

Global Tropics Hazards And Benefits Outlook

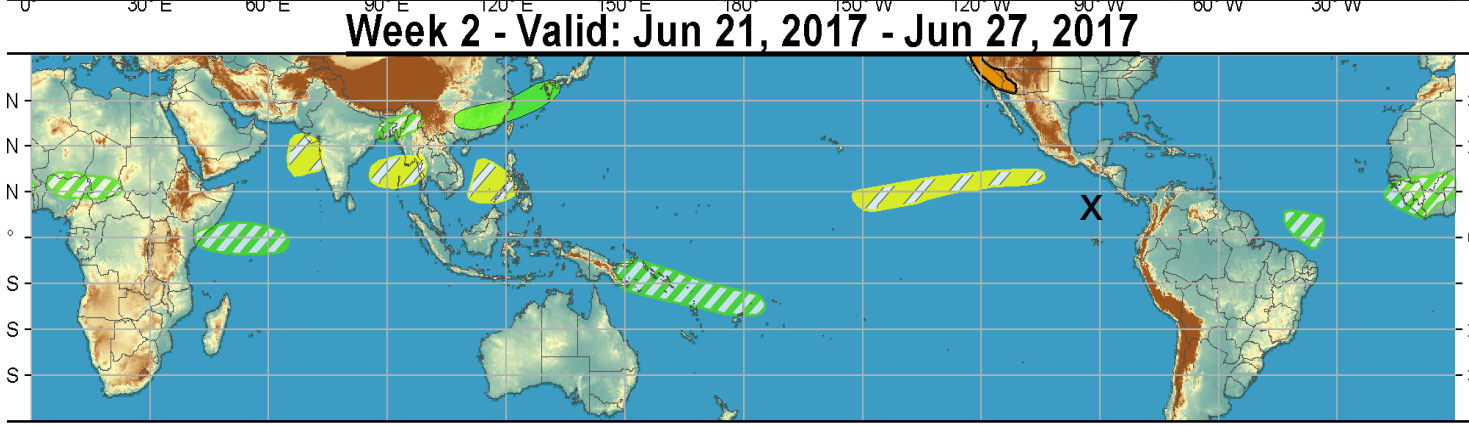
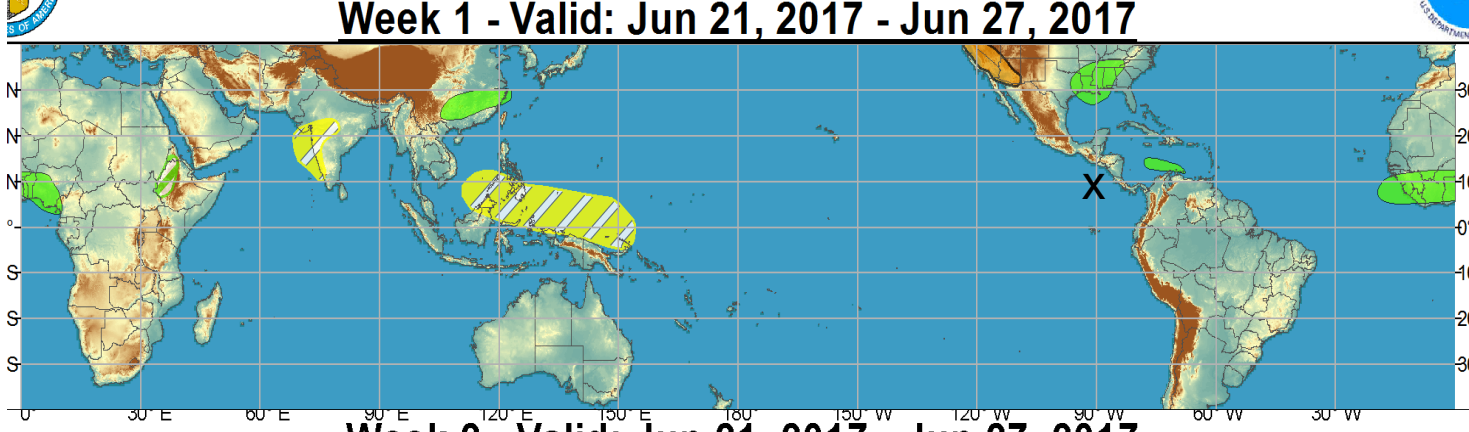
6/27/2017

Matthew Rosencrans

Outline

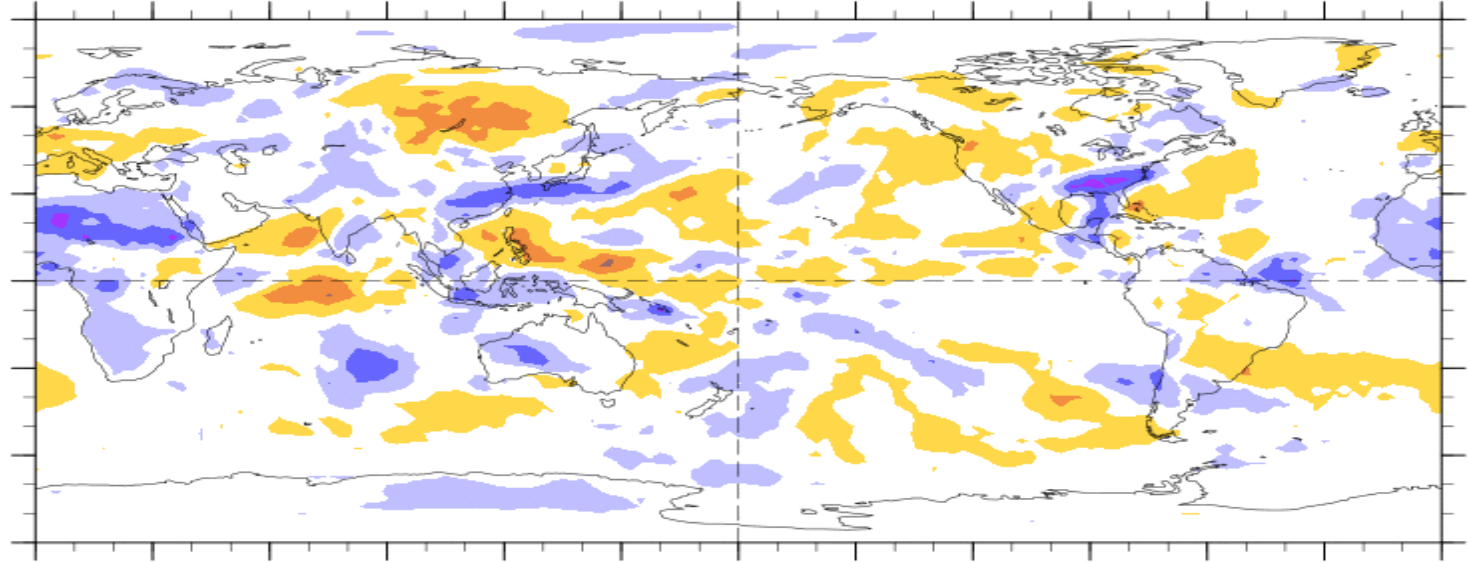
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review



7-Day Average OLR Anomaly

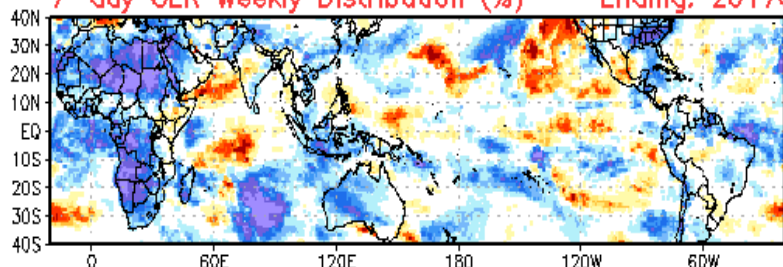
2017/06/19 - 2017/06/25



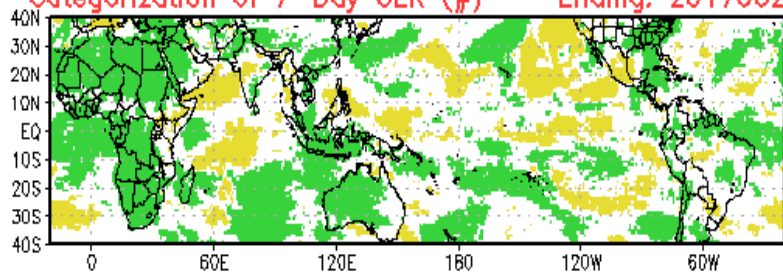
Cool shading
More clouds/rain

Warm shading
Less clouds/rain

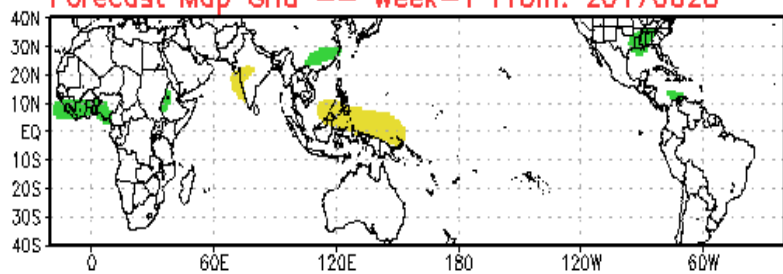
7-day OLR Weekly Distribution (%) -- Ending: 20170627



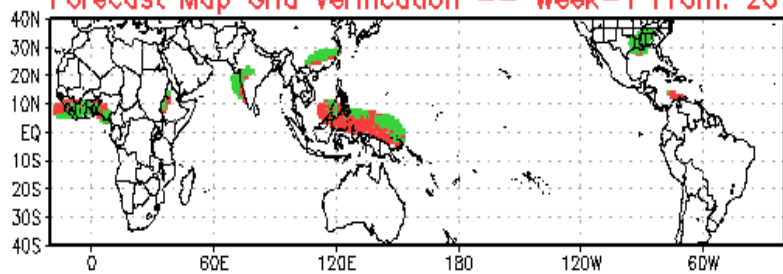
Categorization of 7-Day OLR (#) -- Ending: 20170627



