Global Tropics Hazards And Benefits Outlook

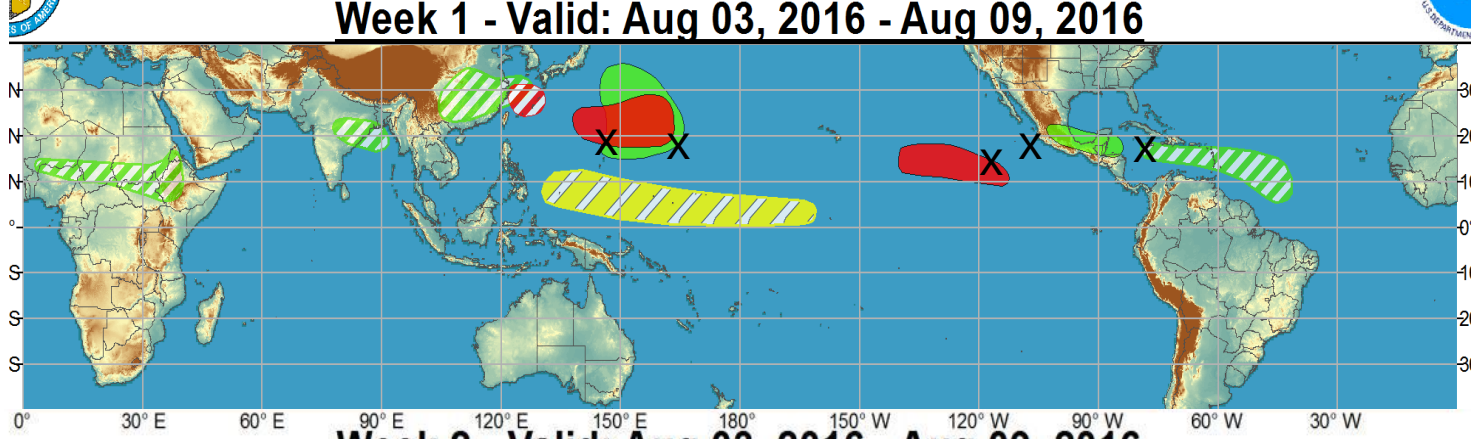
August 9, 2016

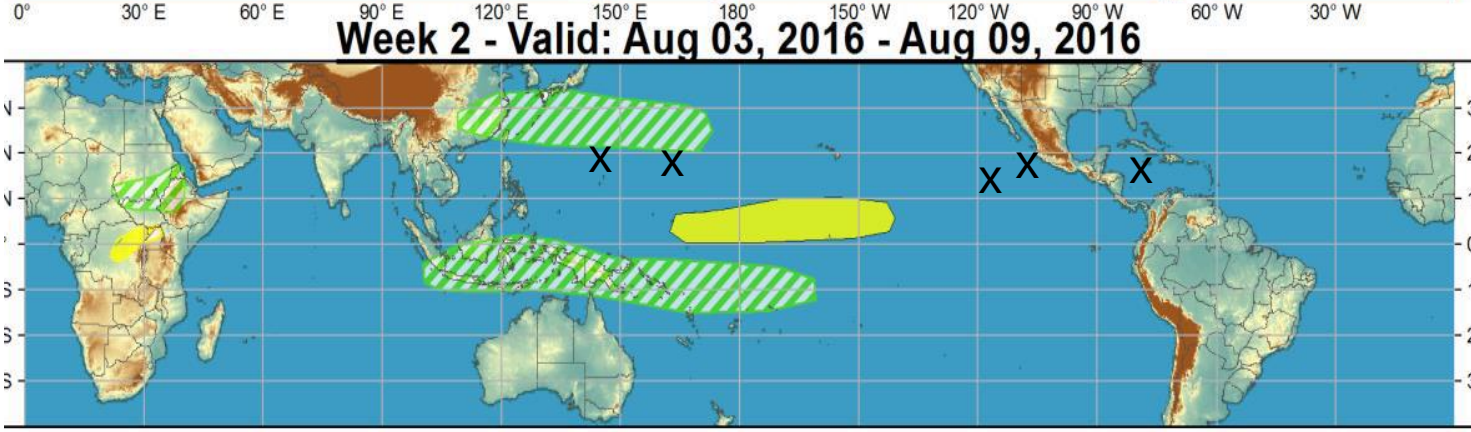
Matthew Rosencrans

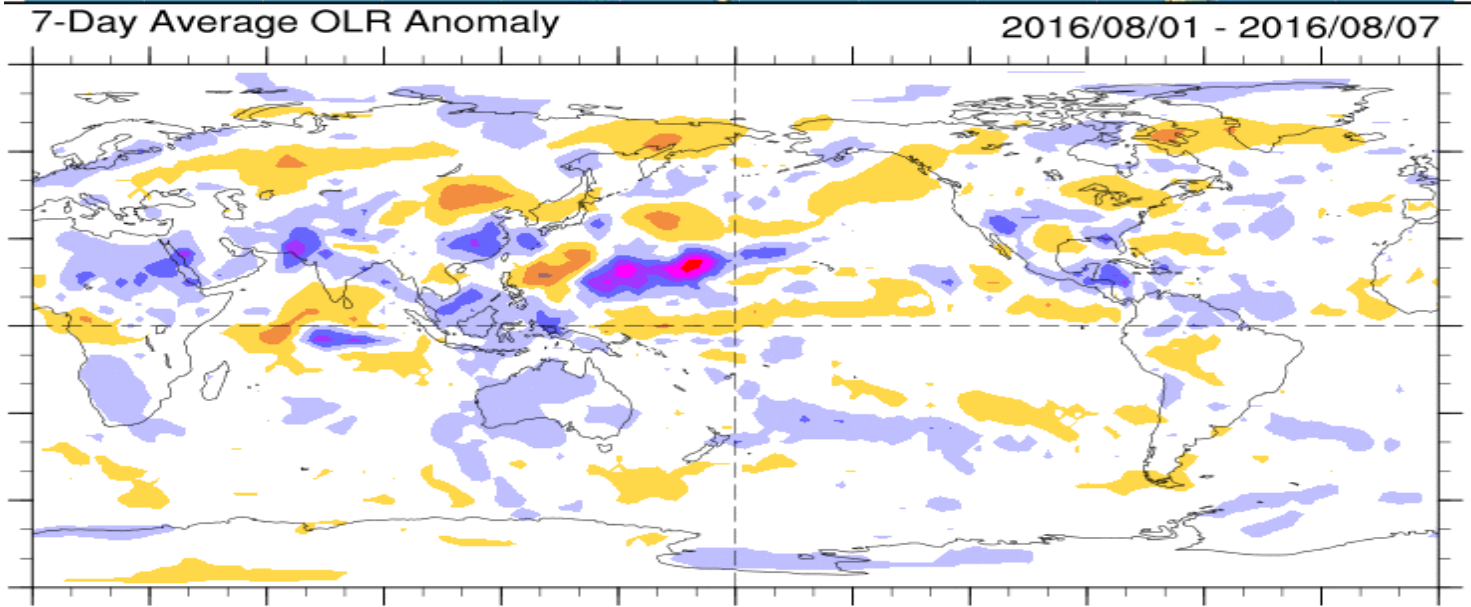
Outline

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

Outlook Review



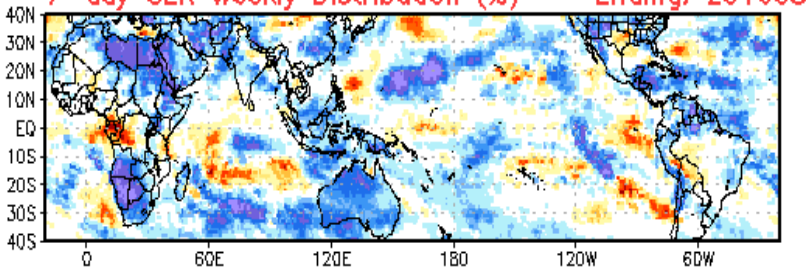


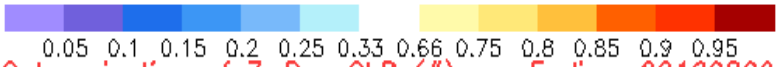


Cool shading
More clouds/rain

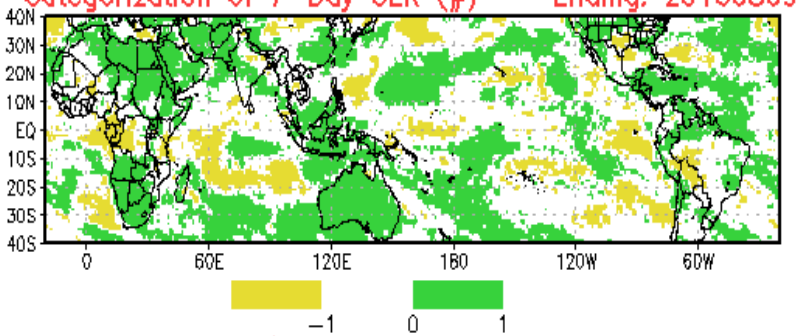
Warm shading
Less clouds/rain

7-day OLR Weekly Distribution (%) -- Ending: 20160809

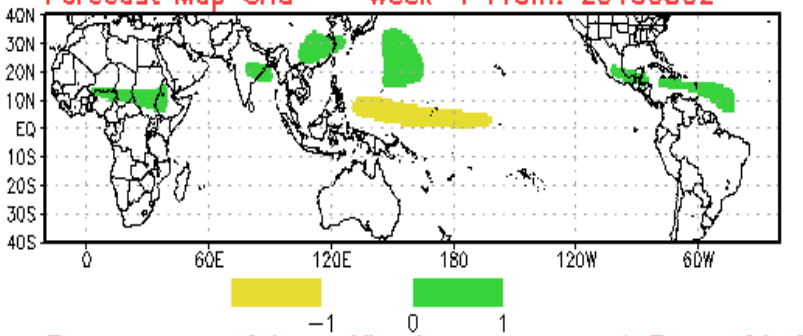




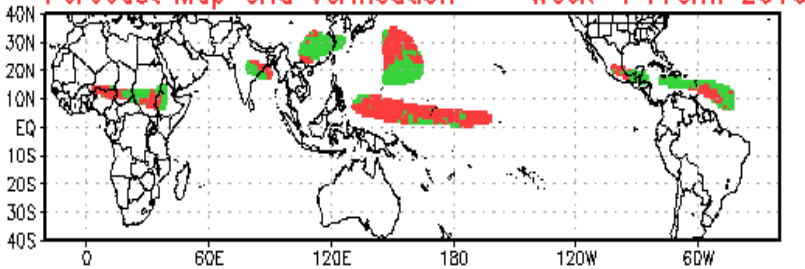
Categorization of 7-Day OLR (#) -- Ending: 20160809



Forecast Map Grid -- Week-1 From: 20160802

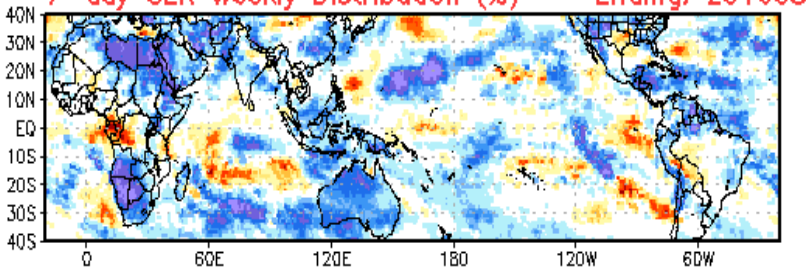


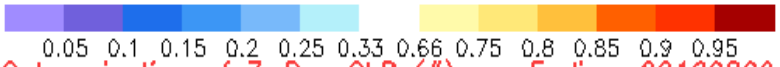
Forecast Map Grid Verification -- Week-1 From: 20160802



Hit: Green, Miss: Red
Heidke Skill Score: 20.7929

