

# Global Tropics Hazards And Benefits Outlook

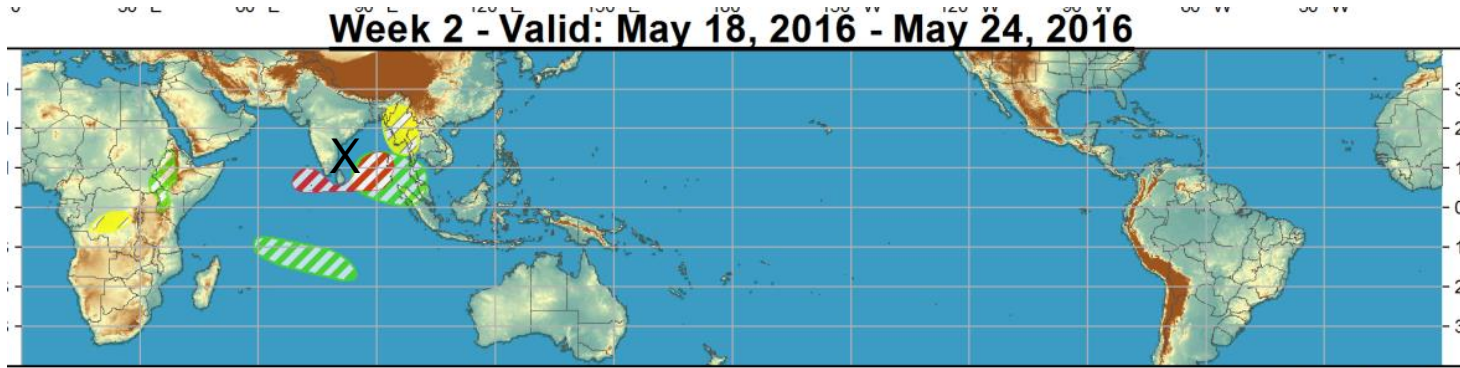
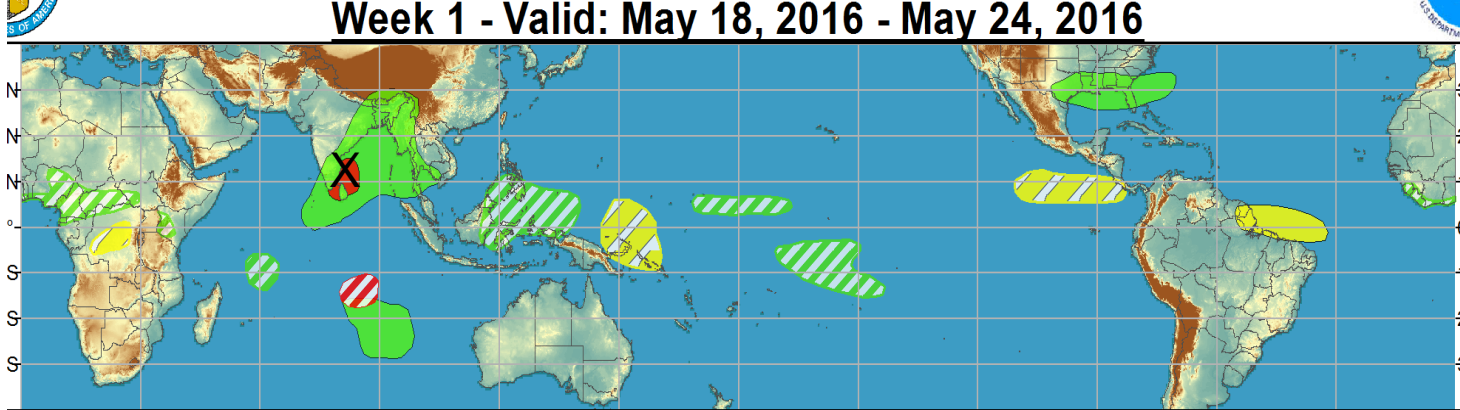
May 24, 2016

Dan Harnos

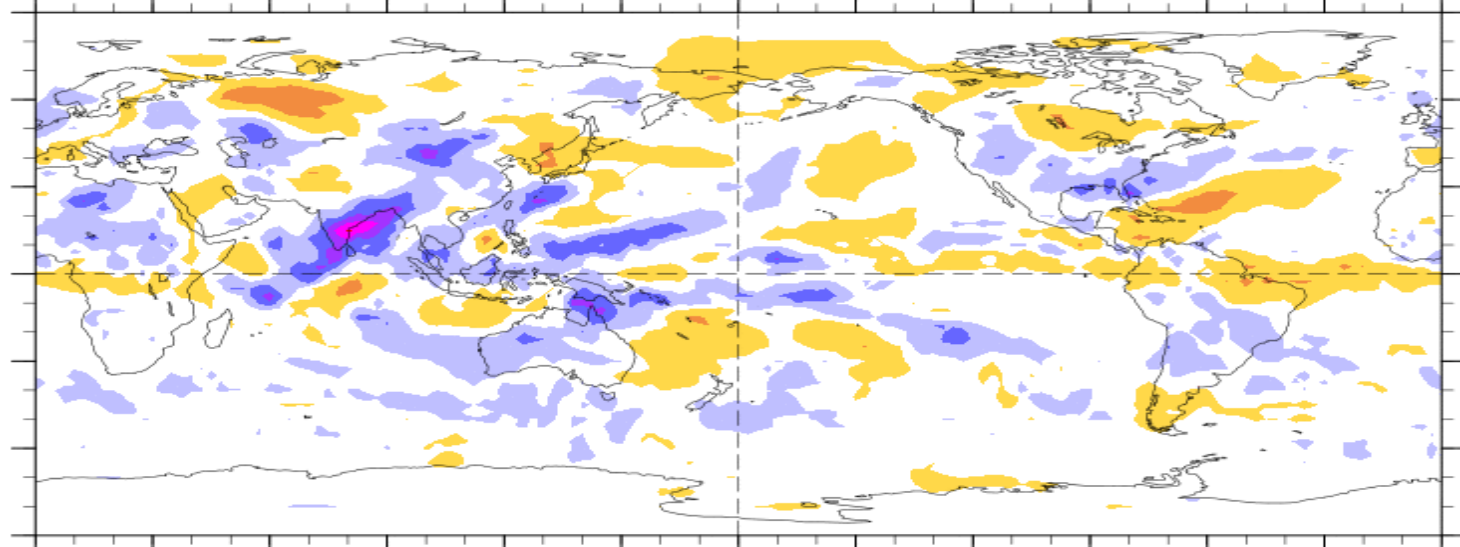
## Outline

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

# Outlook Review



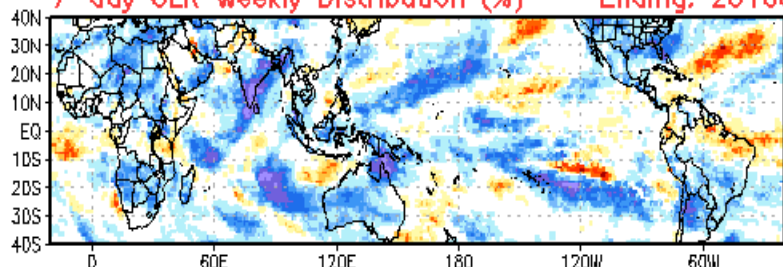
7-Day Average OLR Anomaly 2016/05/16 - 2016/05/22



