

Global Tropics Hazards And Benefits Outlook

8/02/2022

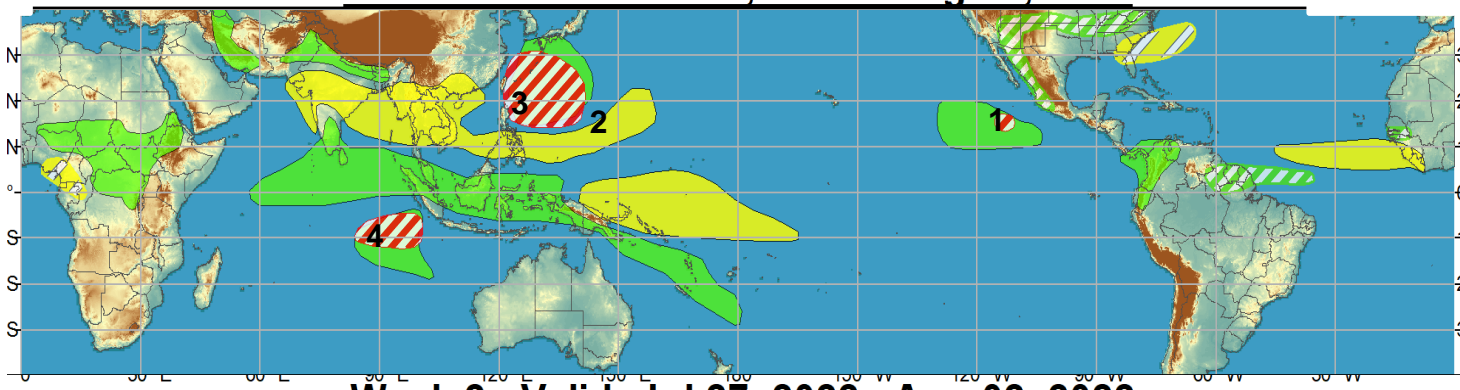
Danny Barandiaran

Outline

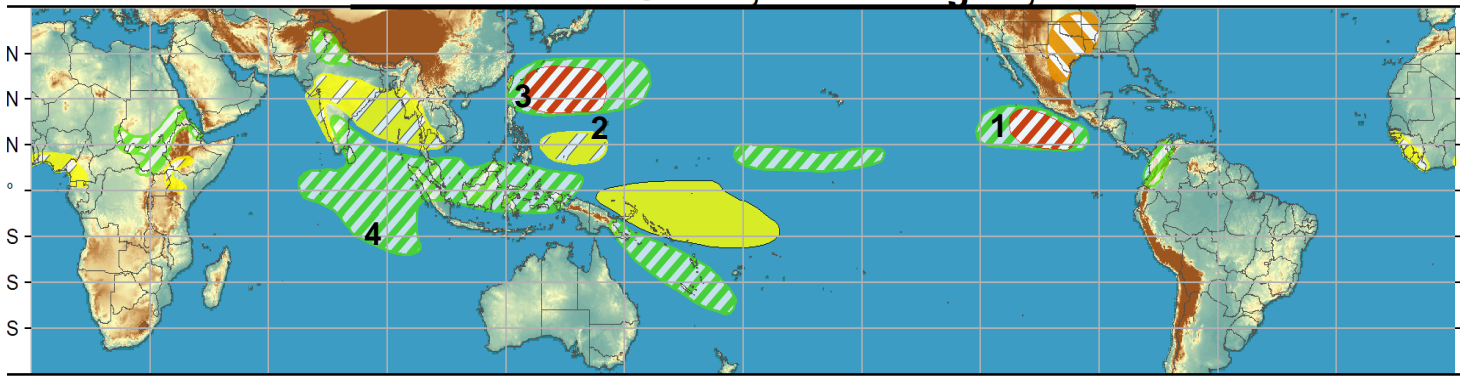
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Week 1 - Valid: Jul 27, 2022 - Aug 02, 2022



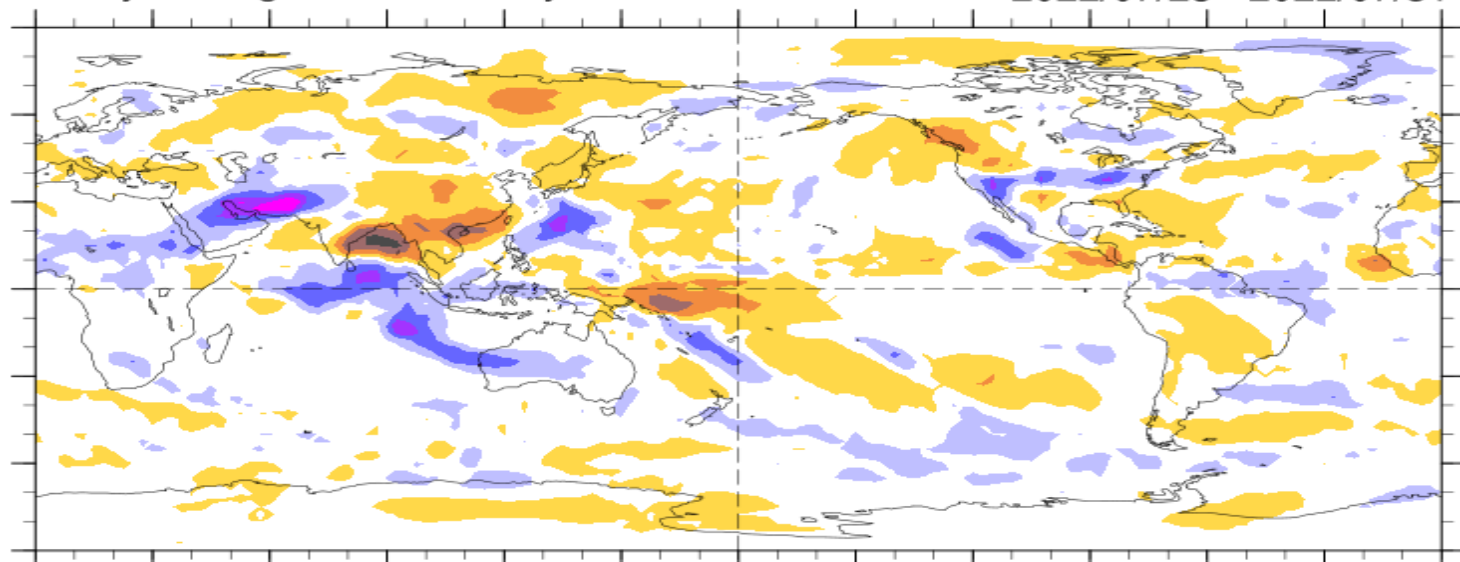
Week 2 - Valid: Jul 27, 2022 - Aug 02, 2022



- 1=Tropical Storm Georgette (7/27)
- 2=Tropical Cyclone (TC) Songda (7/26)
- 3=TC Trases (7/29)
- 4=TC 01S (7/28)

7-Day Average OLR Anomaly

2022/07/25 - 2022/07/31



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (14 July, 2022 Update)

next update on 11th of Aug.!

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña is favored to continue through 2022 with the odds for La Niña decreasing into the Northern Hemisphere late summer (60% chance in July-September 2022) before increasing through the Northern Hemisphere fall and early winter 2022 (62-66% chance).

MJO and other subseasonal tropical variability:

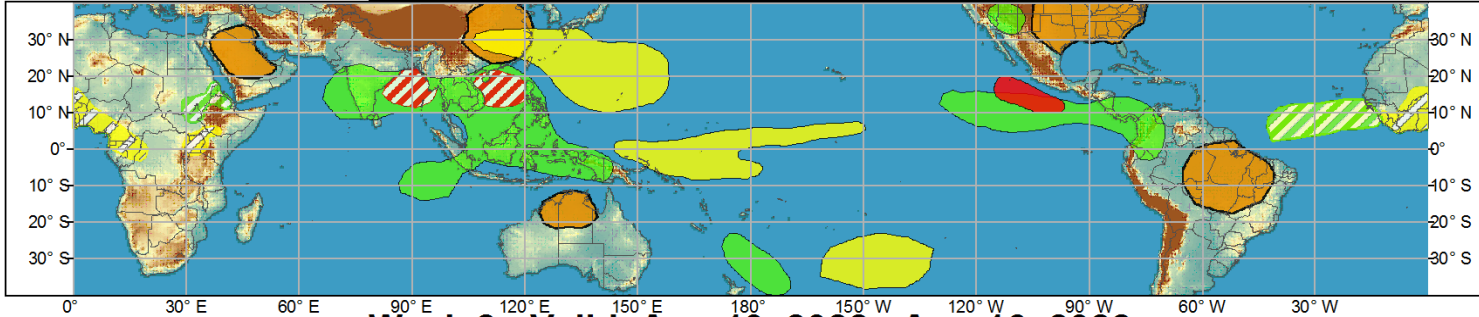
- The MJO signal weakened through late July due to destructive interference with the La Niña base state.
- Dynamical model RMM forecasts a continued weak MJO signal in the coming two weeks, and there is a lot of uncertainty regarding whether convective activity will continue to propagate eastward in the coming weeks.
- The Atlantic basin continues to be quiet with regard to tropical cyclone (TC) development, while the East Pacific continues to be active, possibly due to Rossby wave activity enhancing convection.



