

Global Tropics Hazards And Benefits Outlook

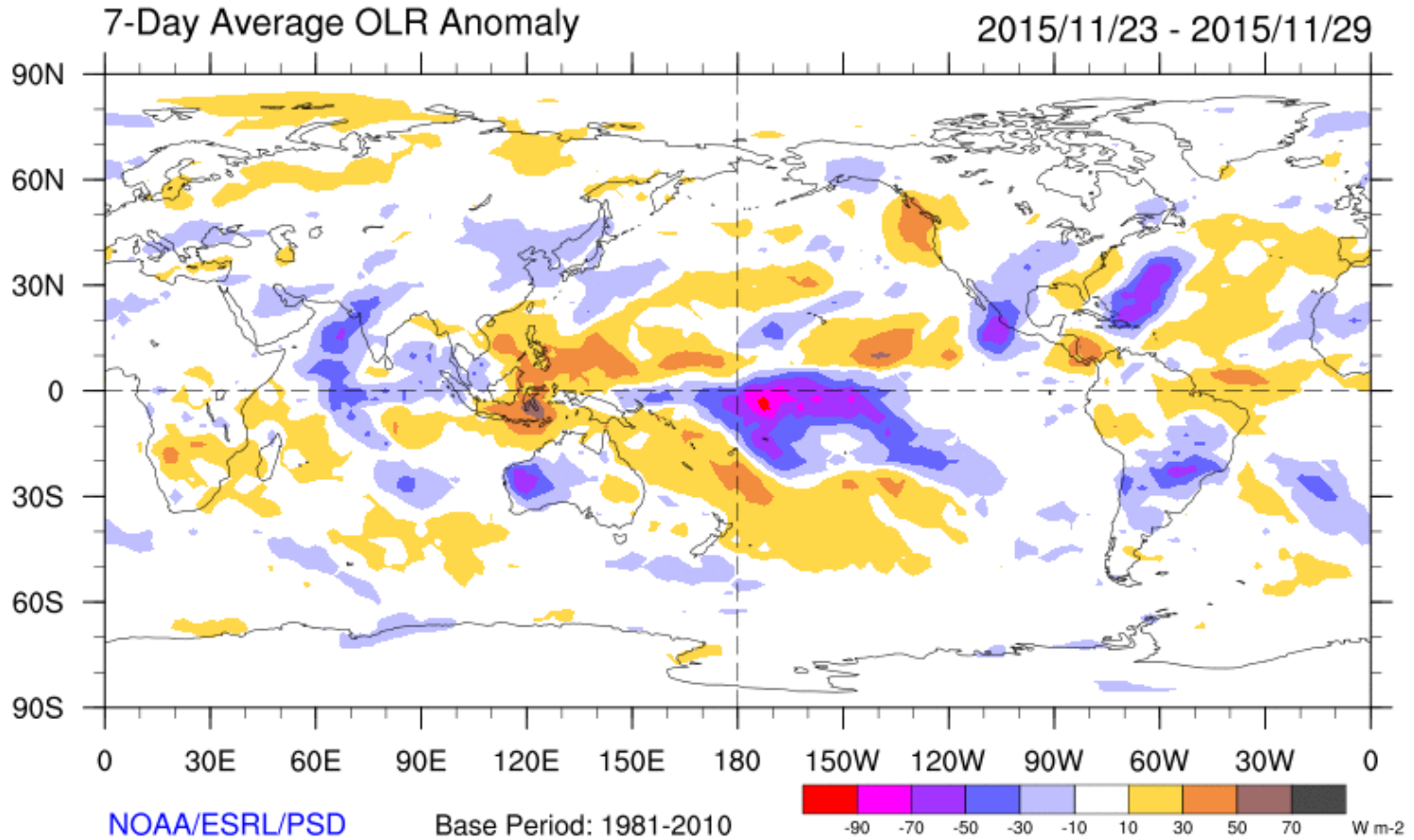
December 1, 2015

Jon Gottschalck

Outline

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

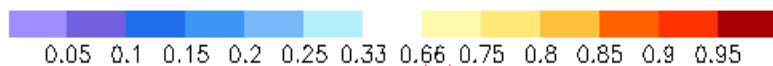
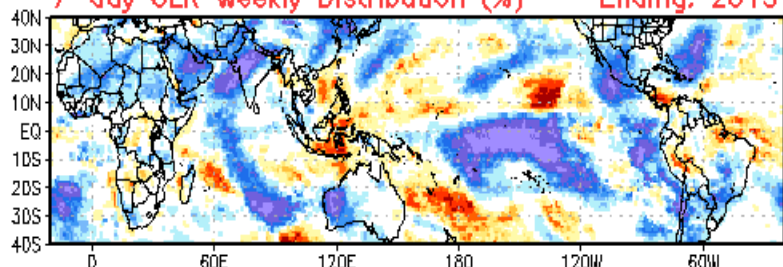
Weekly Tropical Convection Review



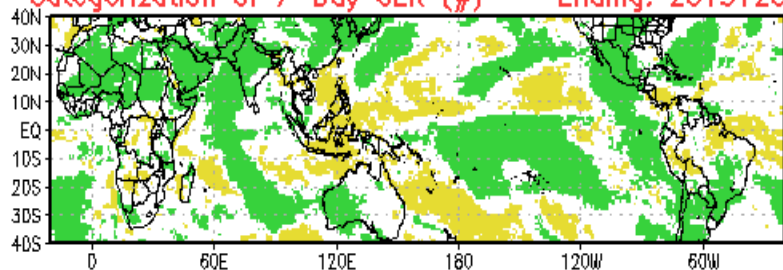
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

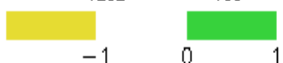
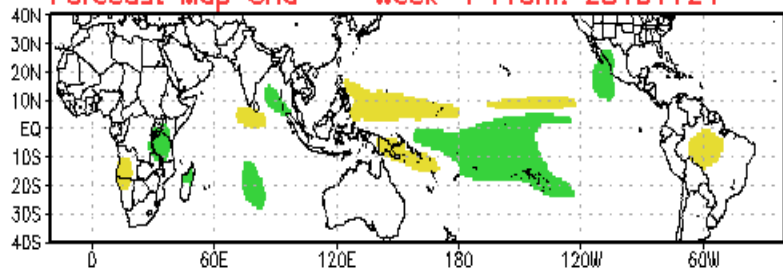
7-day OLR Weekly Distribution (%) -- Ending: 20151201



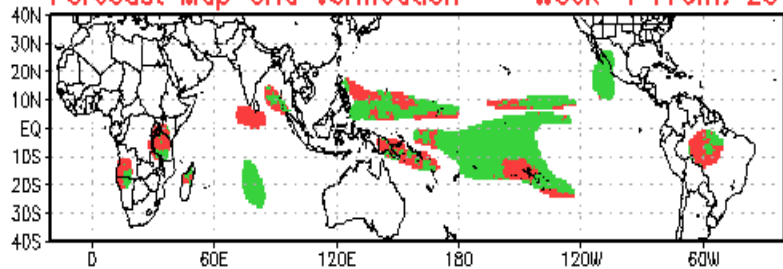
Categorization of 7-Day OLR (#) -- Ending: 20151201



Forecast Map Grid -- Week-1 From: 20151124

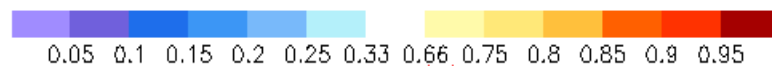
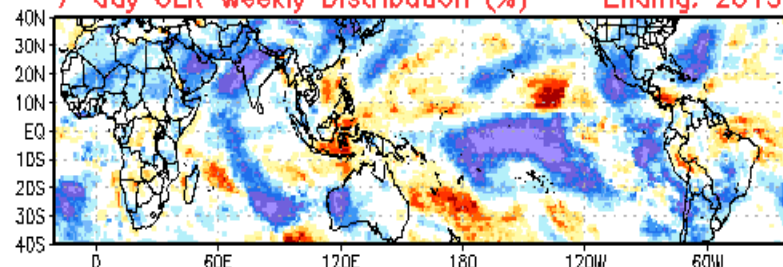


Forecast Map Grid Verification -- Week-1 From: 20151124

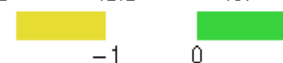
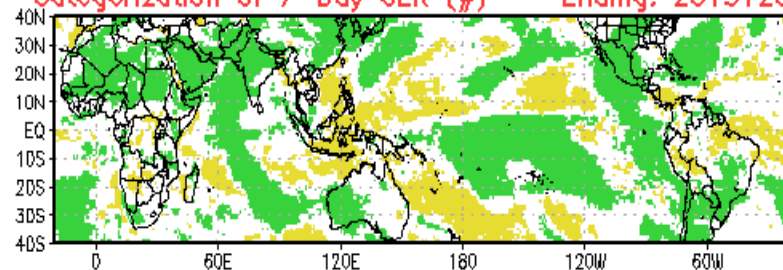


