

Global Tropics Hazards And Benefits Outlook

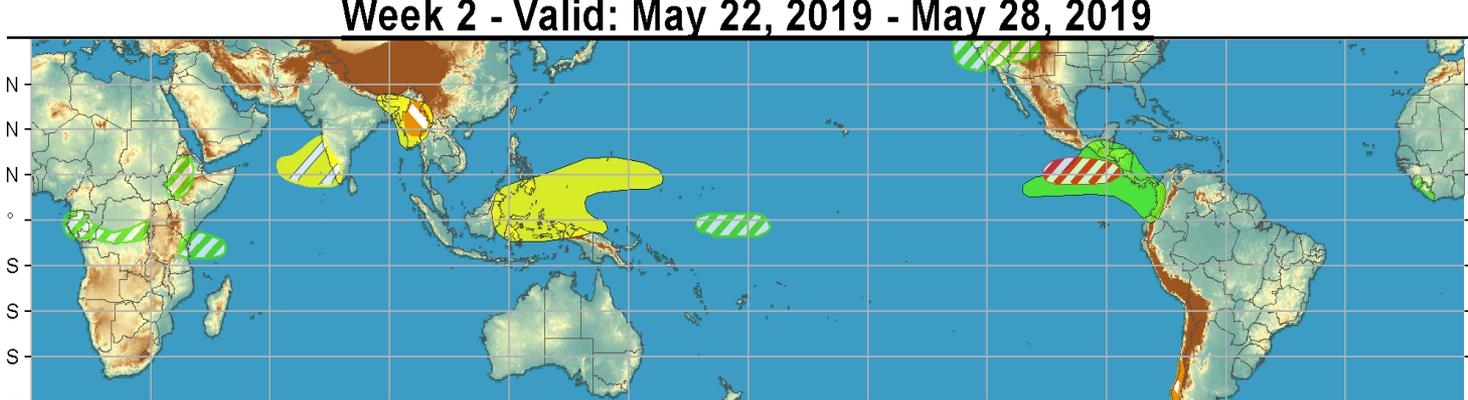
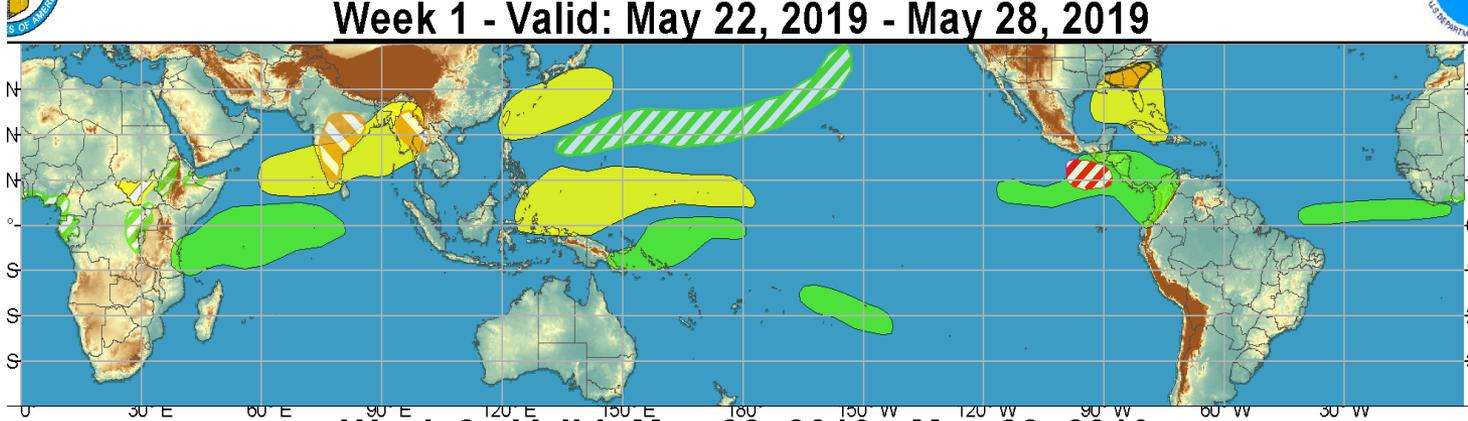
05/28/2019

Stephen Baxter

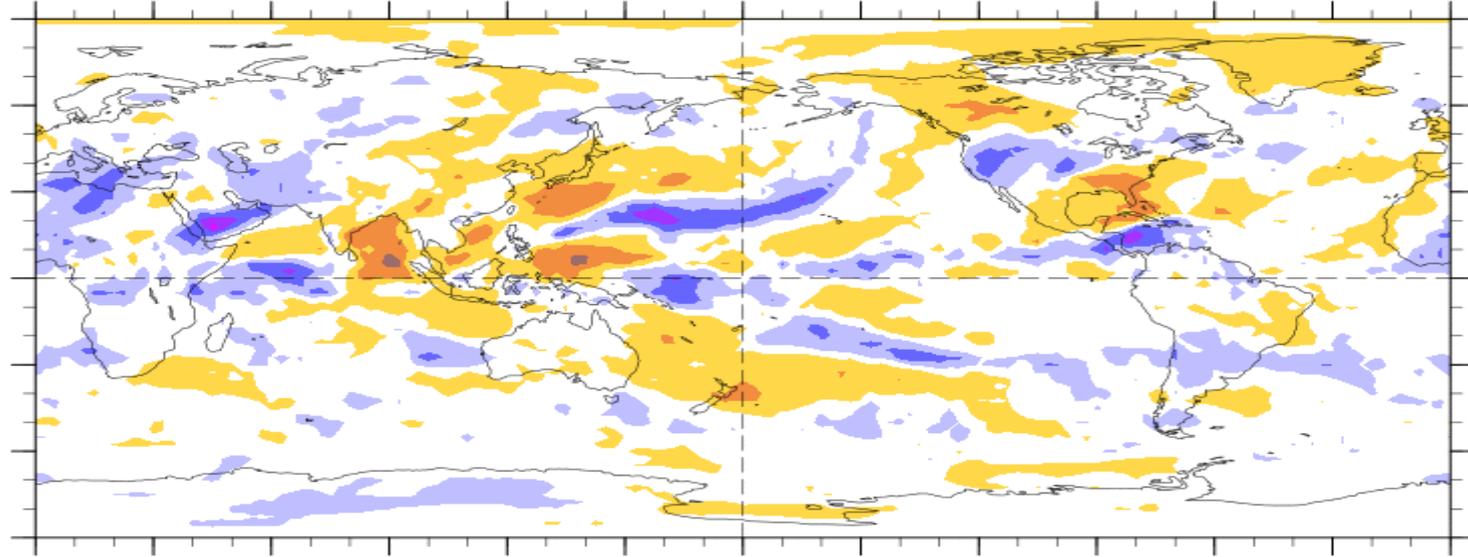
Outline

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

Outlook Review



7-Day Average OLR Anomaly 2019/05/20 - 2019/05/26



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (May 2019 Update)

- ENSO Alert System Status: El Niño Advisory
- El Niño is favored through Northern Hemisphere summer 2019, with a ~55-60% chance of persisting through winter 2019-20.

MJO and other subseasonal tropical variability:

- The MJO has remained active, with the enhanced phase now centered over Africa.
- There is some model disagreement, though the MJO is generally forecast to propagate across the Indian Ocean during the next two weeks.