Forecast Map Grid -- Week-1 From: 20170620

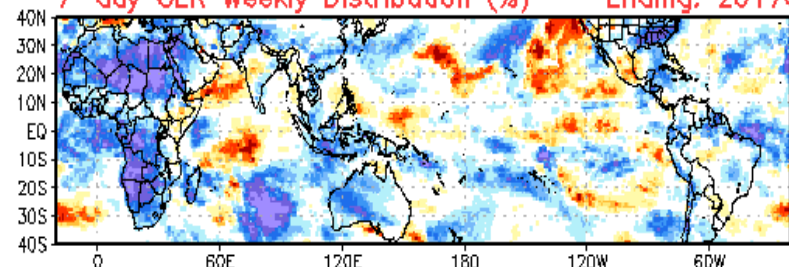


Forecast Map Grid Verification -- Week-1 From: 20170620

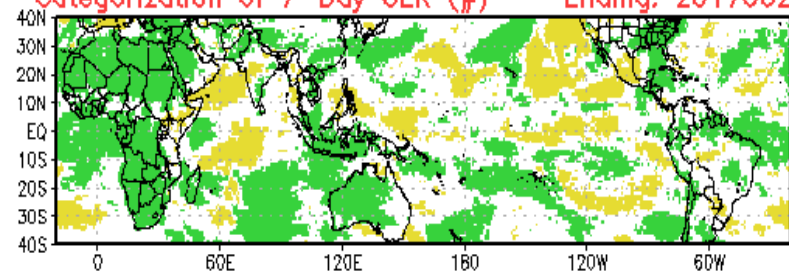


Hit: Green, Miss: Red
Heidke Skill Score: 37.1224

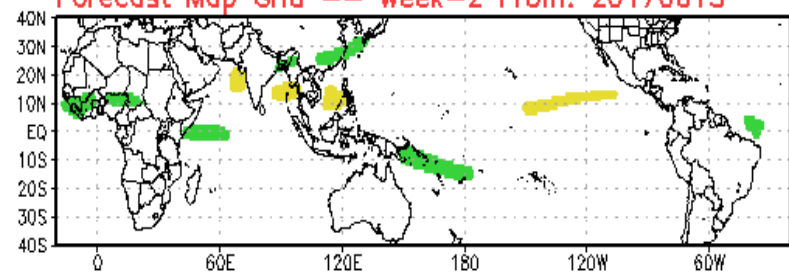
7-day OLR Weekly Distribution (%) -- Ending: 20170627



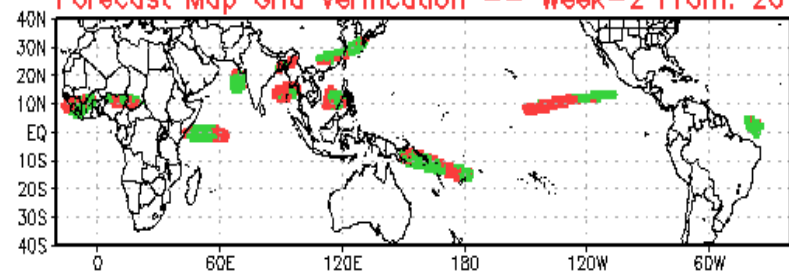
Categorization of 7-Day OLR (#) -- Ending: 20170627



Forecast Map Grid -- Week-2 From: 20170613



Forecast Map Grid Verification -- Week-2 From: 20170613



Hit: Green, Miss: Red
Heidke Skill Score: 32.4844

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is favored (50 to ~55% chance) through the Northern Hemisphere fall 2017.

MJO and other subseasonal tropical variability:

- The MJO remained weak during the past 7 days.
- Dynamical models indicate a weak signal initially, strengthening over the Indian Ocean during week-1, then models diverge significantly, allowing other modes to dominate the pattern.

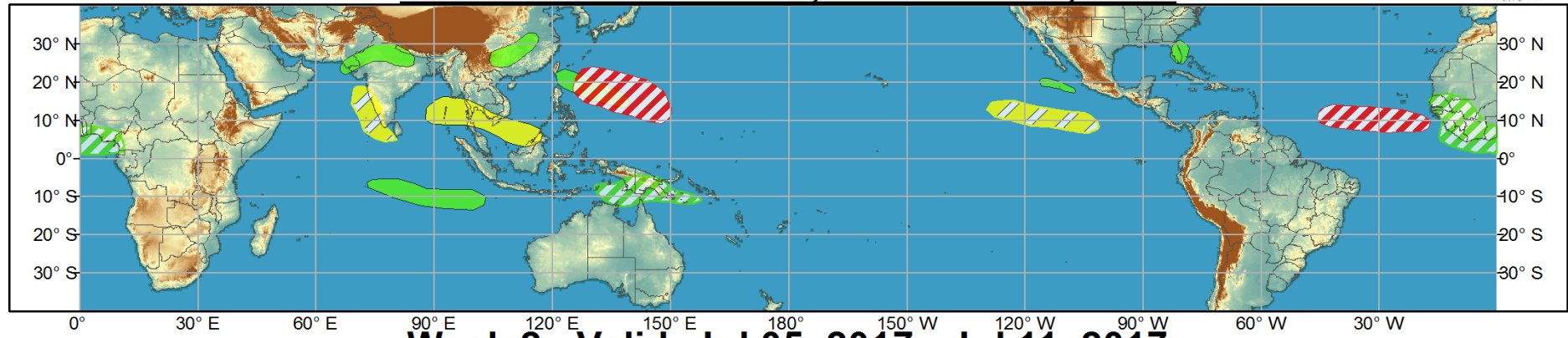
Extratropics:

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

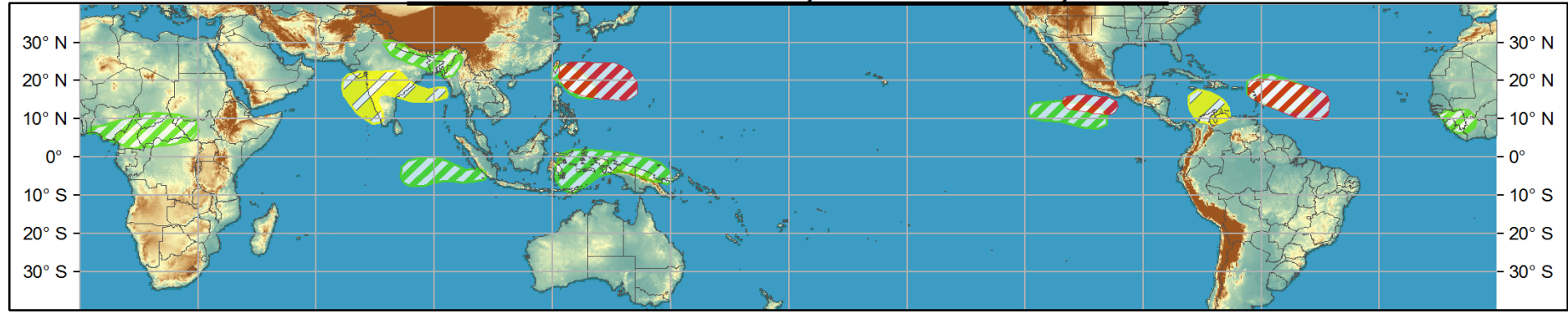


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 28, 2017 - Jul 04, 2017



Week 2 - Valid: Jul 05, 2017 - Jul 11, 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: 06/27/2017

Forecaster: Rosencrans

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.



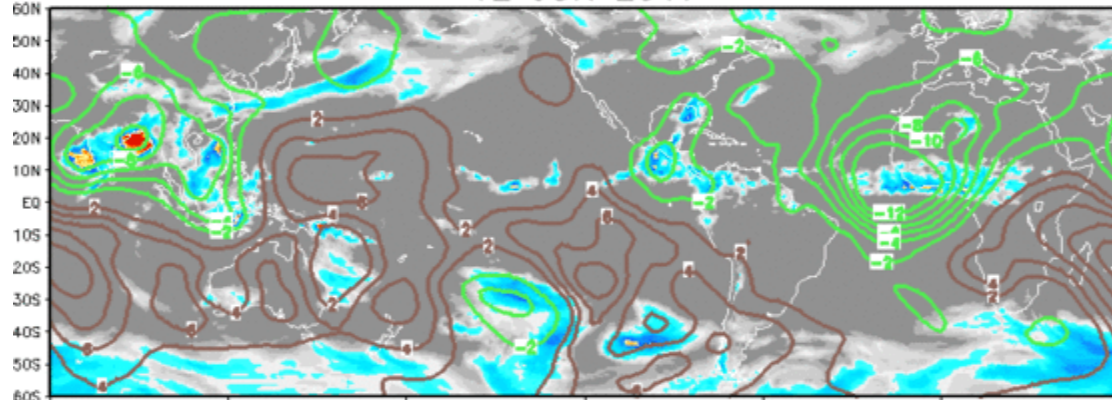
IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence

Brown: Enhanced Convergence

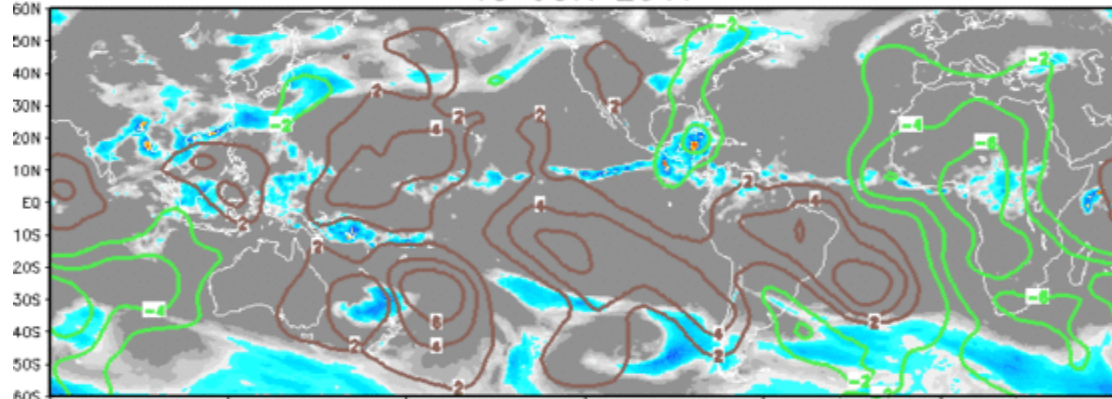
High wave number, not consistent with MJO.

12 JUN 2017



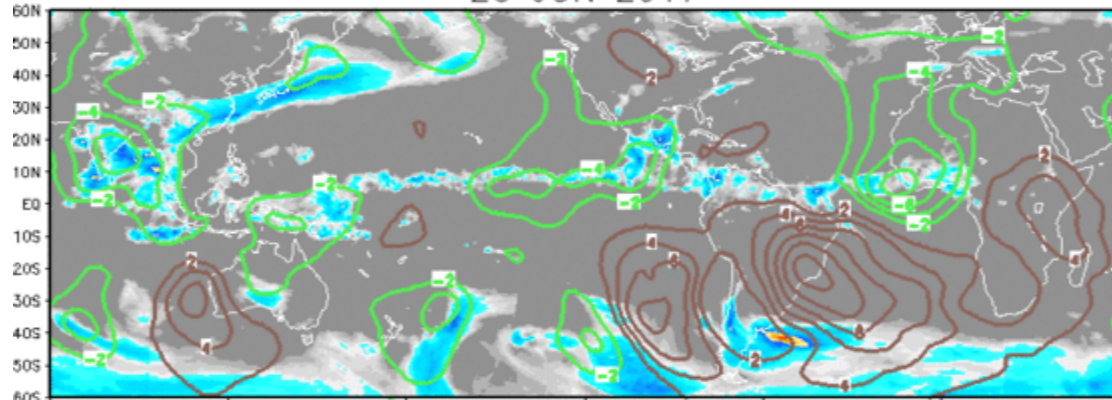
Pattern not consistent with MJO.

