



Weeks 2-3 Global Tropics Hazards Outlook

6/25/2024

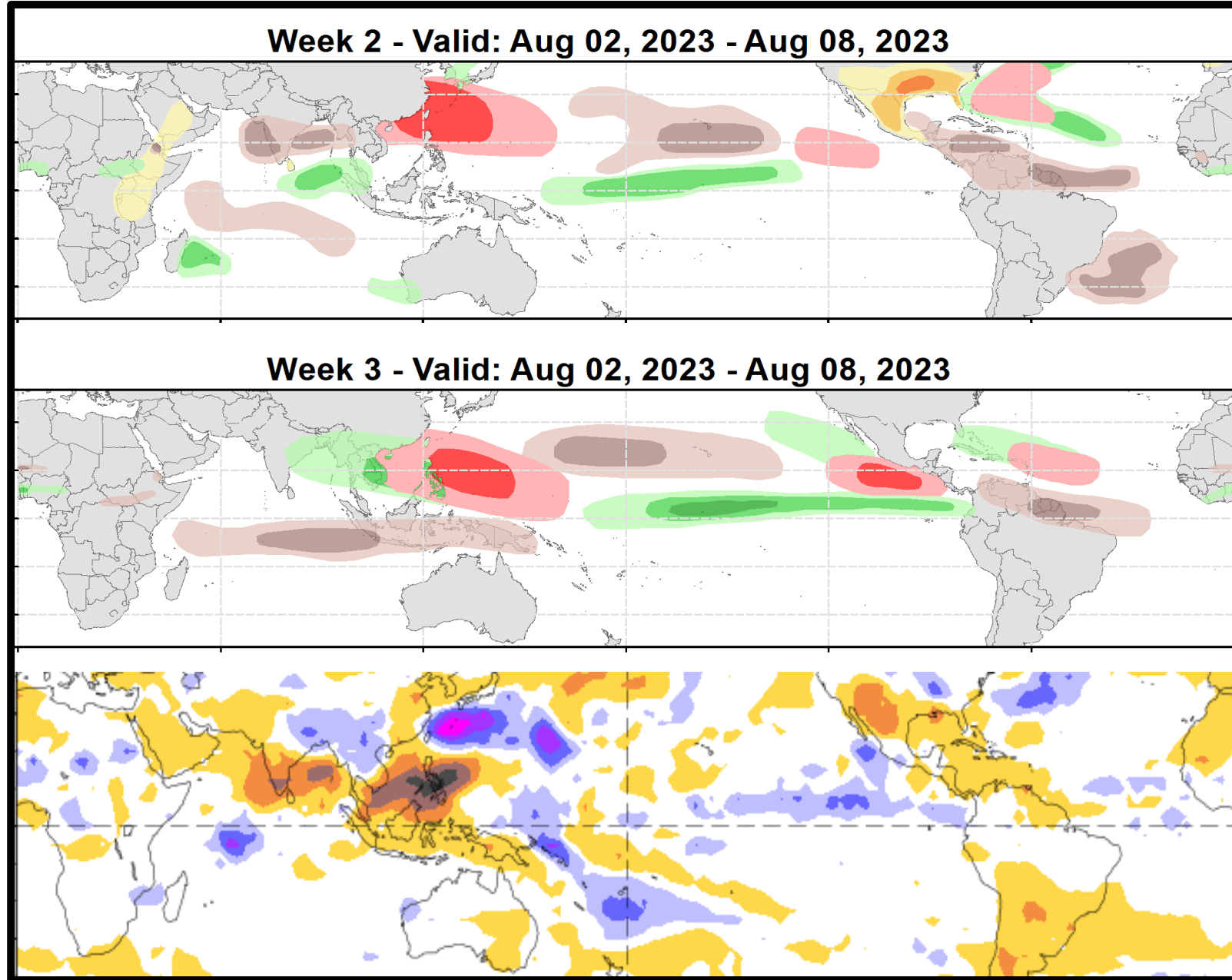
Brad Pugh

NWS / NCEP / Climate Prediction Center

****** Briefing Cancelled due to IT outage.
Please disregard following material *****

Outlook Review: TC development & anomalous precipitation during the past week

- Bullet #1
- Bullet #2



Synopsis of Climate Modes:

ENSO: (Aug 11, 2022 Update) *next update on Thursday, Sep 8th*

- ENSO Alert System Status: [El Niño Advisory](#)
- La Niña is expected to continue, with chances for La Niña gradually decreasing from 86% in the coming season to 60% during Dec-Feb 2022-23.

MJO and other subseasonal tropical variability:

- Following a brief uptick of the MJO signal over the Indian Ocean during late August, the MJO quickly weakened in early September where it continues to shift eastward over the Maritime Continent at a low amplitude.
- While RMM forecasts are unresponsive of a more coherent MJO reemerging during the next 3 weeks, upper-level velocity potential forecasts favor a secondary envelope of enhanced conditions developing over the Western Hemisphere that may help aid in the reorganization of the MJO later in September.
- Given these conditions, the large-scale environment is expected to be favorable for additional tropical cyclogenesis across the Pacific and Atlantic basins.

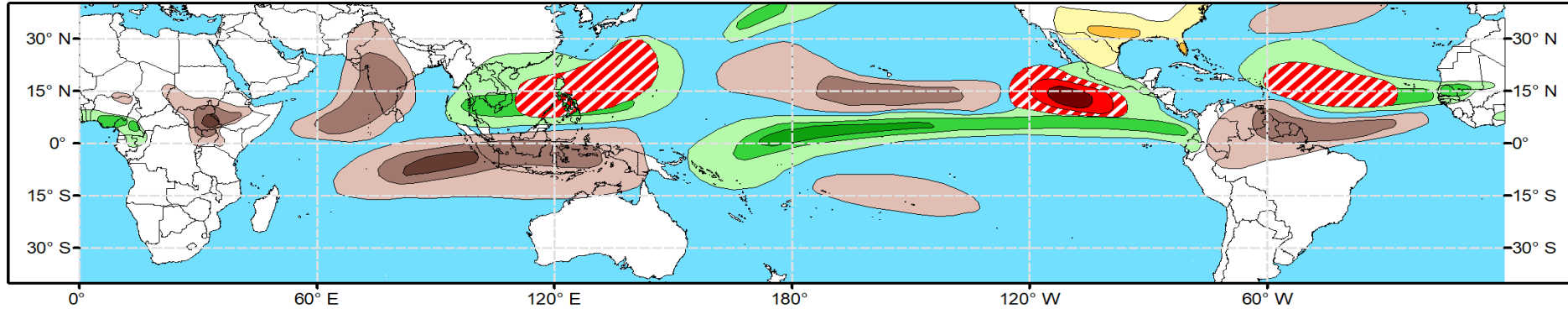
GTH Outlook:



Global Tropics Hazards Outlook Climate Prediction Center

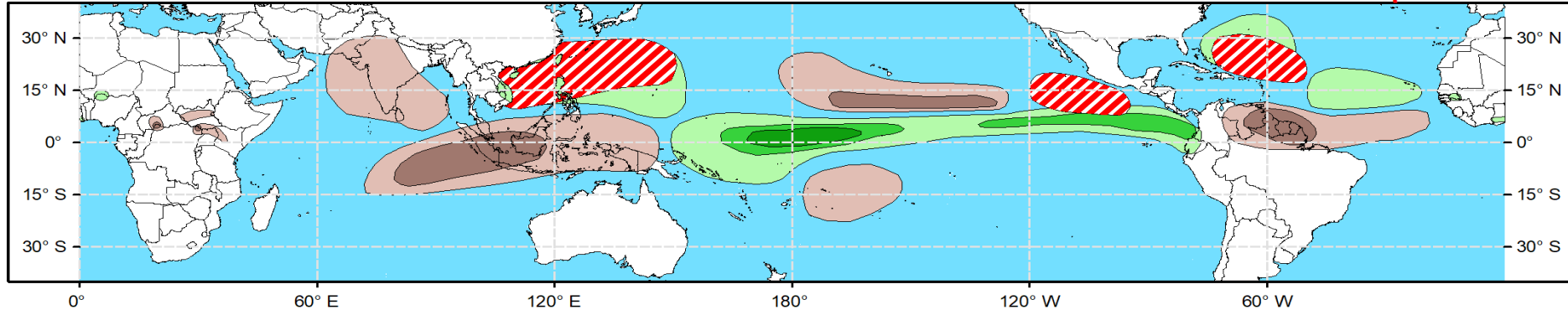


Week 2 - Valid: Aug 16, 2023 - Aug 22, 2023



Week 3 - Valid: Aug 23, 2023 - Aug 29, 2023

**** Experimental ****



**Tropical Cyclone (TC)
Formation Probability**



>20% >40% >60%

Tropical Depression (TD)
or greater strength

**Above-Average
Rainfall Probability**



>50% >65% >80%

Weekly total rainfall in the
Upper third of the historical range

**Below-Average
Rainfall Probability**



>50% >65% >80%

Weekly total rainfall in the
Lower third of the historical range

**Above-Average
Temperatures Probability**



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7-day max temperatures in the
Upper third of the historical range

**Below-Average
Temperatures Probability**



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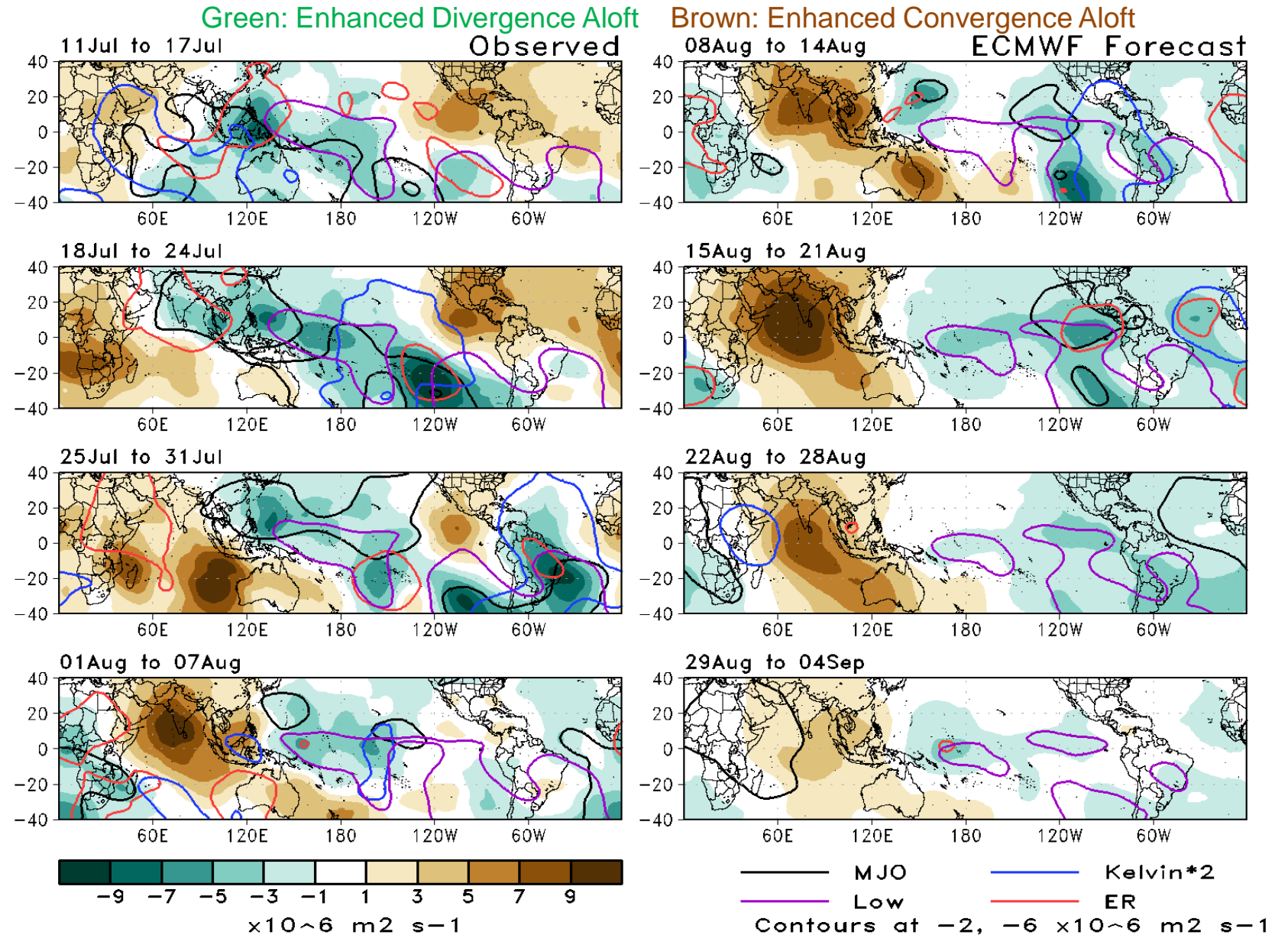
7-day min temperatures in the
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**Issued: 08/08/2023
Forecaster: Novella**