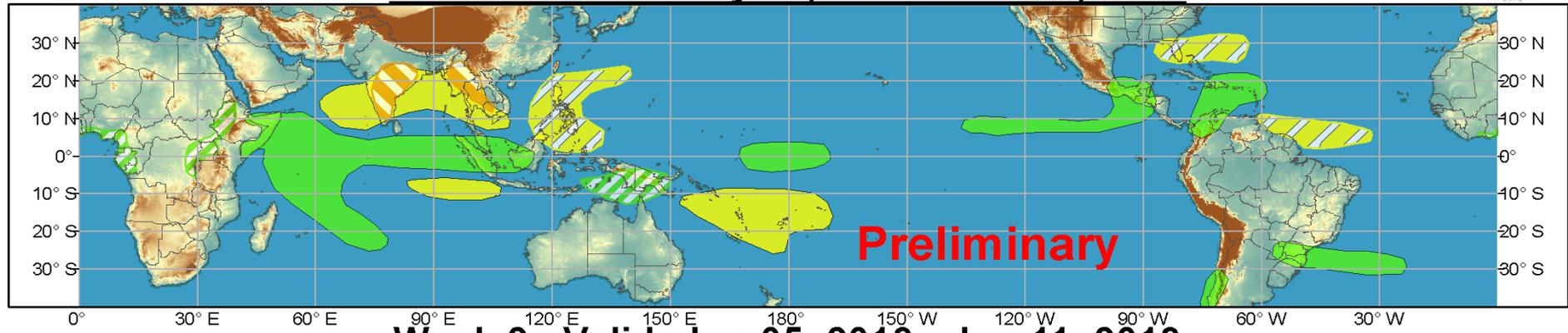
Impacts:

- The tropics are expected to be relatively quiet in terms of TC activity. The MJO would favor some activity over the Atlantic, though the overwhelming model consensus suggests TC formation is decidedly unlikely.
- Conditions over the East Pacific are expected to become less favorable over the one to two weeks.
- There is little notable influence on the extratropical longwave pattern heading into June.

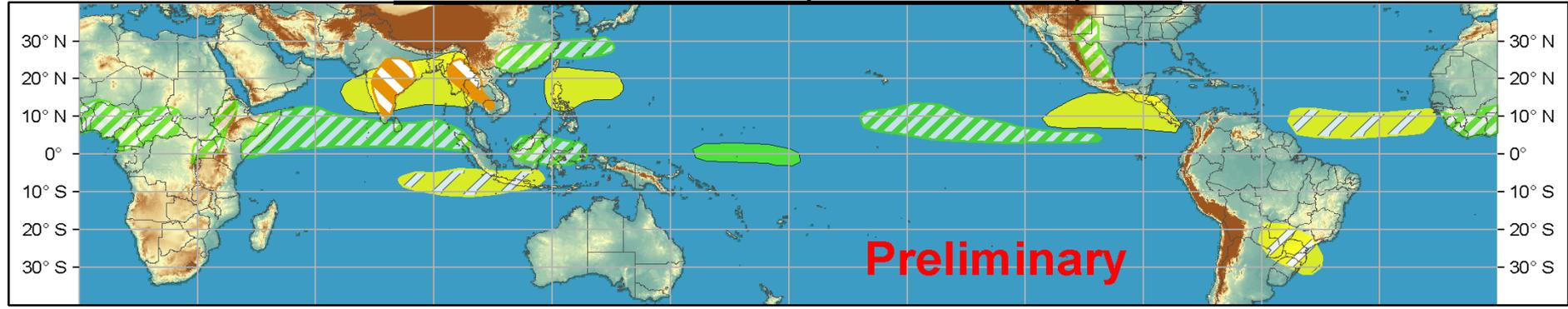


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: May 29, 2019 - Jun 04, 2019



Week 2 - Valid: Jun 05, 2019 - Jun 11, 2019



Produced: 05/28/2019
Forecaster: Baxter

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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IR Satellite & 200-hpa Velocity Potential Anomalies

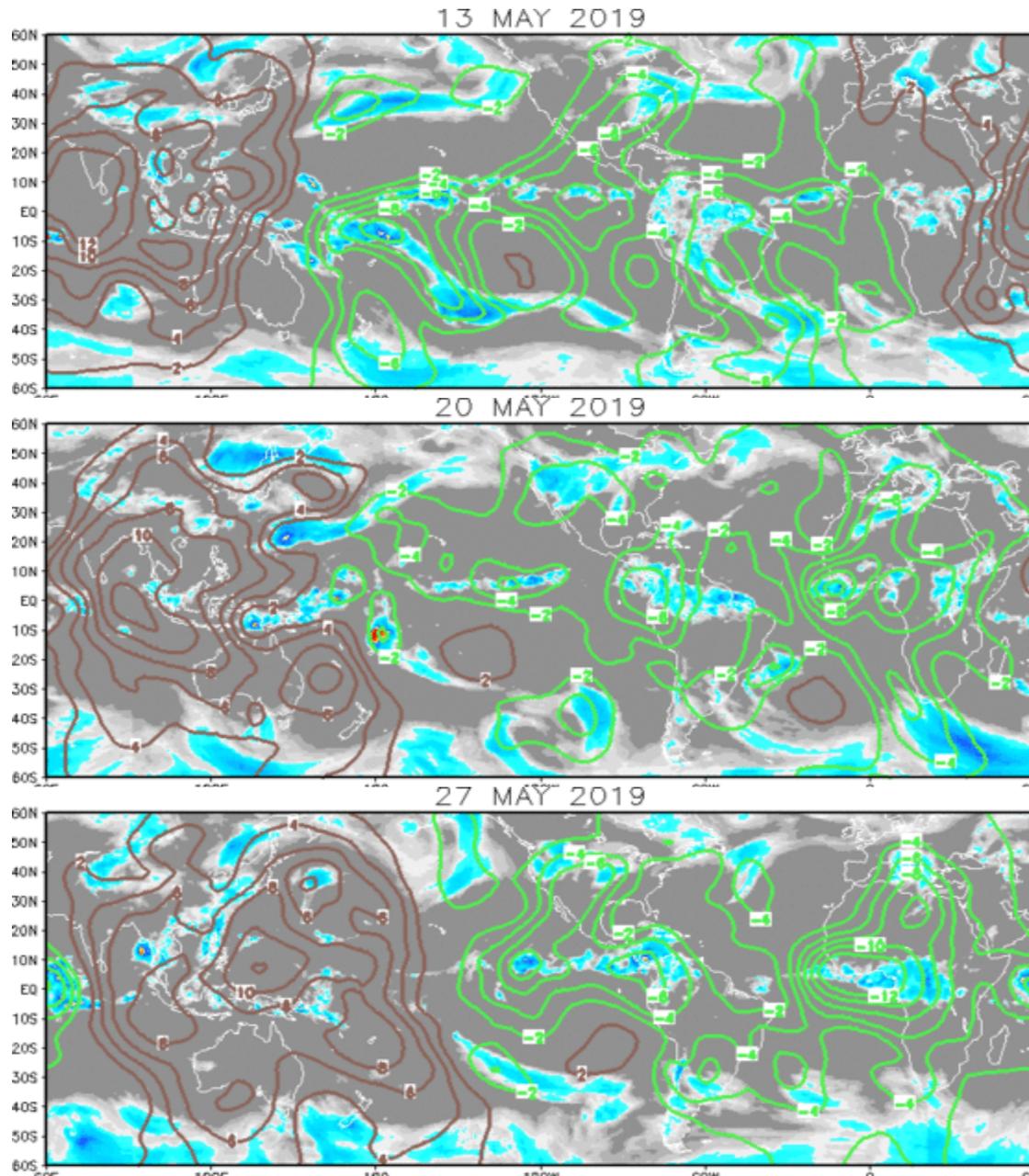
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-1 pattern with enhanced convection over the Western Hemisphere.

Little eastward propagation is evident due to interference with westward moving variability.

Eastward propagation of the high-amplitude Wave-1 pattern resumed.

