

Global Tropics Hazards And Benefits Outlook

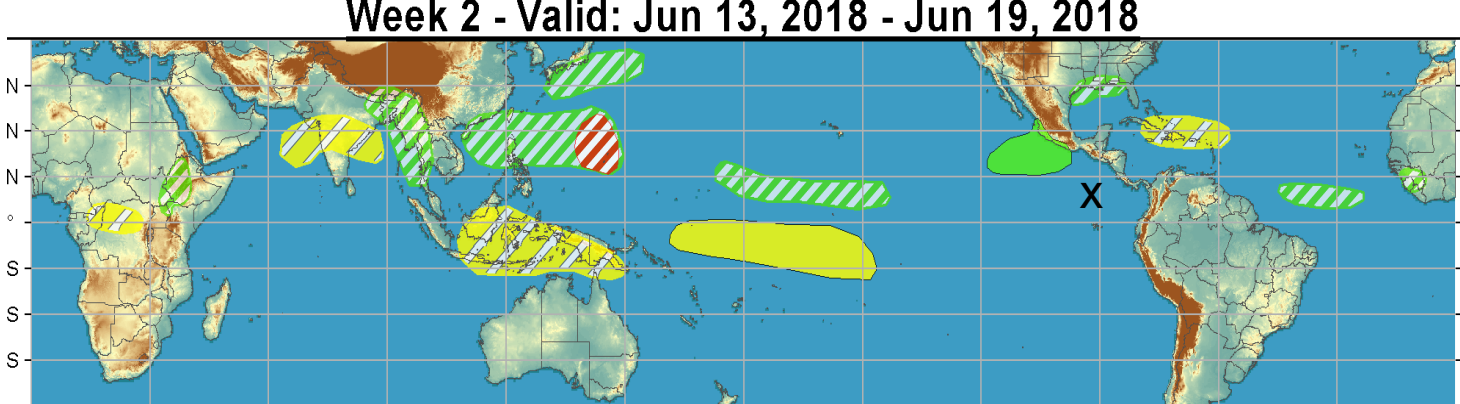
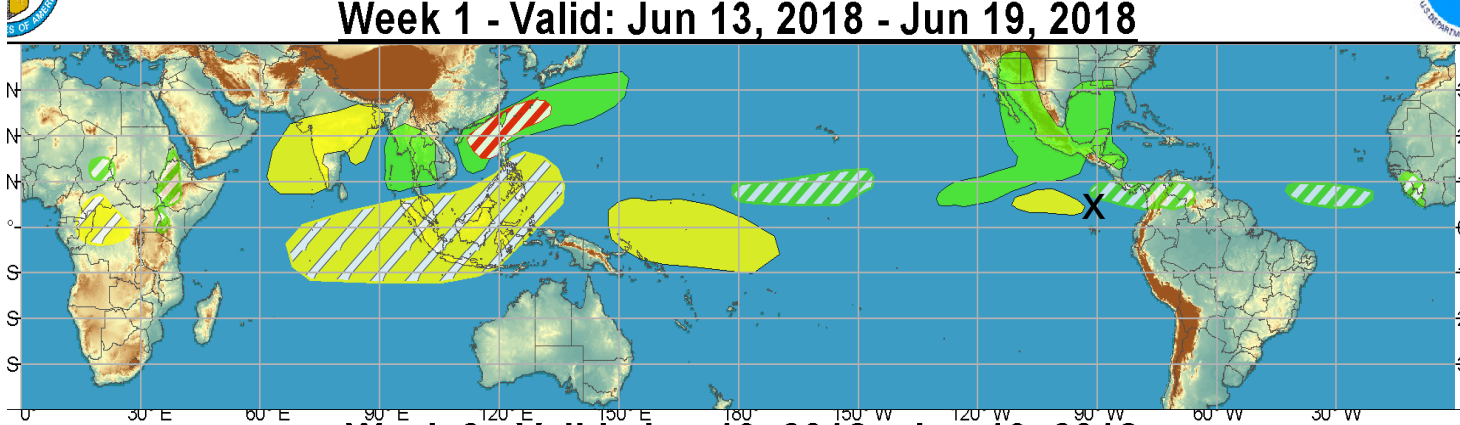
06/19/2018

Kyle MacRitchie

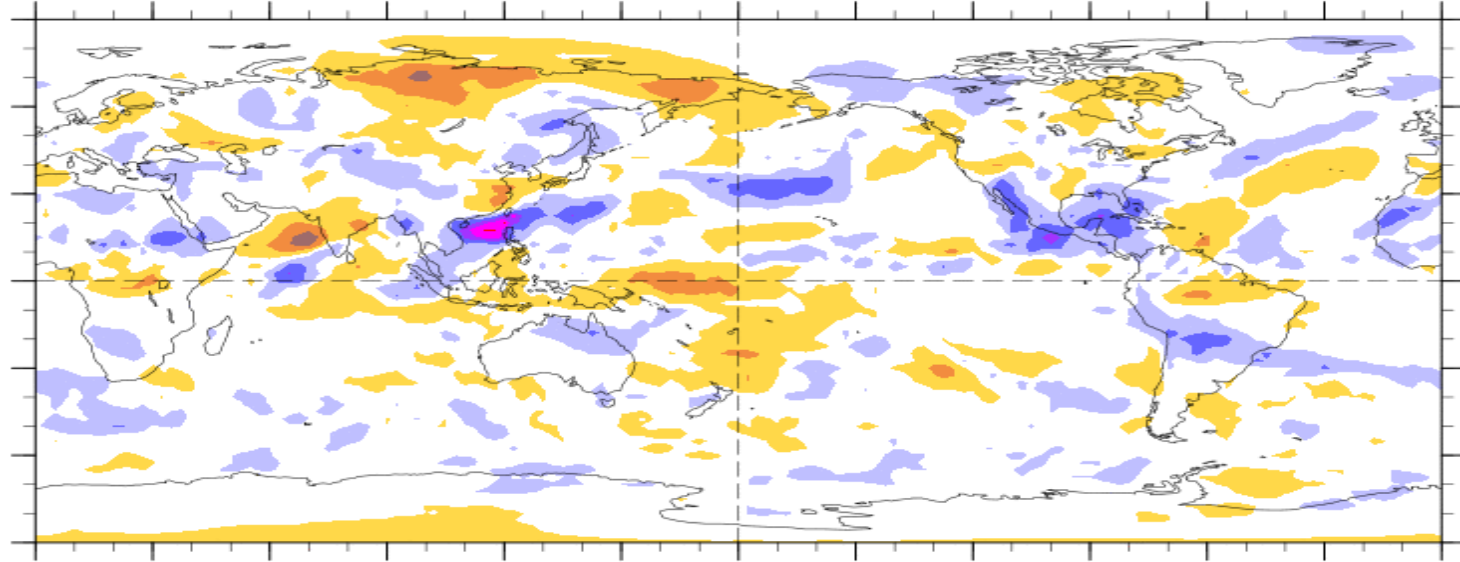
Outline

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

Outlook Review



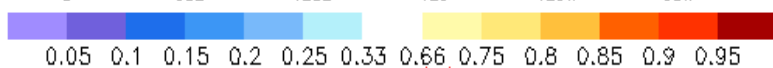
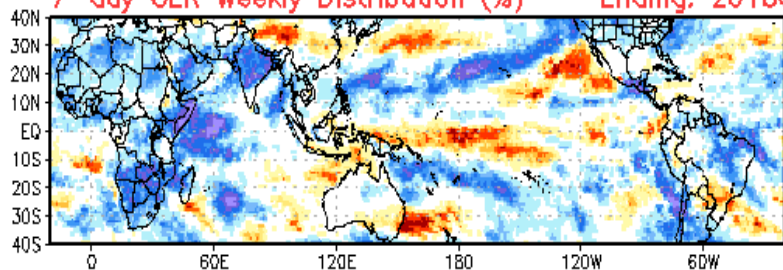
7-Day Average OLR Anomaly 2018/06/11 - 2018/06/17



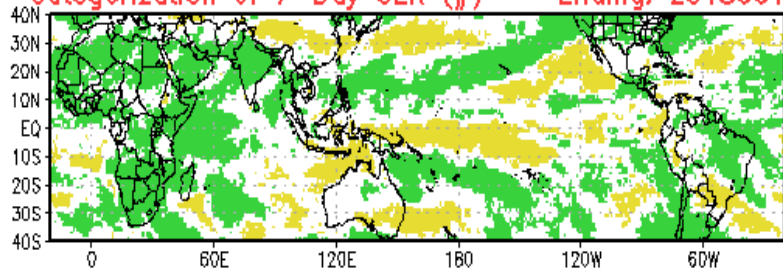
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

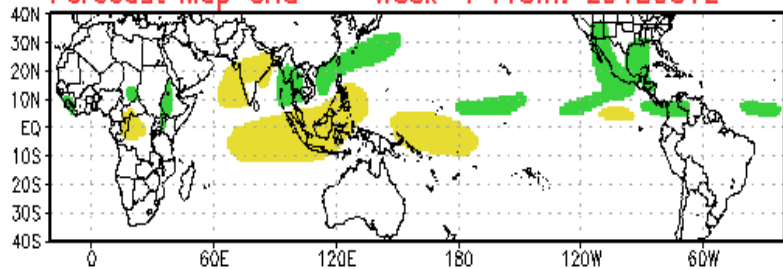
7-day OLR Weekly Distribution (%) -- Ending: 20180619



