

Global Tropics Hazards And Benefits Outlook

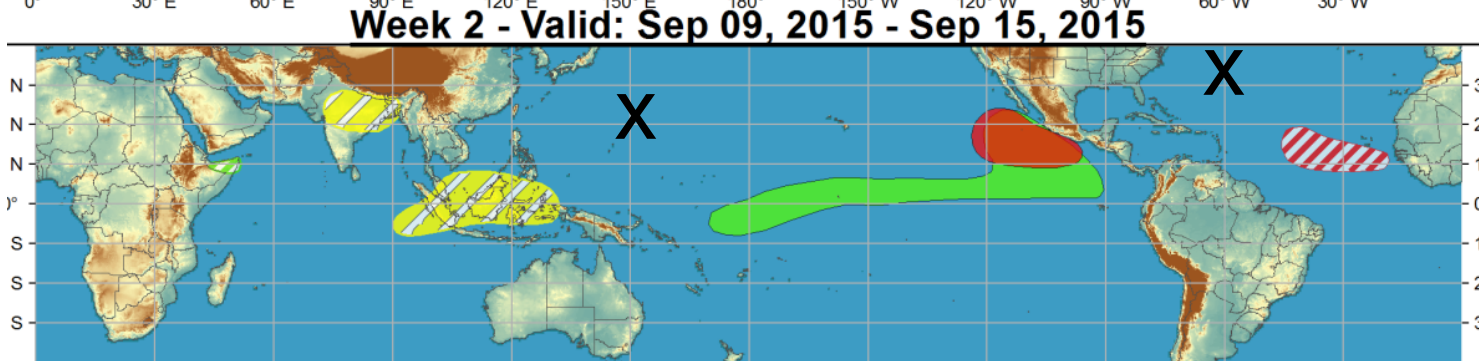
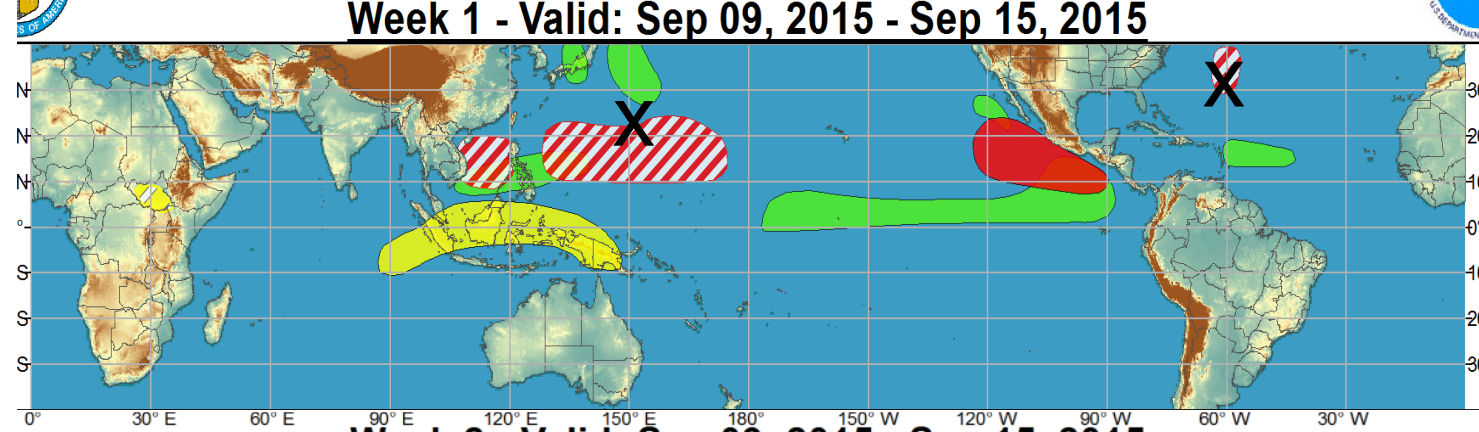
September 15, 2015

Matthew Rosencrans

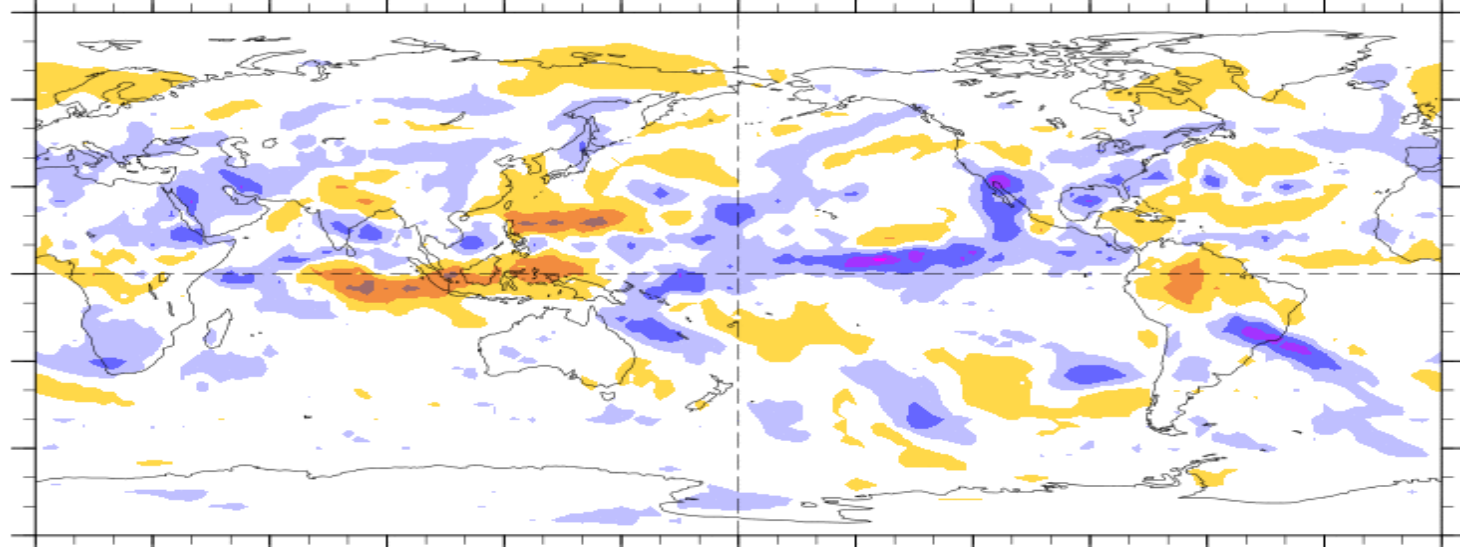
Outline

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

Outlook Review



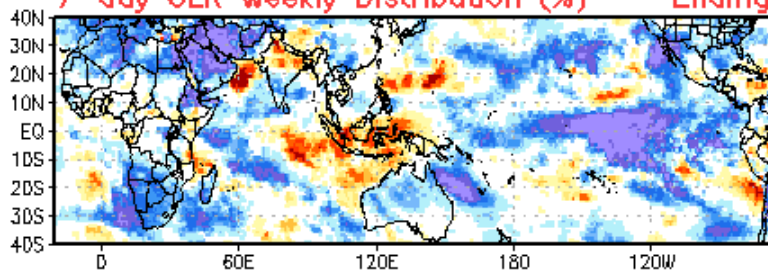
7-Day Average OLR Anomaly 2015/09/07 - 2015/09/13



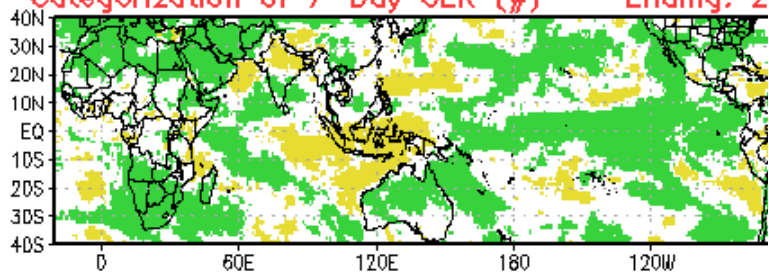
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

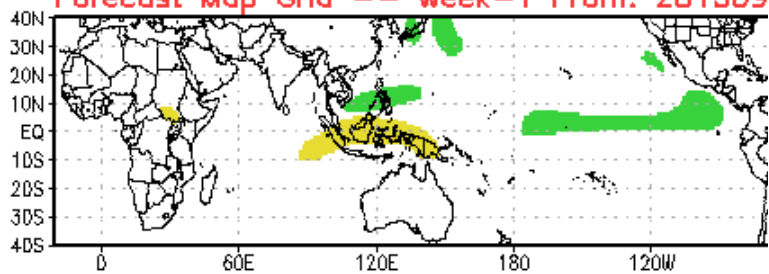
7-day OLR Weekly Distribution (%) -- Ending



