Global Tropics Hazards And Benefits Outlook

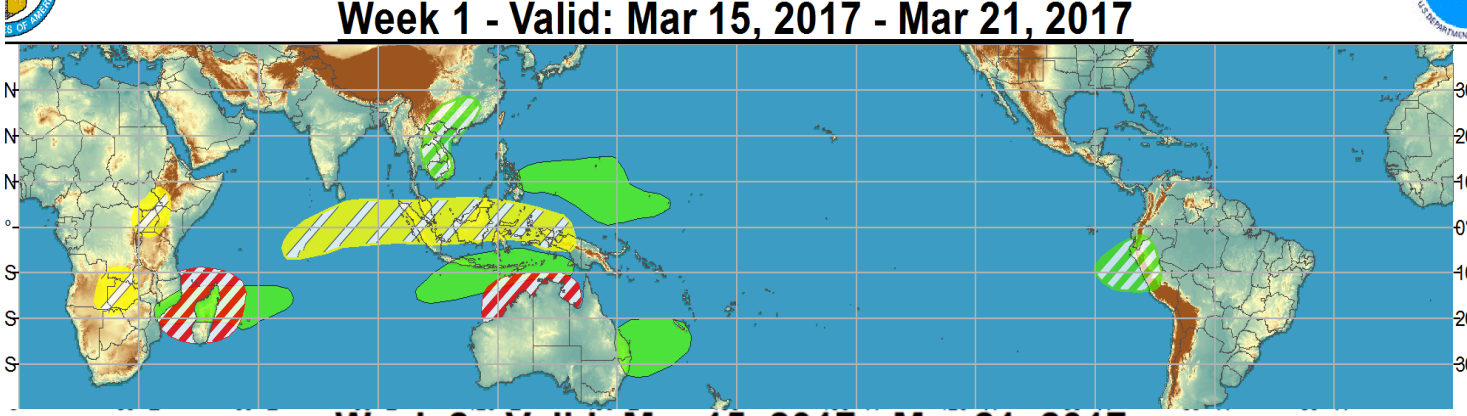
3/21/2017

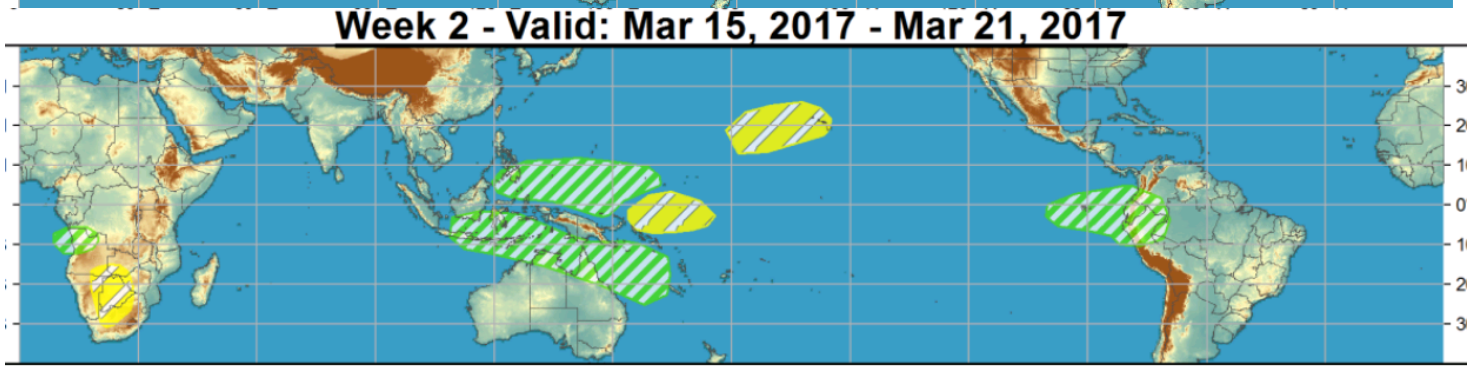
Dan Harnos

Outline

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

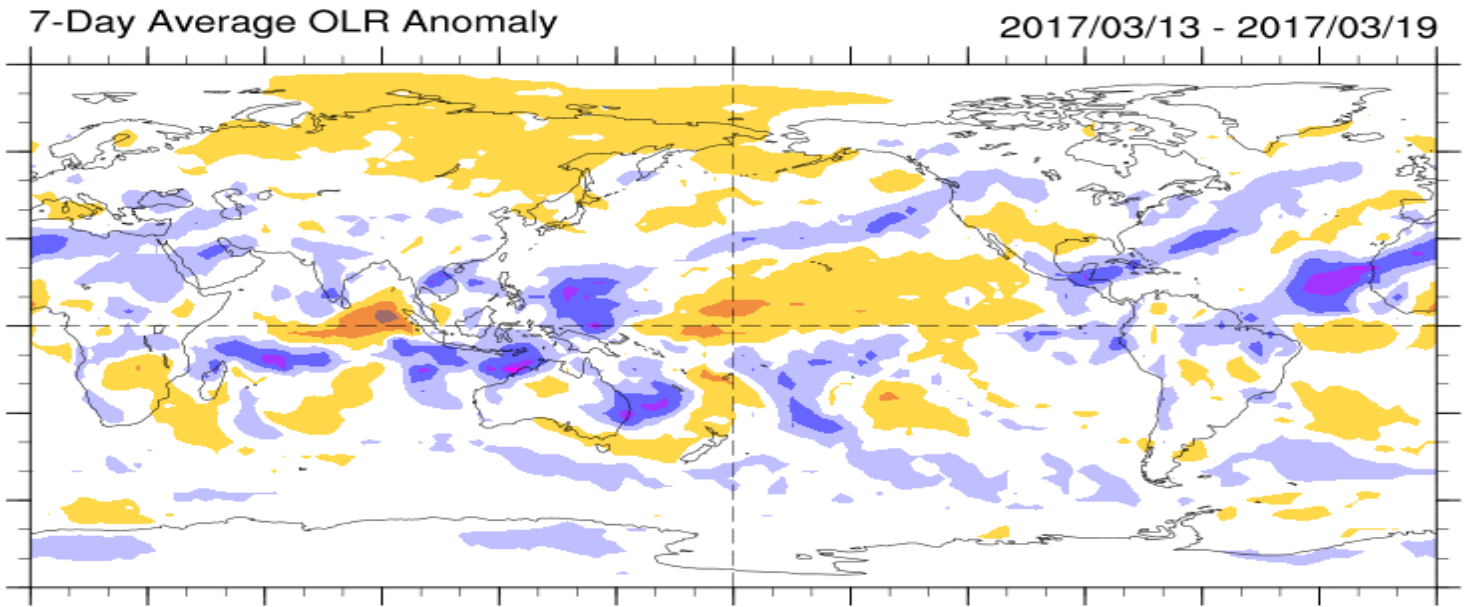
Outlook Review



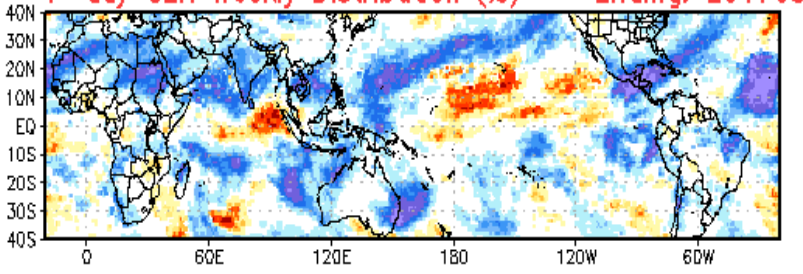


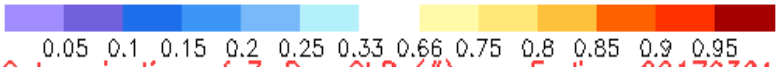
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