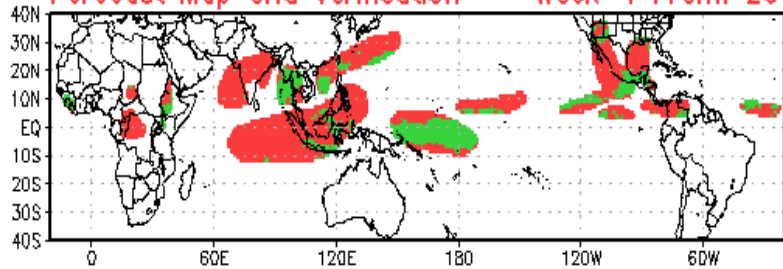
Categorization of 7-Day OLR (#) -- Ending: 20180619



Forecast Map Grid -- Week-1 From: 20180612

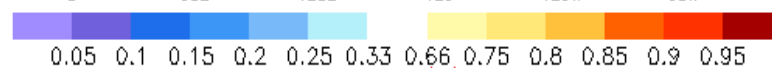
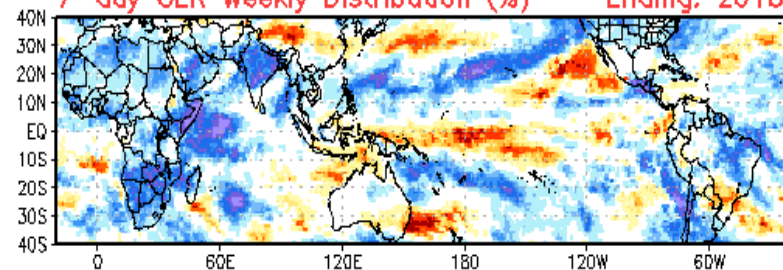


Forecast Map Grid Verification -- Week-1 From: 20180612

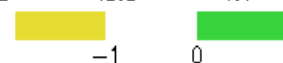
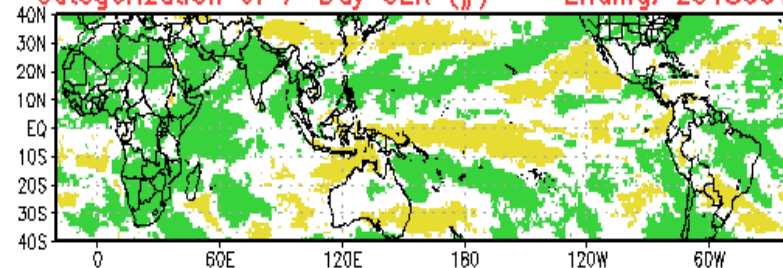


Hit: Green, Miss: Red
Heidke Skill Score: -11.3100

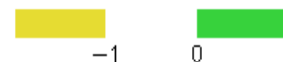
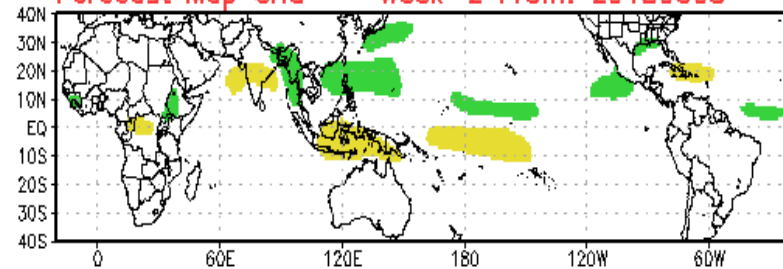
7-day OLR Weekly Distribution (%) -- Ending: 20180619



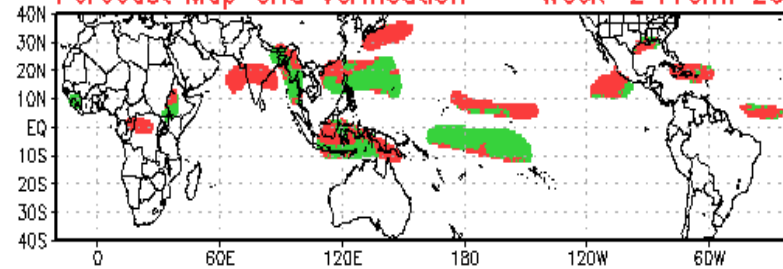
Categorization of 7-Day OLR (#) -- Ending: 20180619



Forecast Map Grid -- Week-2 From: 20180605



Forecast Map Grid Verification -- Week-2 From: 20180605



Hit: Green, Miss: Red
Heidke Skill Score: 16.6806

Synopsis of Climate Modes

ENSO:

From June 14, 2018 ENSO Diagnostic Discussion:

ENSO-neutral is favored through Northern Hemisphere summer 2018, with the chance for El Niño increasing to 50% during fall, and ~65% during winter 2018-19.

MJO and other subseasonal tropical variability:

- The MJO's RMM projection has been weak.
- Models agree that the RMM projection is likely to strengthen this week but disagree on how far the MJO will propagate.
- Kelvin wave activity is likely through the forecast period.

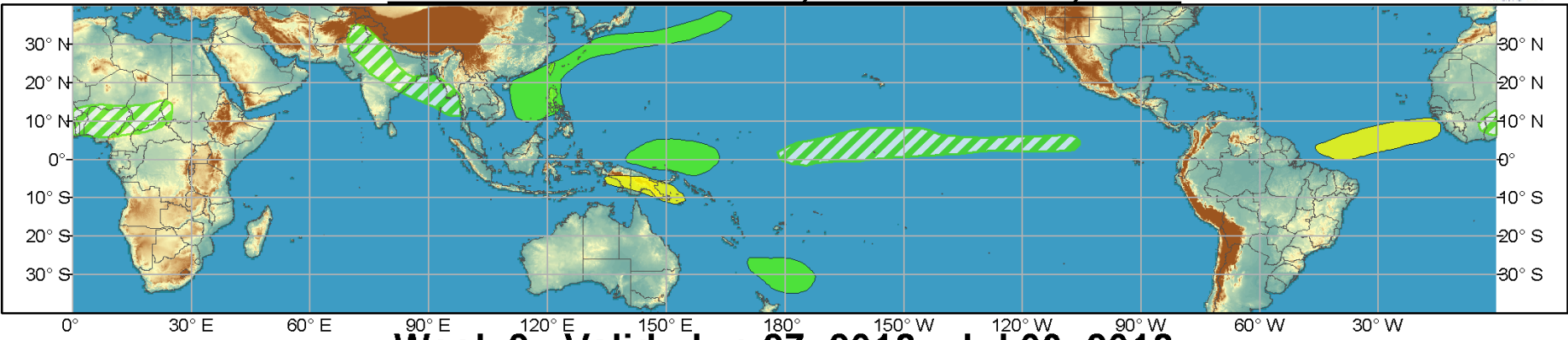
Extratropics:

- No significant extratropical impacts are expected from tropical variability.

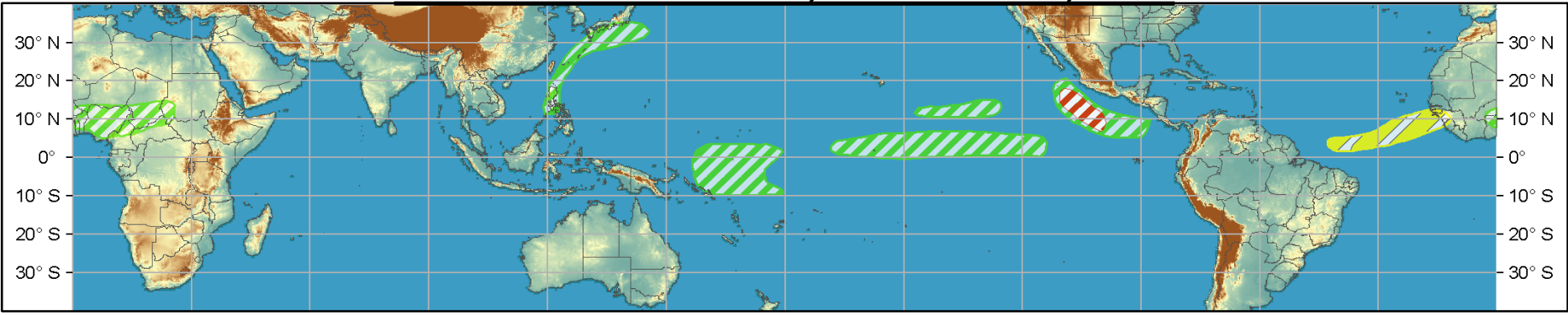


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 20, 2018 - Jun 26, 2018



Week 2 - Valid: Jun 27, 2018 - Jul 03, 2018



Confidence

	High	Moderate
Tropical Cyclone Formation		
Above-average rainfall		
Below-average rainfall		
Above-normal temperatures		
Below-normal temperatures		

Produced: 06/19/2018
Forecaster: MacRitchie

Development of a tropical cyclone (tropical depression - TD, or greater strength).

Weekly total rainfall in the upper third of the historical range.

Weekly total rainfall in the lower third of the historical range.

7-day mean temperatures in the upper third of the historical range.

7-day mean temperatures in the lower third of the historical range.

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.



