

Global Tropics Hazards And Benefits Outlook

6/25/2019

Adam Allgood

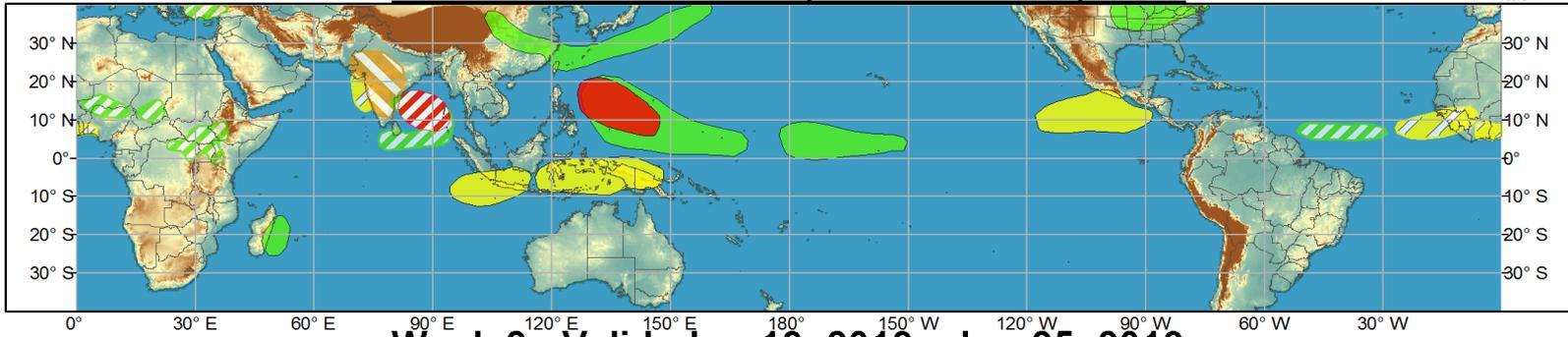
Outline

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

Outlook Review



Week 1 - Valid: Jun 19, 2019 - Jun 25, 2019

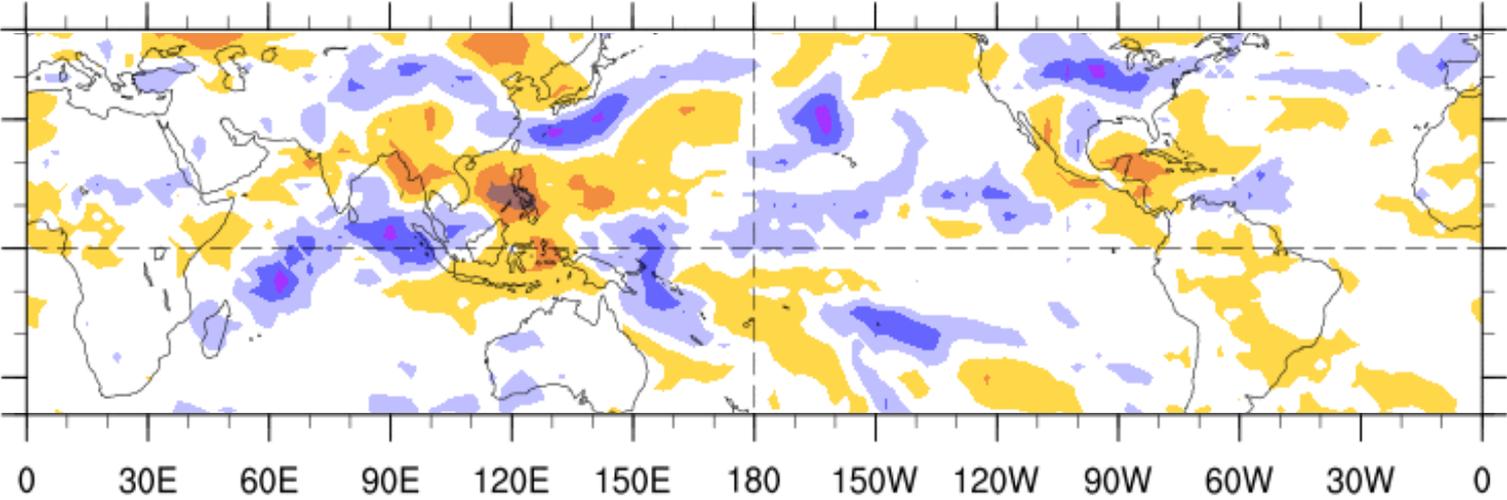


Week 2 - Valid: Jun 19, 2019 - Jun 25, 2019



7-Day Average OLR Anomaly

2019/06/17 - 2019/06/23



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (July 12, 2018 Update)

- ENSO Alert System Status: [El Niño Advisory](#)
- El Niño is predicted to persist through the Northern Hemisphere summer 2019 (66% chance), with lower odds of continuing through the fall and winter (50-55% chance).

MJO and other subseasonal tropical variability:

- The MJO weakened during the past week as the enhanced phase destructively interfered with the suppressed phase of a strong Rossby wave over the West Pacific.
- The MJO circulation remains fairly robust at the upper-levels of the atmosphere.
- Dynamical models indicate continued weak MJO activity; however, eastward propagation of a coherent signal may continue as the competing MJO and Rossby wave signals diverge.

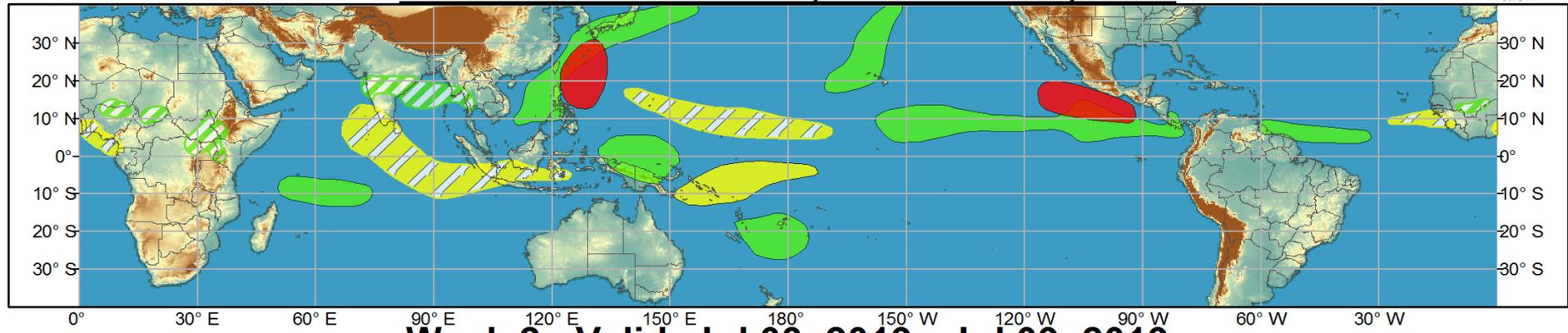
Extratropics:

- The MJO or leading Kelvin waves may influence tropical cyclogenesis over the East Pacific (low potential for the central Pacific). Dynamical model track forecasts do not support substantial Gulf surge impacts (Southwest Monsoon).

