

Global Tropics Hazards And Benefits Outlook

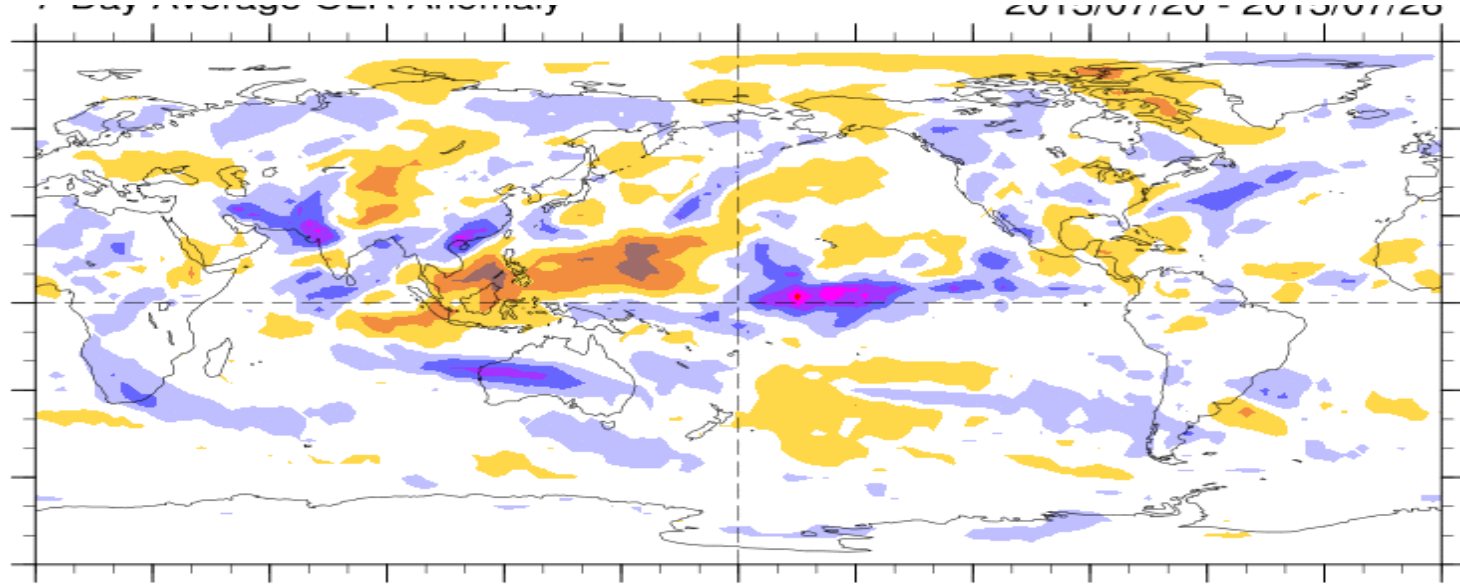
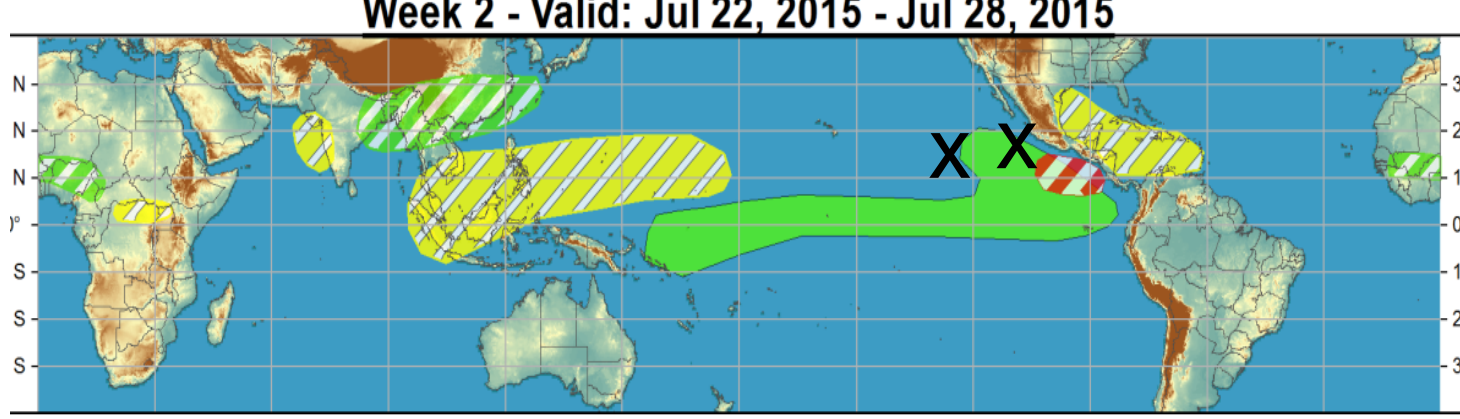
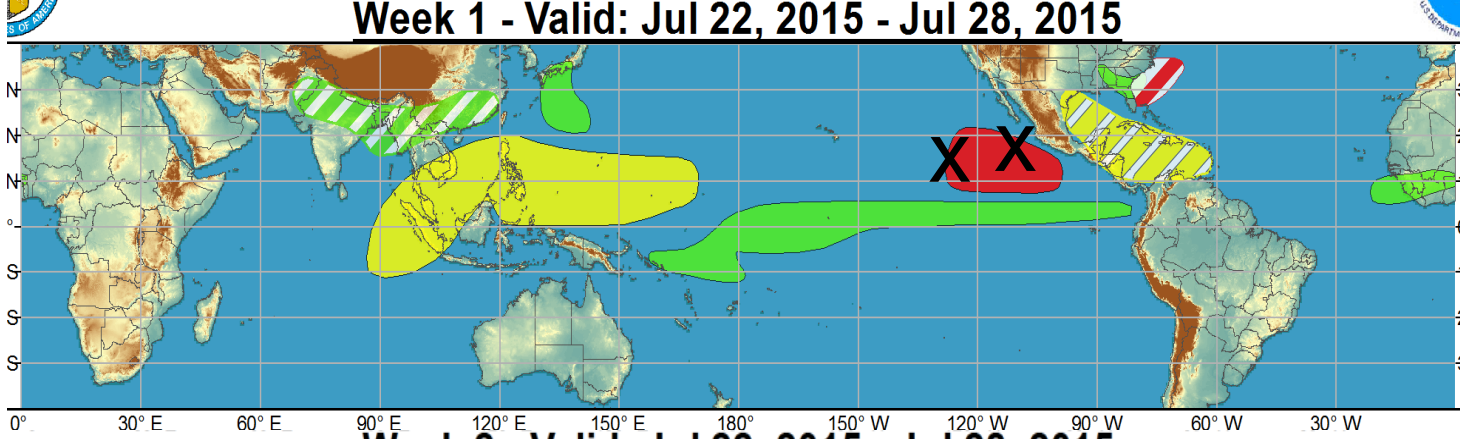
July 28, 2015

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

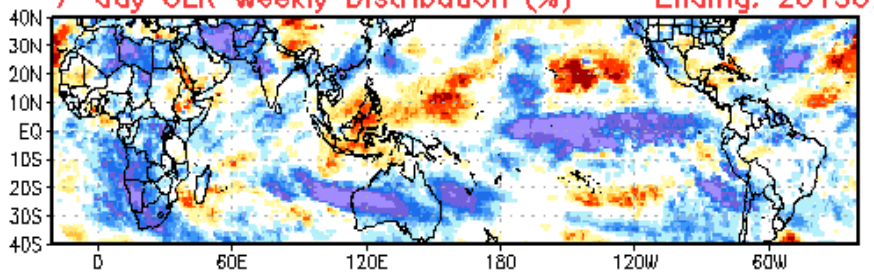
Outlook Review



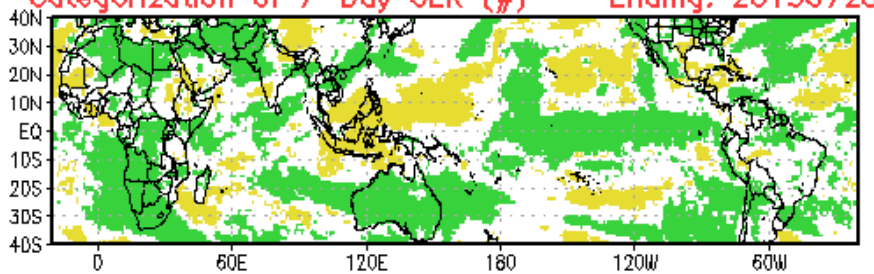
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

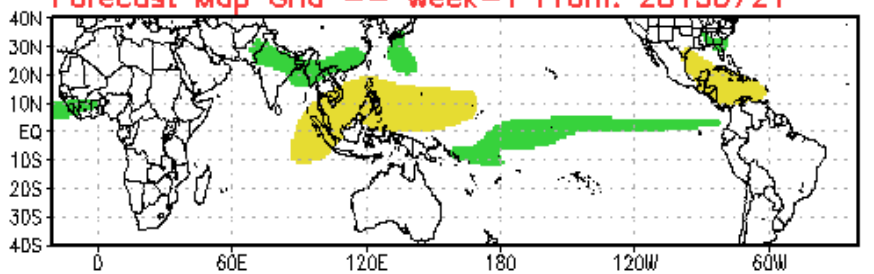
7-day OLR Weekly Distribution (%) -- Ending: 20150728



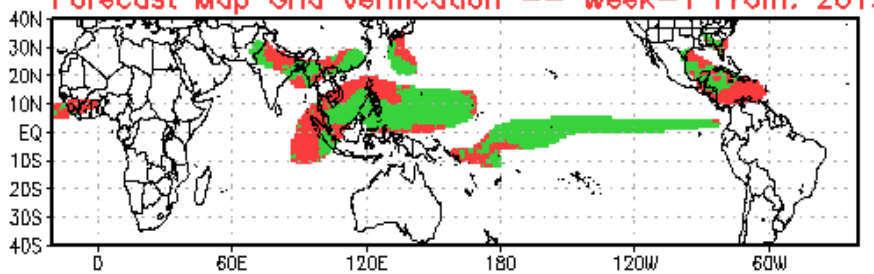
Categorization of 7-Day OLR (#) -- Ending: 20150728



