

Global Tropics Hazards And Benefits Outlook

7/11/2017

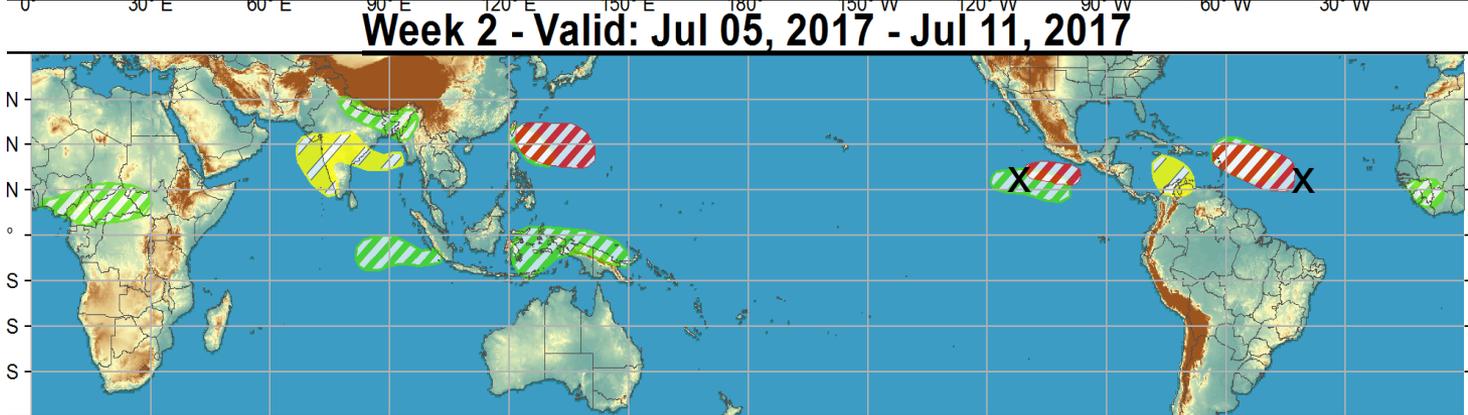
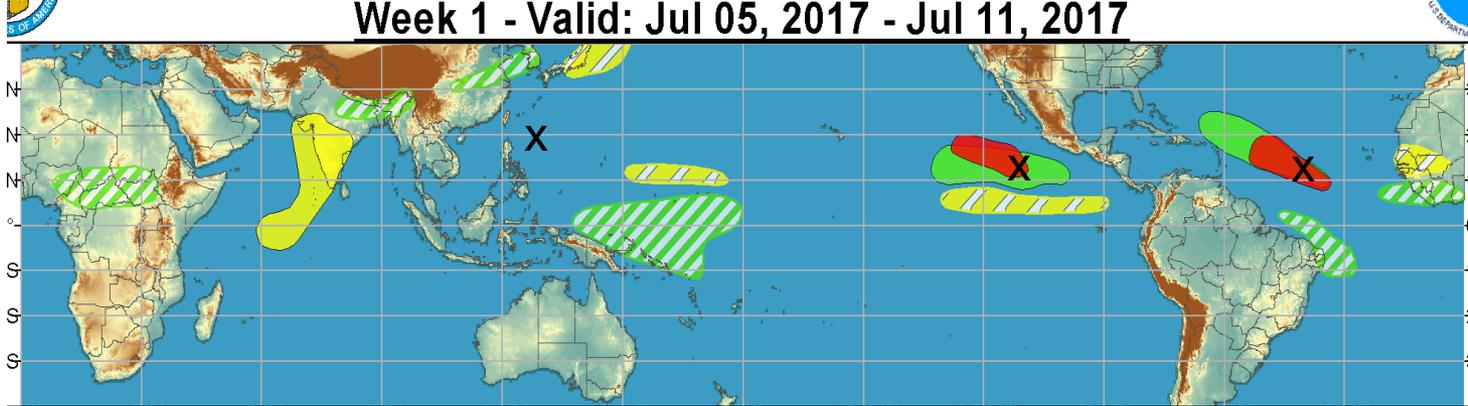
Stephen Baxter

Outline

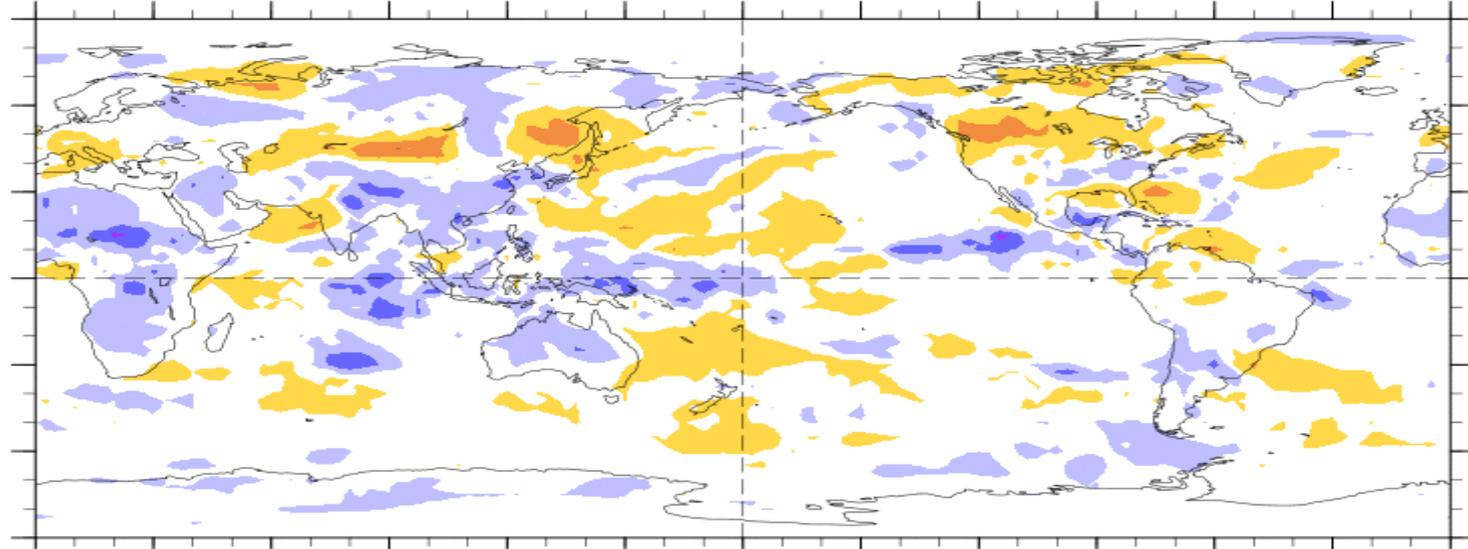
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Hurricane Eugene
Peak: 115 mph
July 7 - present



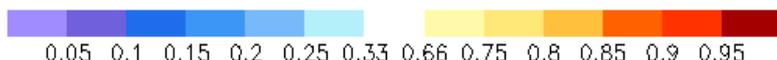
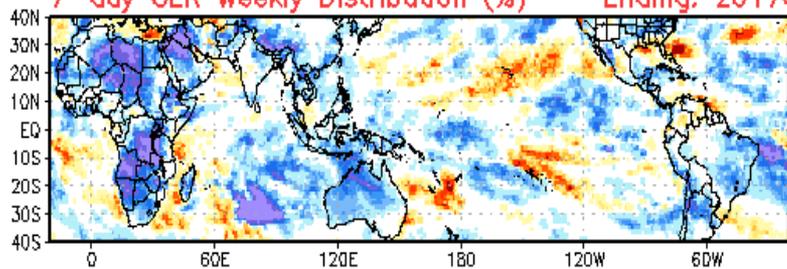
7-Day Average OLR Anomaly 2017/07/03 - 2017/07/09



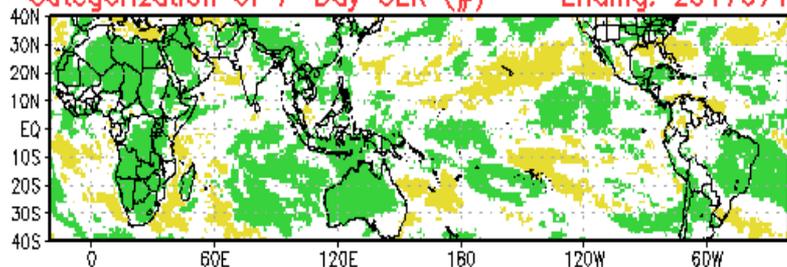
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

