



Weeks 2-3 Global Tropics Hazards Outlook

11/8/2022

Thomas Collow

NWS / NCEP / Climate Prediction Center

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

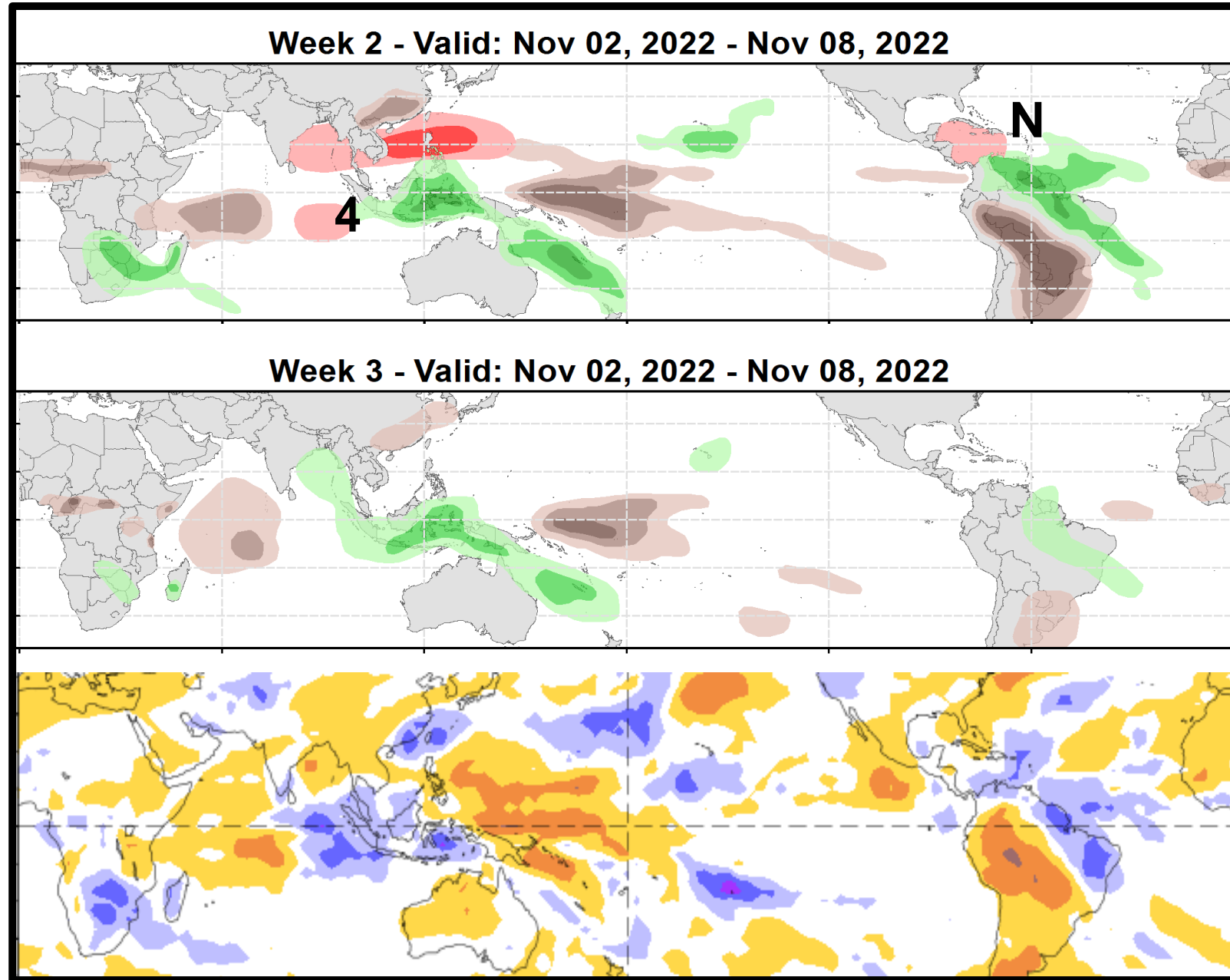
TCs formed in the past week

Atlantic

- Nicole (11/7)

