

Global Tropics Hazards And Benefits Outlook

9/24/2019

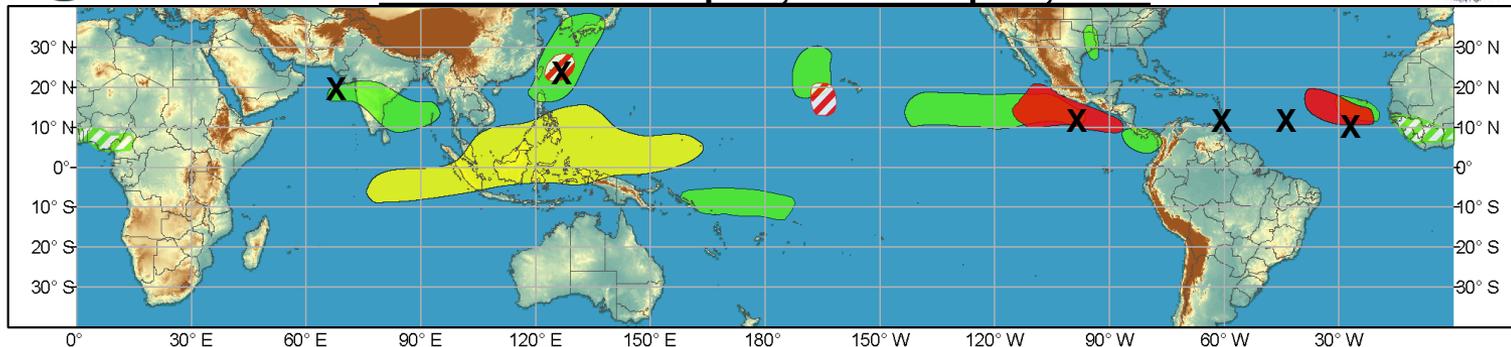
Adam Allgood

Outline

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



Week 1 - Valid: Sep 18, 2019 - Sep 24, 2019

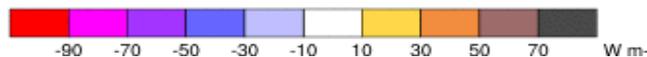
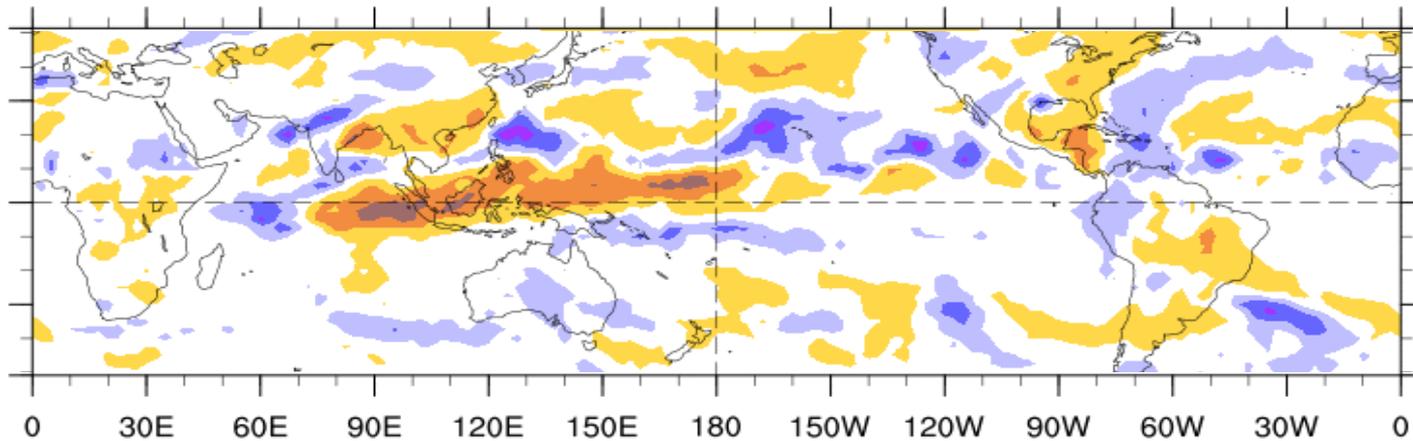


Week 2 - Valid: Sep 18, 2019 - Sep 24, 2019



7-Day Average OLR Anomaly

2019/09/16 - 2019/09/22



Outlook Review

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (July 12, 2018 Update)

- ENSO Alert System Status: Not Active
- ENSO-neutral is favored during the Northern Hemisphere fall 2019 (~75% chance), continuing through spring 2020 (55-60% chance).

MJO and other subseasonal tropical variability:

- The MJO amplified during the past week, moving from the Pacific to the Western Hemisphere.
- Model guidance shows the MJO signal stalling and weakening over the Western Hemisphere. This may be due to competing signals: The MJO propagating to the Indian Ocean/Maritime Continent and the developing stationary atmospheric response to the positive Indian Ocean Dipole (IOD) event.

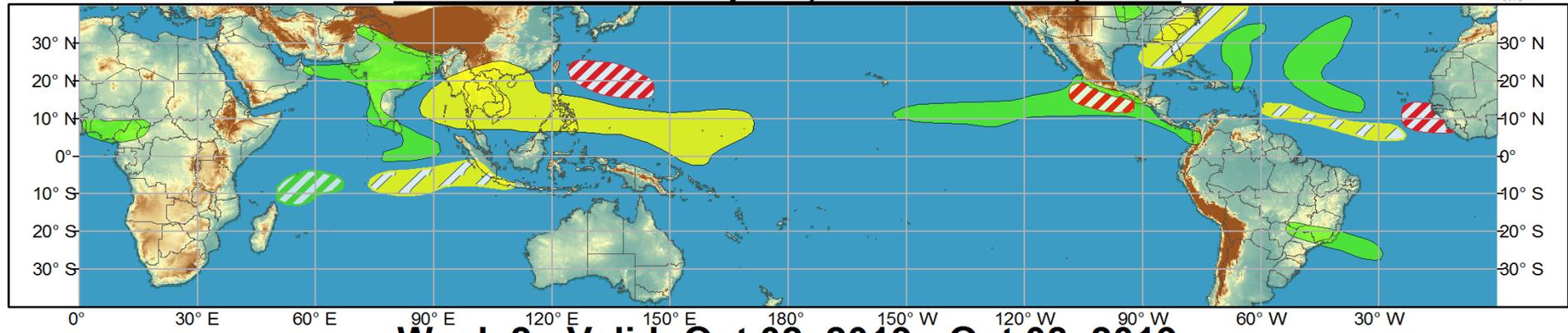
Extratropics:

- The MJO/IOD constructive interference may help keep the window open for Atlantic MDR tropical cyclone development over the next two weeks.
- A trough/ridge pattern over the western/eastern CONUS is typical this time of year during a Western Hemisphere MJO event. This pattern may change during October.

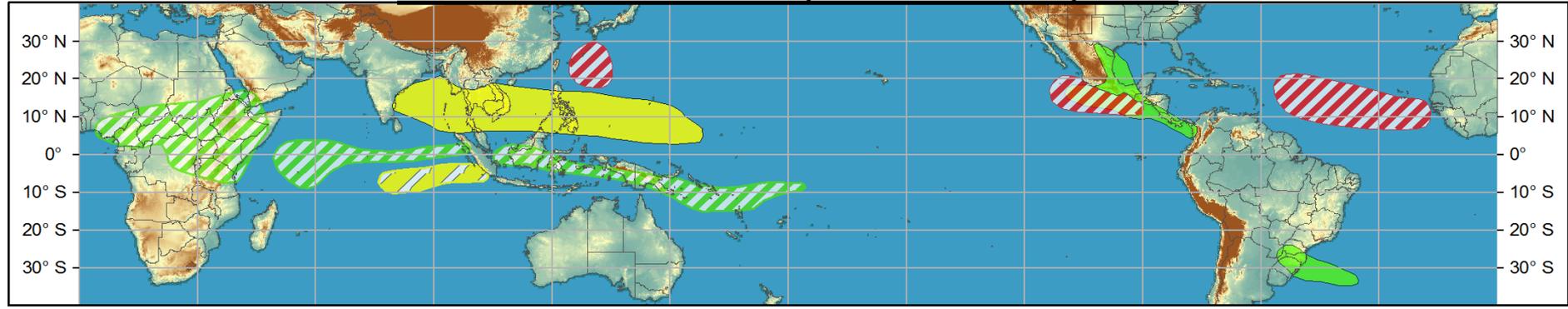


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Sep 25, 2019 - Oct 01, 2019



Week 2 - Valid: Oct 02, 2019 - Oct 08, 2019



Produced: 09/24/2019
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.
		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.

