Global Tropics Hazards And Benefits Outlook

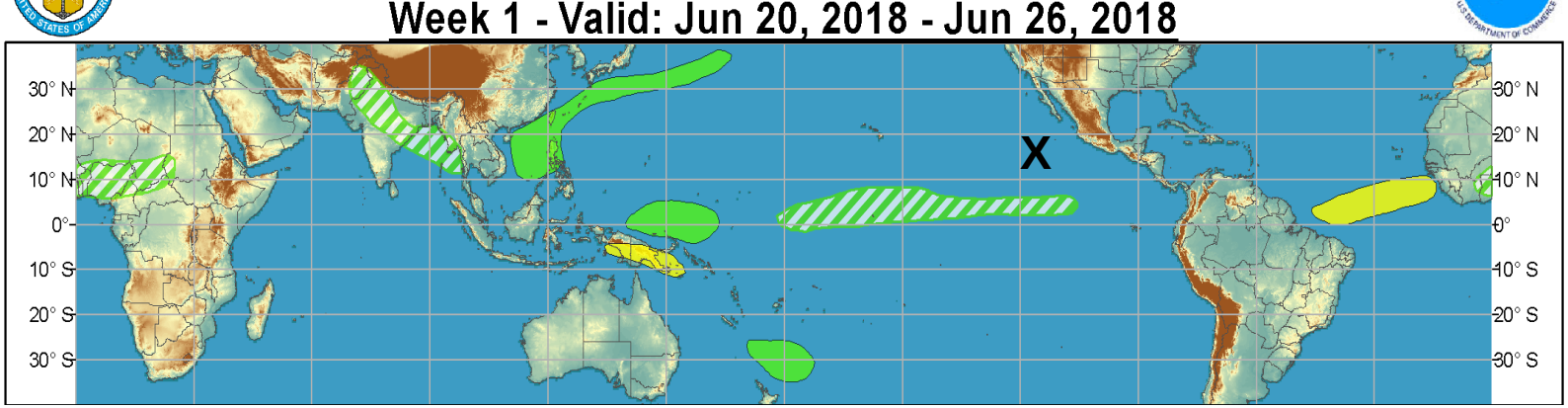
6/26/2018

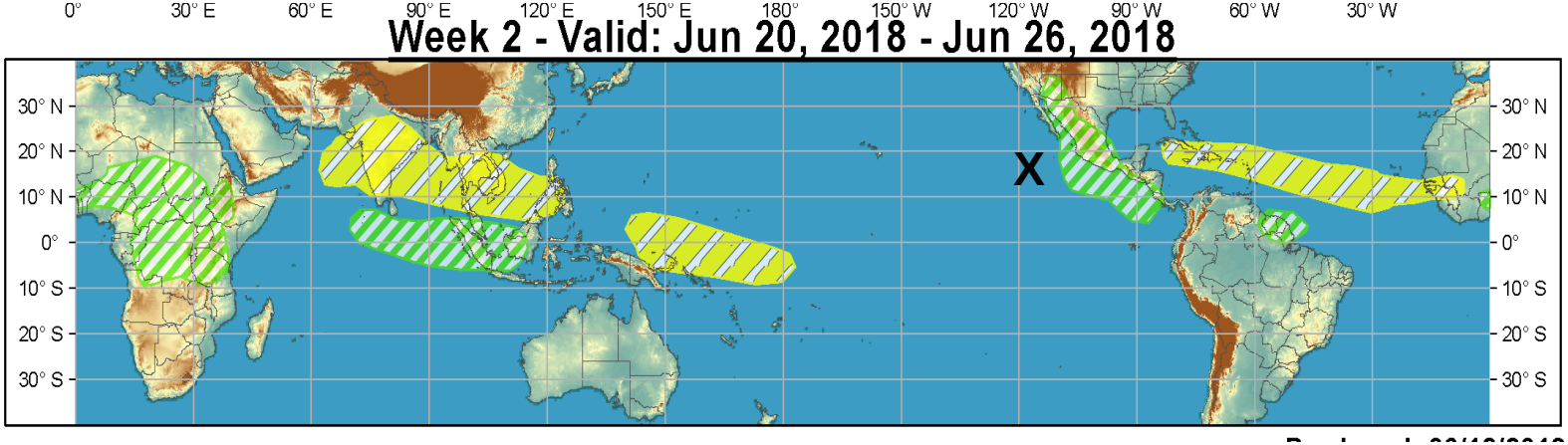
Adam Allgood

Outline

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

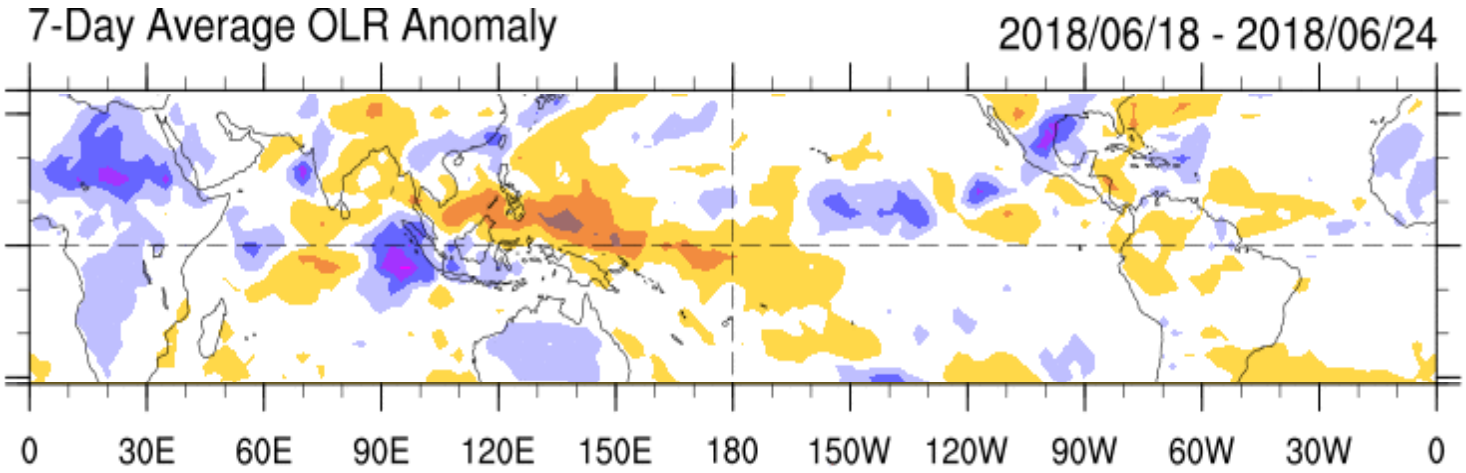
Outlook Review





Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: **El Niño Watch**

- 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 RMM and CPC MJO indices depict weak activity, with the enhanced (suppressed) phase over Africa/western Indian Ocean (western and central Pacific)

- The intraseasonal signal is more apparent in the circulation fields than the convective anomalies

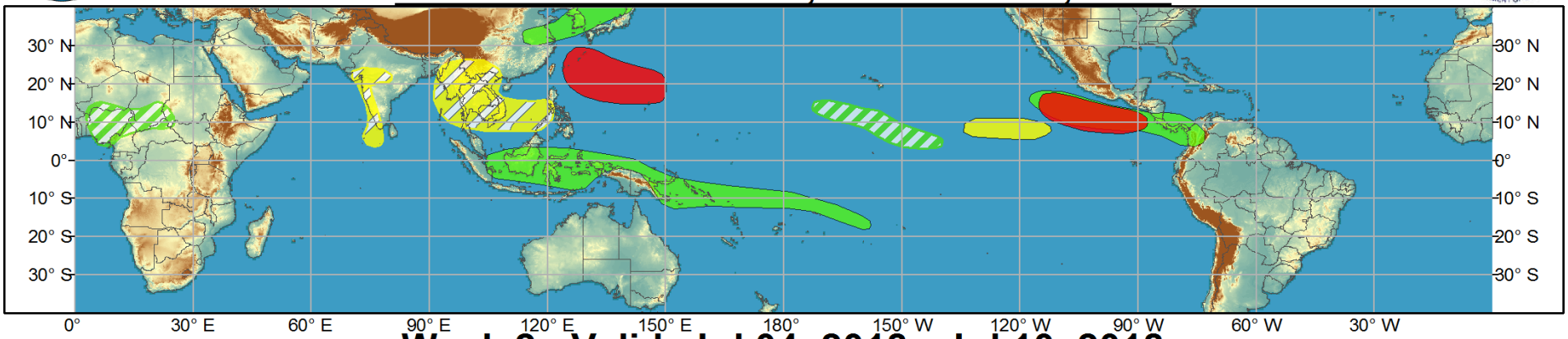
- Dynamical models depict a wide range of solutions – partly due to interference with a highly active East Pacific.