7-day OLR Weekly Distribution (%) -- Ending: 20160809





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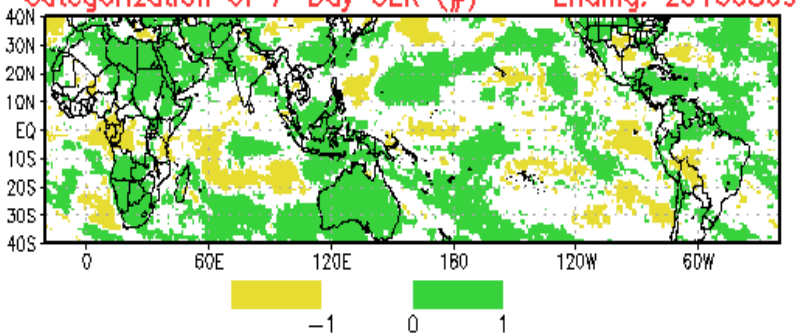
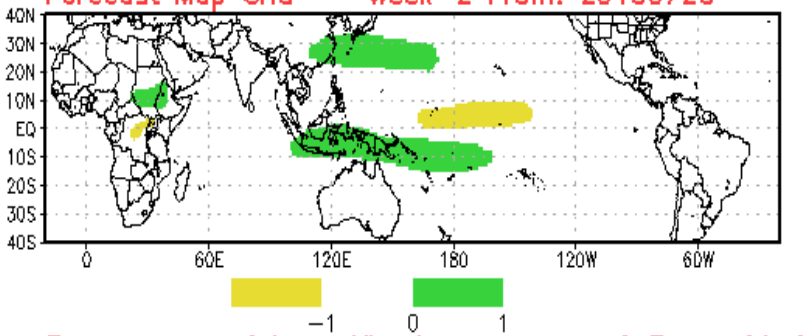
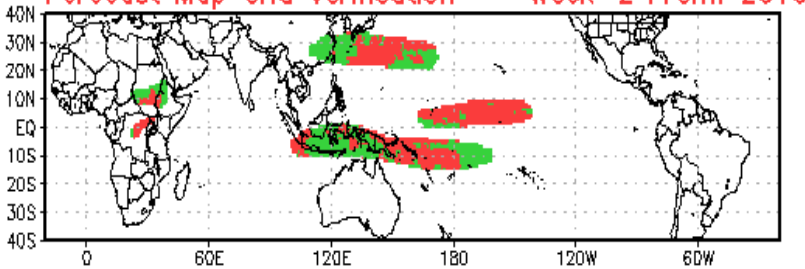


Forecast Map Grid -- Week-2 From: 20160726



Forecast Map Grid Verification -- Week-2 From: 20160726



Hit: Green, Miss: Red
Heidke Skill Score: 18.3478

Synopsis of Climate Modes

ENSO:

- **La Niña Watch**

La Niña is favored to develop during August - October 2016, with about a 55-60% chance of La Niña during the fall and winter 2016-17.

MJO and other subseasonal tropical variability:

- Emerging MJO over Maritime Continent/Western Pacific

- Dynamical models indicate strengthening, in place, for most models. Divergence about which mode dominates, Rossby Wave (westward propagation) or MJO (eastward propagation)

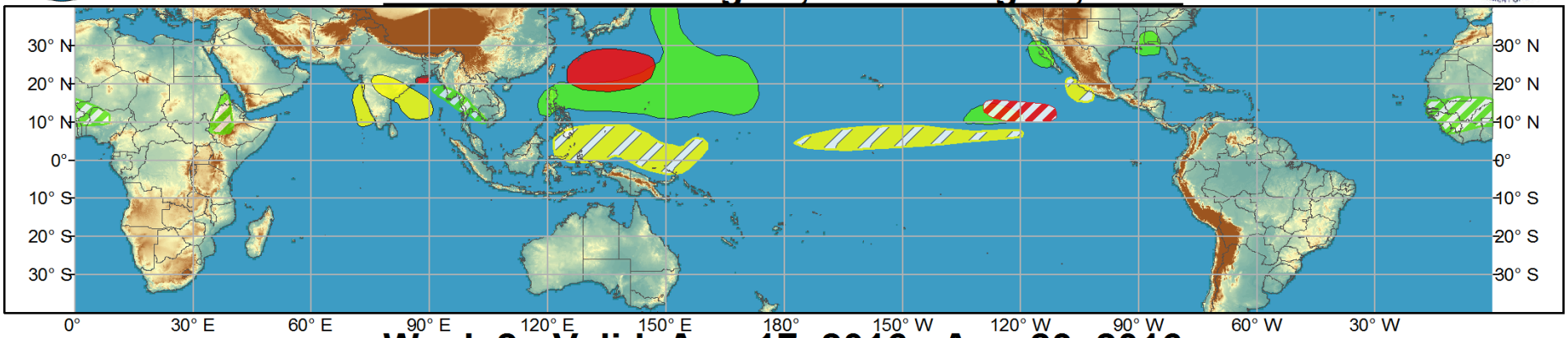
- Kelvin waves also influencing the pattern.