19 JUN 2017

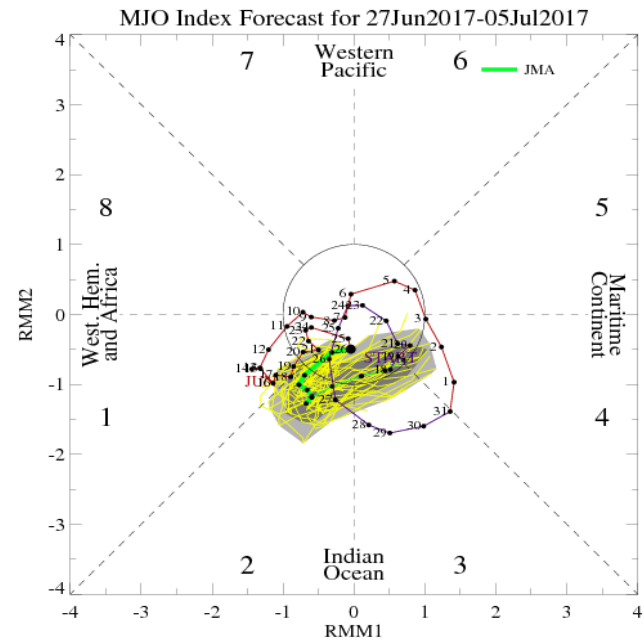
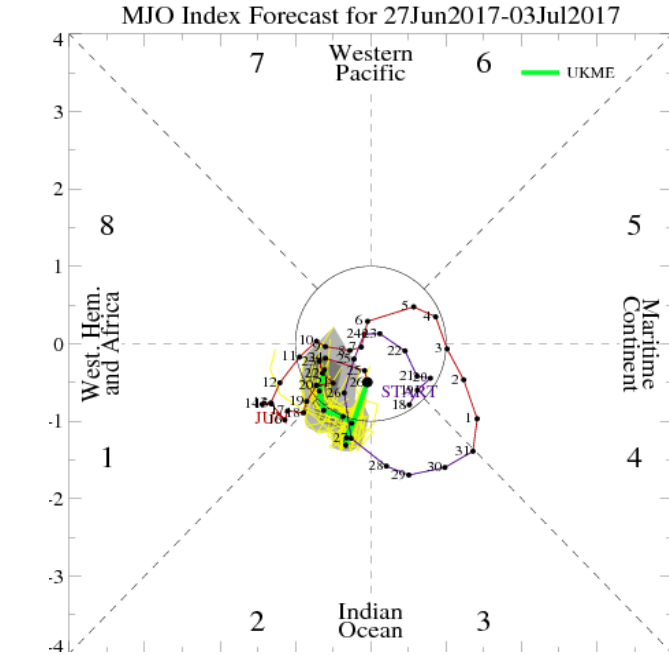
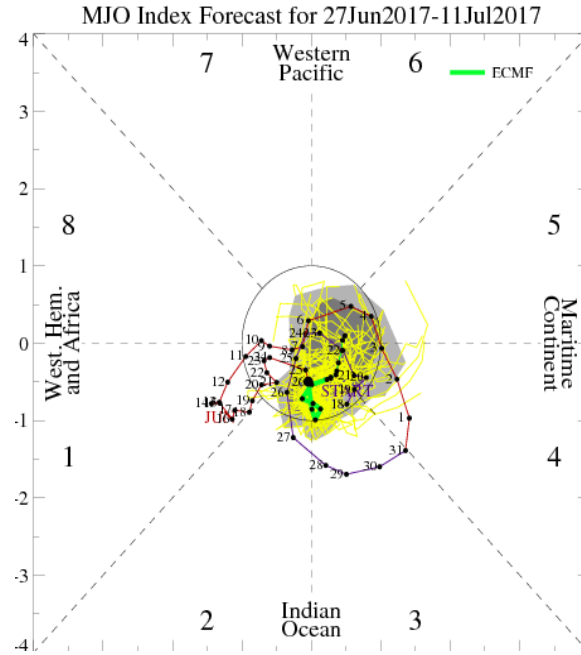
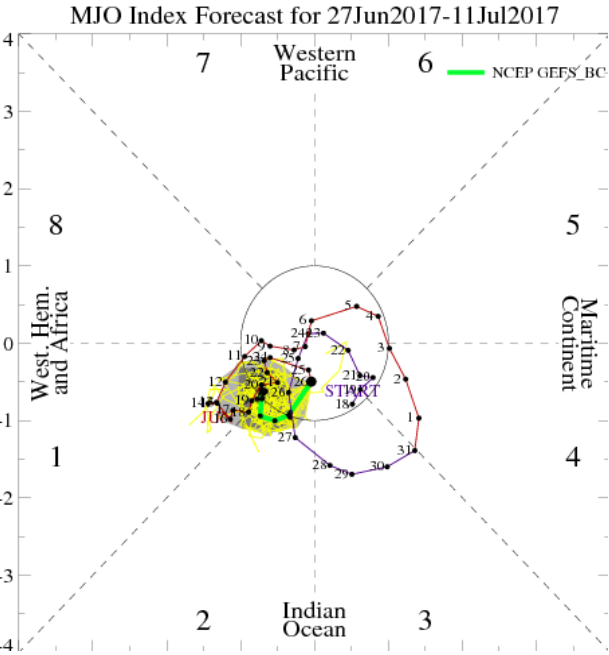


High wave number, not consistent with MJO. Highlights other modes of variability.

26 JUN 2017



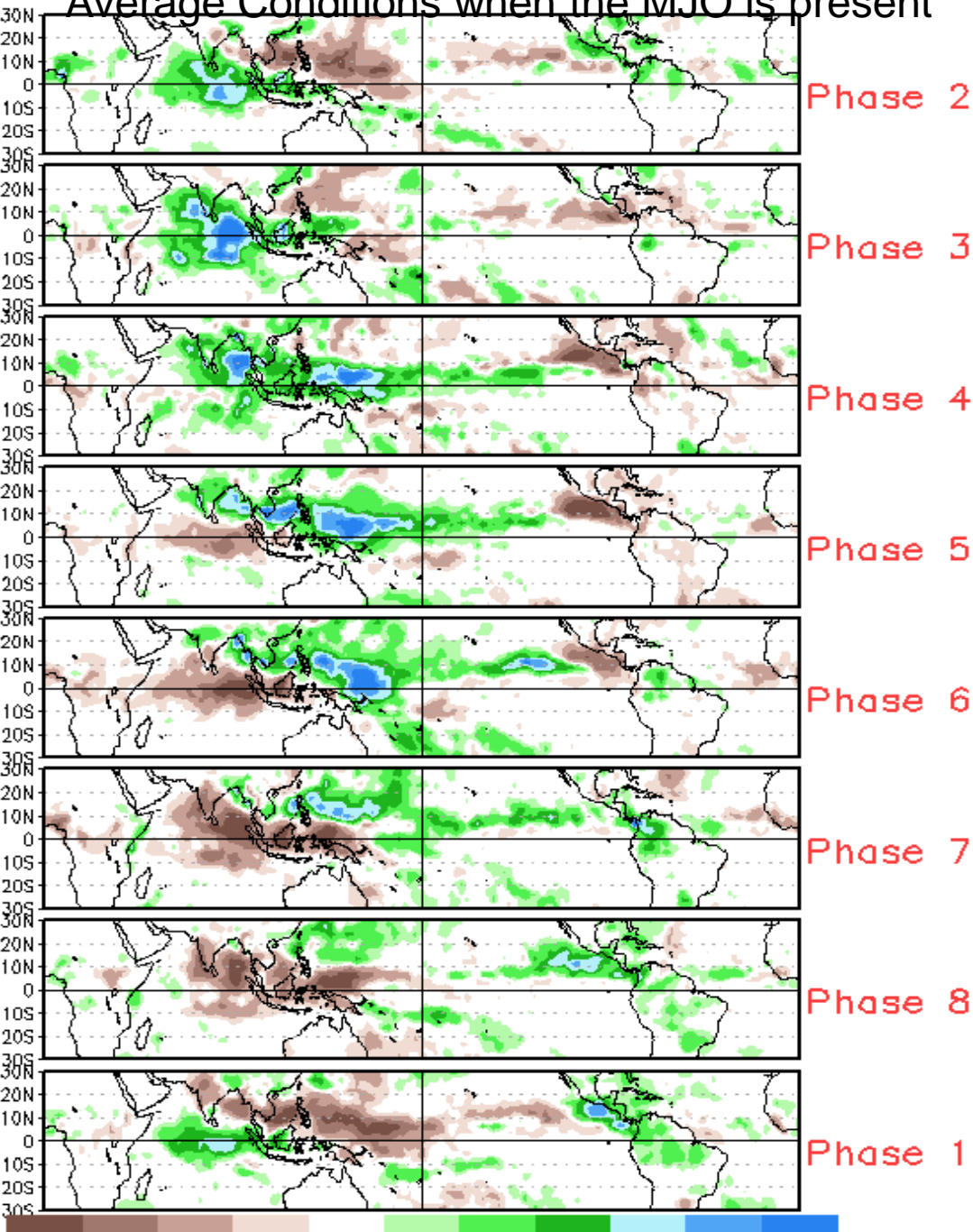
MJO Observation/Forecast



Two “camps” for where convection is likely to setup during the next 2 weeks.

Neither related to MJO.

