

Global Tropics Hazards And Benefits Outlook

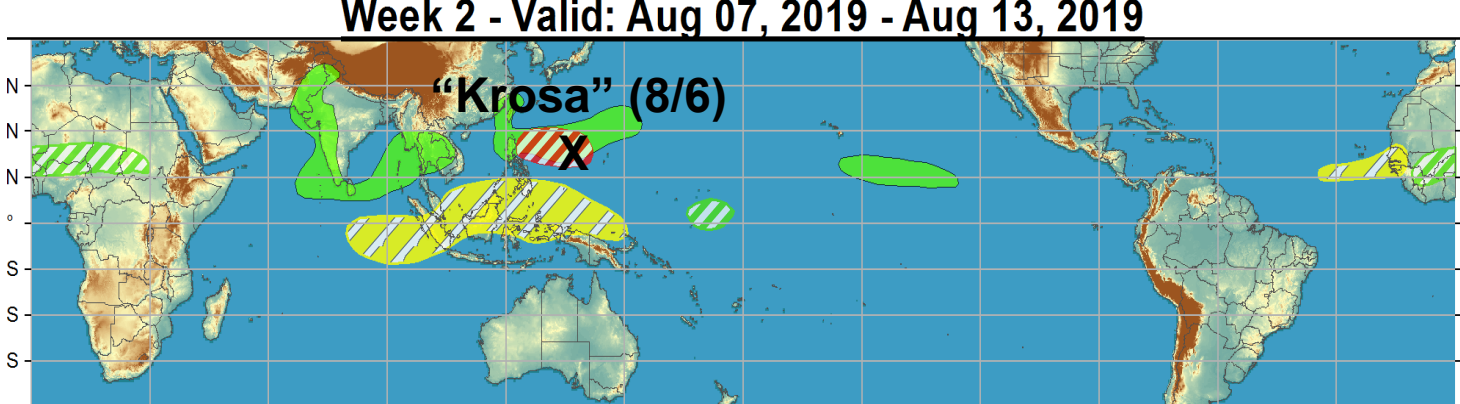
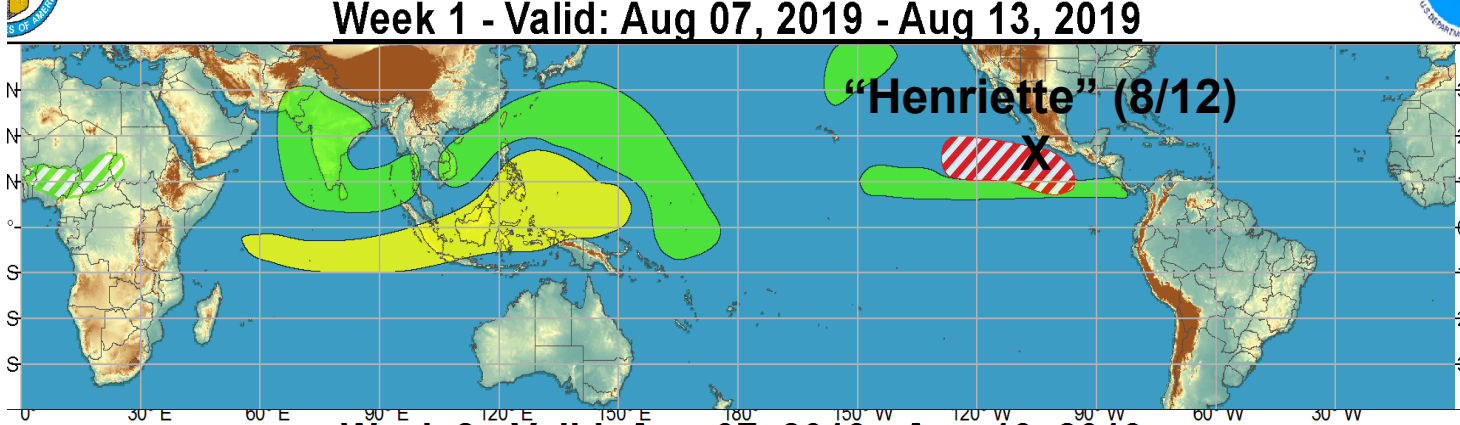
8/13/2019

Nick Novella

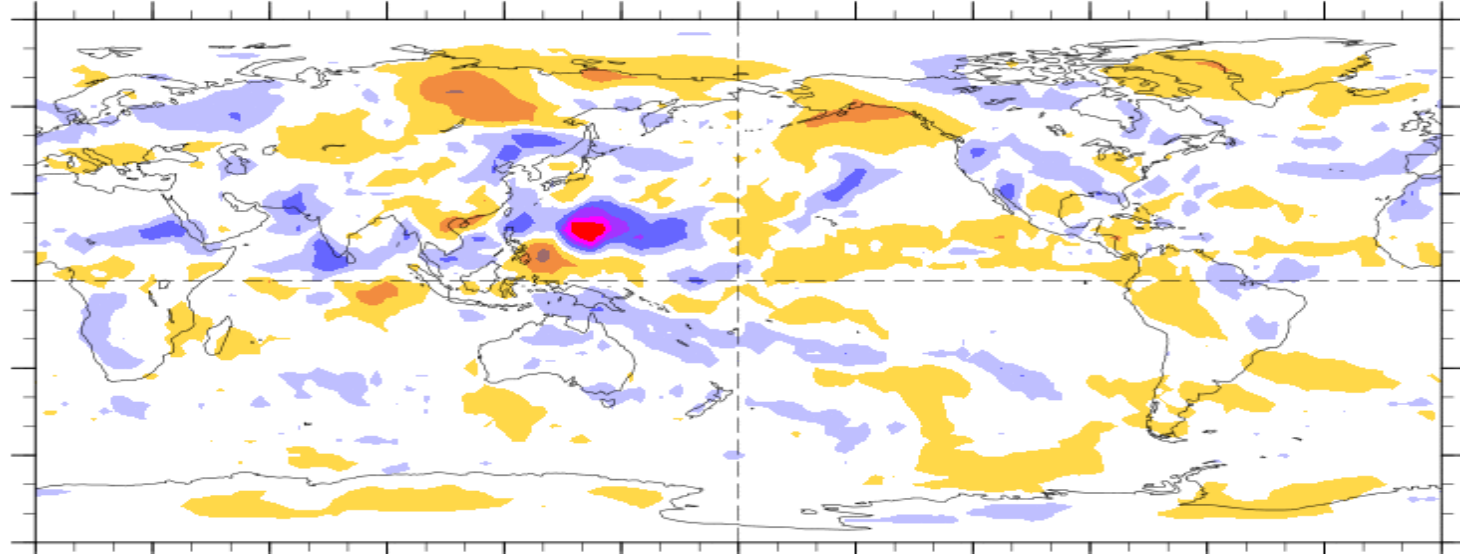
Outline

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 2019/08/05 - 2019/08/11



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (as of August 12, 2019 – next update on Thursday, September 12th)

- ENSO Alert System Status: [Final El Niño Advisory](#)
- ENSO-neutral conditions are present, and is most likely to continue through Northern Hemisphere Winter 2019-2020 (50-55% chance).

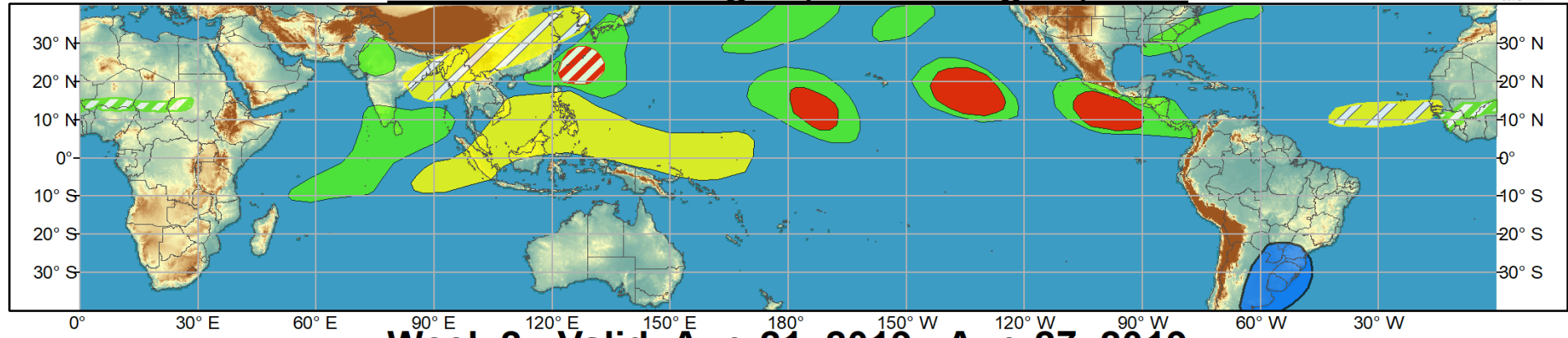
MJO and other subseasonal tropical variability:

- The MJO was weak over the past week.
- The MJO is forecast to remain weak during most of the GTH forecast period, with a slight chance for re-emergence later during Week-2.
- Continued Rossby wave activity is over western Pacific, partially responsible tropical cyclogenesis in the Pacific.