Extratropics:

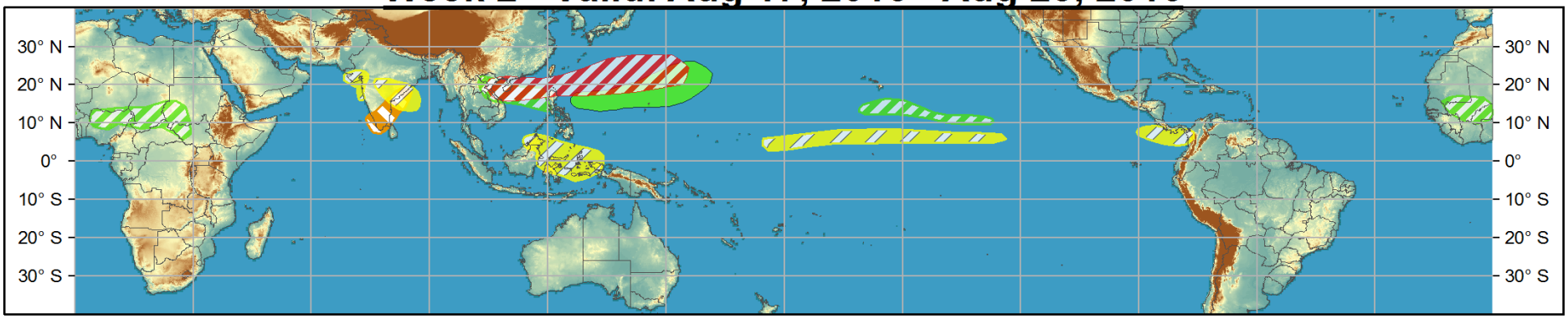
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO.

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 10, 2016 - Aug 16, 2016



Week 2 - Valid: Aug 17, 2016 - Aug 23, 2016



Produced: 08/09/2016

Forecaster: Rosencrans

	Confidence: High	Confidence: 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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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.

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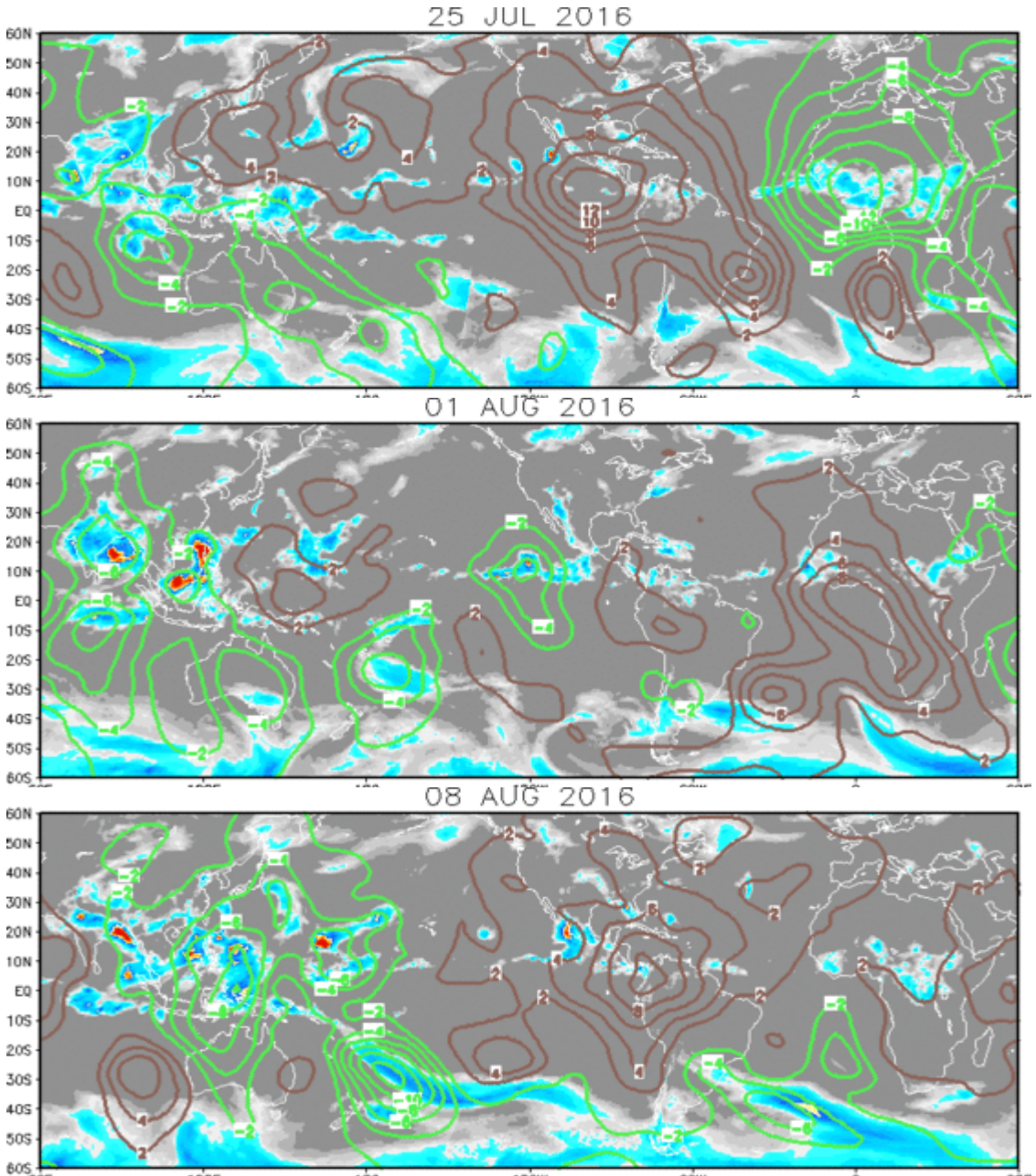
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

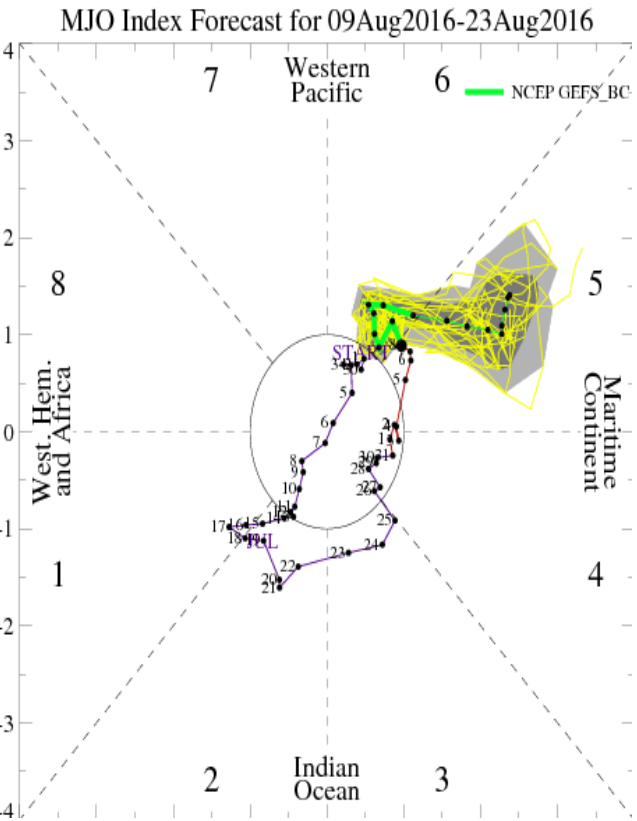
Wave-2 pattern, enhancement over the Americas

Breakdown of the signal into higher wavenumber modes.

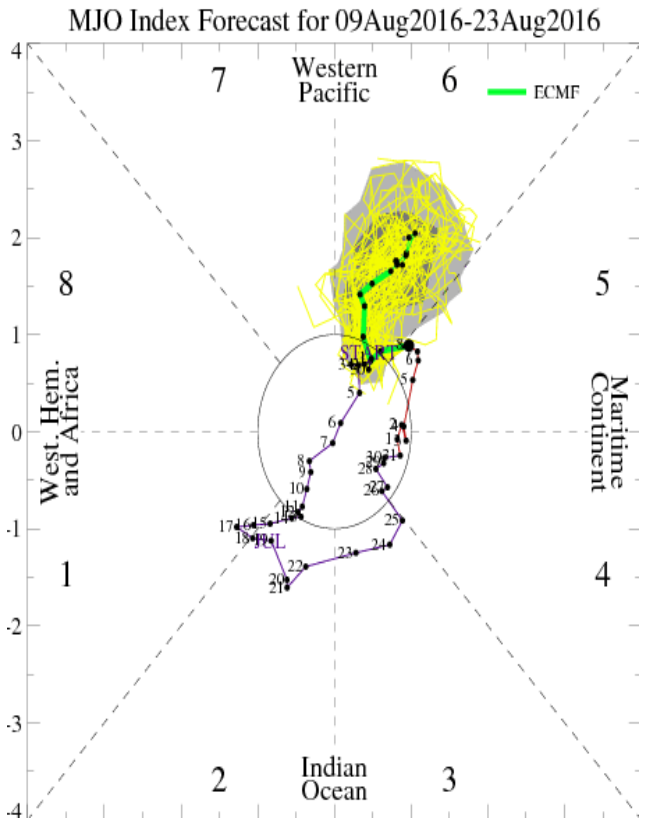
Still a Wave-2 pattern, but seeming to coalesce around enhanced divergence over Africa and convergence over the West Pacific