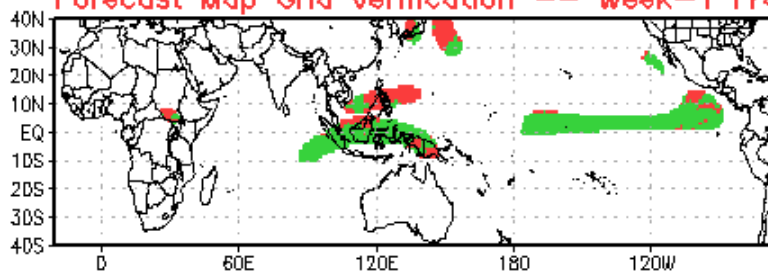
Categorization of 7-Day OLR (#) -- Ending: 20150909



Forecast Map Grid -- Week-1 From: 20150909

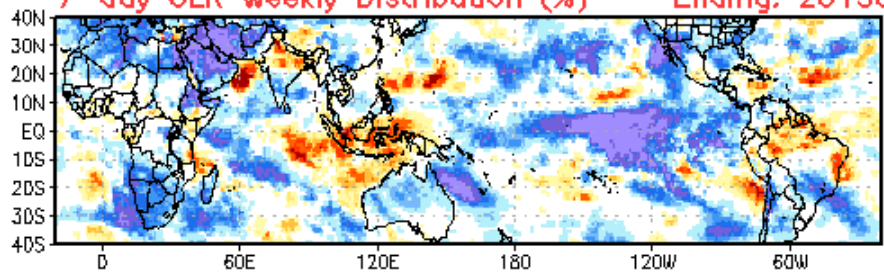


Forecast Map Grid Verification -- Week-1 From: 20150909

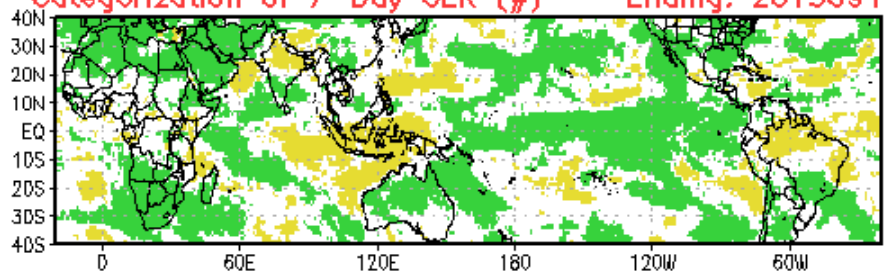


Hit: Green, Miss: Red
Heidke Skill Score: 54.1181

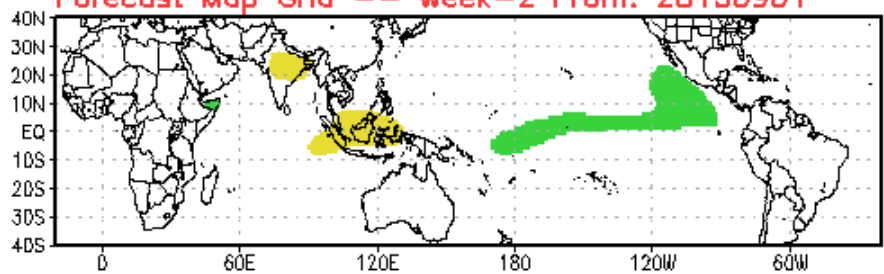
7-day OLR Weekly Distribution (%) -- Ending: 20150915



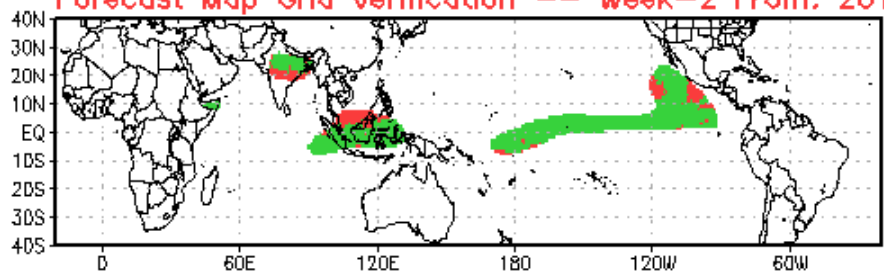
Categorization of 7-Day OLR (#) -- Ending: 20150915



Forecast Map Grid -- Week-2 From: 20150901



Forecast Map Grid Verification -- Week-2 From: 20150901



Hit: Green, Miss: Red
Heidke Skill Score: 73.1303

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. Some models depict an amplification during Week-2, anywhere from the Western Pacific to the Central Pacific. Most impact to tropical convection will likely come from El Niño and tropical cyclones.

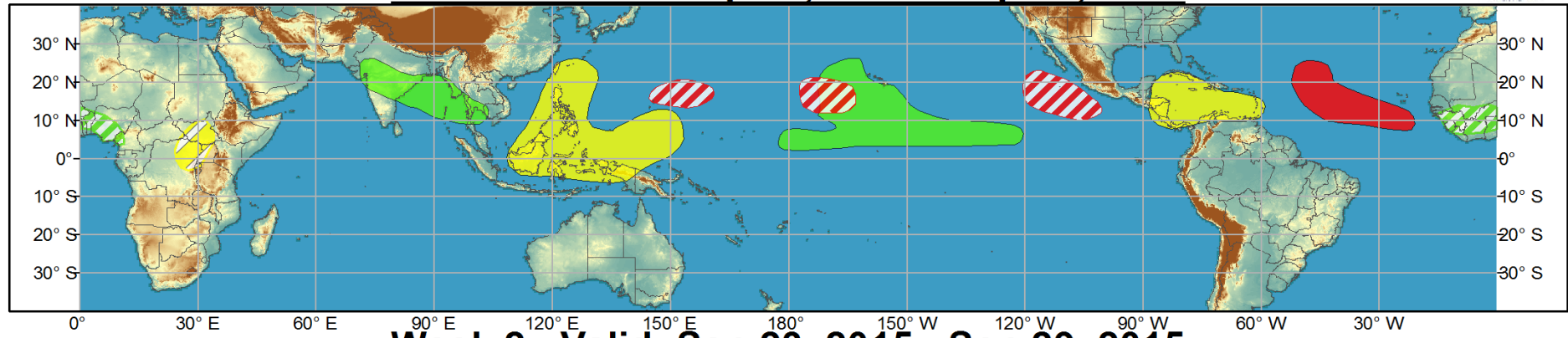
Extratropics:

- 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.

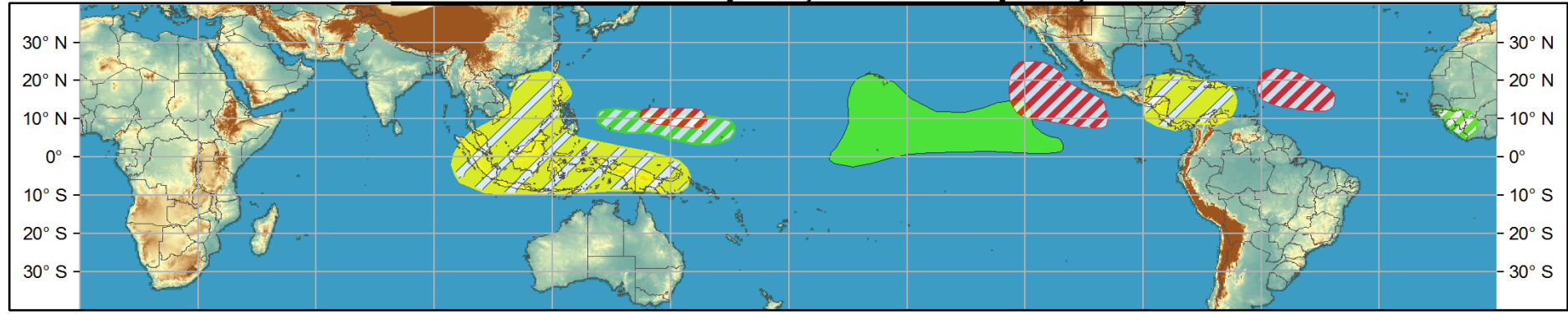


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Sep 16, 2015 - Sep 22, 2015



Week 2 - Valid: Sep 23, 2015 - Sep 29, 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.
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Produced: 09/15/2015