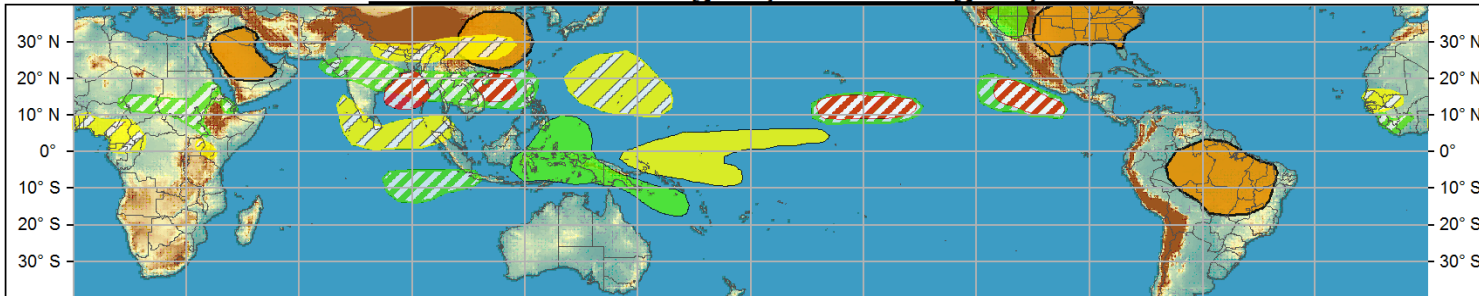
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Aug 03, 2022 - Aug 09, 2022



Week 2 - Valid: Aug 10, 2022 - Aug 16, 2022



Produced: 08/02/2022

Forecaster: Barandiaran

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

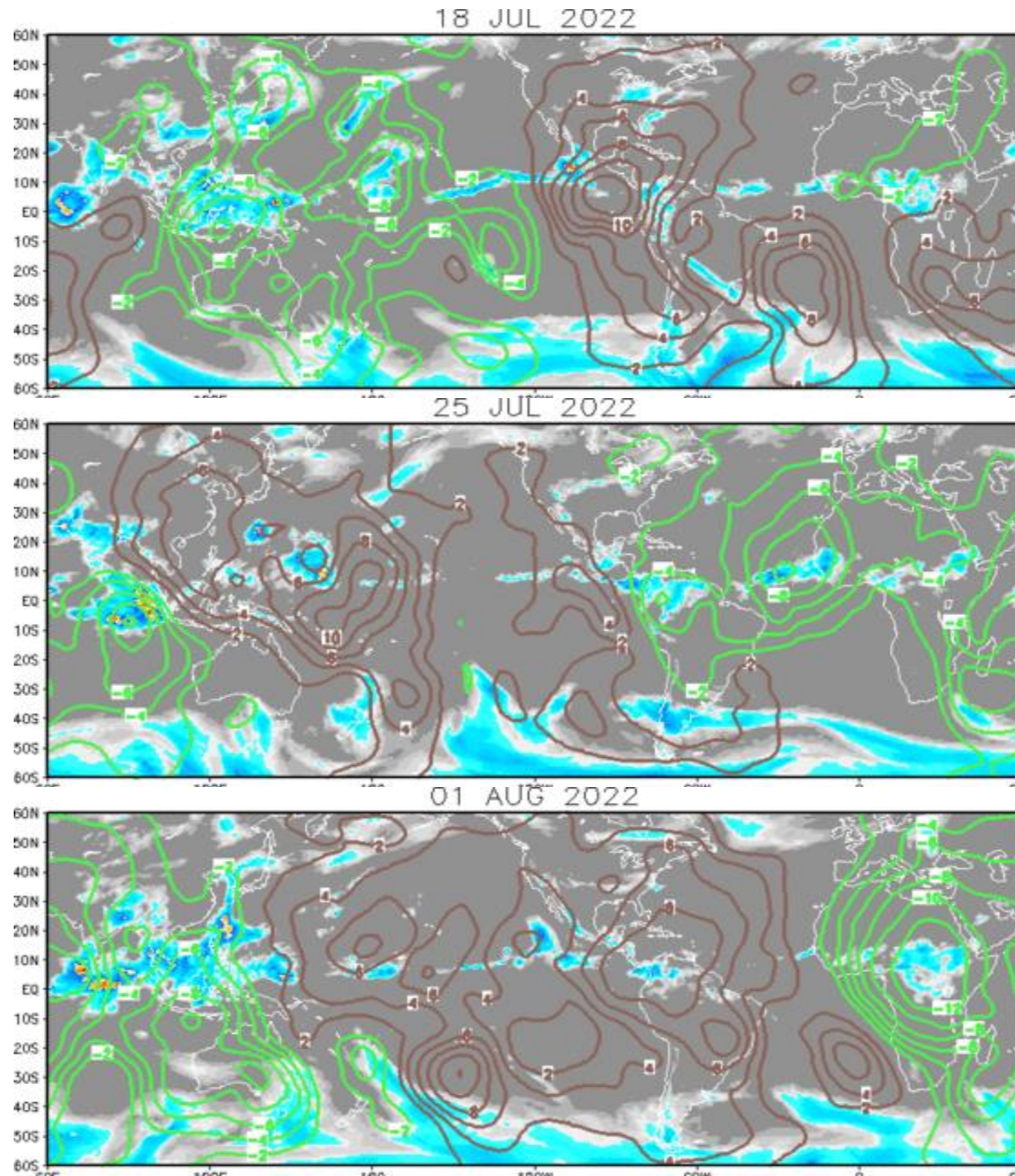
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-1 pattern has remained the dominant mode in the tropics, with convective envelope over the Maritime Continent and West Pacific.

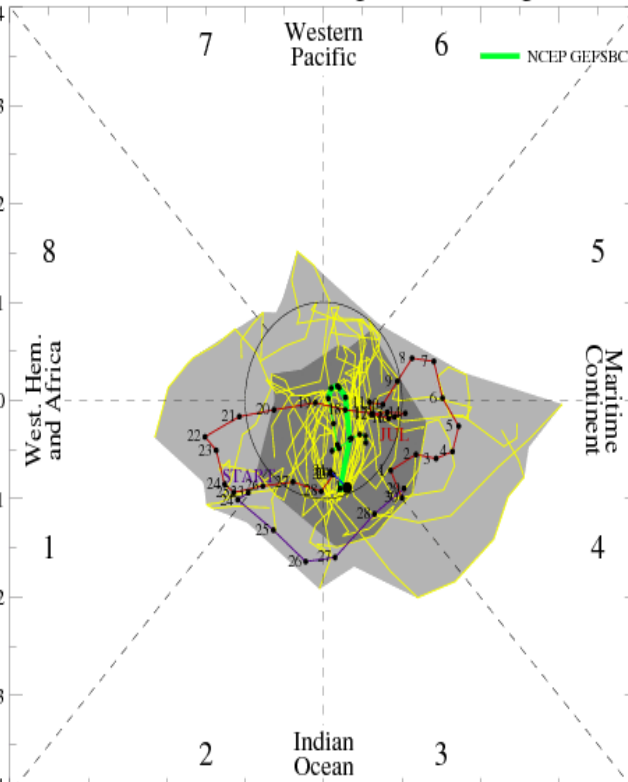
Kelvin wave activity raced across the Pacific and into the Western Hemisphere in the second half of July.

More recently, eastward propagation of enhanced convection slowed, resembling a more MJO-like regime.