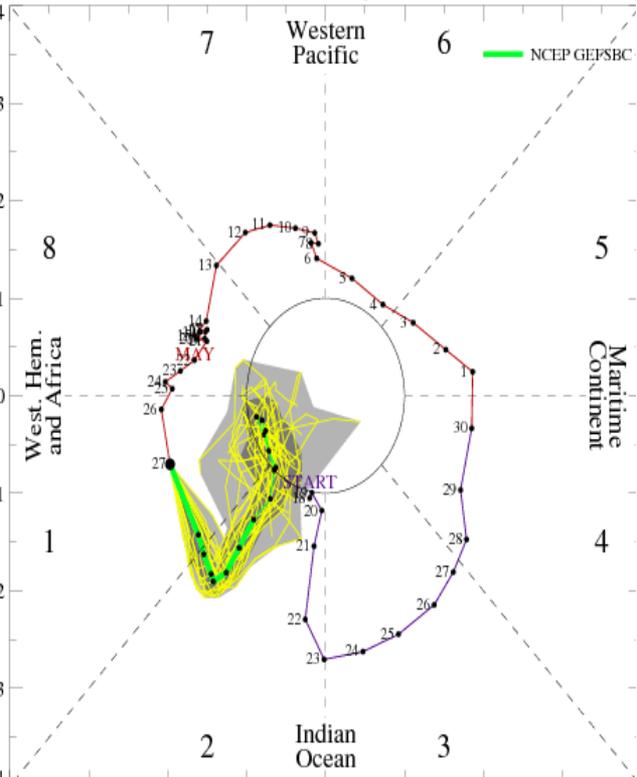


MJO Observation/Forecast

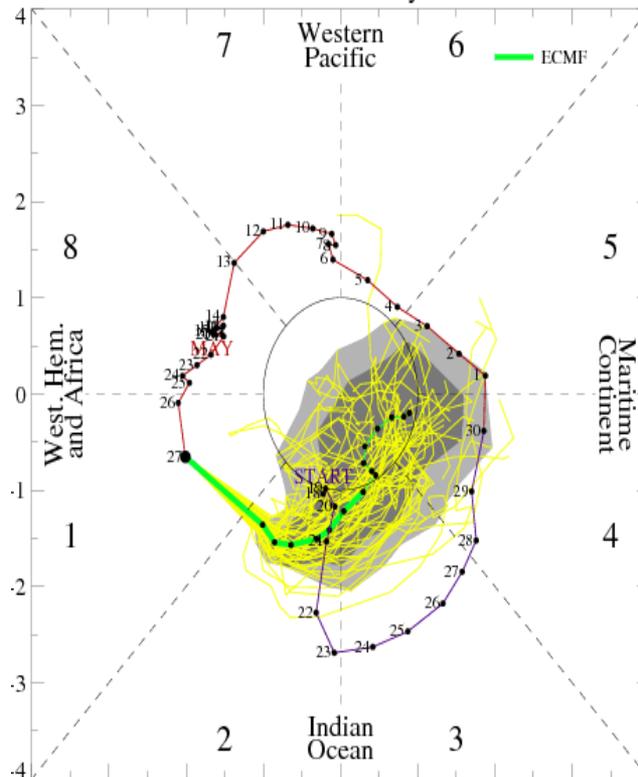
[RMM1, RMM2] forecast for May-28-2019 to Jun-11-2019

MJO Index Forecast for 28May2019-11Jun2019

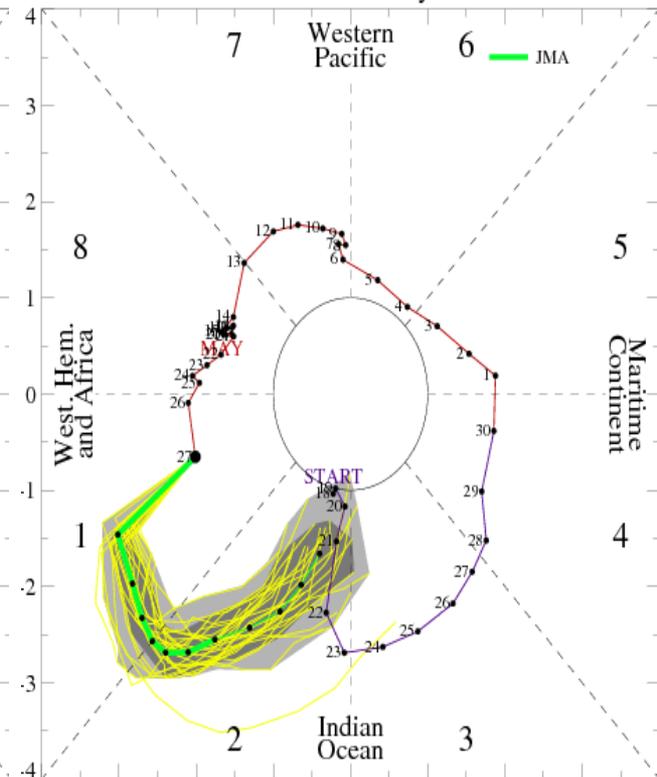
MJO Index Forecast for 28May2019-05Jun2019