Forecaster: Rosencrans

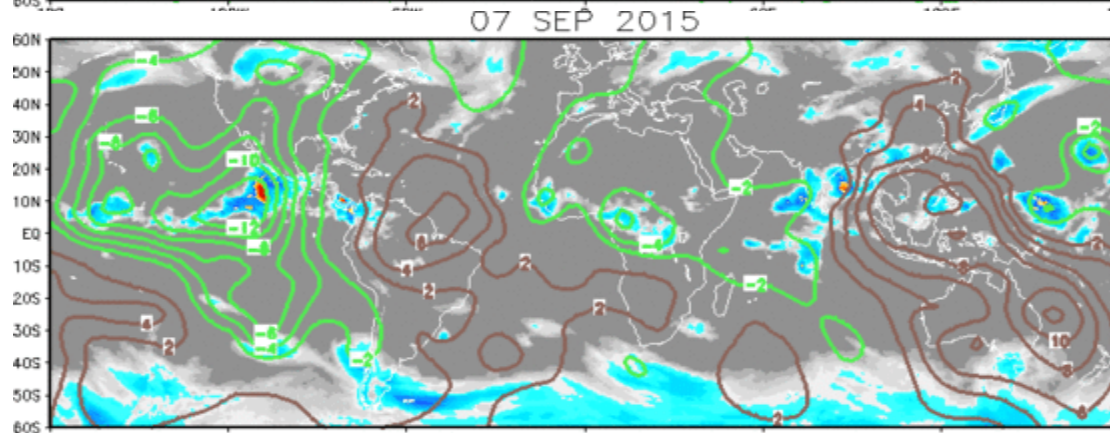
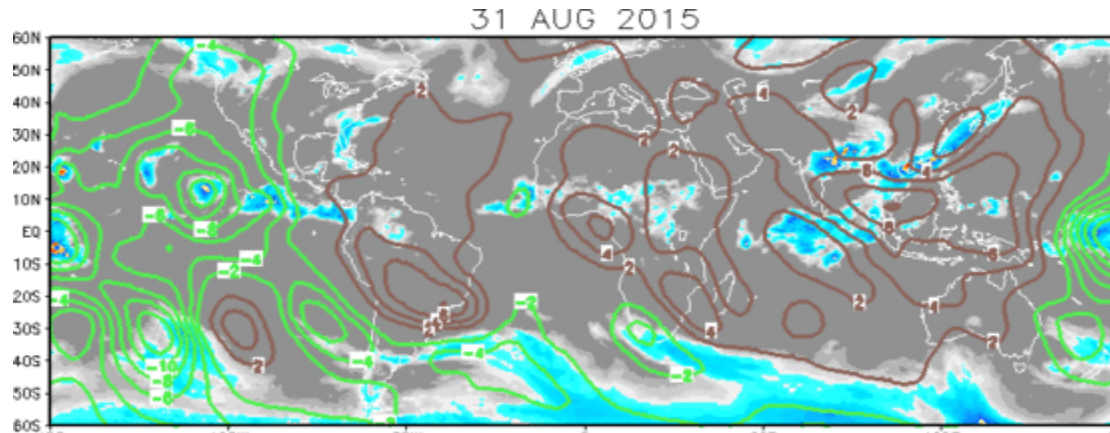
Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



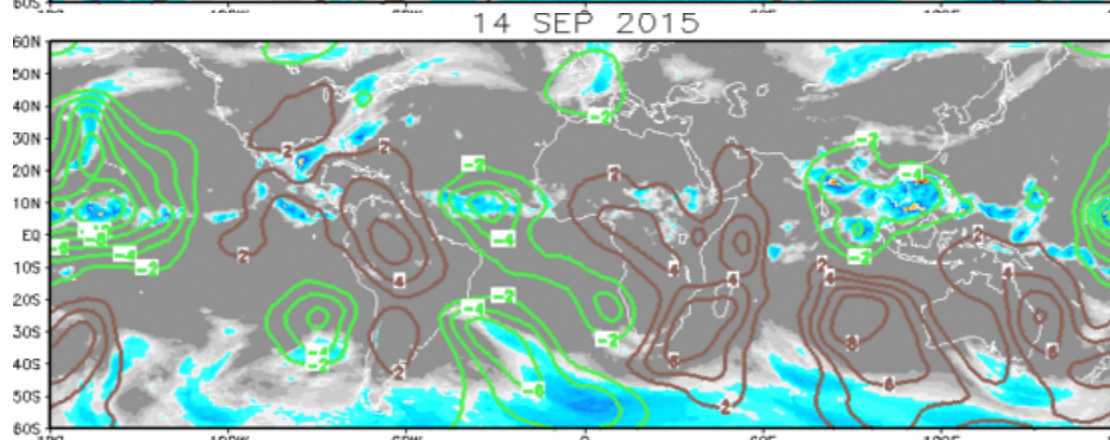
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

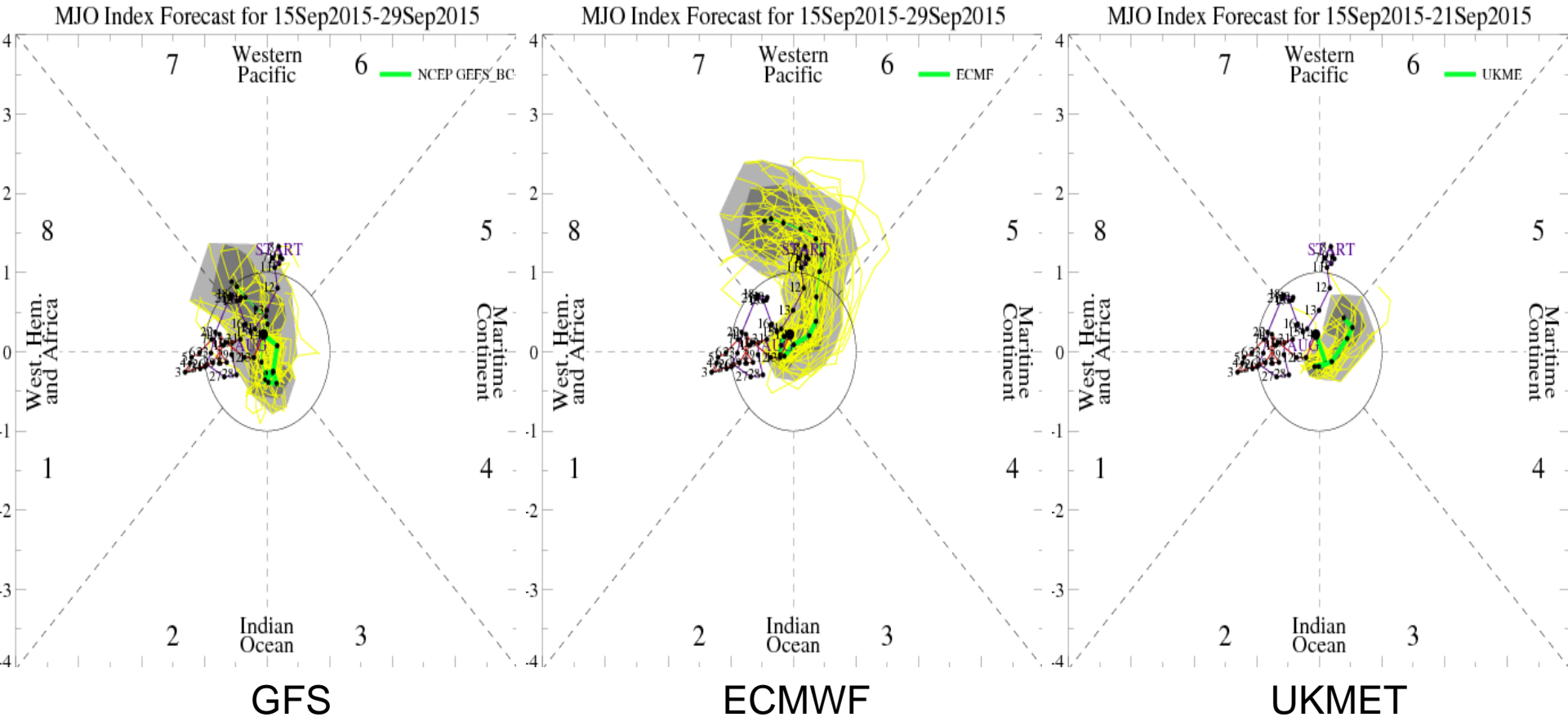
Base state and transient features evident.