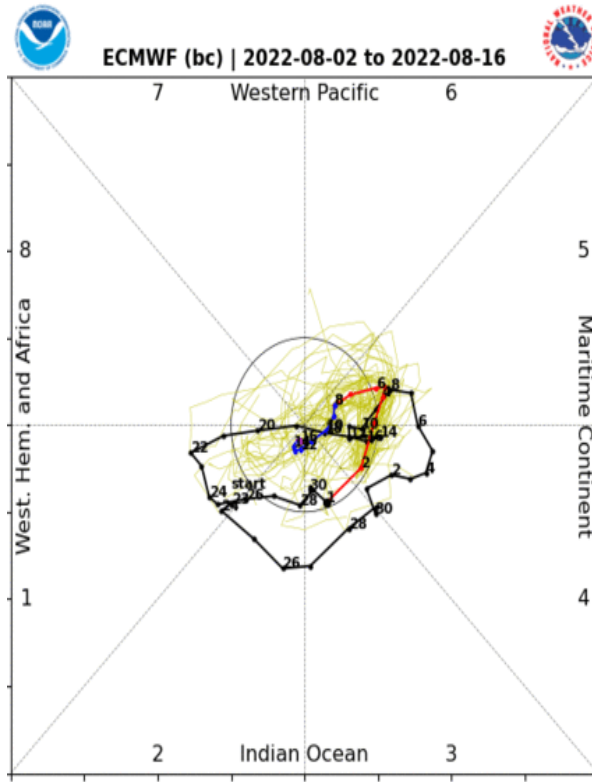


MJO Observation/Forecast

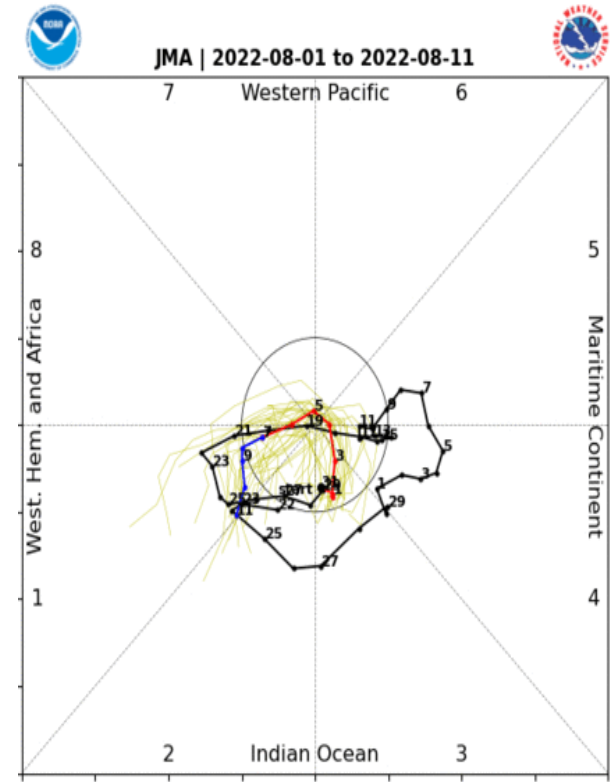
[RMM1, RMM2] forecast for Aug-02-2022 to Aug-16-2022



GEFS



ECMWF



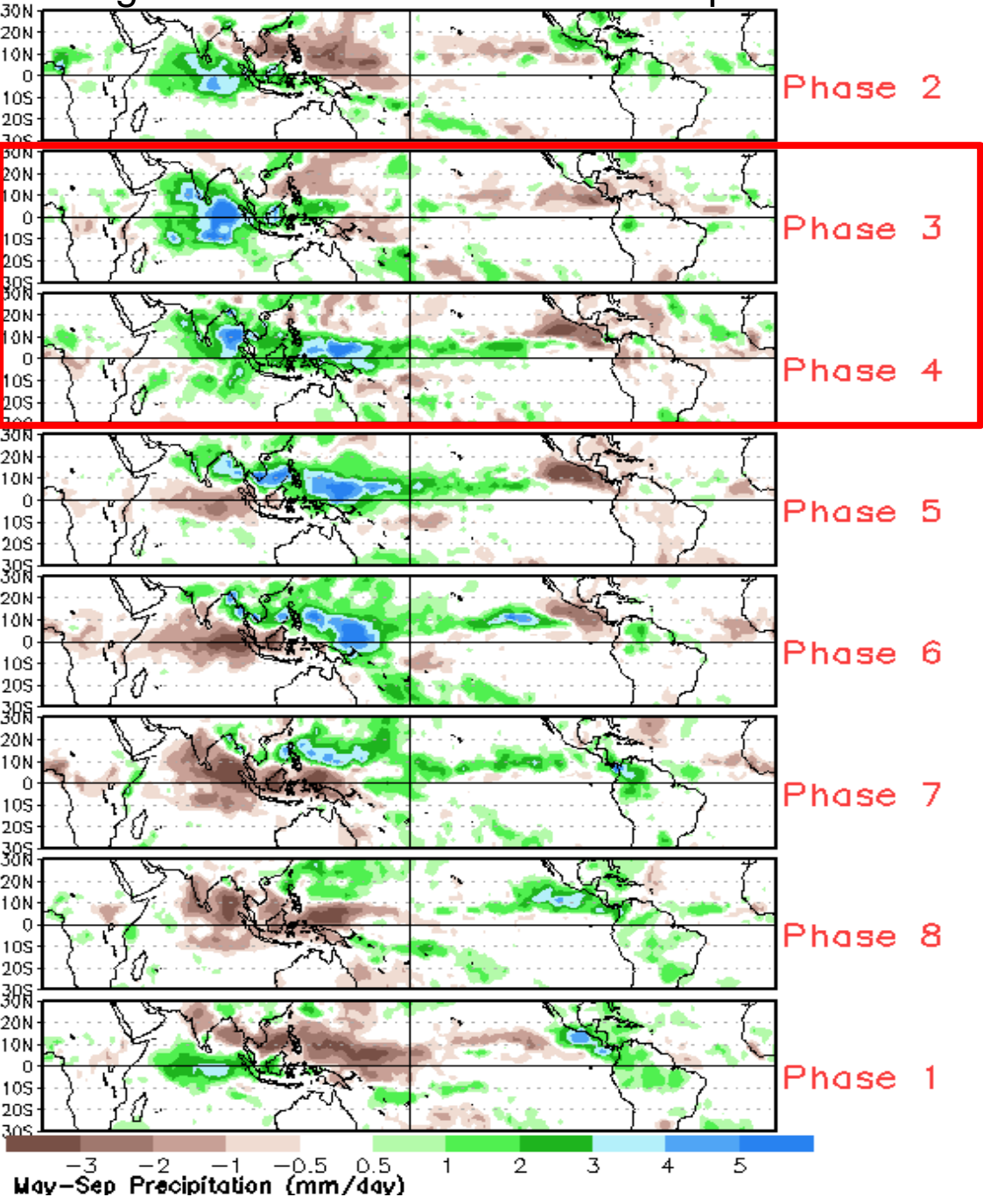
JMA

There is a great deal of ensemble member spread in the GEFS, resulting in an ensemble mean that remains within the unit circle and trends towards the origin.

ECMWF ensembles generally favor a rapid progression to the Maritime Continent over the next week before diving into the unit circle.

The JMA forecast starts similar to GEFS ensemble but pushes the RMM signal out into phase 1 in week-2.