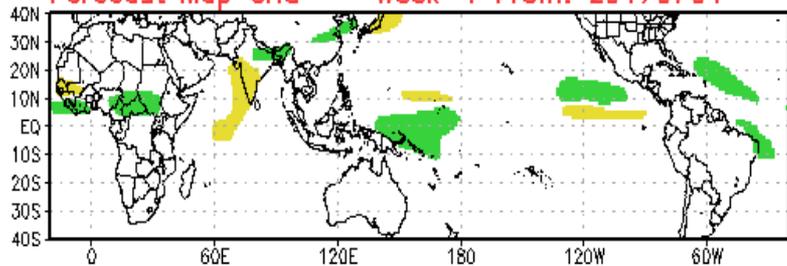
7-day OLR Weekly Distribution (%) -- Ending: 20170711



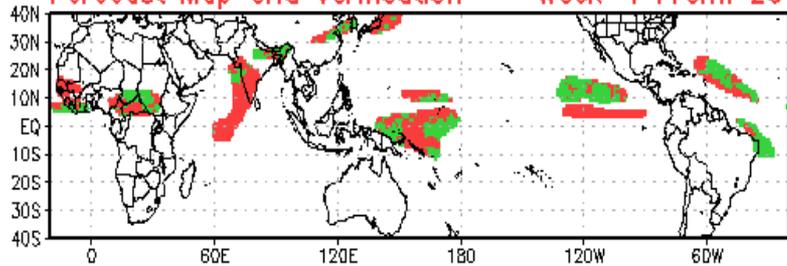
Categorization of 7-Day OLR (#) -- Ending: 20170711



Forecast Map Grid -- Week-1 From: 20170704

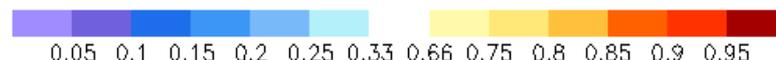
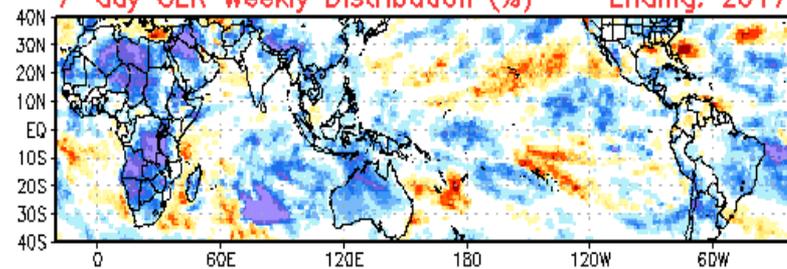


Forecast Map Grid Verification -- Week-1 From: 20170704

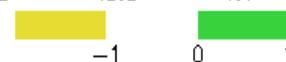
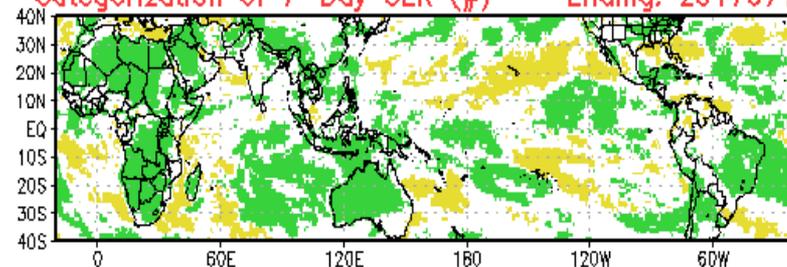


Hit: Green, Miss: Red
Heidke Skill Score: 13.6295

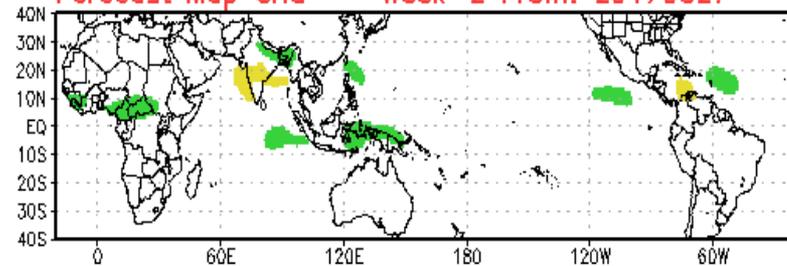
7-day OLR Weekly Distribution (%) -- Ending: 20170711



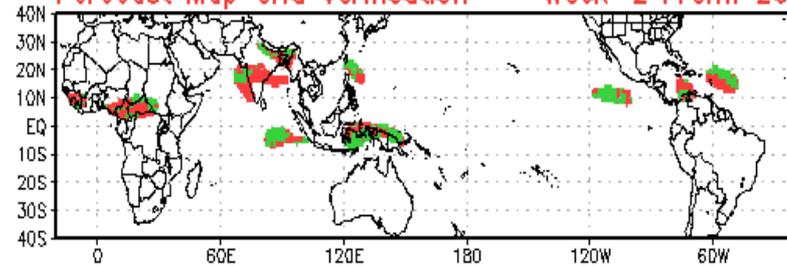
Categorization of 7-Day OLR (#) -- Ending: 20170711



Forecast Map Grid -- Week-2 From: 20170627



Forecast Map Grid Verification -- Week-2 From: 20170627



Hit: Green, Miss: Red
Heidke Skill Score: 19.3241

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is favored (50-55%) through Northern Hemisphere fall 2017.
- The next ENSO diagnostic discussion release will be Thursday (13 July).

MJO and other subseasonal tropical variability:

- The RMM index shows continued weakness of the MJO, though some organization is evident in recent days, suggesting some MJO signal may be developing over the eastern Indian Ocean and Maritime Continent.
- Low frequency enhancement of convection continues over the Maritime Continent.
- Ensemble guidance is mixed regarding the intraseasonal state of the global tropics, with the ECMWF showing a more canonical MJO evolution over the next two weeks.

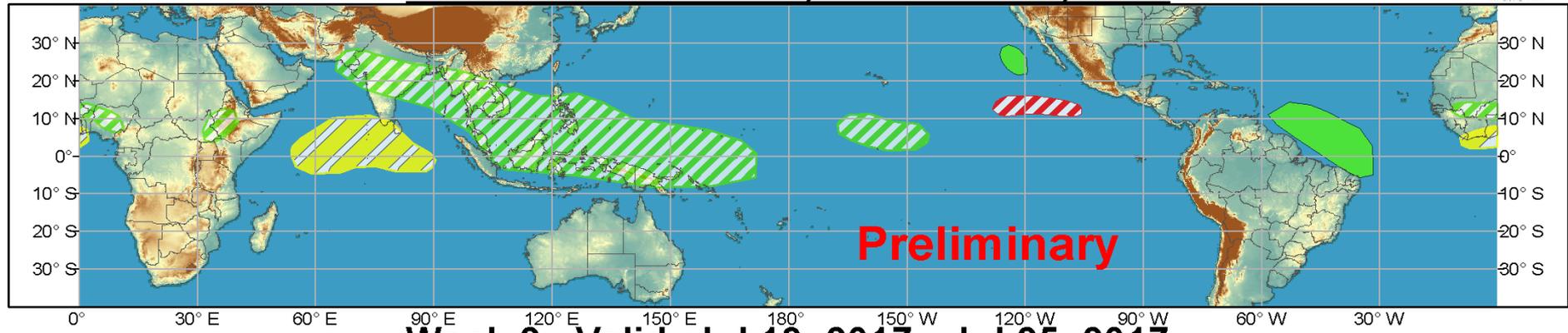
Extratropics:

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



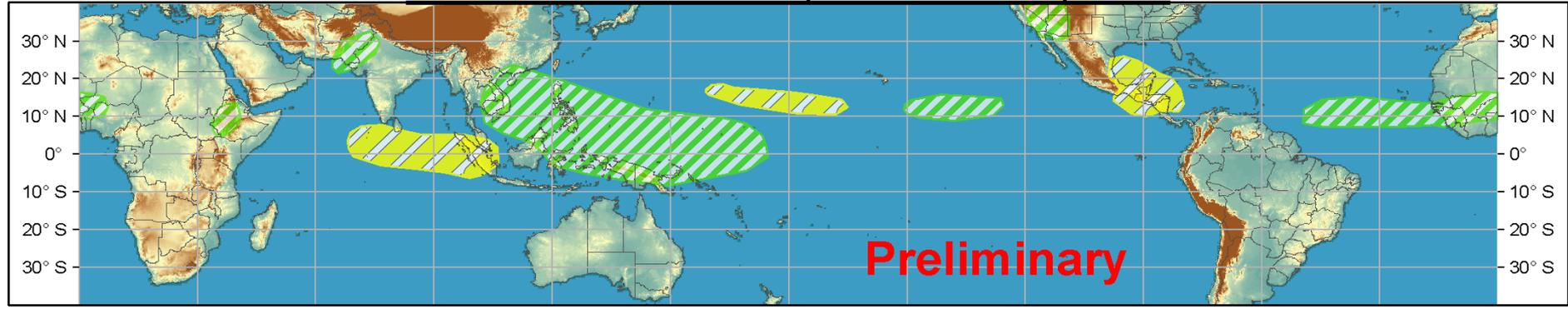
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 12, 2017 - Jul 18, 2017



Preliminary

Week 2 - Valid: Jul 19, 2017 - Jul 25, 2017



Preliminary

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.
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- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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Produced: 07/11/2017
Forecaster: Baxter

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IR Satellite & 200-hpa Velocity Potential Anomalies

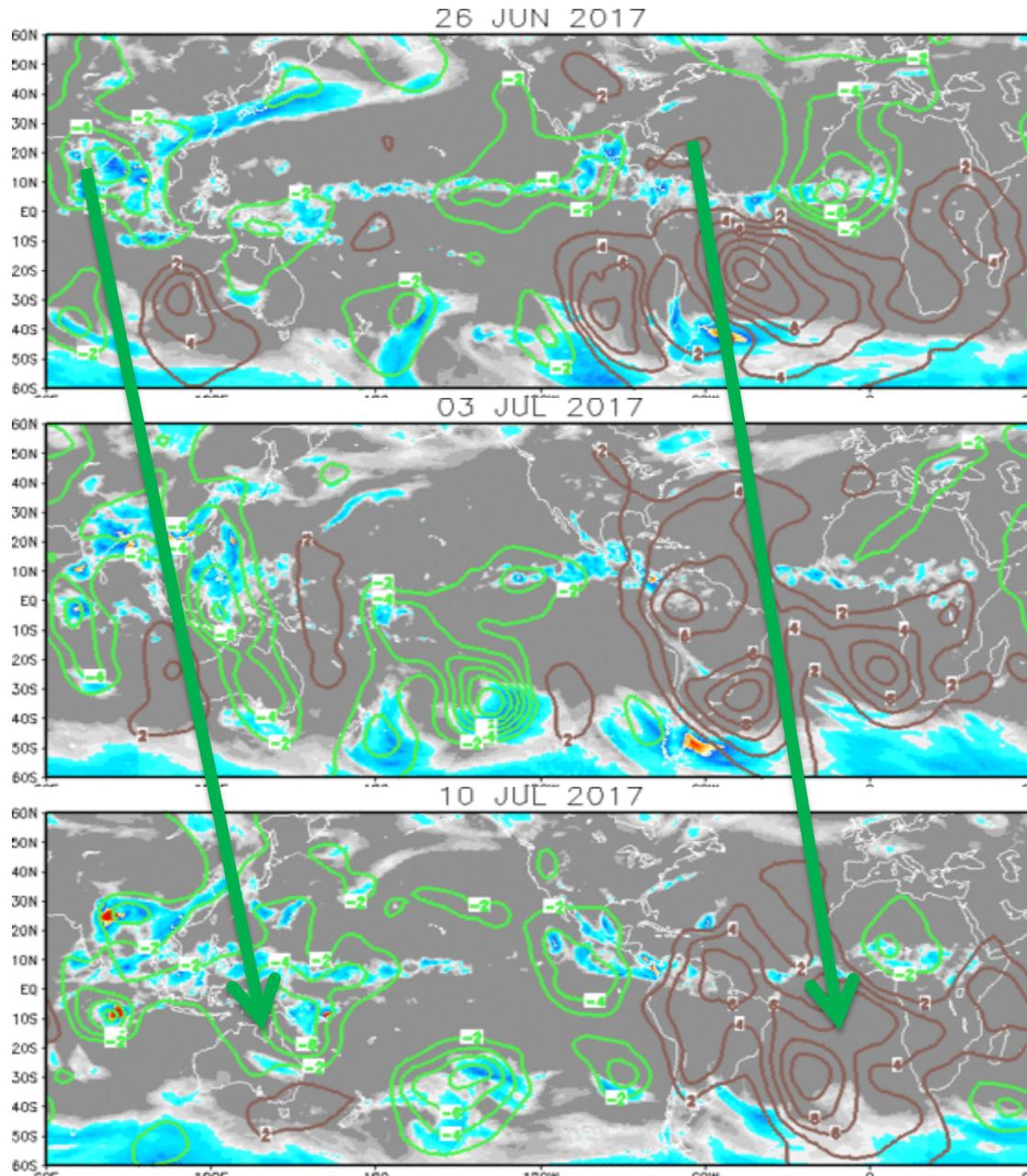
Green: Enhanced Divergence

Brown: Enhanced Convergence

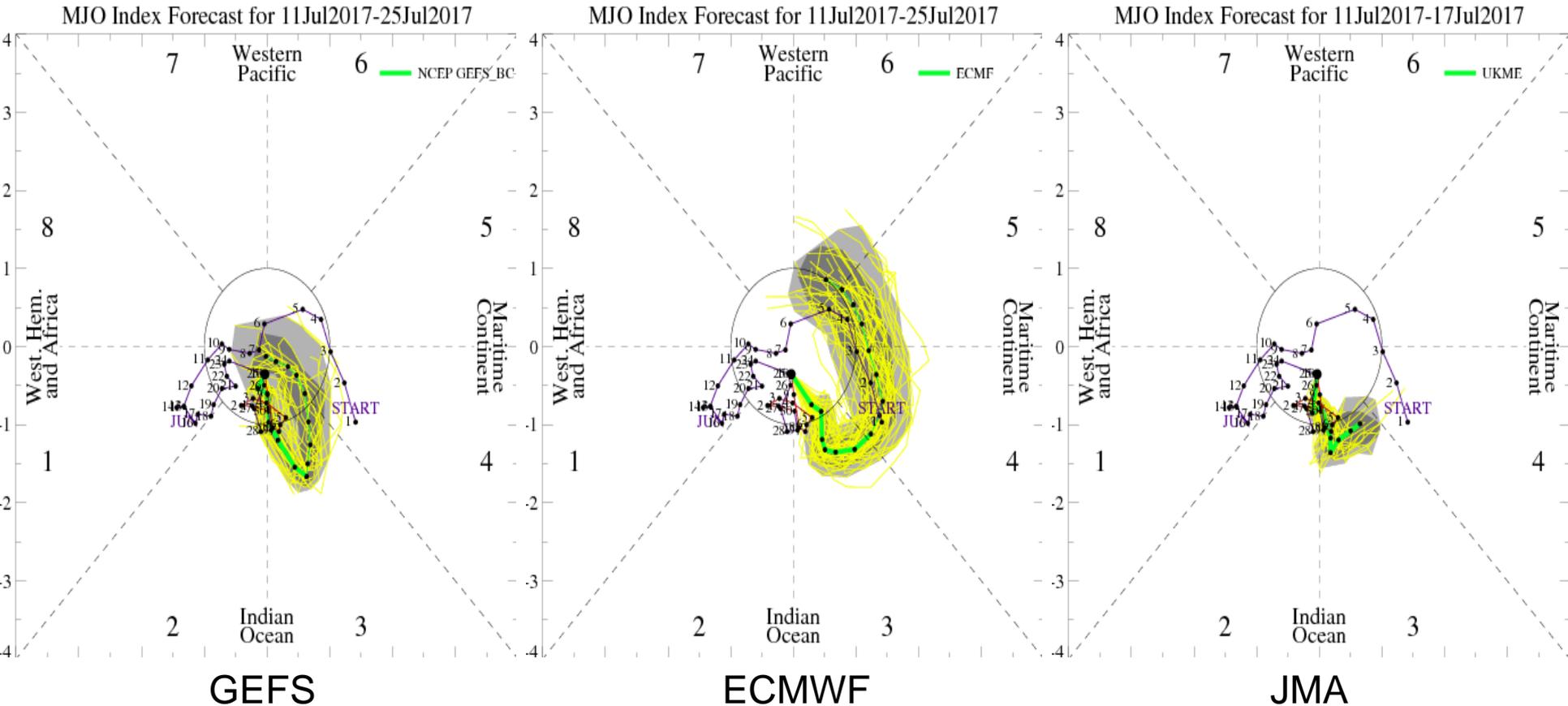
Pattern has become somewhat more organized, though there is still no robust MJO signal.