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

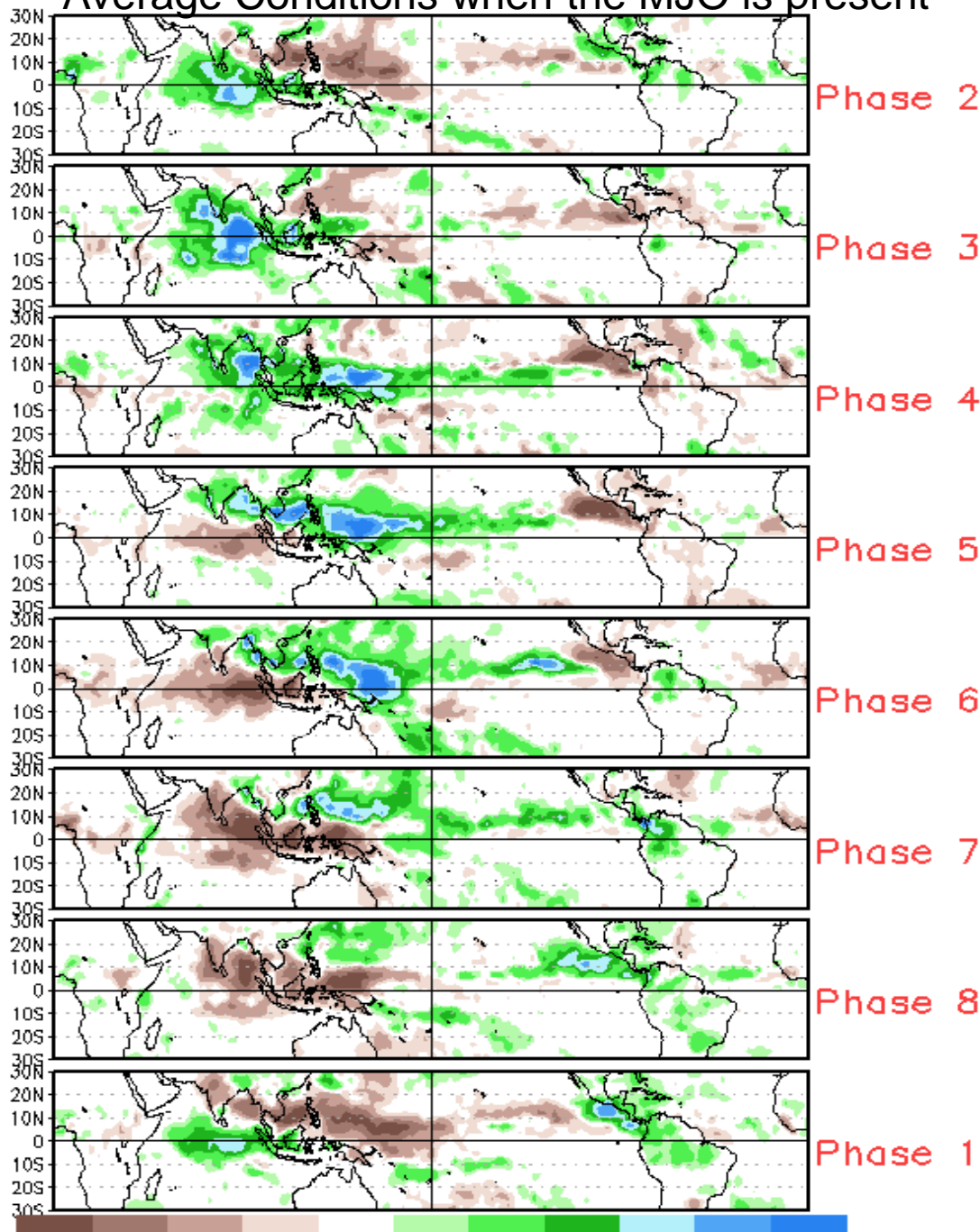


MJO Observation/Forecast

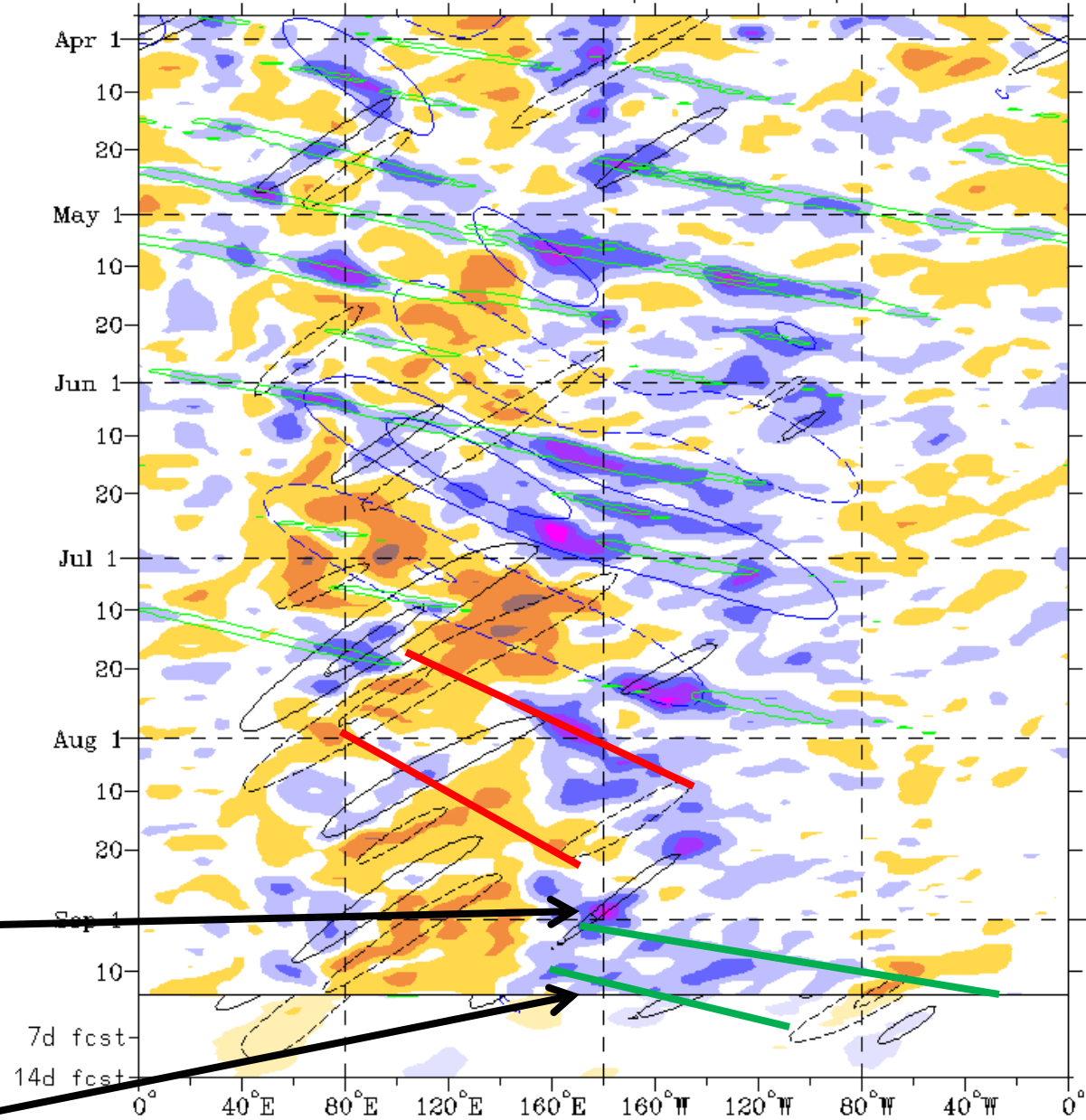


Wheeler-Hendon based analyses of model forecasts indicate little to no MJO related signal. Any amplitude here, outside the circle, is likely related to tropical cyclone activity.

Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



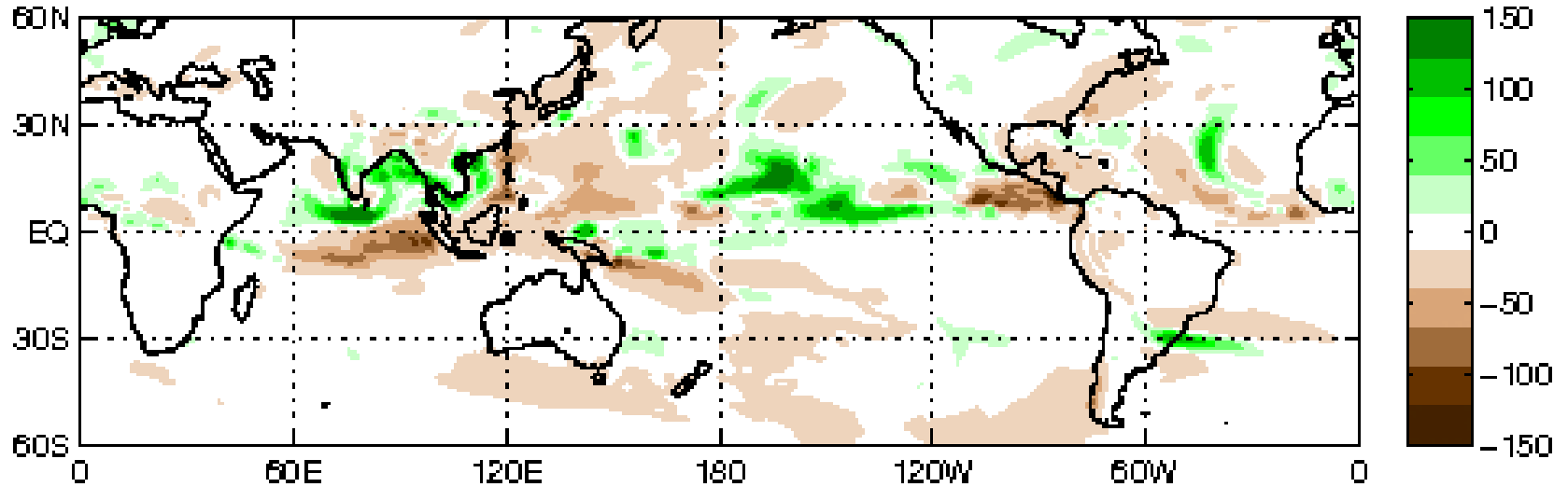
Low frequency likely to dominate pattern more than MJO.