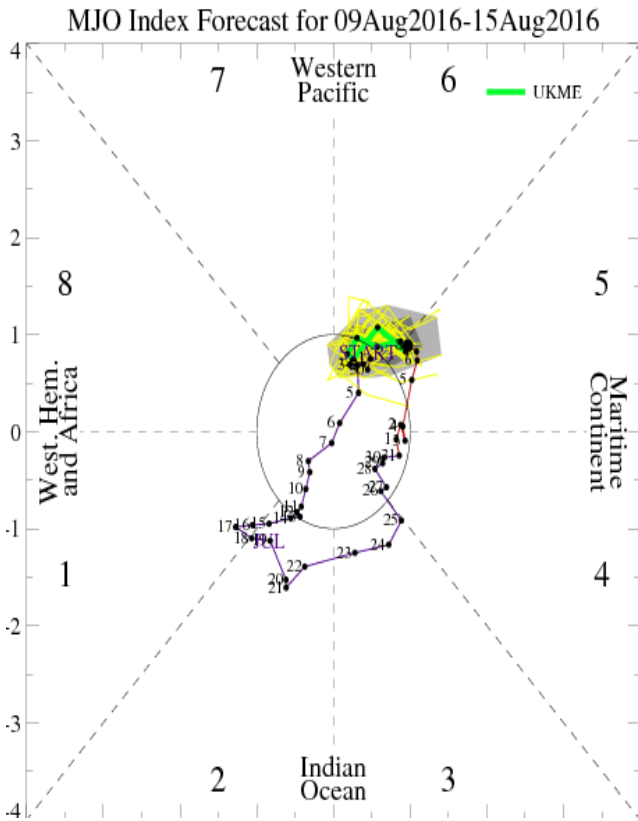
MJO Observation/Forecast



GEFS



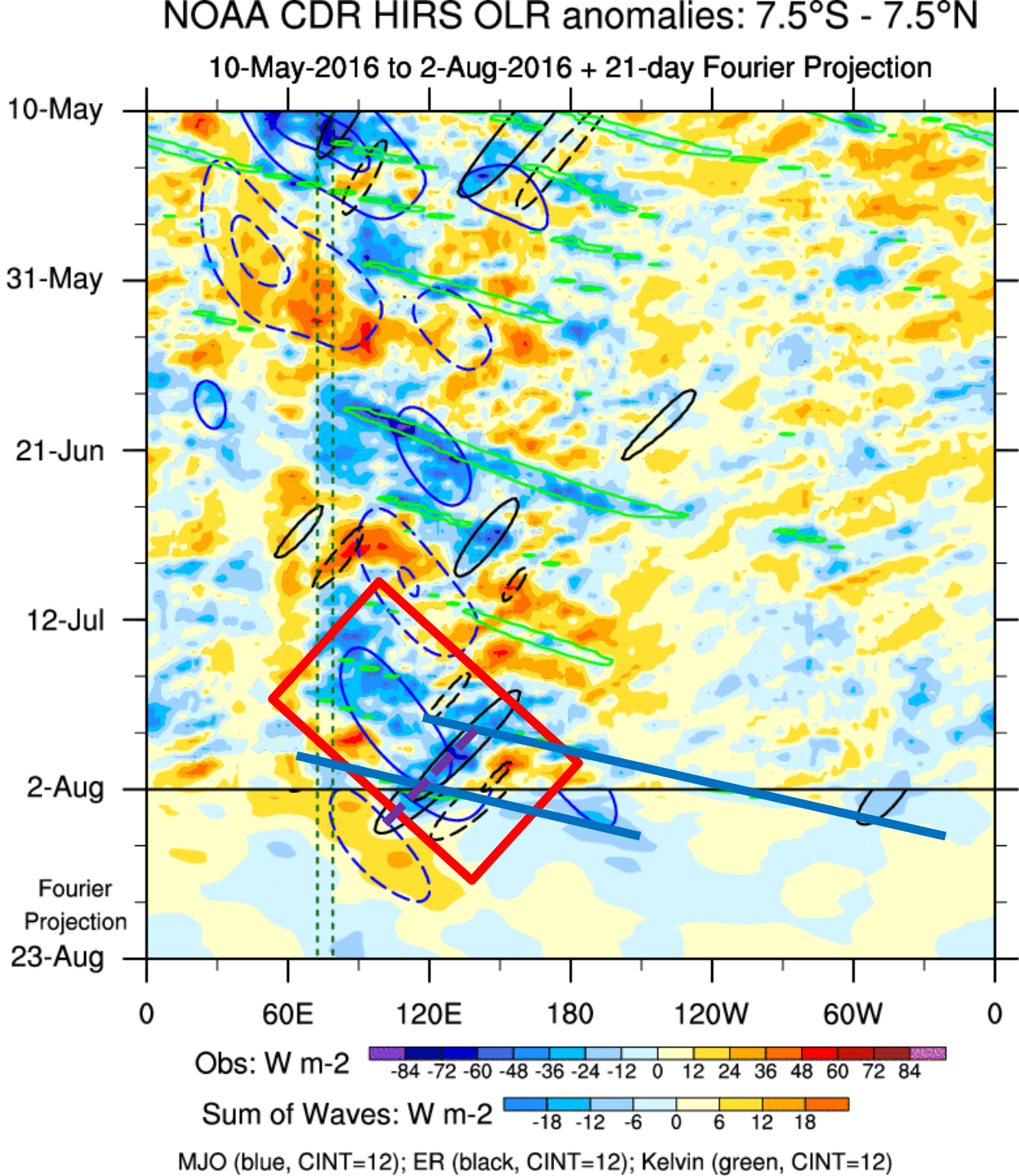
ECMWF

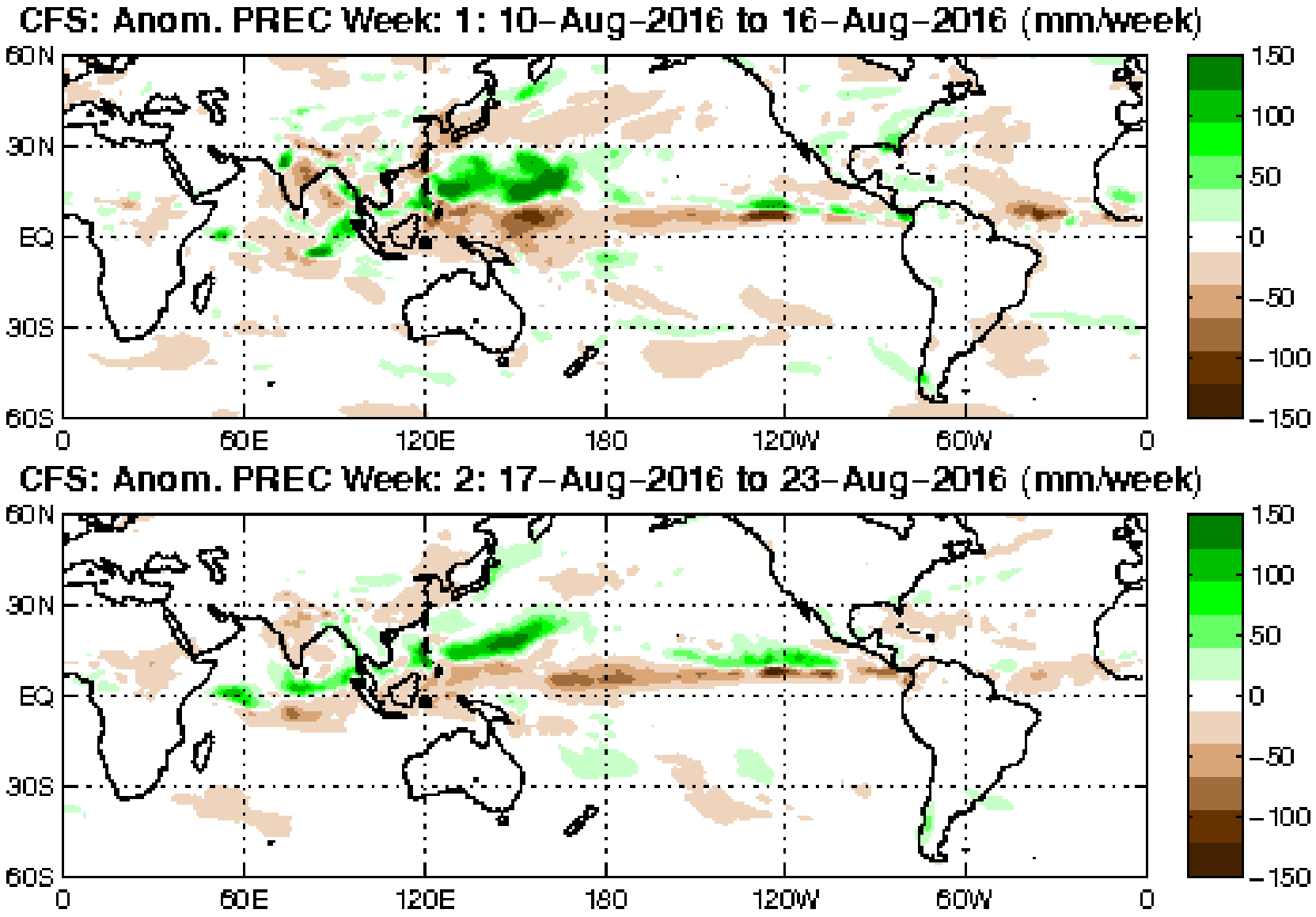


UKMET

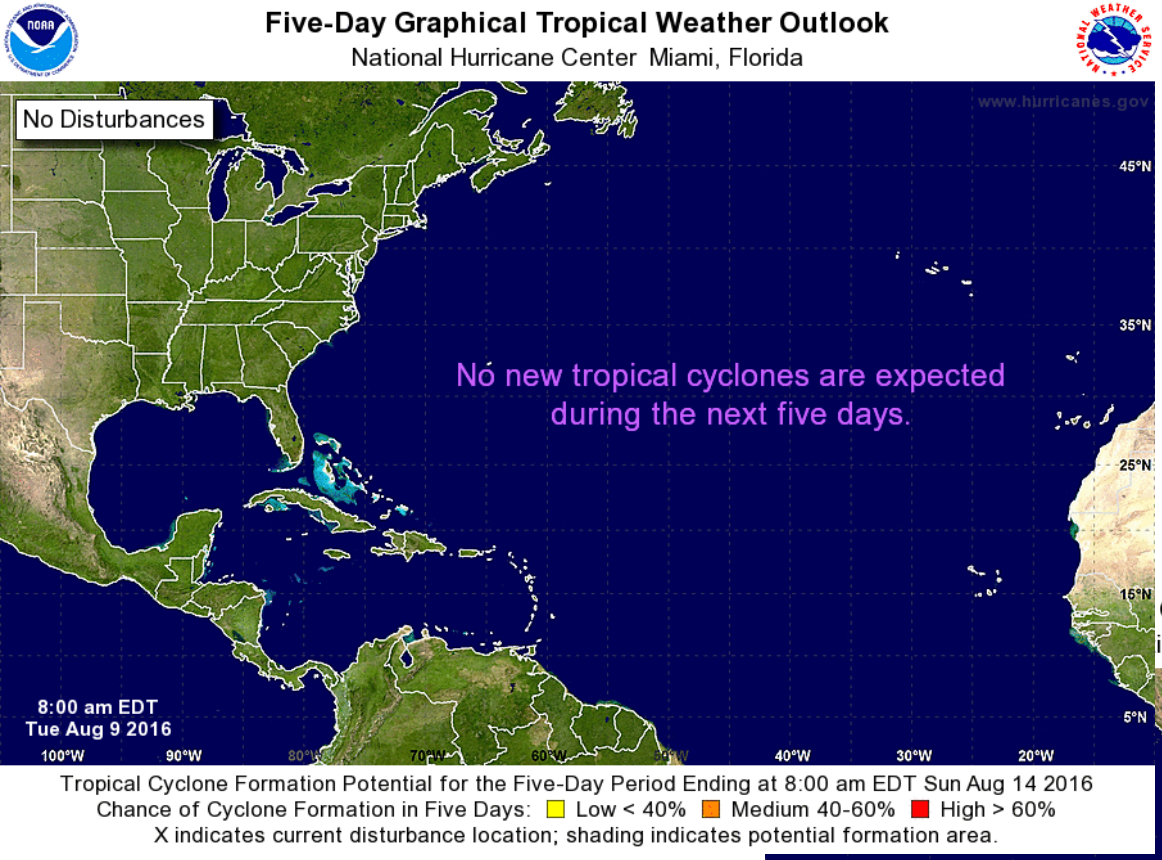
Wheeler-Hendon based analyses of model forecasts indicate a continued signal for Week-1, with some models indicating strengthening of a stagnant signal.