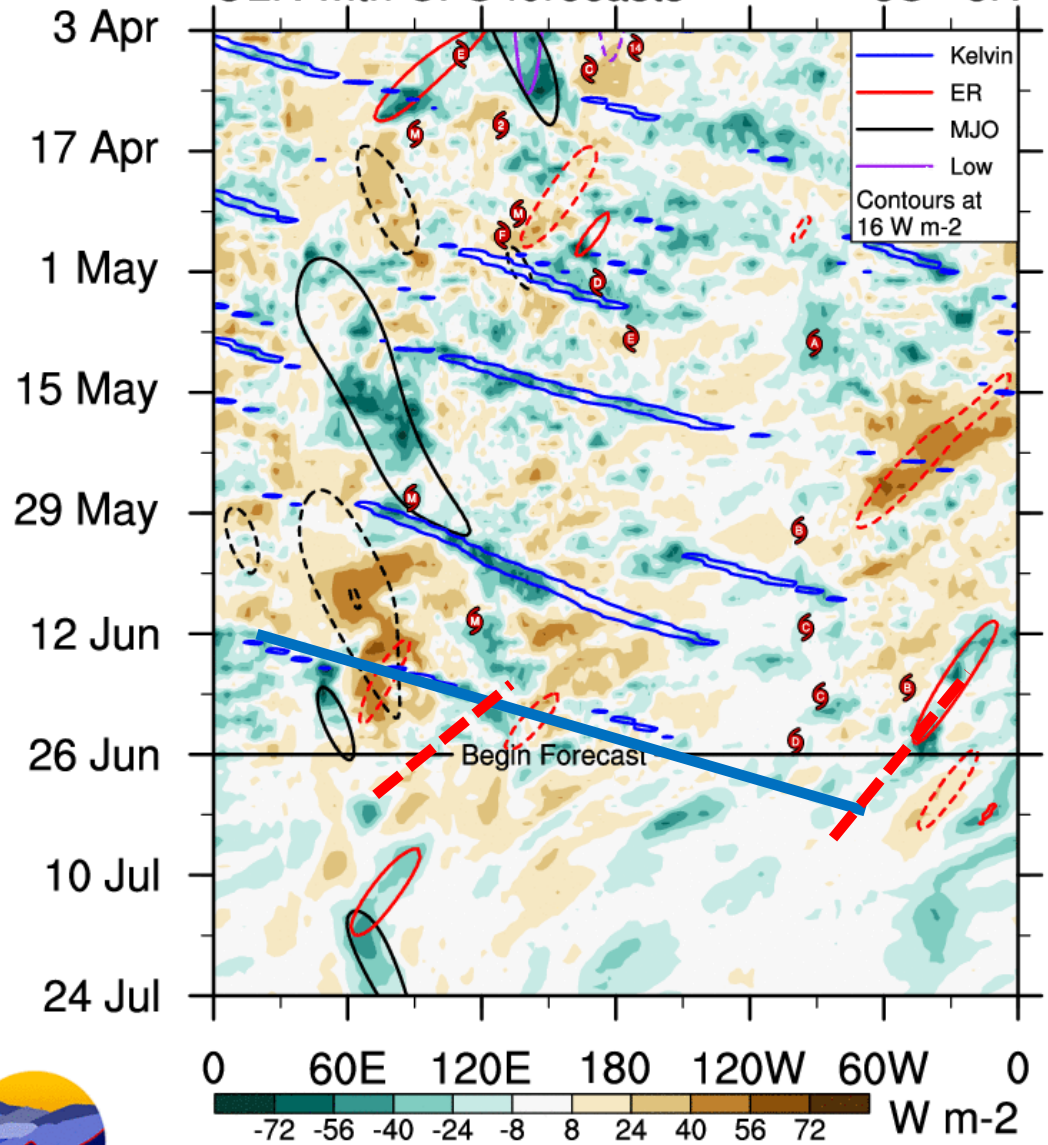
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts

5S - 5N



Rossby wave
 Kelvin wave
 having an influence

MJO little to no influence

Low-frequency pattern less
 of an influence

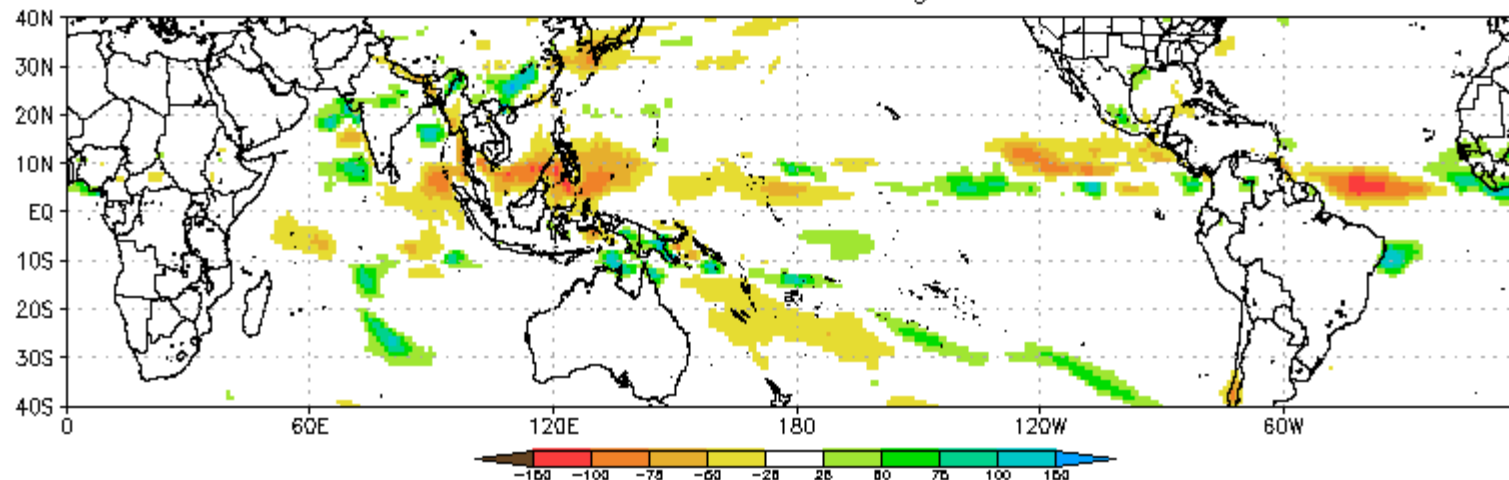


ncics.org/mjo

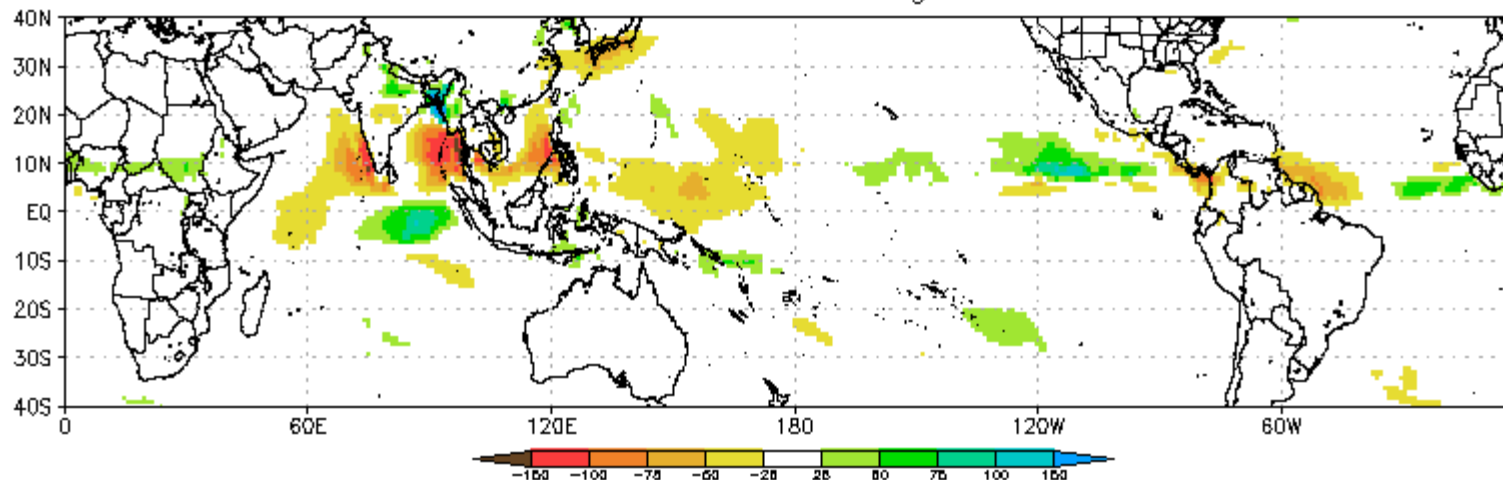
Tue 2017-06-27 15:26 UTC

Carl Schreck (cjschrec@ncsu.edu)

CFS Precipitation Anomalies (mm) Issued 26Jun2017
Week-1 Forecast Ending 04Jul2017

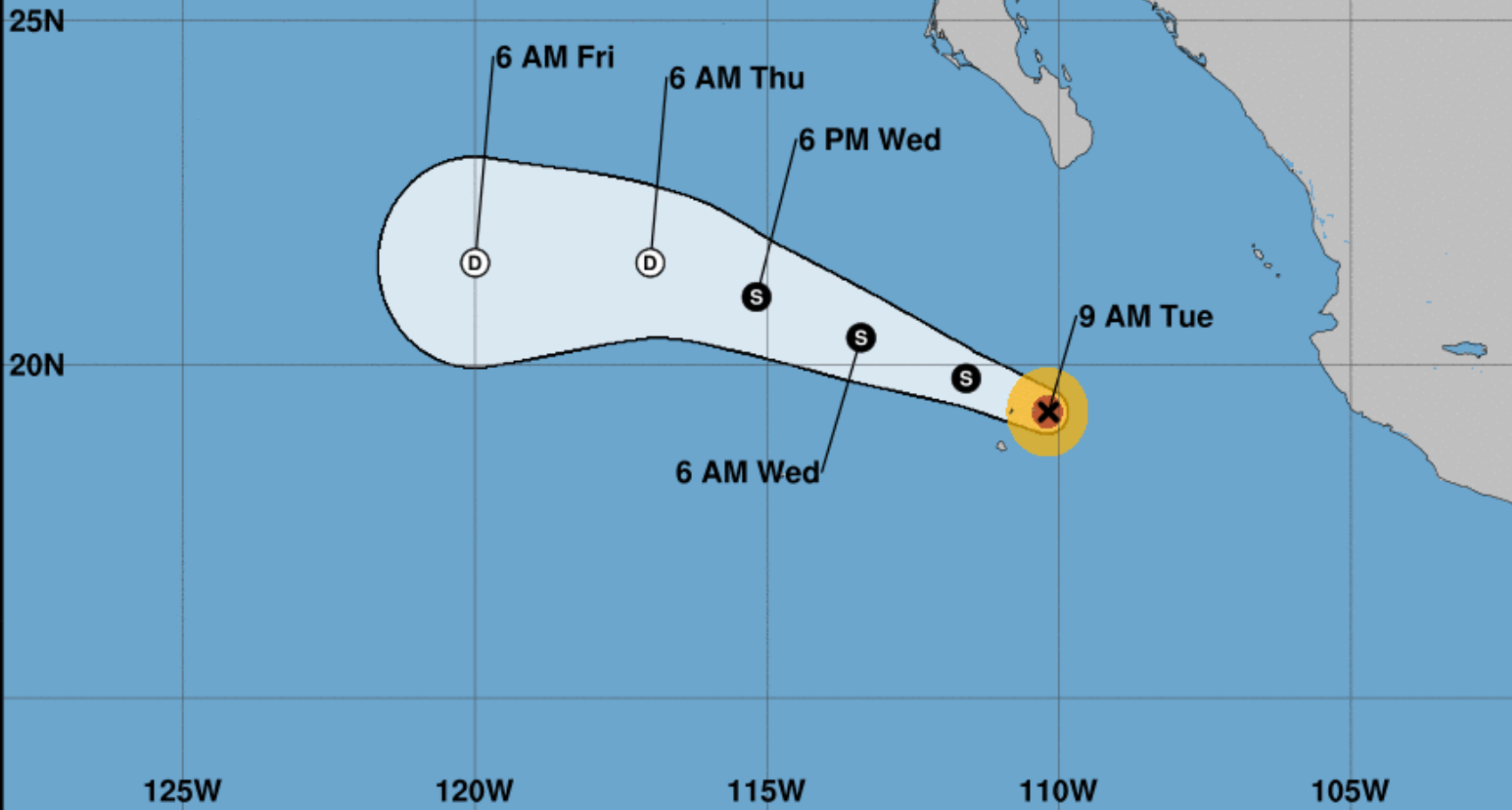


CFS Precipitation Anomalies (mm) Issued 26Jun2017
Week-2 Forecast Ending 11Jul2017