Forecast Map Grid -- Week-1 From: 20150721

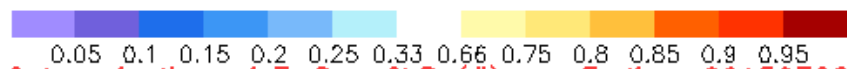
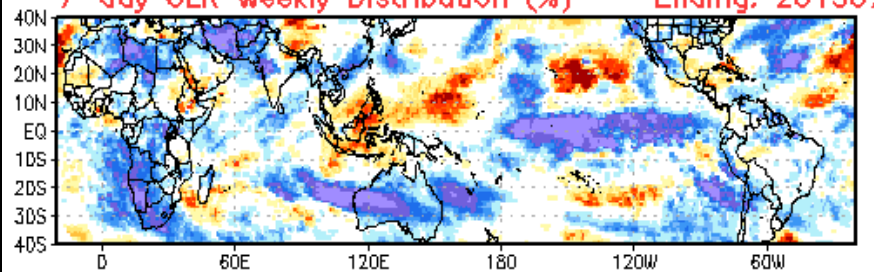


Forecast Map Grid Verification -- Week-1 From: 20150721

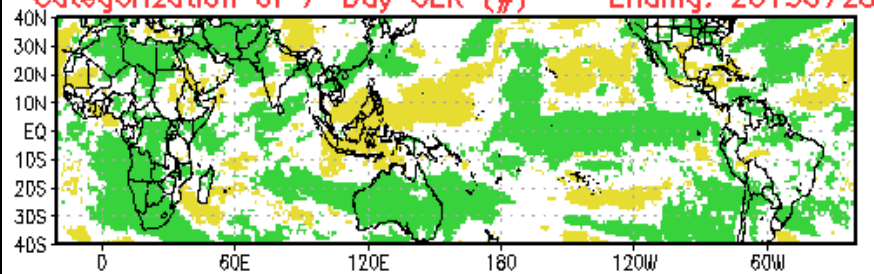


Hit: Green, Miss: Red
Heidke Skill Score: 39.2940

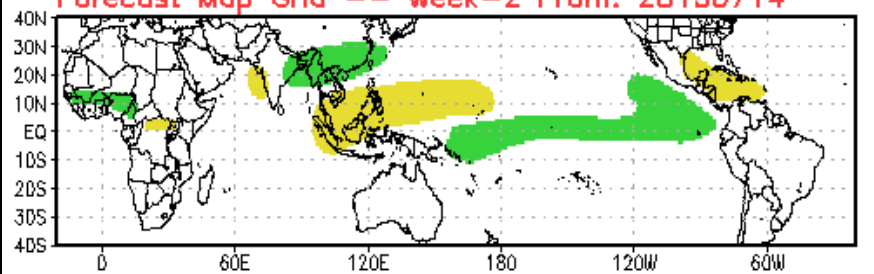
7-day OLR Weekly Distribution (%) -- Ending: 20150728



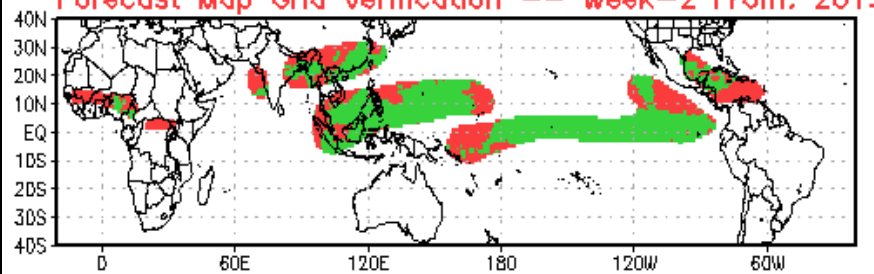
Categorization of 7-Day OLR (#) -- Ending: 20150728



Forecast Map Grid -- Week-2 From: 20150714



Forecast Map Grid Verification -- Week-2 From: 20150714



Hit: Green, Miss: Red
Heidke Skill Score: 39.9812

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 the strongest signal emerging over the western Pacific, likely in response to tropical cyclone activity, so uncertainty is high.

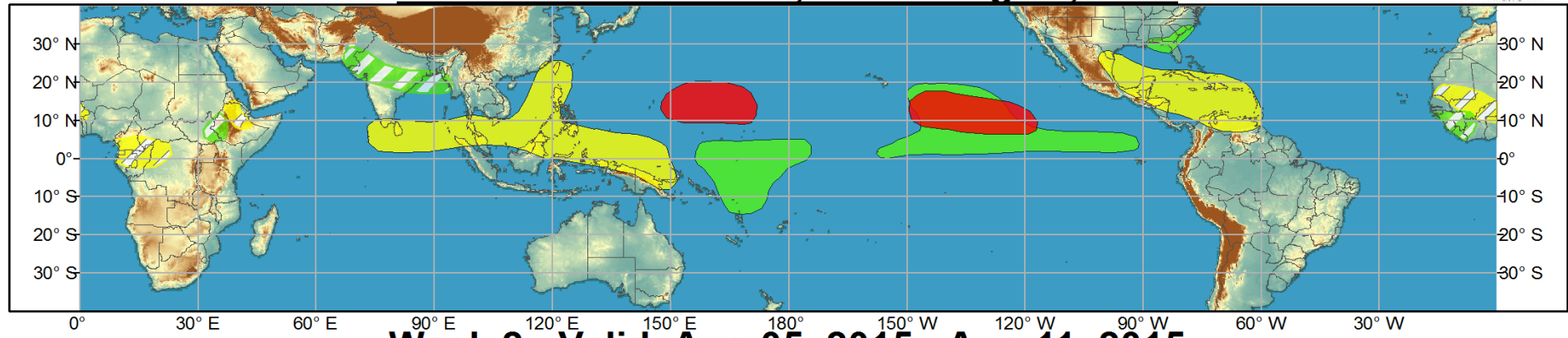
Extratropics:

- 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.

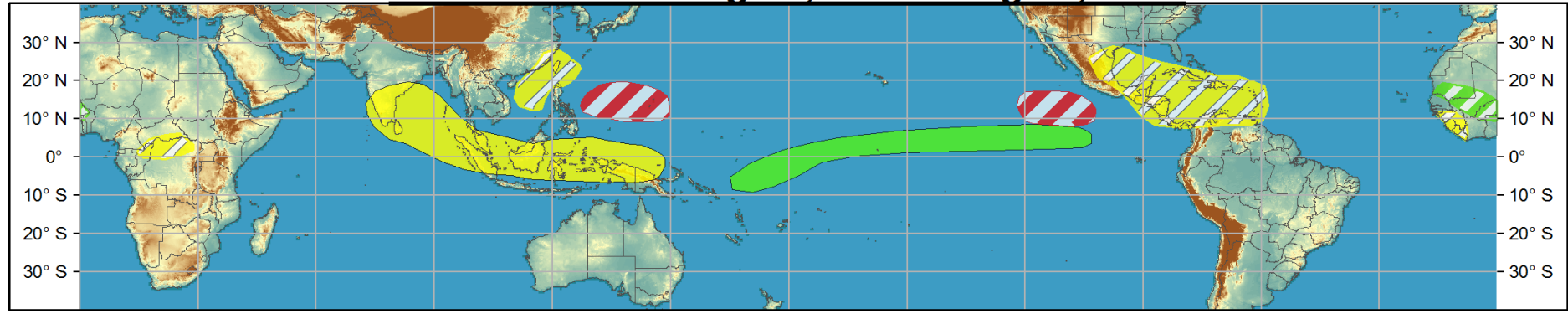


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 29, 2015 - Aug 04, 2015



Week 2 - Valid: Aug 05, 2015 - Aug 11, 2015



Confidence
High Moderate

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- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
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- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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Produced: 07/28/2015

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.