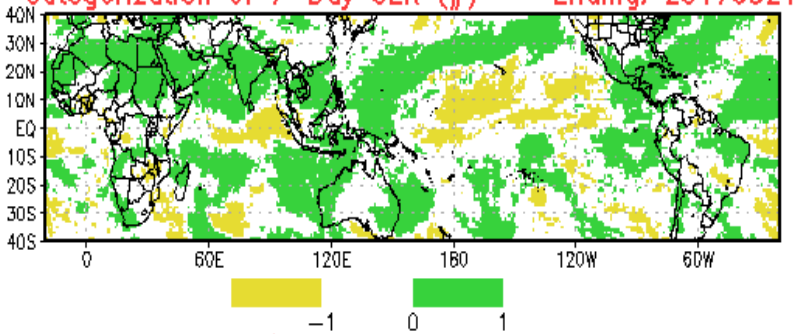


7-day OLR Weekly Distribution (%) -- Ending: 20170321

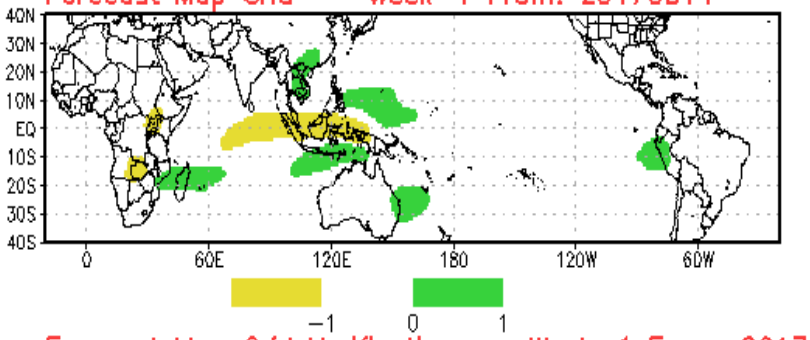




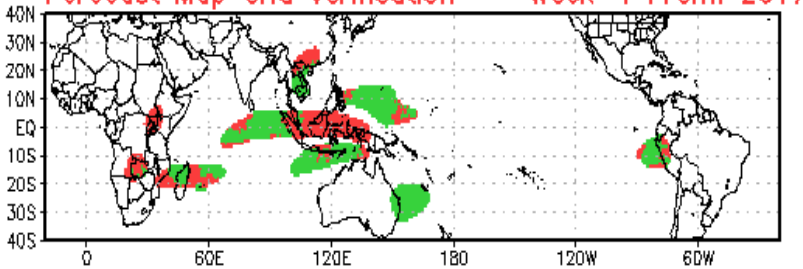
Categorization of 7-Day OLR (#) -- Ending: 20170321



Forecast Map Grid -- Week-1 From: 20170314

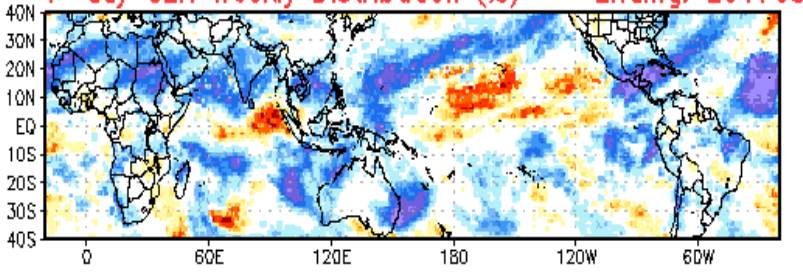


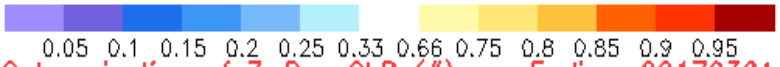
Forecast Map Grid Verification -- Week-1 From: 20170314



Hit: Green, Miss: Red
Heidke Skill Score: 36.7422

7-day OLR Weekly Distribution (%) -- Ending: 20170321





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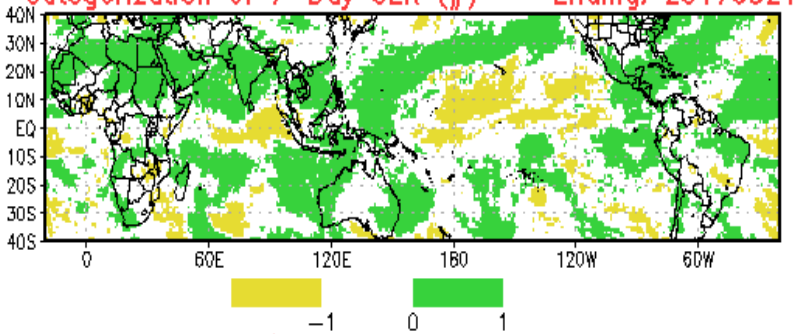
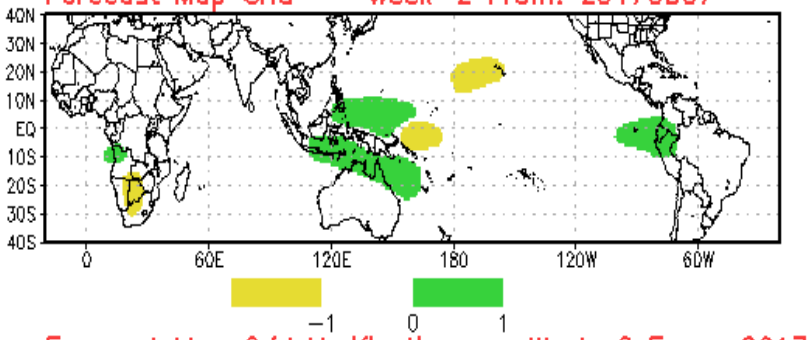
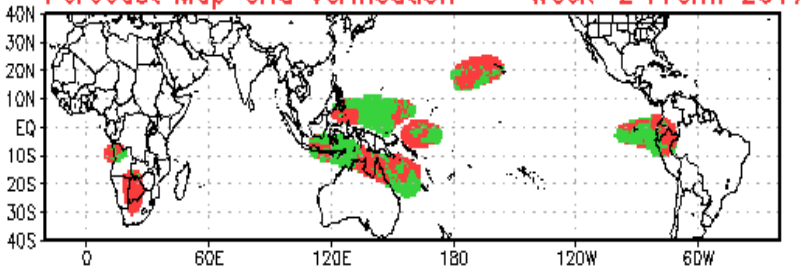


Forecast Map Grid -- Week-2 From: 20170307



Forecast Map Grid Verification -- Week-2 From: 20170307



Hit: Green, Miss: Red
Heidke Skill Score: 26.8507

Synopsis of Climate Modes

ENSO:

- **ENSO-neutral conditions are expected to continue through boreal Spring.**
- **Increasing chances of El Niño development through boreal Autumn.**
- **The next ENSO update will be released on 13 Apr 2017.**

MJO and other subseasonal tropical variability:

•The MJO exhibited continued weakness over the past week, with the low frequency state dominating the global tropics.