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

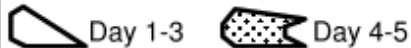


Hurricane Dora
 Tuesday June 27, 2017
 9 AM MDT Advisory 11
 NWS National Hurricane Center

Current information: x
 Center location 19.3 N 110.2 W
 Maximum sustained wind 75 mph
 Movement WNW at 13 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:



Watches:



Warnings:



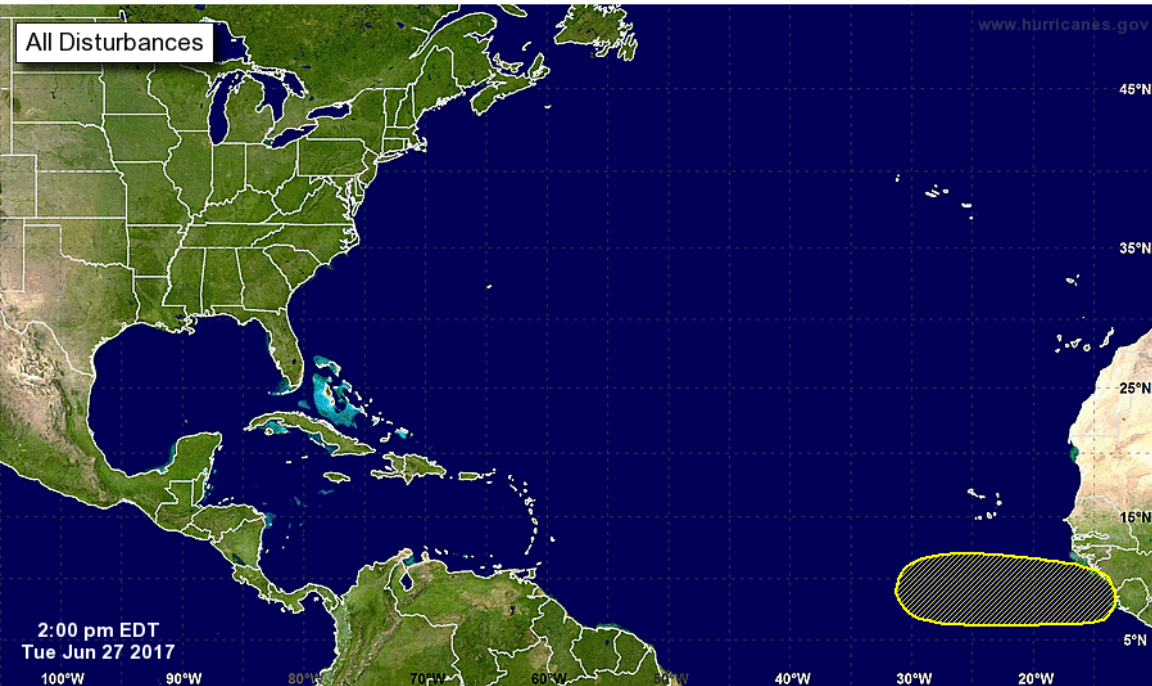
Current wind extent:





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



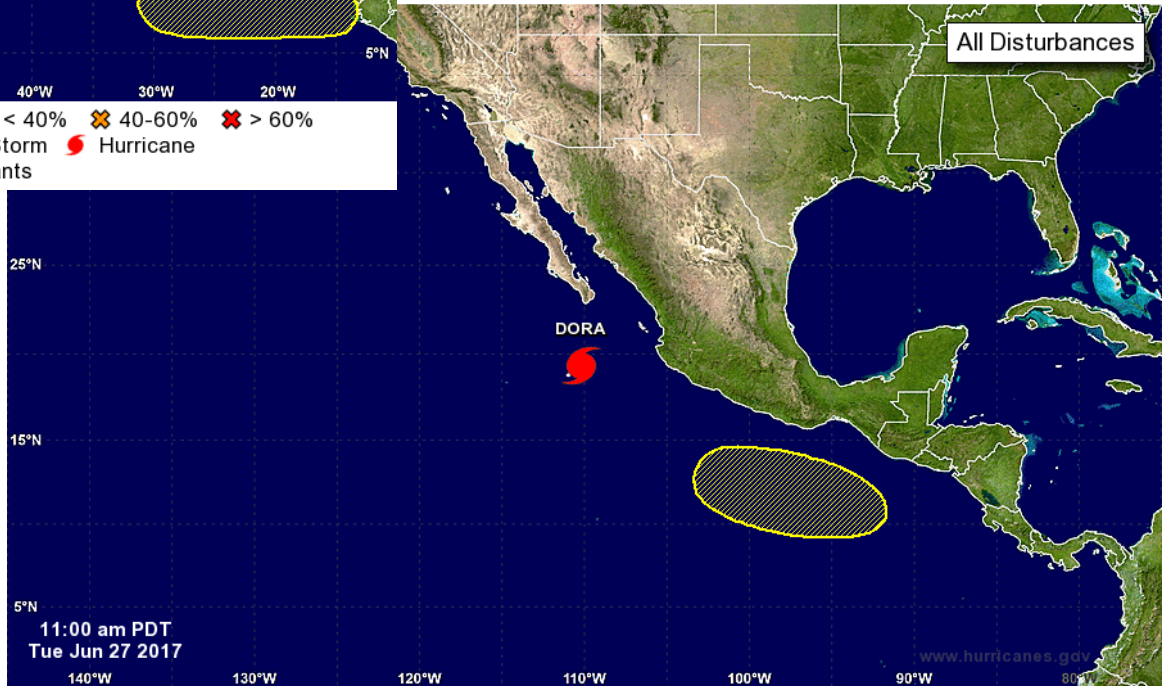
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

Graphical Tropical Weather Outlook

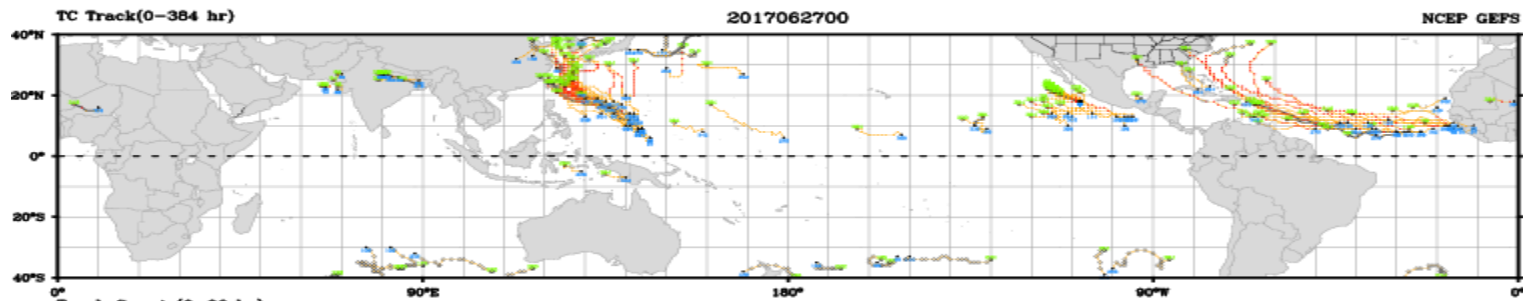
National Hurricane Center Miami, Florida



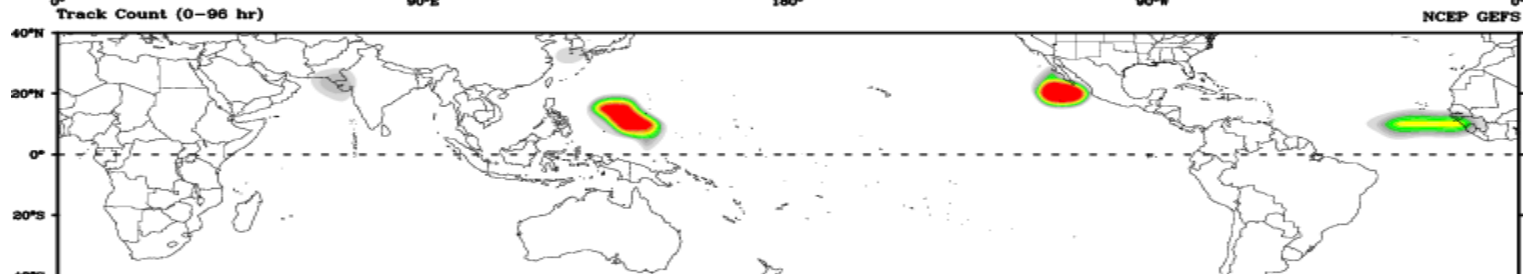
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