Southern Indian Ocean

- 04S (11/4)



Synopsis of Climate Modes:

ENSO: (Oct 13, 2022 Update) *next update on Thursday, Nov 10th*

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña is expected to continue, with chances for La Niña gradually decreasing from 75% for Northern Hemisphere winter (Dec-Feb) to 54% during Feb-Apr 2023.

MJO and other subseasonal tropical variability:

- During the past week, there has been coherent eastward propagation of the RMM-based MJO index through phase 7, although its quick phase speed is more indicative of a Kelvin Wave rather than a true MJO.
- The ECMWF, JMA, and GEFS ensembles indicate a weakening of the enhanced convective signal in the short-term, with the RMM index decaying back into the unit circle.
- The intraseasonal signal is forecast to re-emerge during week-2 across the Maritime Continent and West Pacific, allowing the global convective pattern to return to a pattern more typical of La Niña.

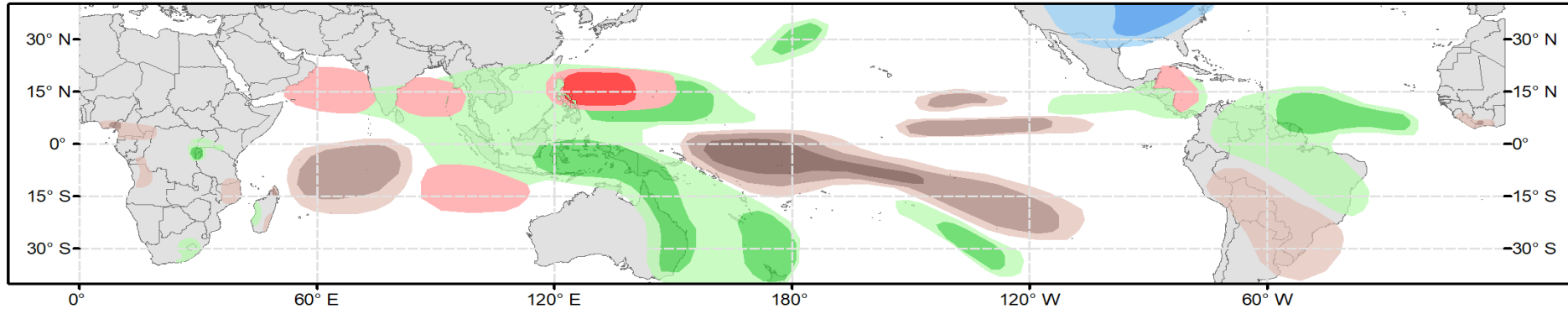
GTH Outlook:



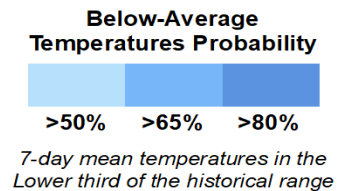
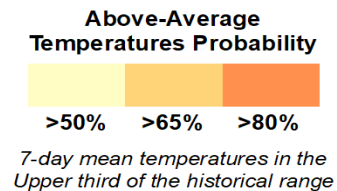
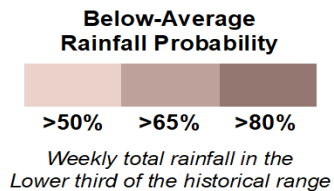
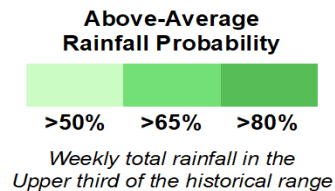
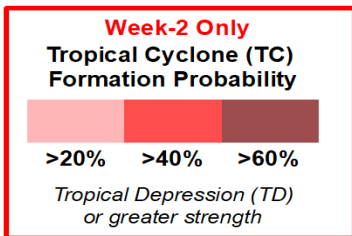
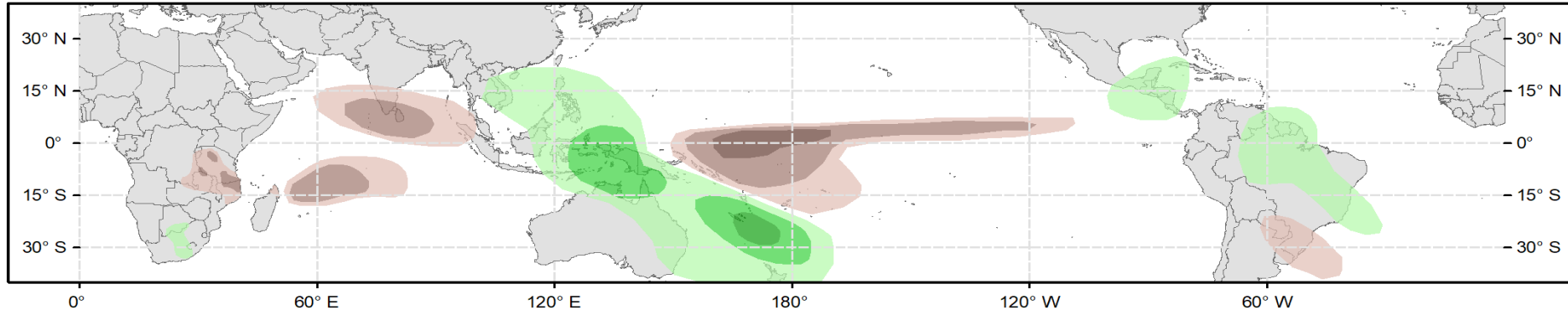
Global Tropics Hazards Outlook Climate Prediction Center