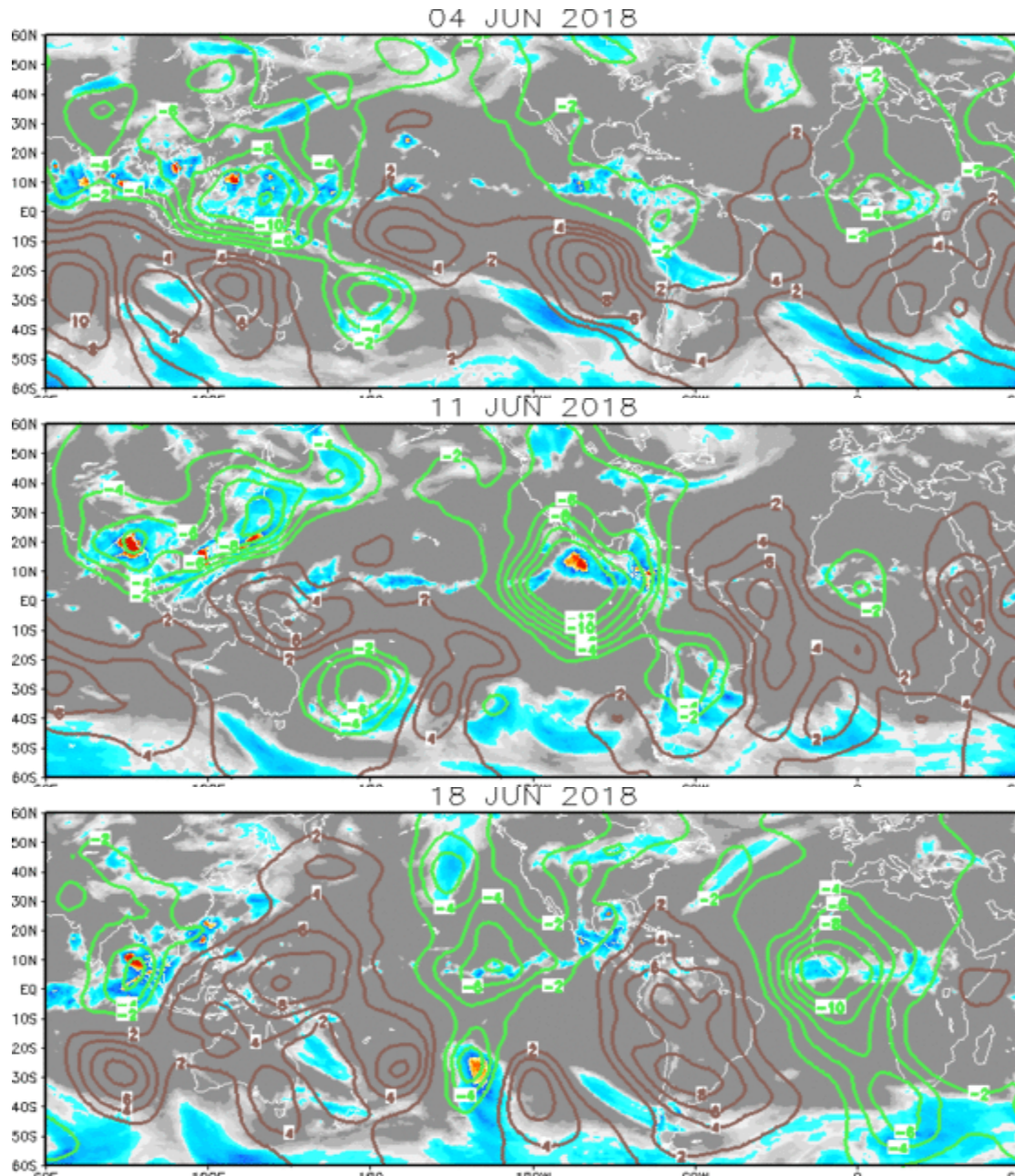
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence

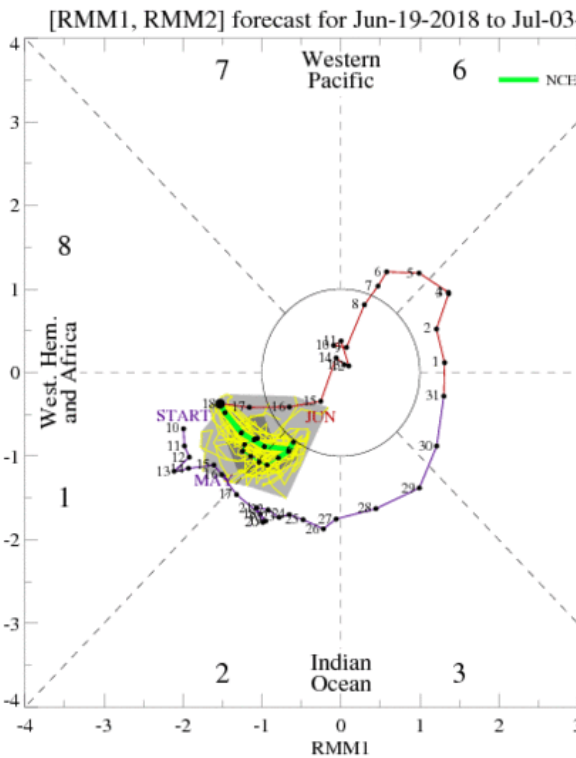
Brown: Enhanced Convergence

The Wave-1 pattern that was dominated by the MJO has broken down.

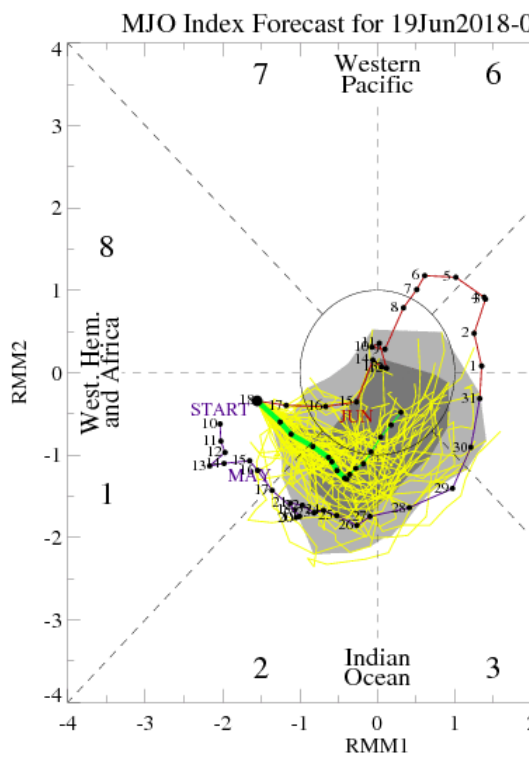
There are strong areas of convection related to tropical waves and TC activity.



