

Global Tropics Hazards And Benefits Outlook

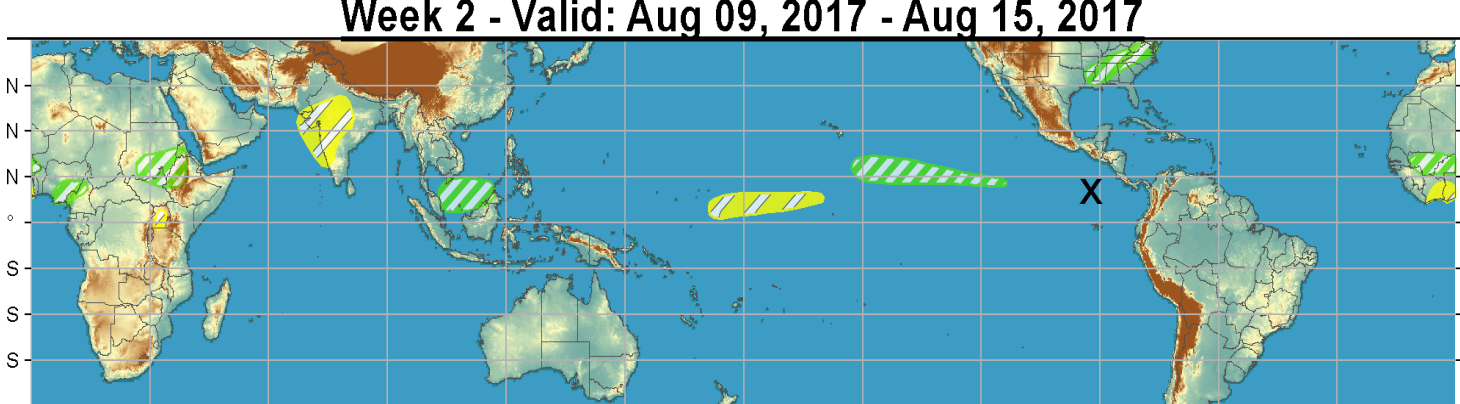
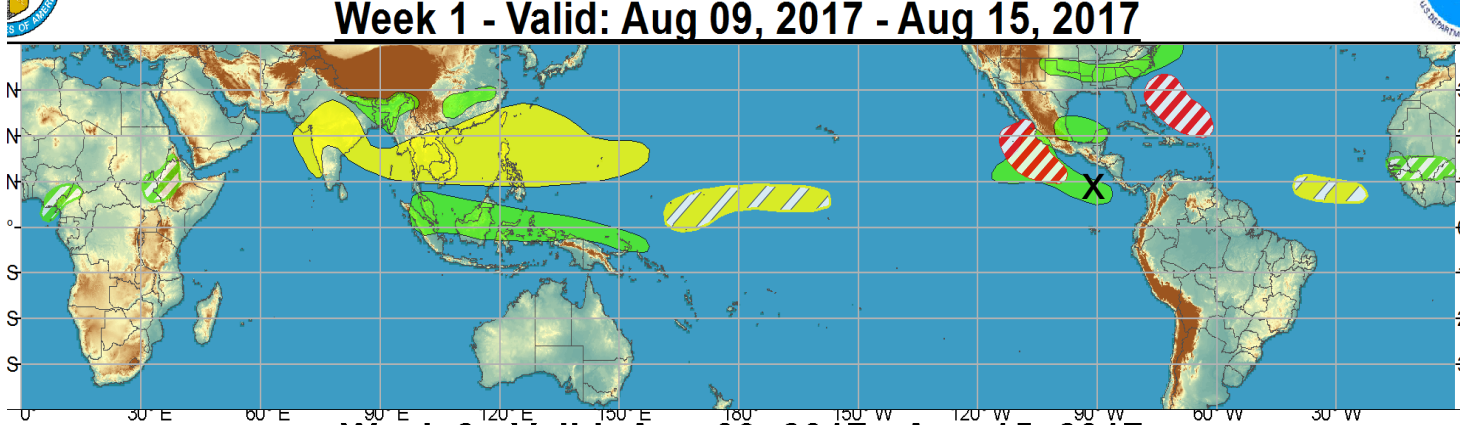
8/15/2017

Matthew Rosencrans

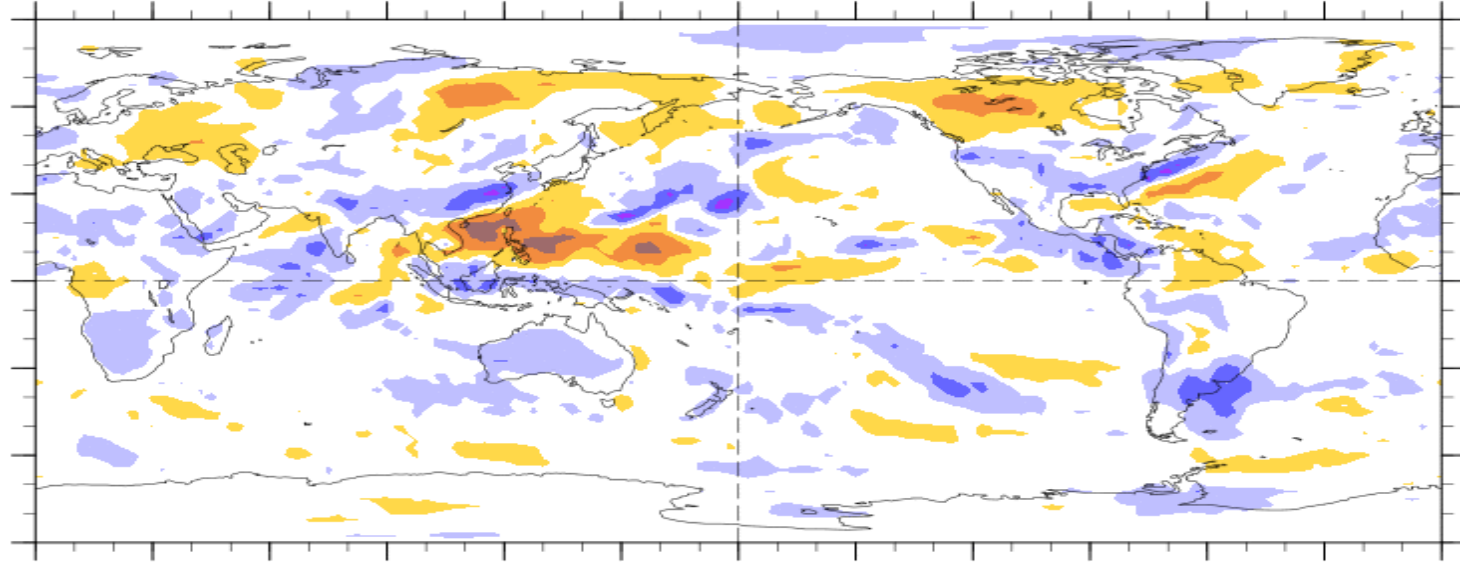
Outline

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

Outlook Review



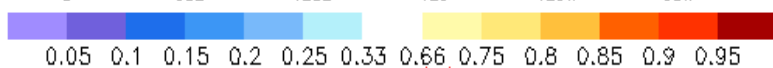
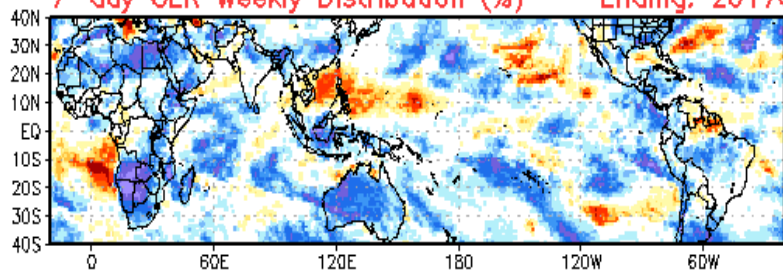
7-Day Average OLR Anomaly 2017/08/07 - 2017/08/13



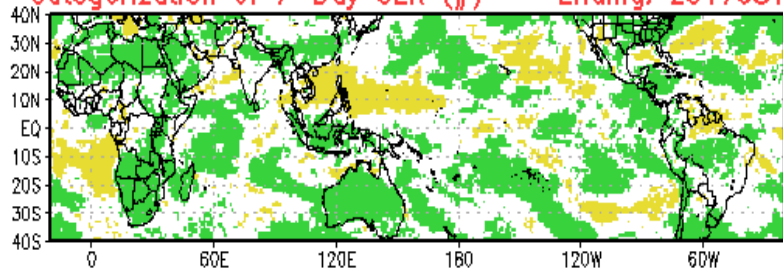
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

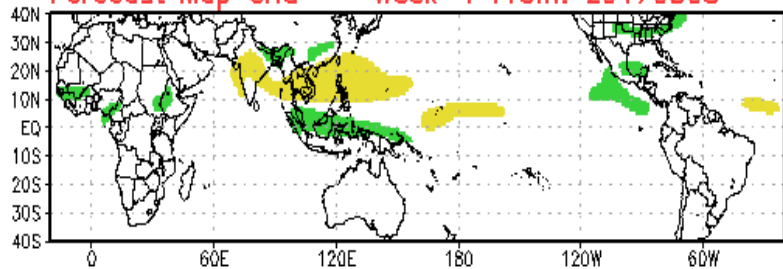
7-day OLR Weekly Distribution (%) -- Ending: 20170815