Hit: Green, Miss: Red
Heidke Skill Score: 49.7804

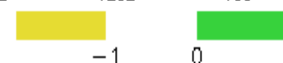
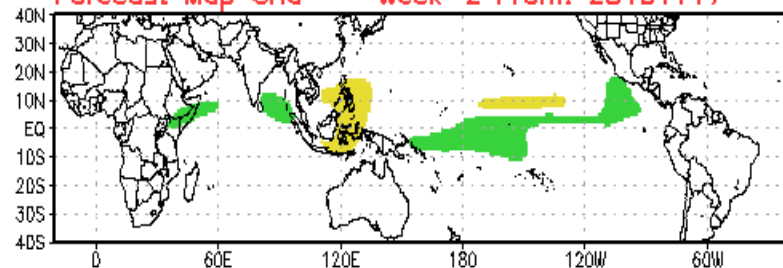
7-day OLR Weekly Distribution (%) -- Ending: 20151201



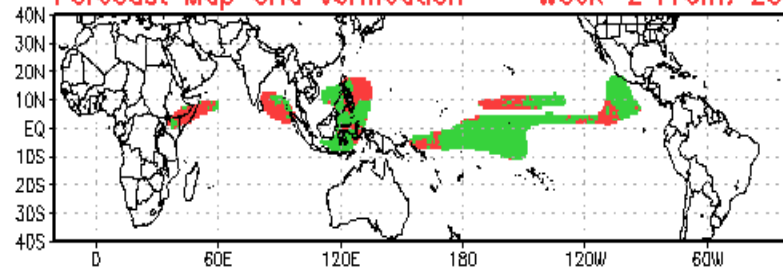
Categorization of 7-Day OLR (#) -- Ending: 20151201



Forecast Map Grid -- Week-2 From: 20151117



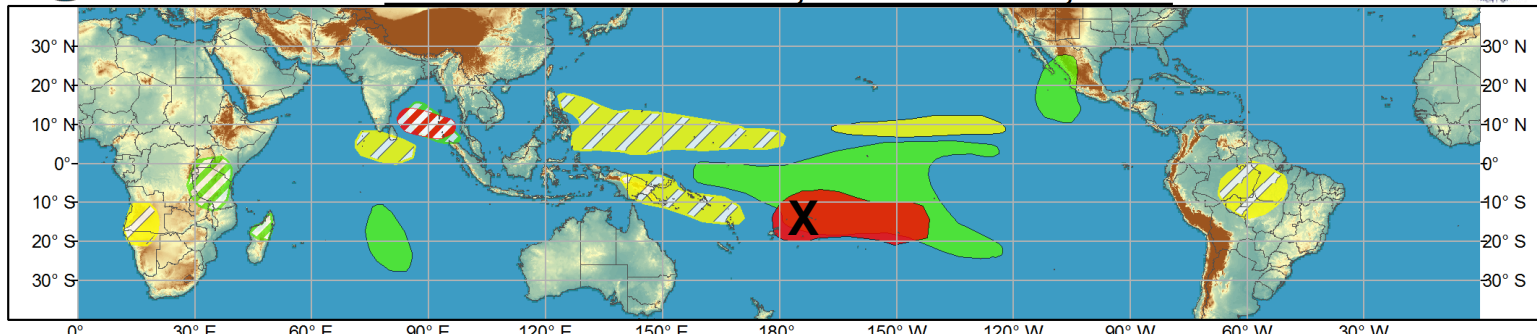
Forecast Map Grid Verification -- Week-2 From: 20151117



Hit: Green, Miss: Red
Heidke Skill Score: 53.9334



Week 1 - Valid: Nov 25, 2015 - Dec 01, 2015



Week 2 - Valid: Nov 25, 2015 - Dec 01, 2015



Tropical Cyclone Review

Synopsis of Climate Modes

ENSO:

- Current: [El Niño Advisory](#)
- Outlook: There is an approximately 95% chance that El Niño will continue through Northern Hemisphere winter 2015-16, gradually weakening through spring 2016.

MJO and other subseasonal tropical variability:

- The MJO component of subseasonal remains weak or incoherent.
- In general, the MJO contribution to the pattern of anomalous tropical convection is expected to be minor.
- Equatorial Rossby wave activity continues to play a role in anomalous tropical convection

Extratropics:

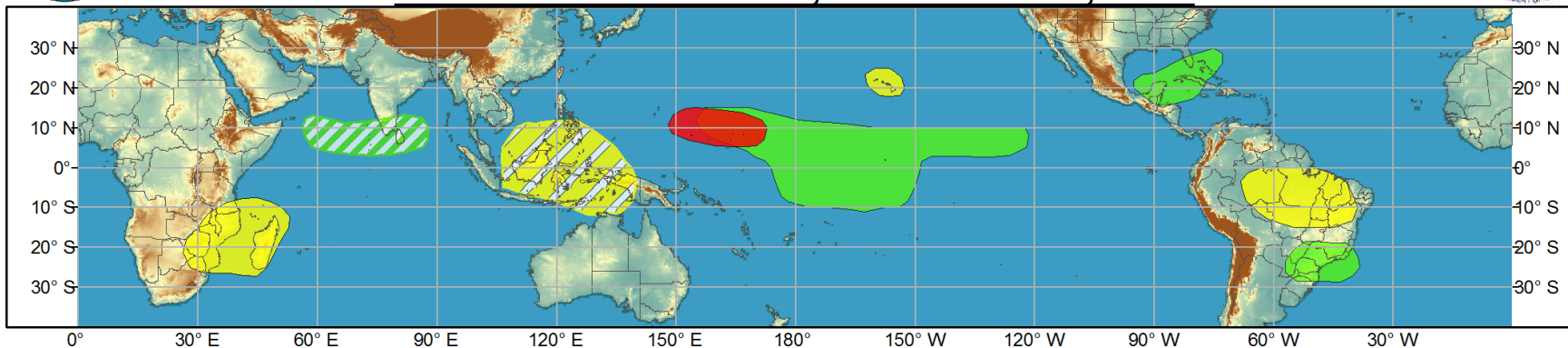
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but more likely consistent with ongoing El Niño conditions.
- NAO and AO forecast to be strongly positive next two weeks
- Late season WPAC TC recurvature?



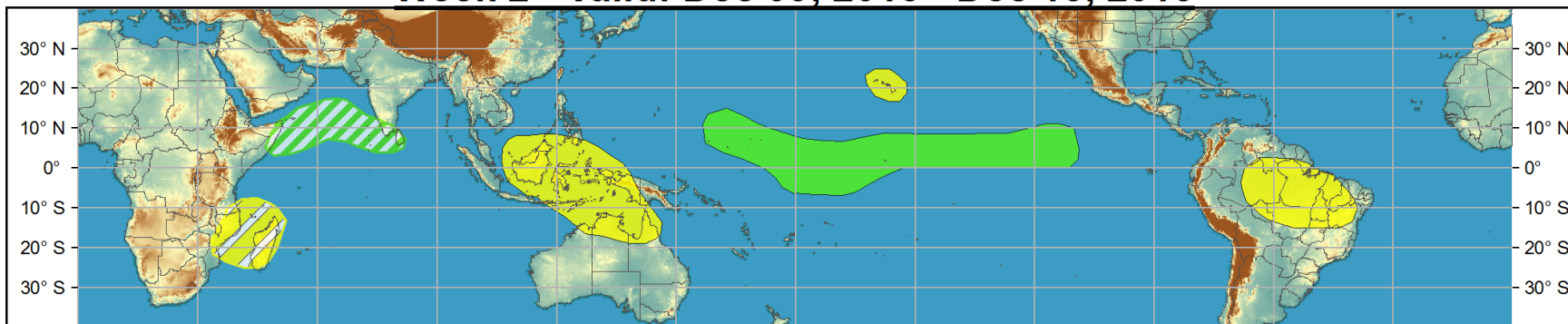
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Dec 02, 2015 - Dec 08, 2015