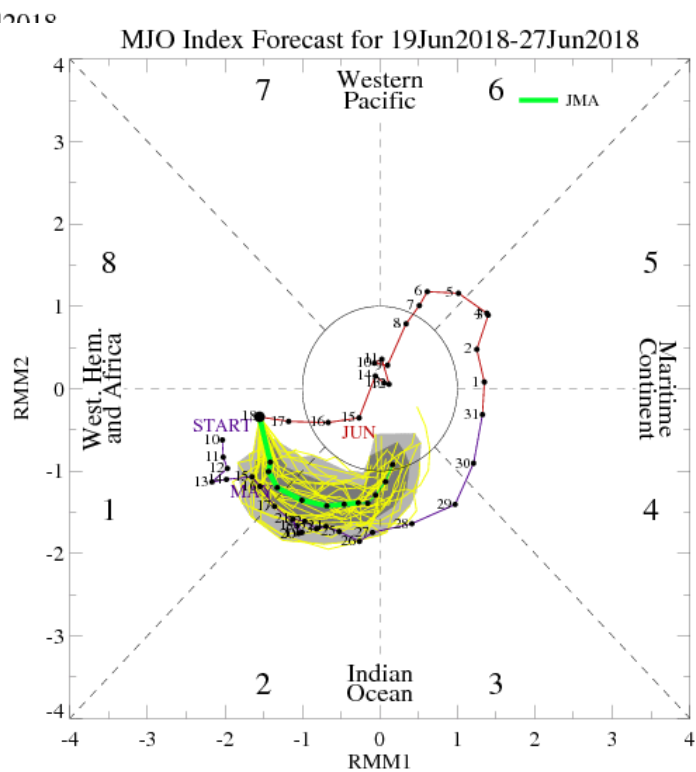
MJO Observation/Forecast



GEFS



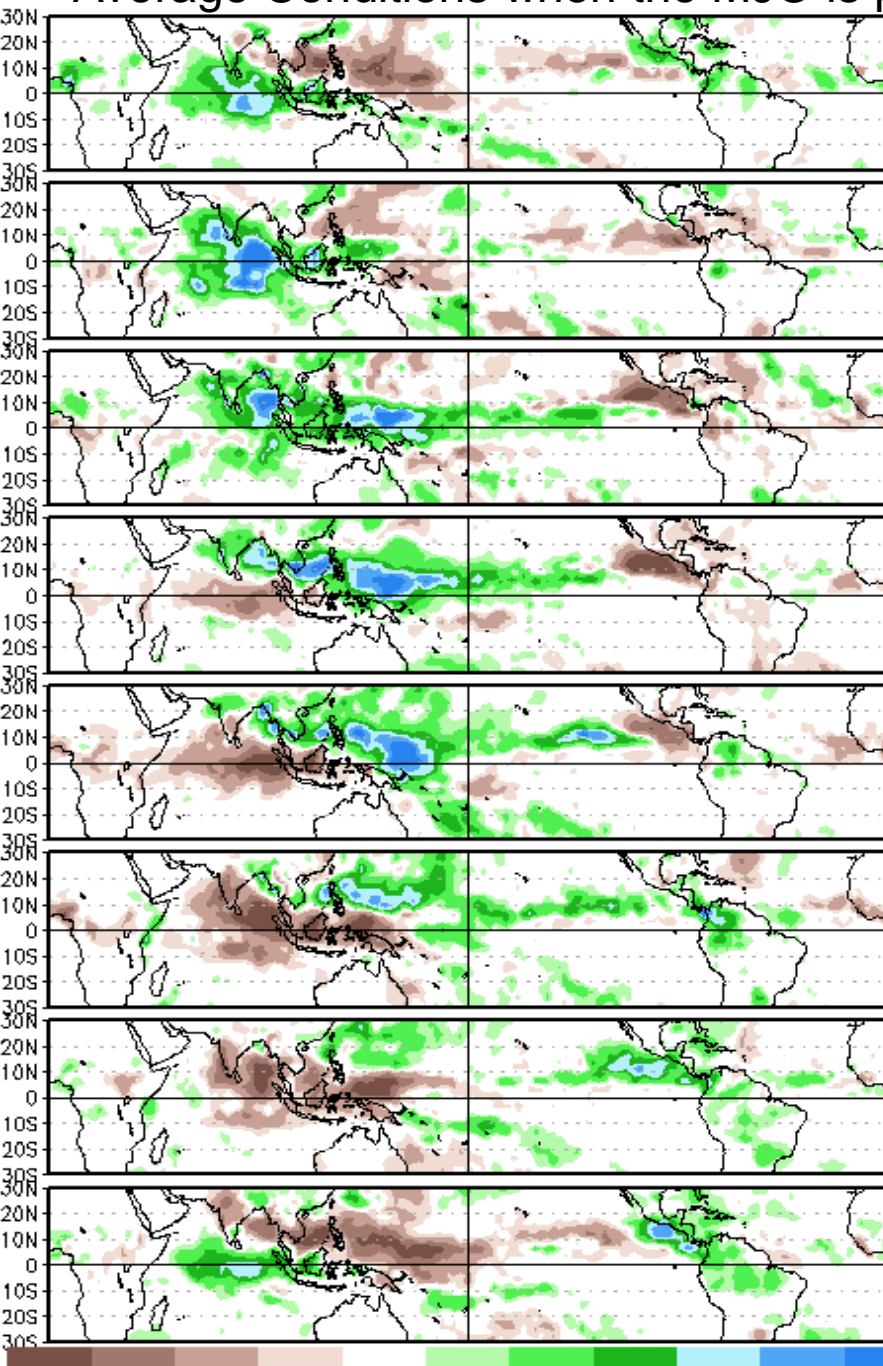
ECMWF



JMA

Models agree on MJO formation during Week-1 but disagree on how long it will stay around.