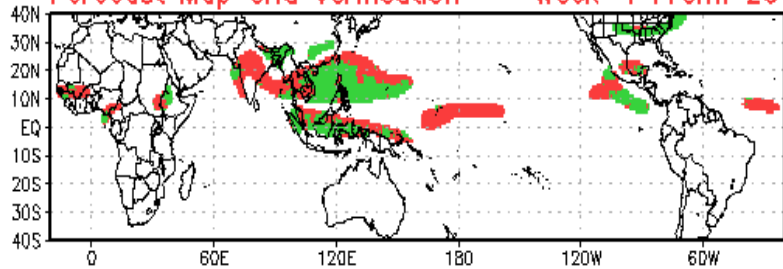
Categorization of 7-Day OLR (#) -- Ending: 20170815



Forecast Map Grid -- Week-1 From: 20170808

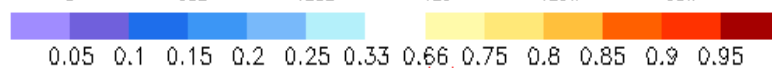
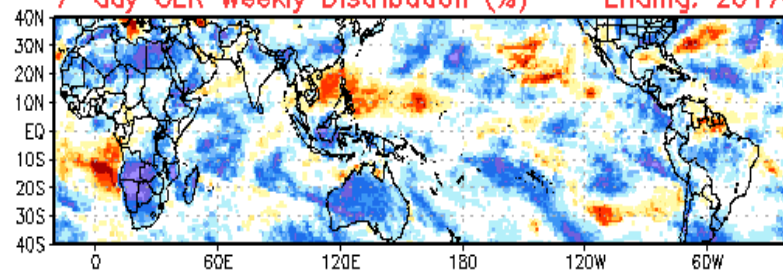


Forecast Map Grid Verification -- Week-1 From: 20170808

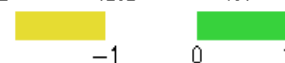
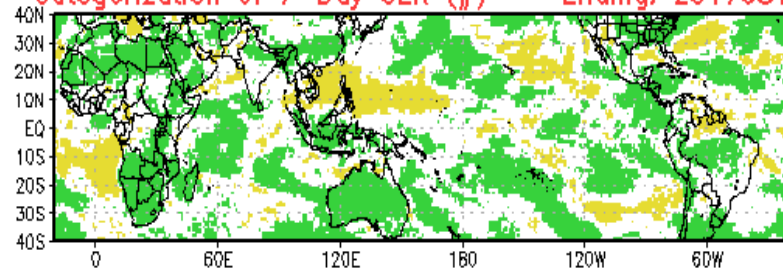


Hit: Green, Miss: Red
Heidke Skill Score: 22.7946

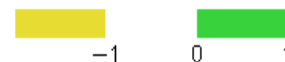
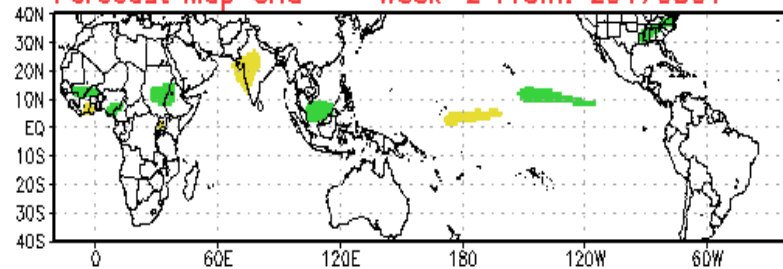
7-day OLR Weekly Distribution (%) -- Ending: 20170815



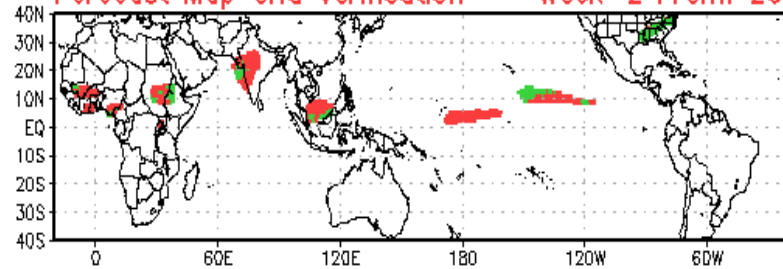
Categorization of 7-Day OLR (#) -- Ending: 20170815



Forecast Map Grid -- Week-2 From: 20170801



Forecast Map Grid Verification -- Week-2 From: 20170801



Hit: Green, Miss: Red
Heidke Skill Score: -5.1012

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is favored (~85% chance during Jul-Sep, decreasing to ~55% during Dec-Feb) through the Northern Hemisphere winter 2017-18

MJO and other subseasonal tropical variability:

- The MJO remained weak during the past week, though that weak signal continued to stretch over the Americas and the Atlantic Basin.
- Dynamical models indicate a continued weak MJO signal over the Atlantic Ocean/Africa during Week-1, with some models moving a signal across the Indian Ocean into Week-2.

Extratropics:

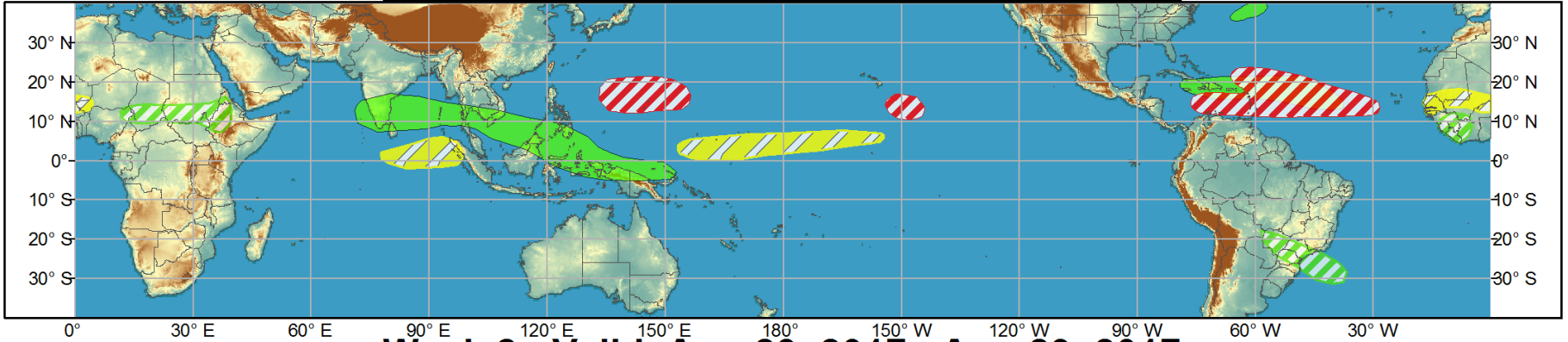
- The extended range temperature and precipitation forecasts for the U.S. are potentially impacted by tropical cyclone activity, enhanced by MJO activity.



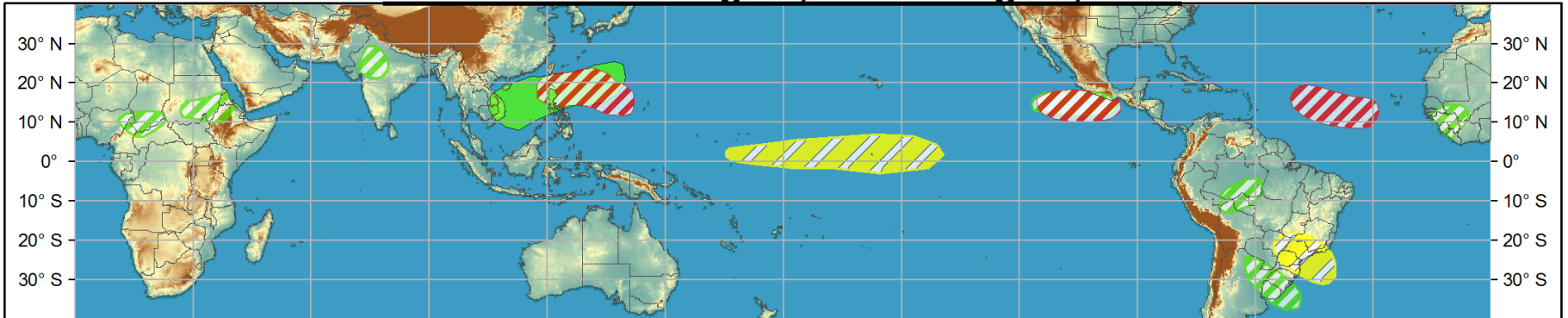
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Aug 16, 2017 - Aug 22, 2017



Week 2 - Valid: Aug 23, 2017 - Aug 29, 2017



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: 08/15/2017
Forecaster: MR

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.