Noisy signal has organized slightly around fewer wavenumbers in recent weeks.

Some eastward propagation may be ongoing.



MJO Observation/Forecast

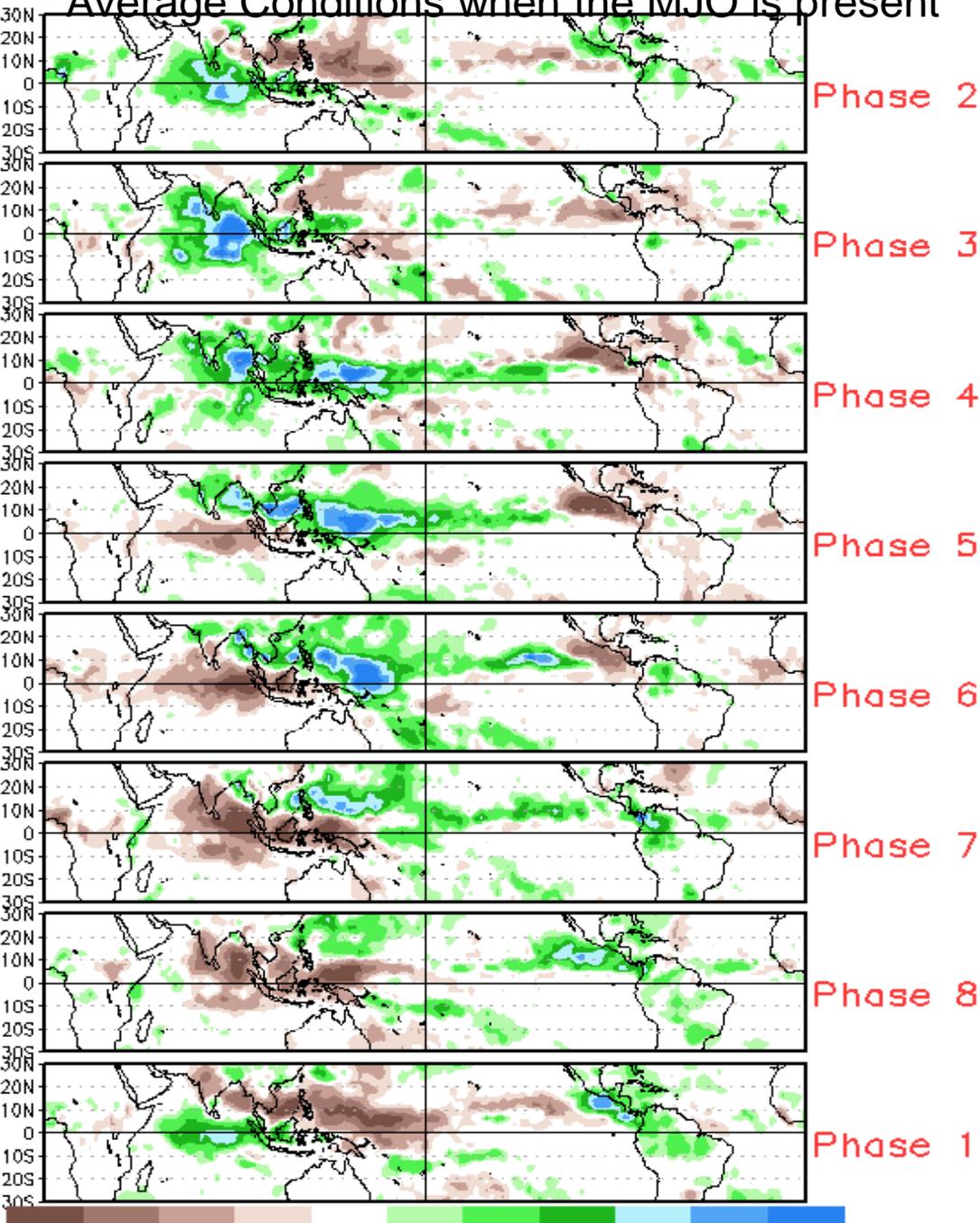


GEFS now agrees with ECMWF on emerging signal over eastern Indian Ocean, but shows no coherent eastward propagation.

ECMWF shows canonical eastward propagation of an MJO signal on the fast end of the MJO envelope.

JMA forecast hints at some eastward propagation.

Average Conditions when the MJO is present

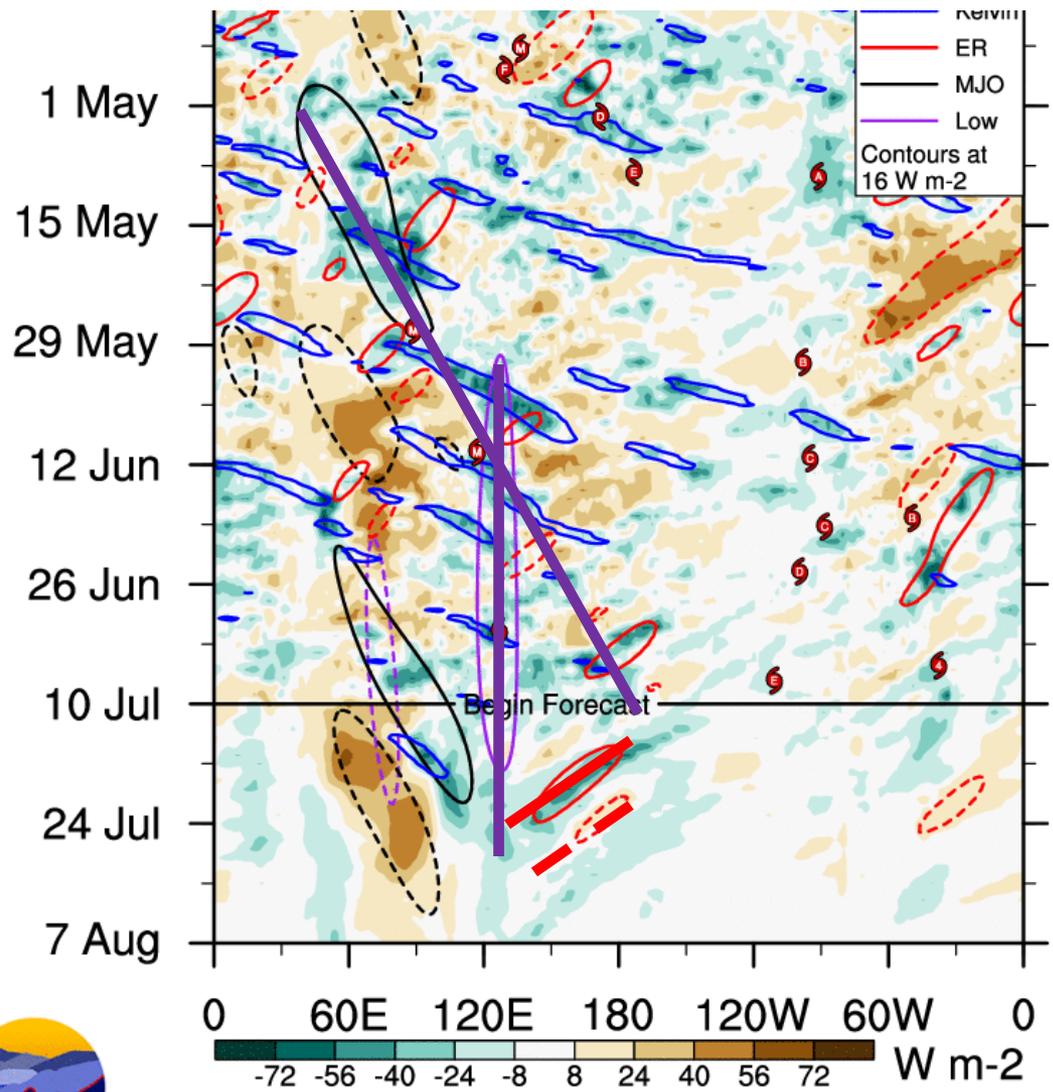


CAVEAT: These panels are representative of robust MJO events.

