

Global Tropics Hazards And Benefits Outlook

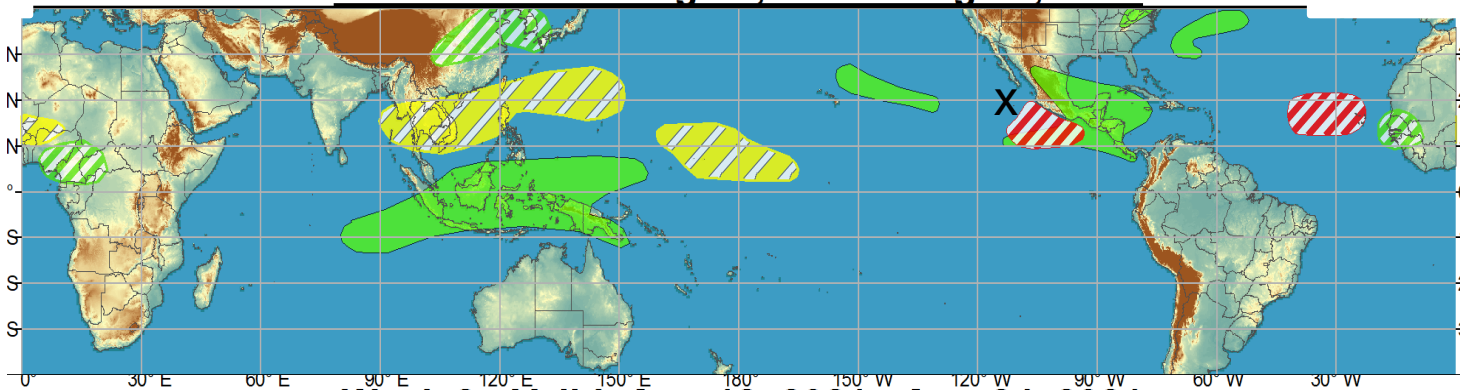
8/24/2021

Brad Pugh

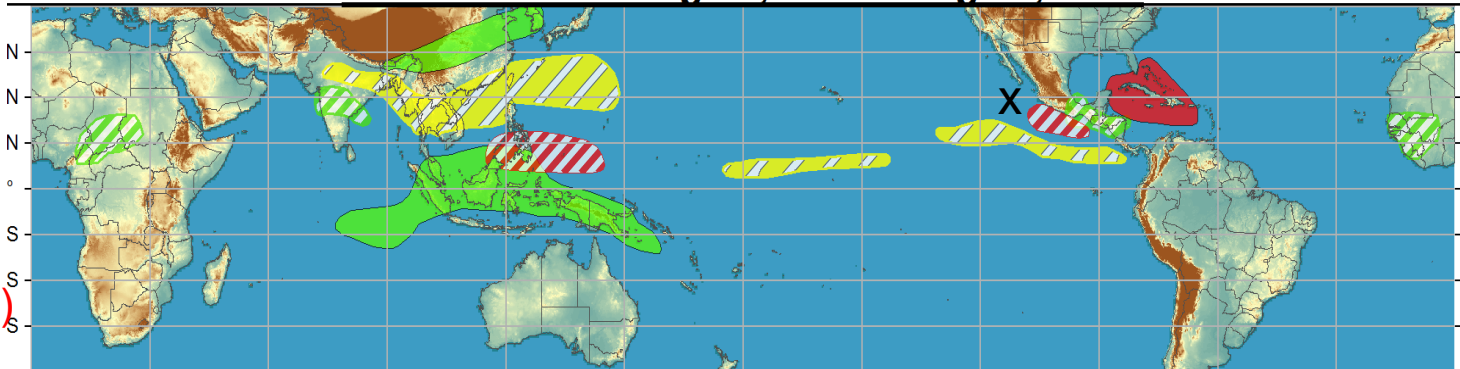
Outline

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: Aug 18, 2021 - Aug 24, 2021

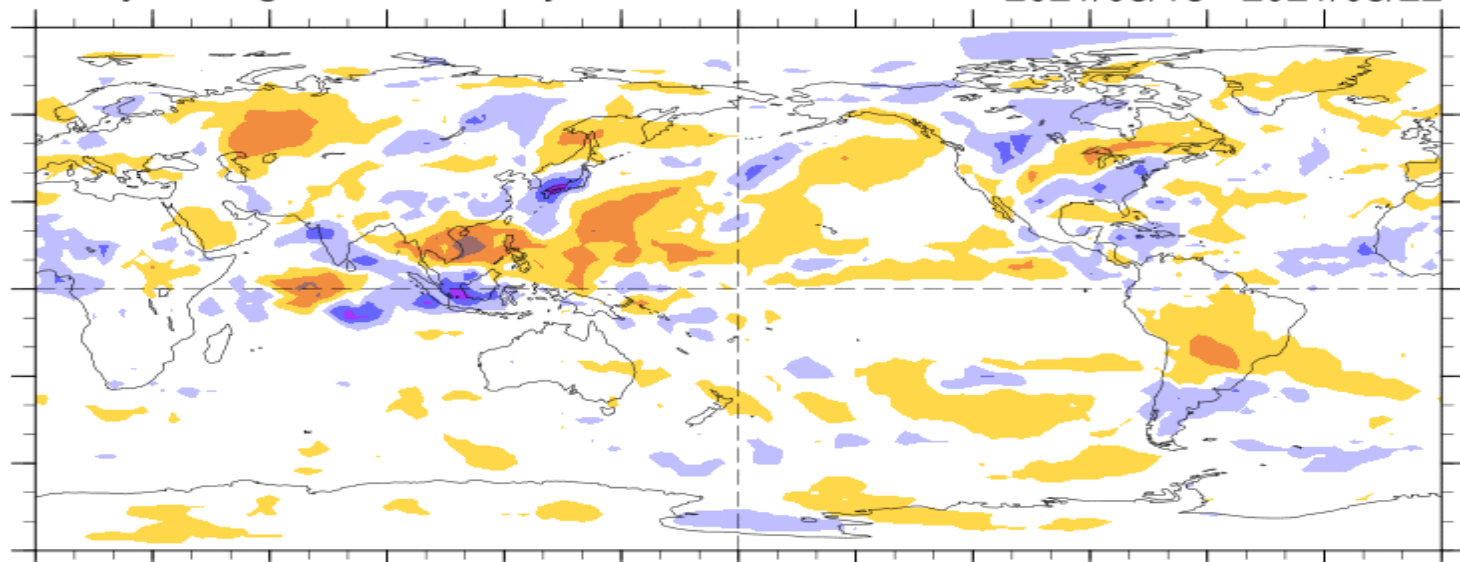


Week 2 - Valid: Aug 18, 2021 - Aug 24, 2021



7-Day Average OLR Anomaly

2021/08/16 - 2021/08/22



Outlook Review

X = Tropical Storm Marty

No TCs developed in the Atlantic basin

TS Henri (RI landfall)

Major Hurricane Grace (eastern Mexico landfall)

