

Global Tropics Hazards And Benefits Outlook

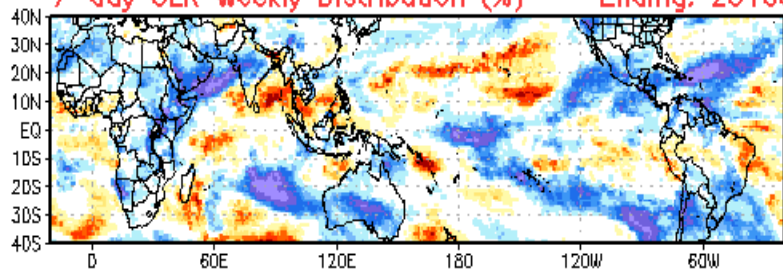
May 3, 2016

Brad Pugh

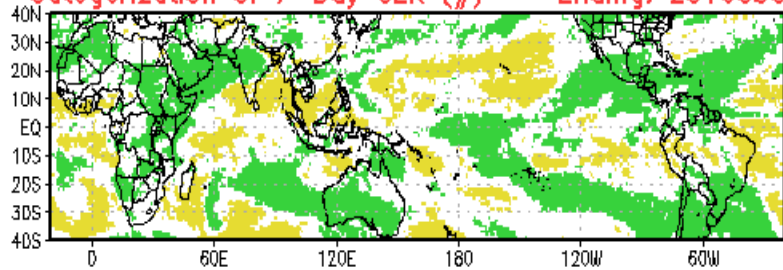
Outline

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

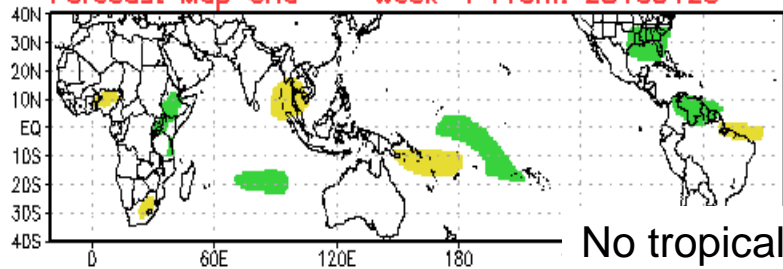
7-day OLR Weekly Distribution (%) -- Ending: 20160503



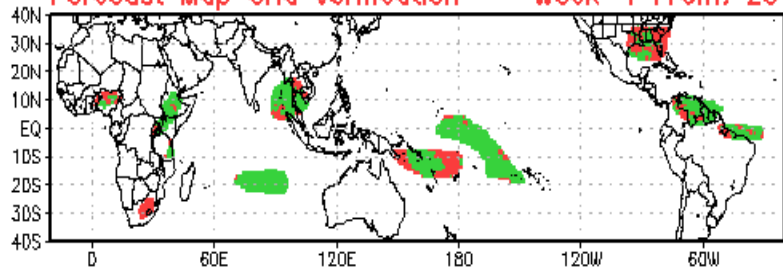
Categorization of 7-Day OLR (#) -- Ending: 20160503



Forecast Map Grid -- Week-1 From: 20160426

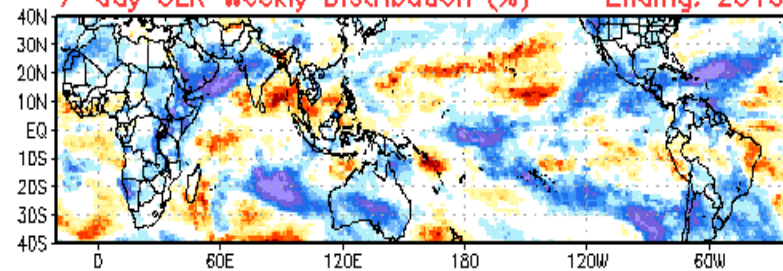


Forecast Map Grid Verification -- Week-1 From: 20160426

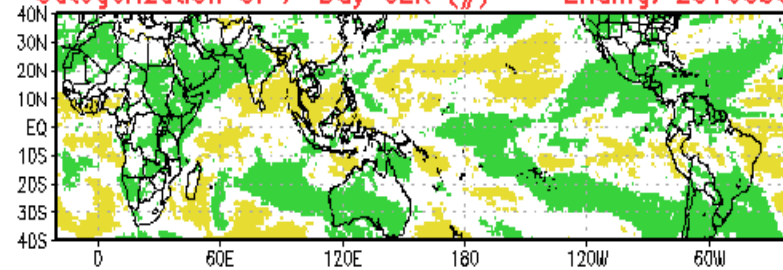


Hit: Green, Miss: Red
Heidke Skill Score: 55.8019

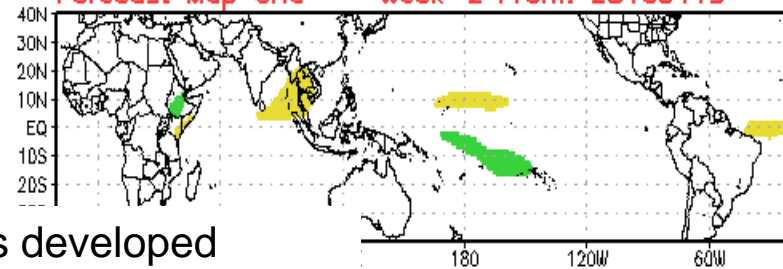
7-day OLR Weekly Distribution (%) -- Ending: 20160503



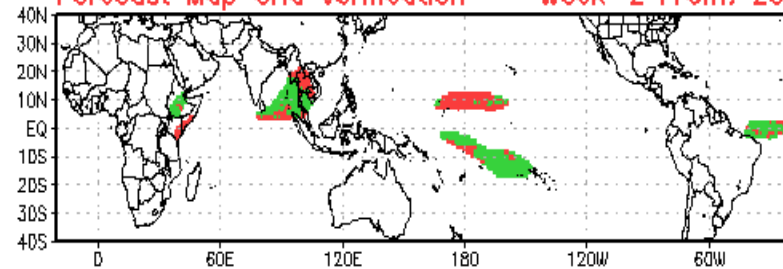
Categorization of 7-Day OLR (#) -- Ending: 20160503



Forecast Map Grid -- Week-2 From: 20160419



Forecast Map Grid Verification -- Week-2 From: 20160419



Hit: Green, Miss: Red
Heidke Skill Score: 41.1284

No tropical cyclones developed during the past week; no false alarms

Synopsis of Climate Modes

ENSO:

- La Nina Watch in effect as of 14 April 2016
- El Nino is weakening, though large area of +30 C SSTs still exists over south-central Pacific (0-15S, DL-150W).
- ENSO neutral likely during late spring/early summer 2016; possible La Nina conditions to develop by late summer/early fall.