Average Conditions when the MJO is present

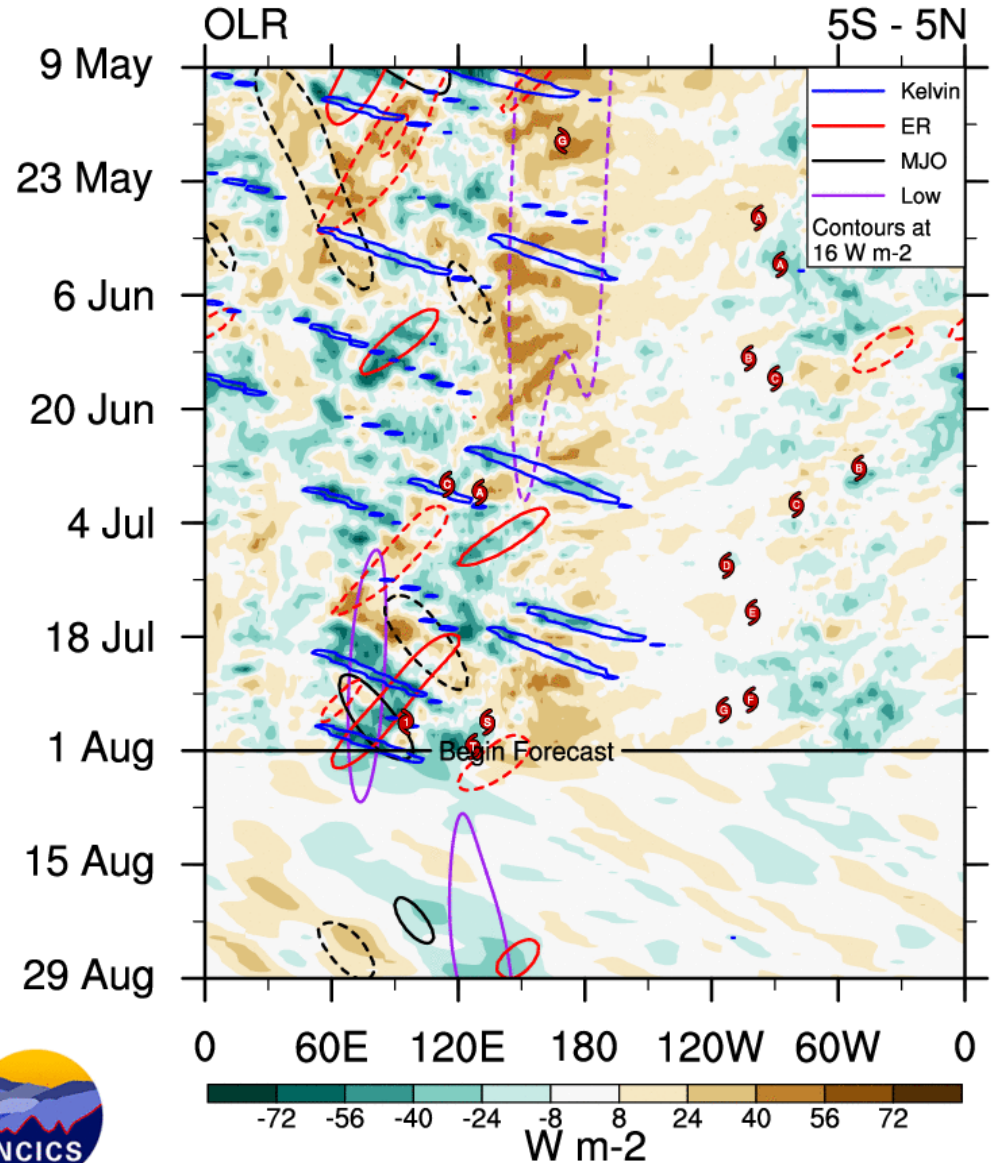


CAVEAT: These panels are representative of robust MJO events.

MJO activity is coming through the filtering near the eastern IO and Maritime Continent but fades early in the forecast period.

Kelvin wave activity remains a significant player in evolution of convective environment in the tropics.

Low frequency contours depict ENSO cold conditions. This model solution depicts a weakening of La Nina signal, a bit of an outlier.

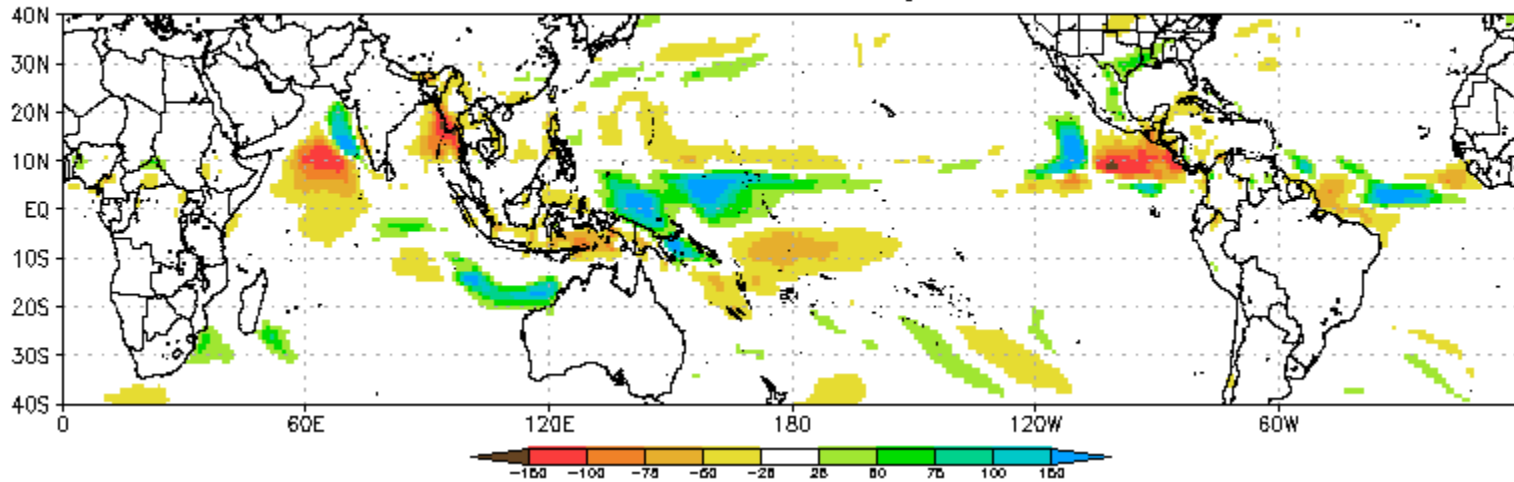


ncics.org/mjo

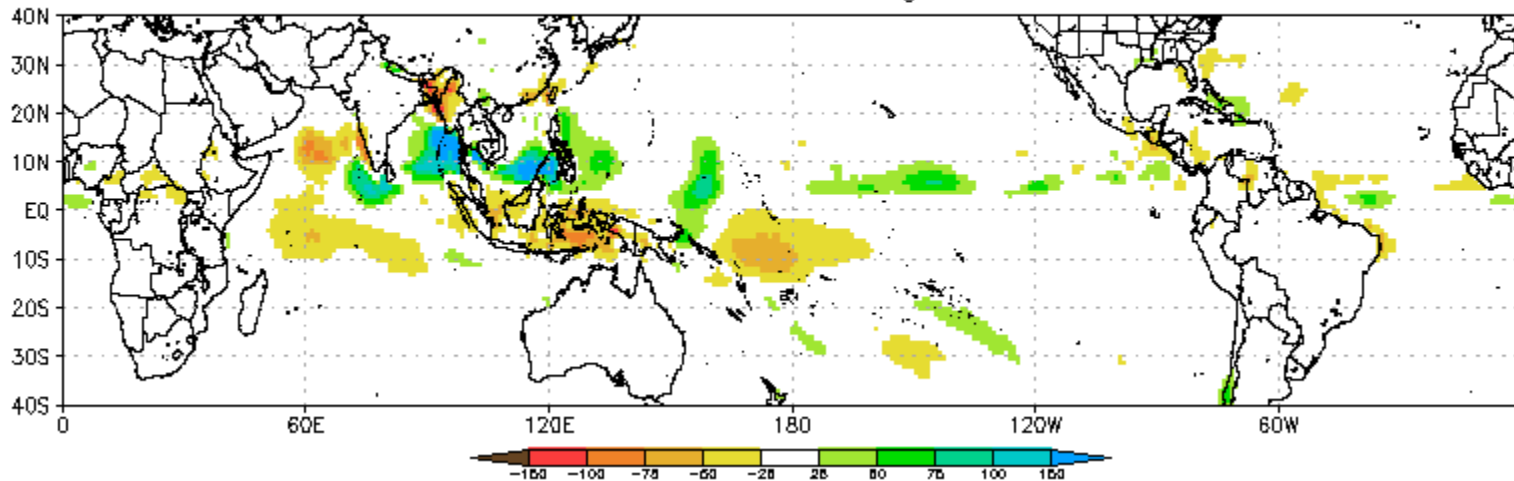
Tue 2022-08-02 1510 UTC

Carl Schreck
carl_schreck@ncsu.edu

CFS Precipitation Anomalies (mm) Issued 31May2021
Week-1 Forecast Ending 08Jun2021

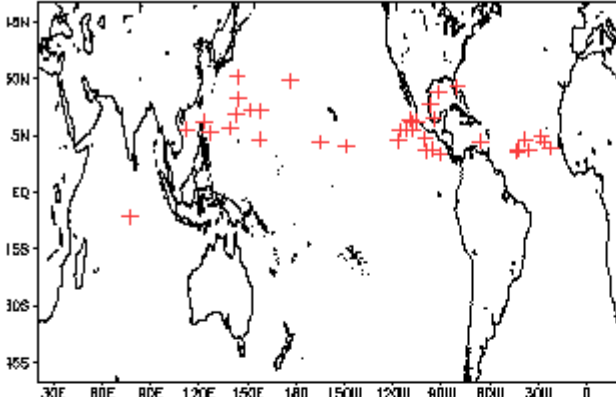


CFS Precipitation Anomalies (mm) Issued 31May2021
Week-2 Forecast Ending 15Jun2021