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

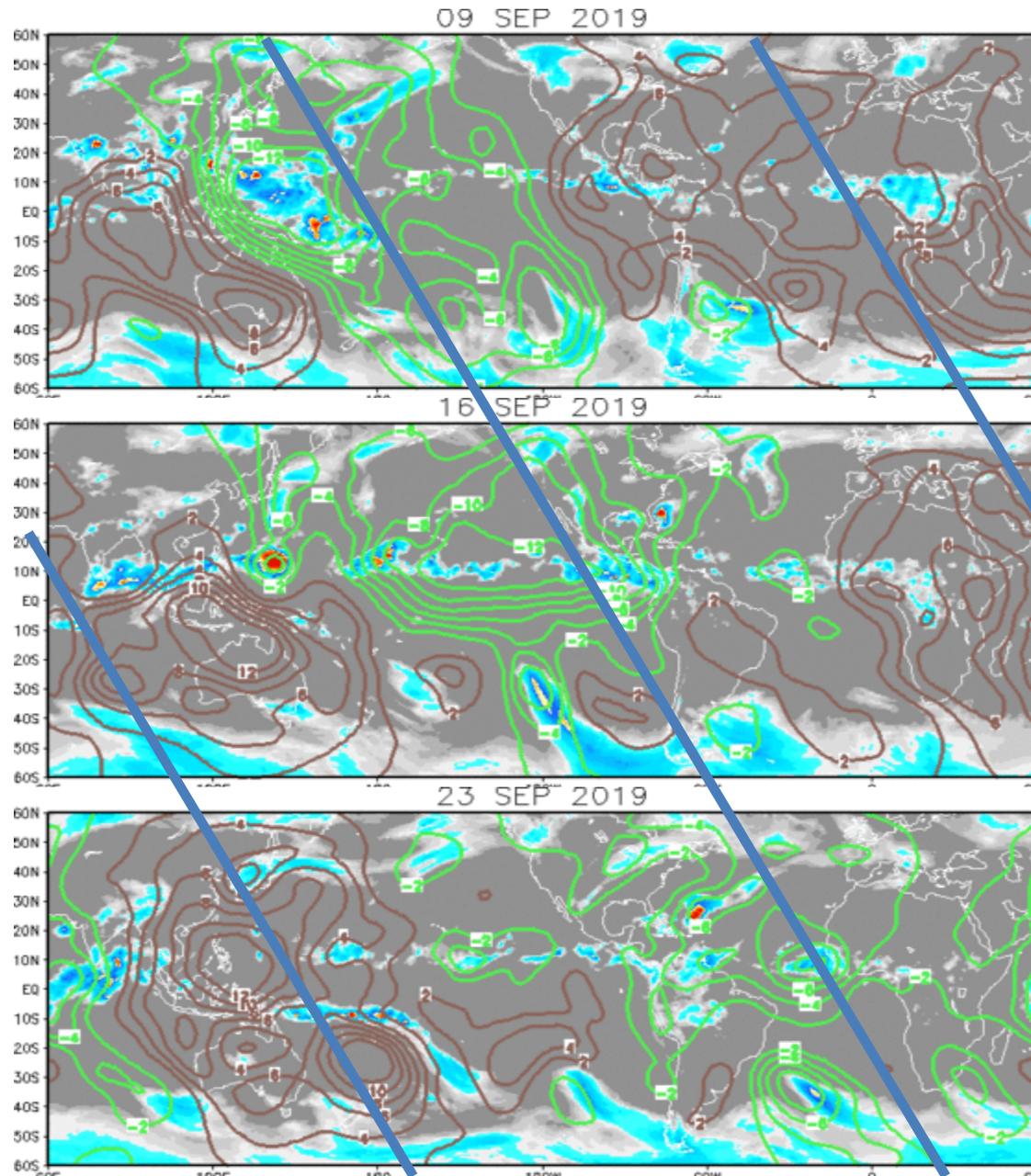
Green: Enhanced Divergence

Brown: Enhanced Convergence

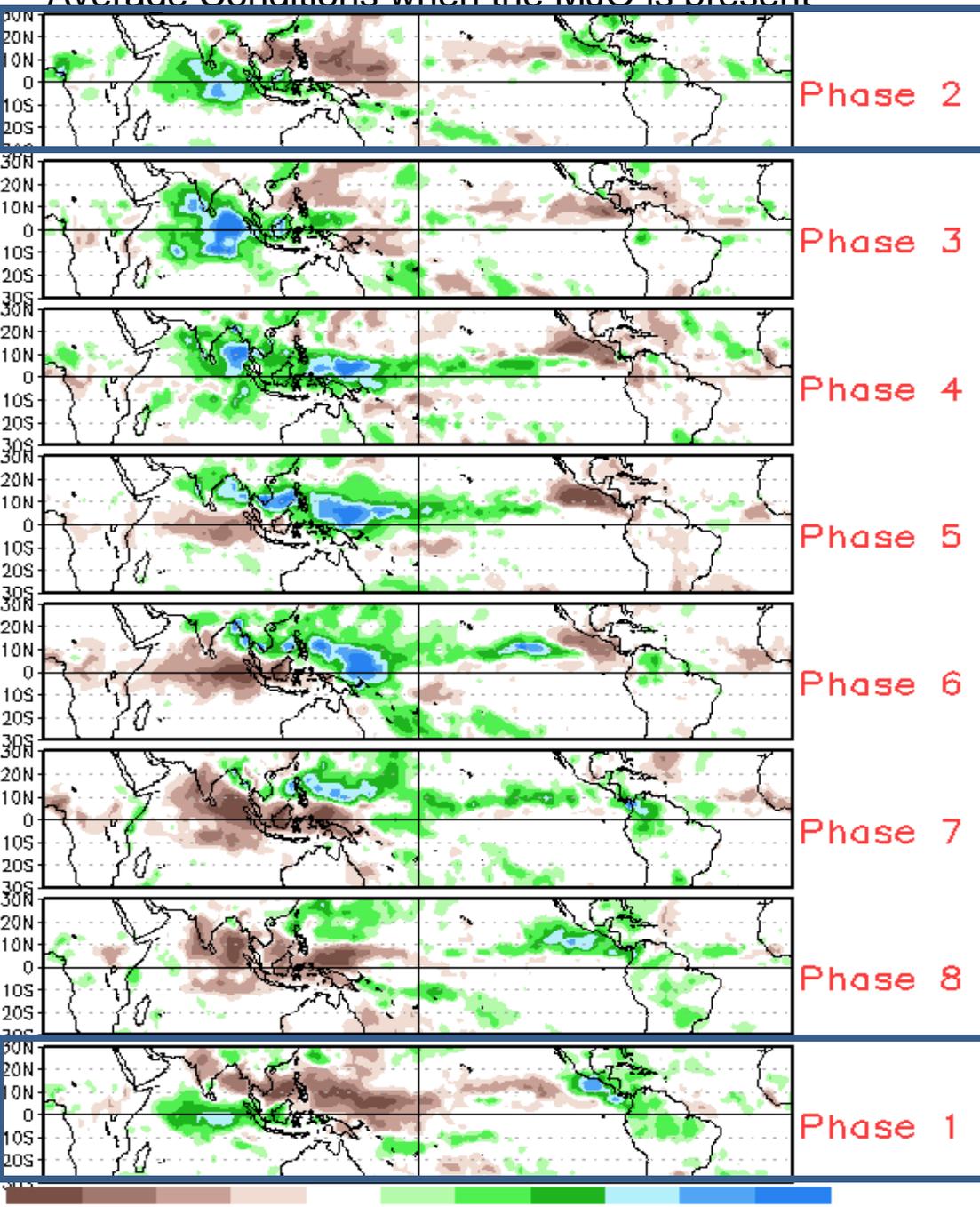
Robust wavenumber-1
asymmetry reflects a Pacific
MJO event. Low-level fields were
not in phase (weak RMM)

As the intraseasonal signal
crossed the Pacific, a robust low-
level westerly wind burst
developed, and ITCZ activity
picked up.

The upper-level enhanced signal
more recently was over the
Western Hemisphere.

