

Global Tropics Hazards And Benefits Outlook

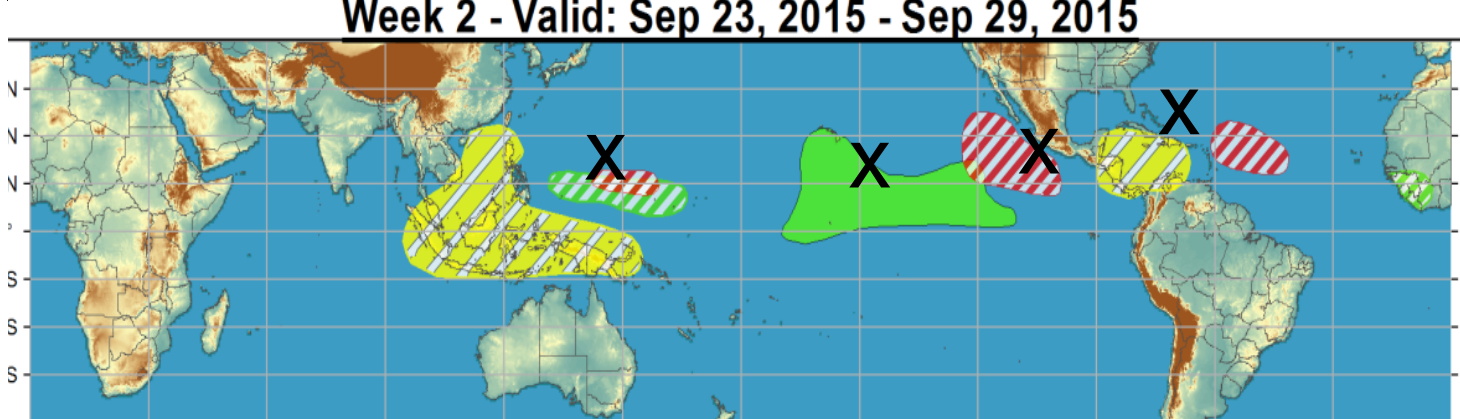
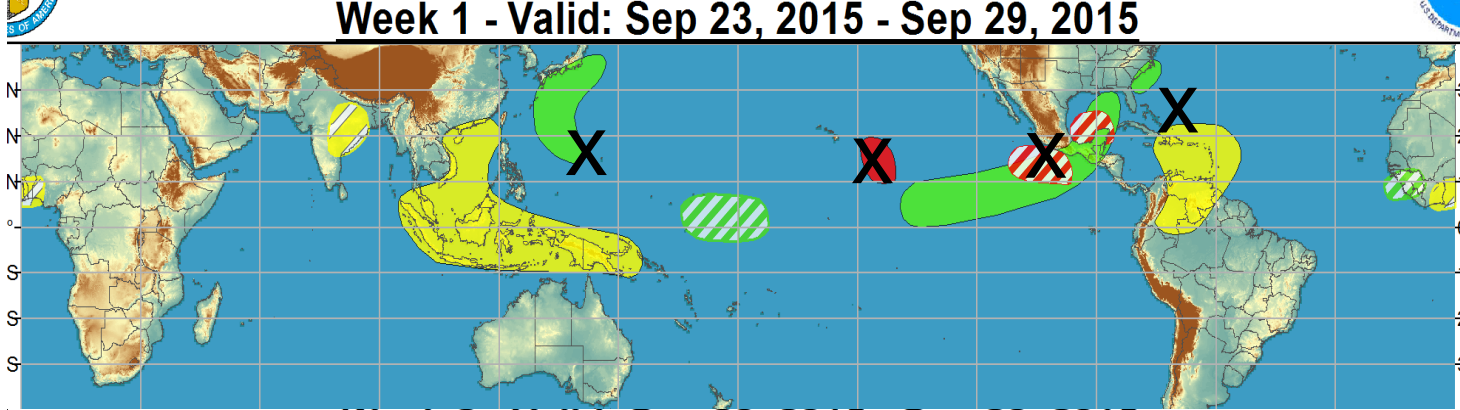
September 29, 2015

Matthew Rosencrans

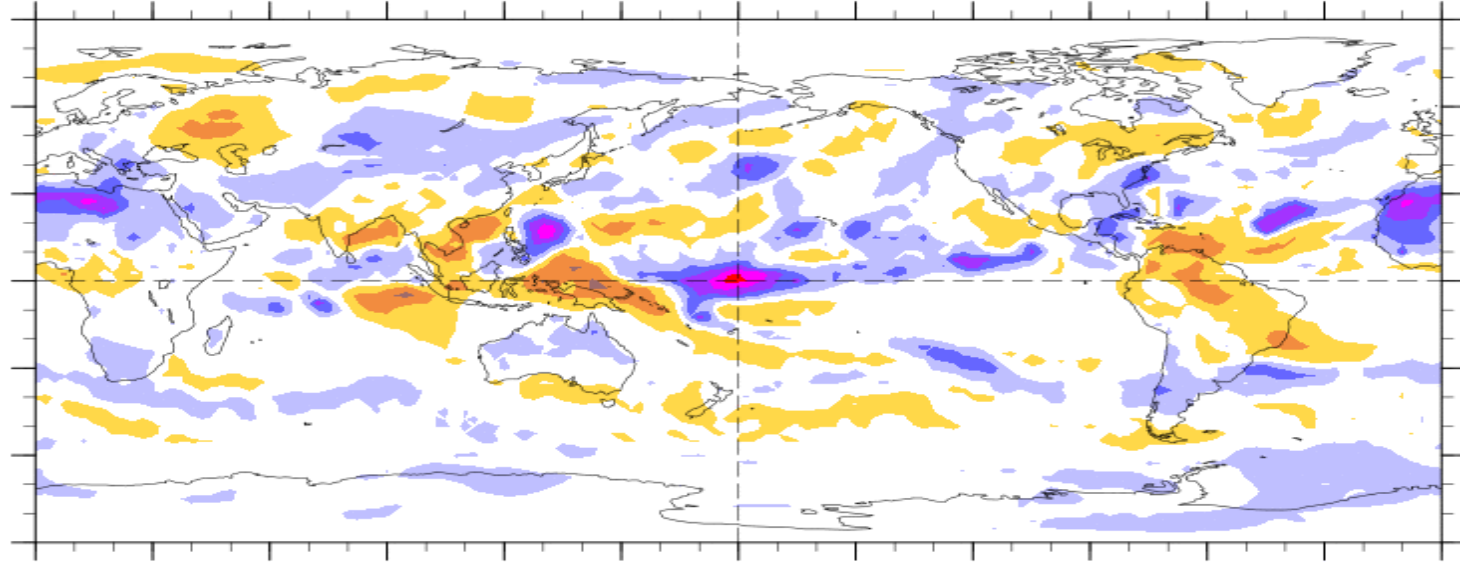
Outline

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

Outlook Review



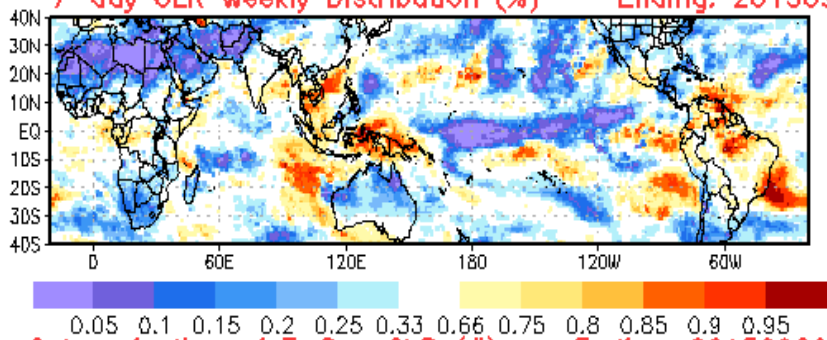
7-Day Average OLR Anomaly 2015/09/21 - 2015/09/27