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

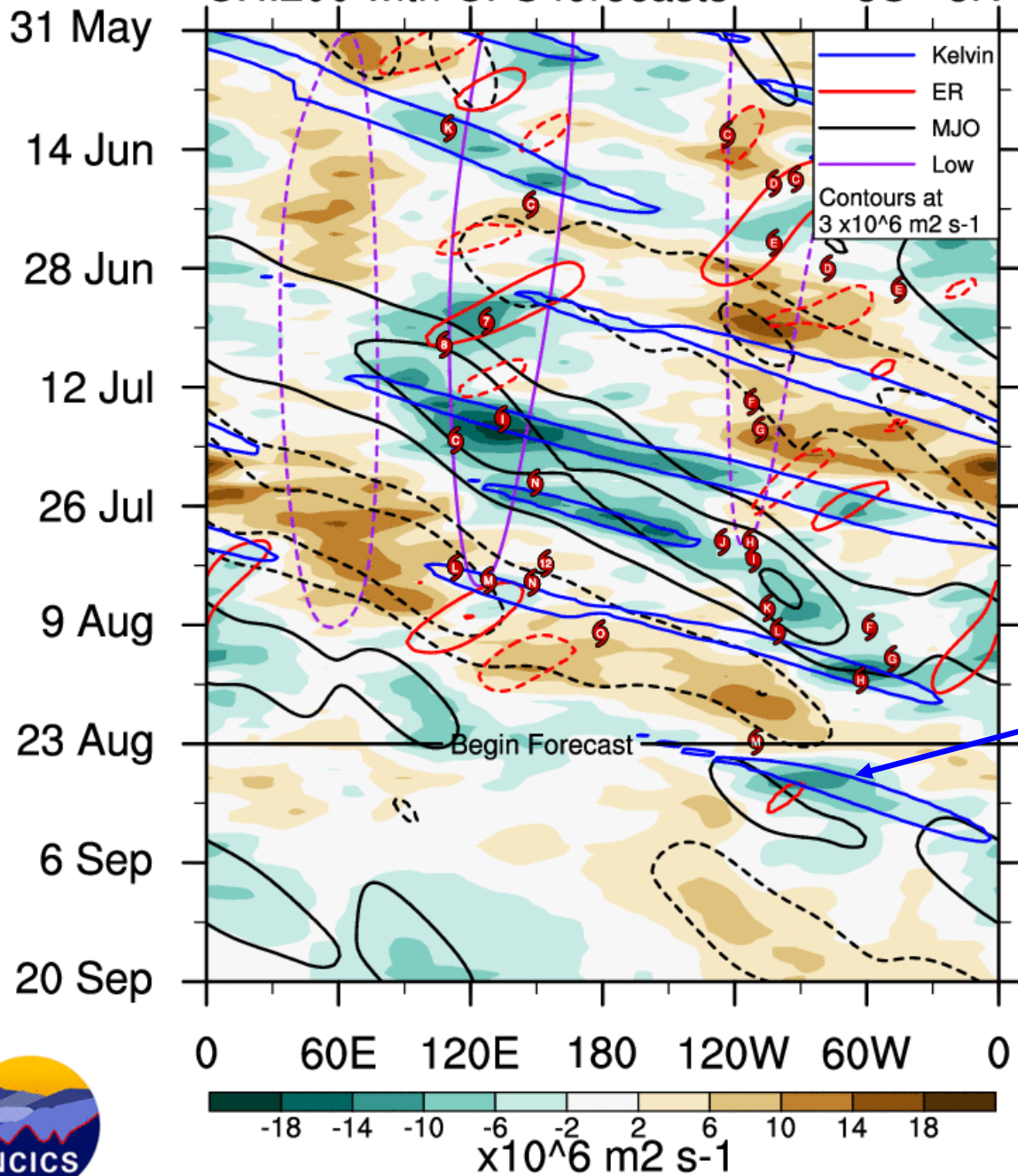
ENSO: (August 12, 2021 Update)

- ENSO Alert System Status: [La Niña Watch](#)
- ENSO-neutral is favored for the remainder of the Northern Hemisphere summer and probabilities of La Niña increasing to 60 percent by September-October-November.

MJO and other subseasonal tropical variability:

- Following a robust MJO during July and early August, the MJO recently weakened due to interference from other modes of tropical variability.
- Dynamical models are in good agreement that the MJO remains weak during the next two weeks.
- However, an atmospheric Kelvin wave is forecast to propagate eastward over the Western Hemisphere and increase chances of tropical cyclone development across the East Pacific and Atlantic basins.

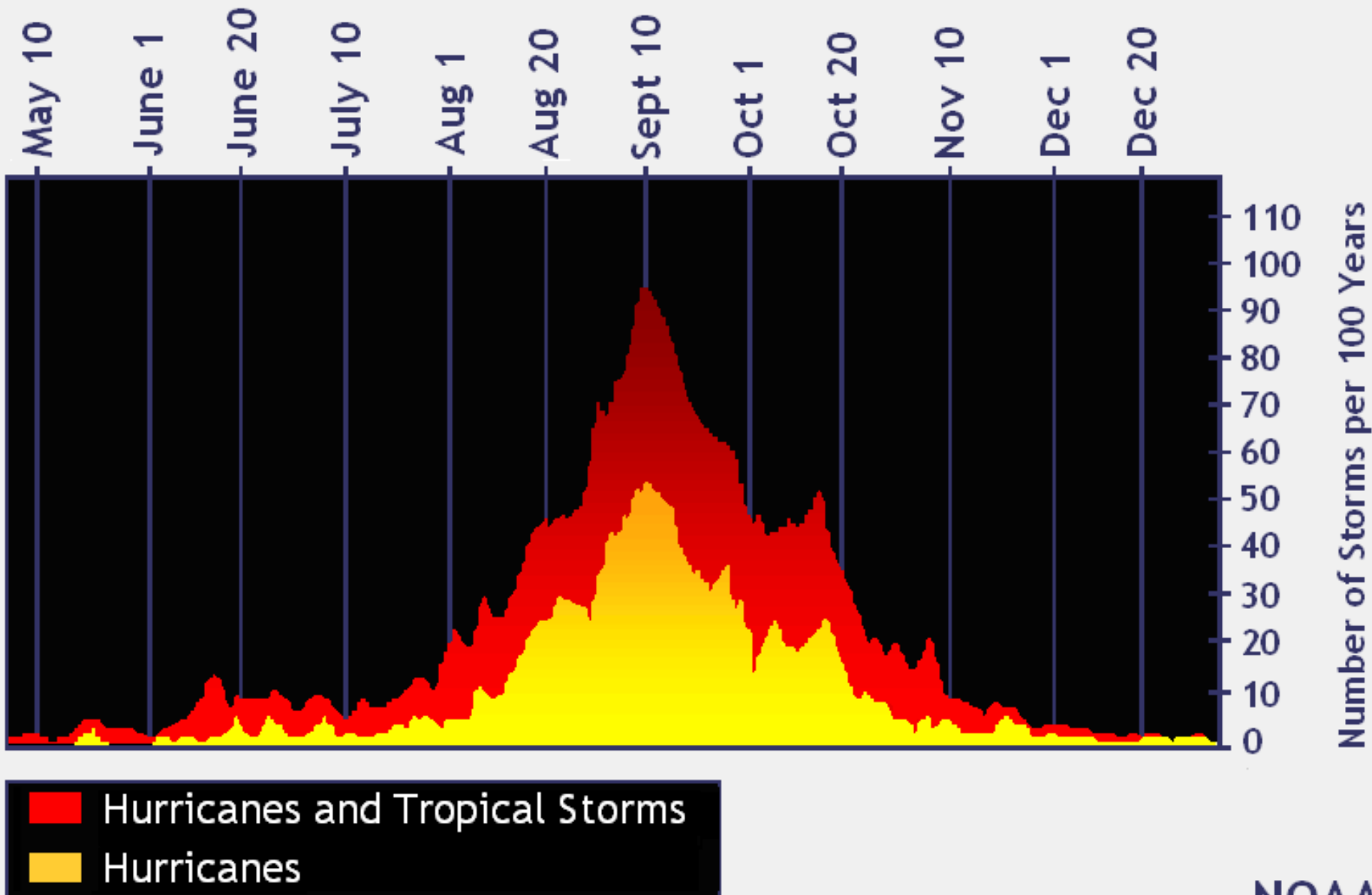
CHI200 with CFS forecasts 5S - 5N



Kelvin wave
(faster than the MJO)