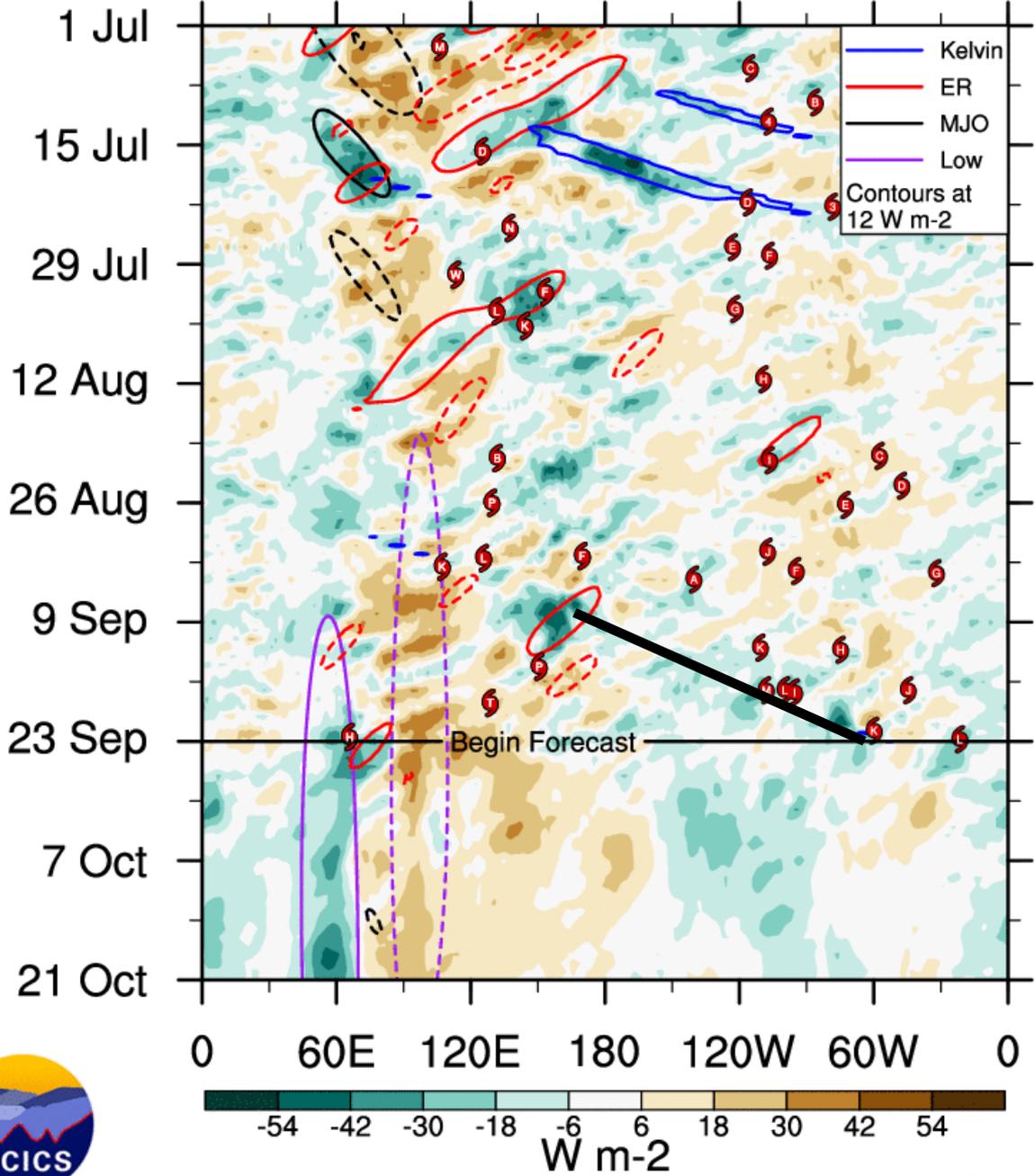


Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts 15S - 15N

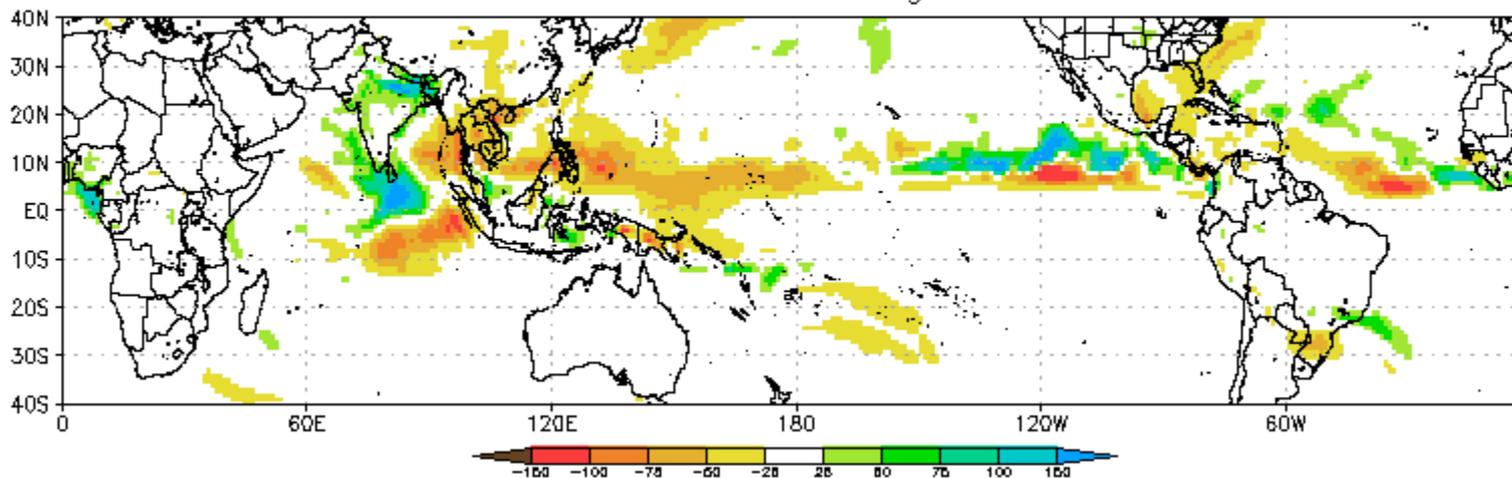


MJO, while not analyzed by the filter, does show up somewhat in the wide band OLR T-Lon plot

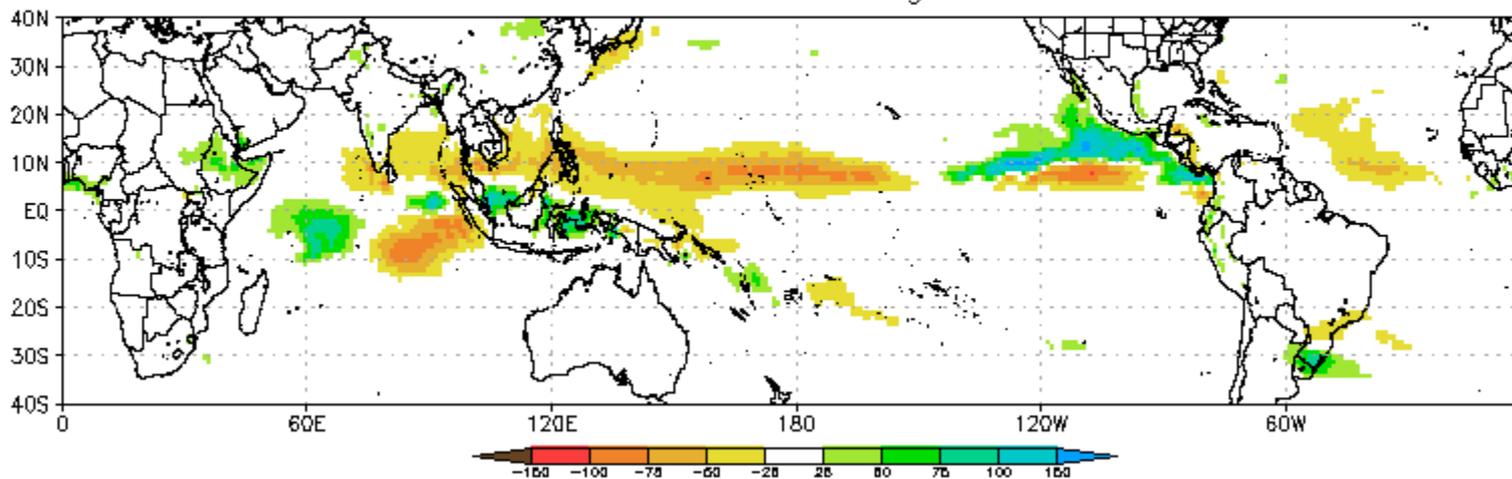
Low-frequency pattern reflecting positive IOD shows up in the obs and strengthens in the CFS



CFS Precipitation Anomalies (mm) Issued 23Sep2019
Week-1 Forecast Ending 01Oct2019