Tropical/Extratropical Impacts:

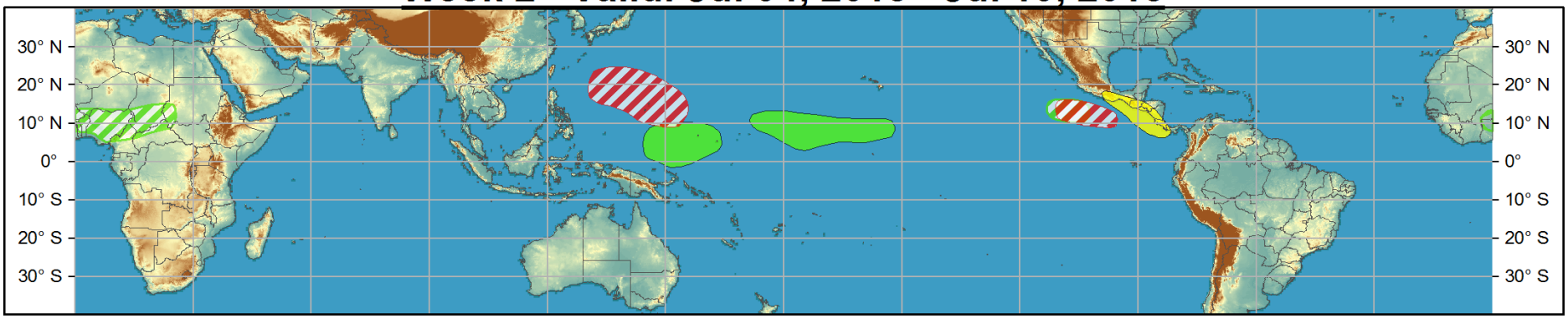
• The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by MJO activity. The Walker Circulation is taking on a more ENSO-like characteristic, and anticipated tropical cyclone activity over the East Pacific at this point will likely stay well south of Mexico.

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 27, 2018 - Jul 03, 2018



Week 2 - Valid: Jul 04, 2018 - Jul 10, 2018



Produced: 06/26/2018

Forecaster: Allgood

	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.
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UNIVERSITY AT ALBANY State University of New York
EARTH SYSTEM SCIENCE INTERDISCIPLINARY CENTER ESSIC UNIVERSITY OF MARYLAND
Australian Government Bureau of Meteorology
cics.nc
NPS PRAESTANTIA PER SCIENTIAM

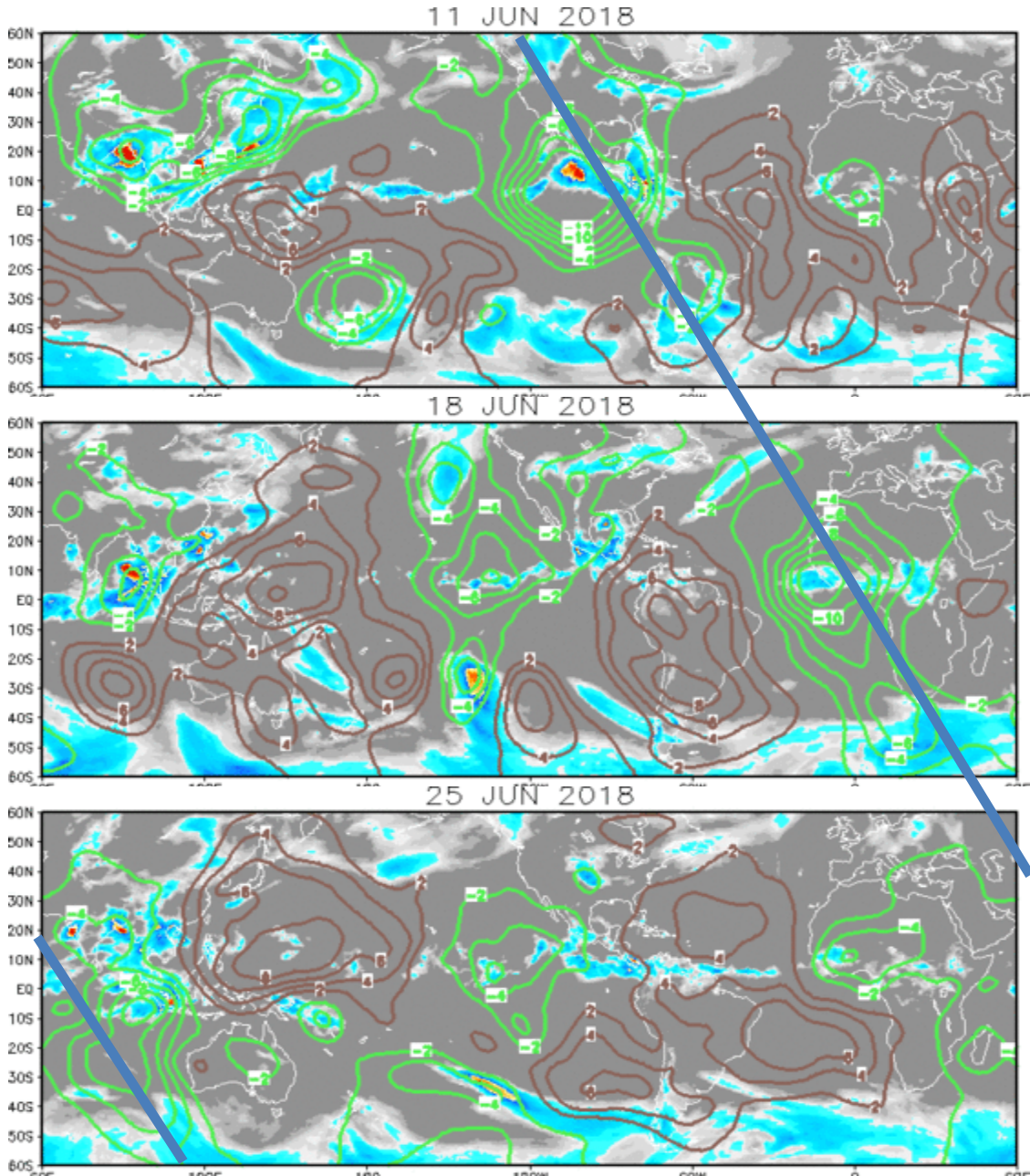
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

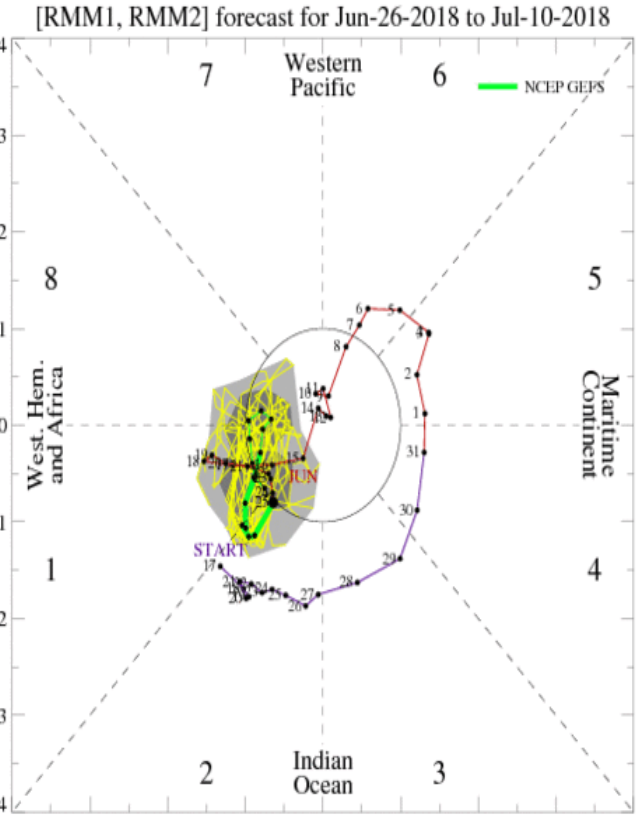
Remnant MJO enhanced convection moved to the East Pacific. Widespread enhanced monsoon activity over Asia

