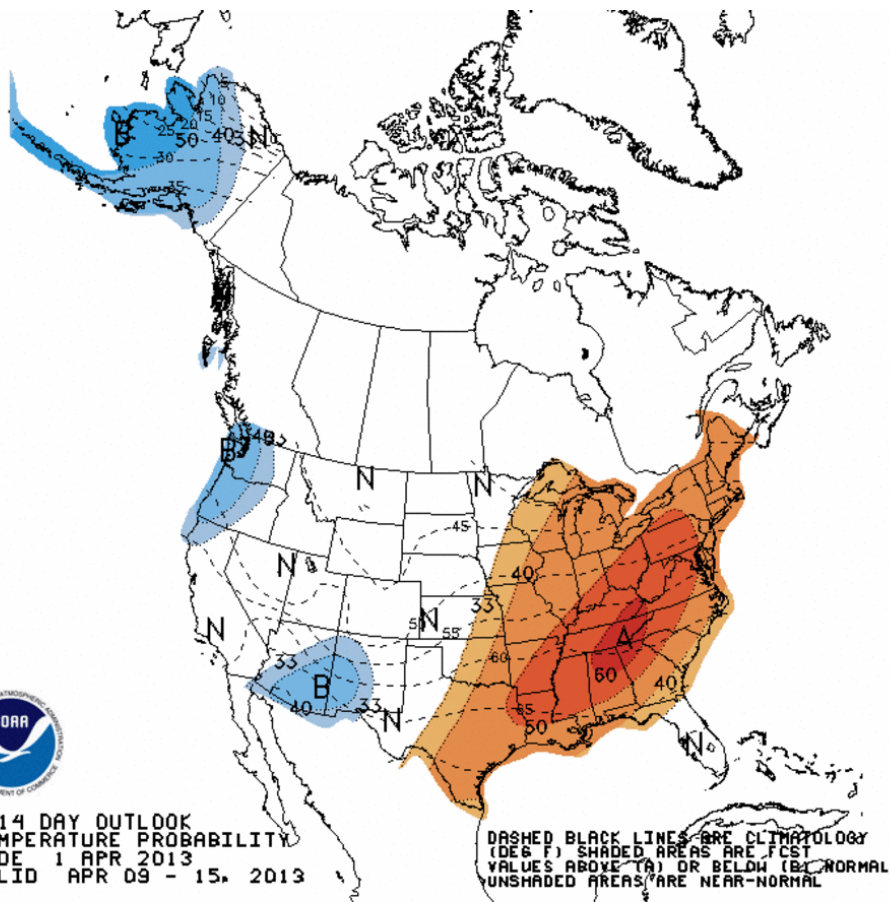
AO: Observed & ENSM forecasts





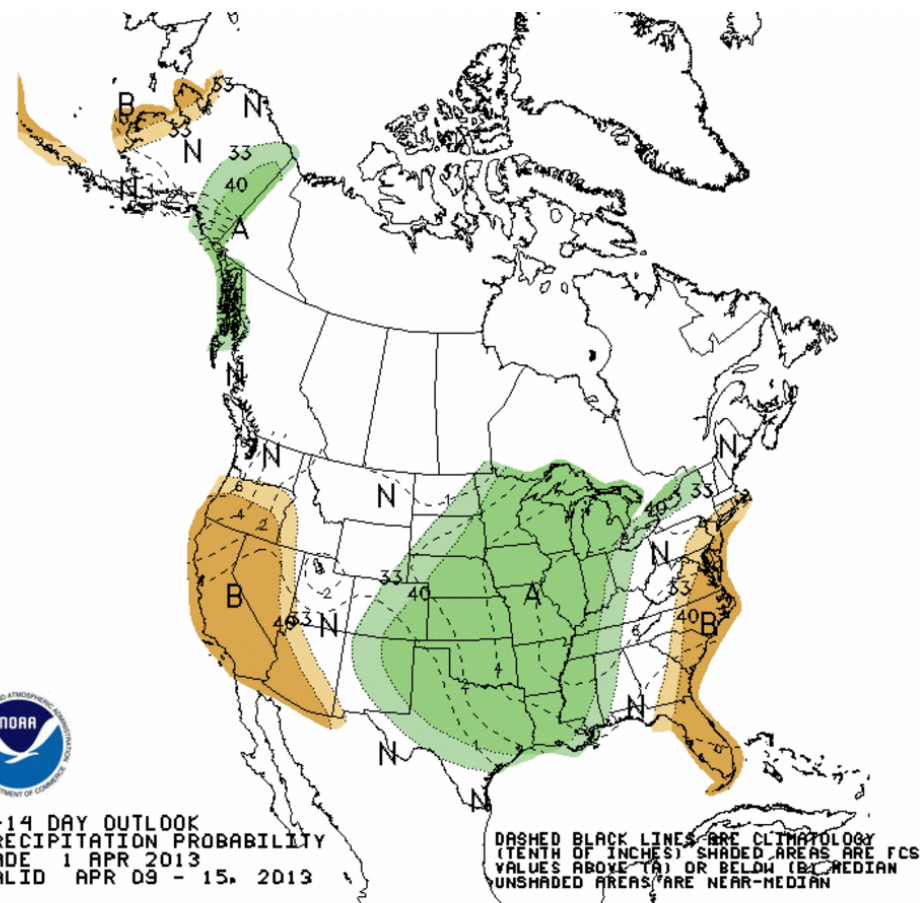
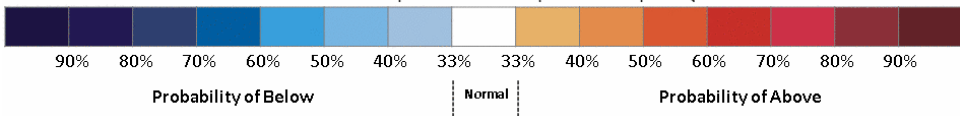
D+8 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE APR 02 2013 1045 UTC CNTD APR 10 2013