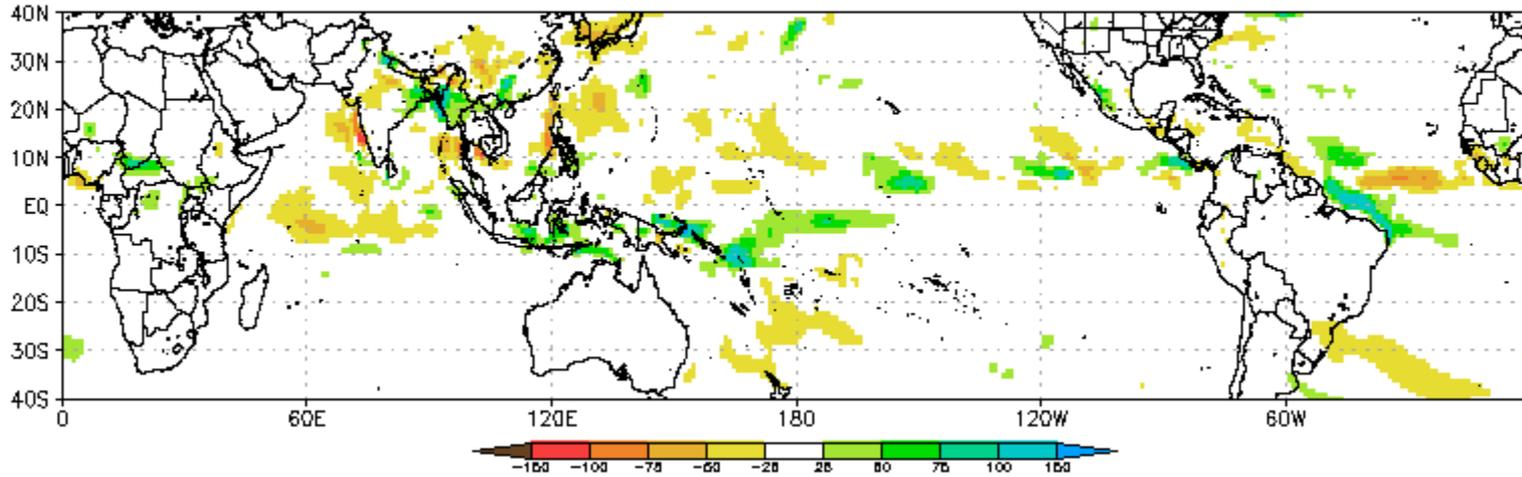
The **Low-frequency pattern** is stationary and enhancing convection over Maritime Continent, with another signal pushing eastward into the E. Pacific.

A series of **equatorial Rossby waves** are forecast to suppress/enhance convection across the West Pacific, but the CFS has a tendency to overdo these features.

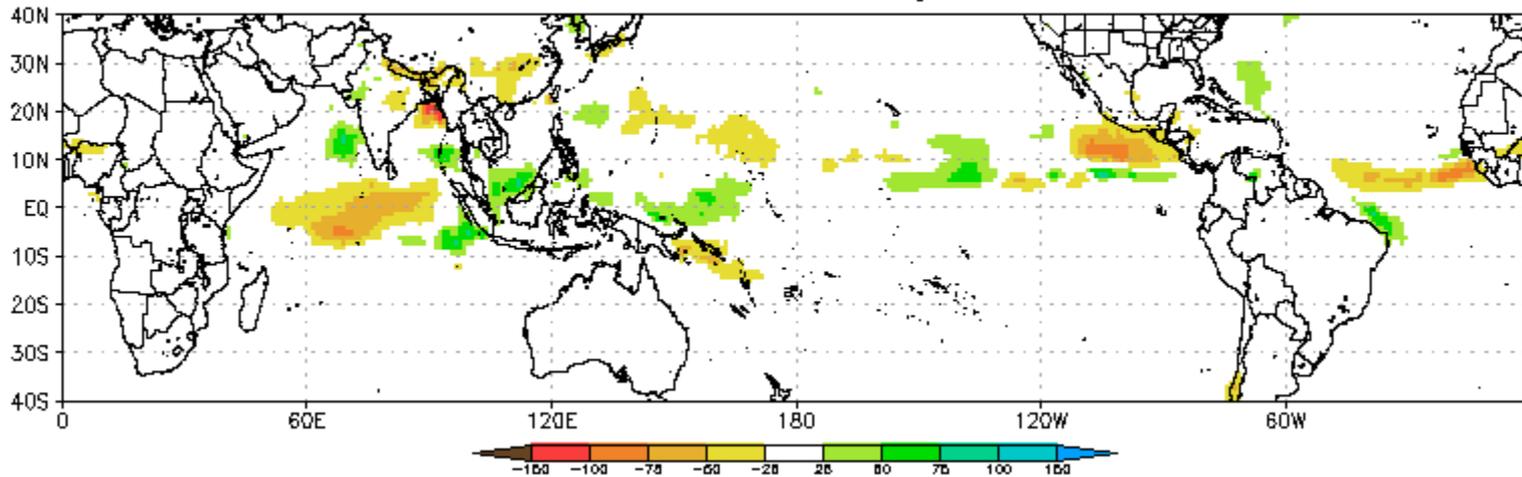
In recent days there is some indication of an enhanced MJO phase over the Indian Ocean.



CFS Precipitation Anomalies (mm) Issued 09Jul2017
Week-1 Forecast Ending 17Jul2017



CFS Precipitation Anomalies (mm) Issued 09Jul2017
Week-2 Forecast Ending 24Jul2017





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Jul 11 2017

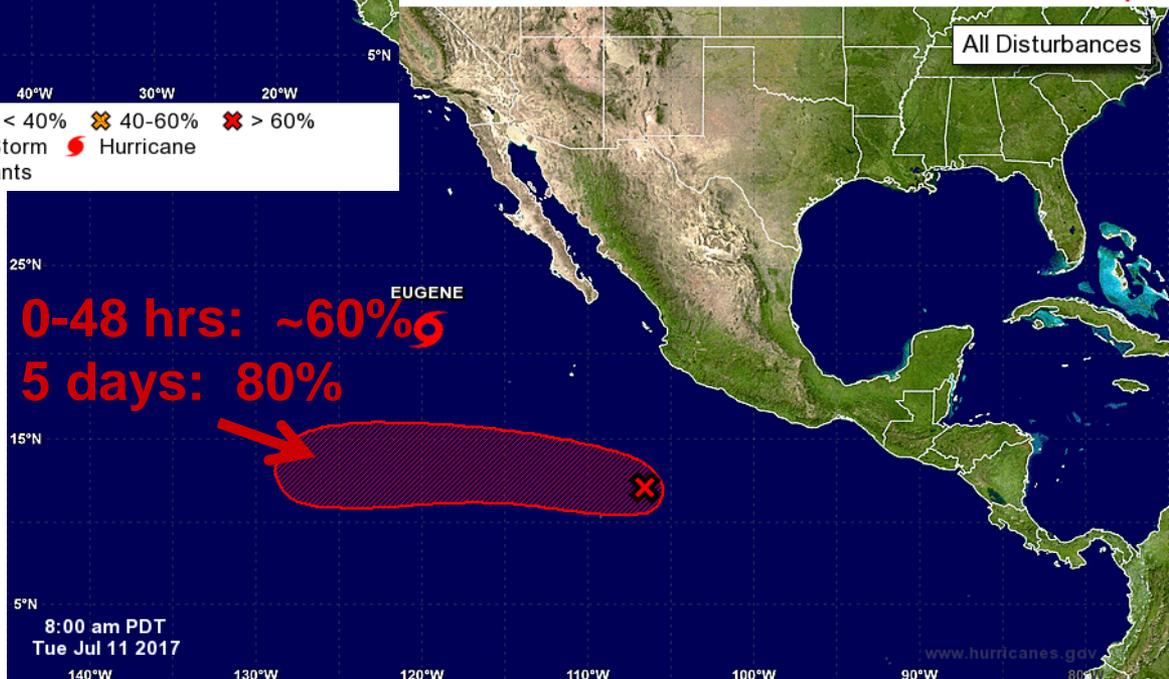
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

