

Global Tropics Hazards And Benefits Outlook

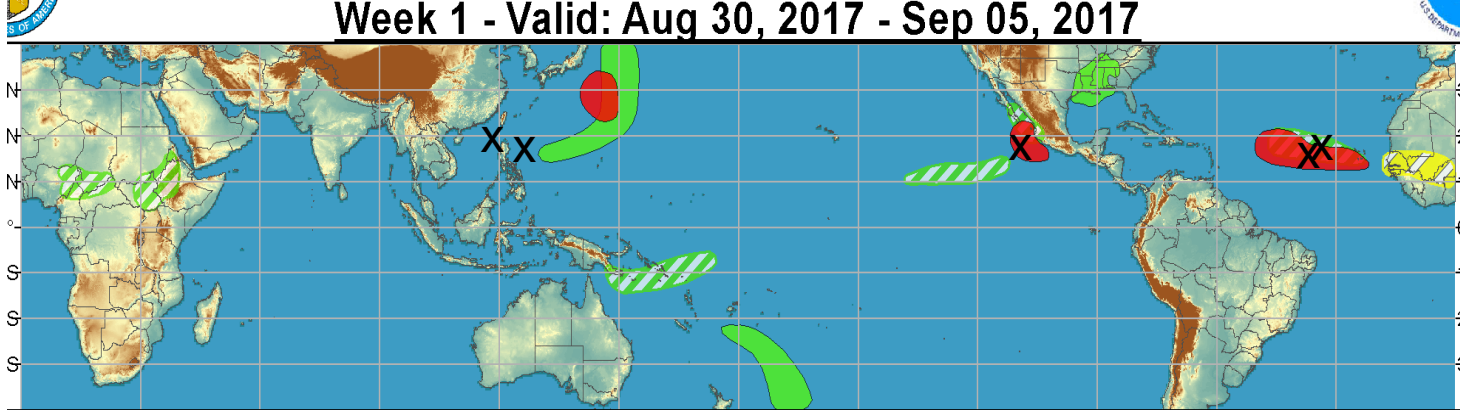
9/05/2017

Stephen Baxter

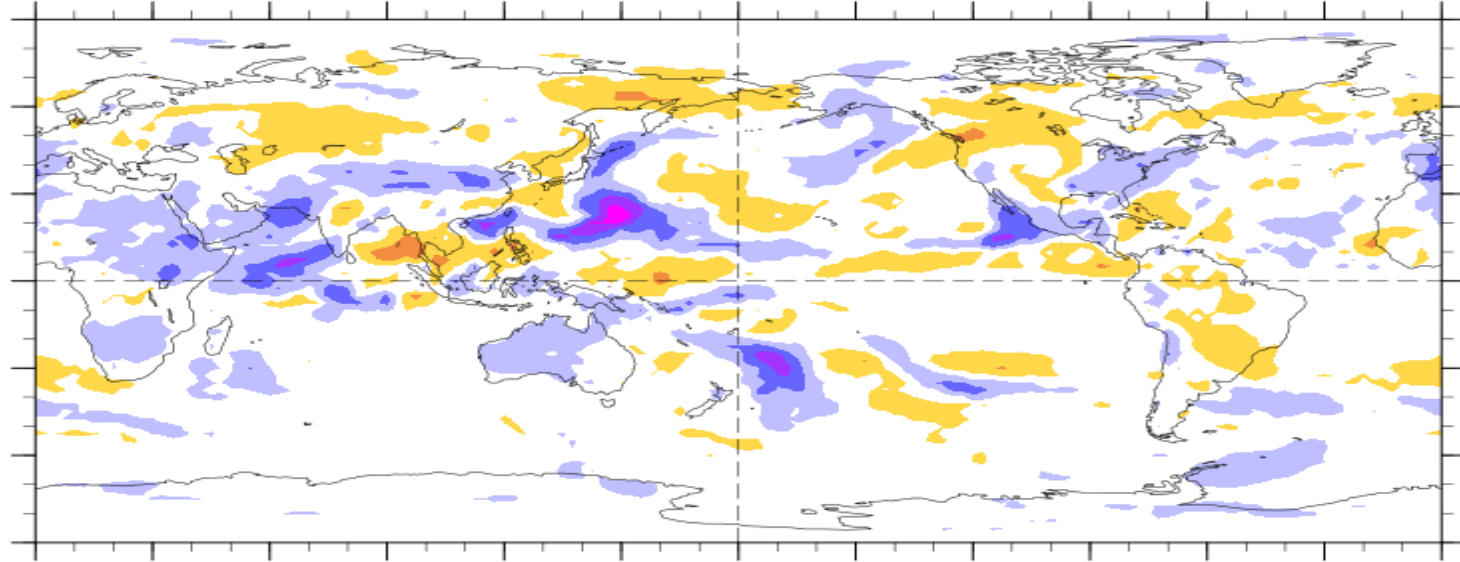
Outline

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

Outlook Review



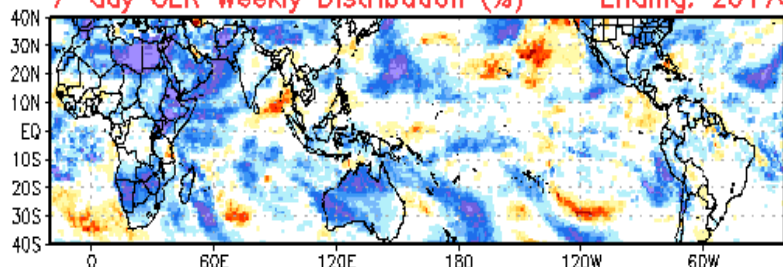
7-Day Average OLR Anomaly 2017/08/28 - 2017/09/03



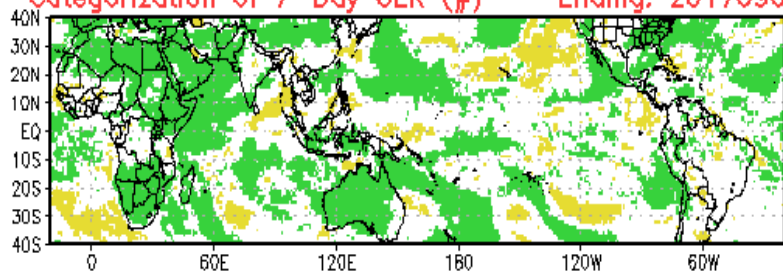
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

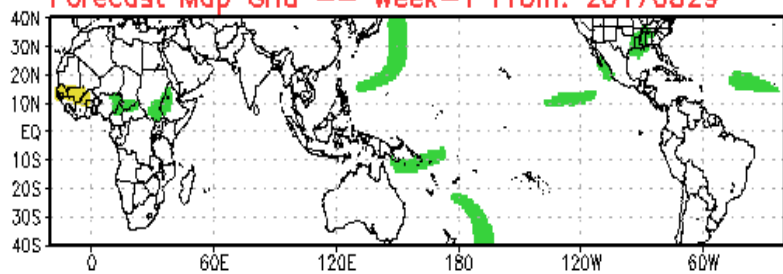
7-day OLR Weekly Distribution (%) -- Ending: 20170905



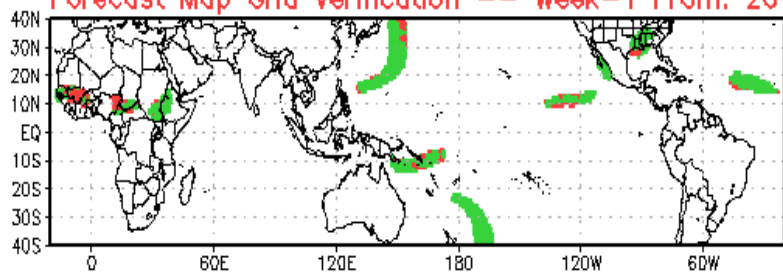
Categorization of 7-Day OLR (#) -- Ending: 20170905