Uncertainty is high this week relative to prior weeks due to the model disagreement.

Complicated pattern with **MJO, Kelvin, and Rossby** waves influencing the pattern.

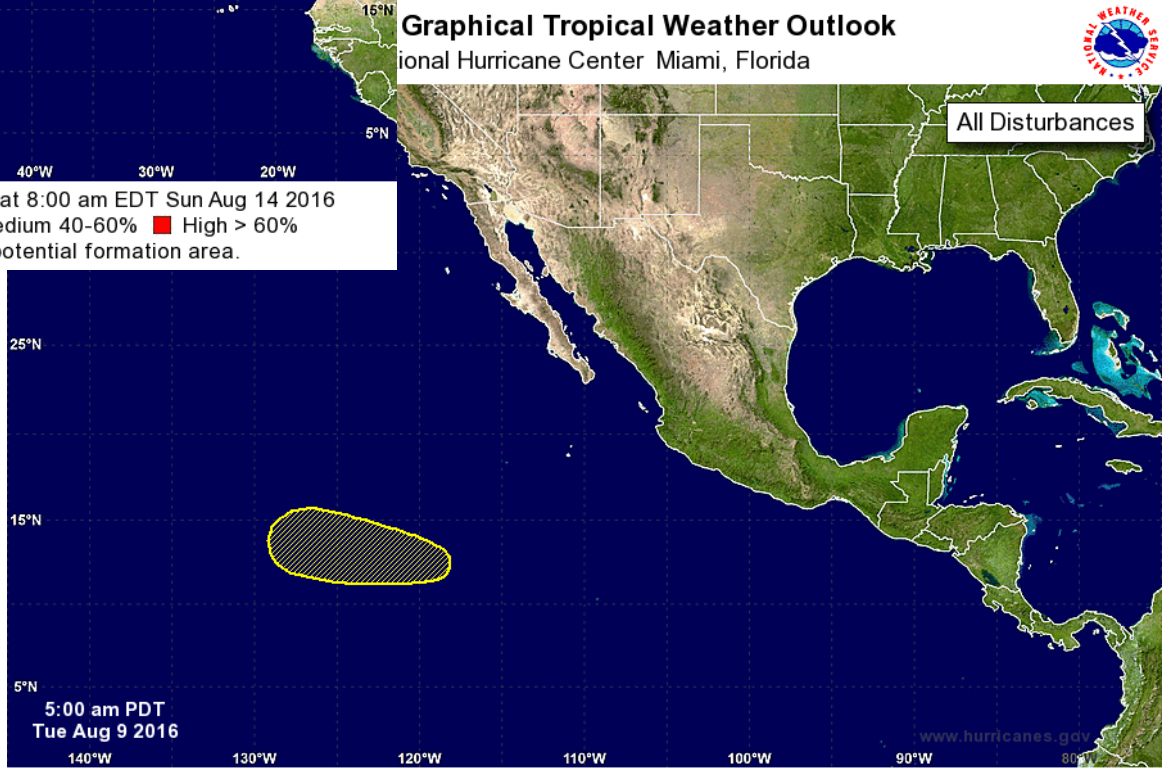



CFS: Anom. PREC Week: 1: 10-Aug-2016 to 16-Aug-2016 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150
CFS: Anom. PREC Week: 2: 17-Aug-2016 to 23-Aug-2016 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150