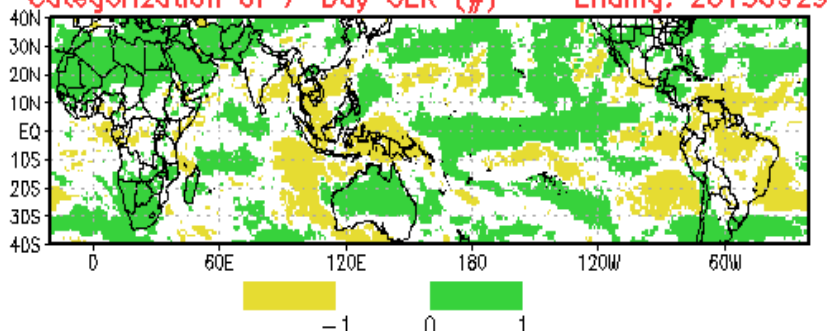
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

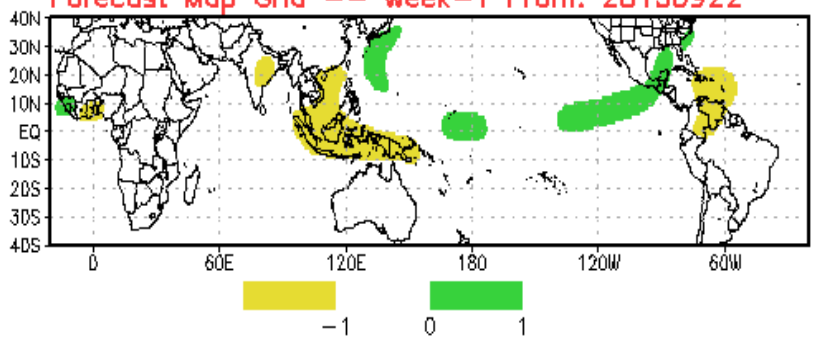
7-day OLR Weekly Distribution (%) -- Ending: 20150929



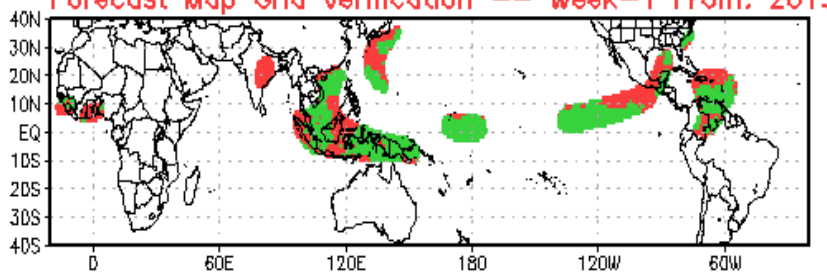
Categorization of 7-Day OLR (#) -- Ending: 20150929



Forecast Map Grid -- Week-1 From: 20150922

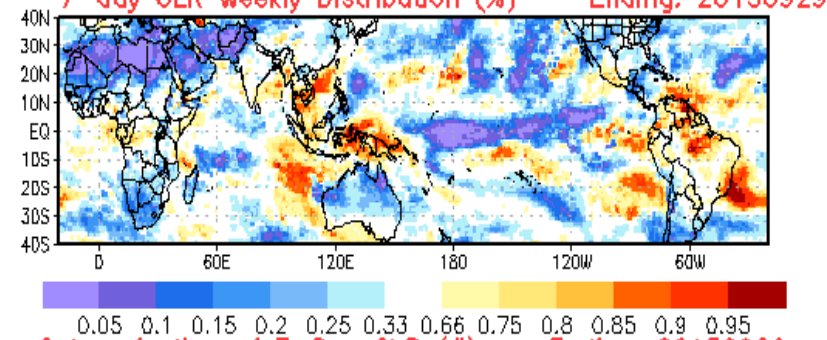


Forecast Map Grid Verification -- Week-1 From: 20150922

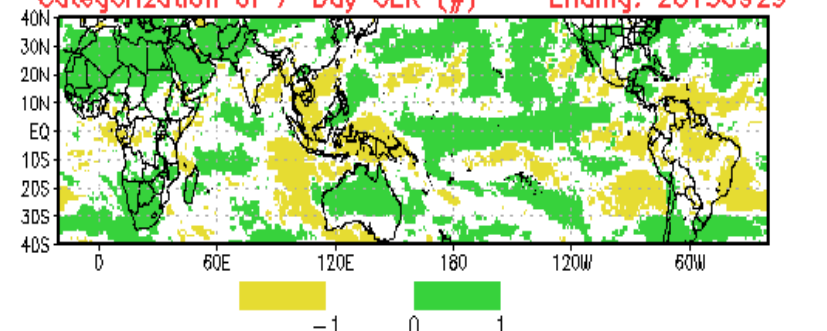


Hit: Green, Miss: Red
Heidke Skill Score: 38.9419

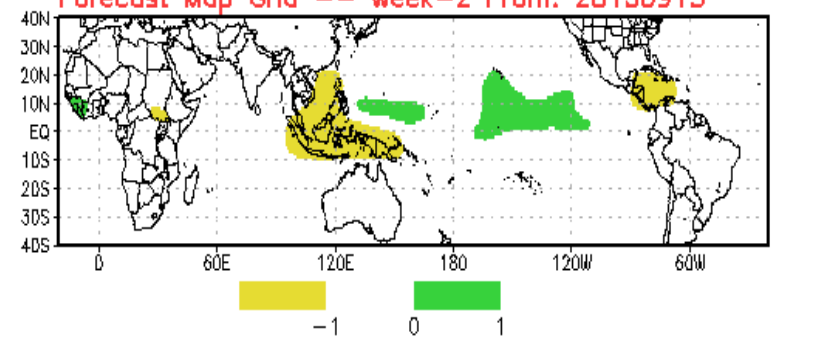
7-day OLR Weekly Distribution (%) -- Ending: 20150929



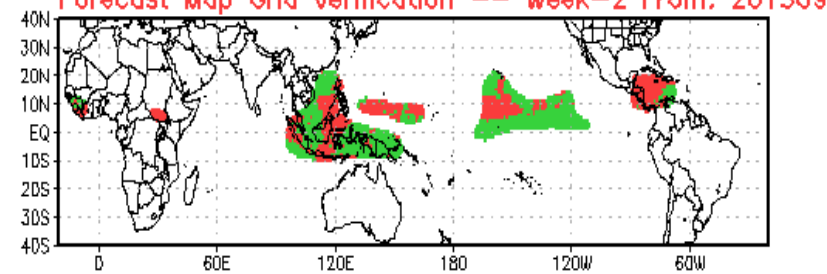
Categorization of 7-Day OLR (#) -- Ending: 20150929



Forecast Map Grid -- Week-2 From: 20150915



Forecast Map Grid Verification -- Week-2 From: 20150915



Hit: Green, Miss: Red
Heidke Skill Score: 36.9871

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 is weak and not likely to impact tropical variability during the next 2 weeks.
- Most dynamical model MJO index forecasts depict little to no MJO signal during Week-1 (GEFS_BC is outlier). Disagreement from GFS to CFS to EC for Week-2, related to handling of tropical cyclones. Most impact to tropical convection will likely come from El Niño and tropical cyclones, with some influence from a CCKW.

Extratropics:

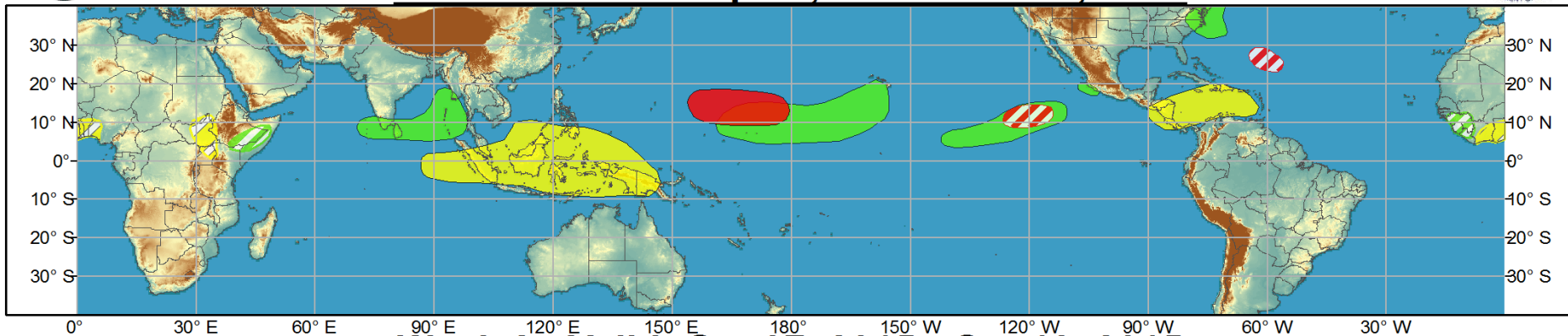
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but more likely impacted by the ongoing El Niño and tropical cyclone activity.