Average Conditions when the MJO is present



Phase 2

Phase 3

Phase 4

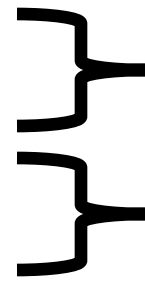
Phase 5

Phase 6

Phase 7

Phase 8

Phase 1

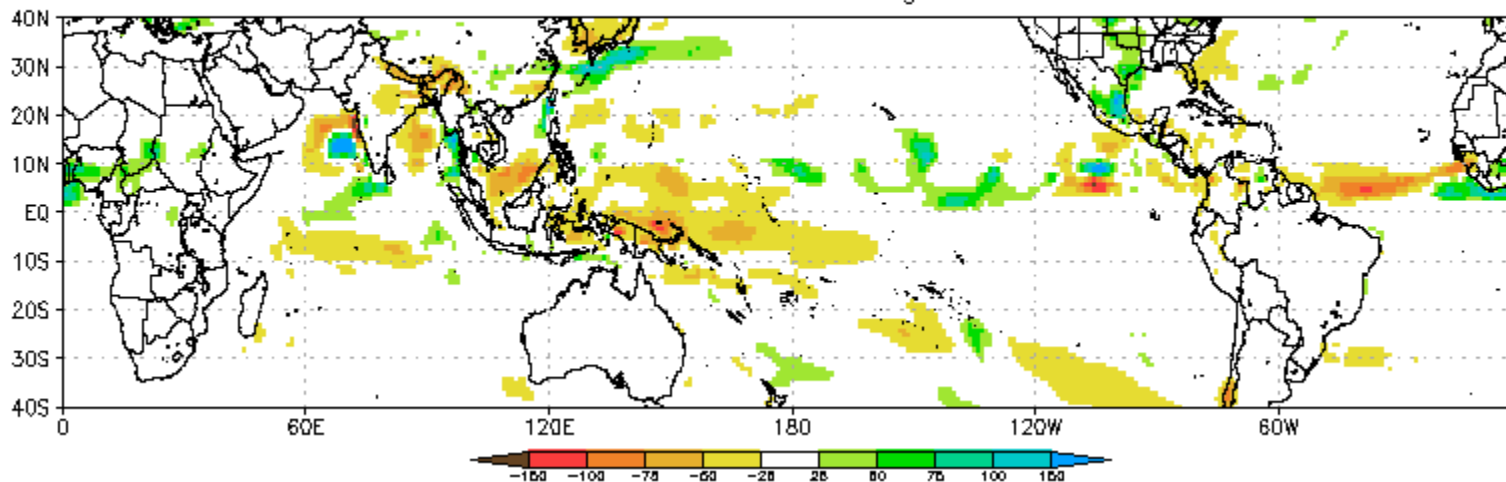


Possible during Week-1

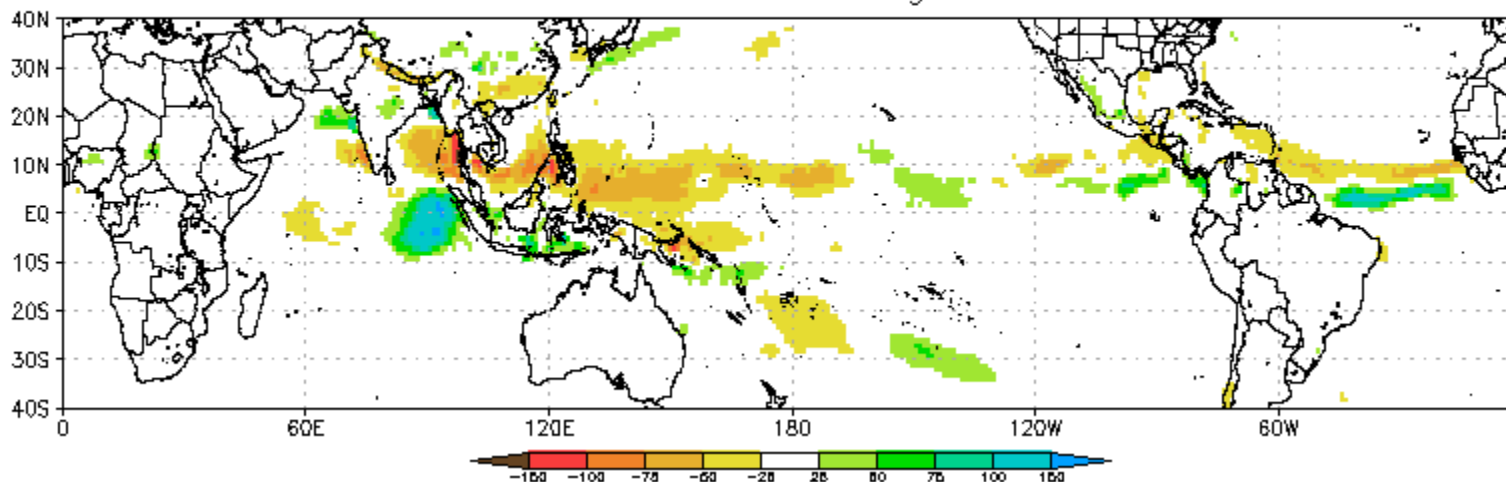
Possible during Week-2

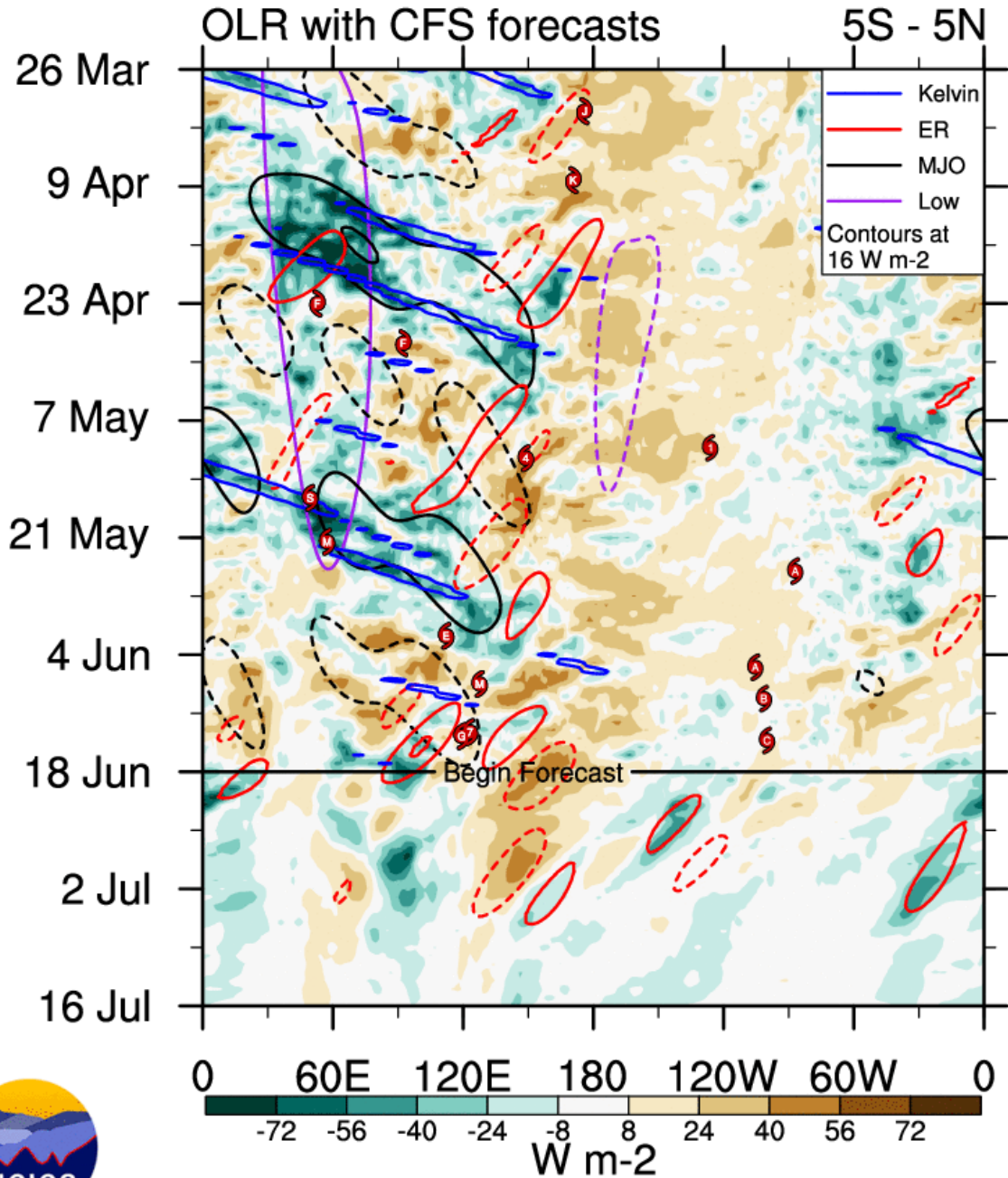
CAVEAT: These panels are representative of robust MJO events.

CFS Precipitation Anomalies (mm) Issued 17Jun2018
Week-1 Forecast Ending 25Jun2018



CFS Precipitation Anomalies (mm) Issued 17Jun2018
Week-2 Forecast Ending 02Jul2018





MJO is weak in OLR field

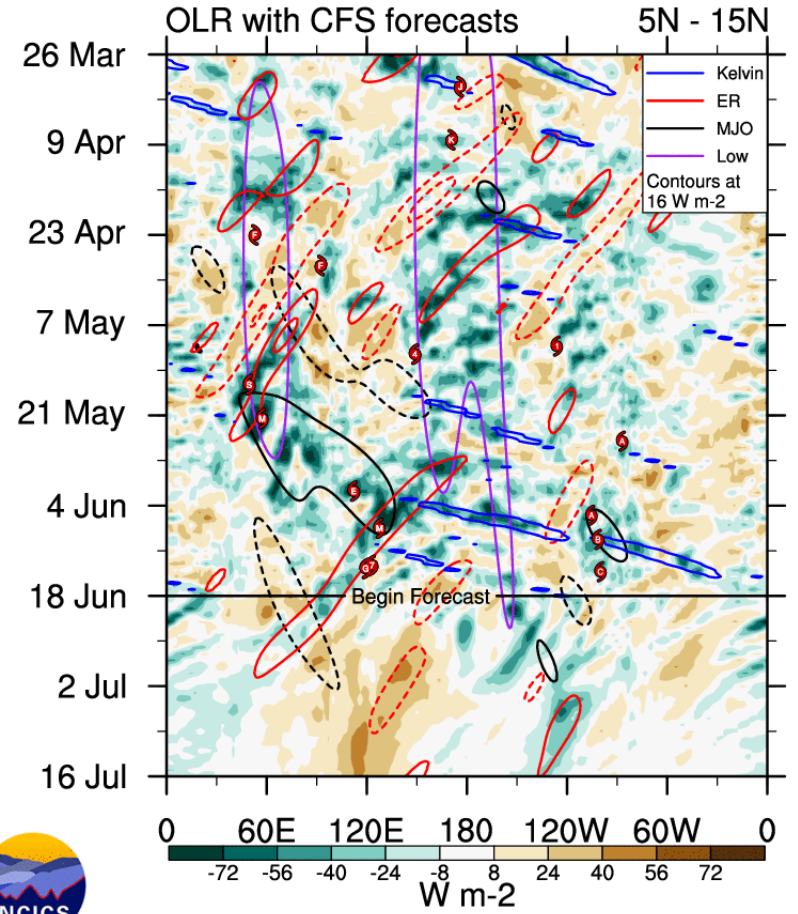
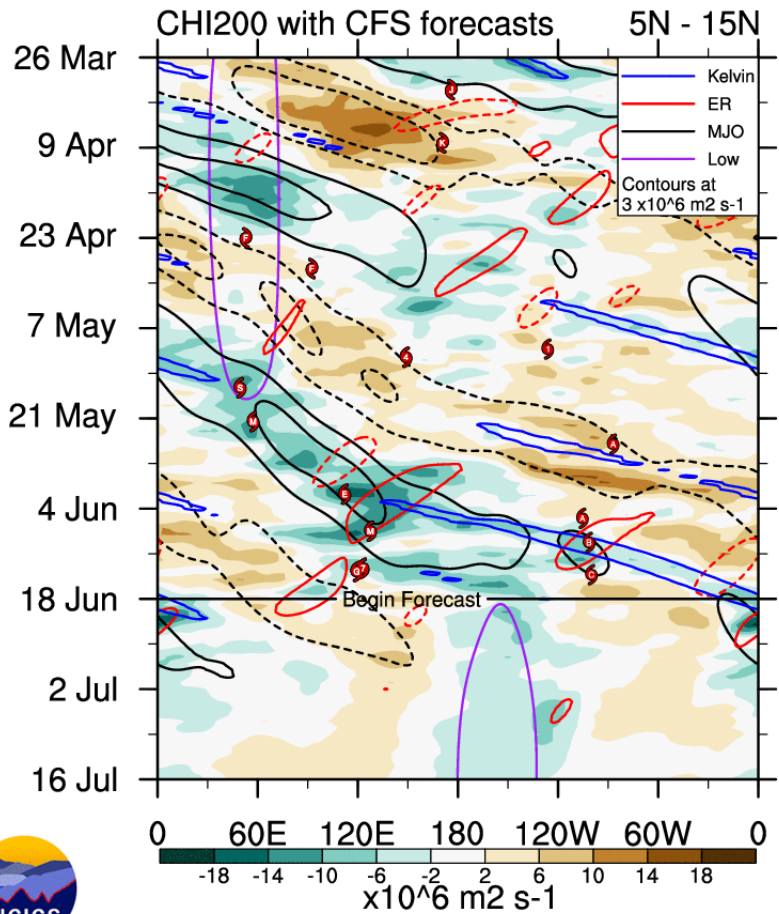
Equatorial Rossby wave
and **Kelvin wave** activity
between 60E – 120E.



ncics.org/mjo

Tue 2018-06-19 15:29 UTC

Carl Schreck (cjschrec@ncsu.edu)



ncics.org/mjo

Tue 2018-06-19 1036 UTC

Carl Schreck (cjschrec@ncsu.edu)



ncics.org/mjo

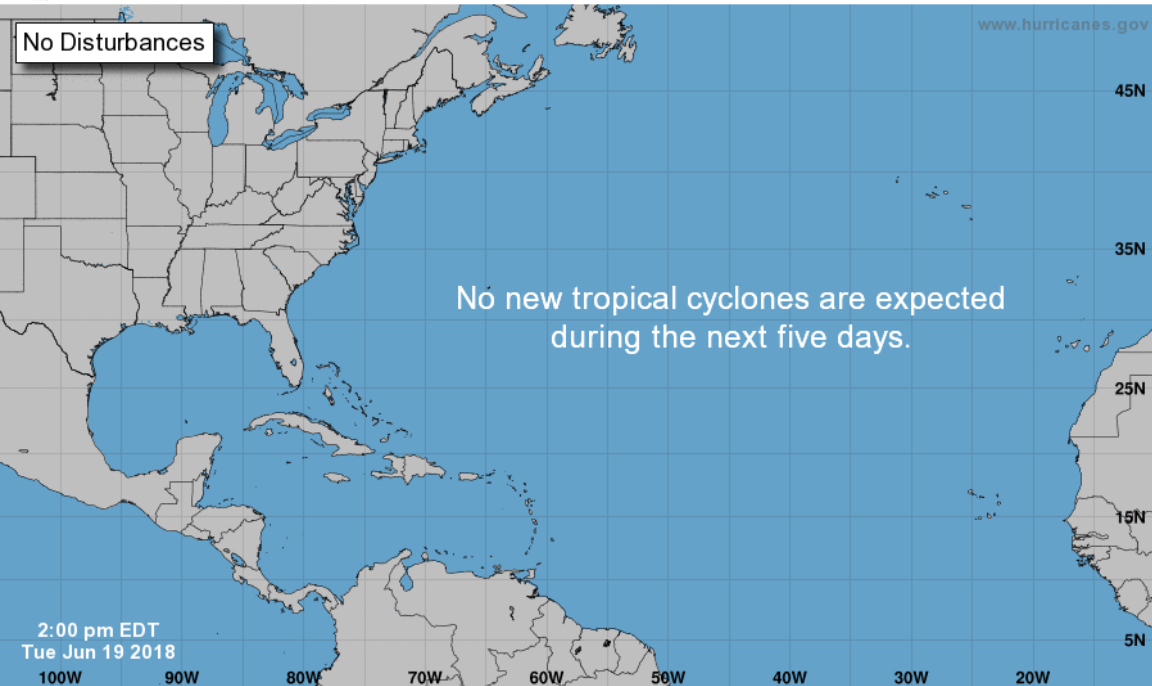
Tue 2018-06-19 1529 UTC

Carl Schreck (cjschrec@ncsu.edu)