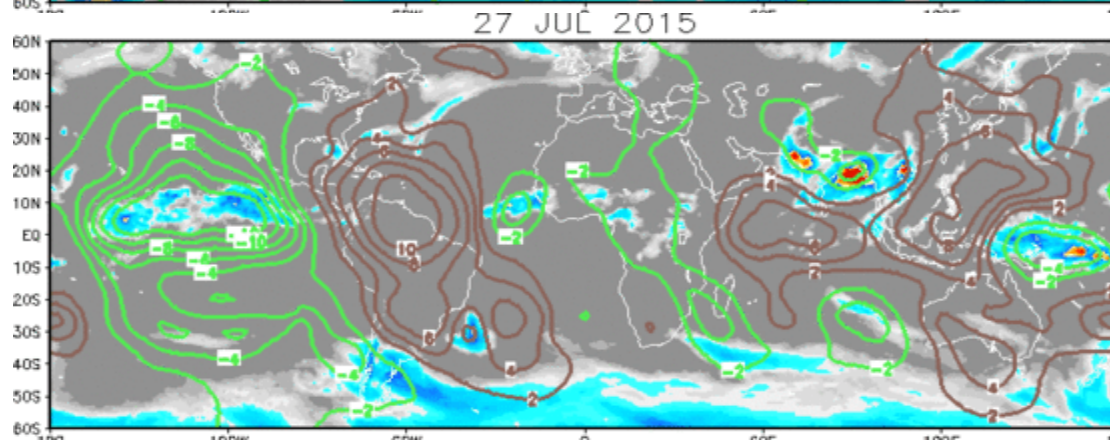
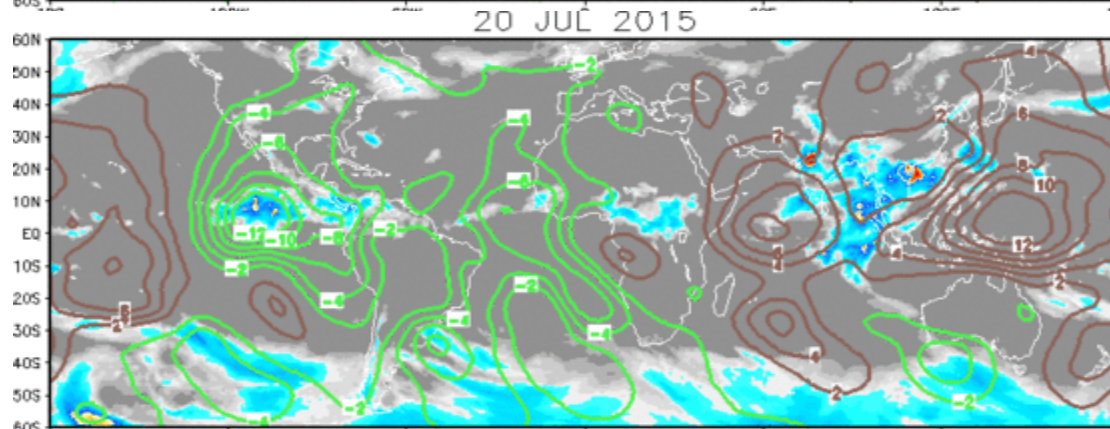
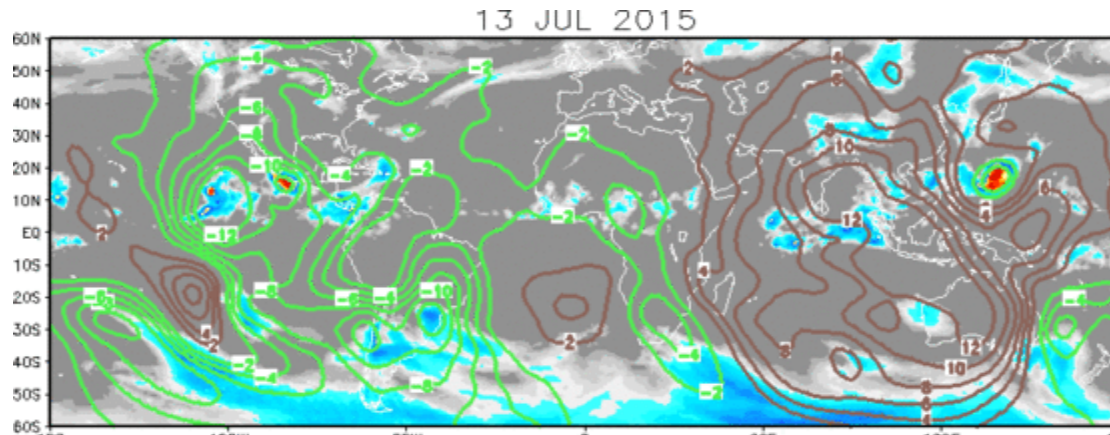


IR Satellite & 200-hpa Velocity Potential Anomalies

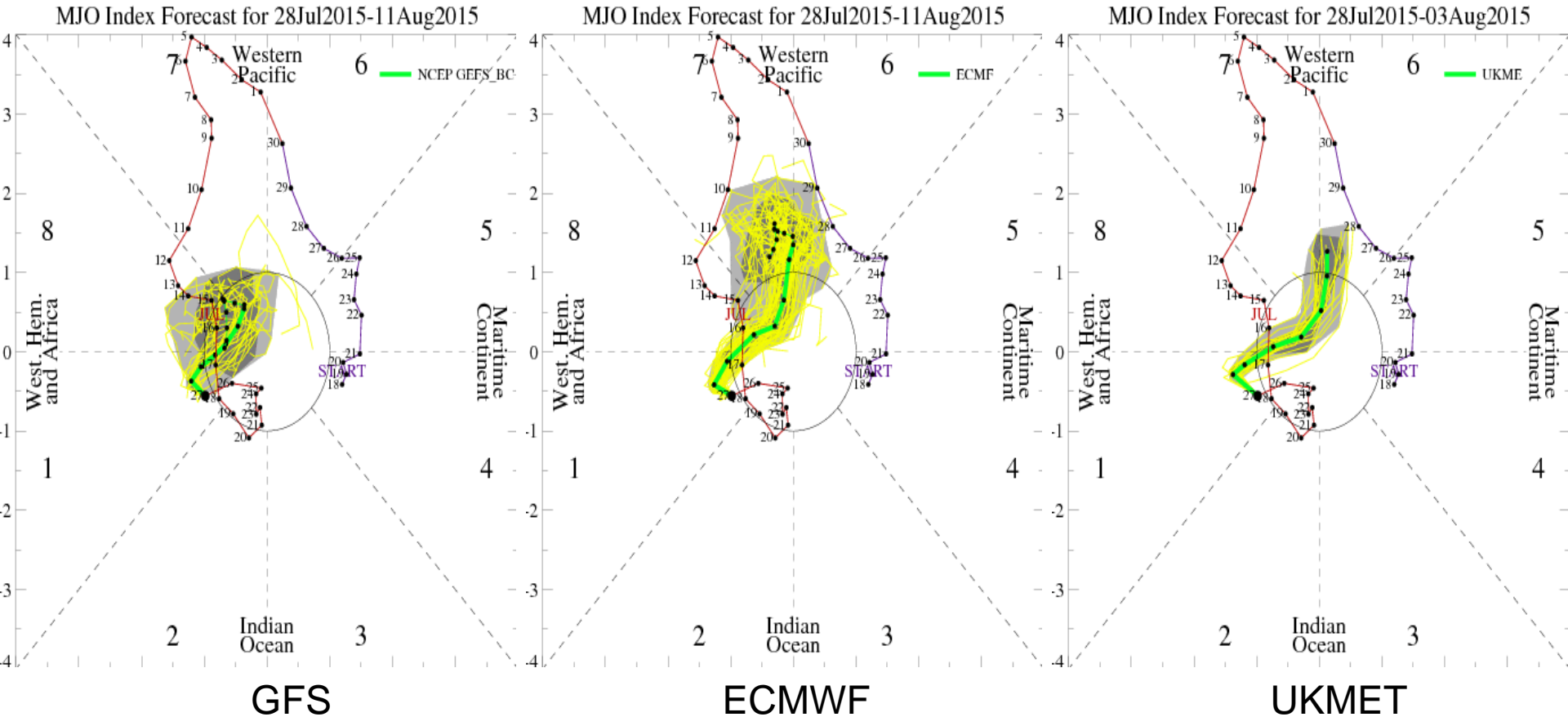
Green: Enhanced Divergence Brown: Enhanced Convergence

Base state
and transient
features
evident.

Wave-1
structure
broke down.