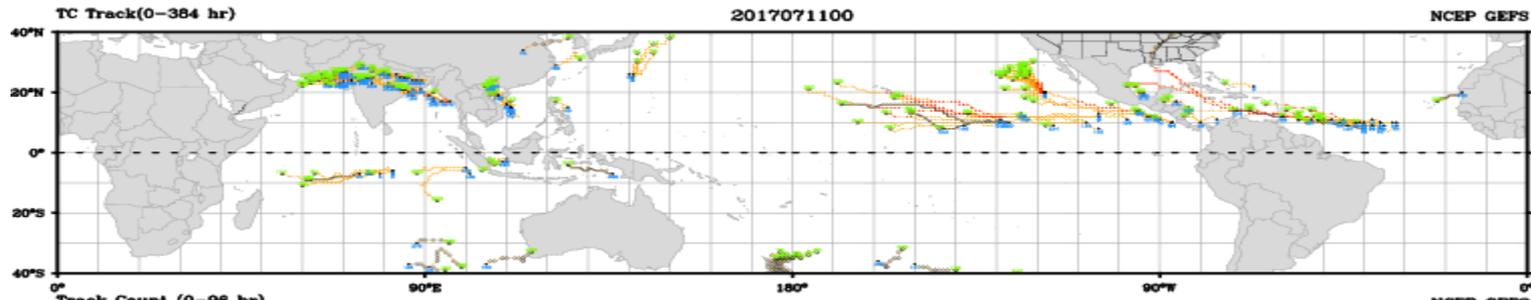


8:00 am PDT
Tue Jul 11 2017

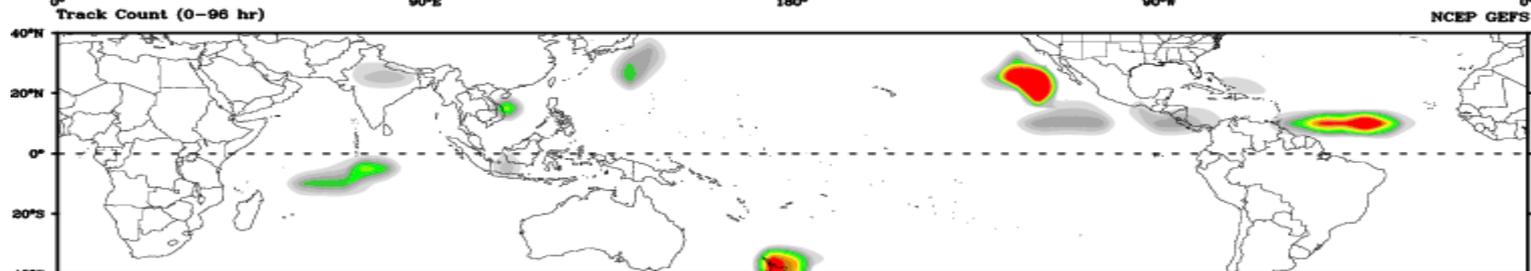
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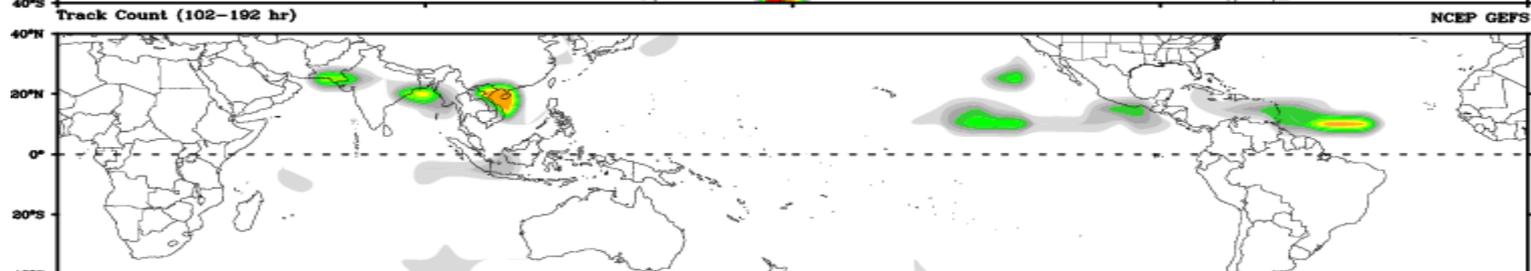
Post-Tropical Cyclone Remnants



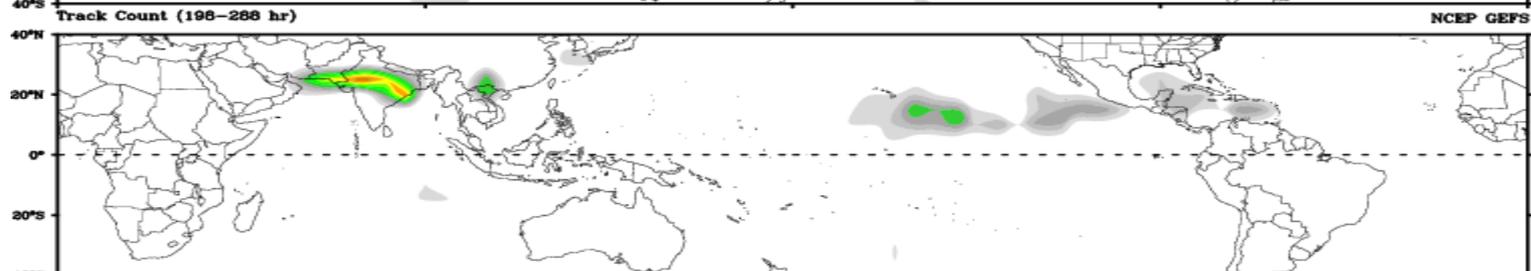
Days 1-4



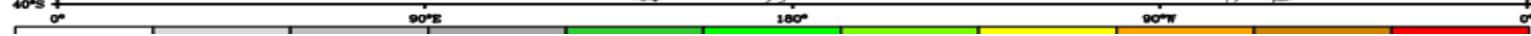
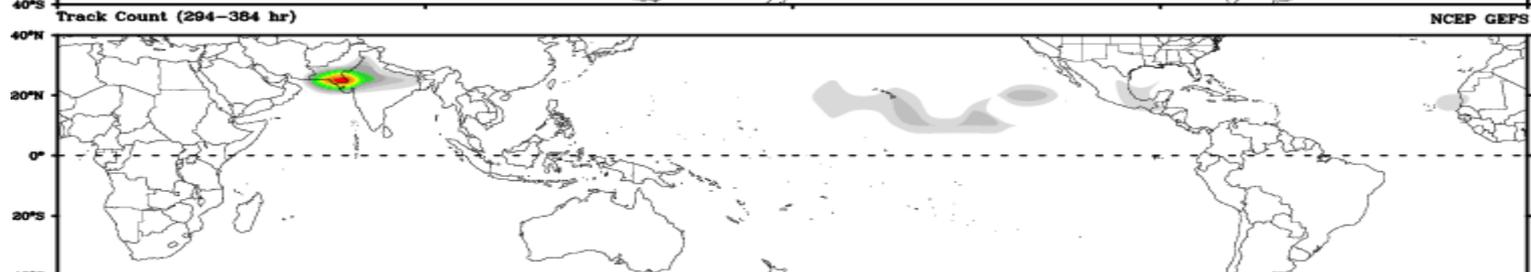
Days 5-8