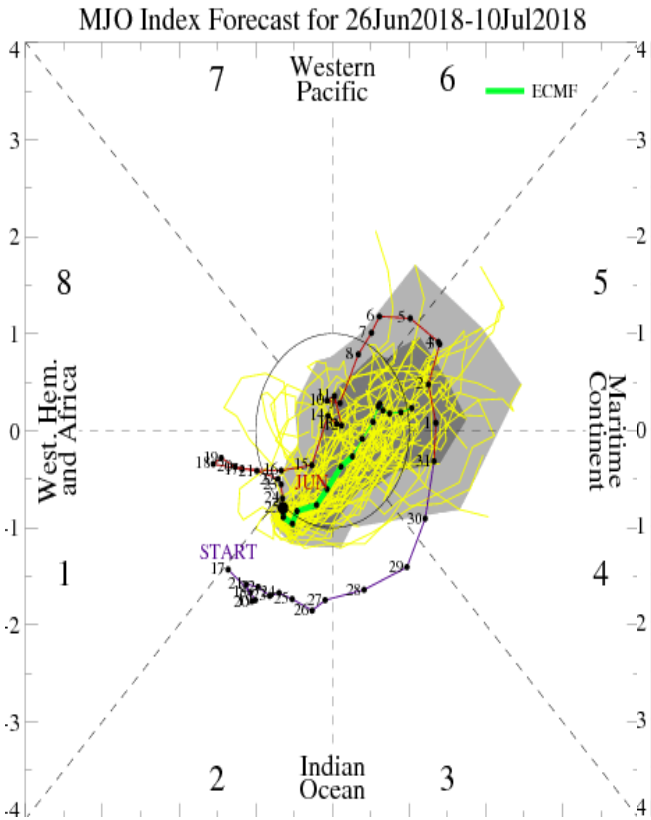
Other modes continued to interfere with the MJO signal, resulting in a chaotic upper-level field

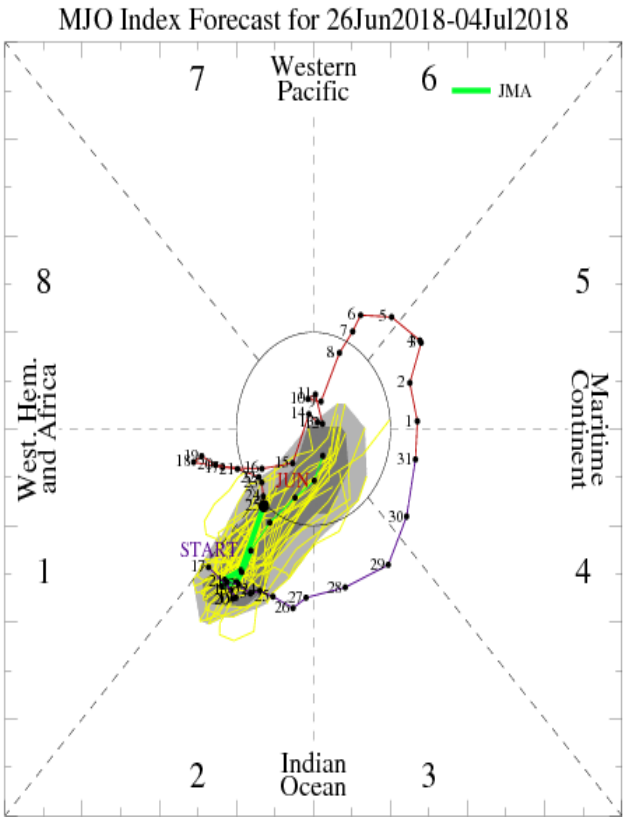
The upper-level VP field appears more organized, other than a robust Kelvin wave over the East Pacific.



MJO Observation/Forecast







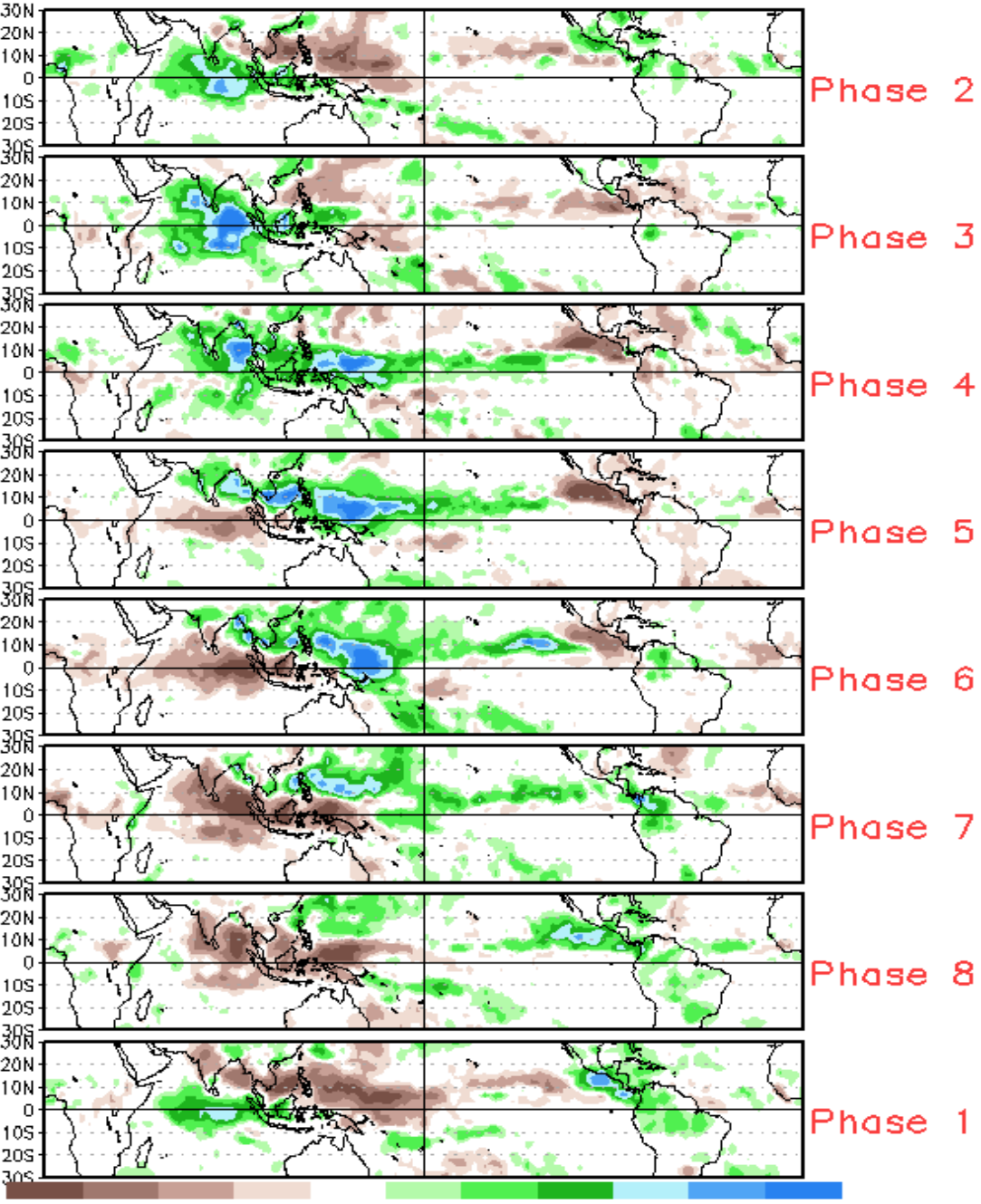
GEFS ECMWF JMA

GEFS: Loops back around Phase-1 – likely due to hyperactive East Pacific

ECMWF: More progressive MJO propagation to Maritime Continent. Weak in WK1 potentially due to East Pacific interference

JMA: Broadly similar to ECMWF, though stronger initial projection over western Indian Ocean