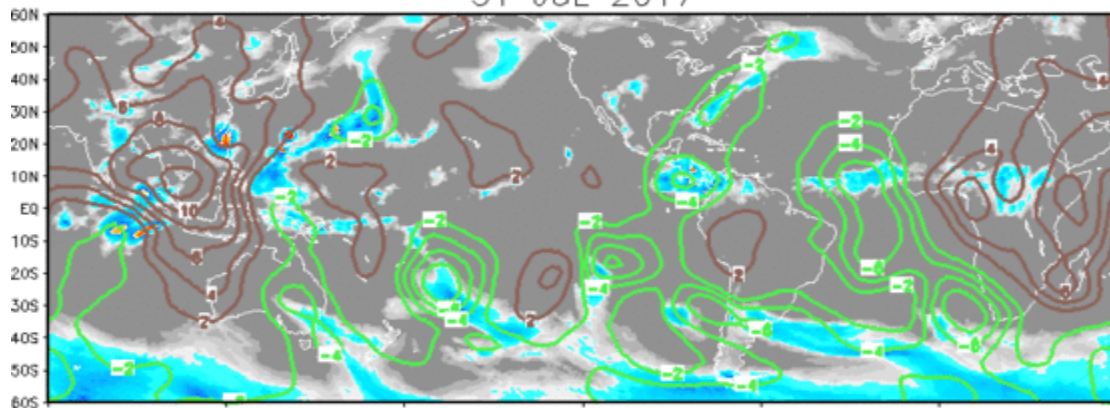
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence

Brown: Enhanced Convergence

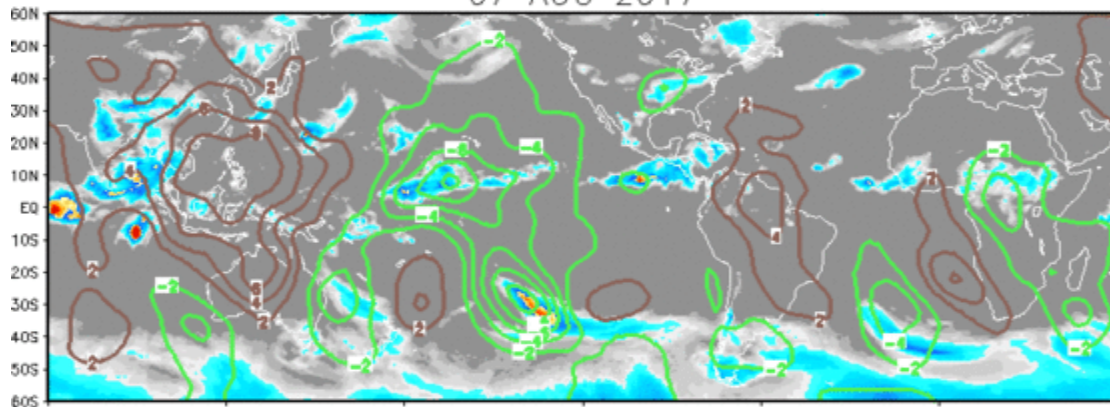
Not projecting onto MJO.

31 JUL 2017



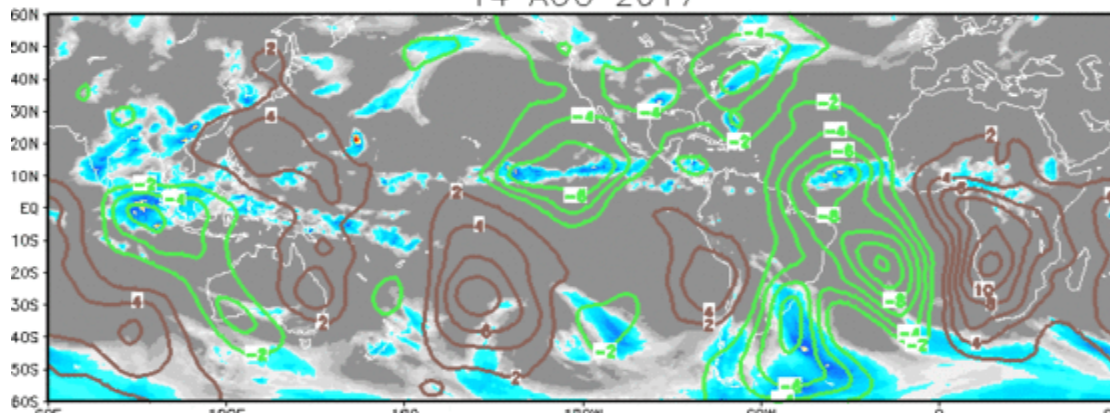
Little to no MJO projection.

07 AUG 2017

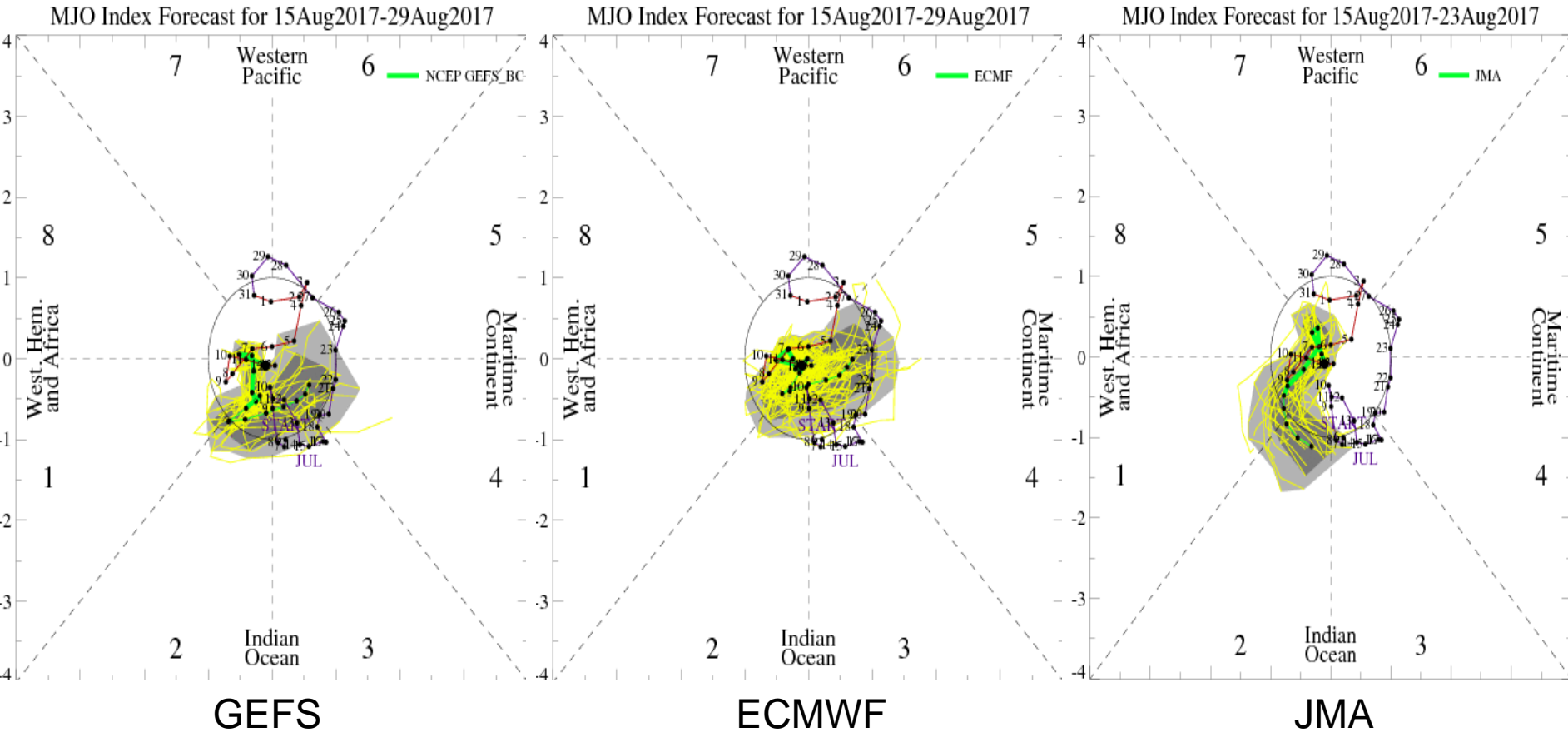


Wave-2, but still a weak projection onto MJO. Slightly more organized.