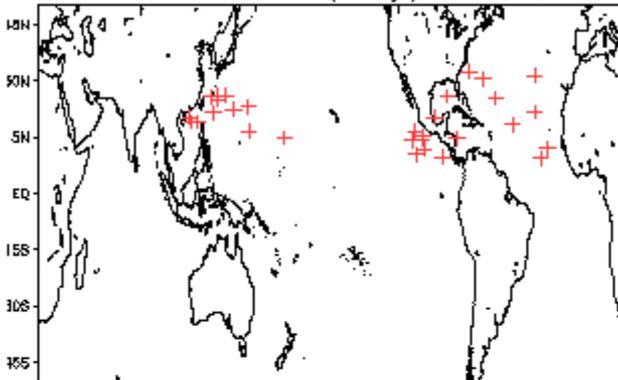


CFS Precipitation Anomalies (mm) Issued 23Sep2019
Week-2 Forecast Ending 08Oct2019

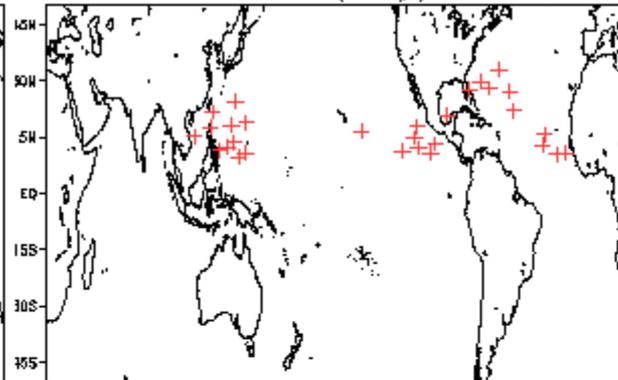


September Tropical Storm Formation by MJO phase

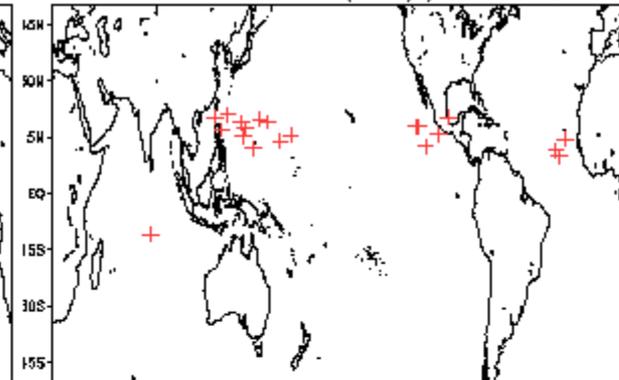
Phase 1 (81 days) 31 storms



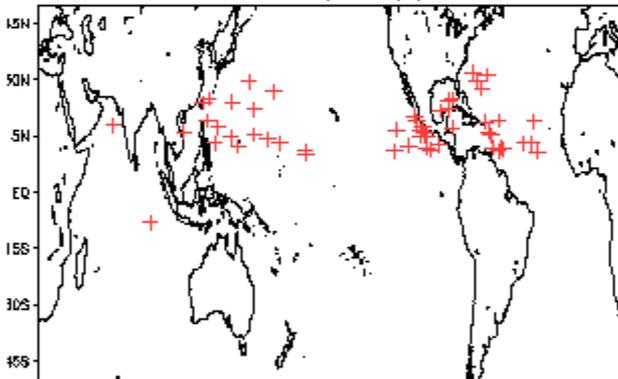
Phase 4 (70 days) 30 storms



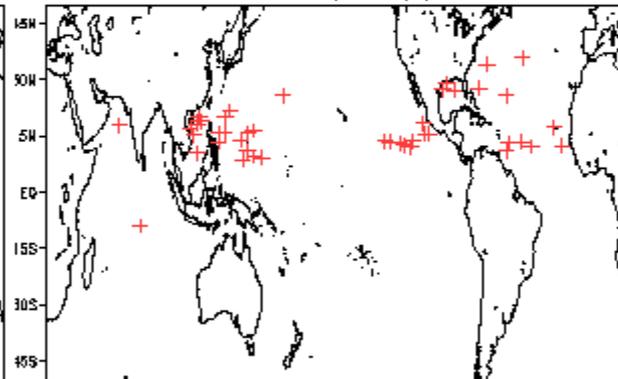
Phase 7 (38 days) 22 storms



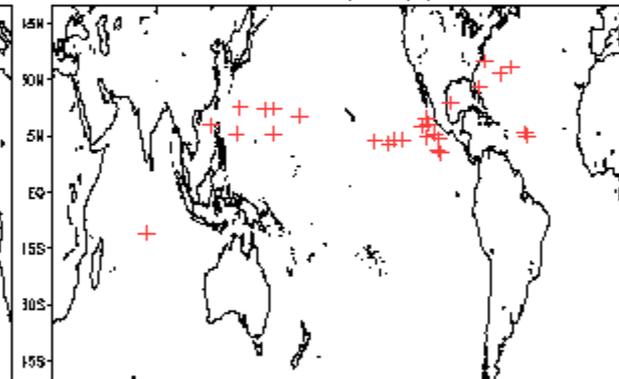
Phase 2 (122 days) 56 storms



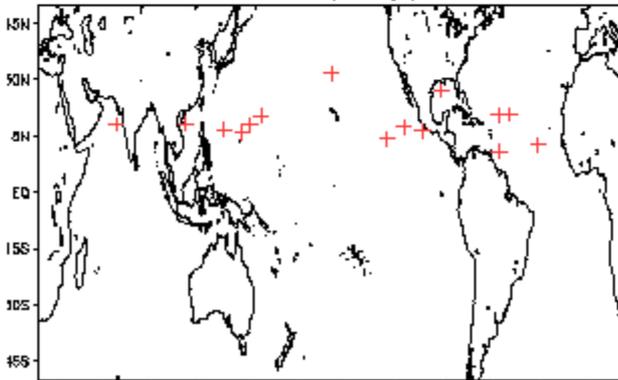
Phase 5 (106 days) 45 storms



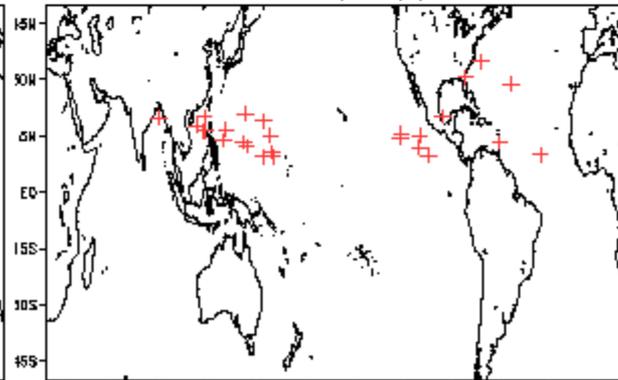
Phase 8 (67 days) 29 storms



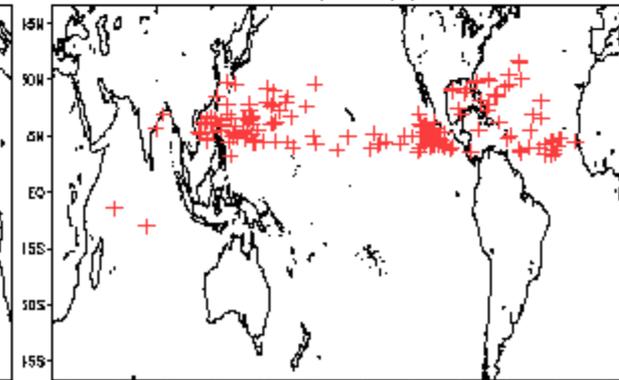
Phase 3 (51 days) 16 storms

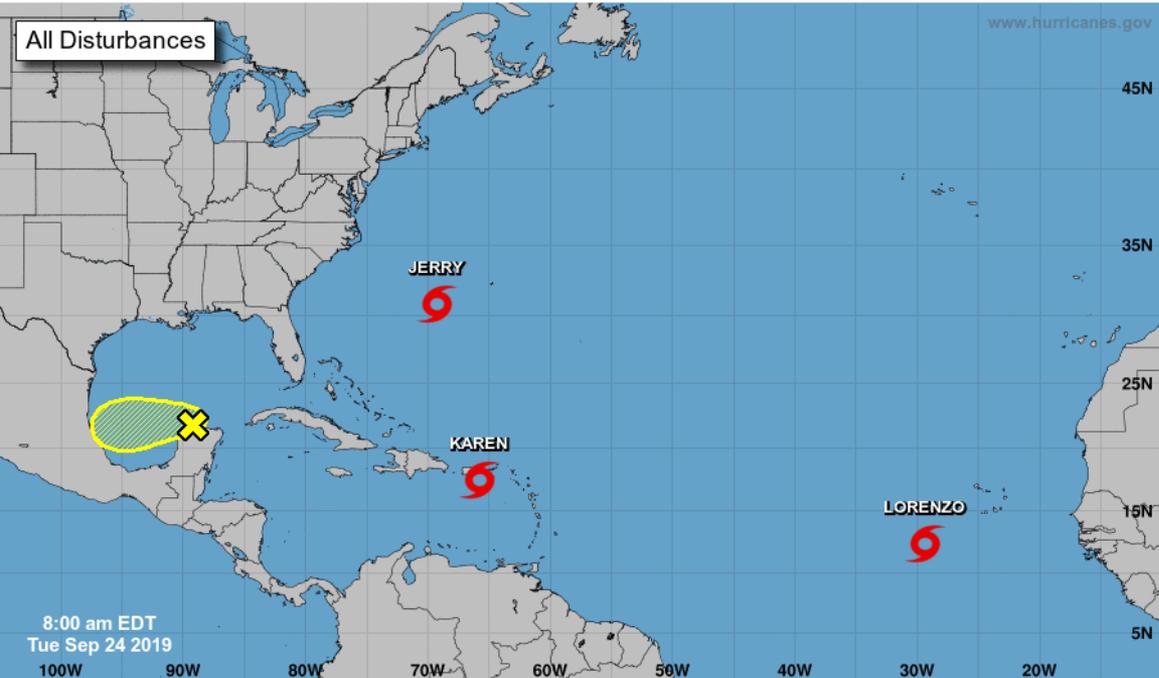