Week 2 - Valid: Nov 16, 2022 - Nov 22, 2022



Week 3 - Valid: Nov 23, 2022 - Nov 29, 2022

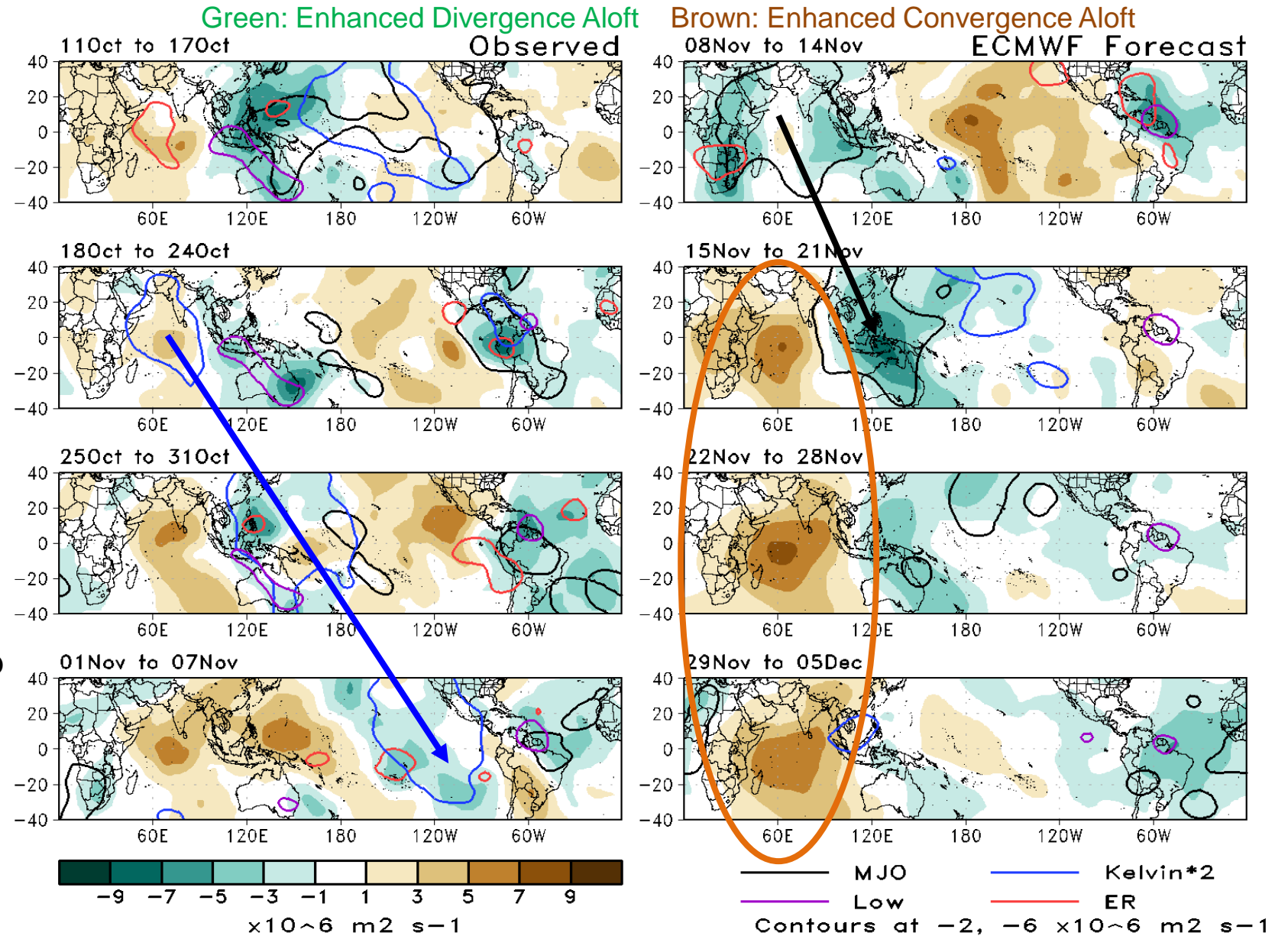


Issued: 11/08/2022
Forecaster: Collow

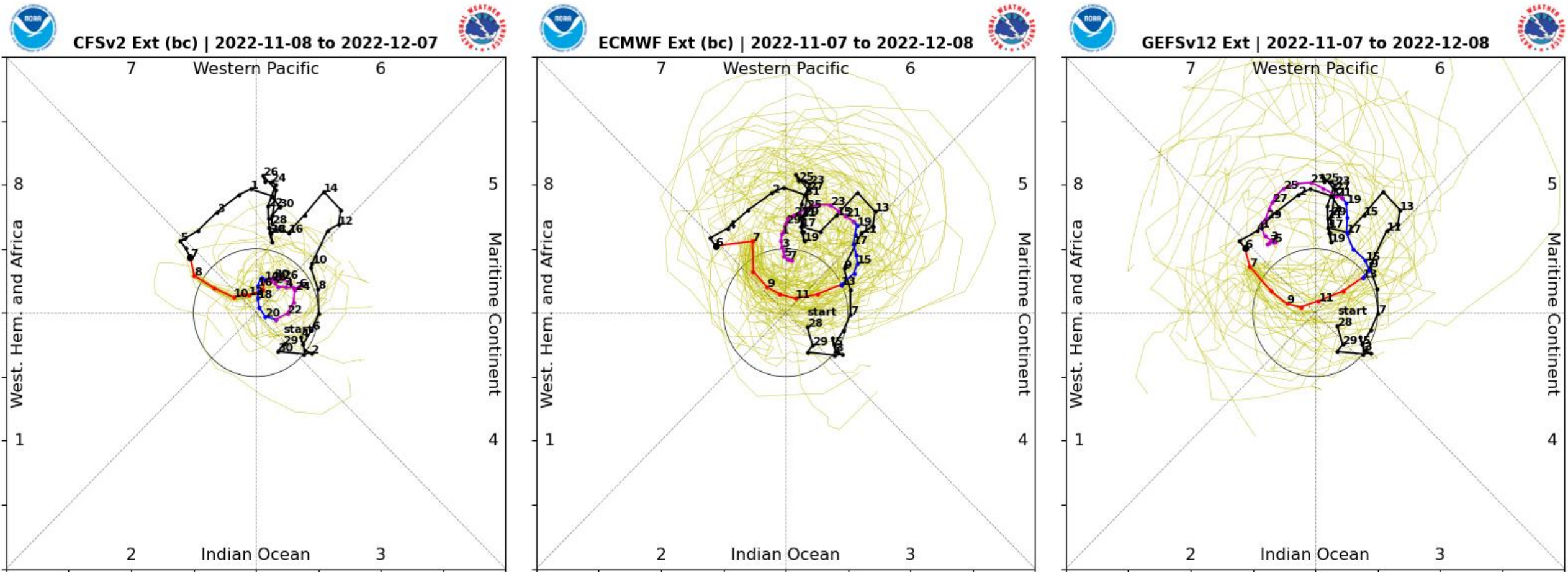
This product is updated once per week and targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