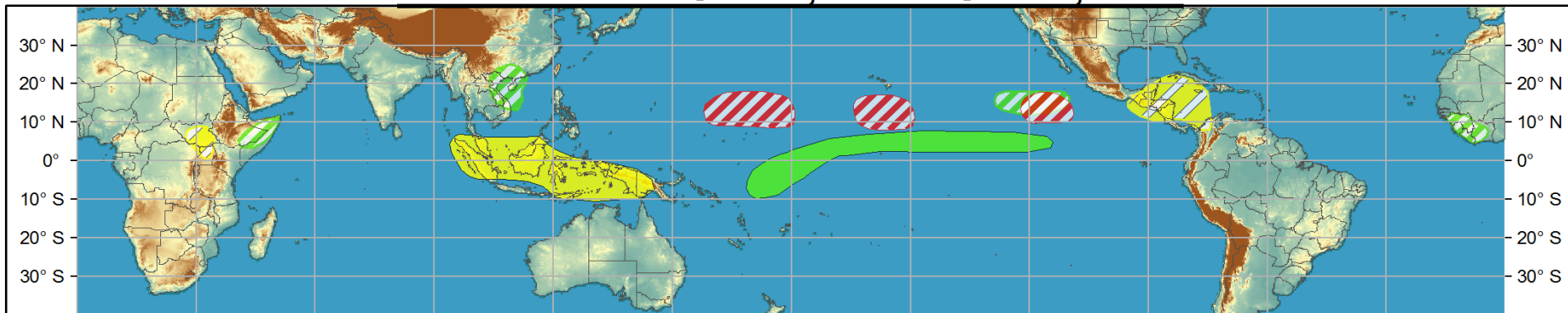
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 30, 2015 - Oct 06, 2015



Week 2 - Valid: Oct 07, 2015 - Oct 13, 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: 09/29/2015

Forecaster: Rosencrans

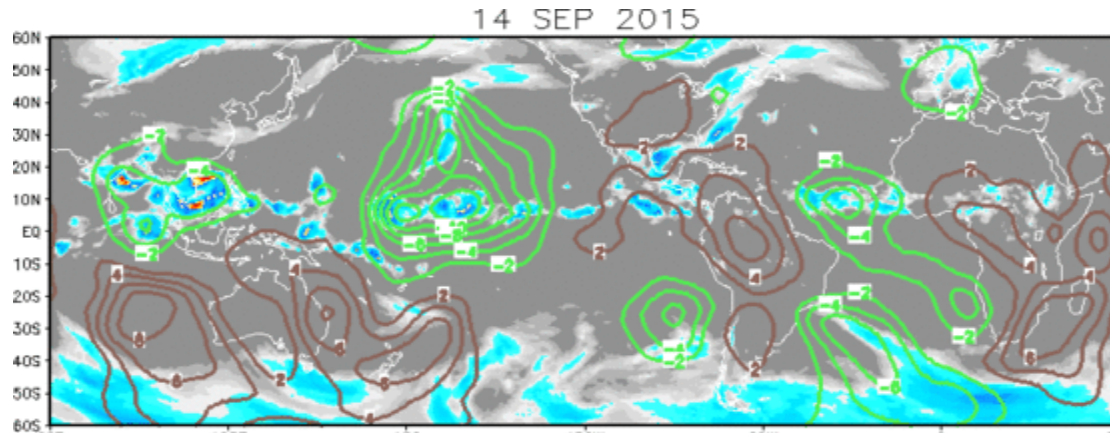
Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



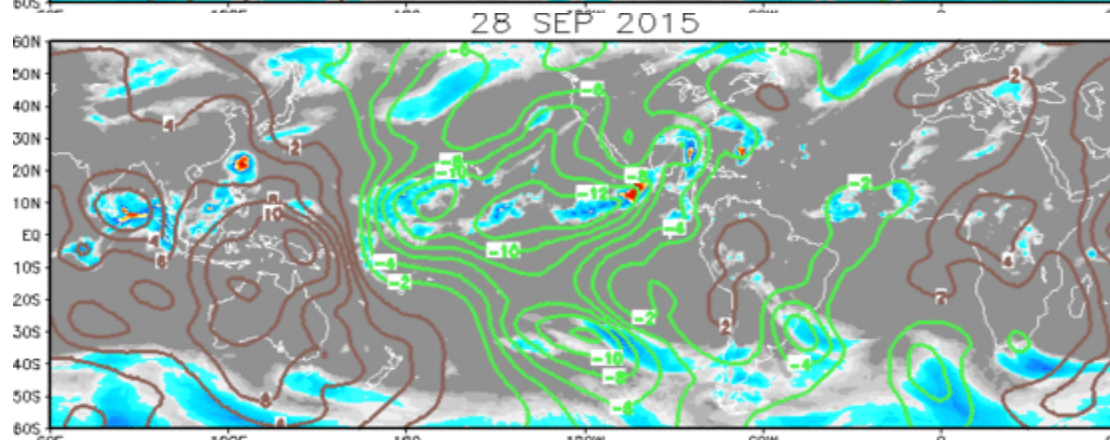
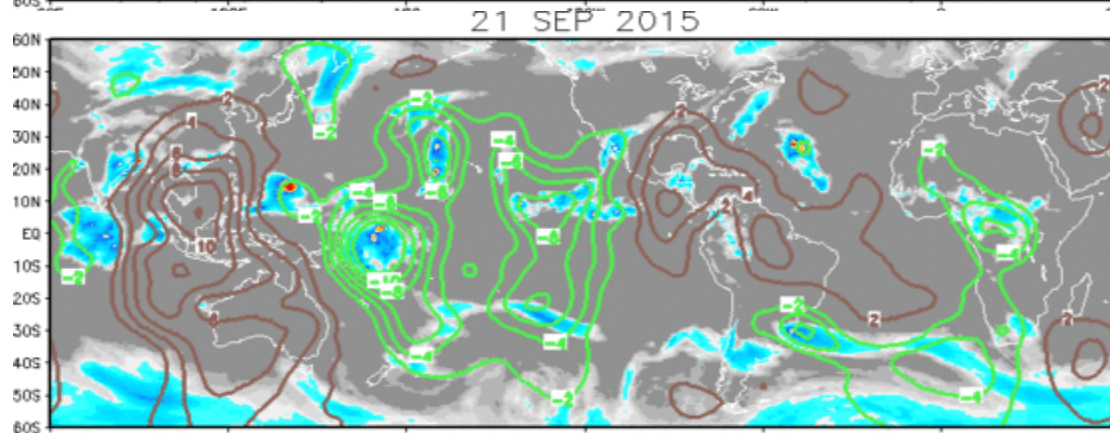
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