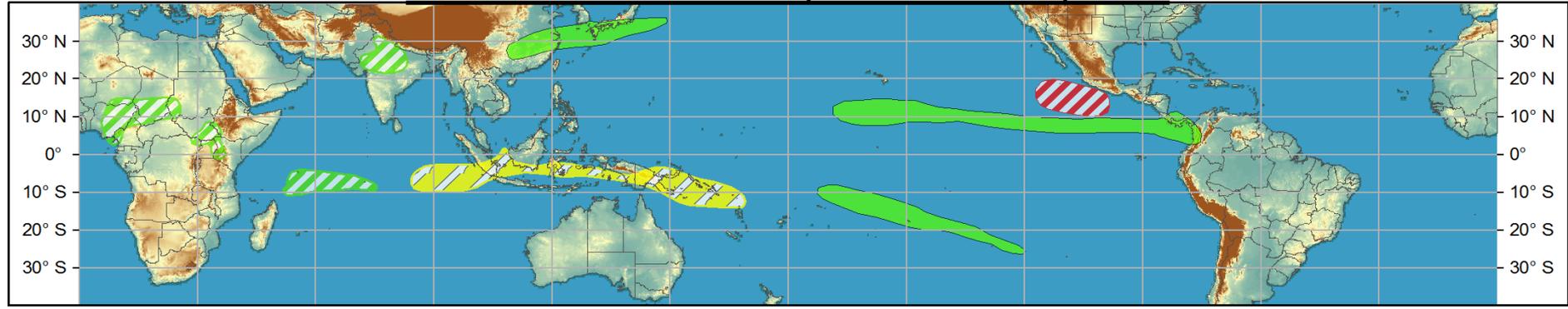


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 26, 2019 - Jul 02, 2019



Week 2 - Valid: Jul 03, 2019 - Jul 09, 2019



Produced: 06/25/2019
Forecaster: Allgood

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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IR Satellite & 200-hpa Velocity Potential Anomalies

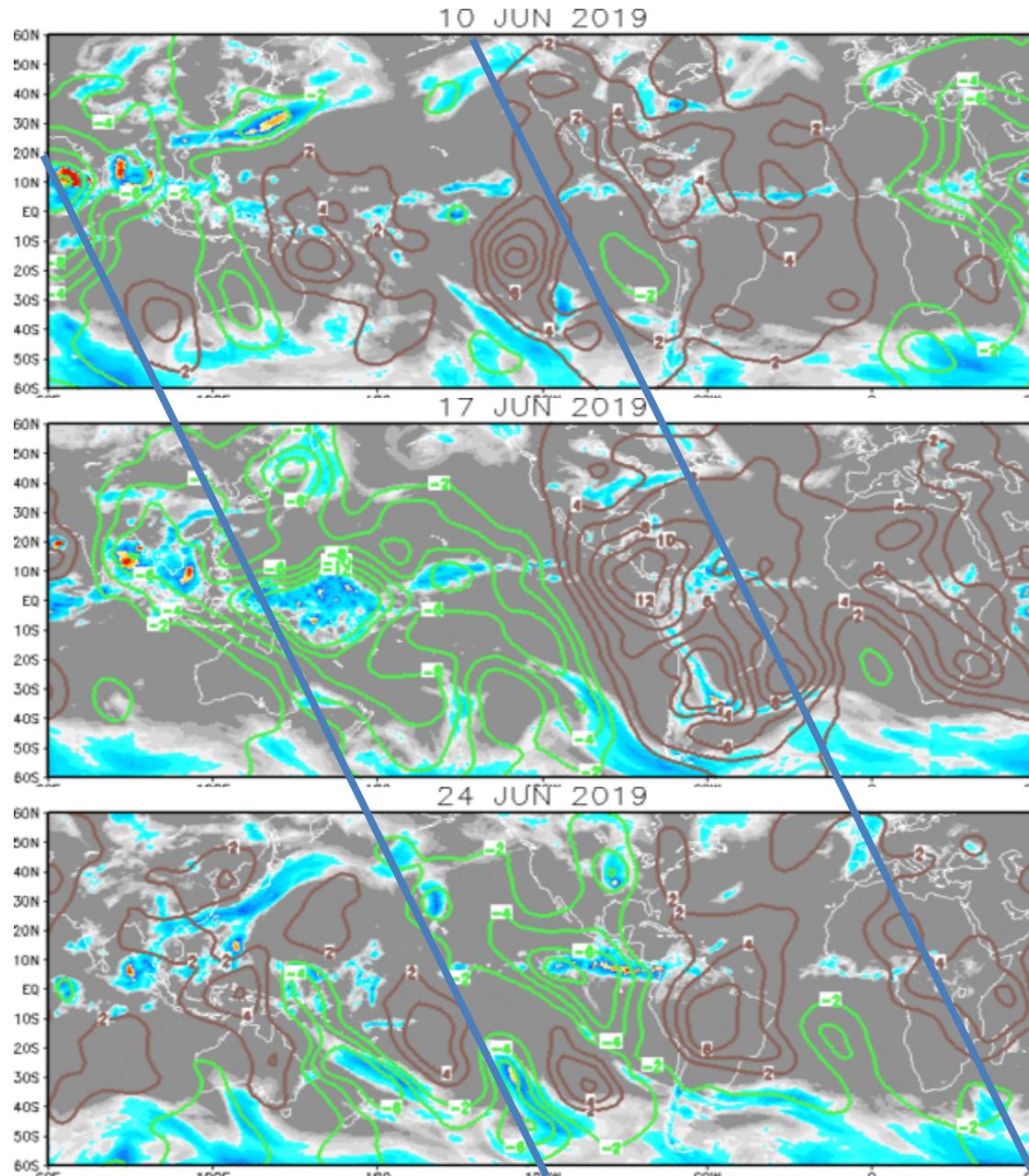
Green: Enhanced Divergence

Brown: Enhanced Convergence

Indian Ocean MJO destructively interfering with ENSO. Enhanced signal aided by strong TC activity.

Robust Wave-1 signature as the MJO moved over the eastern Maritime Continent.

Broad features are still present, but interference from other modes is apparent.

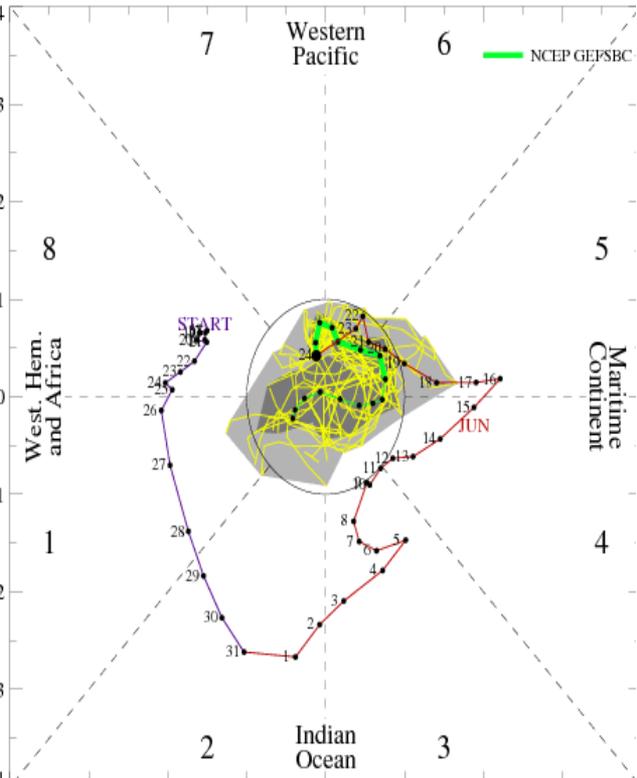


MJO Observation/Forecast

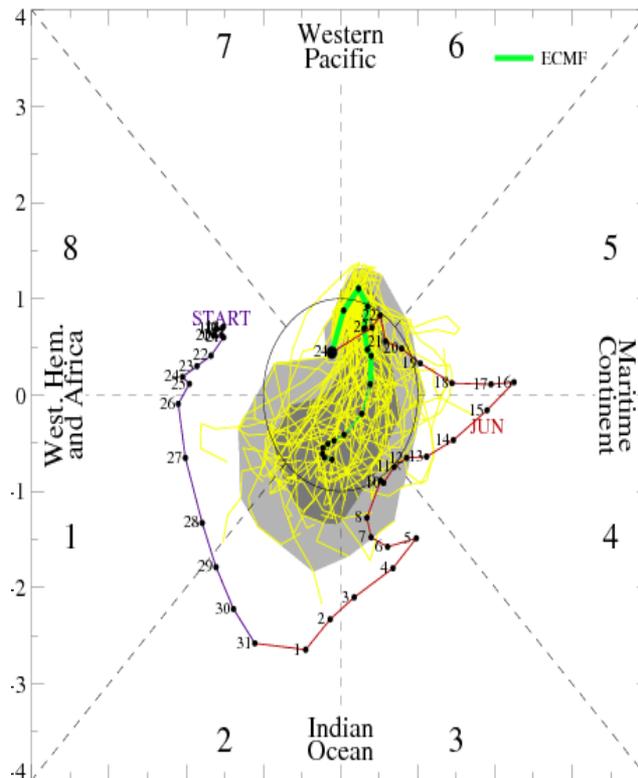
[RMM1, RMM2] forecast for Jun-25-2019 to Jul-09-2019