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



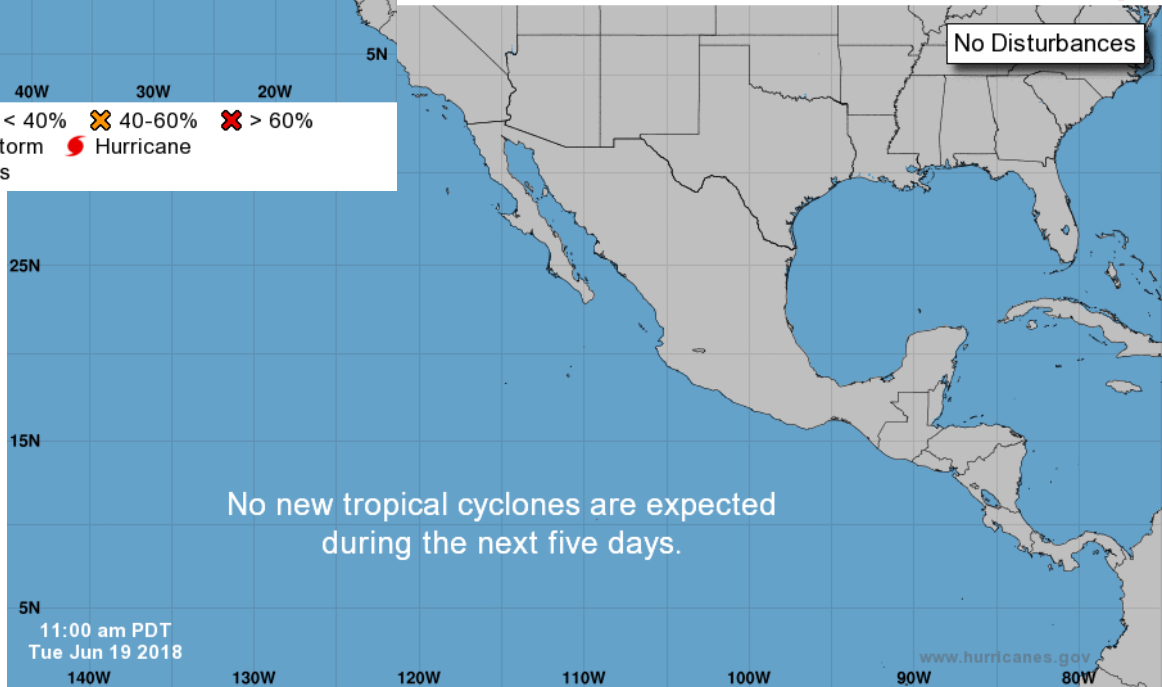
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

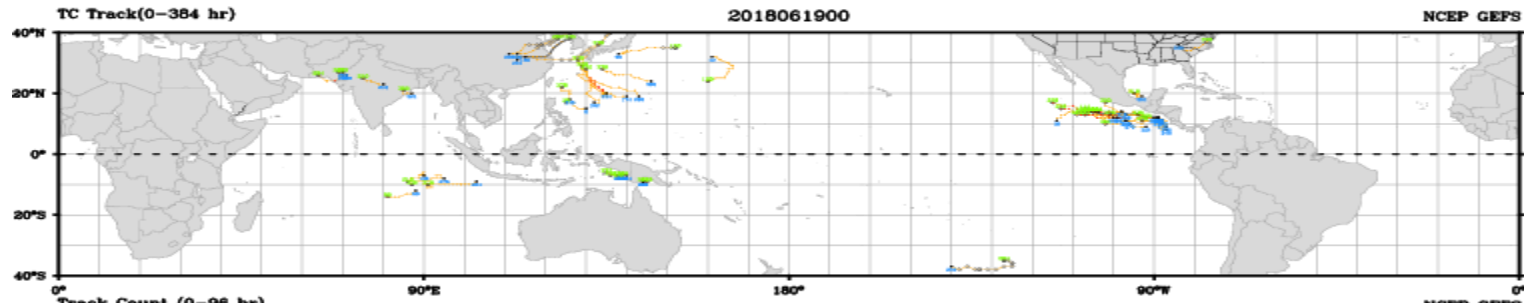
National Hurricane Center Miami, Florida



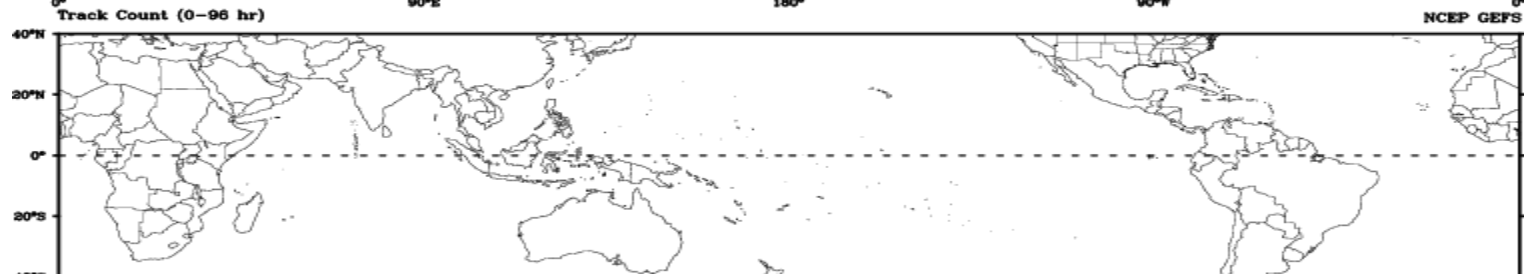
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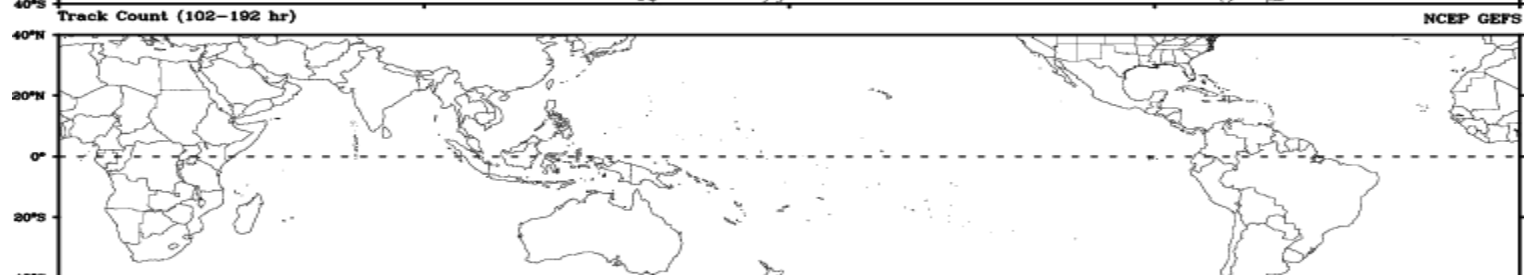
Post-Tropical Cyclone or Remnants



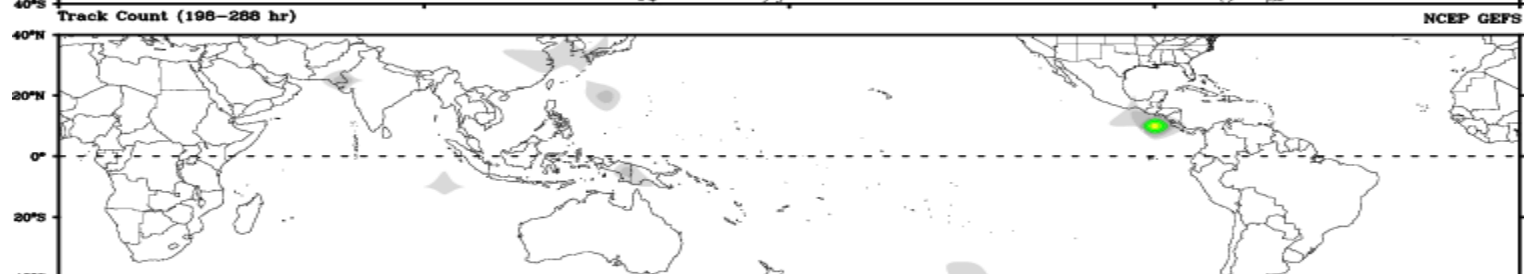
Days 1-4



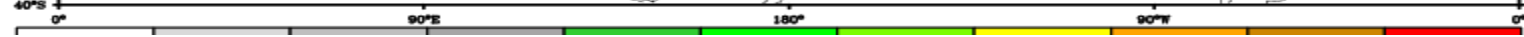
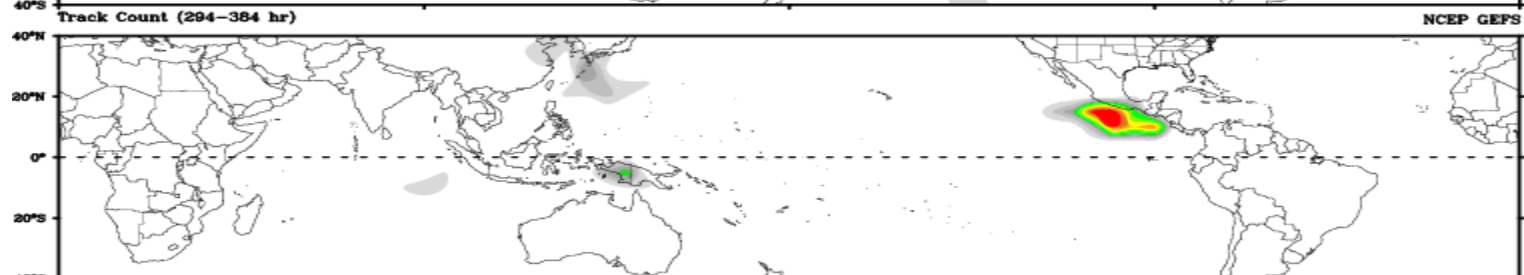
Day 5-8