Week 2 - Valid: Dec 09, 2015 - Dec 15, 2015



Confidence
High Moderate

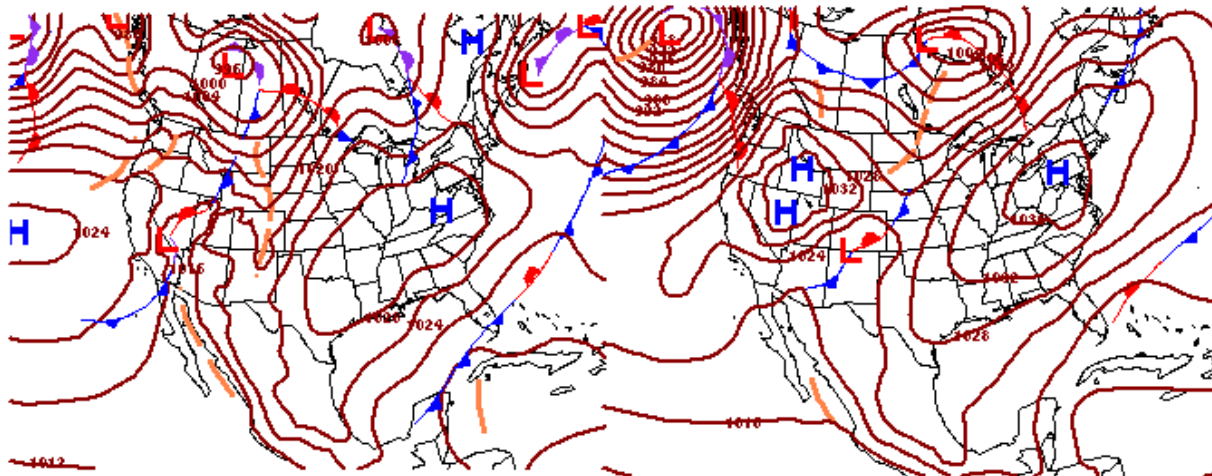
- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- 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: 12/01/2015

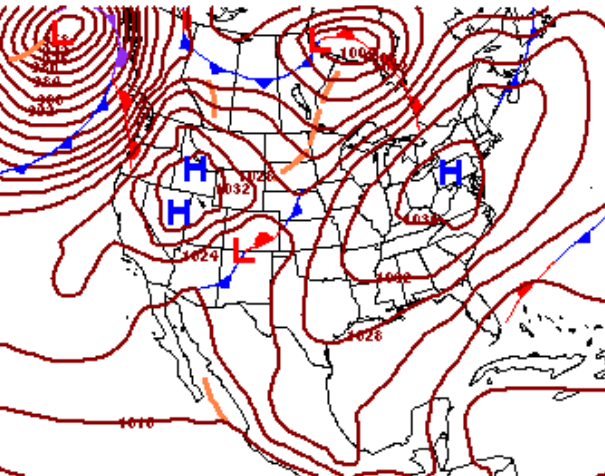
Forecaster: Gottschalck

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.

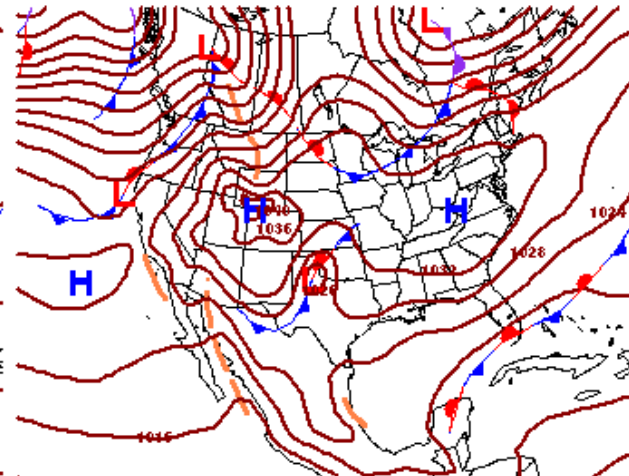




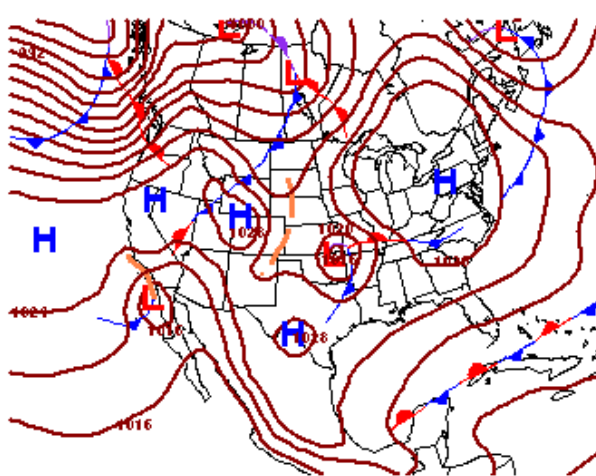
WPC DAY 3 SFC PROG
 ISSUED: 1536Z TUE DEC 01 2015
 VALID: 12Z FRI DEC 04 2015
 FCSTR: VOJTESAK
 DOC/NOAA/NWS/NCEP/WPC



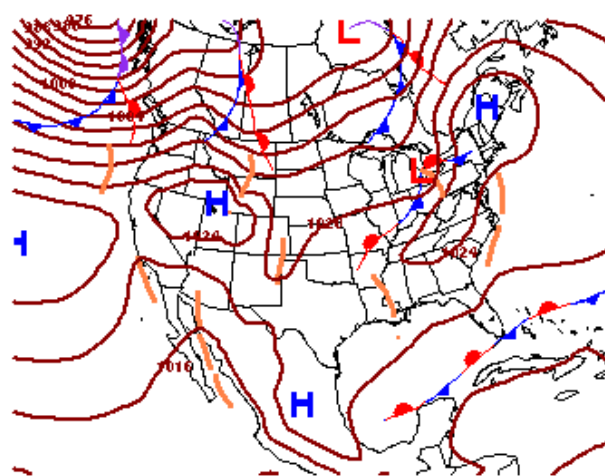
WPC DAY 4 SFC PROG
 ISSUED: 1536Z TUE DEC 01 2015
 VALID: 12Z SAT DEC 05 2015
 FCSTR: VOJTESAK
 DOC/NOAA/NWS/NCEP/WPC



