

Global Tropics Hazards And Benefits Outlook

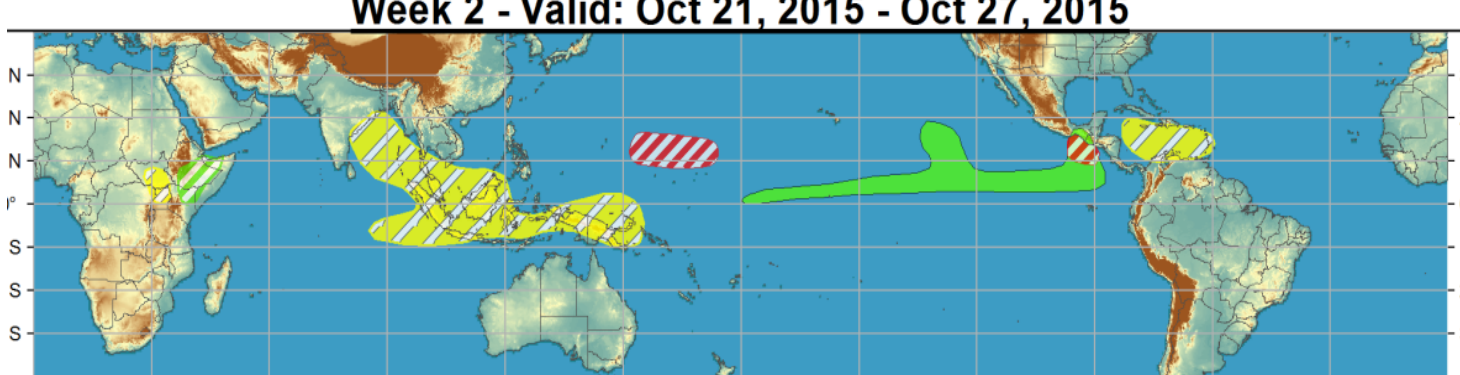
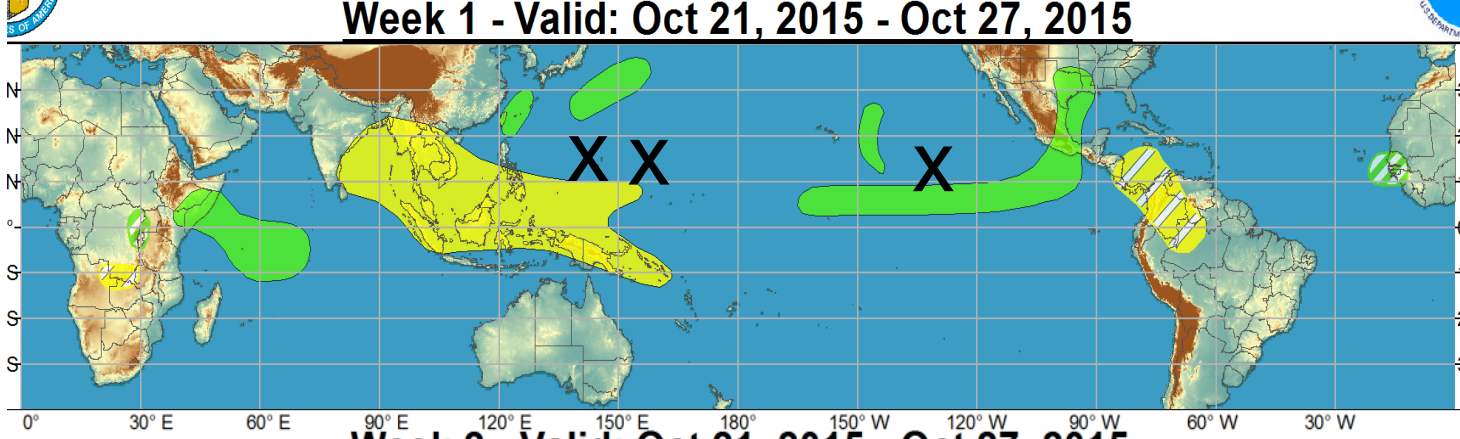
October 27, 2015

Matthew Rosencrans

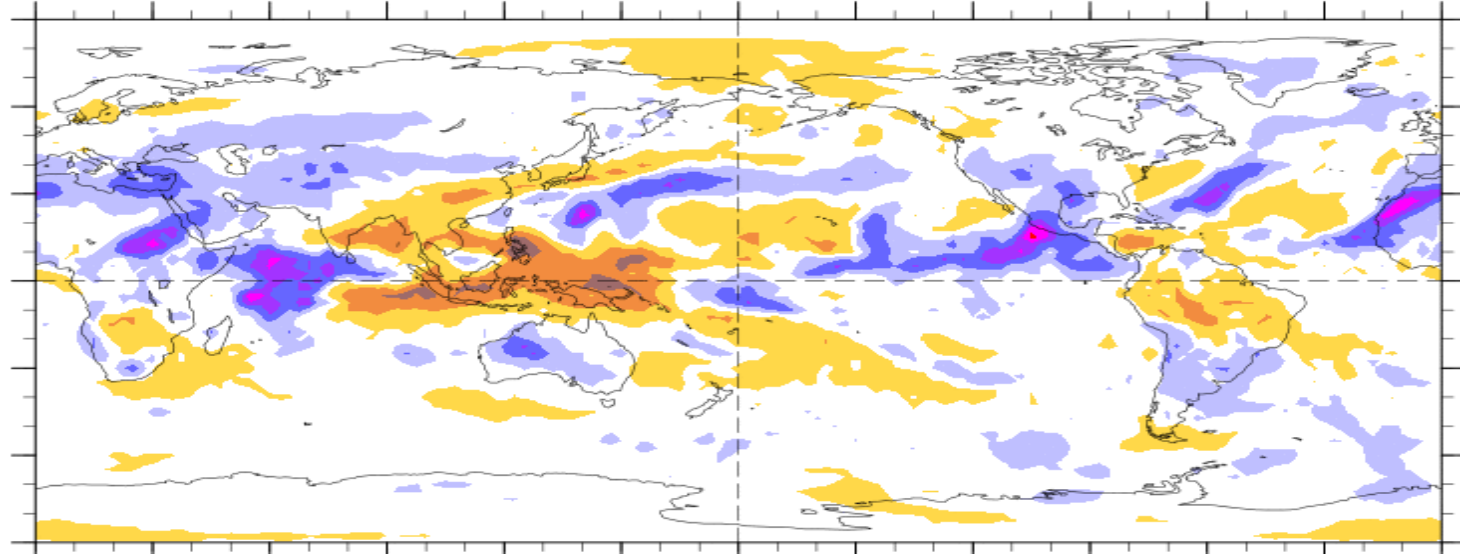
Outline

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

Outlook Review



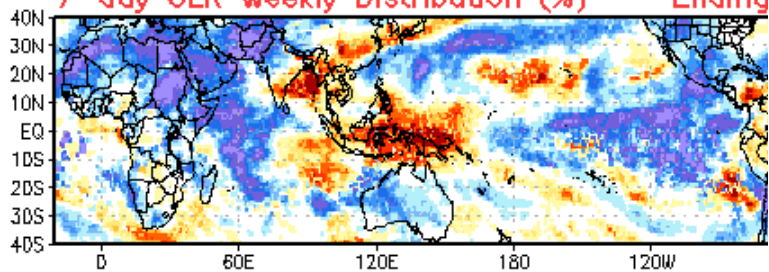
7-Day Average OLR Anomaly 2015/10/19 - 2015/10/25



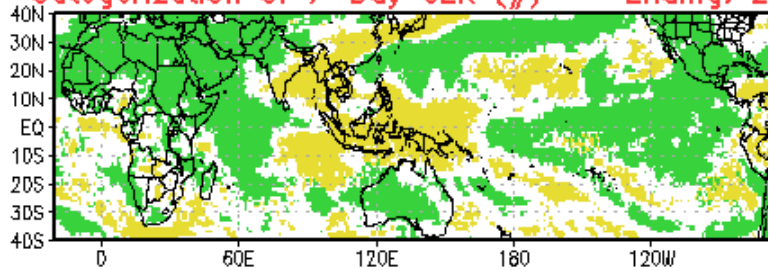
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