14 AUG 2017



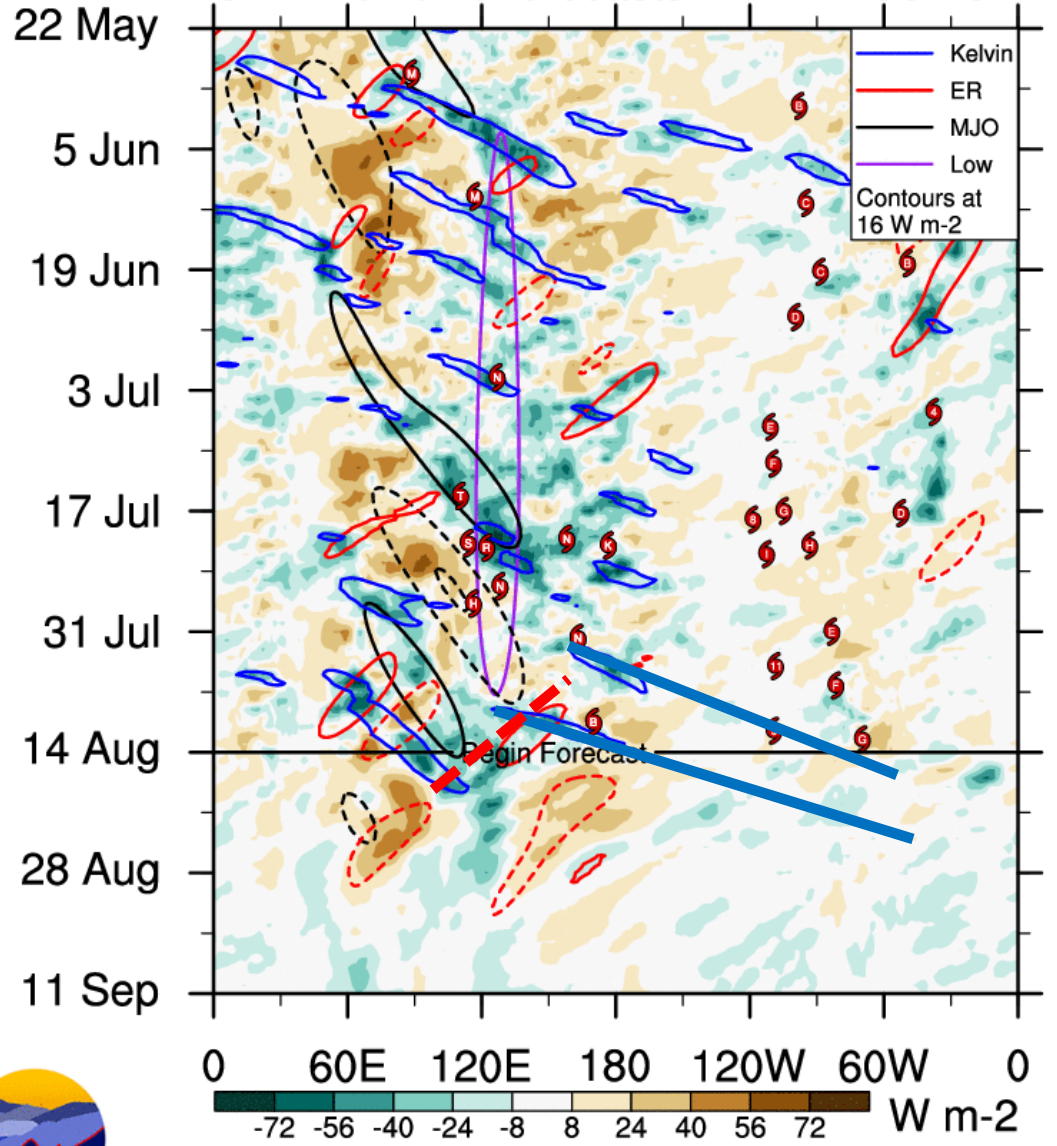
MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate propagation to the east. Generally a weak signal, though eastward propagation of that weak signal is indicated.

OLR with CFS forecasts

5S - 5N



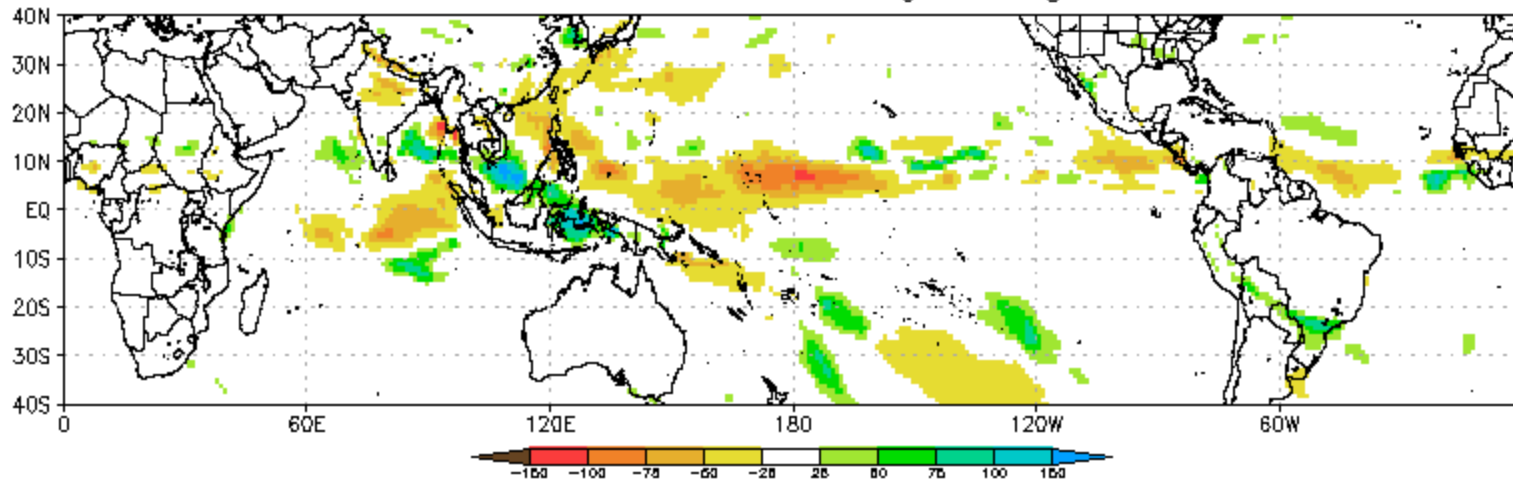
Rossby wave and Kelvin wave having an influence

MJO influence minimal

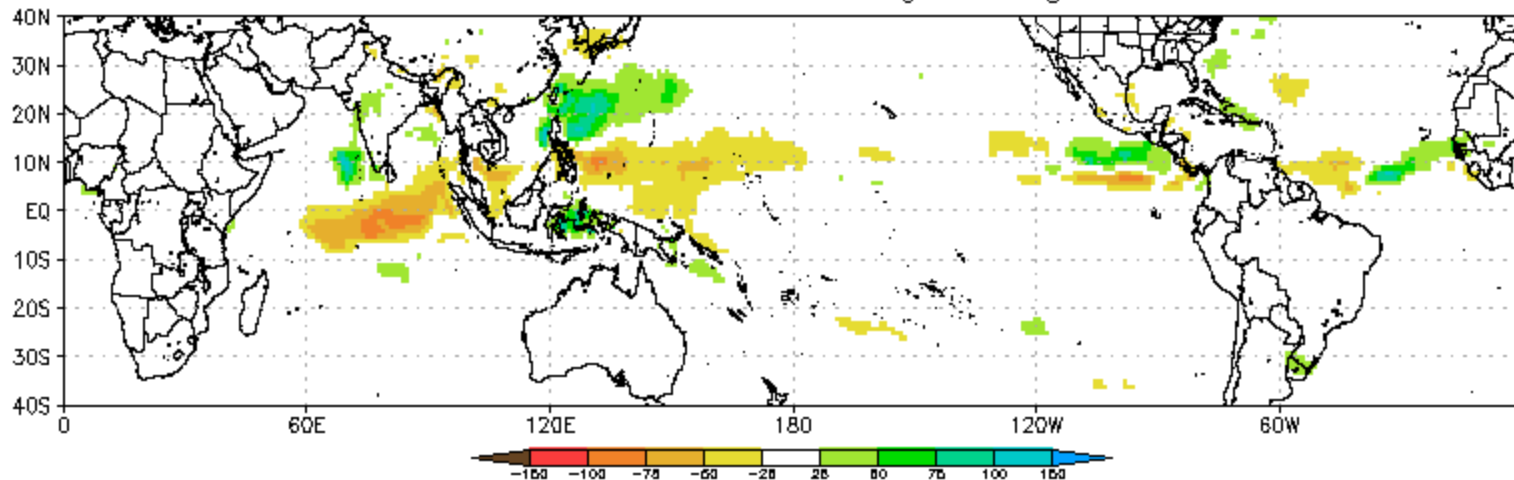
Low-frequency pattern less of an influence



CFS Precipitation Anomalies (mm) Issued 14Aug2017
Week-1 Forecast Ending 22Aug2017



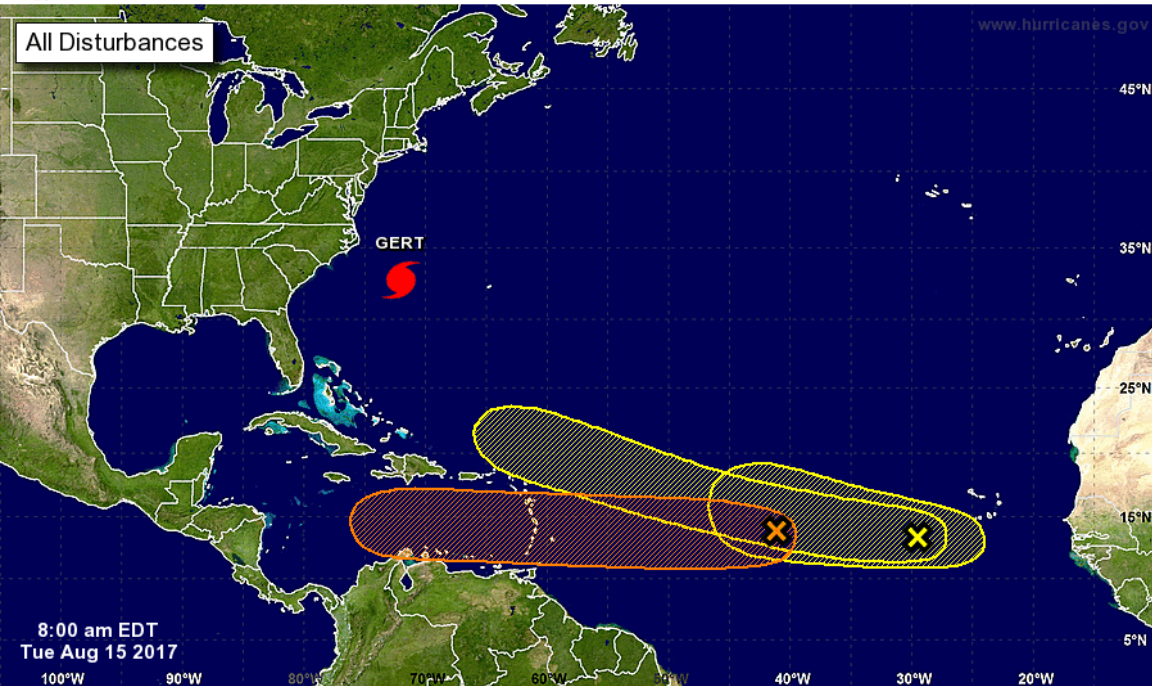
CFS Precipitation Anomalies (mm) Issued 14Aug2017
Week-2 Forecast Ending 29Aug2017