200-hPa Velocity Potential Anomaly Maps:

- Fast moving convective signal propagated across the Pacific during late October, and into the Atlantic in early November.
- Enhanced MJO signal is forecast to develop later this week across the Indian Ocean and shift toward the Maritime Continent/West Pacific.
- Persistent suppressed convection is forecast to develop across the Indian Ocean in the wake of this MJO.

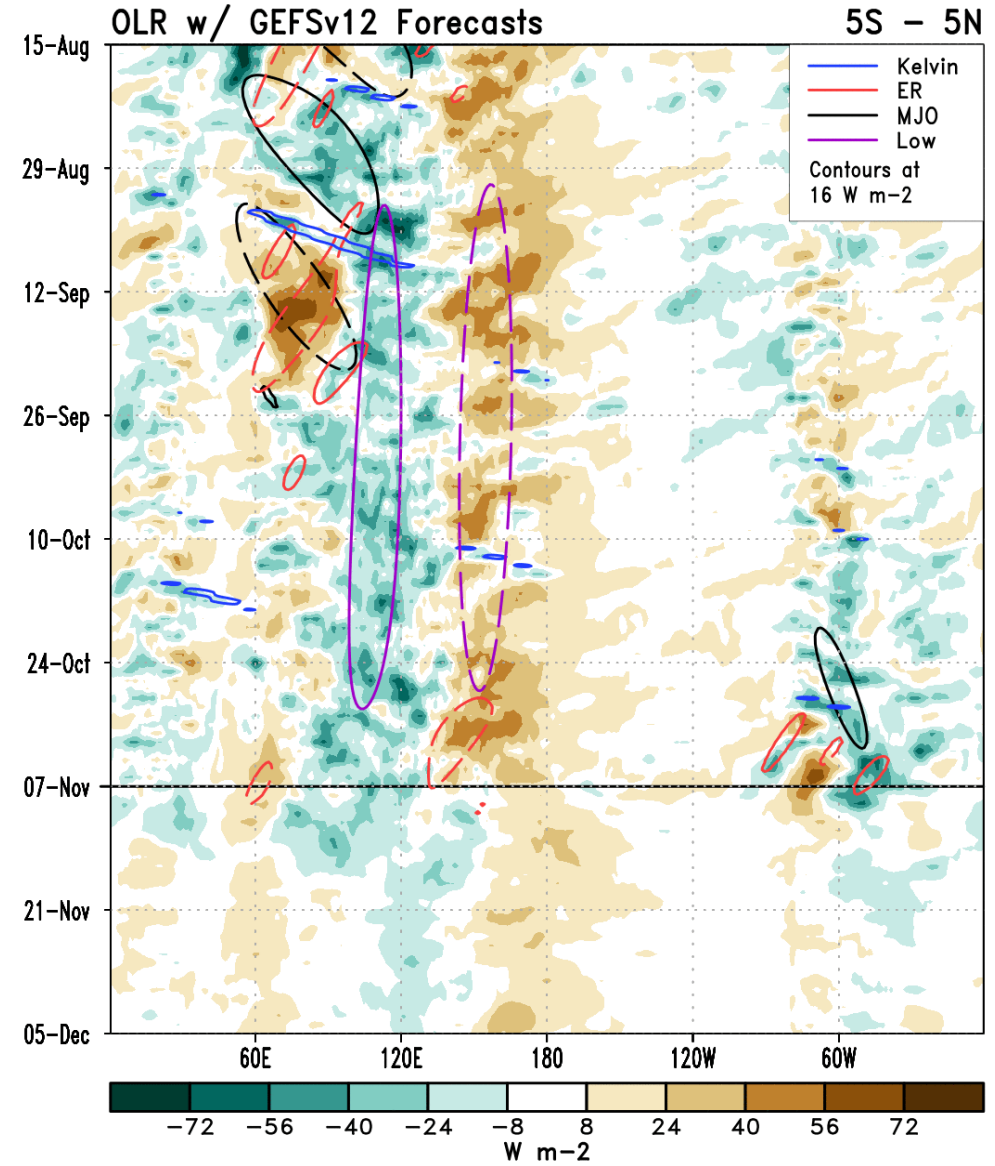
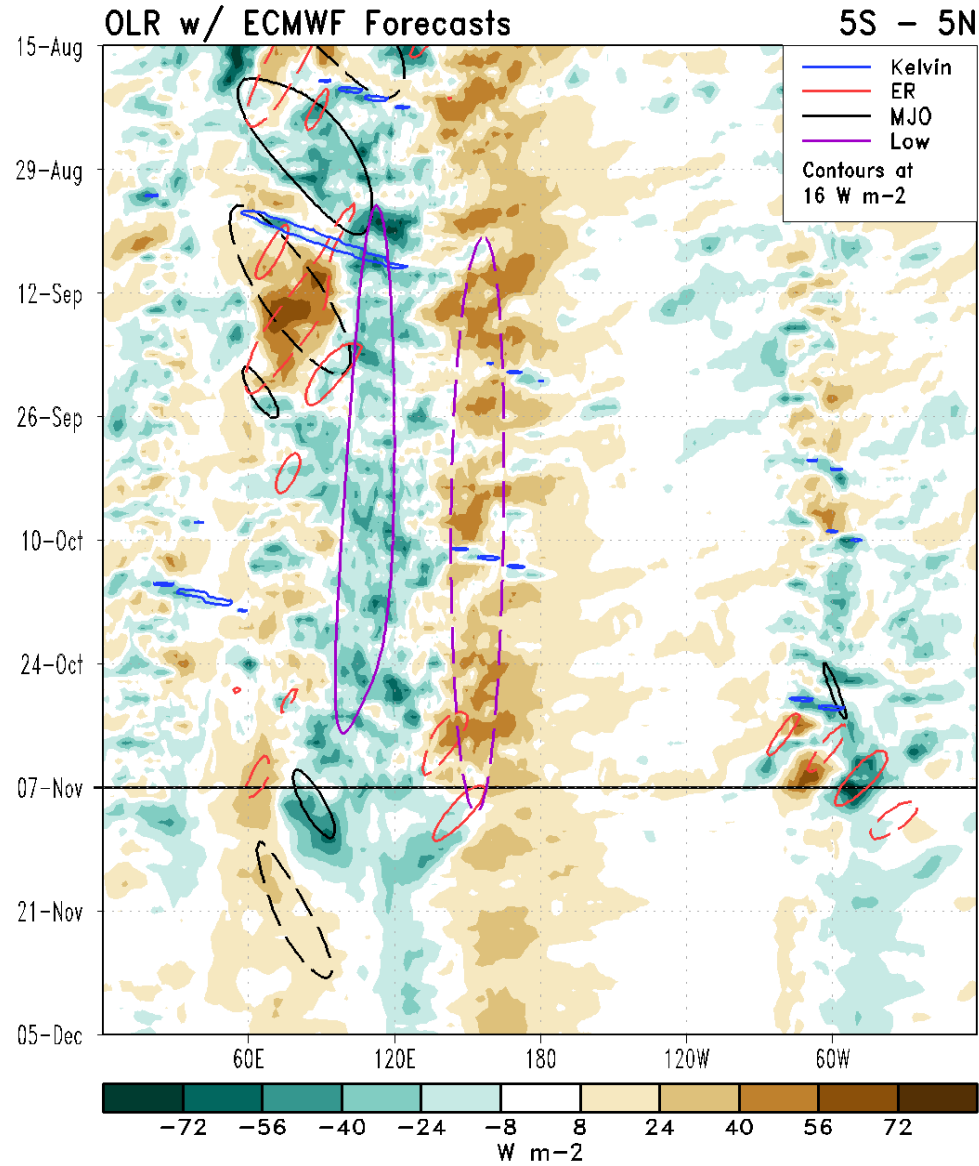