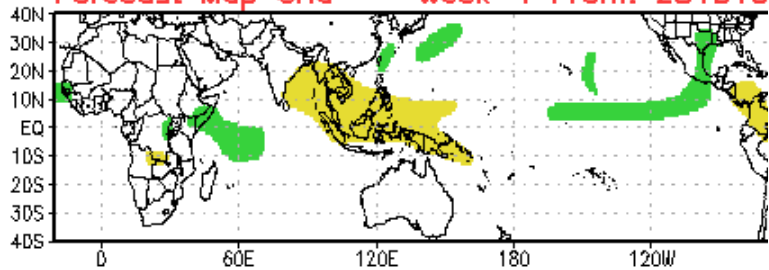
7-day OLR Weekly Distribution (%) -- Ending



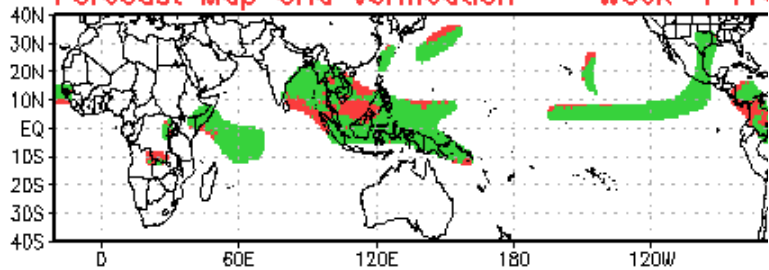
Categorization of 7-Day OLR (#) -- Ending: 2



Forecast Map Grid -- Week-1 From: 201510

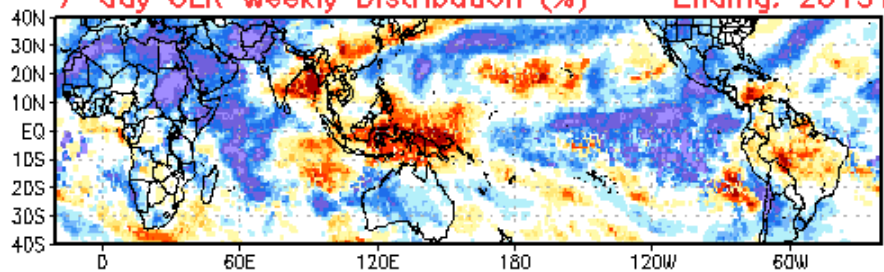


Forecast Map Grid Verification -- Week-1 From: 201510

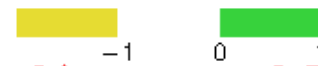
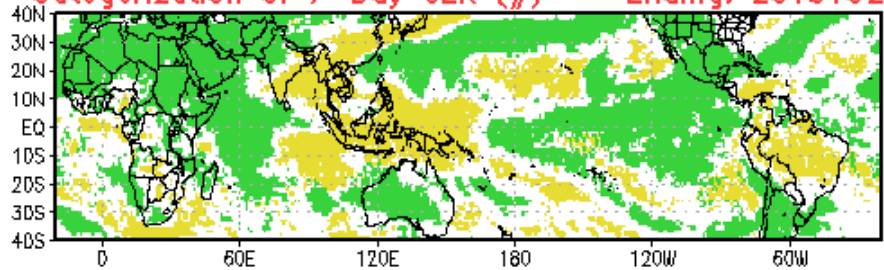


Hit: Green, Miss: Red
Heidke Skill Score: 71.1111

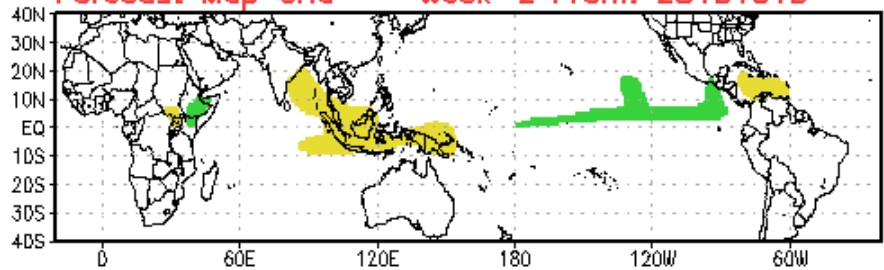
7-day OLR Weekly Distribution (%) -- Ending: 20151027



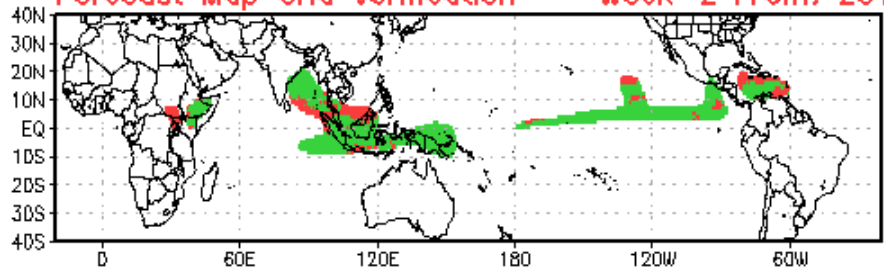
Categorization of 7-Day OLR (#) -- Ending: 20151027



Forecast Map Grid -- Week-2 From: 20151013



Forecast Map Grid Verification -- Week-2 From: 20151013



Hit: Green, Miss: Red
Heidke Skill Score: 69.3213

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:

- Some MJO indices are indicating a signal over the western Indian Ocean.
- Other measures indicate that variability is associated with a Kelvin Wave.
- Most dynamical model MJO index forecasts depict some weakening and eastward propagation of an MJO signal during the next two weeks.

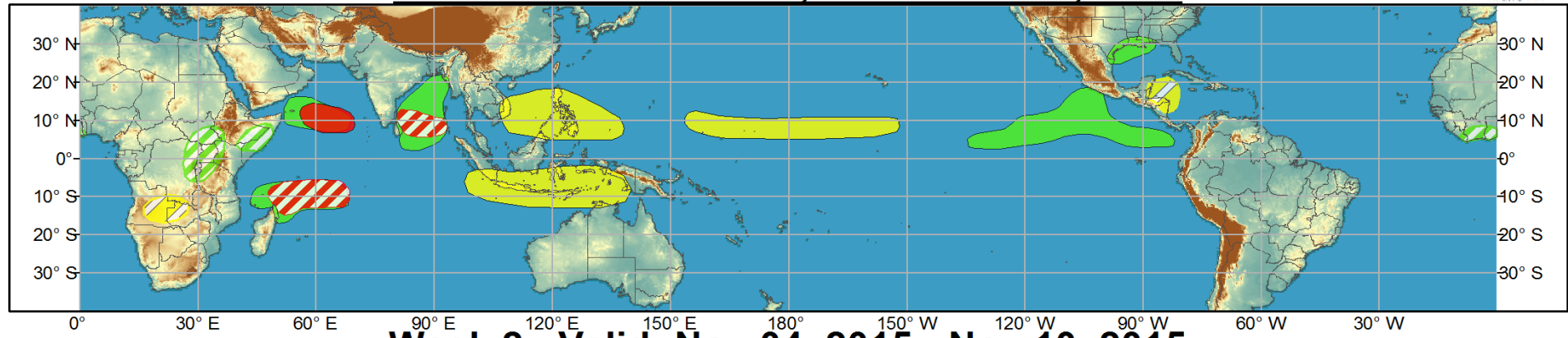
Extratropics:

- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but more likely impacted by the ongoing El Niño and tropical cyclone activity.