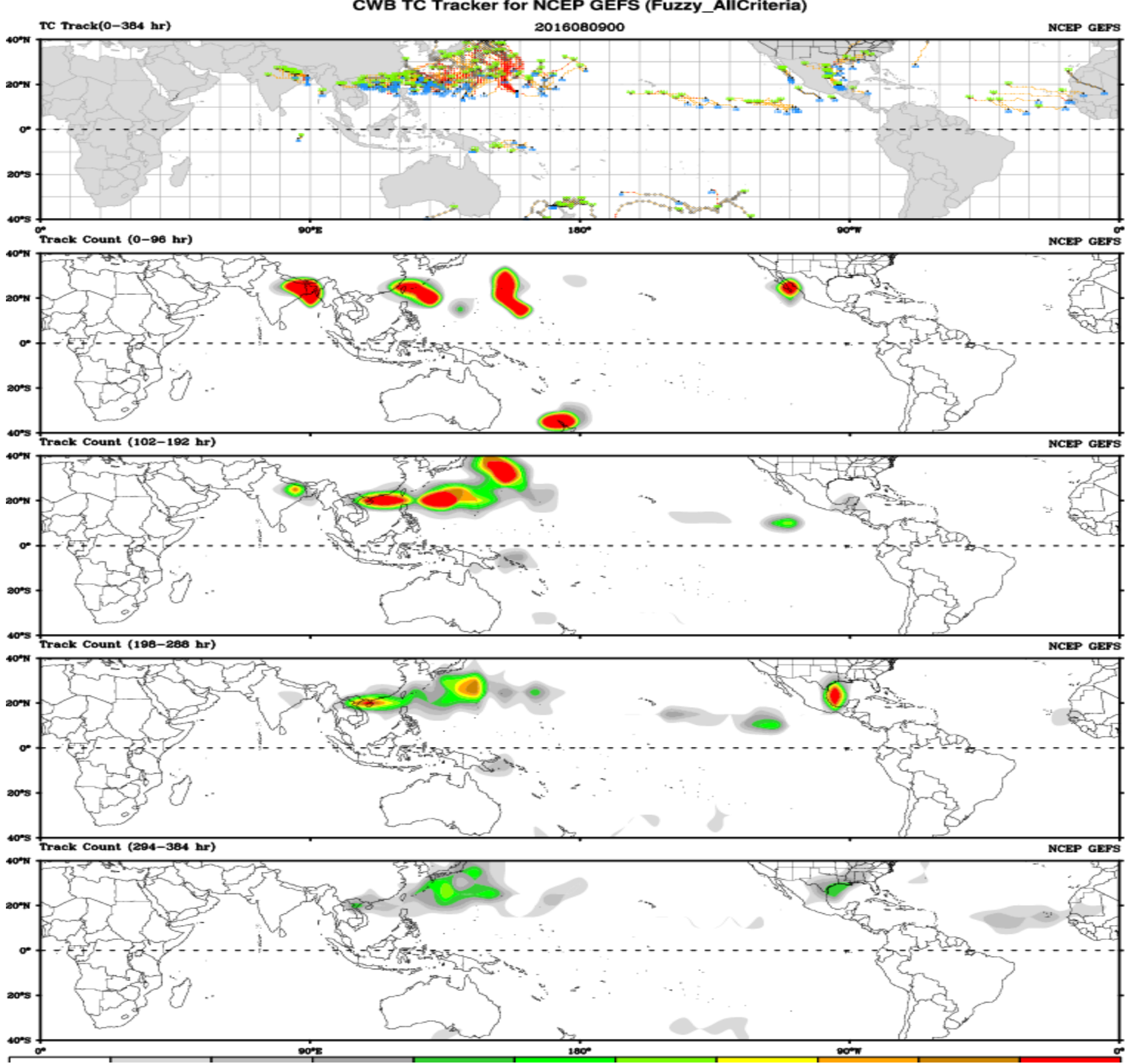
Graphical Tropical Weather Outlooks



Tropical Cyclone Formation Potential for the Five-Day Period Ending at 8:00 am EDT Sun Aug 14 2016
Chance of Cyclone Formation in Five Days: Low < 40% Medium 40-60% High > 60%
X indicates current disturbance location; shading indicates potential formation area.



Tropical Cyclone Formation Potential for the Five-Day Period Ending at 5:00 am PDT Sun Aug 14 2016
Chance of Cyclone Formation in Five Days: Low < 40% Medium 40-60% High > 60%
X indicates current disturbance location; shading indicates potential formation area.



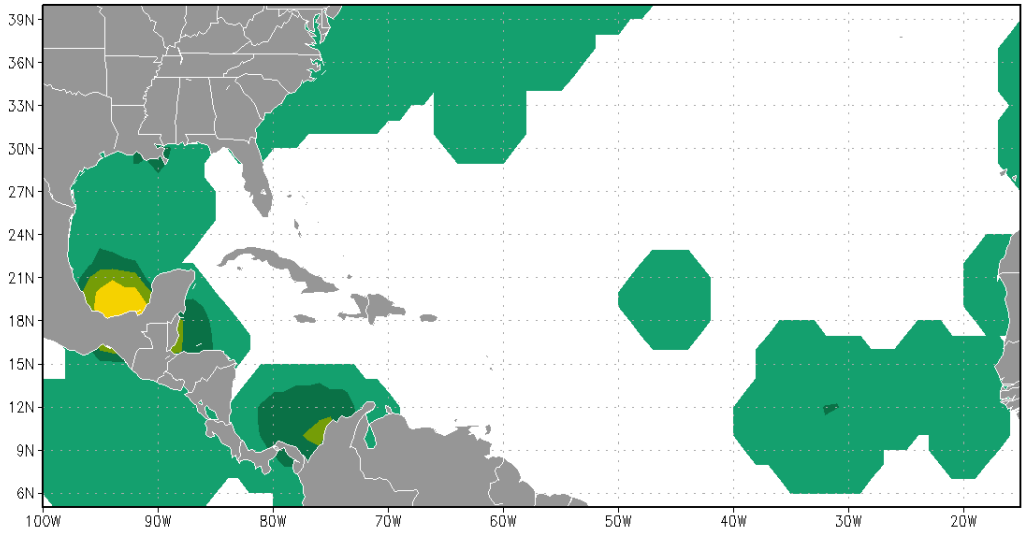
Days 1-4

Day 5-8

Day 9-12

Day 13-15

Ensemble-based Probability (%) of TC genesis
using these global ensembles: NCEP CMC ECMWF
For forecasts during the 120-240h period from initial time = 2016080900



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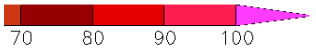
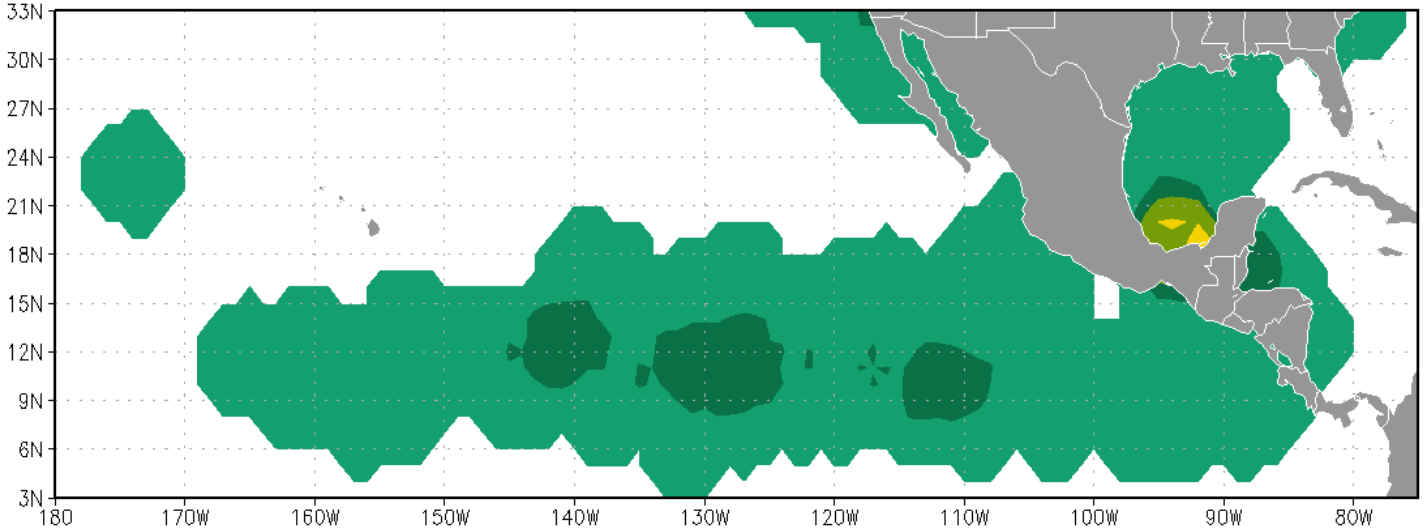