WPC DAY 5 SFC PROG
 ISSUED: 1536Z TUE DEC 01 2015
 VALID: 12Z SUN DEC 06 2015
 FCSTR: VOJTESAK
 DOC/NOAA/NWS/NCEP/WPC

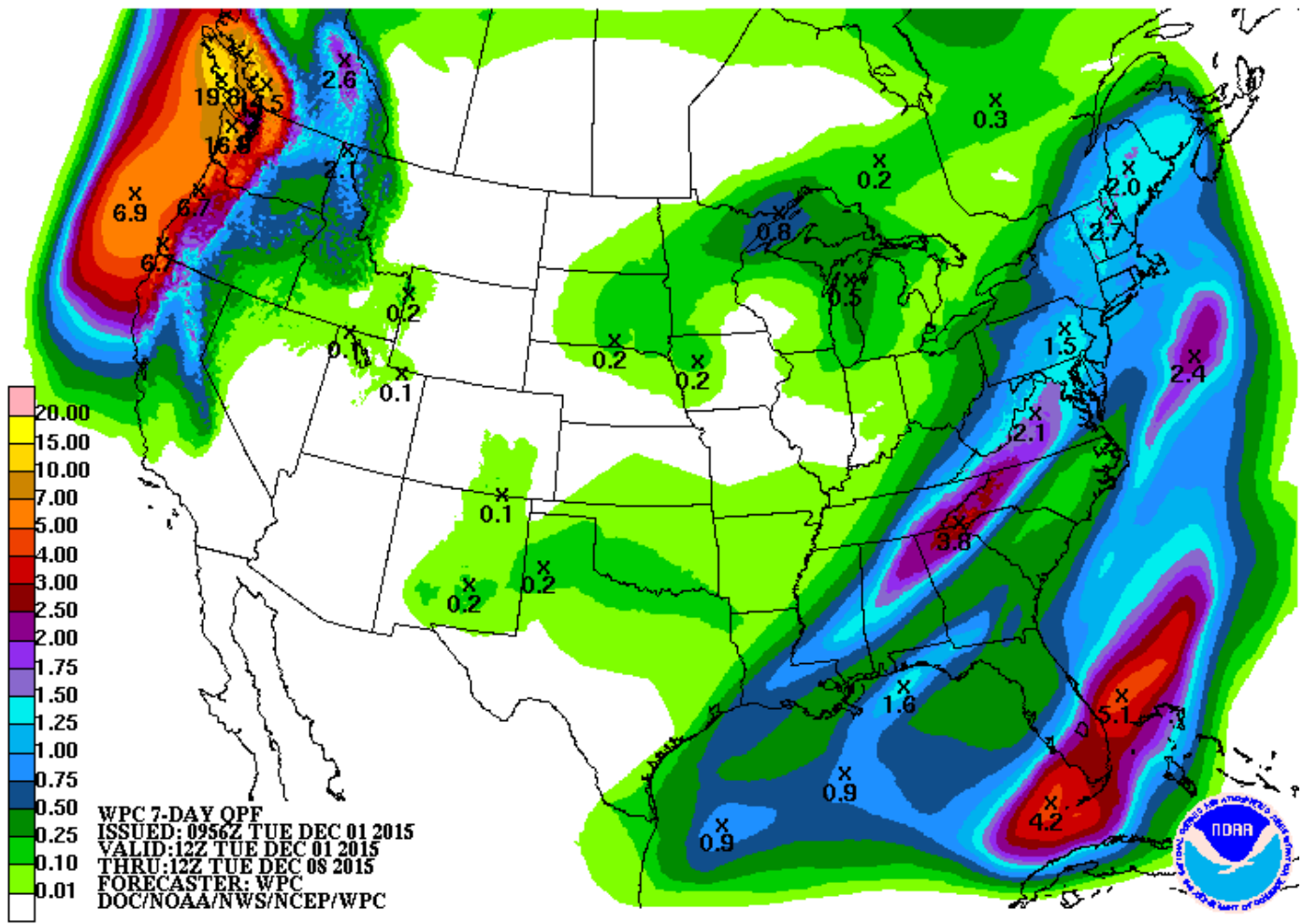


WPC DAY 6 SFC PROG
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 VALID: 12Z MON DEC 07 2015
 FCSTR: VOJTESAK
 DOC/NOAA/NWS/NCEP/WPC



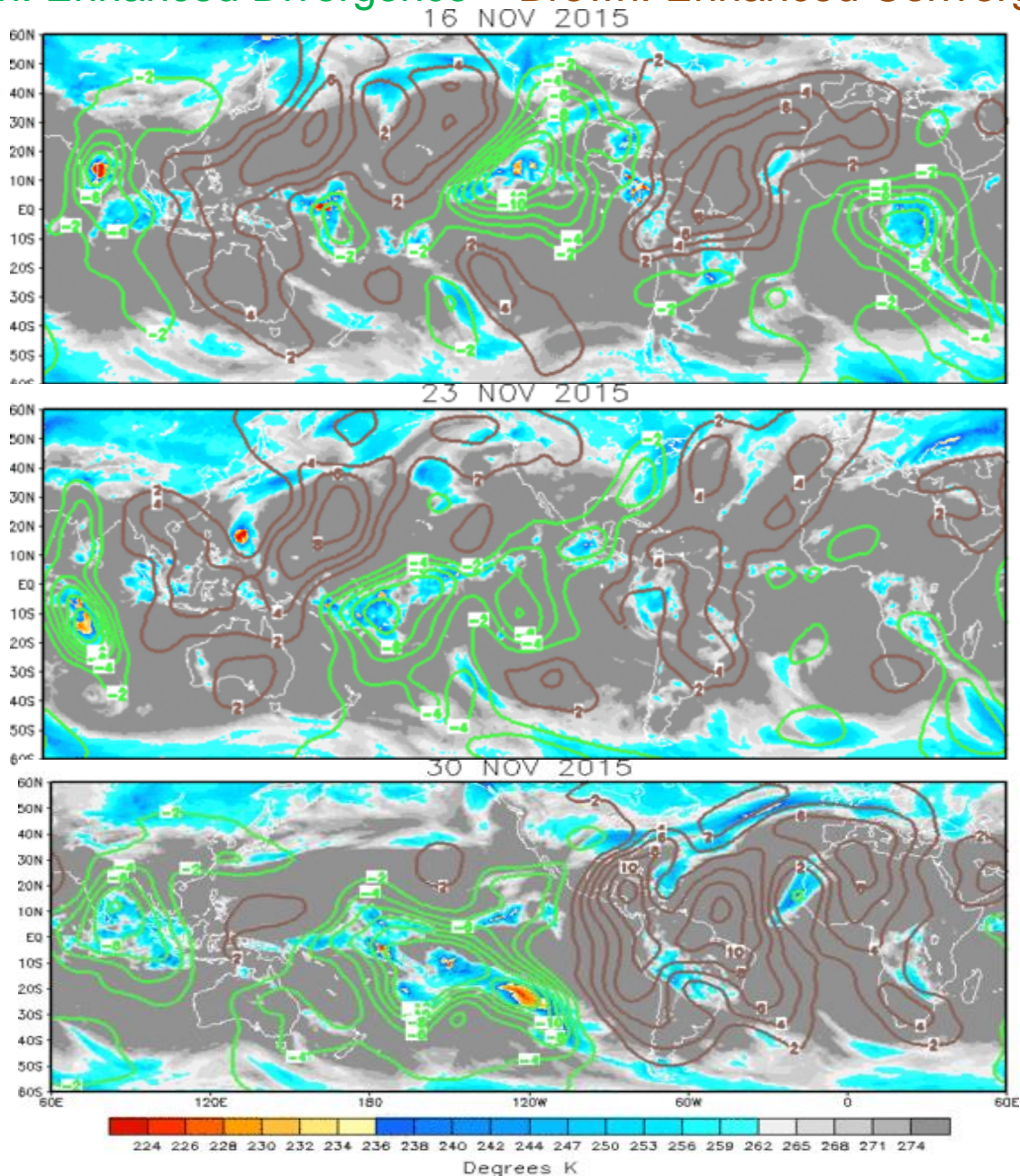
WPC DAY 7 SFC PROG
 ISSUED: 1536Z TUE DEC 01 2015
 VALID: 12Z TUE DEC 08 2015
 FCSTR: VOJTESAK
 DOC/NOAA/NWS/NCEP/WPC



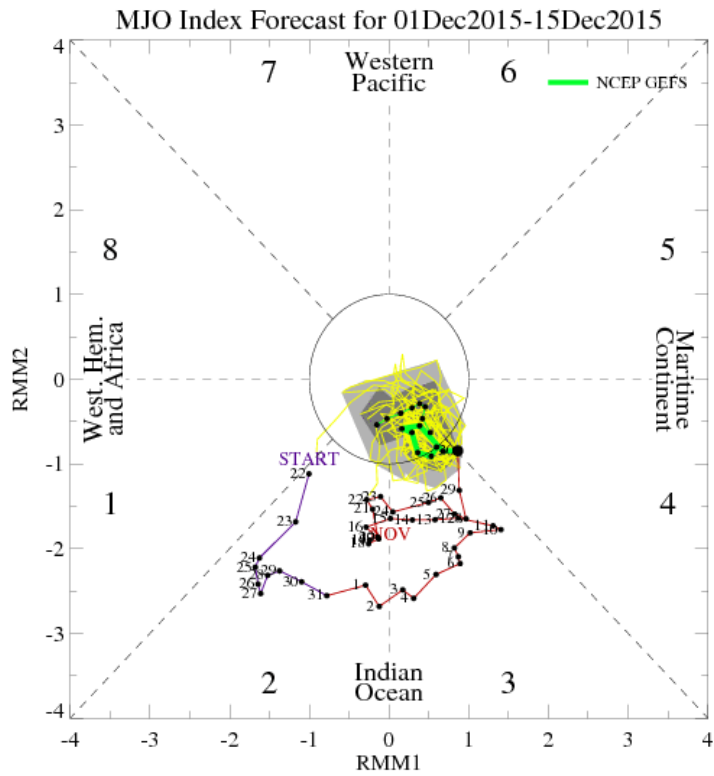


IR Satellite & 200-hpa Velocity Potential Anomalies

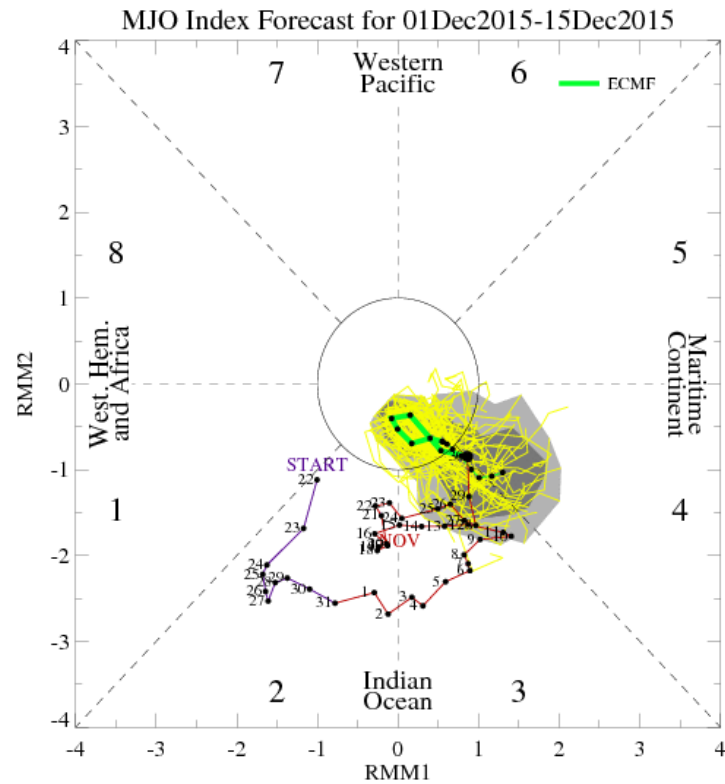
Green: Enhanced Divergence Brown: Enhanced Convergence