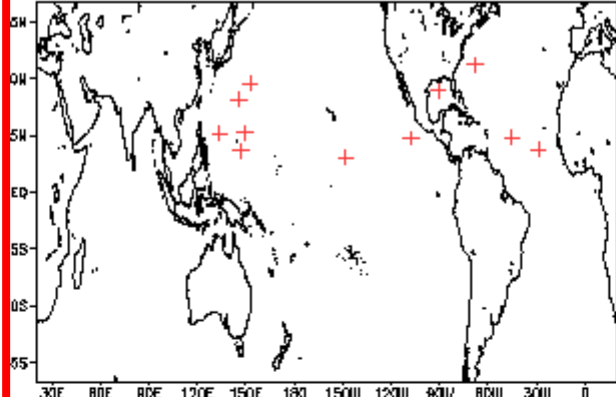


August Tropical Storm Formation by MJO phase

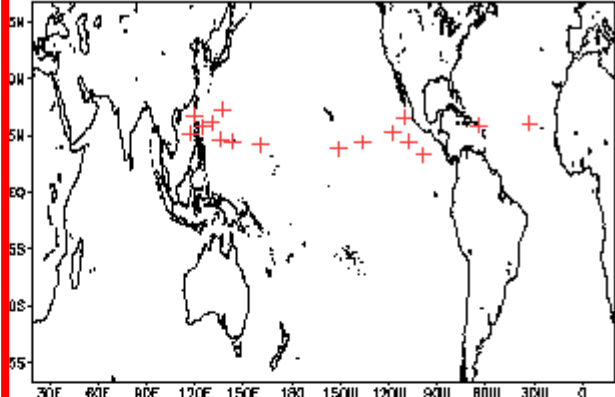
Phase 1 (101 days) 38 storms



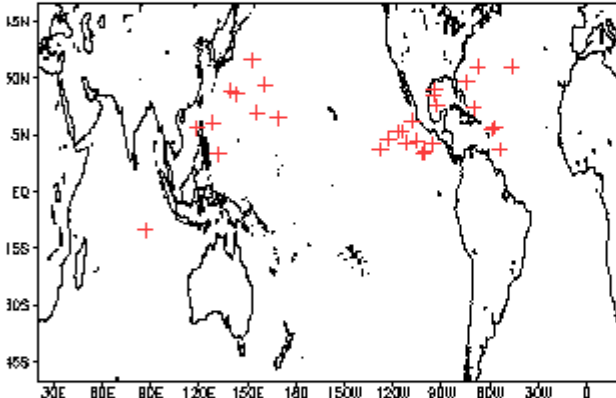
Phase 4 (40 days) 12 storms



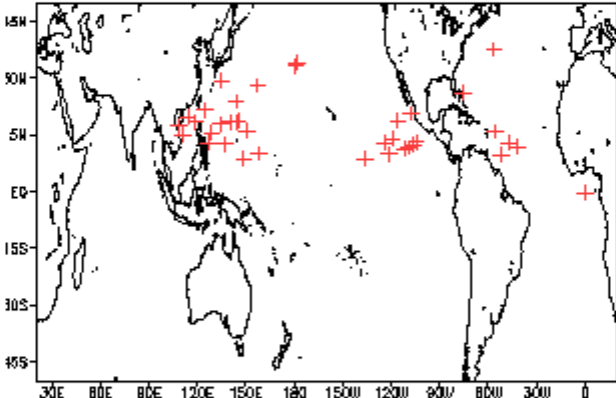
Phase 7 (43 days) 17 storms



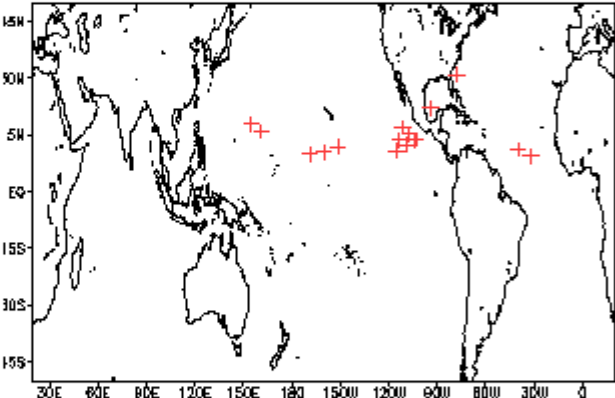
Phase 2 (79 days) 31 storms



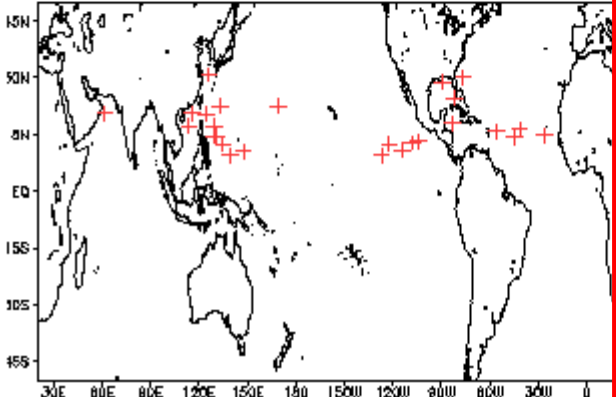
Phase 5 (117 days) 40 storms



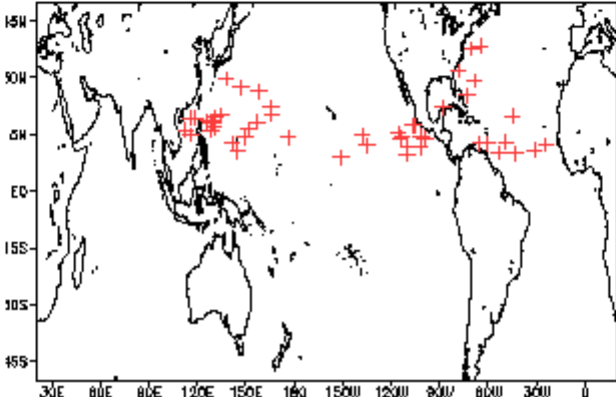
Phase 8 (25 days) 17 storms



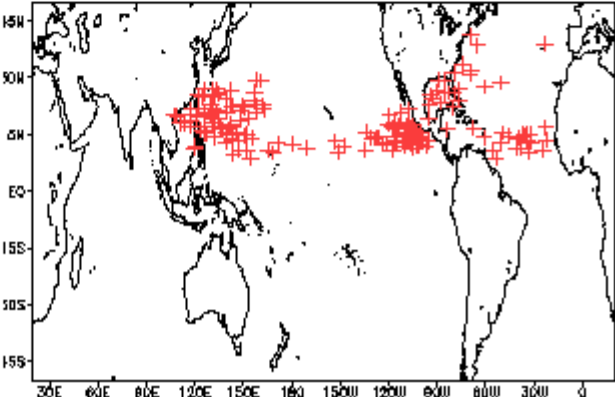
Phase 3 (51 days) 27 storms



Phase 6 (101 days) 50 storms



Null (466 days) 189 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Aug 2 2022

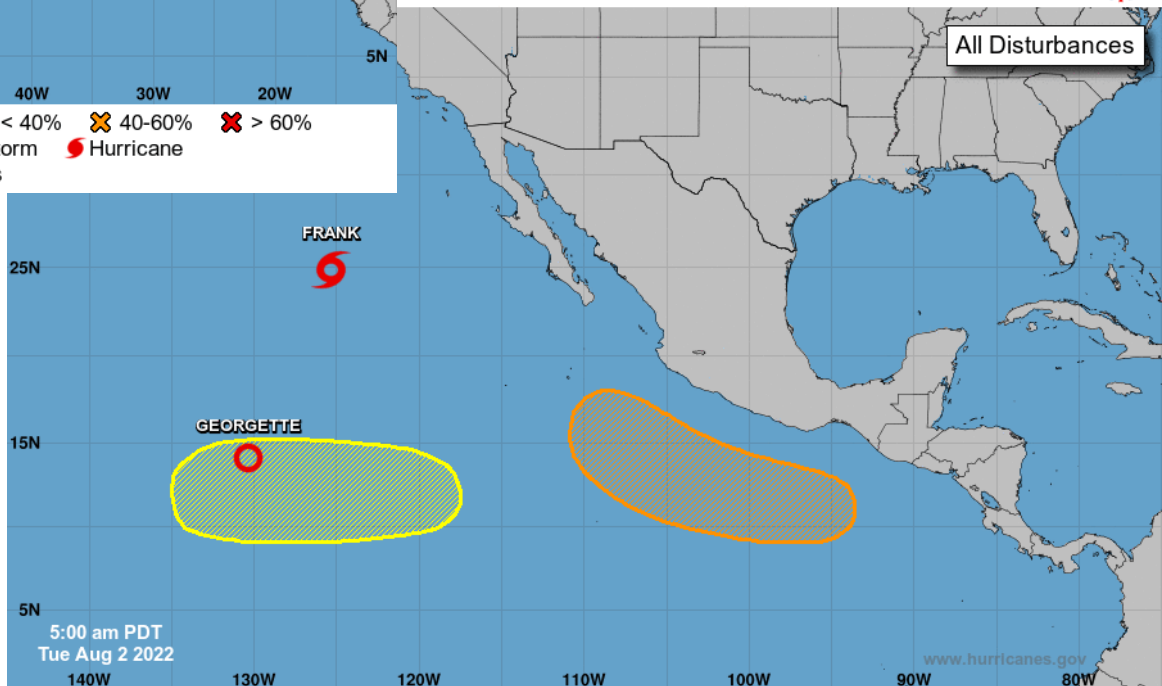
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