MJO Index Forecast for 25Jun2019-09Jul2019

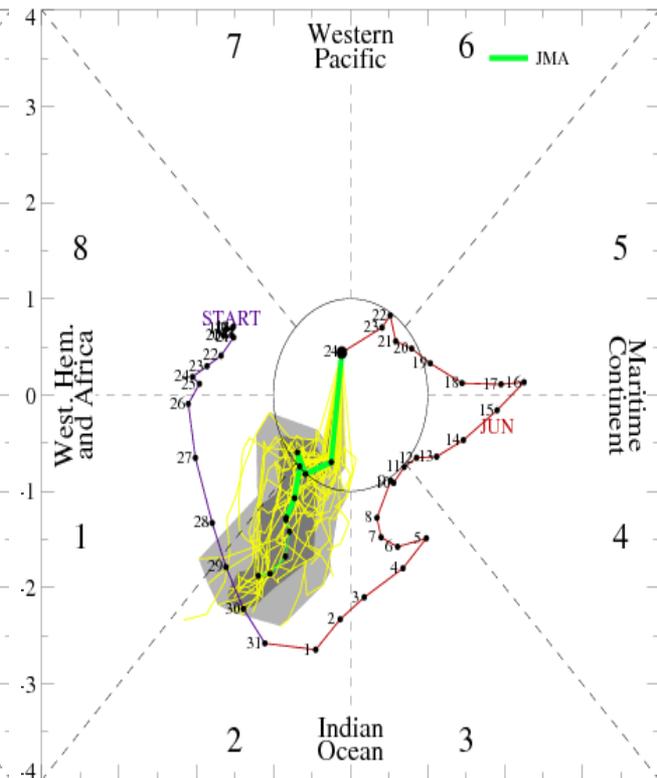
MJO Index Forecast for 25Jun2019-03Jul2019



GEFS



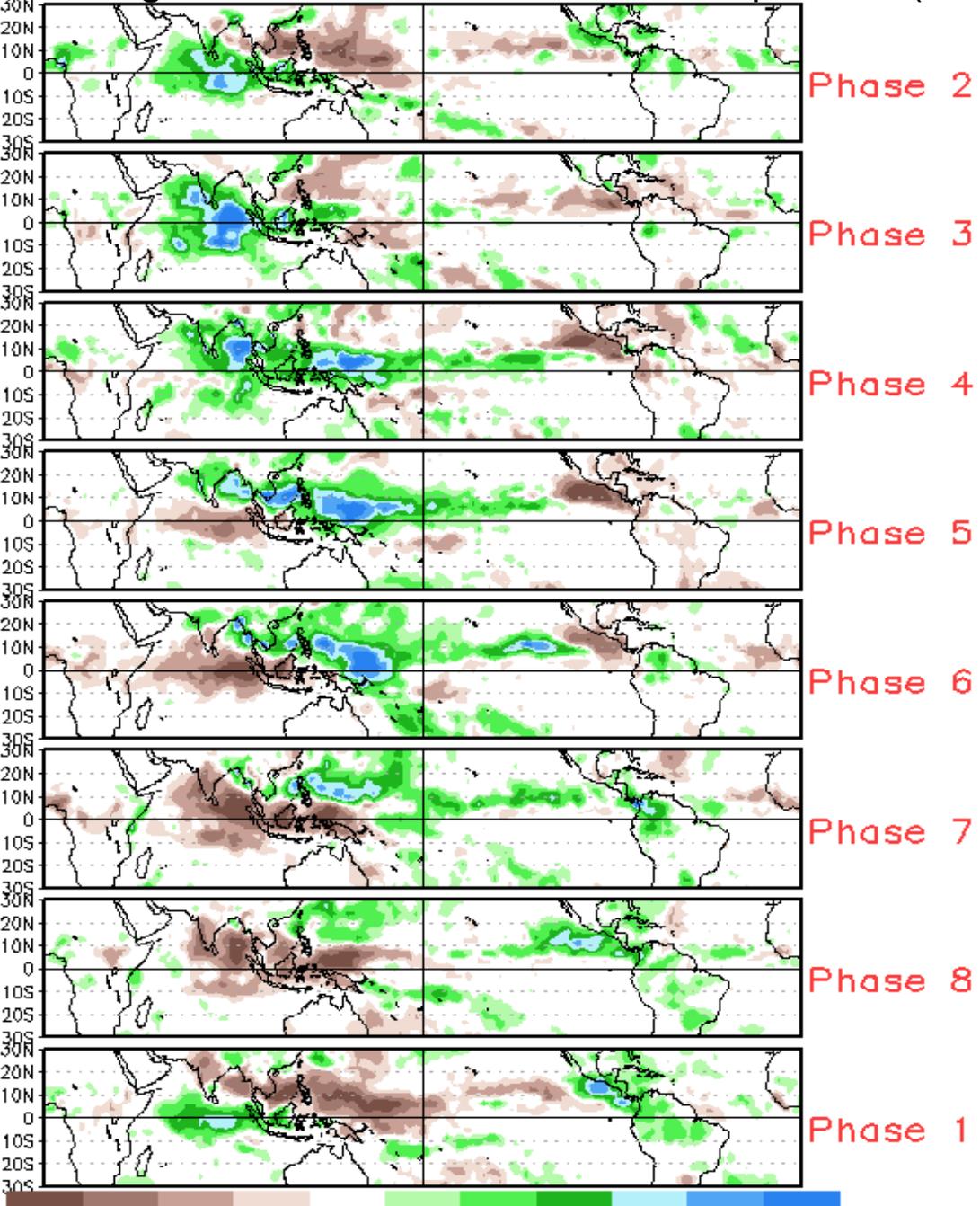
ECMWF



JMA

Ensemble means from both the GEFS and ECMWF remain inside the unit circle.

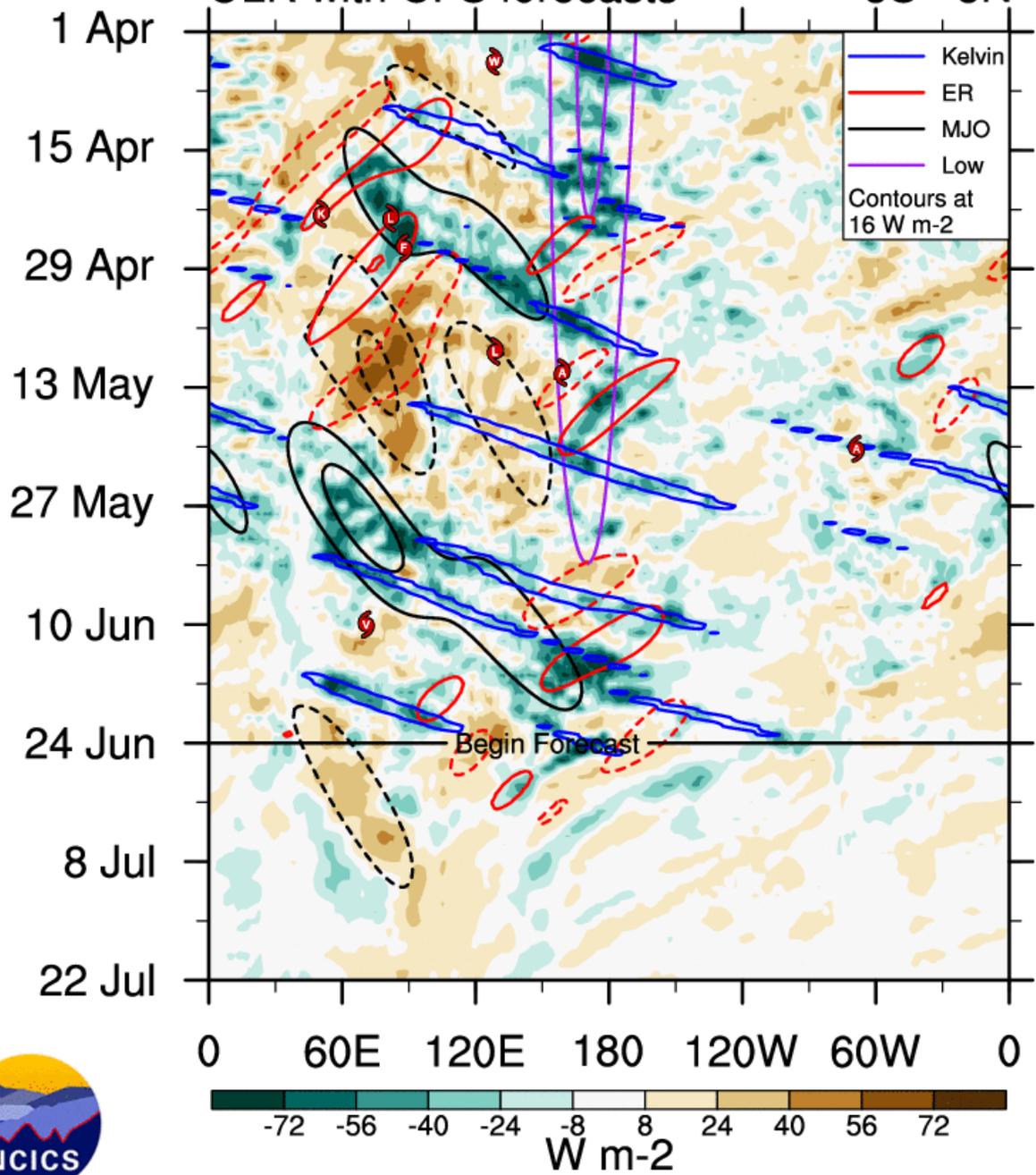
Average Conditions when the MJO is present (May – Sep)