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



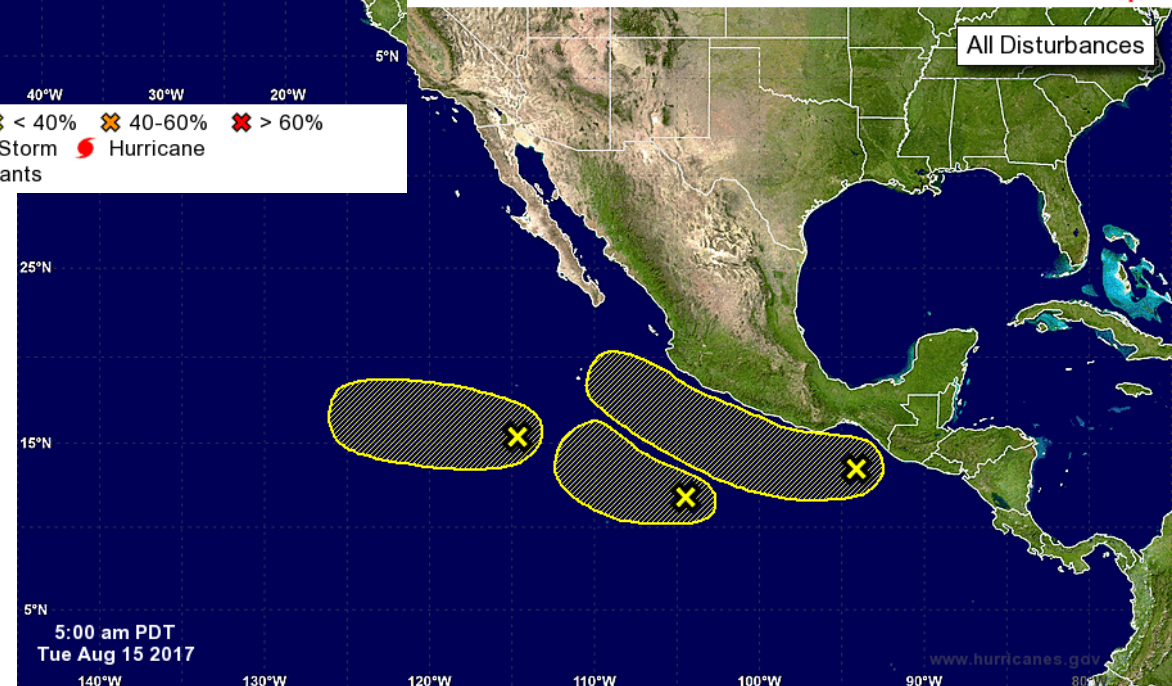
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

Graphical Tropical Weather Outlook

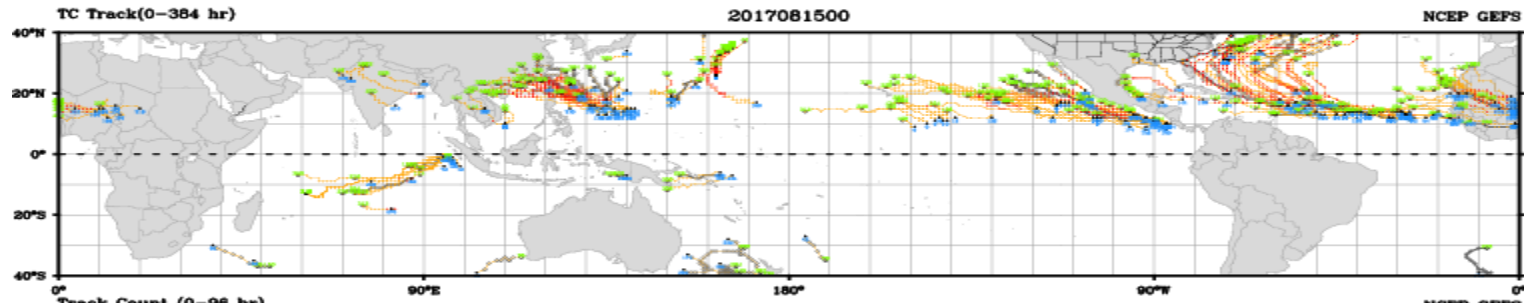
National Hurricane Center Miami, Florida



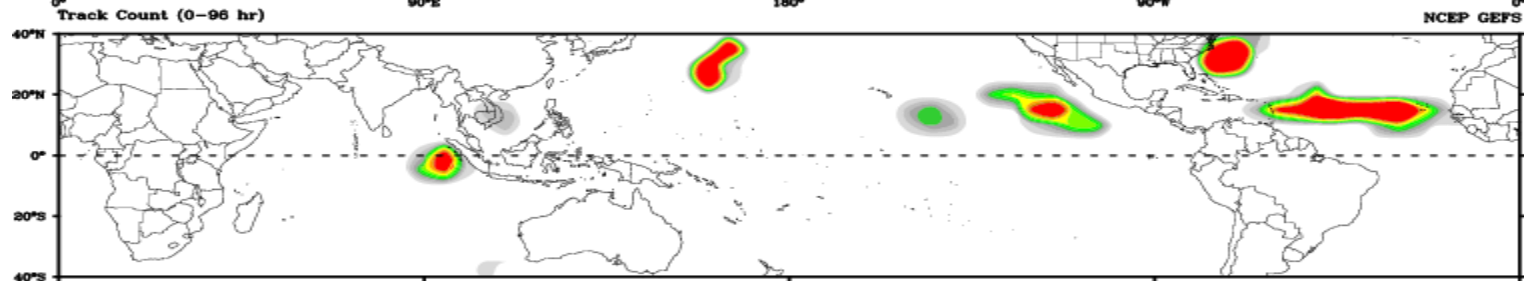
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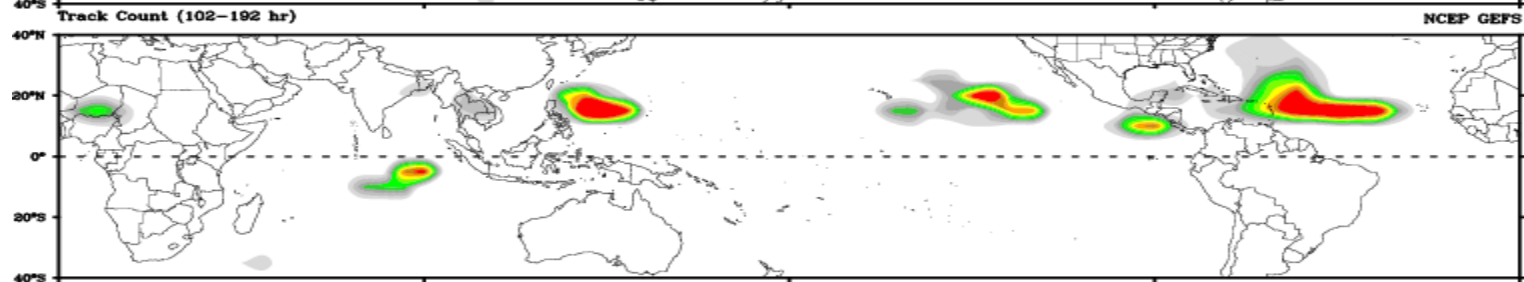
Post-Tropical Cyclone Remnants