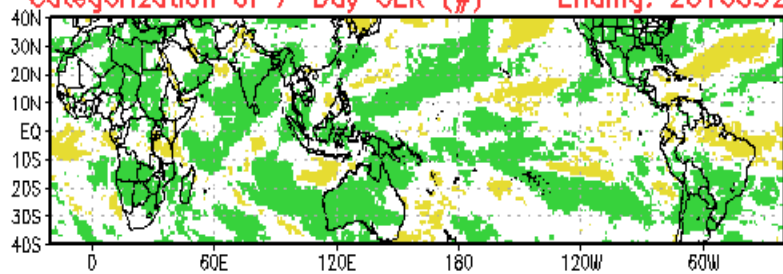
Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain

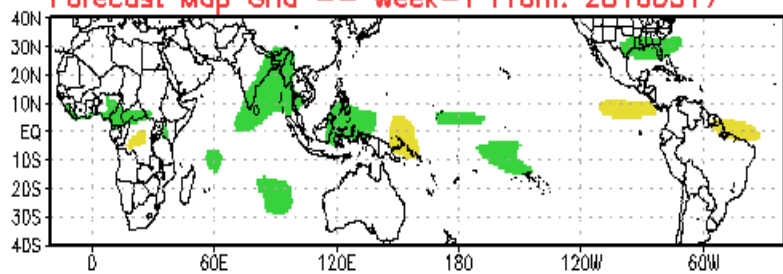
7-day OLR Weekly Distribution (%) -- Ending: 20160524



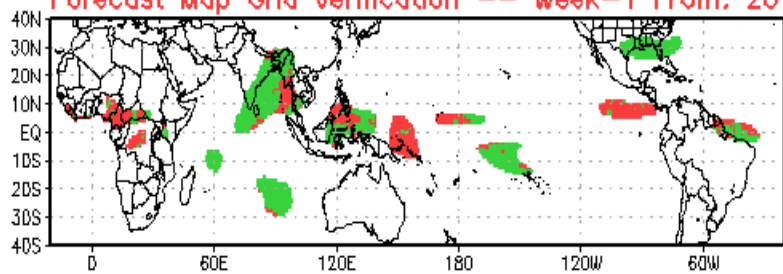
Categorization of 7-Day OLR (#) -- Ending: 20160524



Forecast Map Grid -- Week-1 From: 20160517

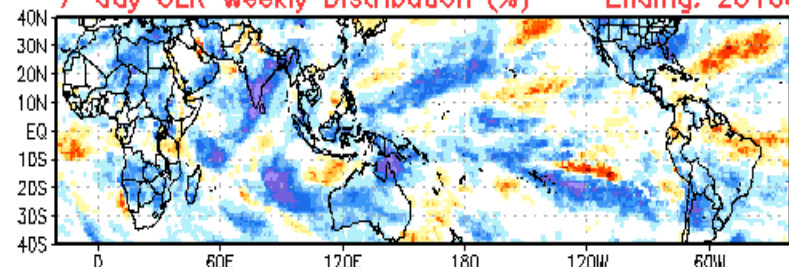


Forecast Map Grid Verification -- Week-1 From: 20160517

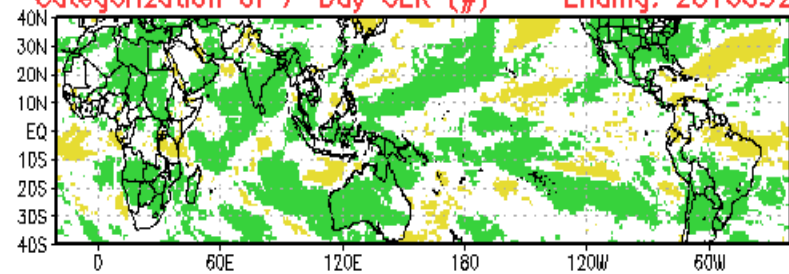


Hit: Green, Miss: Red  
Heidke Skill Score: 43.1902

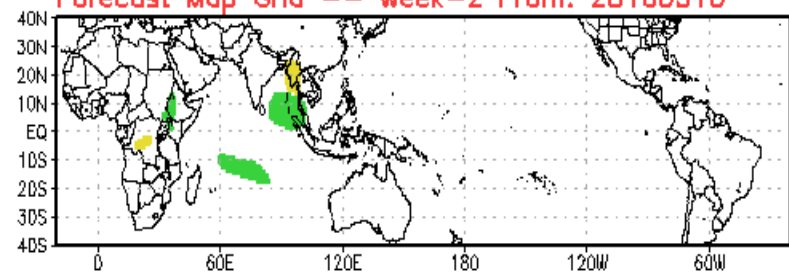
7-day OLR Weekly Distribution (%) -- Ending: 20160524



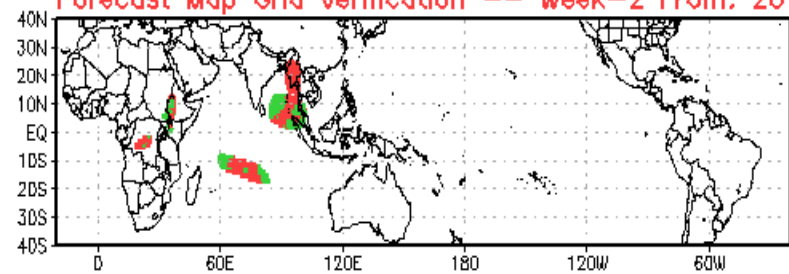
Categorization of 7-Day OLR (#) -- Ending: 20160524



Forecast Map Grid -- Week-2 From: 20160510



Forecast Map Grid Verification -- Week-2 From: 20160510



Hit: Green, Miss: Red  
Heidke Skill Score: 13.5275

# Synopsis of Climate Modes

## ENSO:

- La Nina Watch in effect as of 14 April 2016

ENSO Neutral likely during late spring/early summer 2016; possible La Nina conditions to develop by late summer/early fall. El Nino is weakening, though large area of +30 C SSTs still exists over central South Pacific (0-15S, DL-150W). More than sufficient to sustain convection.