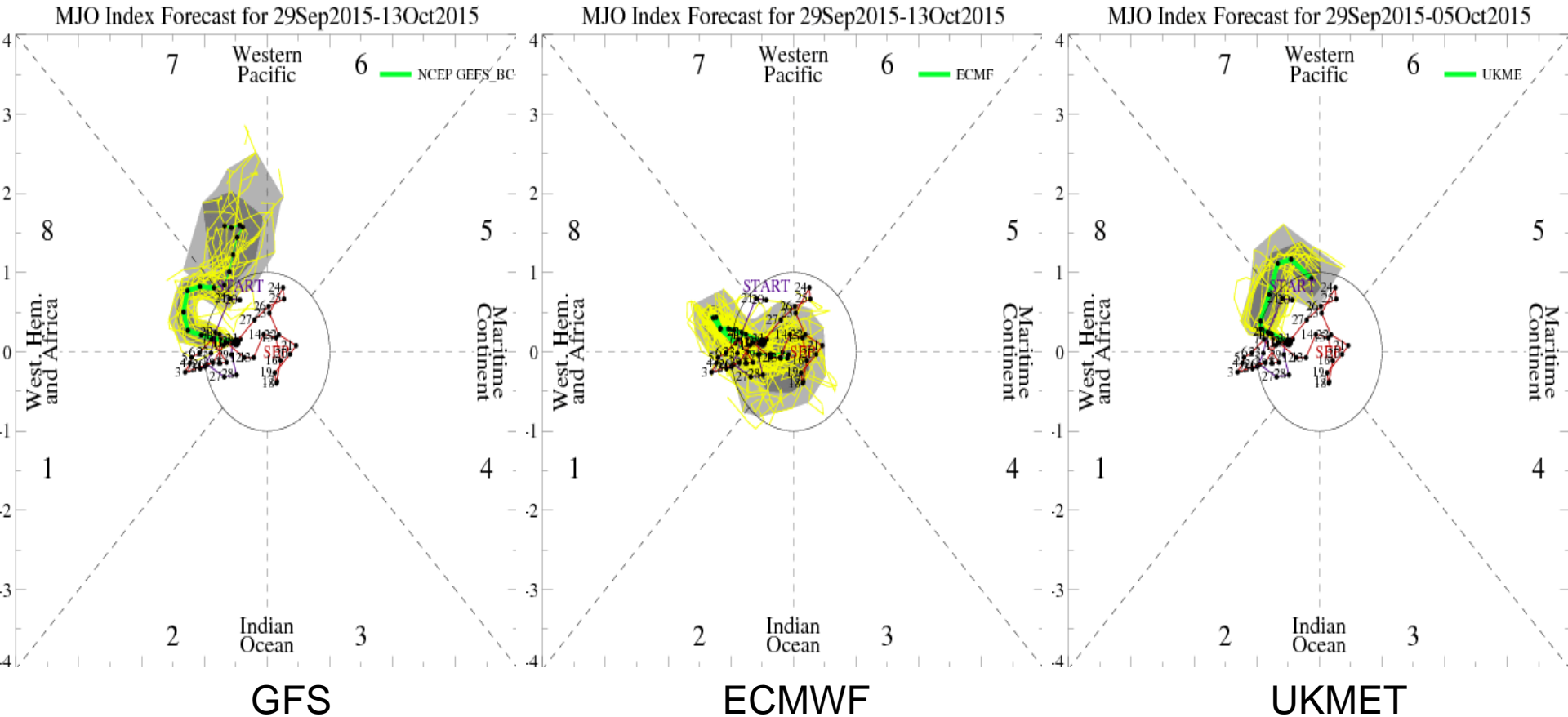
Base state and transient features evident.



Weak evidence of Kelvin wave over Atlantic, along with AEW activity.