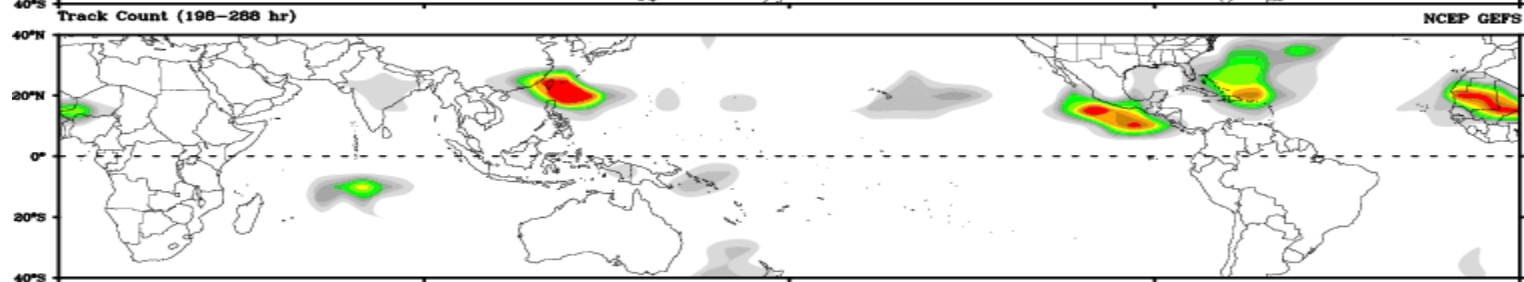
Days 1-4



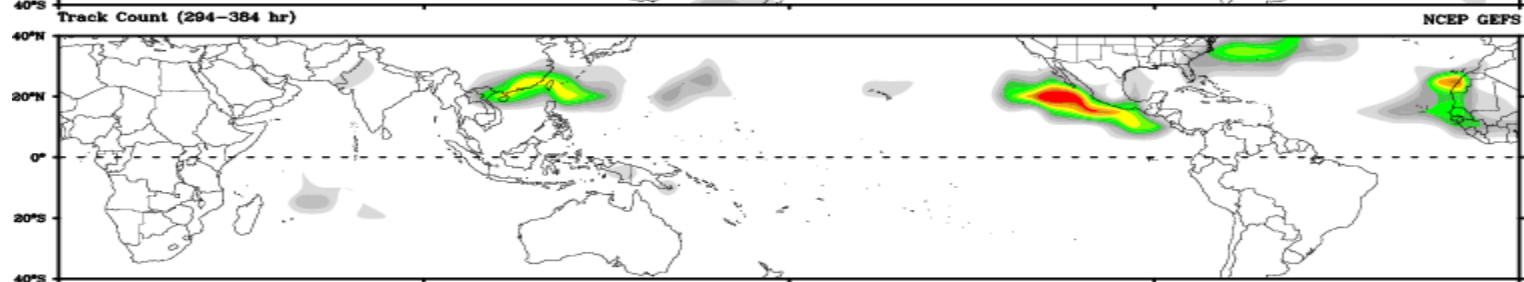
Day 5-8



Day 9-12

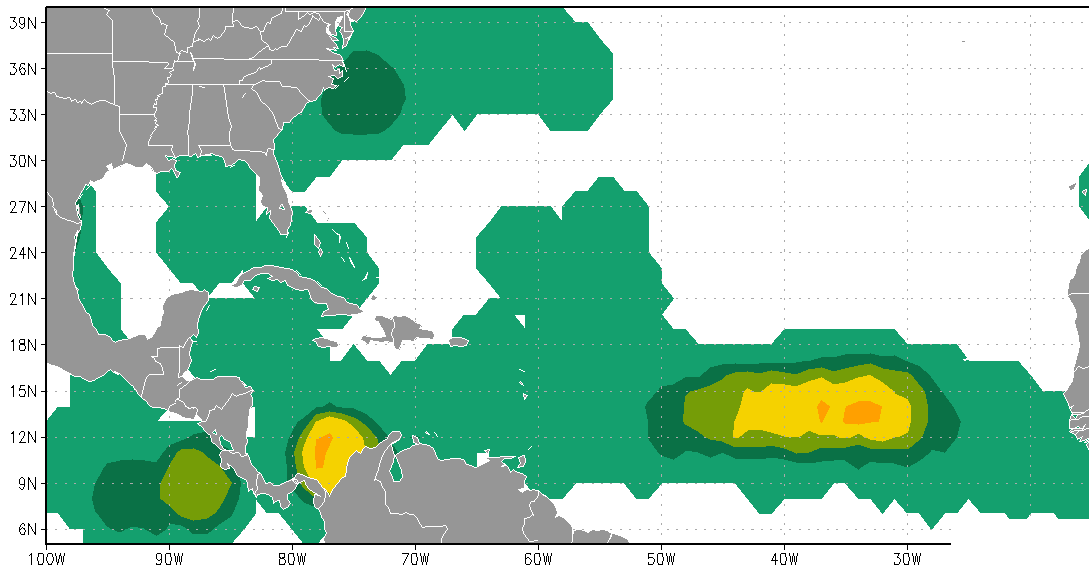


Day 13-15

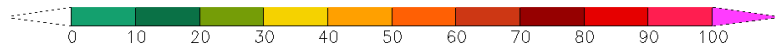
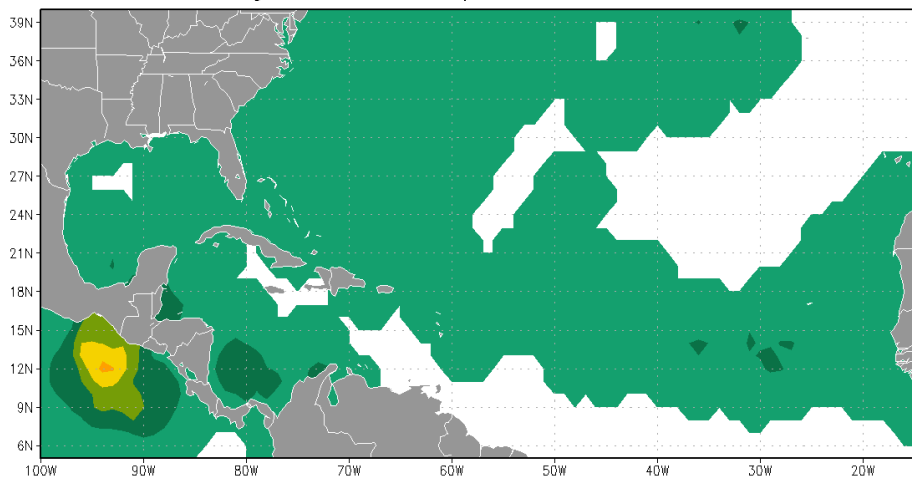


Ensemble-based Probability (%) of TC genesis
using these global ensembles: NCEP CMC ECMWF

For forecasts during the 00–120h period from initial time = 2017081500

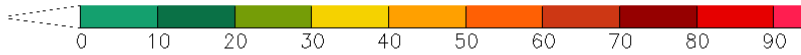
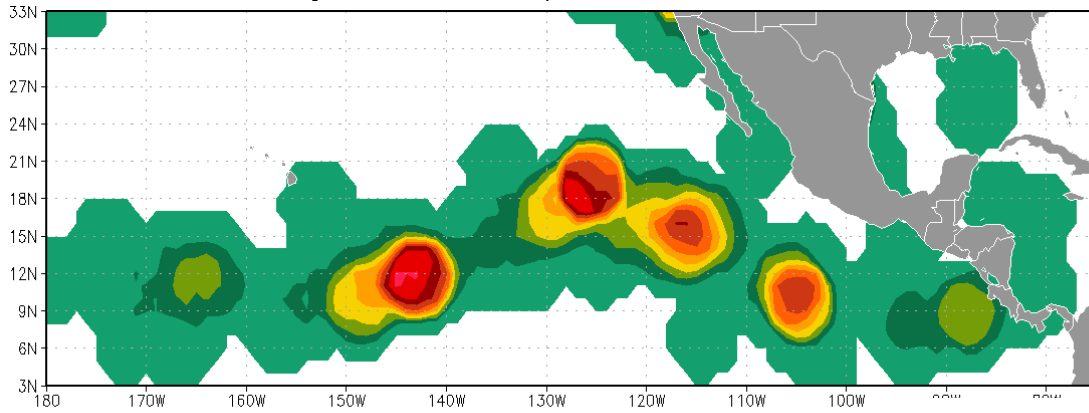


Ensemble-based Probability (%) of TC genesis
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For forecasts during the 120–240h period from initial time = 2017081500