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts

5S - 5N

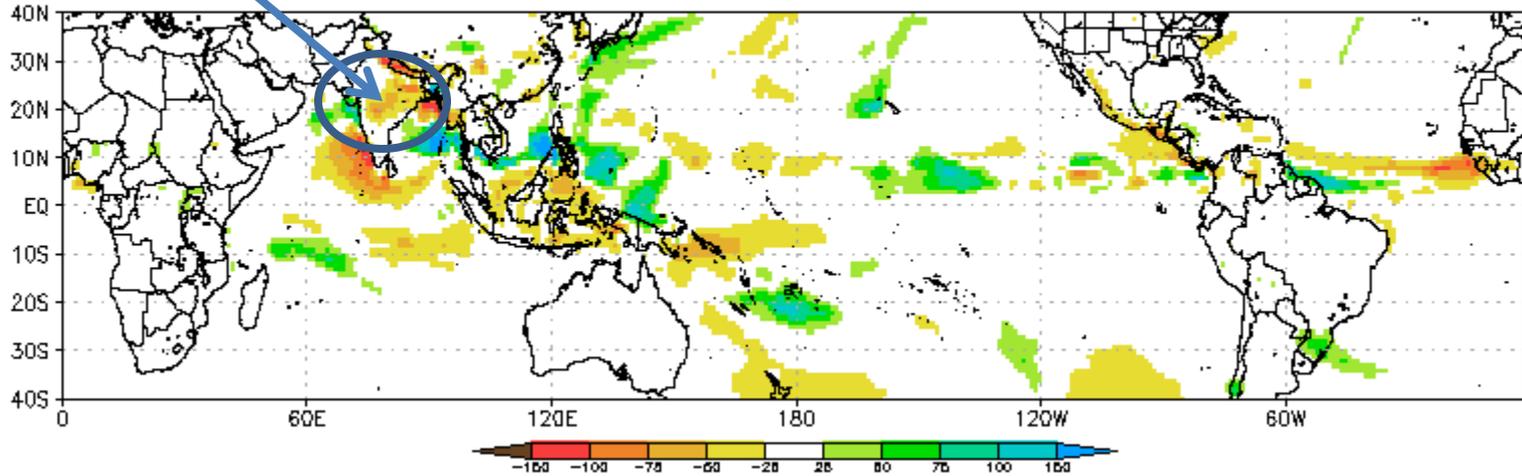


Destructive interference between the **MJO** and the suppressed phase of a **Rosby wave** is apparent.

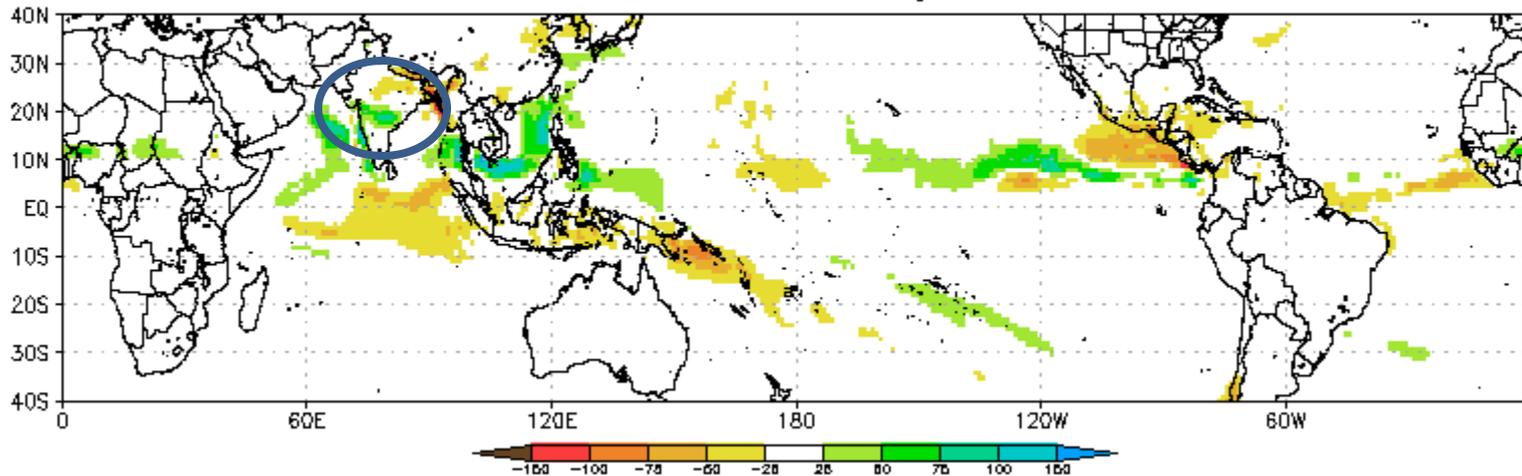


ECMWF a wetter
solution

CFS Precipitation Anomalies (mm) Issued 24Jun2019
Week-1 Forecast Ending 02Jul2019

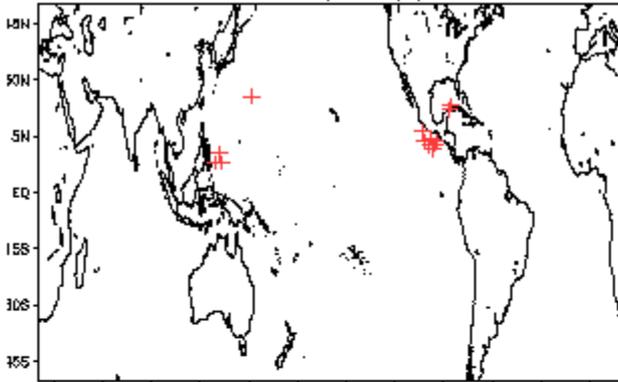


CFS Precipitation Anomalies (mm) Issued 24Jun2019
Week-2 Forecast Ending 09Jul2019