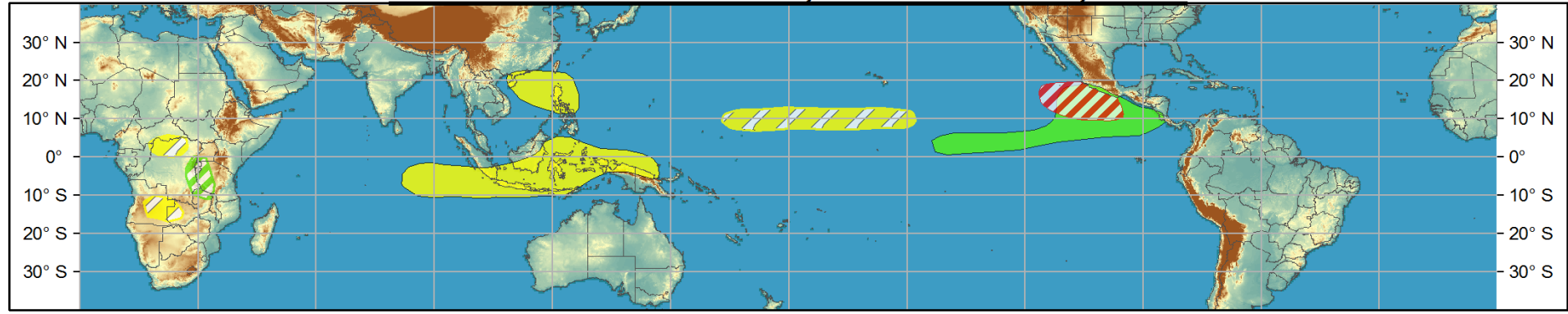


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 28, 2015 - Nov 03, 2015



Week 2 - Valid: Nov 04, 2015 - Nov 10, 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: 10/27/2015

Forecaster: Rosencrans

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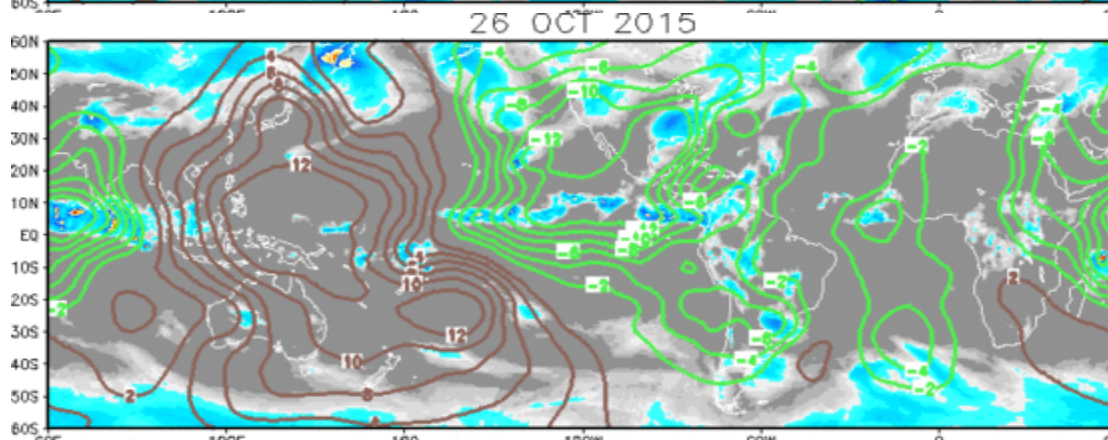
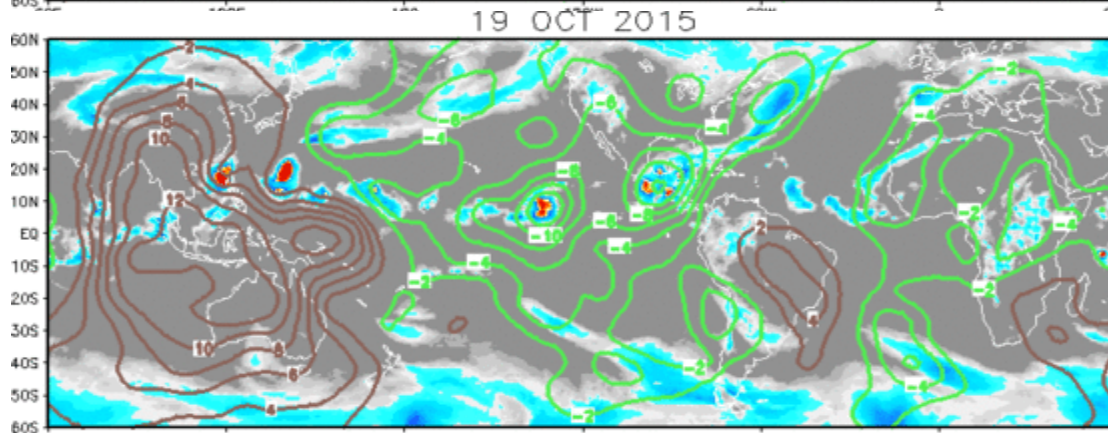
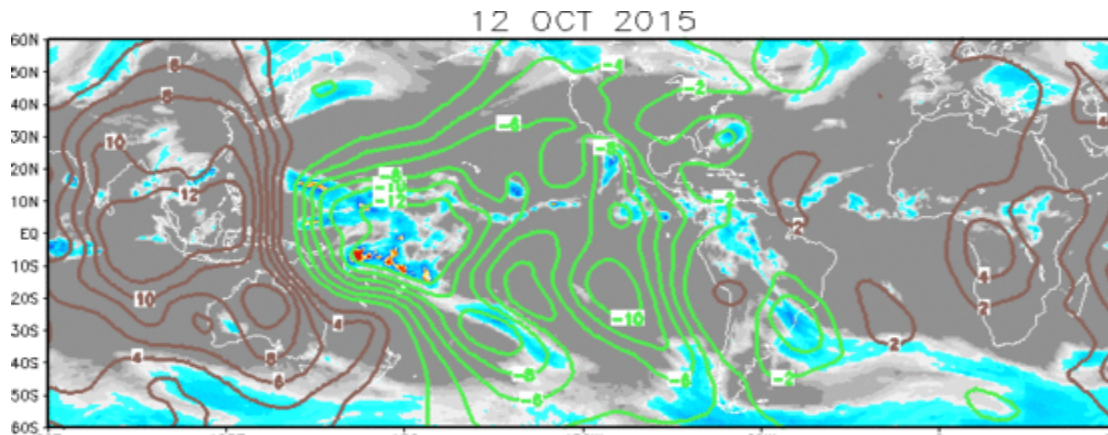


IR Satellite & 200-hpa Velocity Potential Anomalies

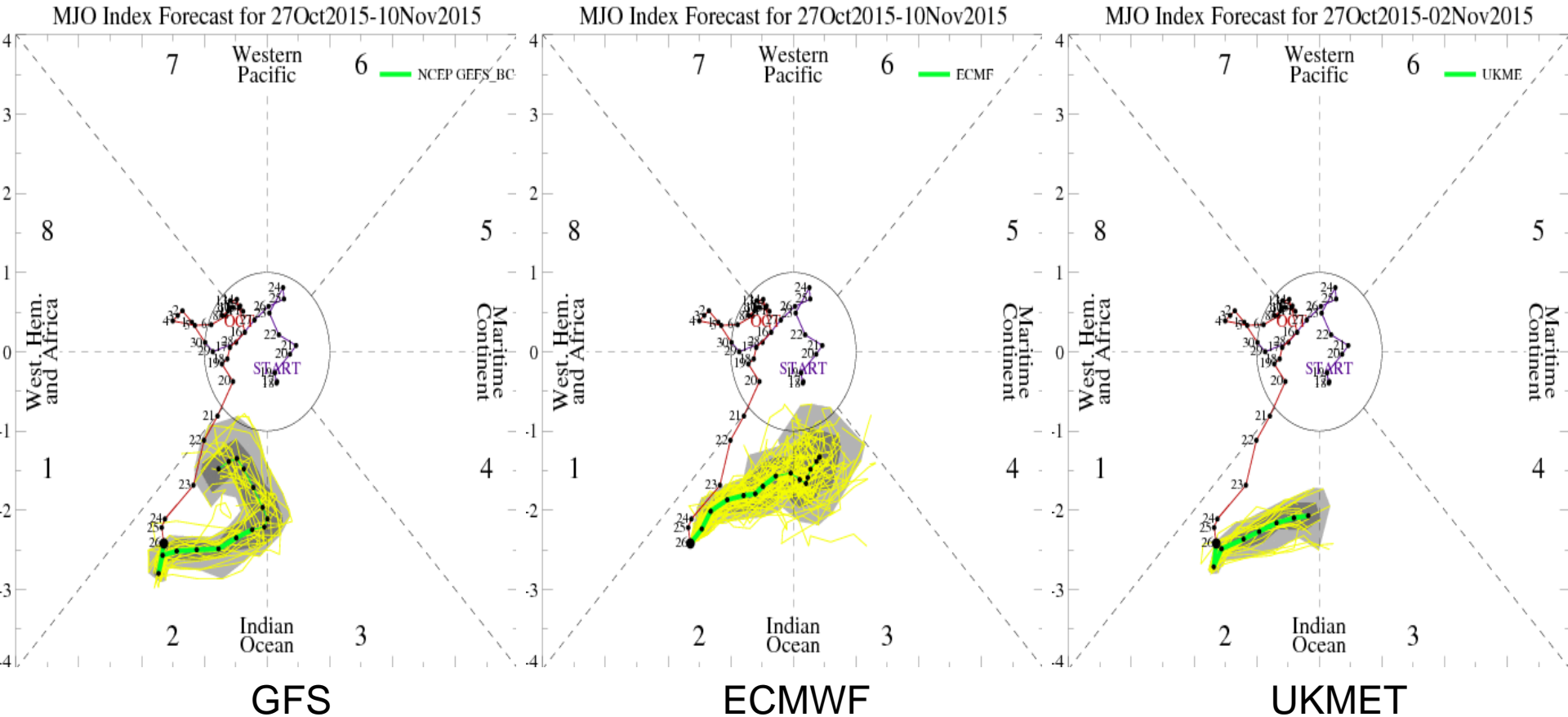
Green: Enhanced Divergence Brown: Enhanced Convergence