GEFS



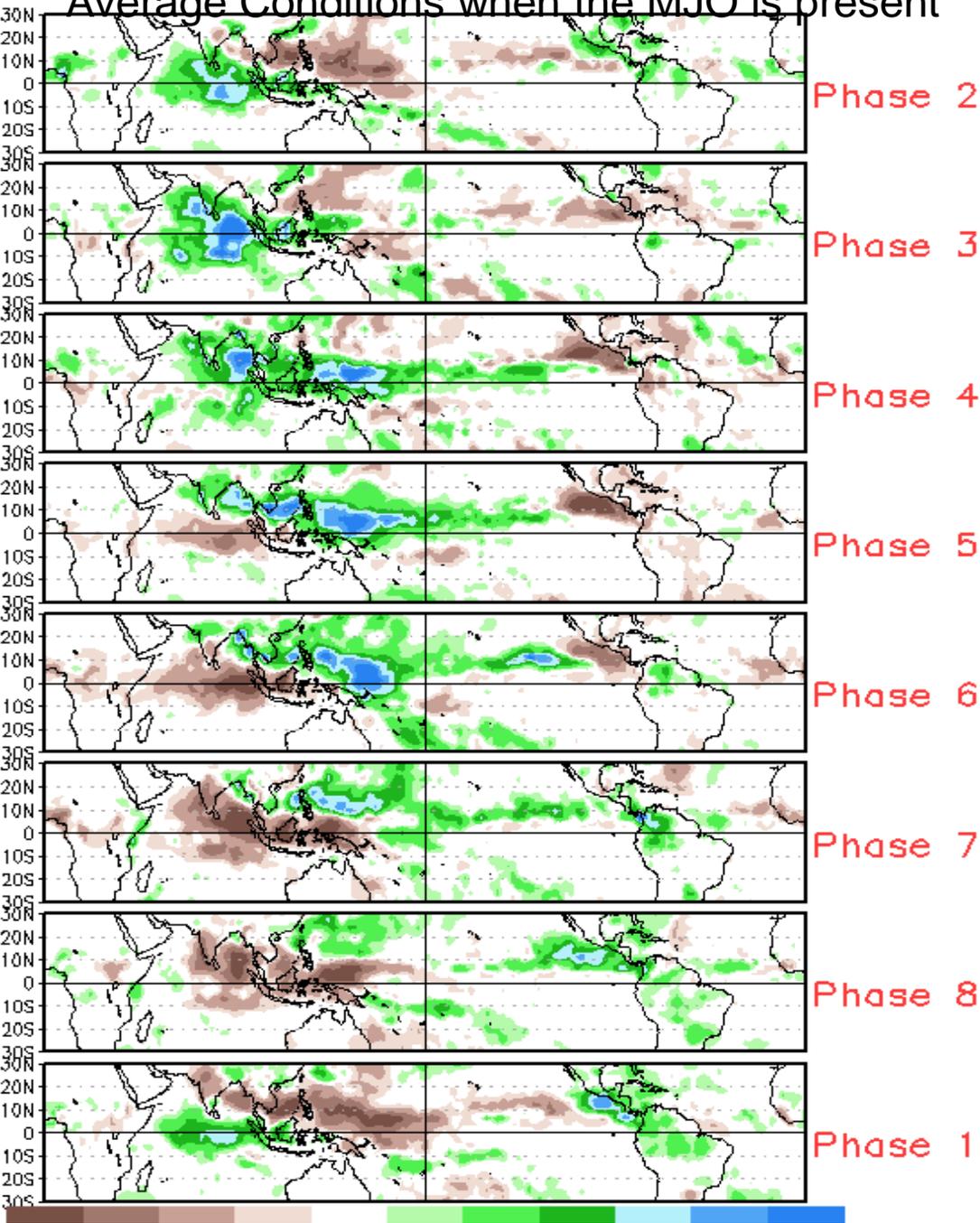
ECMWF



JMA

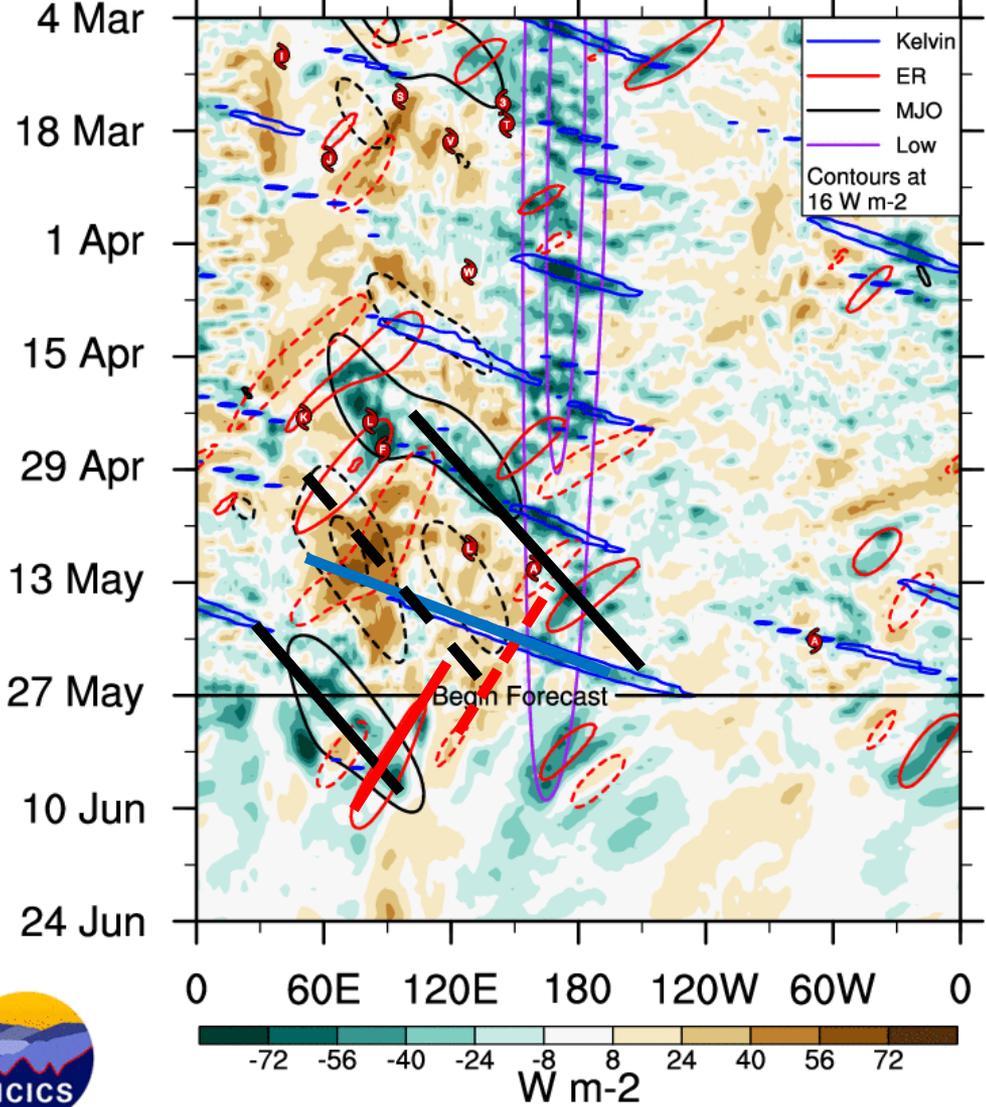
The ECMWF/JMA solutions (minus an initial jump) are in good agreement. The GEFS is an outlier due to emphasis on an equatorial Rossby wave.

Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts 5S - 5N



MJO, Rossby waves and Kelvin waves having an influence

Low-frequency pattern also prominent.

GEFS emphasis on Rossby wave over Indian Ocean disrupts RMM signal.

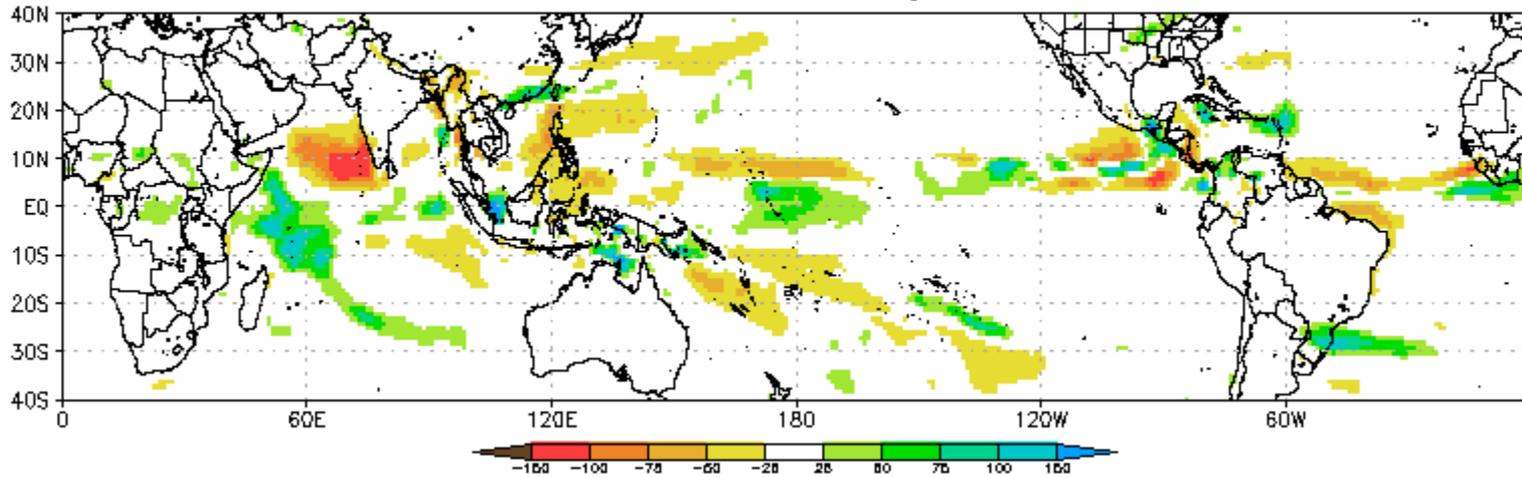


ncics.org/mjo

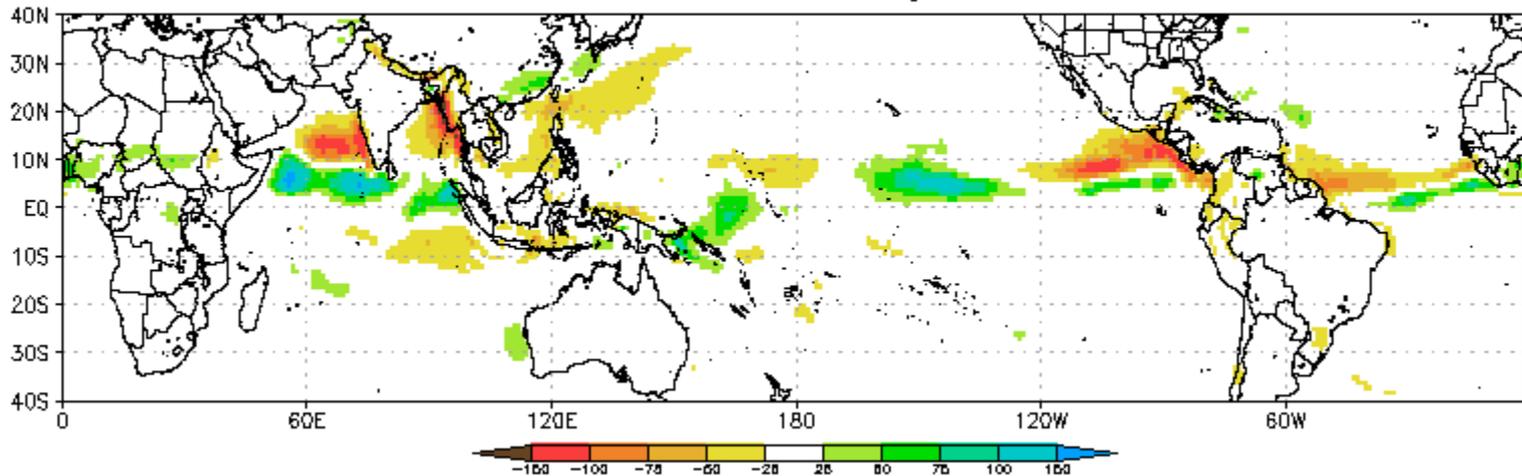
Tue 2019-05-28 1516 UTC

Carl Schreck (cjschrec@ncsu.edu)