Day 9-12

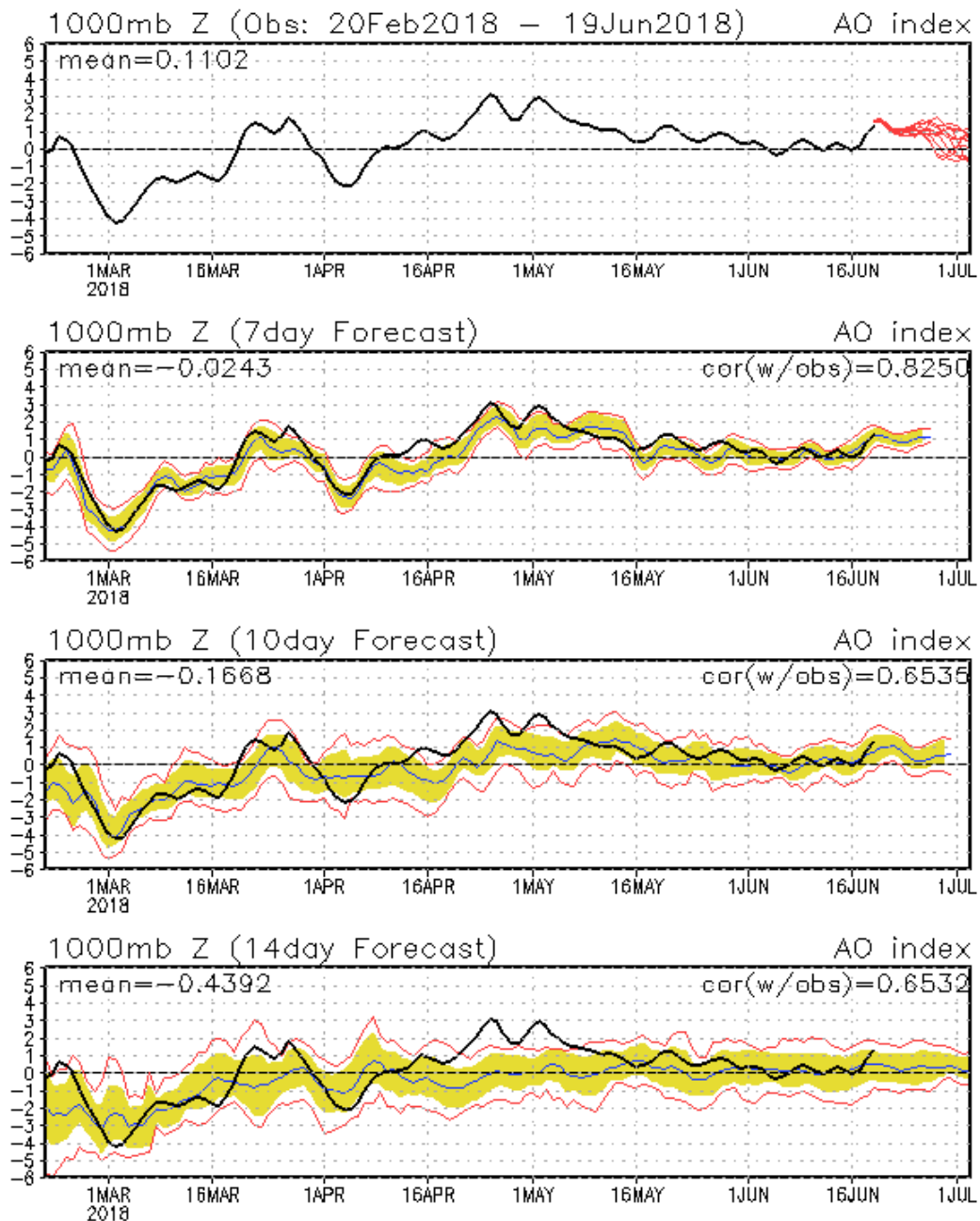


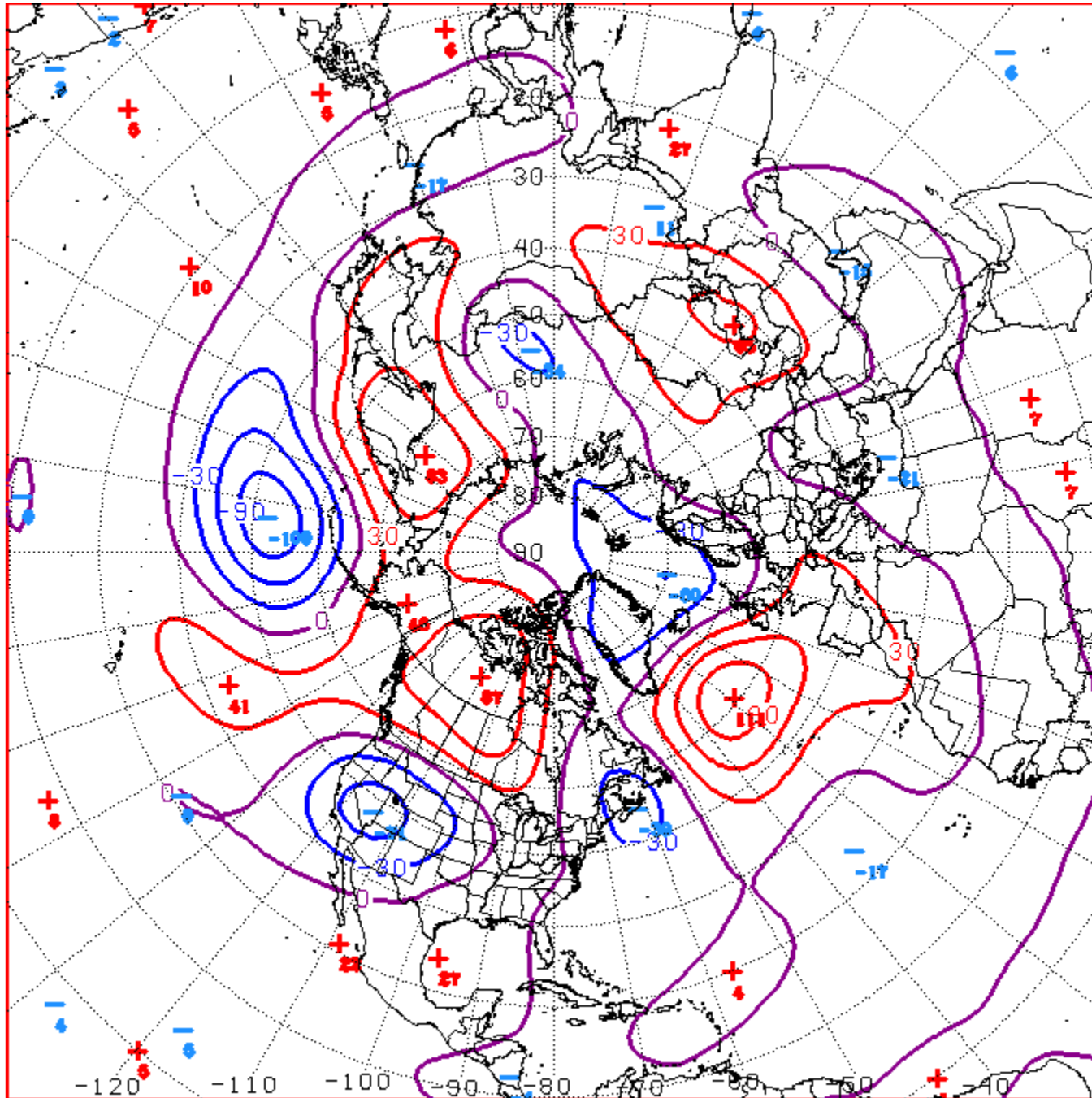
Day 13-15



Connections to U.S. Impacts

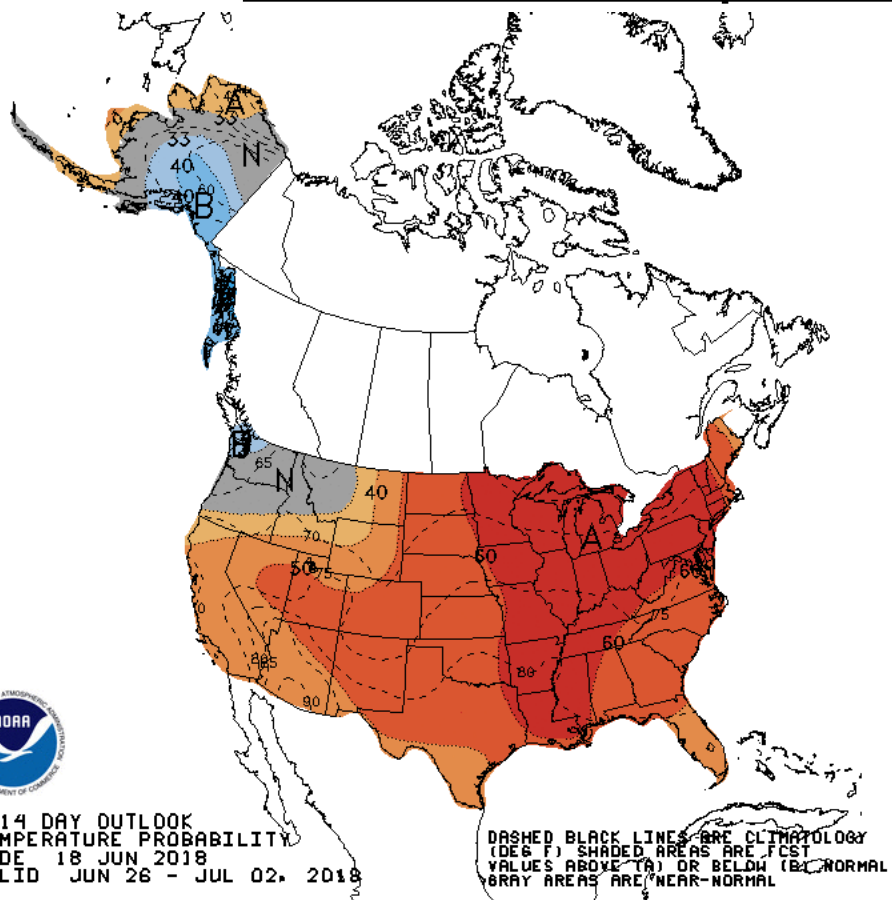
AO: Observed & ENSM forecasts





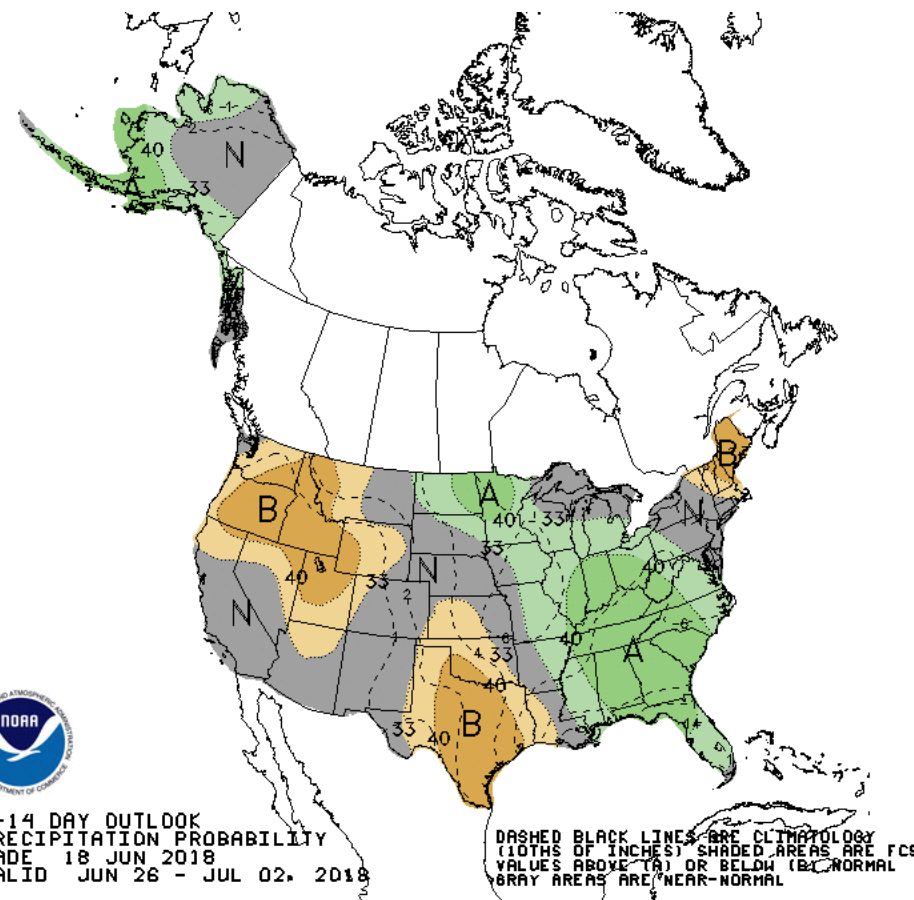
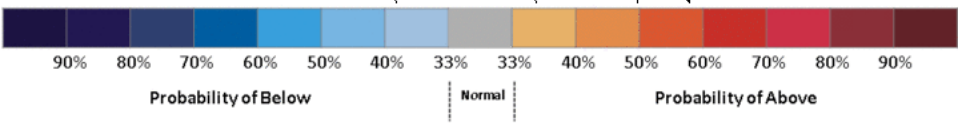
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE MAY 09 2017 1333 UTC CNTD MAY 20 2017

Week 2 – Temperature and Precipitation



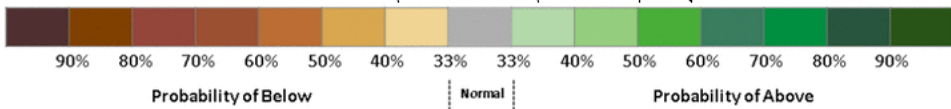