Base state
evident.

Eastward shift in
base state.

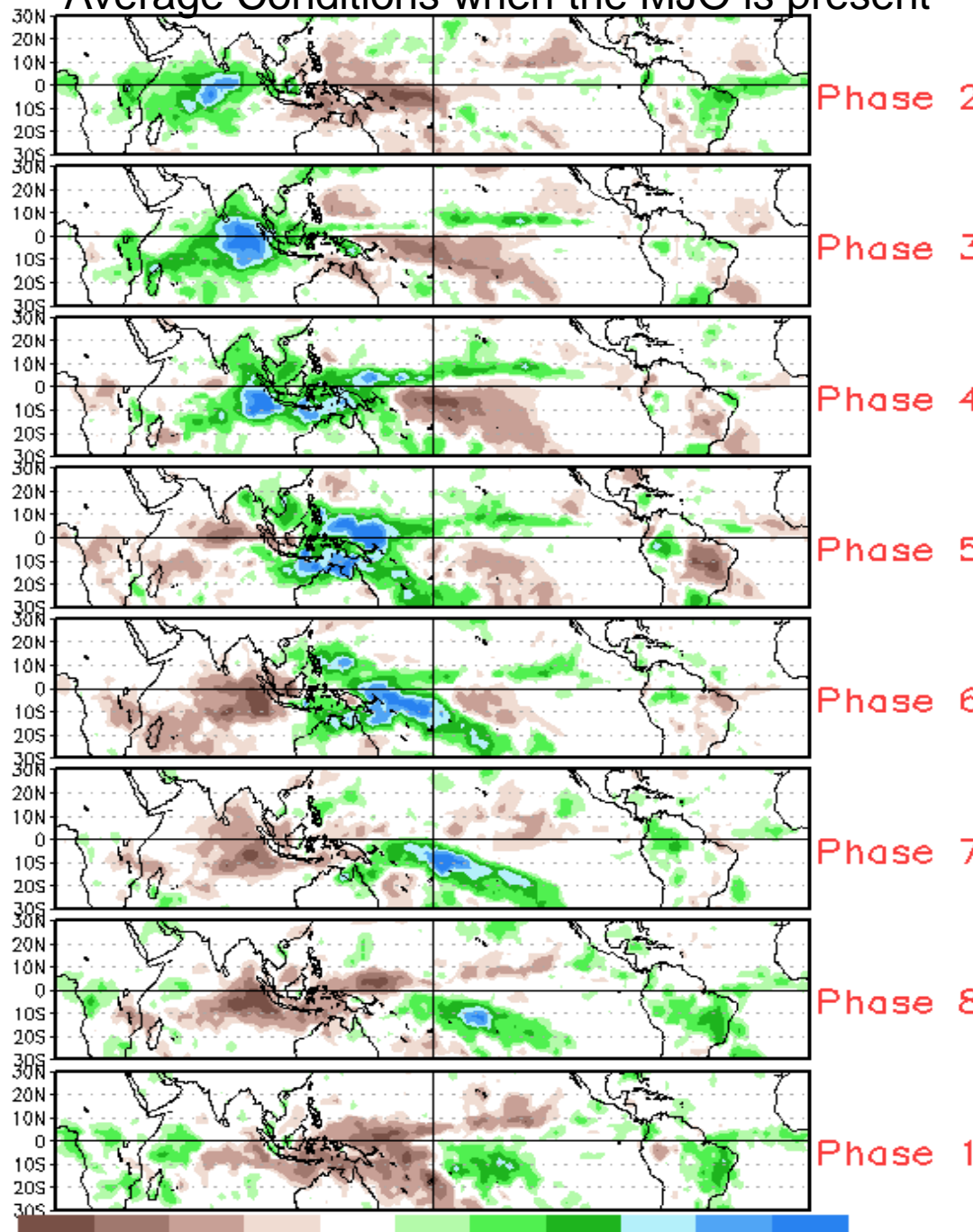


MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate an signal over the Indian Ocean.

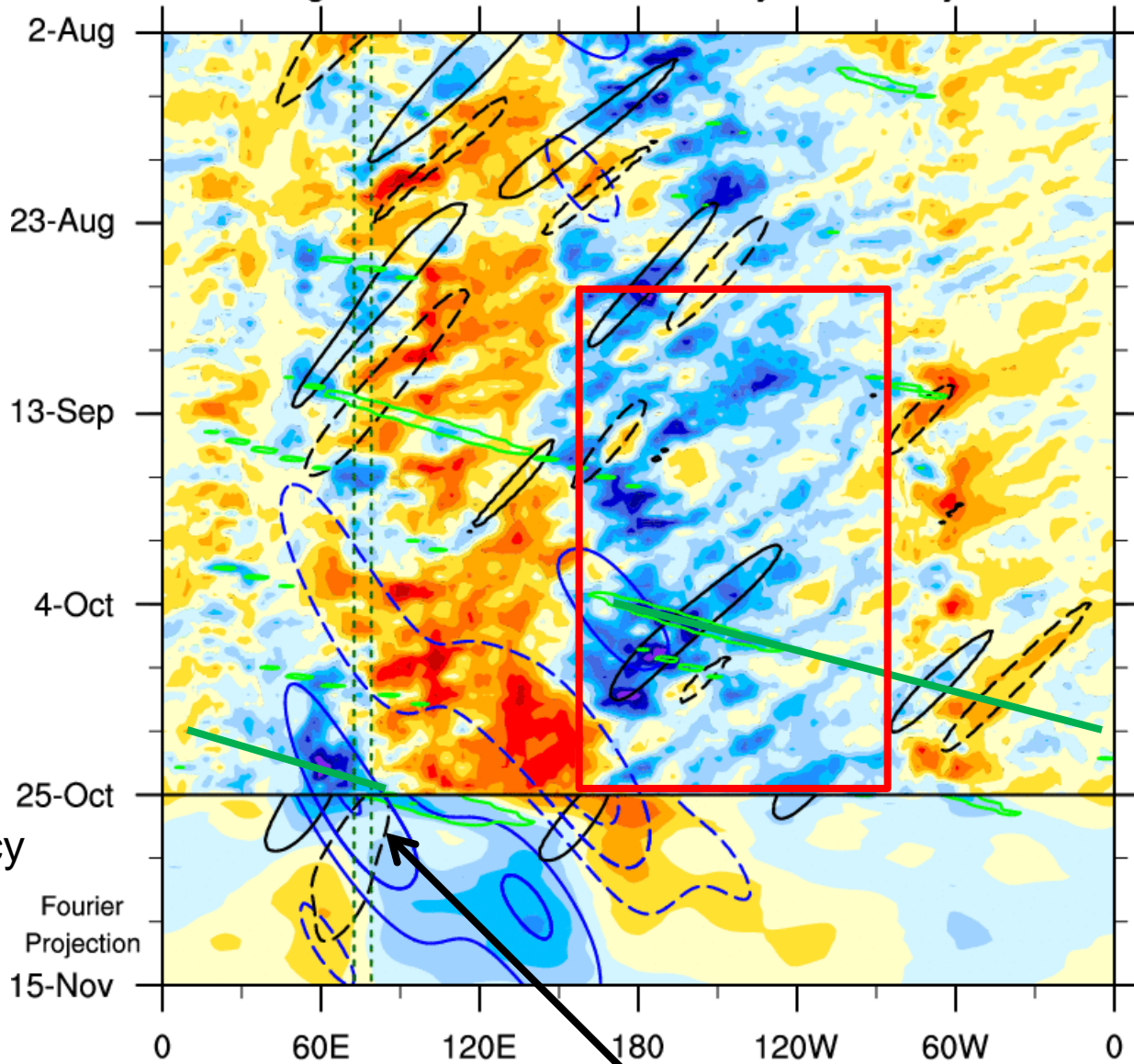
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events, with all phases of ENSO.