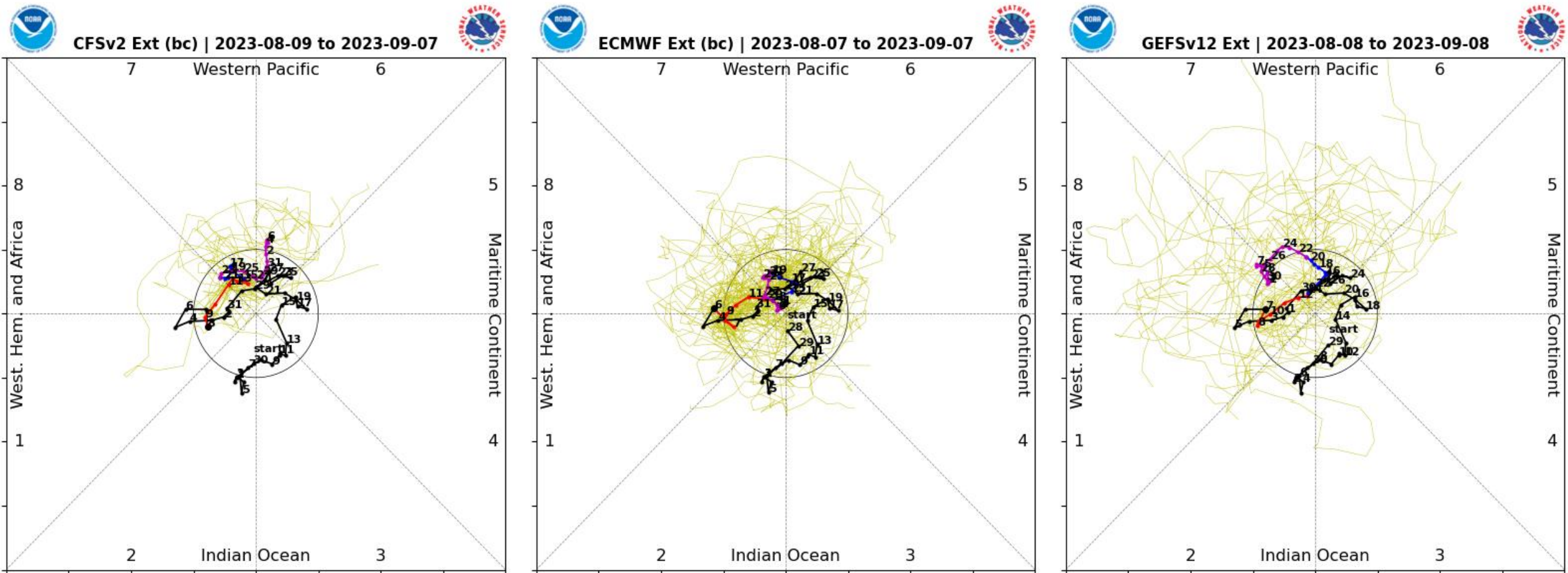
**This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only.
Consult your local responsible forecast agency.**

200-hPa Velocity Potential Anomaly Maps:

- A secondary envelope of enhanced conditions is favored during week-1 over the Americas, while the main convective envelope remains anchored over the eastern Hemisphere.
- By week-3, the a wave-1 pattern is favored to redevelop, suggestive of the renewal of a more coherent MJO.

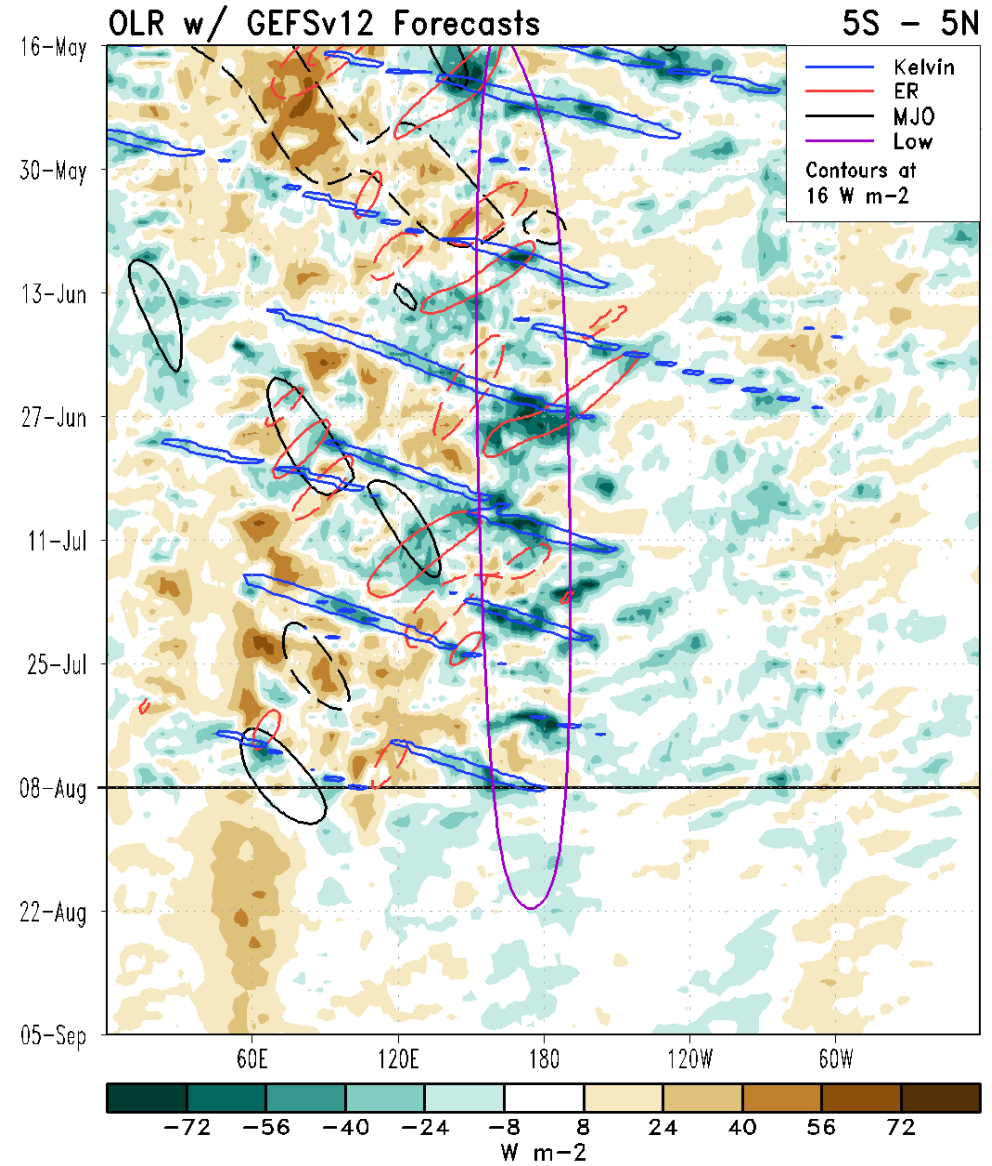
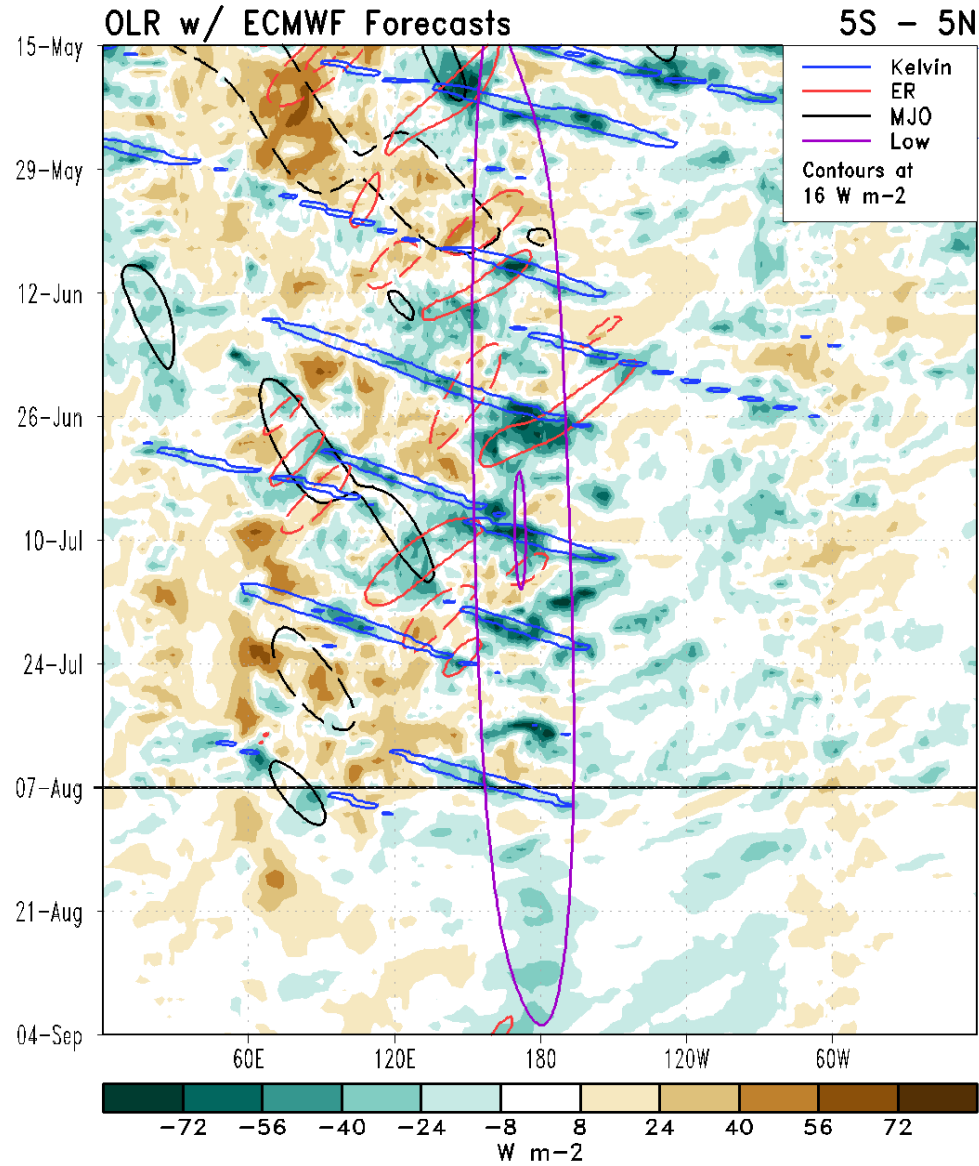