Forecast Map Grid -- Week-1 From: 20170829

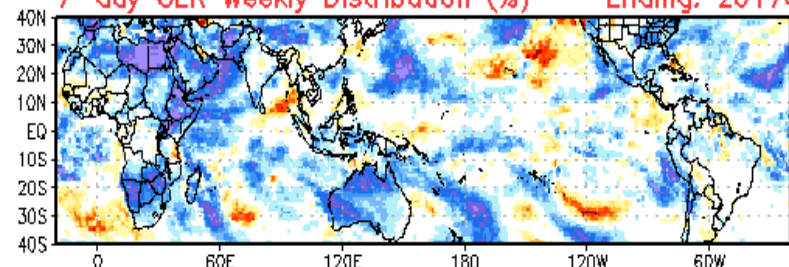


Forecast Map Grid Verification -- Week-1 From: 20170829

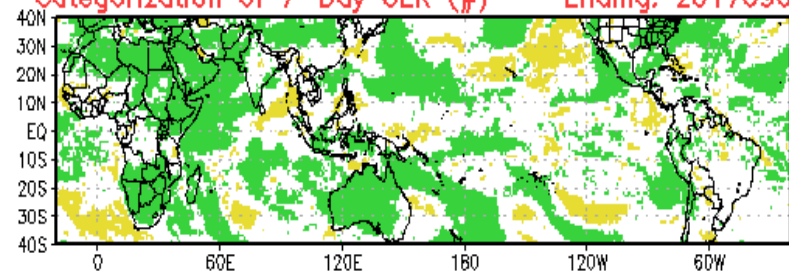


Hit: Green, Miss: Red
Heidke Skill Score: 71.8977

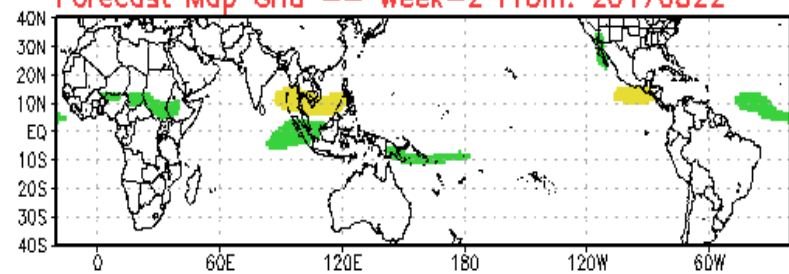
7-day OLR Weekly Distribution (%) -- Ending: 20170905



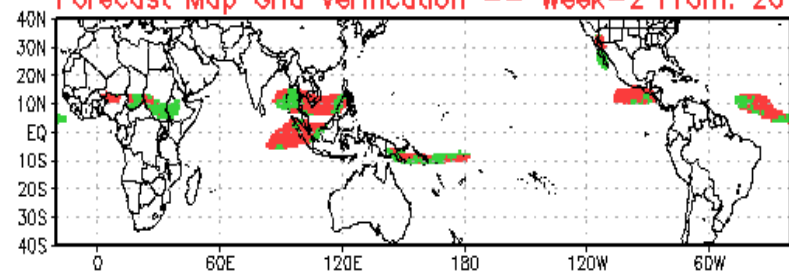
Categorization of 7-Day OLR (#) -- Ending: 20170905



Forecast Map Grid -- Week-2 From: 20170822



Forecast Map Grid Verification -- Week-2 From: 20170822



Hit: Green, Miss: Red
Heidke Skill Score: 13.2417

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is favored (85% through Sept, decreasing to ~55% during Dec-Feb 2017-18). La Niña is favored relative to El Niño by winter.

MJO and other subseasonal tropical variability:

- The MJO remained weak overall, though the upper-level divergent circulation shows a more coherent structure.
- Dynamical models indicate a weak MJO in Week-1. During Week-2, some signal may emerge over the Western Hemisphere.
- Tropical cyclone activity in the Western Hemisphere could be impacted by the MJO-related divergent circulation.

Extratropics:

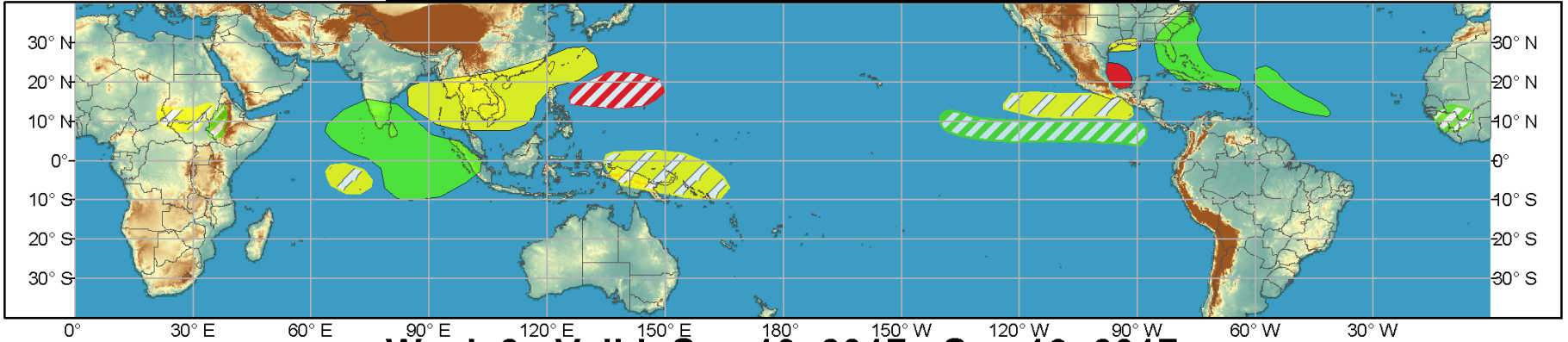
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be directly impacted by MJO activity.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 06, 2017 - Sep 12, 2017



Week 2 - Valid: Sep 13, 2017 - Sep 19, 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.
- Below-normal temperatures** 7-day mean temperatures in the lower third of the historical range.