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

2-Aug-2015 to 25-Oct-2015 + 21-day Fourier Projection



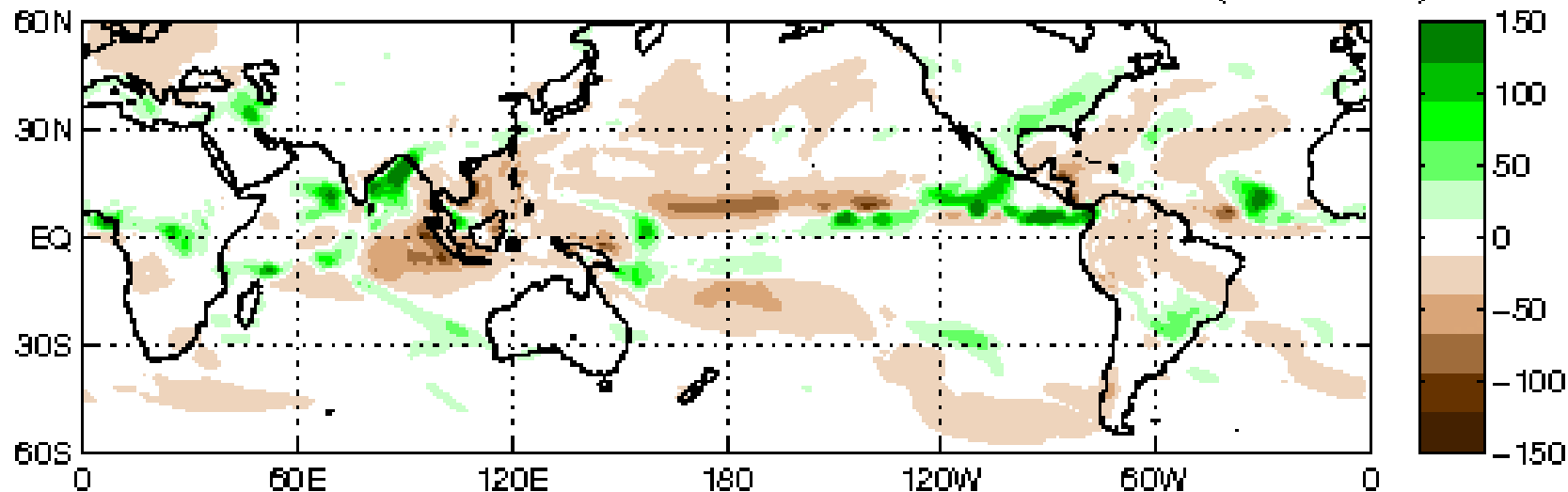
Low frequency likely to dominate pattern.

Some tools indicate MJO activity displacing low-frequency mode.

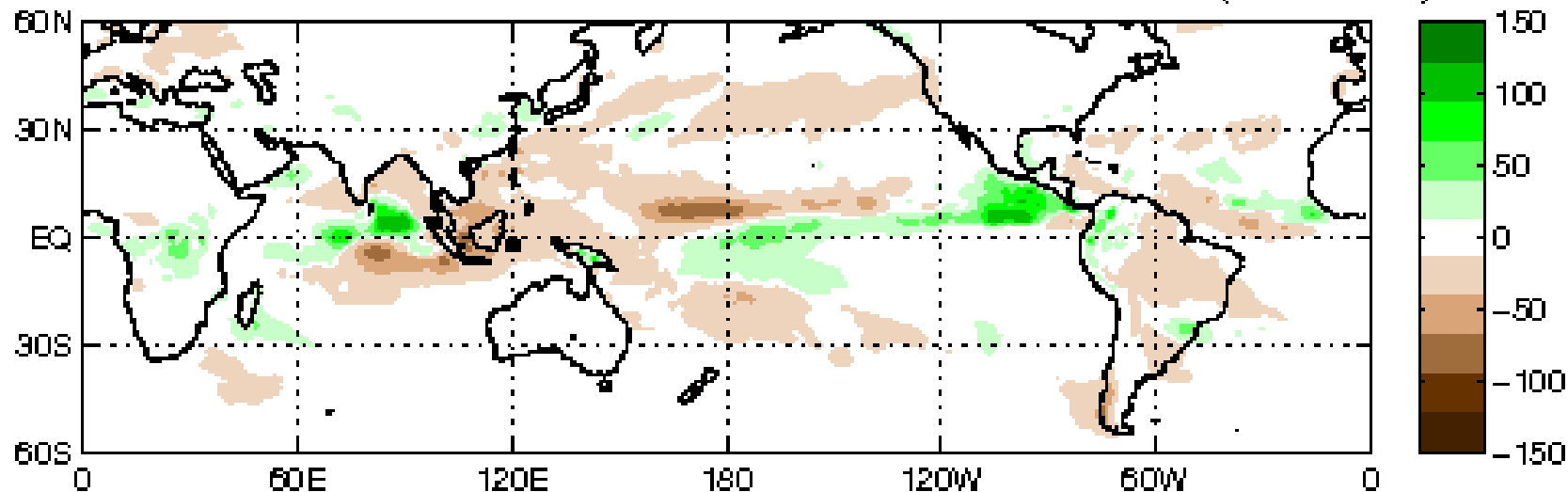
Indian Ocean rainfall also increased during Oct of 1932 and 1997.

Kelvin Wave impacting Indian Ocean.

CFS: Anom. PREC Week: 1: 28-Oct-2015 to 03-Nov-2015 (mm/week)



CFS: Anom. PREC Week: 2: 04-Nov-2015 to 10-Nov-2015 (mm/week)





Five-Day Graphical Tropical Weather Outlooks

National Hurricane Center Miami, Florida



2:00 pm EDT
Tue Oct 27 2015

Tropical Cyclone Formation Potential for the 5-Day Period Ending 2:00 pm EDT Sun Nov 1 2015
 Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.

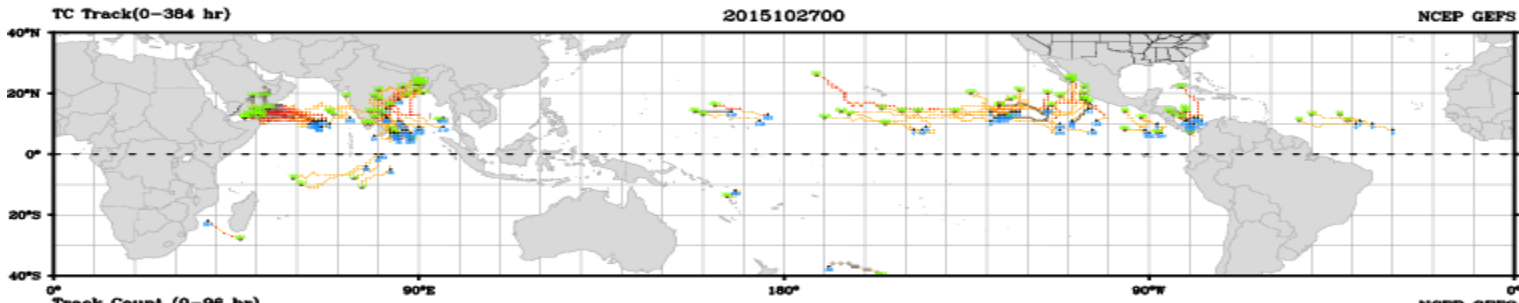
Five-Day Graphical Tropical Weather Outlook