Phase 6 (61 days) 27 storms



Null (393 days) 189 storms





All Disturbances

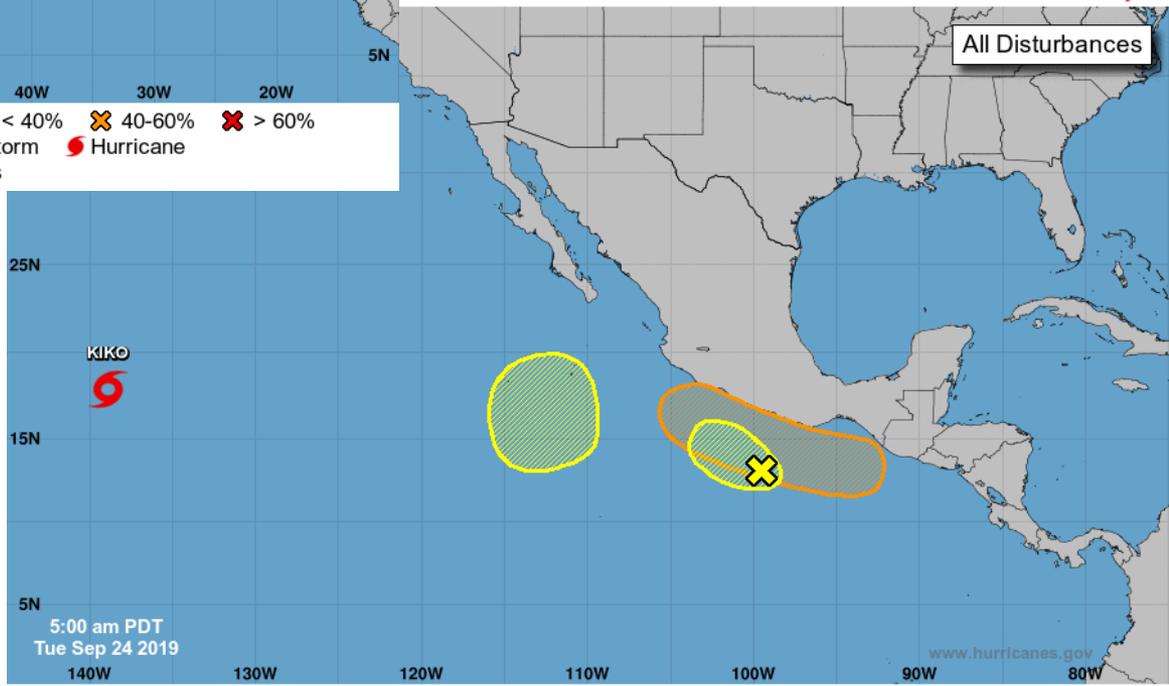
www.hurricanes.gov

8:00 am EDT
Tue Sep 24 2019

100W 90W 80W 70W 60W 50W 40W 30W 20W

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

Graphical Tropical Weather Outlook
National Hurricane Center Miami, Florida



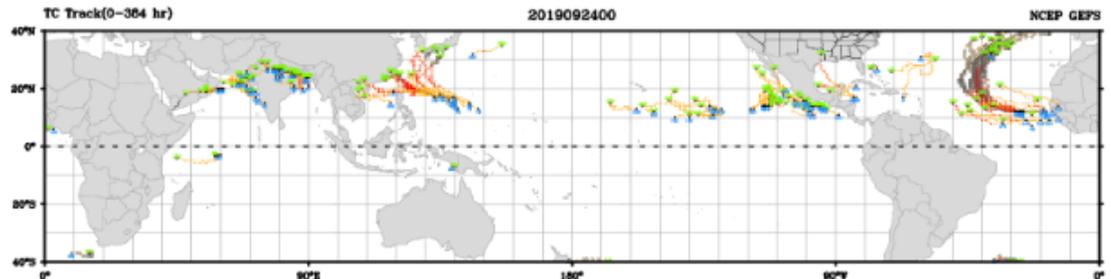
All Disturbances

5:00 am PDT
Tue Sep 24 2019

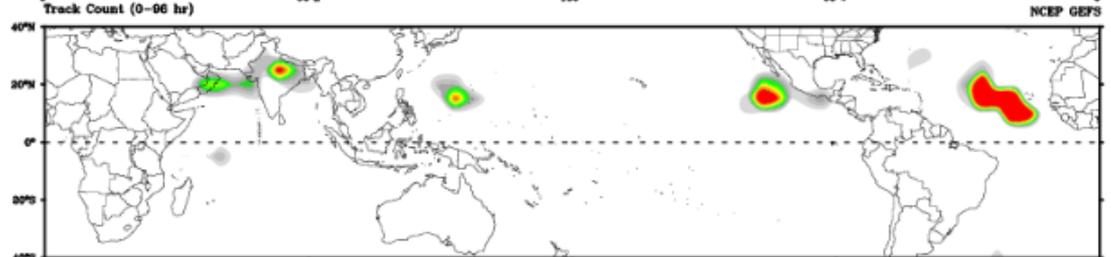
140W 130W 120W 110W 100W 90W 80W

Current Disturbances and Five-Day Cyclone Formation Chance:
 X < 40% X 40-60% X > 60%
 Tropical or Sub-Tropical Cyclone: ○ Depression ○ Storm ○ Hurricane
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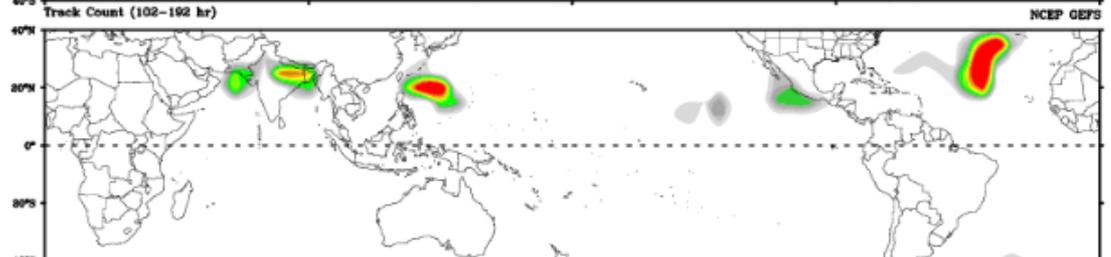
www.hurricanes.gov