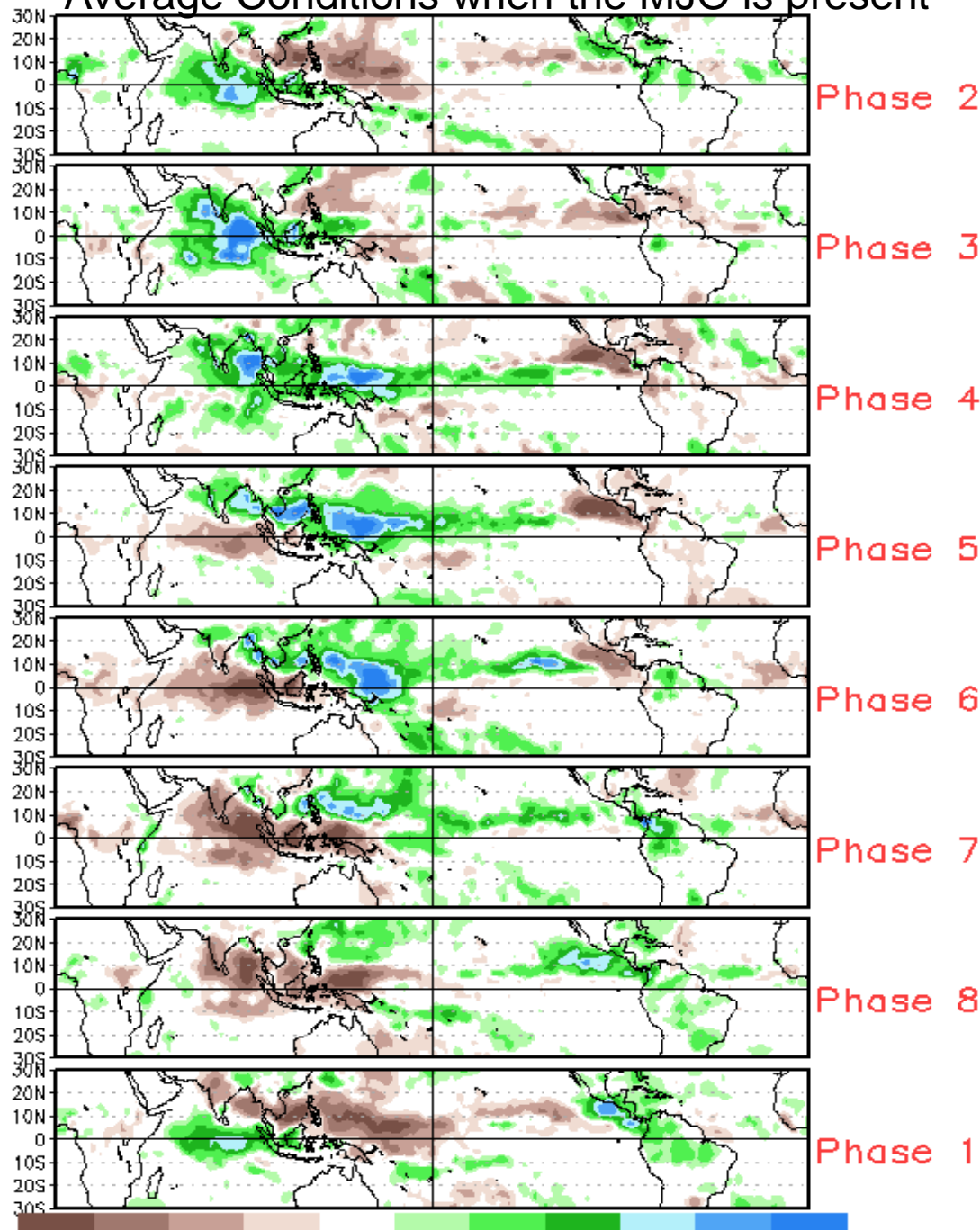


MJO Observation/Forecast

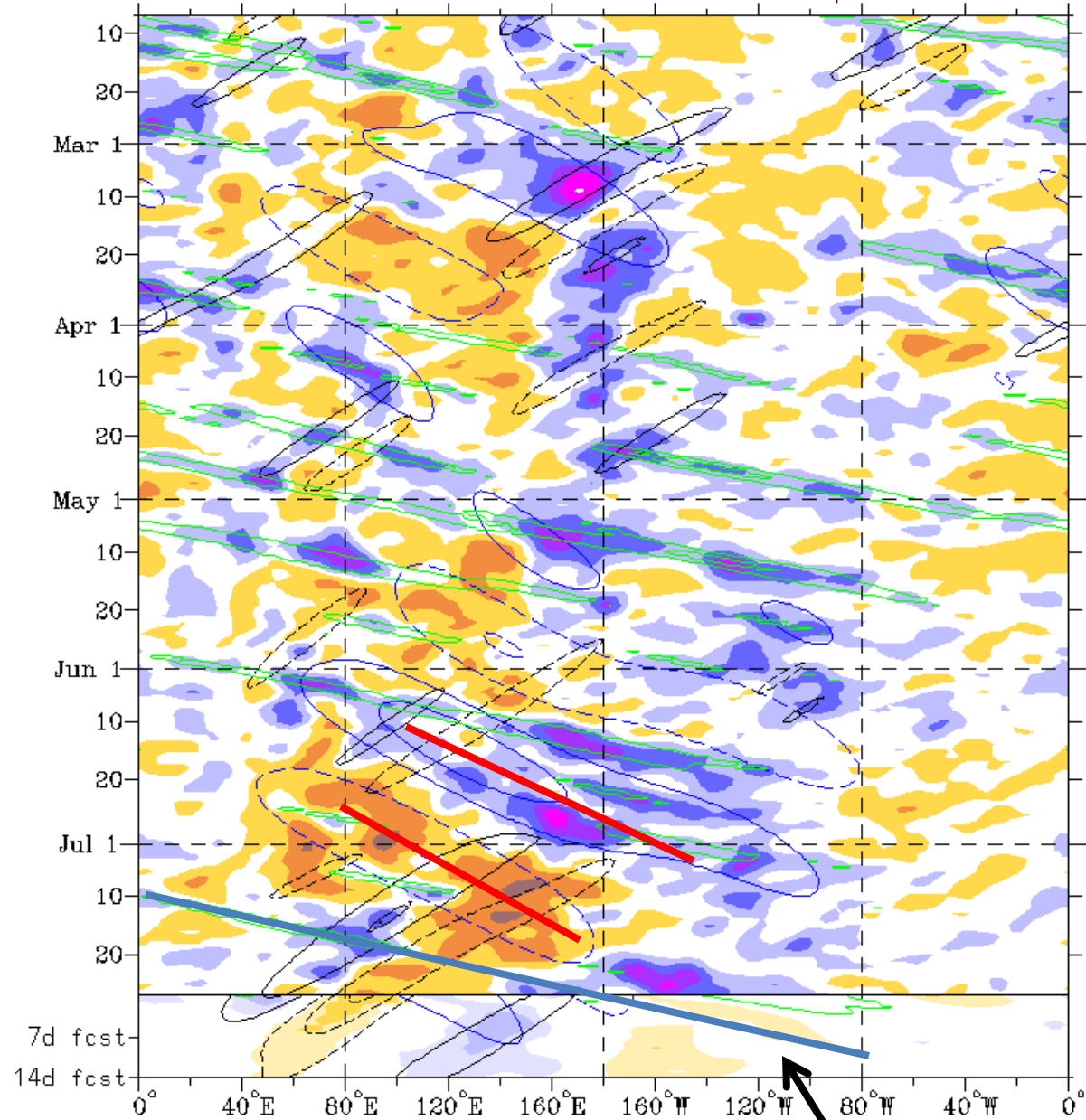


Wheeler-Hendon based analyses of model forecasts indicate some convection east of the Date Line, then a weak signal emerging over the West Pacific in Week-2.

Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



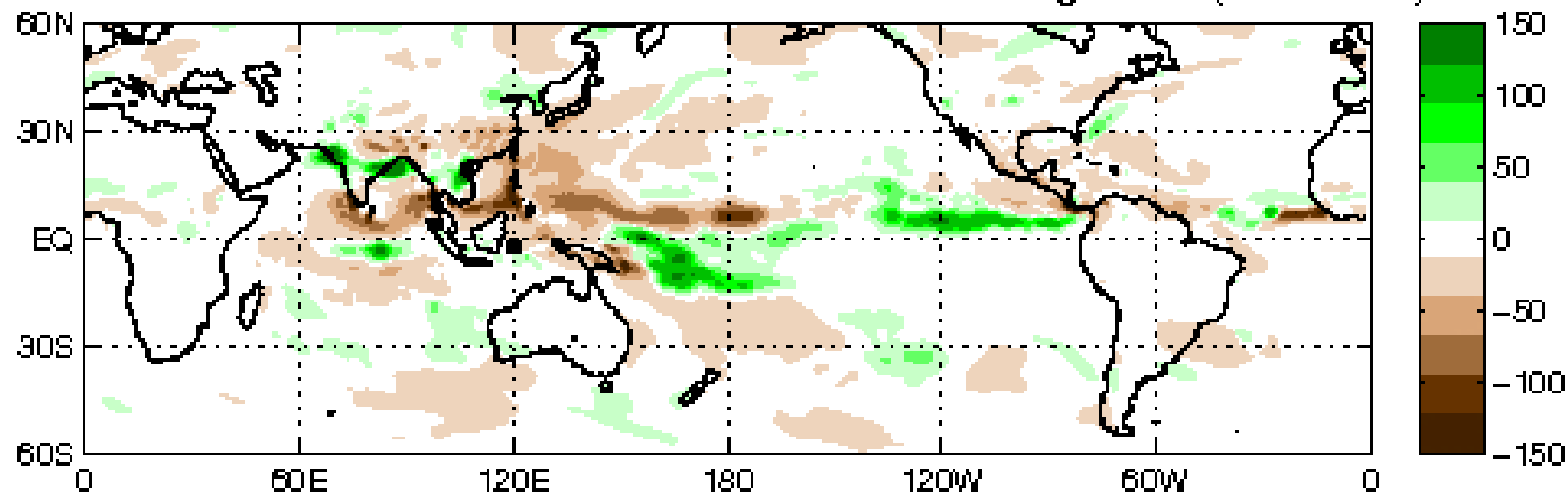
Low frequency likely to dominate pattern more than MJO.

Some indications of Rossby wave near 170E.

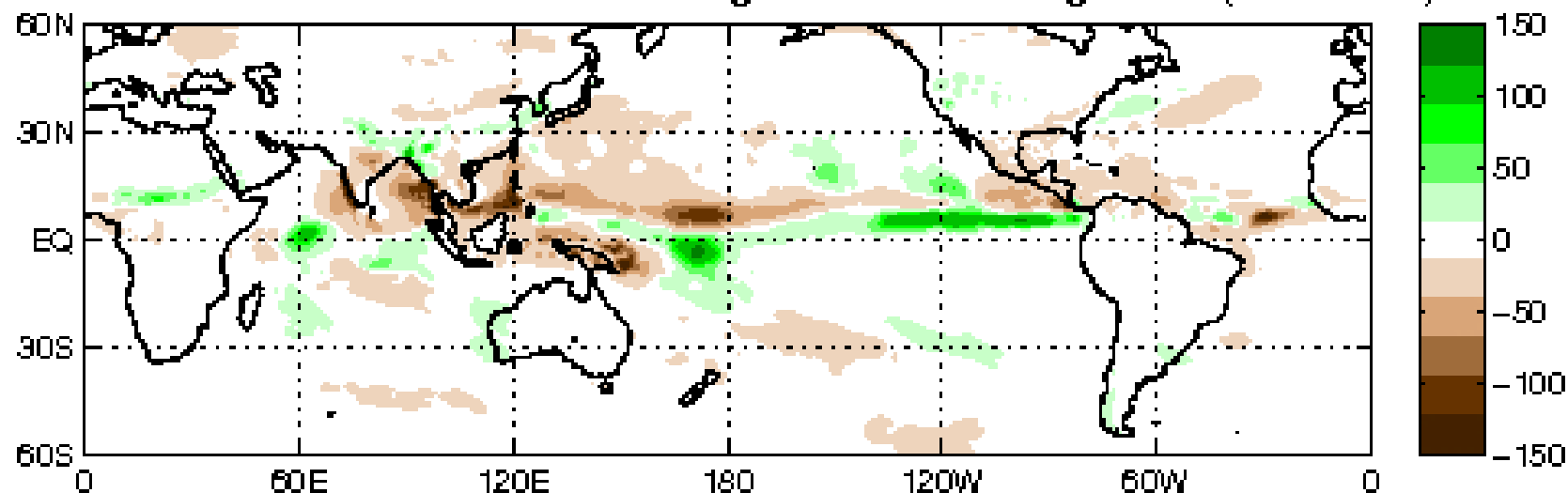
MJO indicated by red lines

Kelvin Wave to impact ePAC.