RMM Index Observations & Forecasts:



- Unlike the GEFs and CFS, the ECMWF favors a continual circumnavigation of the intraseasonal signal that returns to the Western Hemisphere and Indian Ocean during the next 3 weeks, albeit at a low amplitude. This evolution is also favored by the latest BOMM RMM forecast (not pictured).
- However, ensemble spread remains quite high among the dynamical models, contributing to much uncertainty in the outlook.

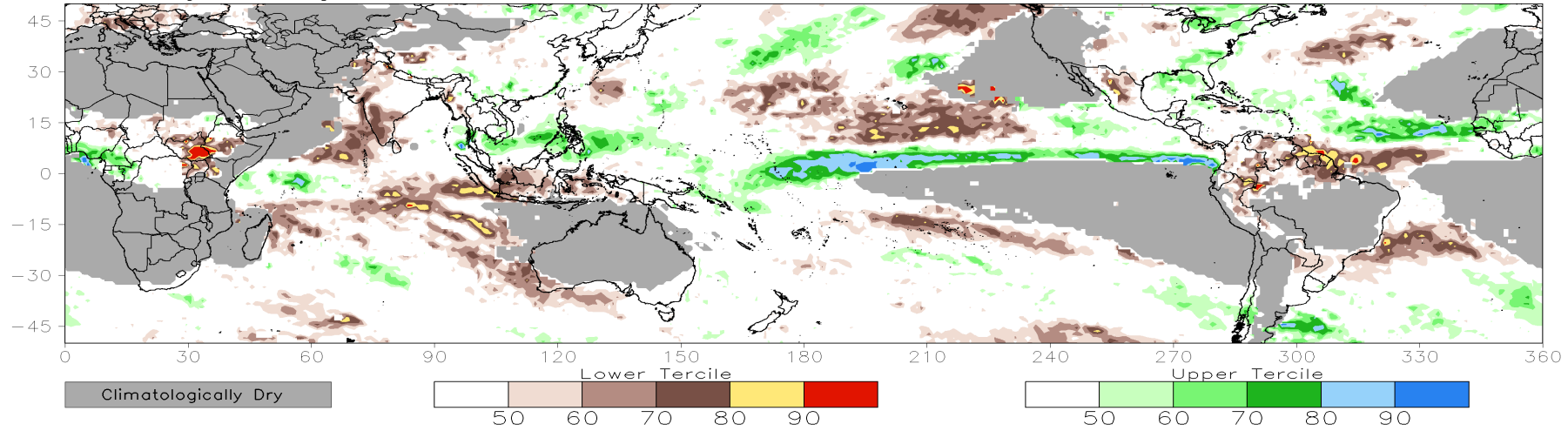
Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



Consolidated Probabilistic Precipitation: Weeks 2 & 3

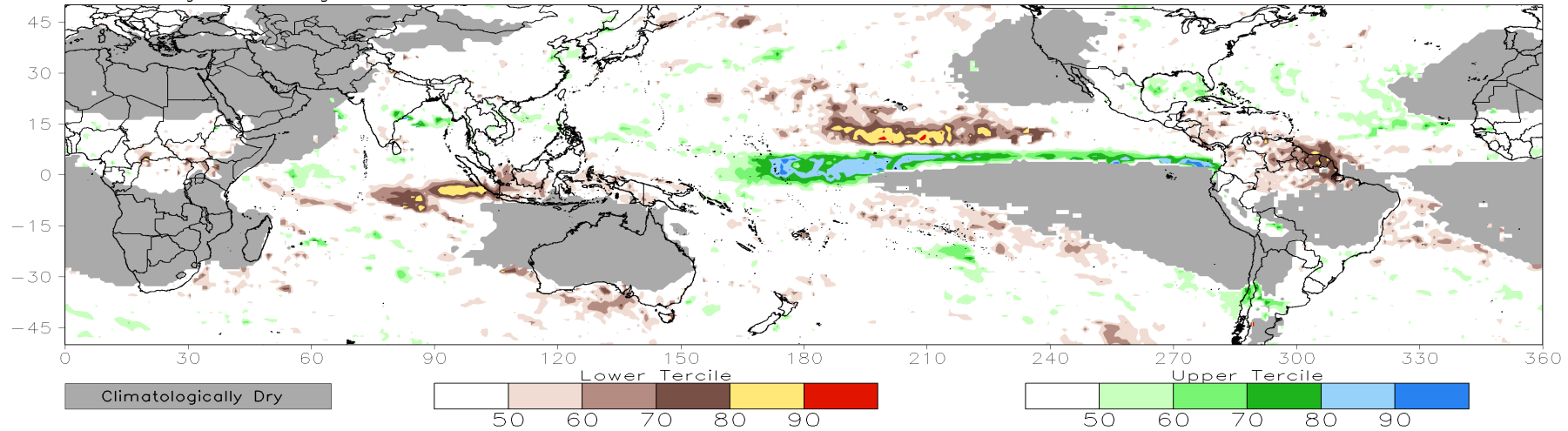
CONS 00z: Week2 Probability for Total Rainfall Below(Above) Lower(Upper) Tercile (%)

Valid: 16Aug2023–22Aug2023



CONS 00z: Week3 Probability for Total Rainfall Below(Above) Lower(Upper) Tercile (%)

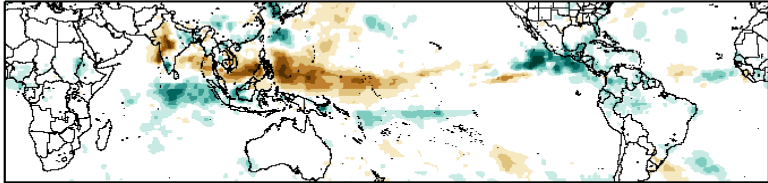
Valid: 23Aug2023–29Aug2023



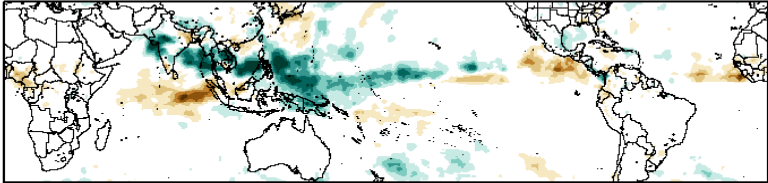
Historical Precipitation Anomalies By MJO Phase:

JAS MJO Composite: GPCP1DD (mm/day)

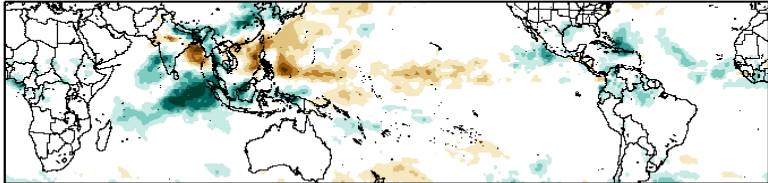
Phase 1



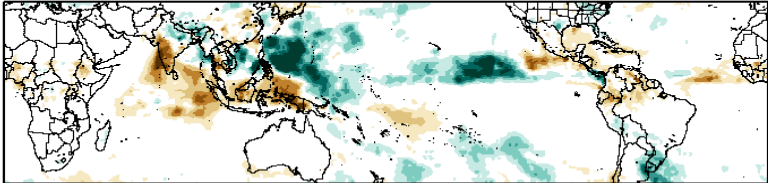
Phase 5



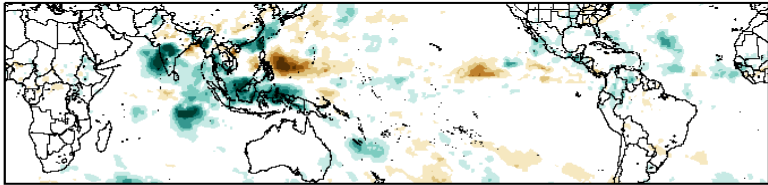
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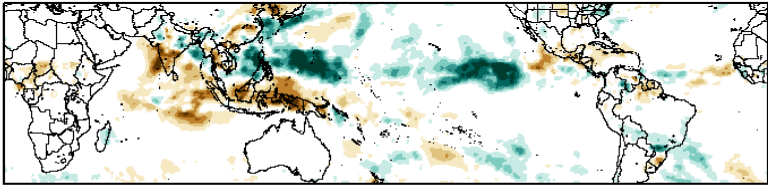
Phase 6



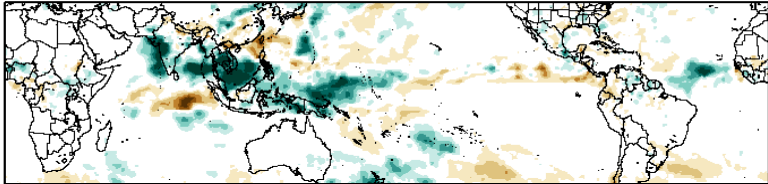
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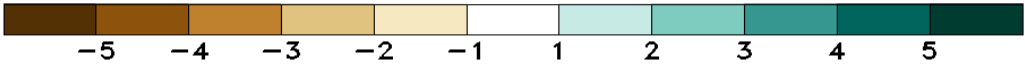
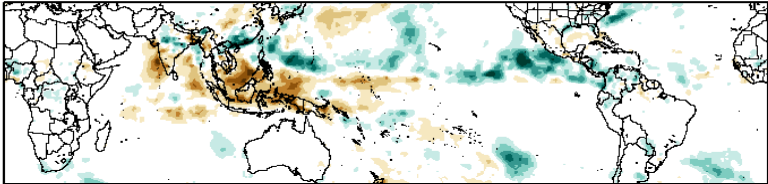
Phase 7



