

Global Tropics Hazards And Benefits Outlook

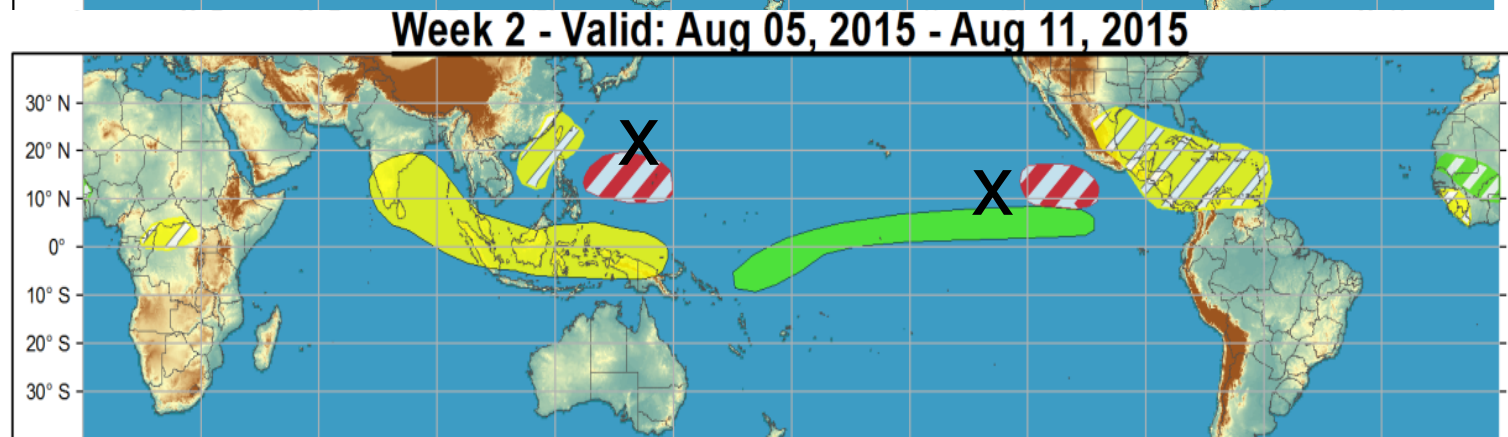
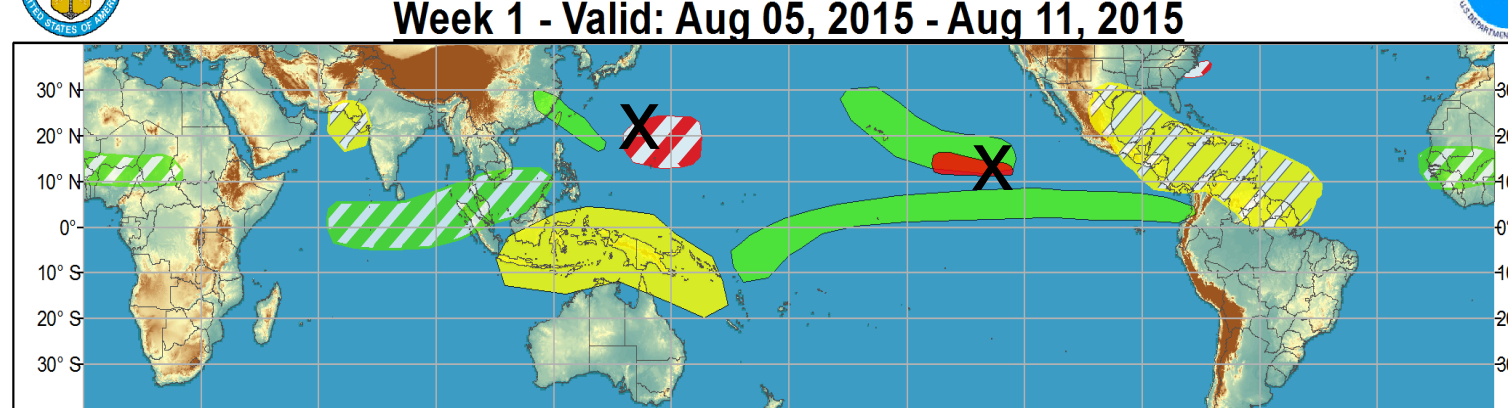
August 11, 2015

Matthew Rosencrans

Outline

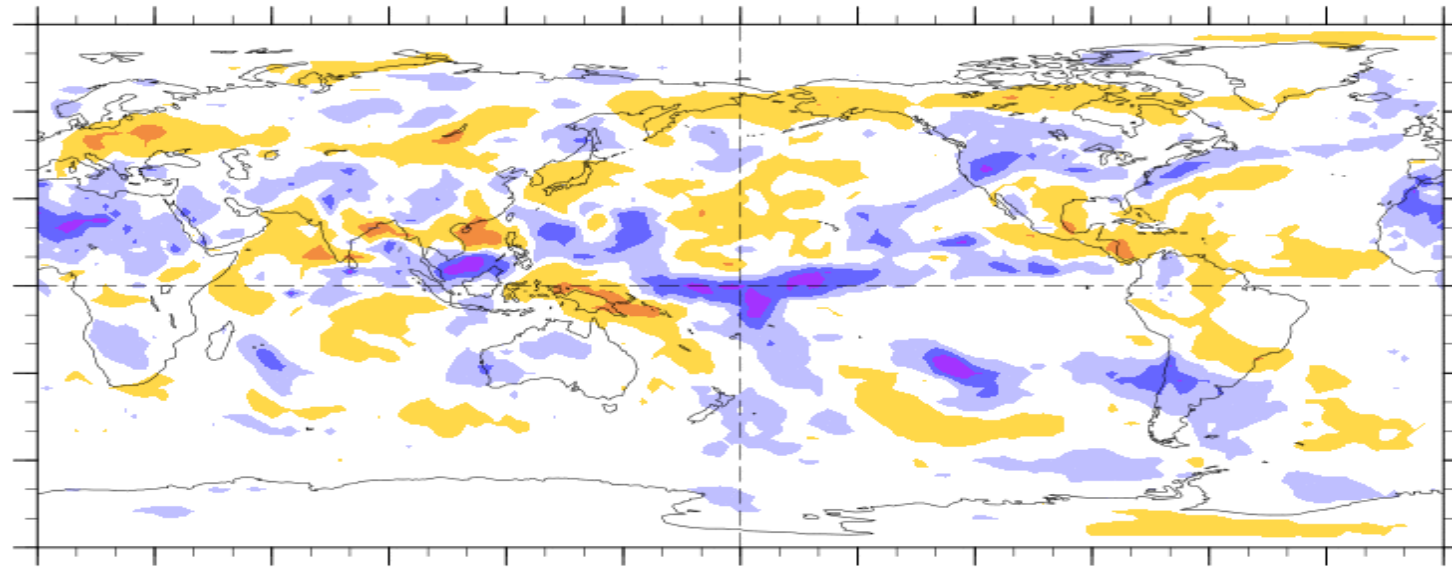
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review



7-Day Average OLR Anomaly

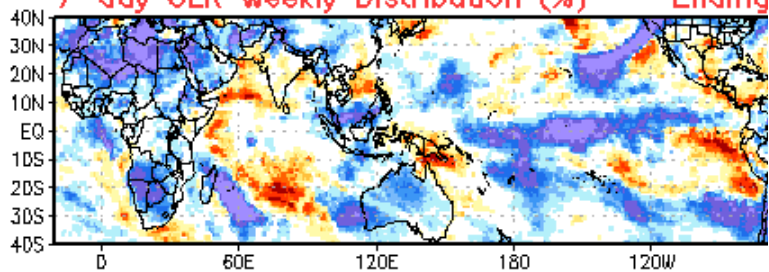
2015/08/03 - 2015/08/09



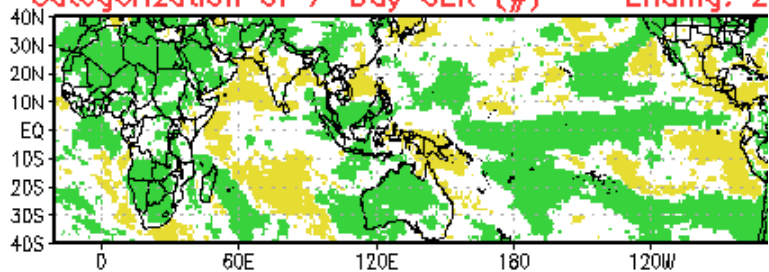
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