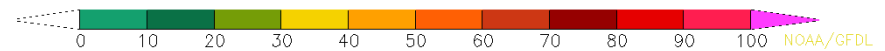
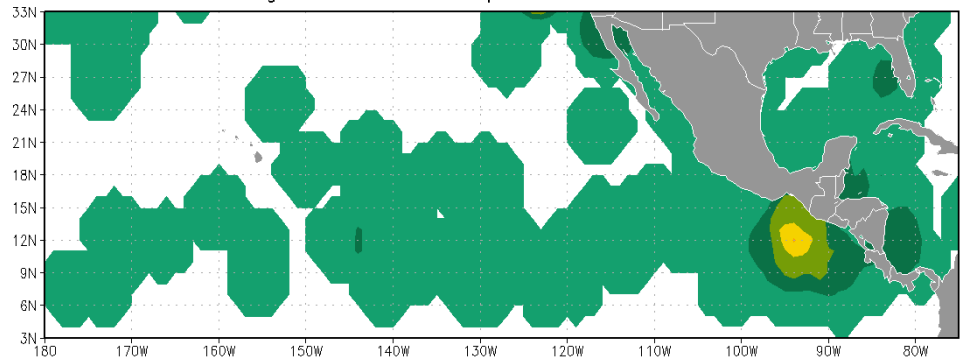
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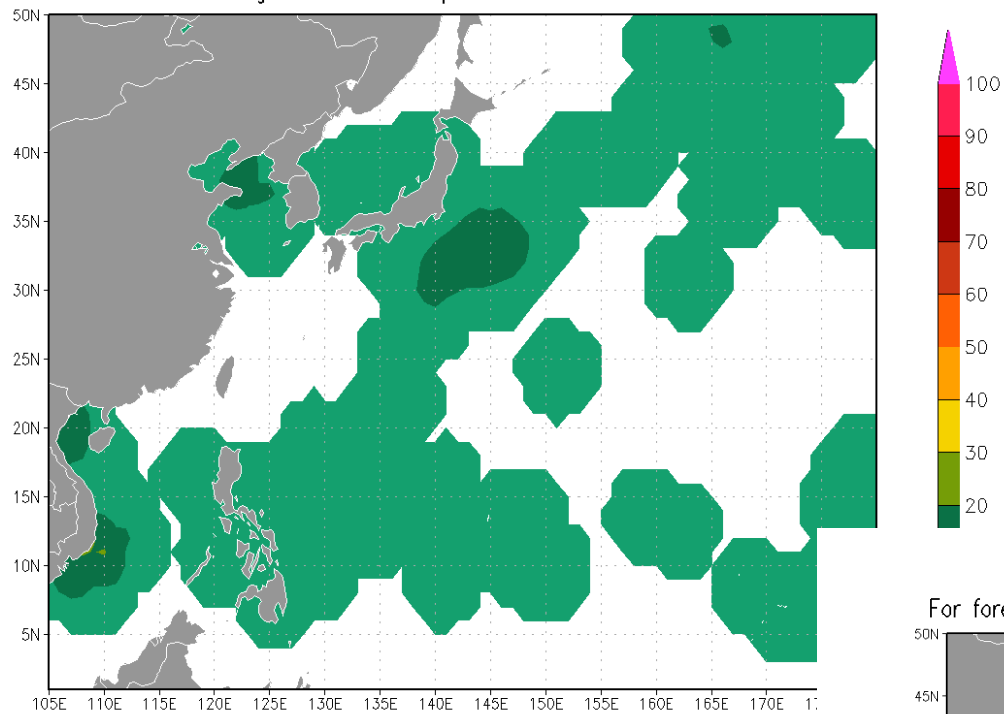
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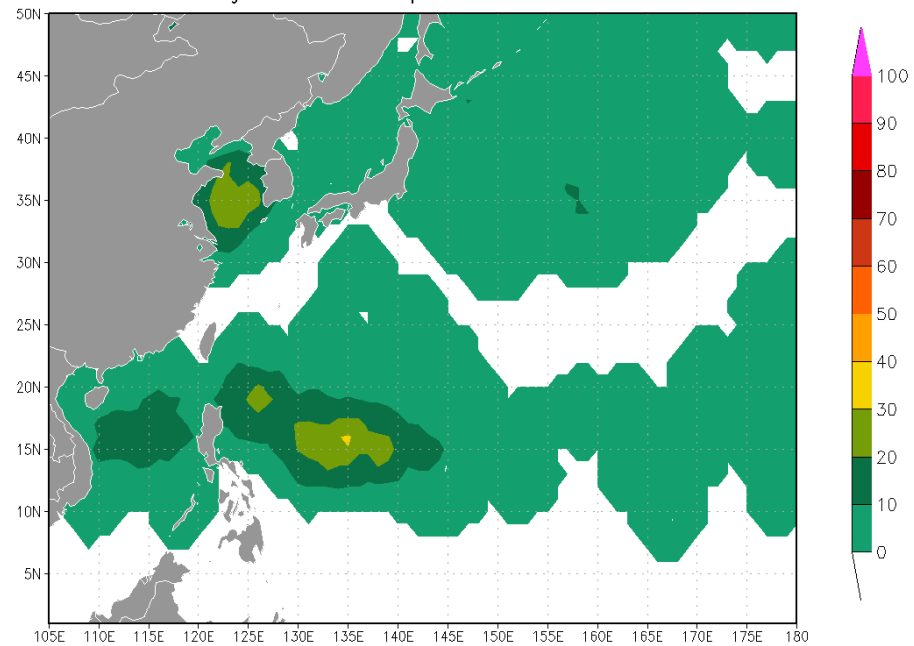
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NOAA

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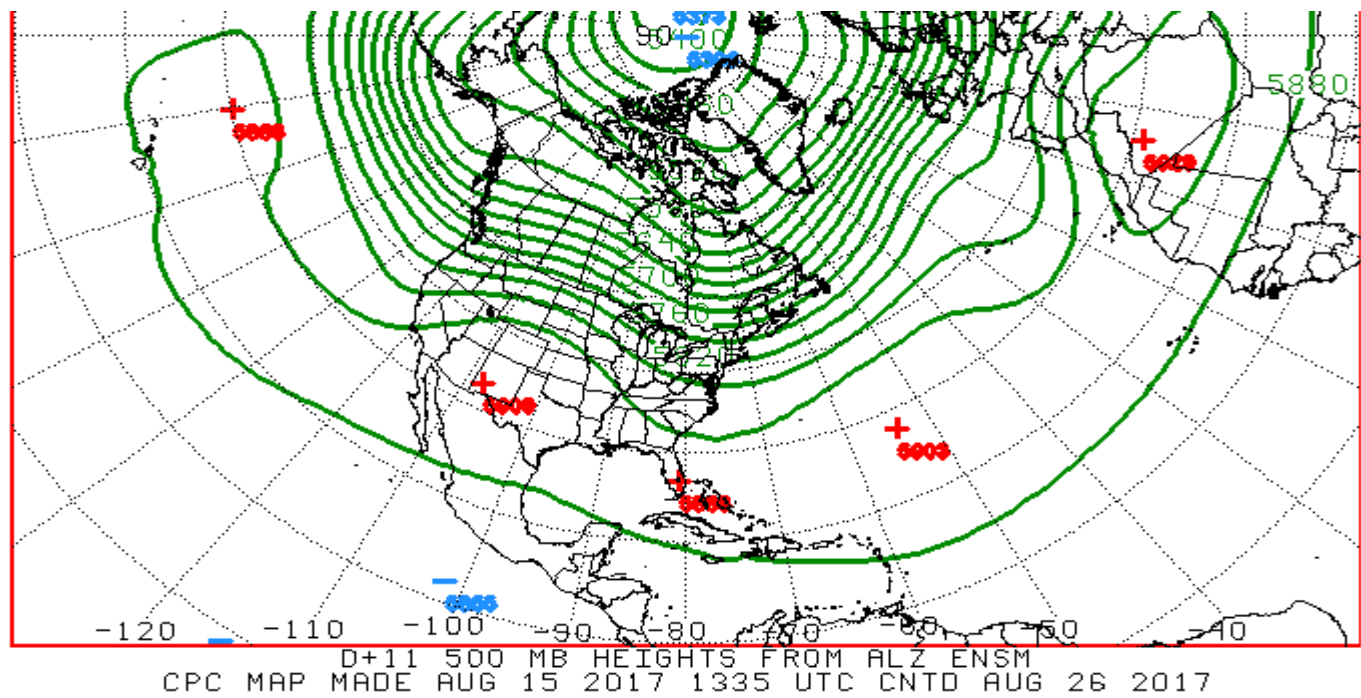
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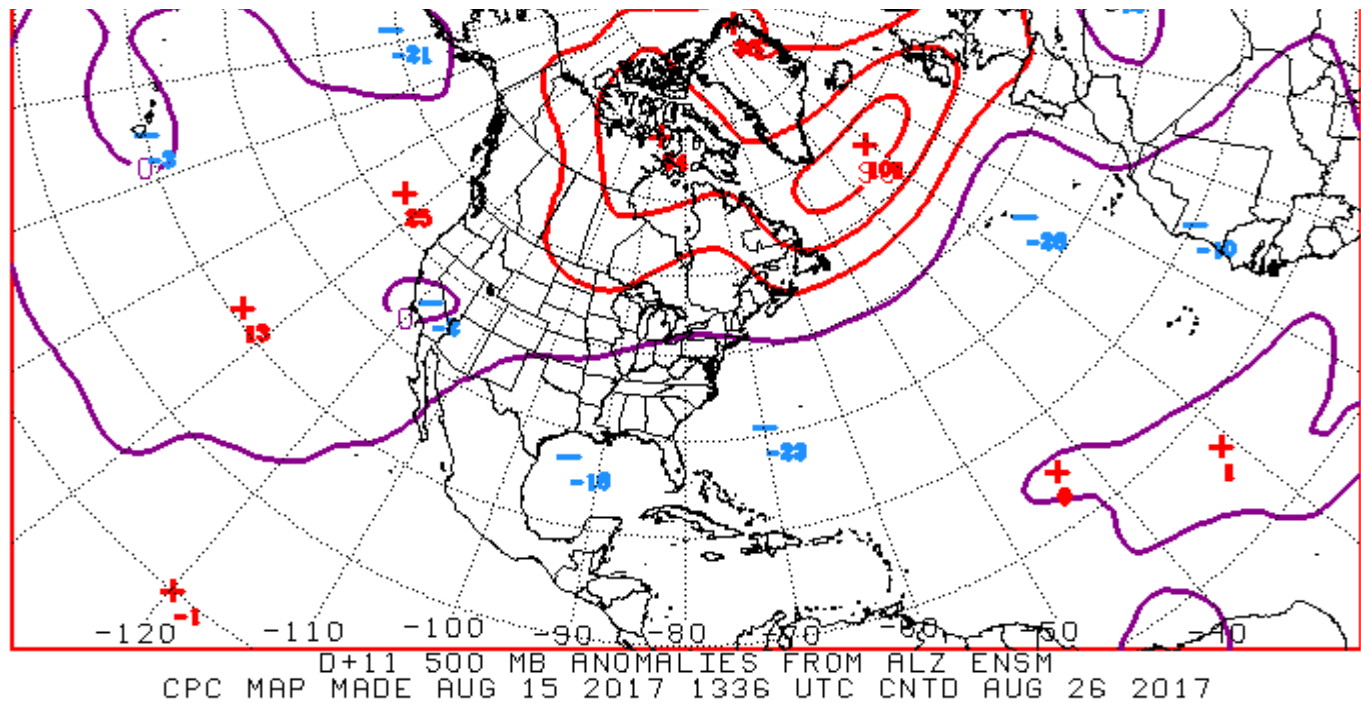
NOAA / OERI