Phase 4

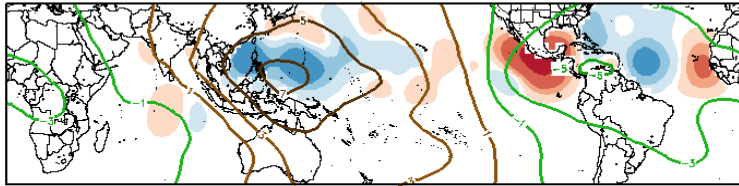


Phase 8

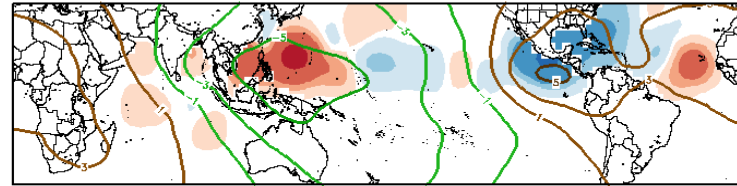


Historical TC Origin Anomalies By MJO Phase & Weeks 2+3 Genesis Climo:

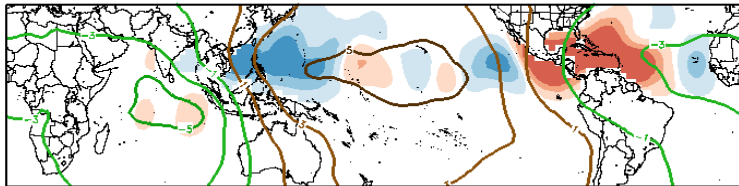
JAS MJO Composite: Mean TC Origin Density Anomaly ($\#TCs/277km^2*100$)
w/ JAS CHI200 ($\times 10^{-6} m^{-2} s^{-1}$) / Contours every $2 \times 10^{-6} m^{-2} s^{-1}$



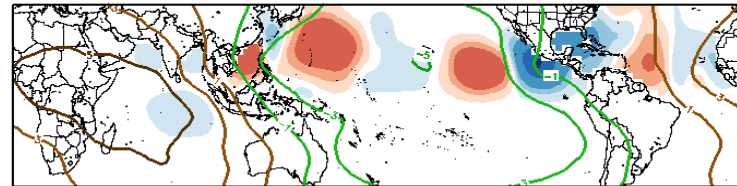
Phase 1



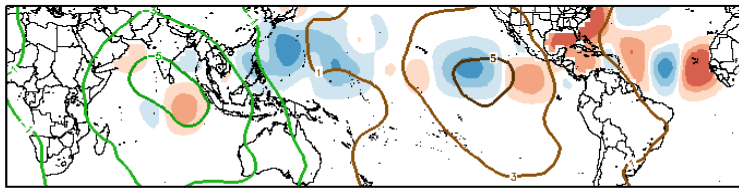
Phase 5



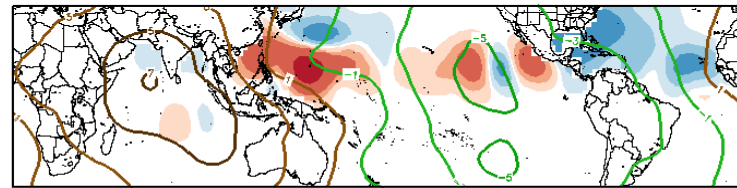
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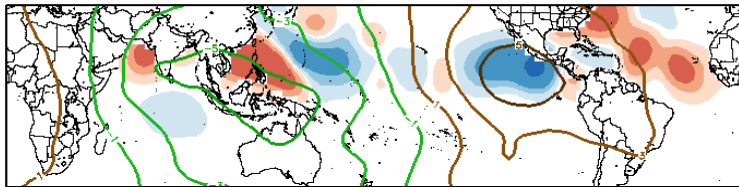
Phase 6



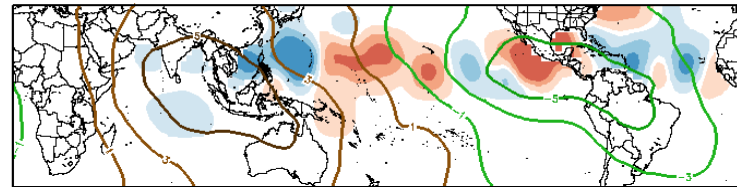
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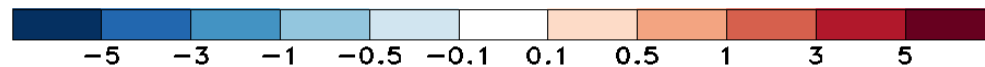
Phase 7



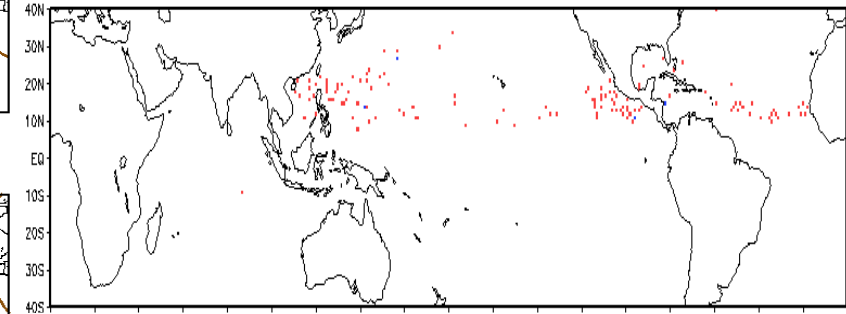
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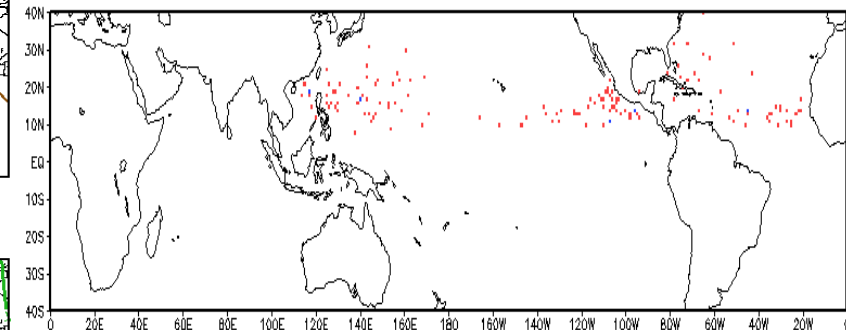
Phase 8



Observed TC Genesis, 1979-2021
7-day Period 0816 to 0822

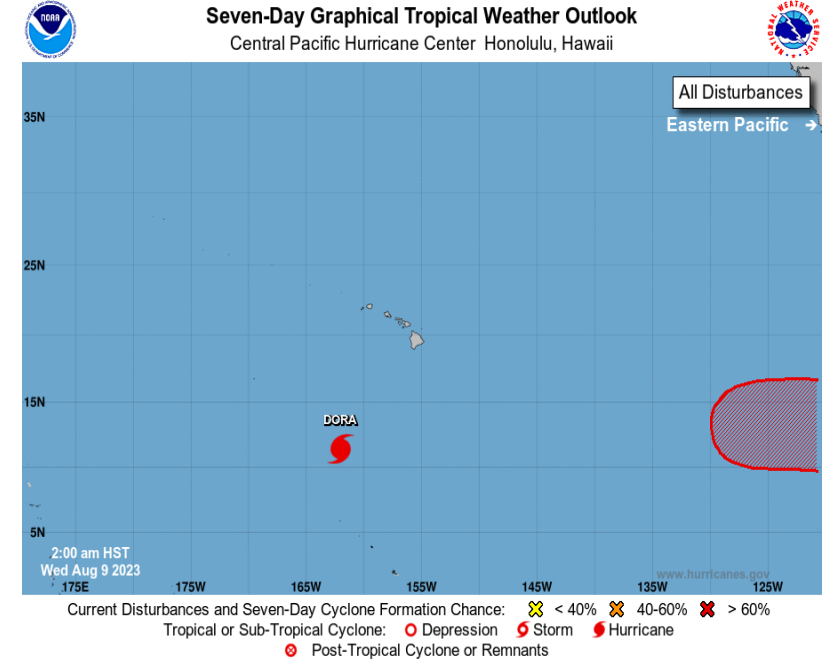
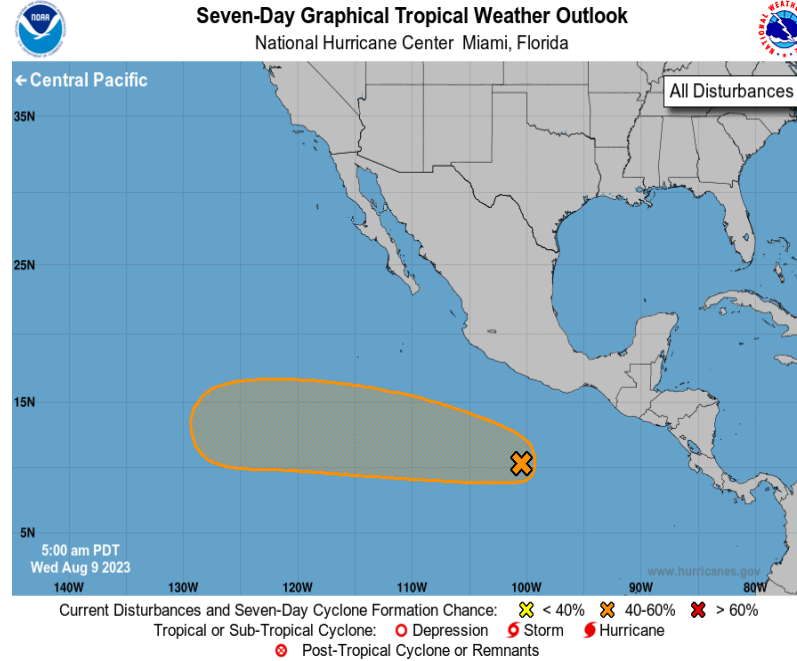
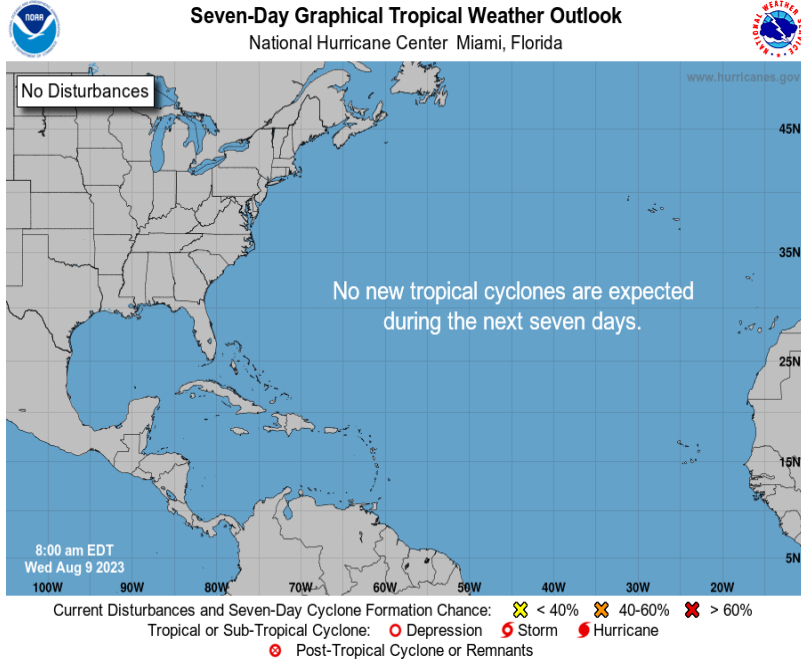