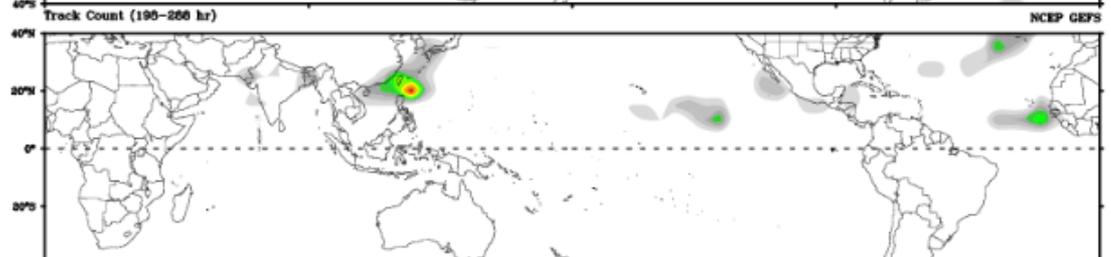
Days 1-4



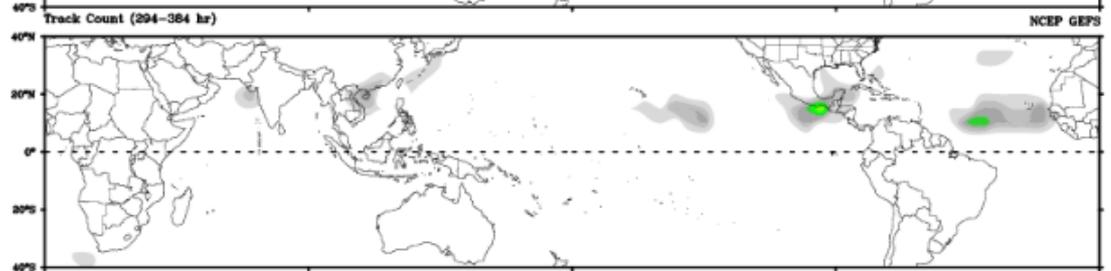
Day 5-8



Day 9-12

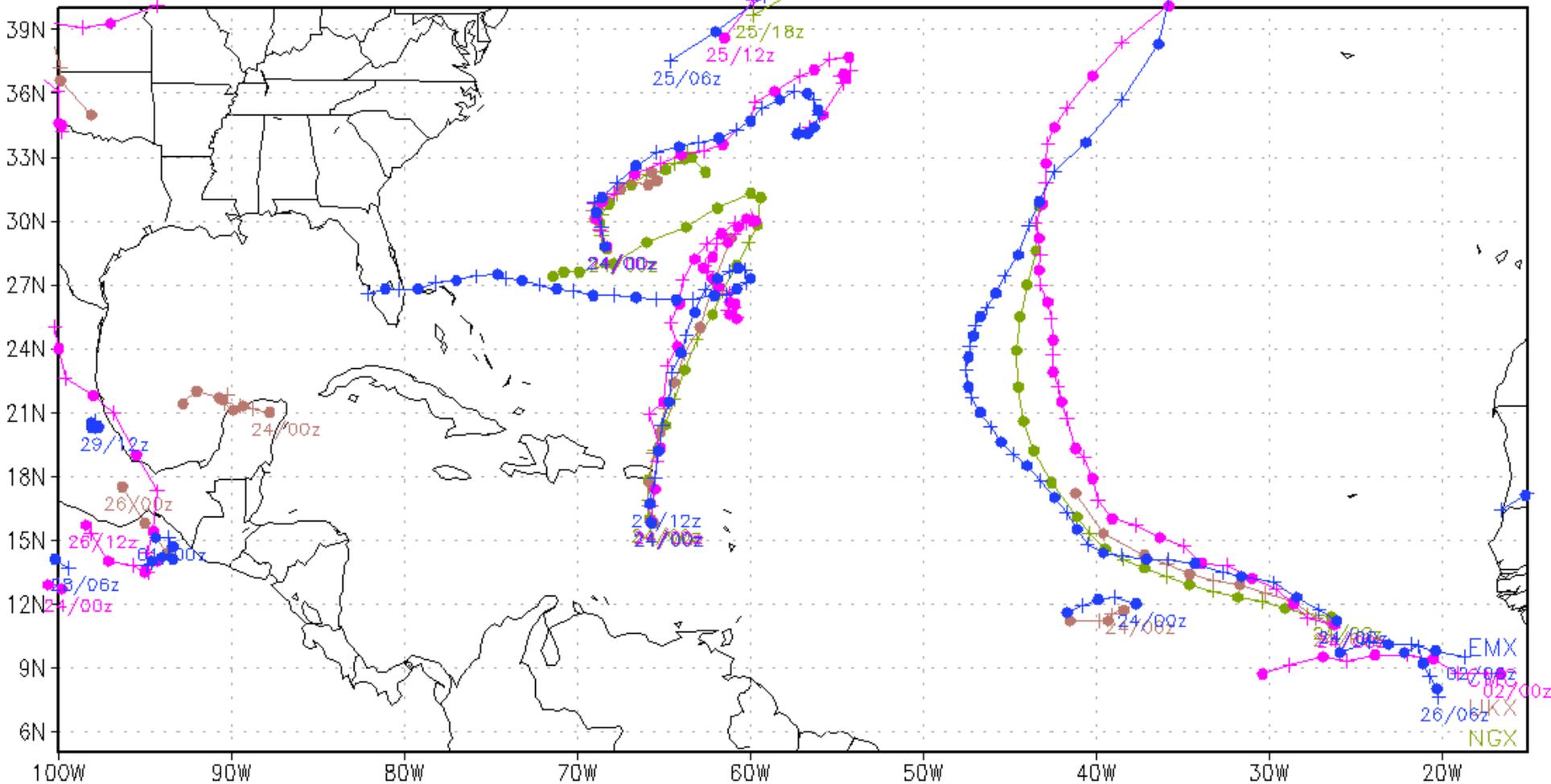


Day 13-15



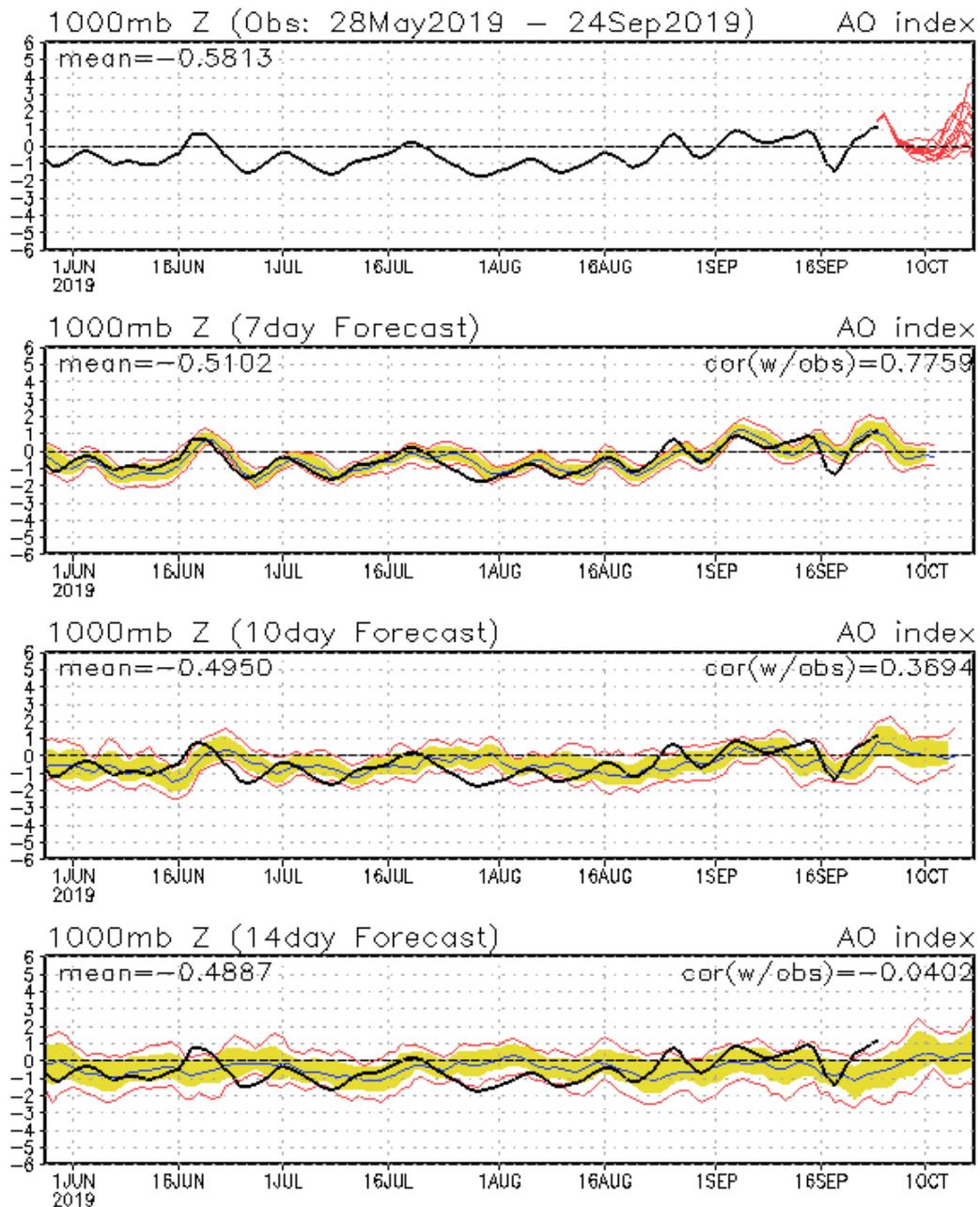
Model Forecast Storm Tracks

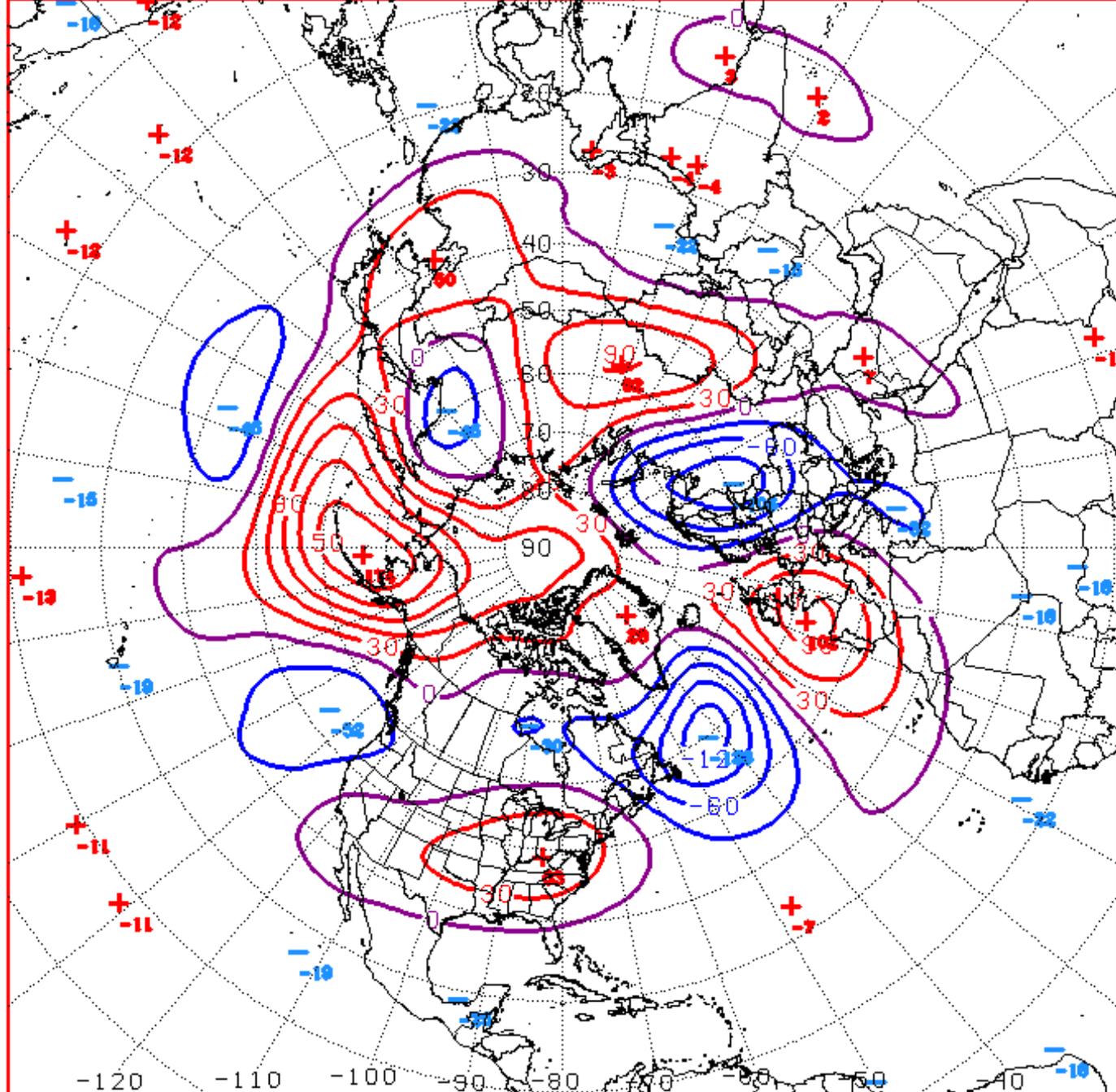