Rossby wave over the Pacific

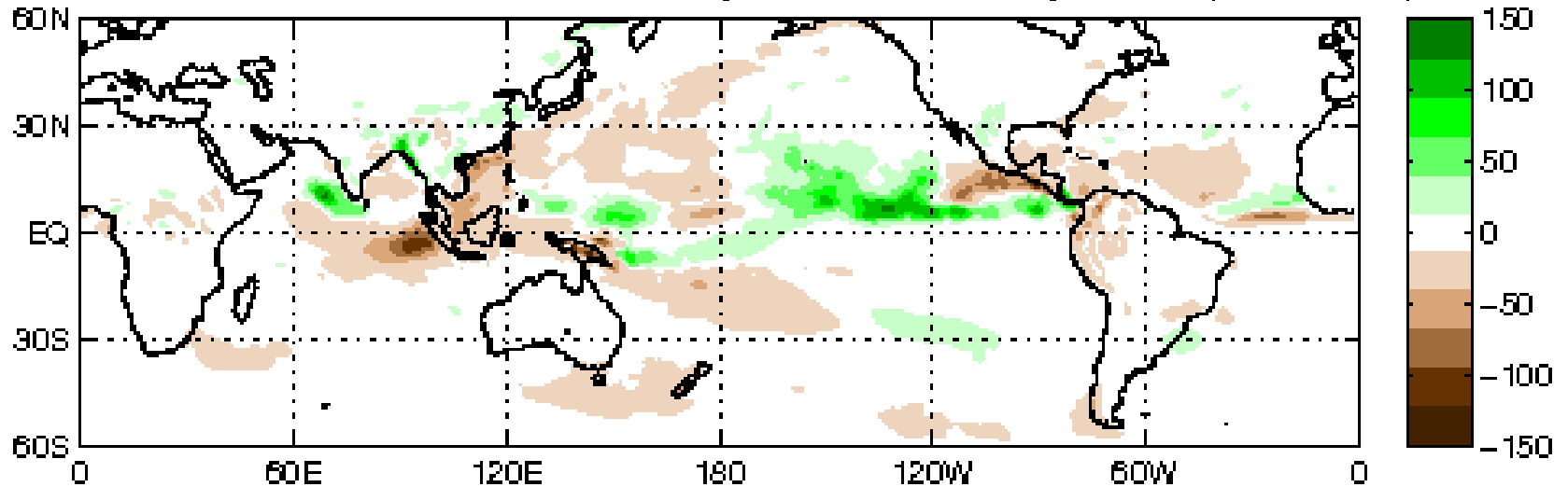
Tropical cyclone activity

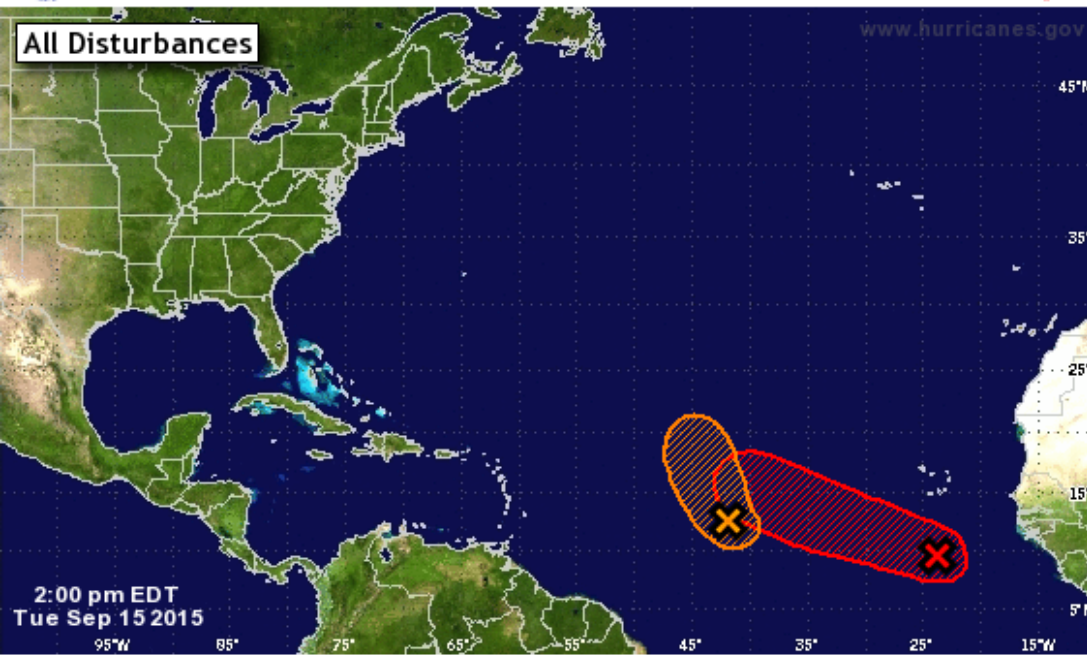
Kelvin Wave likely impacting Atlantic.

CFS: Anom. PREC Week: 1: 16-Sep-2015 to 22-Sep-2015 (mm/week)



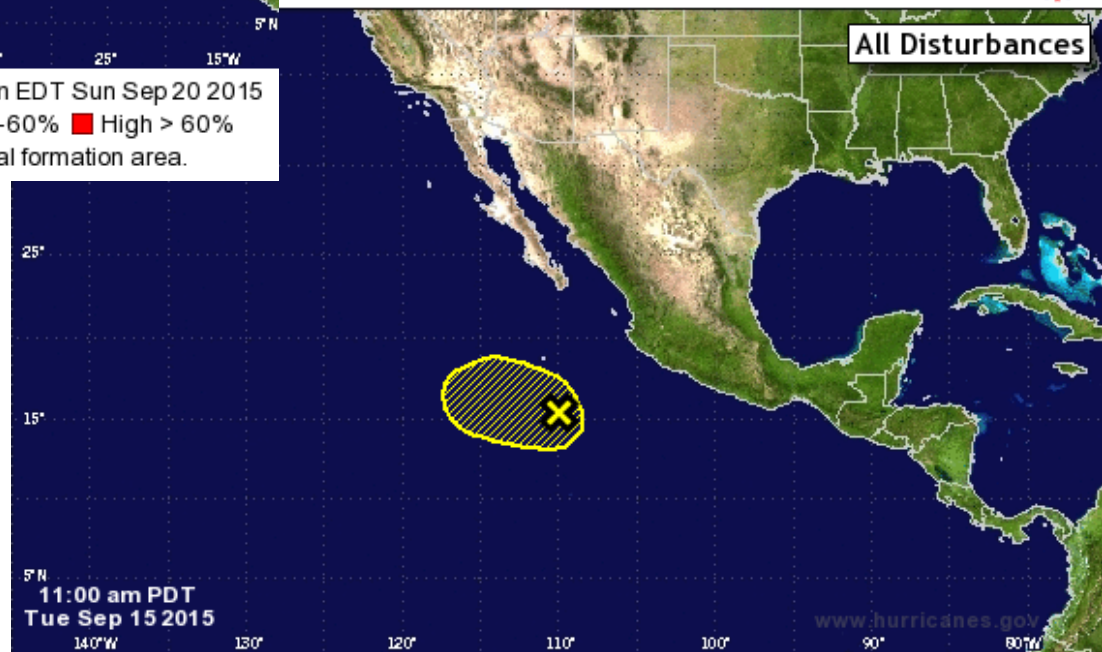
CFS: Anom. PREC Week: 2: 23-Sep-2015 to 29-Sep-2015 (mm/week)



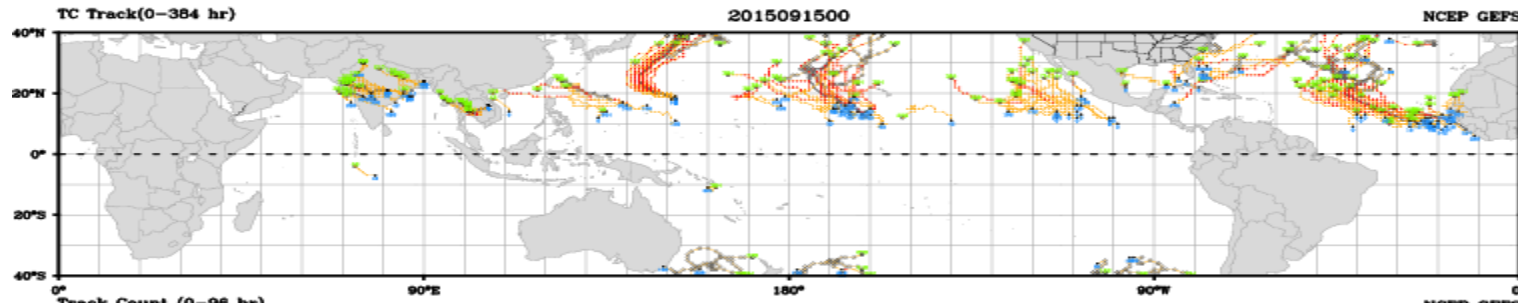


Tropical Cyclone Formation Potential for the 5-Day Period Ending 2:00 pm EDT Sun Sep 20 2015
Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
X indicates current disturbance location; shading indicates potential formation area.