•Dynamical models generally remain weak during the next two weeks, with some suggesting an emerging MJO over the Indian Ocean during Week-2. However, this is geographically inconsistent with the low frequency state and observations of what little subseasonal variability remains from the prior MJO event.

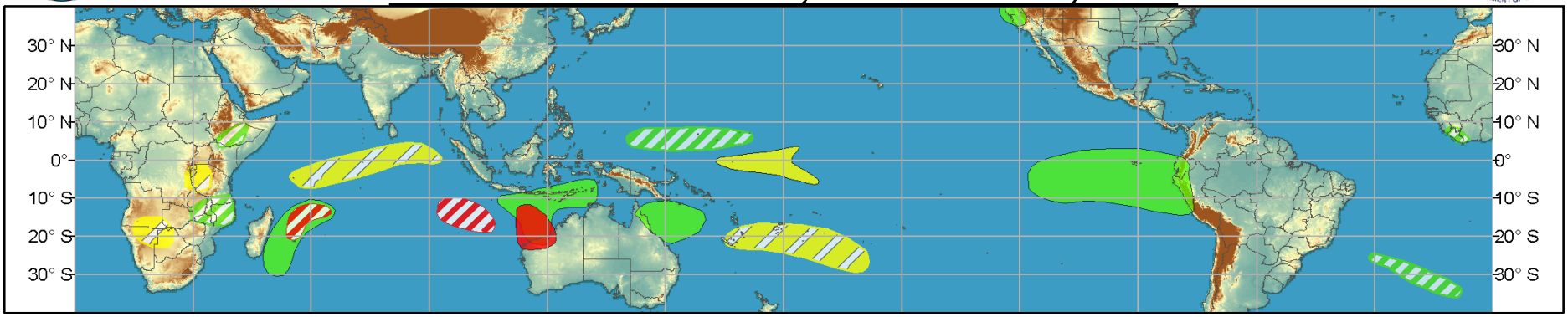
Extratropics:

•The low frequency state is unique, with large positive SST anomalies near the South American coast that would be associated with El Niño, yet limited westward extension exists of these values into the Central Pacific as would be expected. Instead, atmospheric conditions that would be consistent with La Niña are observed from the Indian Ocean through the Central Pacific.

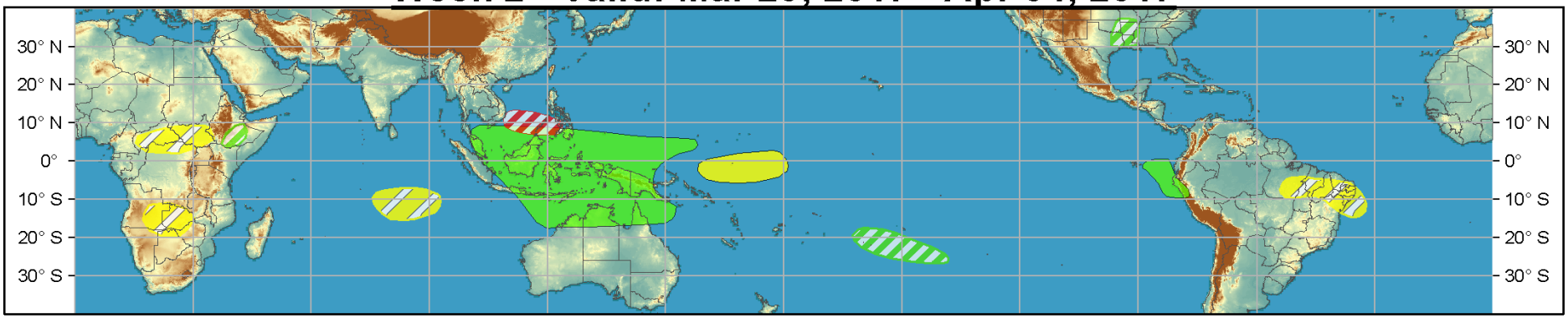
•Tropical influences on the extratropics are highly uncertain.

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

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



Week 2 - Valid: Mar 29, 2017 - Apr 04, 2017



Produced: 03/21/2017

Forecaster: D.Harnos

	Confidence: High	Confidence: 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.

中央氣象局 Central Weather Bureau

UNIVERSITY AT ALBANY State University of New York

EARTH SYSTEM SCIENCE INTERDISCIPLINARY CENTER ESSIC UNIVERSITY OF MARYLAND

Australian Government Bureau of Meteorology

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NPS PRAESTANTIA PER SCIENTIAM

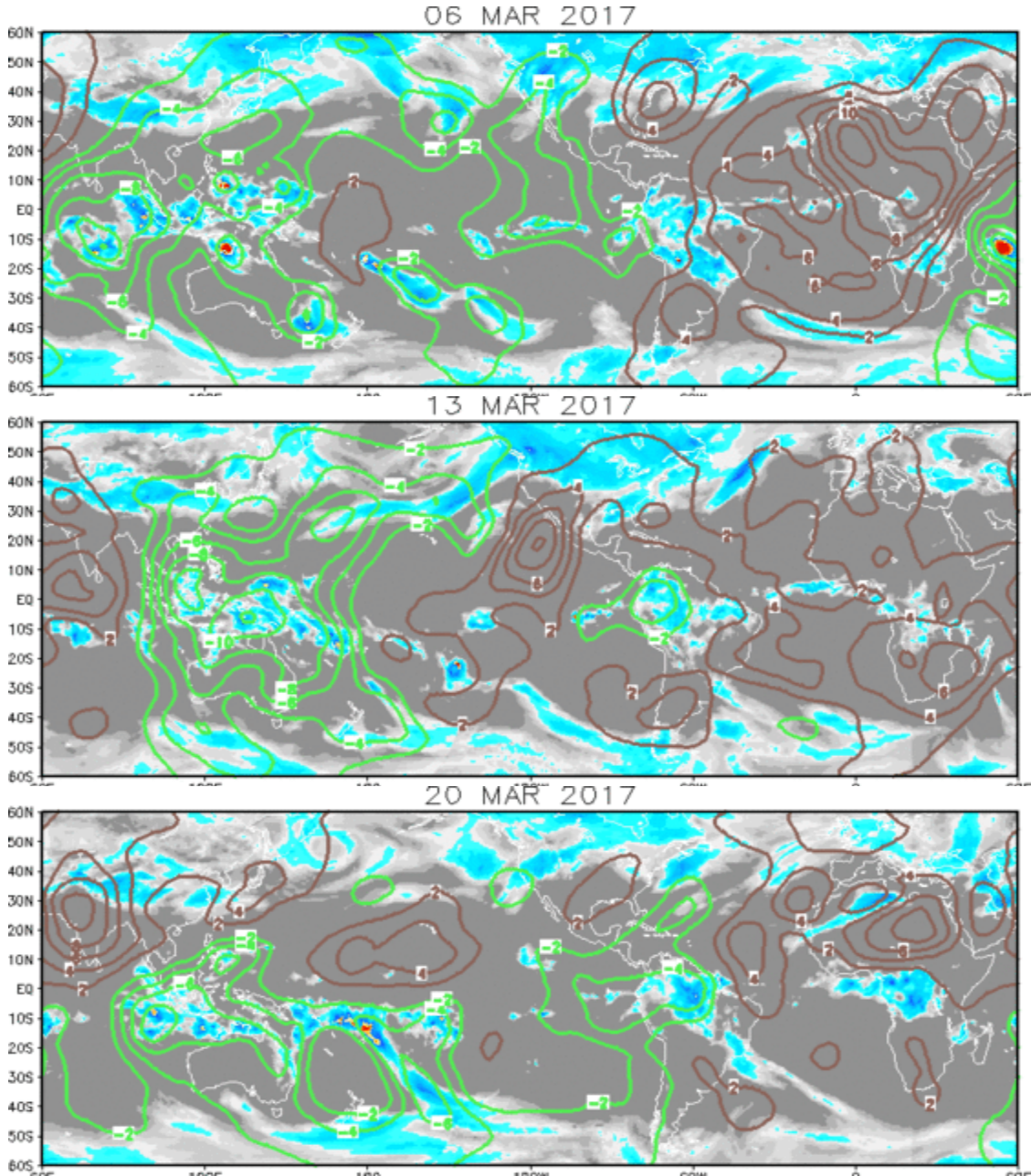
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