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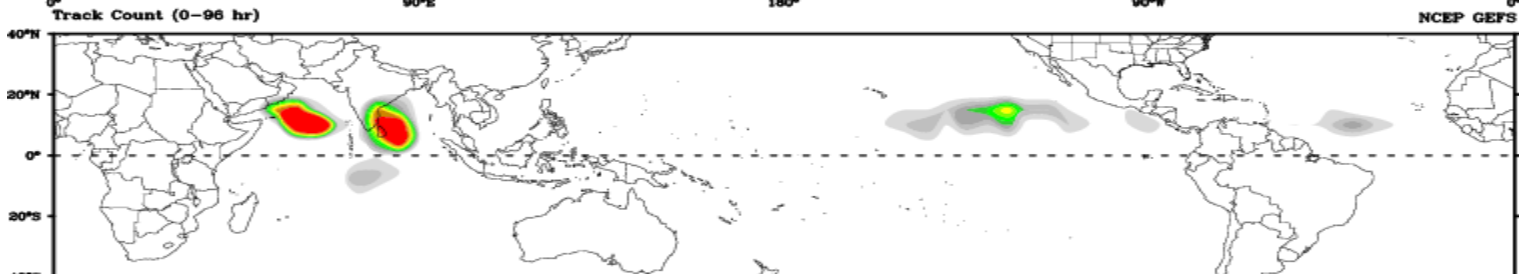


11:00 am PDT
Tue Oct 27 2015

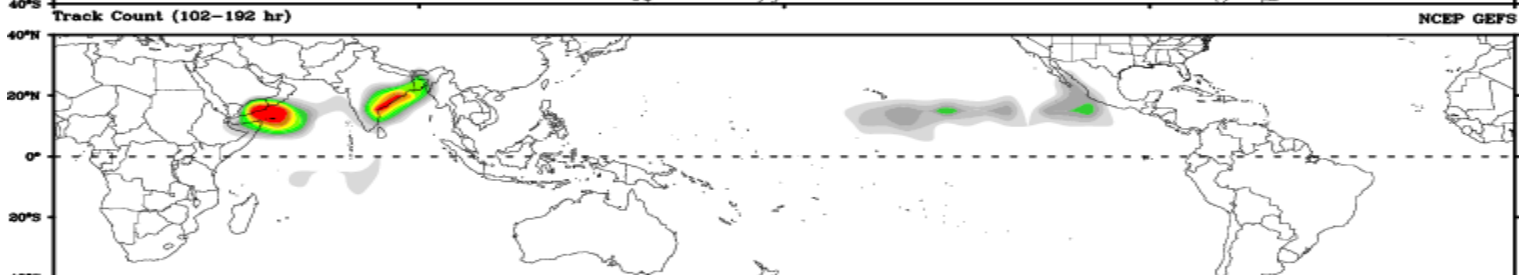
Tropical Cyclone Formation Potential for the 5-Day Period Ending 11:00 am PDT Sun Nov 1 2015
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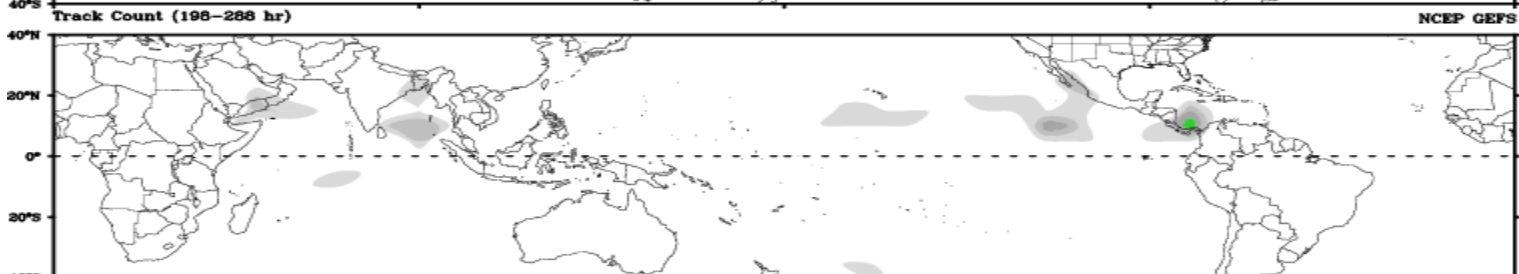
Days 1-4



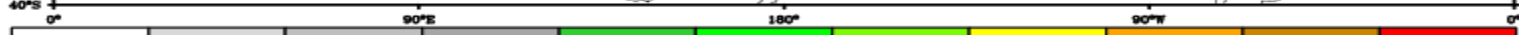
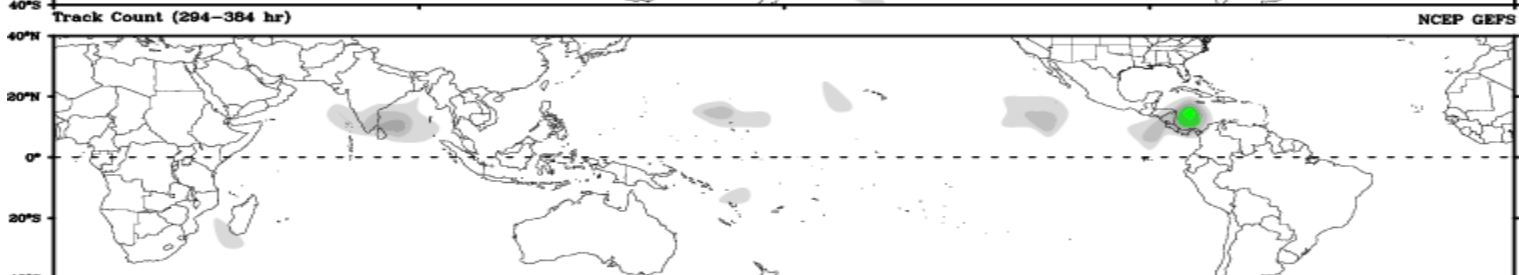
Day 5-8