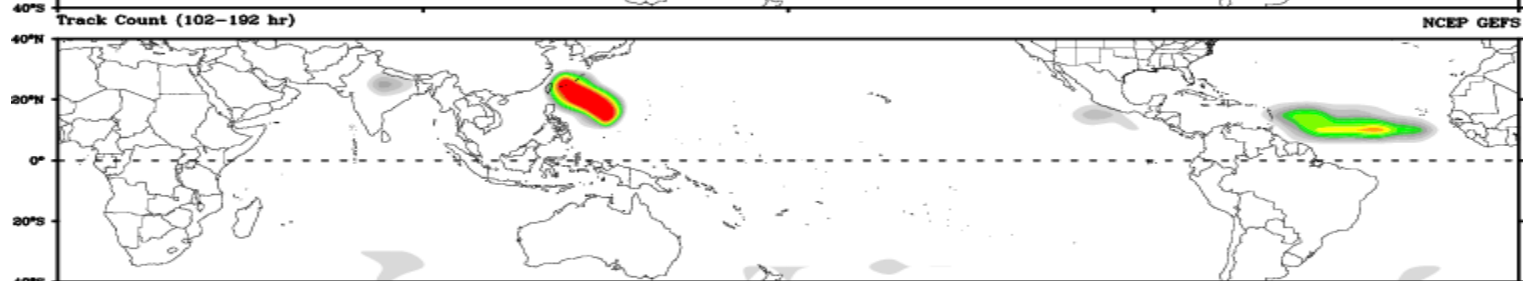
Post-Tropical Cyclone Remnants



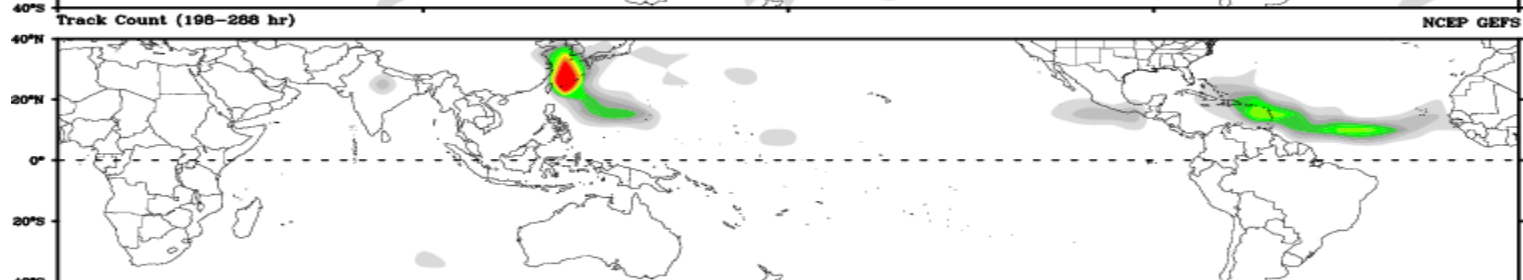
Days 1-4



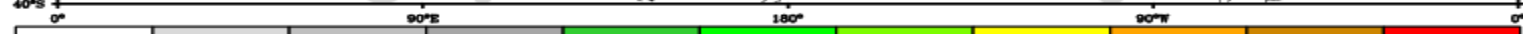
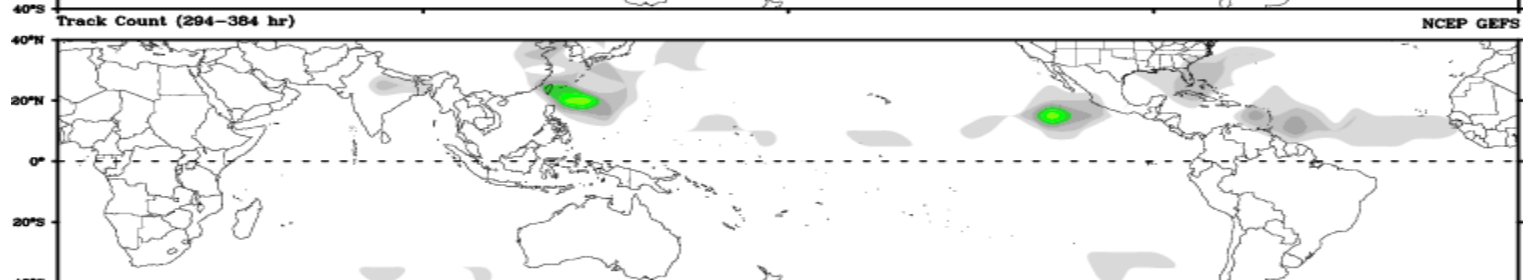
Day 5-8