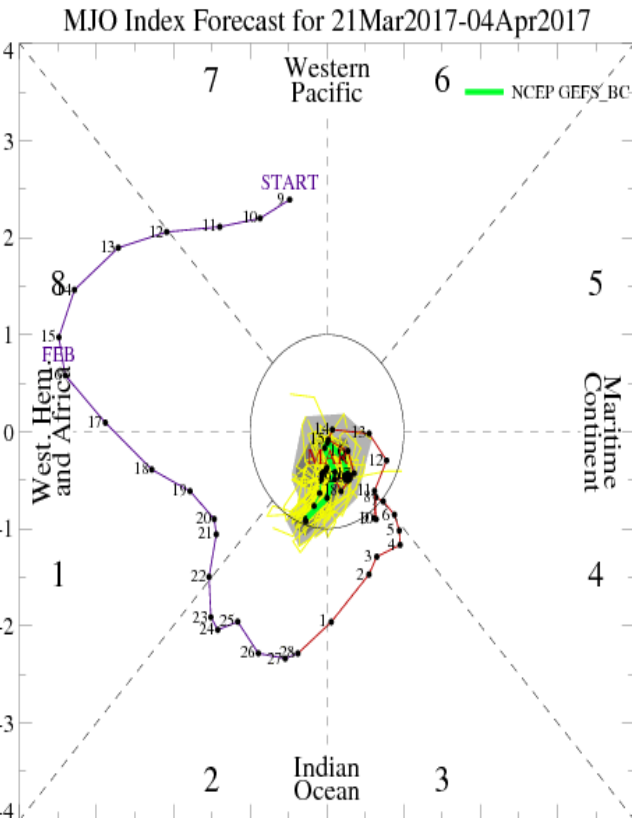
Generally wave-1 structure with enhanced phase over Eastern Hemisphere.

Pattern begins to break down, with two distinct enhanced phases over Maritime Continent and East Pacific/South America.

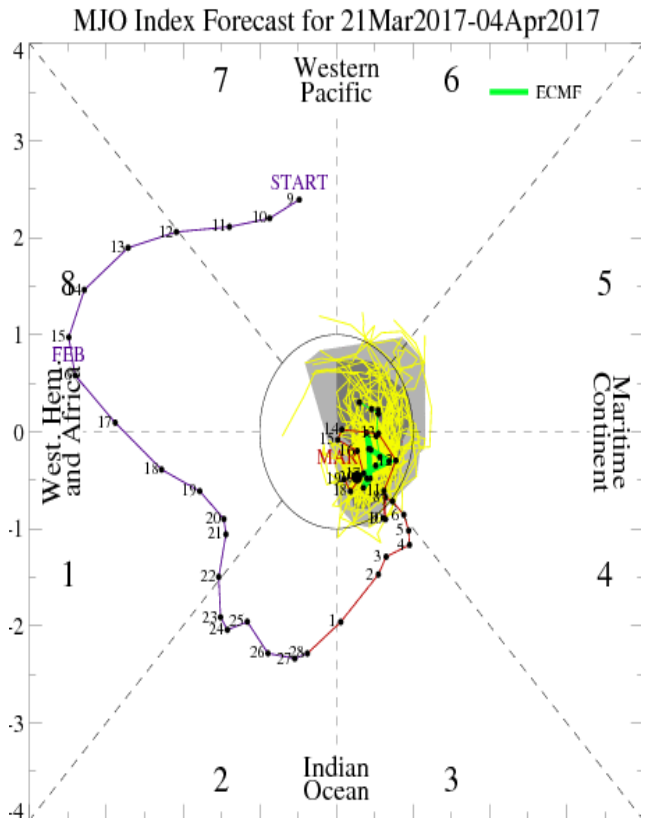
Pronounced wave-2 pattern with centers of action consistent with prior week.



