

Global Tropics Hazards And Benefits Outlook

May 26, 2015

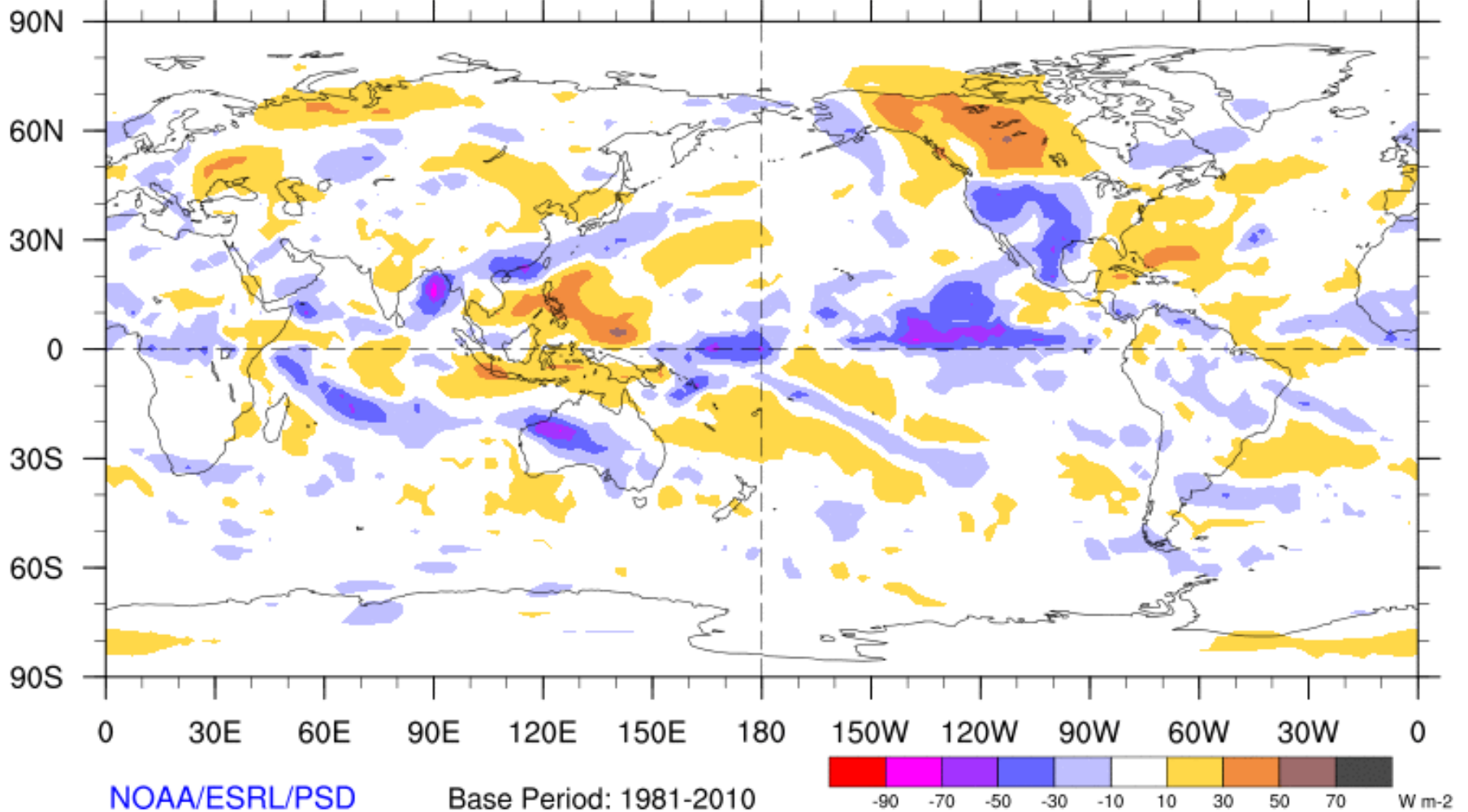
Stephen Baxter

Outline

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

7-Day Average OLR Anomaly

2015/05/18 - 2015/05/24



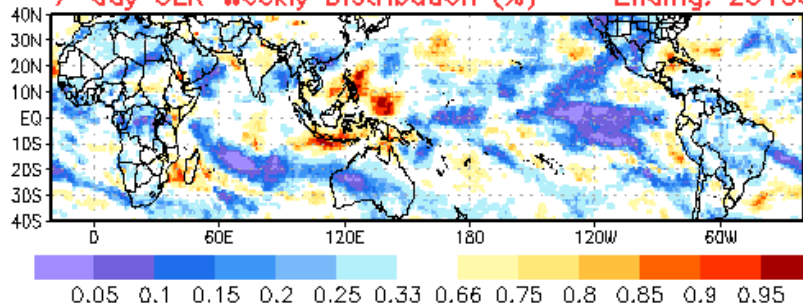
Cool colors:

Enhanced rainfall

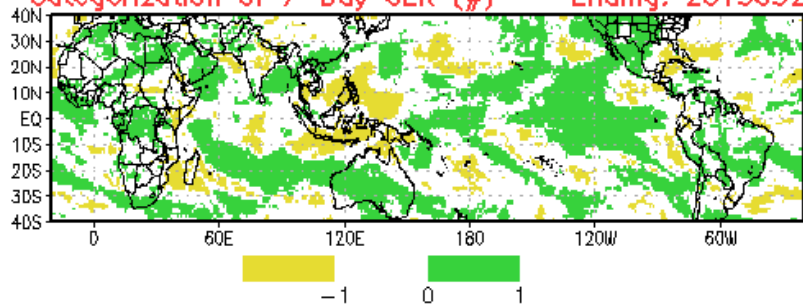
Warm colors:

Suppressed rainfall

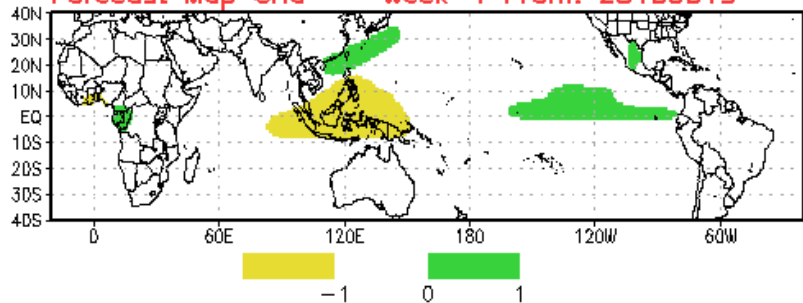
7-day OLR Weekly Distribution (%) -- Ending: 20150526



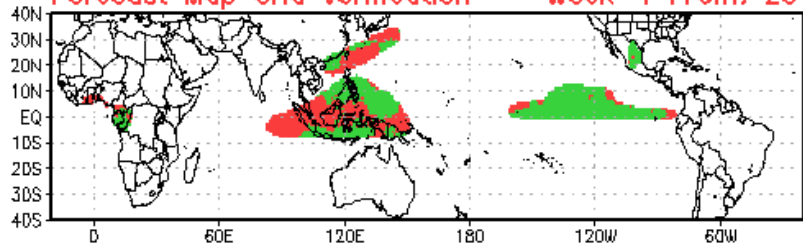
Categorization of 7-Day OLR (#) -- Ending: 20150526