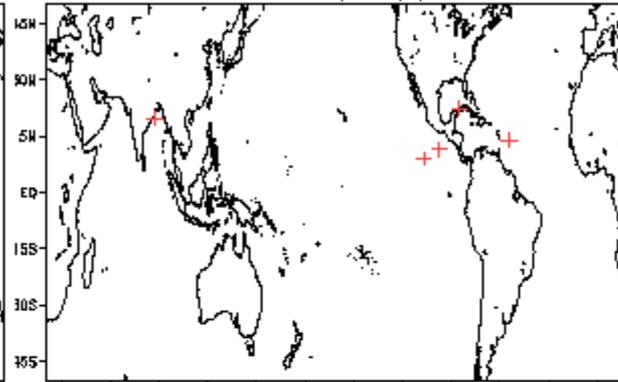


June Tropical Storm Formation by MJO phase

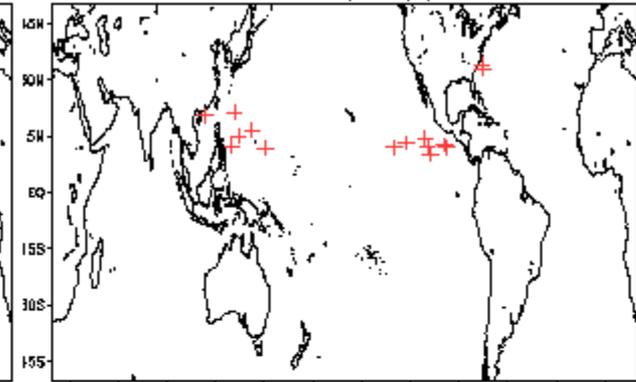
Phase 1 (104 days) 14 storms



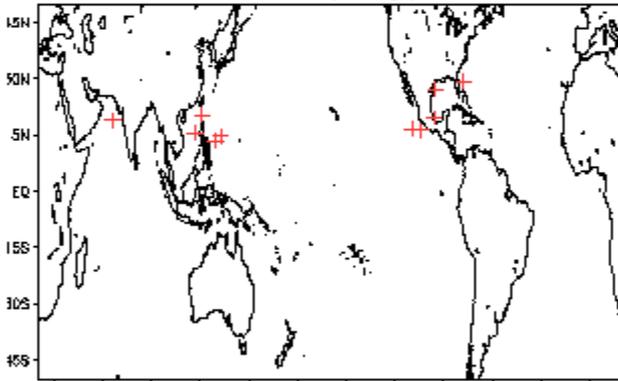
Phase 4 (80 days) 6 storms



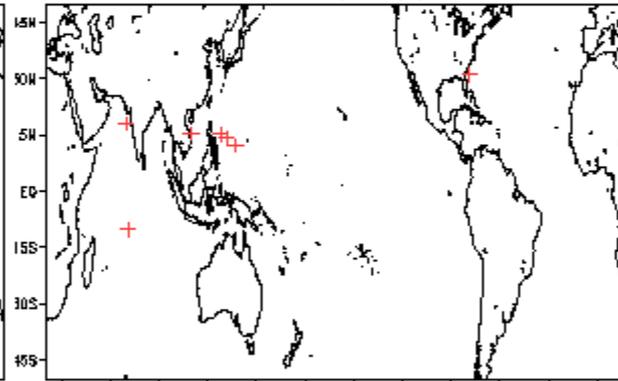
Phase 7 (45 days) 16 storms



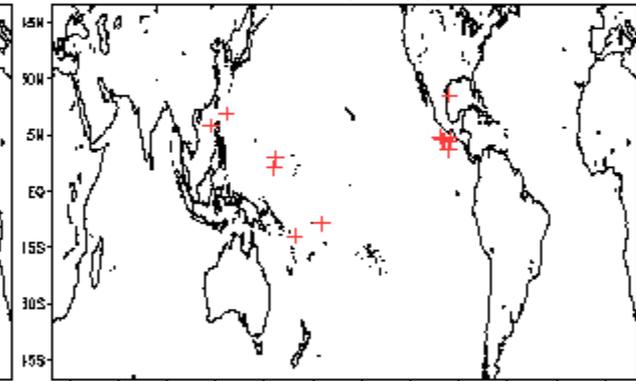
Phase 2 (82 days) 11 storms



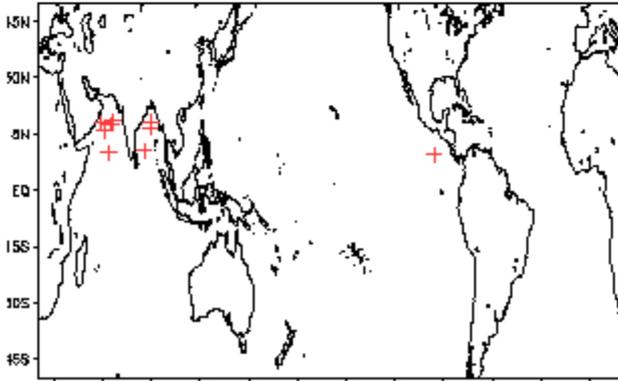
Phase 5 (77 days) 8 storms



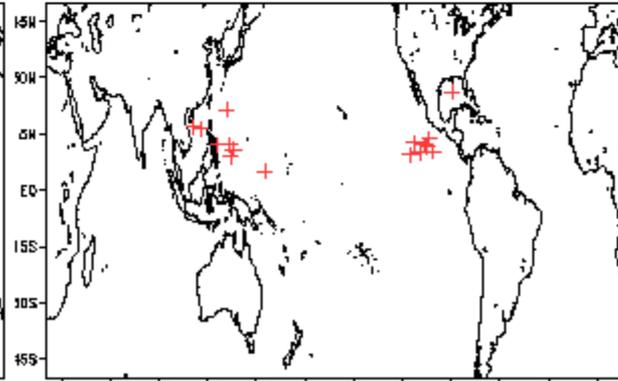
Phase 8 (70 days) 15 storms



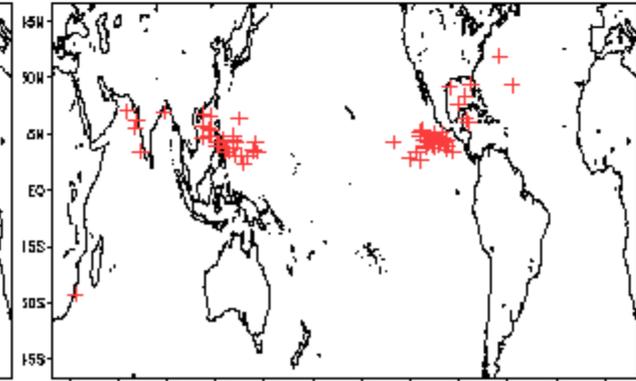
Phase 3 (57 days) 10 storms



Phase 6 (82 days) 17 storms



Null (423 days) 71 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



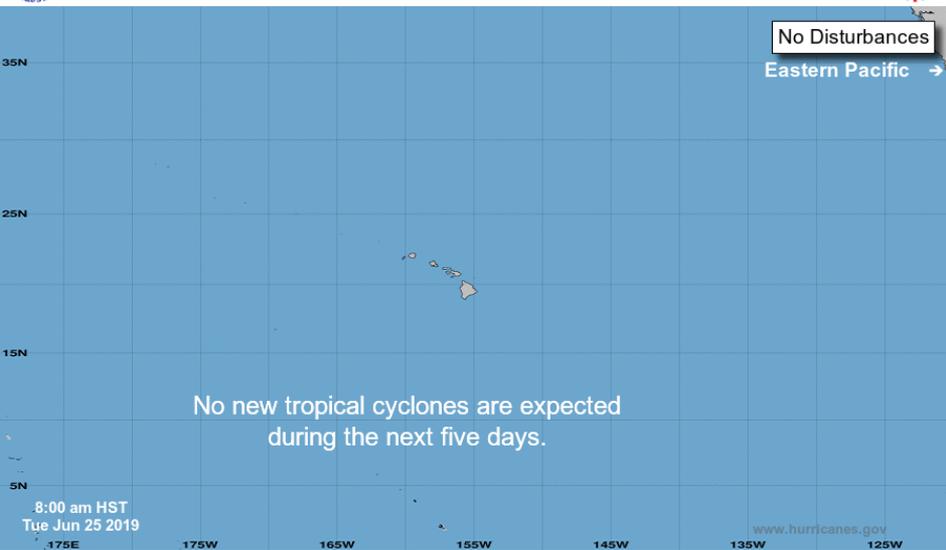
2:00 pm EDT
Tue Jun 25 2019

Current Disturbances and Five-Day Cyclone Formation Chance:
 Tropical or Sub-Tropical Cyclone:
 ○ Depression ○ Storm ● Hurricane
 ○ Post-Tropical Cyclone or Remnants