Day 9-12

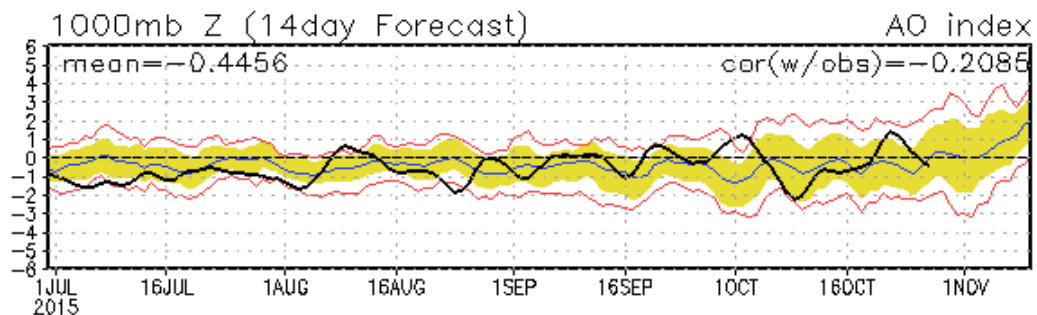
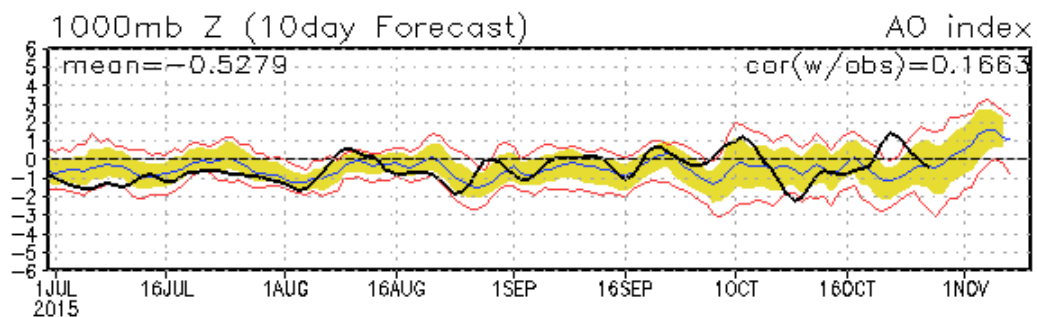
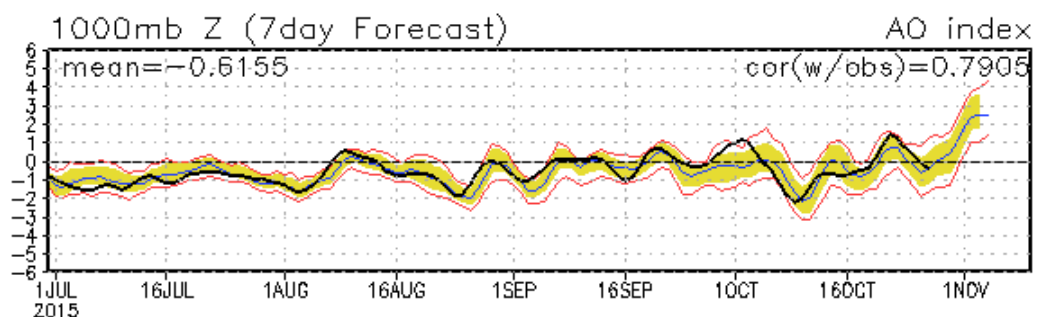
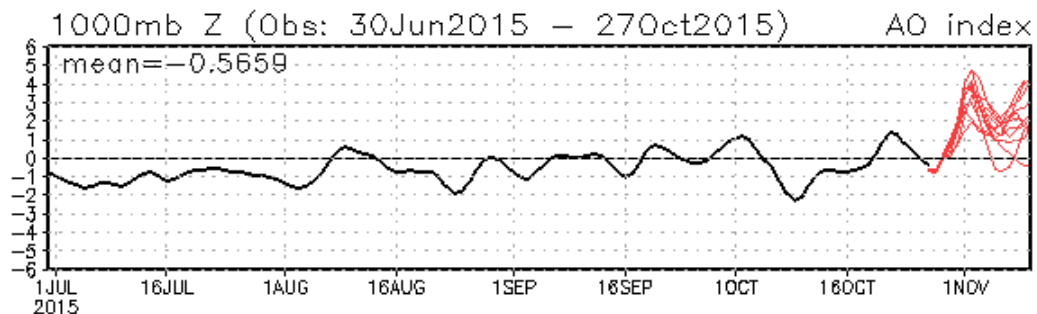