Forecast Map Grid -- Week-1 From: 20150519

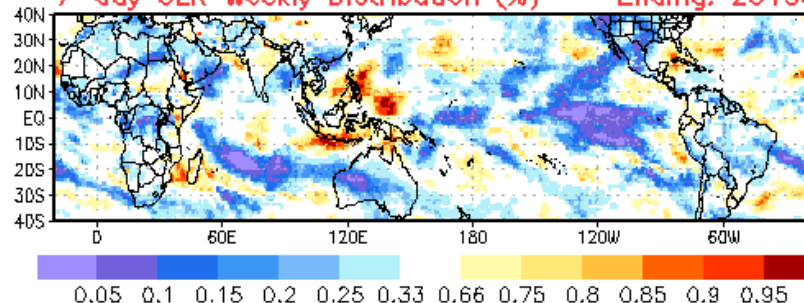


Forecast Map Grid Verification -- Week-1 From: 20150519

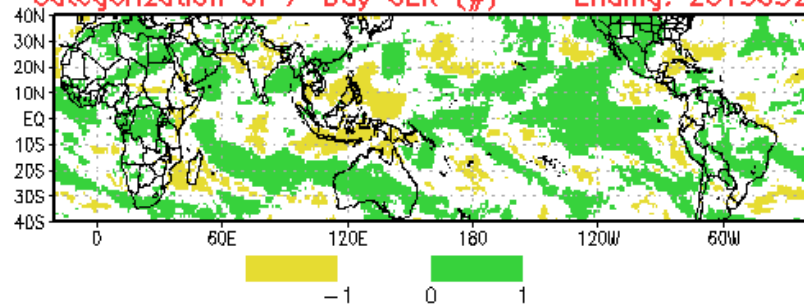


Hit: Green, Miss: Red
Heidke Skill Score: 40.0301

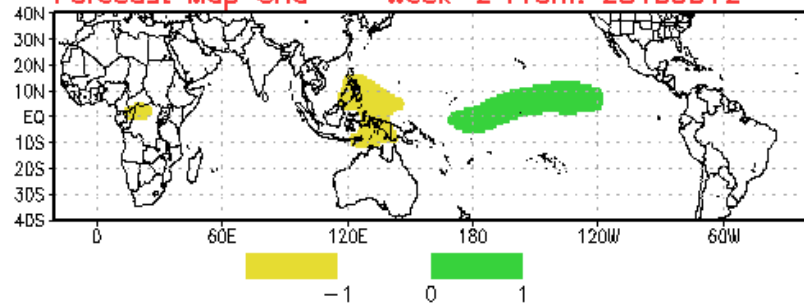
7-day OLR Weekly Distribution (%) -- Ending: 20150526



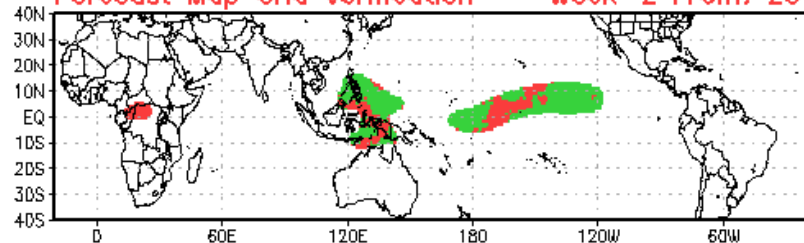
Categorization of 7-Day OLR (#) -- Ending: 20150526



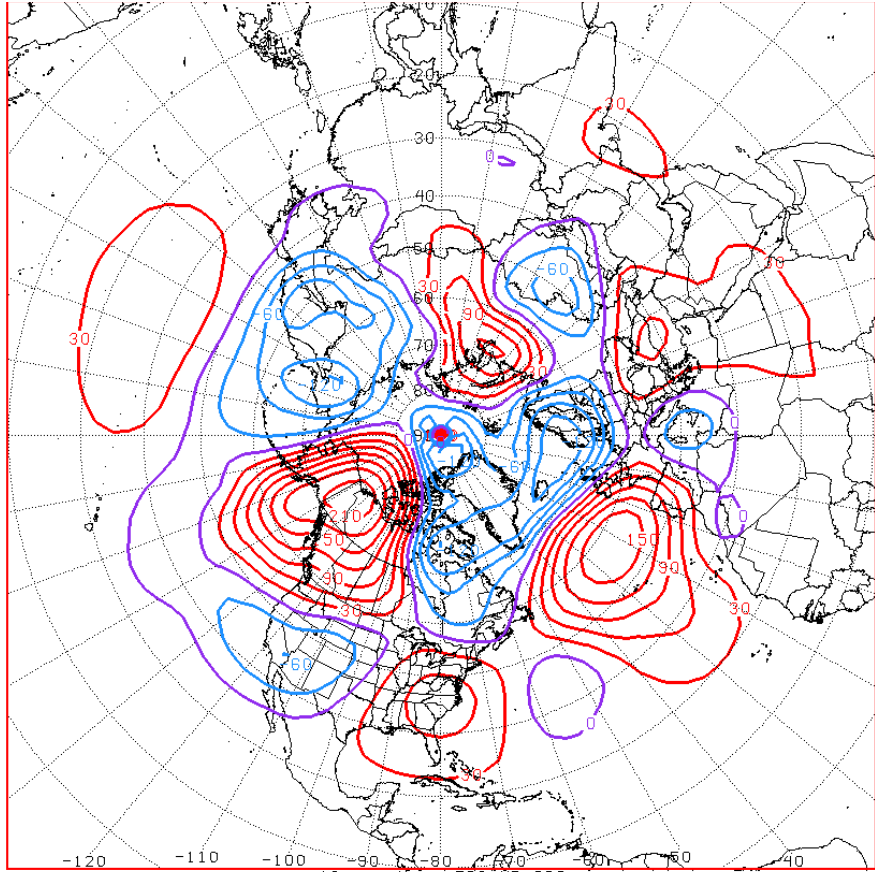
Forecast Map Grid -- Week-2 From: 20150512



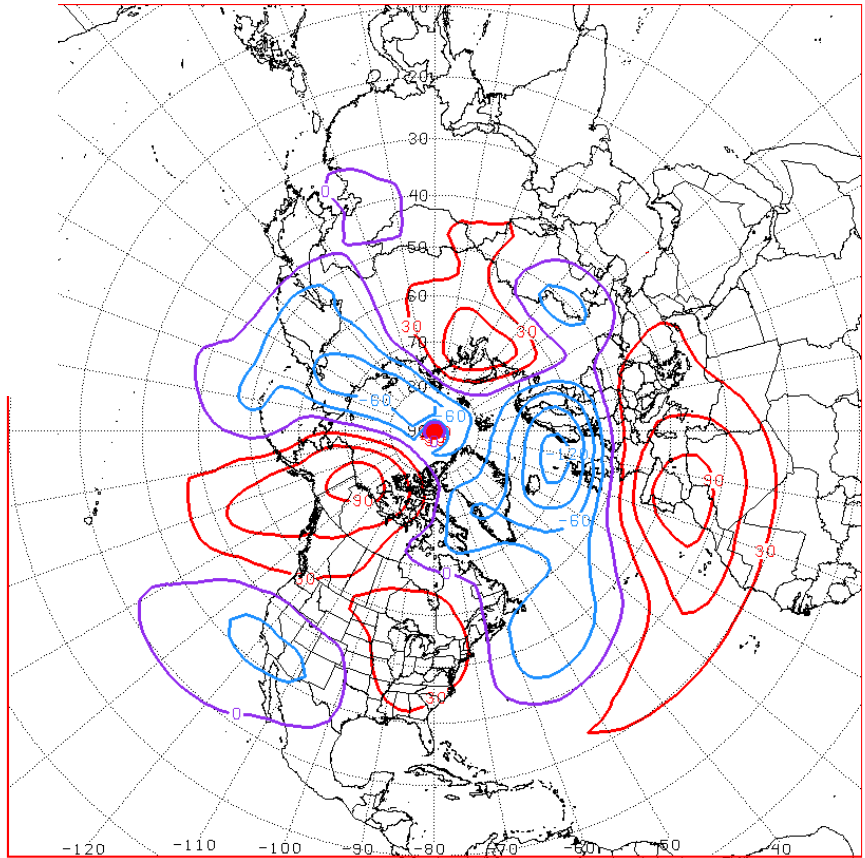
Forecast Map Grid Verification -- Week-2 From: 20150512