Days 9-12

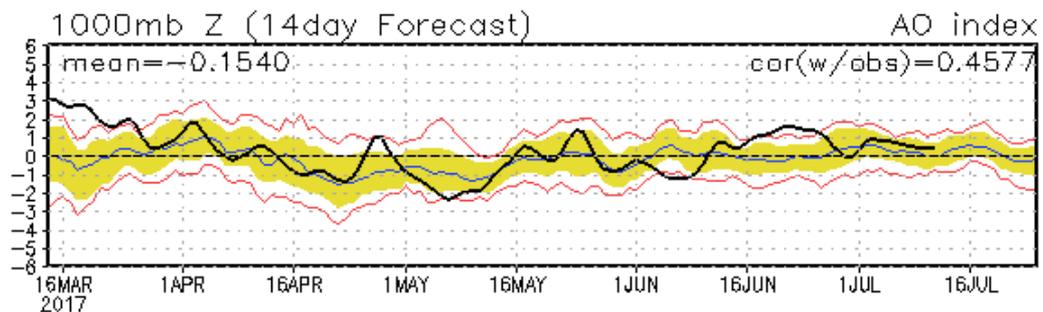
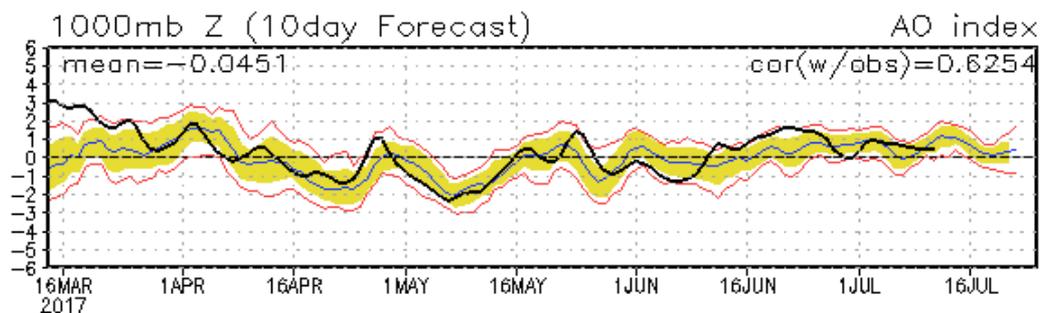
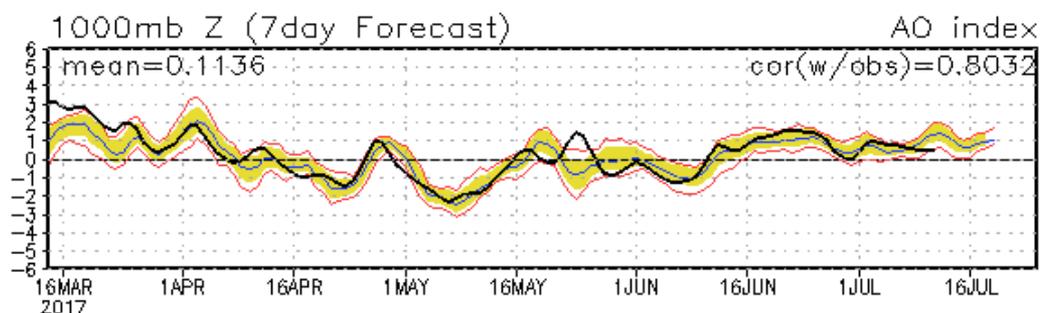
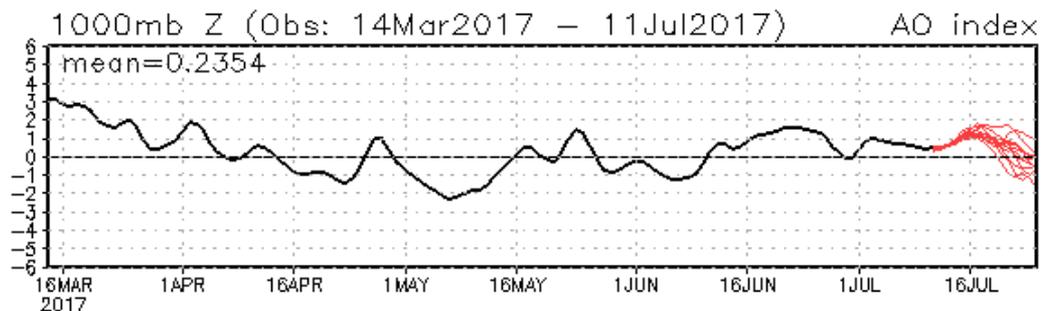