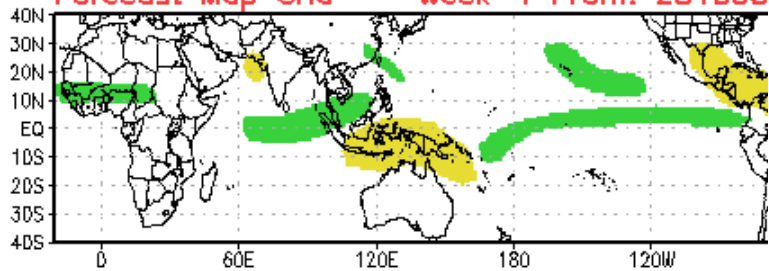
7-day OLR Weekly Distribution (%) -- Ending: 20150811



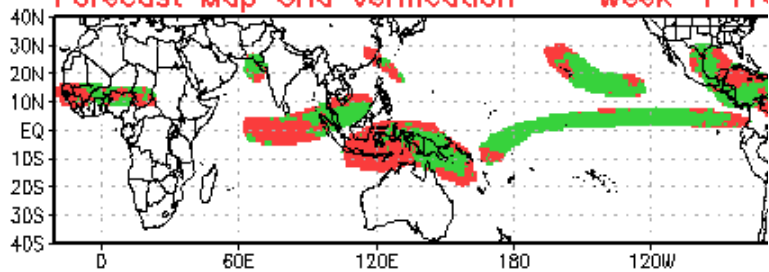
Categorization of 7-Day OLR (#) -- Ending: 20150811



Forecast Map Grid -- Week-1 From: 20150808

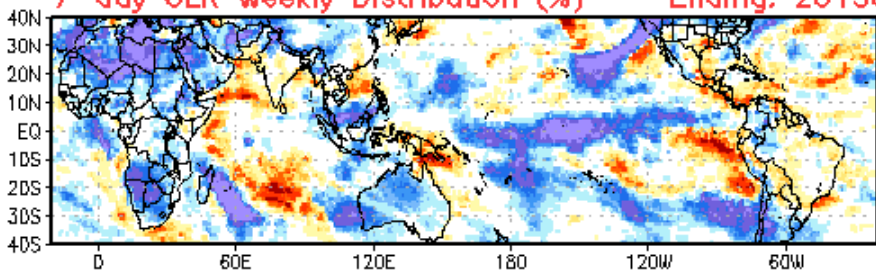


Forecast Map Grid Verification -- Week-1 From: 20150808

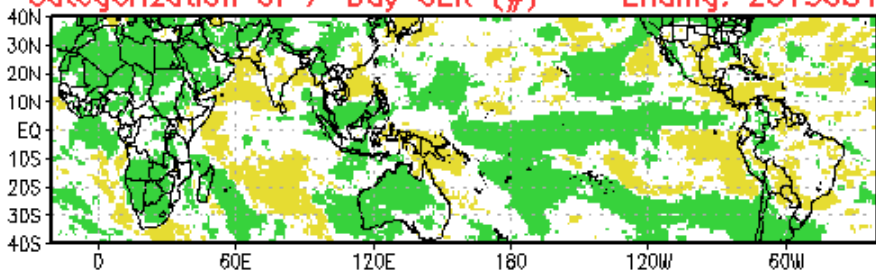


Hit: Green, Miss: Red
Heidke Skill Score: 30.0357

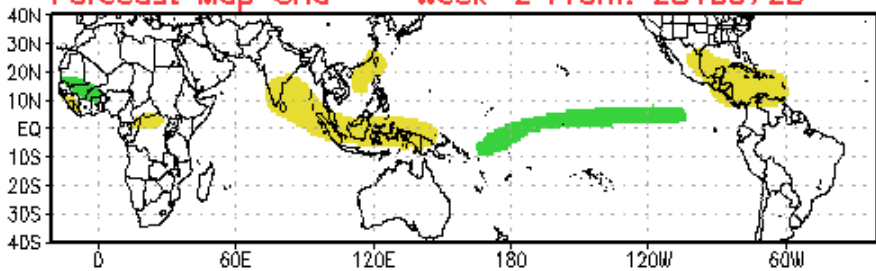
7-day OLR Weekly Distribution (%) -- Ending: 20150811



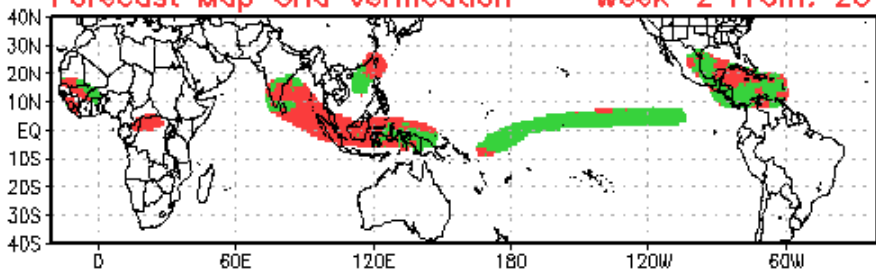
Categorization of 7-Day OLR (#) -- Ending: 20150811



Forecast Map Grid -- Week-2 From: 20150728



Forecast Map Grid Verification -- Week-2 From: 20150728



Hit: Green, Miss: Red
Heidke Skill Score: 26.6186

Synopsis of Climate Modes

ENSO:

- Current: [El Niño Advisory](#)
- Outlook: There is a greater than 90% chance that El Niño will continue through Northern Hemisphere winter 2015-16, and around an 80% chance it will last into early 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 a westward moving signal during the next 2 weeks, with little to no signal. Any amplitude in the WH framework is likely in response to tropical cyclone activity over the East Pacific.

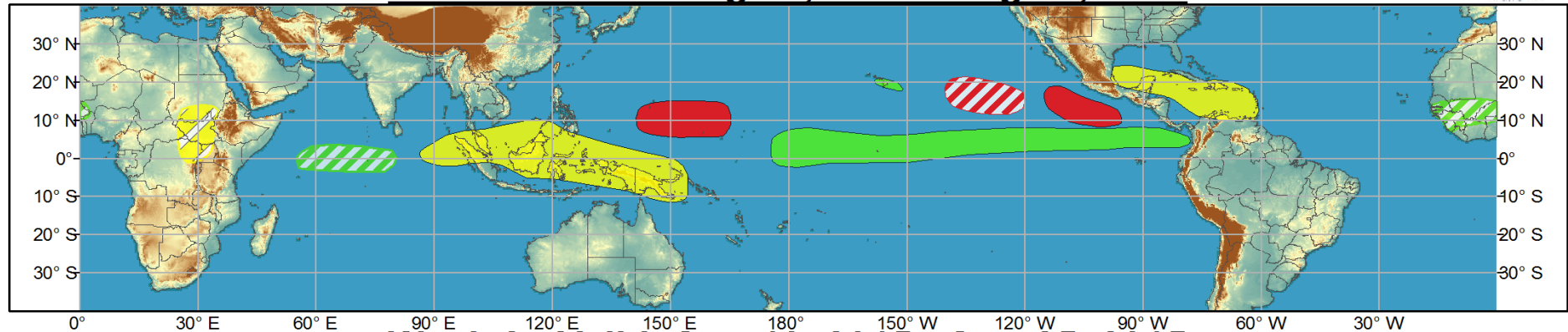
Extratropics:

- 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 near Baja California.

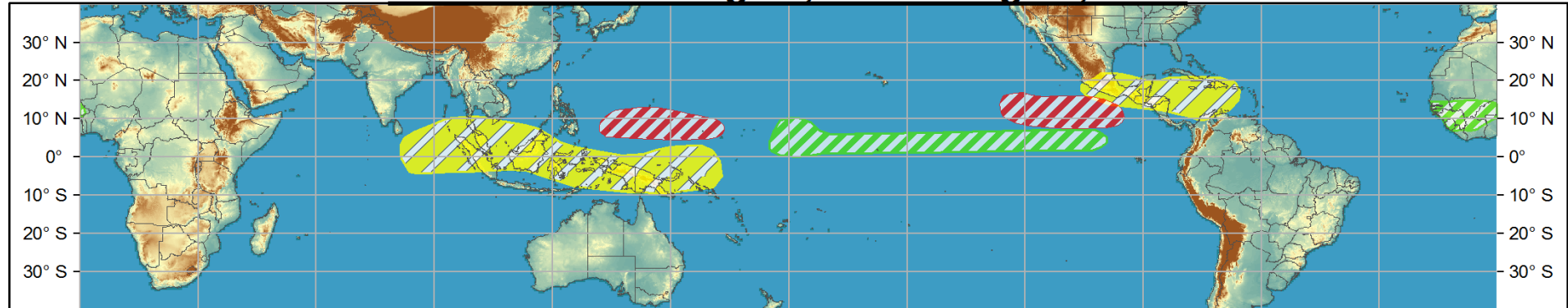


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 12, 2015 - Aug 18, 2015



Week 2 - Valid: Aug 19, 2015 - Aug 25, 2015



Produced: 08/11/2015

Forecaster: Rosencrans

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.