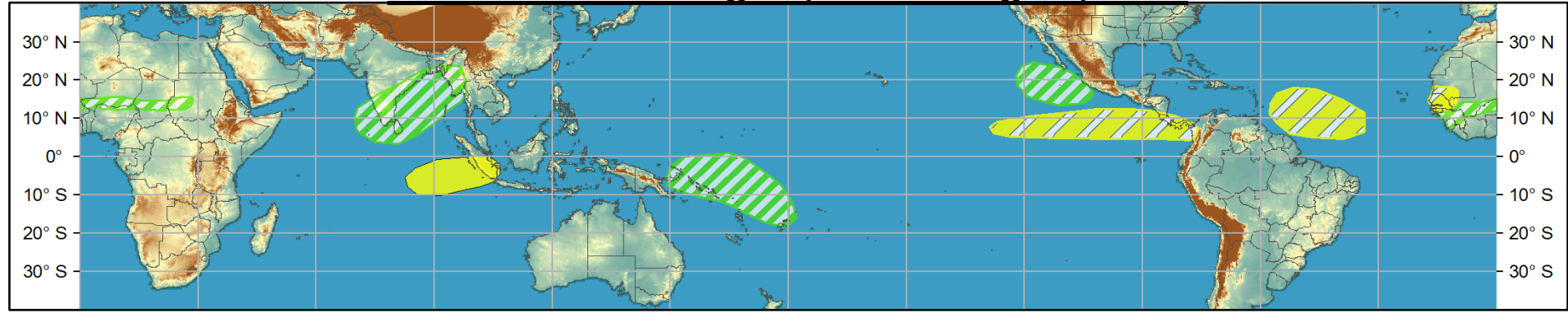


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Aug 14, 2019 - Aug 20, 2019



Week 2 - Valid: Aug 21, 2019 - Aug 27, 2019



Produced: 08/13/2019
Forecaster: Novella

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.
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IR Satellite & 200-hpa Velocity Potential Anomalies

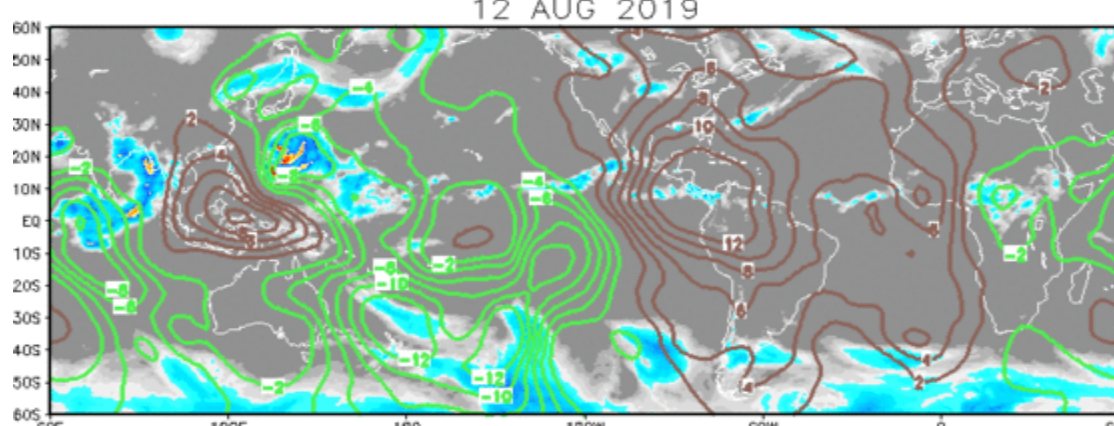
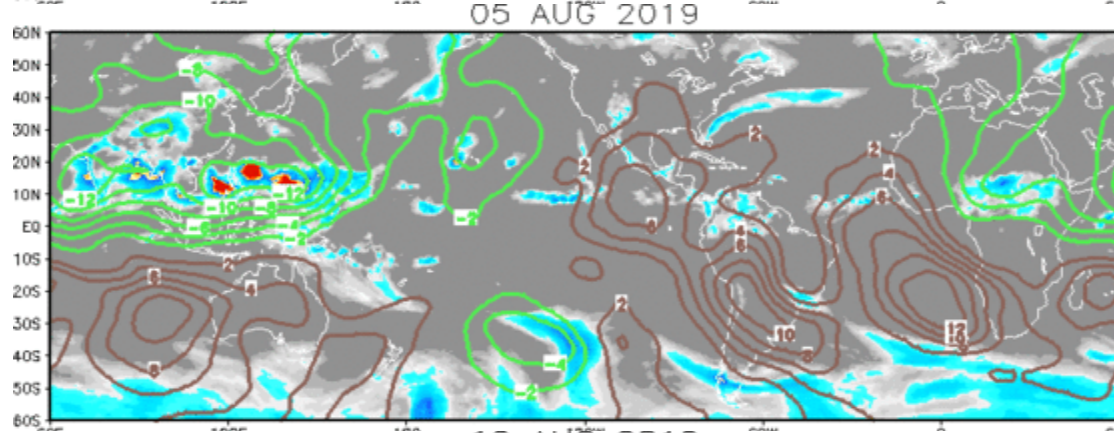
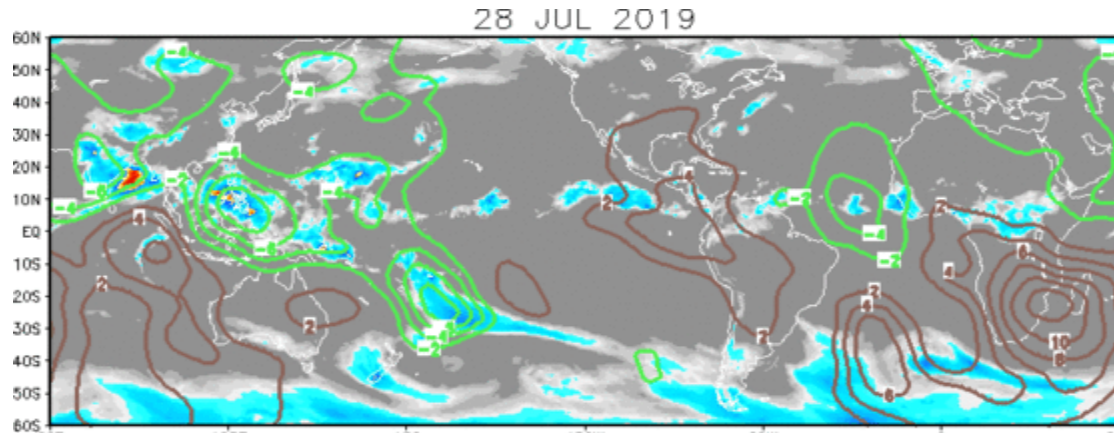
Green: Enhanced Divergence

Brown: Enhanced Convergence

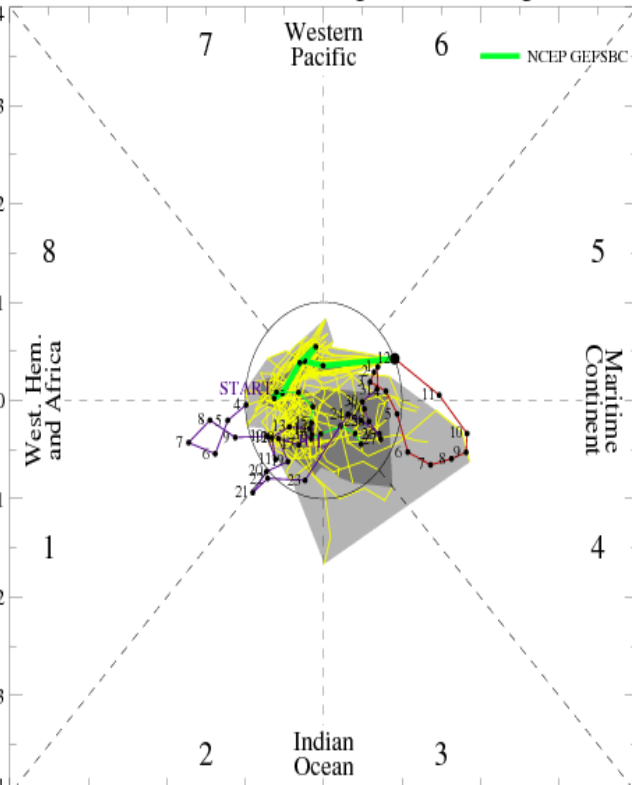
Incoherent, Wave-2 pattern.