CFS: Anom. PREC Week: 1: 29-Jul-2015 to 04-Aug-2015 (mm/week)

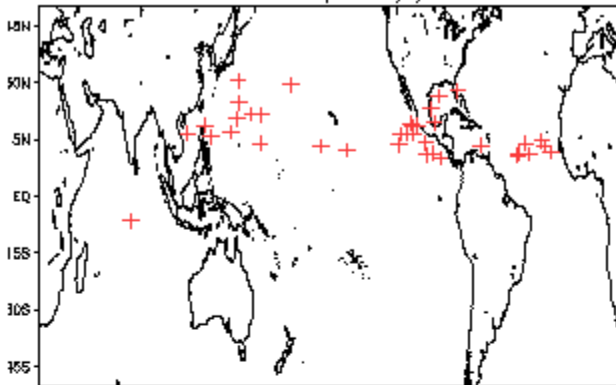


CFS: Anom. PREC Week: 2: 05-Aug-2015 to 11-Aug-2015 (mm/week)

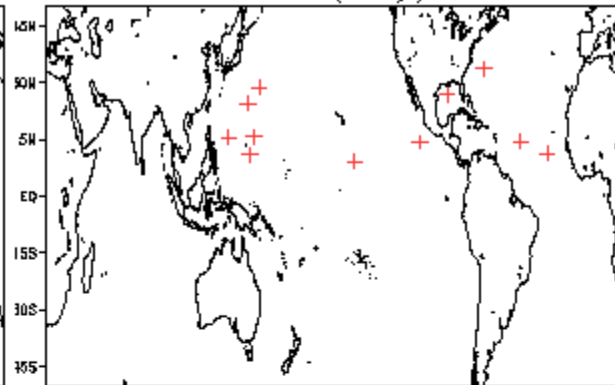


August Tropical Storm Formation by MJO phase

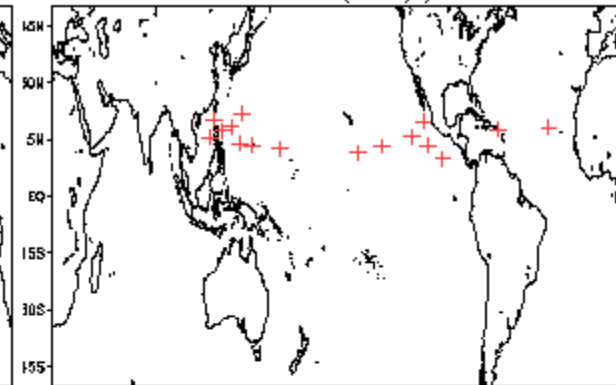
Phase 1 (101 days) 38 storms



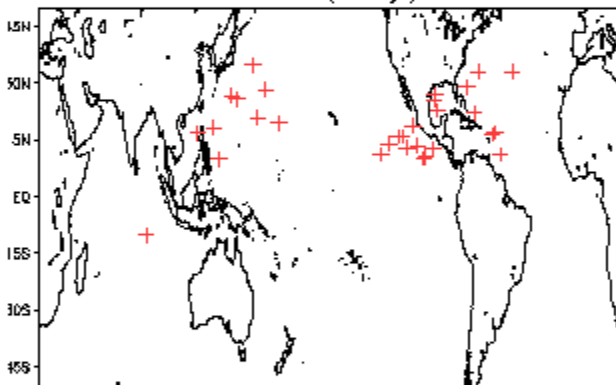
Phase 4 (40 days) 12 storms



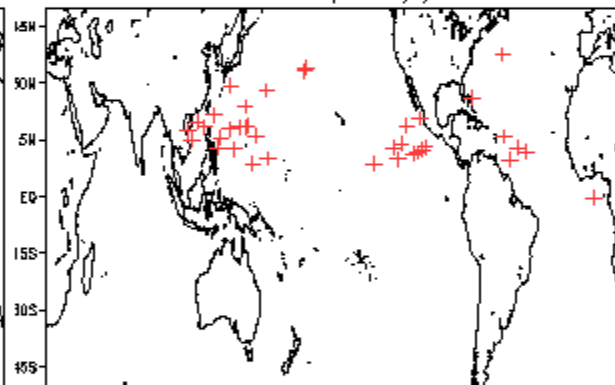
Phase 7 (43 days) 17 storms



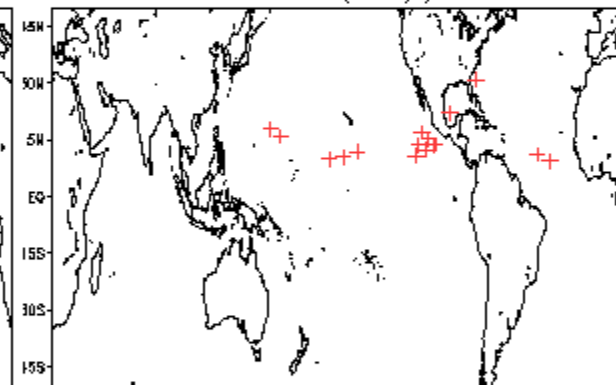
Phase 2 (79 days) 31 storms



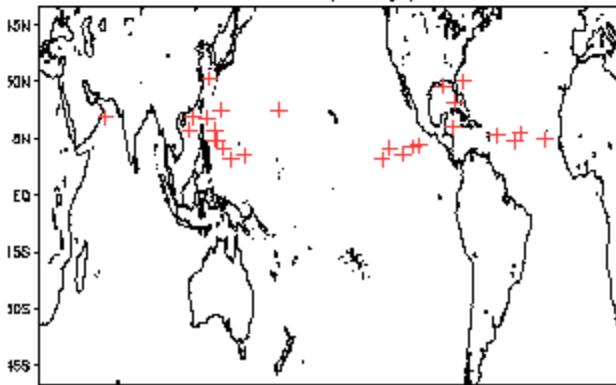
Phase 5 (117 days) 40 storms



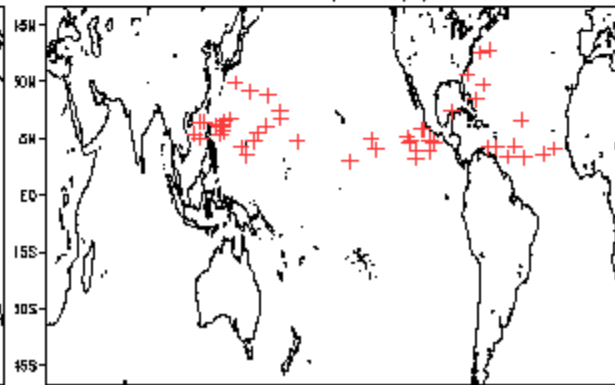
Phase 8 (25 days) 17 storms



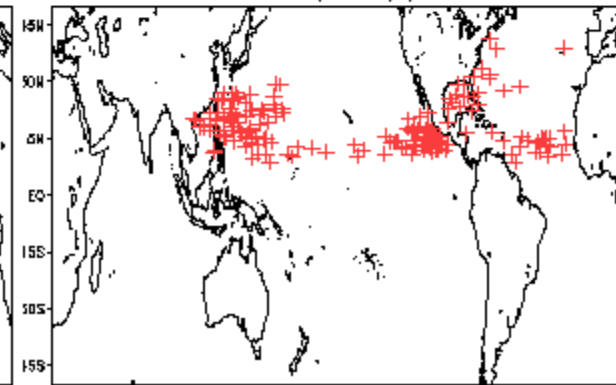
Phase 3 (51 days) 27 storms



Phase 6 (101 days) 50 storms