Produced: 09/05/2017

Forecaster: Baxter

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

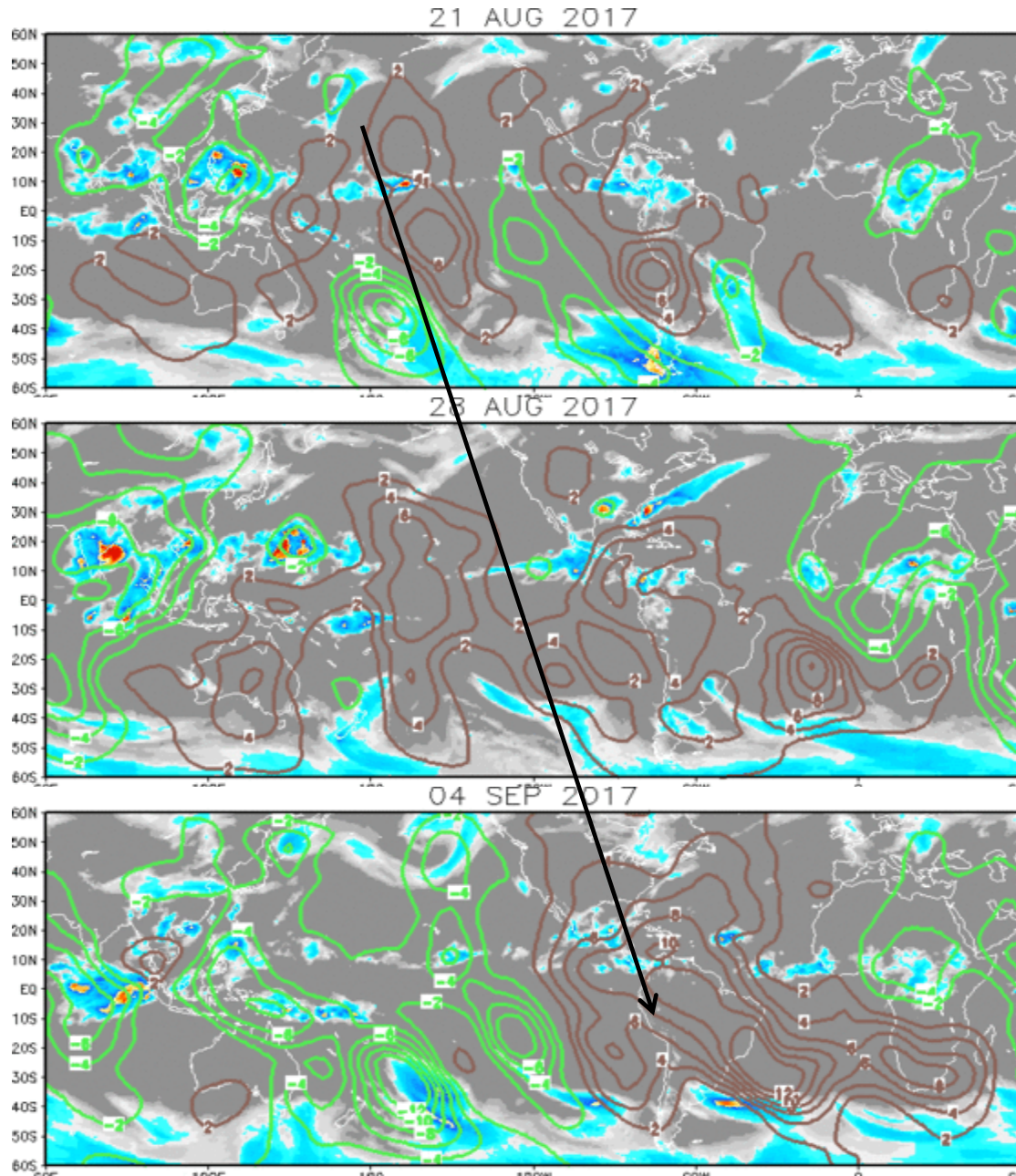
Green: Enhanced Divergence

Brown: Enhanced Convergence

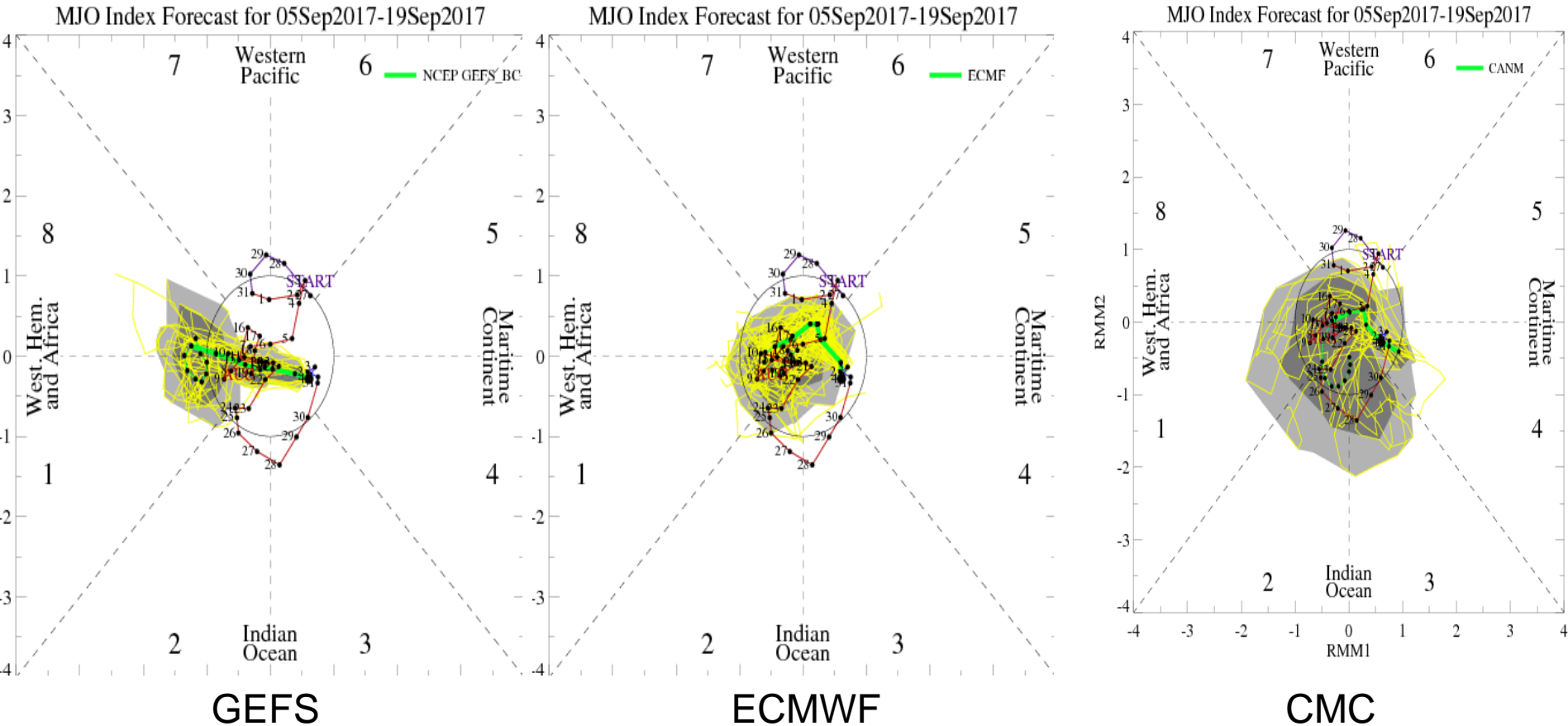
Largely disorganized pattern.

Better organized, wave-1 structure.

Broadly wave-1 with some other tropical variability interfering.

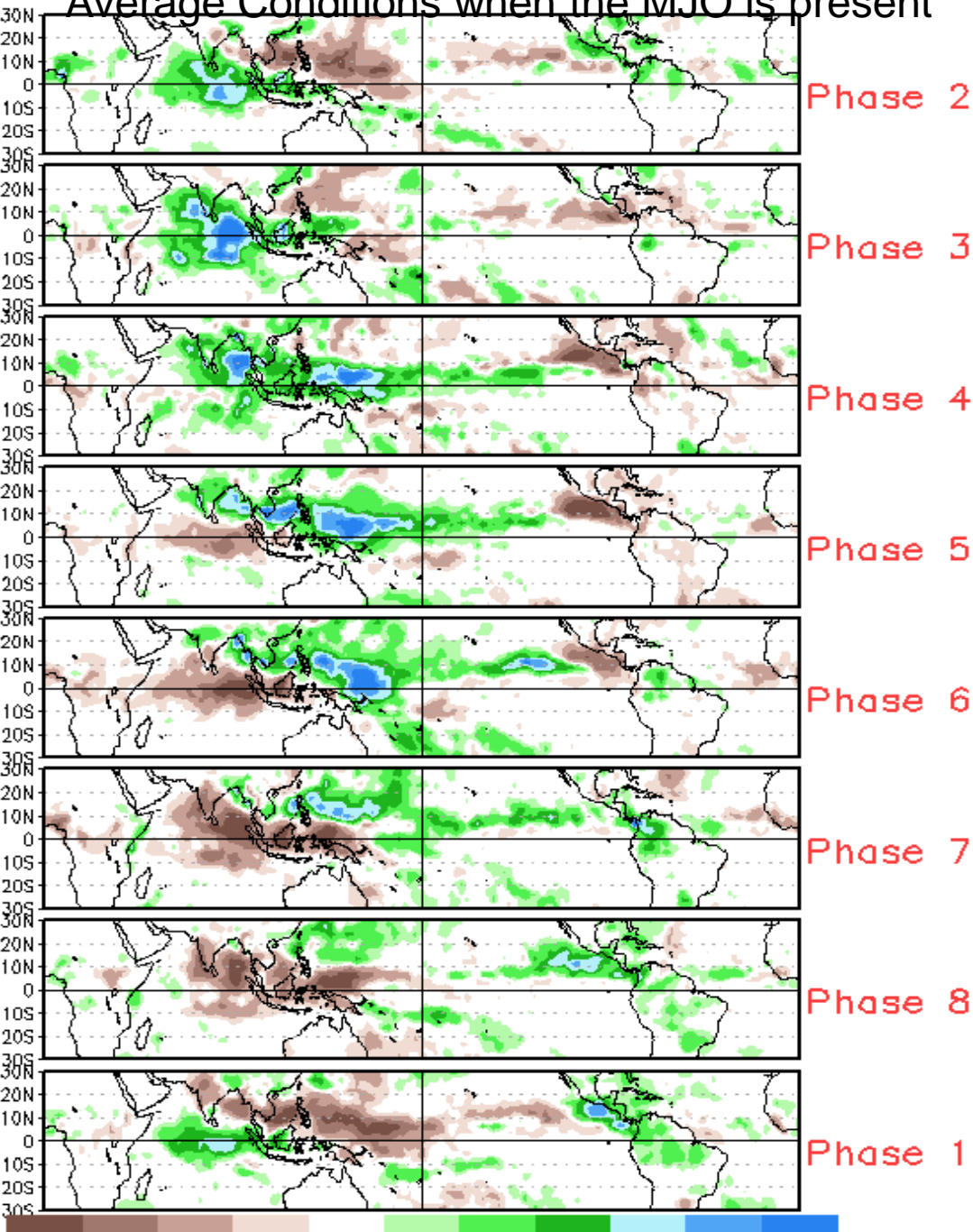


MJO Observation/Forecast



RMM index is forecast to show little coherent MJO activity over the upcoming two weeks.