Connections to U.S. Impacts

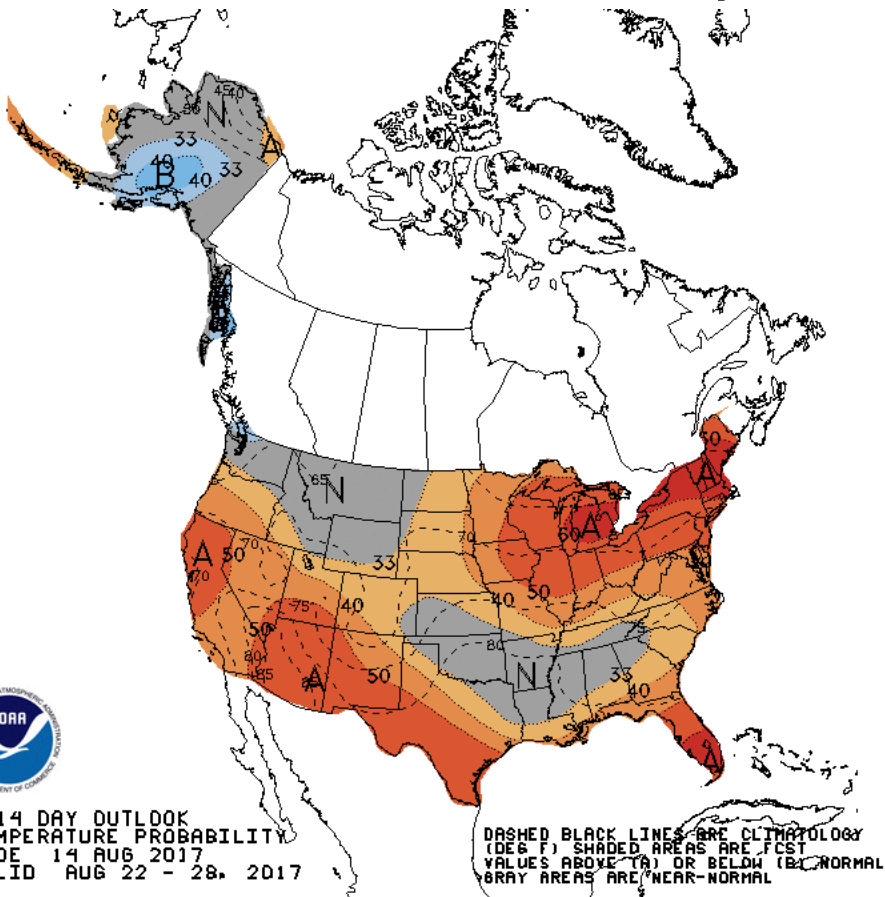
Upper level pattern



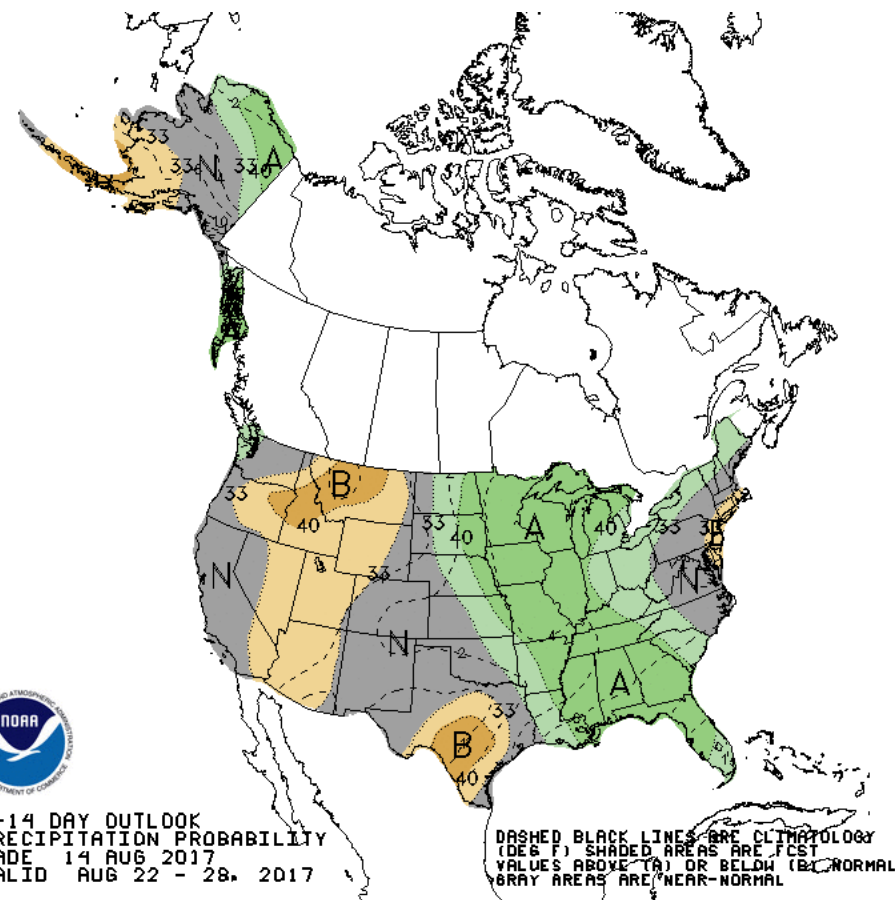
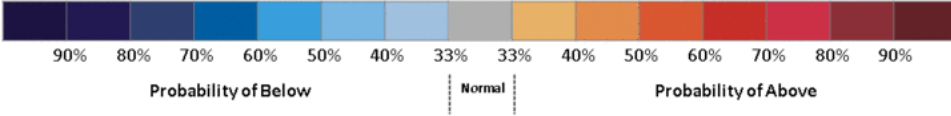
Upper level pattern difference from average.



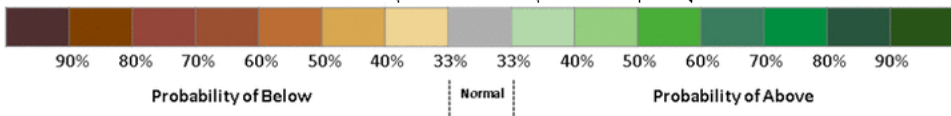
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 14 AUG 2017
VALID AUG 22 - 28, 2017



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 14 AUG 2017
VALID AUG 22 - 28, 2017

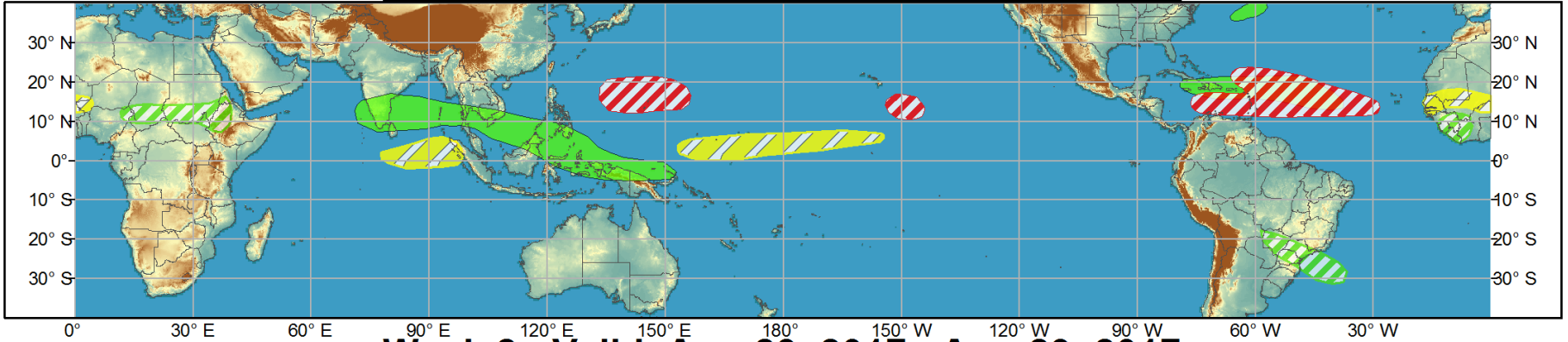




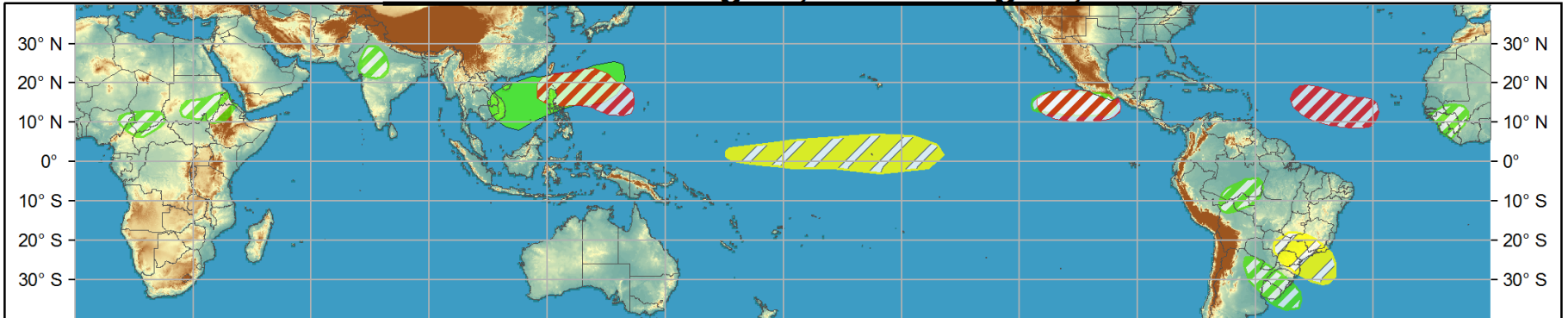
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