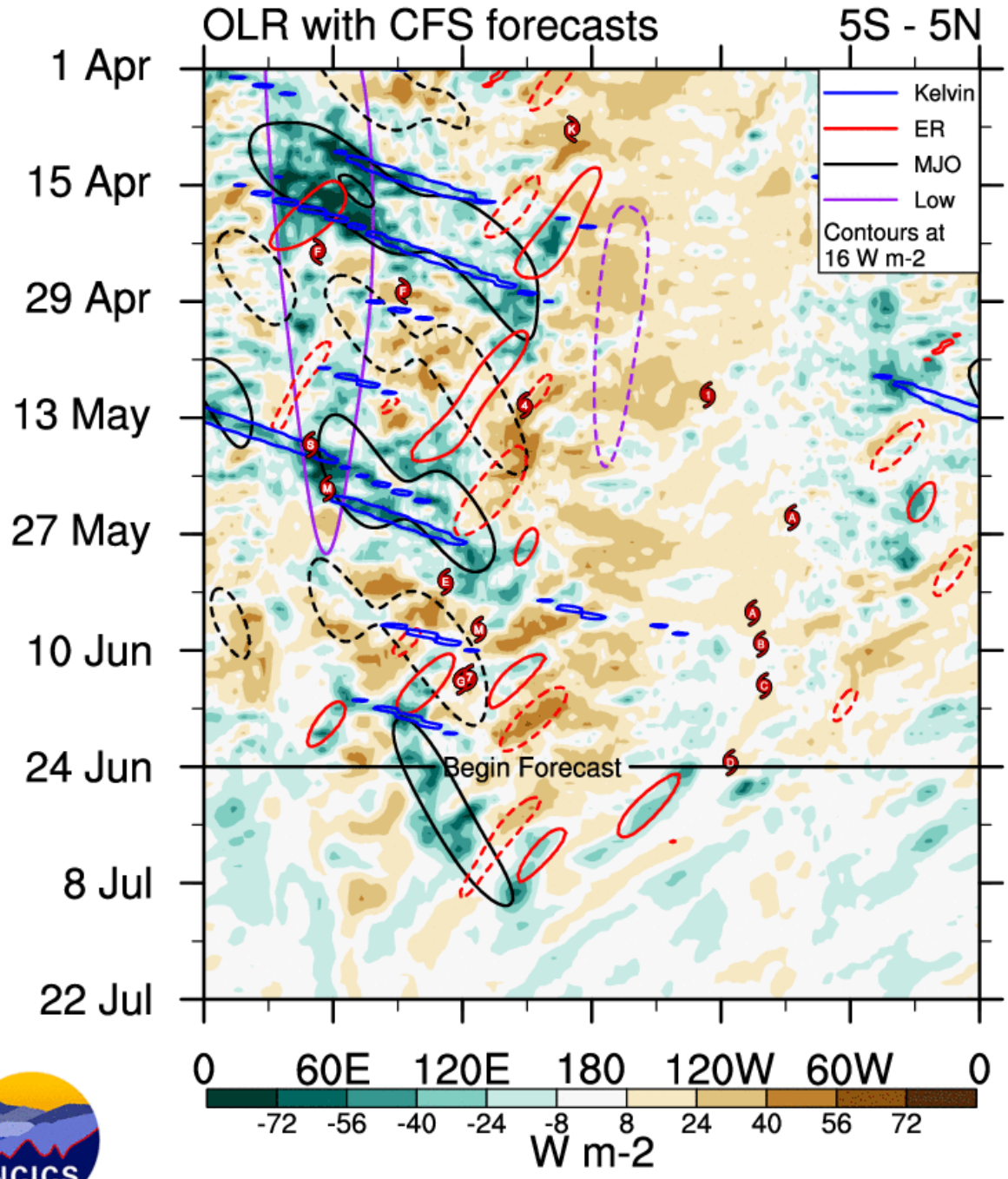
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

Previous MJO event faded in early June due partly to Rossby wave interference

CFS depicts some MJO activity over the Indian Ocean/Maritime Continent during the period.