## MJO and other subseasonal tropical variability:

- MJO in phase 4 over the Maritime Continent last week. Noisy pattern elsewhere.
- Most dynamical model MJO index forecasts depict the MJO signal to become incoherent over the coming week. Select models and some ensemble members continue the MJO signal through to the Pacific or depict a new signal emerging again over the Indian Ocean. **High uncertainty.**

## Extratropics:

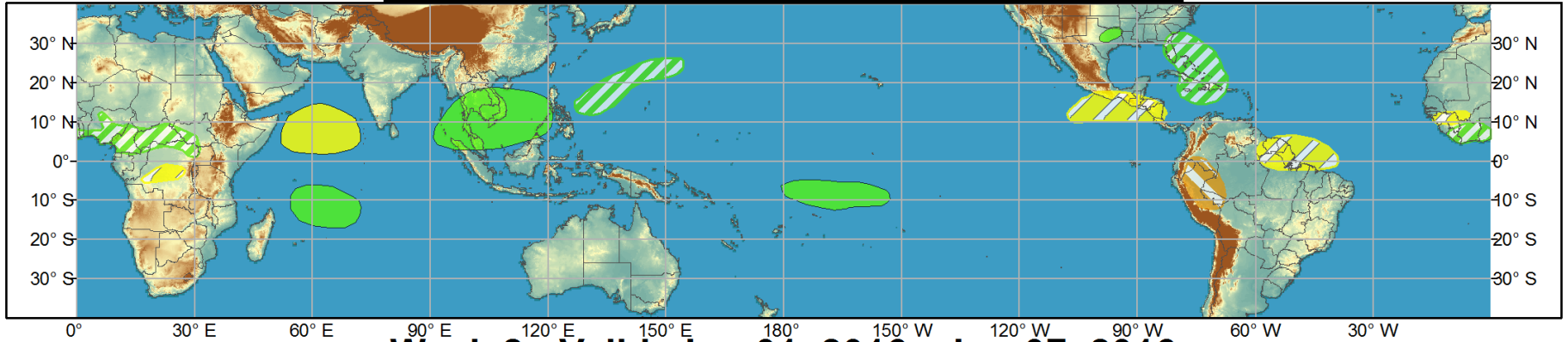
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO or the decaying El Niño, but more likely impacted by mid-latitude frontal/cyclonic activity.



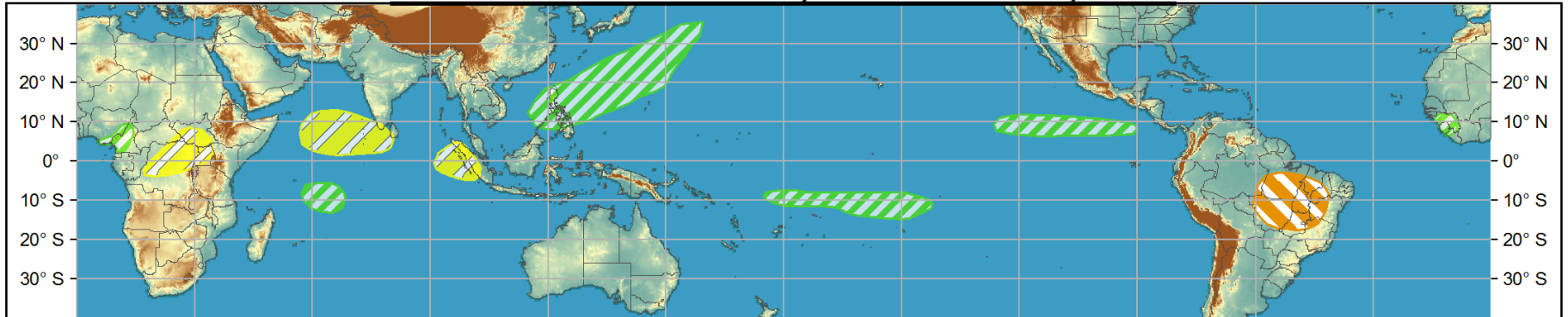
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: May 25, 2016 - May 31, 2016

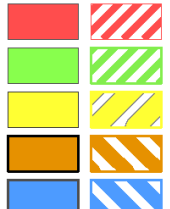


## Week 2 - Valid: Jun 01, 2016 - Jun 07, 2016



**Confidence**  
High Moderate

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



- Development of a tropical cyclone (tropical depression - TD, or greater 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: 05/24/2016  
Forecaster: D.Harnos

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.

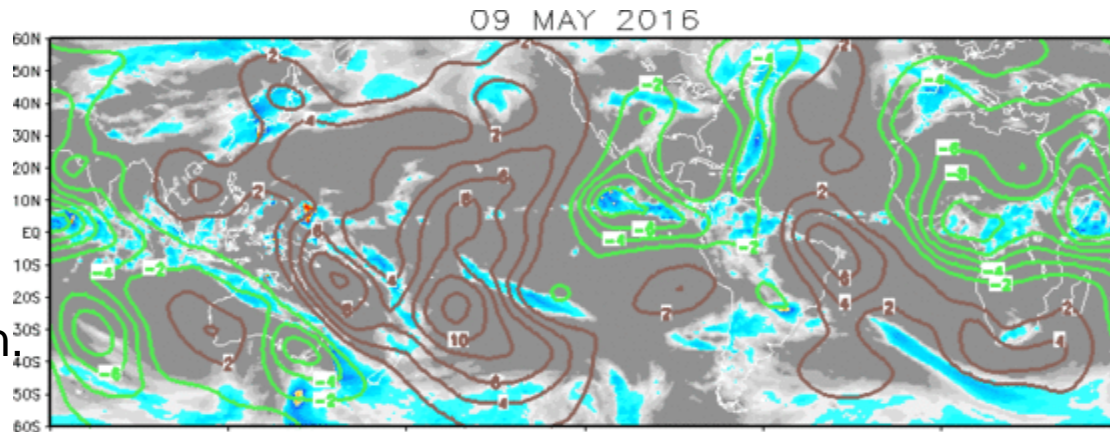




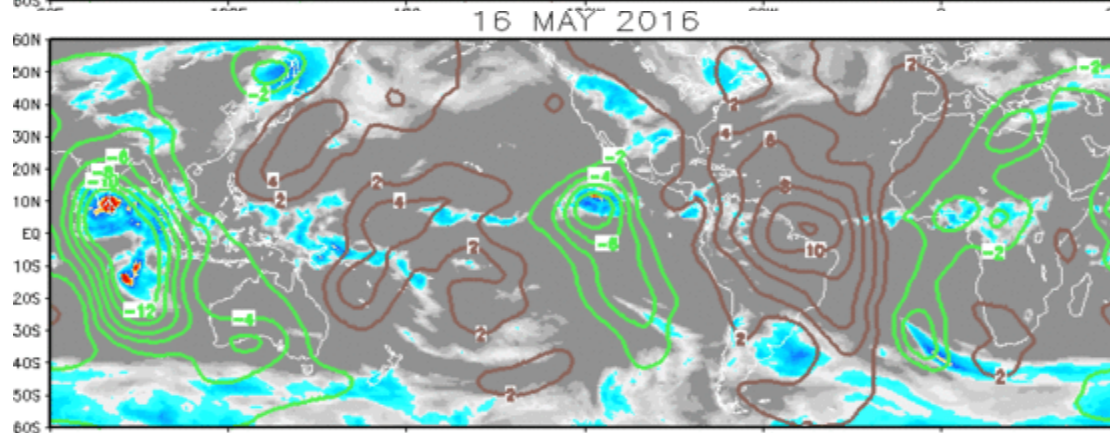
# IR Satellite & 200-hPa Velocity Potential Anomalies