Day 9-12



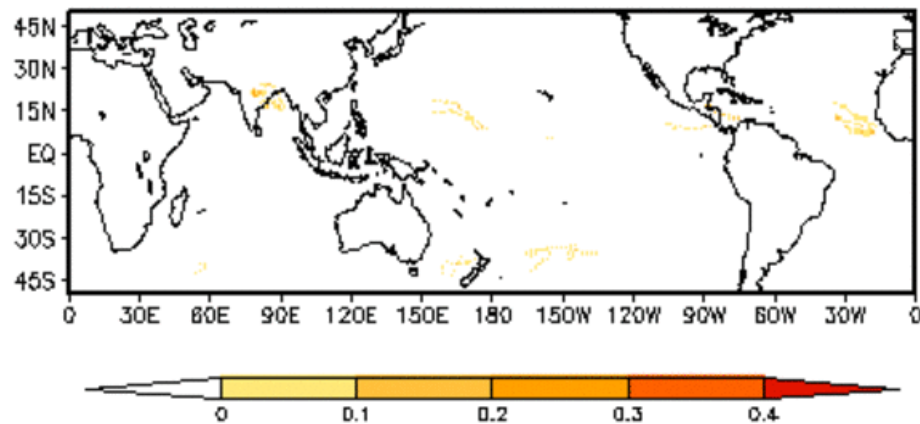
Day 13-15



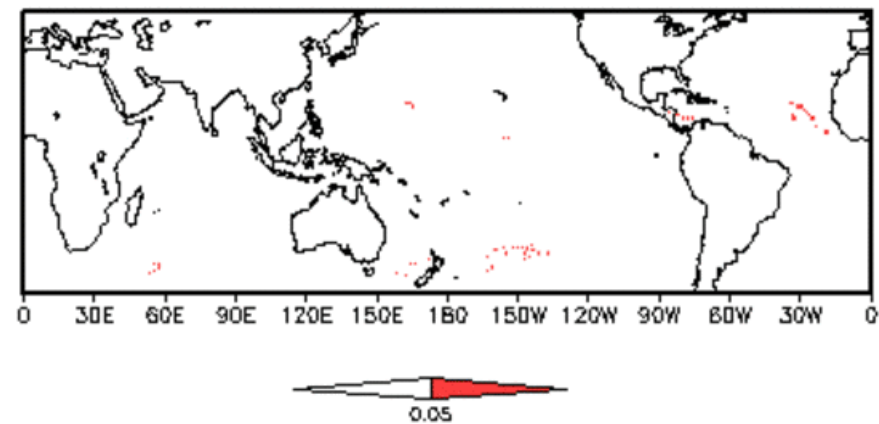
CFSv2 45-Day Forecasts

Week 1: 0627-0703

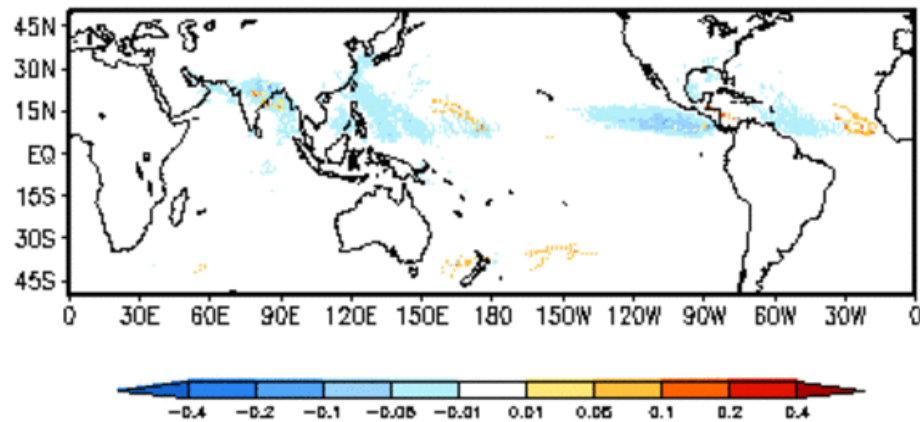
a) Forecast Tracks



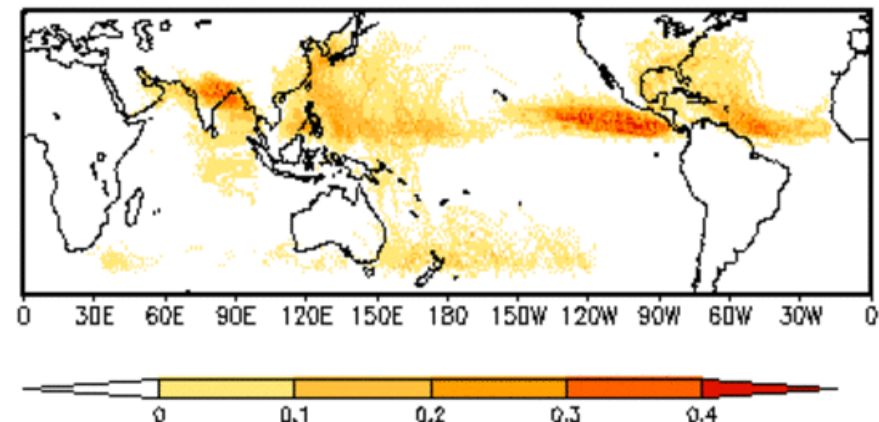
b) Filtered Tracks



c) Track Anomaly



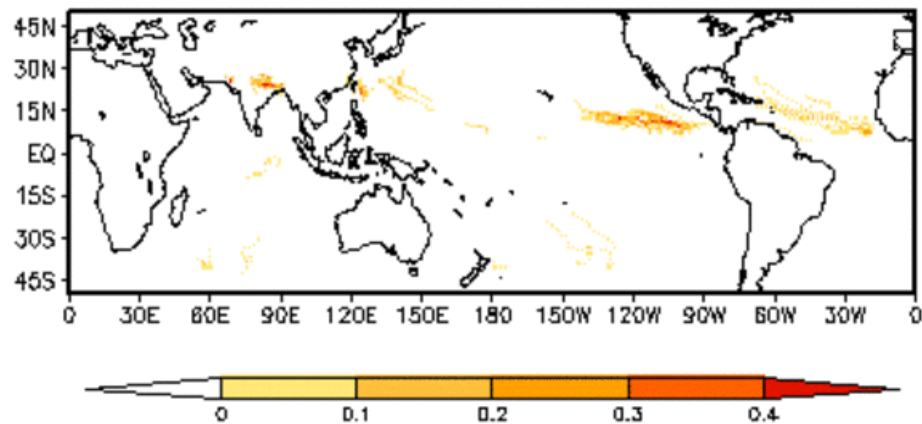
d) False Alarm Climatology



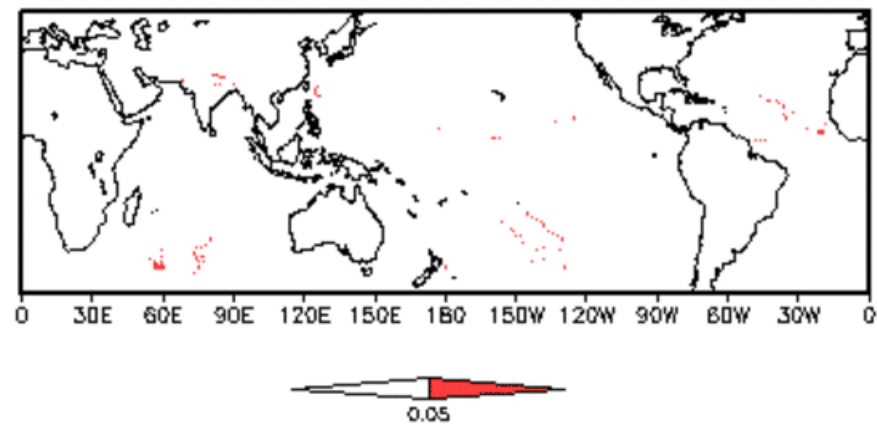
CFSv2 45-Day Forecasts

Week 2: 0704-0710

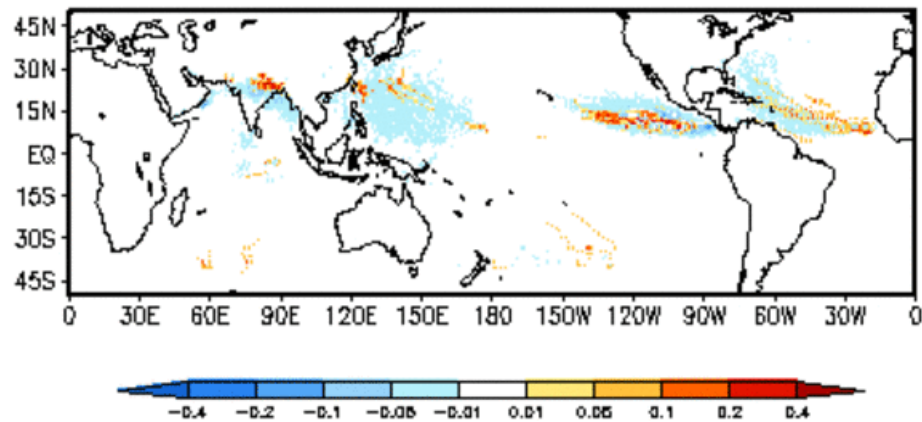
a) Forecast Tracks



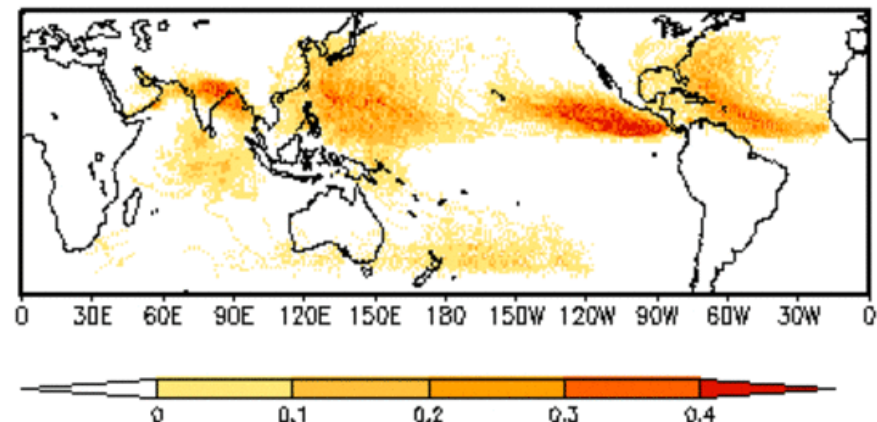
b) Filtered Tracks



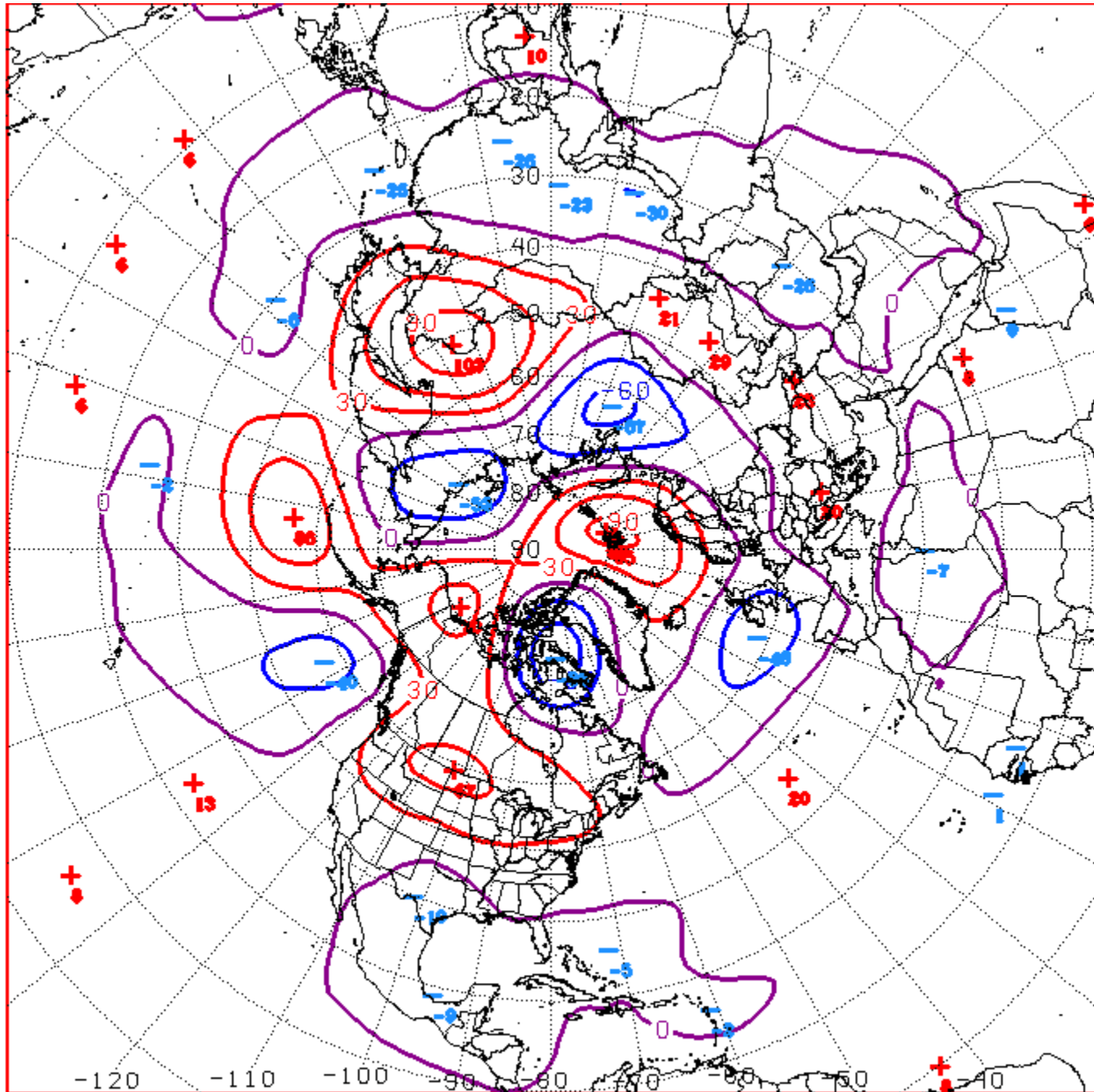
c) Track Anomaly



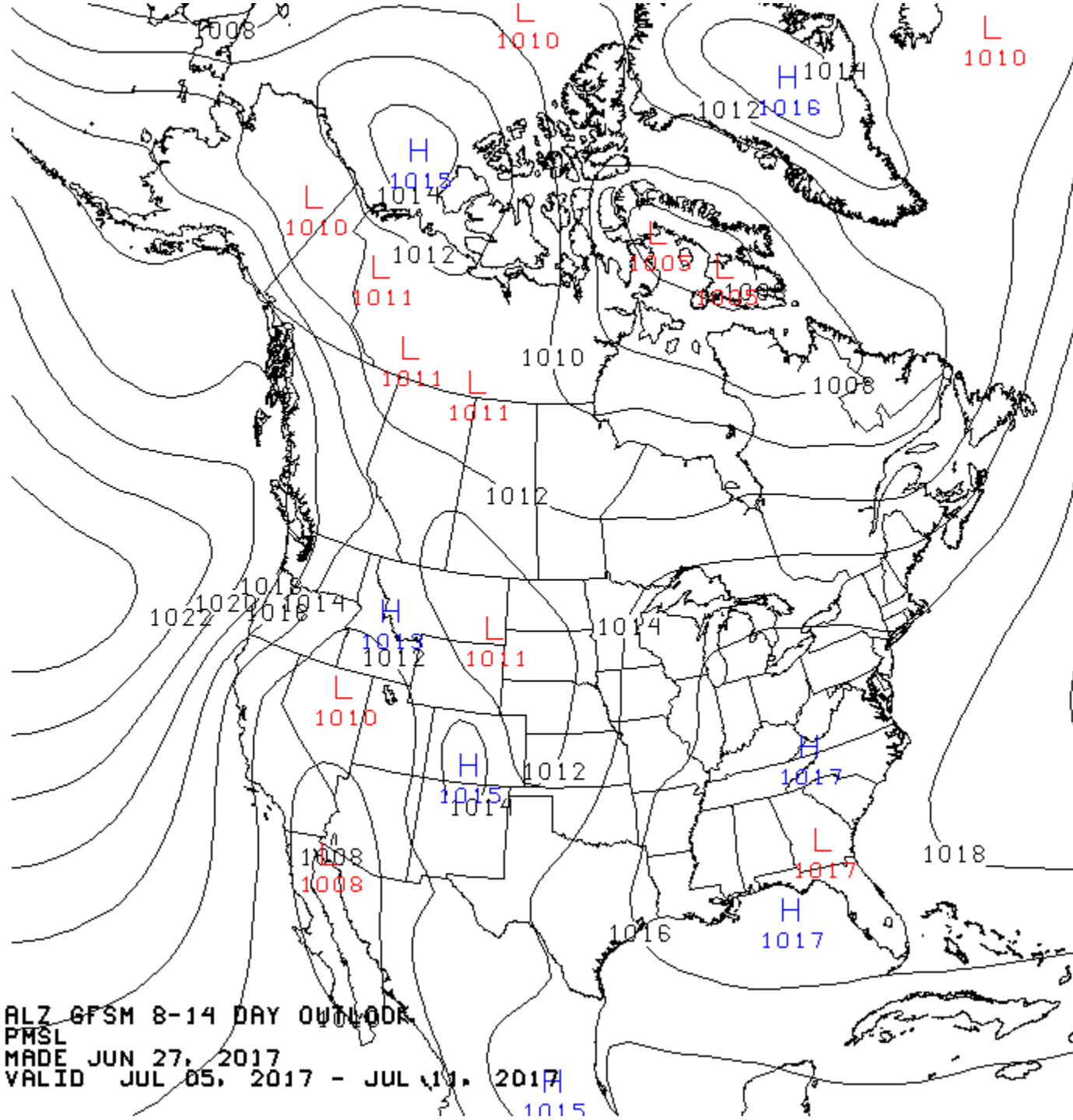
d) False Alarm Climatology



Connections to U.S. Impacts

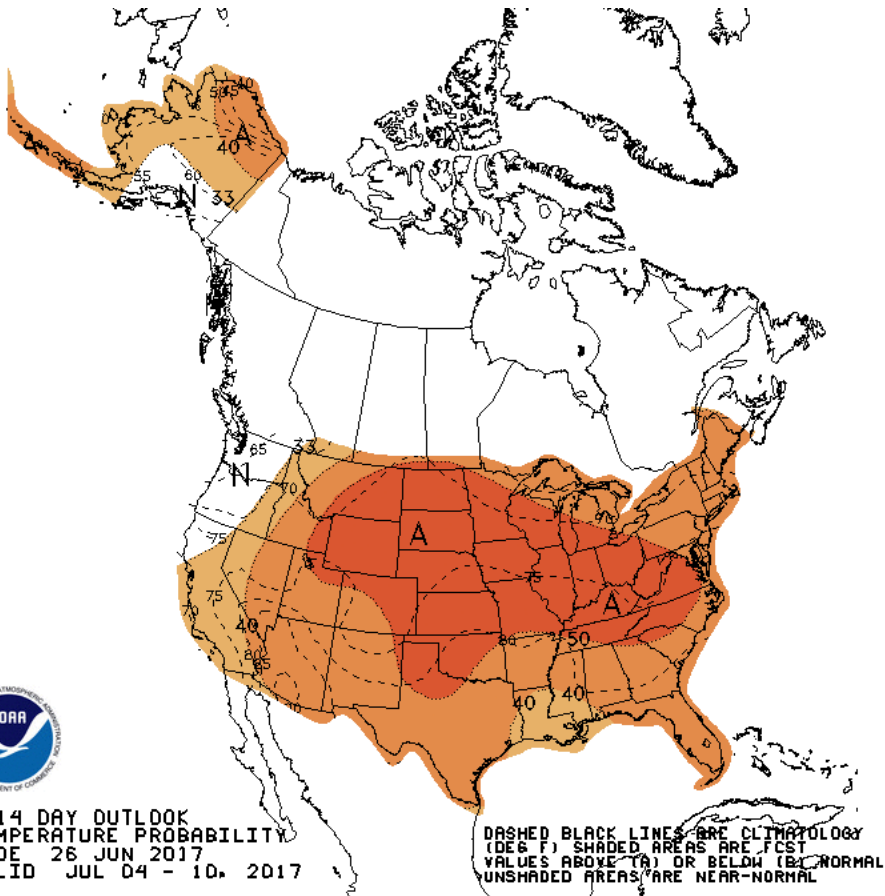


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUN 27 2017 1339 UTC CNTD JUL 08 2017