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

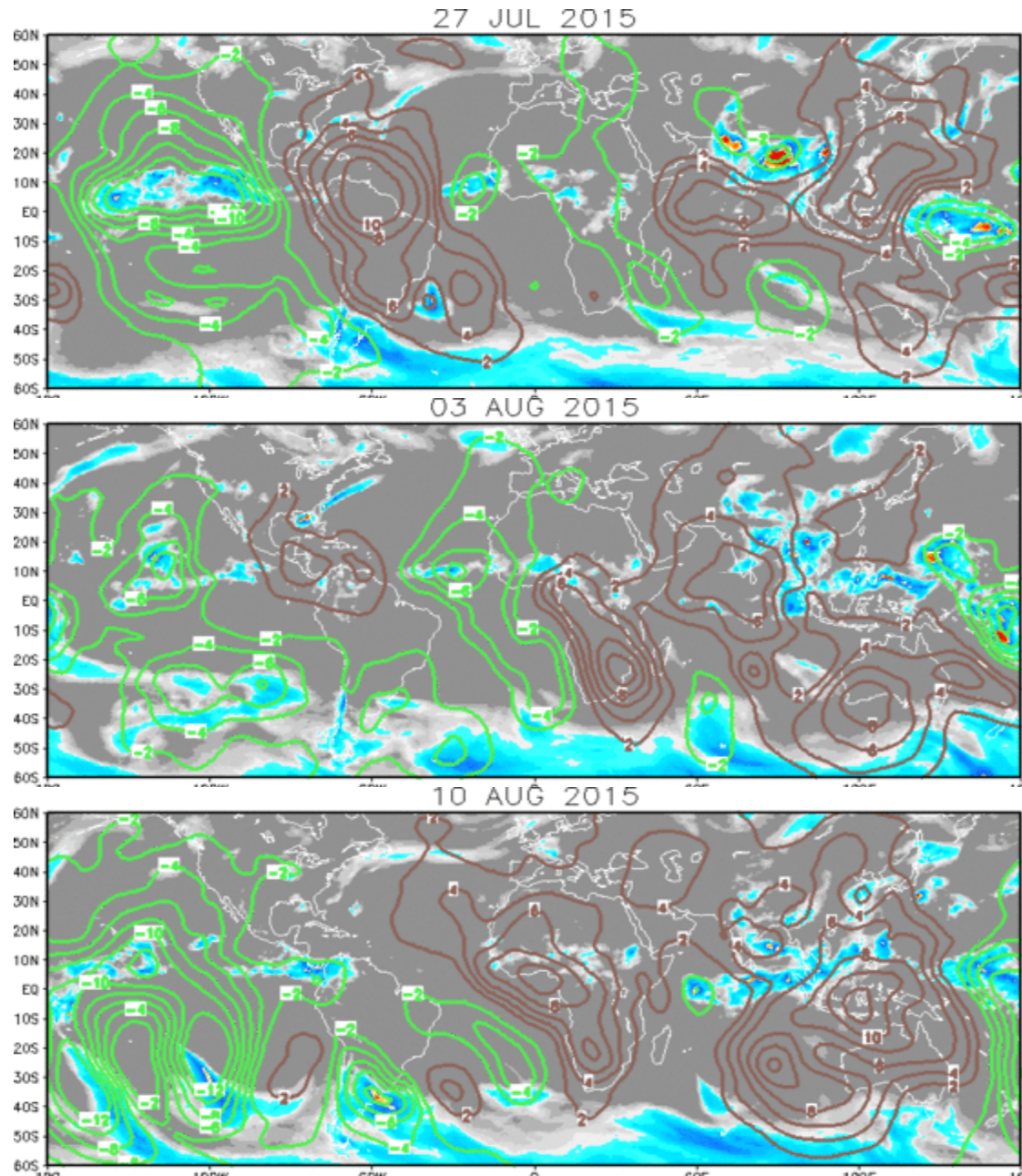
Green: Enhanced Divergence

Brown: Enhanced Convergence

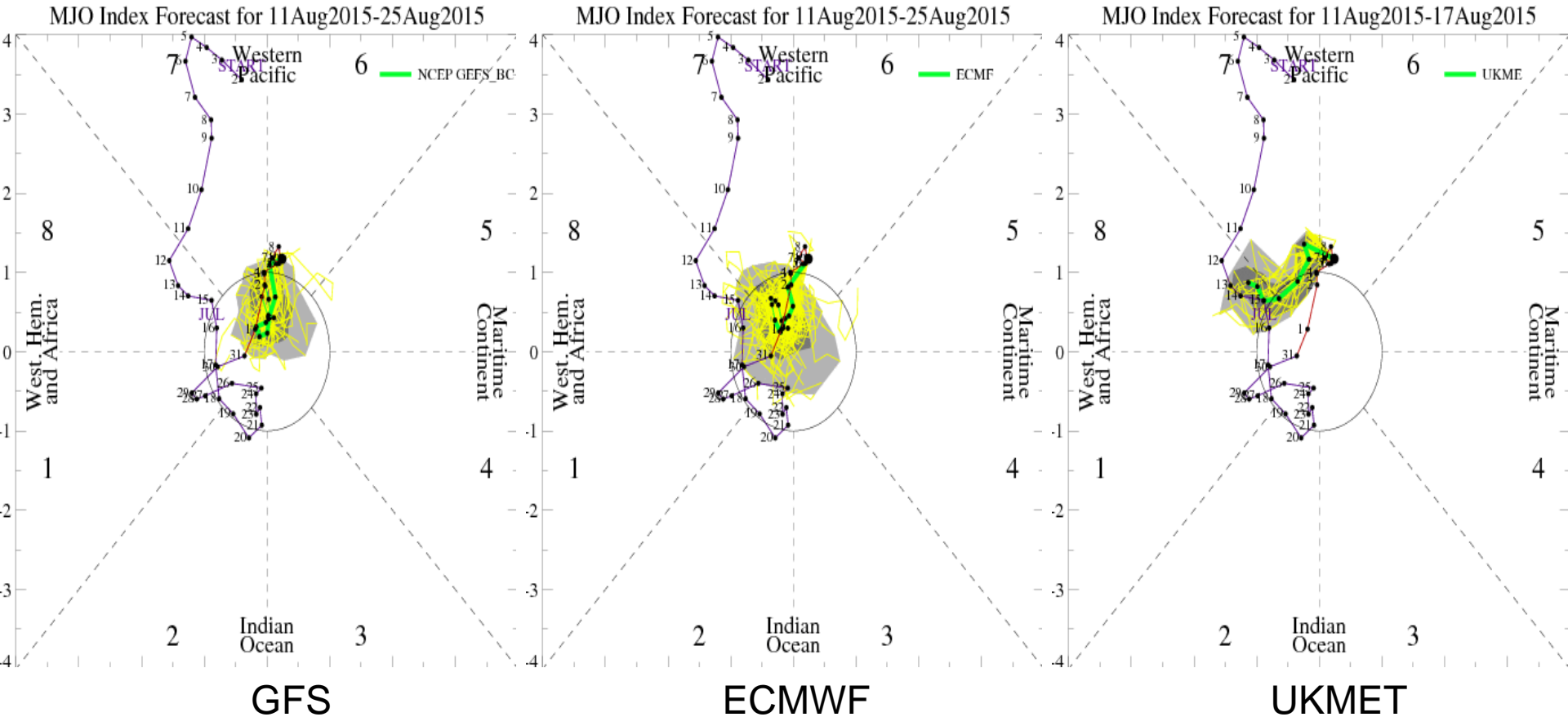
Base state and transient features evident.

Wave-1 structure broken down.
Residual active MJO over Atlantic.

Rossby Wave over Indian Ocean.