TC activity in WPAC anchored enhanced convection in Pacific, however a N/S dipole of VP was observed

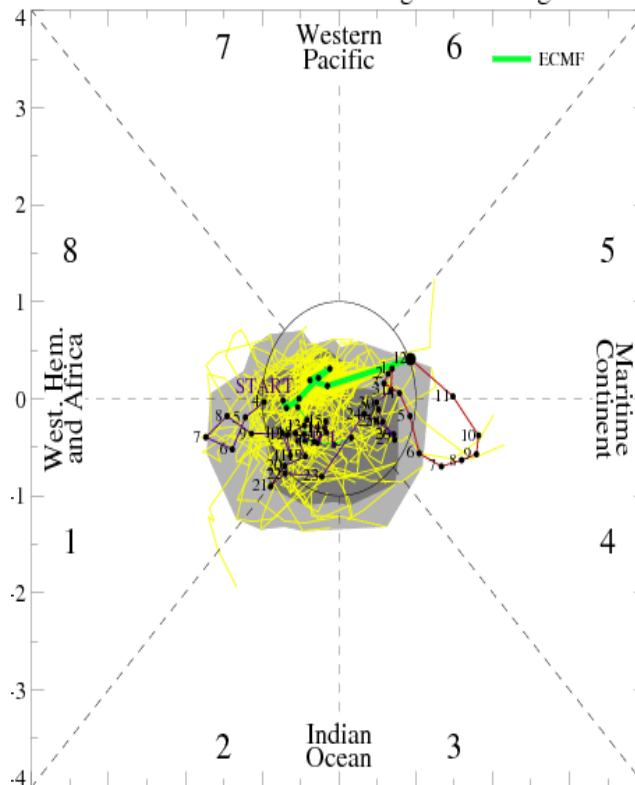
TC activity in WPAC anchored enhanced convection in Pacific, with suppressed envelope expanded over Americas/Atlantic.



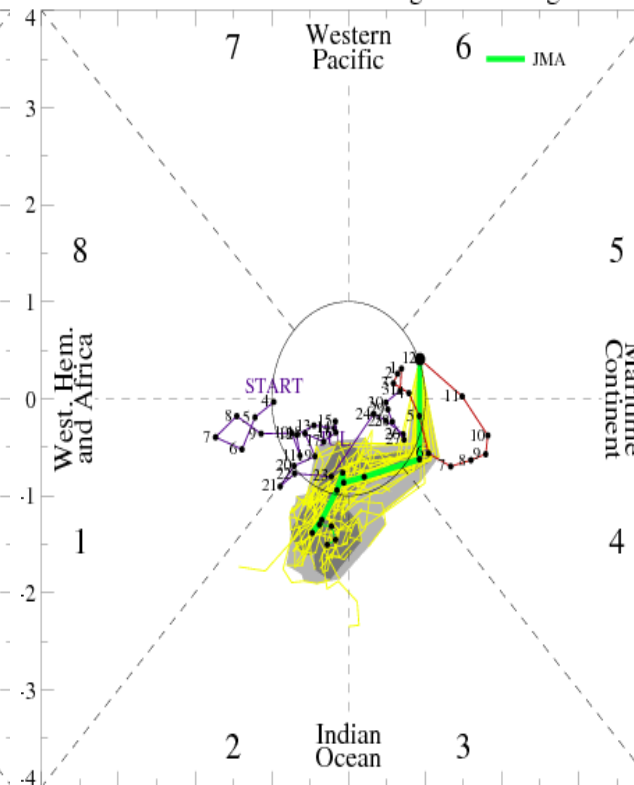
[RMM1, RMM2] forecast for Aug-13-2019 to Aug-27-2019



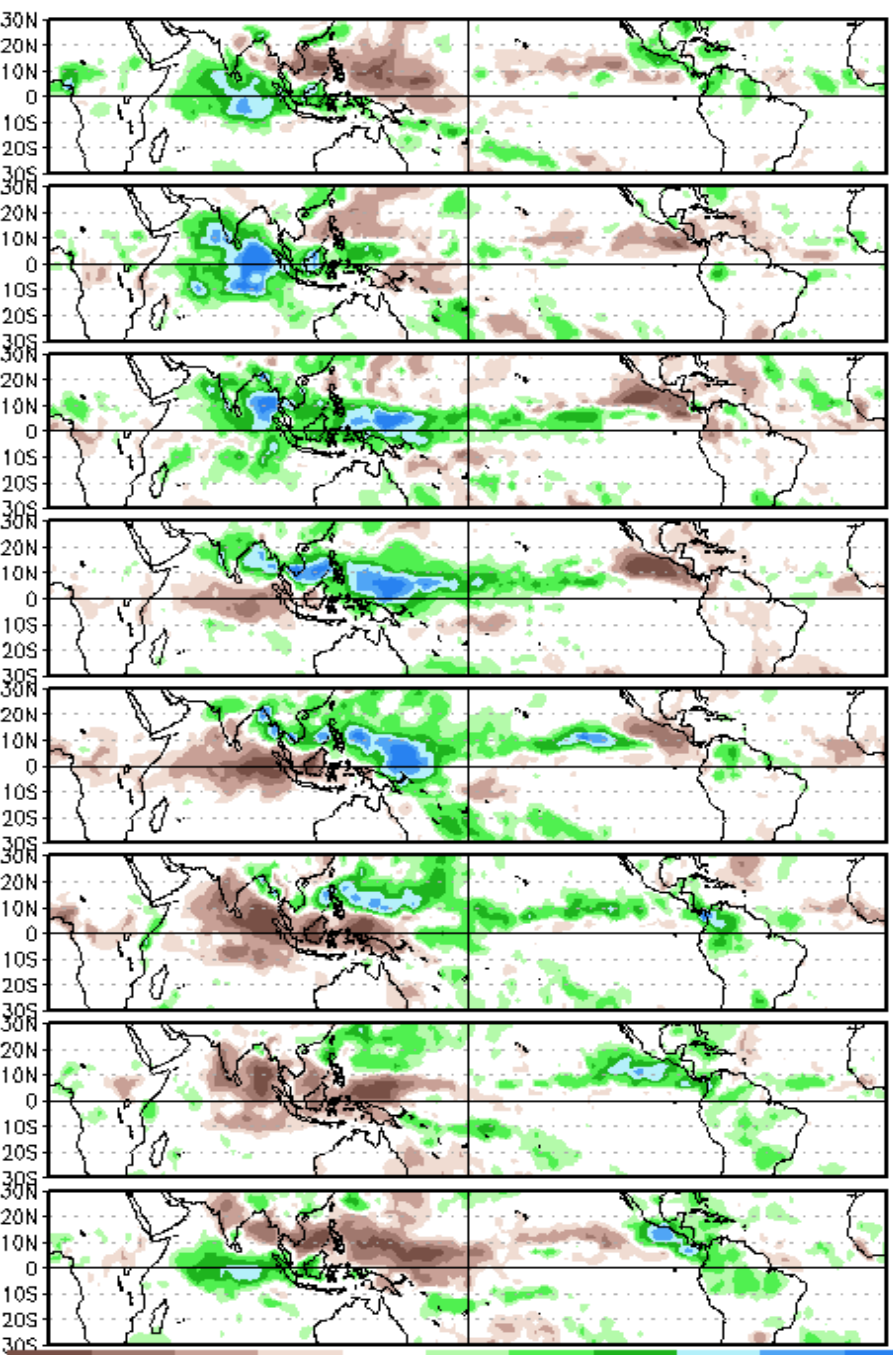
MJO Index Forecast for 13Aug2019-27Aug2019



MJO Index Forecast for 13Aug2019-21Aug2019



- Good agreement between GEFS and ECMWF this week. JMA still eager to amplify MJO signal.
- As indicated in the forecast last week, the recent reemergence of the MJO more reflective of an enhancement of lower-level easterly winds, producing a spurious increase in RMM space.
- Some ECMWF members do suggest some re-strengthening and eastward propagation of the MJO later during Week-2 (phases 1+2).