Green: Enhanced Divergence    Brown: Enhanced Convergence

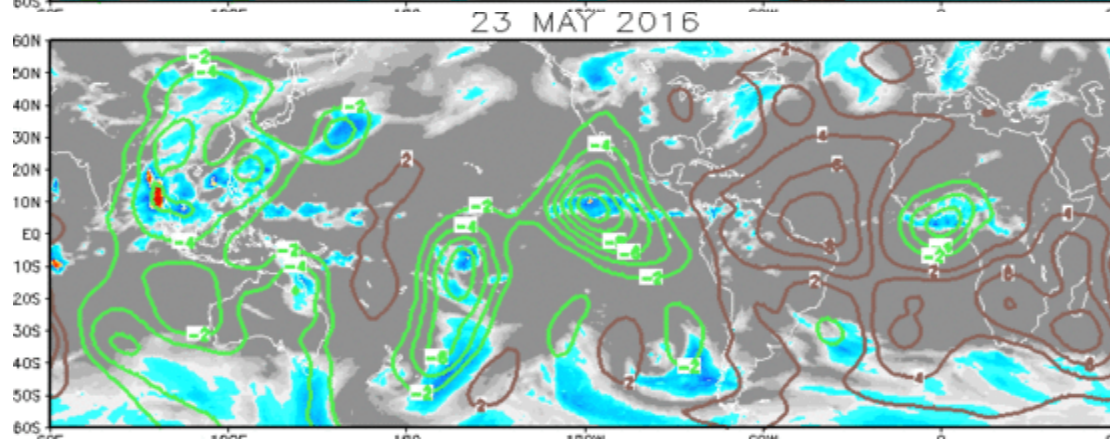
Wave-2 pattern  
with 200-hPa  
divergence over  
Americas, Africa,  
and Indian Ocean



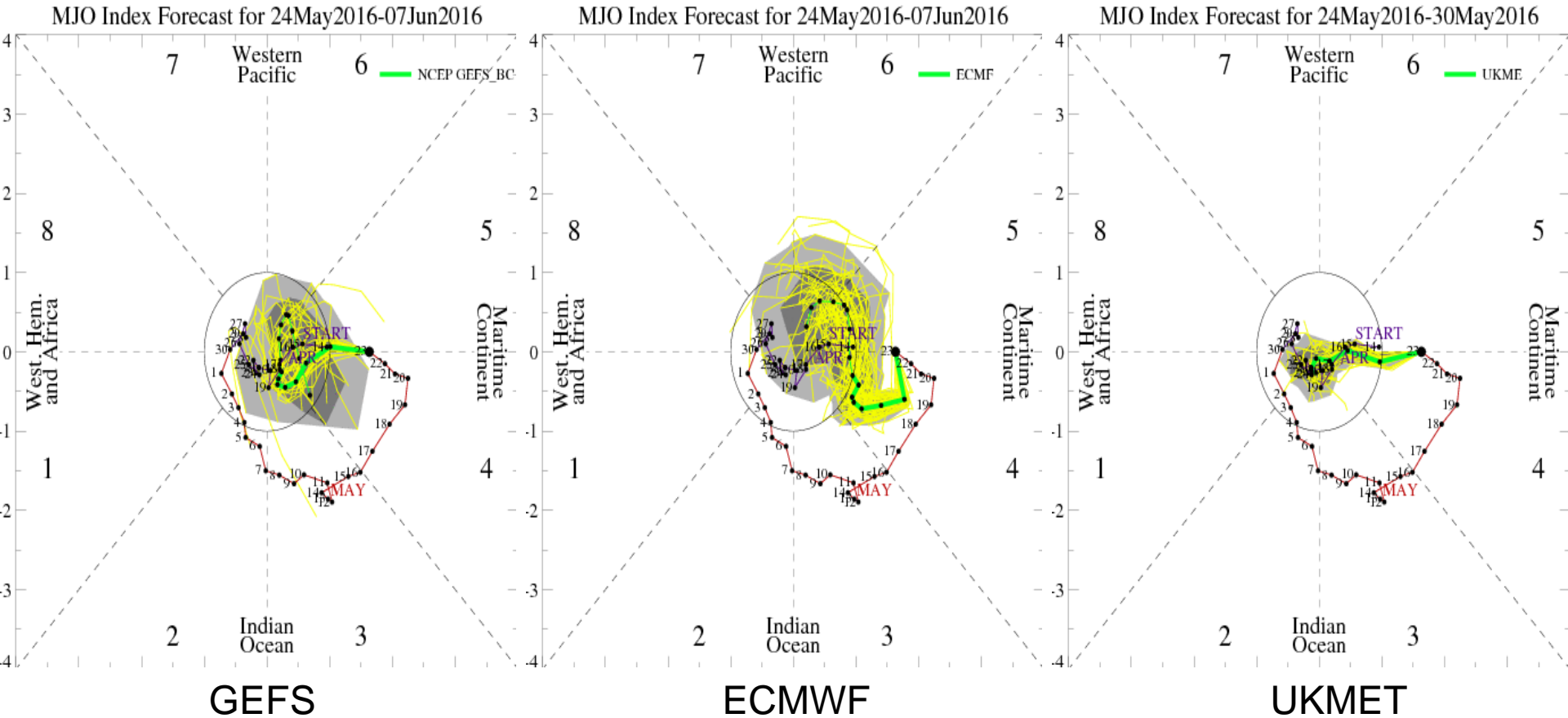
Eastward  
propagation of  
pattern from  
prior week.



Upper-level  
divergence over  
Maritime  
Continent, E.  
Pacific, and W.  
Africa.