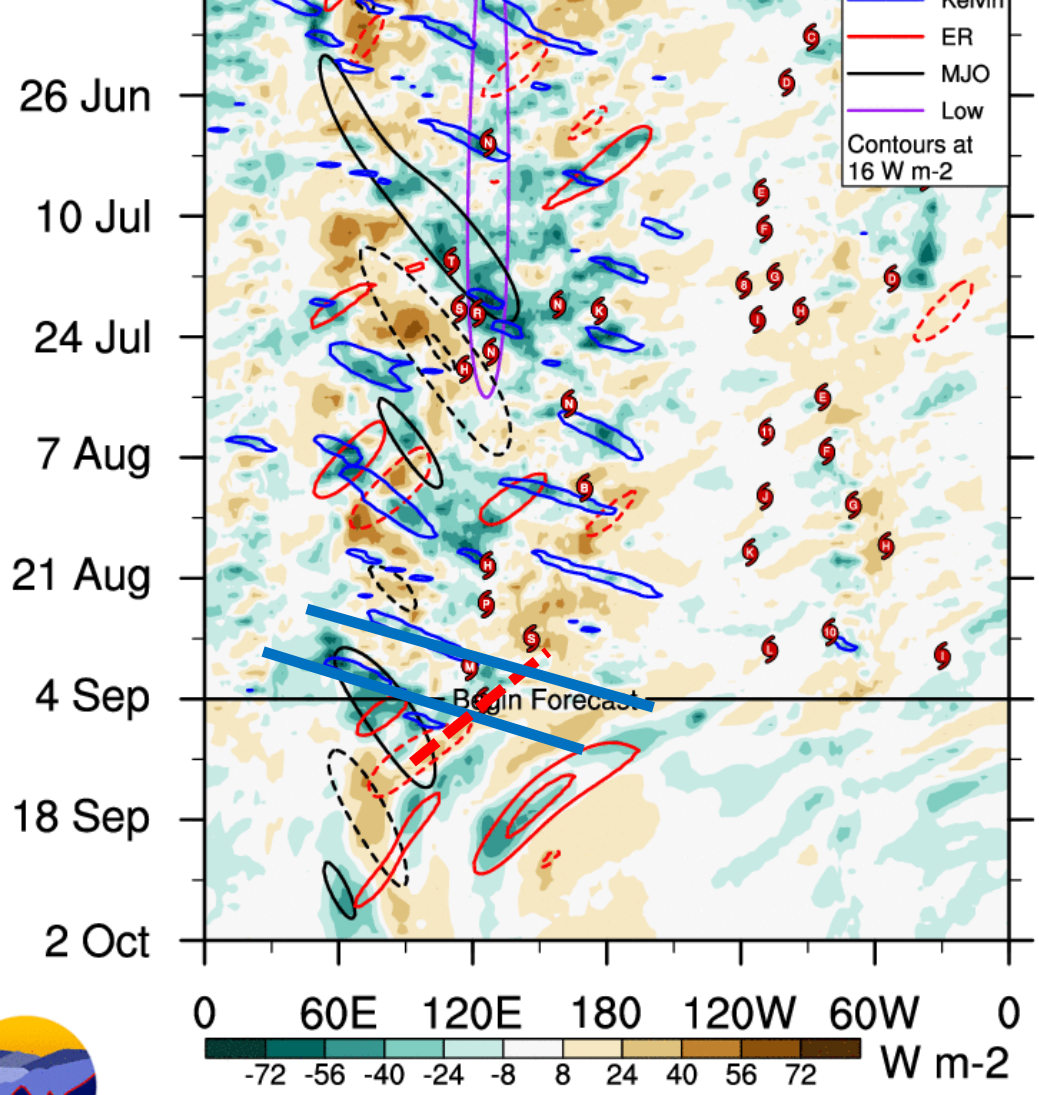
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

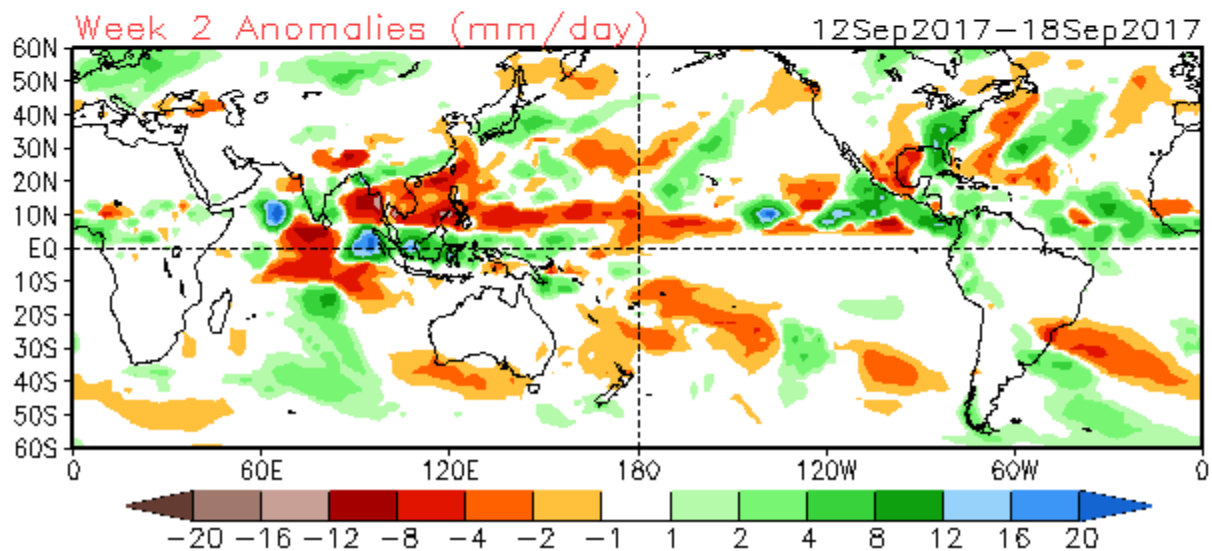
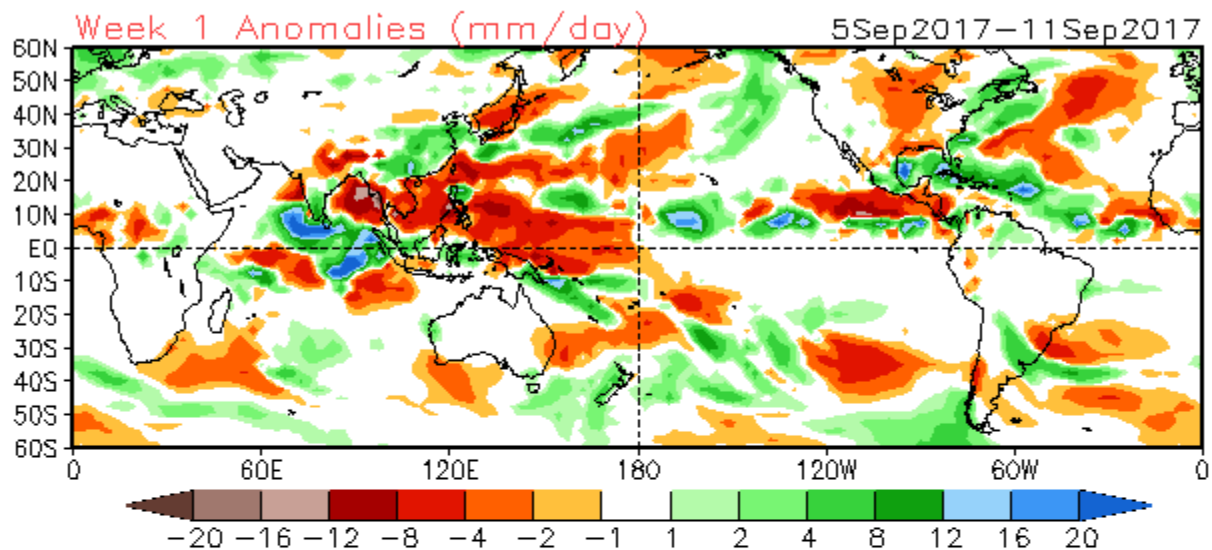
MJO, Rossby wave and **Kelvin wave** having an influence