CFS Precipitation Anomalies (mm) Issued 27May2019
Week-1 Forecast Ending 04Jun2019



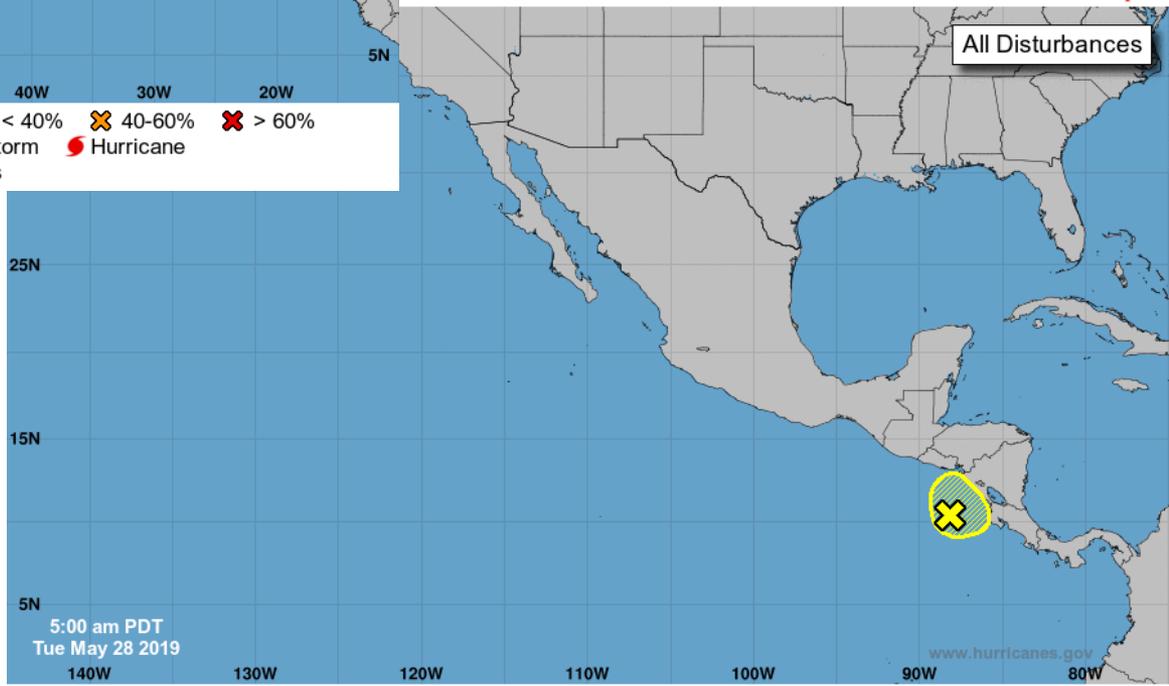
CFS Precipitation Anomalies (mm) Issued 27May2019
Week-2 Forecast Ending 11Jun2019





2:00 am EDT
Tue May 21 2019

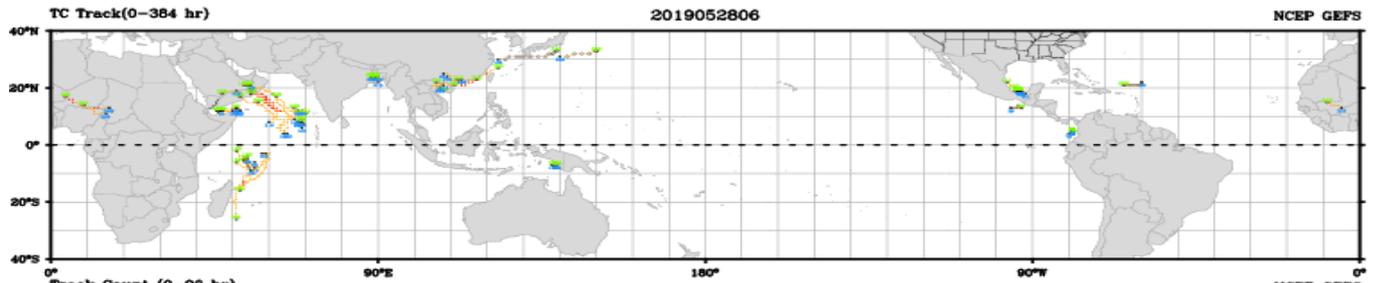
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane
 Post-Tropical Cyclone or Remnants



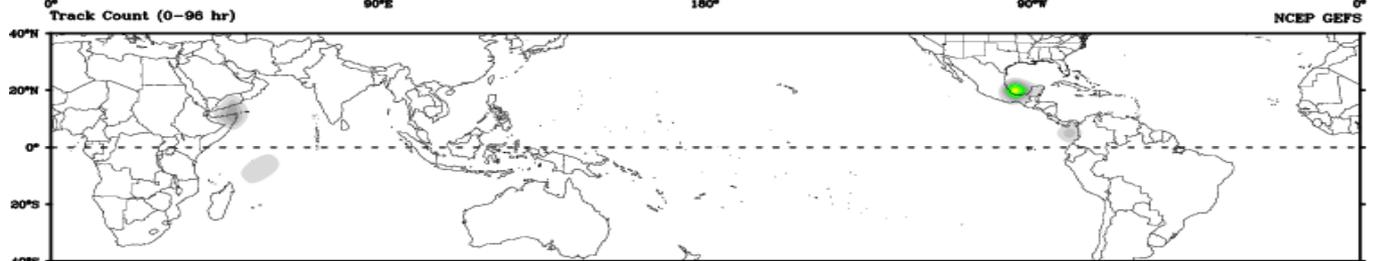
5:00 am PDT
Tue May 28 2019

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

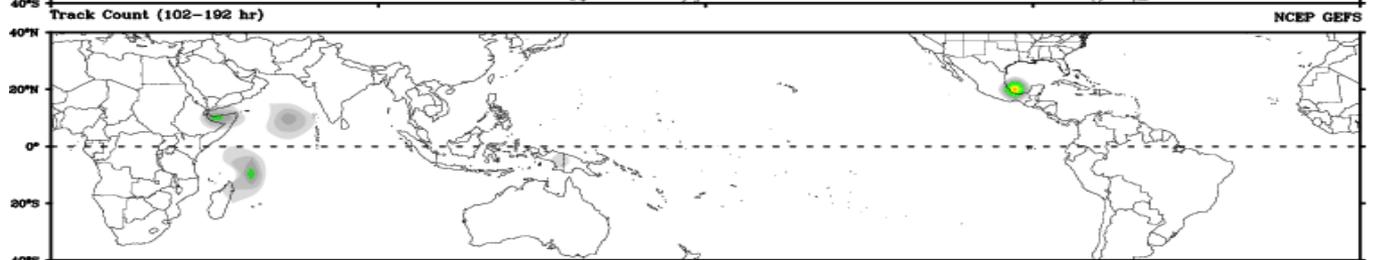
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