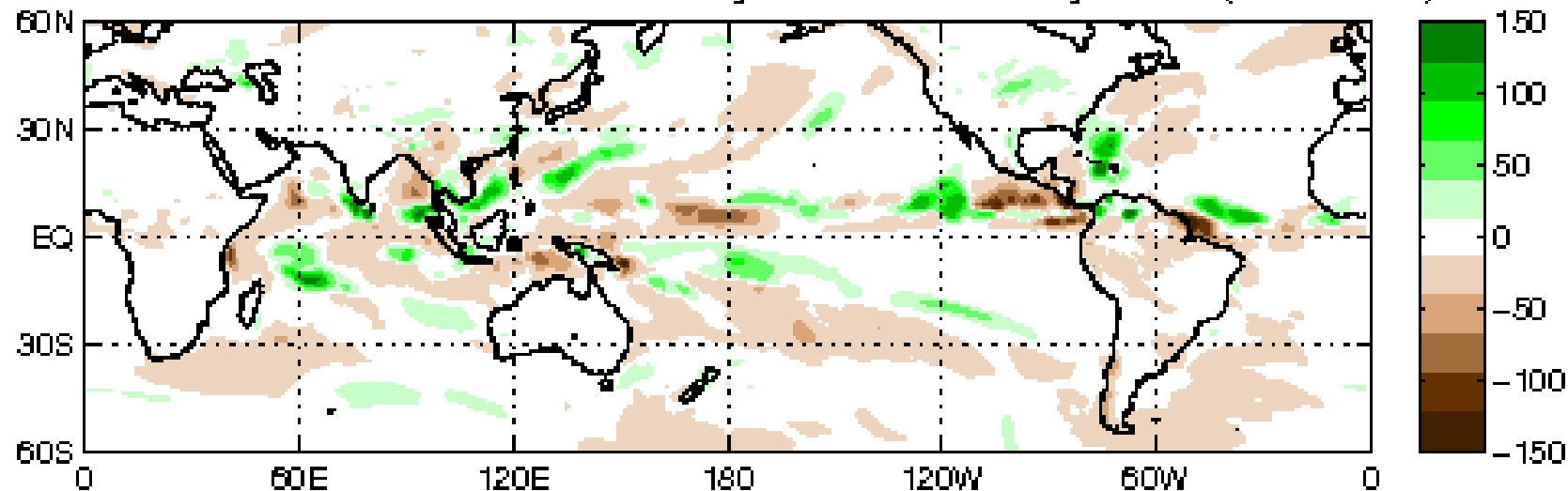


# MJO Observation/Forecast

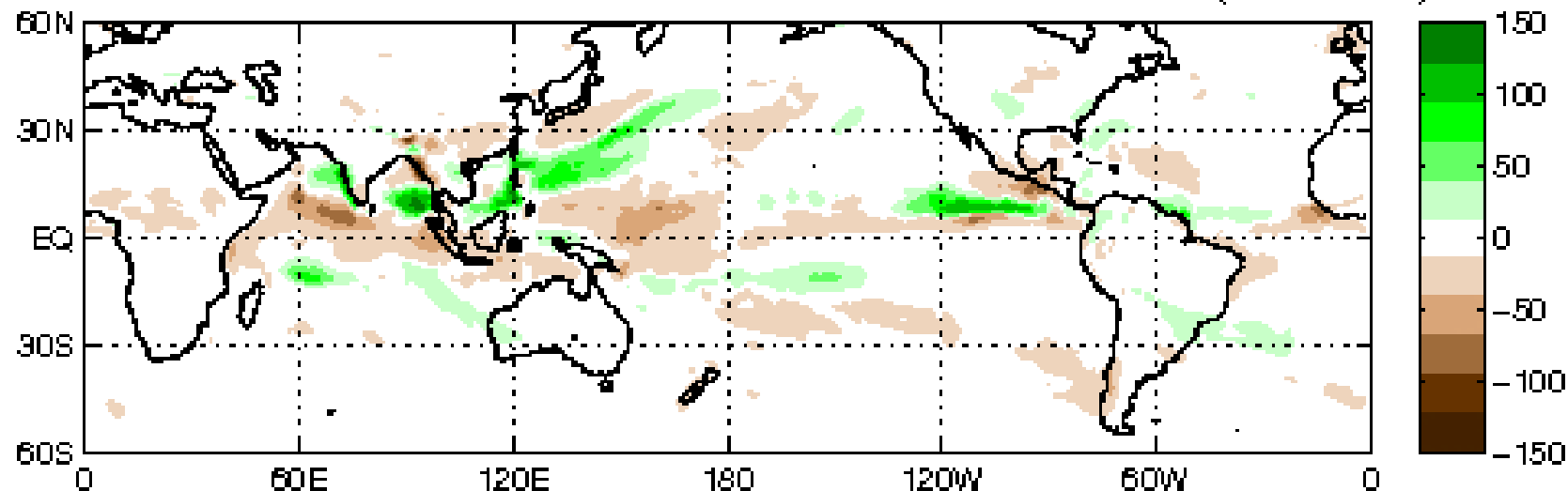


Wheeler-Hendon based analyses of model forecasts indicate a weakening signal during week-1, with on average an incoherent pattern present by week-2 in the GEFS and ECMWF.

**CFS: Anom. PREC Week: 1: 25-May-2016 to 31-May-2016 (mm/week)**



**CFS: Anom. PREC Week: 2: 01-Jun-2016 to 07-Jun-2016 (mm/week)**





# Atlantic Tropical Cyclones and Disturbances



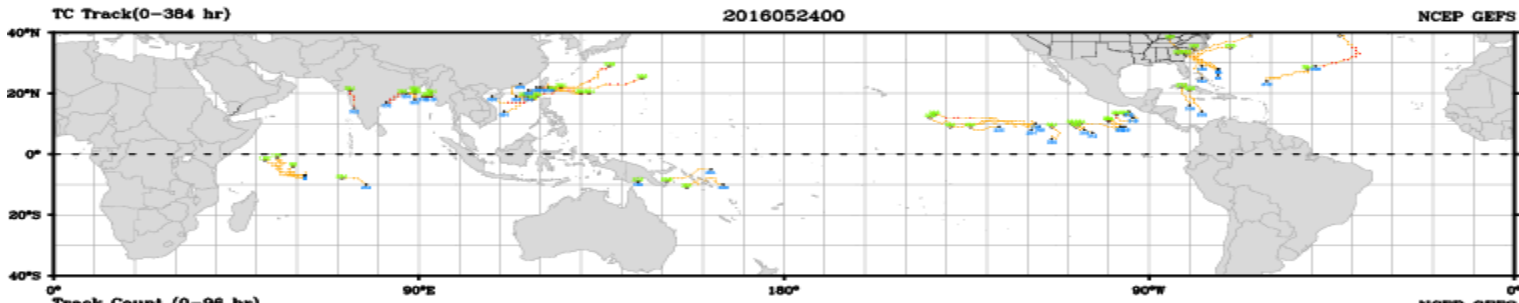
# Graphical Tropical Weather Outlooks

Current Disturbances and Two-Day Cyclone Formation Chance: ✘ < 40% ✘ 40-60% ✘ > 60%  
Tropical or Sub-Tropical Cyclone: ○ Depression ○ Storm ○ Hurricane  
⊕ Post-Tropical Cyclone ✘ Remnants

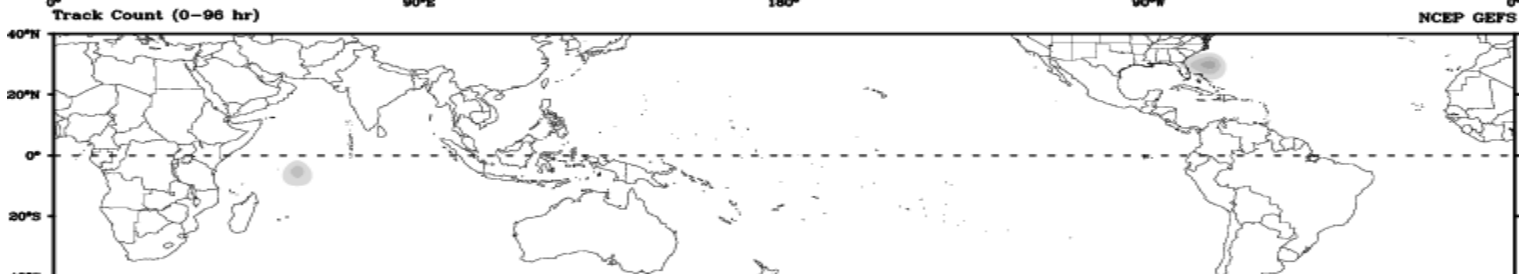
# Eastern Pacific Tropical Cyclones and Disturbances