For forecast with initial time = 2019092400



Connections to U.S. Impacts

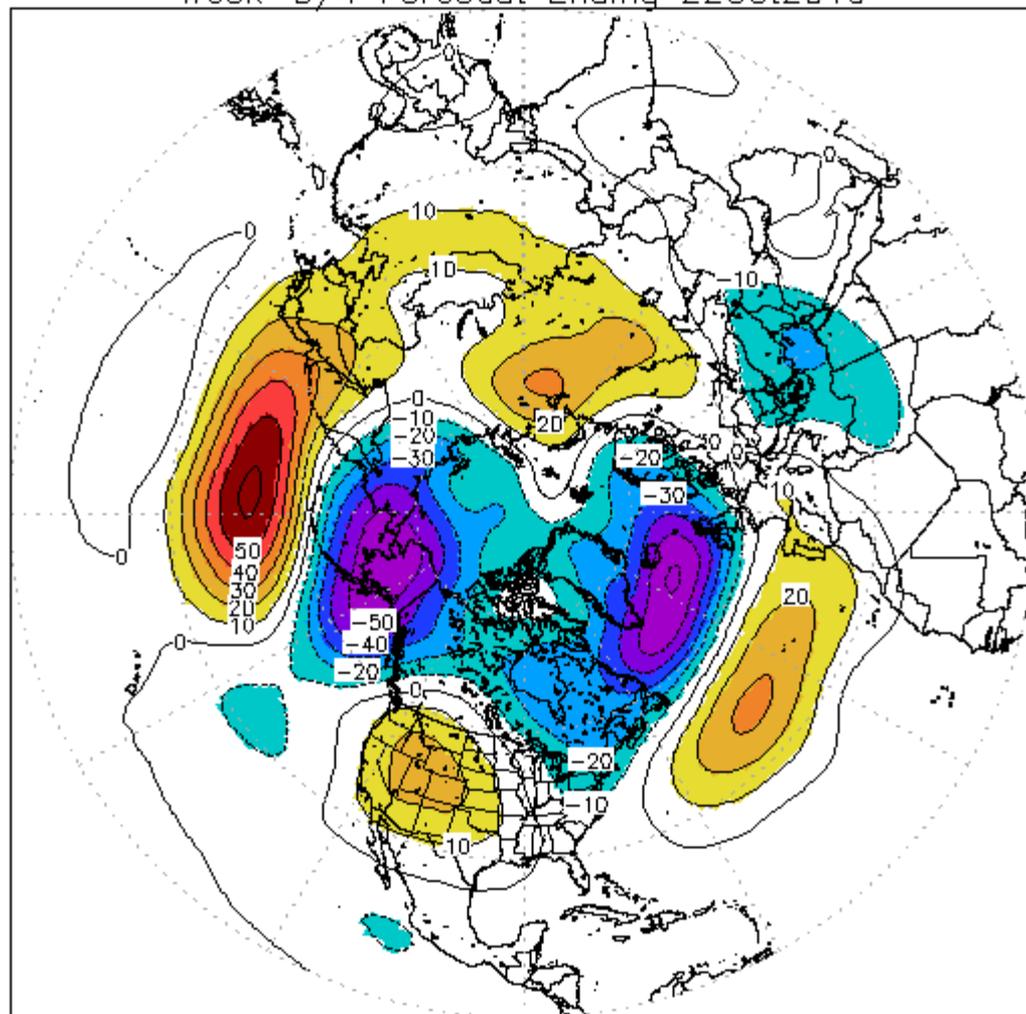
AO: Observed & ENSM forecasts



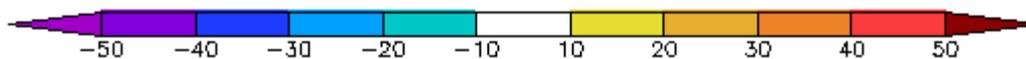


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE SEP 24 2019 1330 UTC CNTD OCT 05 2019