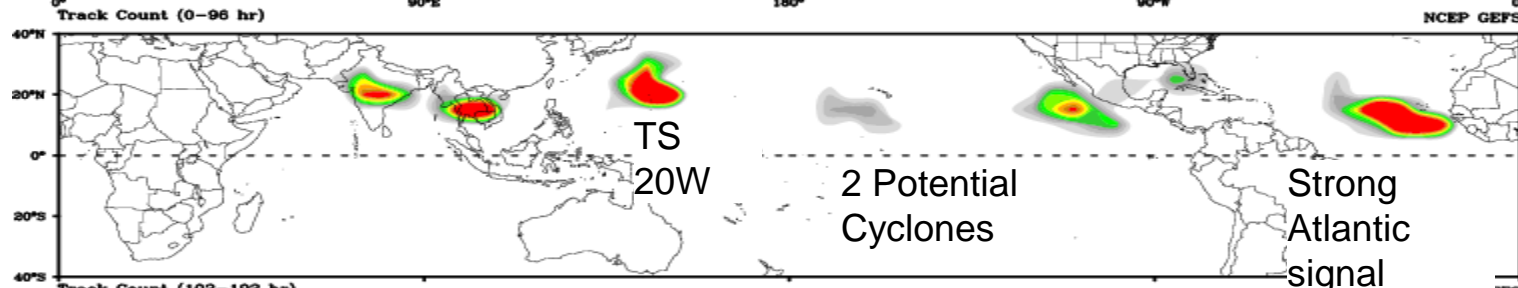
Five-Day Graphical Tropical Weather Outlook
National Hurricane Center Miami, Florida



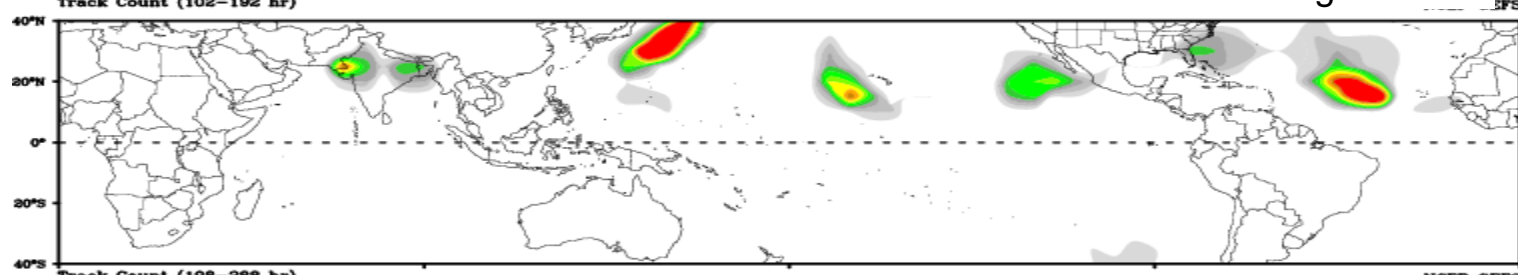
Tropical Cyclone Formation Potential for the 5-Day Period Ending 11:00 am PDT Sun Sep 20 2015
Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
X indicates current disturbance location; shading indicates potential formation area.



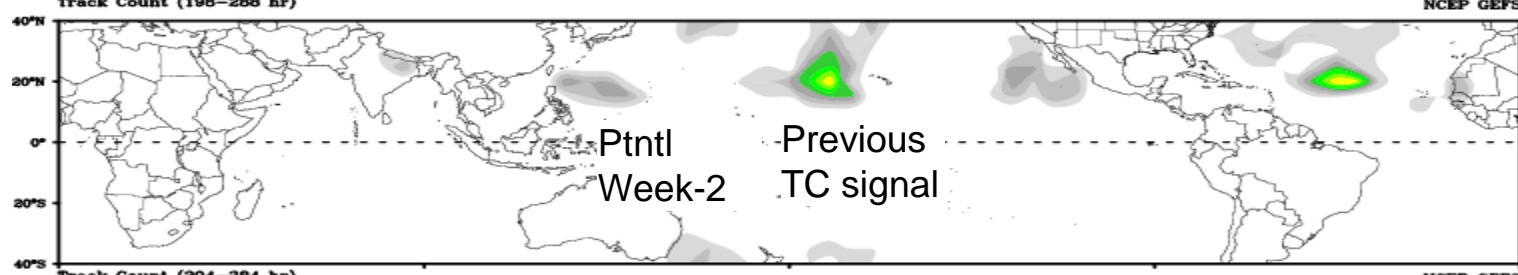
Days 1-4



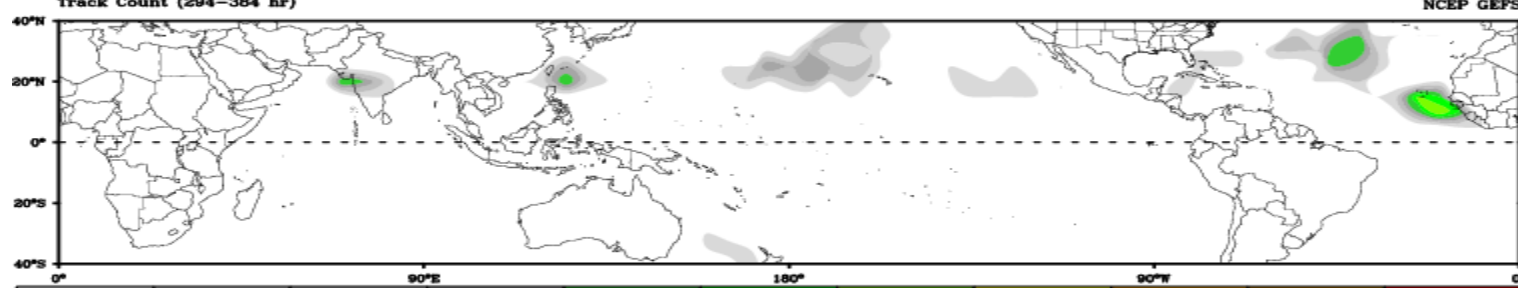
Day 5-8



Day 9-12



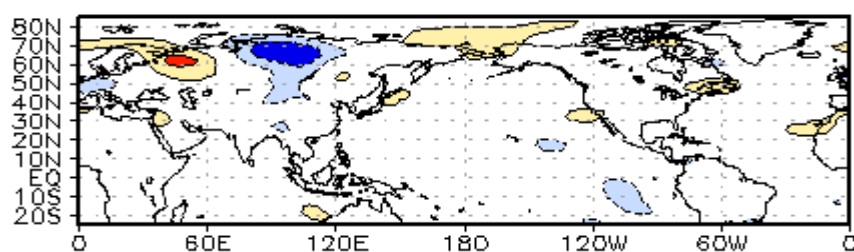
Day 13-15



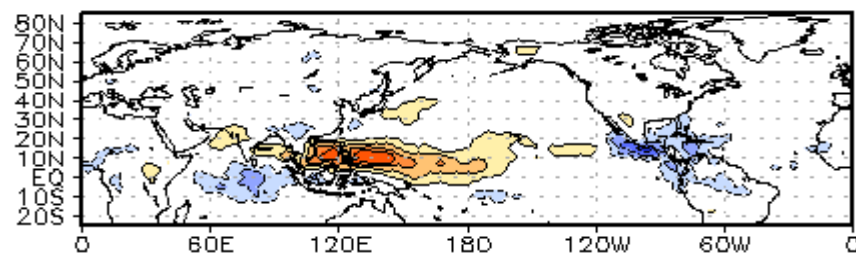
Connections to U.S. Impacts

Lagged composites from MJO 5-day intervals

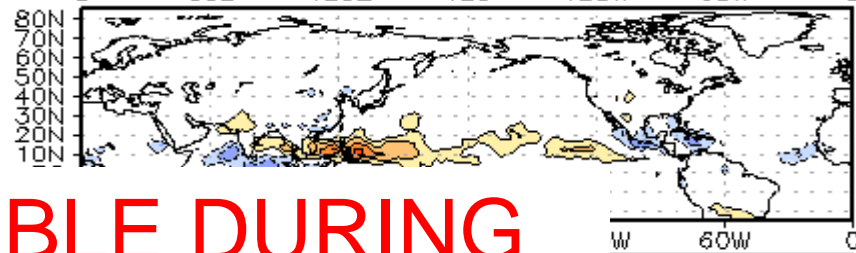
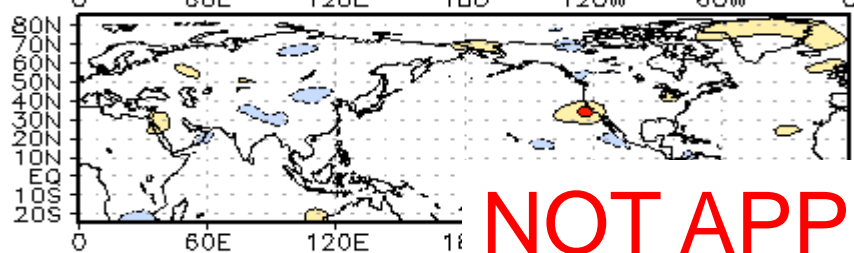
WHMJO Phase 1 t850 Lagged Composite (jas)



WHMJO Phase 1 air Lagged Composite (jas)