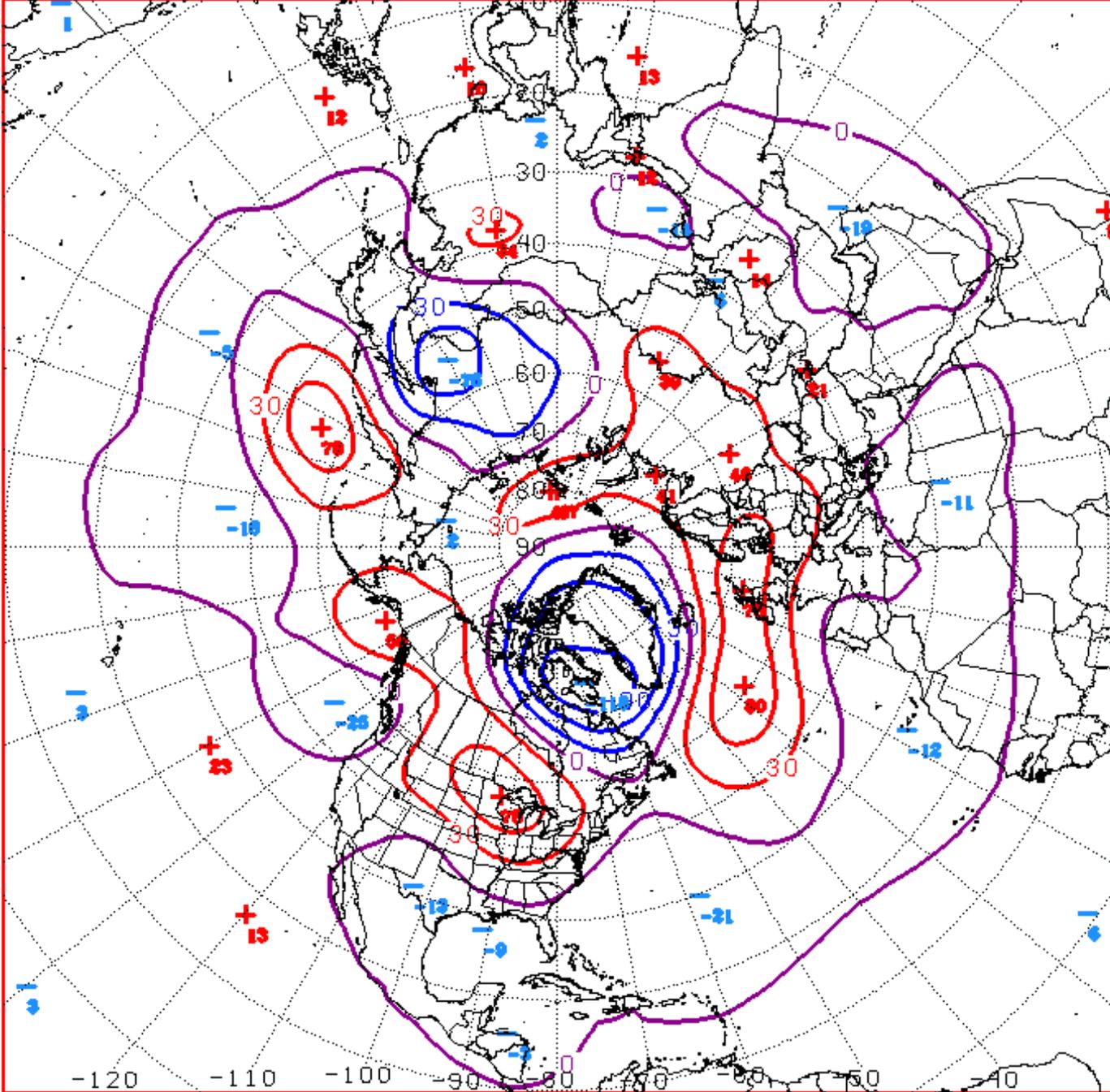
Days 13-15



Connections to U.S. Impacts

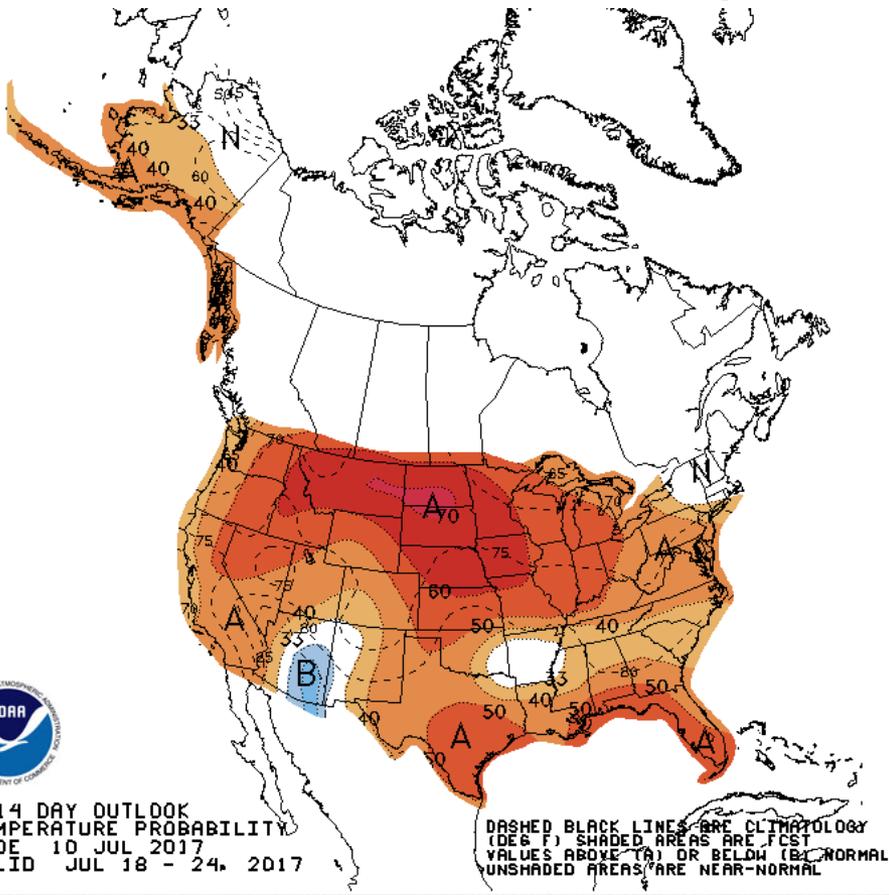
AO: Observed & ENSM forecasts





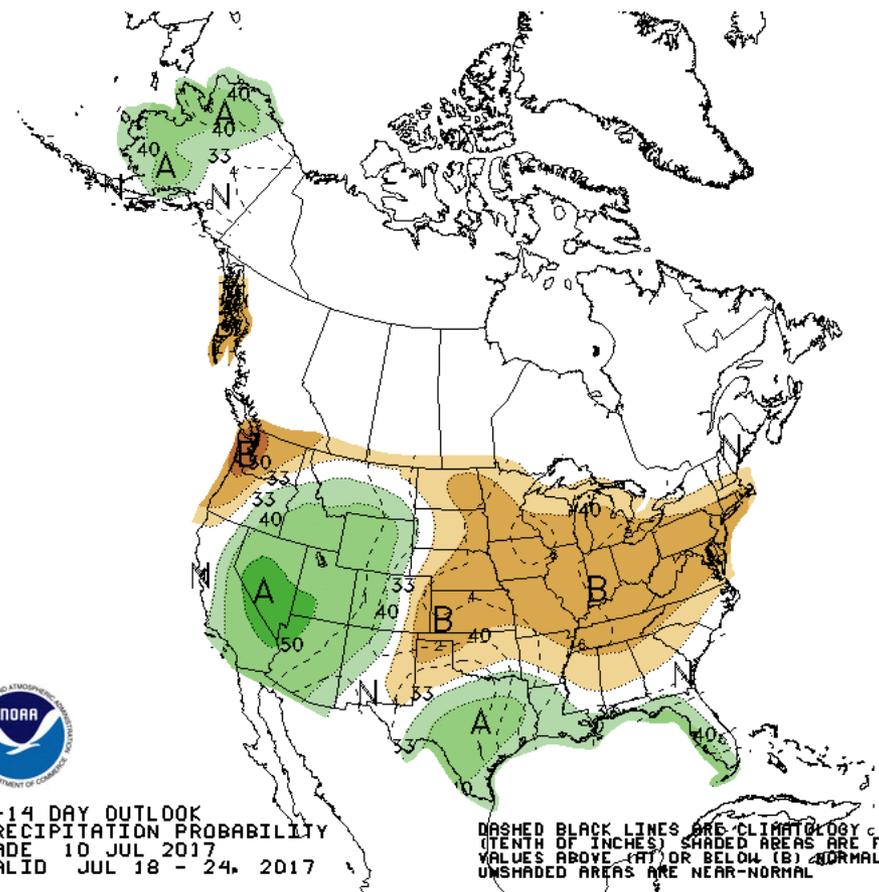
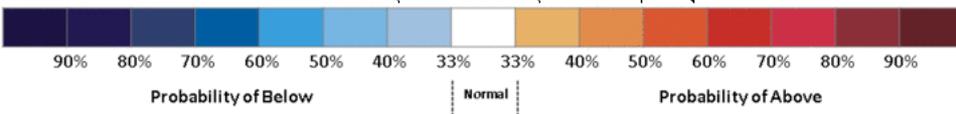
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUL 11 2017 1423 UTC CNTD JUL 22 2017

Week 2 – Temperature and Precipitation



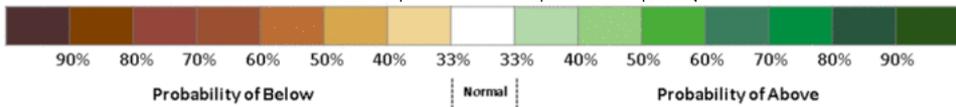
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 10 JUL 2017
VALID JUL 18 - 24, 2017

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 JUL 2017
VALID JUL 18 - 24, 2017

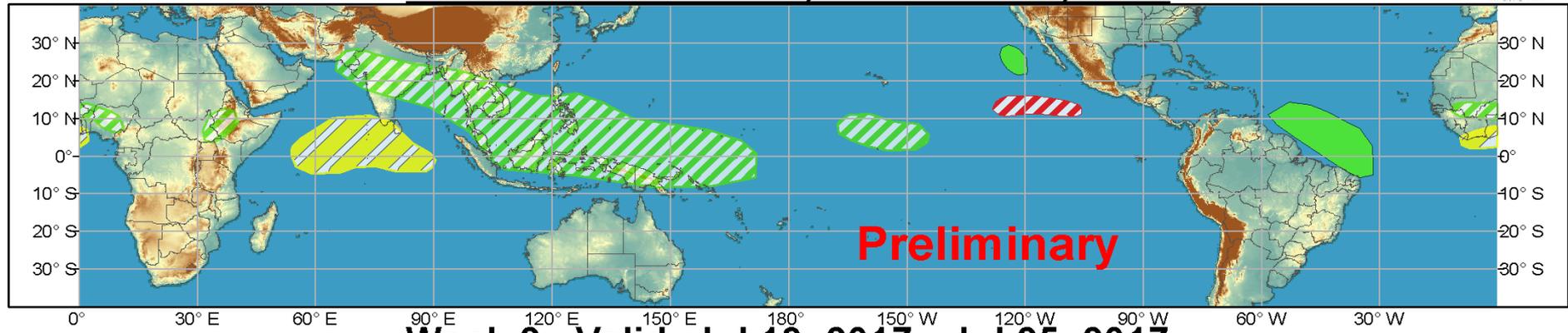
DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL.





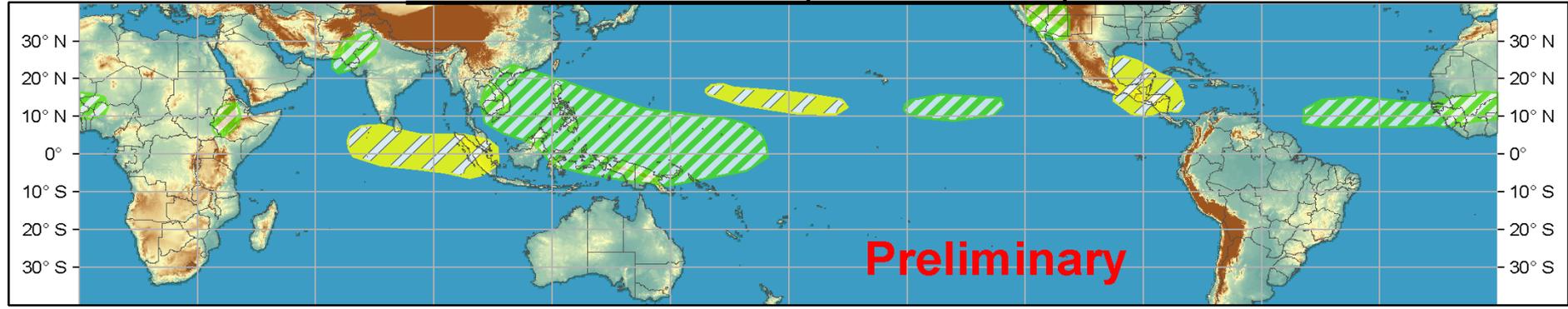
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