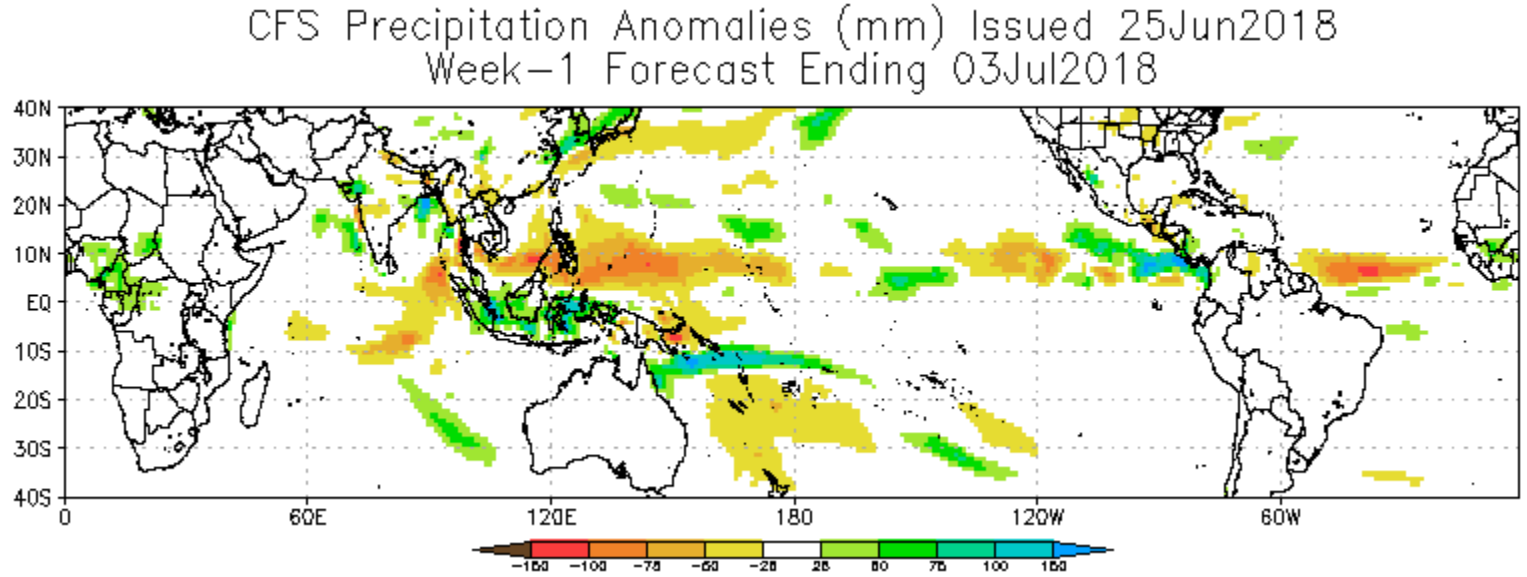


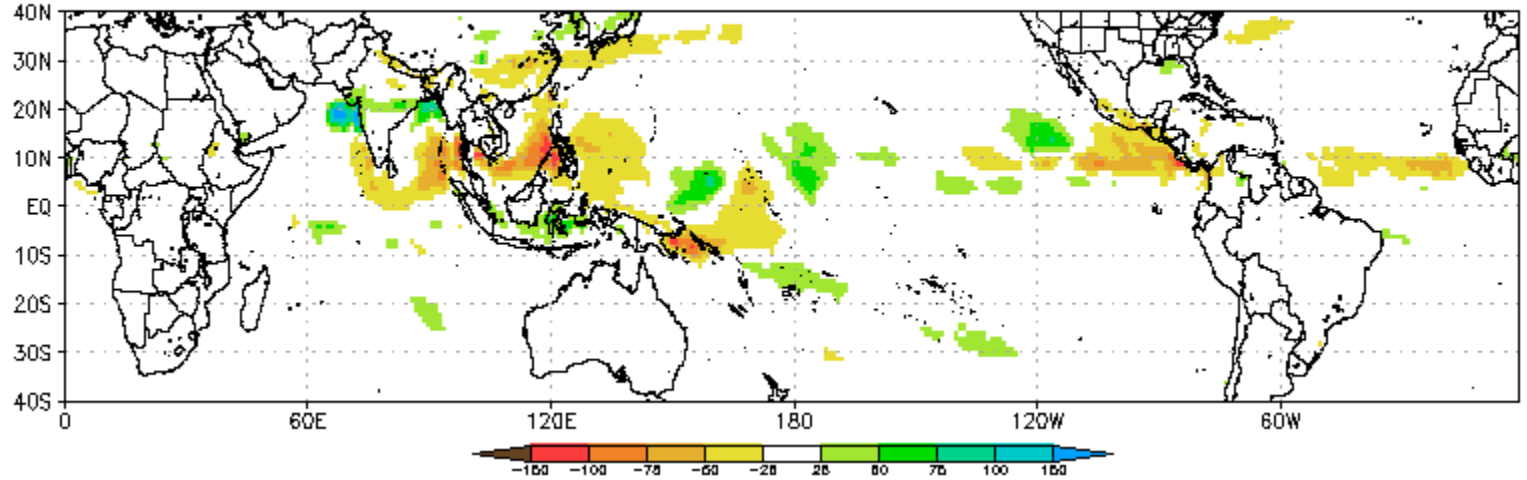
NCICS

ncics.org/mjo

Mon 2018-06-25 1525 UTC

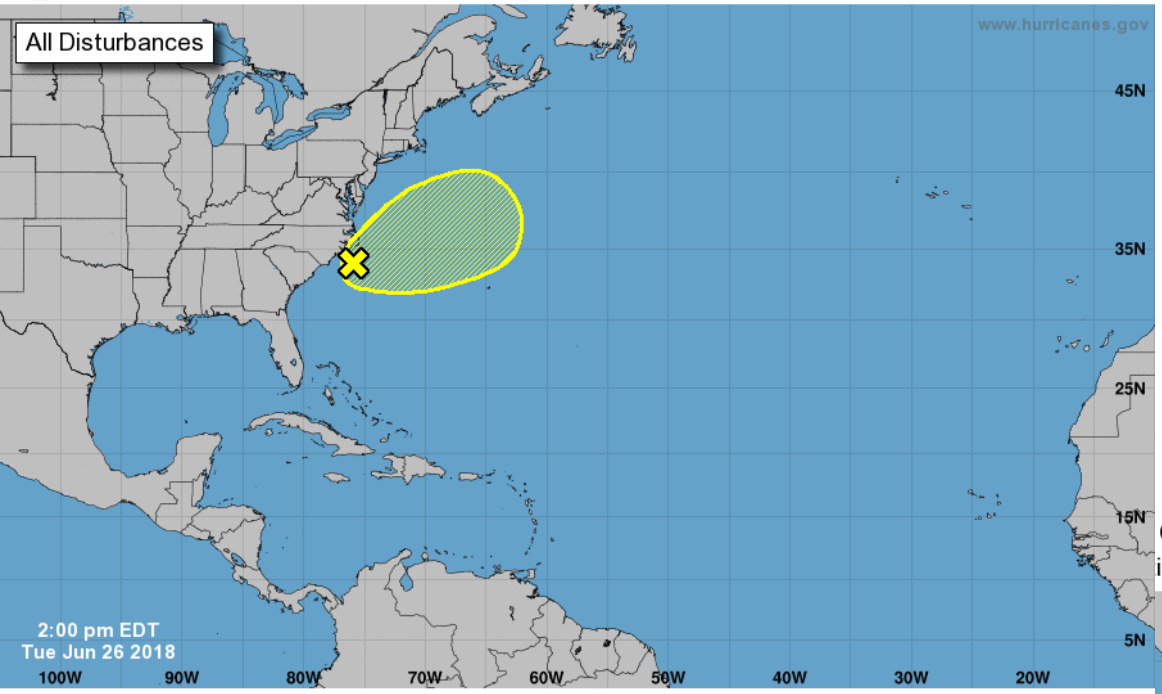
Carl Schreck (cjschrec@ncsu.edu)


CFS Precipitation Anomalies (mm) Issued 25Jun2018
Week-1 Forecast Ending 03Jul2018
40N
30N
20N
10N
EQ
10S
20S
30S
40S
0
60E
120E
180
120W
60W
-150 -100 -75 -50 -25 25 50 75 100 150


CFS Precipitation Anomalies (mm) Issued 25Jun2018
Week-2 Forecast Ending 10Jul2018
40N
30N
20N
10N
EQ
10S
20S
30S
40S
0
60E
120E
180
120W
60W
-150 -100 -75 -50 -25 25 50 75 100 150

Five-Day Graphical Tropical Weather Outlook

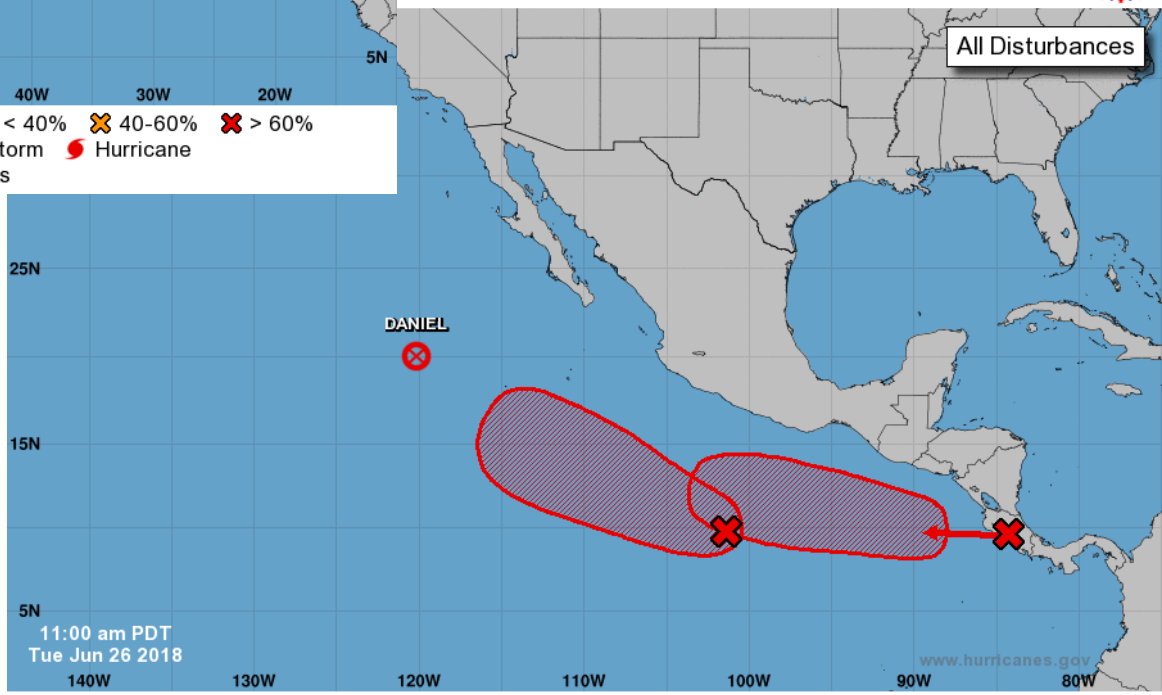
National Hurricane Center Miami, Florida



