



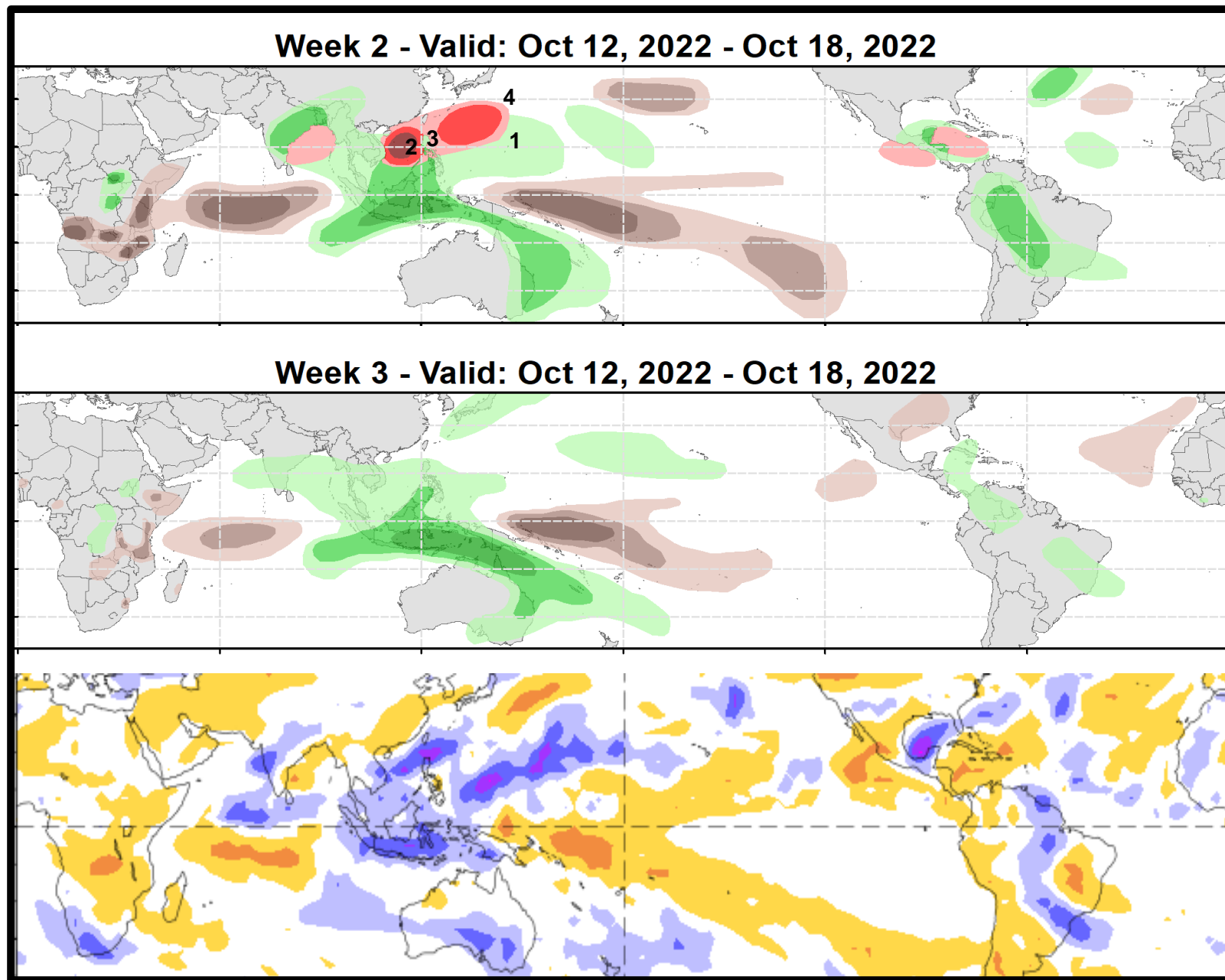
# Weeks 2-3 Global Tropics Hazards Outlook

10/18/2022

Danny Barandiaran  
NWS / NCEP / Climate Prediction Center

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

- 1: TD 21 W, Oct. 12
- 2: TS Sonca, Oct. 13
- 3: Typhoon Nesat, Oct. 14
- 4: TS Haitang, Oct. 18



# Synopsis of Climate Modes:

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## ENSO: (Oct 17, 2022 Update)

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña is expected to continue, with chances for La Niña at 75% during Dec-Feb 2022-23, with a 54% chance of ENSO-neutral conditions by Feb-Apr 2023.

## MJO and other subseasonal tropical variability:

- Following a brief uptick of the MJO signal over the Maritime Continent and Western Pacific in mid-October, RMM index dropped its signal strength and eastward propagation is beginning to slow.
- RMM forecasts are almost uniform in the depiction of nearly stationary pattern of MJO-related convection, with the convective envelope remaining centered over the West Pacific for the foreseeable future.
- Given these conditions, the large-scale environment is expected to be favorable for additional tropical cyclogenesis across the West Pacific and Bay of Bengal regions.

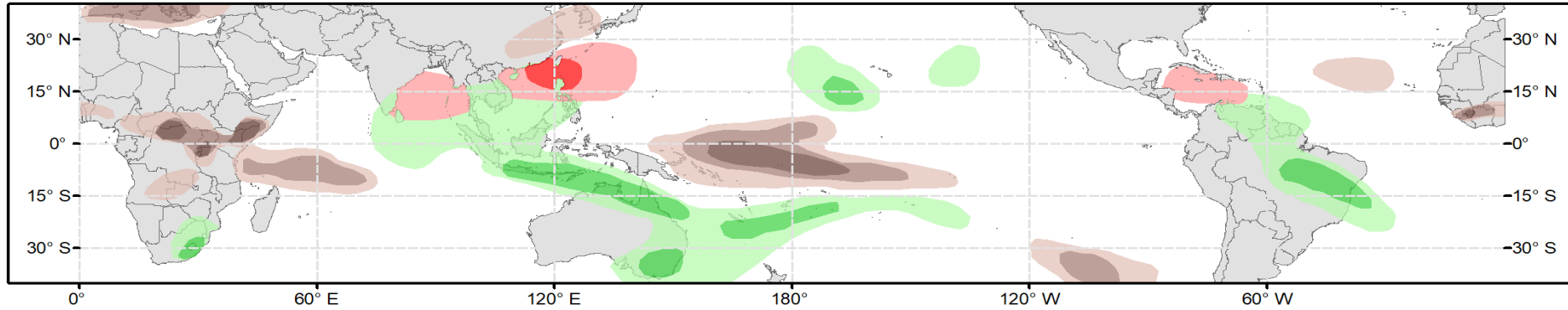
# GTH Outlook:



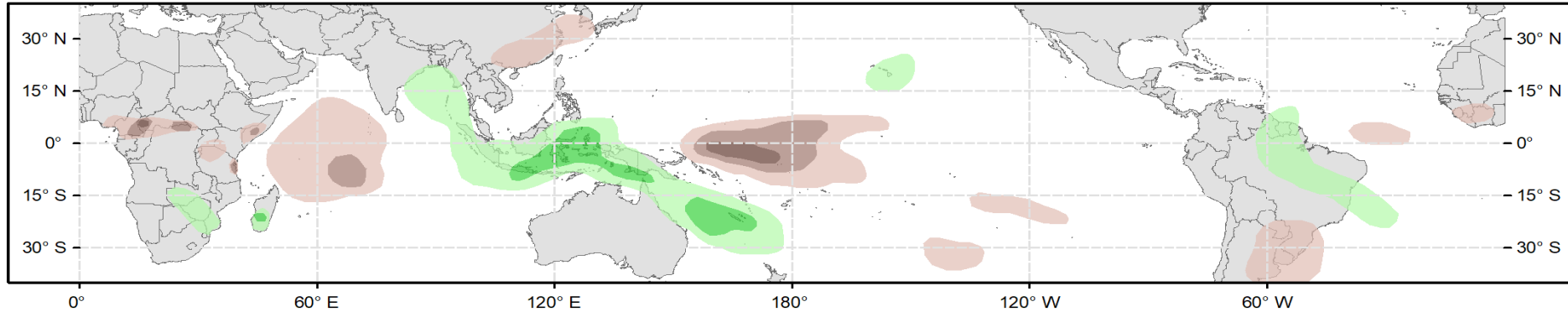
## Global Tropics Hazards Outlook Climate Prediction Center



**Week 2 - Valid: Oct 26, 2022 - Nov 01, 2022**



**Week 3 - Valid: Nov 02, 2022 - Nov 08, 2022**



**Week-2 Only**

**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**

>50% >65% >80%

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

**Below-Average Temperatures Probability**

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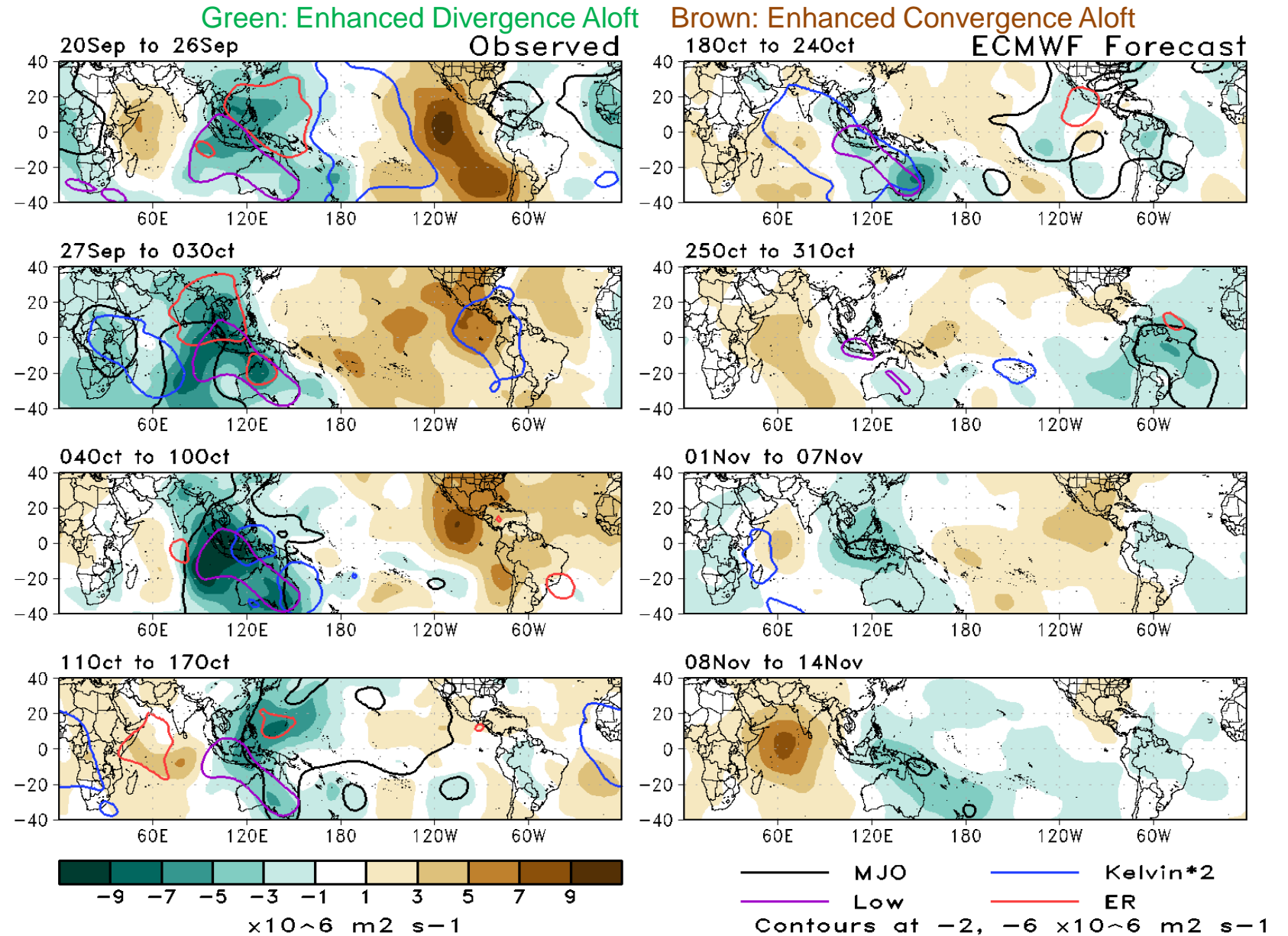
7-day mean temperatures in the Lower third of the historical range