Phase 2

Phase 3

Phase 4

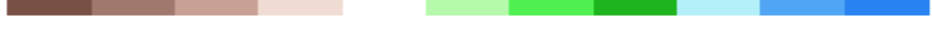
Phase 5

Phase 6

Phase 7

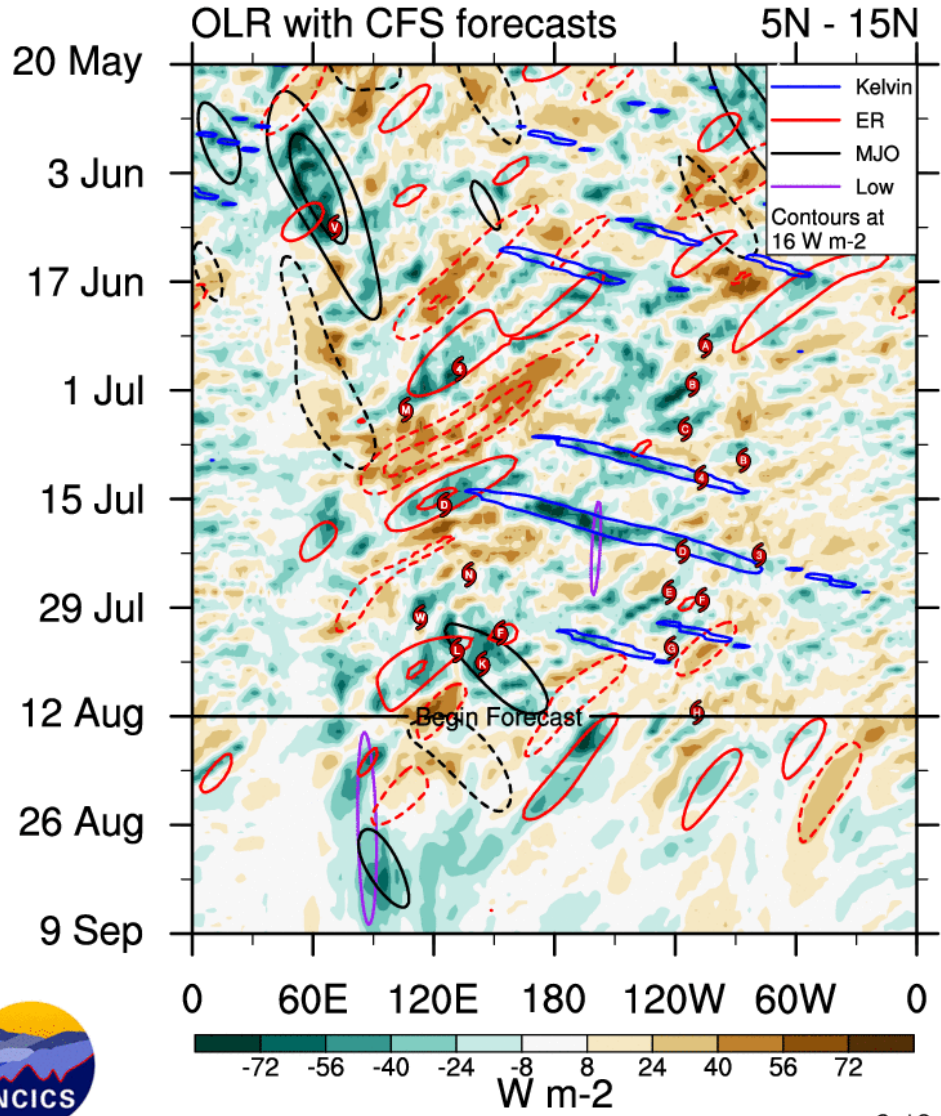
Phase 8

Phase 1



Currently: Weak **MJO** and **Kelvin** wave signals, active equatorial **Rossby wave**.

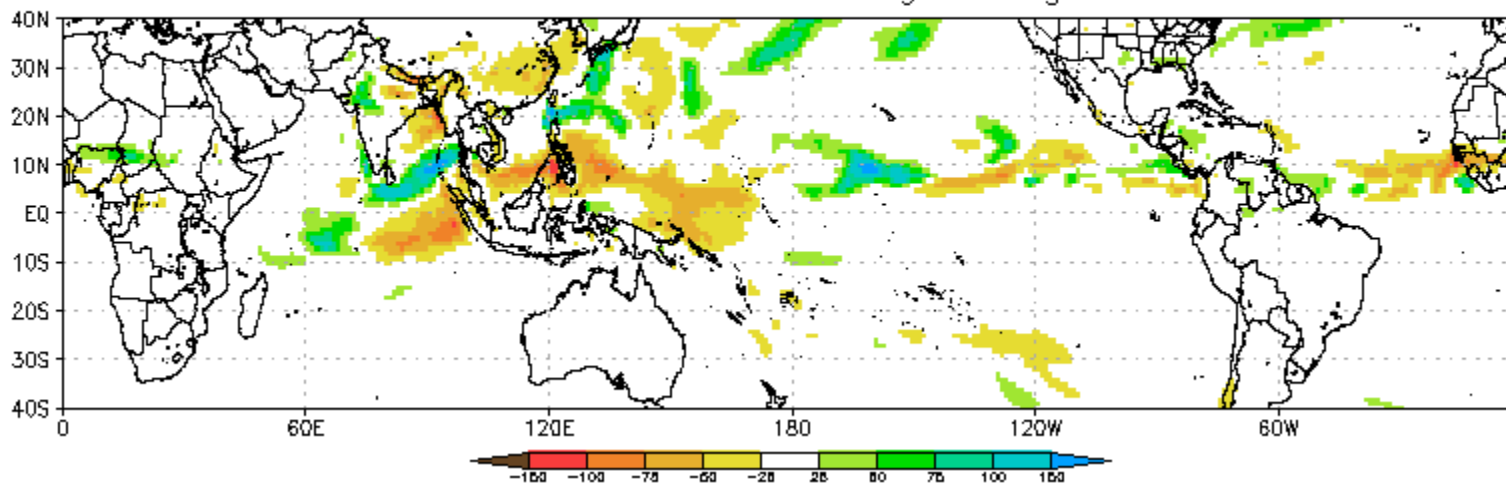
Forecast: **Rossby wave** development in eastern and central Pacific (could fuel TC development)



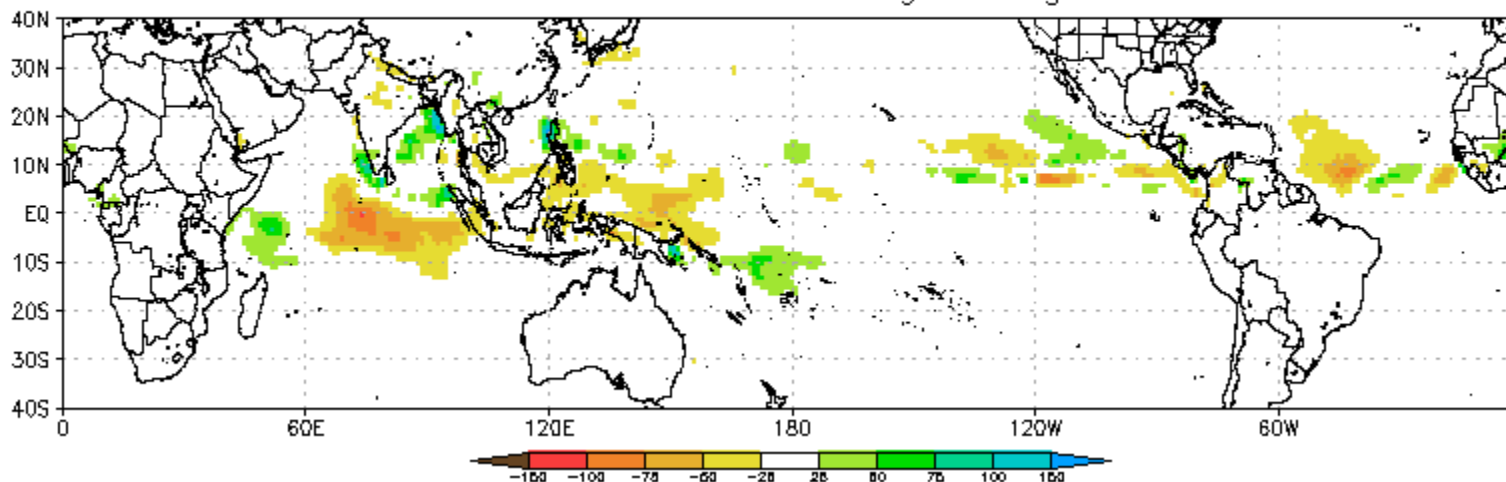
Tue 2019-08-13 15:14 UTC

Carl Schreck
carl_schreck@ncsu.edu

CFS Precipitation Anomalies (mm) Issued 12Aug2019
Week-1 Forecast Ending 20Aug2019

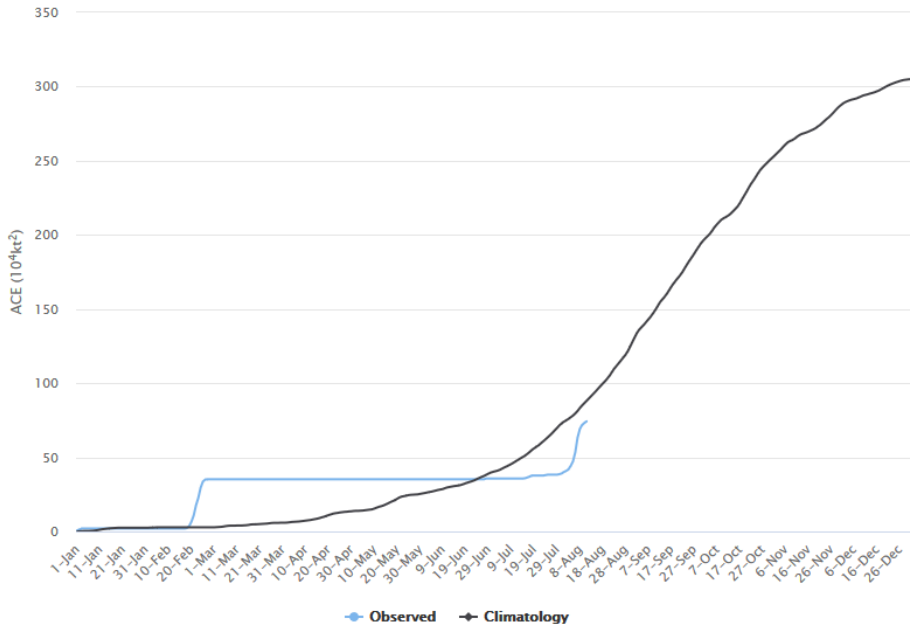


CFS Precipitation Anomalies (mm) Issued 12Aug2019
Week-2 Forecast Ending 27Aug2019