MJO Observation/Forecast



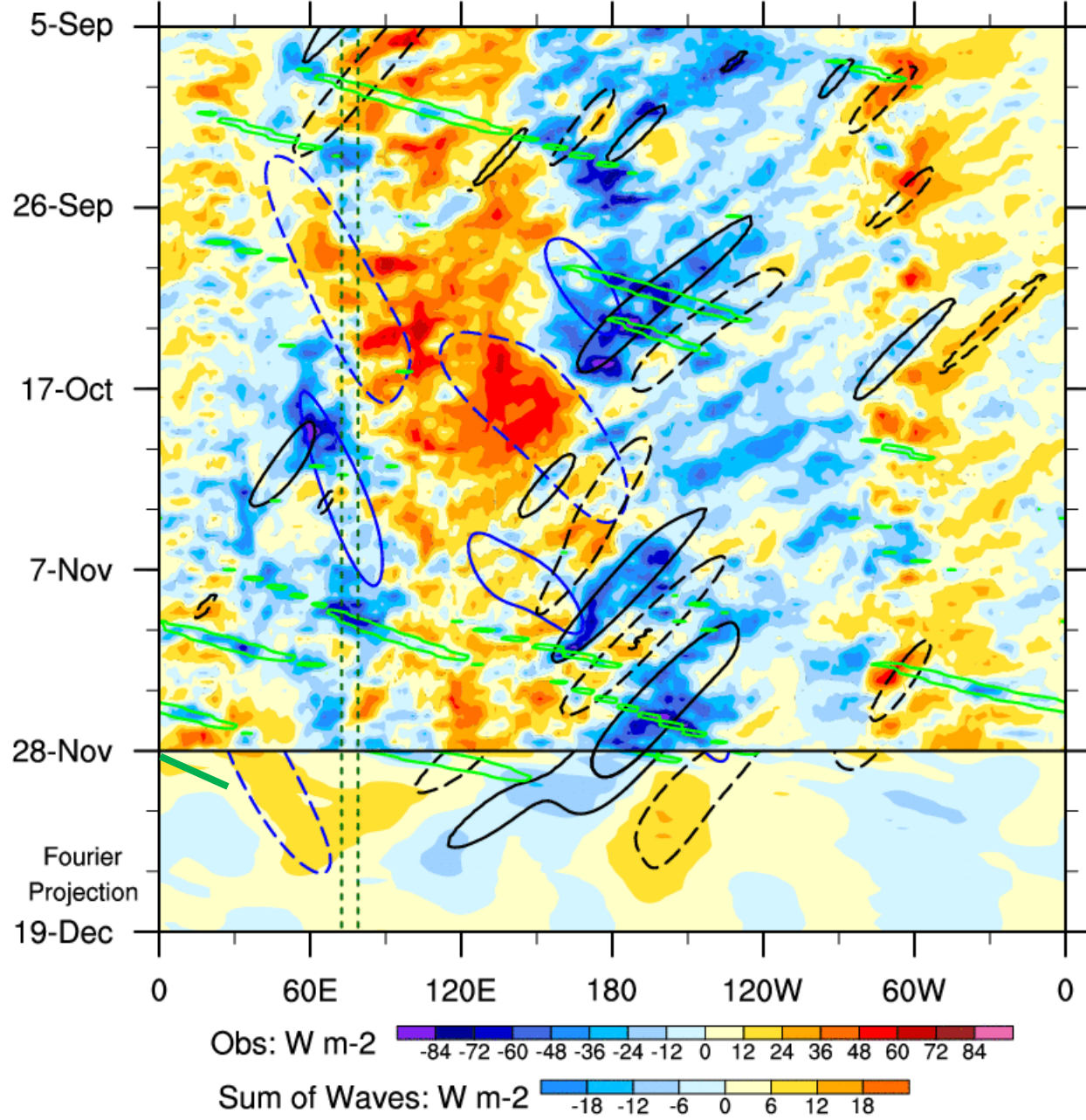
GFS



ECMWF

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

5-Sep-2015 to 28-Nov-2015 + 21-day Fourier Projection

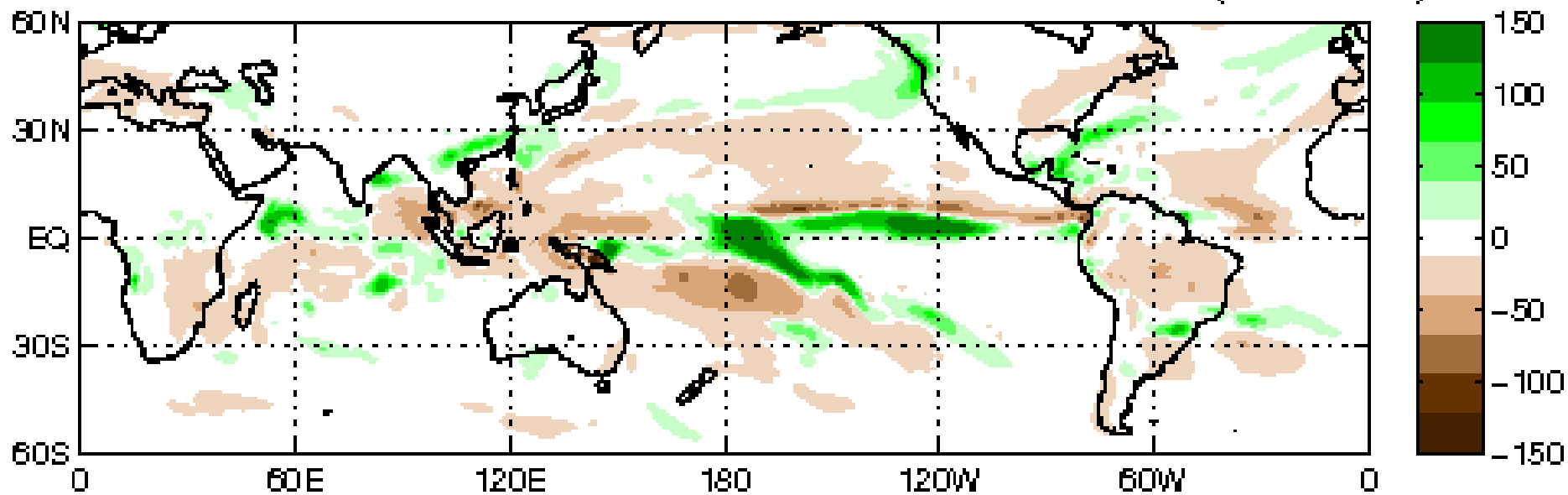


Low frequency likely to dominate pattern.