Observed TC Genesis, 1979-2021
7-day Period 0823 to 0829



Experimental

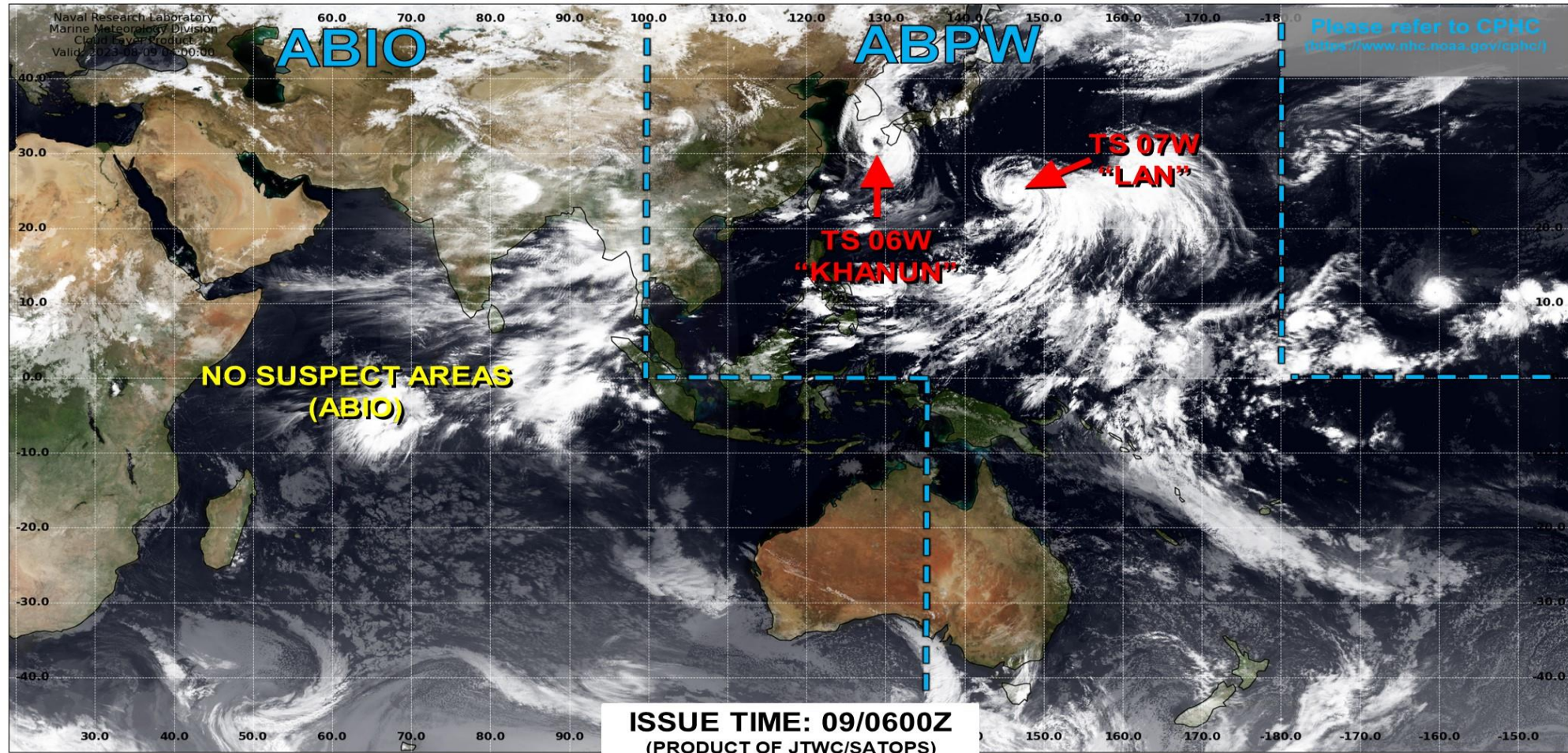
Tropical Cyclone Monitoring/Forecast: NHC / CPHC



Tropical Cyclone Monitoring/Forecast: JTWC



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)



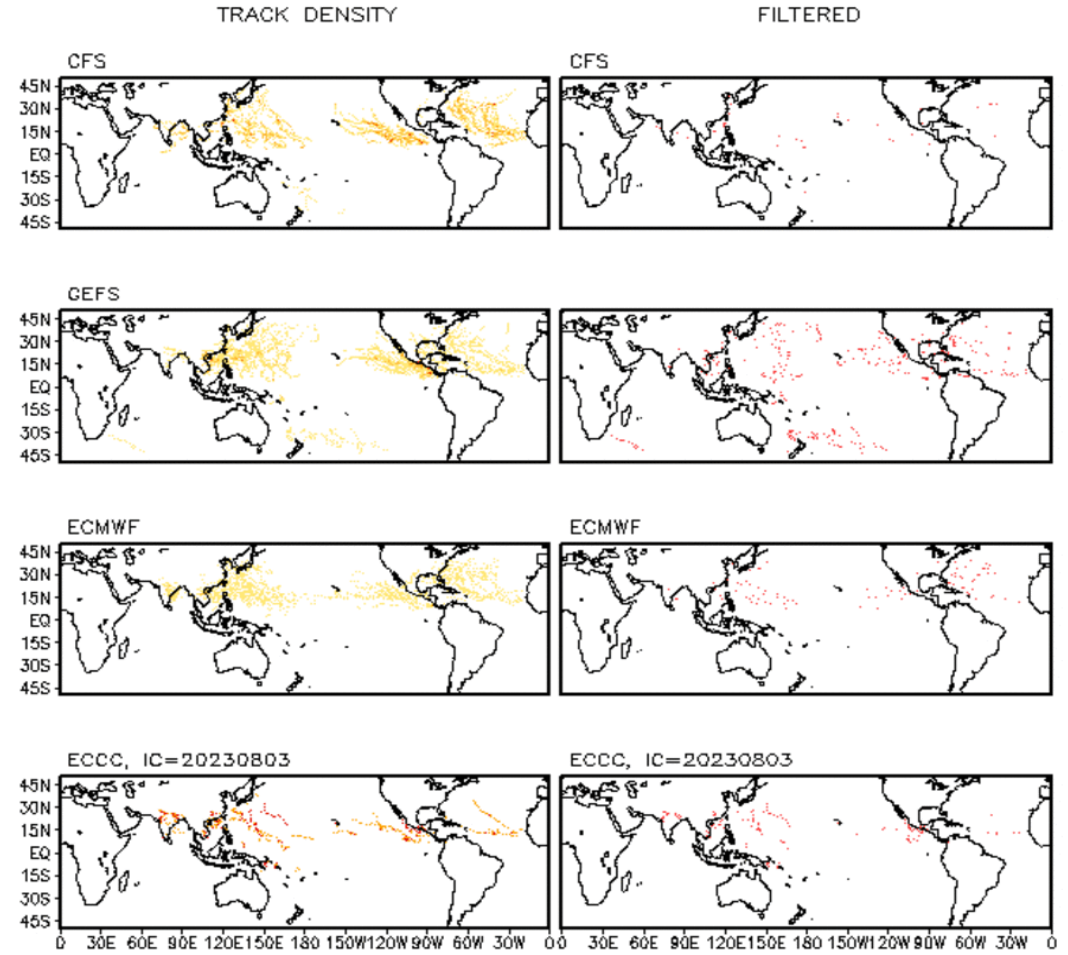
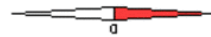
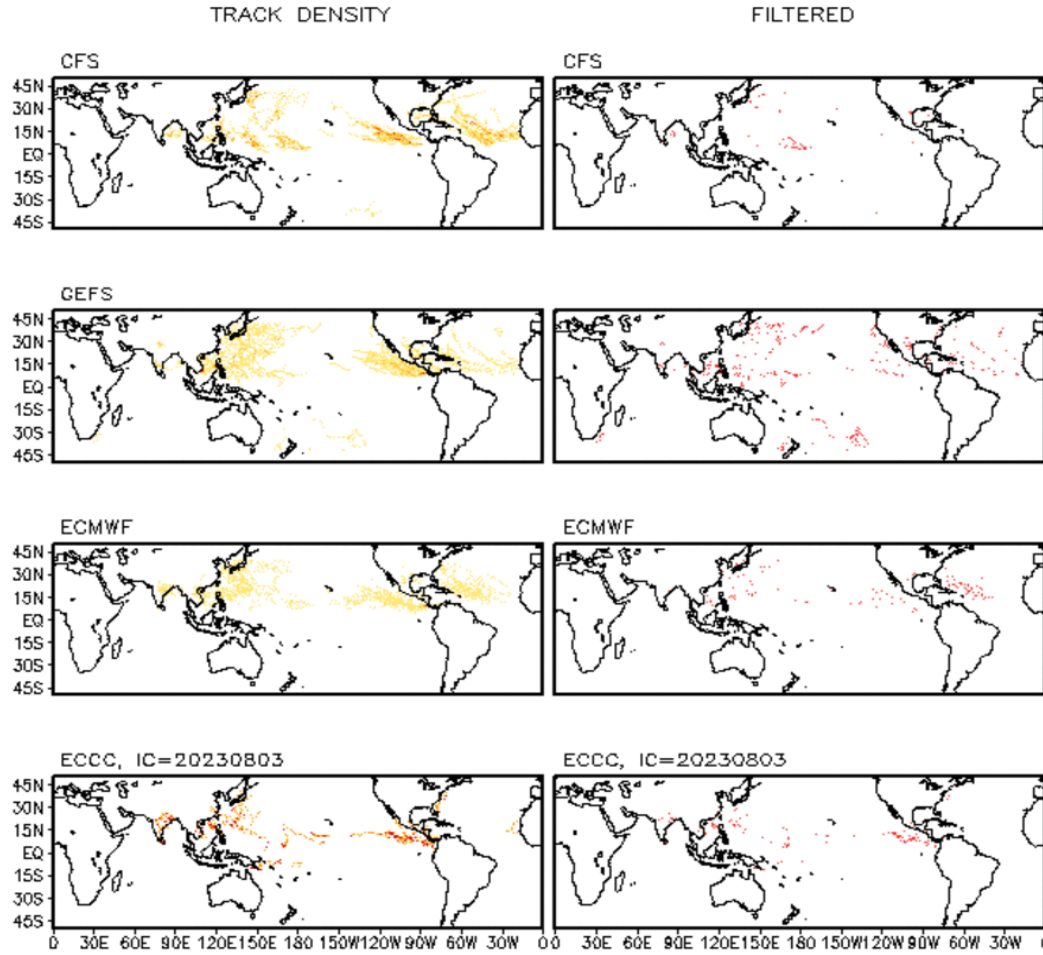
Monitoring for potential transition to TC. Invest label color denotes tropical transition probability