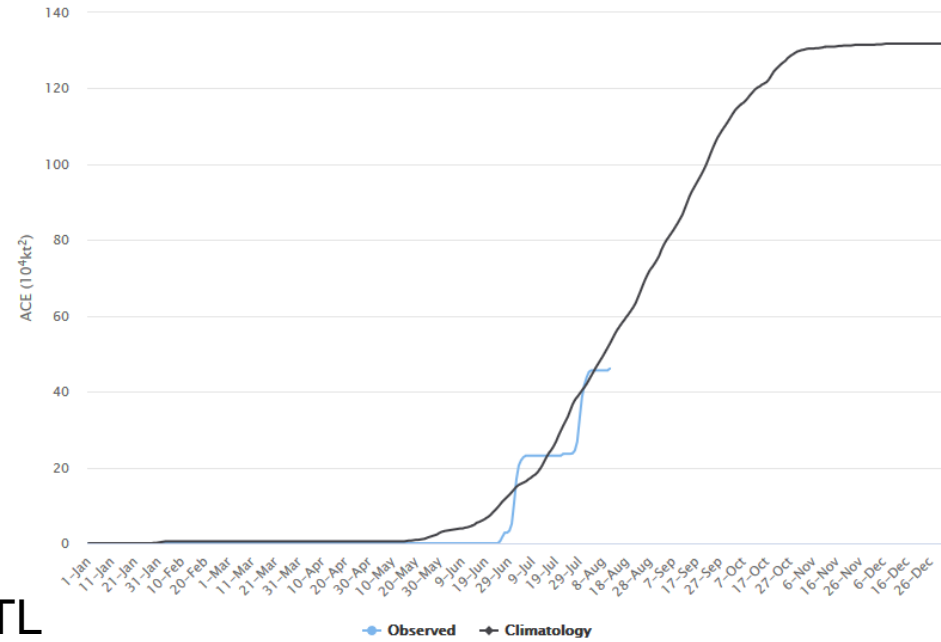
WPAC

Current Season Northwest Pacific Ocean ACE (1981–2010 Climo)



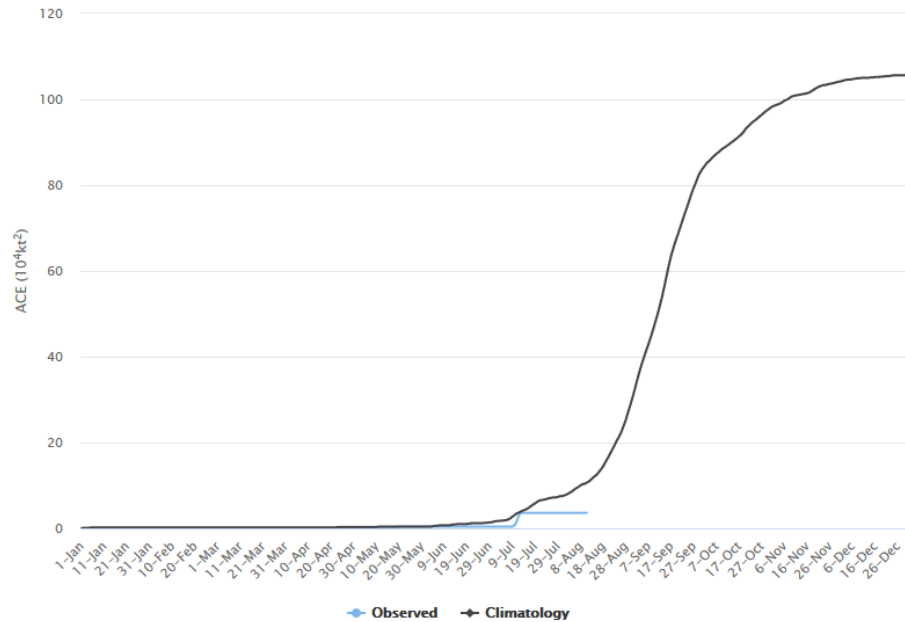
EPAC

Current Season Northeast Pacific Ocean ACE (1981–2010 Climo)



ATL

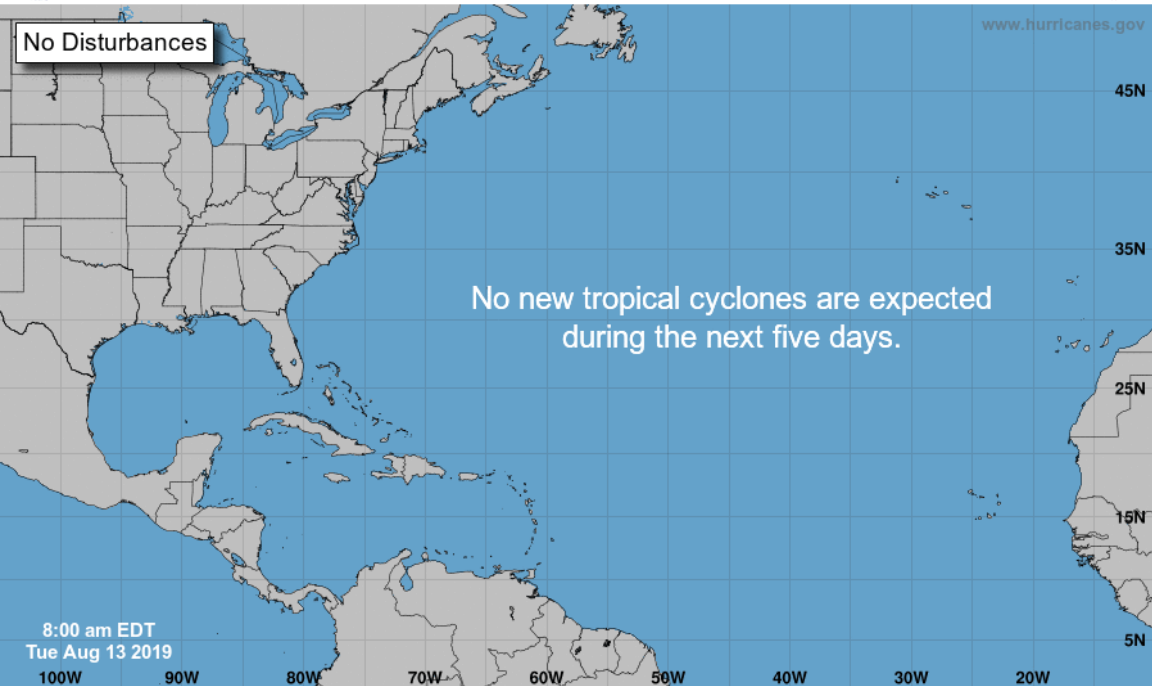
Current Season North Atlantic Ocean ACE (1981–2010 Climo)





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Aug 13 2019

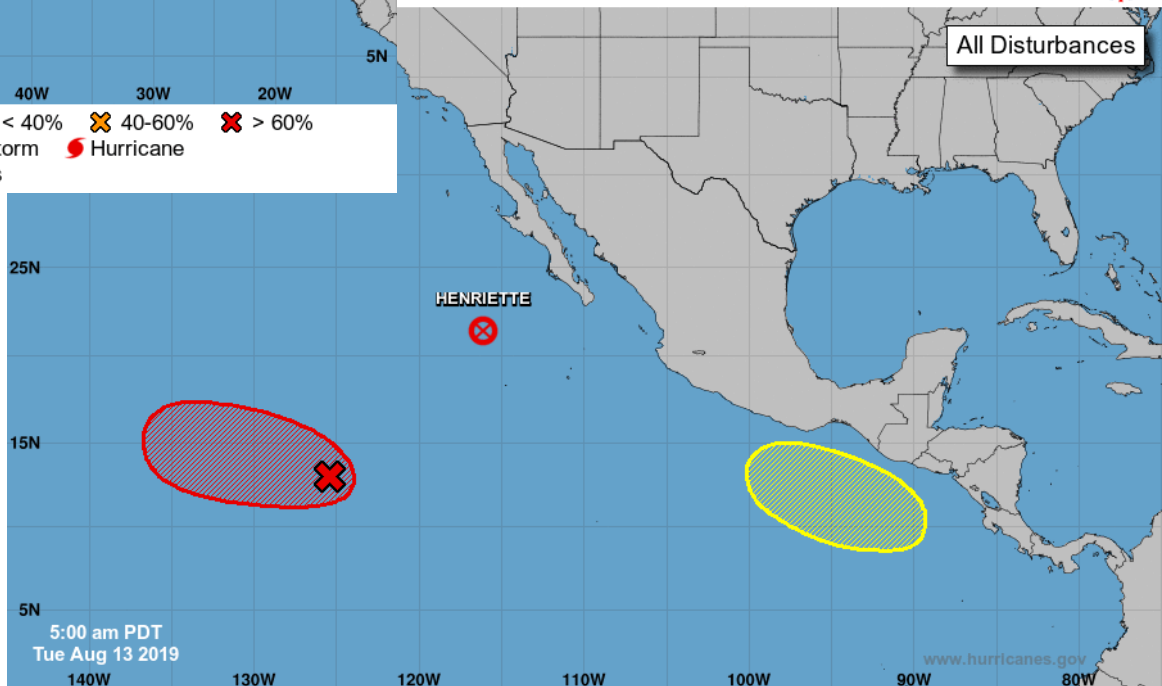
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