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

ional Hurricane Center Miami, Florida



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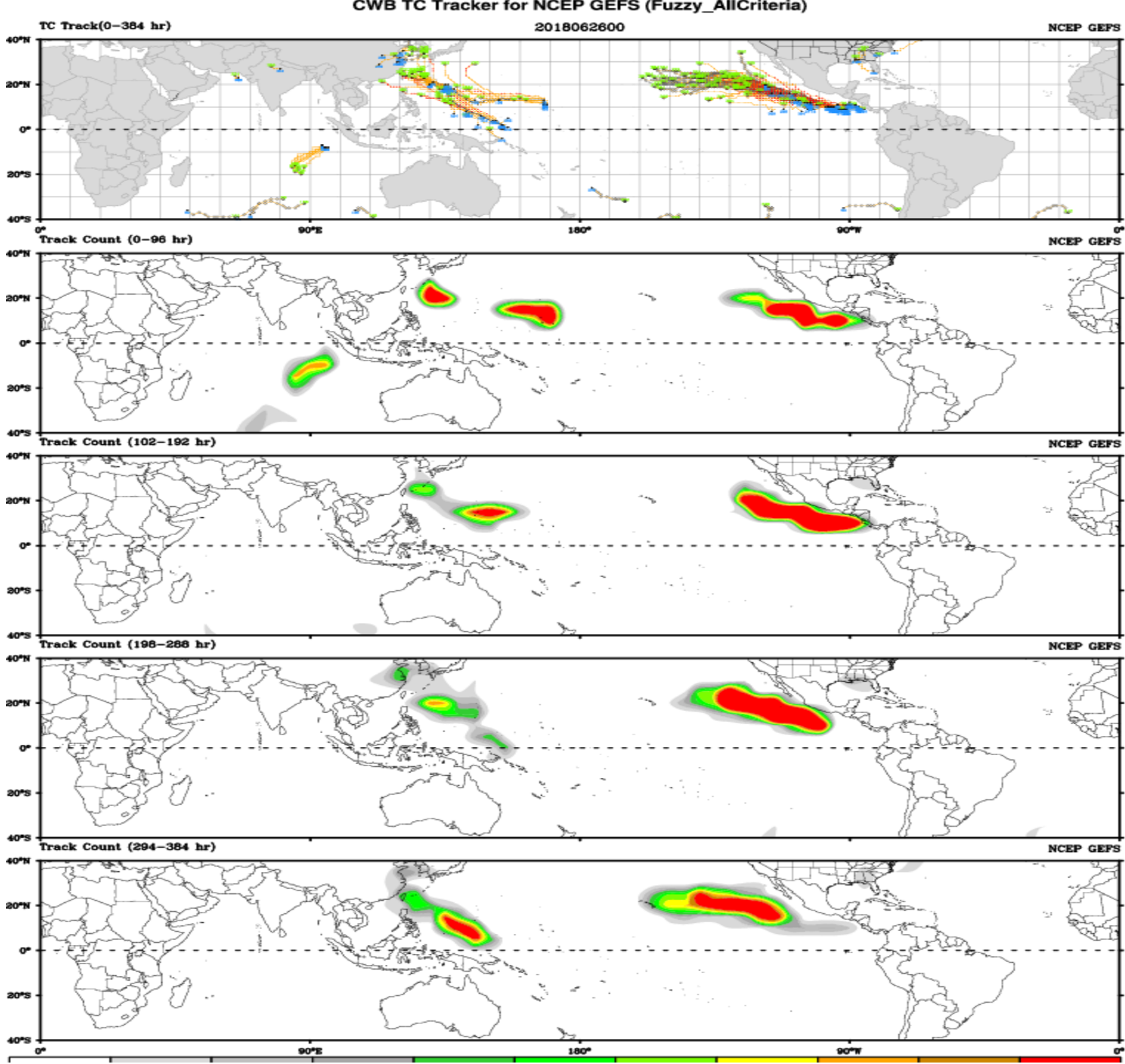
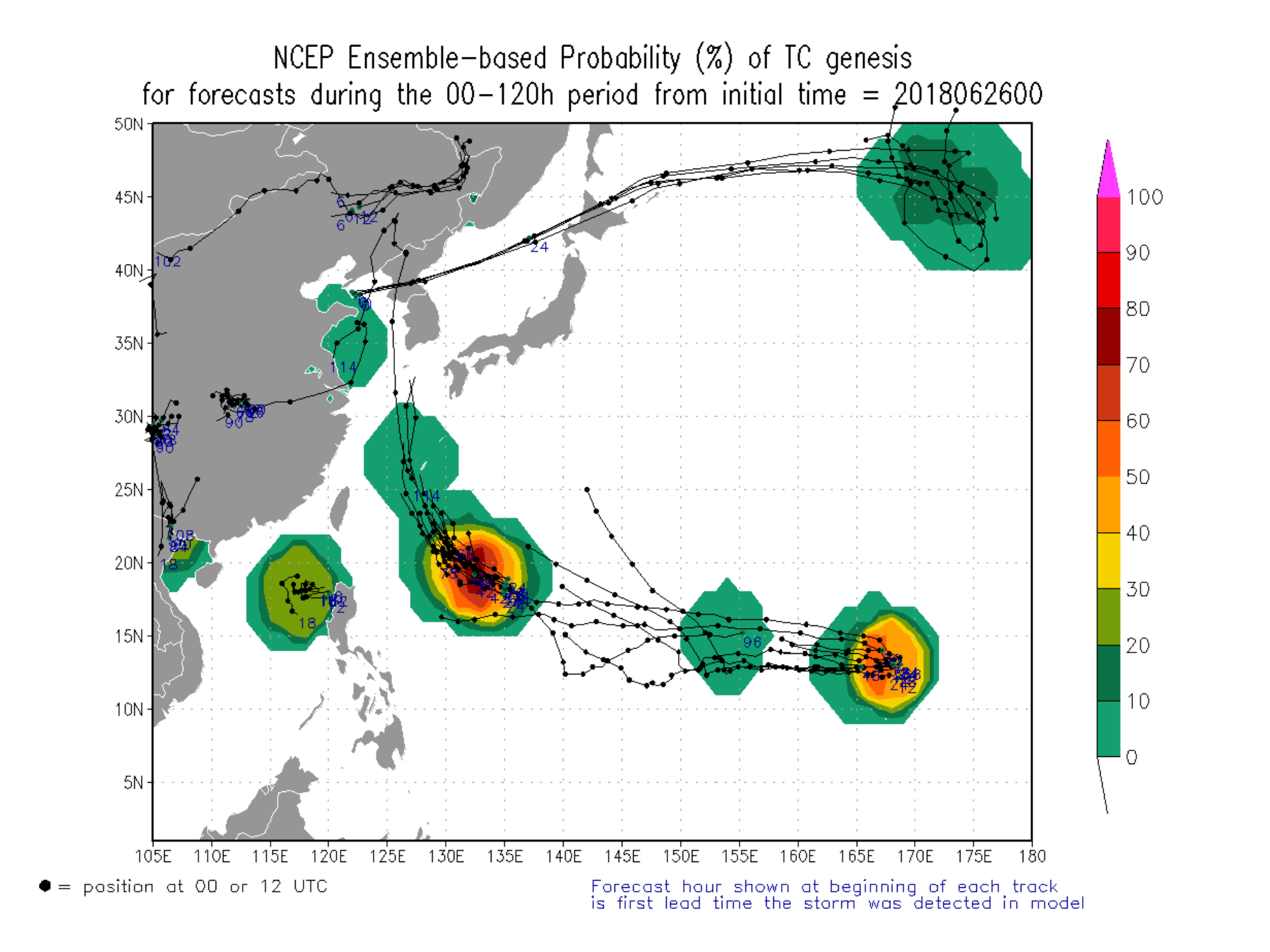