Hit: Green, Miss: Red
Heidke Skill Score: 51.7836

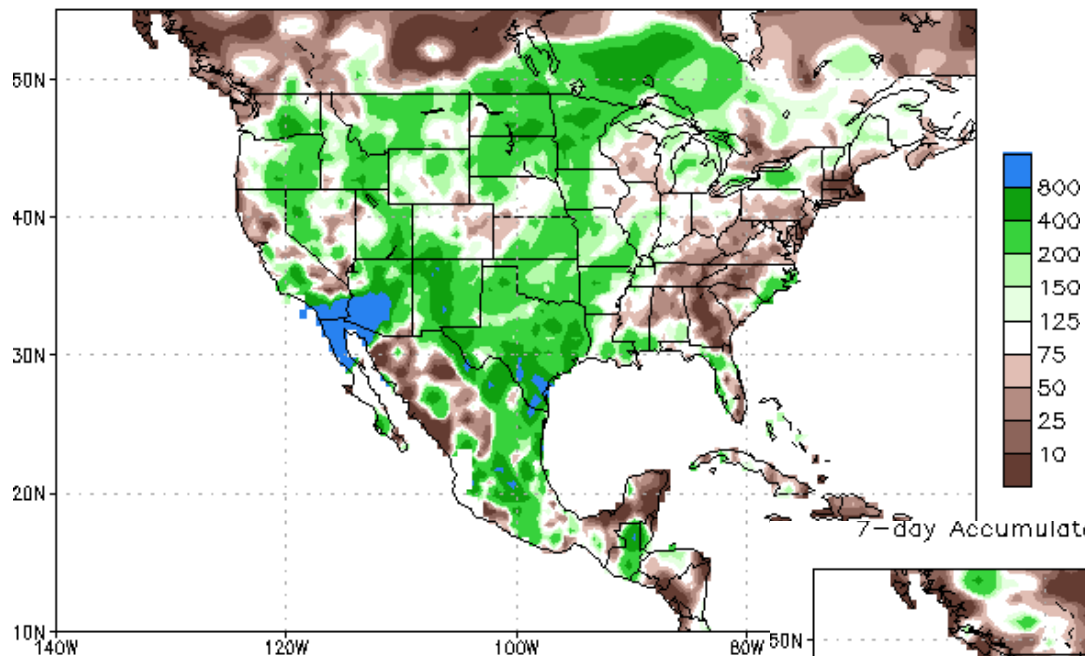


10-day Mean 500 MB OBS
CPC MAP MADE May 26 2015



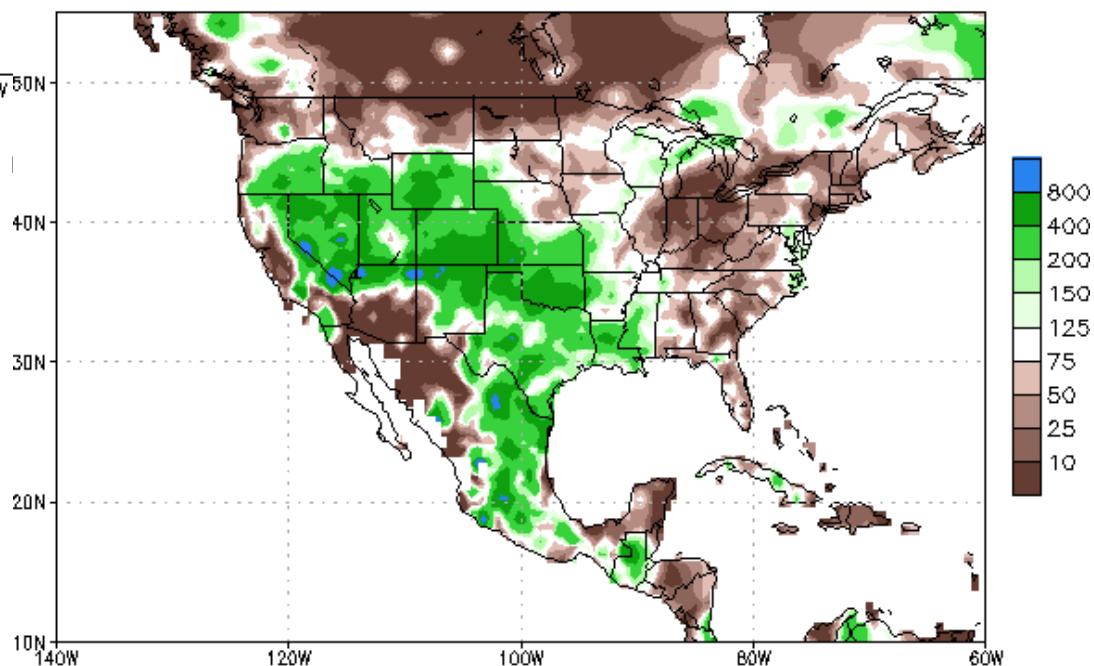
30-day Mean 500 MB OBS
CPC MAP MADE May 25 2015

7-day Accumulated Prep % of Normal 11MAY2015–17MAY2015



Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) |
Climatology (1981–2010)

7-day Accumulated Prep % of Normal 19MAY2015–25MAY2015



Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis
Climatology (1981–2010)

Synopsis of Climate Modes

ENSO:

- Current: [El Niño Advisory](#)
- Outlook: There is an approximately 90% chance that El Niño will continue through Northern Hemisphere summer 2015, and a greater than 80% chance it will last through the year.

MJO and other subseasonal tropical variability:

- The MJO was weak during the past 7 days. Subseasonal variability continues to be dominated the influence of atmospheric Kelvin wave activity.
- Most dynamical model MJO index forecasts depict a strengthening signal over Africa and the Western Hemisphere, although this is likely due to interaction between Kelvin wave activity and El Niño.

Extratropics:

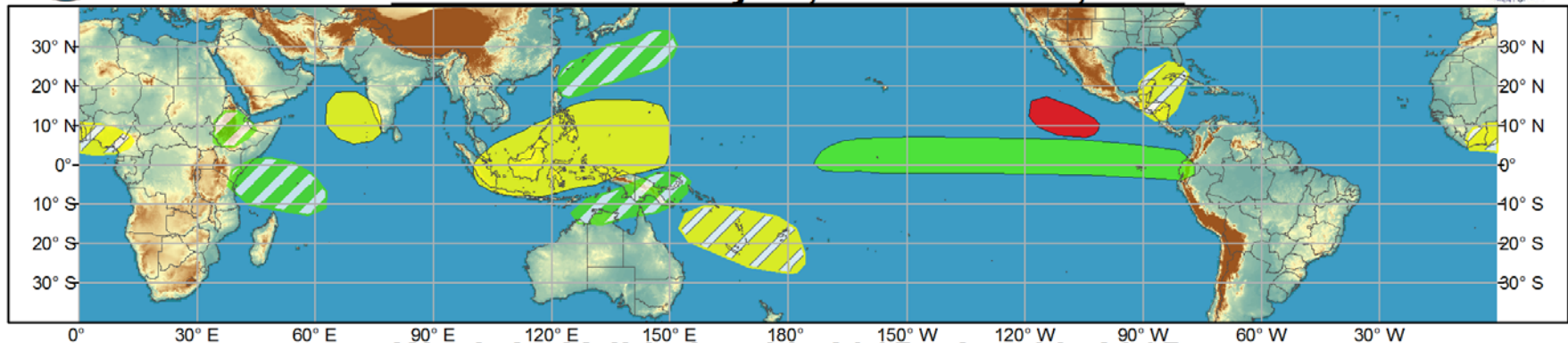
- The extended range forecast for the U.S. is not likely to be largely impacted directly by the MJO.
- Internal, mid-latitude variability is likely to drive much of the pattern of the CONUS along with some potential influence from the Tropics related to El Niño.