Week 2 – Temperature and Precipitation



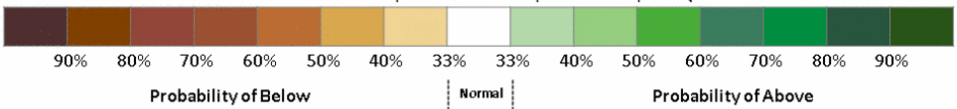
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 1 APR 2013
VALID APR 09 - 15, 2013

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

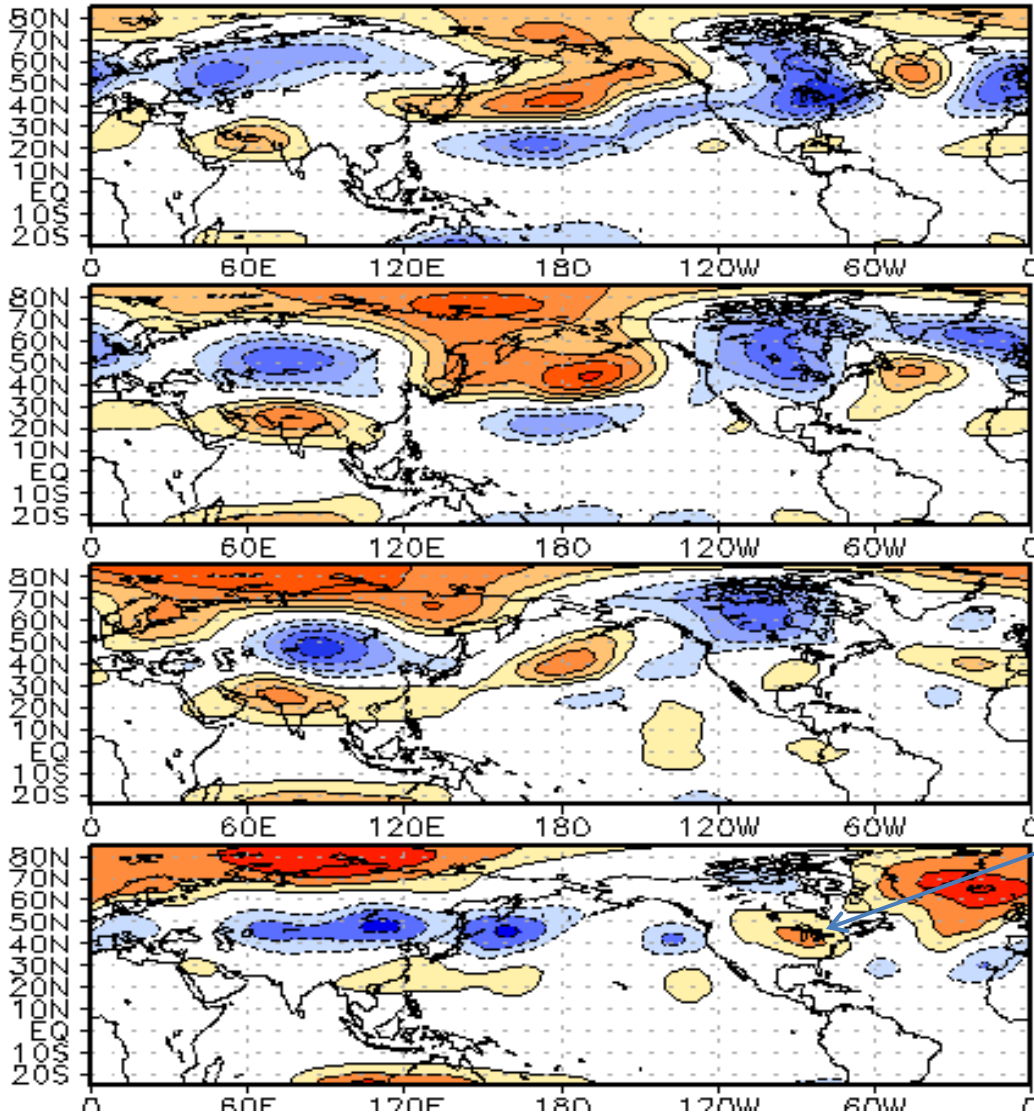


8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 1 APR 2013
VALID APR 09 - 15, 2013

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