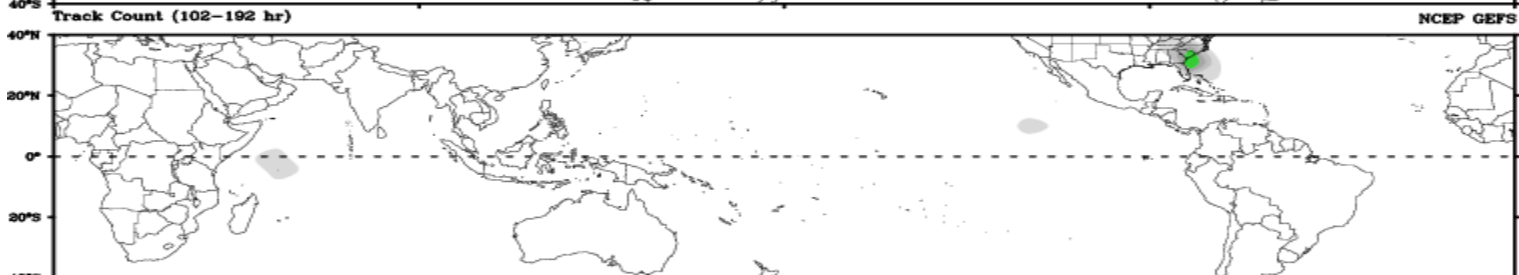
Current Disturbances and Two-Day Cyclone Formation Chance: ✘ < 40% ✘ 40-60% ✘ > 60%  
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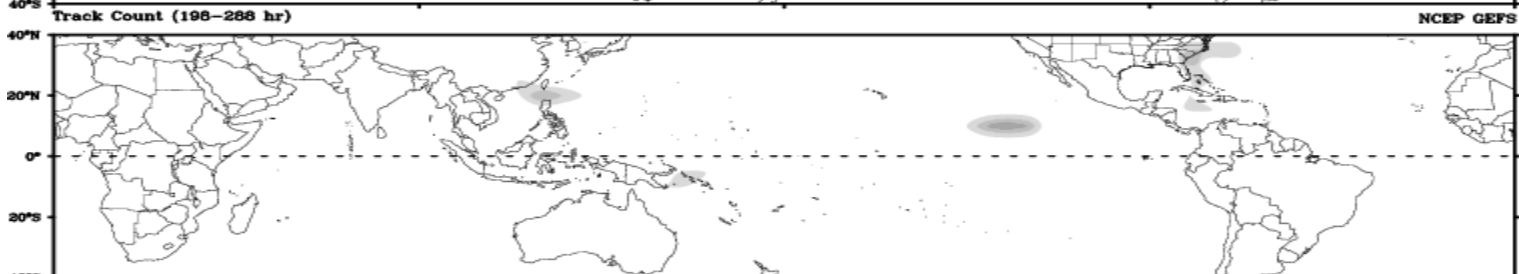
Days 1-4



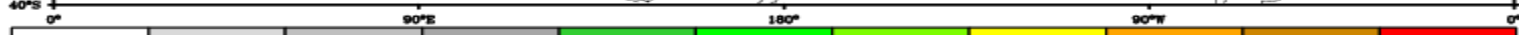
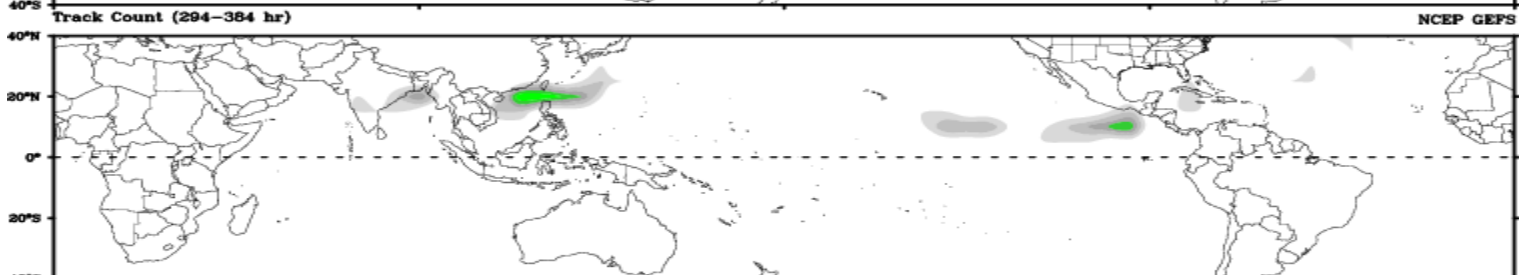
Day 5-8