MJO and other subseasonal tropical variability:

- MJO indices indicate a continued weak signal.
- Dynamical model MJO index forecasts depict a continued weak signal during Week-1.
- ECMWF model depicts an emerging MJO signal over the Indian Ocean by Week-2.

Extratropics:

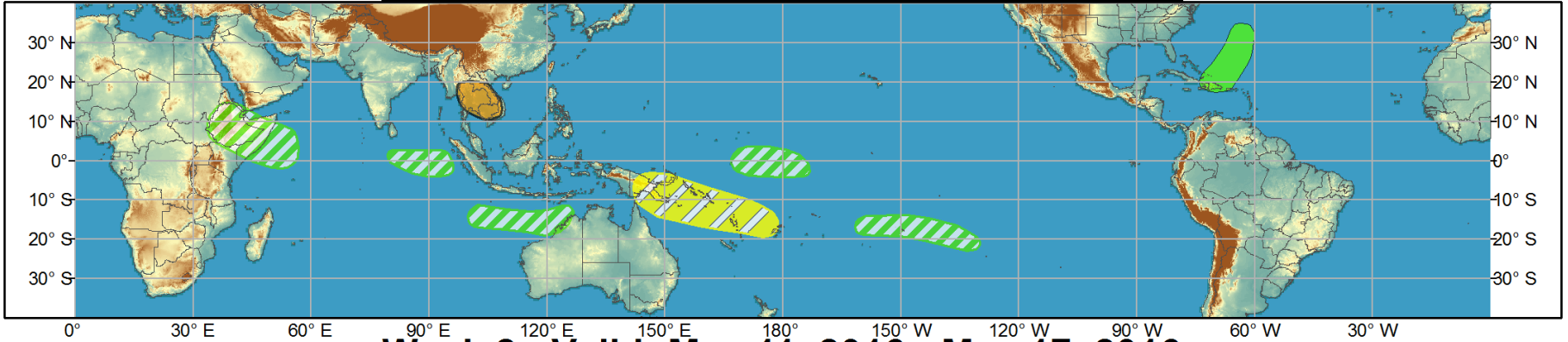
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be affected by the MJO.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 04, 2016 - May 10, 2016



Week 2 - Valid: May 11, 2016 - May 17, 2016



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.

Produced: 05/03/2016

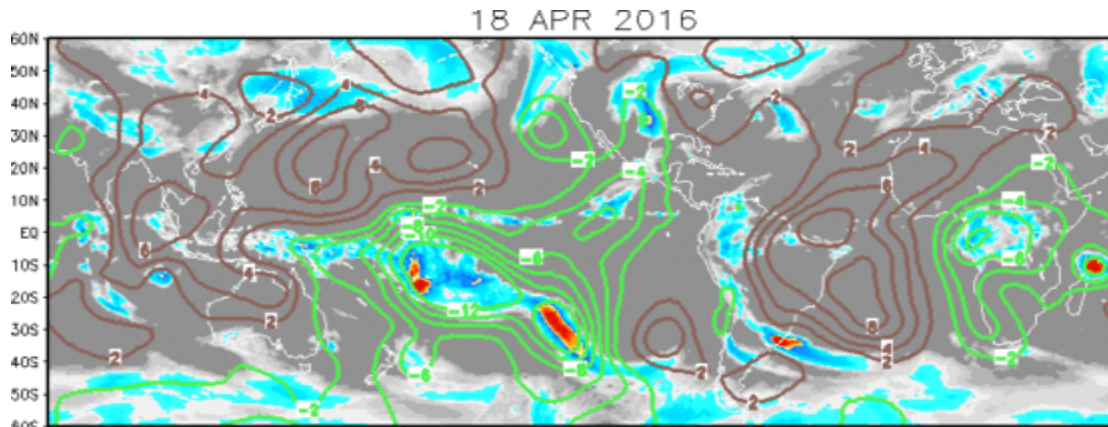
Forecaster: Pugh

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.

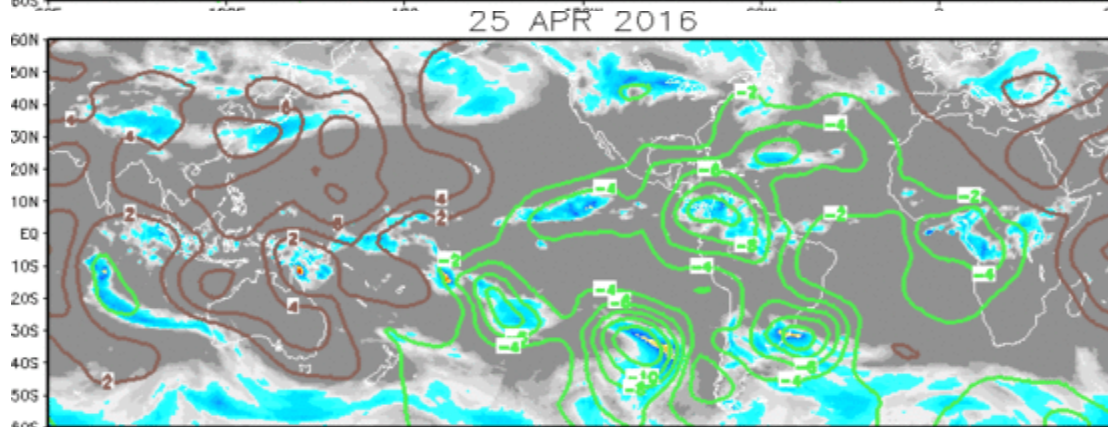


IR Satellite & 200-hpa Velocity Potential Anomalies

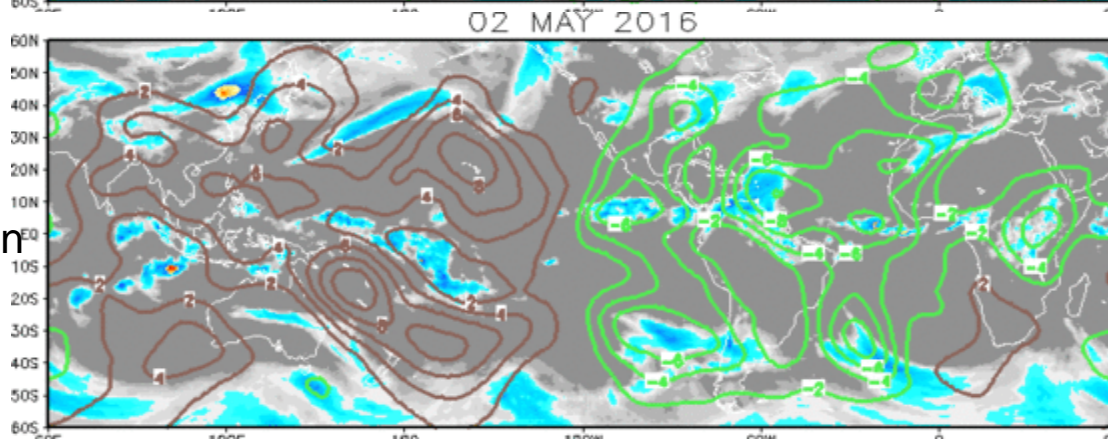
Green: Enhanced Divergence Brown: Enhanced Convergence