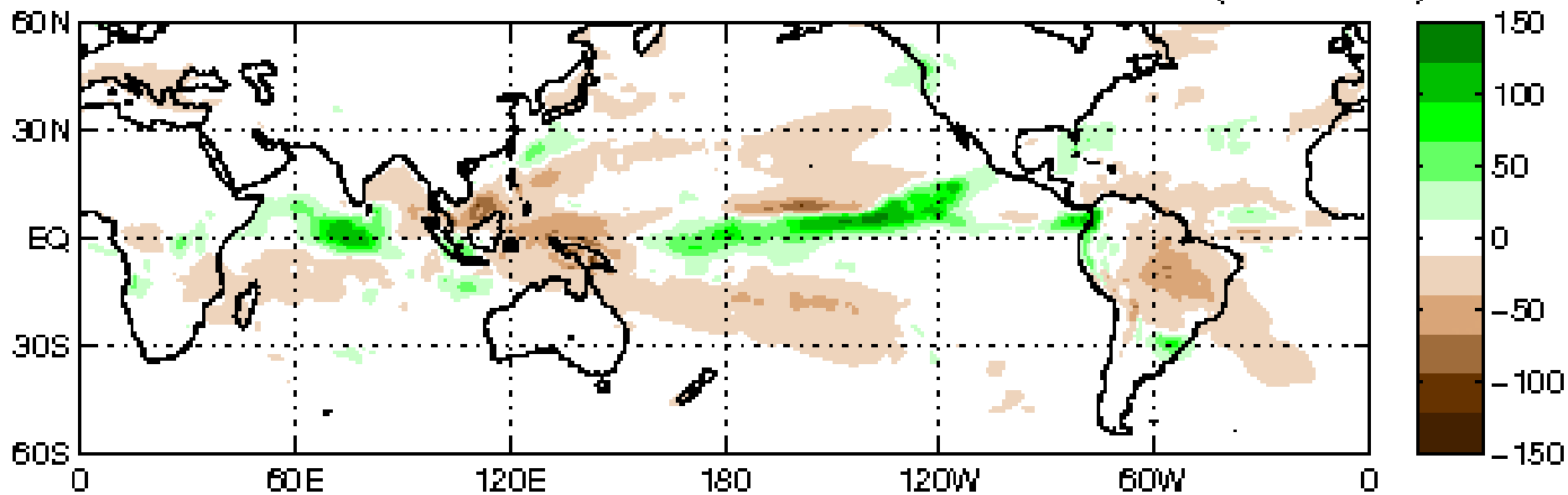
Equatorial Rossby Wave activity (black ovals) continues to impact the central Pacific

MJO (blue, CINT=12); ER (black, CINT=12); Kelvin (green, CINT=12)

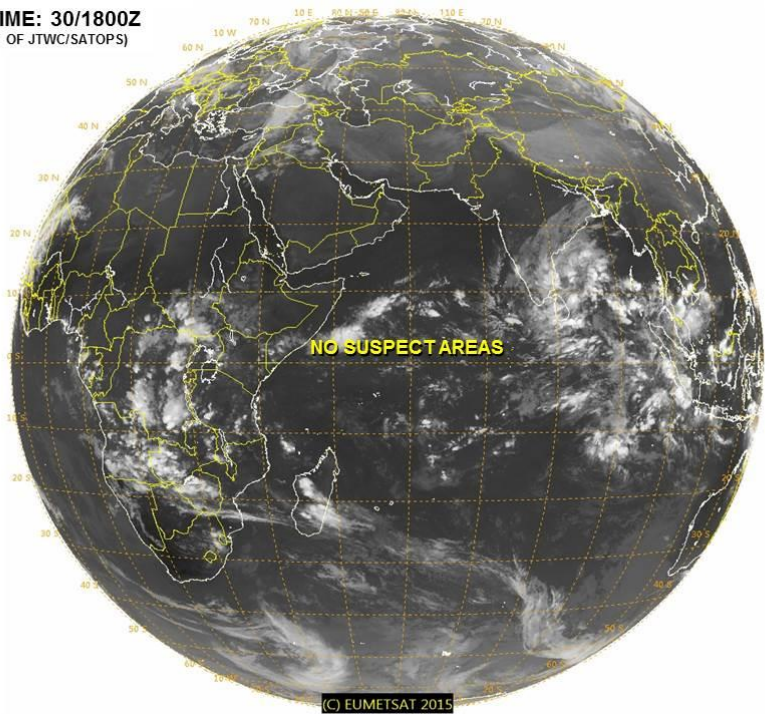
CFS: Anom. PREC Week: 1: 02-Dec-2015 to 08-Dec-2015 (mm/week)



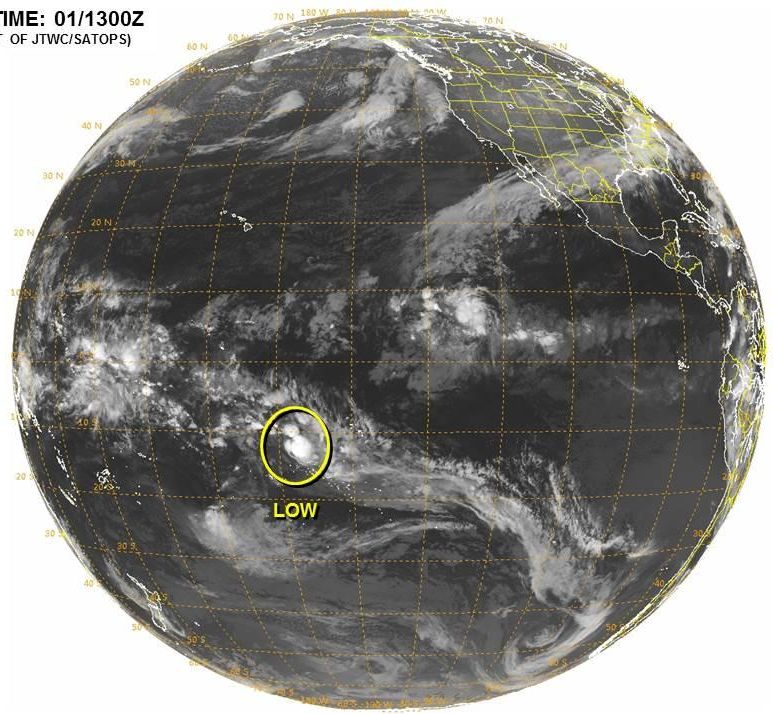
CFS: Anom. PREC Week: 2: 09-Dec-2015 to 15-Dec-2015 (mm/week)

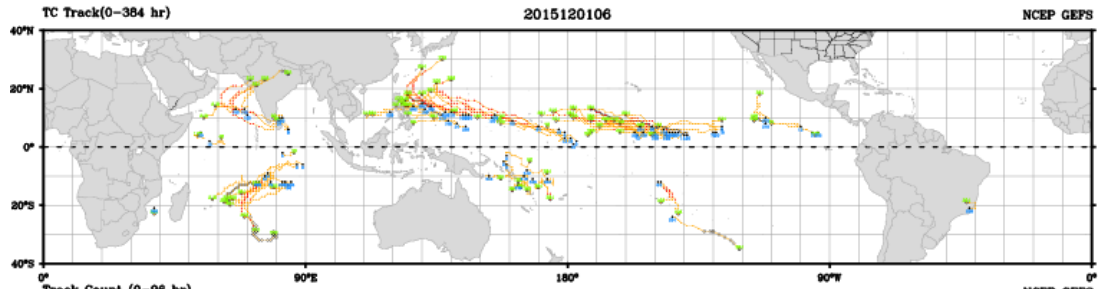


VALID TIME: 30/1800Z
(PRODUCT OF JTWC/SATOPS)

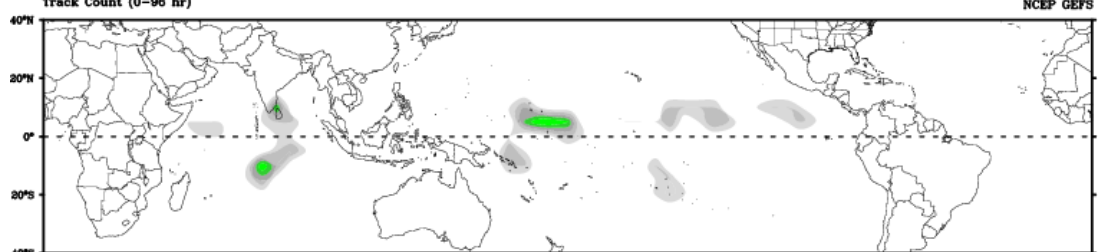


VALID TIME: 01/1300Z
(PRODUCT OF JTWC/SATOPS)