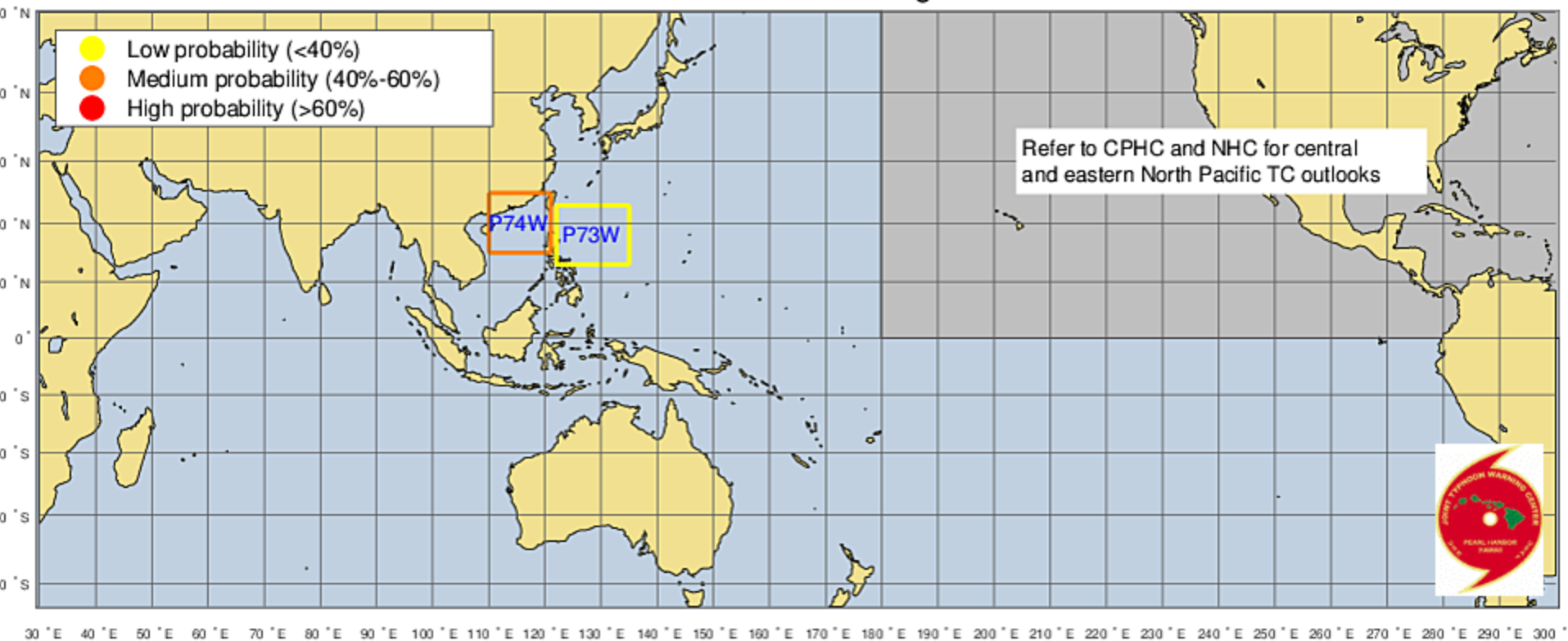
5:00 am PDT
Tue Aug 2 2022

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

JTWC Two-Week TC Formation Outlook. Valid: 02 August 2022 at 1200Z

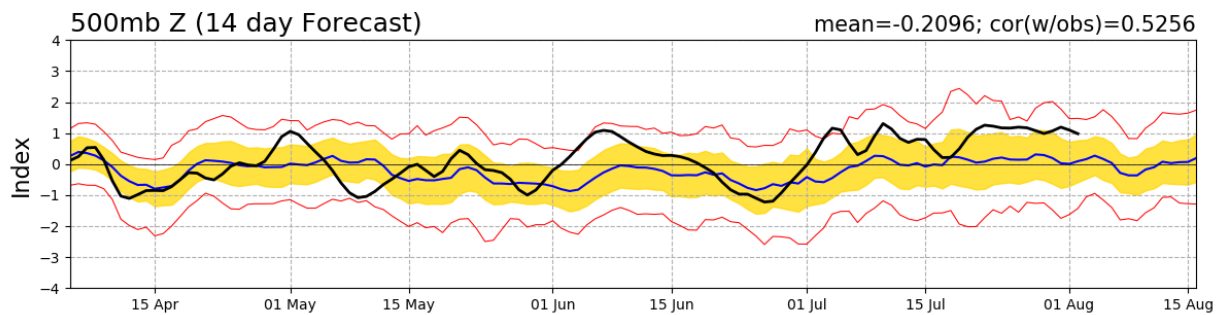
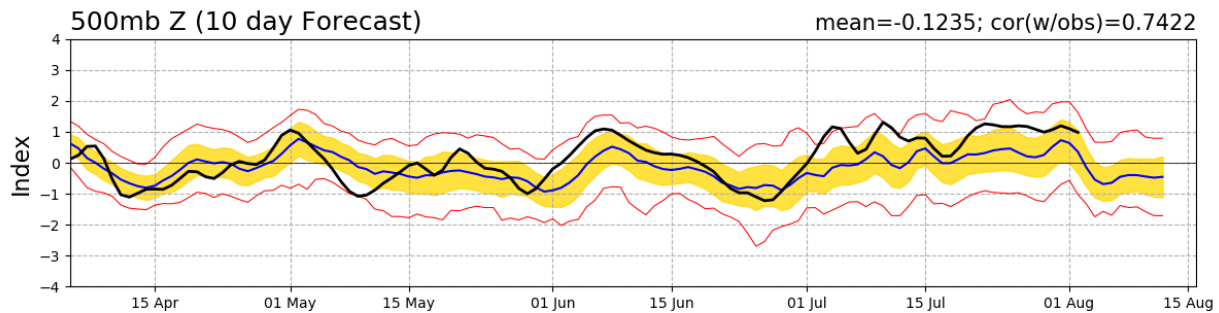
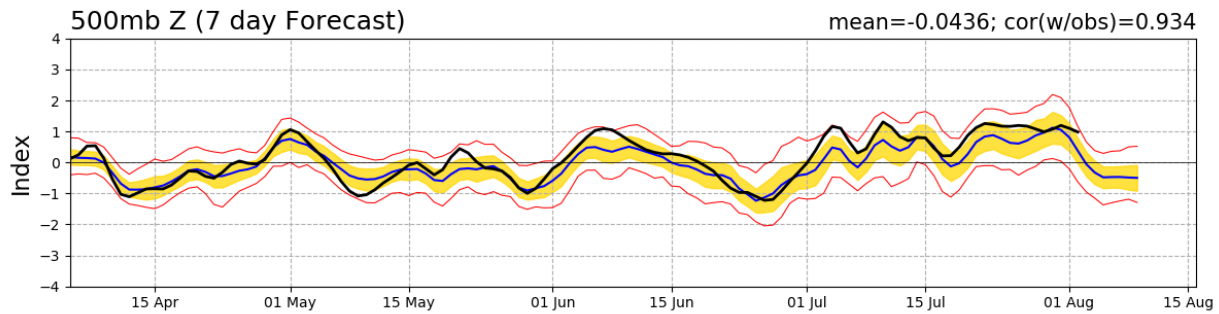
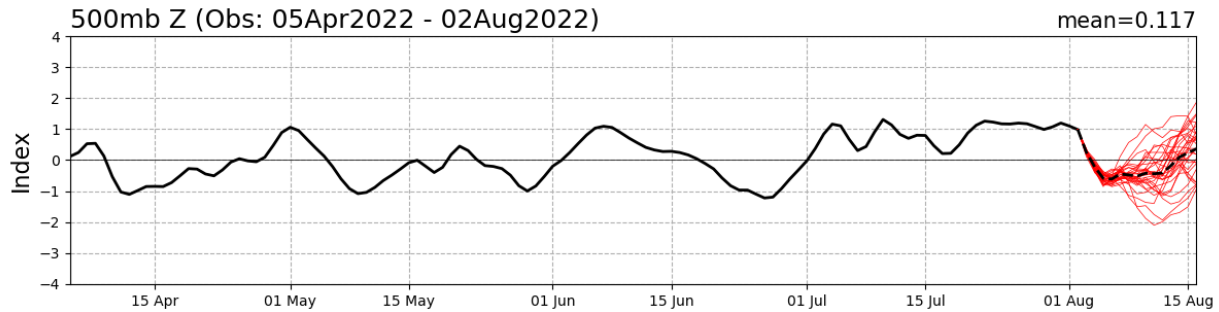