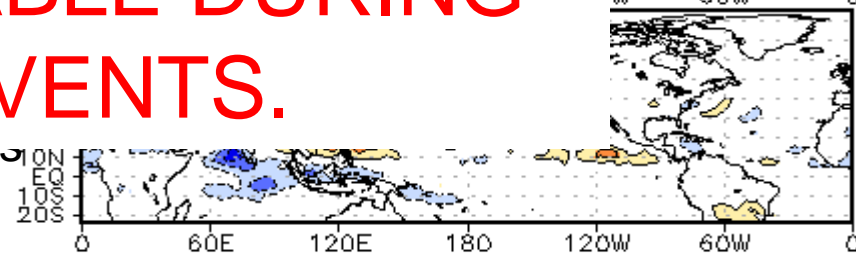
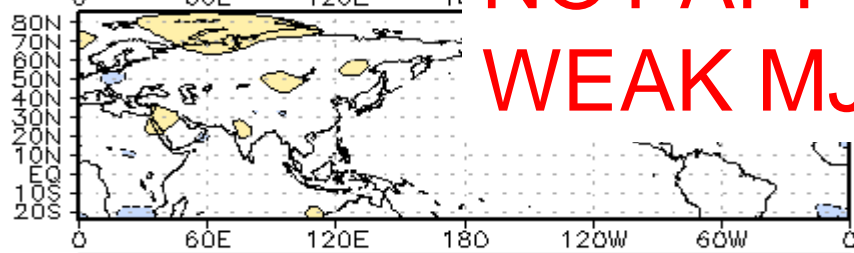


+5-day

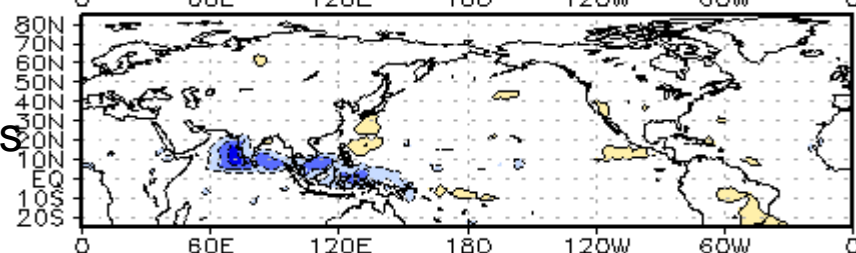
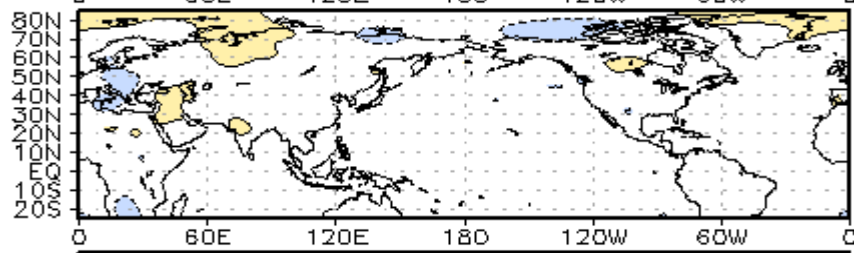


**NOT APPLICABLE DURING
WEAK MJO EVENTS.**

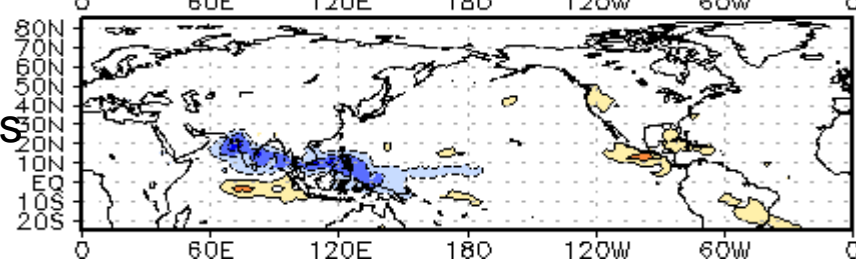
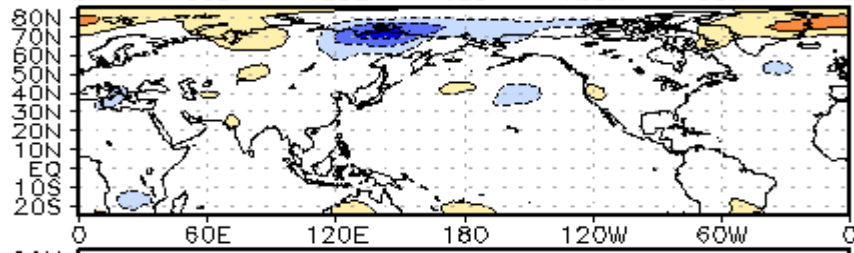
+10-days