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 18 JUN 2018
VALID JUN 26 - JUL 02, 2018

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 18 JUN 2018
VALID JUN 26 - JUL 02, 2018

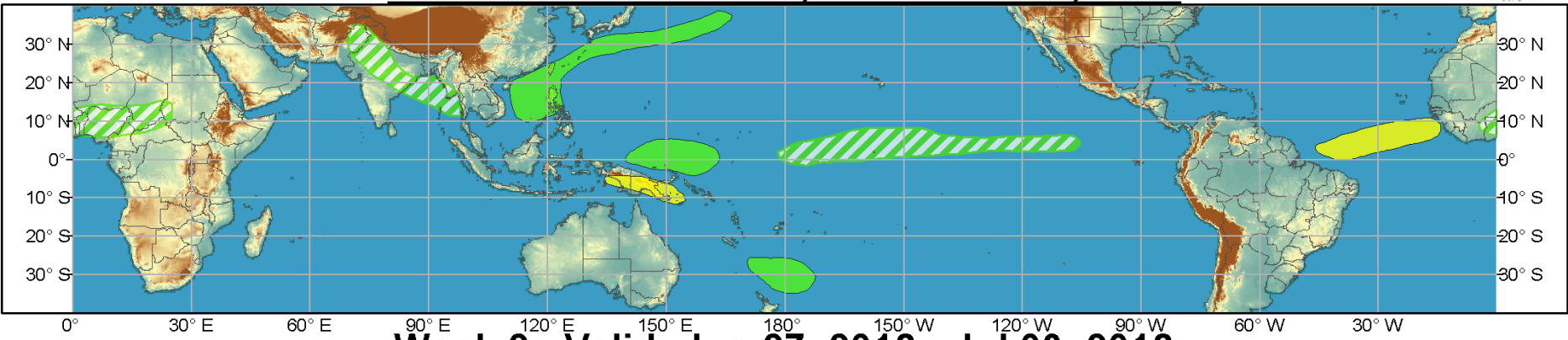
DASHED BLACK LINES ARE CLIMATOLOGY (10THS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



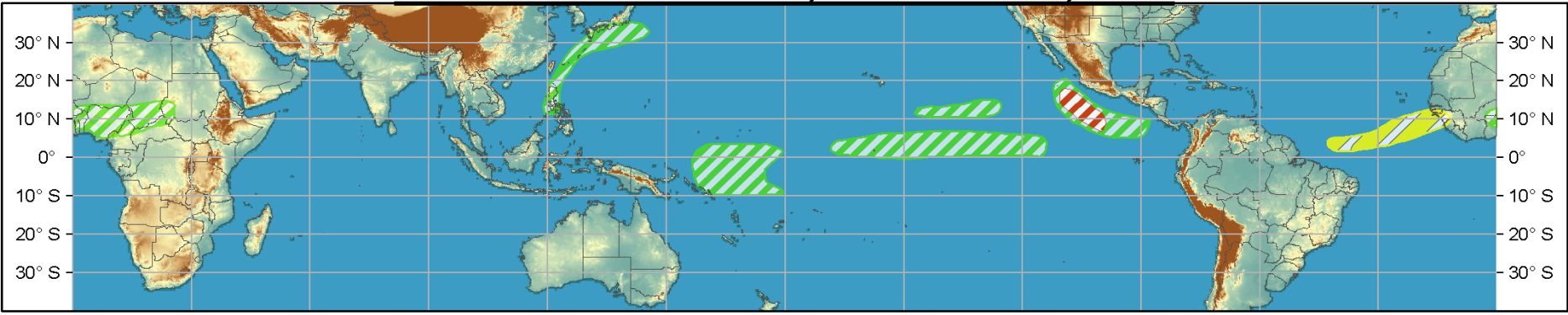


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- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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