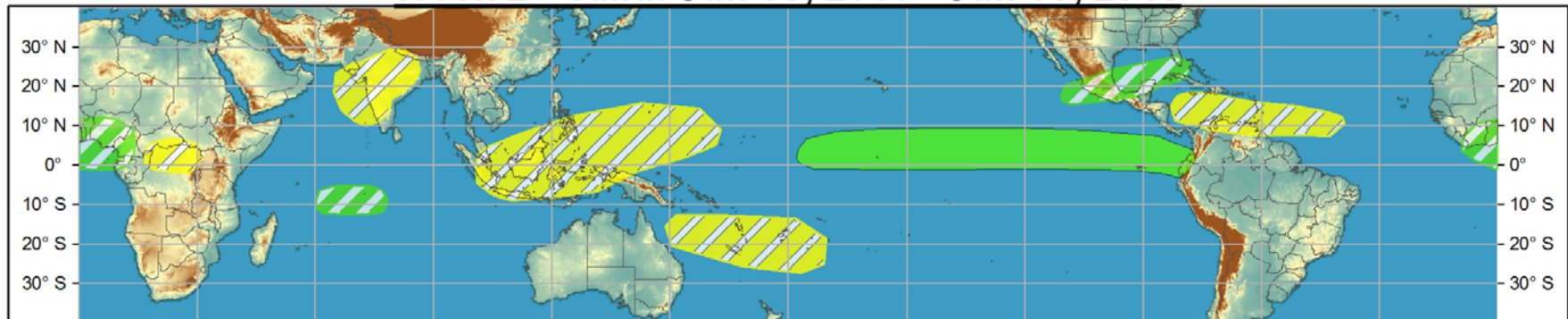
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 27, 2015 - Jun 02, 2015



Week 2 - Valid: Jun 03, 2015 - Jun 09, 2015



Produced: 05/26/2015

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.

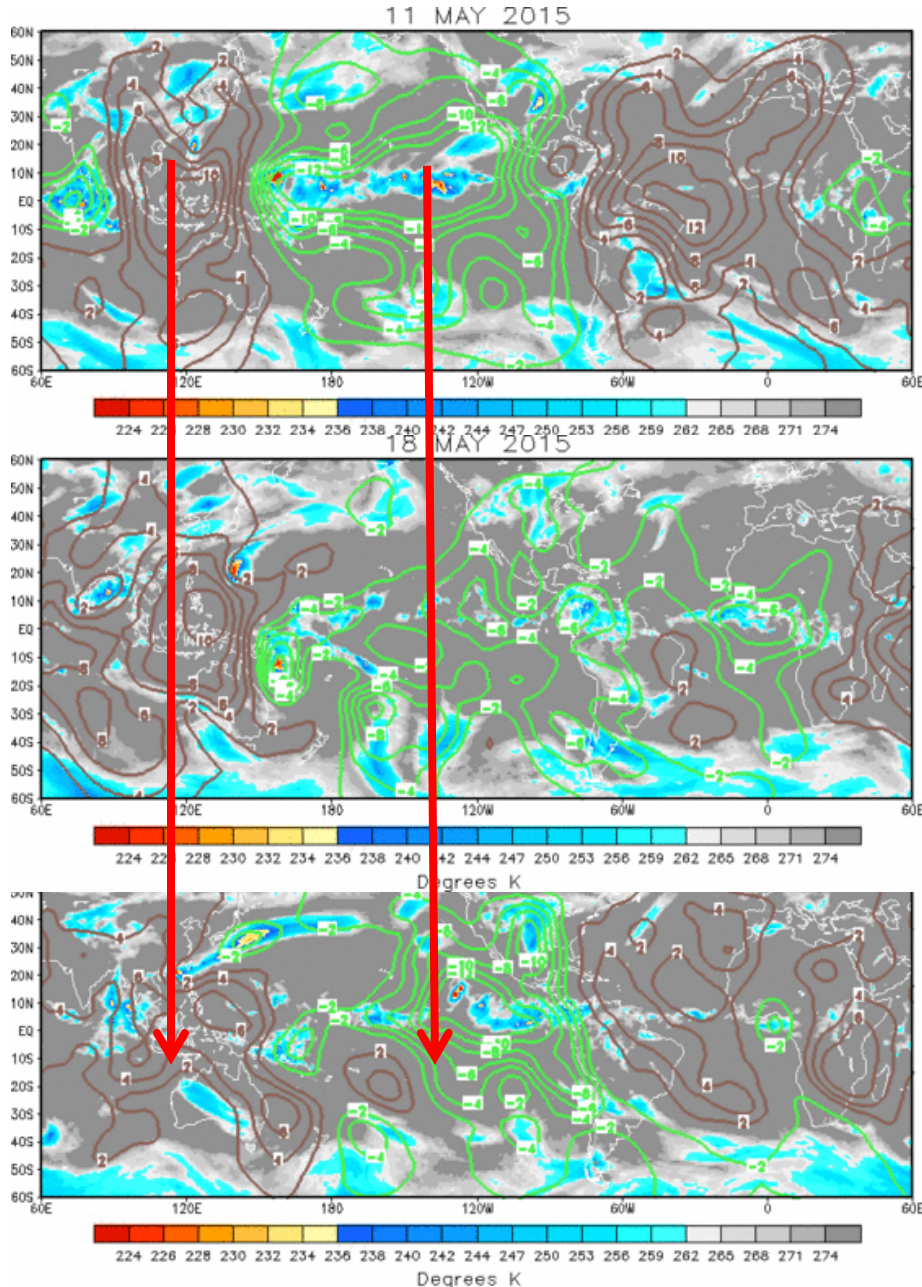
Below-normal temperatures 7-day mean temperatures in the lower third of the historical range.

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.



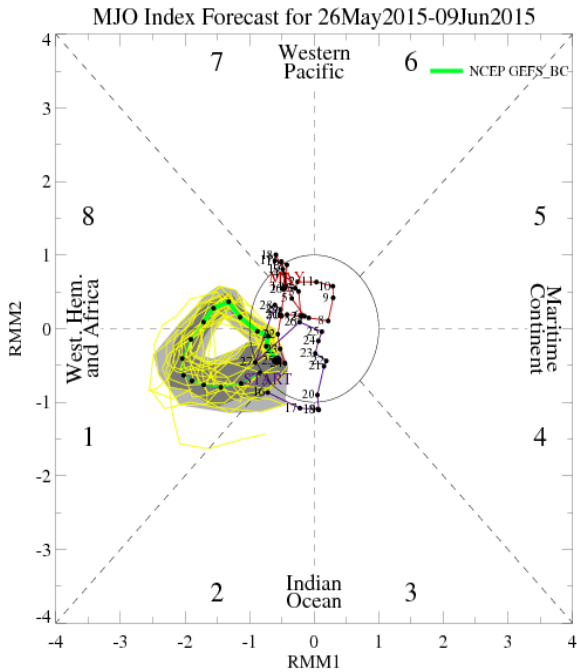
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