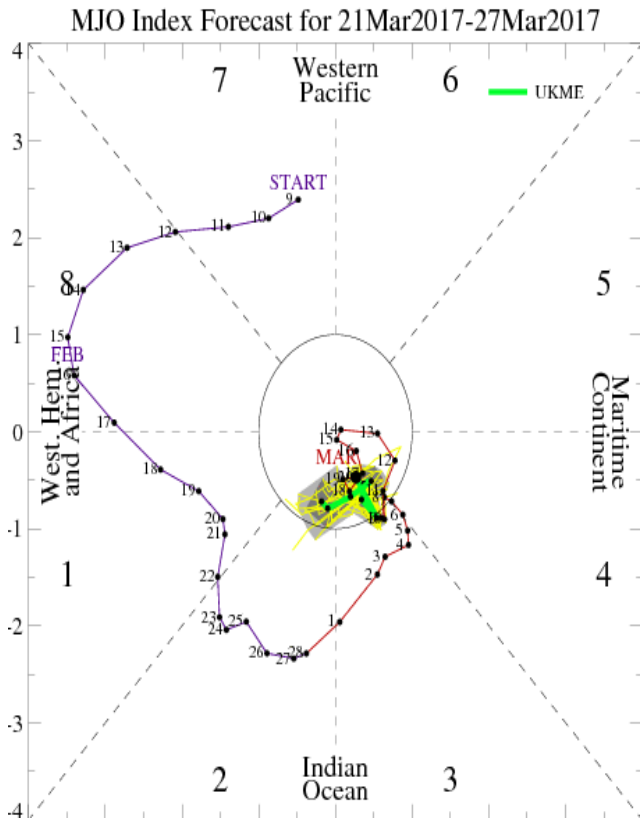
MJO Observation/Forecast



GEFS



ECMWF



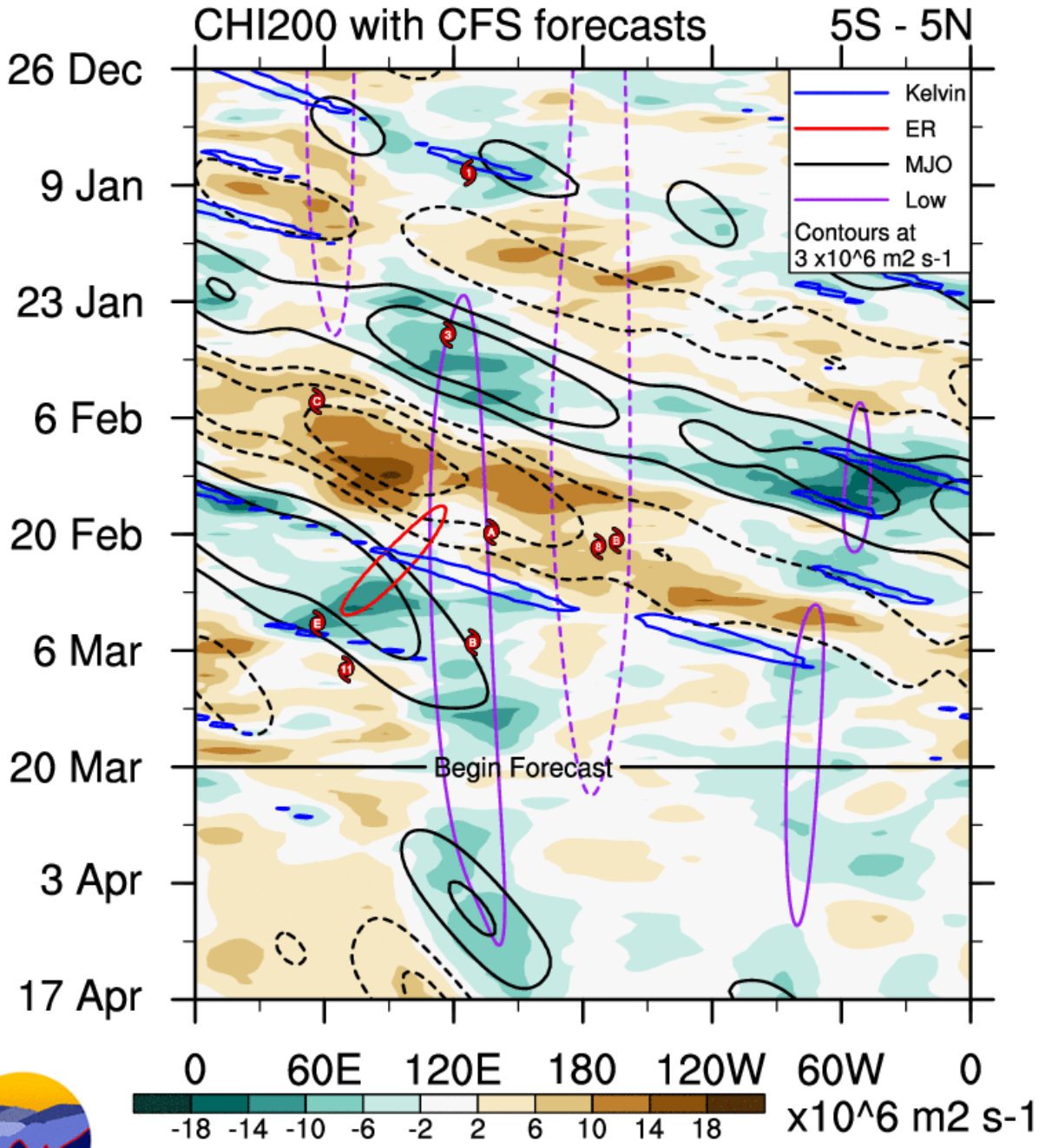
UKMET

GEFS/UKMET push signal towards Indian Ocean → inconsistent with suppressed low frequency activity and what little eastward propagating signal has been observed.

ECMWF forecasts further east towards the Maritime Continent → consistent with low frequency state, but inconsistent with observed eastward propagating variability.

Low frequency signal apparent with convective enhancement over the Maritime Continent and East Pacific, suppression near Date Line.

MJO activity not analyzed recently, what remains would be interfering with suppressed convection near Date Line.