Potential Formation Area P73W: TC formation may occur between 08061200Z and 08091200Z. Probability: 30% Corresponding invest: XXX

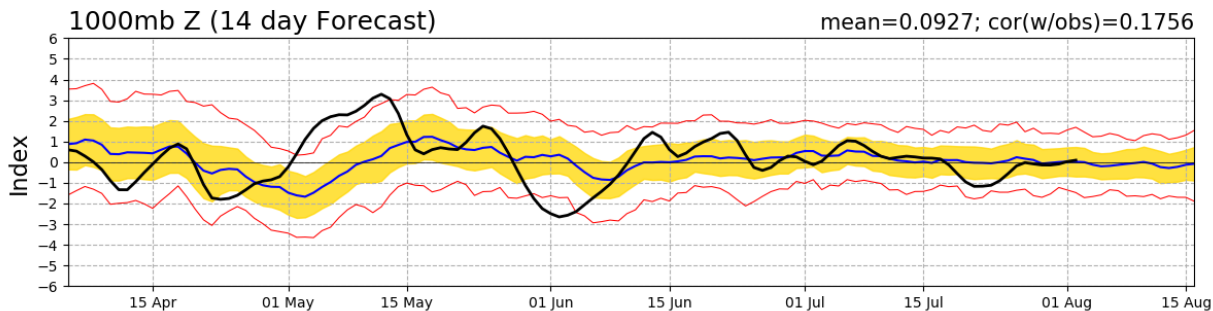
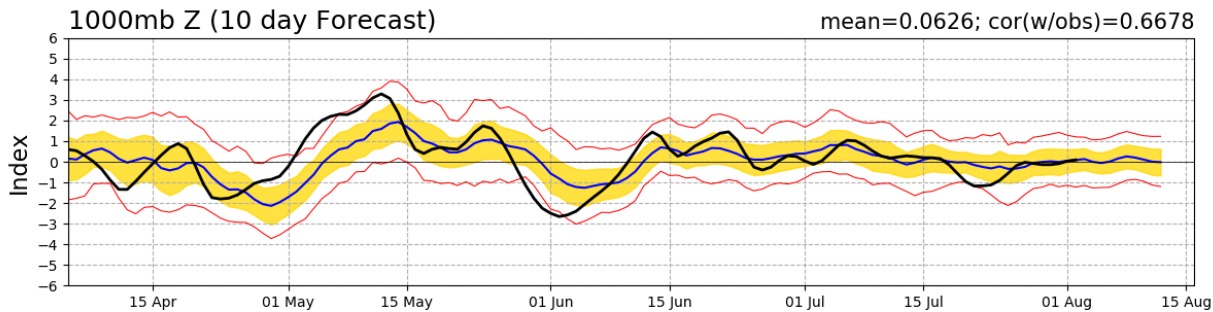
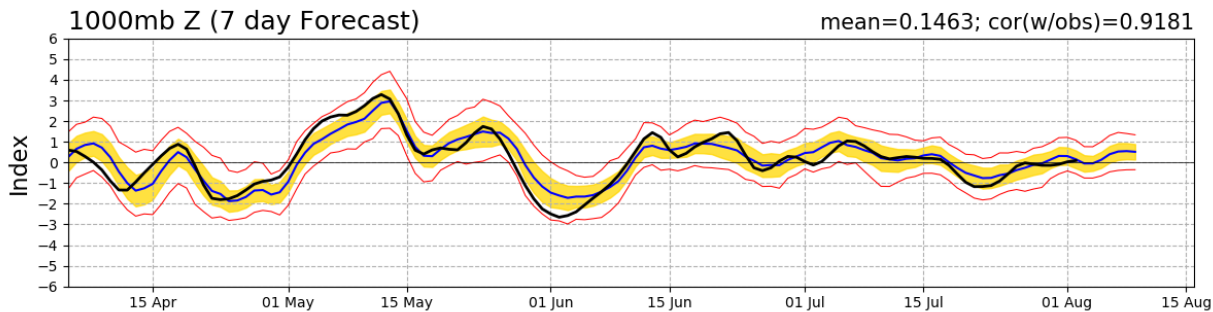
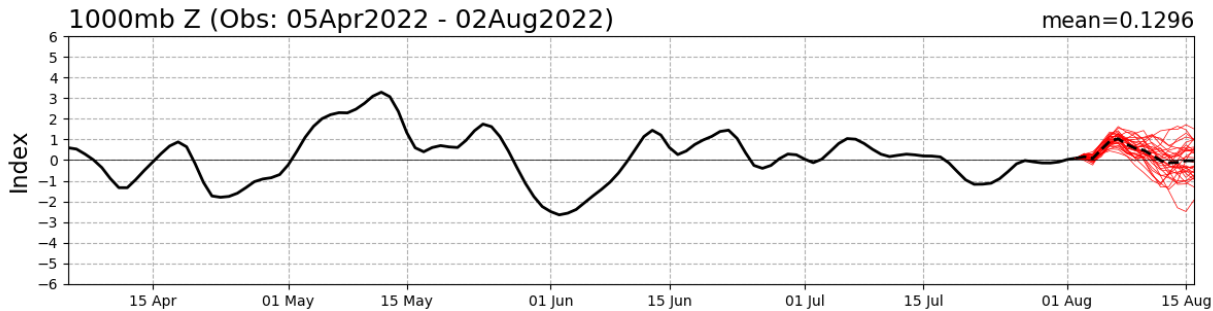
Potential Formation Area P74W: TC formation may occur between 08031800Z and 08051800Z. Probability: 50% Corresponding invest: 96W