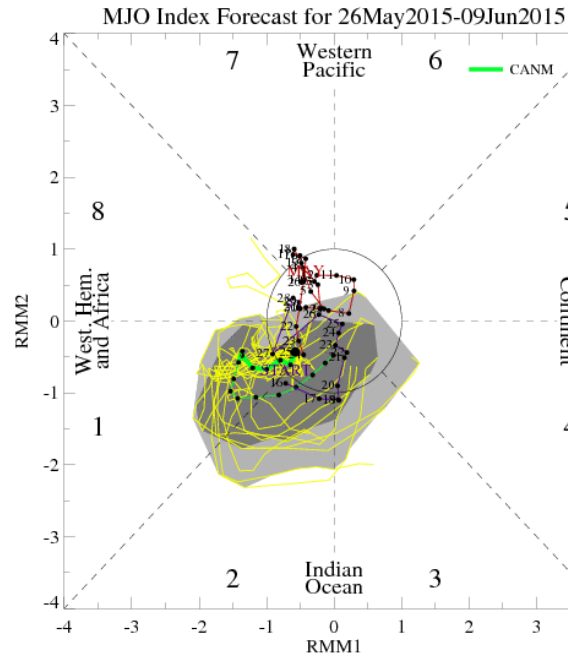


ENSO signal very apparent, though there is some modulation by Kelvin waves.

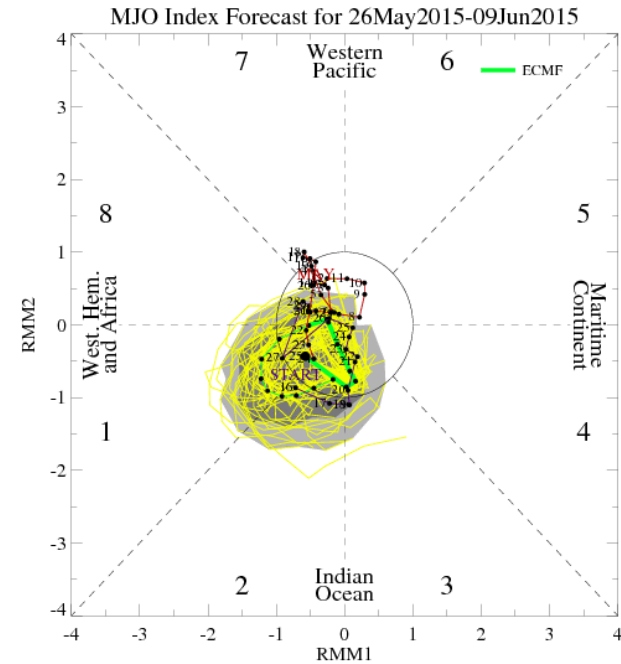
MJO Observation/Forecast



GEFS



Canadian



ECMWF

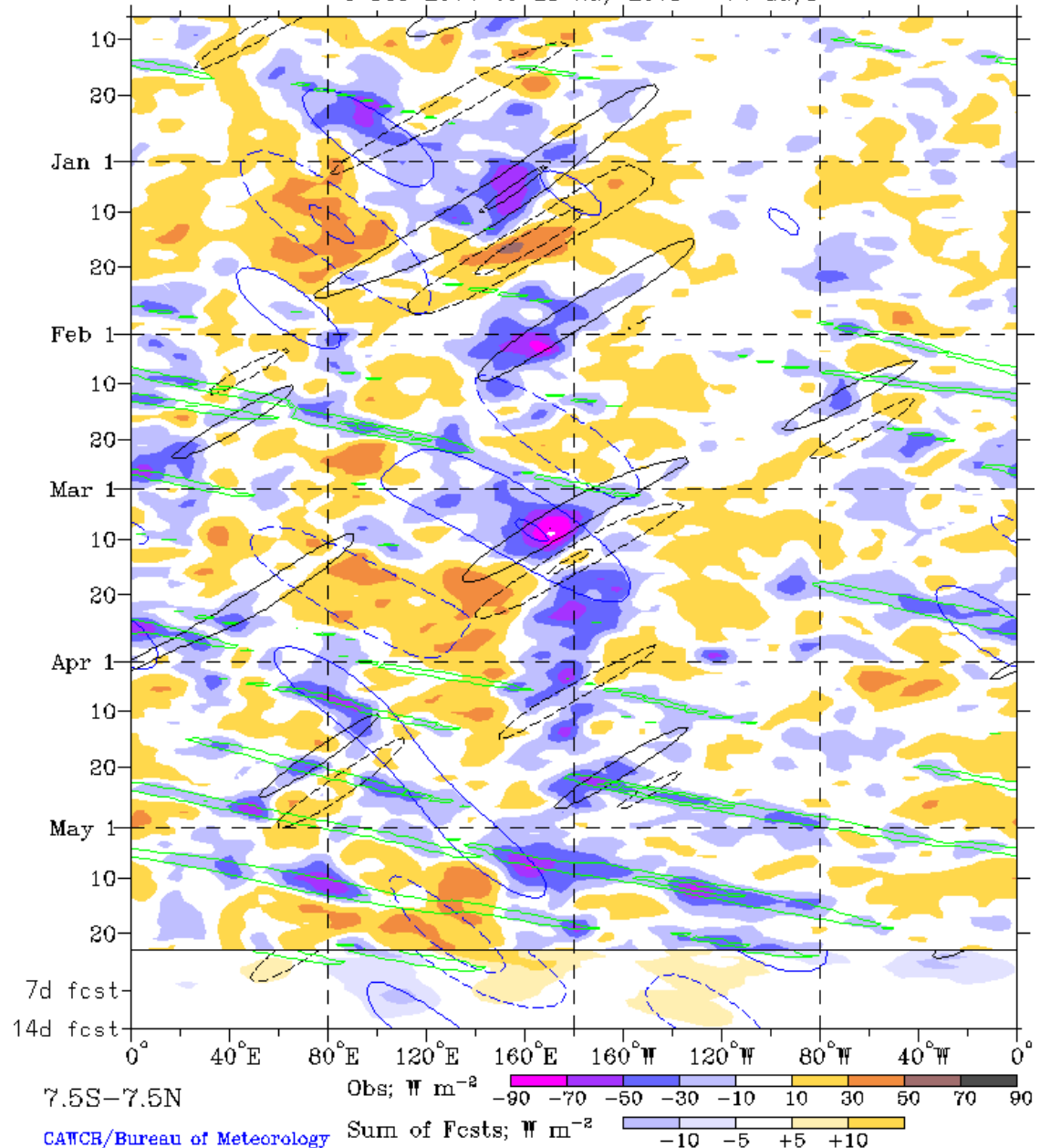
RMM forecasts indicate something other than canonical MJO, likely related to ENSO and Kelvin waves.