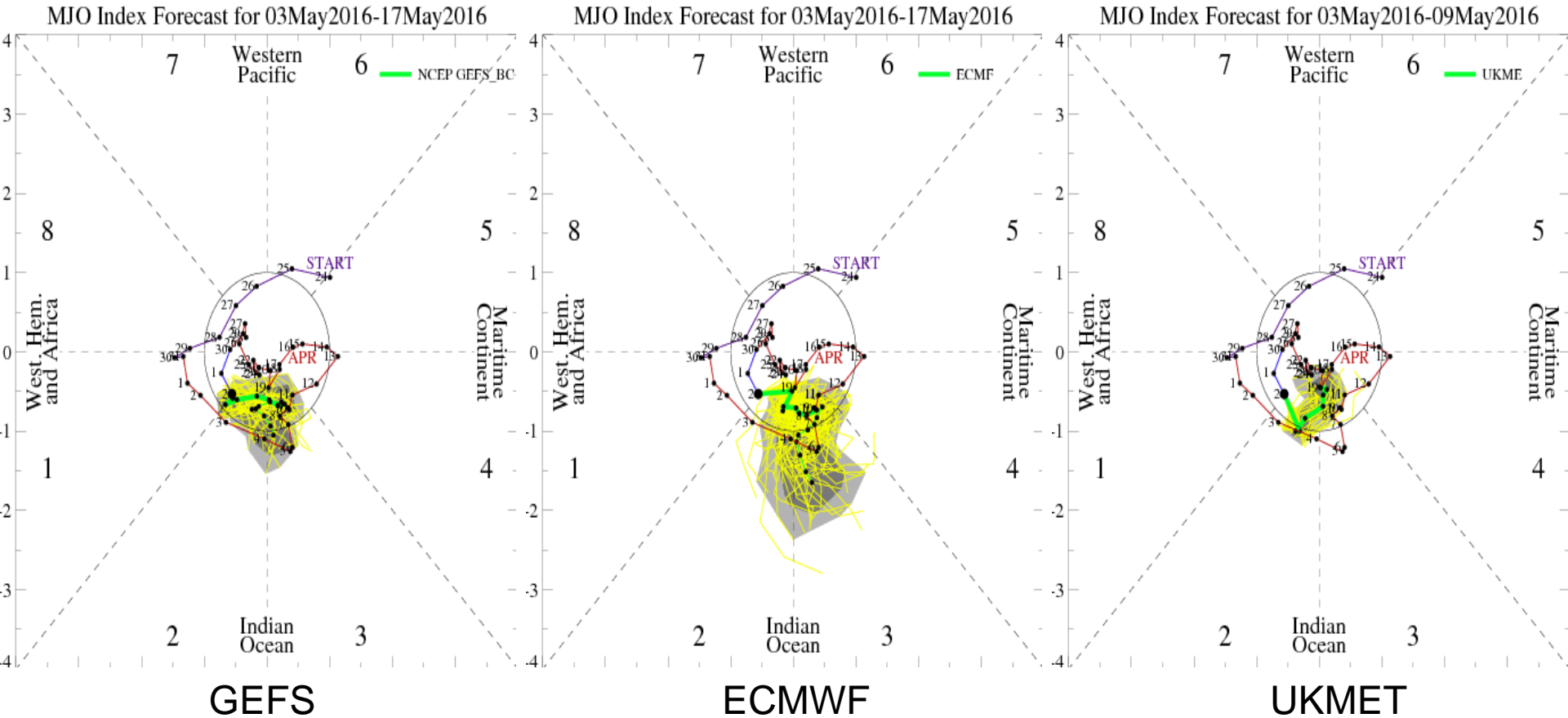
Incoherent pattern
with the background
state of ENSO
remaining dominant



Wave-1 pattern
developed by end
of April and slight
eastward propagation
during the past
few days



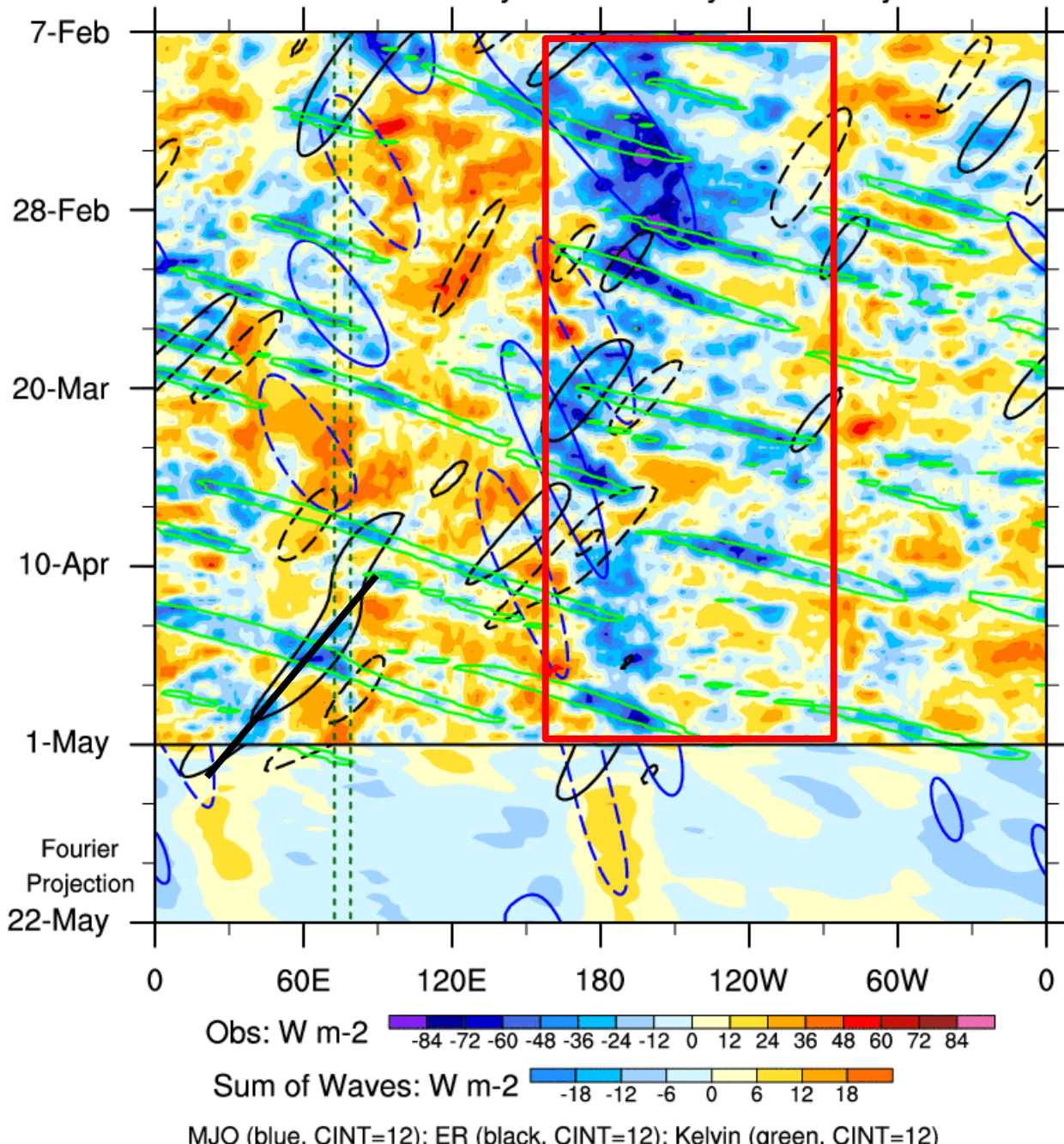
MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate a weak signal through Week-1 but ECMWF model indicates an increase in amplitude over Indian Ocean during Week-2