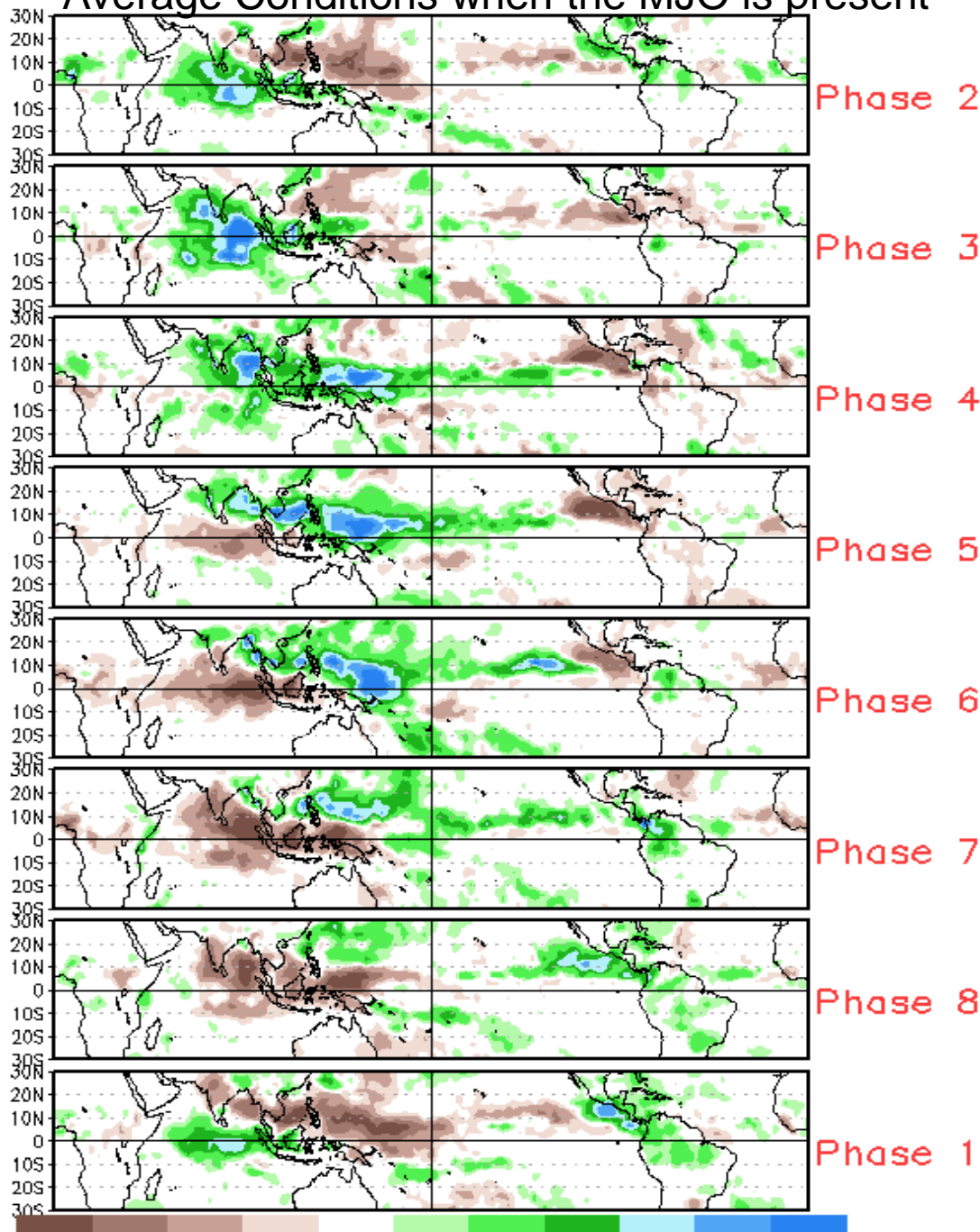


MJO Observation/Forecast



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



Phase 2

Phase 3

Phase 4

Phase 5

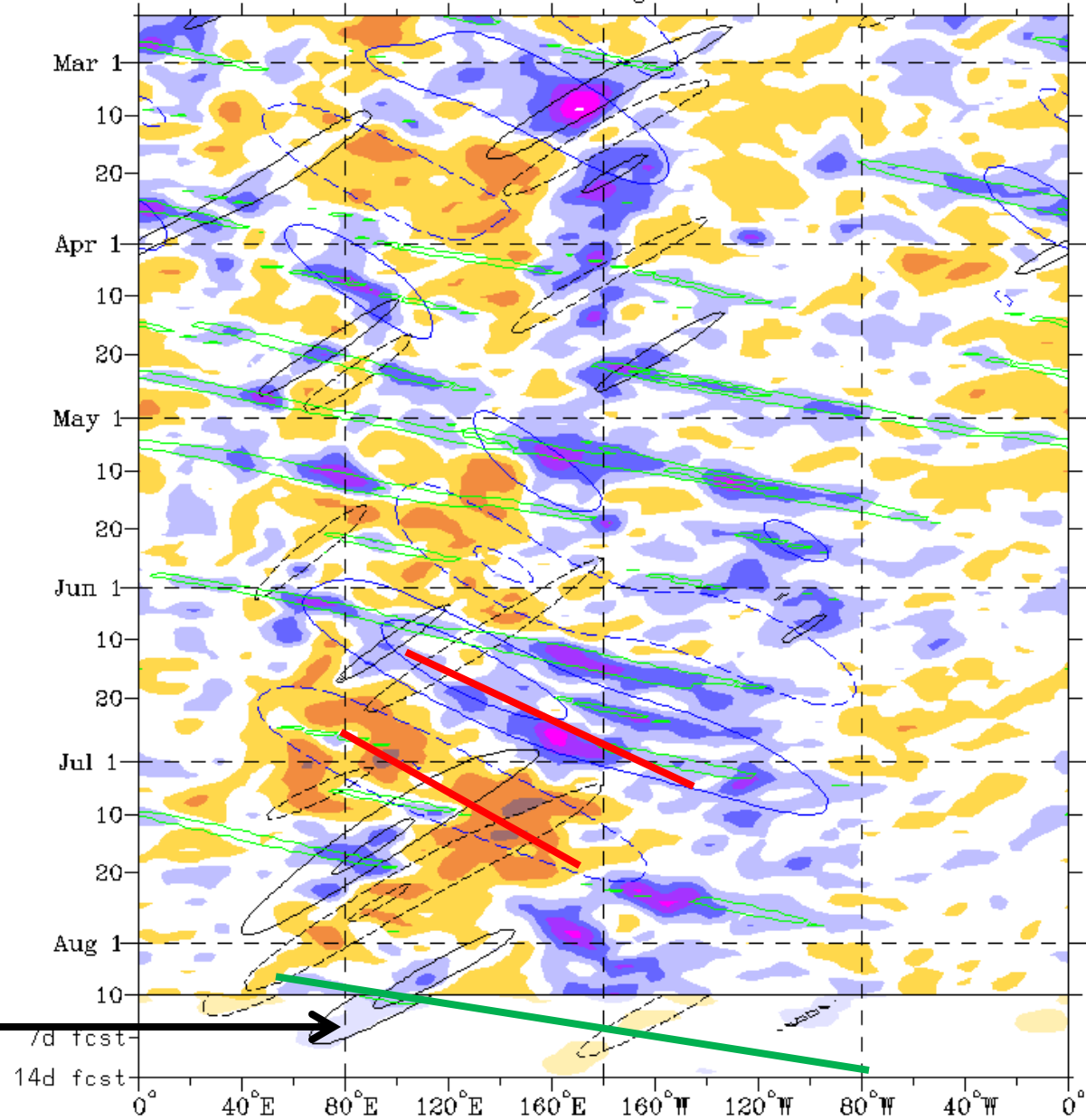
Phase 6

Phase 7

Phase 8

Phase 1

CAVEAT: These panels are representative of robust MJO events.



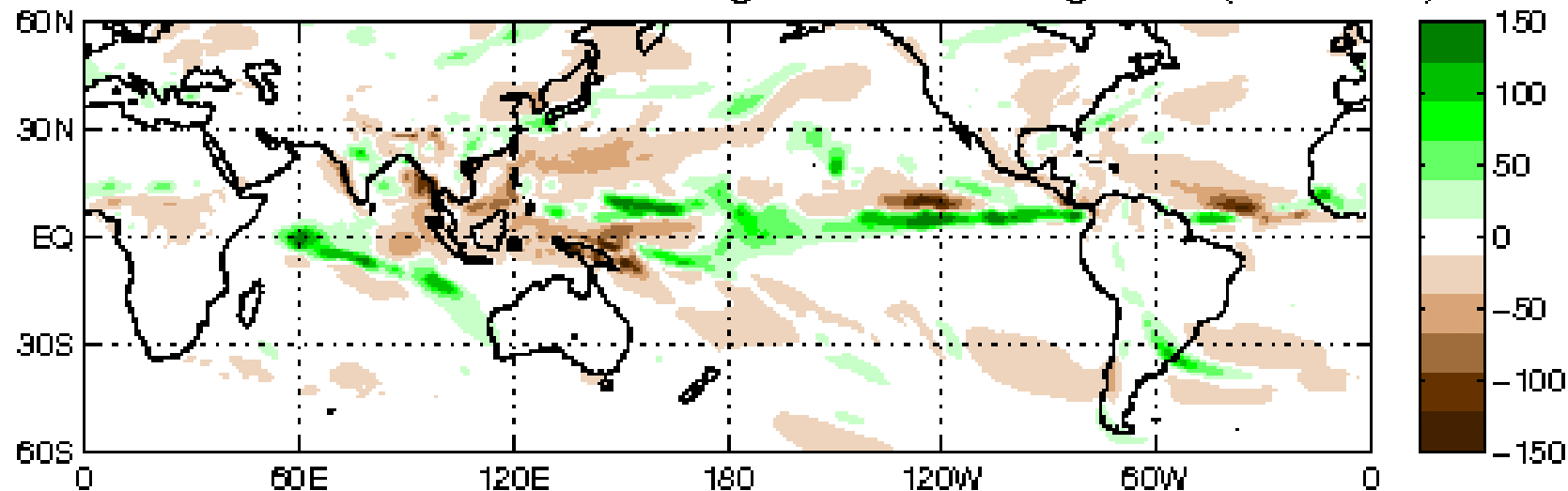
Low frequency likely to dominate pattern more than MJO.