Real-time filtering superimposed upon 1-2-1 filt, R21, OLR Anoms
 MJO blue CINT=10; n1ER black CINT=10; Kelvin green CINT=15
 Negative contours solid, positive dashed (excluding Kelvin)
 6-Dec-2014 to 25-May-2015 + 14 days

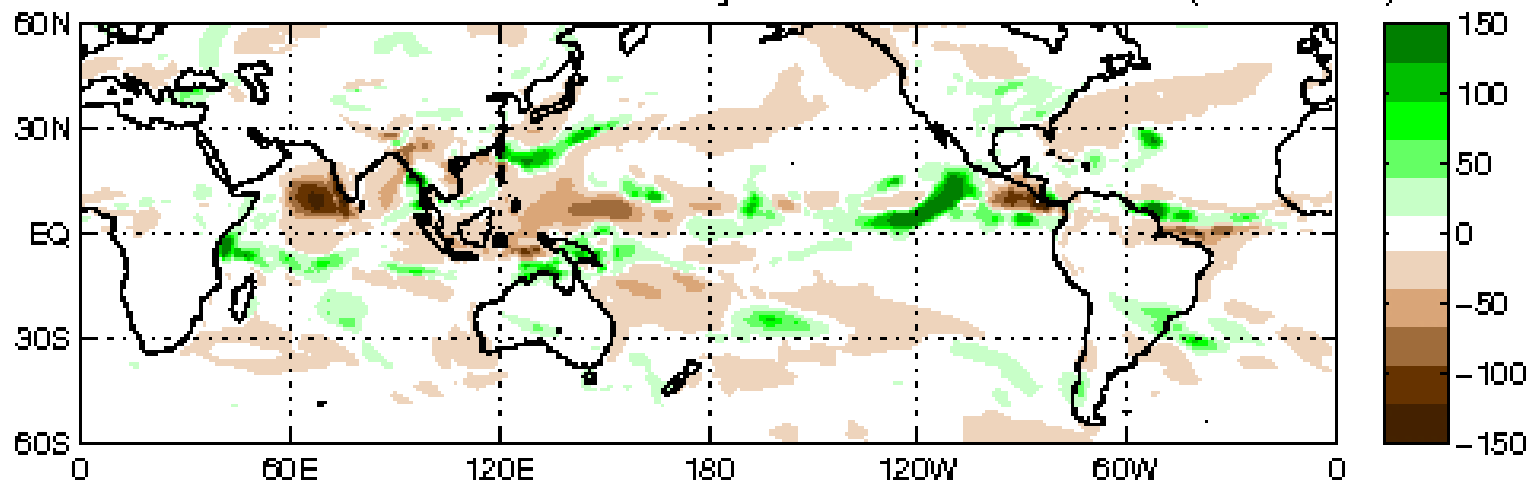
Green contours are propagation
 of enhanced phases of
 atmospheric Kelvin waves

Kelvin wave activity prominent
 over the East Pacific, as well as
 over the eastern Indian Ocean.

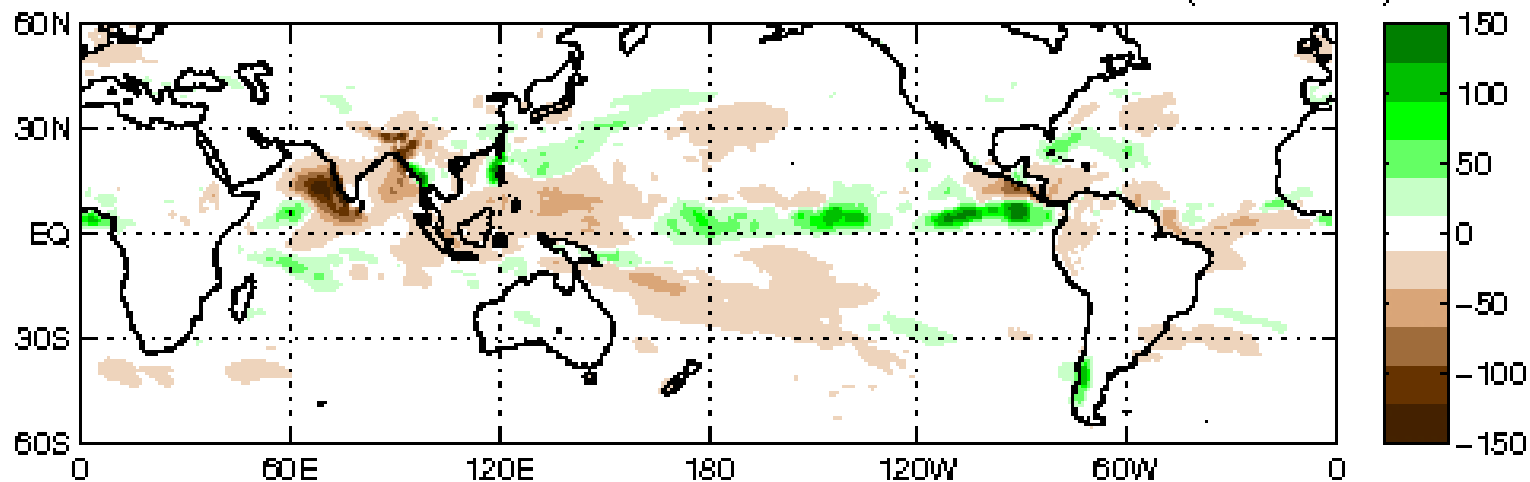
Low frequency is contributing,
 especially near Date Line.



CFS: Anom. PREC Week: 1: 27-May-2015 to 02-Jun-2015 (mm/week)



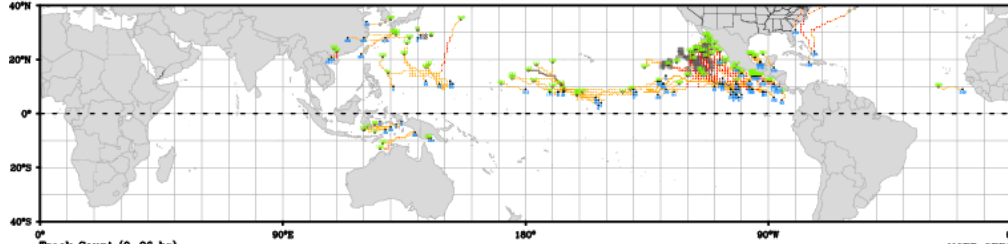
CFS: Anom. PREC Week: 2: 03-Jun-2015 to 09-Jun-2015 (mm/week)



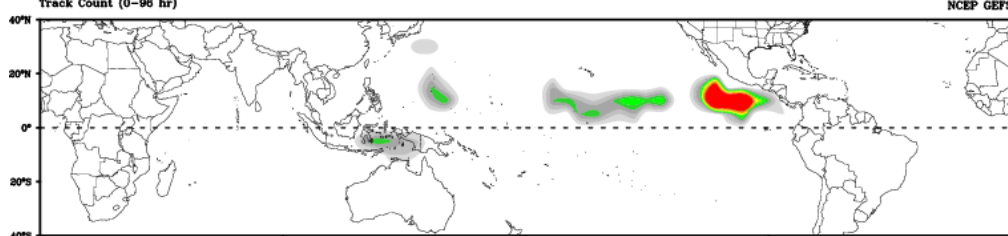
Ensemble GFS

CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)