**Issued: 10/18/2022**  
**Forecaster: Barandiaran**

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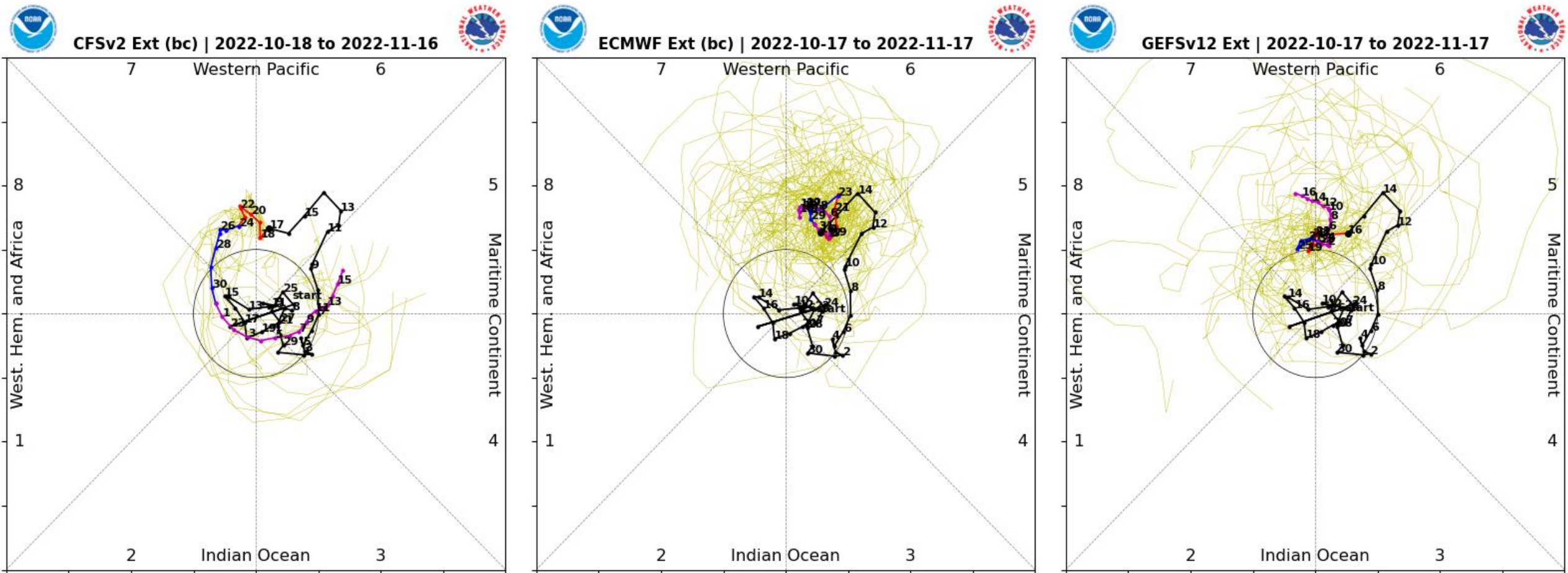
# 200-hPa Velocity Potential Anomaly Maps:

- After a period characterized by an amplified wave-1 pattern, tropical convection has become less structured.
- This disorganized pattern persists in week 1-2, but by week 3 some consolidation of the convective envelope over the Maritime Continent begins to emerge.



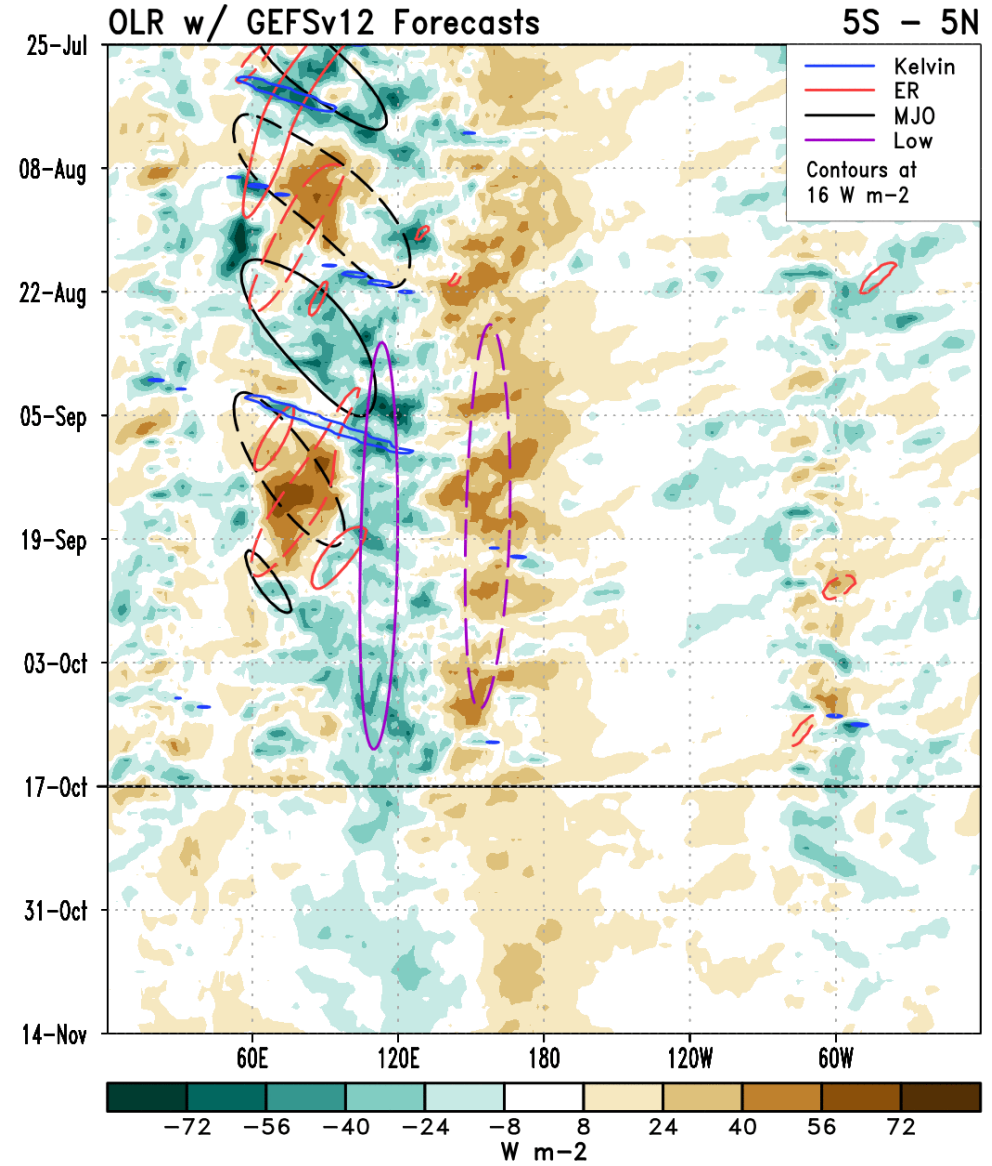
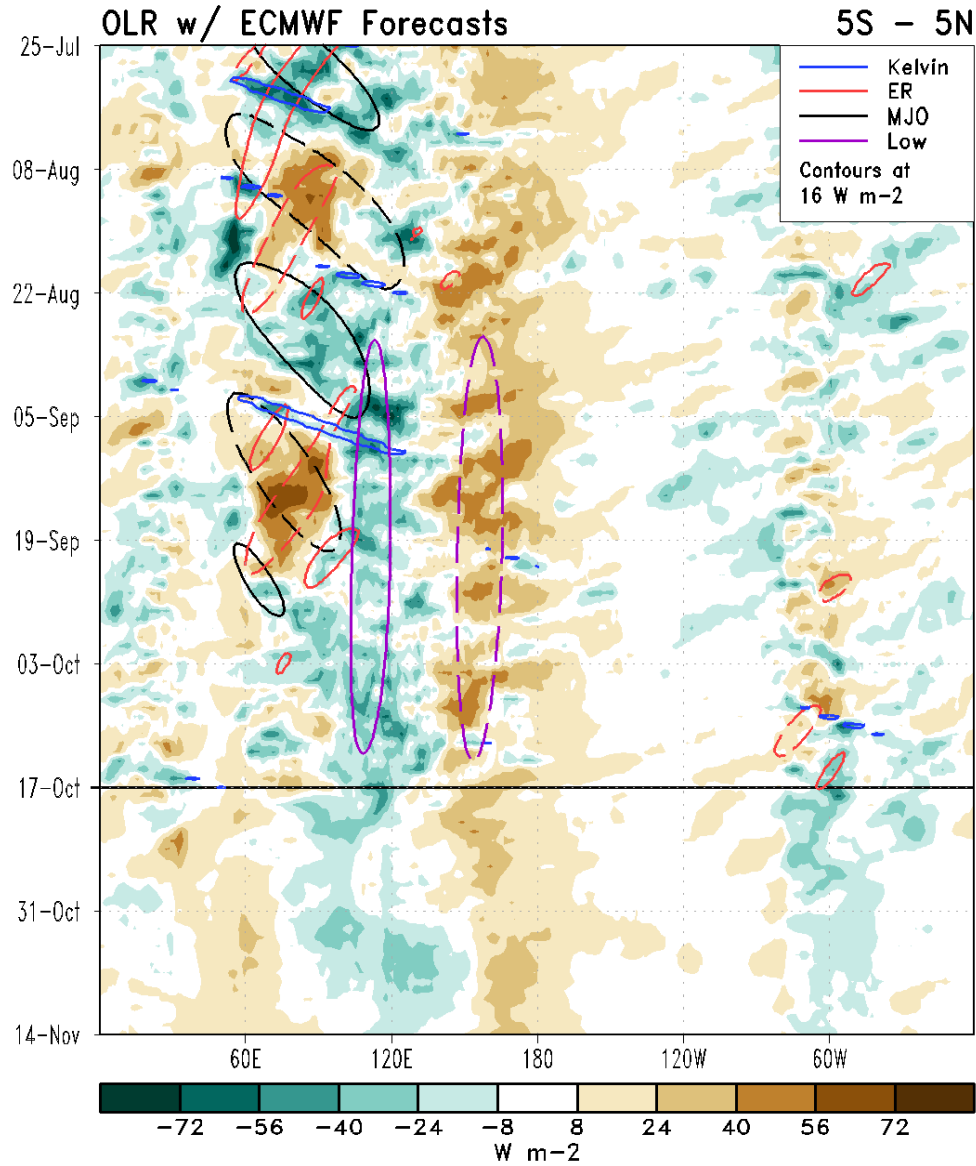


# RMM Index Observations & Forecasts:



- Unlike the GEFS and ECMWF, the CFS 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. Most dynamical models depict a stationary pattern as seen in the ECMWF and GEFS, many with a narrow ensemble spread.