Atlantic Basin

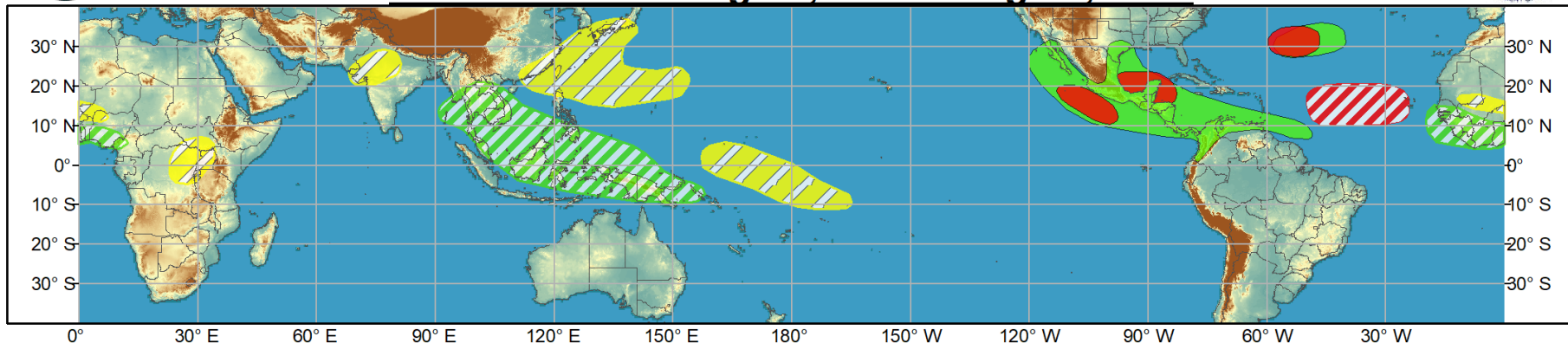




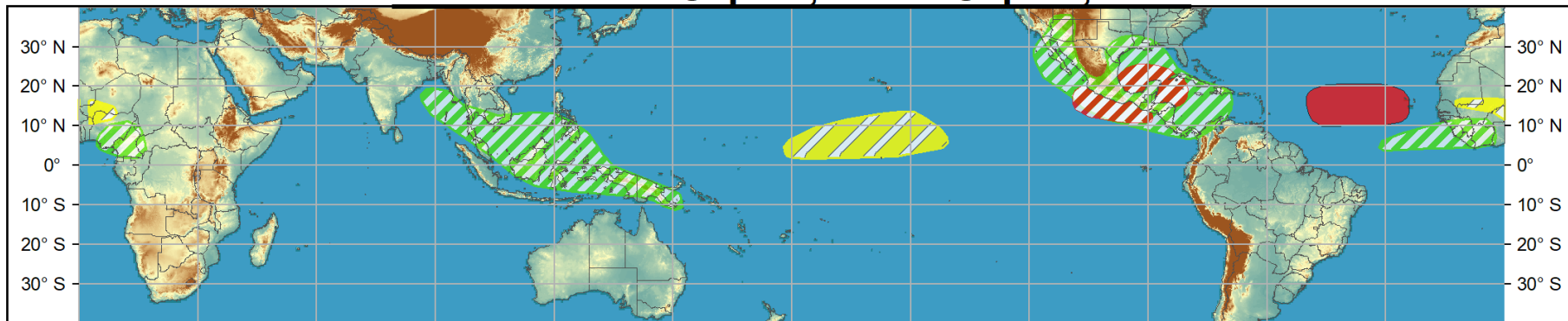
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Aug 25, 2021 - Aug 31, 2021



Week 2 - Valid: Sep 01, 2021 - Sep 07, 2021



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: 08/24/2021

Forecaster: Pugh

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.

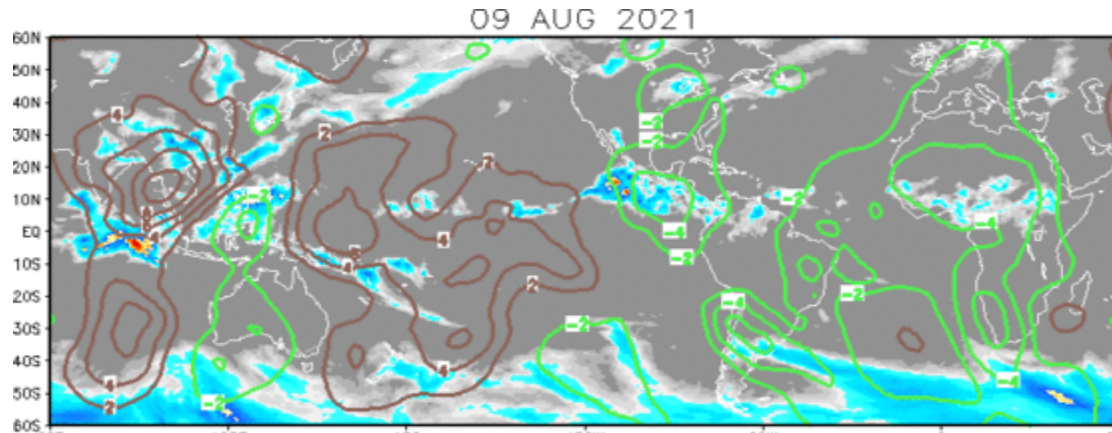


IR Satellite & 200-hpa Velocity Potential Anomalies

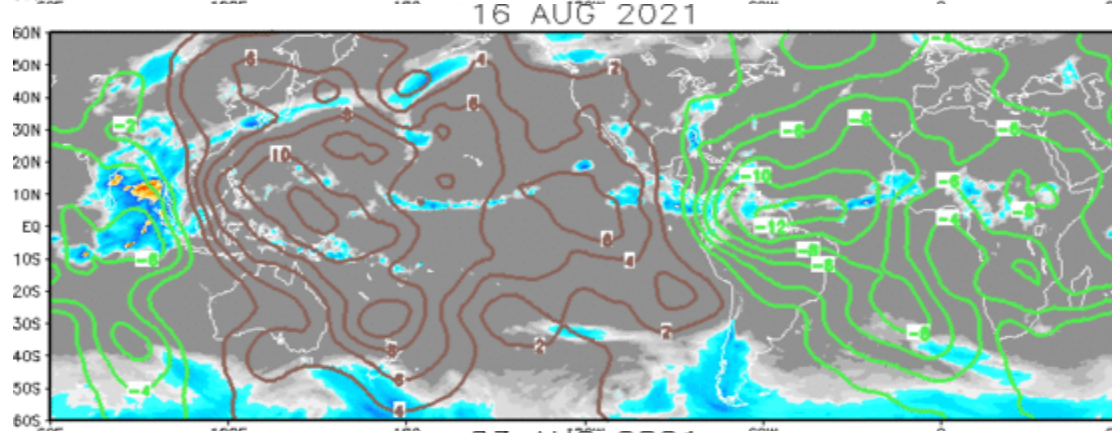
Green: Enhanced Divergence

Brown: Enhanced Convergence

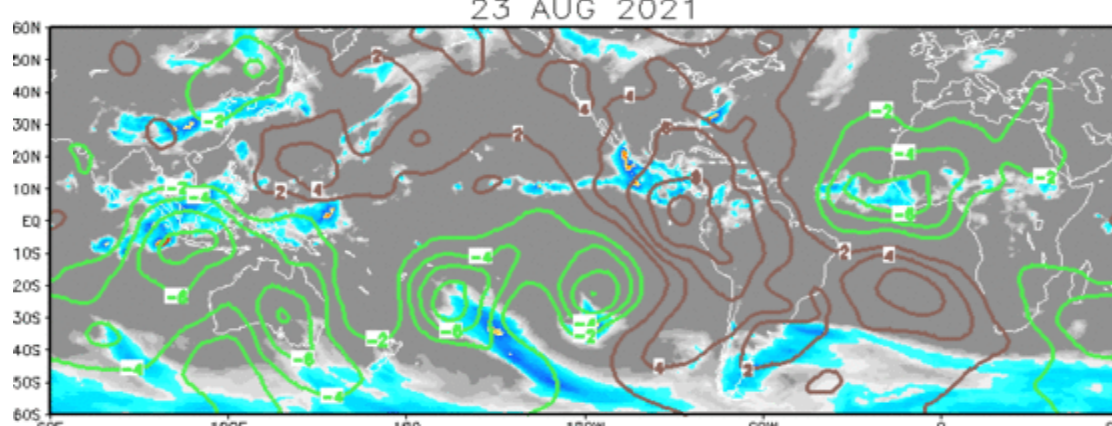
Enhanced phase over the Western Hemisphere, note Rossby wave interference over the Maritime Continent.



Anomalous upper-level divergence persists over the tropical Atlantic and Africa, but anomalous upper-level convergence shifting east of the Date Line.

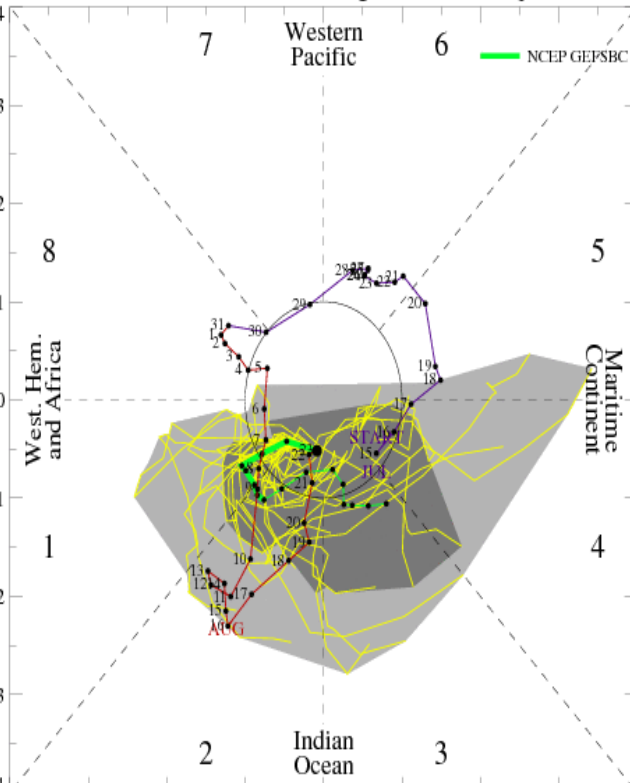


Spatial wave-1 pattern became less coherent by late August, consistent with a weakening MJO.