Multi-Model TC Track Densities: Weeks 2+3

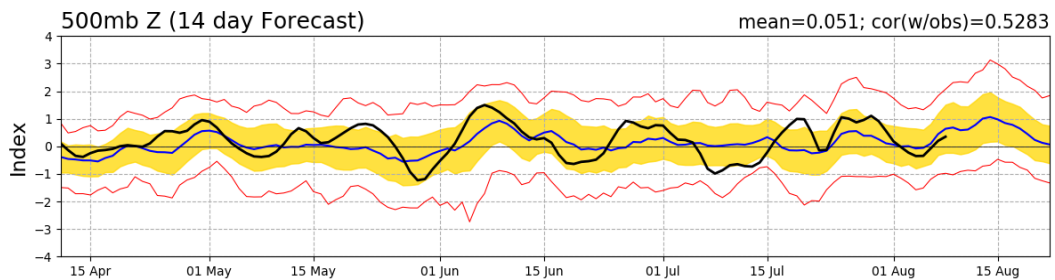
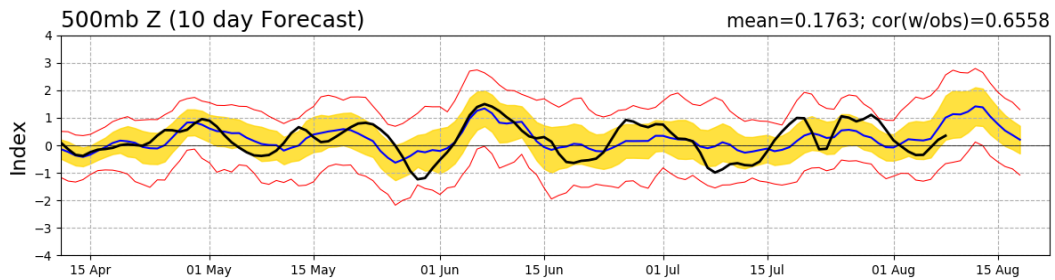
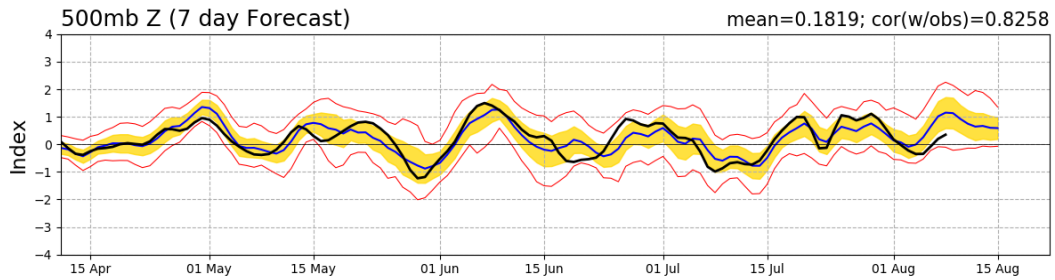
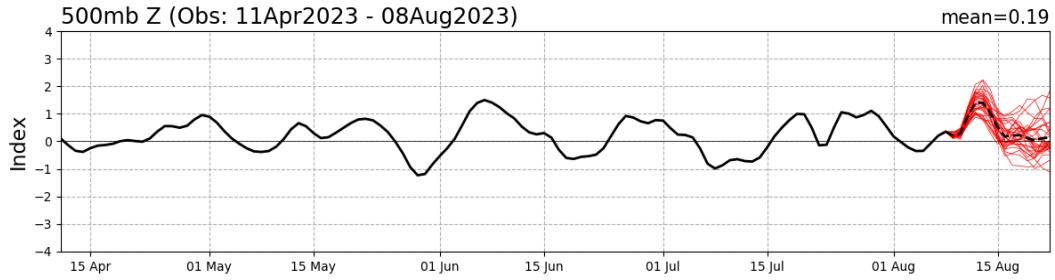
Storm Track Density Distribution, IC=20230807
Week 2 Forecast: 0816-0822

Storm Track Density Distribution, IC=20230807
Week 3 Forecast: 0823-0829

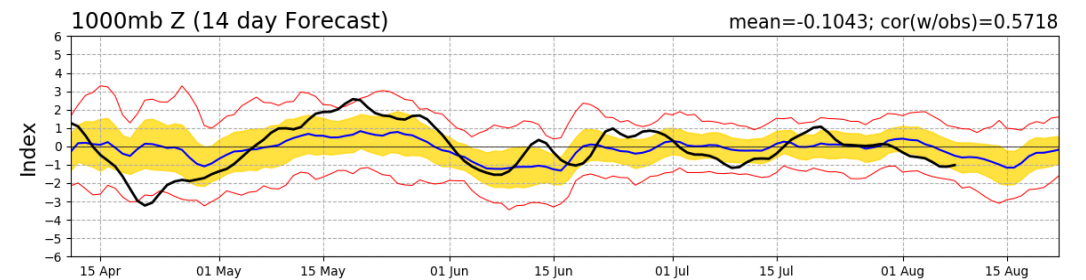
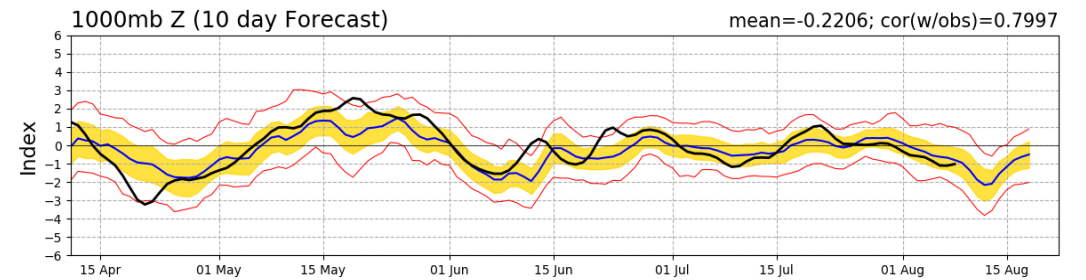
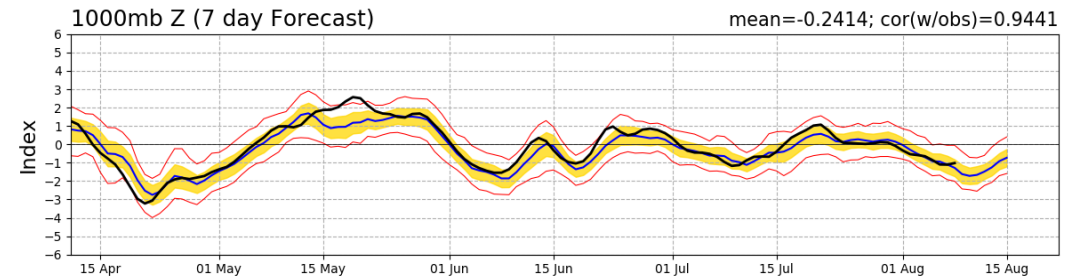
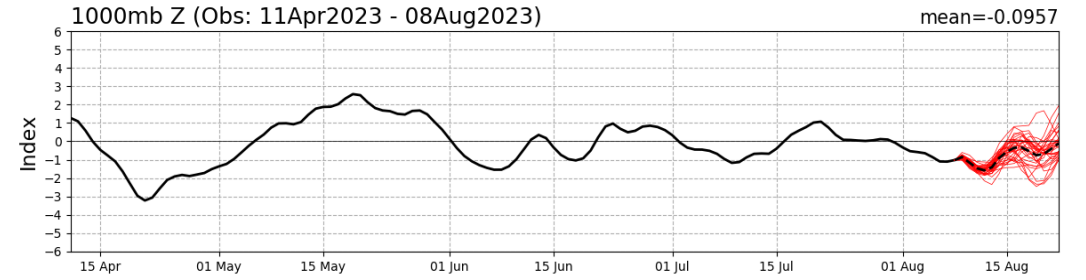


Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts



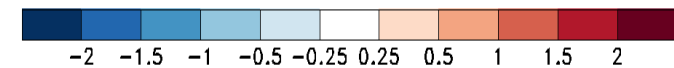
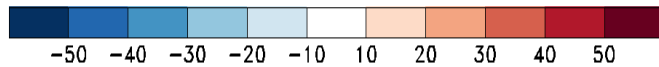
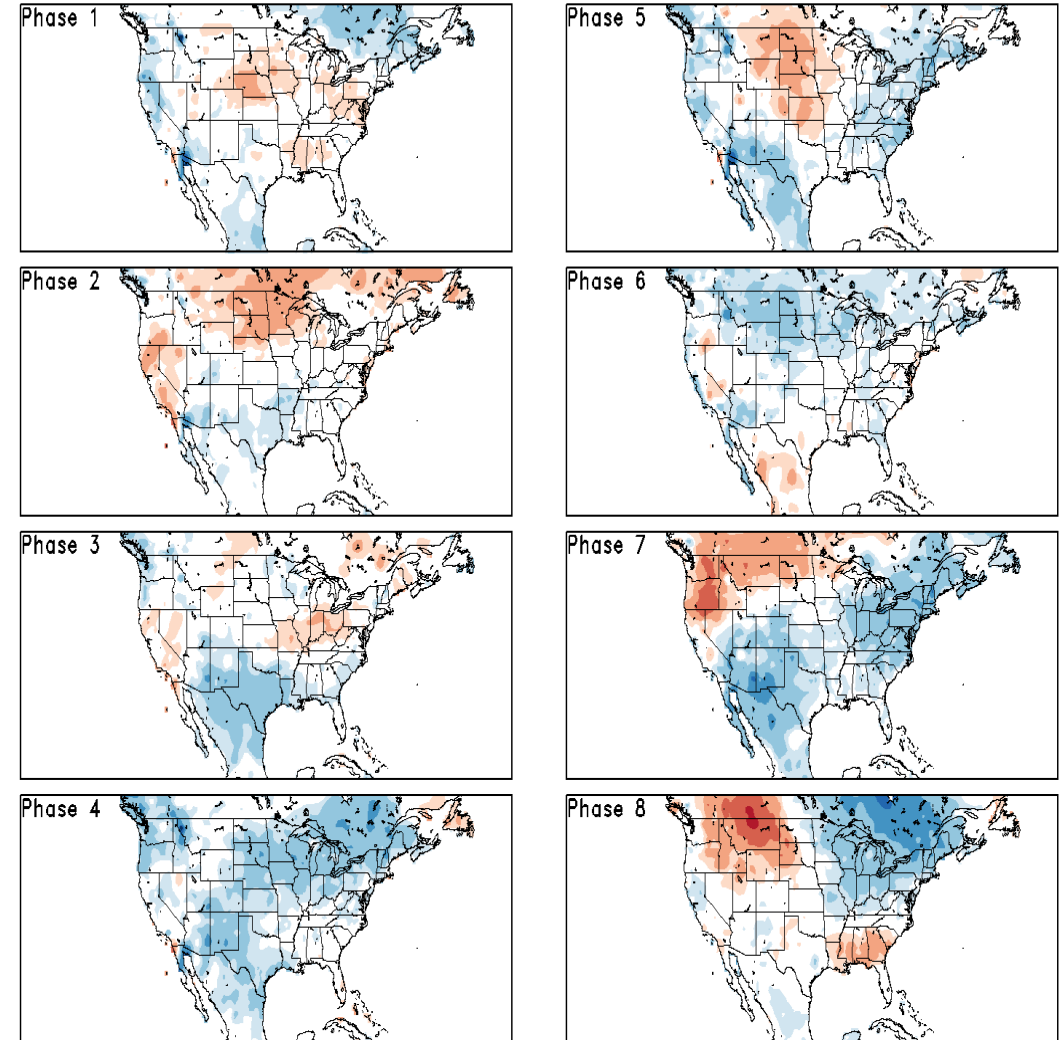
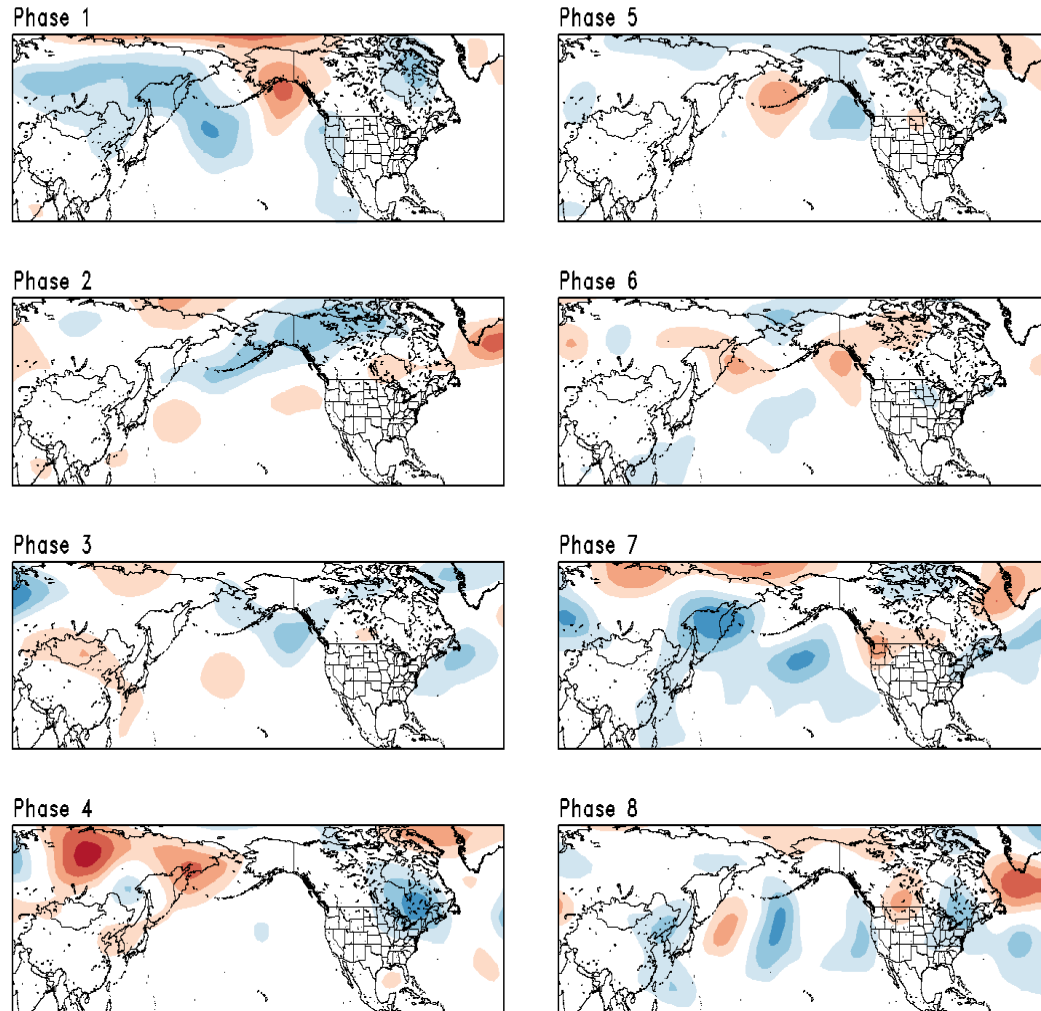
AO Index: Observed & GEFS Forecasts



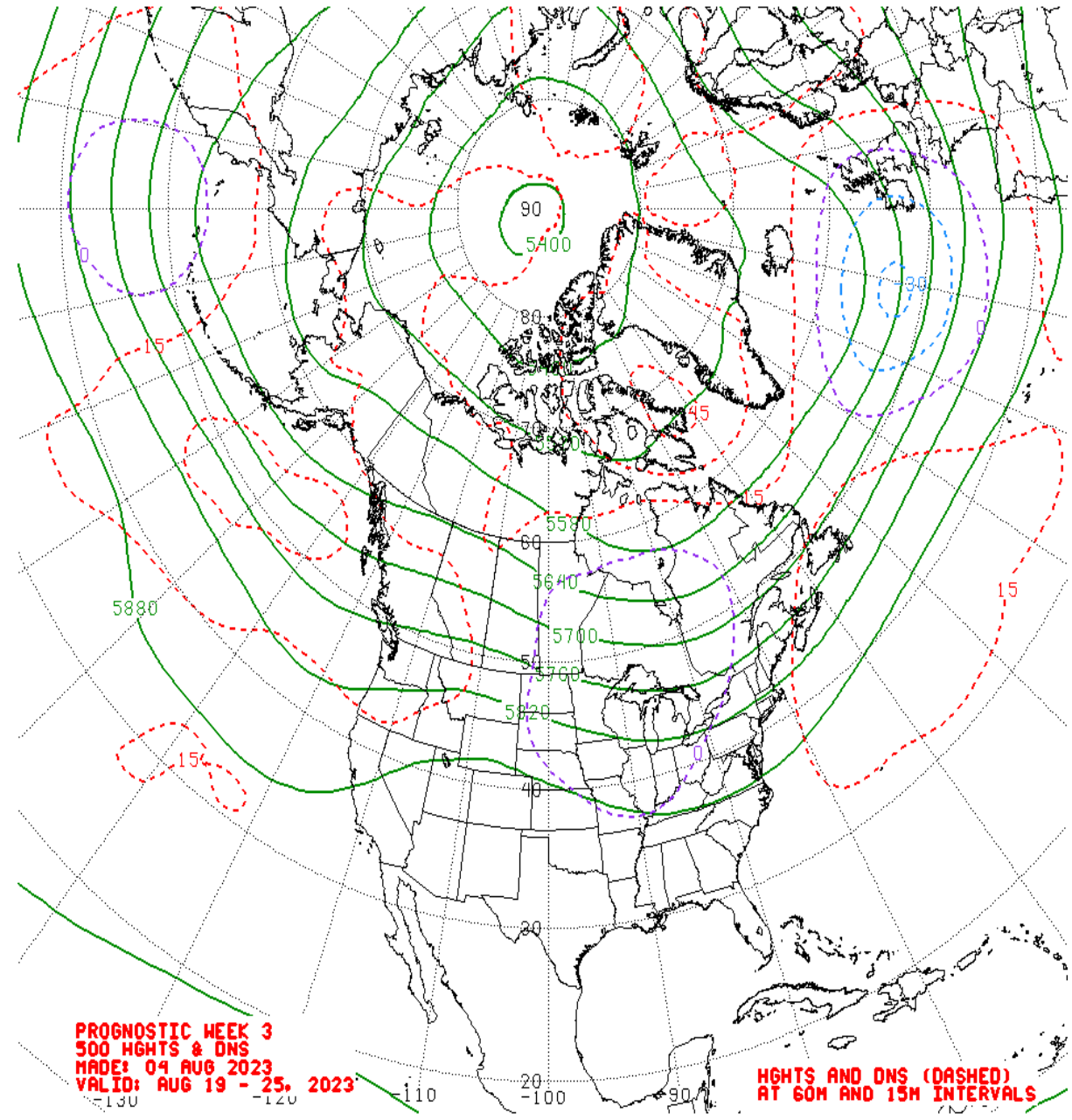
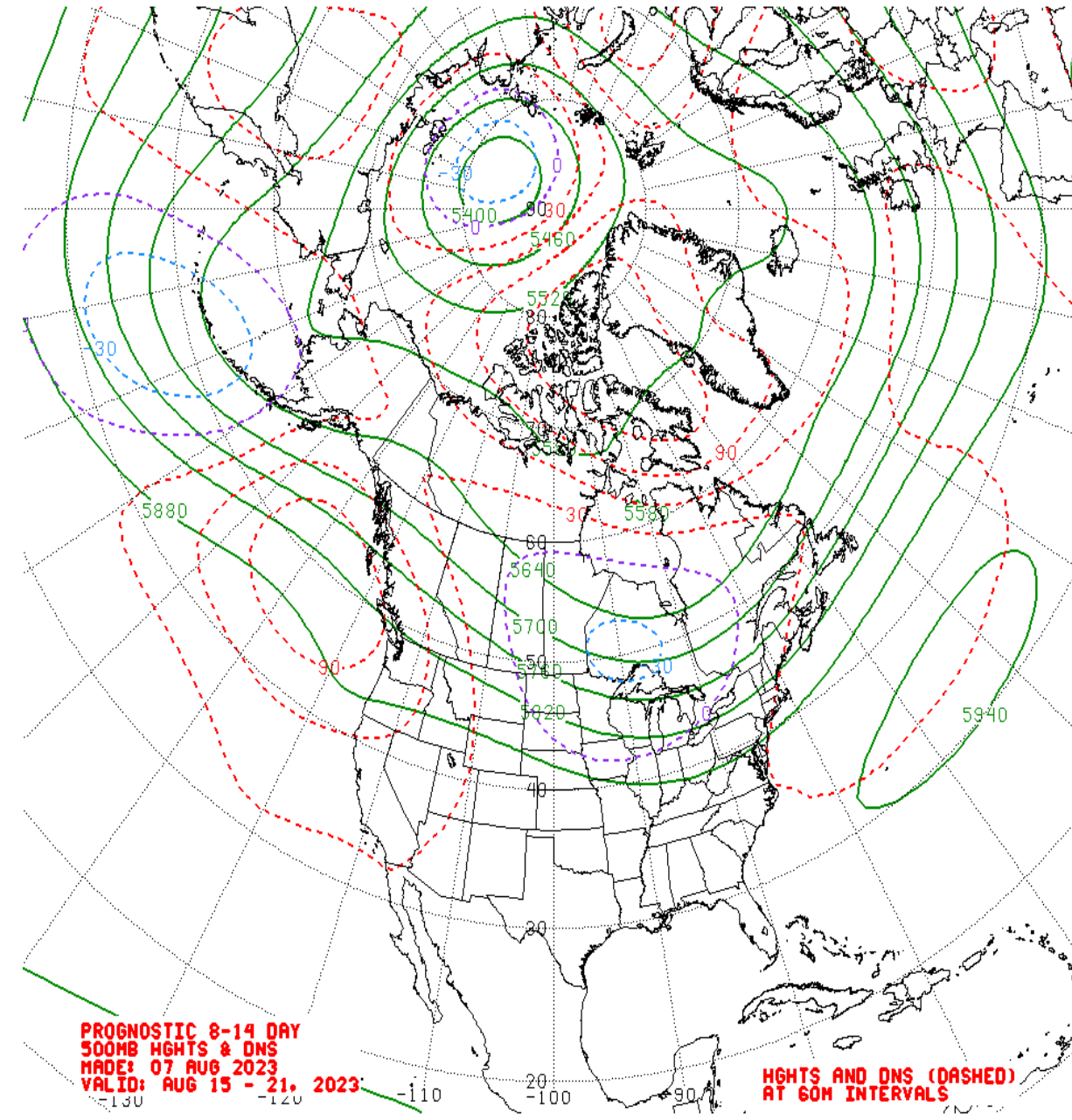
Historical 500-hPa Height & U.S. Temperatures By MJO Phase:

JAS MJO Composite: CDAS 500-hPa Height (m)

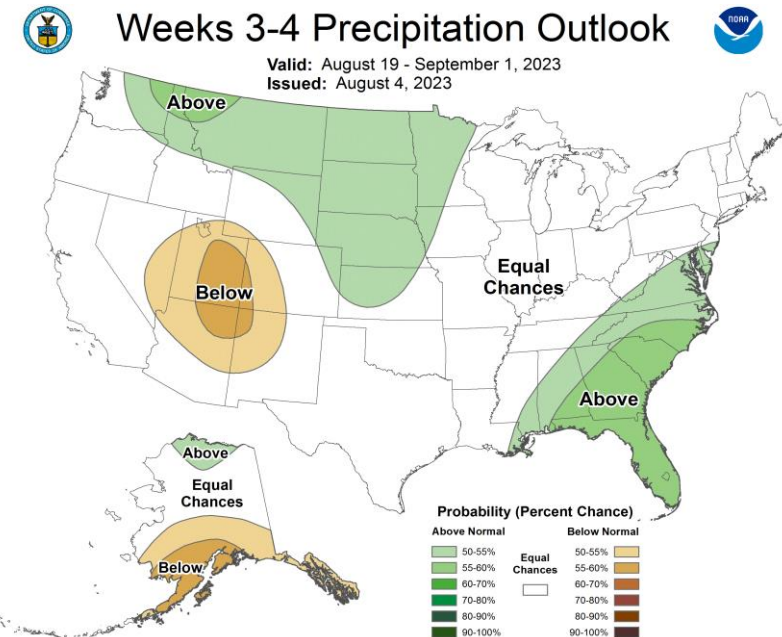
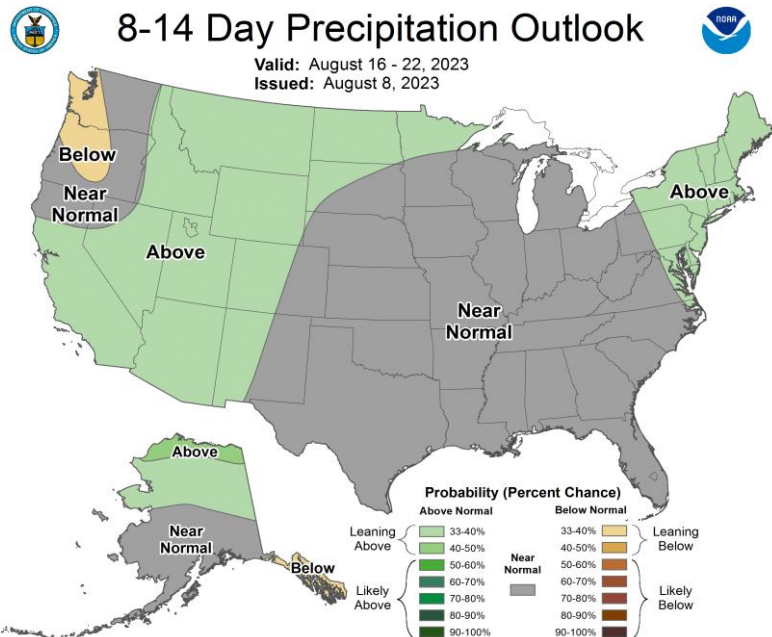
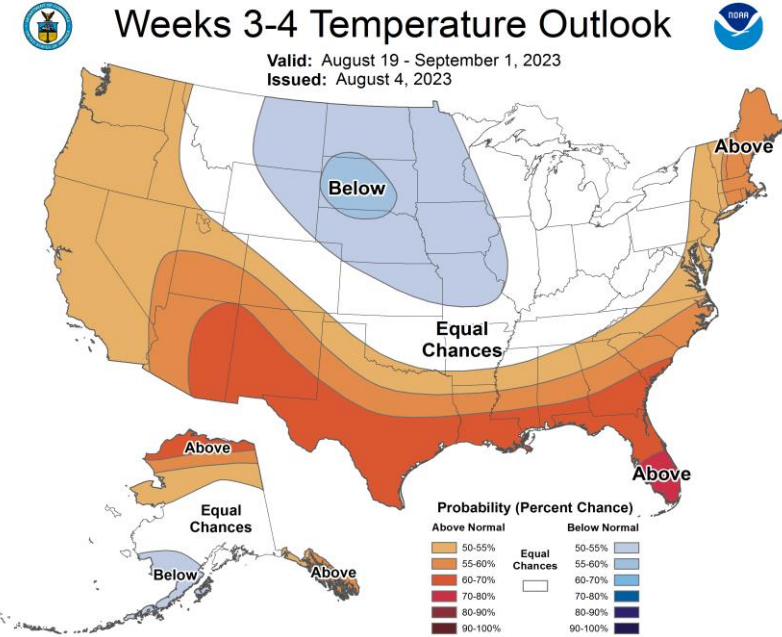
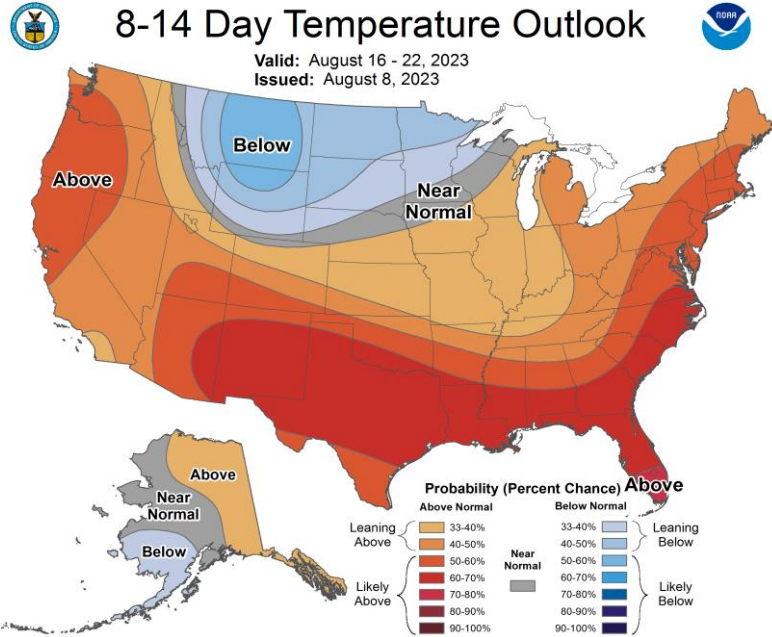
JAS MJO Composite: GLBT (degC)



Mean 500-hPa Height Anomaly Forecasts: Weeks 2+3



Official Temperature & Precipitation Forecasts:



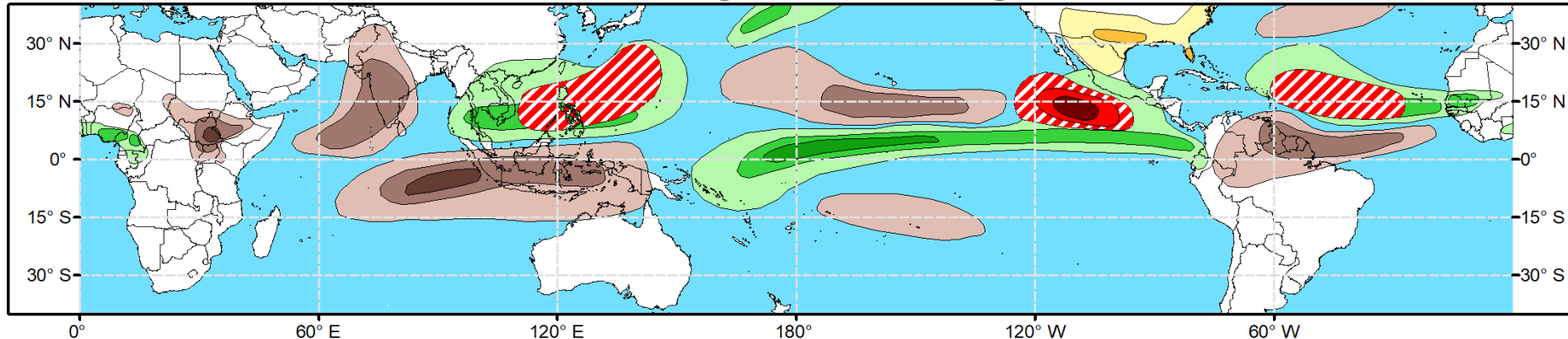


Global Tropics Hazards Outlook

Climate Prediction Center

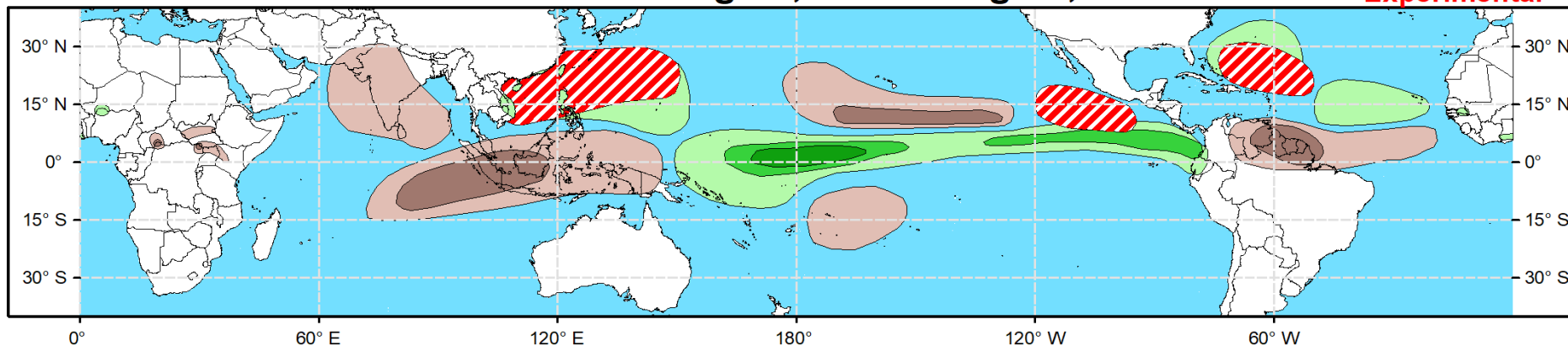


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