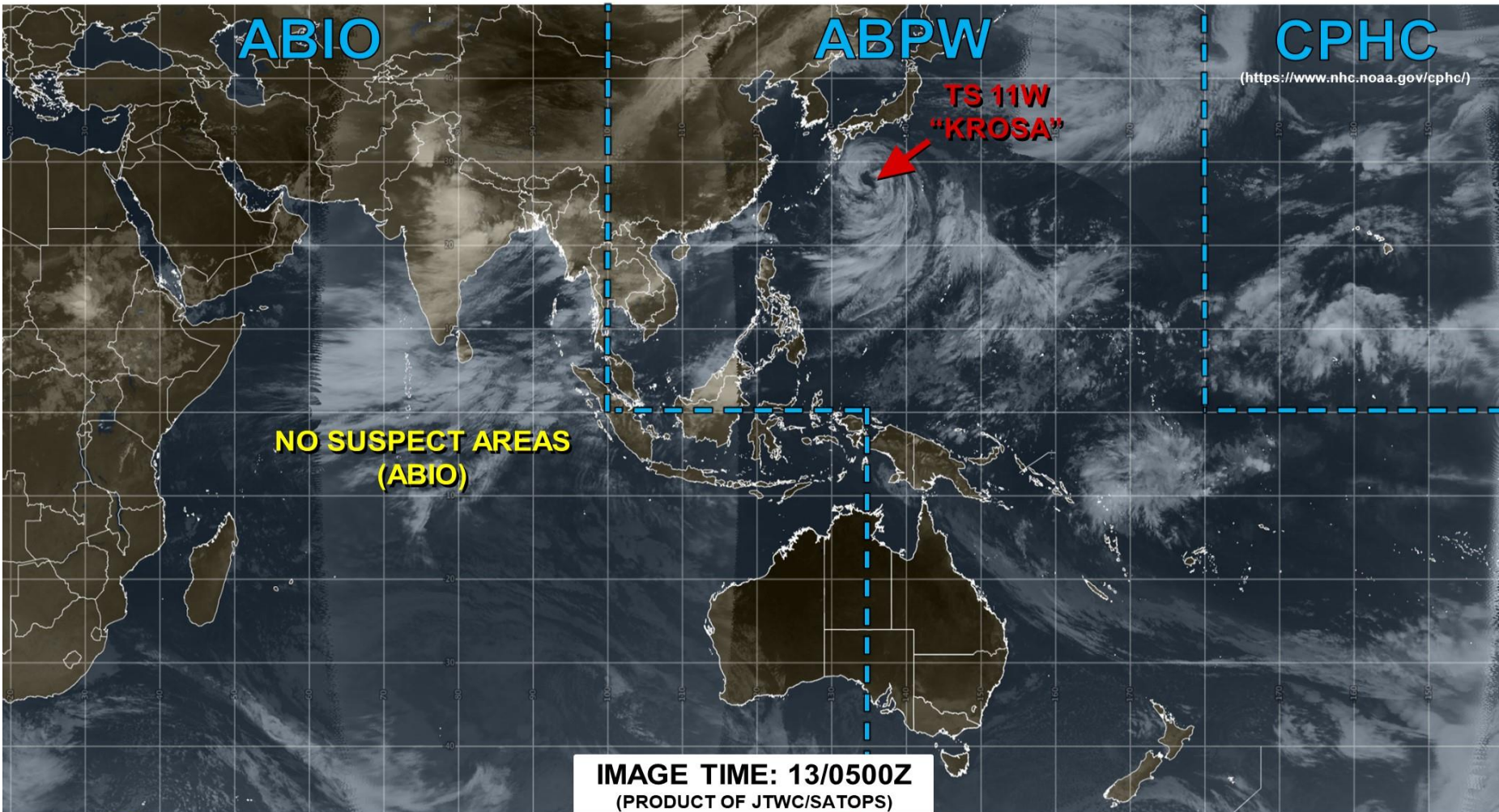
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

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JOINT TYPHOON WARNING CENTER



TC development unlikely within 24 hours



TC development likely, but expected to occur beyond 24 hours

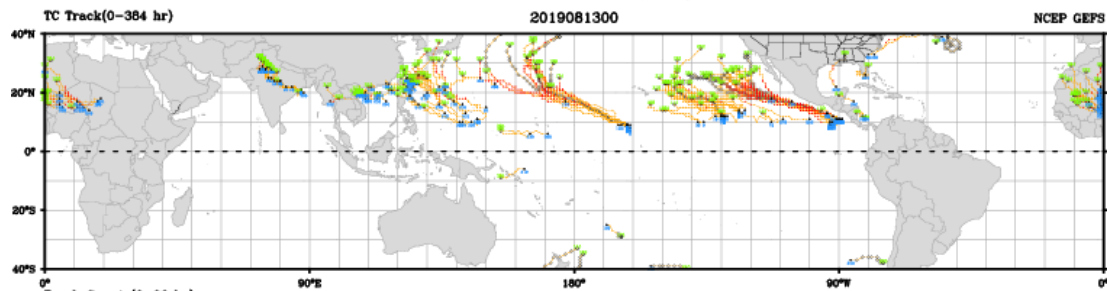


TC development likely within 24 hours (Reference TCFA)

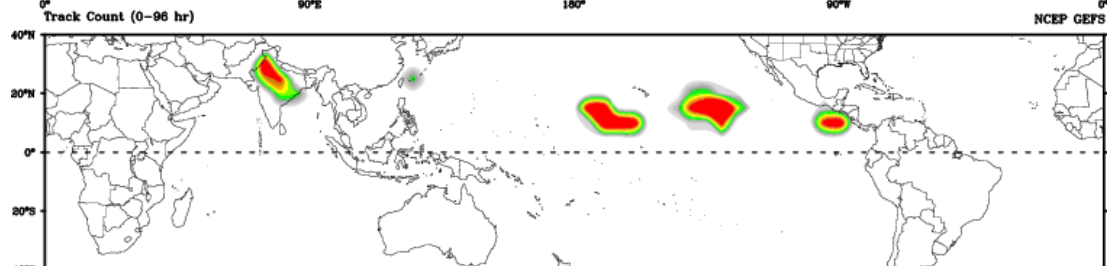


Tropical Cyclone (Reference Warning)

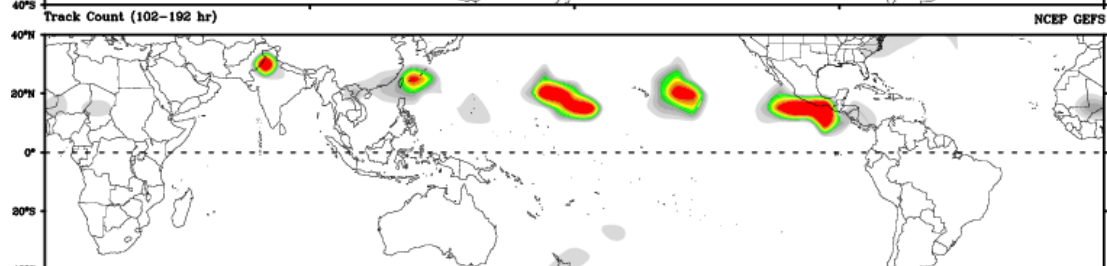
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