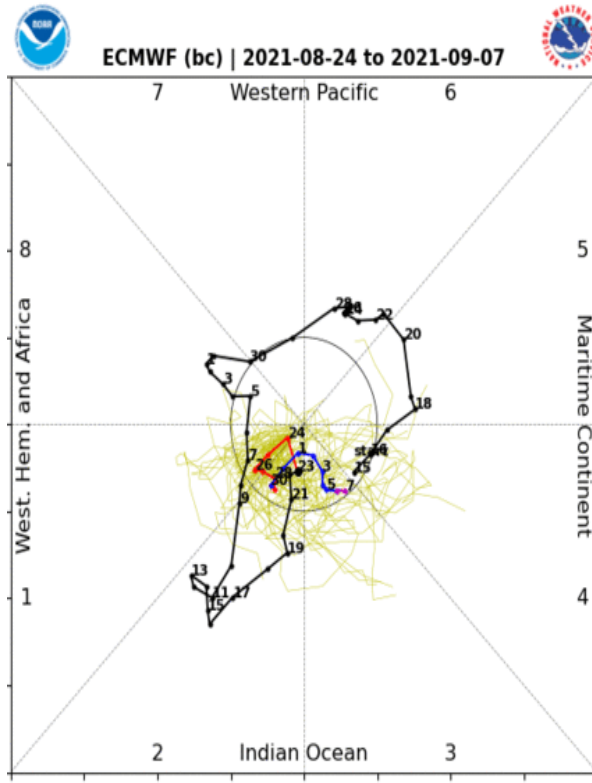


MJO Observation/Forecast

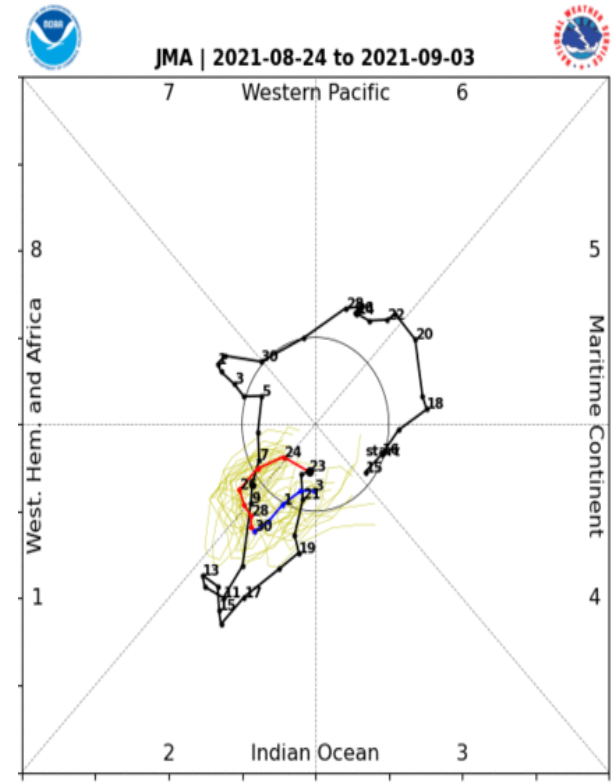
[RMM1, RMM2] forecast for Aug-24-2021 to Sep-07-2021



GEFS

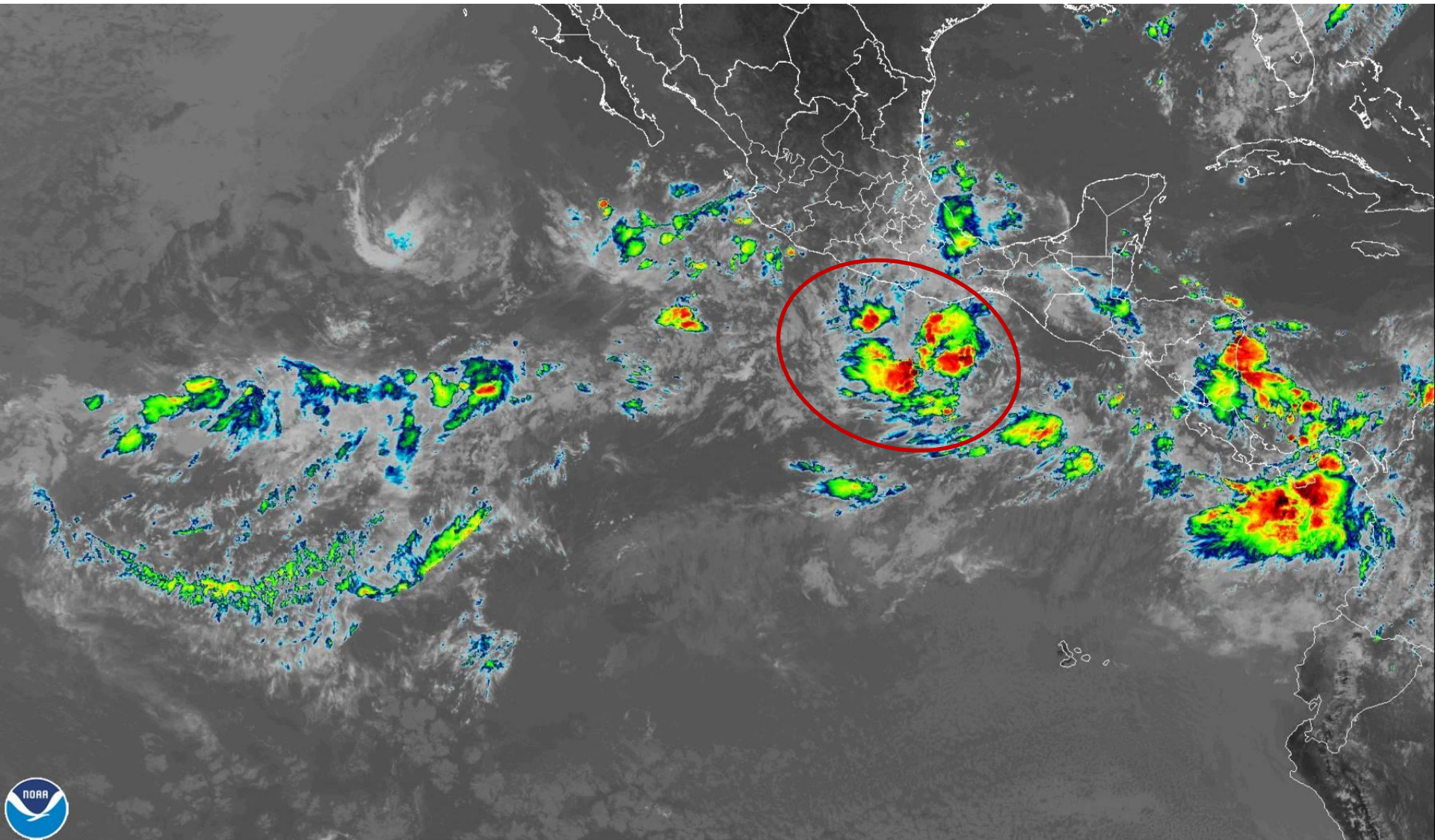


ECMWF



JMA

GEFS and ECWMF in good agreement that a weak MJO persists.