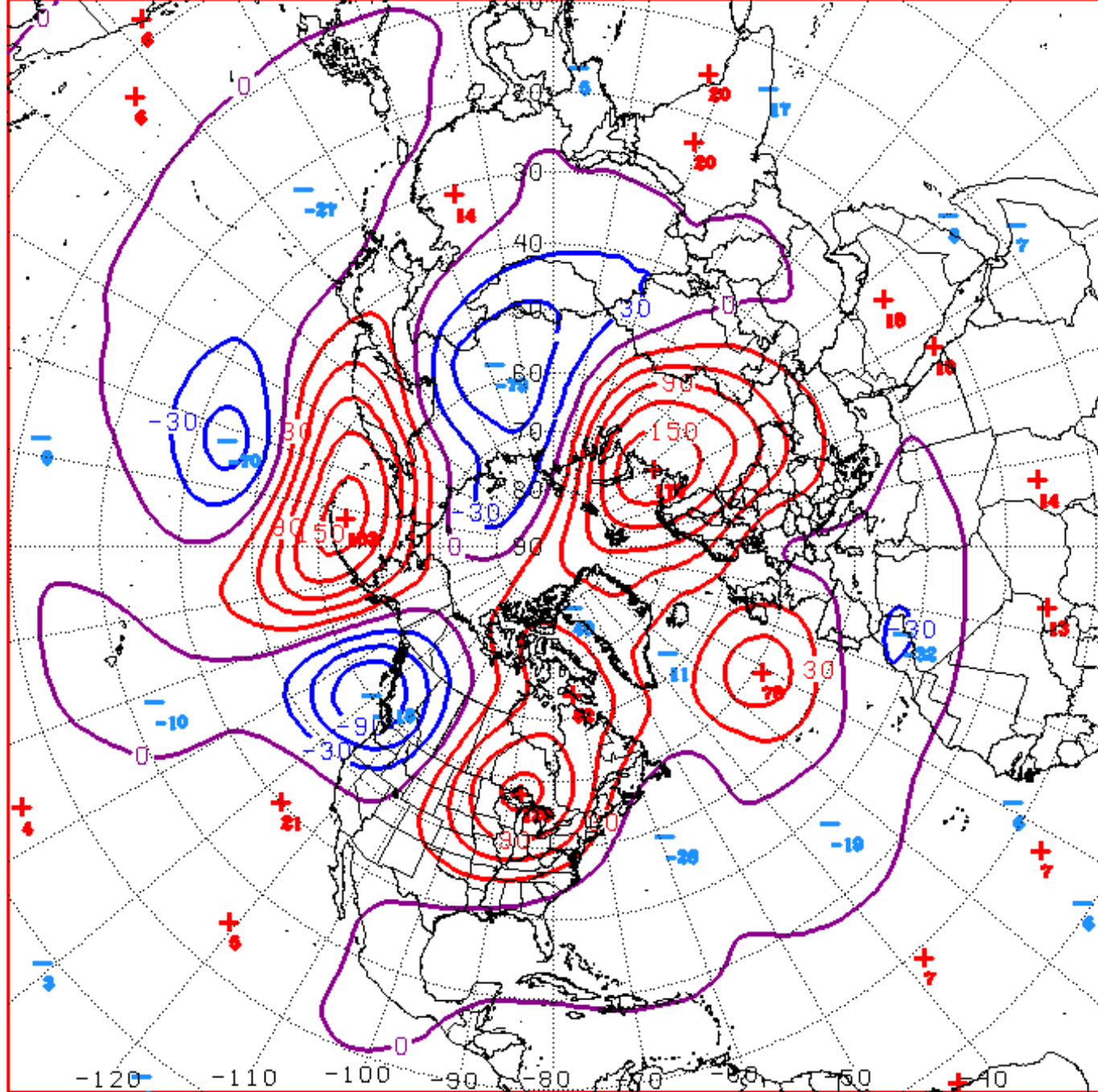


+15-days



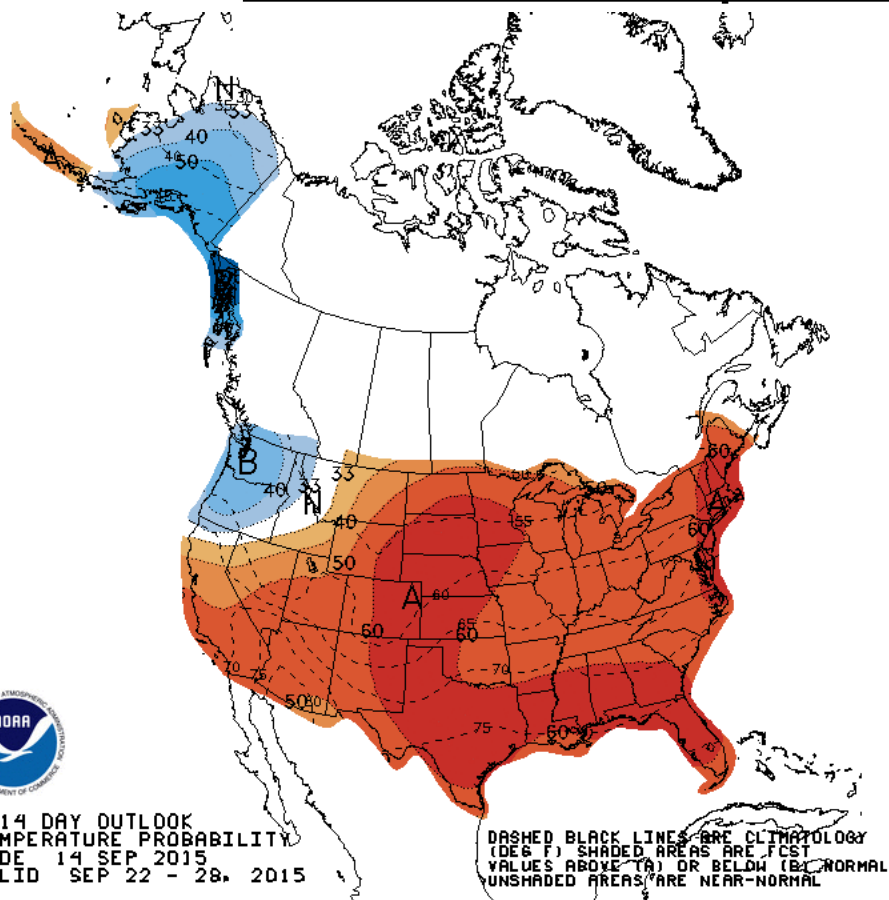
+20-days





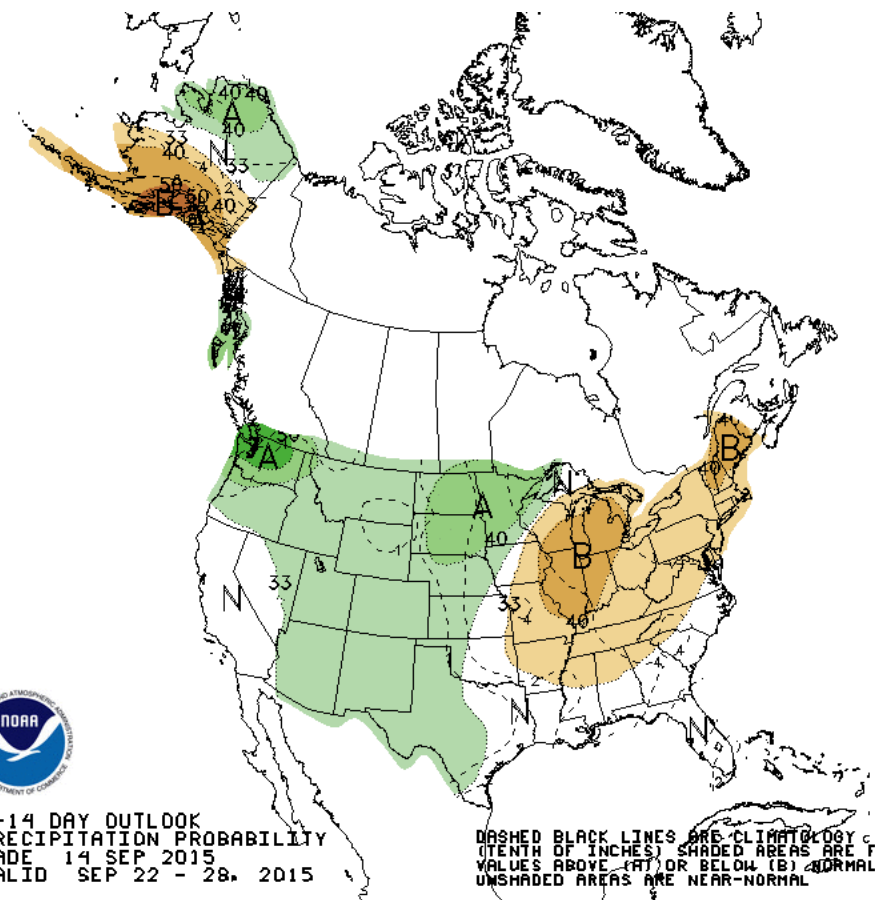
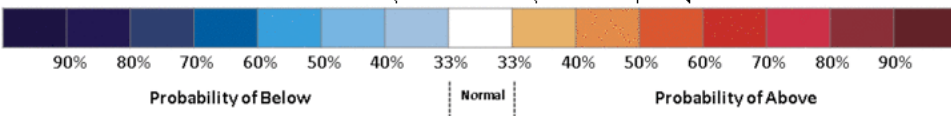
D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE SEP 15 2015 0957 UTC CNTD SEP 26 2015

Week 2 – Temperature and Precipitation



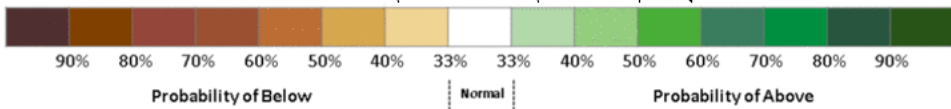
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 14 SEP 2015
VALID SEP 22 - 28, 2015

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 14 SEP 2015
VALID SEP 22 - 28, 2015

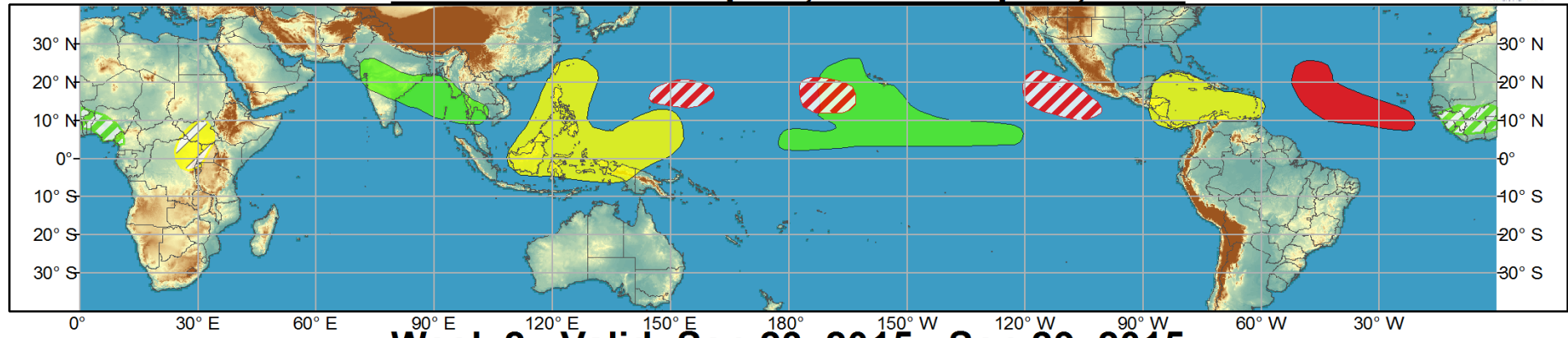
DASHED BLACK LINES ARE CLIMATE
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL



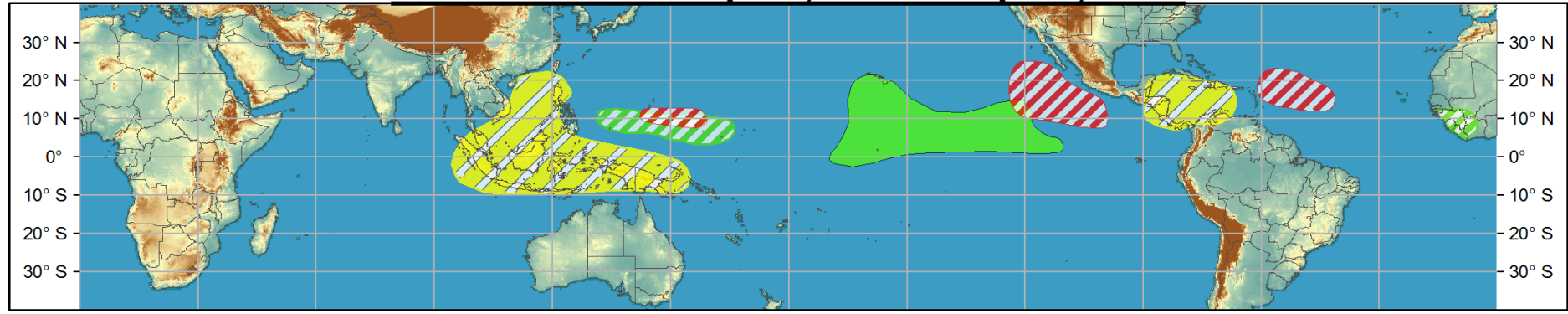


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