NOAA CDR HIRS OLR anomalies: 7.5°S - 7.5°N

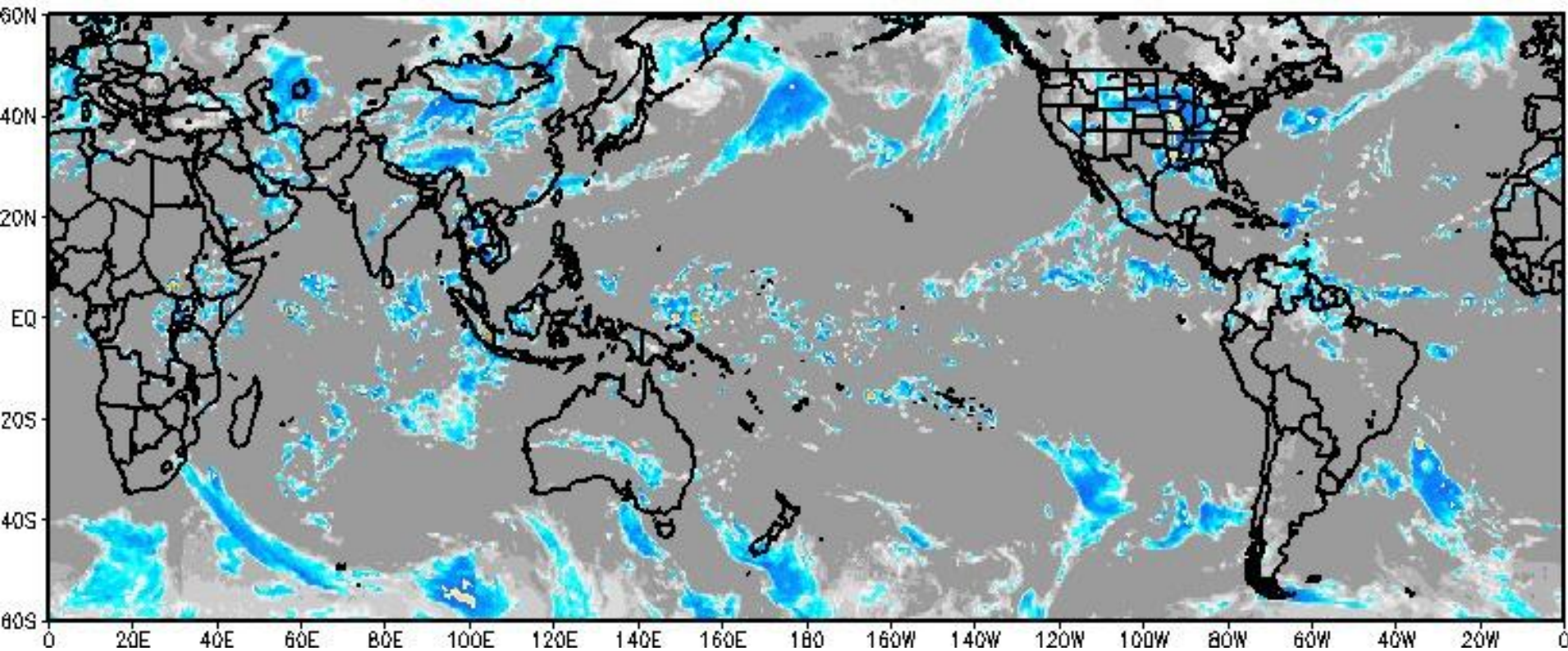
7-Feb-2016 to 1-May-2016 + 21-day Fourier Projection



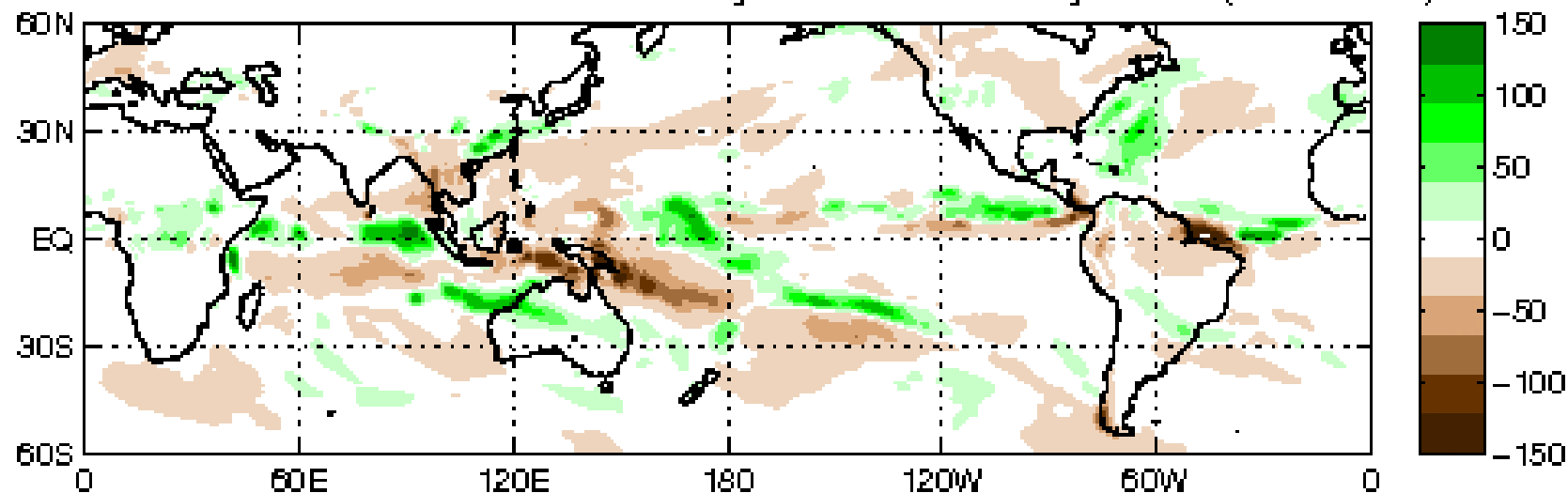
El Nino continues to dominate.