24 Aug 2021 17:00Z NOAA/NESDIS/STAR GOES-East Band 13



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



← Central Pacific

All Disturbances

35N

25N

15N

5N

5:00 am PDT
Tue Aug 24 2021

140W

130W

120W

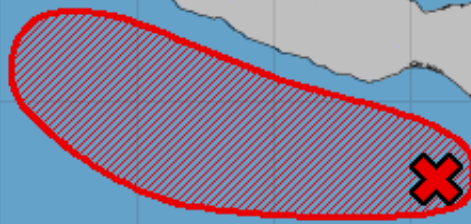
110W

100W

90W

80W

MARTY



www.hurricanes.gov

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

RUN TIME: 12Z AUG 24



Navigation icons: back, forward, zoom in, zoom out, settings, keyboard shortcuts

Run Time: 12z Aug 24

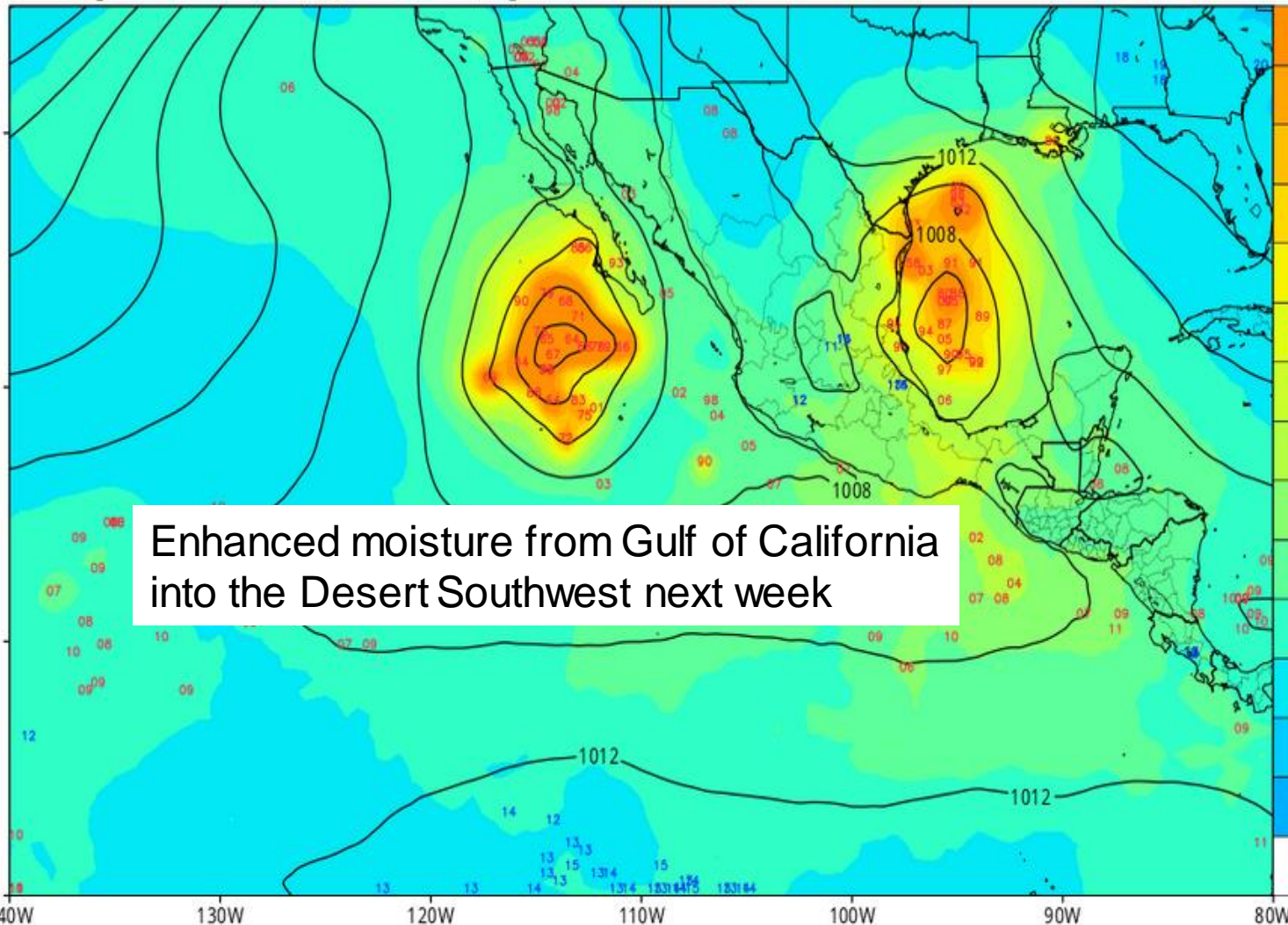
GEFS Mean MSLP (mb), Ensemble Member Pressure Centers (Lows: red | High: blue), & Normalized Spread (σ)

Init: 12z Aug 24 2021 Forecast Hour: [144] valid at 12z Mon, Aug 30 2021

TROPICALTIDBITS.COM

FORECAST TIME:

(+144 hr) 08:00AM Aug 30



Enhanced moisture from Gulf of California into the Desert Southwest next week

-72	-66	-60	-54
-48	-42	-36	-30
-24	-18	-12	-06
000	006	012	018
024	030	036	042
048	054	060	066
072	078	084	090
096	102	108	114
120	126	132	138
144	150	156	162
168	174	180	186
192	198	204	210
216	222	228	234
240	246	252	258
264	270	276	282
288	294	300	306
312	318	324	330

REGIONS

Prev. Run ← Next Run →

FORECAST GIF TREND GIF



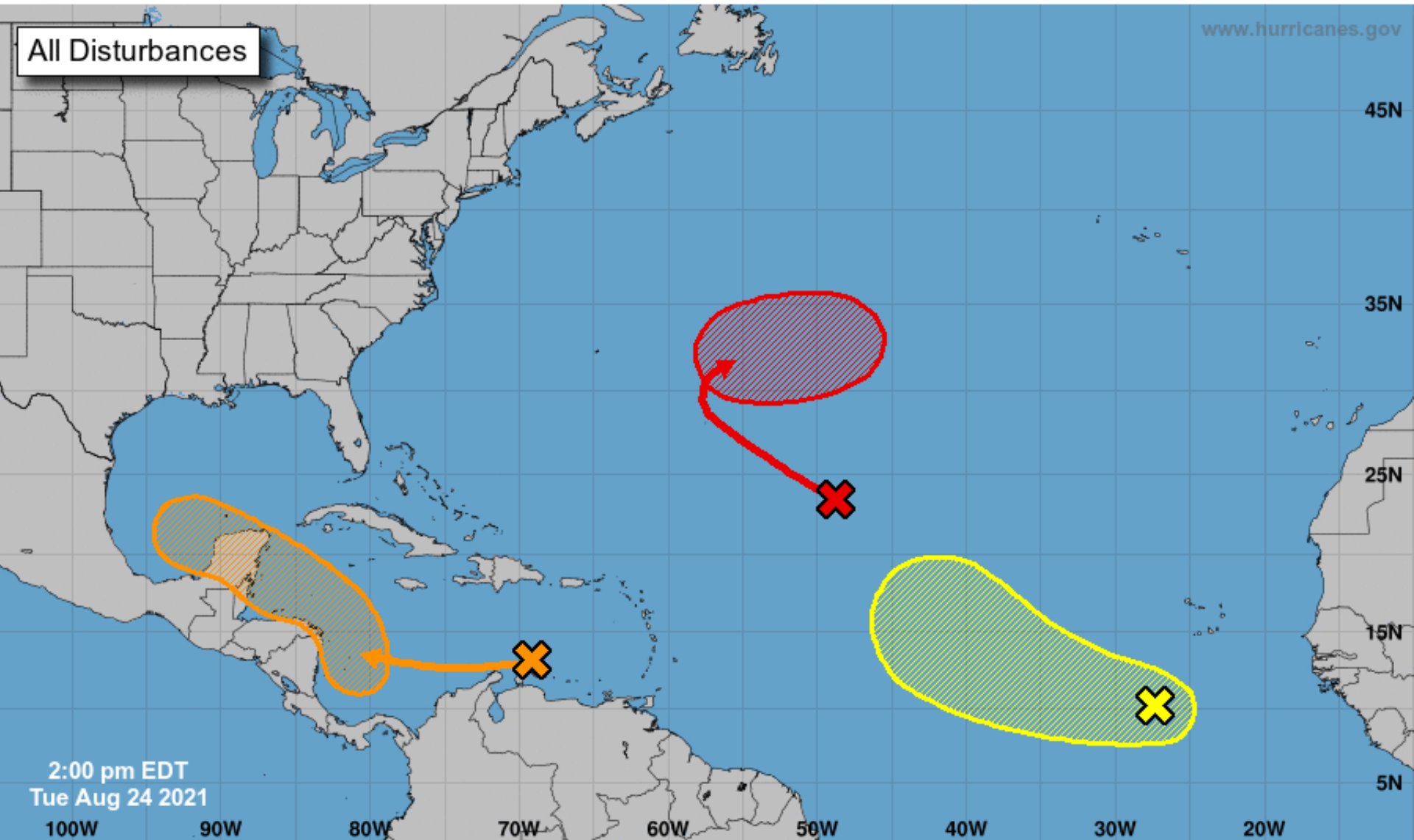
Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