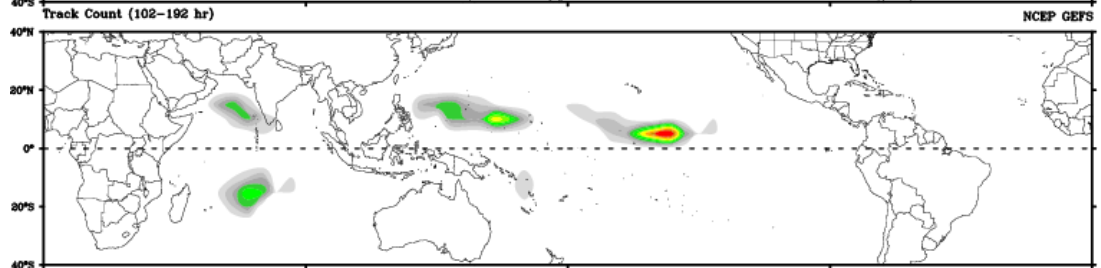




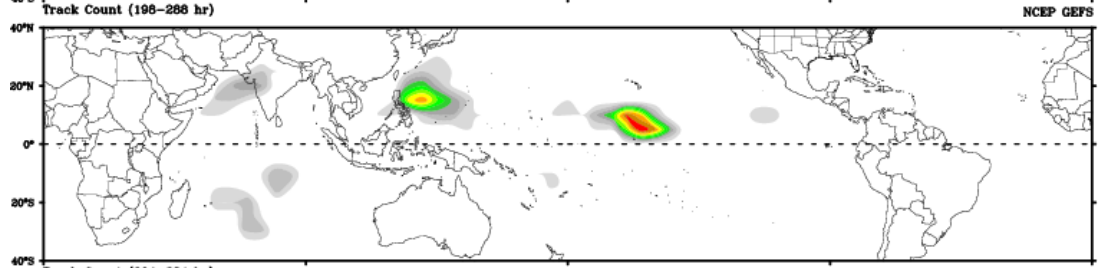
Days 1-4



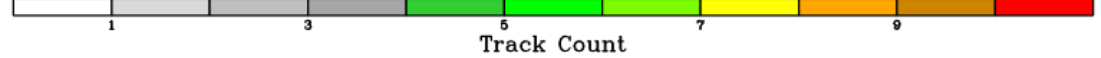
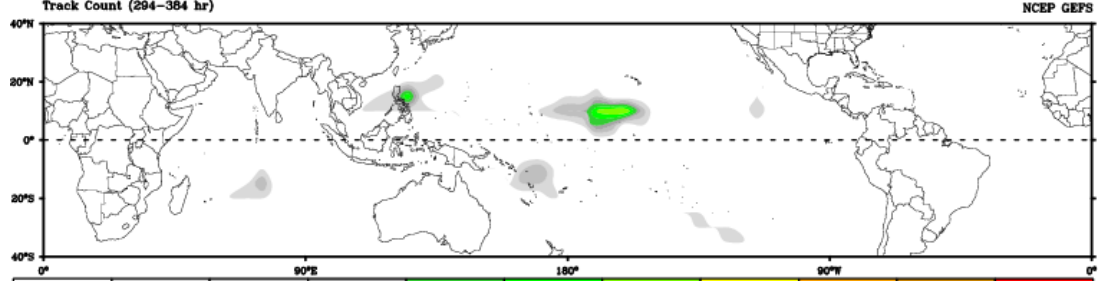
Day 5-8



Day 9-12

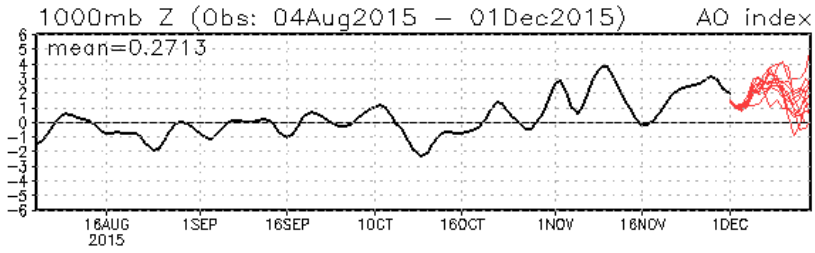


Day 13-15

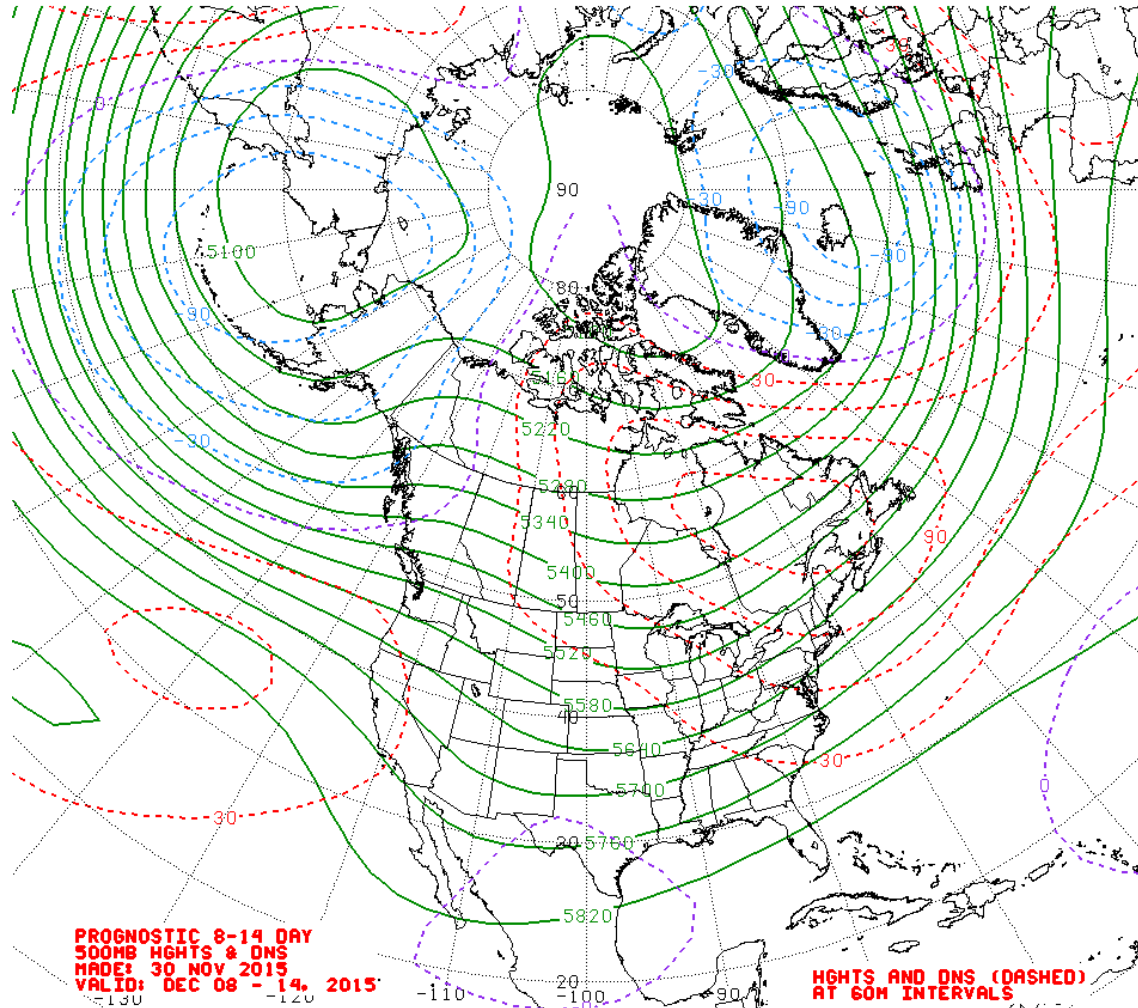
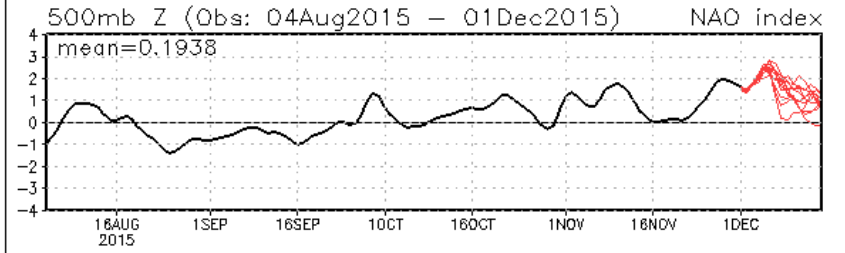