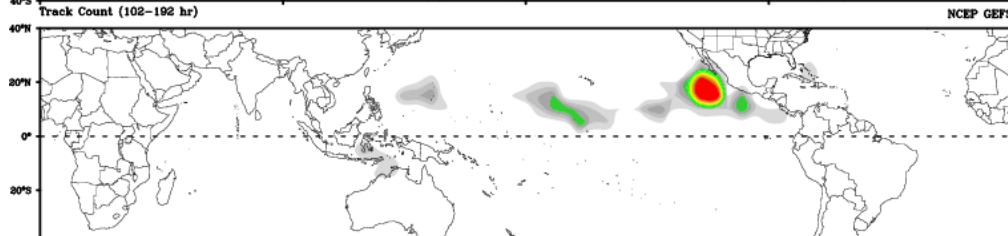
TC Track(0-384 hr) 2015052606 NCEP GEFS



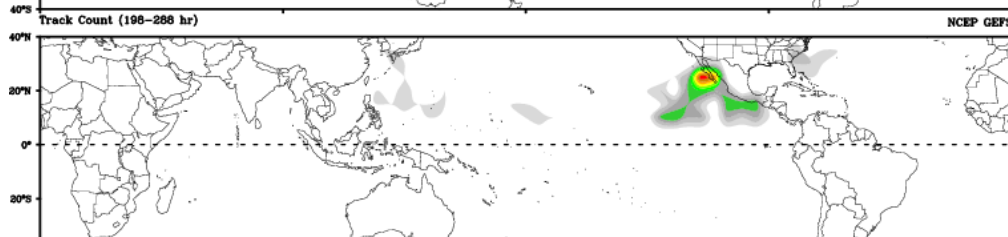
Days 1-4



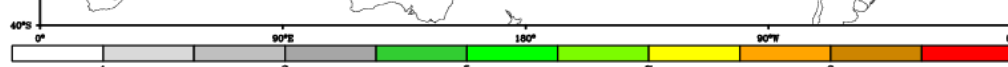
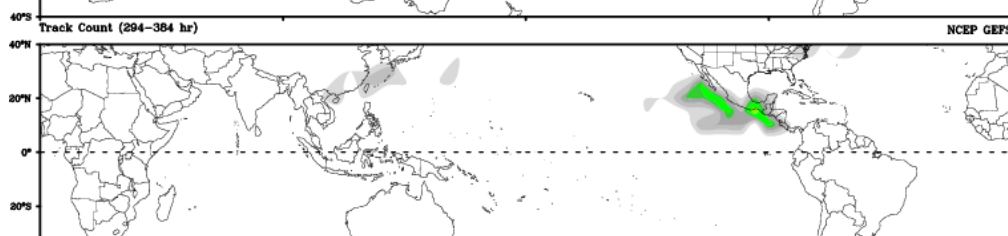
Day 5-8