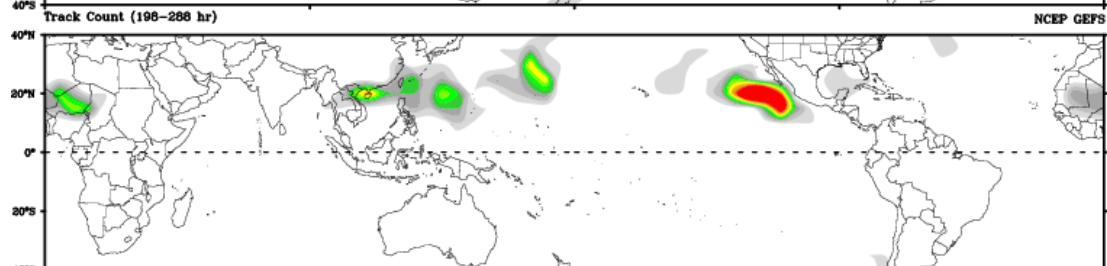
Days 1-4



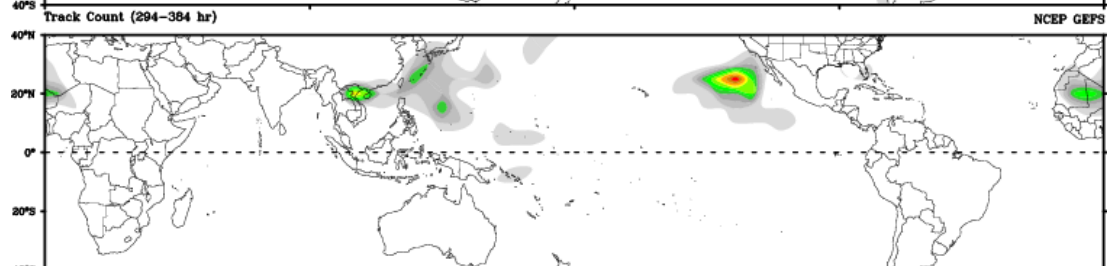
Day 5-8



Day 9-12

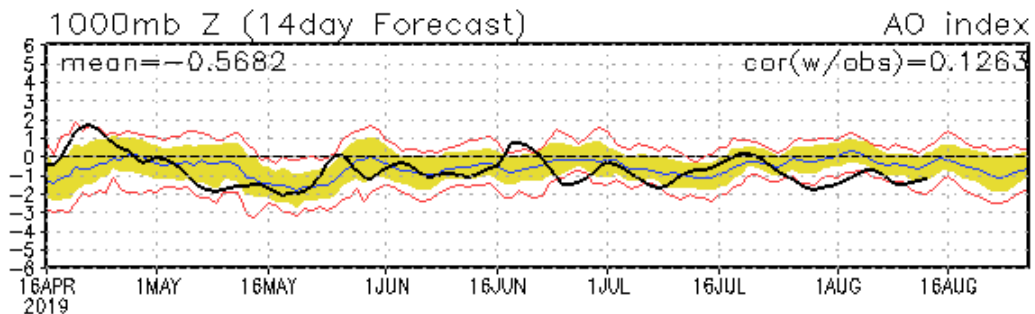
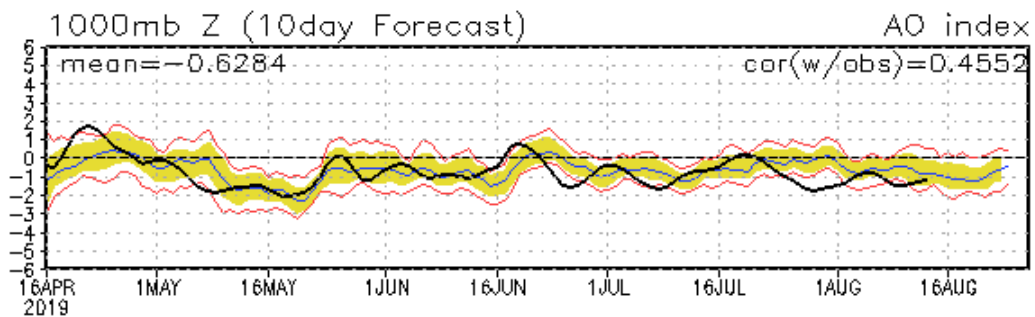
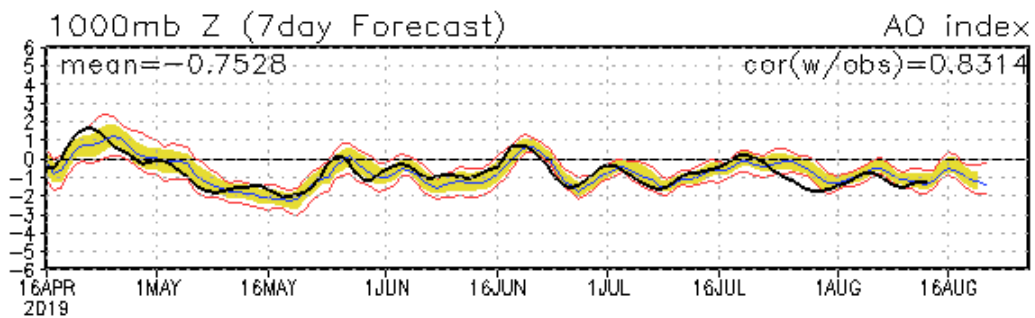
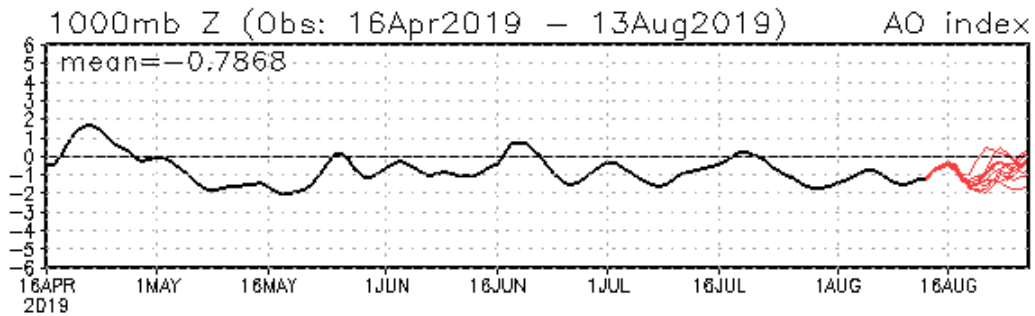