Connections to U.S. Impacts

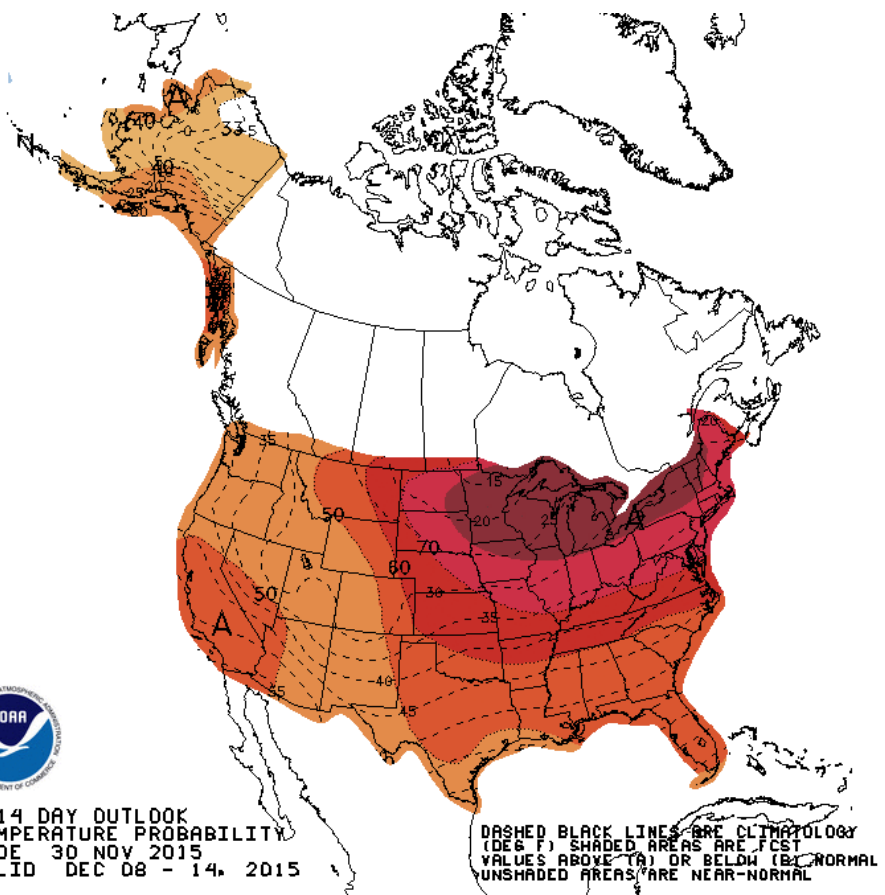
AO: Observed & ENSM forecasts



NAO: Observed & ENSM forecasts

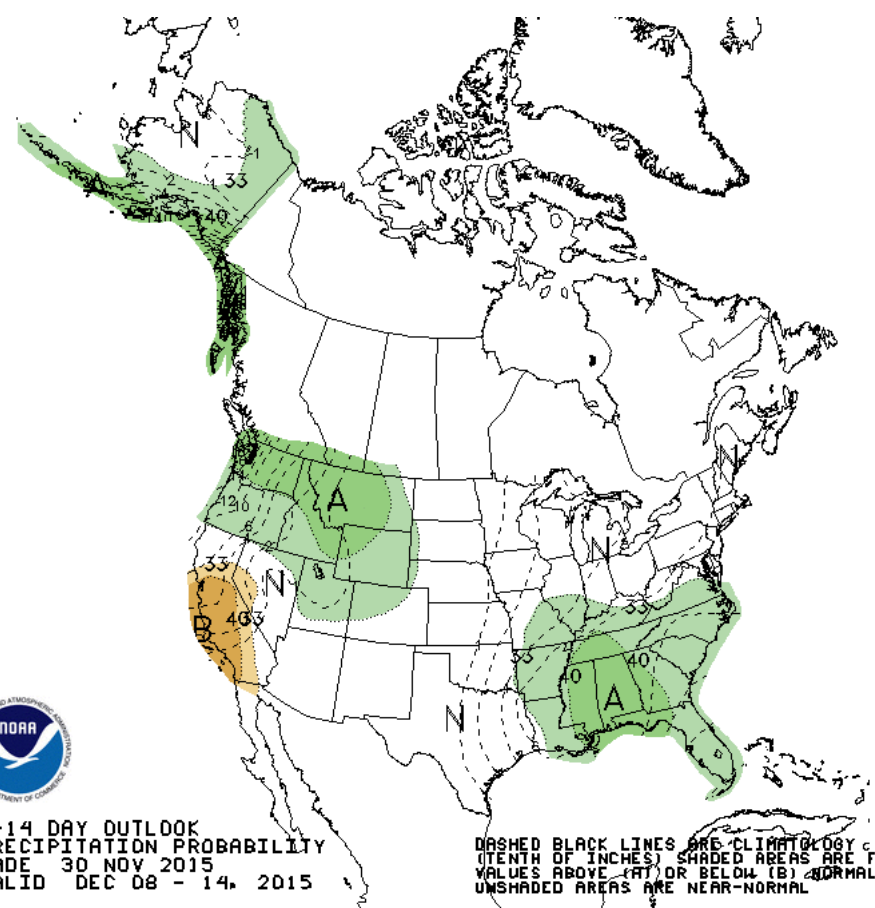
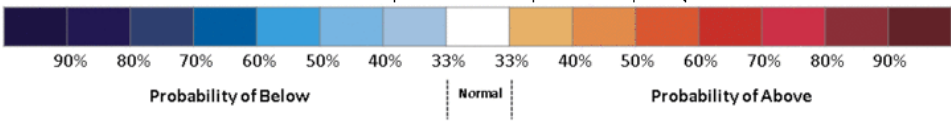


Week 2 – Temperature and Precipitation



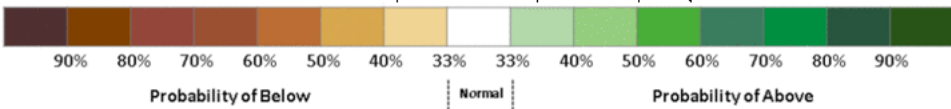
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 30 NOV 2015
VALID DEC 08 - 14, 2015

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 30 NOV 2015
VALID DEC 08 - 14, 2015

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

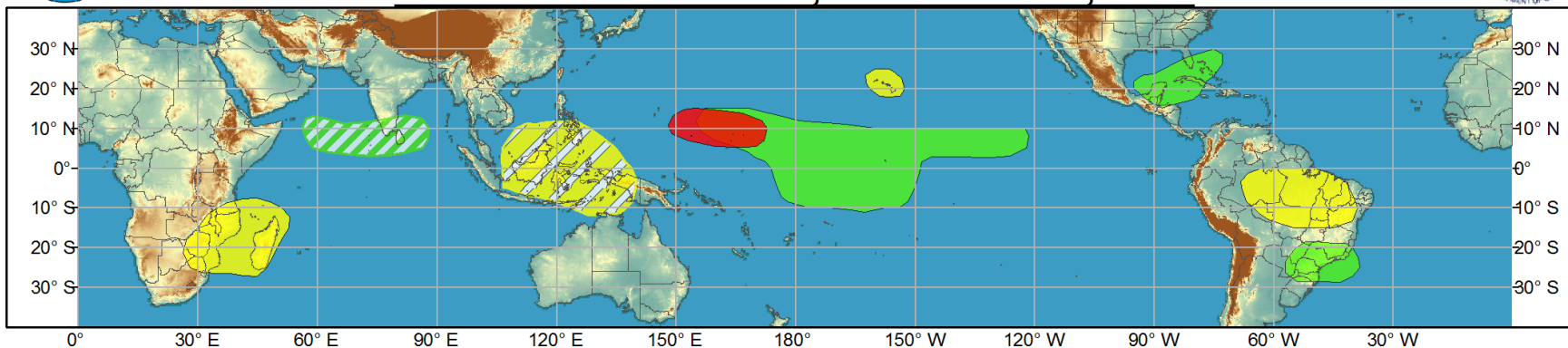




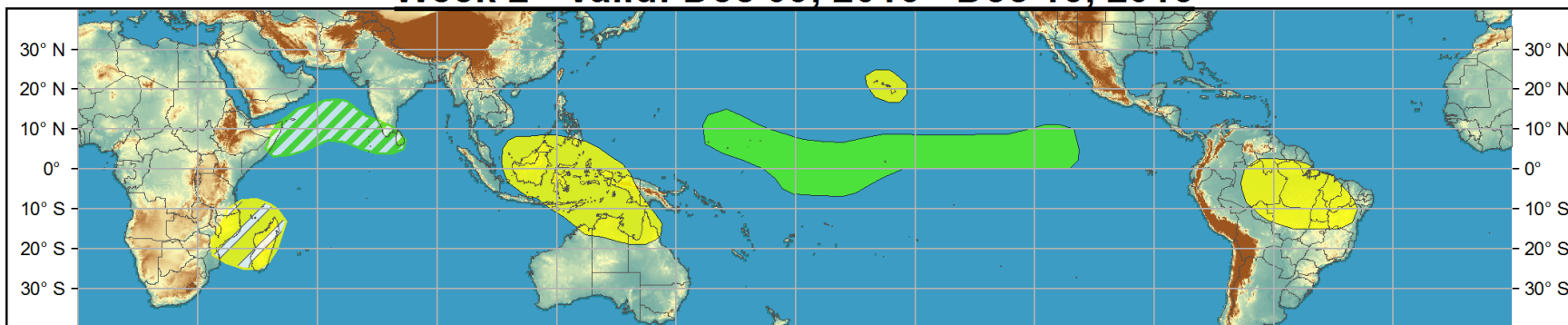
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