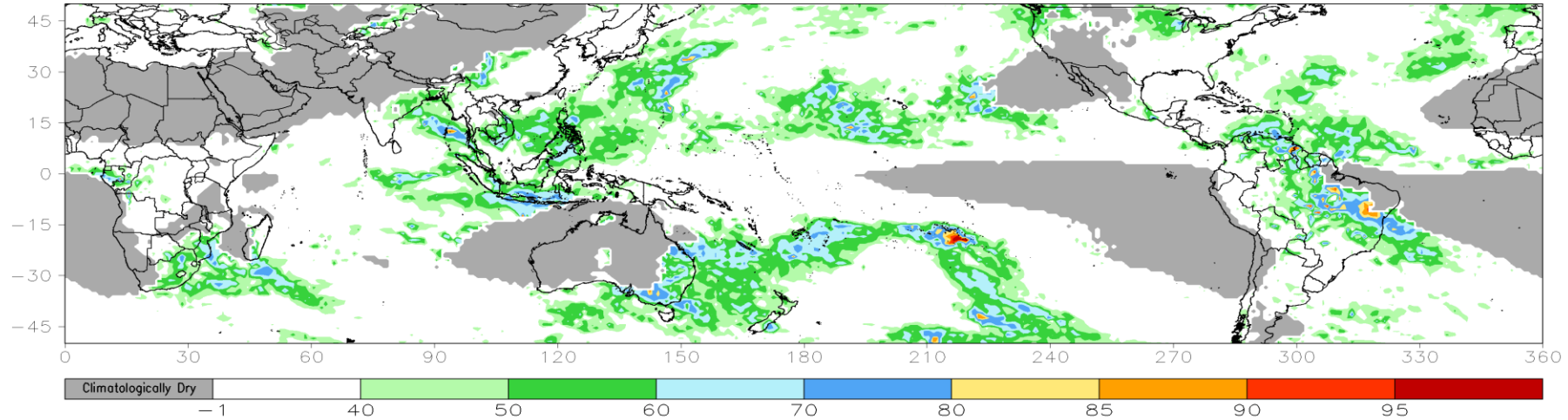
# Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



# Consolidated Probabilistic Precipitation: Week-2

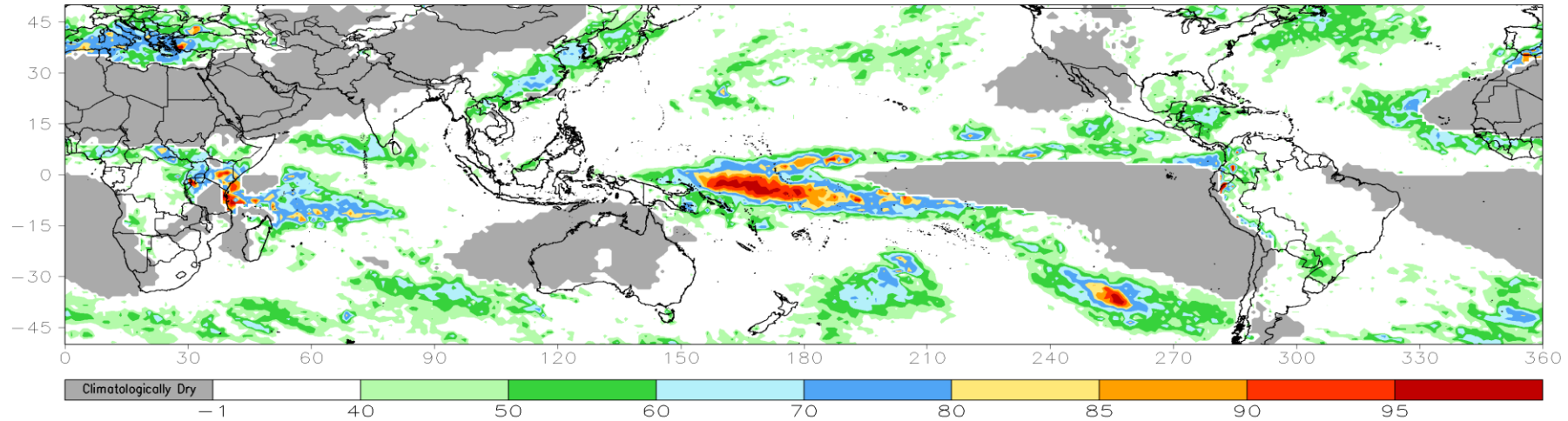
CONS 00z: Week2 Probability for Total Rainfall Above Upper Tercile (%)

Valid: 26Oct2022-01Nov2022



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

Valid: 26Oct2022-01Nov2022

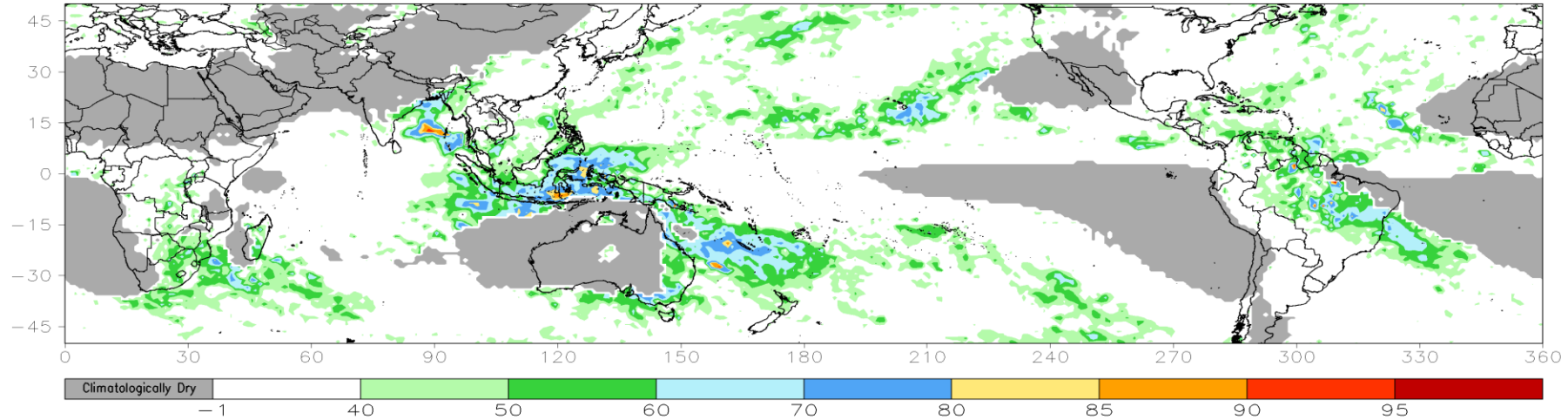




# Consolidated Probabilistic Precipitation: Week-3

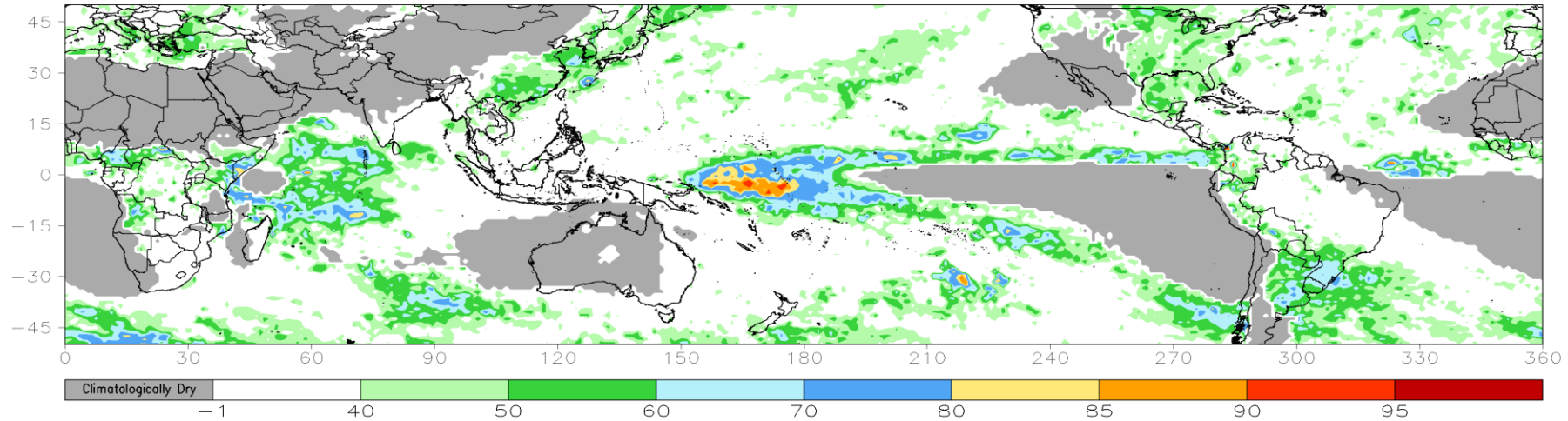
CONS 00z: Week3 Probability for Total Rainfall Above Upper Tercile (%)

Valid: 02Nov2022-08Nov2022



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

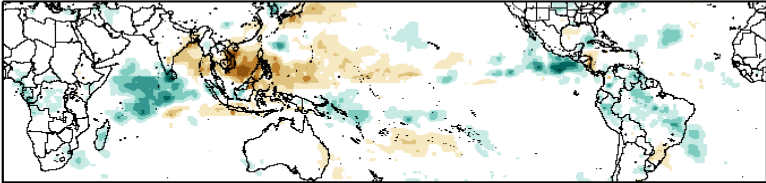
Valid: 02Nov2022-08Nov2022



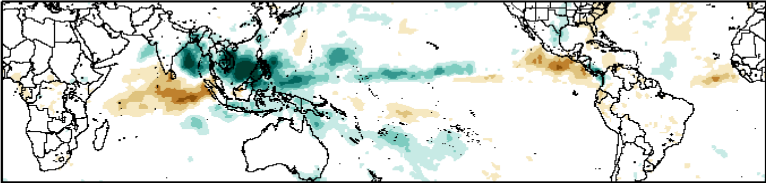
# Historical Precipitation Anomalies By MJO Phase:

SON MJO Composite: GPCP1DD (mm/day)

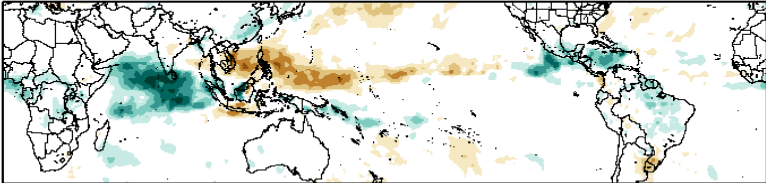
Phase 1



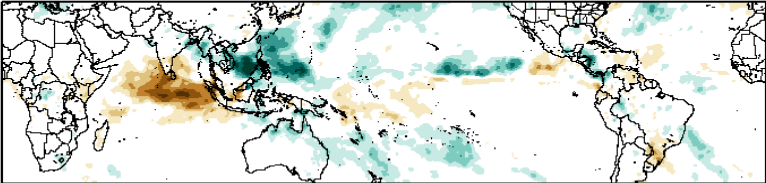
Phase 5



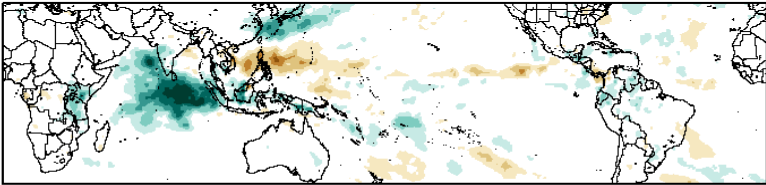
Phase 2



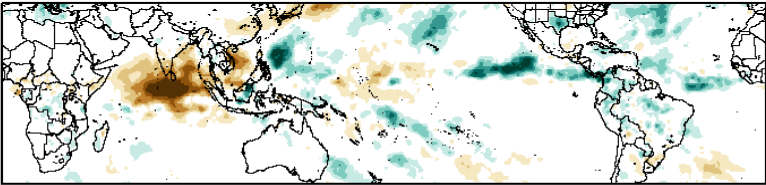
Phase 6



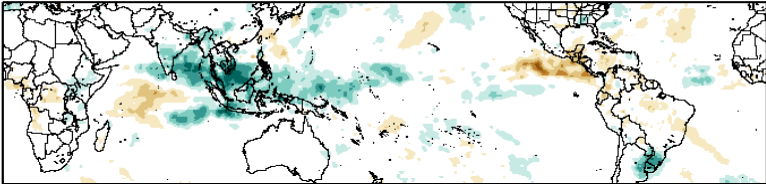
Phase 3



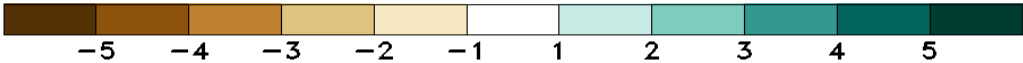
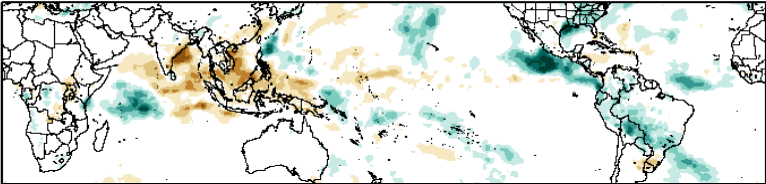
Phase 7