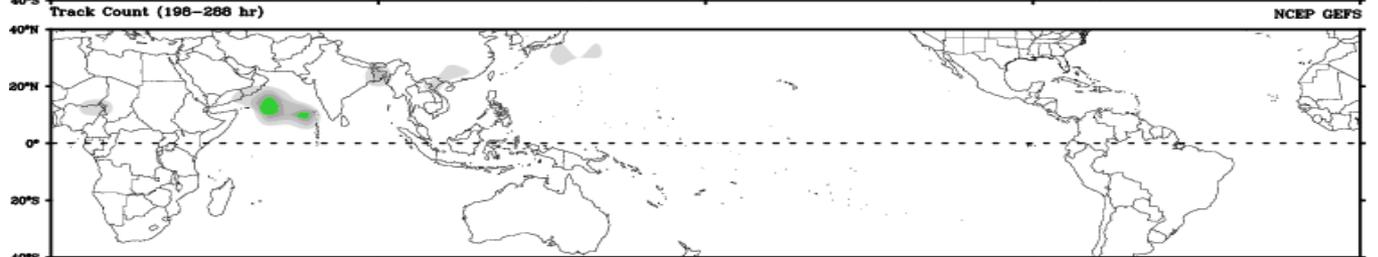
Days 1-4



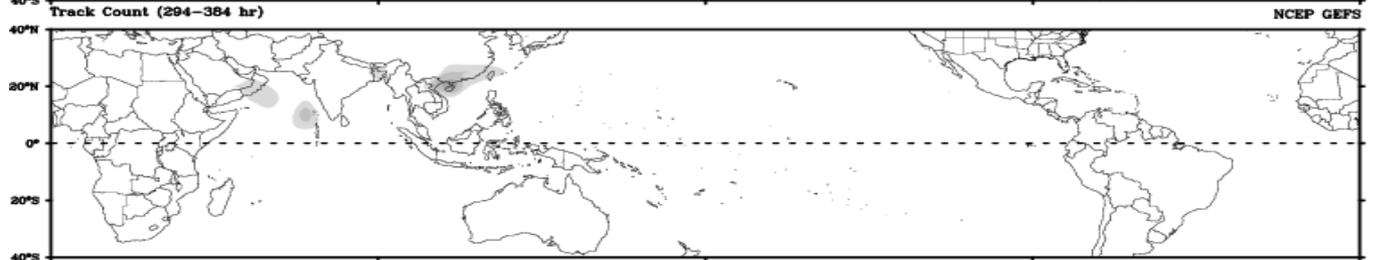
Day 5-8



Day 9-12

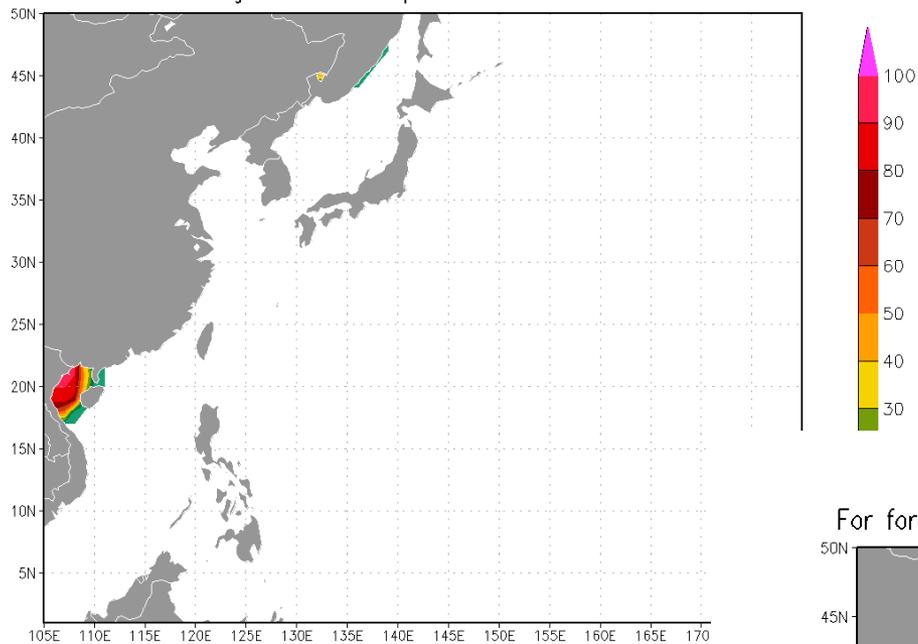


Day 13-15



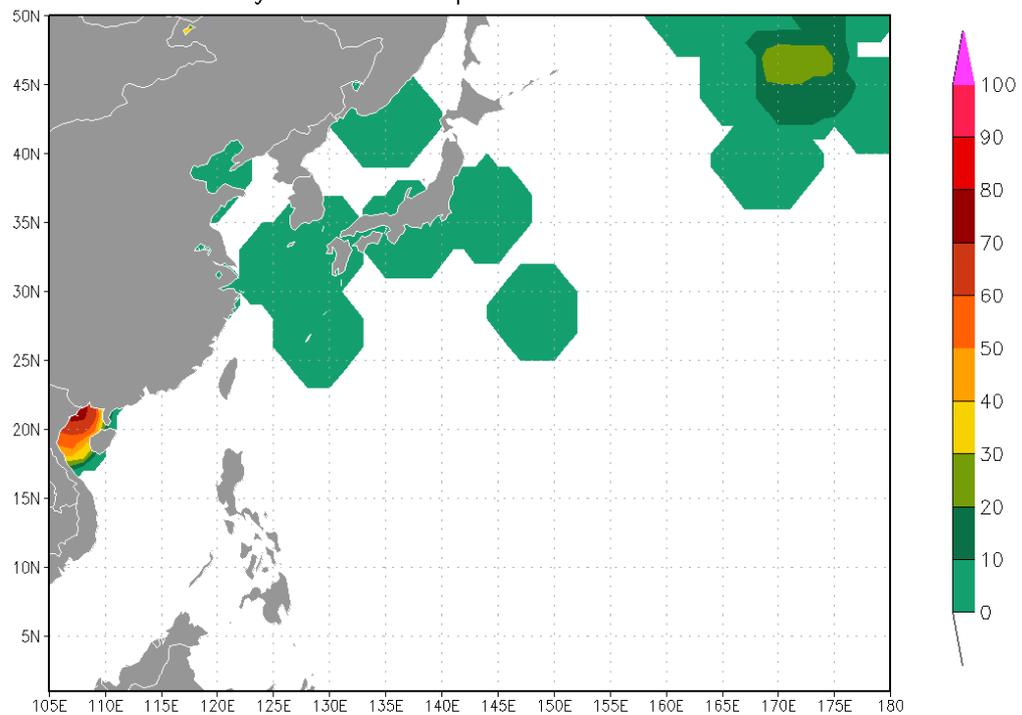
Ensemble-based Probability (%) of TC genesis
using these global ensembles: NCEP