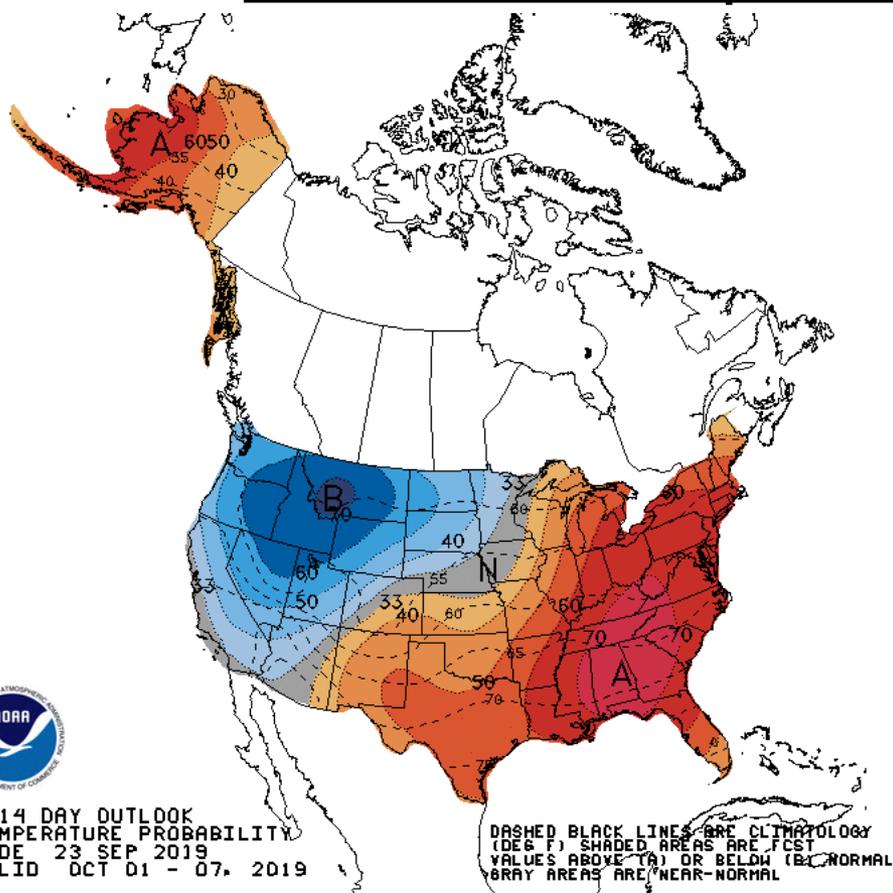
CFS 500hPa Height Anomalies Issued 23Sep2019
Week-3/4 Forecast Ending 22Oct2019



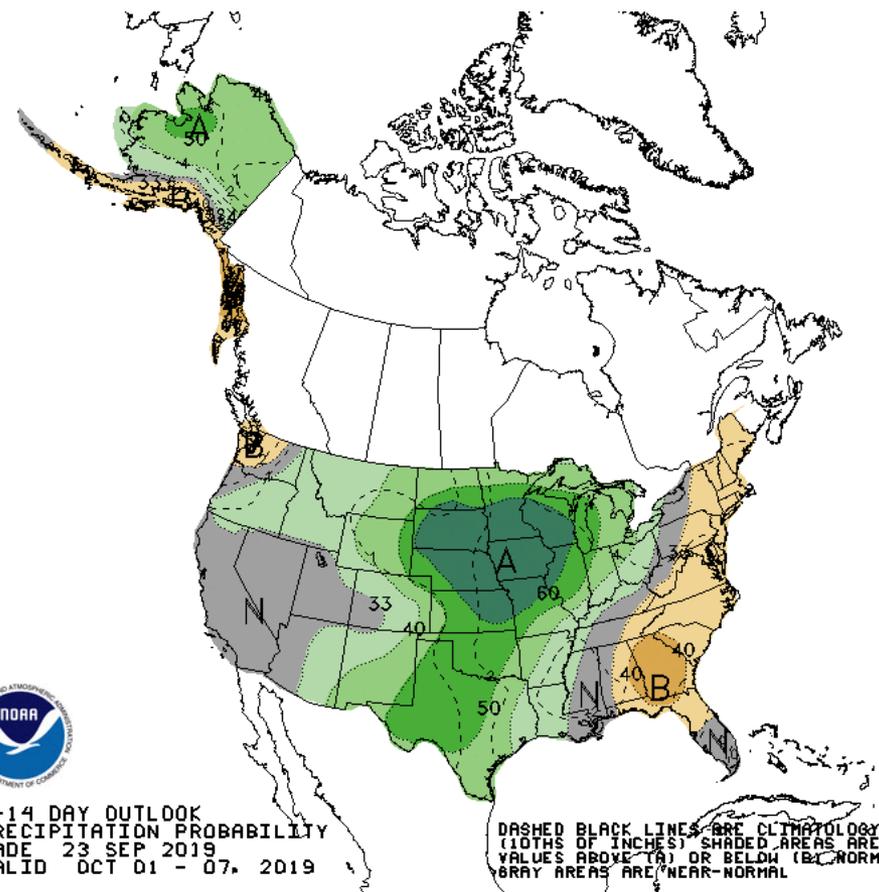
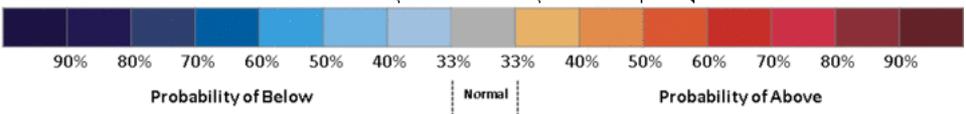
(meters)



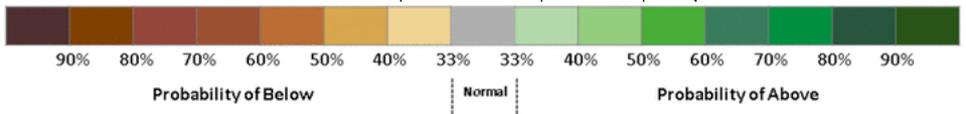
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 23 SEP 2019
VALID OCT 01 - 07, 2019



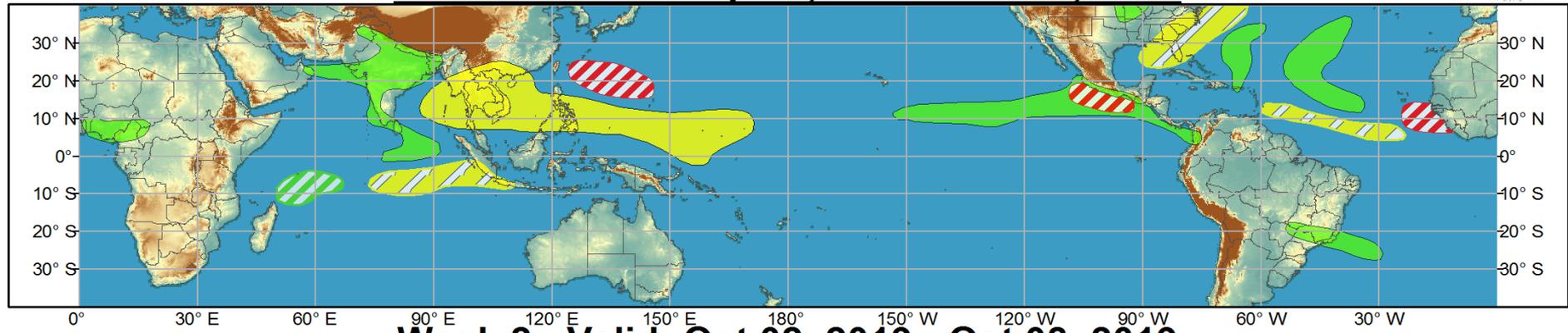
8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 23 SEP 2019
VALID OCT 01 - 07, 2019



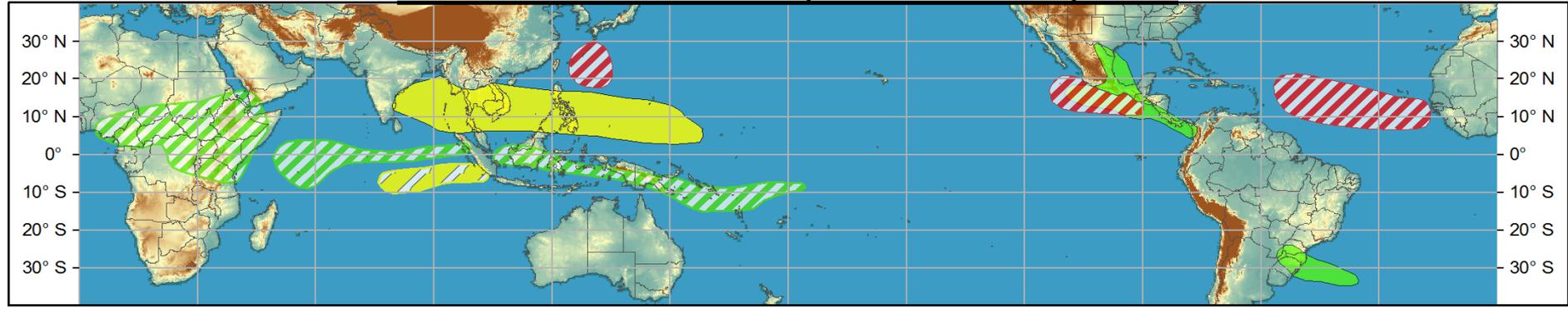


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