Low-frequency pattern less of an influence



CFSv2 Weeks 1 & 2 Precipitation

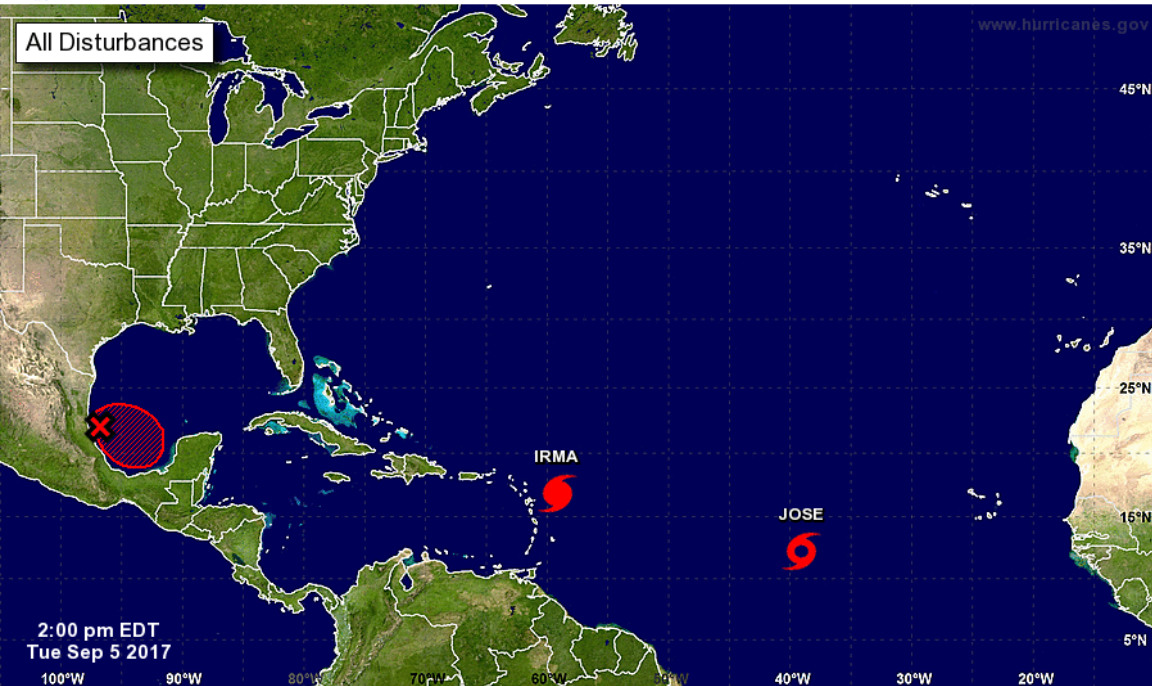
16 Member Ensemble Mean Forecast from 04Sep2017





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



All Disturbances

2:00 pm EDT
Tue Sep 5 2017

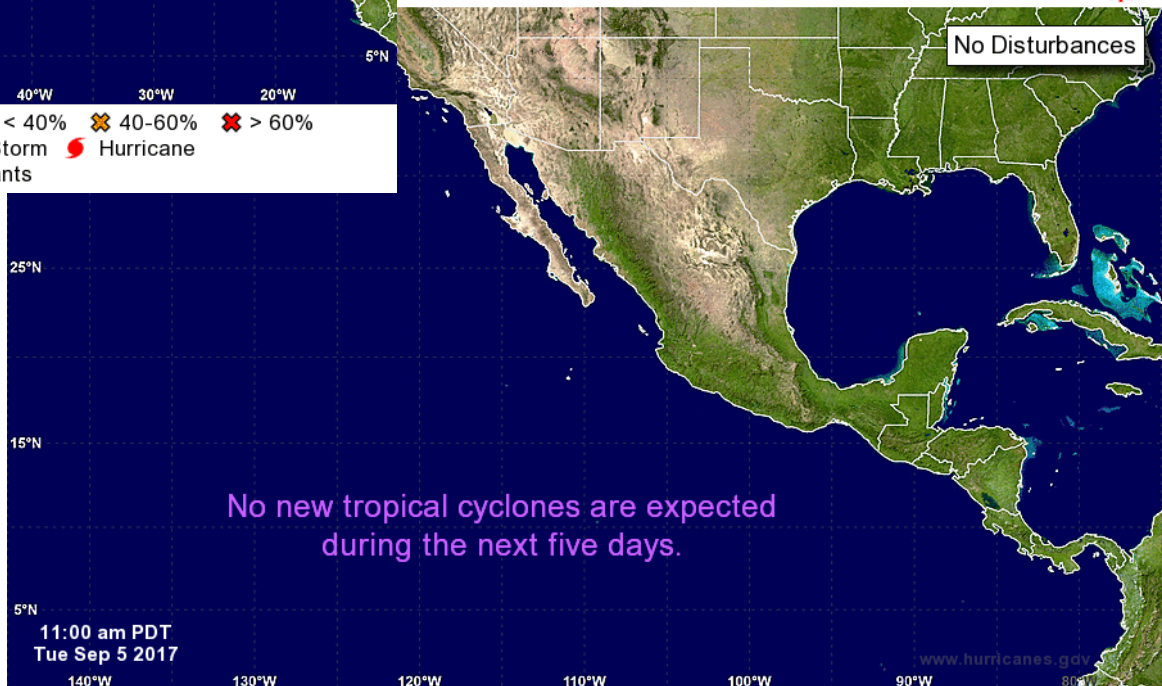
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



No Disturbances

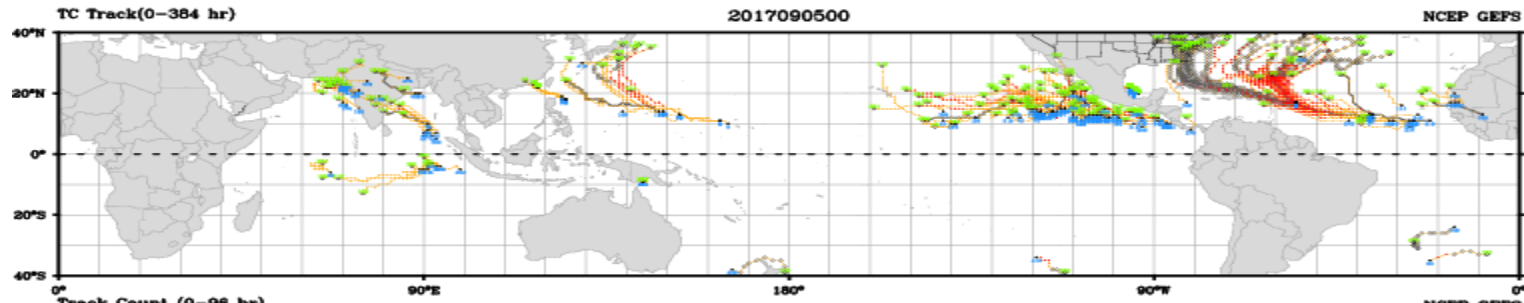
11:00 am PDT
Tue Sep 5 2017

No new tropical cyclones are expected during the next five days.