NOAA/GFDL



Ensemble-based Probability (%) of TC genesis
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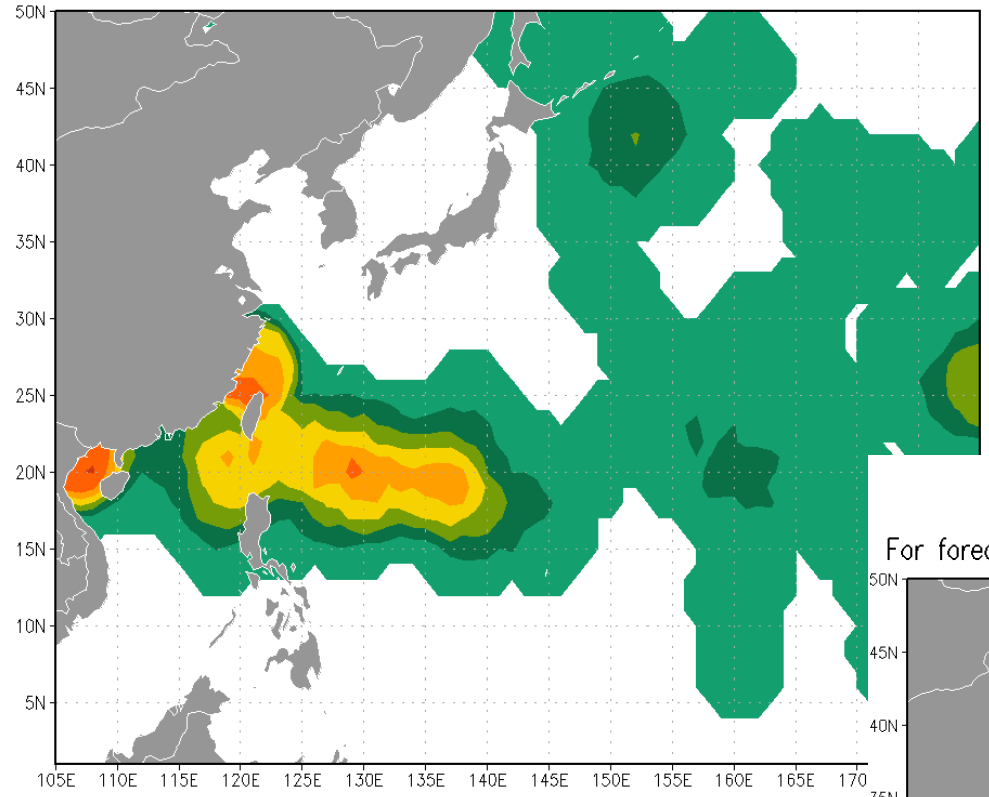
For forecasts during the 00-120h period from initial time = 2016080900



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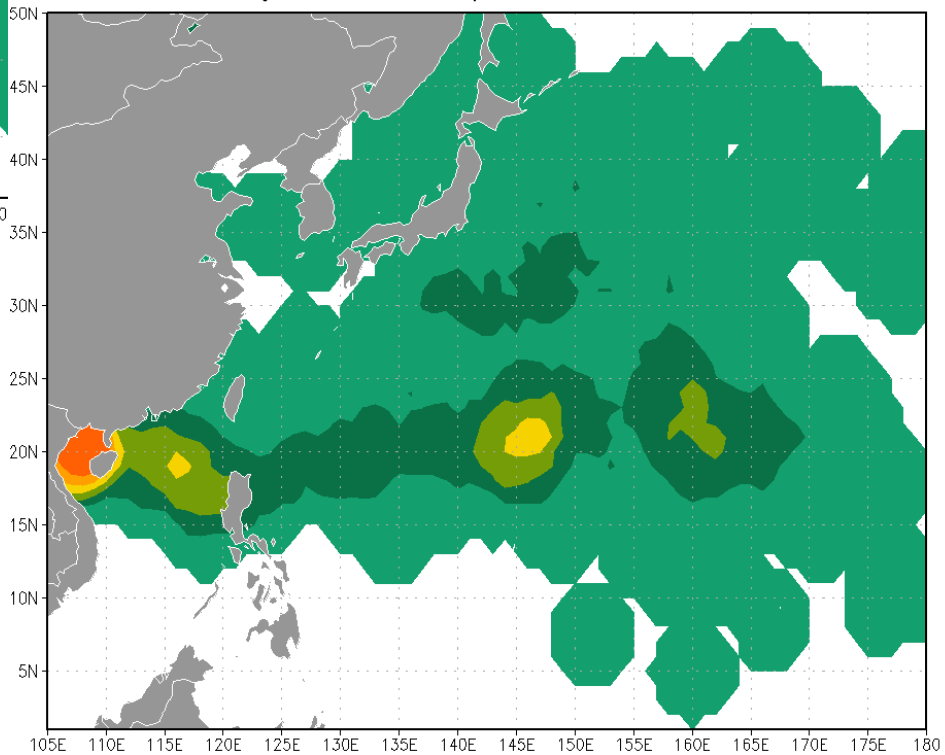