RMM Index Observations & Forecasts:



- The CFS, ECMWF, and GFS are in good agreement indicating the RMM-based MJO index decaying into the unit circle over the next few days.
- These models depict a renewed eastward propagation of the MJO by week-2 across phases 5 and 6 (Maritime Continent and West Pacific) with large ensemble variability regarding the amplitude.

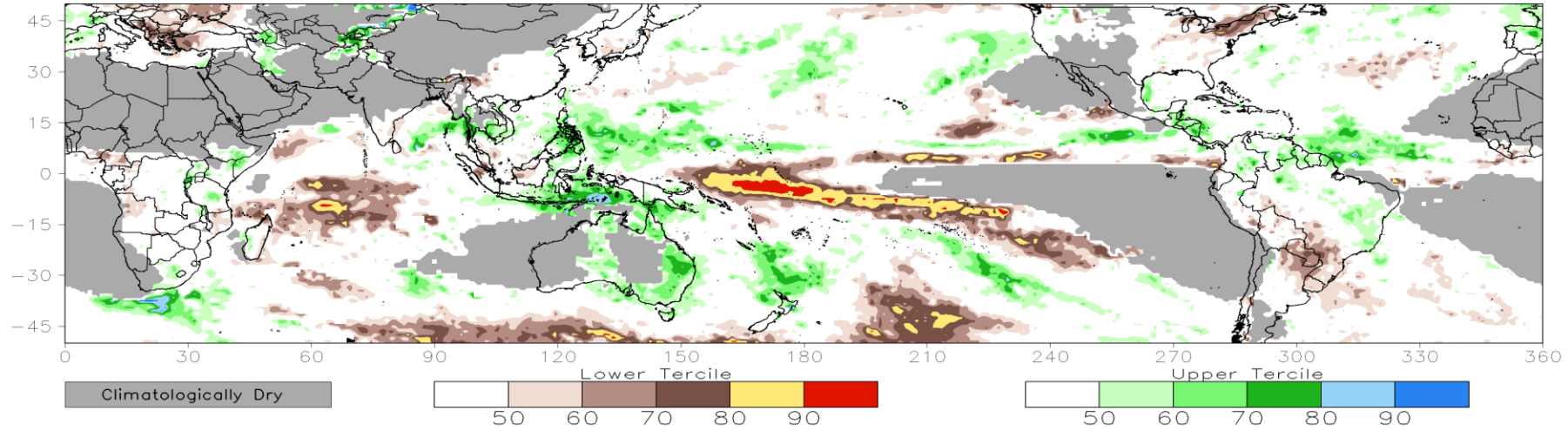
Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