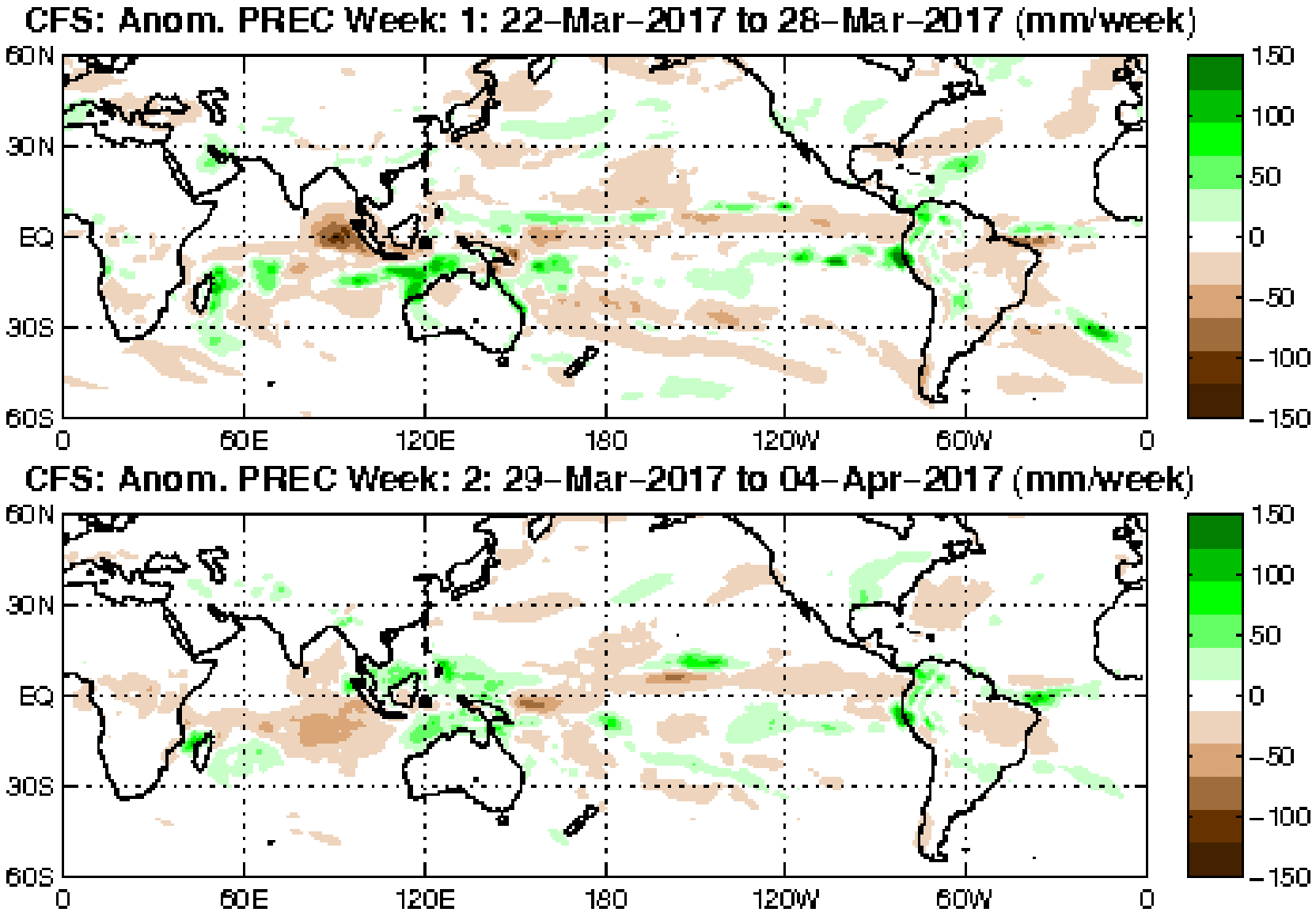


NCICS

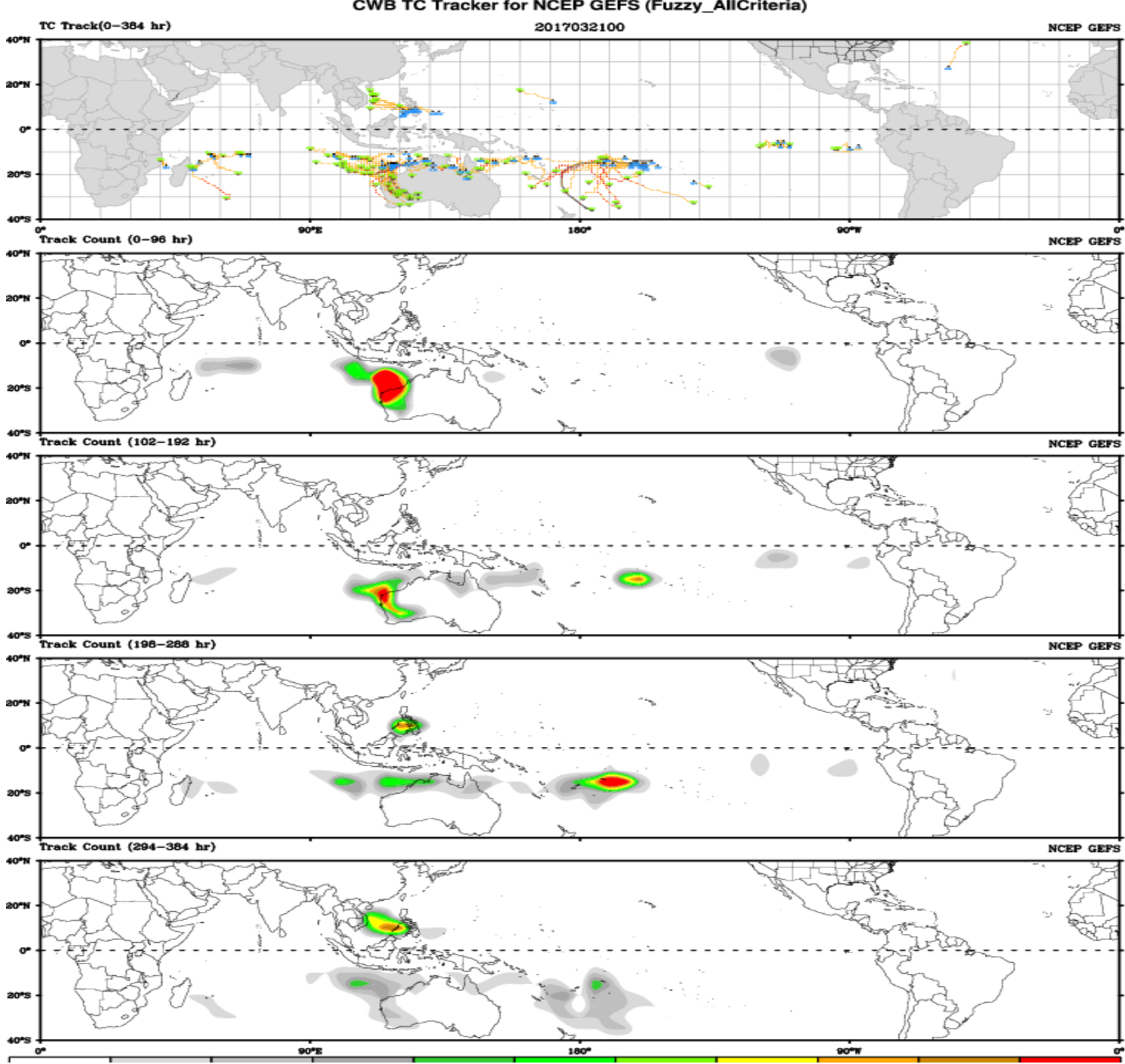
ncics.org/mjo

Tue 2017-03-21 1023 UTC

Carl Schreck (cjschrec@ncsu.edu)

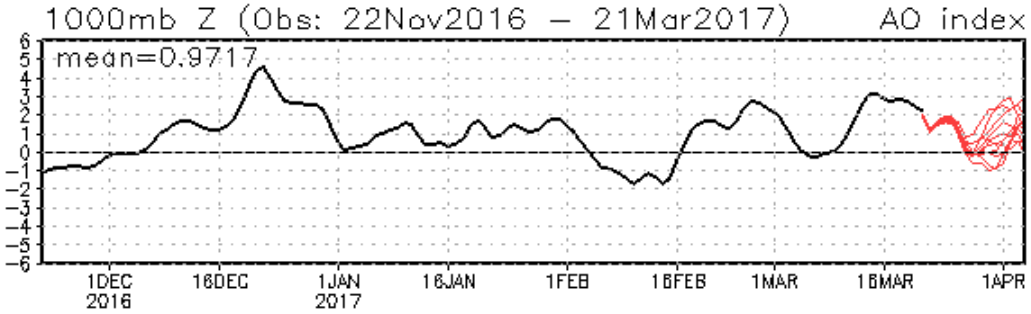

CFS: Anom. PREC Week: 1: 22-Mar-2017 to 28-Mar-2017 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150
CFS: Anom. PREC Week: 2: 29-Mar-2017 to 04-Apr-2017 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150

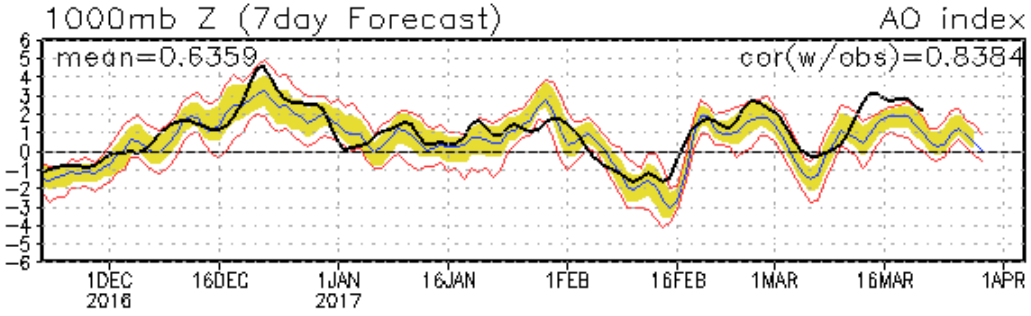
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)