Days 1-4

Day 5-8

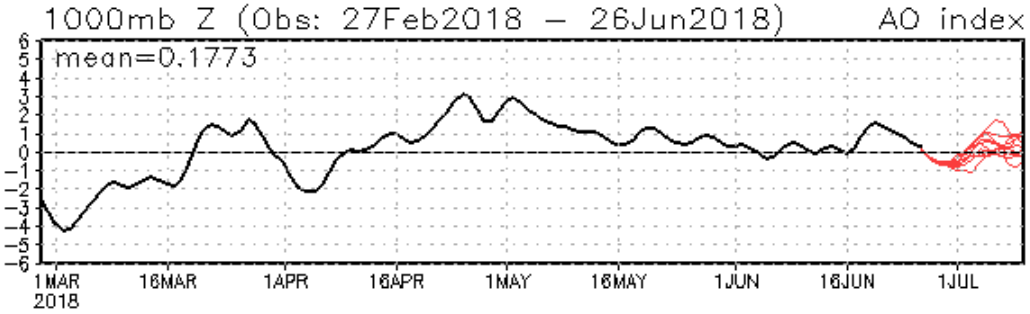
Day 9-12

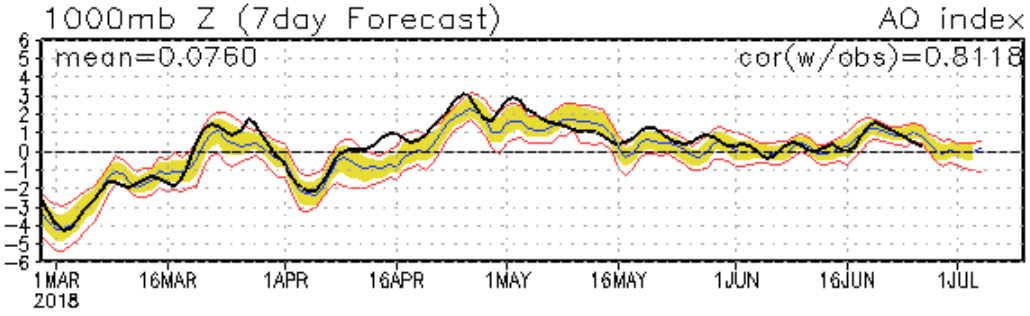
Day 13-15

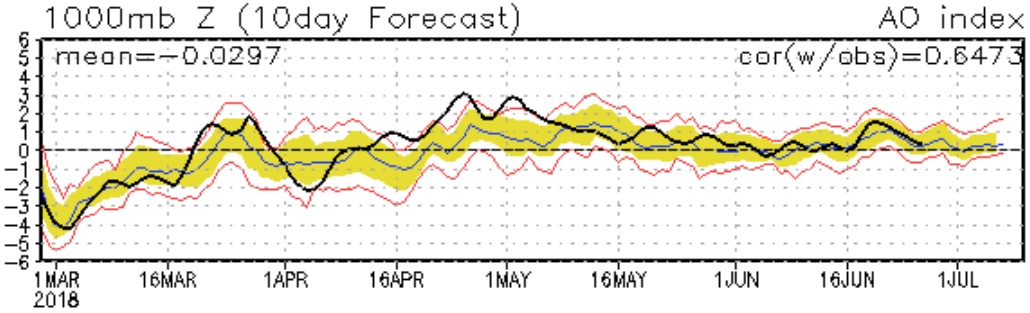

NCEP Ensemble-based Probability (%) of TC genesis
for forecasts during the 00-120h period from initial time = 2018062600
50N
45N
40N
35N
30N
25N
20N
15N
10N
5N
105E
110E
115E
120E
125E
130E
135E
140E
145E
150E
155E
160E
165E
170E
175E
180
100
90
80
70
60
50
40
30
20
10
0
● = position at 00 or 12 UTC
Forecast hour shown at beginning of each track
is first lead time the storm was detected in model