MJO indicated by red lines

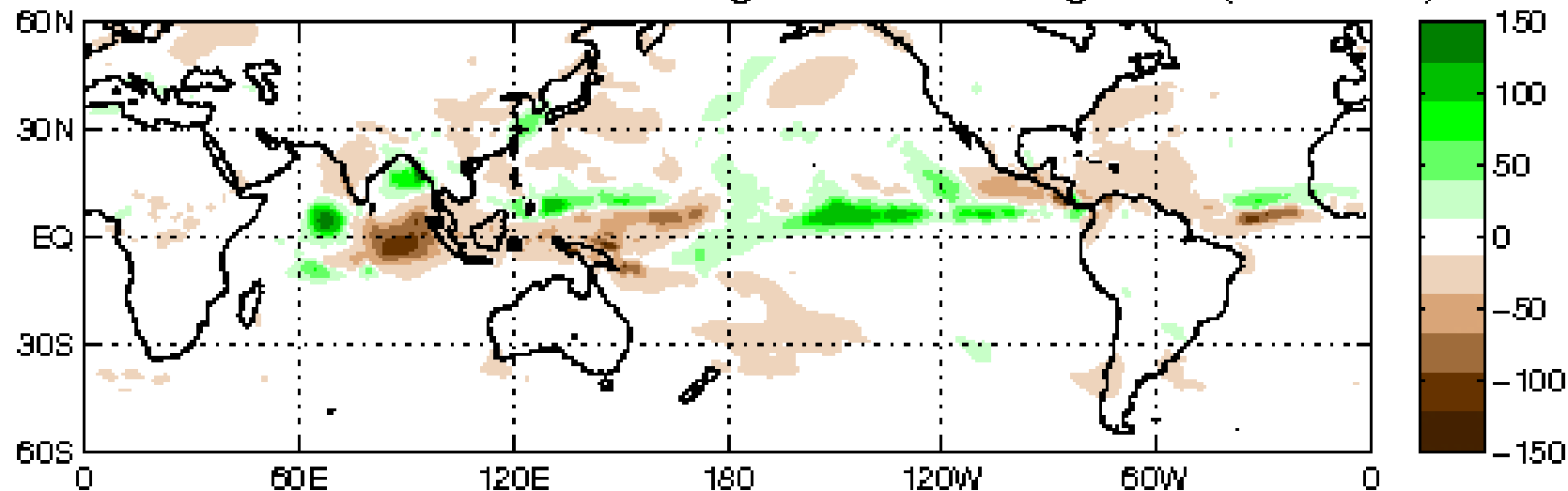
Rossby wave near 100E.

Kelvin Wave likely to traverse Pacific.

CFS: Anom. PREC Week: 1: 12-Aug-2015 to 18-Aug-2015 (mm/week)



CFS: Anom. PREC Week: 2: 19-Aug-2015 to 25-Aug-2015 (mm/week)





Five-Day Graphical Tropical Weather Outlook

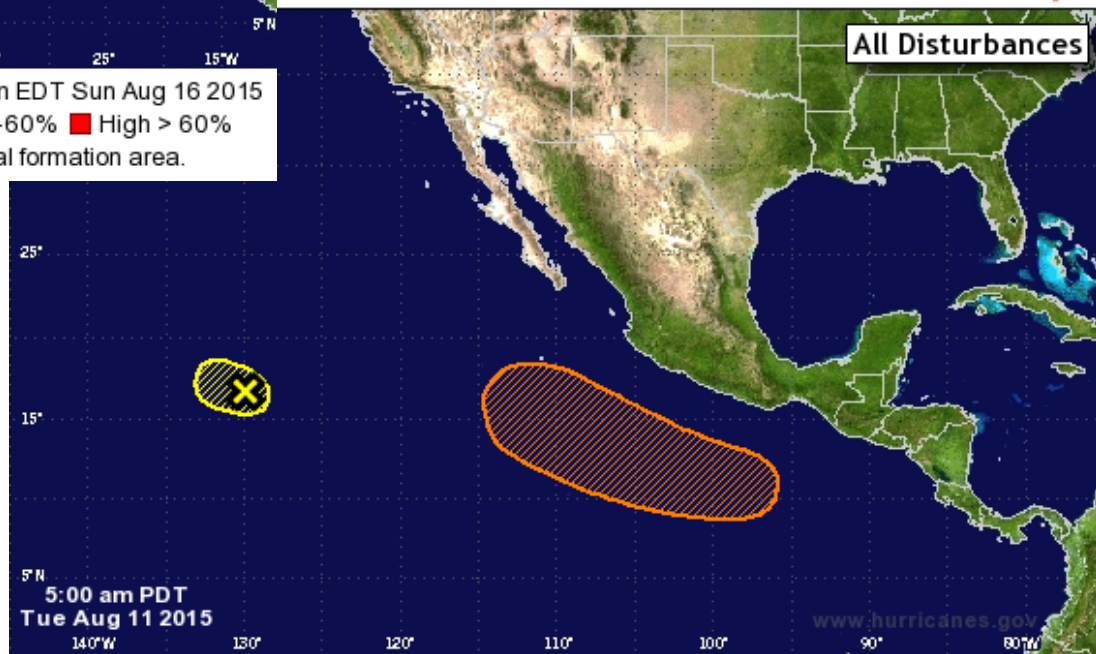
National Hurricane Center Miami, Florida



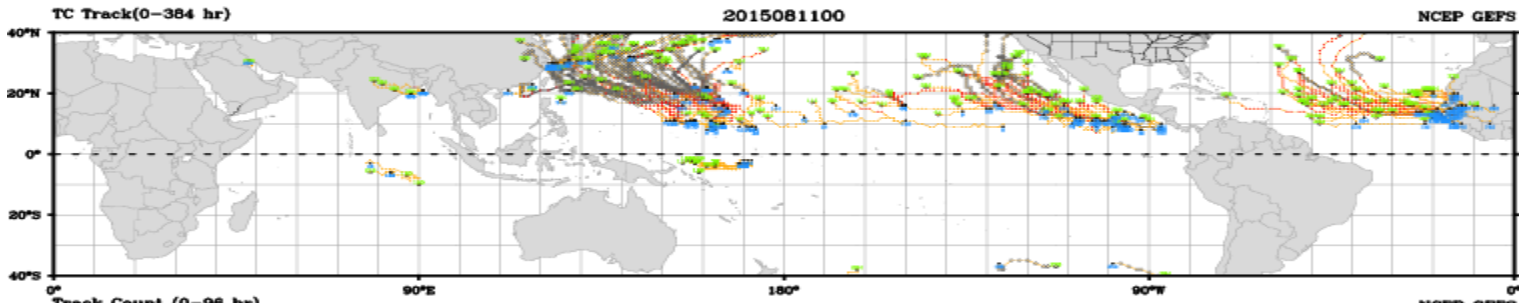
Tropical Cyclone Formation Potential for the 5-Day Period Ending 8:00 am EDT Sun Aug 16 2015
 Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.