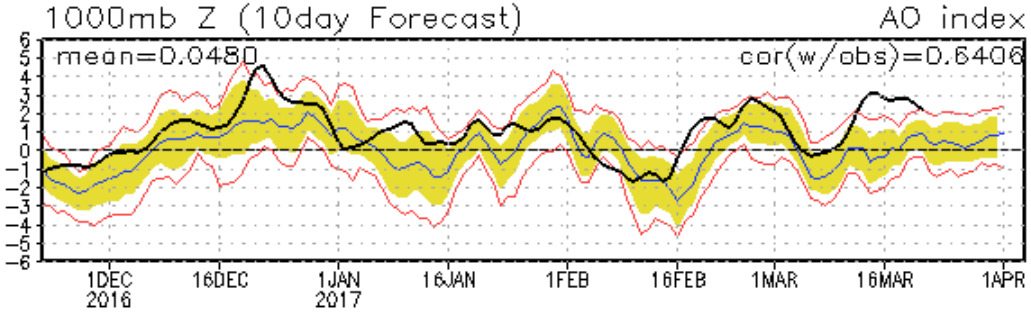


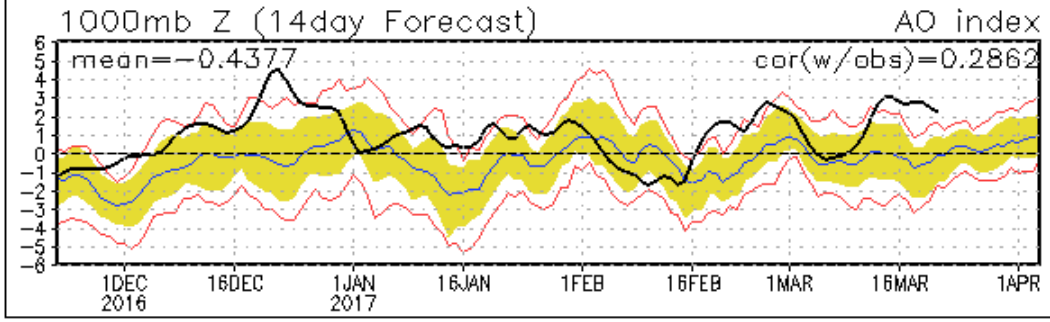
Connections to U.S. Impacts

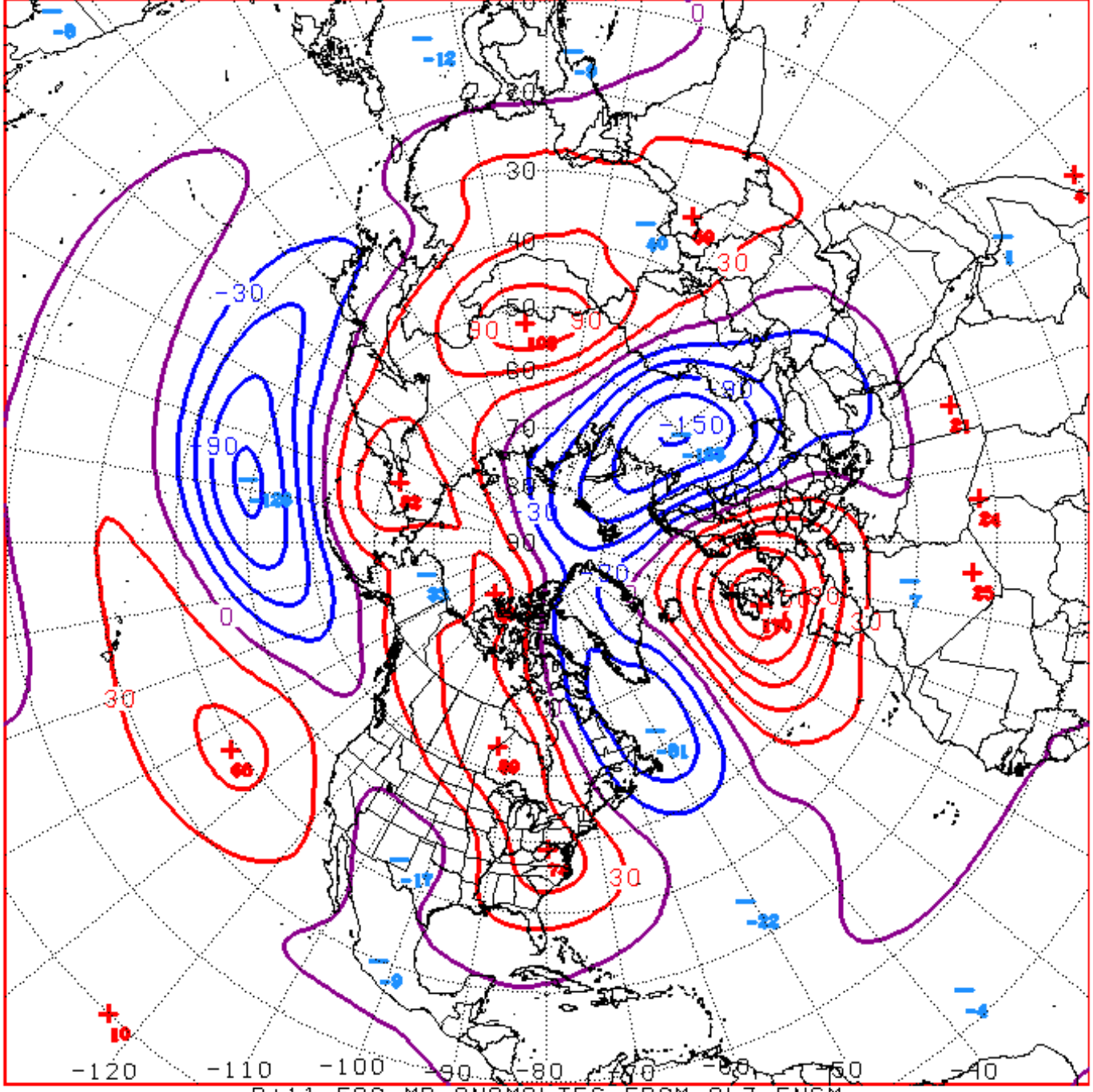
AO: Observed & ENSM forecasts





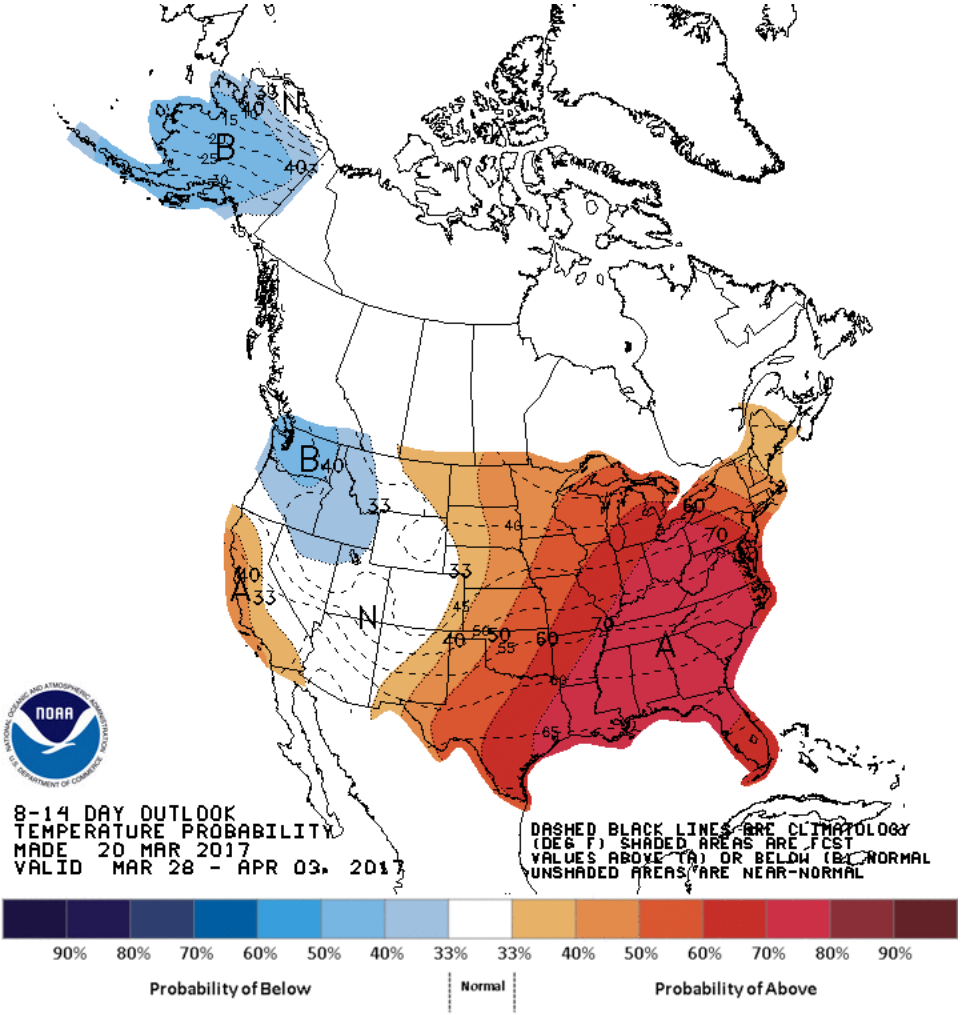




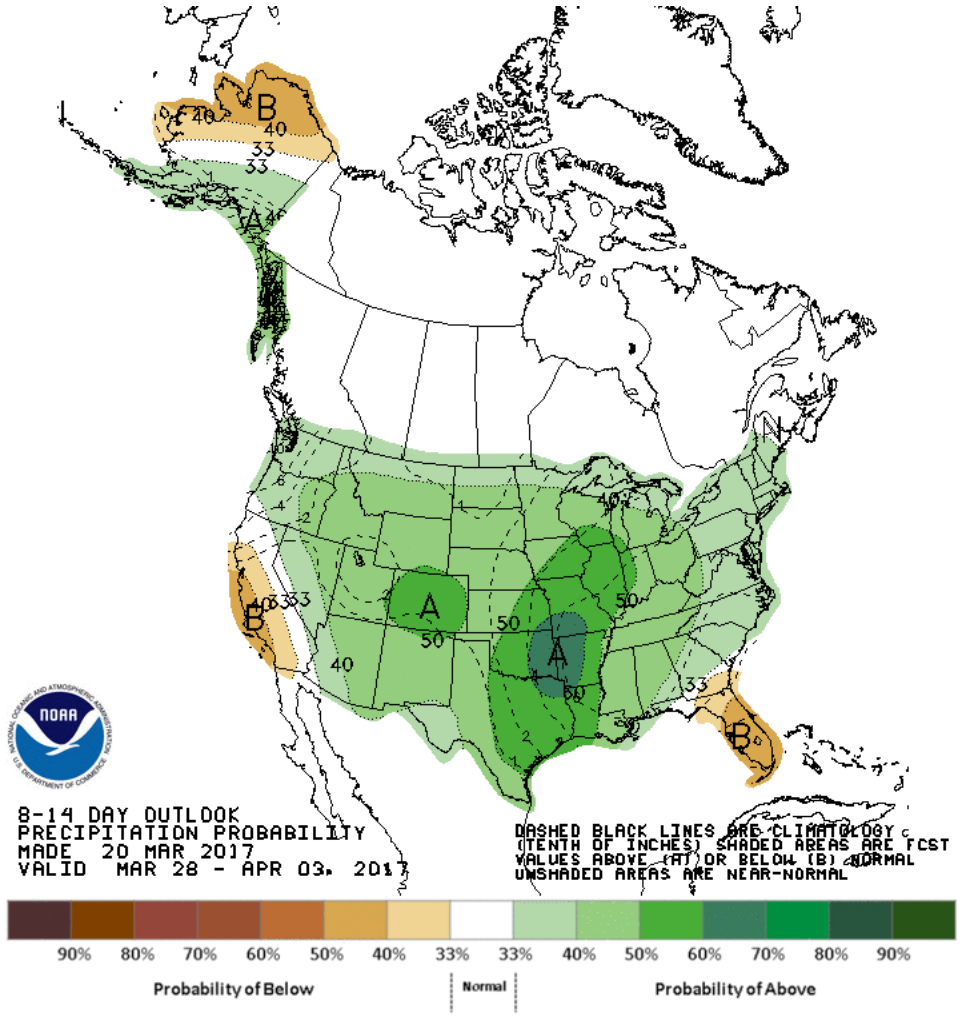


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE MAR 21 2017 1345 UTC CNTD APR 01 2017