Five-Day Graphical Tropical Weather Outlook

Central Pacific Hurricane Center Honolulu, Hawaii



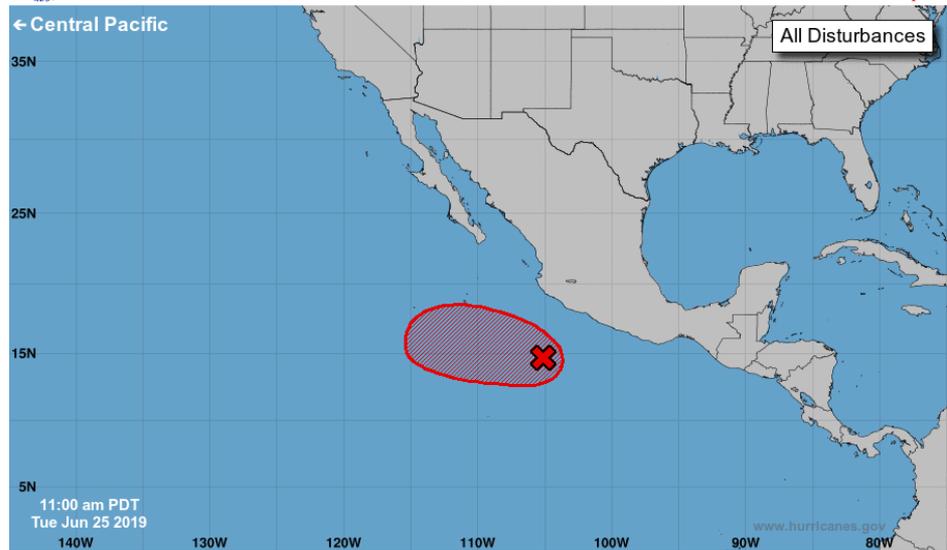
8:00 am HST
Tue Jun 25 2019

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Five-Day Graphical Tropical Weather Outlook

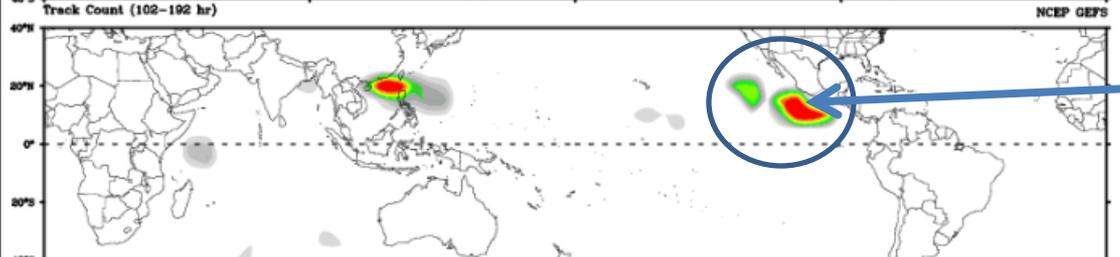
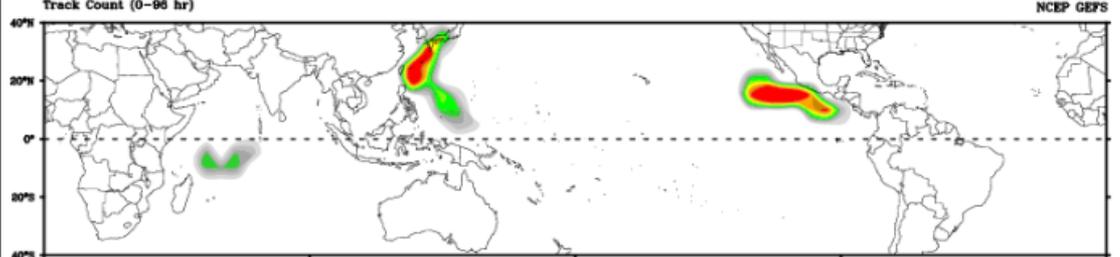
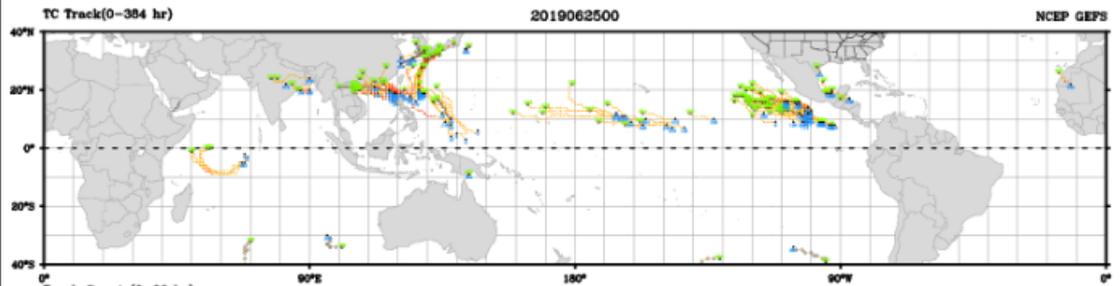
National Hurricane Center Miami, Florida



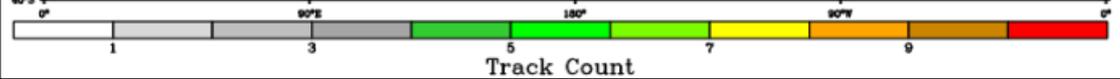
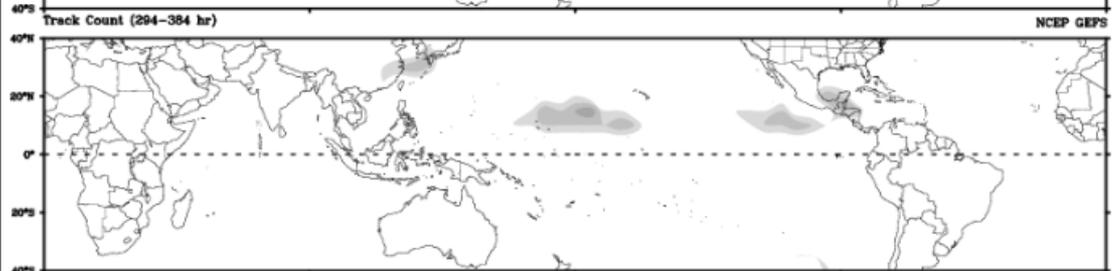
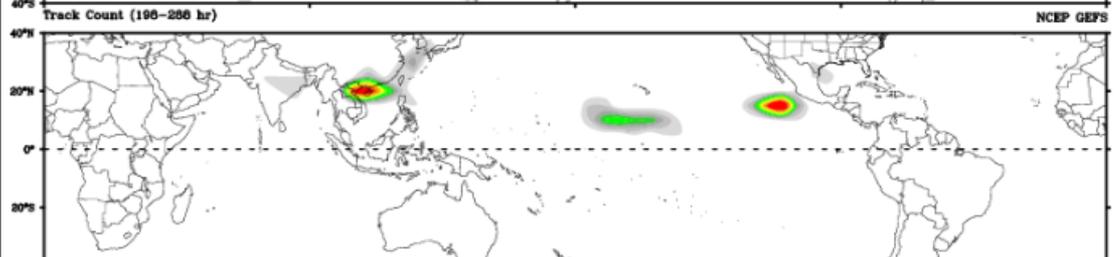
11:00 am PDT
Tue Jun 25 2019

Current Disturbances and Five-Day Cyclone Formation Chance:
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CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)