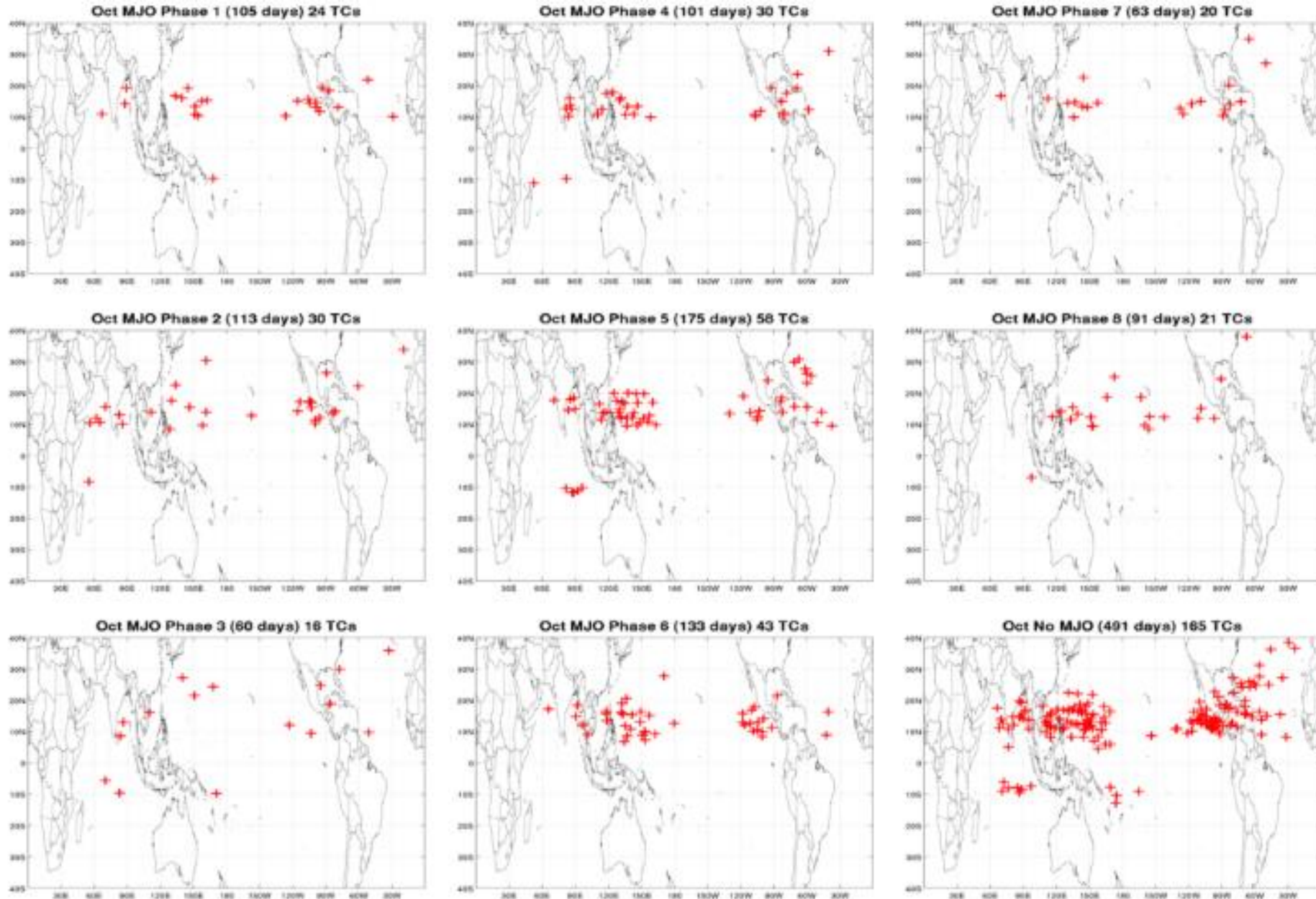
Phase 4



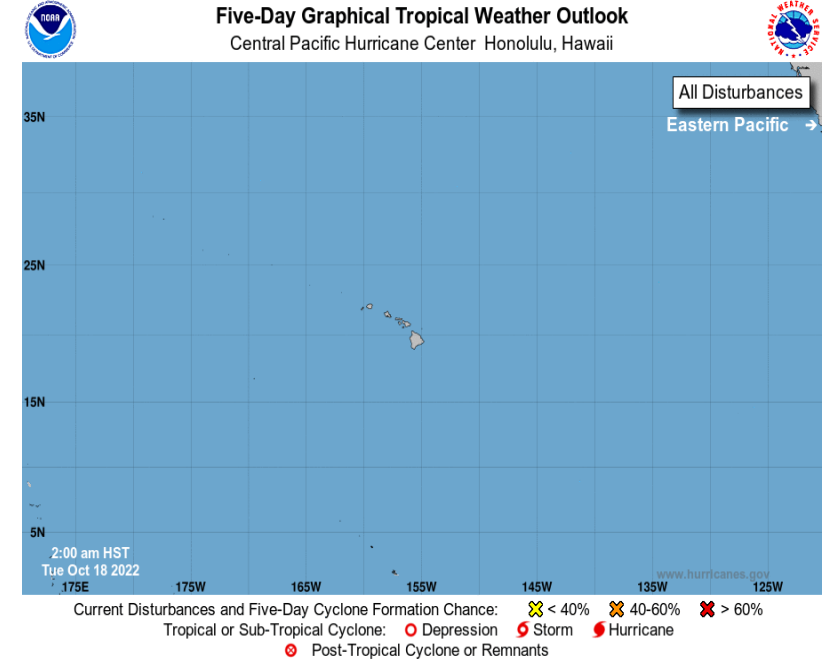
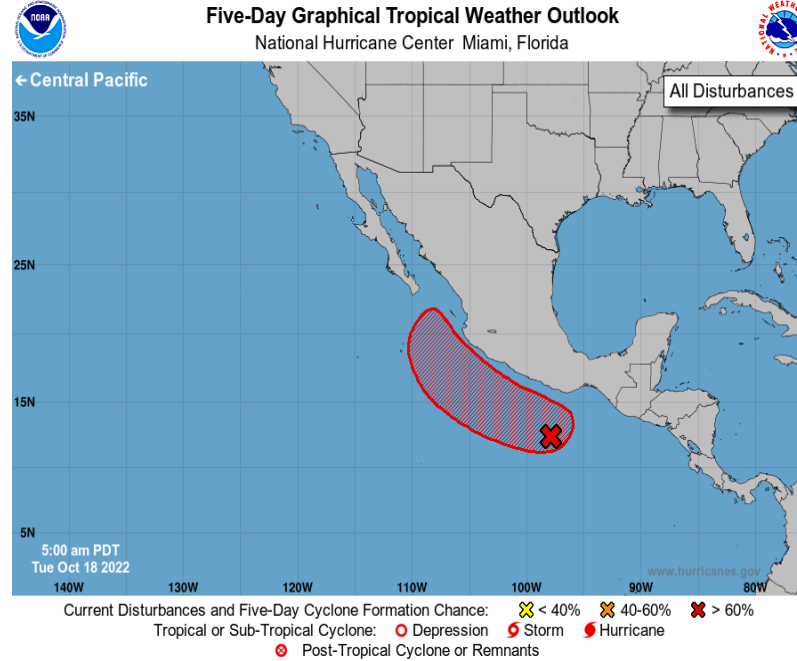
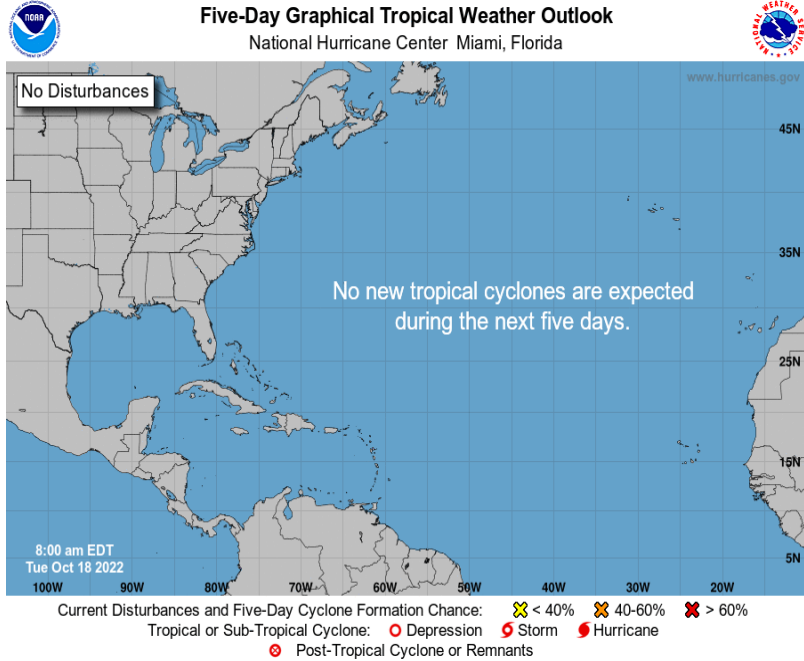
Phase 8