Week 2 – Temperature and Precipitation



More cold in Rockies?
Less cold in Alaska?



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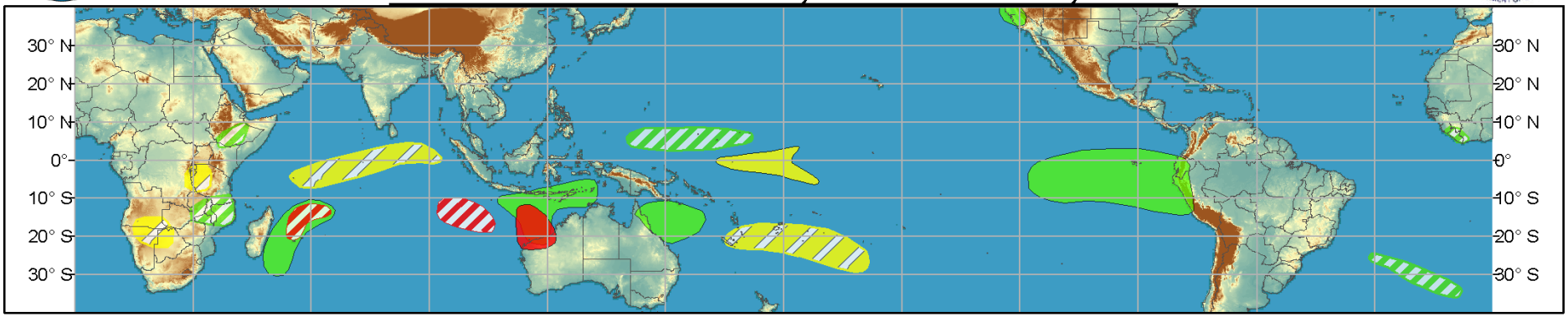

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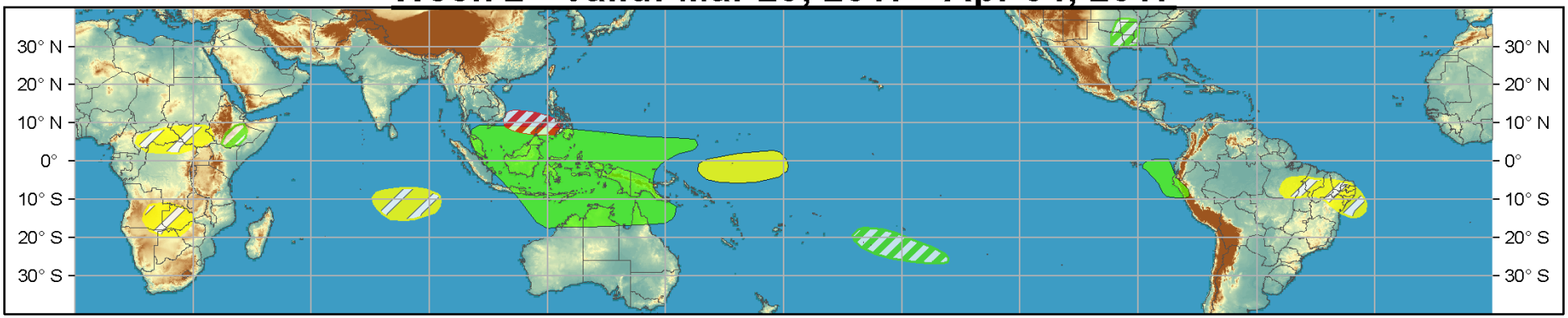

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