Day 9-12

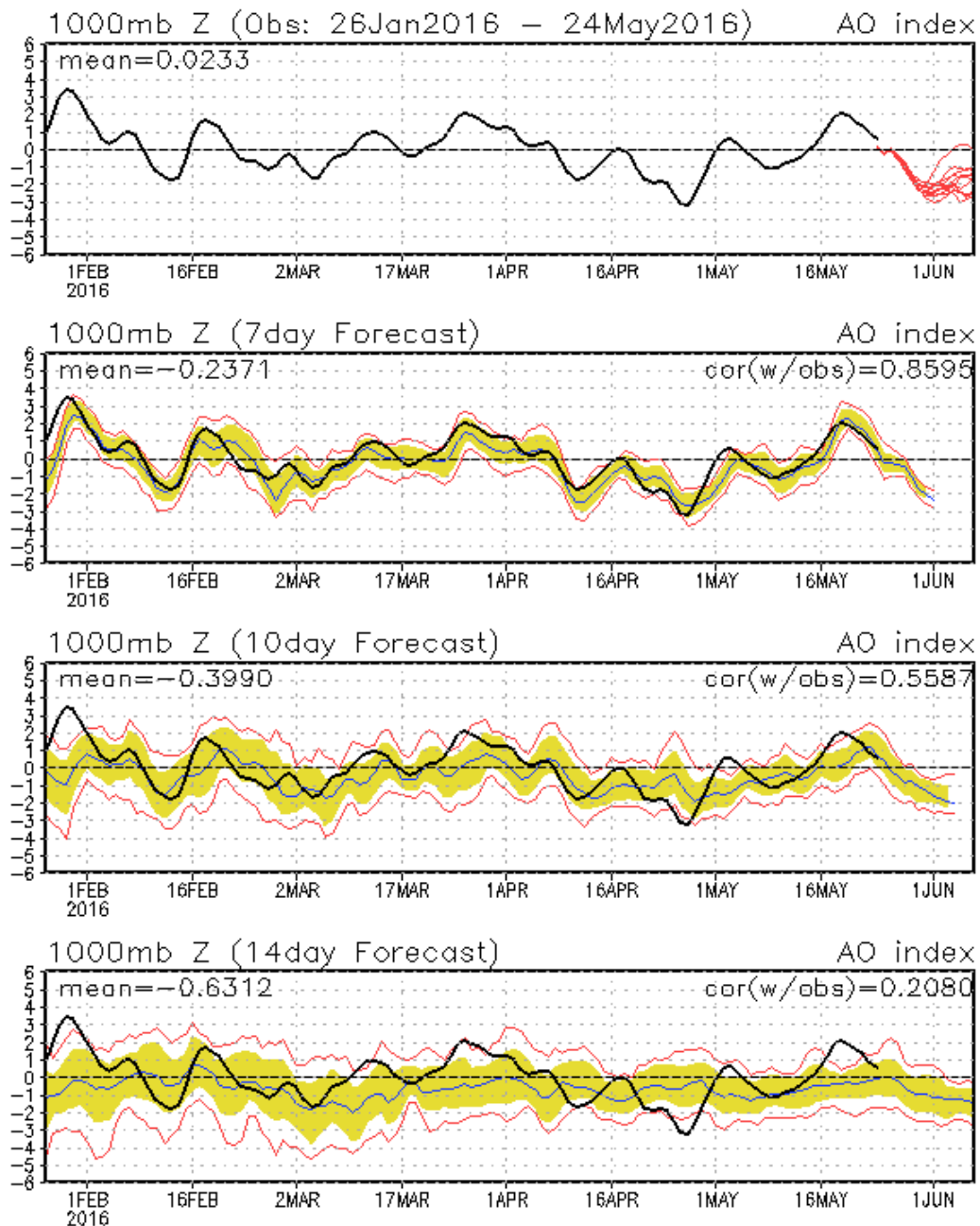


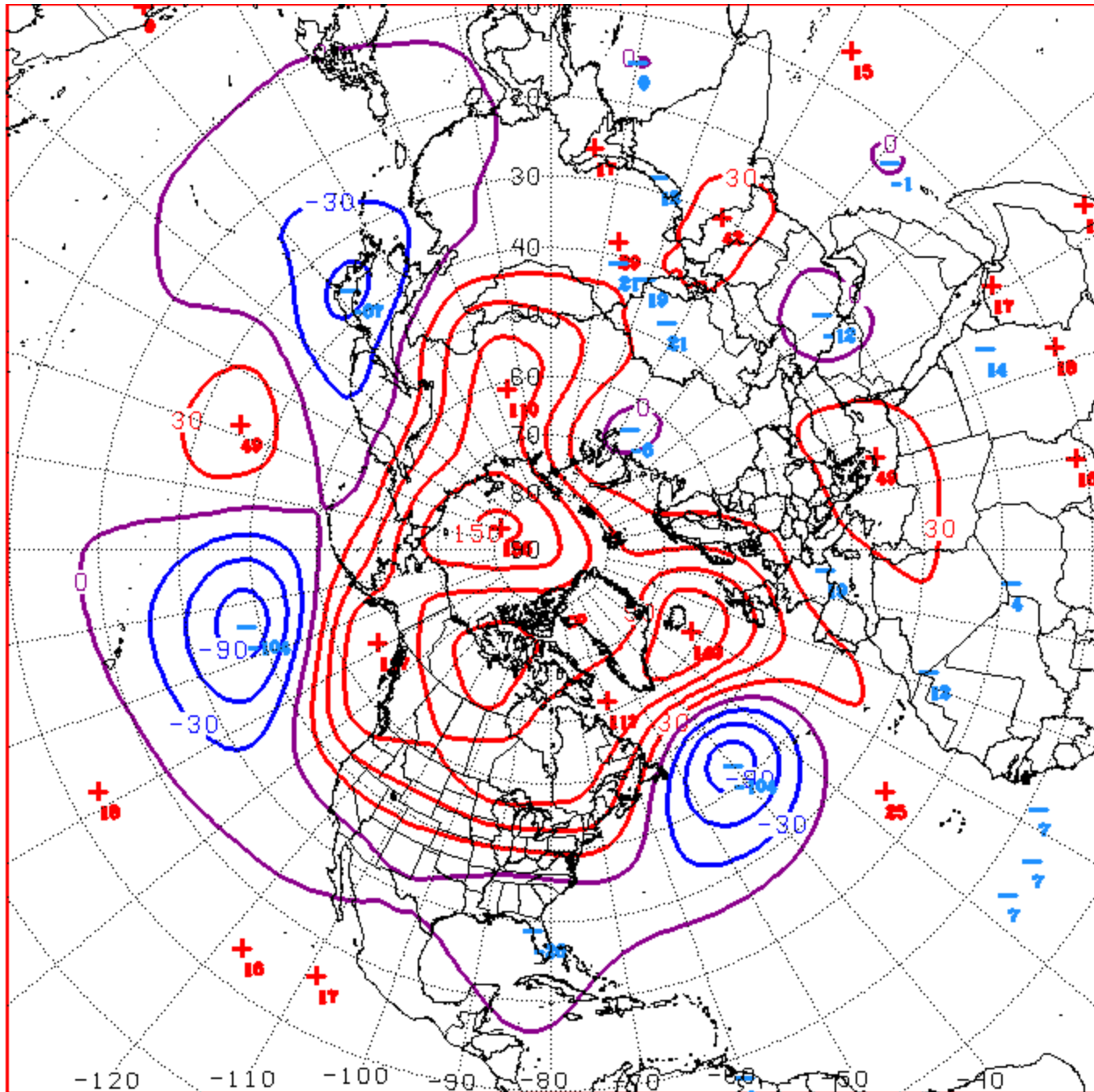
Day 13-15



# Connections to U.S. Impacts

## AO: Observed & ENSM forecasts

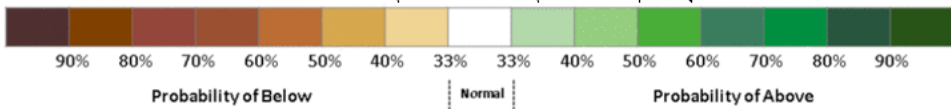
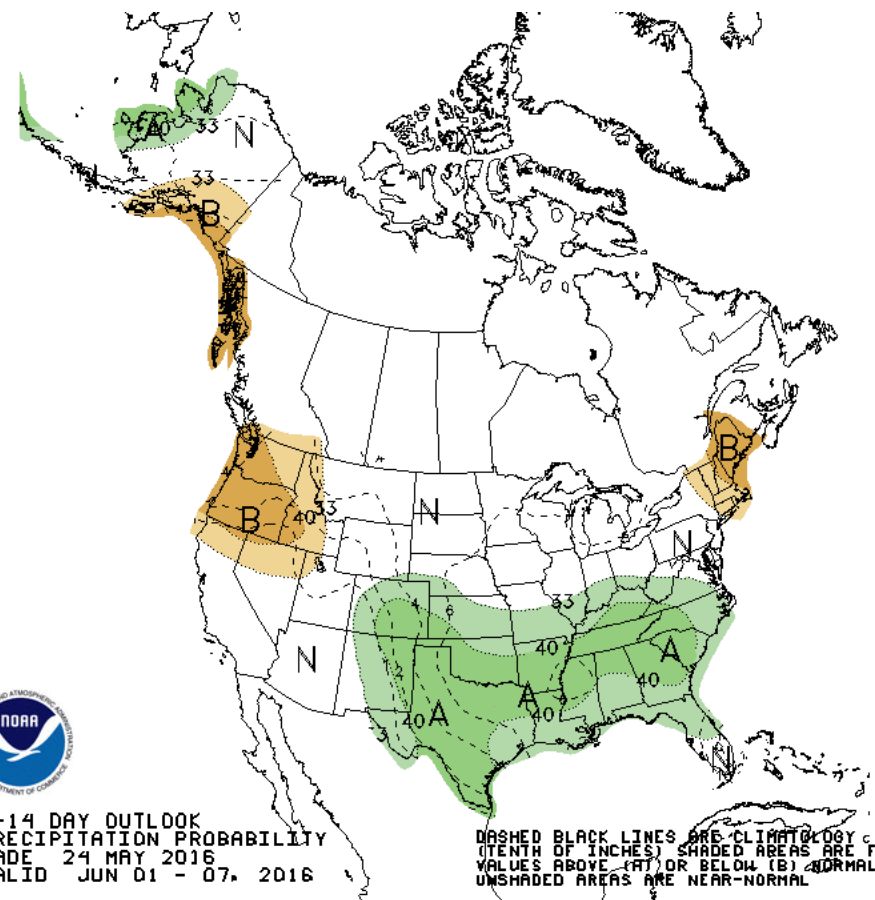
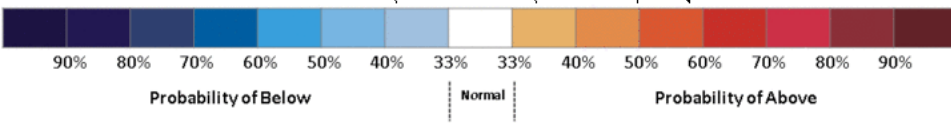