For forecasts during the 00–120h period from initial time = 2019052800



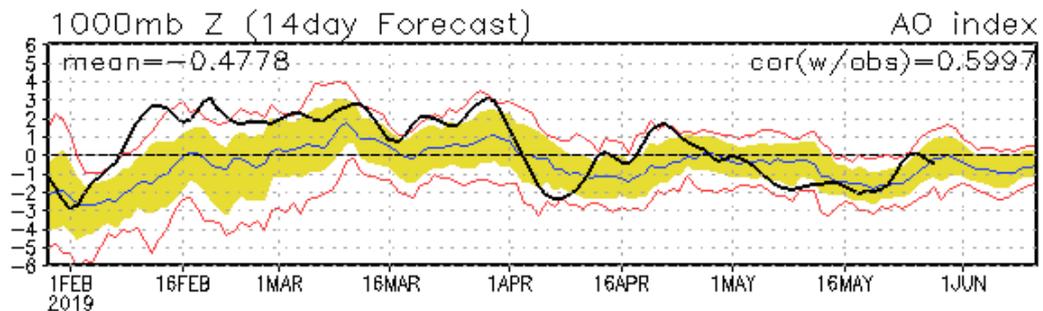
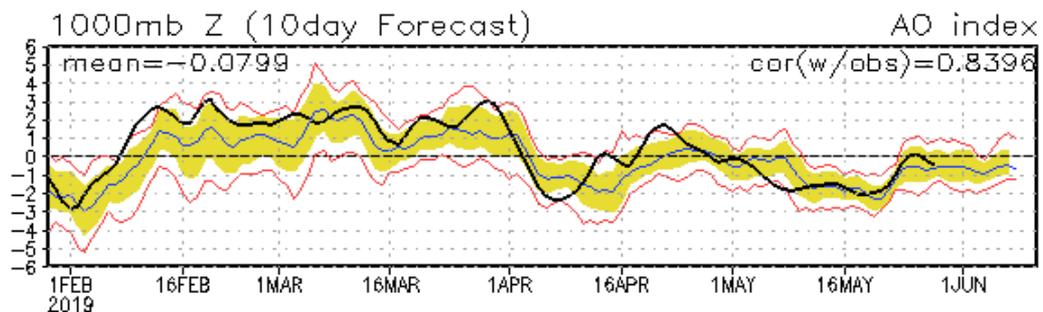
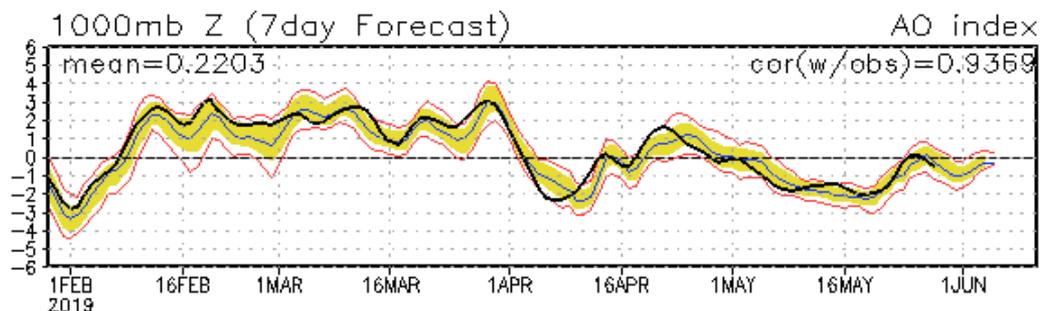
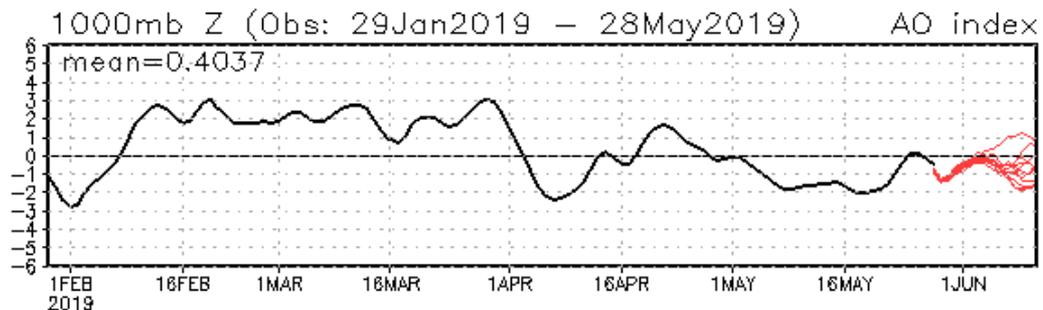
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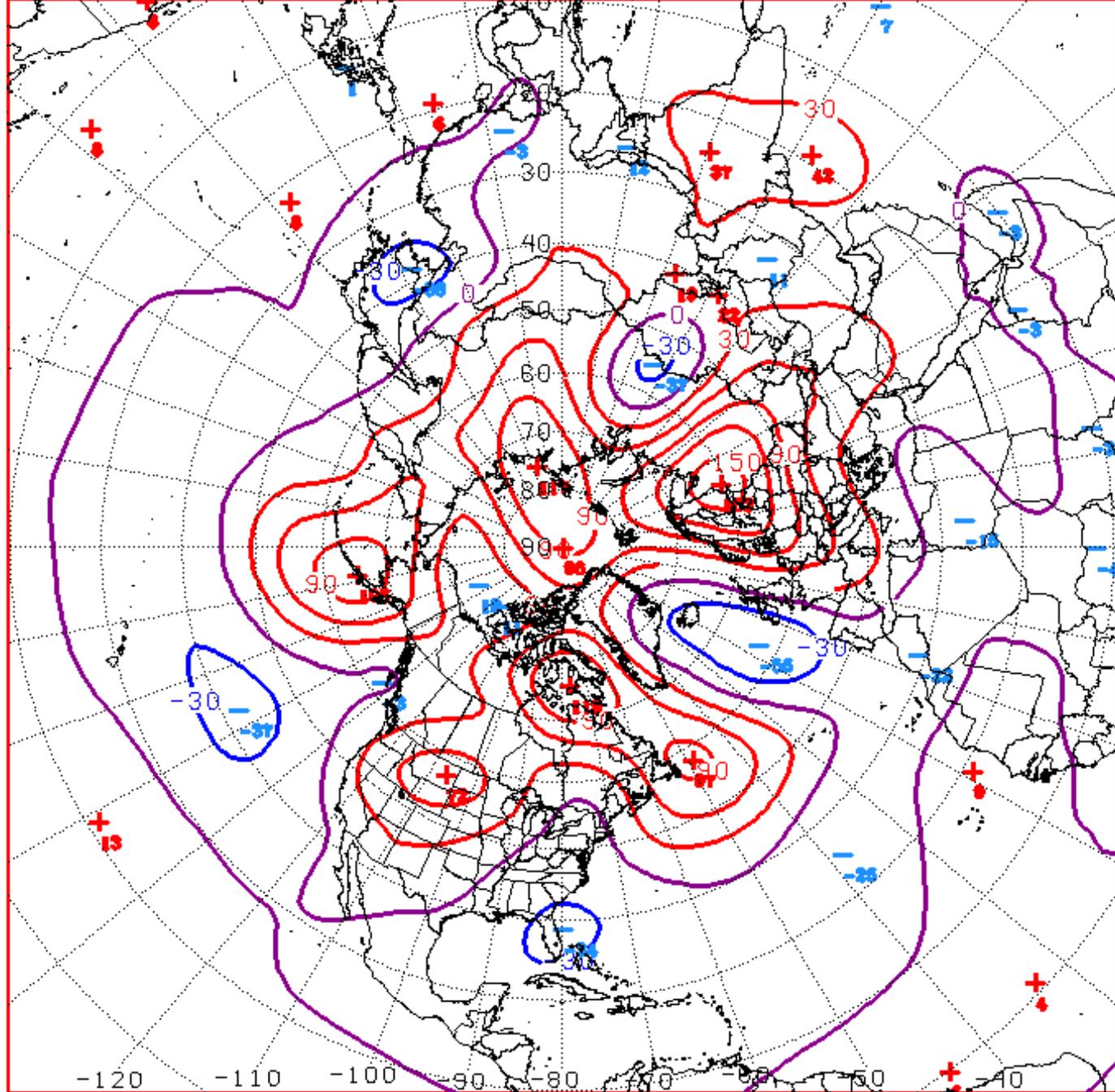
For forecasts during the 120–240h period from initial time = 2019052800