www.hurricanes.gov

All Disturbances

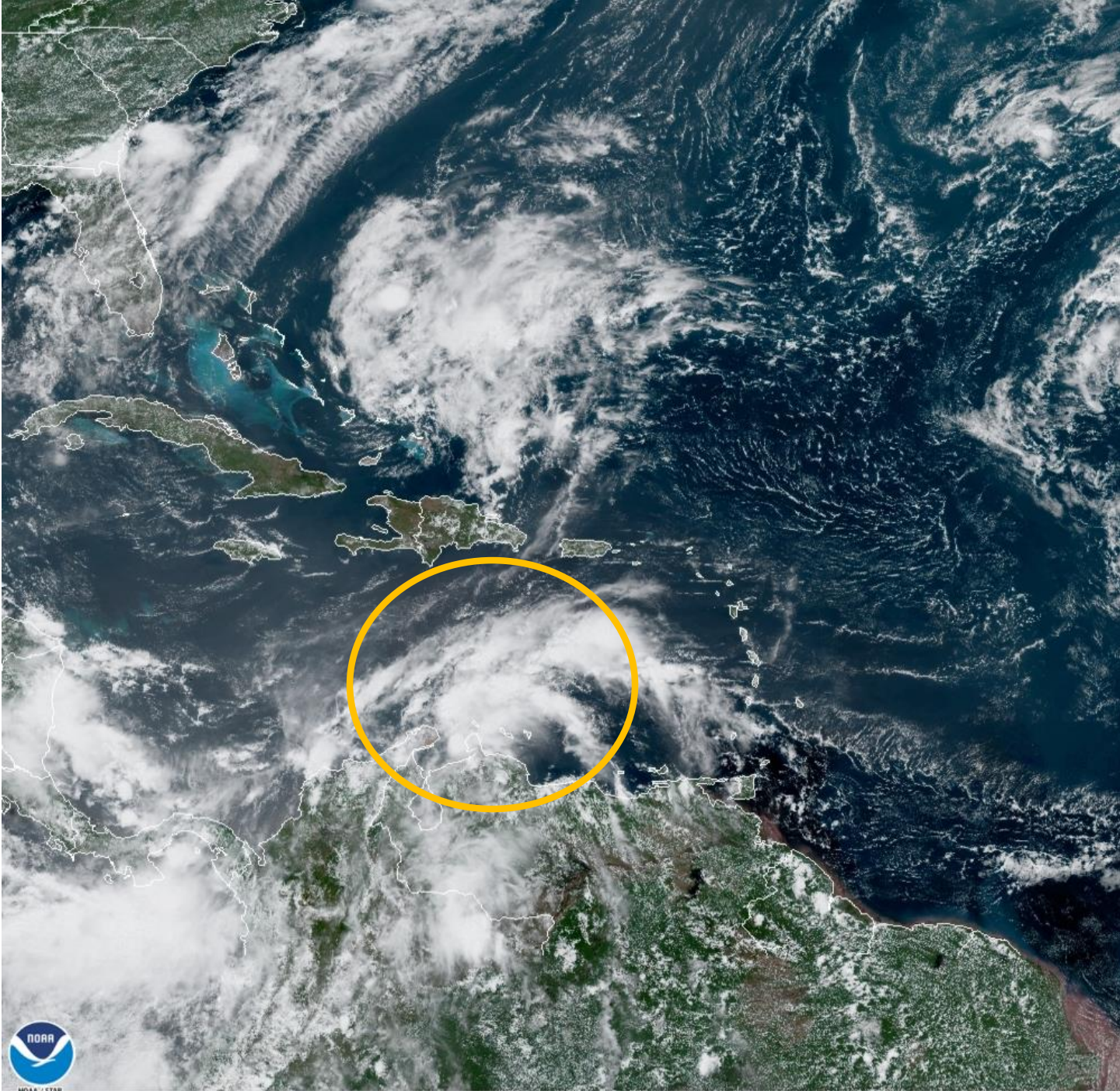


2:00 pm EDT
Tue Aug 24 2021

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



NOAA / STAR

24 Aug 2021 17:30Z NOAA/NESDIS/STAR GOES-East GEOCOLOR

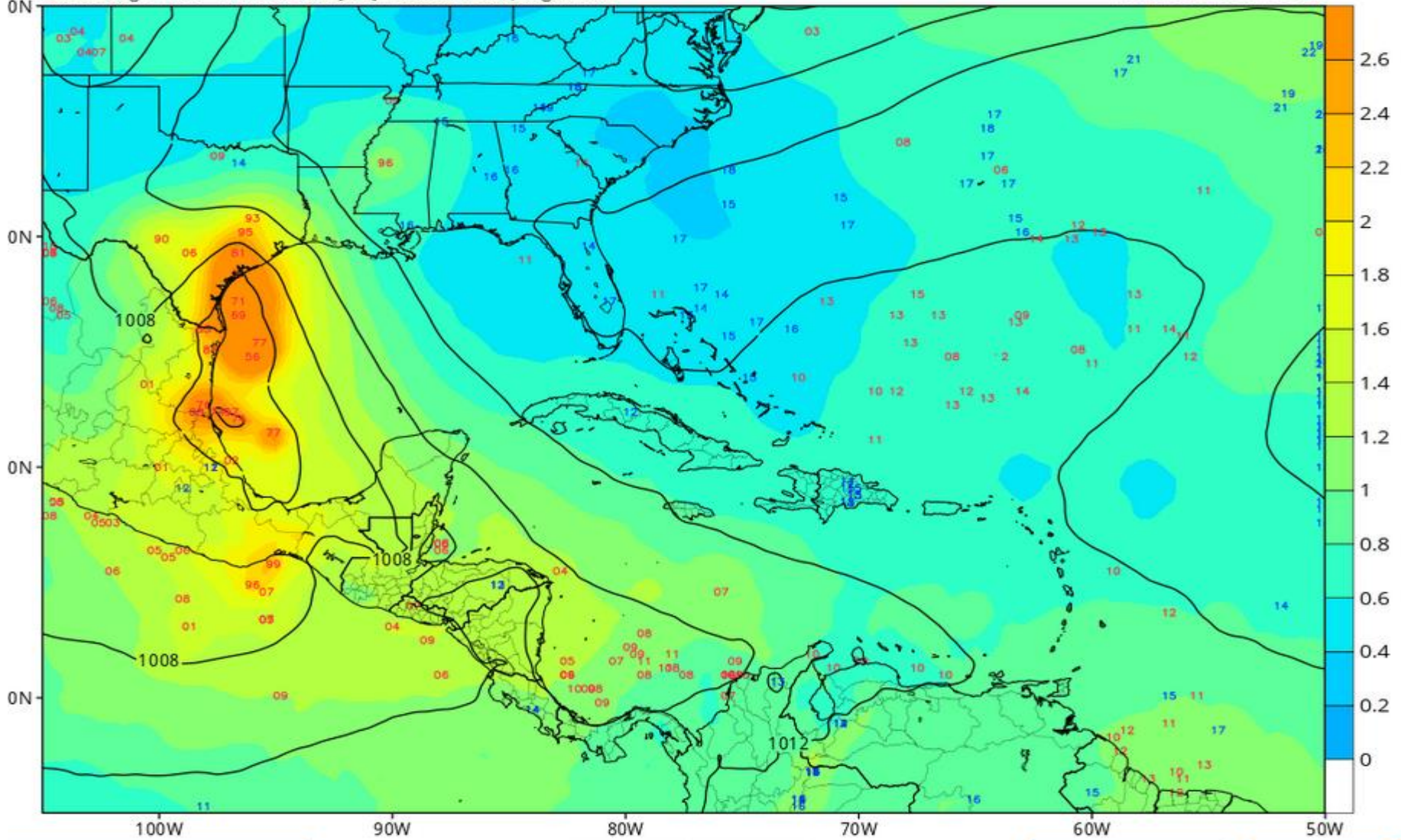
RUN TIME: 12Z AUG 24

Navigation controls: Left arrow, Right arrow, Zoom out (-), Zoom in (+), Settings gear, Keyboard icon.