Rossby Wave and multiple Kelvin Waves also playing a role in anomalous convection.

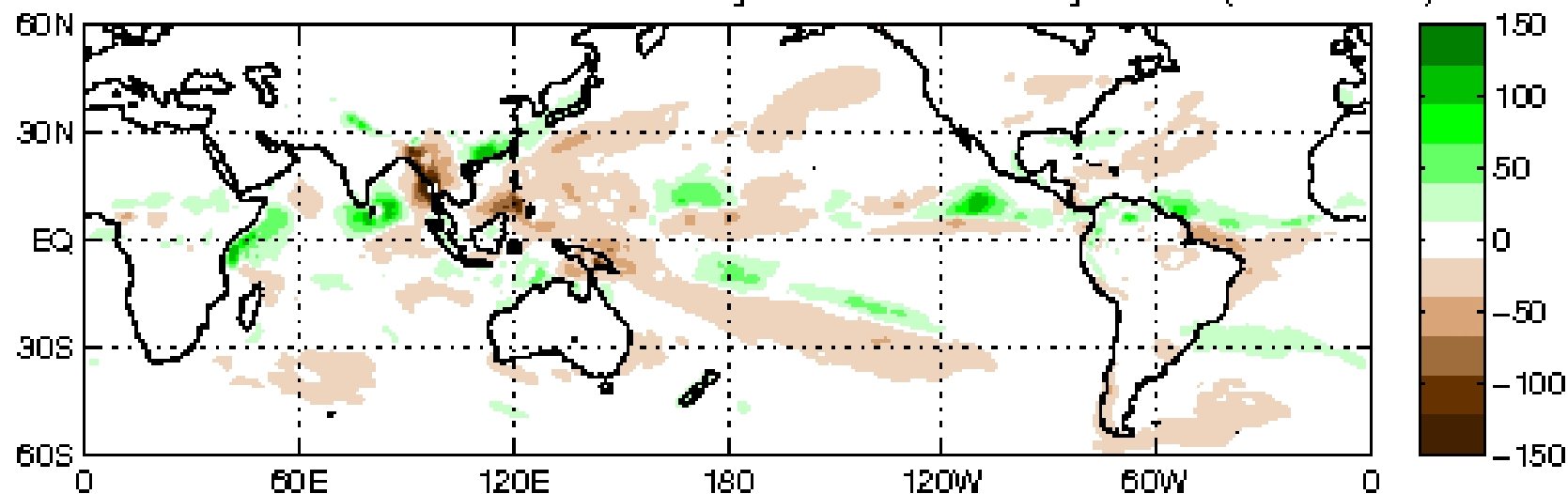
IR Temperatures 1200 UTC 30 APR 2016

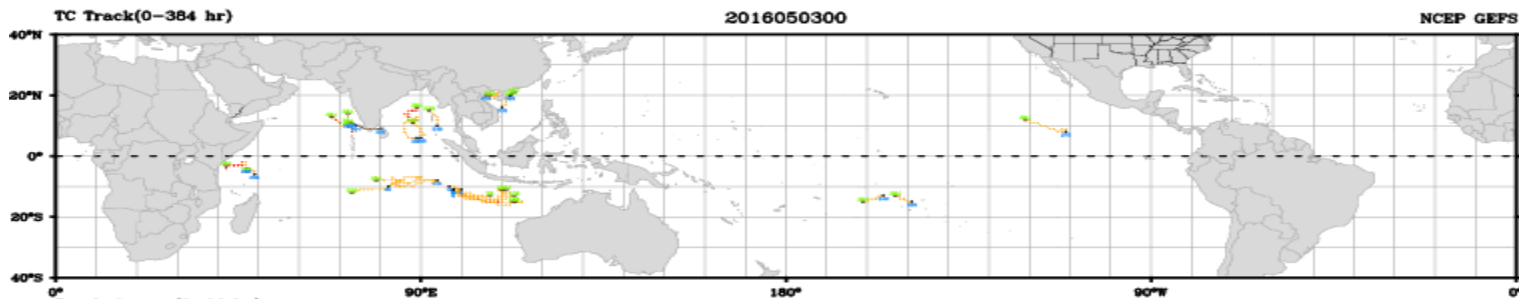


CFS: Anom. PREC Week: 1: 04-May-2016 to 10-May-2016 (mm/week)

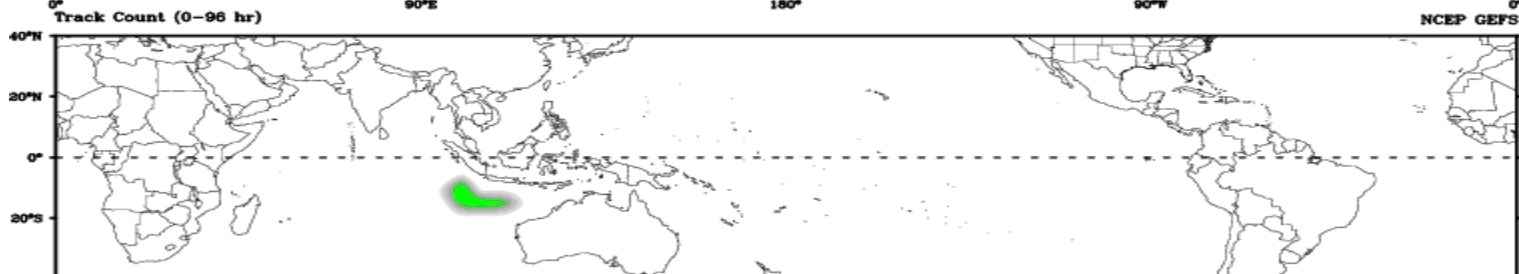


CFS: Anom. PREC Week: 2: 11-May-2016 to 17-May-2016 (mm/week)