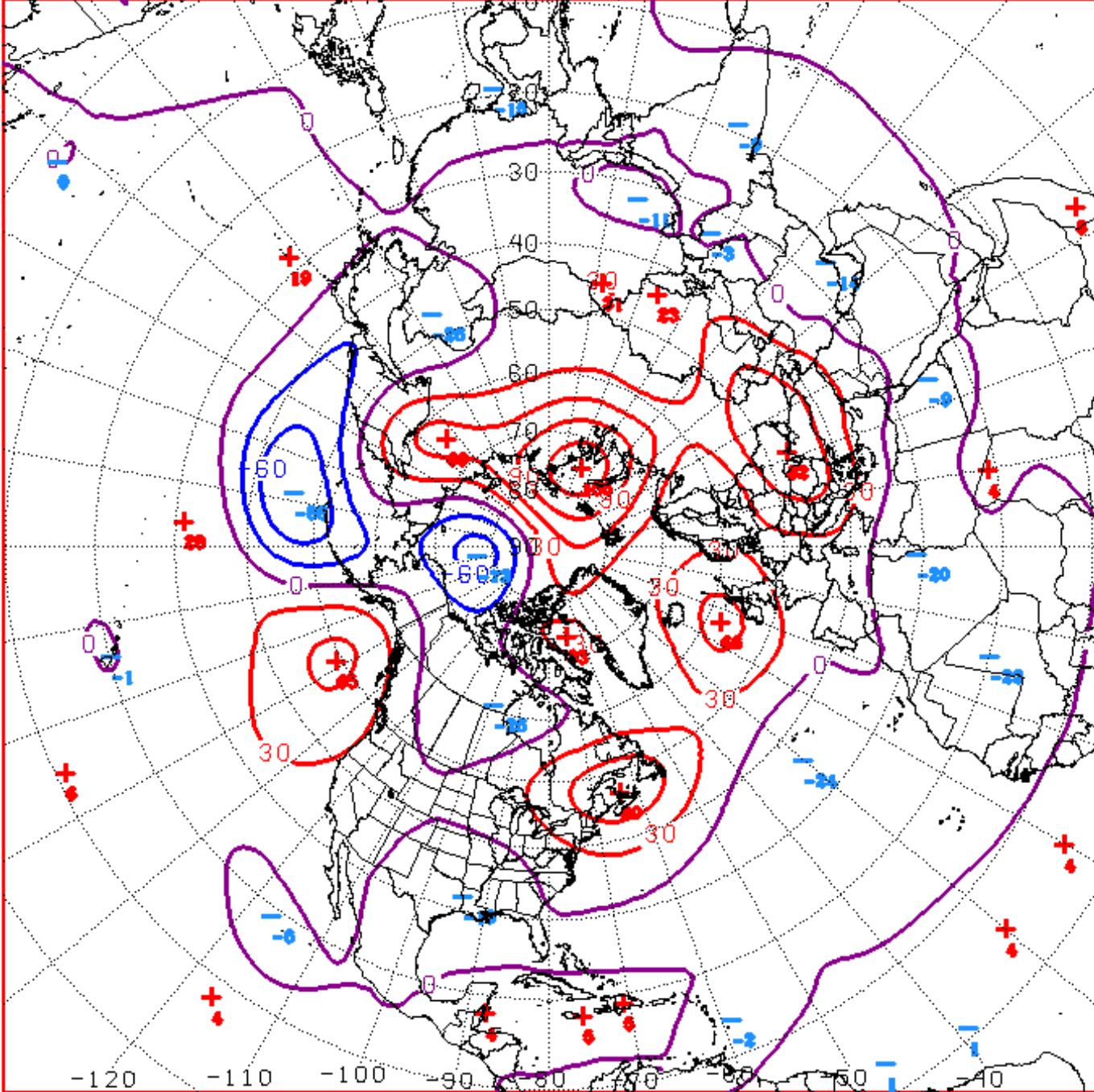
Day 13-15



Connections to U.S. Impacts

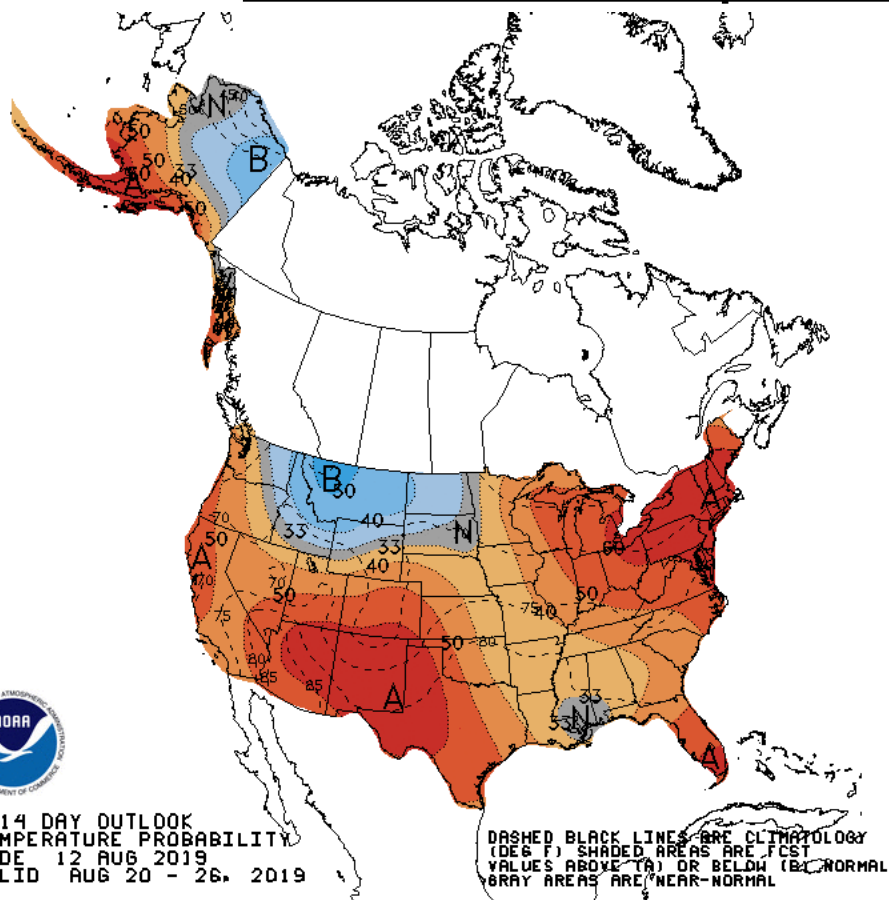
AO: Observed & ENSM forecasts





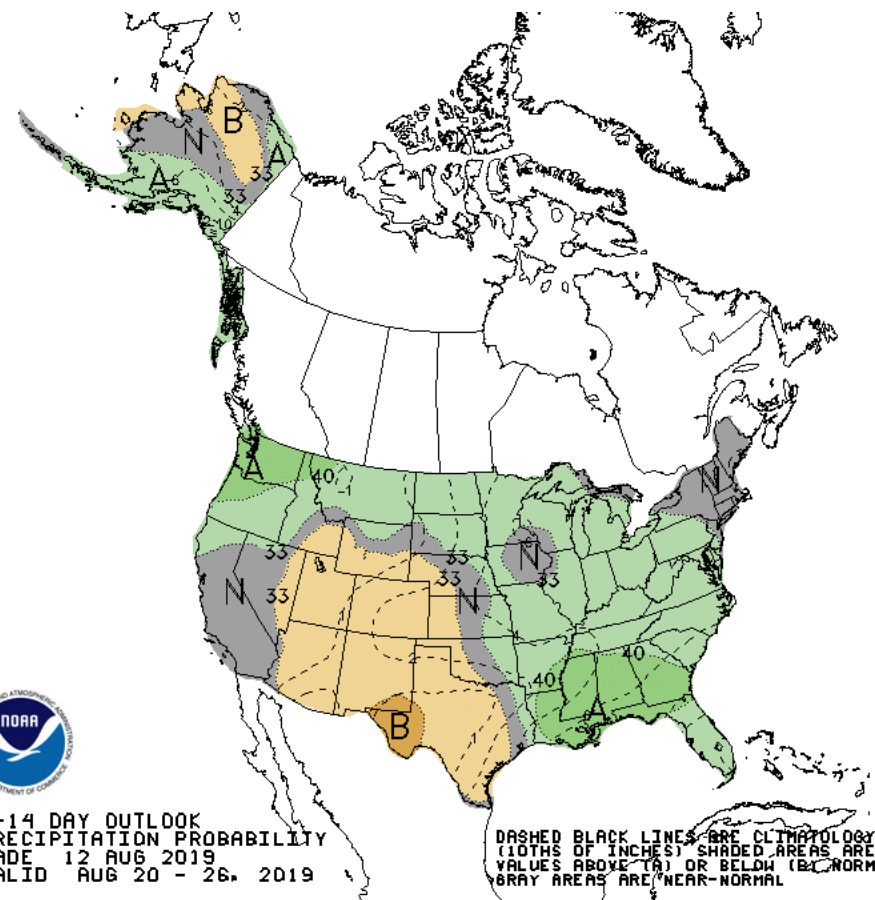
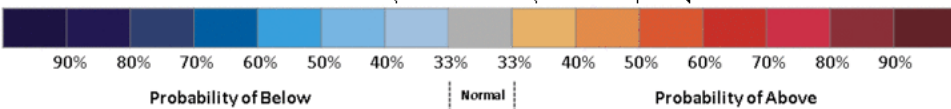
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE AUG 13 2019 1313 UTC CNTD AUG 24 2019

Week 2 – Temperature and Precipitation



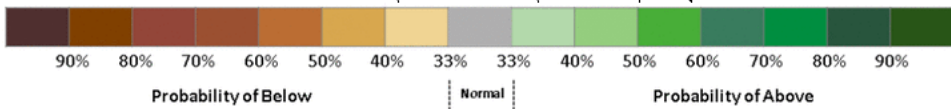
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 12 AUG 2019
VALID AUG 20 - 26, 2019

DASHED BLACK LINES ARE CLIMATE
NORMALS (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 12 AUG 2019
VALID AUG 20 - 26, 2019

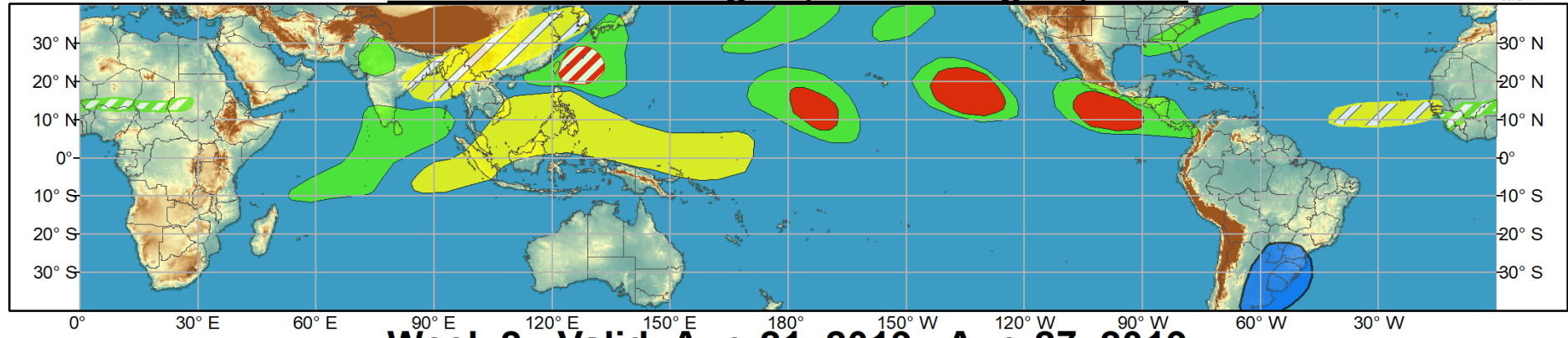
DASHED BLACK LINES ARE CLIMATE
NORMALS (TENTHS OF INCHES). SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL



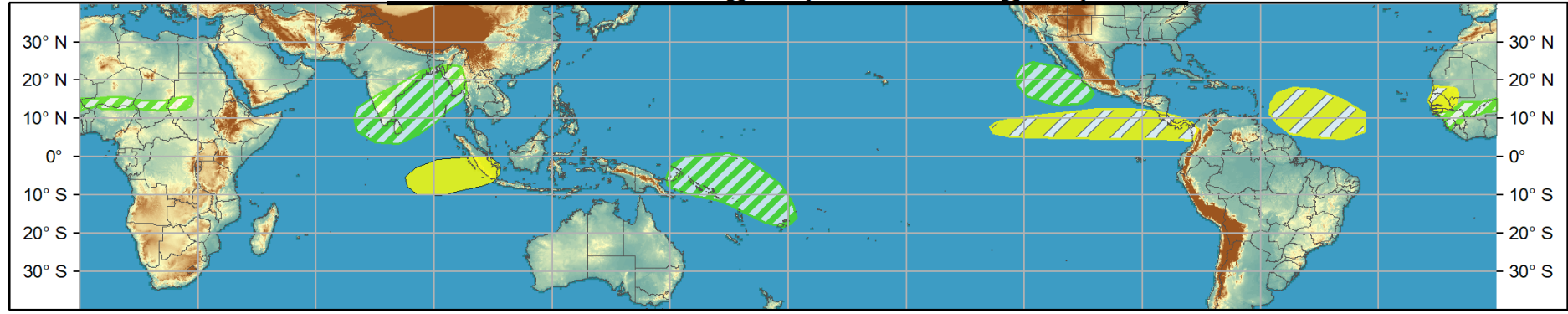


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