# Historical TC Genesis Origins By MJO Phase:



# Tropical Cyclone Monitoring/Forecast: NHC

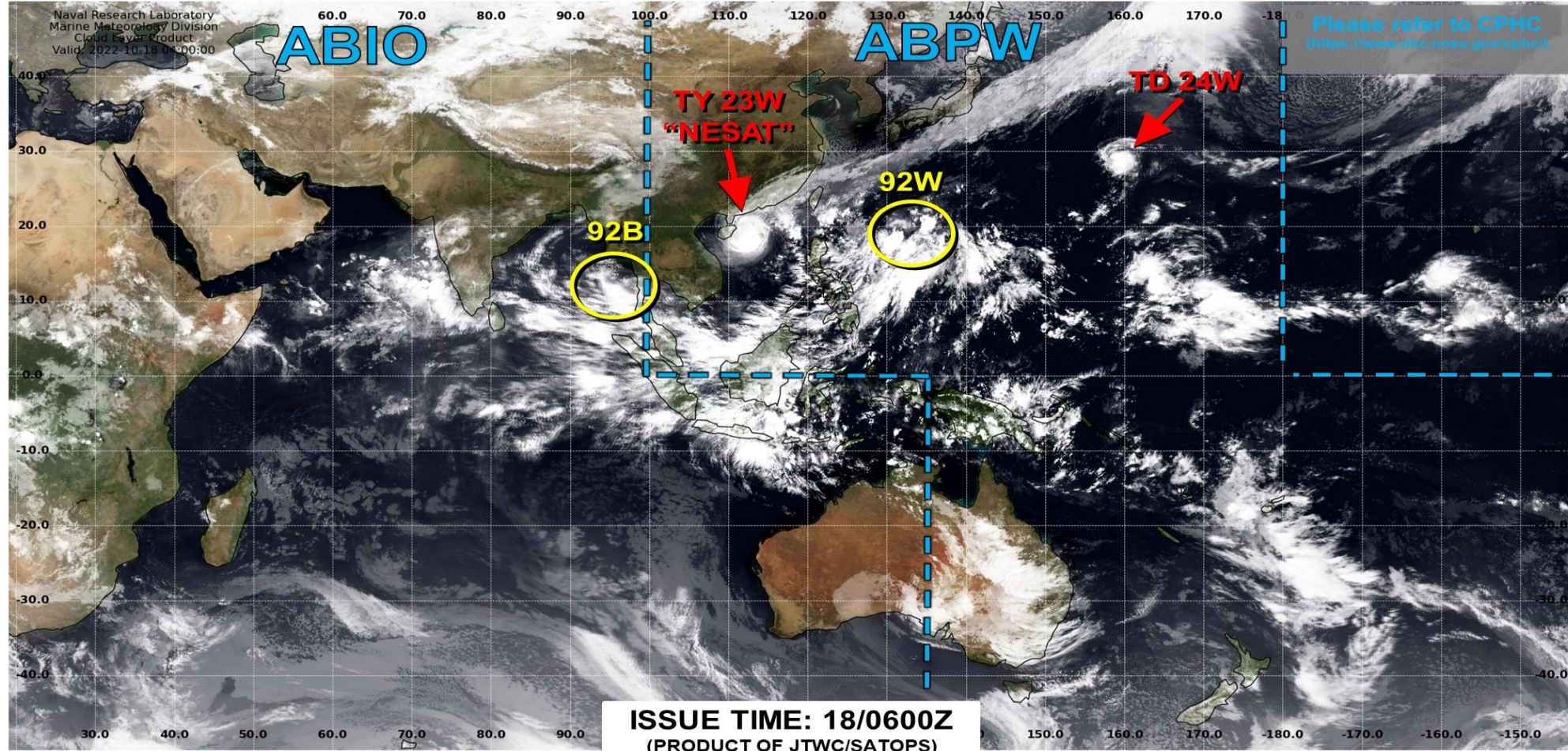




# Tropical Cyclone Monitoring/Forecast: JTWC



## 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)



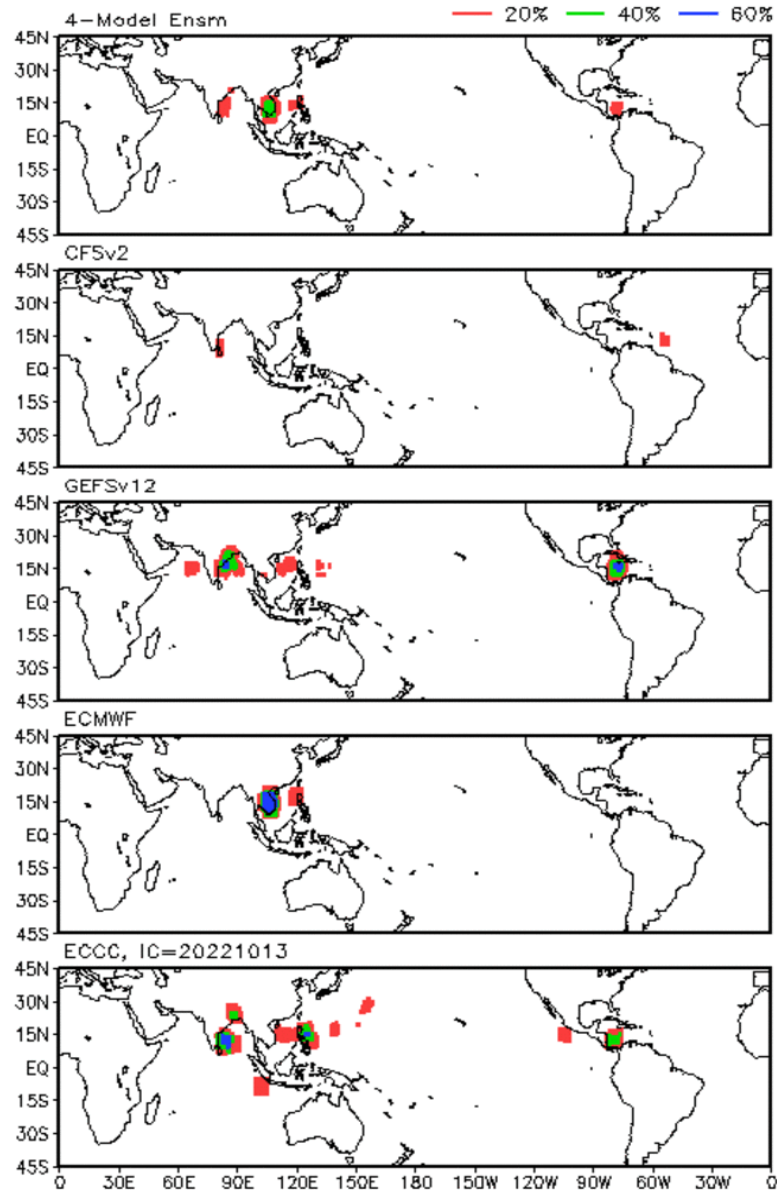
Monitoring for potential transition to TC. Invest label color denotes tropical transition probability

 Tropical Cyclone (Reference Warning)

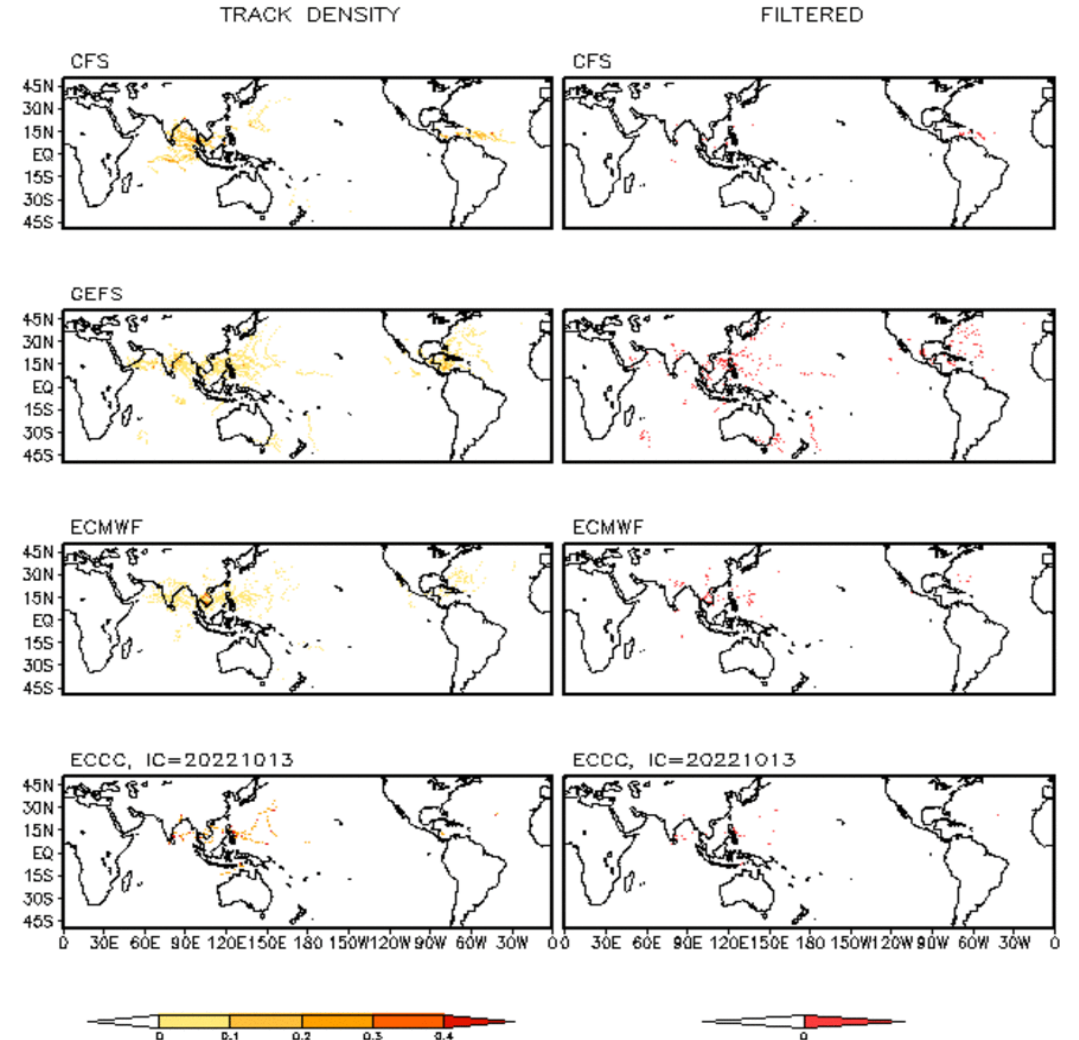


# Multi-Model TC Track Probabilities/Densities: Week-2

Storm Track Probabilities, IC=20221017  
Week 2: 1026 - 1101



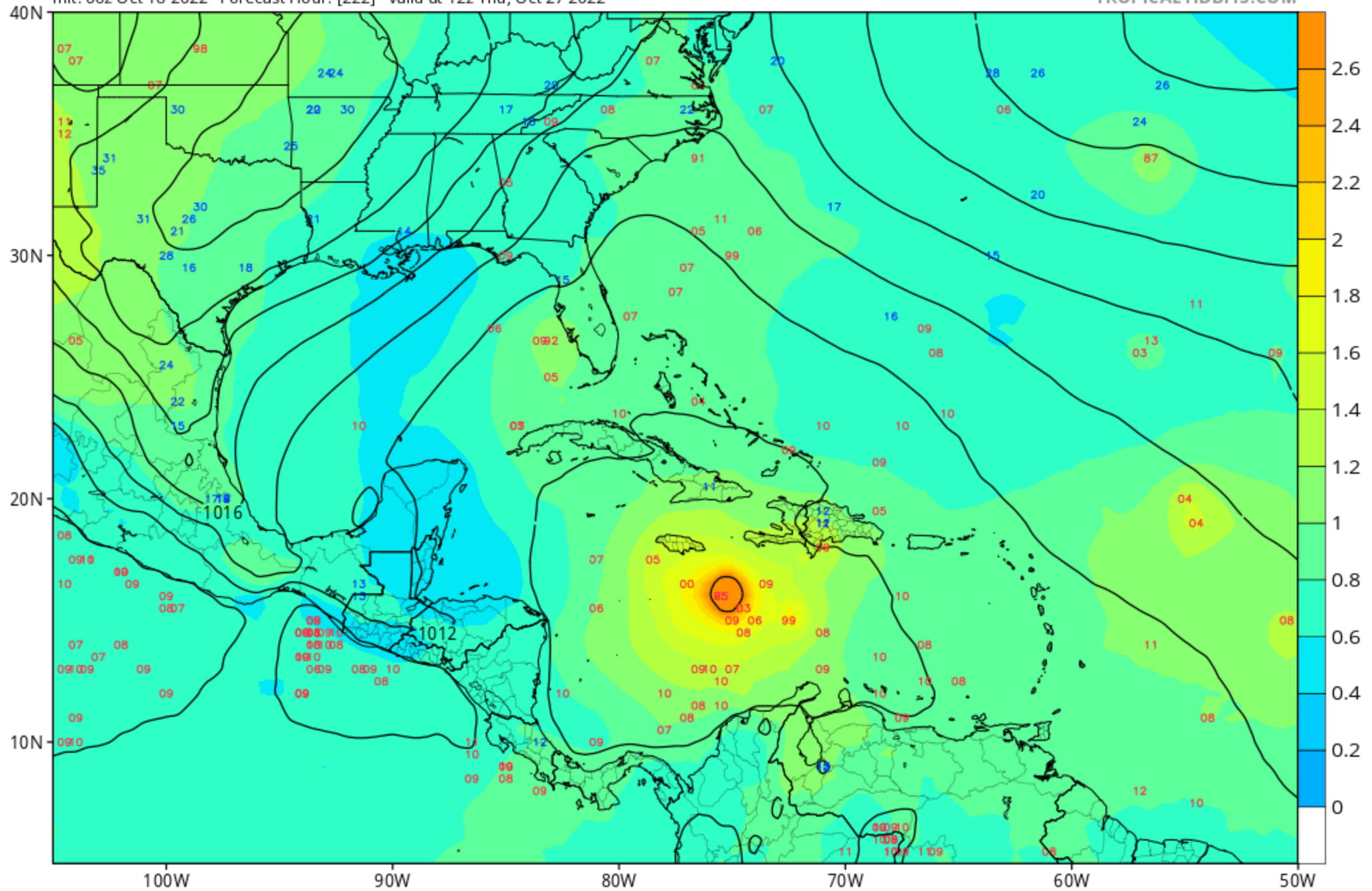
Storm Track Density Distribution, IC=20221017  
Week 2 Forecast: 1026-1101