Null (466 days) 189 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

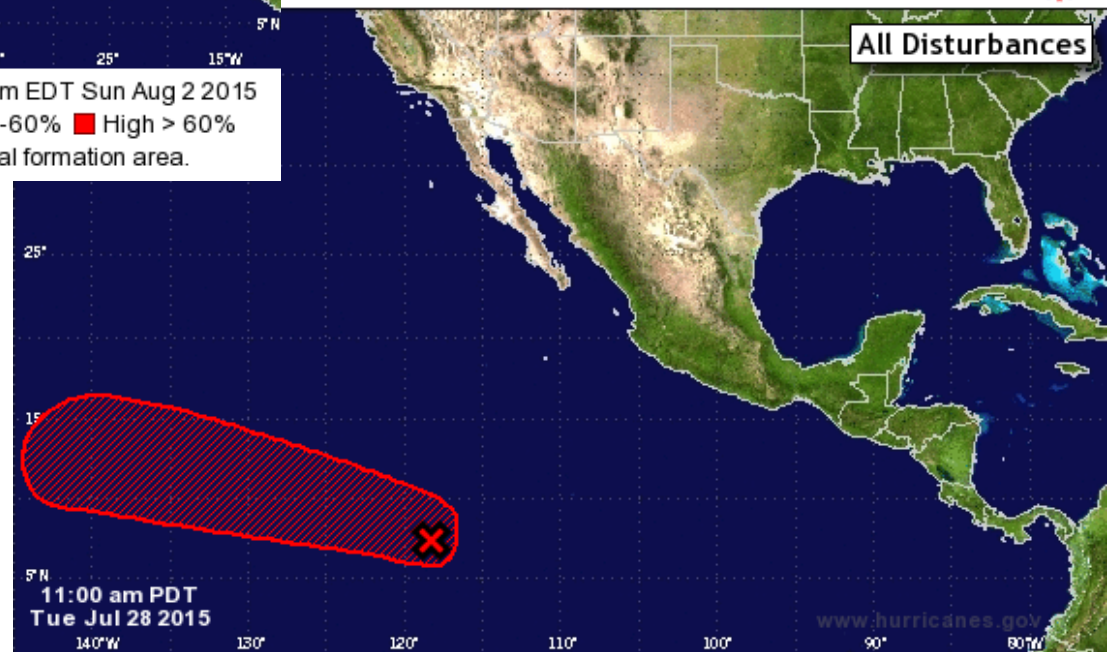


Five-Day Graphical Tropical Weather Outlook

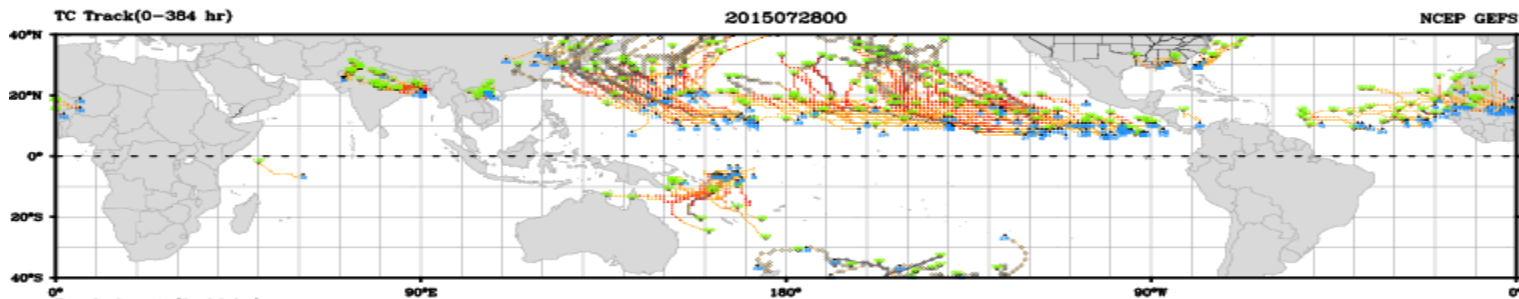
National Hurricane Center Miami, Florida



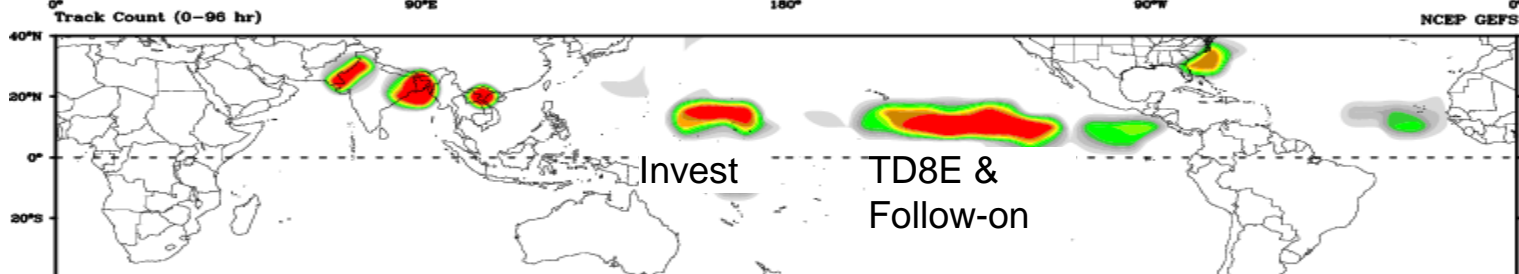
Tropical Cyclone Formation Potential for the 5-Day Period Ending 2:00 pm EDT Sun Aug 2 2015
 Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.



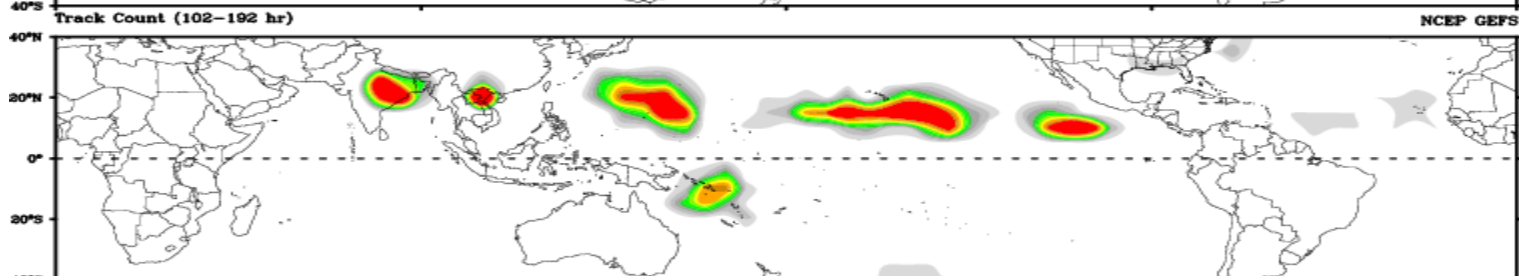
Tropical Cyclone Formation Potential for the 5-Day Period Ending 11:00 am PDT Sun Aug 2 2015
 Chance of Cyclone Formation in 5 Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.



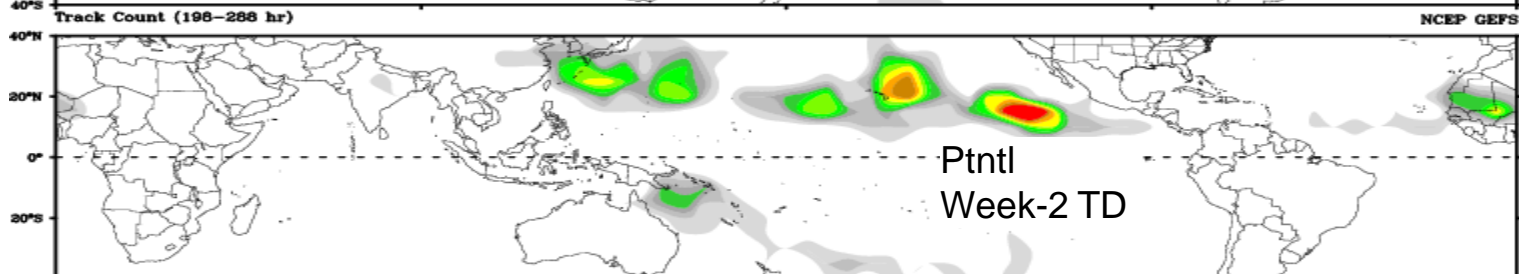
Days 1-4



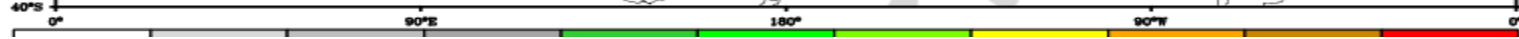
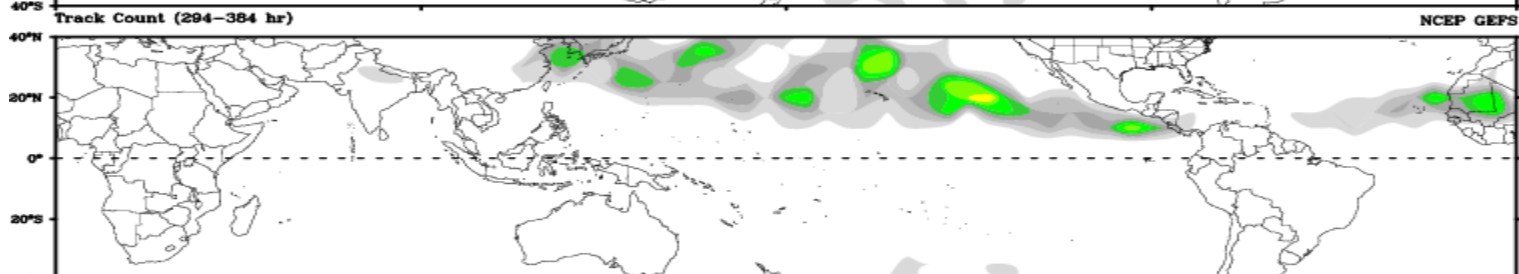
Day 5-8