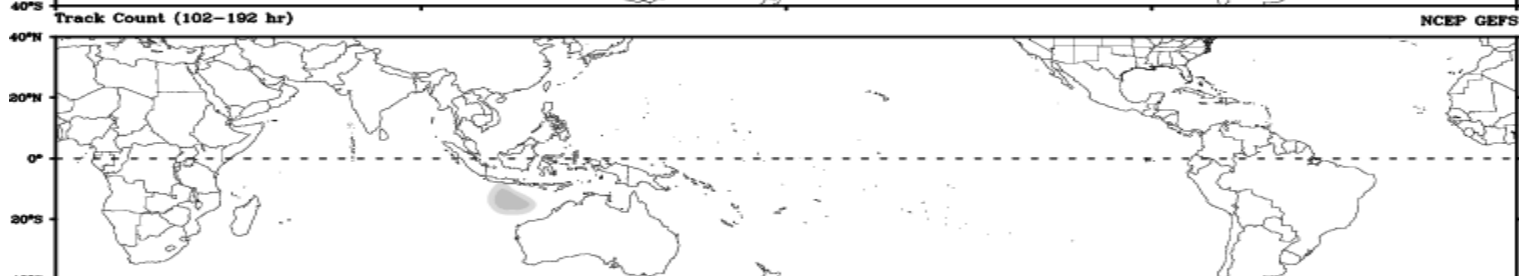




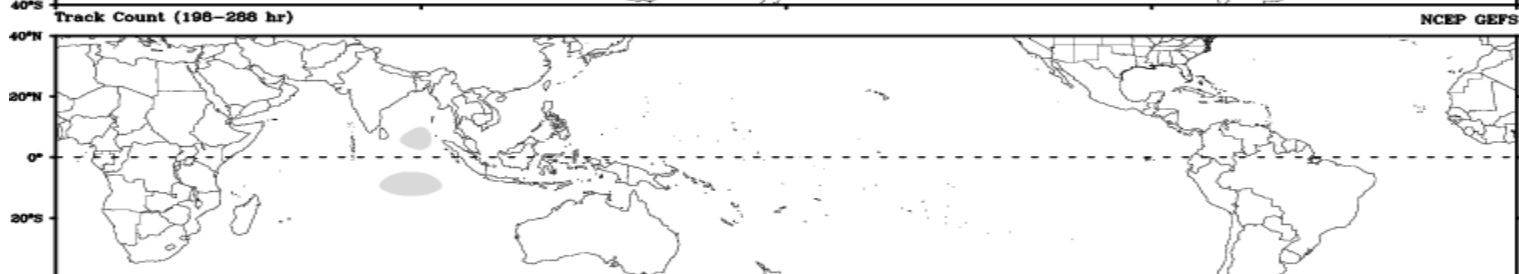
Days 1-4



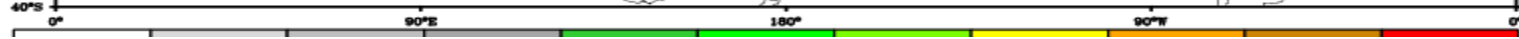
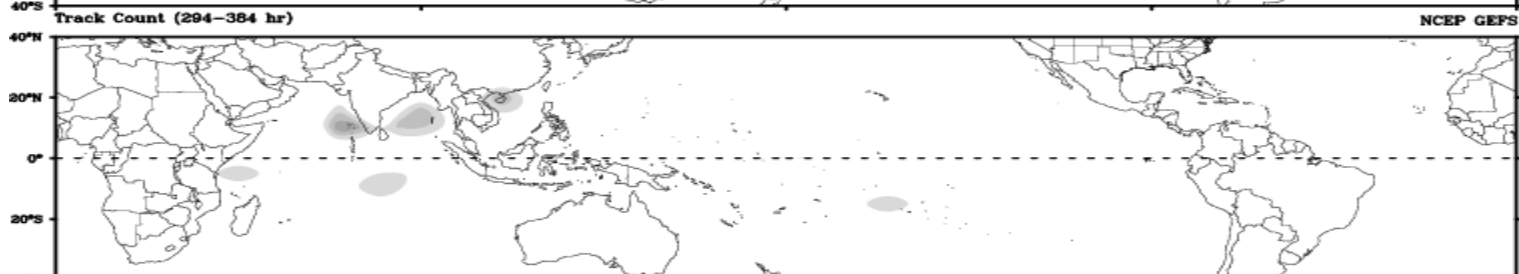
Day 5-8