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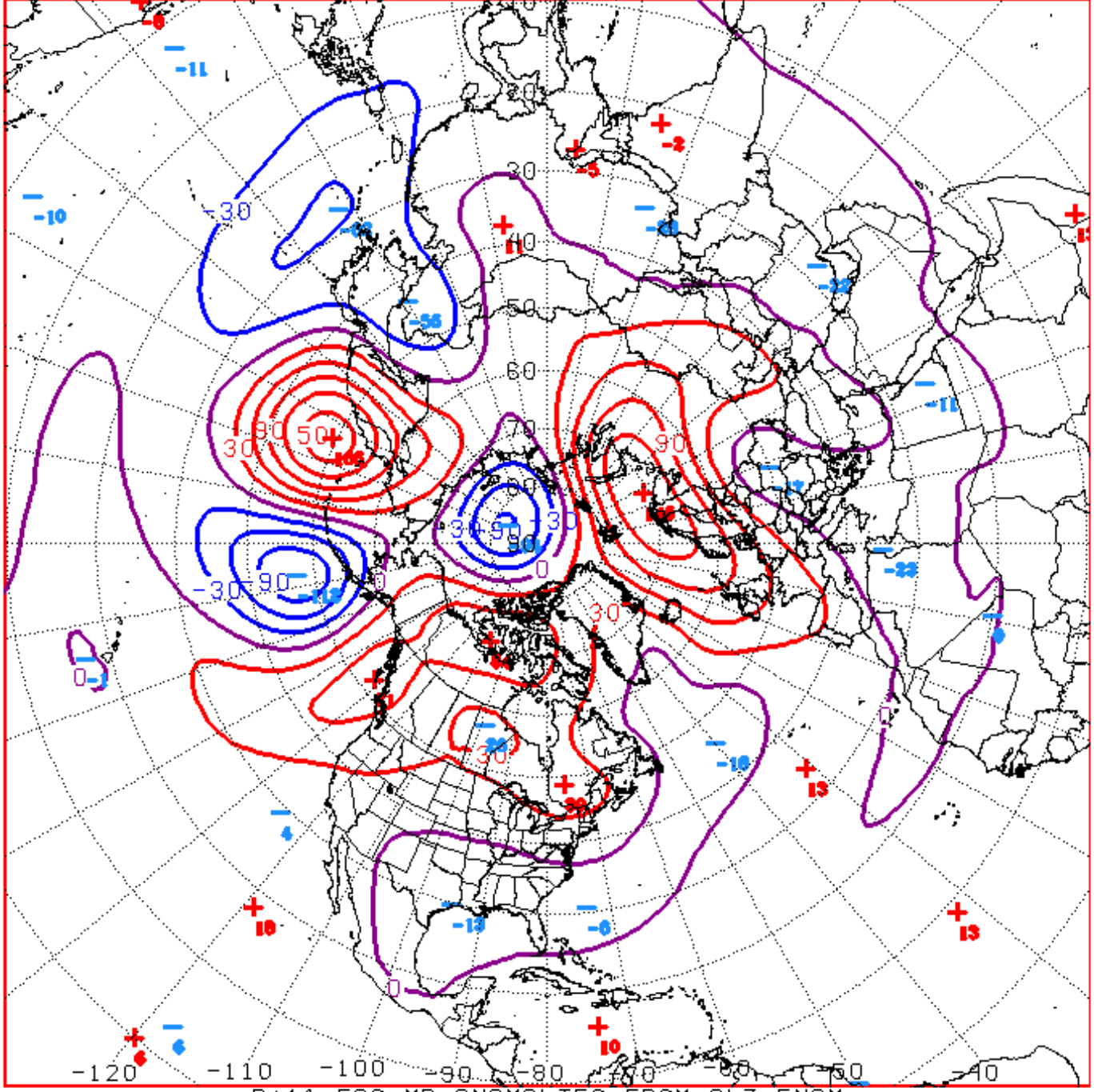
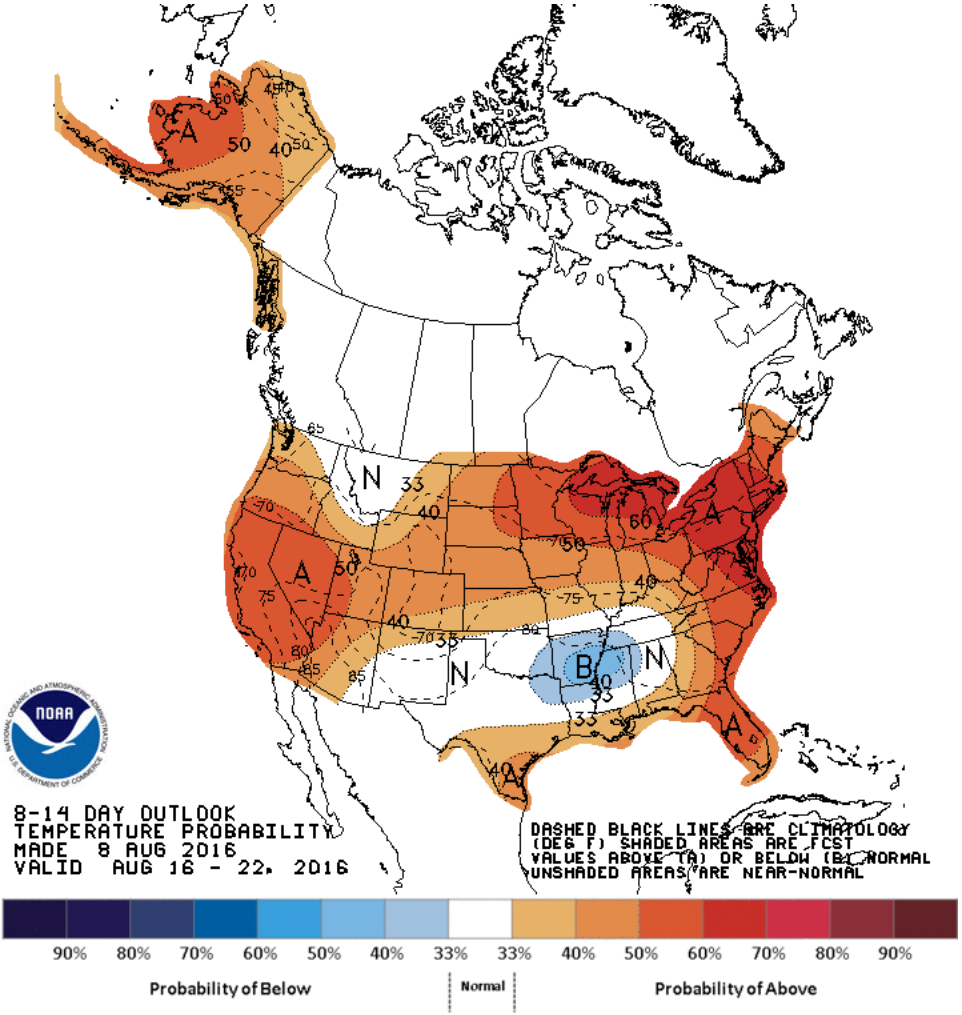
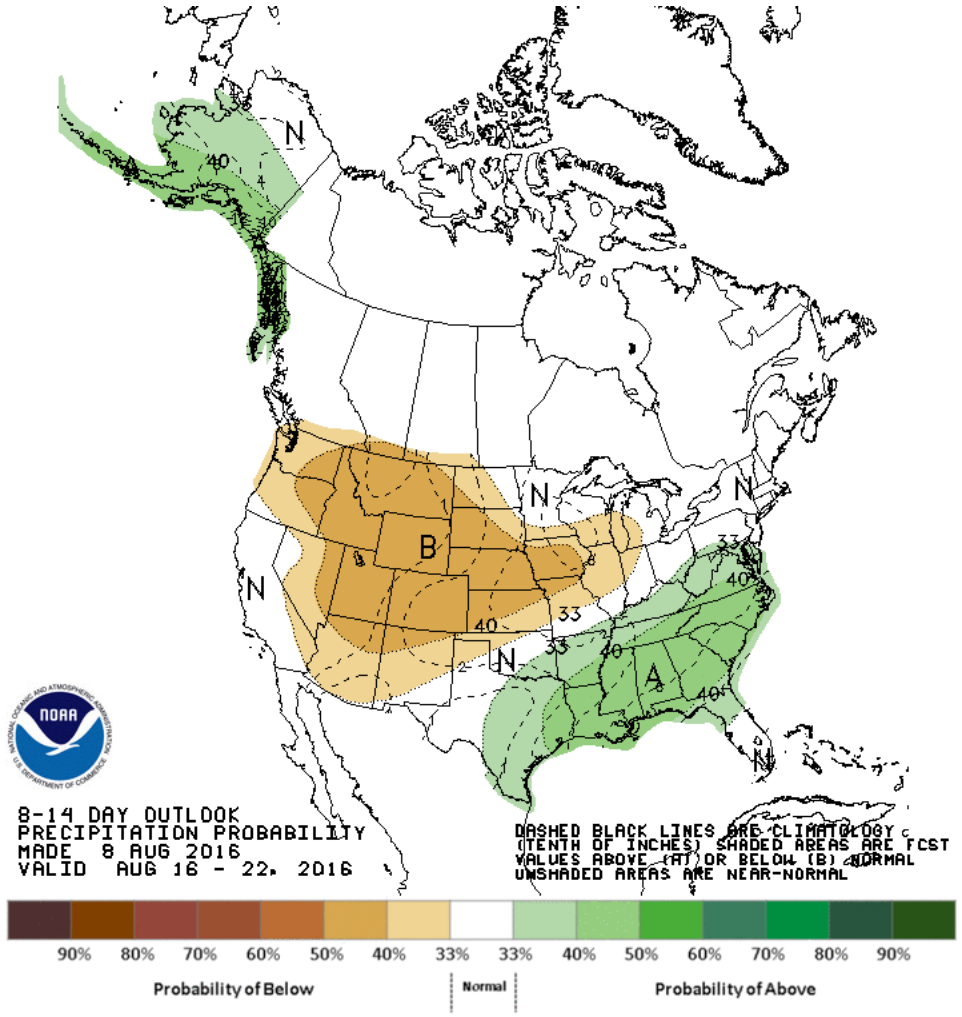


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE AUG 09 2016 1523 UTC CNTD AUG 20 2016

Week 2 – Temperature and Precipitation





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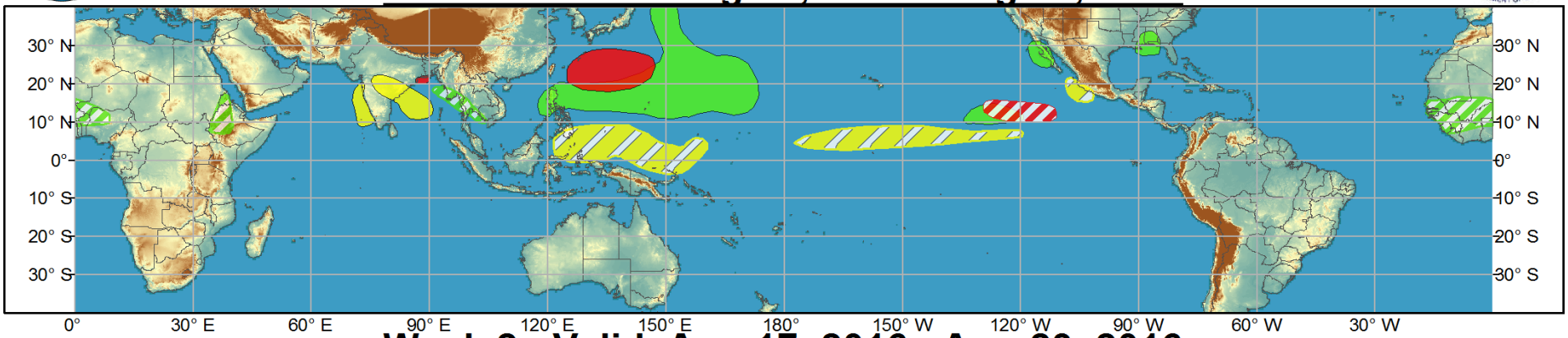

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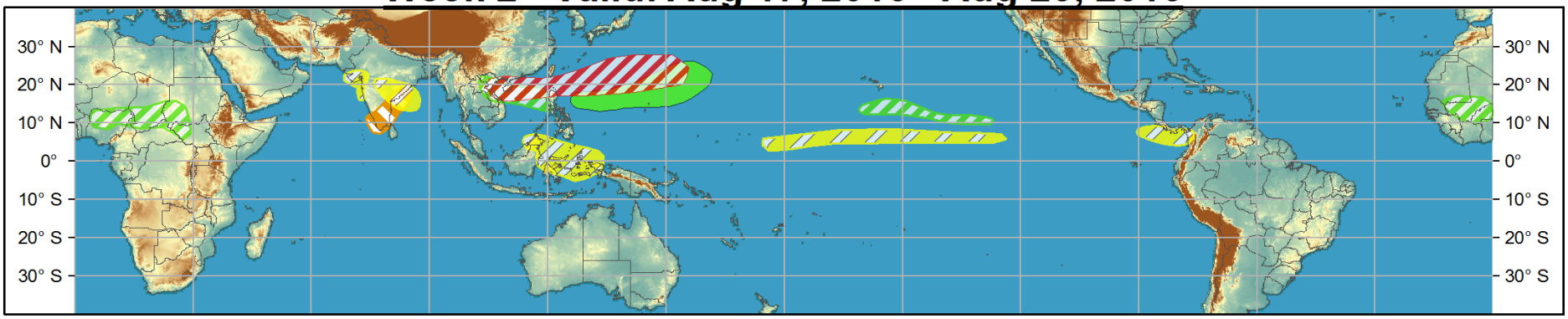

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