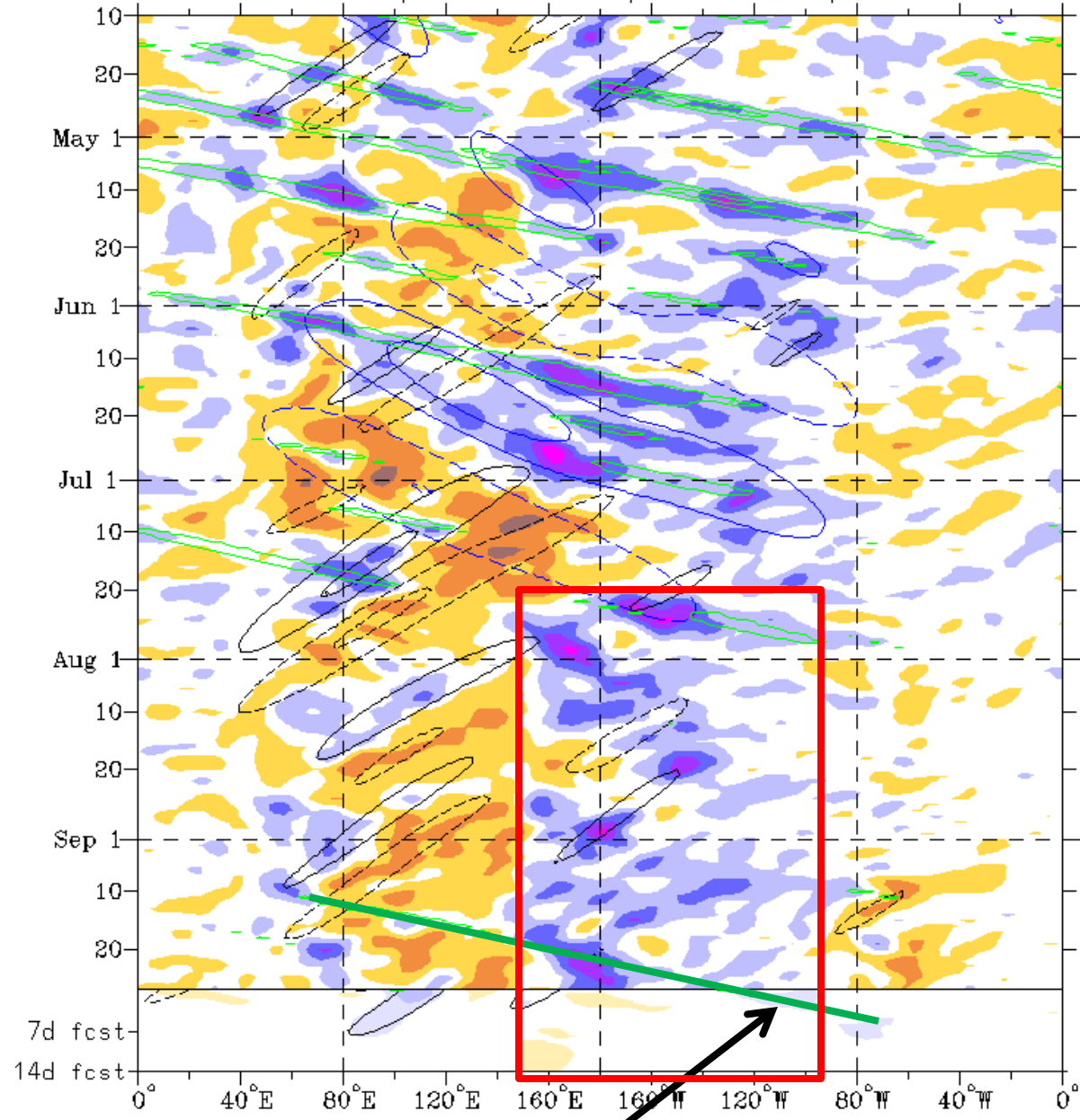


MJO Observation/Forecast



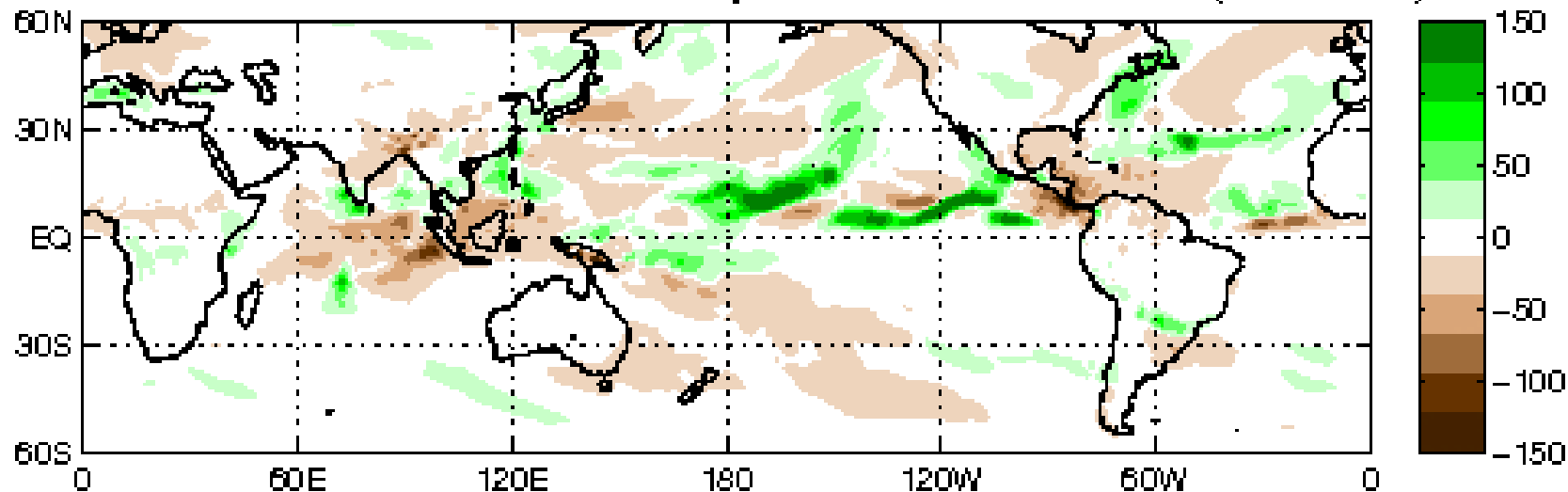
Wheeler-Hendon based analyses of model forecasts indicate little to no MJO related signal. Any amplitude here, outside the circle, is likely related to tropical cyclone activity.

Low frequency likely to dominate pattern more than MJO.

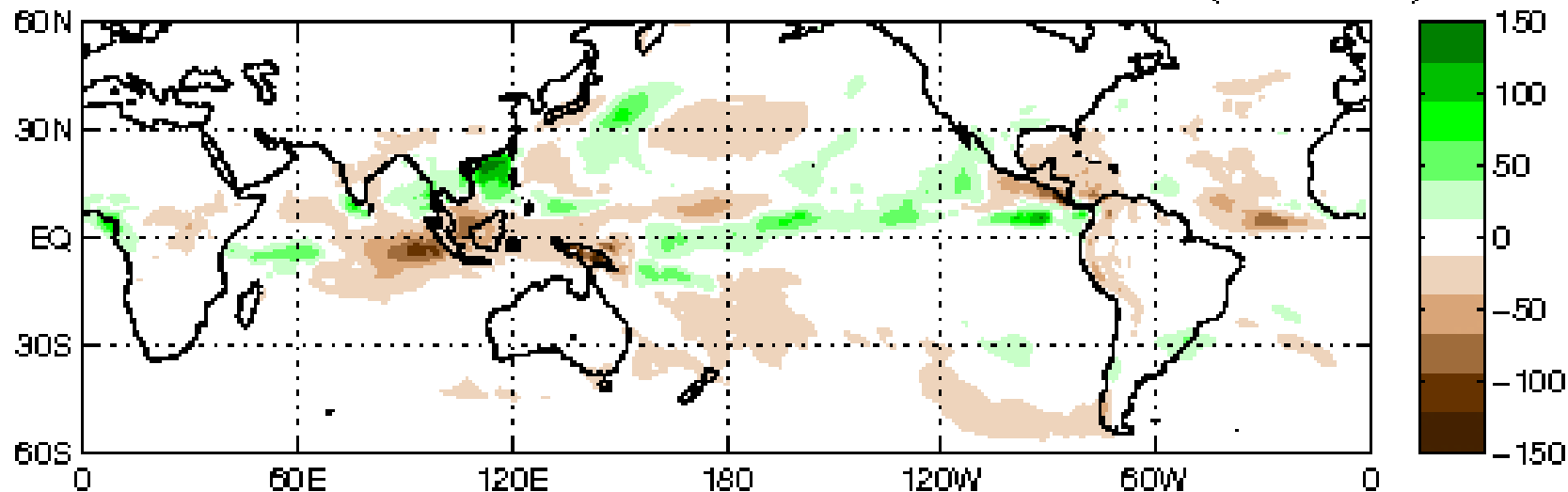


Kelvin Wave likely impacting East Pacific.

CFS: Anom. PREC Week: 1: 30-Sep-2015 to 06-Oct-2015 (mm/week)



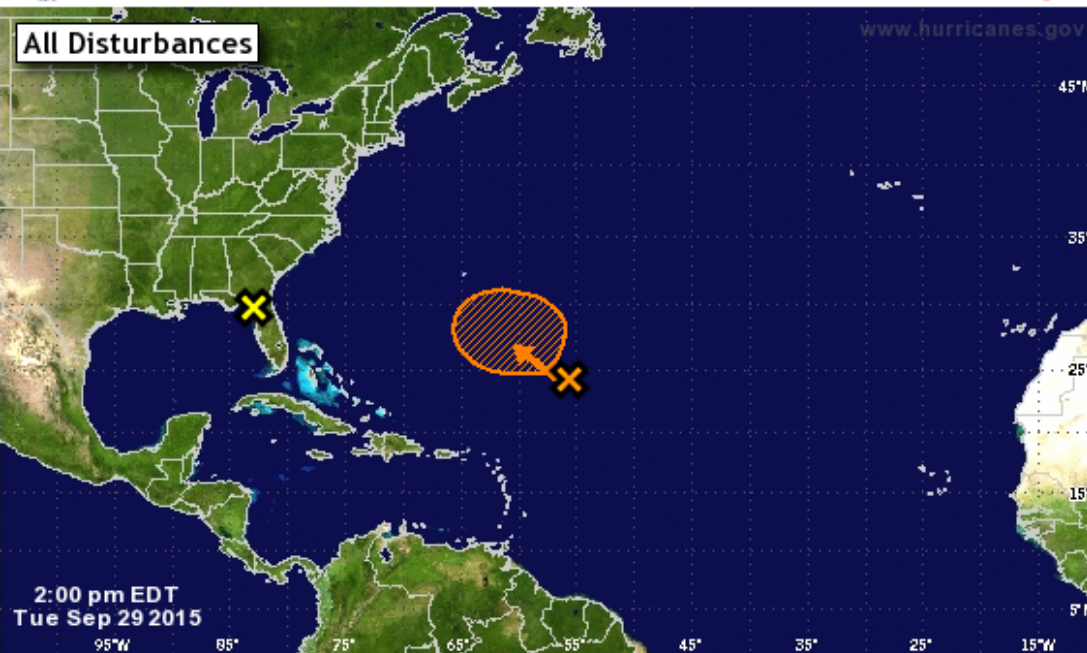
CFS: Anom. PREC Week: 2: 07-Oct-2015 to 13-Oct-2015 (mm/week)





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



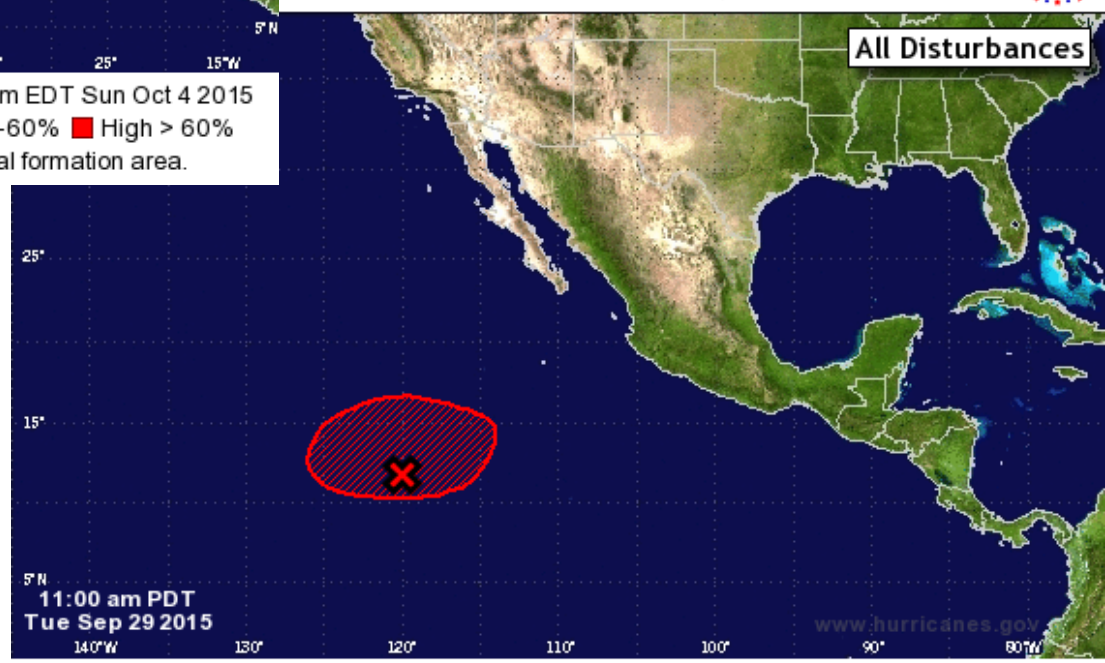
2:00 pm EDT
Tue Sep 29 2015

Tropical Cyclone Formation Potential for the 5-Day Period Ending 2:00 pm EDT Sun Oct 4 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.