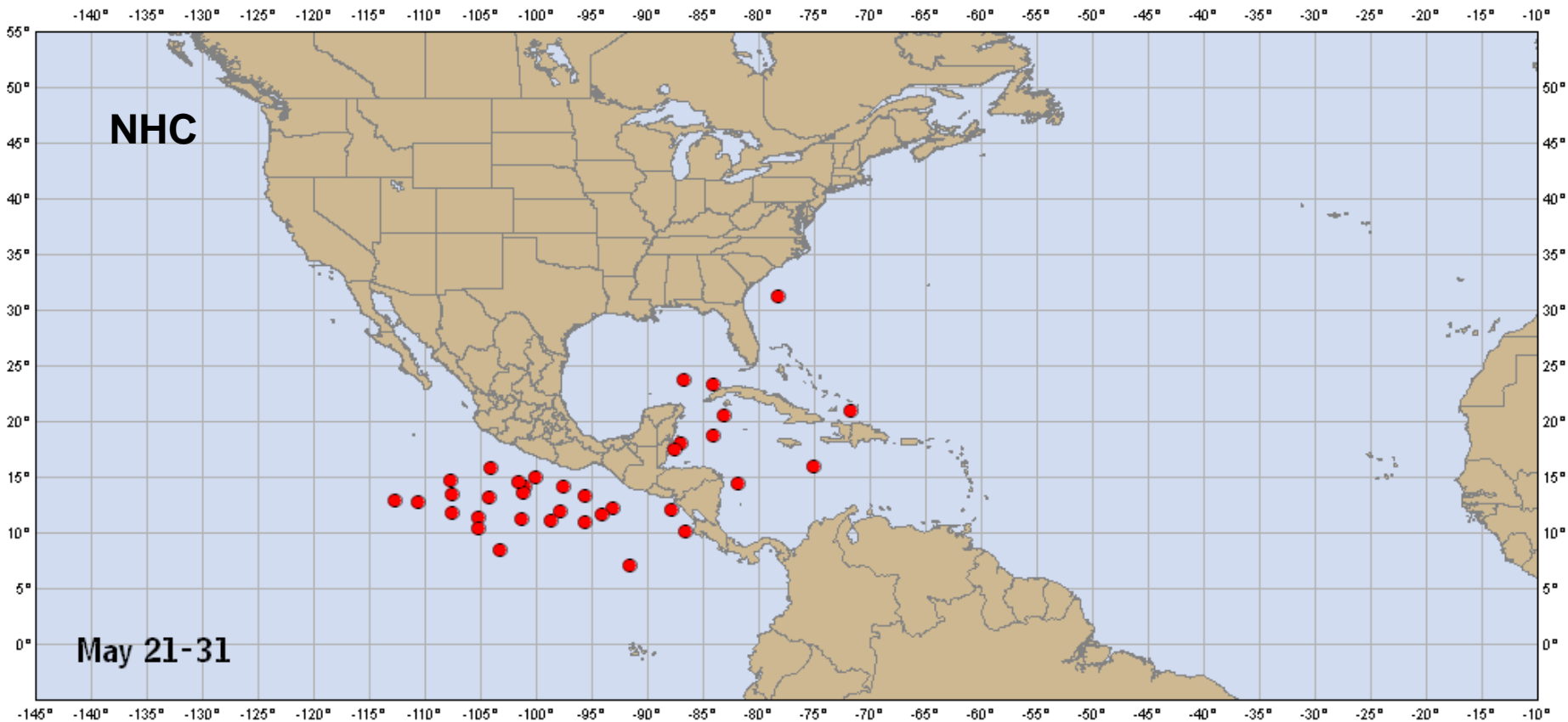
Day 9-12



Day 13-15

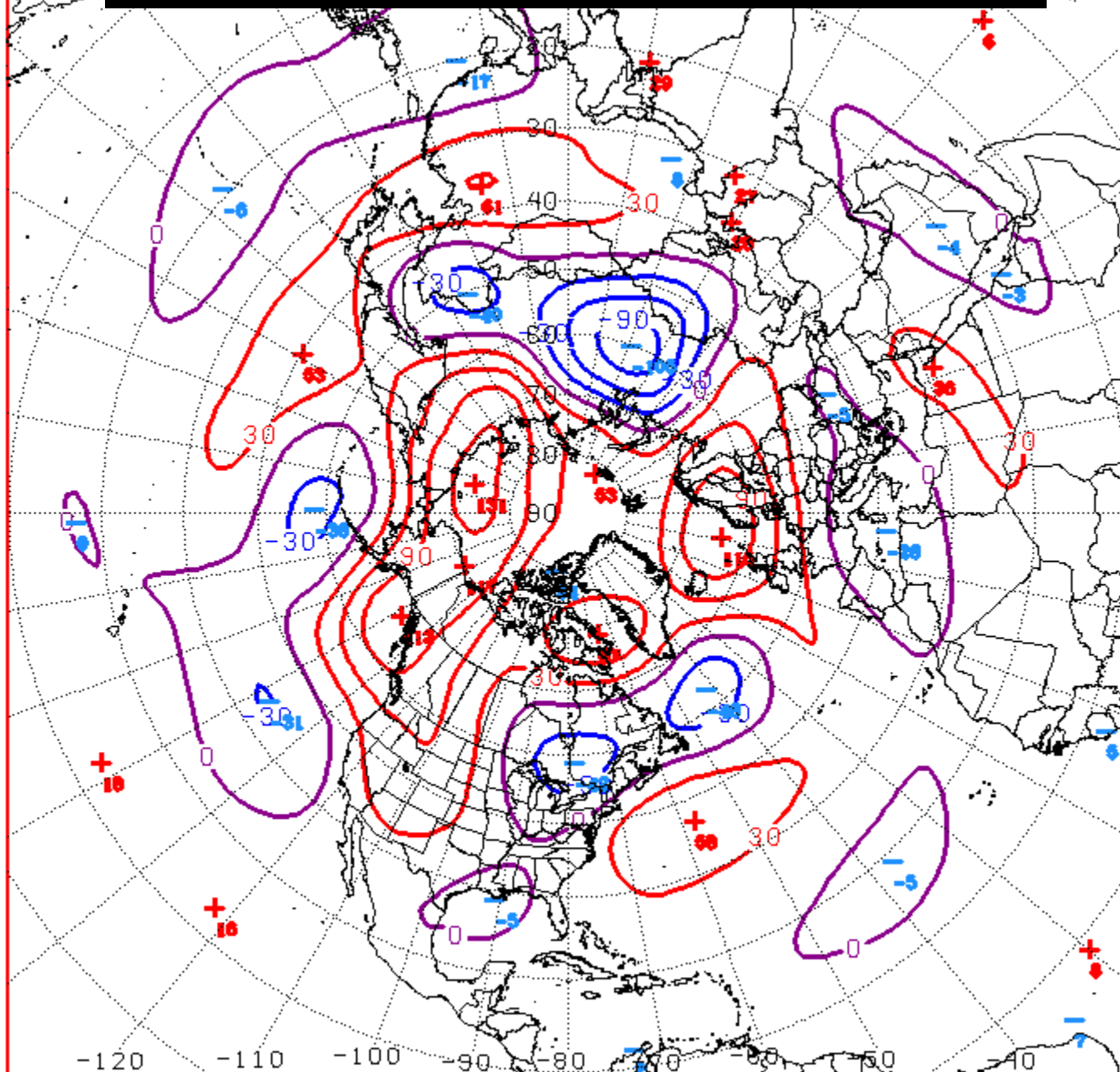


Tropical Cyclone Development: Points of Origin 1851-2009 Atlantic & 1949-2009 East Pacific