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

Init: 06z Oct 18 2022 Forecast Hour: [222] valid at 12z Thu, Oct 27 2022

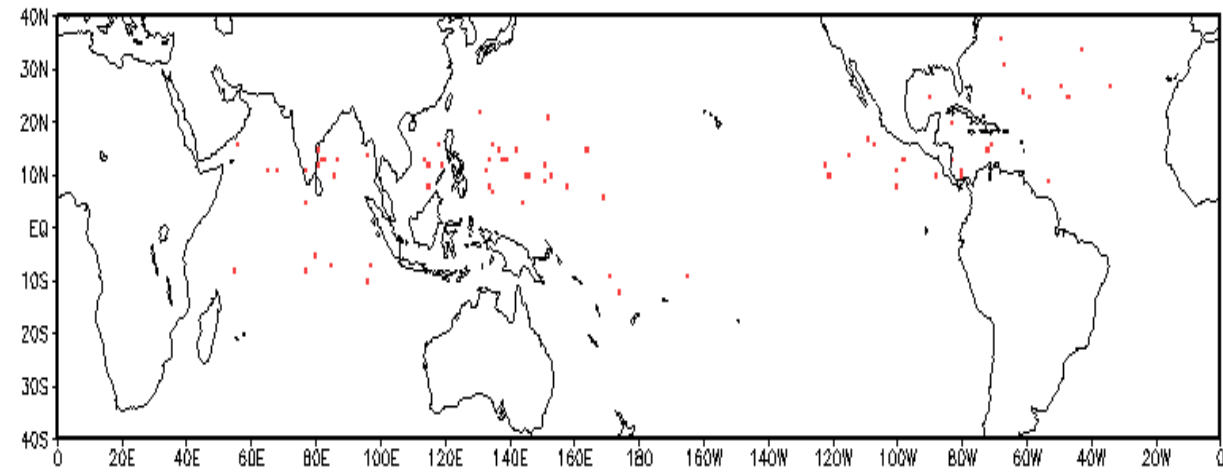
TROPICALTIDBITS.COM



# TC Climatological Genesis: Weeks 2 & 3

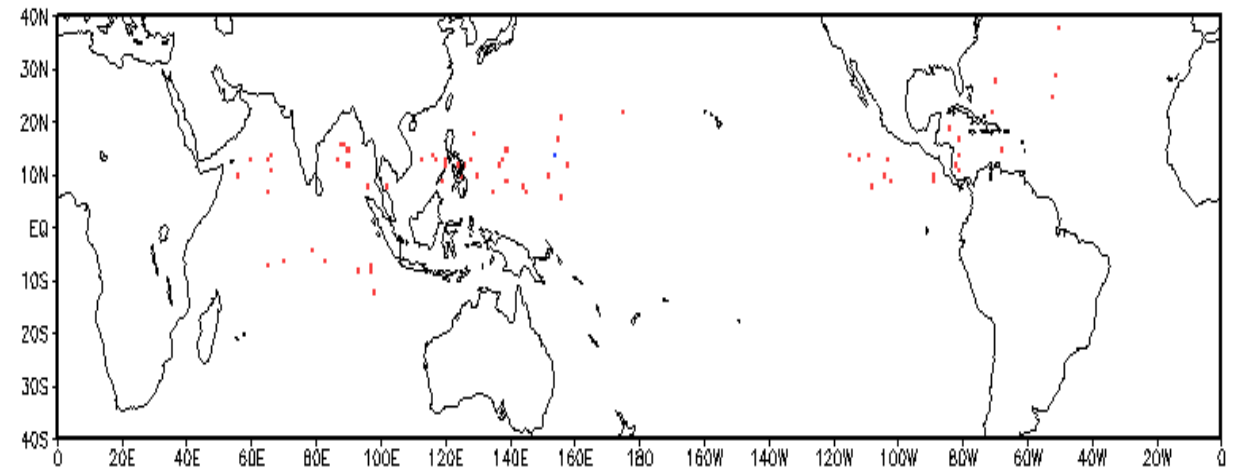
Observed TC Genesis, 1979–2021

7-day Period 1026 to 1101



Observed TC Genesis, 1979–2021

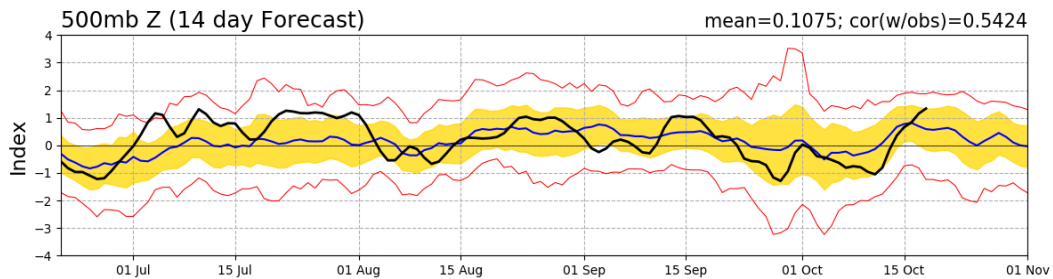
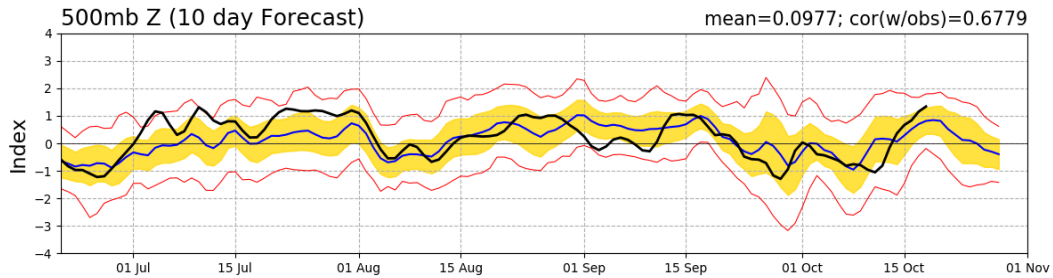
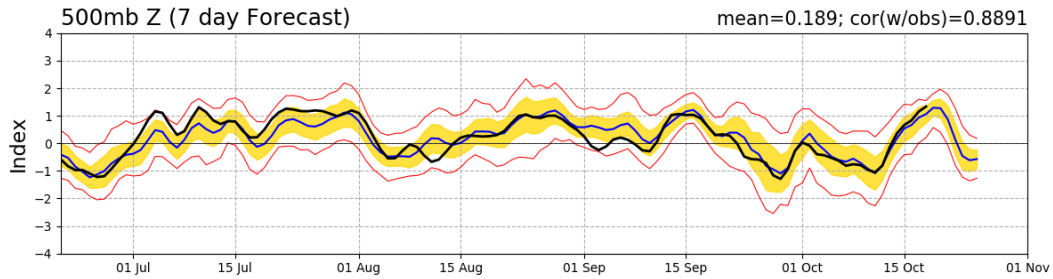
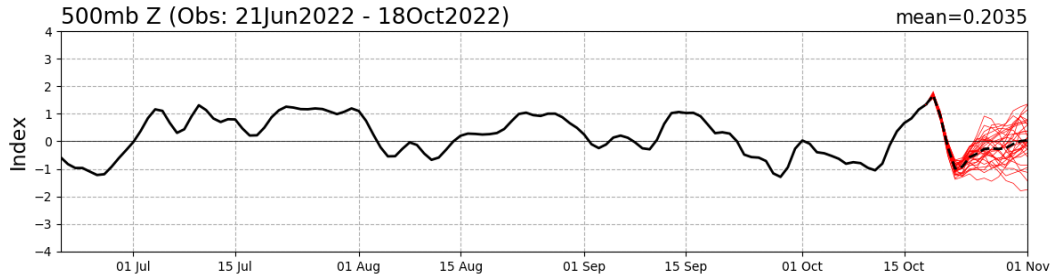
7-day Period 1102 to 1108



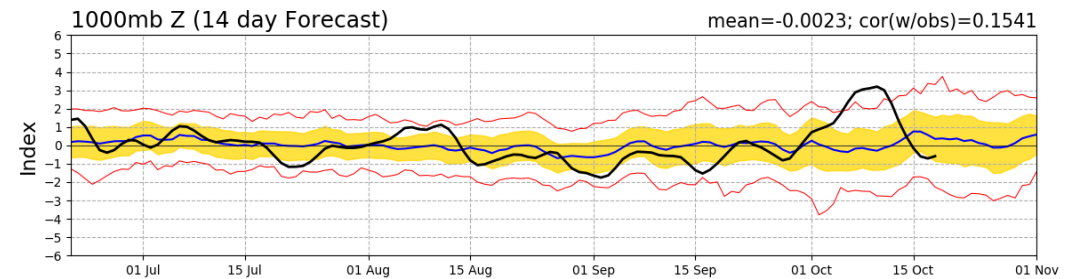
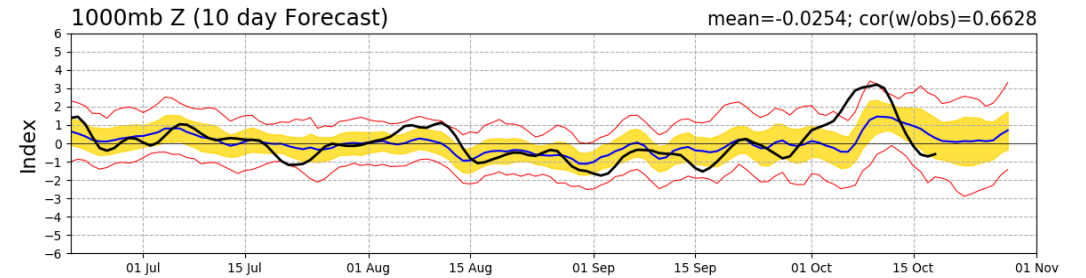
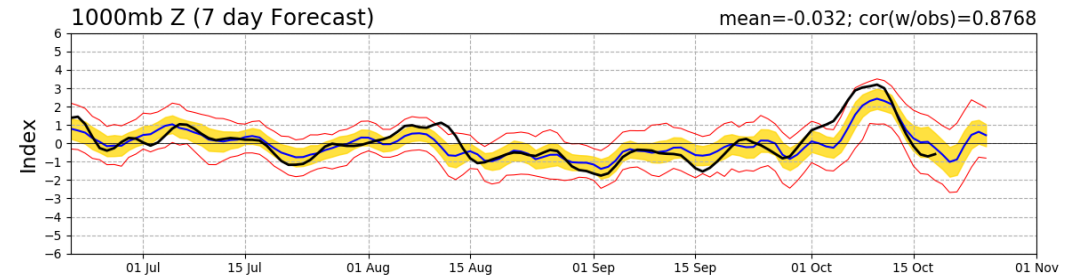
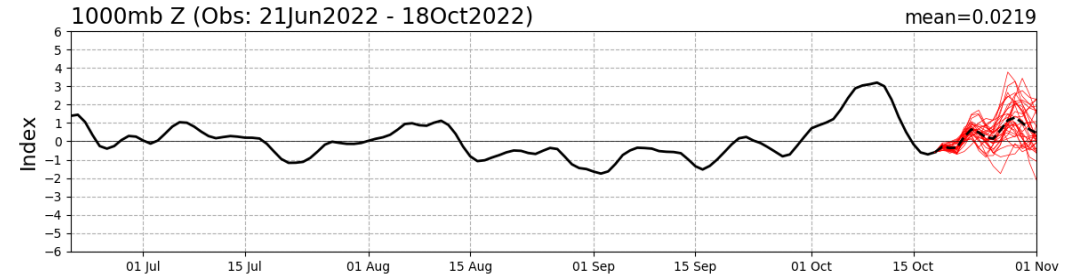