GEFS Mean MSLP (mb), Ensemble Member Pressure Centers (Lows: red | High: blue), & Normalized Spread (σ)

Init: 12z Aug 24 2021 Forecast Hour: [168] valid at 12z Tue, Aug 31 2021

TROPICALTIDBITS.COM



REGIONS

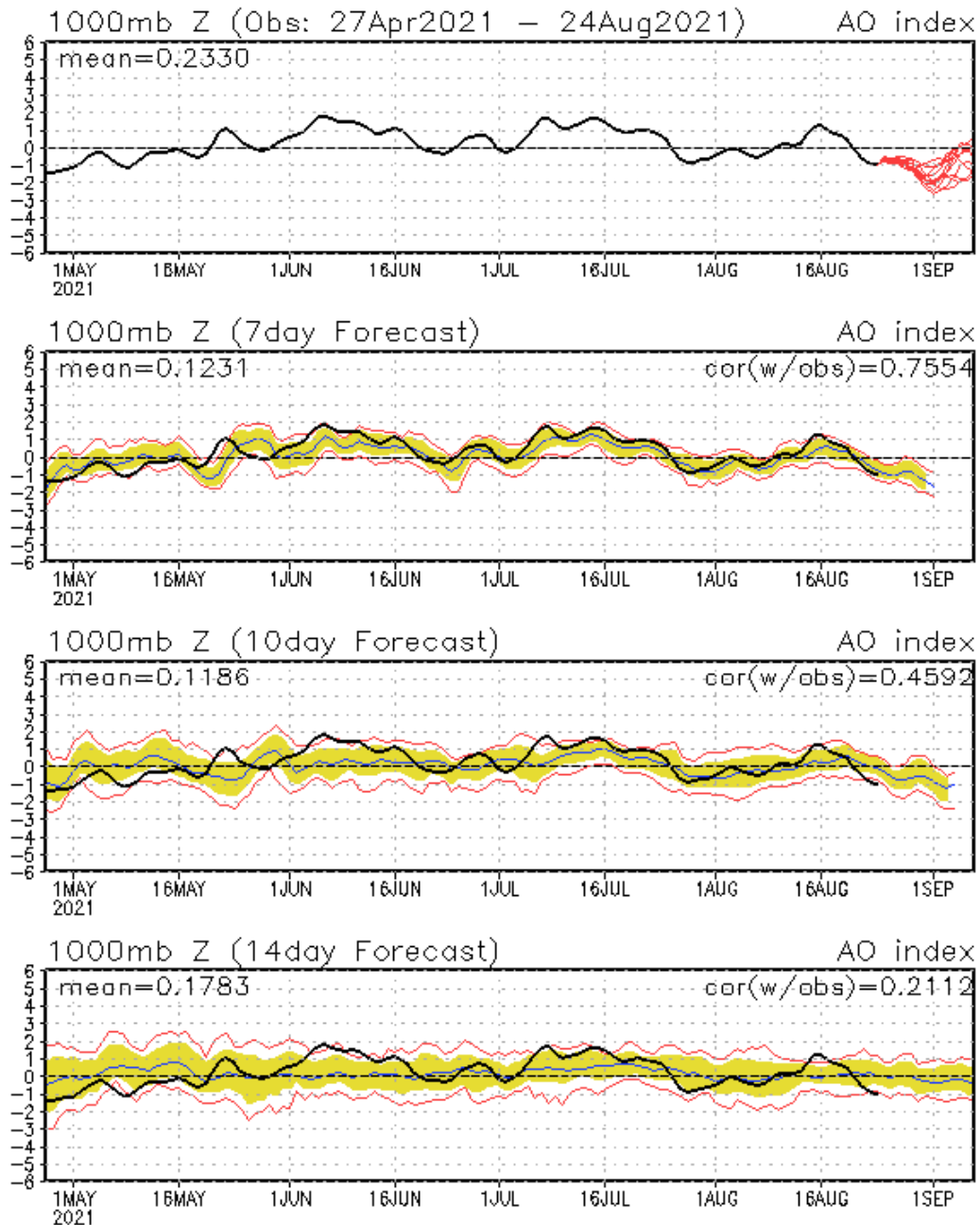
Prev. Run ← Next Run →

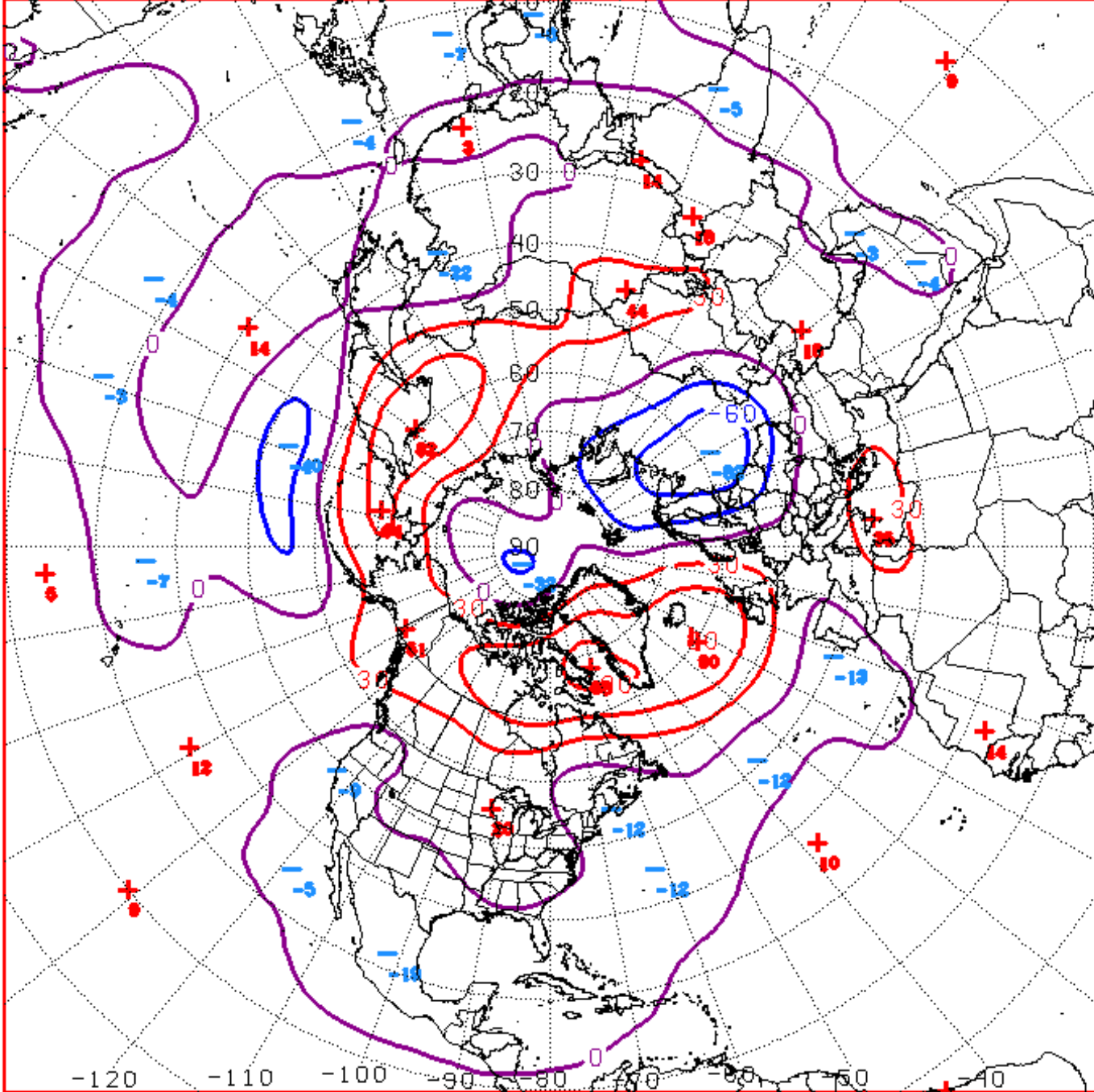
FORECAST GIF

TREND GIF

Connections to U.S. Impacts

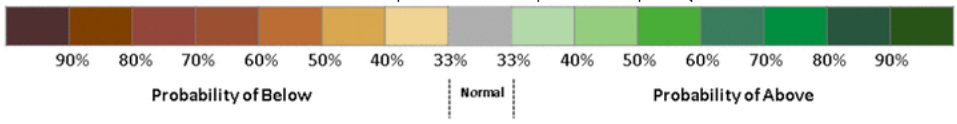