Connections to U.S. Impacts

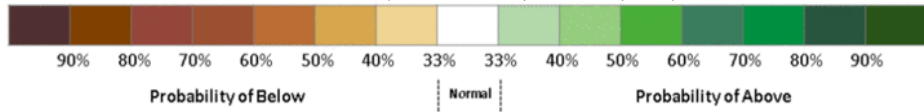
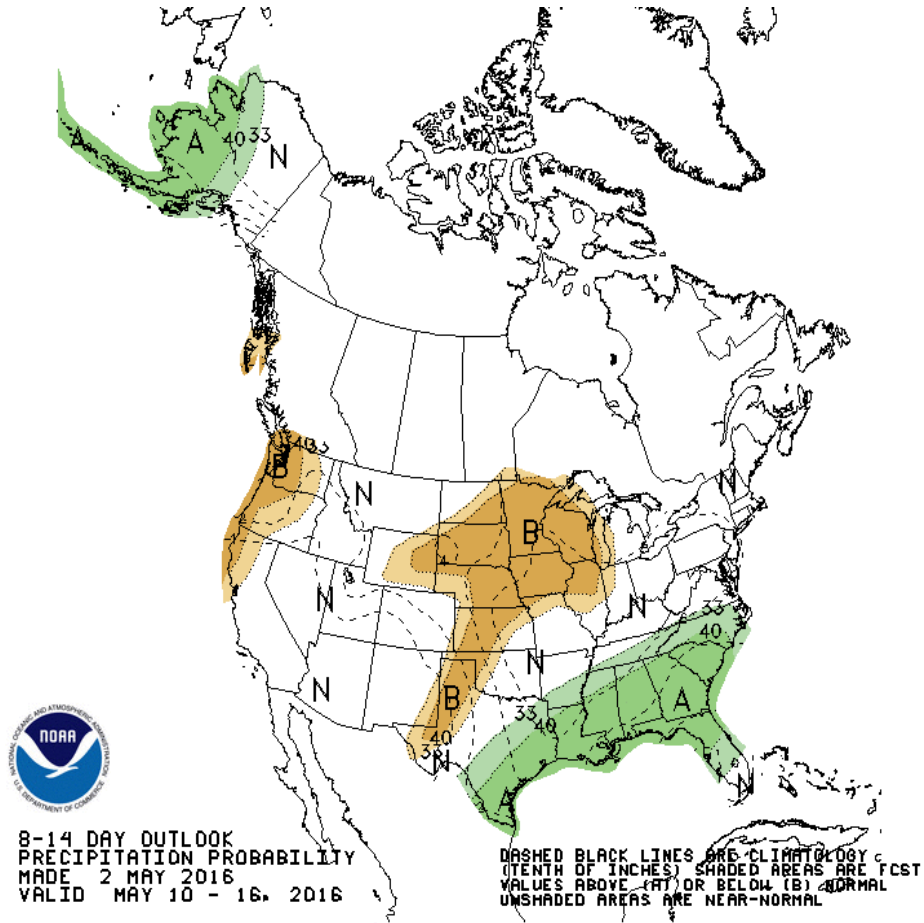
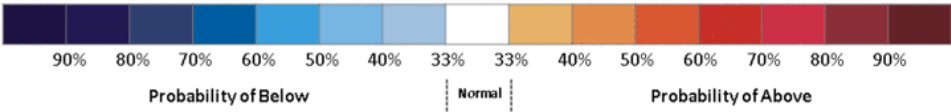
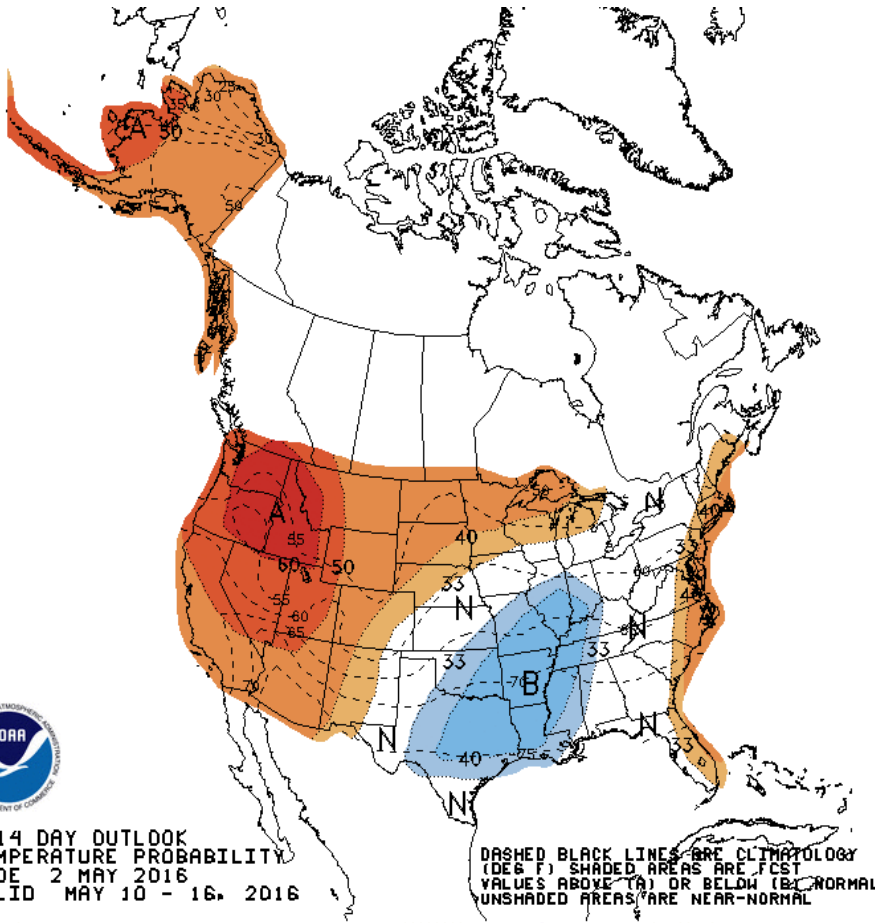
6Z GFS Ensemble Mean: 500-hpa Height Anomaly



-120 -110 -100 -90 -80 -70 -60 -50

D+11 500 MB ANOMALIES FROM 06Z ENSM
CPC MAP MADE MAY 03 2016 1155 UTC CNTD MAY 14 2016

Week 2 – Temperature and Precipitation

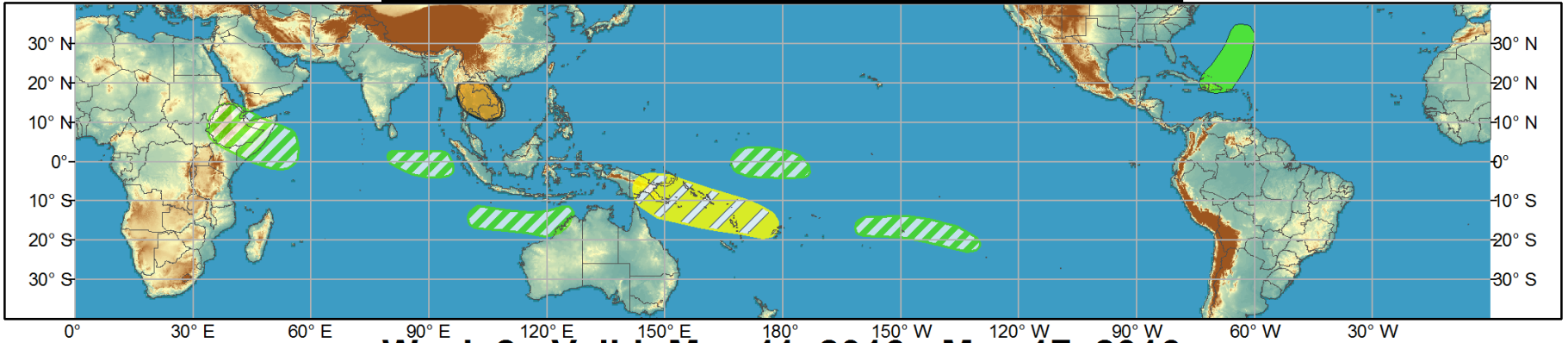




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