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

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

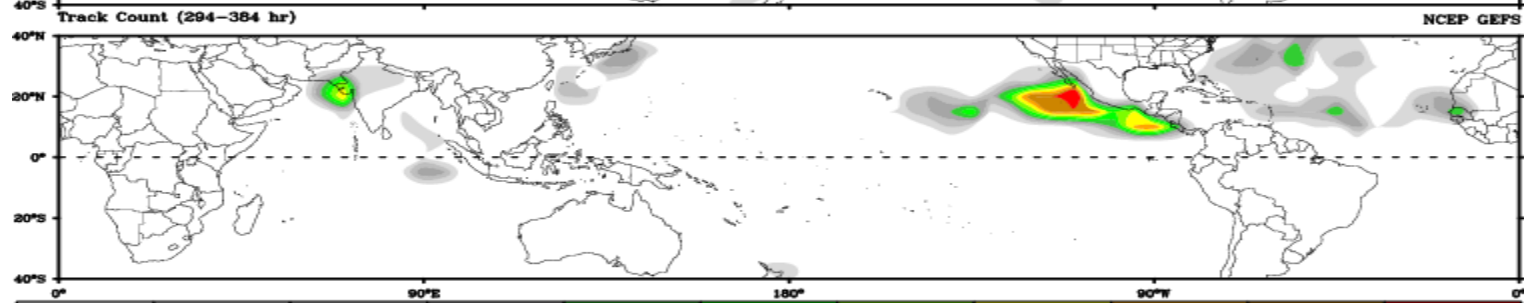
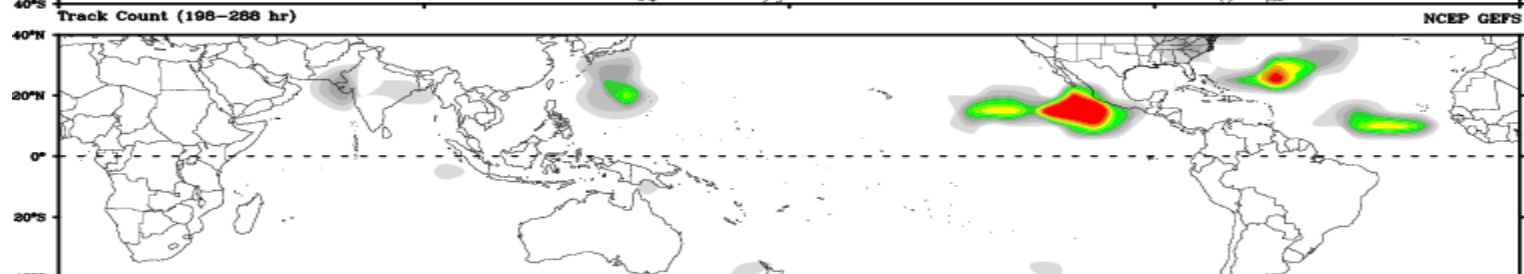
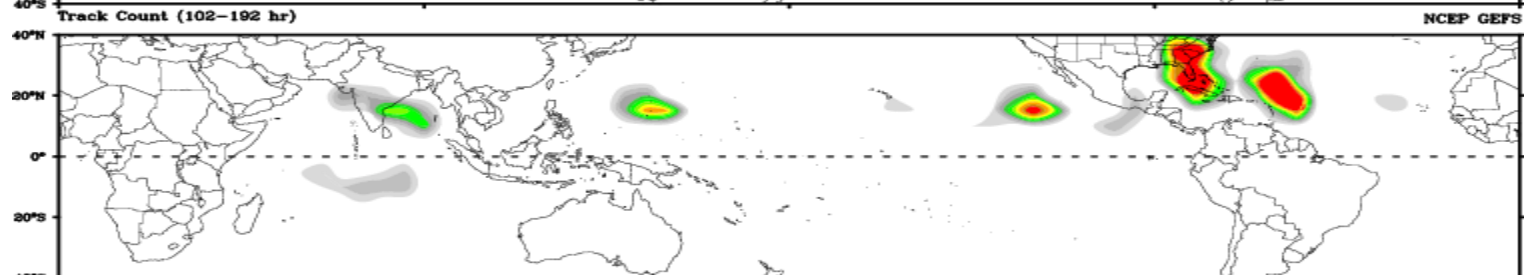
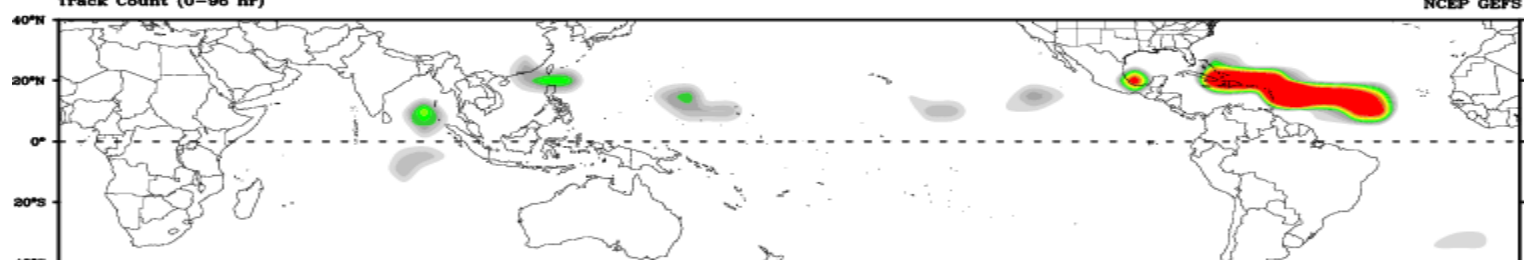