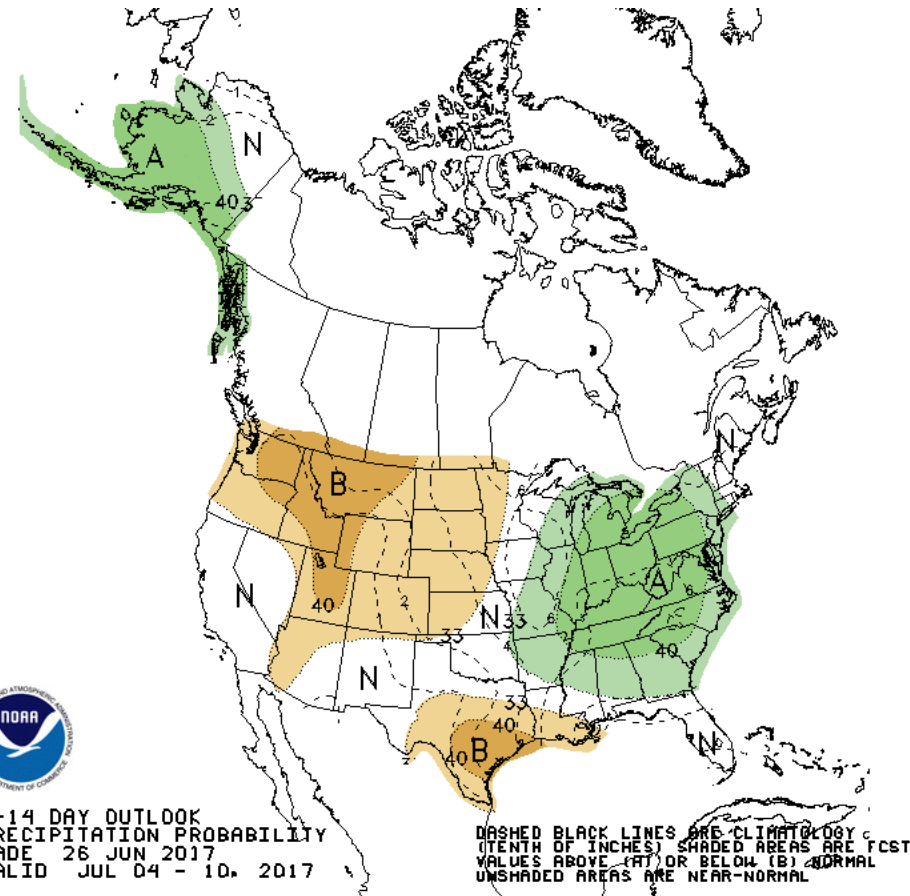
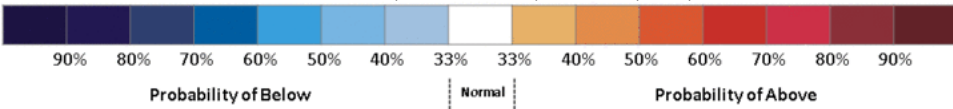
ALZ_GFSM 8-14 DAY OUTLOOK
 PMSL
 MADE JUN 27, 2017
 VALID JUL 05, 2017 - JUL 10, 2017

Week 2 – Temperature and Precipitation



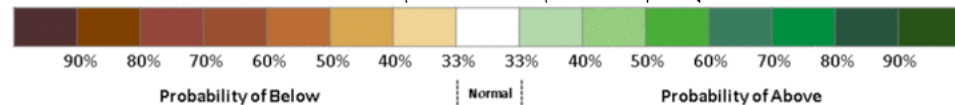
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 26 JUN 2017
VALID JUL 04 - 10, 2017

DASHED BLACK LINES ARE CLIMATE
(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 26 JUN 2017
VALID JUL 04 - 10, 2017

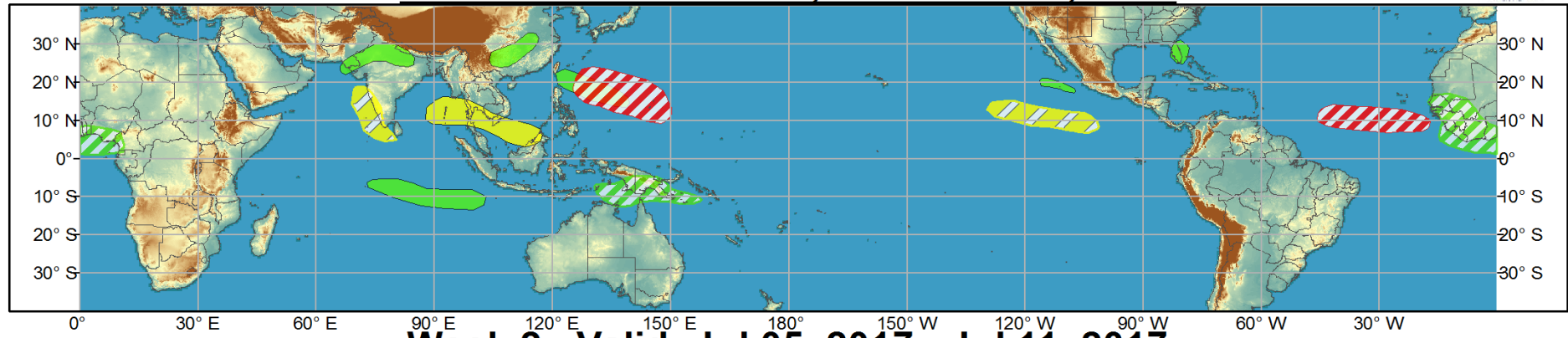
DASHED BLACK LINES ARE CLIMATE
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL



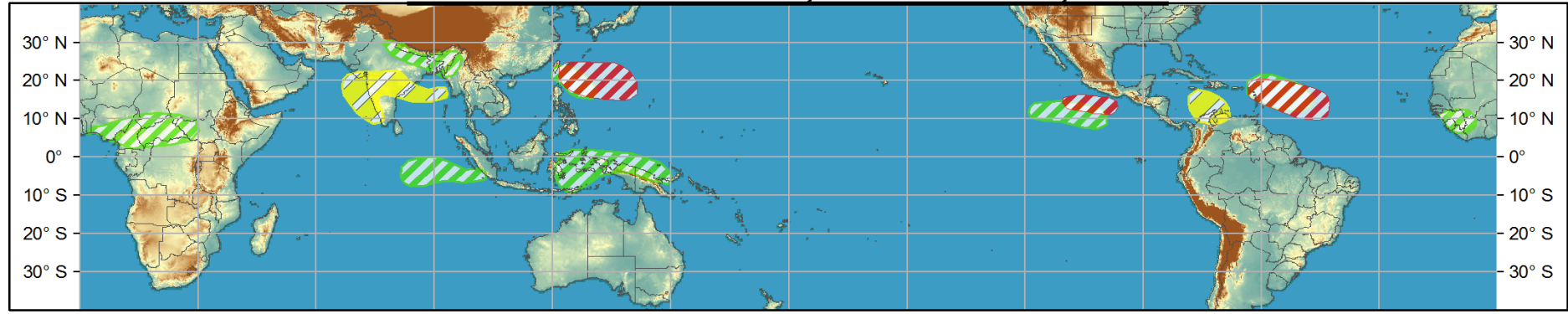


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 28, 2017 - Jul 04, 2017



Week 2 - Valid: Jul 05, 2017 - Jul 11, 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: 06/27/2017

Forecaster: Rosencrans

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.