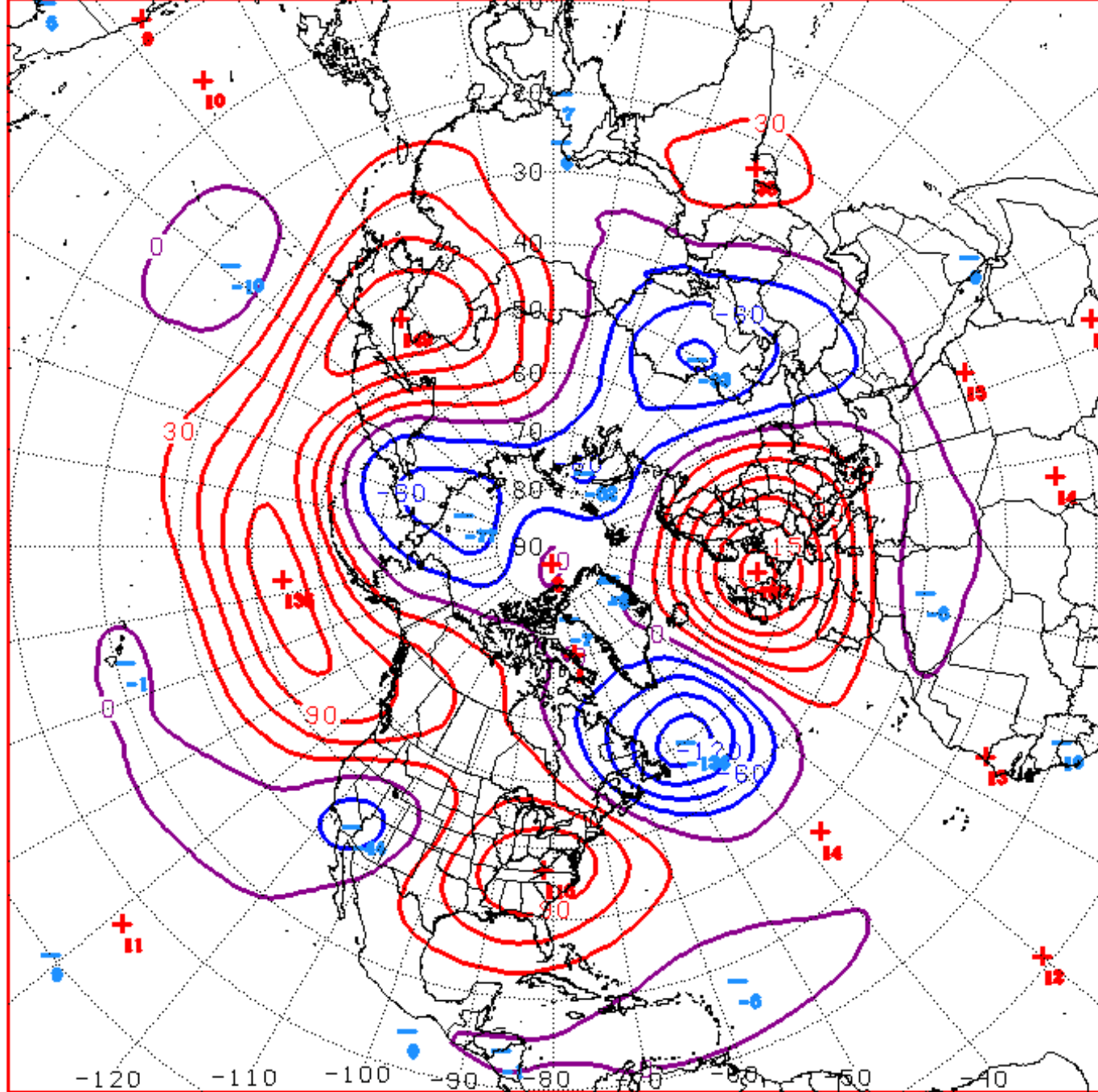
Day 13-15



Connections to U.S. Impacts

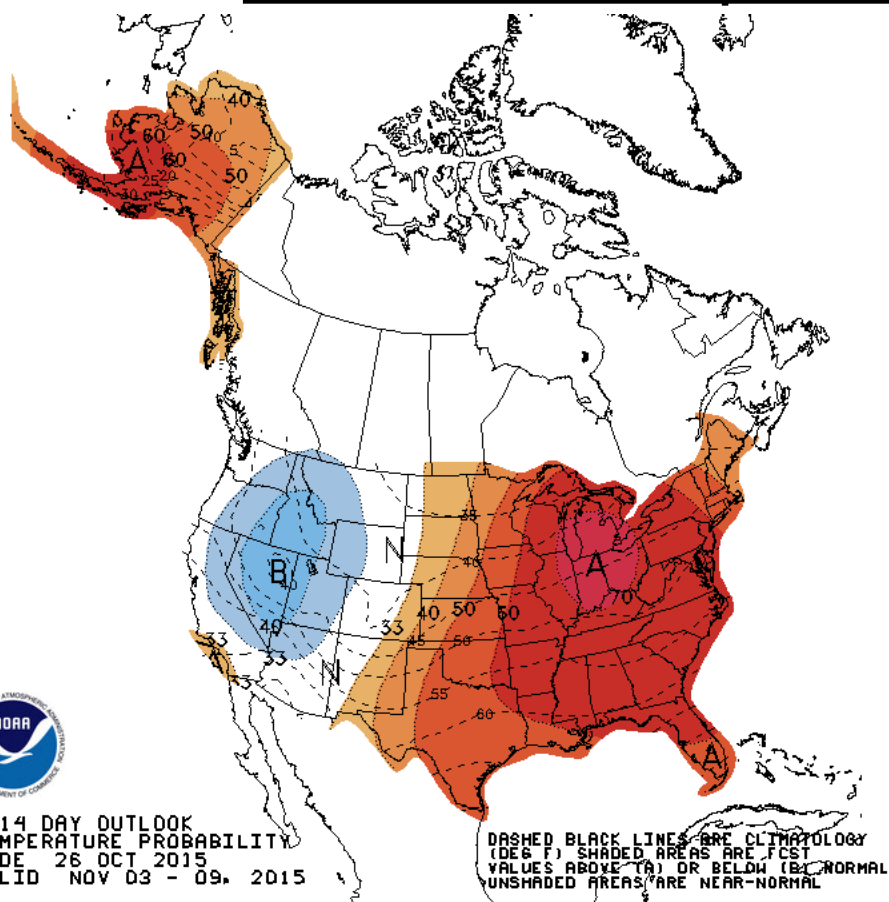
AO: Observed & ENSM forecasts



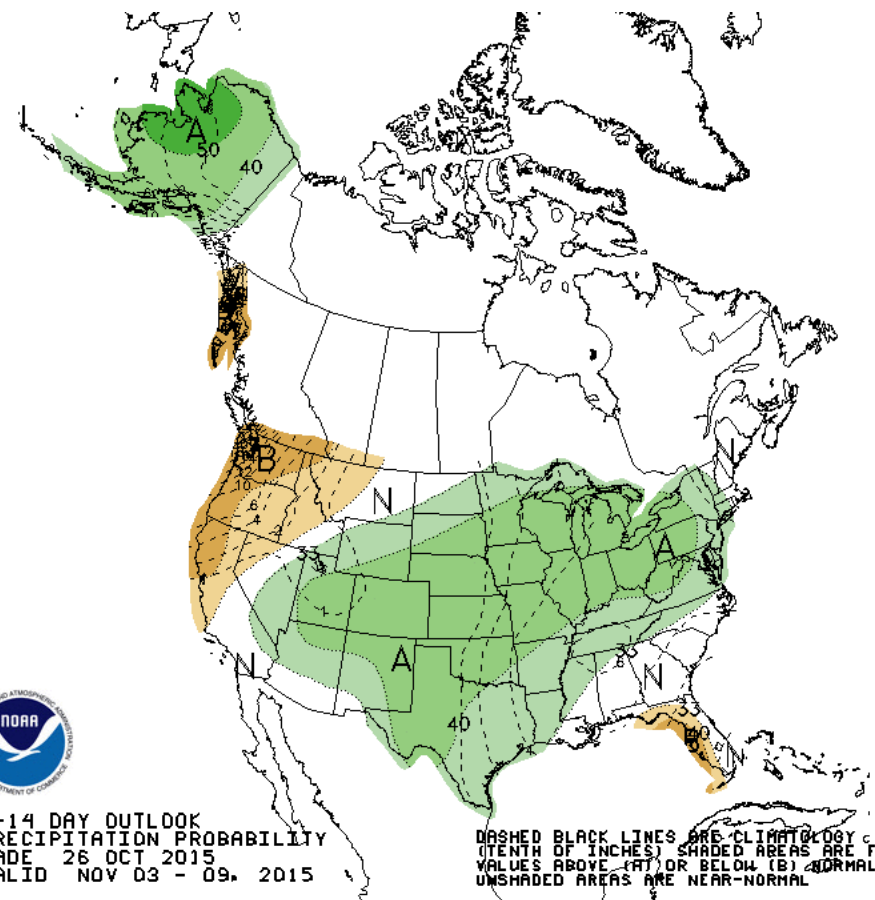
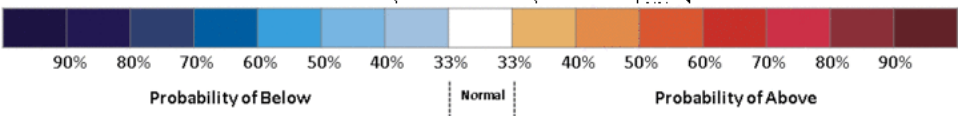


D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE OCT 27 2015 1000 UTC CNTD NOV 07 2015

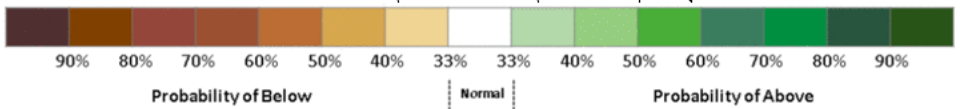
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 26 OCT 2015
VALID NOV 03 - 09, 2015



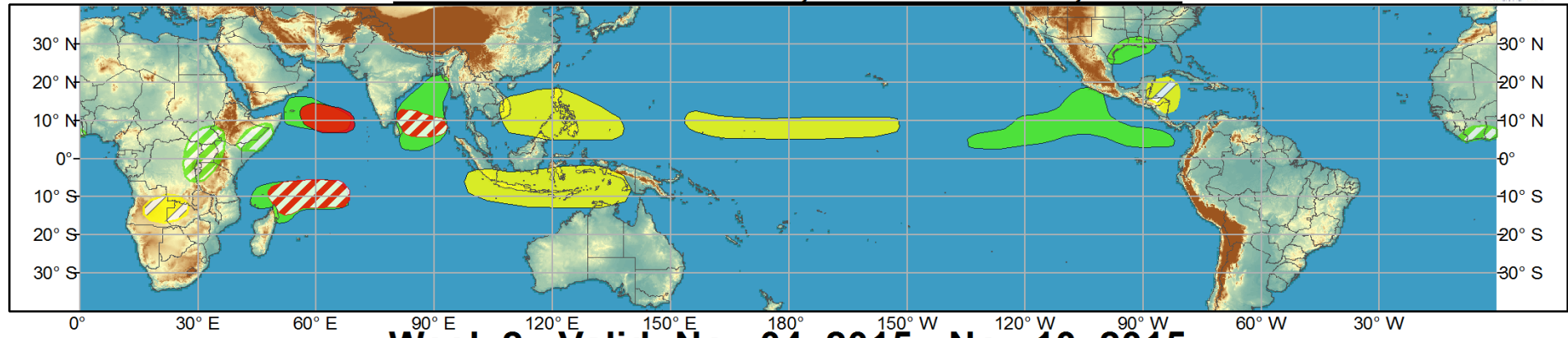
8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 26 OCT 2015
VALID NOV 03 - 09, 2015



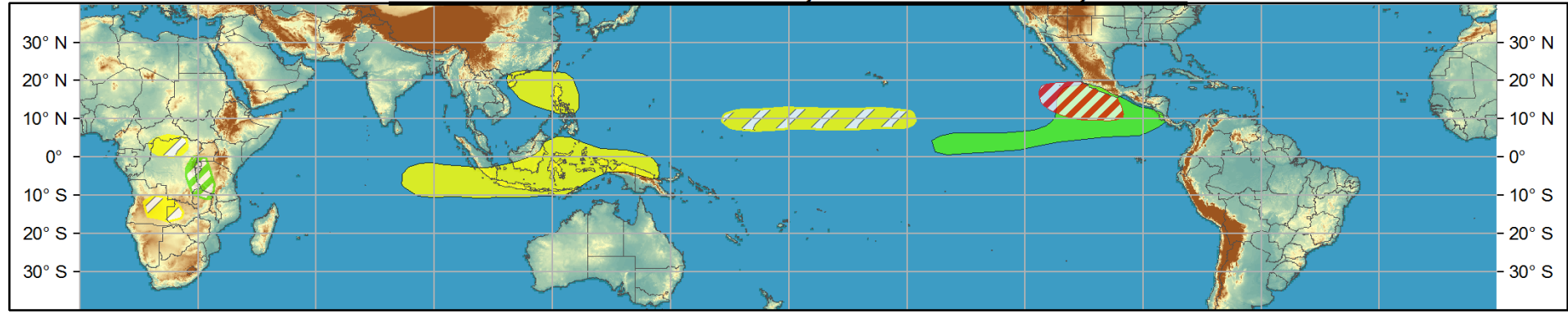


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