Five-Day Graphical Tropical Weather Outlook

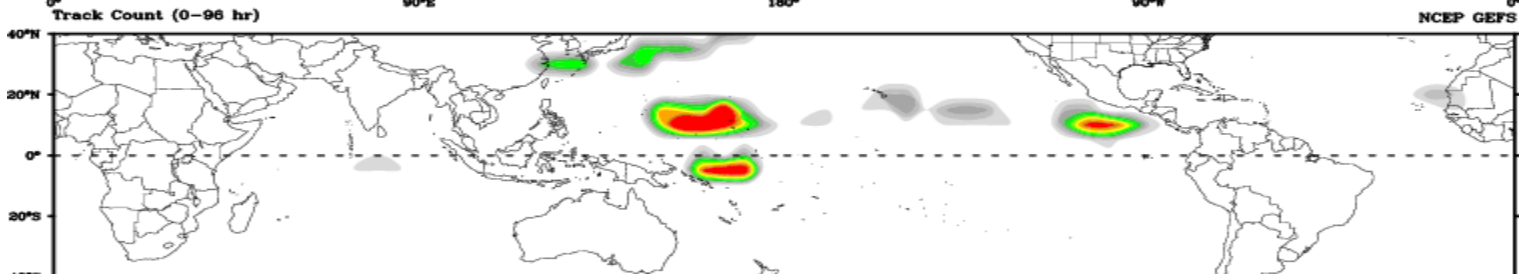
National Hurricane Center Miami, Florida



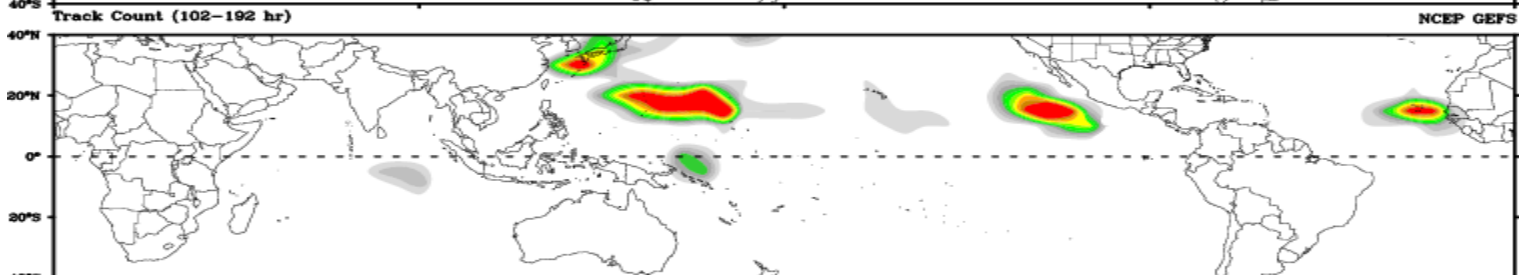
Tropical Cyclone Formation Potential for the 5-Day Period Ending 5:00 am PDT Sun Aug 16 2015
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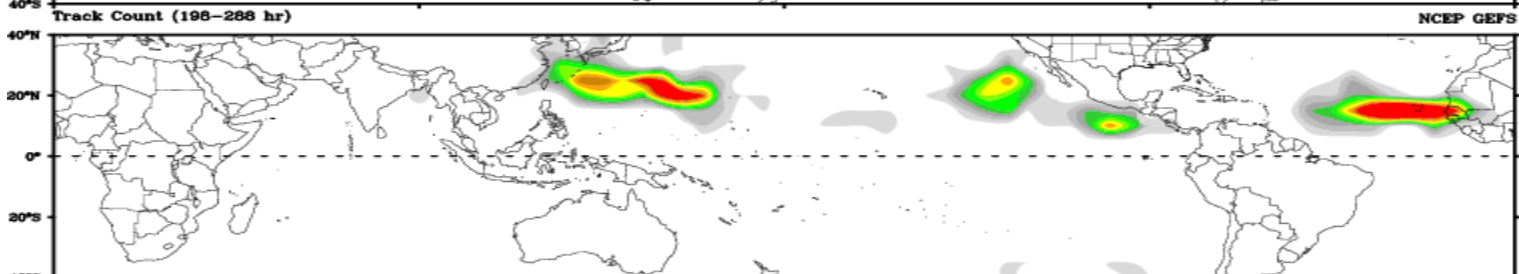
Days 1-4



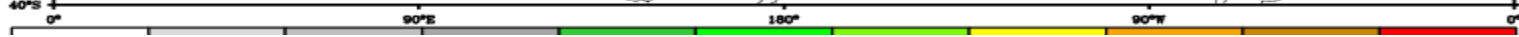
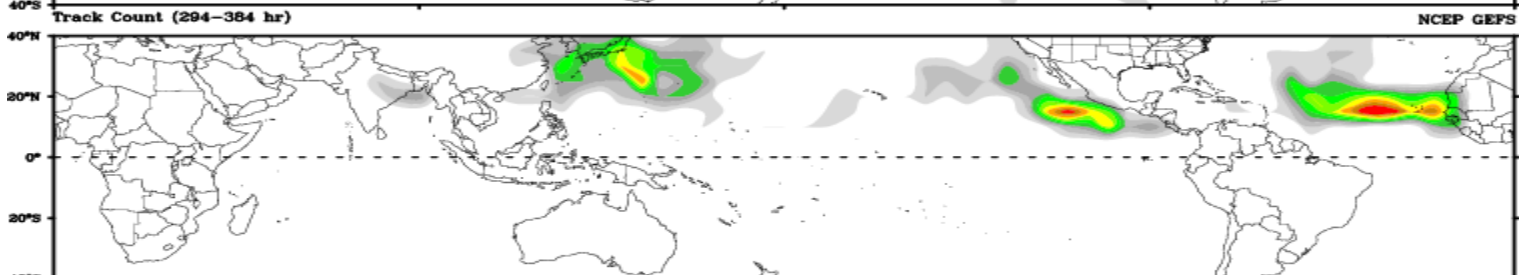
Day 5-8



Day 9-12



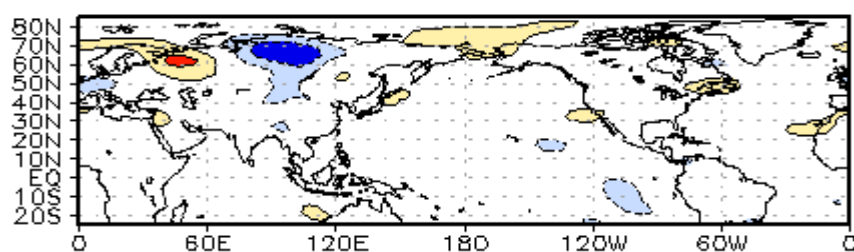
Day 13-15



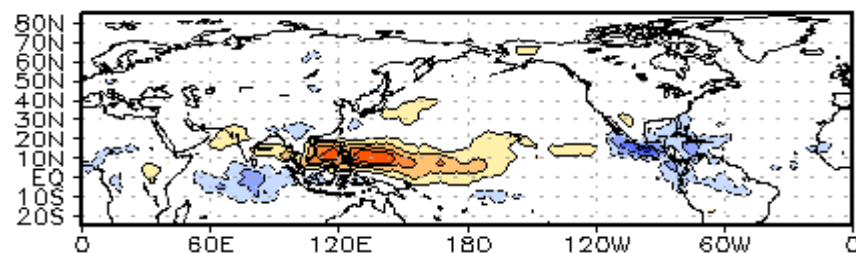
Connections to U.S. Impacts

Lagged composites from MJO 5-day intervals

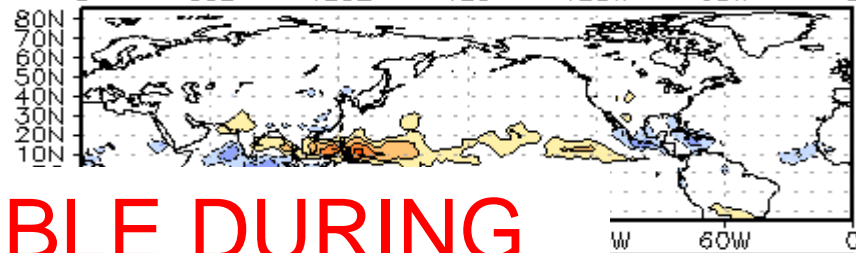
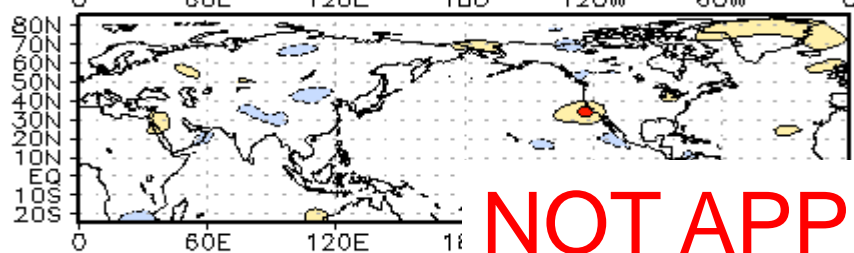
WHMJO Phase 1 t850 Lagged Composite (jas)



WHMJO Phase 1 air Lagged Composite (jas)

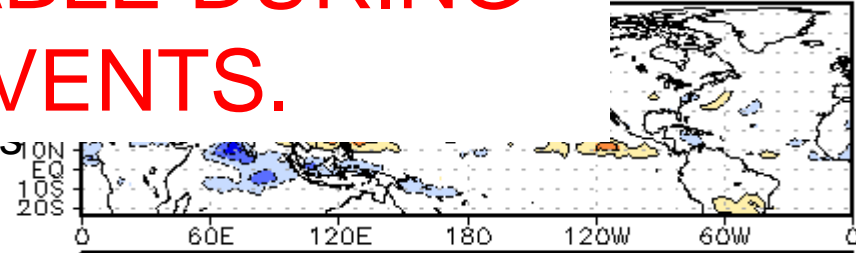
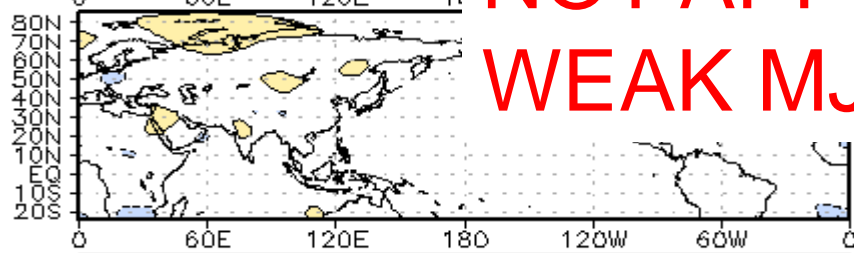