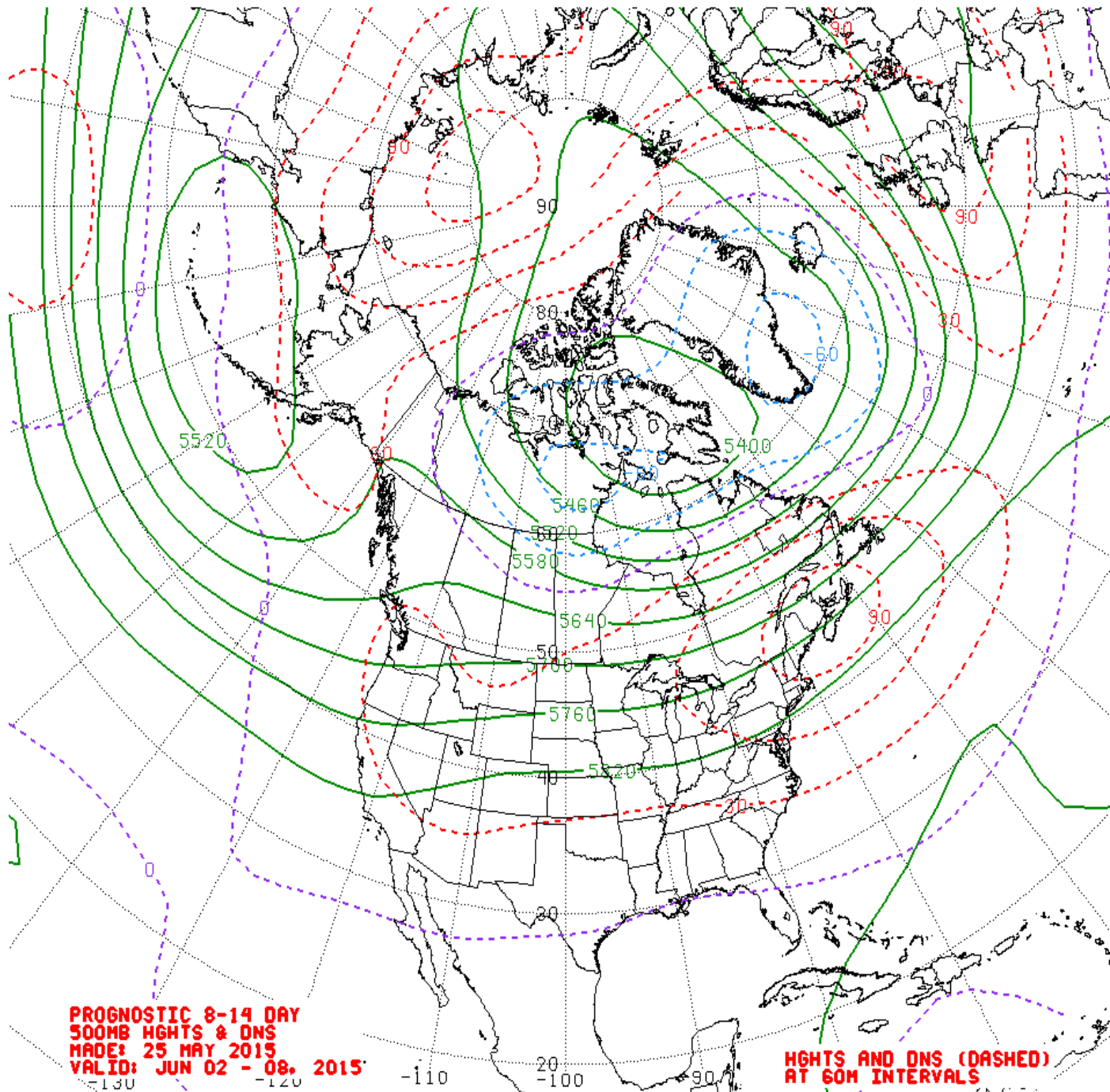
Day 9-12



Day 13-15



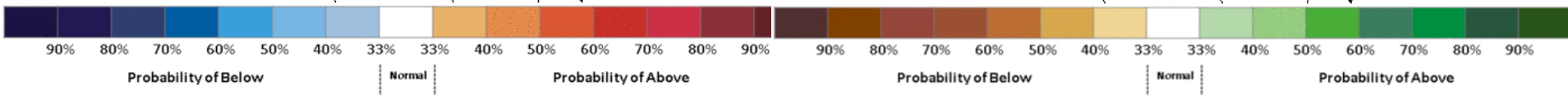
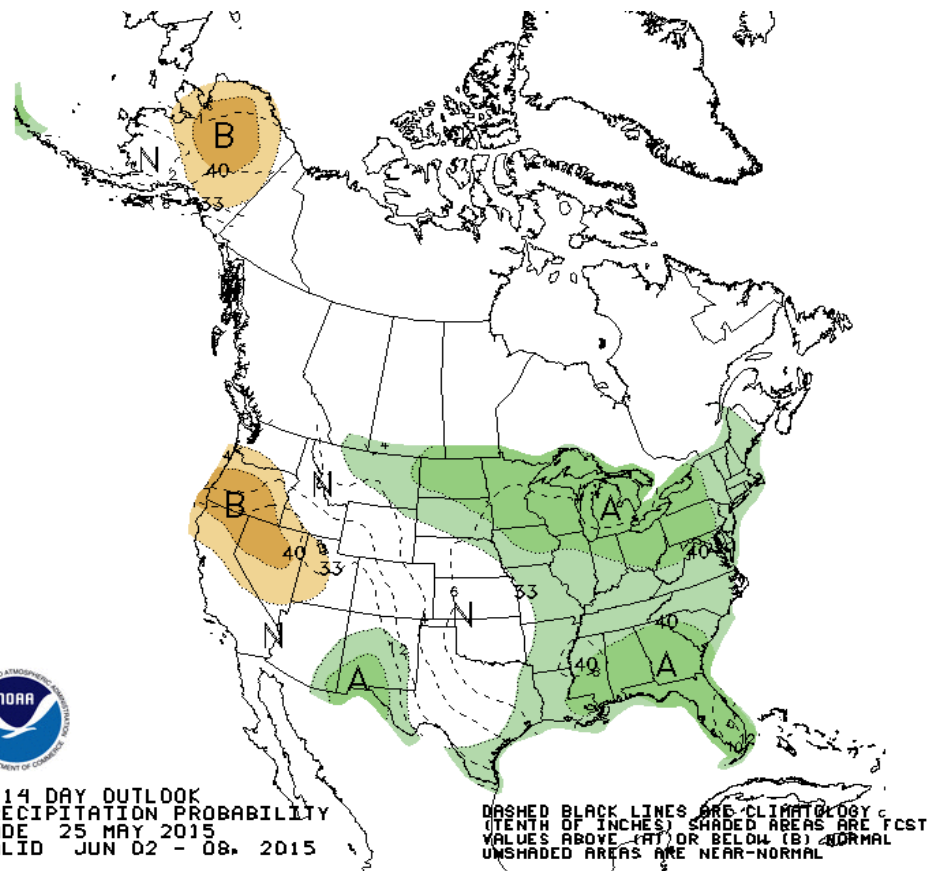
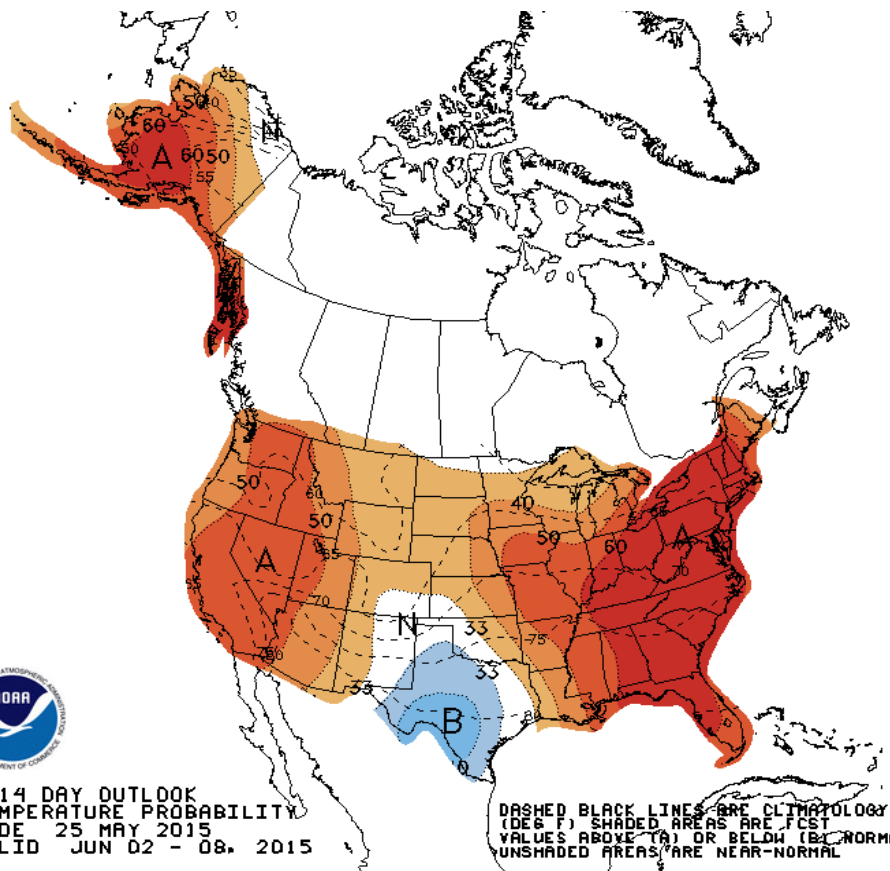
Track Count



**PROGNOSTIC 8-14 DAY
500MB HGHTS & DNS
MADE: 25 MAY 2015
VALID: JUN 02 - 08, 2015**

**HGHTS AND DNS (DASHED)
AT 60M INTERVALS**

Week 2 – Temperature and Precipitation

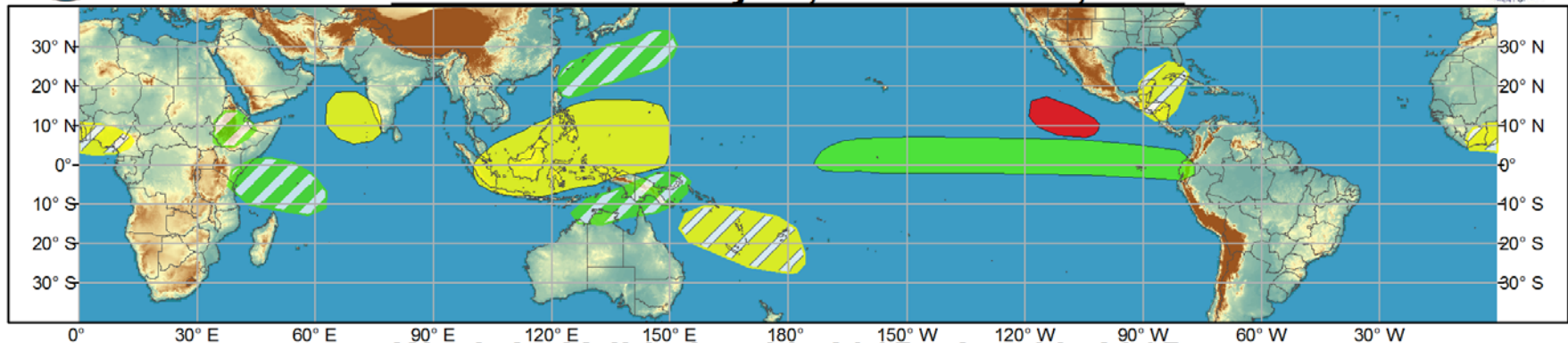




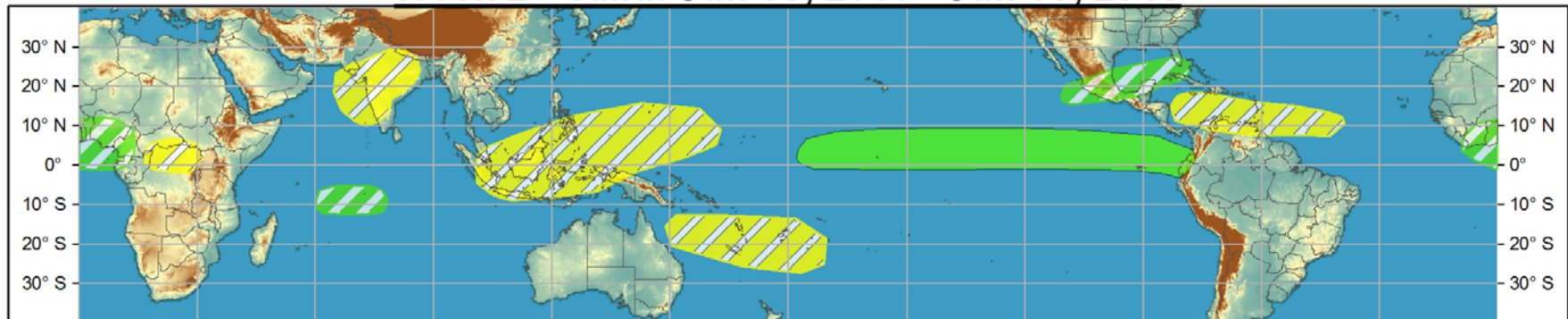
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