# Teleconnection Indices: PNA / AO:

## PNA Index: Observed & GEFS Forecasts

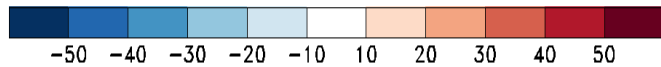
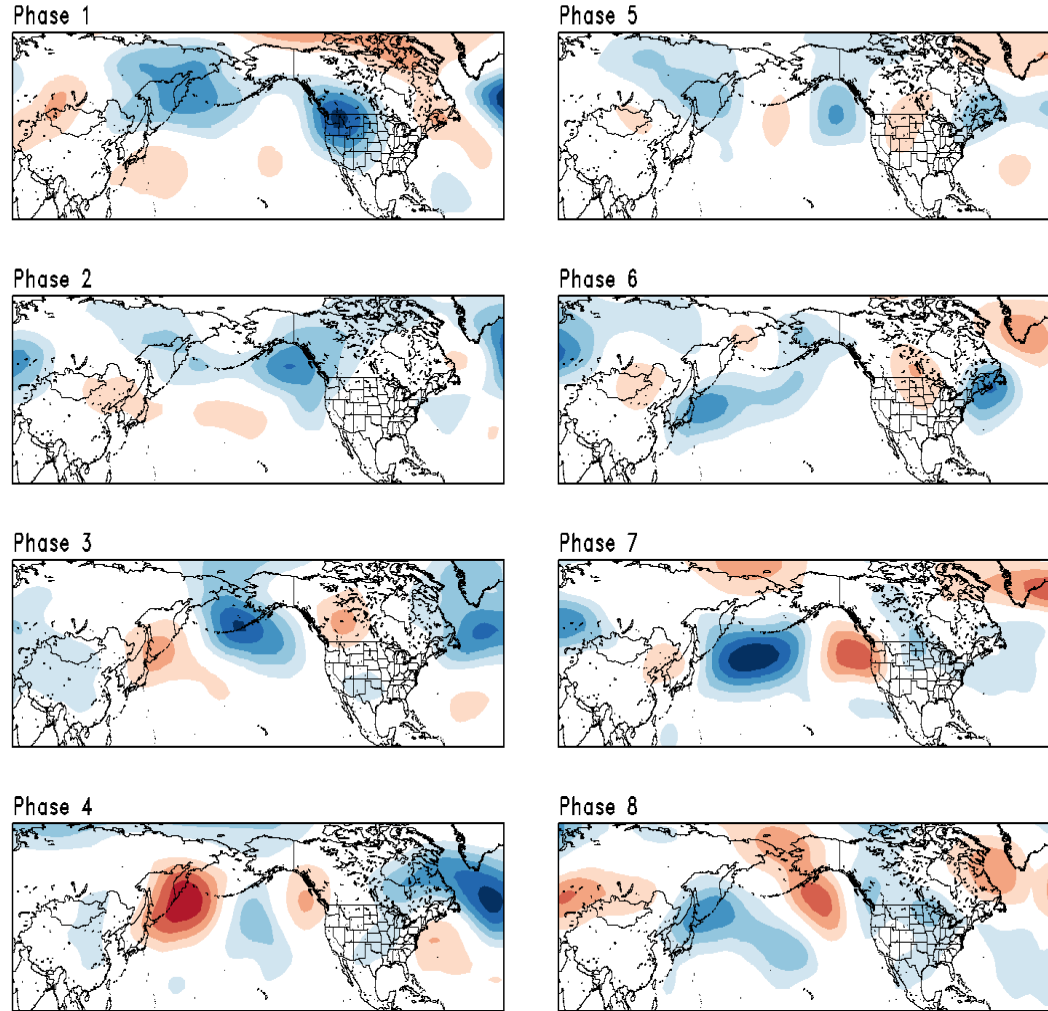


## AO Index: Observed & GEFS Forecasts

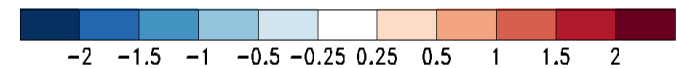
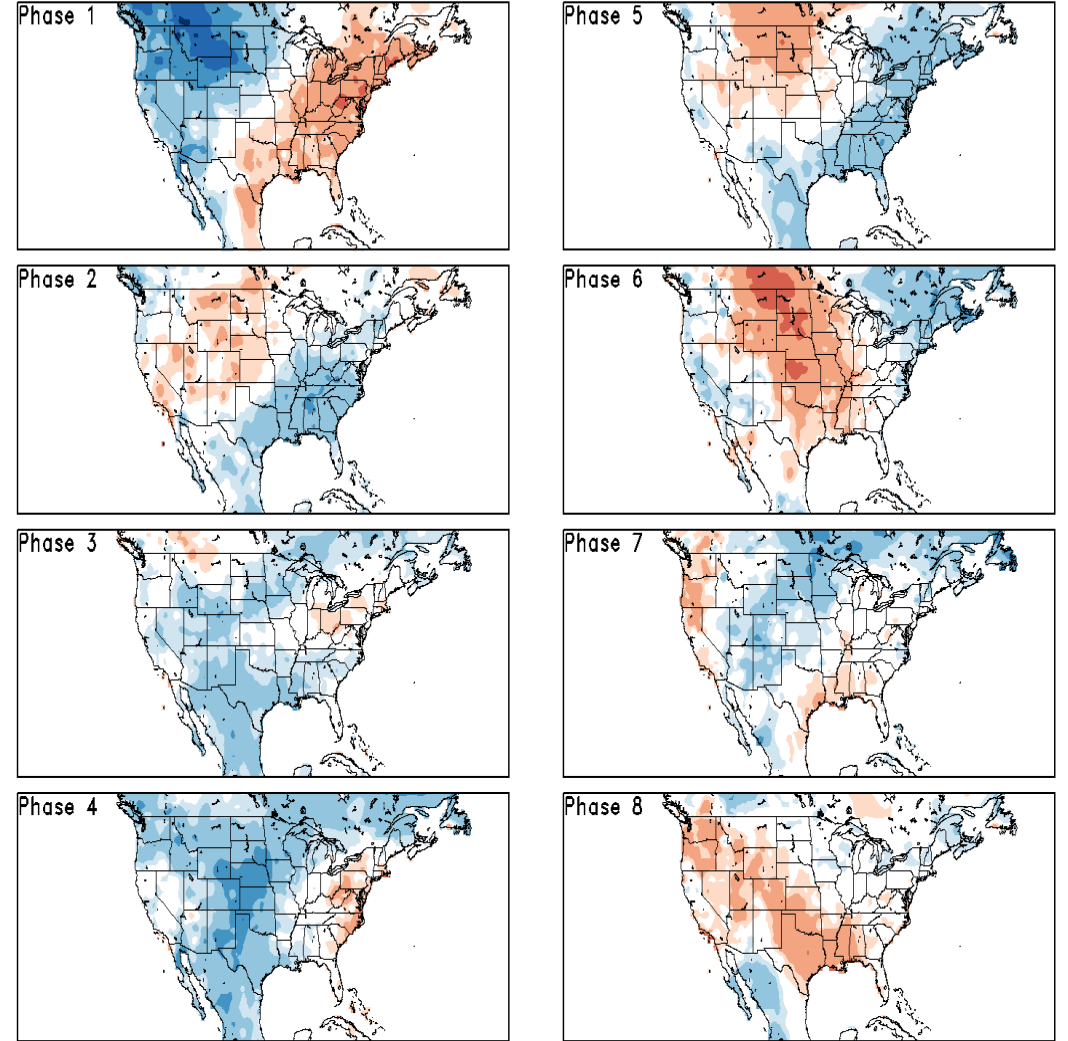


# Historical 500-hPa Height & U.S. Temperatures By MJO Phase:

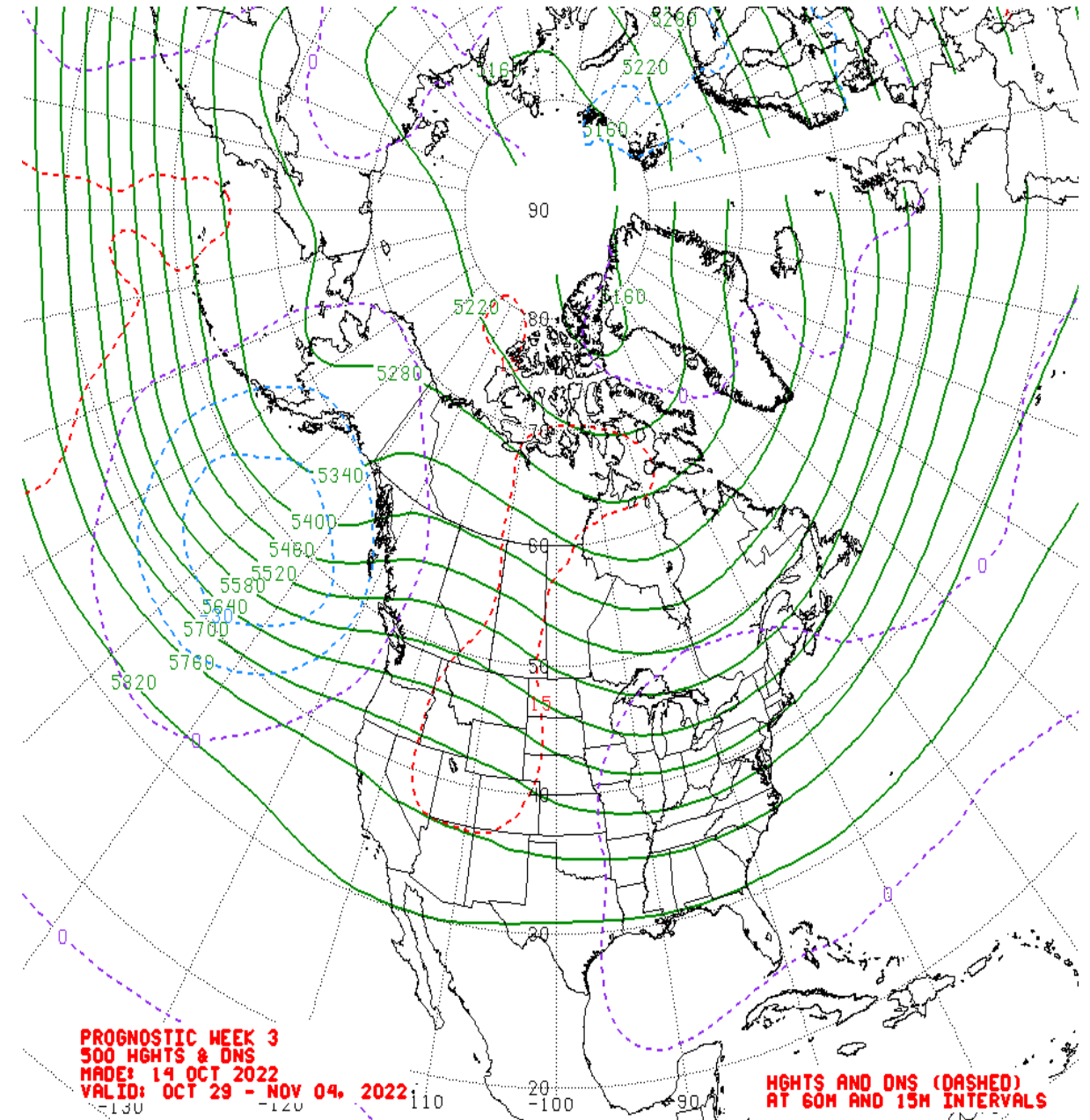
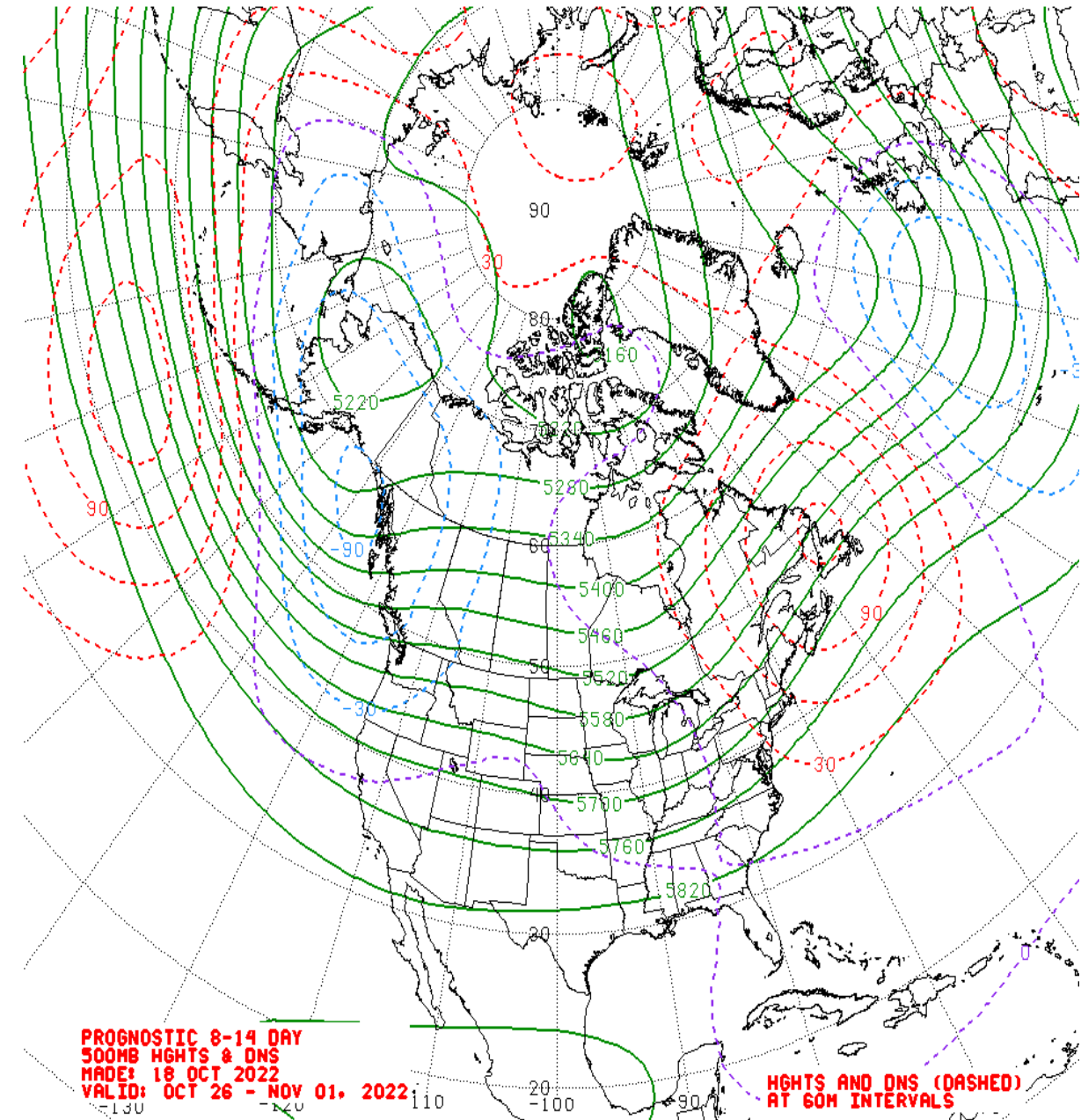
SON MJO Composite: CDAS 500-hPa Height (m)