Days 1-4

Day 5-8

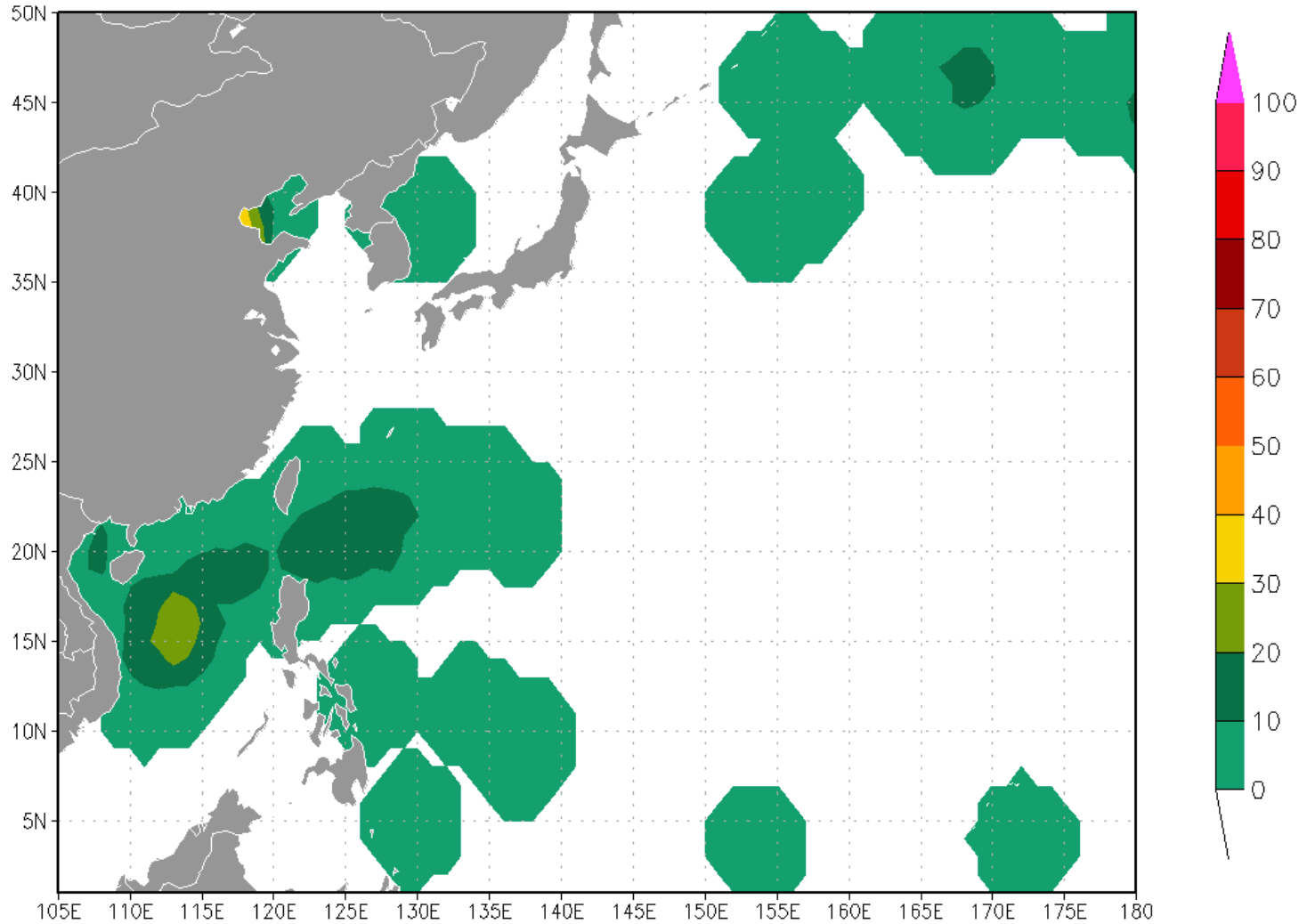
Day 9-12

Day 13-15



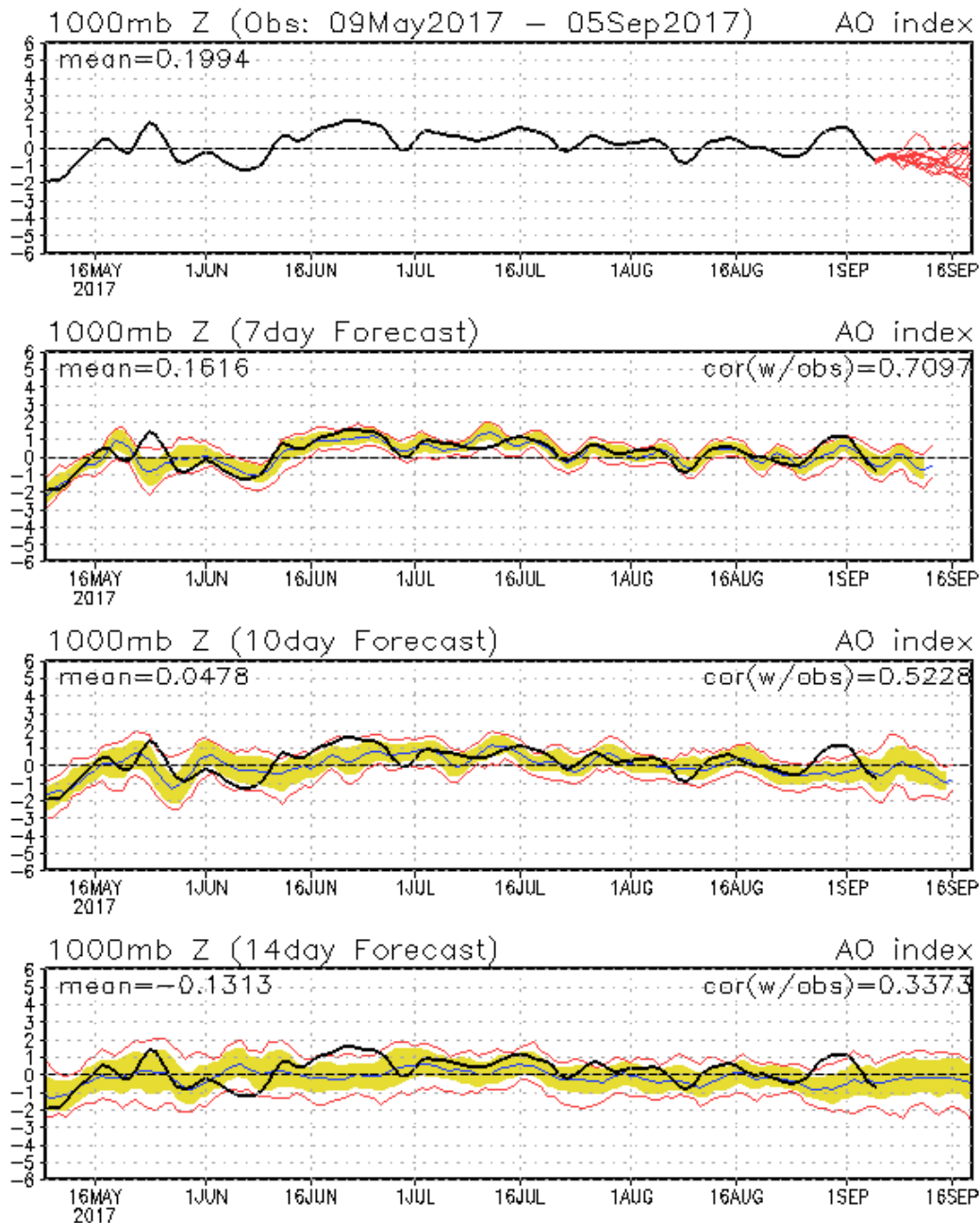
Ensemble-based Probability (%) of TC genesis
using these global ensembles: NCEP CMC ECMWF

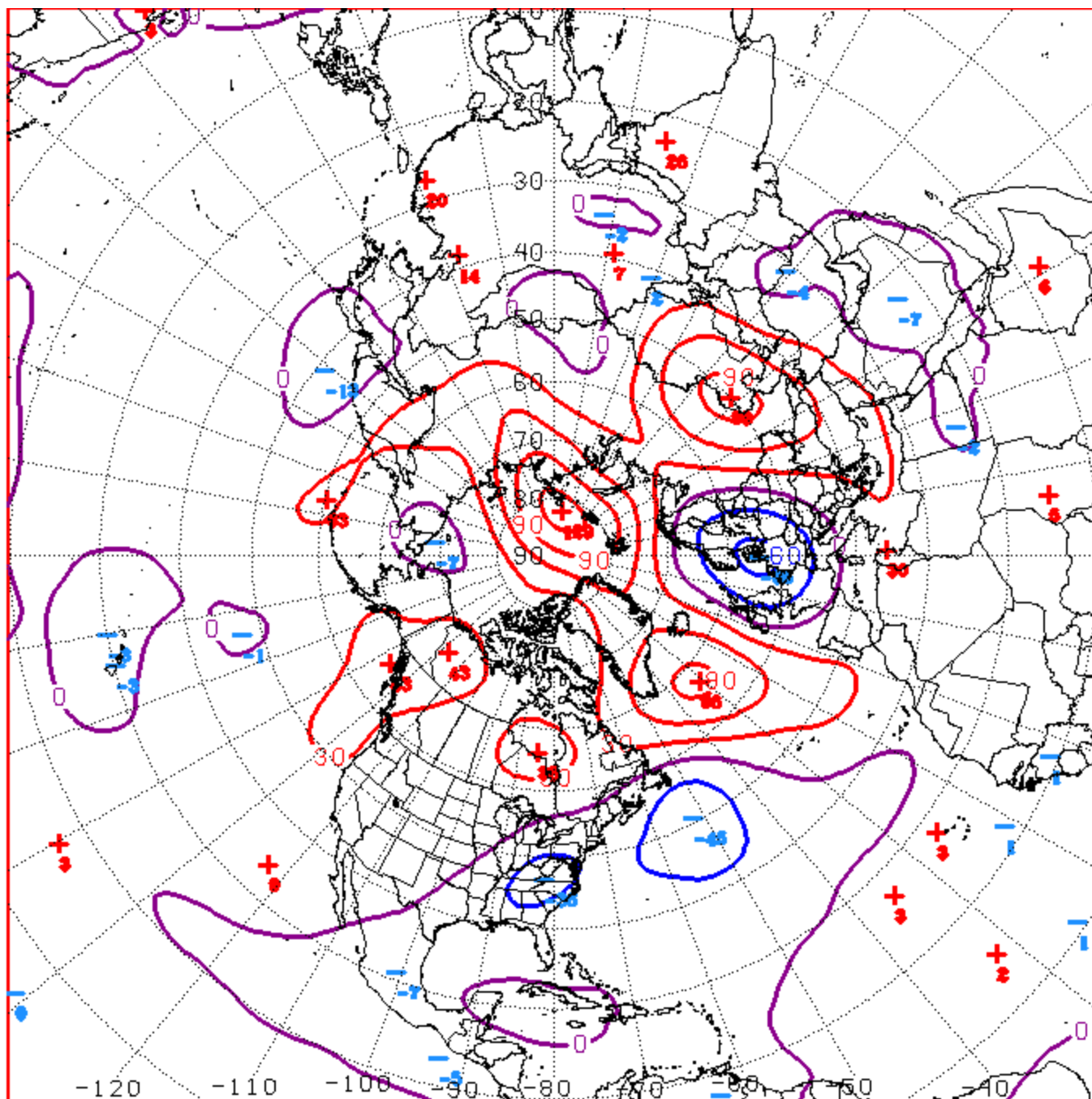
For forecasts during the 00–120h period from initial time = 2017051600