Day 9-12



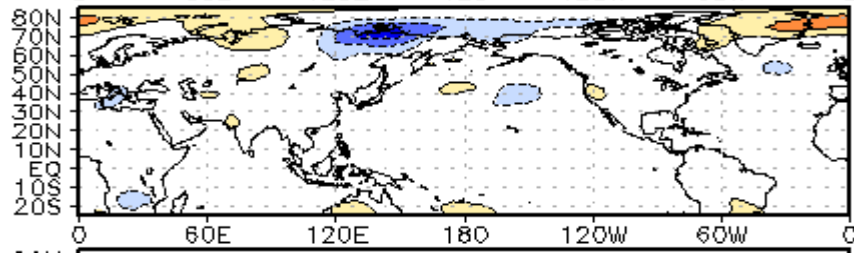
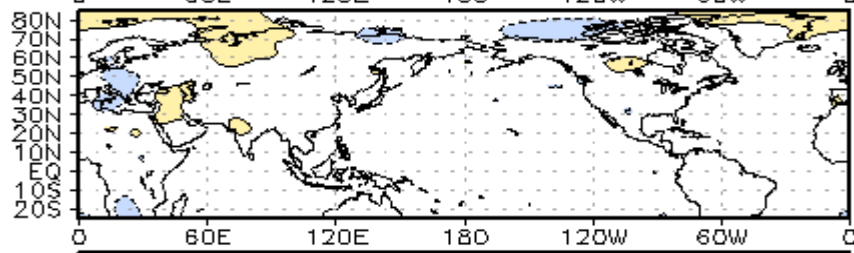
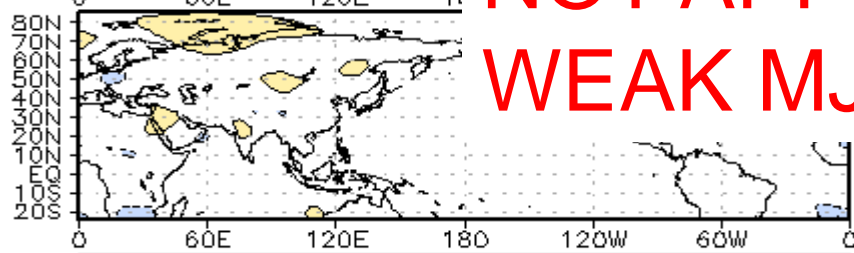
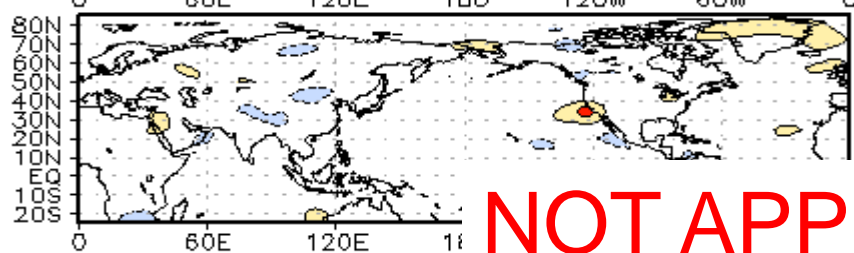
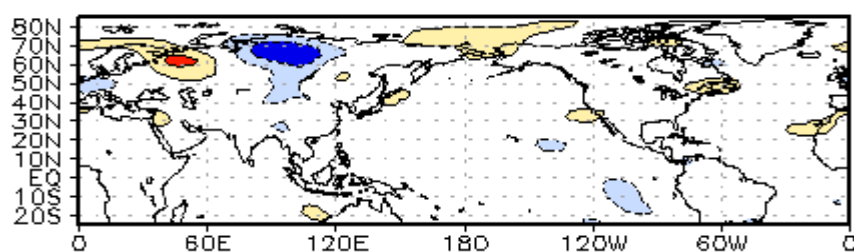
Day 13-15



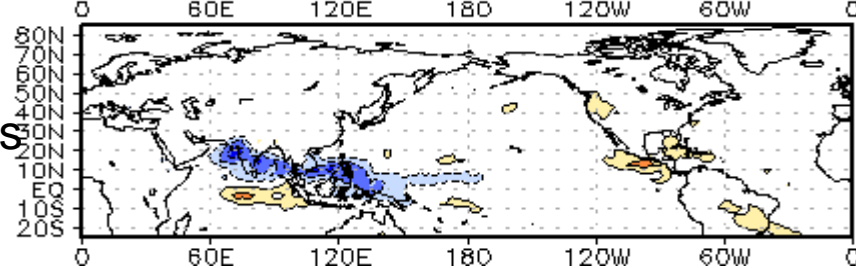
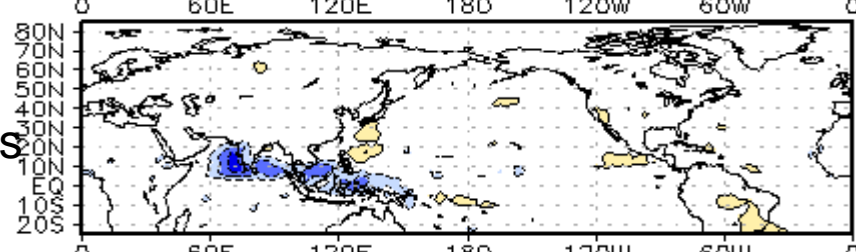
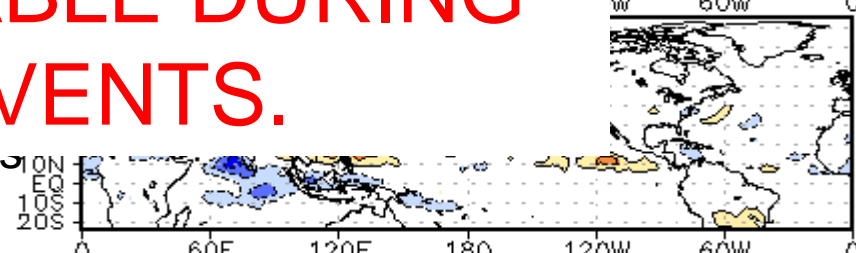
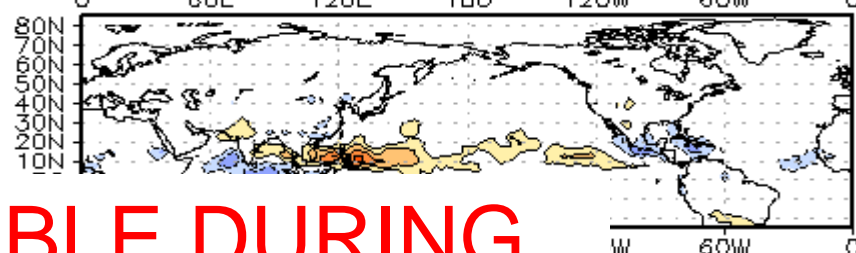
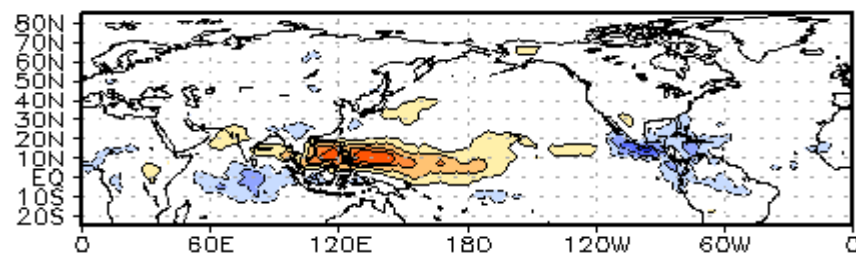
Connections to U.S. Impacts

Lagged composites from MJO 5-day intervals

WHMJO Phase 1 t850 Lagged Composite (jas)



WHMJO Phase 1 air Lagged Composite (jas)