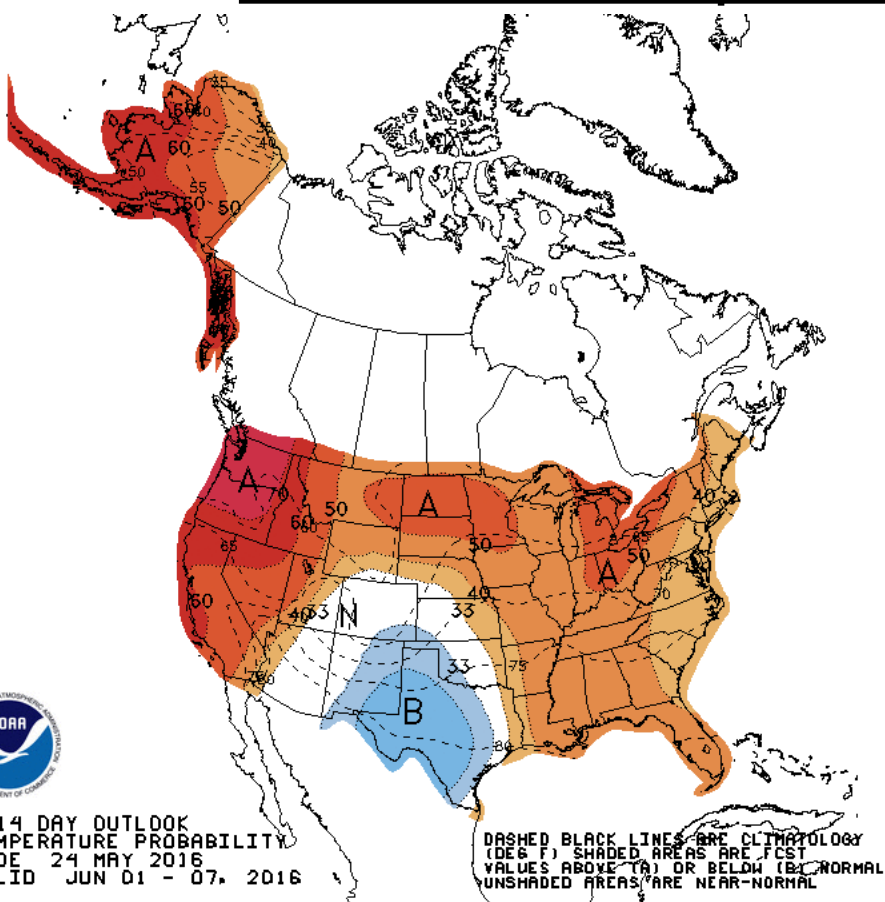




D+11 500 MB ANOMALIES FROM ALZ ENSM  
 CPC MAP MADE MAY 24 2016 1329 UTC CNTD JUN 04 2016



# Week 2 – Temperature and Precipitation

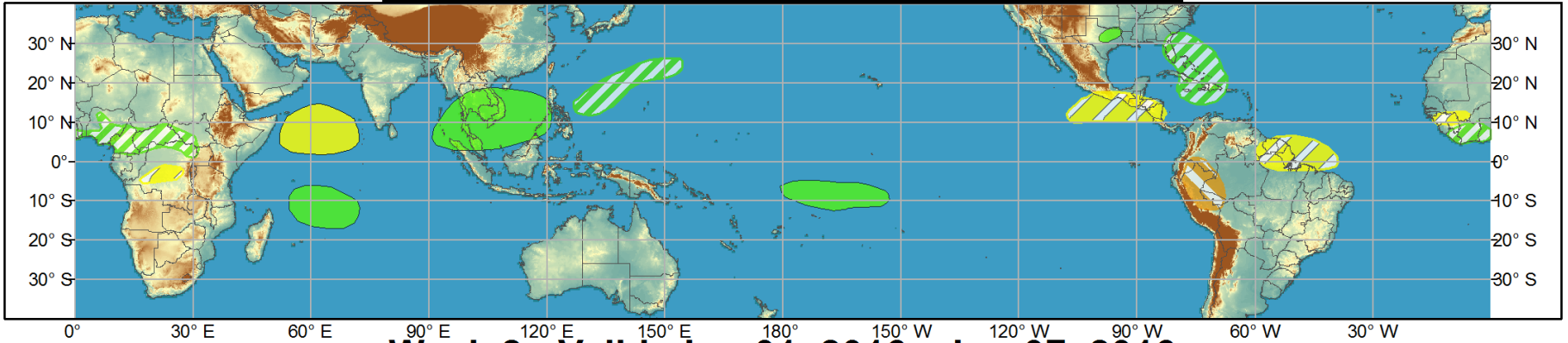




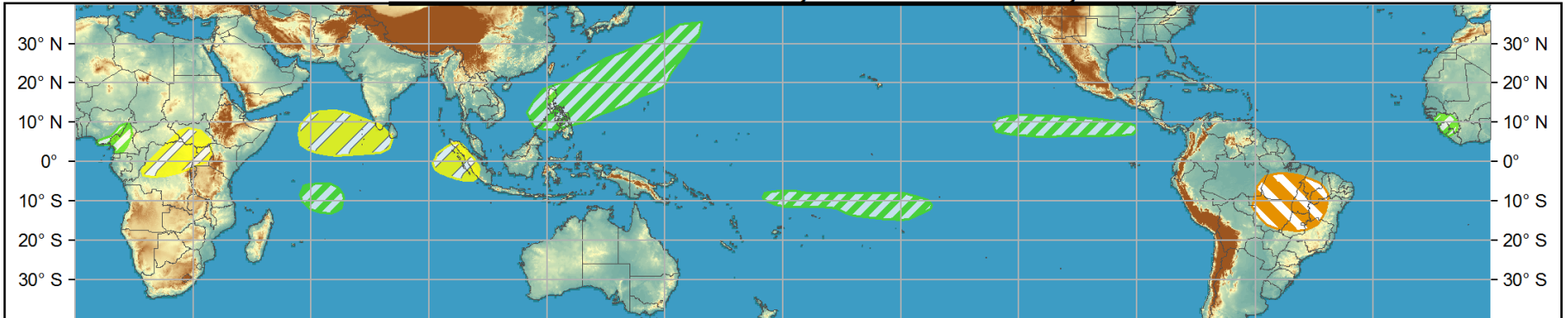
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