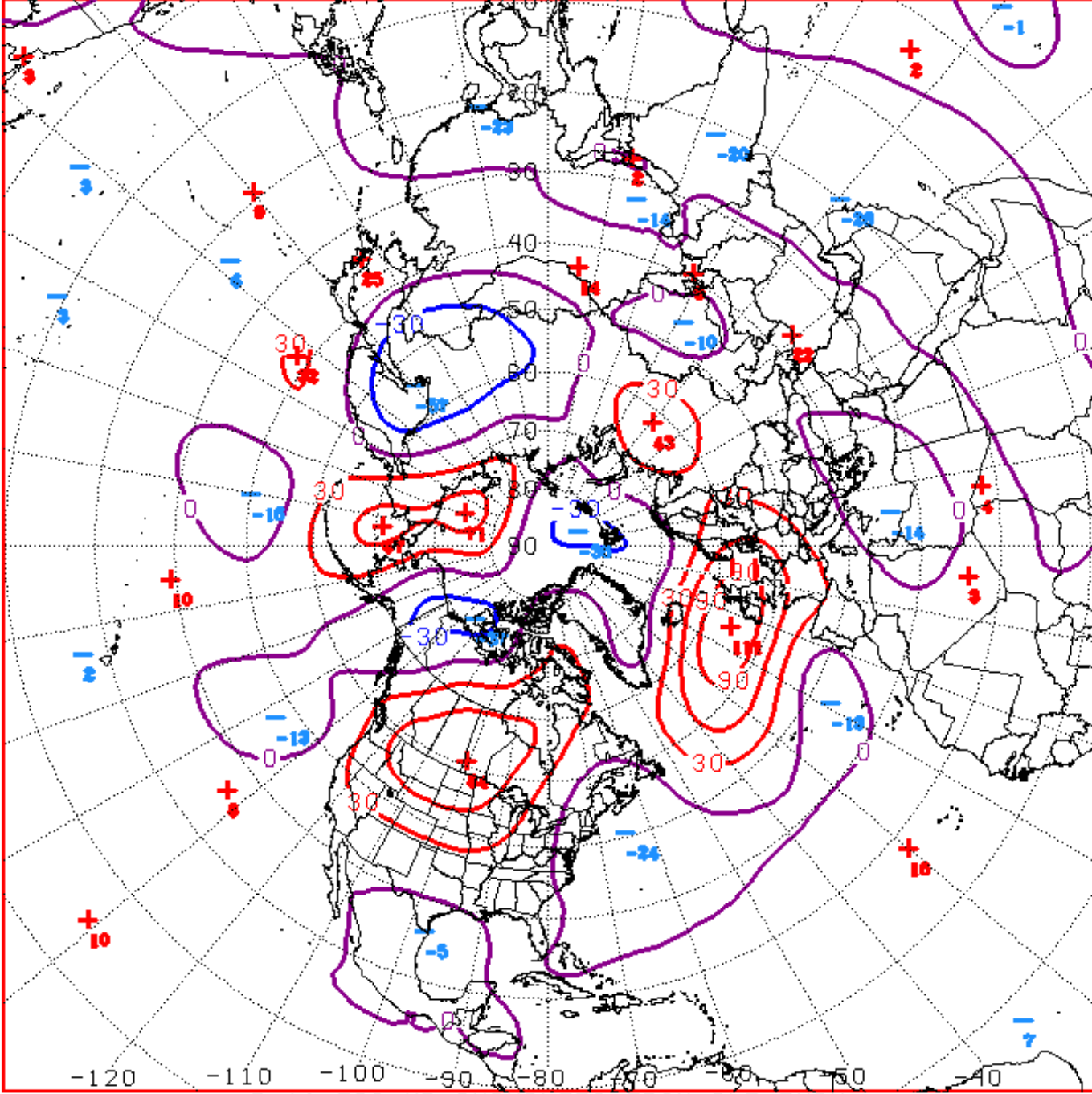
Connections to U.S. Impacts

PNA Index: Observed & GEFS Forecasts



AO Index: Observed & GEFS Forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE AUG 02 2022 1352 UTC CNTD AUG 13 2022

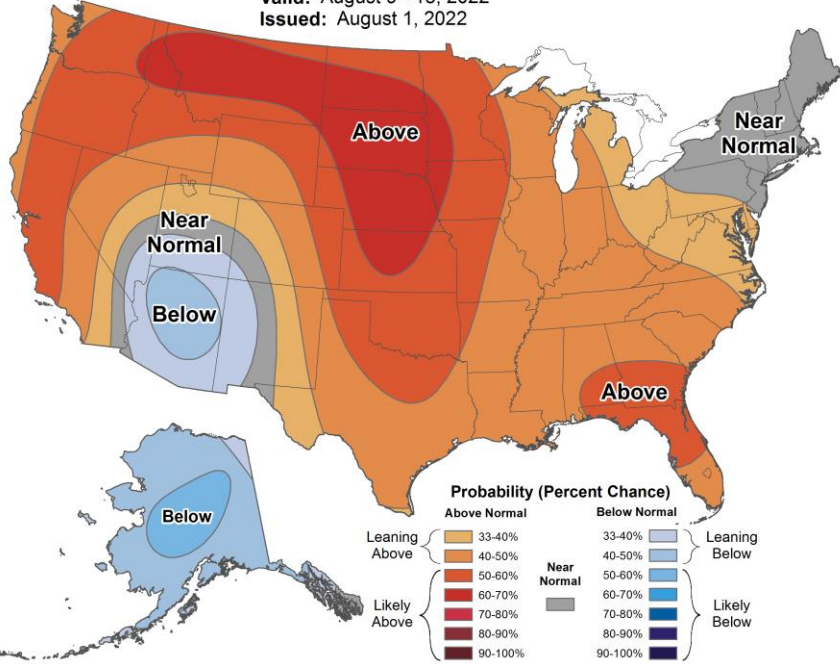
Week 2 – Temperature and Precipitation



8-14 Day Temperature Outlook



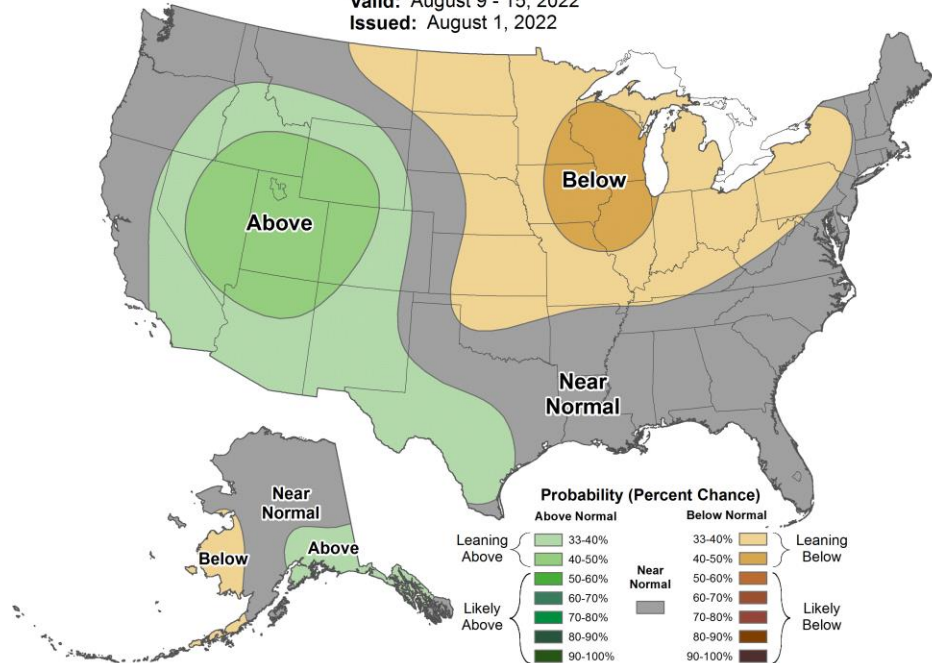
Valid: August 9 - 15, 2022
 Issued: August 1, 2022



8-14 Day Precipitation Outlook



Valid: August 9 - 15, 2022
 Issued: August 1, 2022



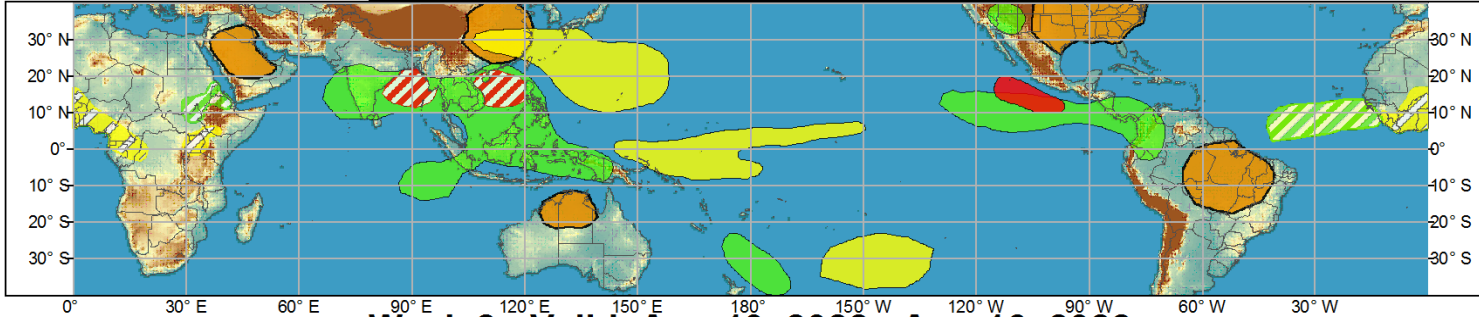
Since we are in an amplified, stable pattern today's outlooks are likely to be similar.



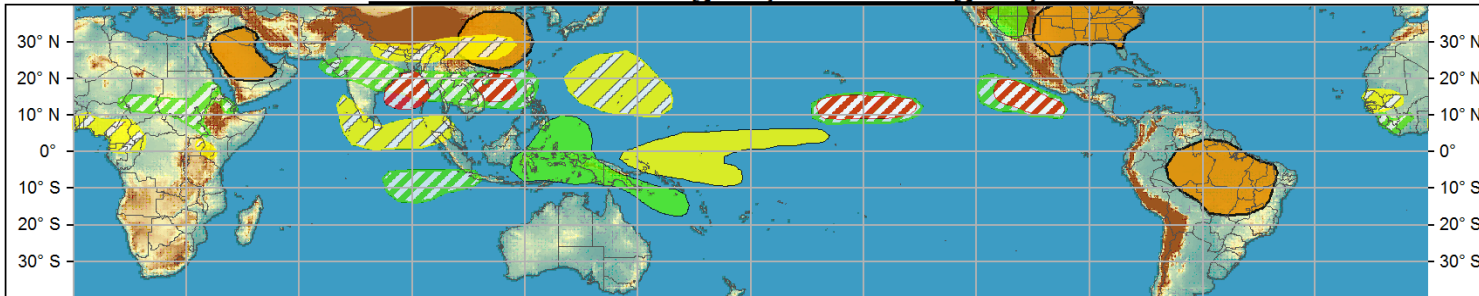
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