WHMJO Phase 3 z200 Lagged Composite (mam)



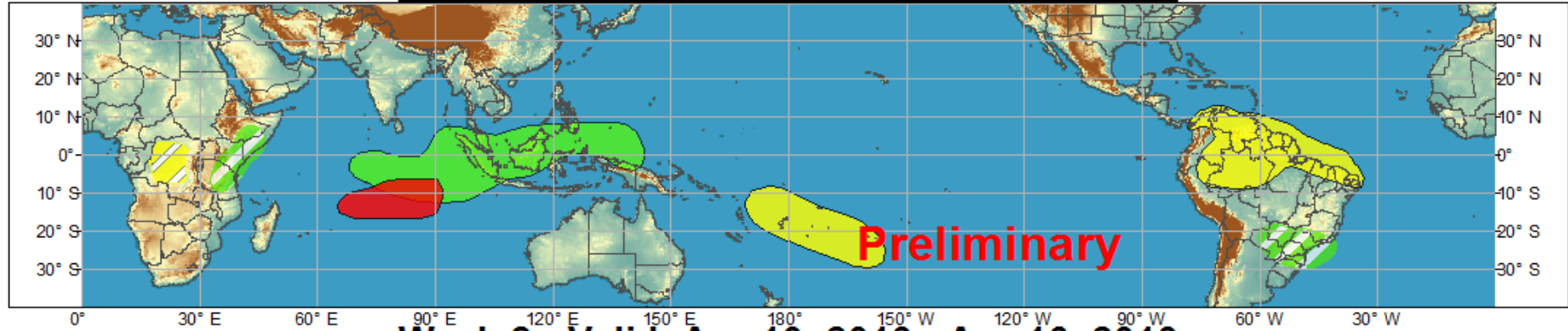
Indicates a shift toward warmer conditions across the eastern half of the CONUS. 5-15 days out.

Would also support some moisture return over the central portions of the country, although a bit later.

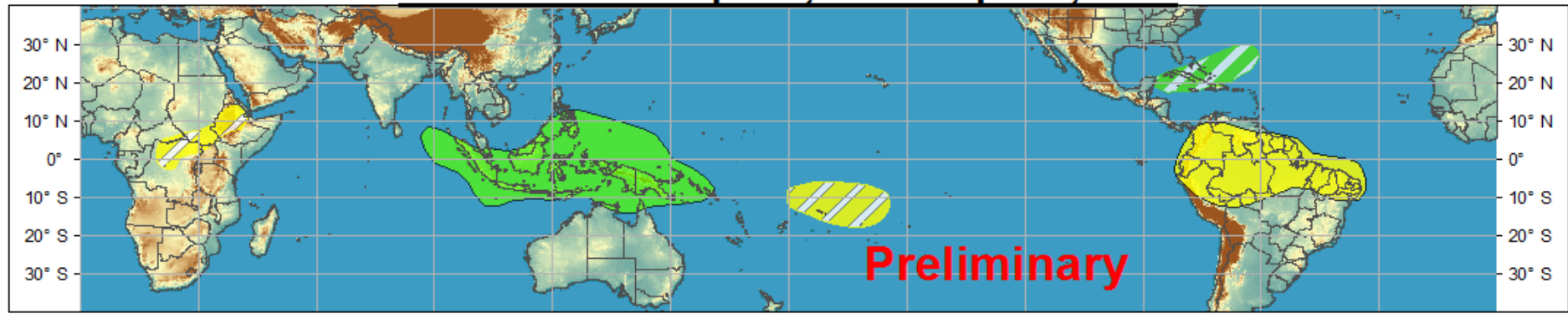


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