+5-day

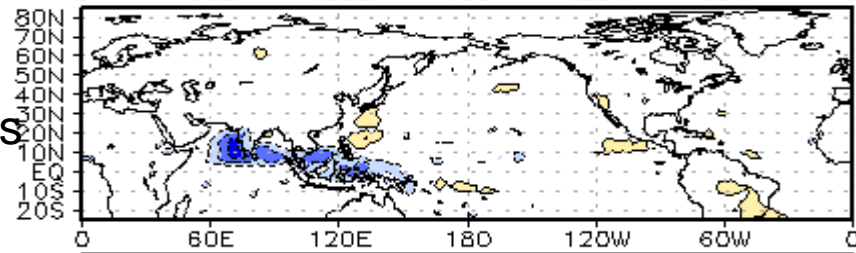
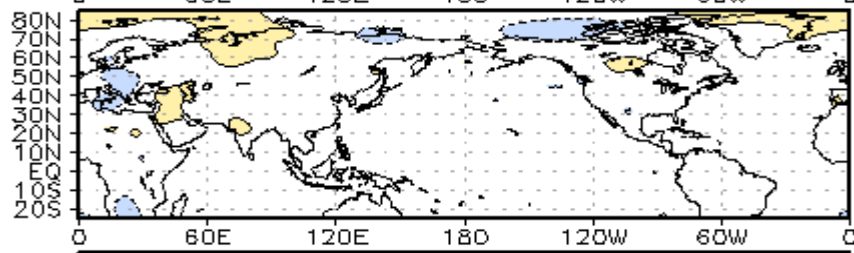


**NOT APPLICABLE DURING
WEAK MJO EVENTS.**

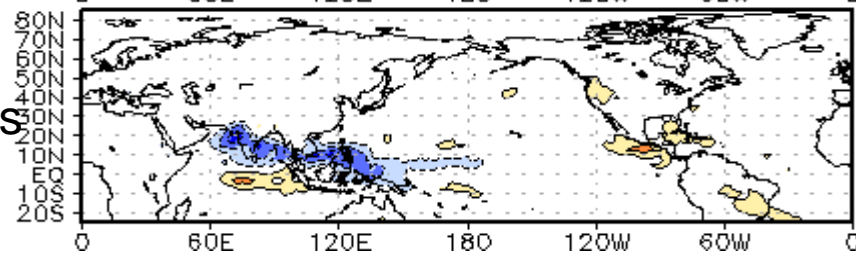
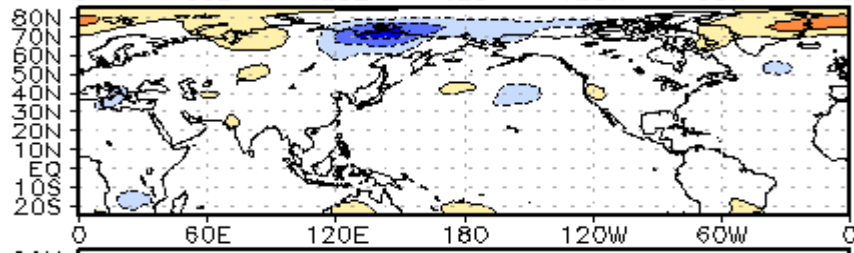
+10-days