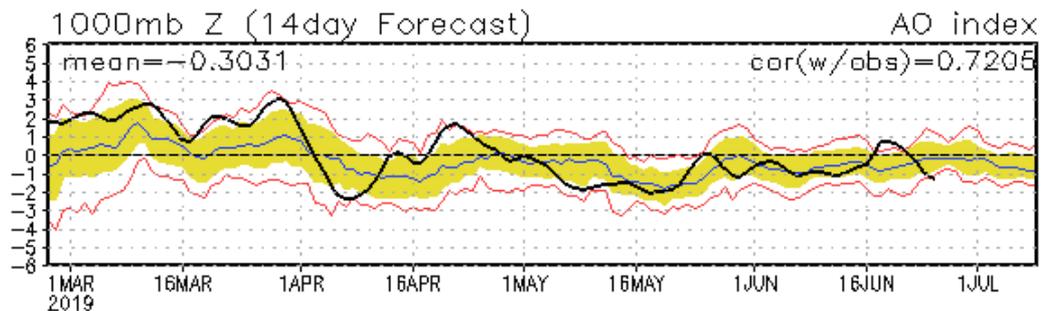
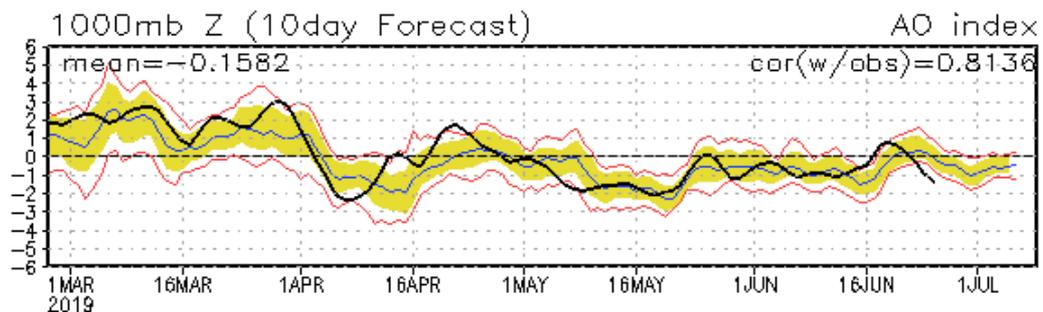
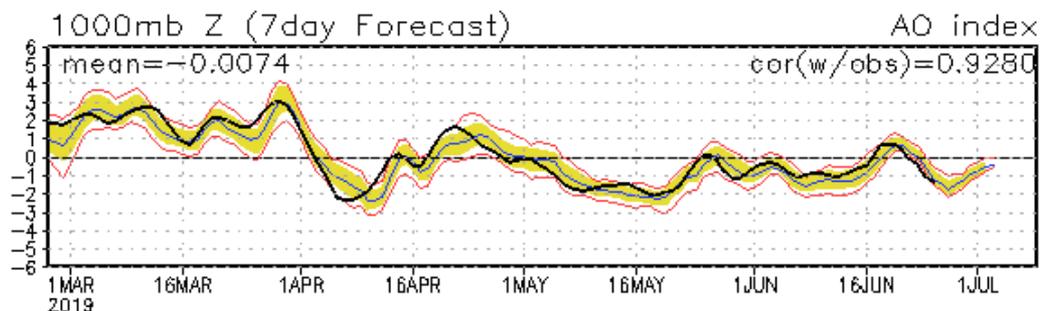
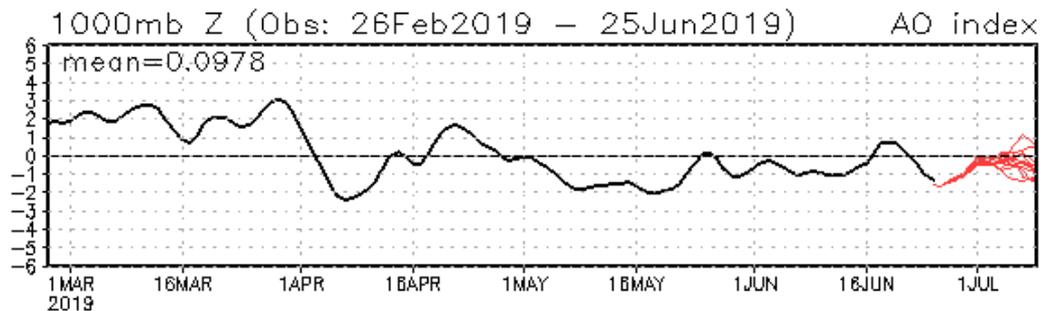