Graphical Tropical Weather Outlooks

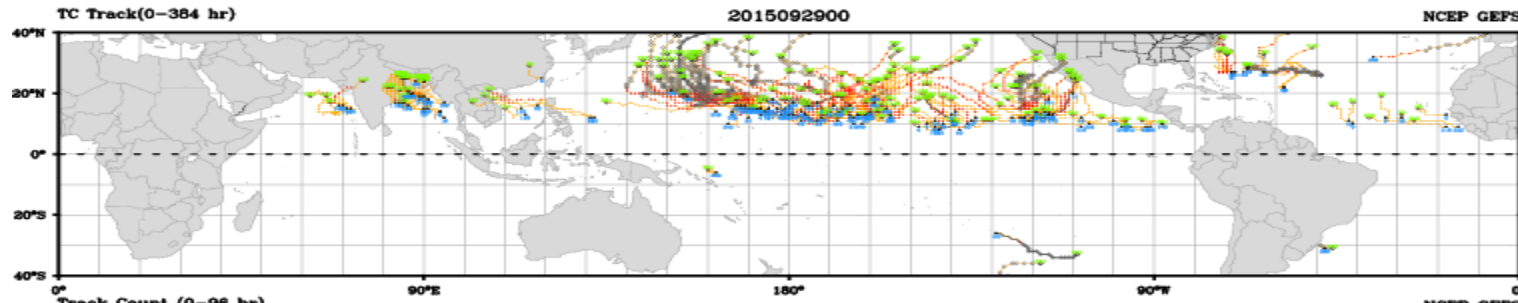
Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



11:00 am PDT
Tue Sep 29 2015

Tropical Cyclone Formation Potential for the 5-Day Period Ending 11:00 am PDT Sun Oct 4 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.



Days 1-4

Niala

Joaquin

Day 5-8

Day 9-12

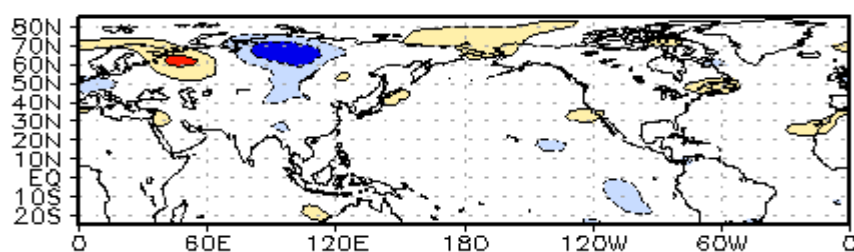
Day 13-15

Ptntl
Week-2

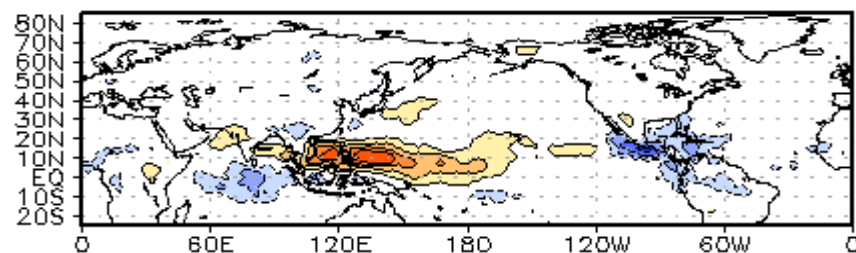
Connections to U.S. Impacts

Lagged composites from MJO 5-day intervals

WHMJO Phase 1 t850 Lagged Composite (jas)

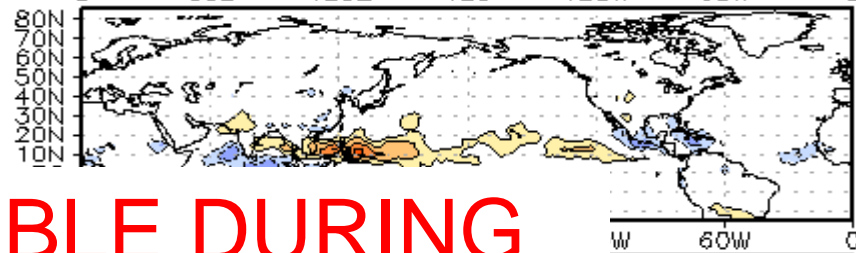
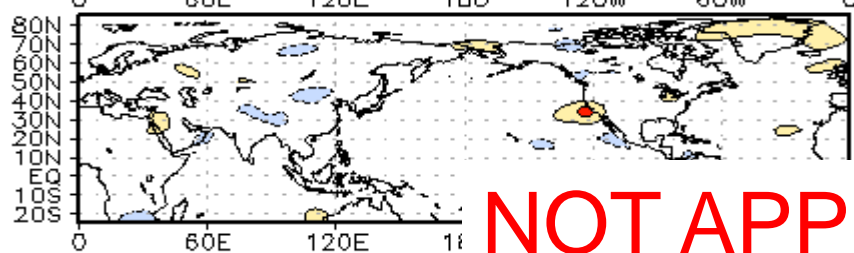


WHMJO Phase 1 air Lagged Composite (jas)

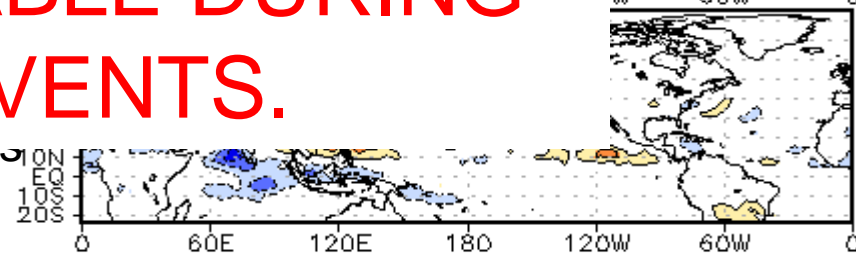
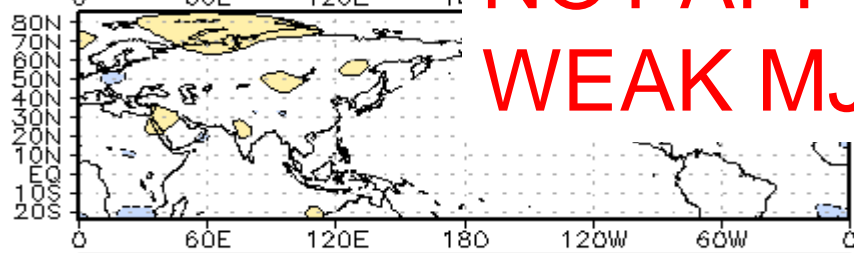


+5-day

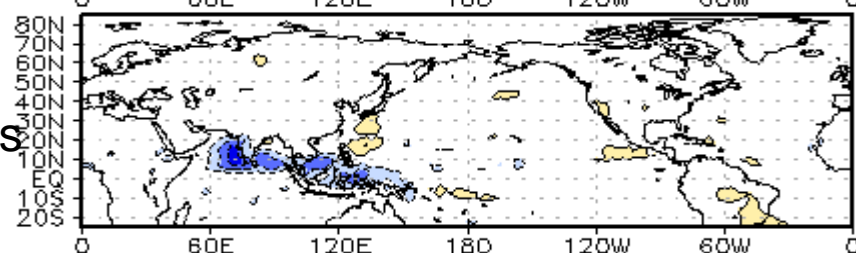
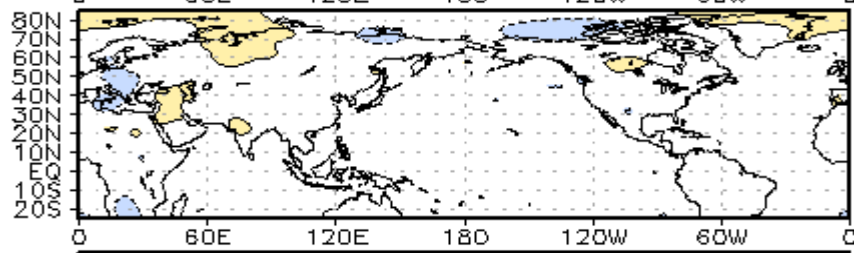
NOT APPLICABLE DURING WEAK MJO EVENTS.