Connections to U.S. Impacts

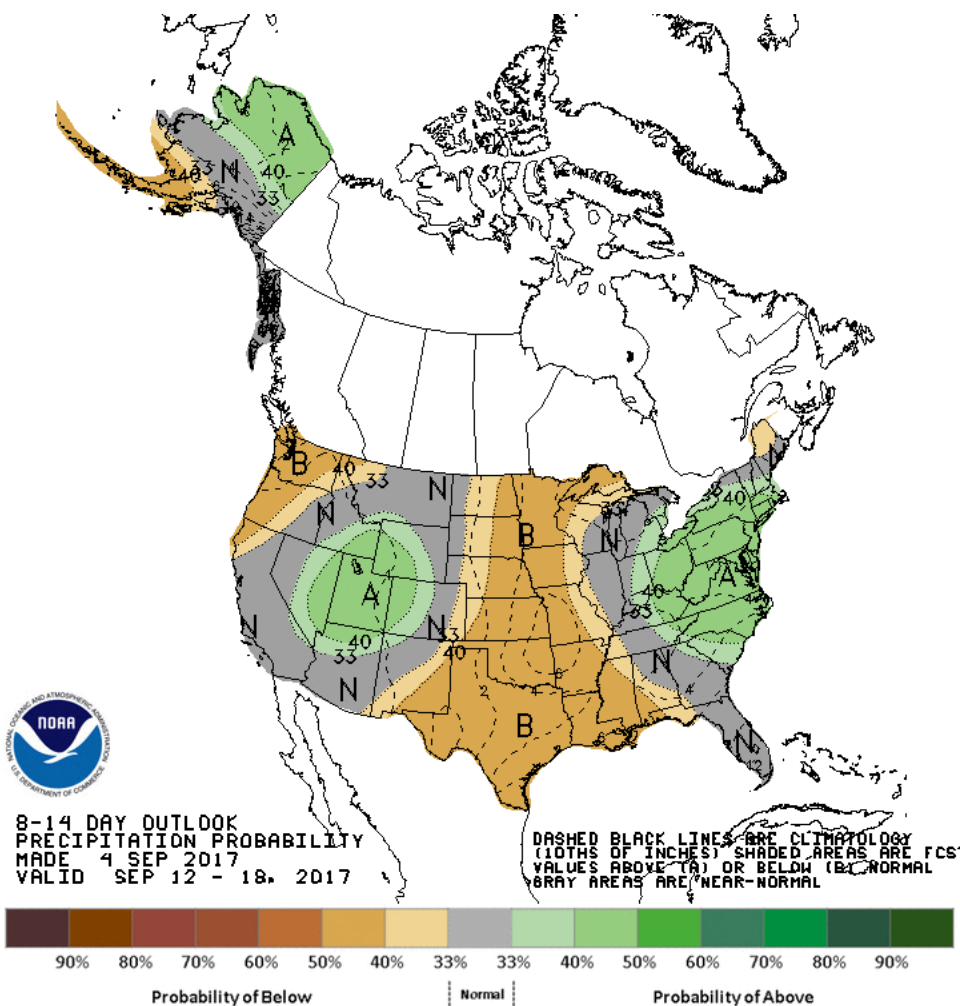
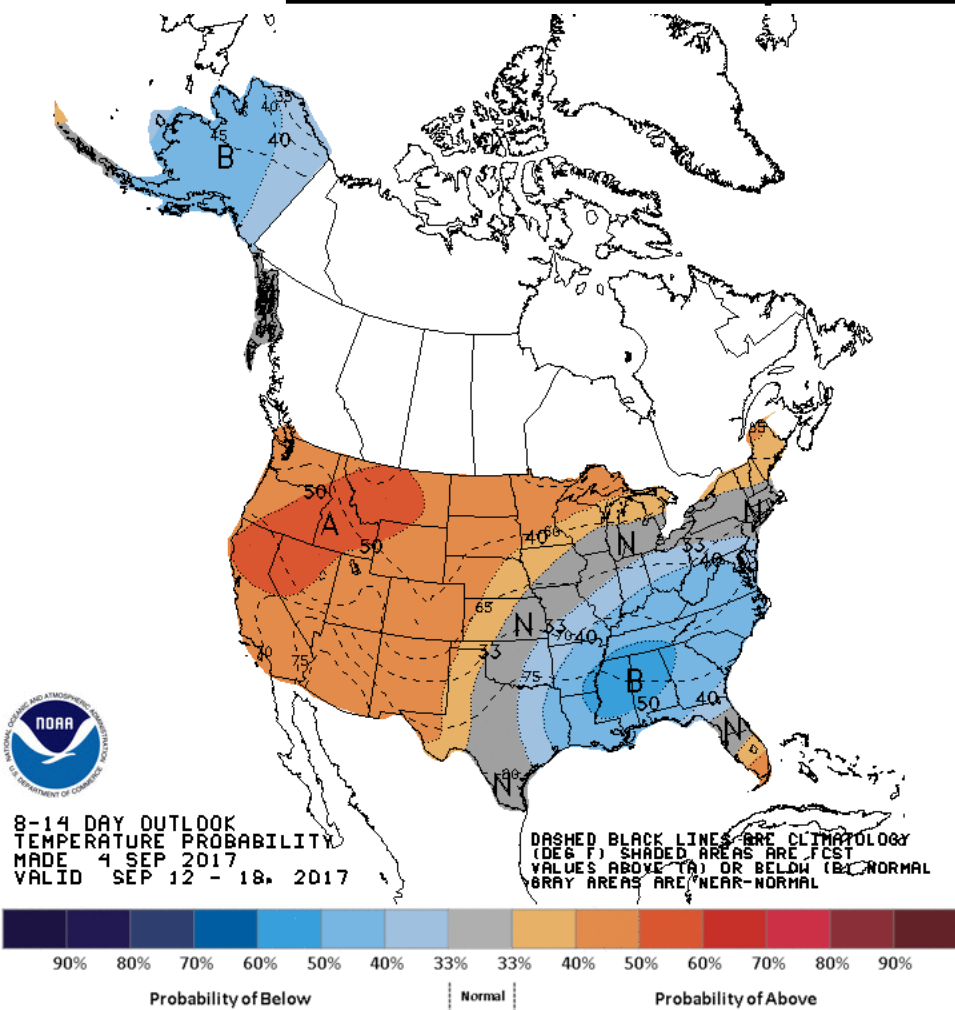
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE SEP 05 2017 1308 UTC CNTD SEP 16 2017

Week 2 – Temperature and Precipitation

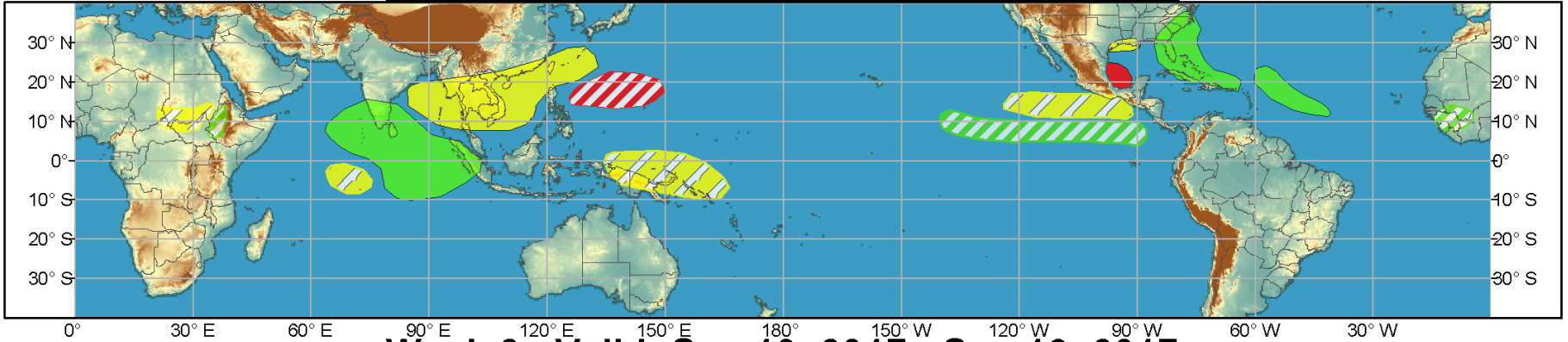




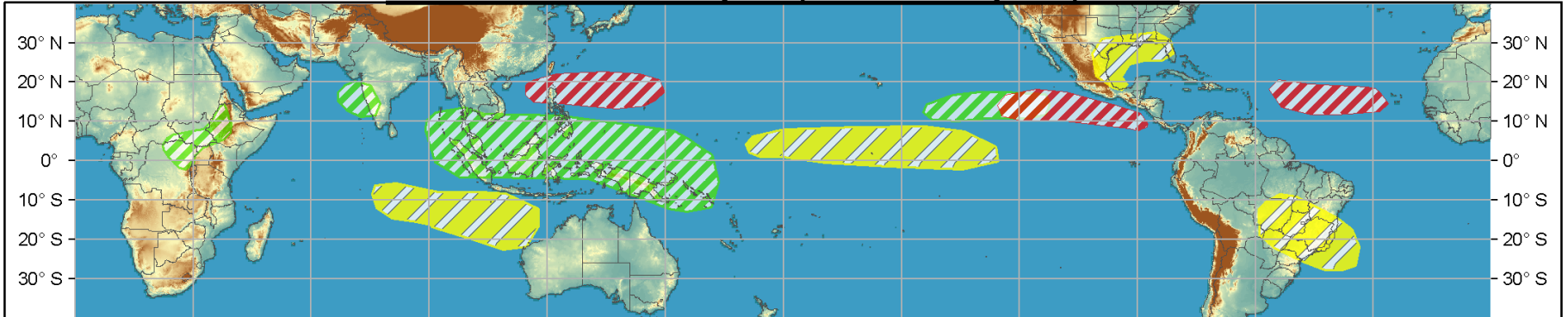
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 06, 2017 - Sep 12, 2017



Week 2 - Valid: Sep 13, 2017 - Sep 19, 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.
- Below-normal temperatures** 7-day mean temperatures in the lower third of the historical range.

Produced: 09/05/2017

Forecaster: Baxter

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.