Connections to U.S. Impacts

AO: Observed & ENSM forecasts

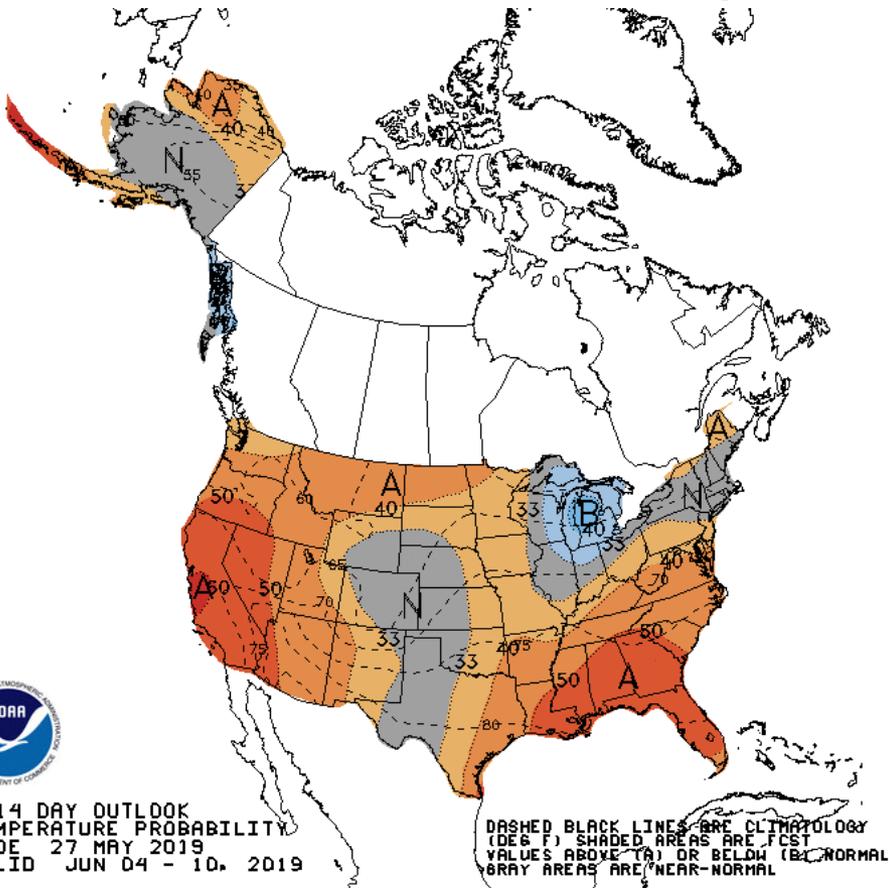




-120 -110 -100 -90 -80 -70 -60 -50

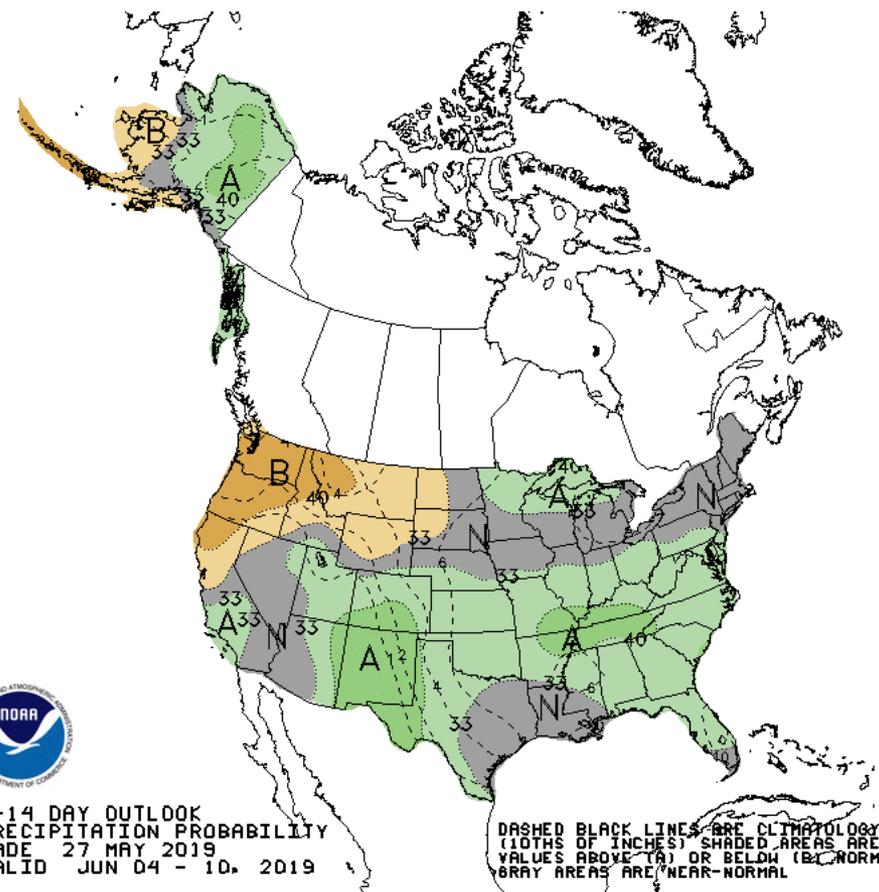
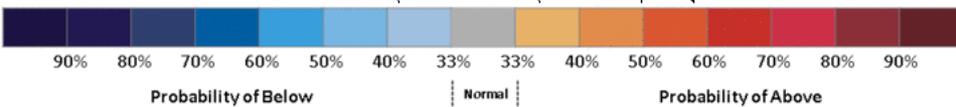
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE MAY 28 2019 1318 UTC CNTD JUN 08 2019

Week 2 – Temperature and Precipitation



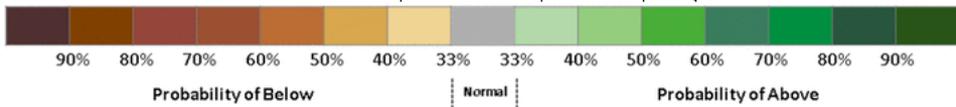
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 27 MAY 2019
VALID JUN 04 - 10, 2019

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 27 MAY 2019
VALID JUN 04 - 10, 2019

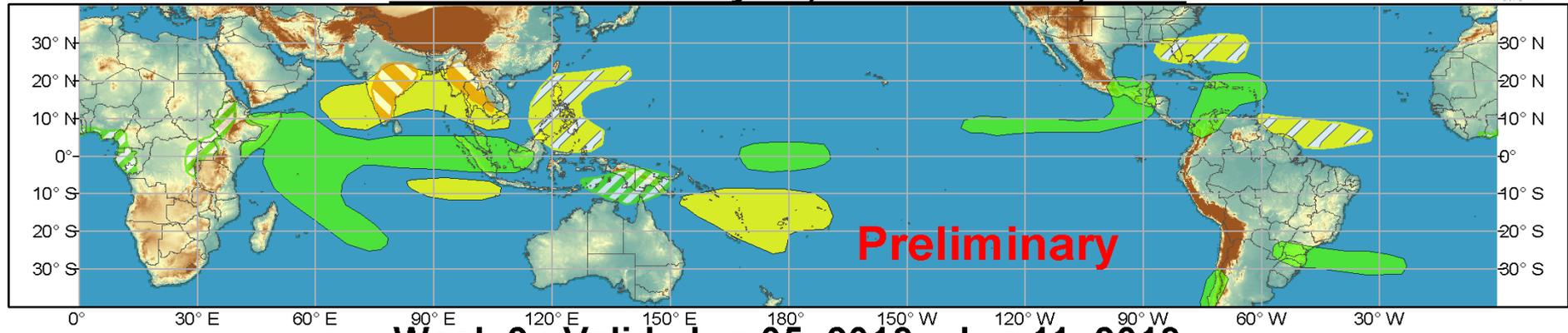
DASHED BLACK LINES ARE CLIMATOLOGY (10THS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



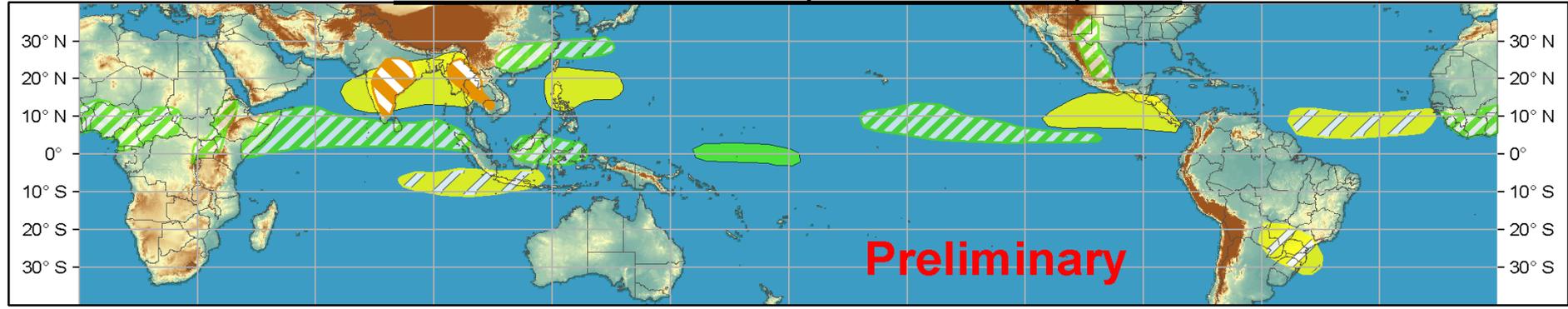


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