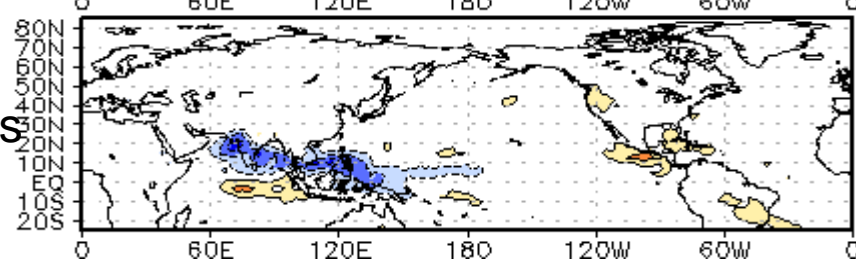
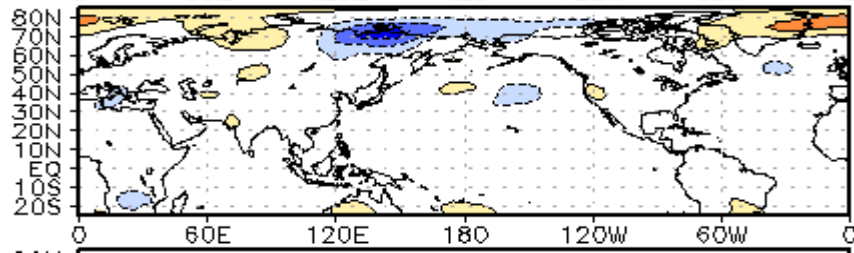
+10-days