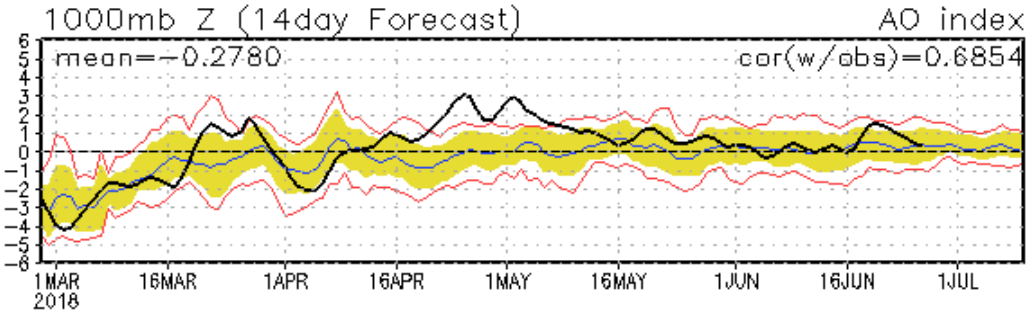
Connections to U.S. Impacts

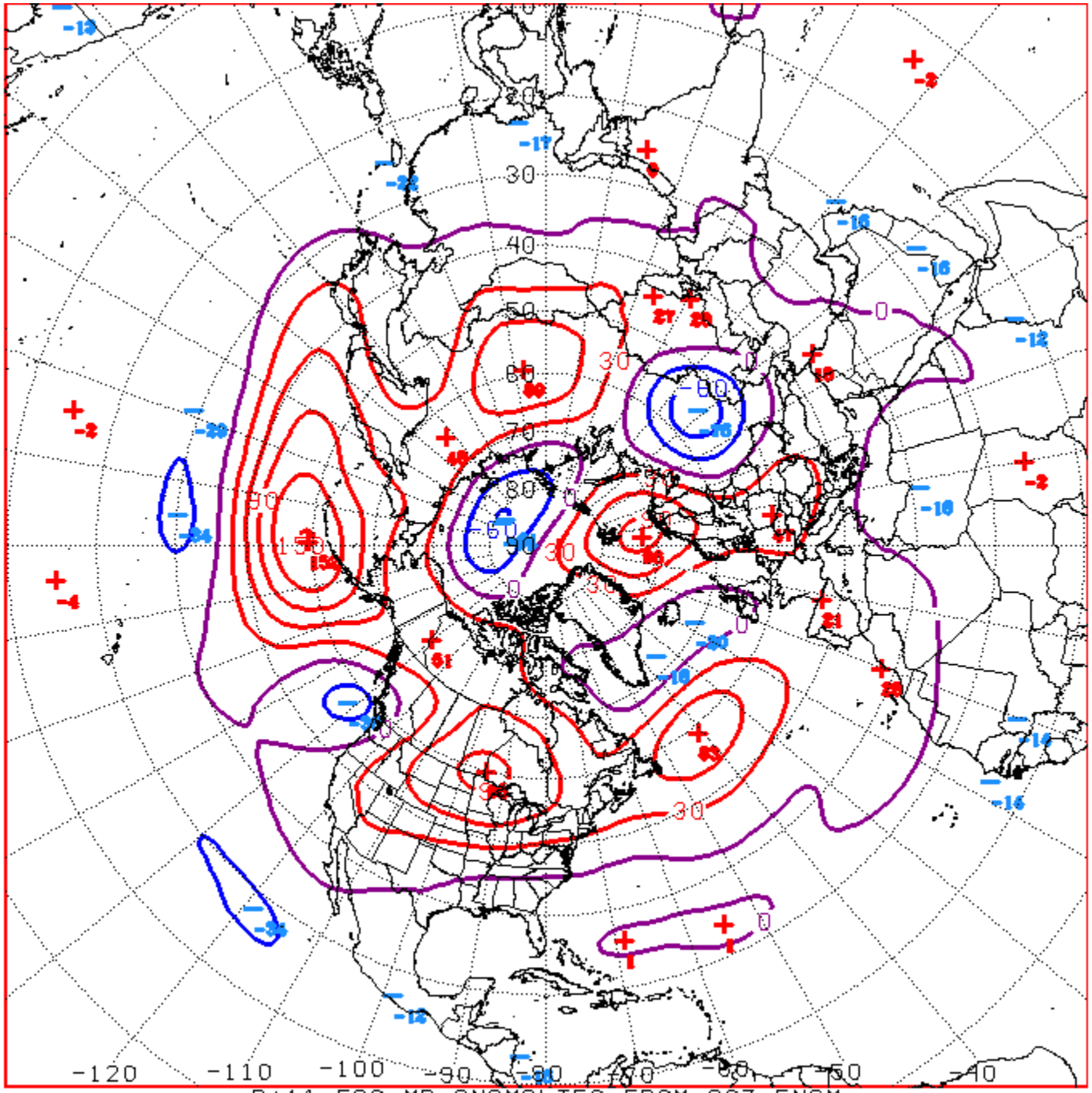
AO: Observed & ENSM forecasts





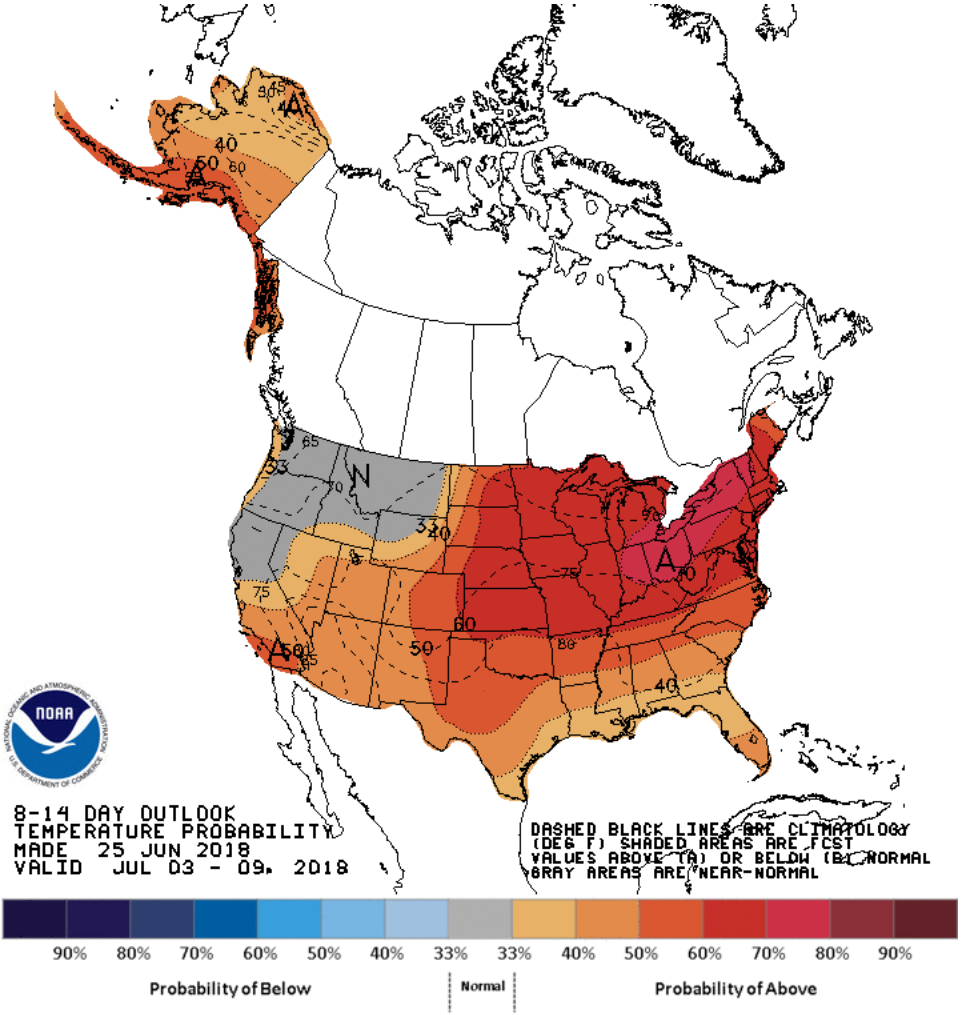


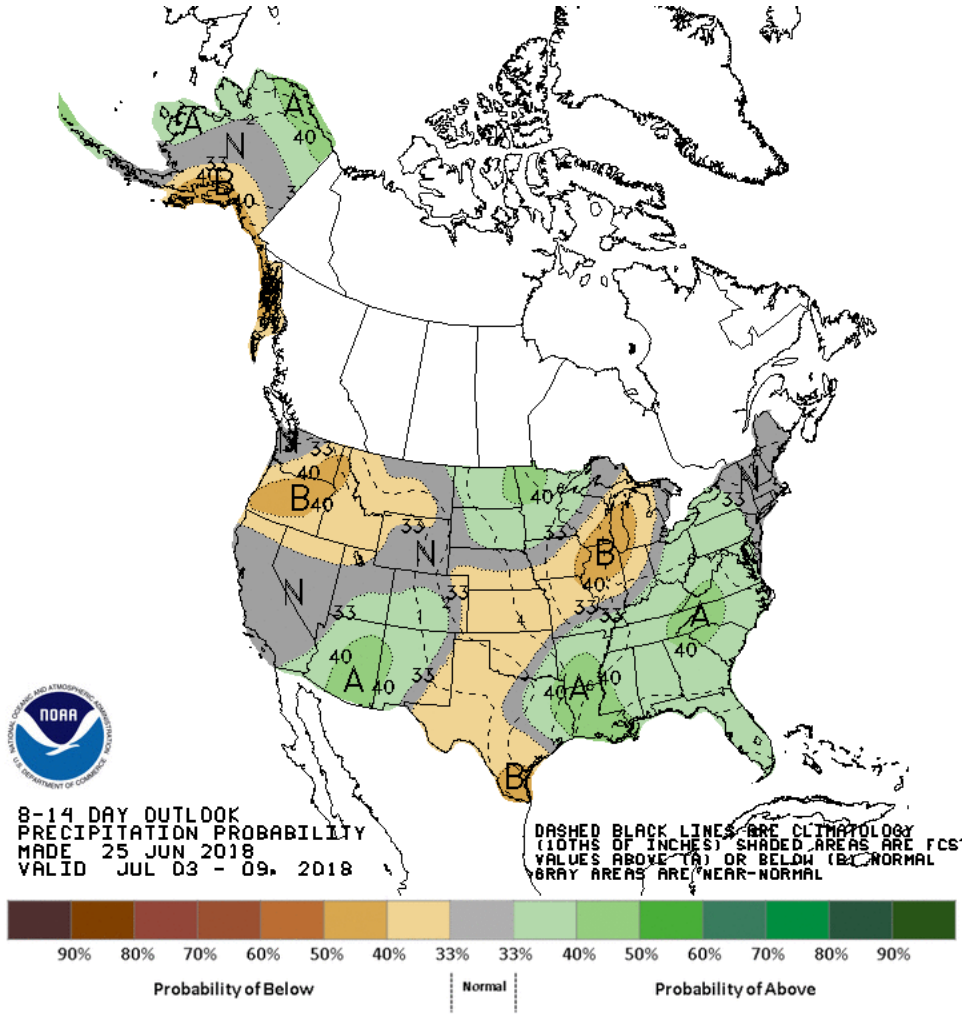




D+11 500 MB ANOMALIES FROM 06Z ENSM
CPC MAP MADE JUN 26 2018 1159 UTC CNTD JUL 07 2018

Week 2 – Temperature and Precipitation





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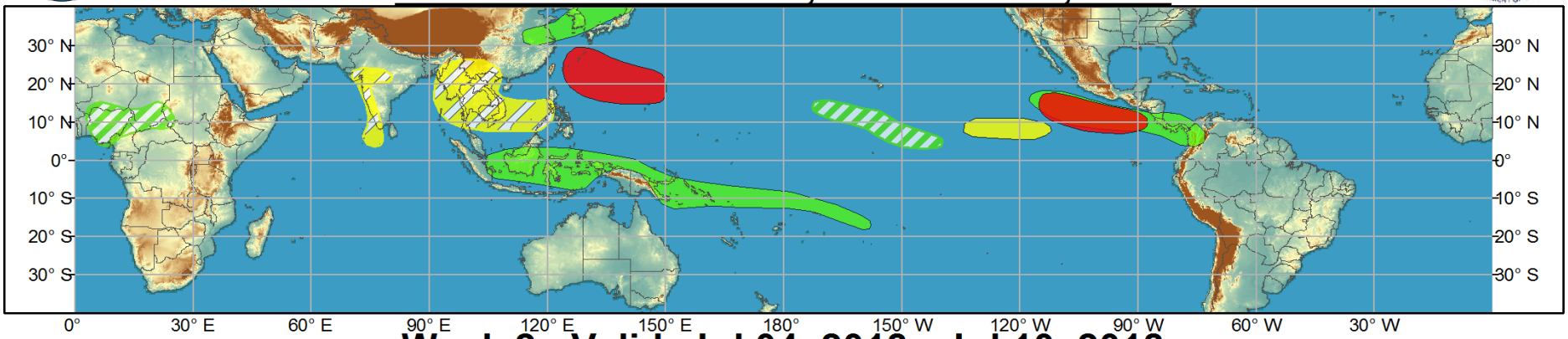

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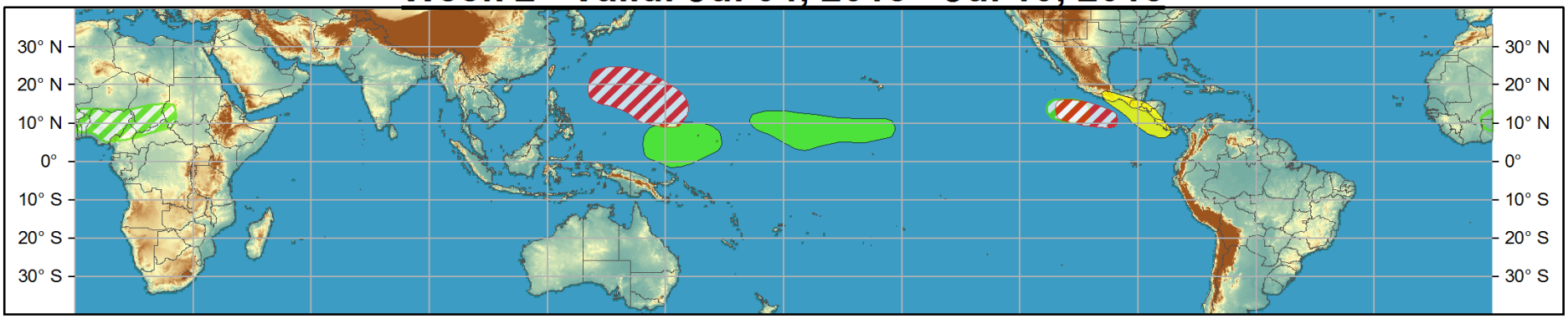

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