SON MJO Composite: GLBT (degC)



# Mean 500-hPa Height Anomaly Forecasts:

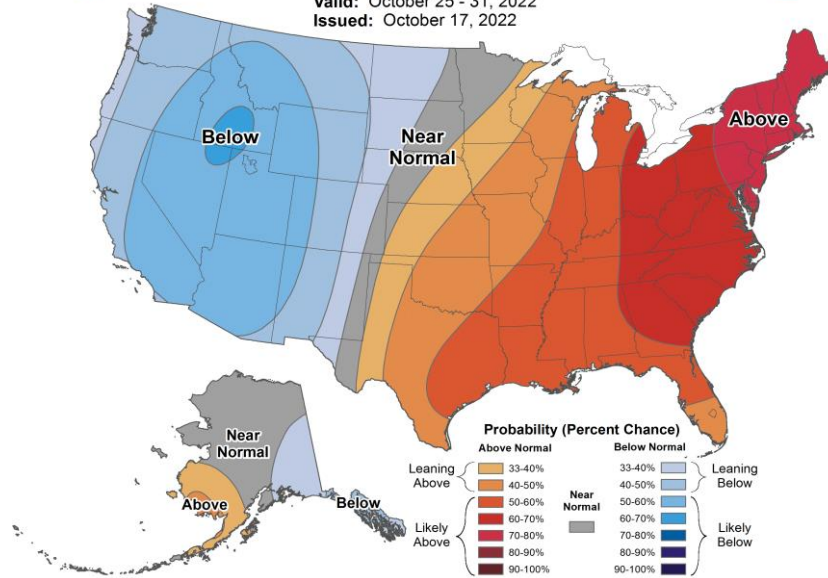




# Official Temperature & Precipitation Forecasts:

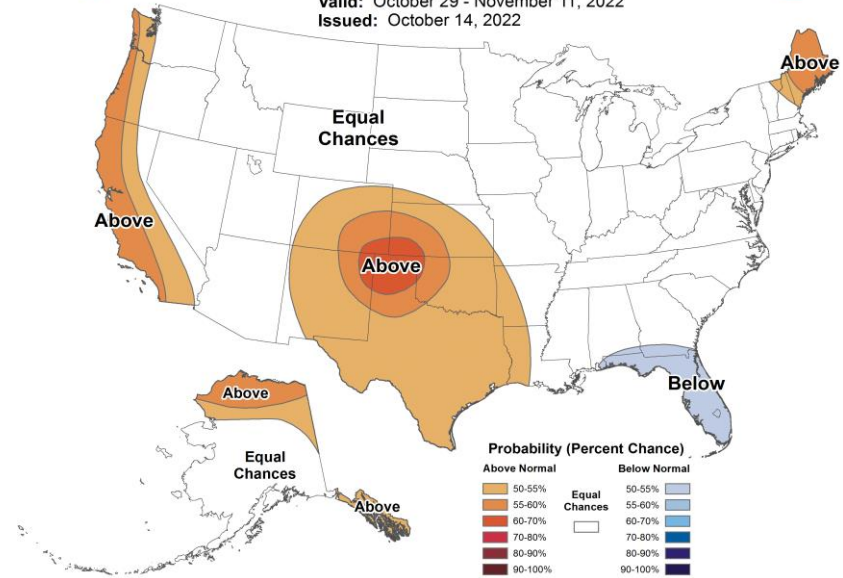
## 8-14 Day Temperature Outlook

Valid: October 25 - 31, 2022  
 Issued: October 17, 2022



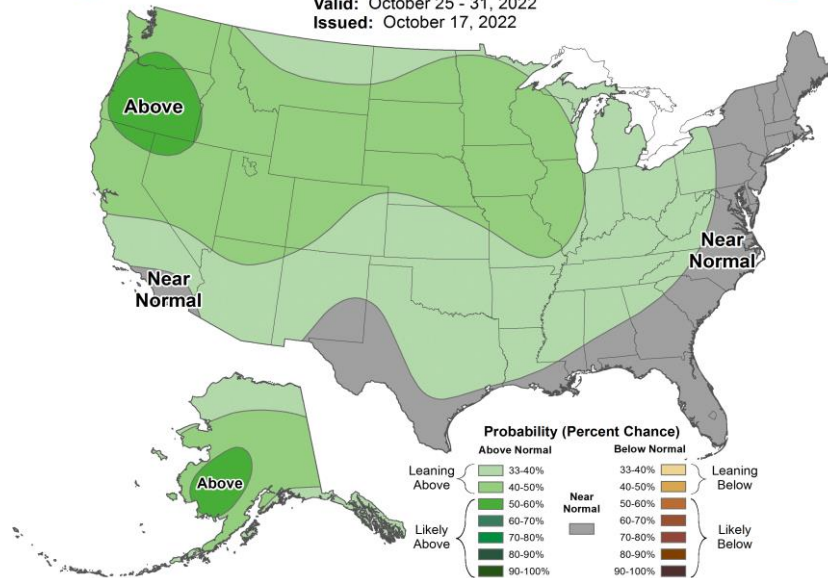
## Weeks 3-4 Temperature Outlook

Valid: October 29 - November 11, 2022  
 Issued: October 14, 2022



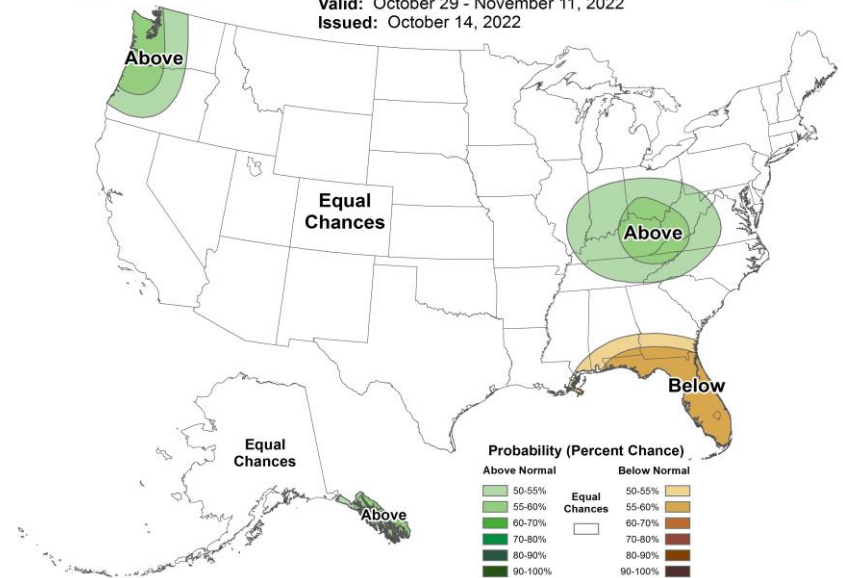
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## Weeks 3-4 Precipitation Outlook

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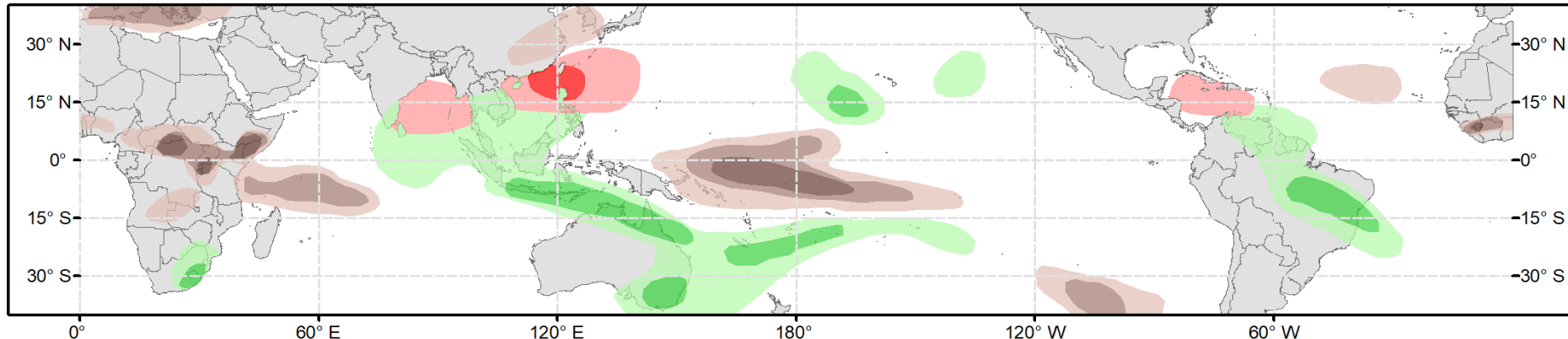


# Global Tropics Hazards Outlook

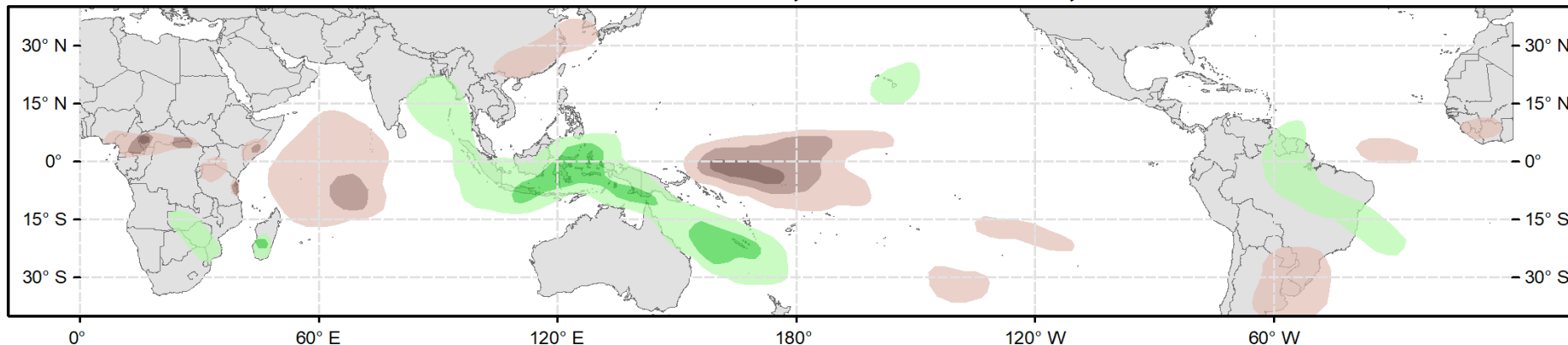
Climate Prediction Center



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