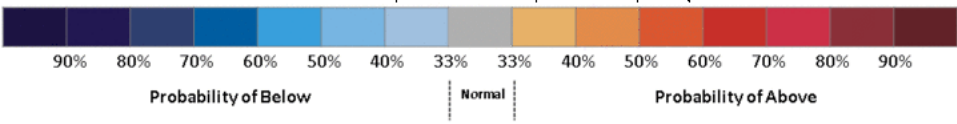
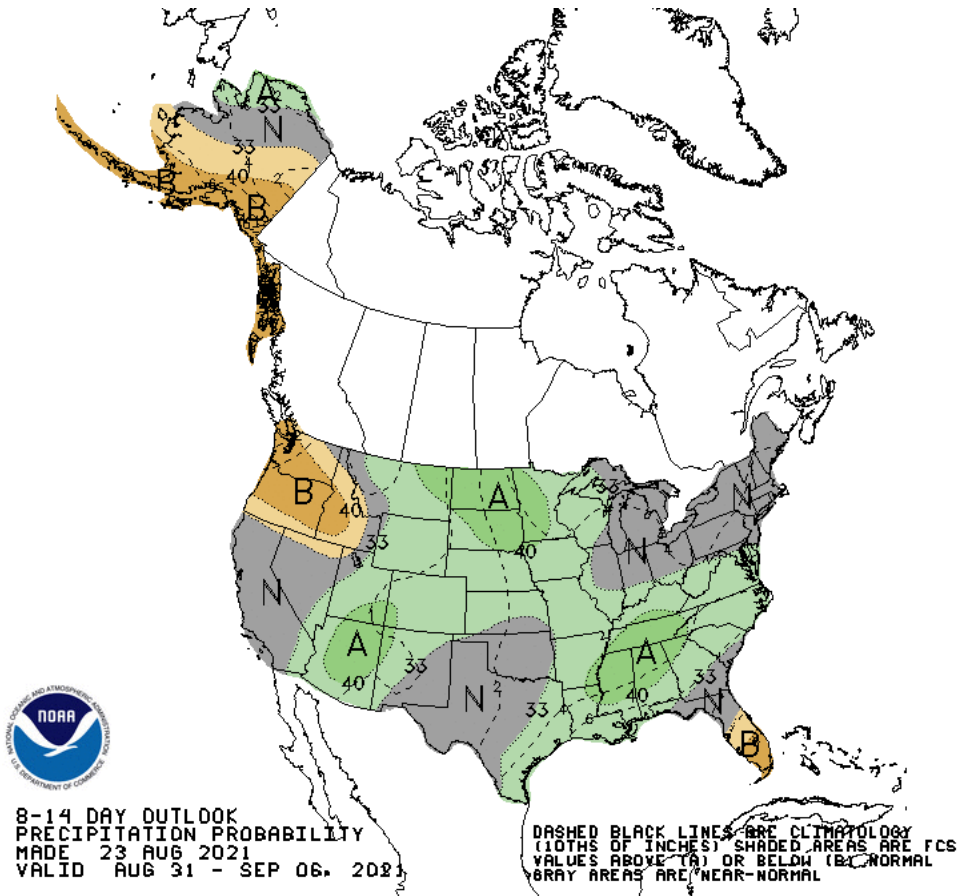
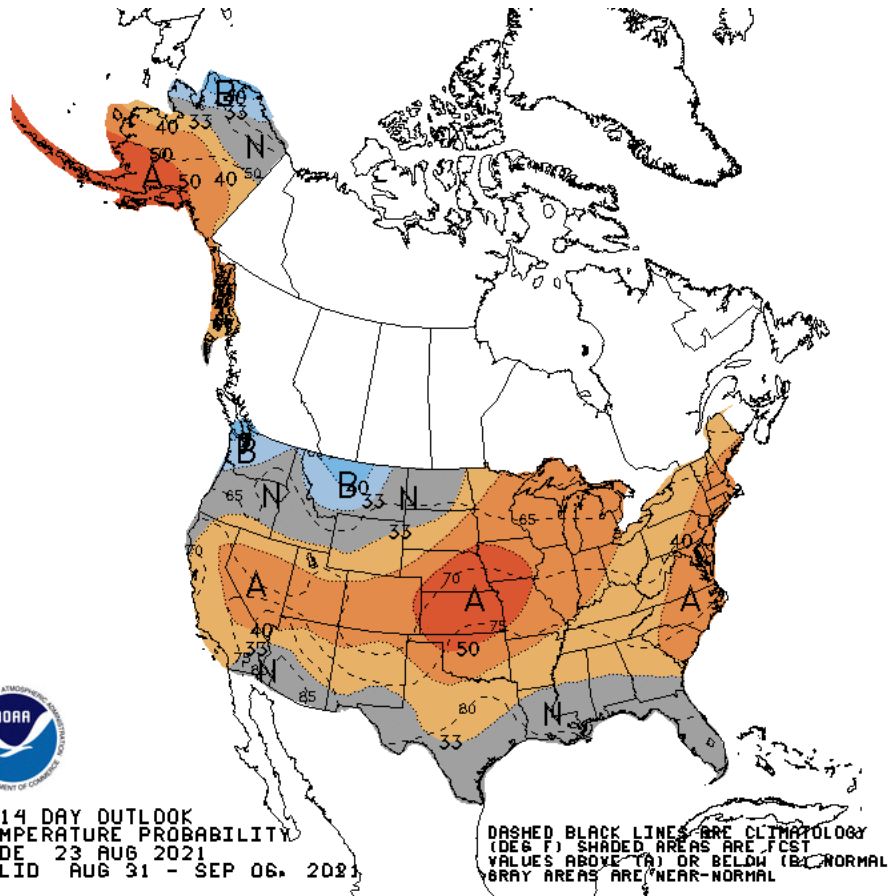
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE AUG 24 2021 1400 UTC CNTD SEP 04 2021

Week 2 – Temperature and Precipitation

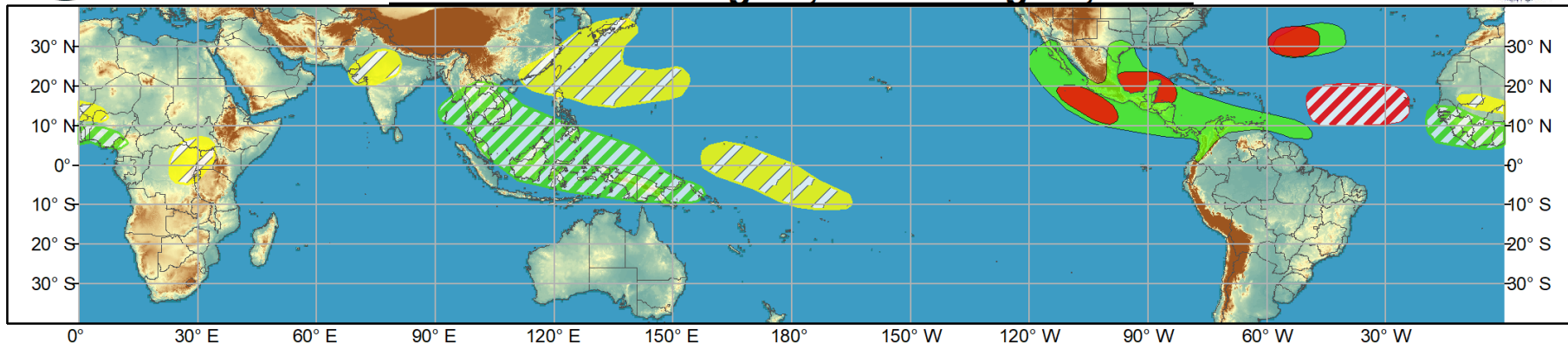




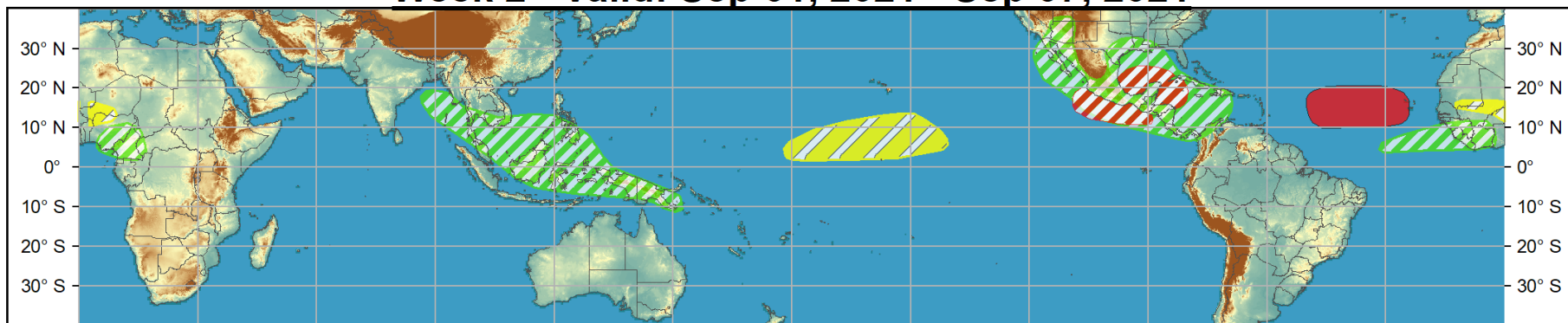
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