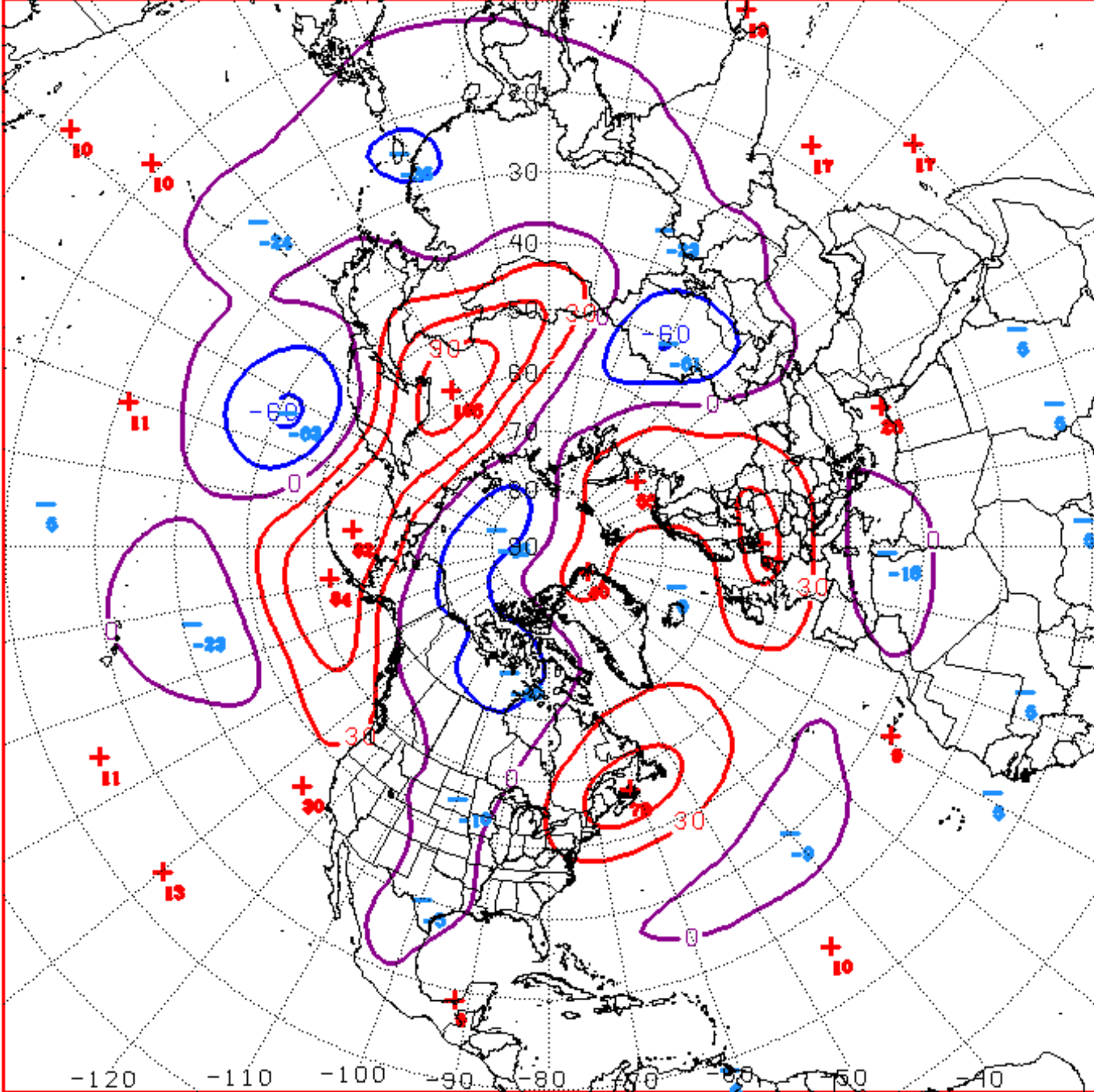


+15-days



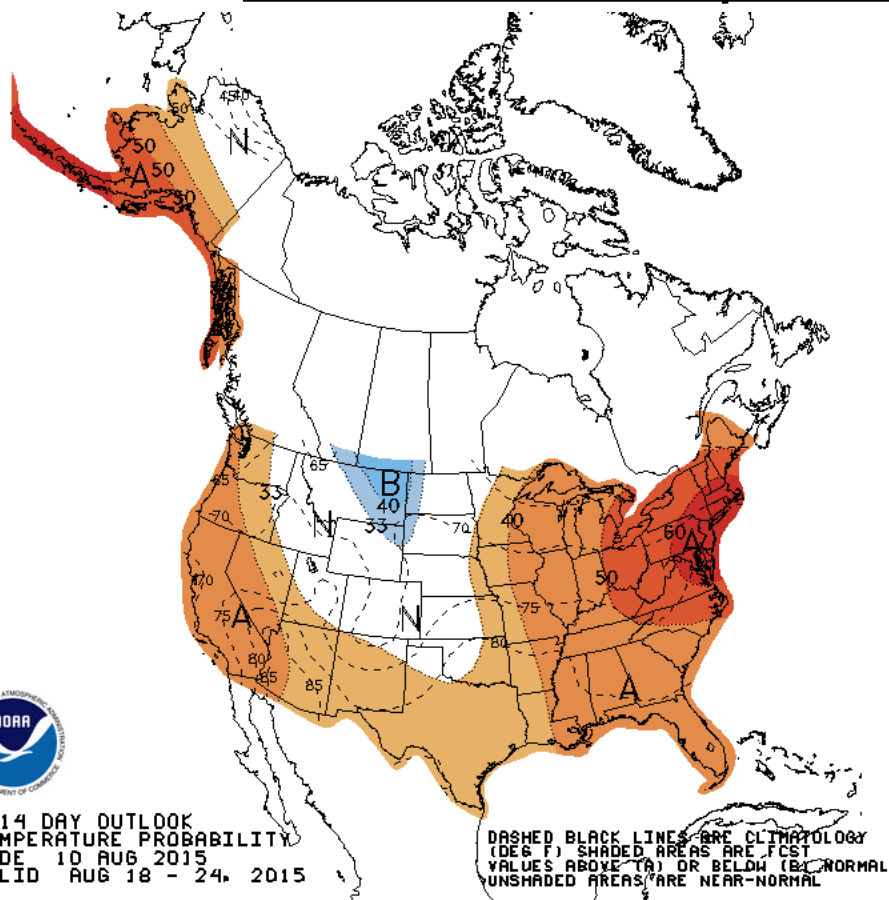
+20-days





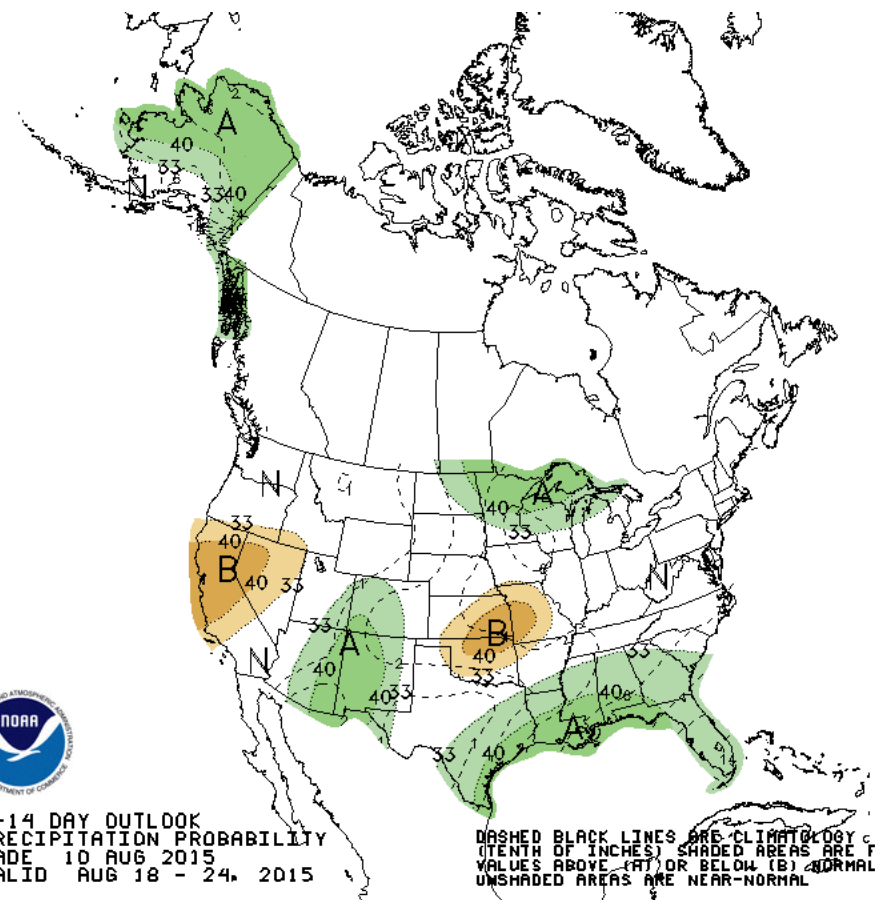
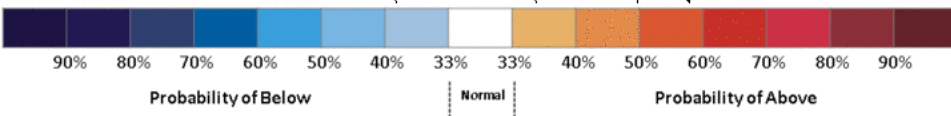
D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE AUG 11 2015 1003 UTC CNTD AUG 22 2015

Week 2 – Temperature and Precipitation



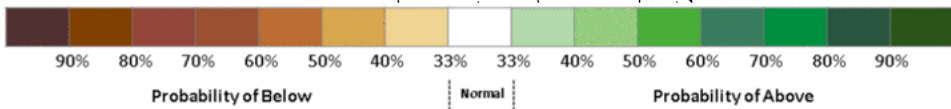
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 10 AUG 2015
VALID AUG 18 - 24, 2015

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 10 AUG 2015
VALID AUG 18 - 24, 2015

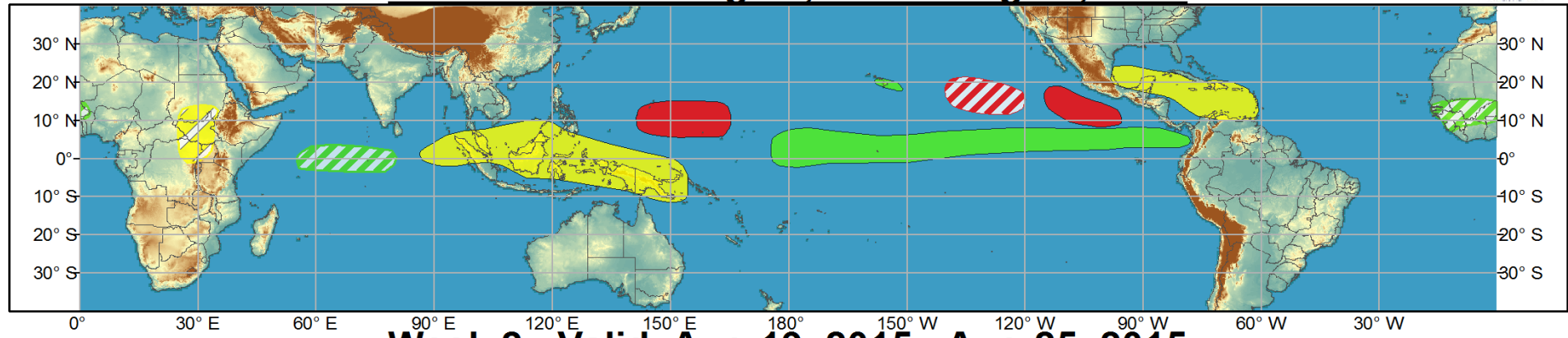
DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL.



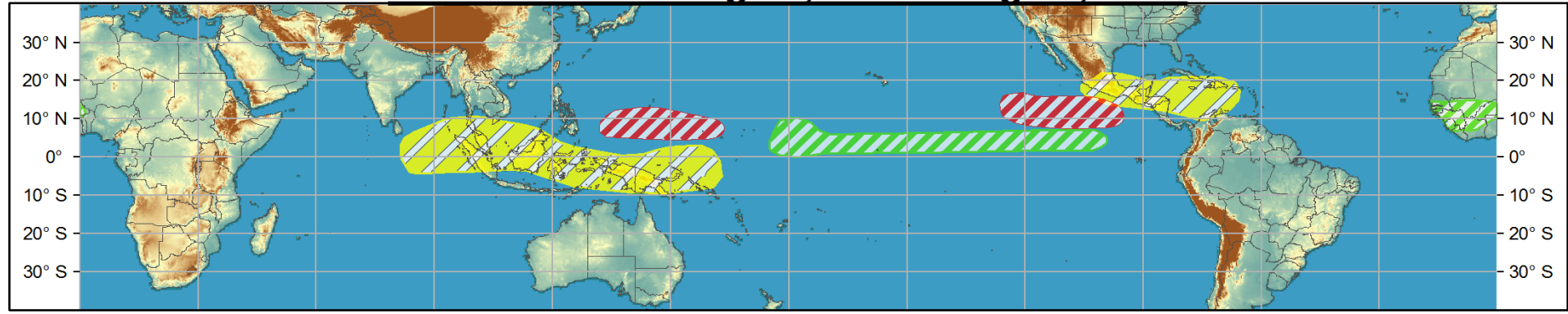


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