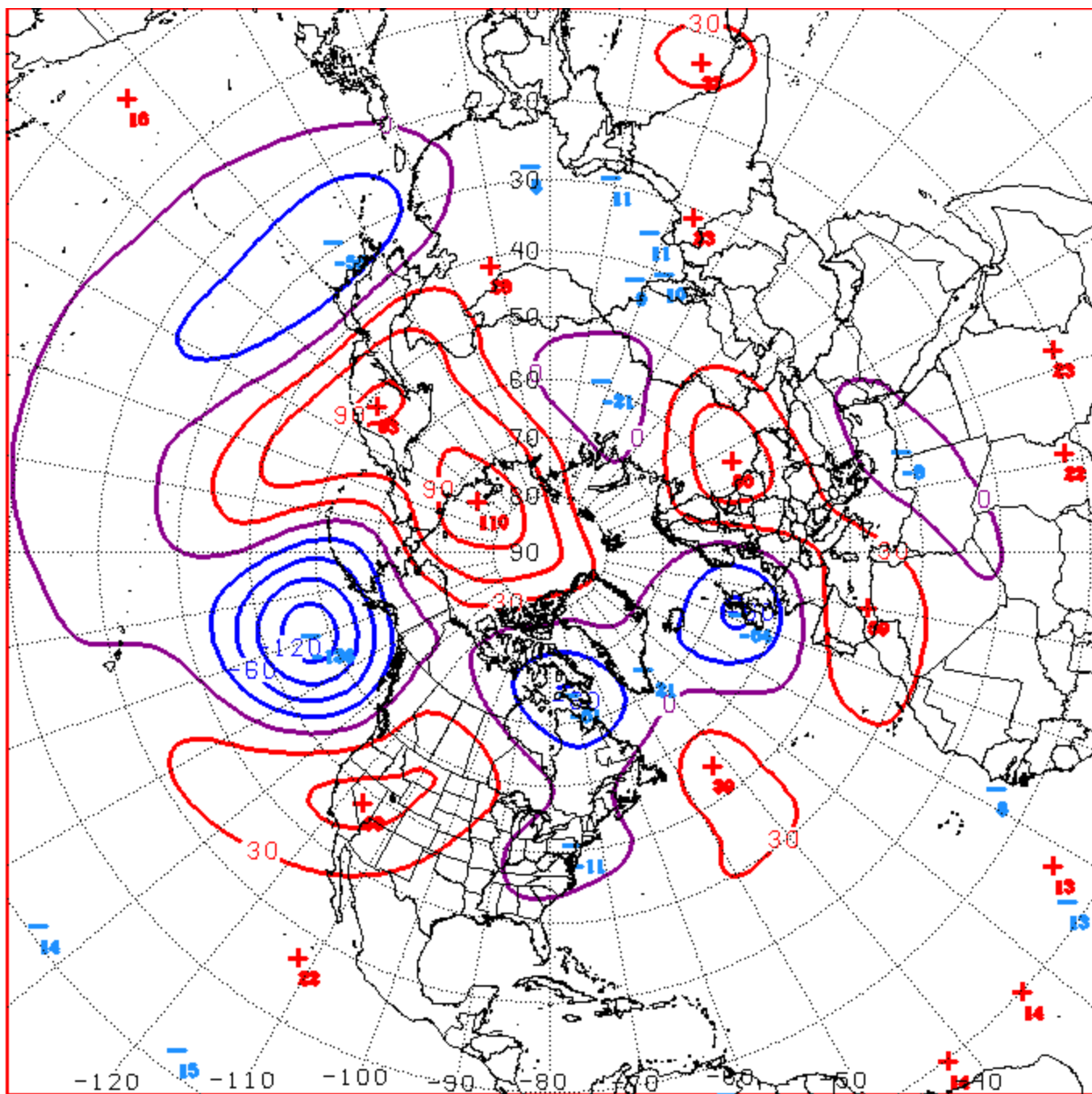


+15-days



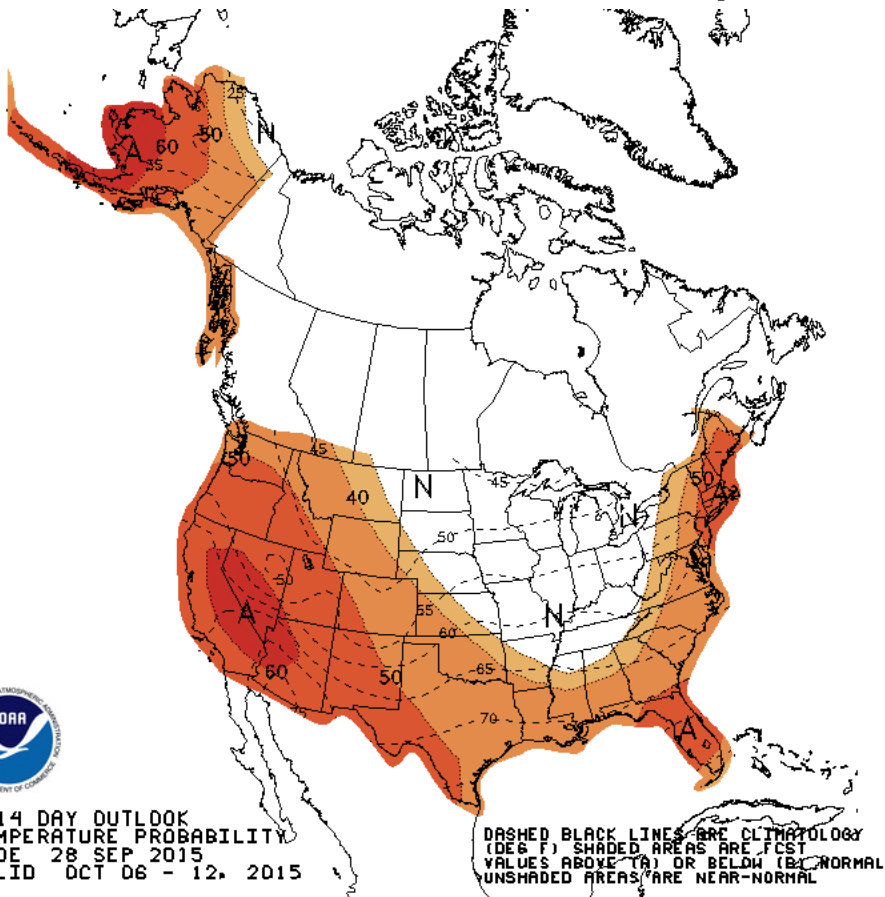
+20-days





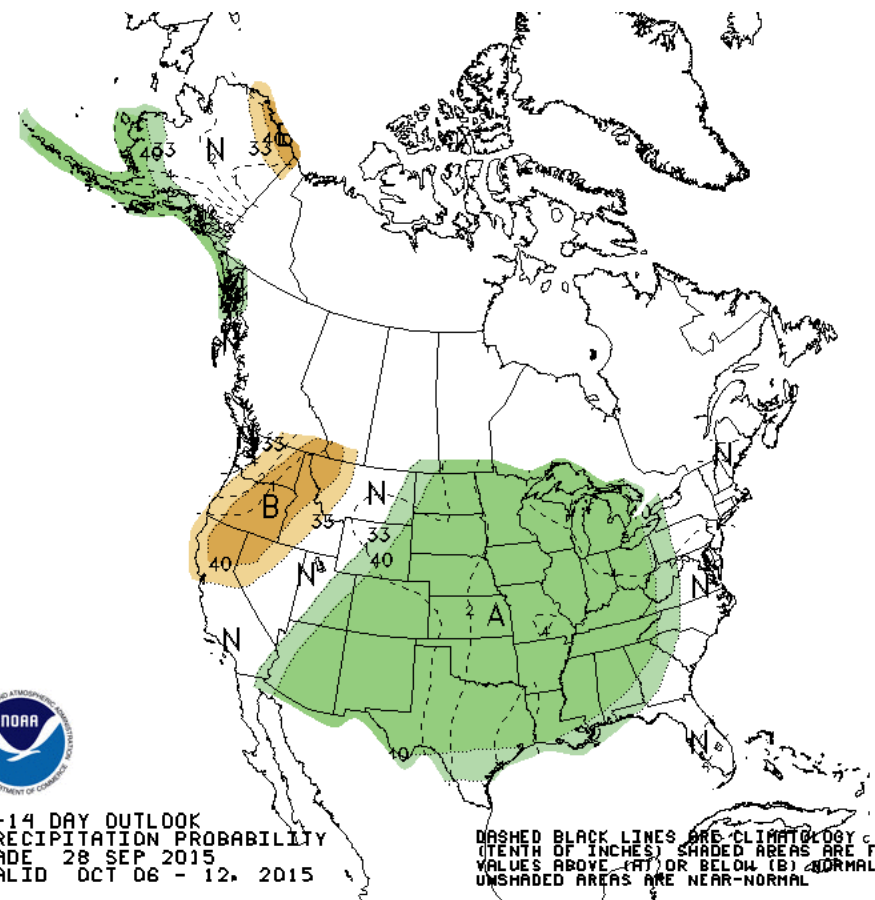
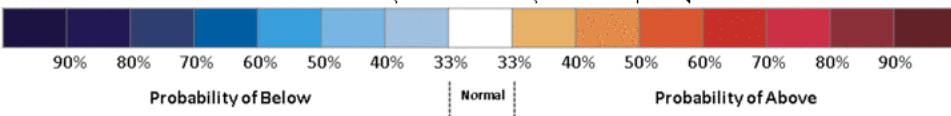
D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE SEP 29 2015 1320 UTC CNTD OCT 10 2015

Week 2 – Temperature and Precipitation



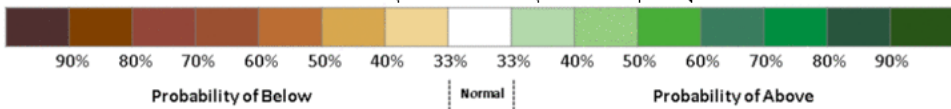
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 28 SEP 2015
VALID OCT 06 - 12, 2015

DASHED BLACK LINES ARE CLIMATE
(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 28 SEP 2015
VALID OCT 06 - 12, 2015

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

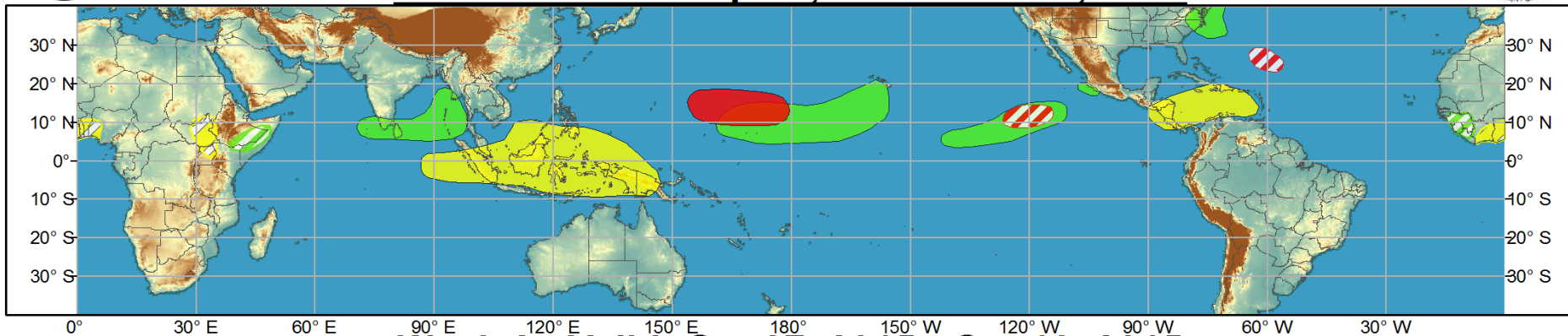




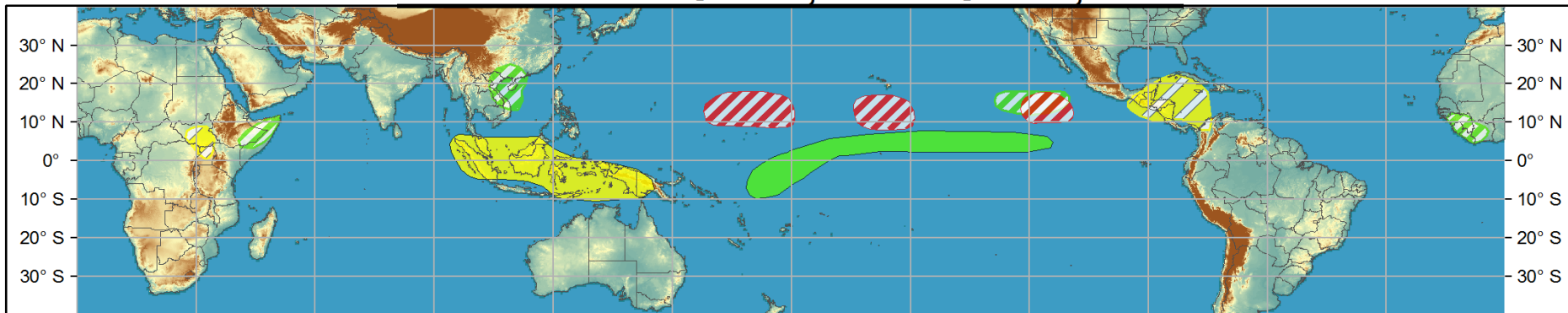
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Tropical Cyclone Formation



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.

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