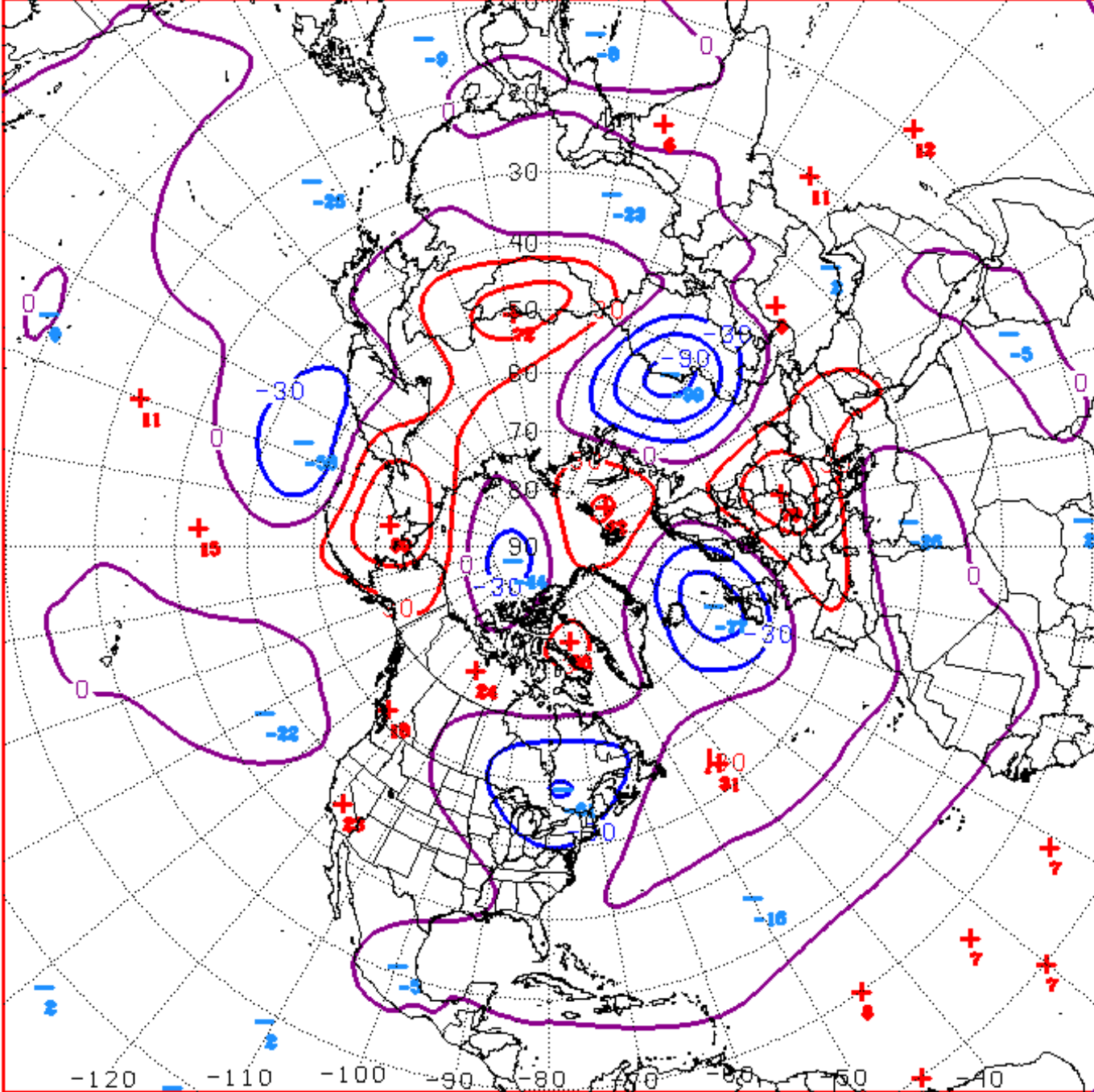
+5-day

+10-days

+15-days

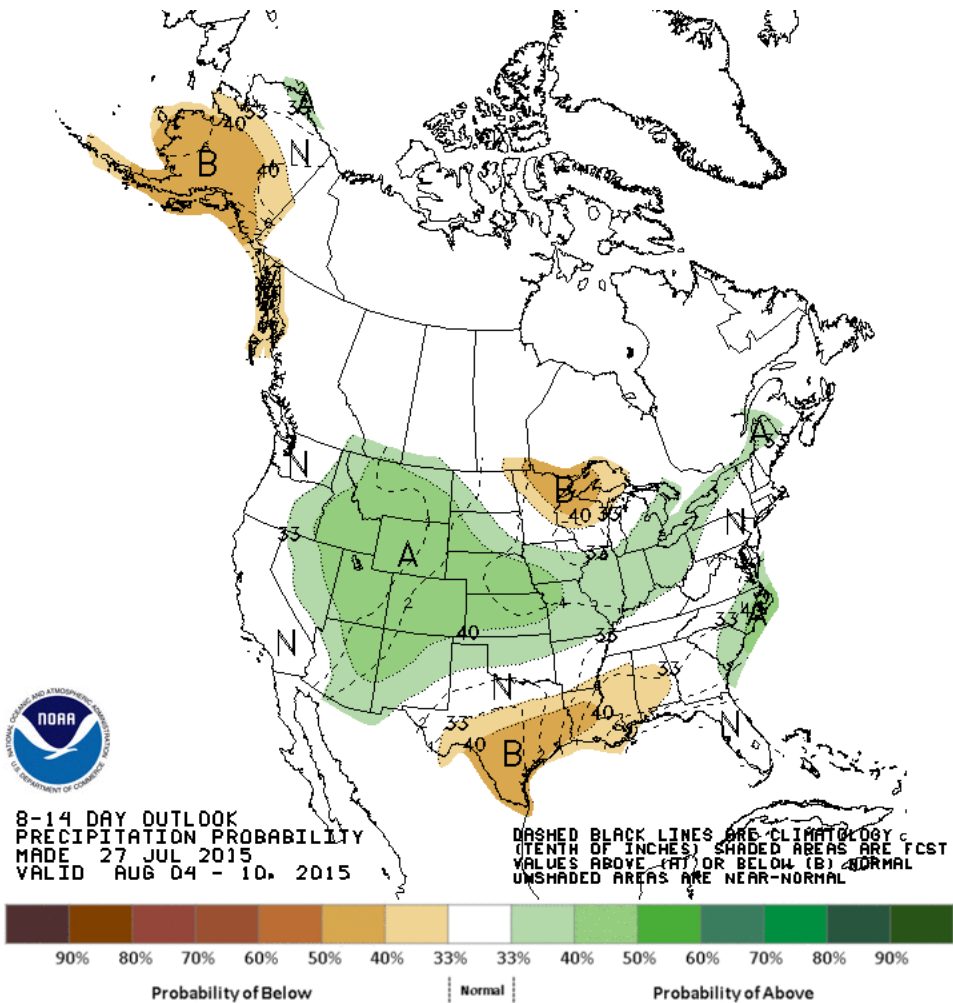
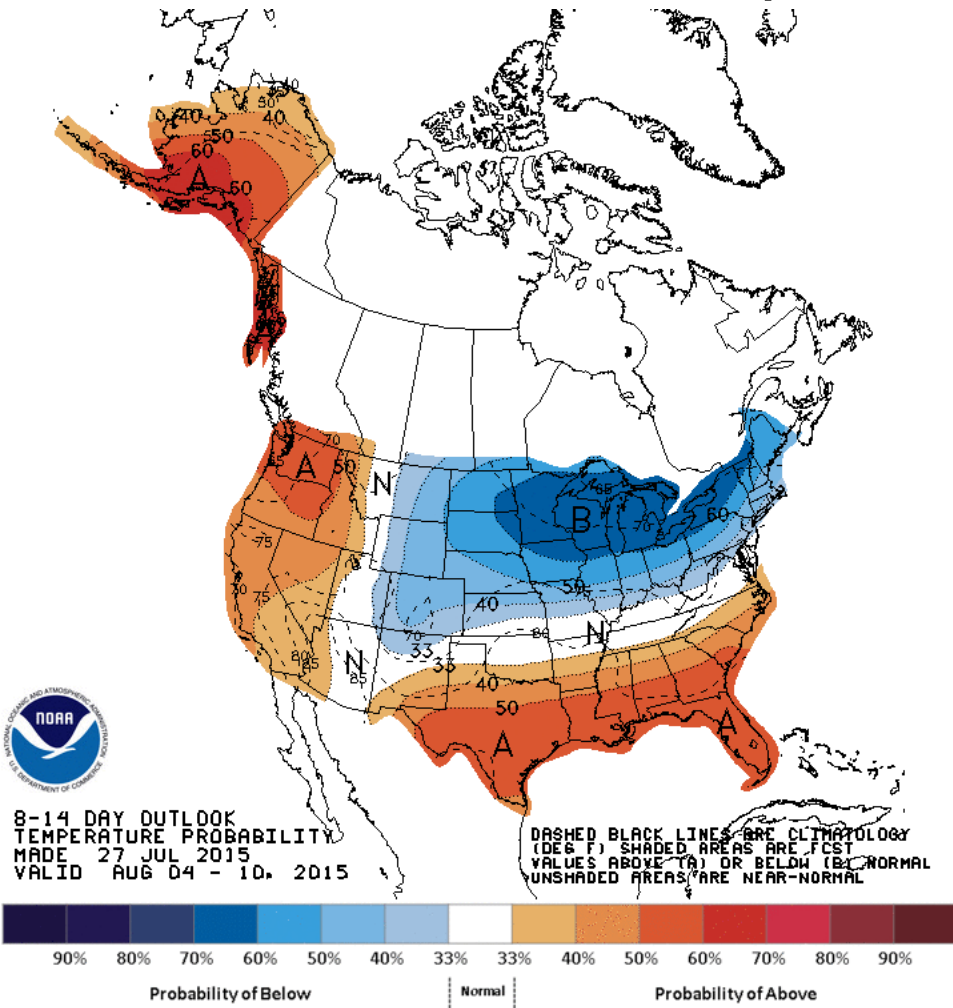
+20-days

NOT APPLICABLE DURING WEAK MJO EVENTS.



D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JUL 28 2015 1020 UTC CNTD AUG 08 2015

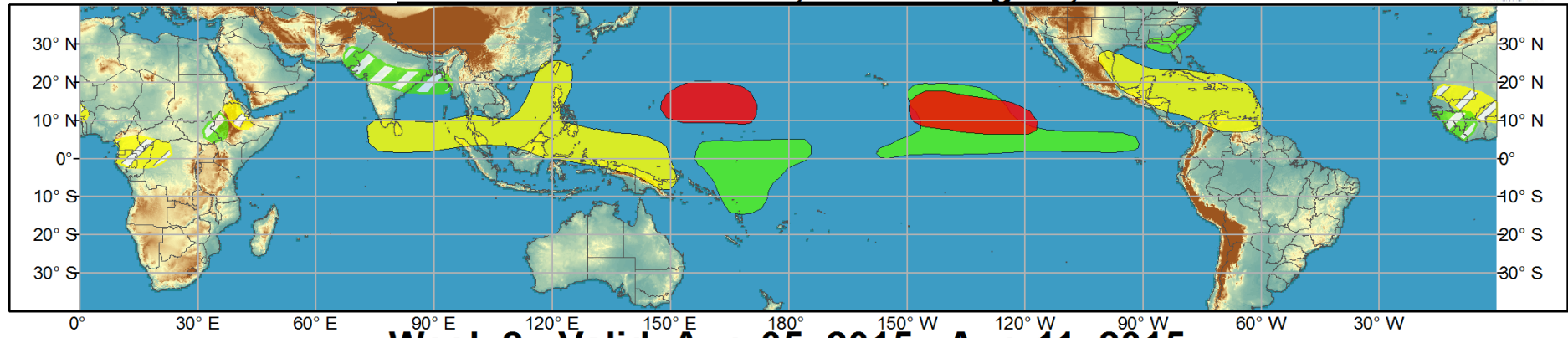
Week 2 – Temperature and Precipitation



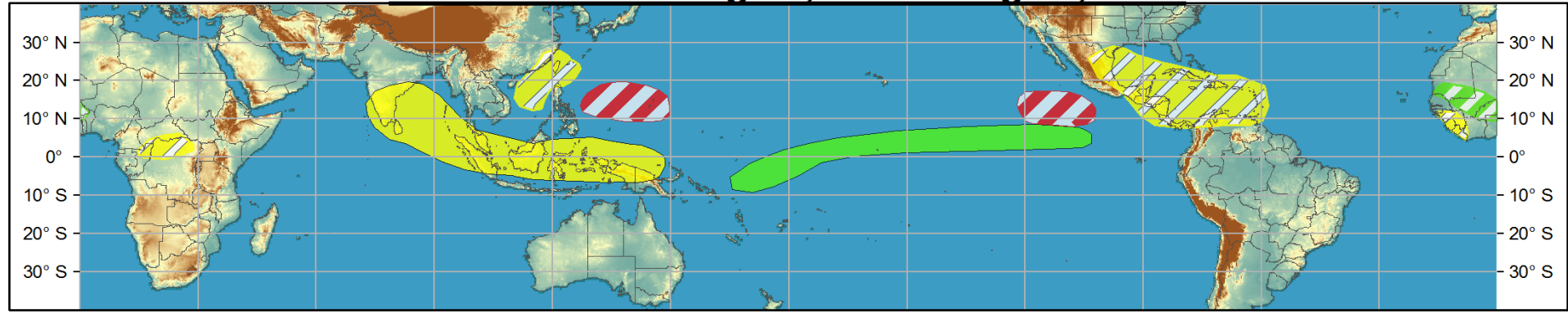


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