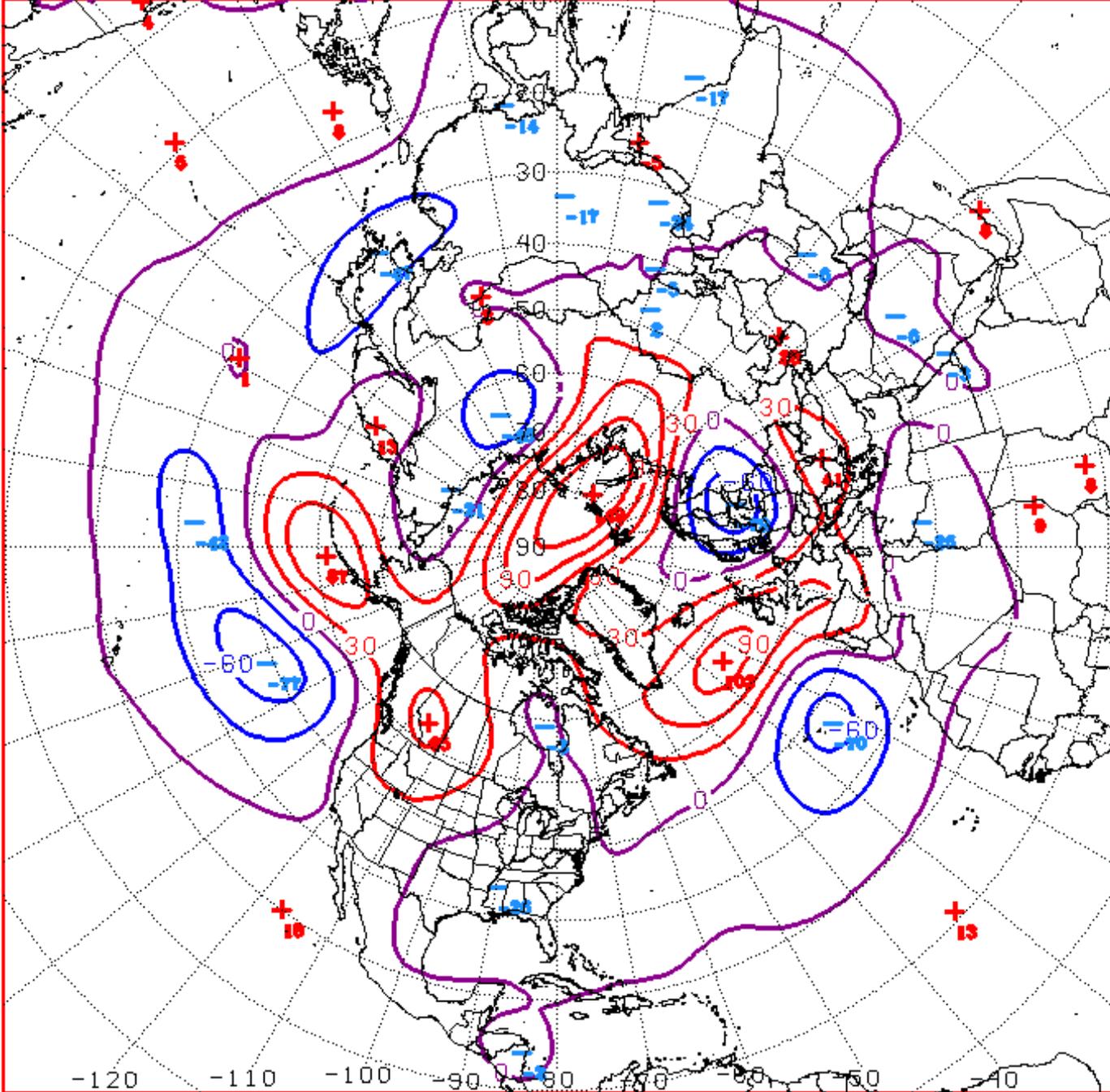
Potential 2nd
EPac TC



Connections to U.S. Impacts

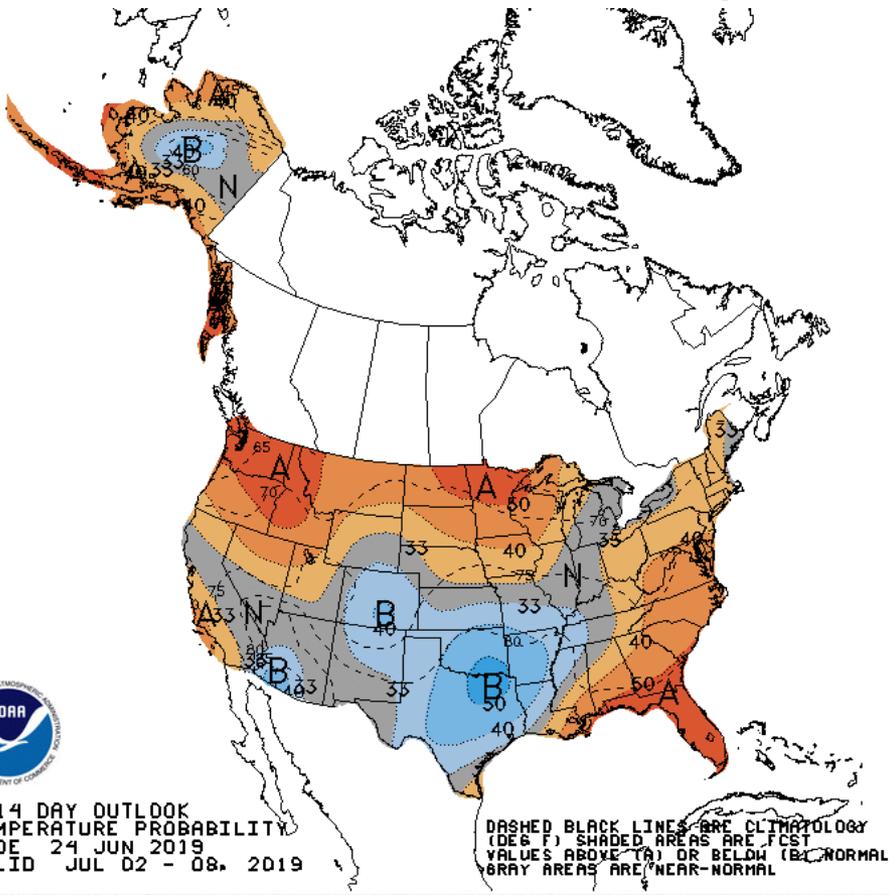
AO: Observed & ENSM forecasts





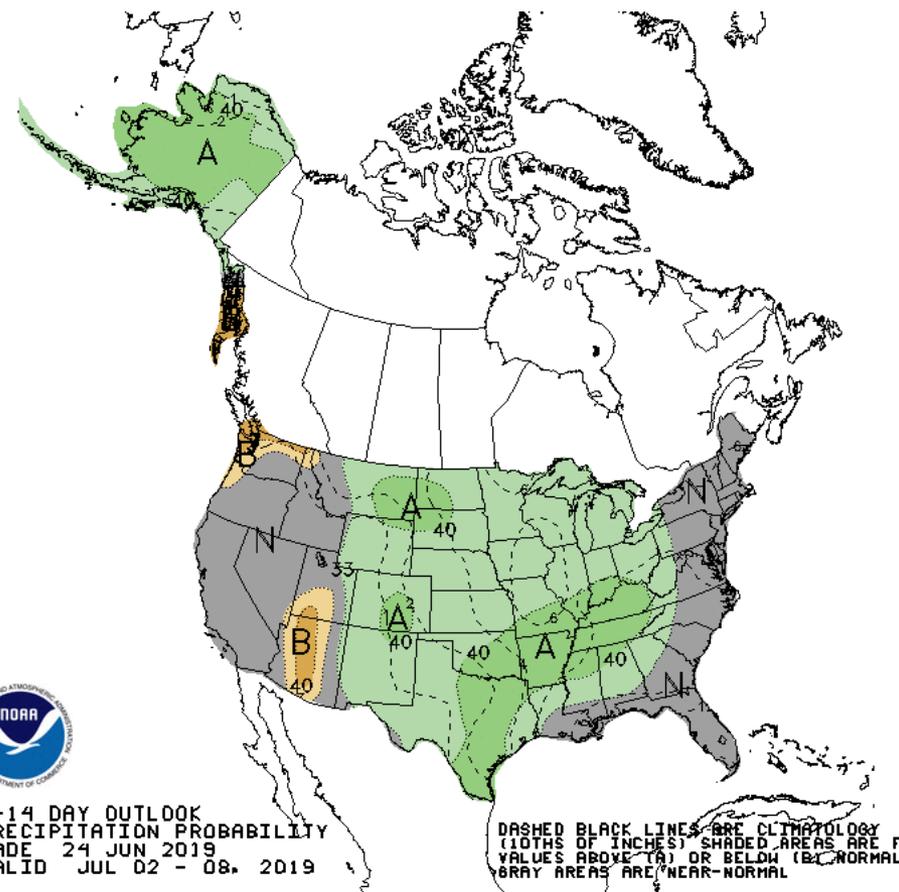
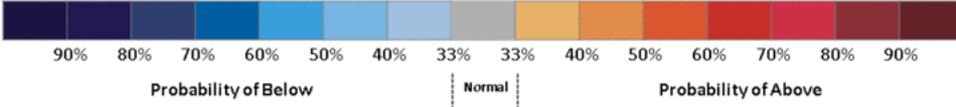
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUN 25 2019 1321 UTC CNTD JUL 06 2019

Week 2 – Temperature and Precipitation



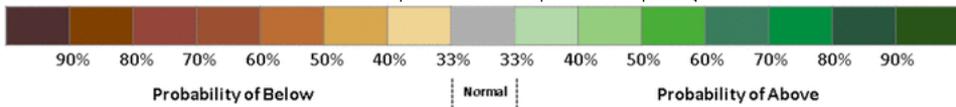
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 24 JUN 2019
VALID JUL 02 - 08, 2019

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 24 JUN 2019
VALID JUL 02 - 08, 2019

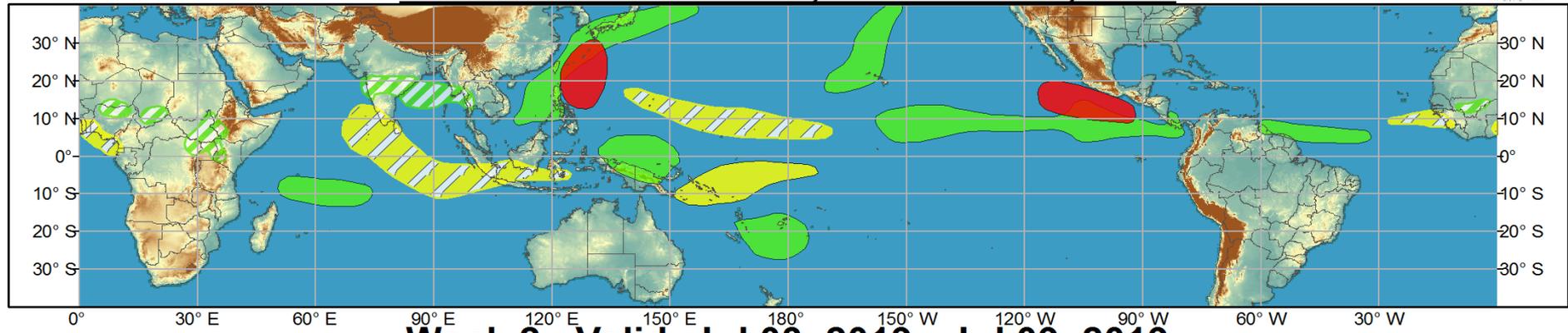
DASHED BLACK LINES ARE CLIMATOLOGY (10THS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



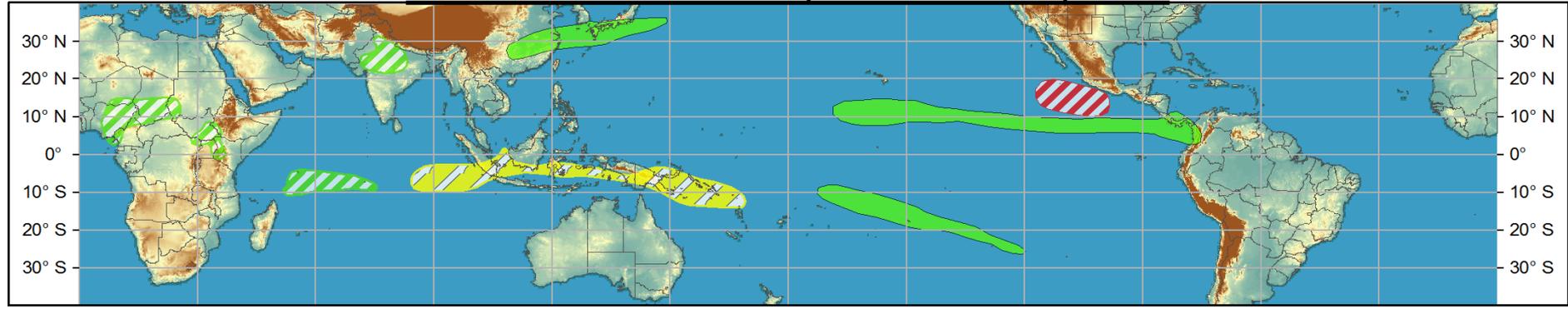


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