Consolidated Probabilistic Precipitation: Weeks 2 & 3

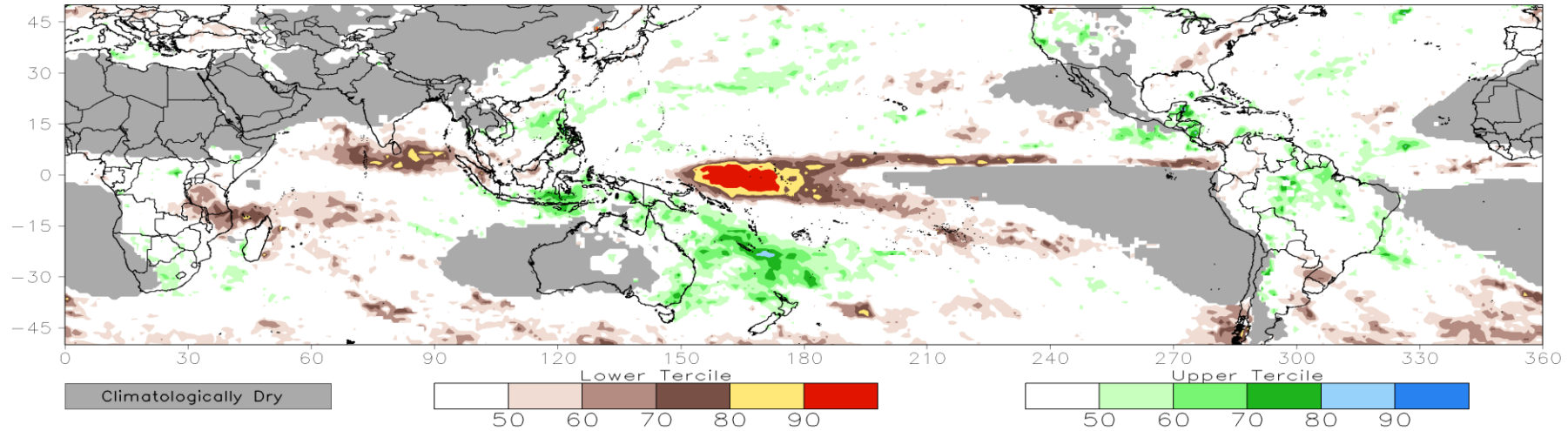
CONS 00z: Week2 Probability for Total Rainfall Below(Above) Lower(Upper) Tercile (%)

Valid: 16Nov2022–22Nov2022



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

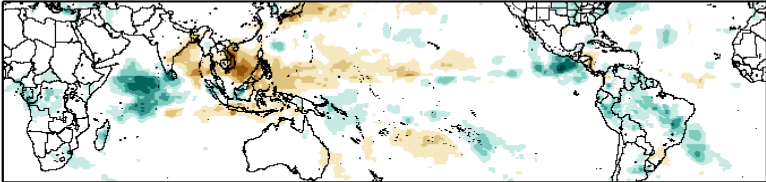
Valid: 23Nov2022–29Nov2022



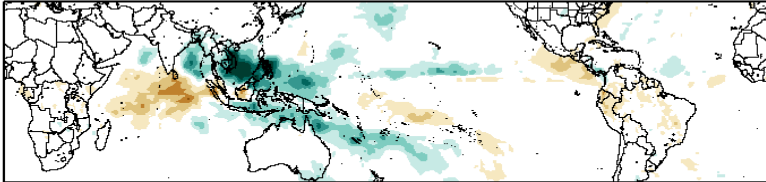
Historical Precipitation Anomalies By MJO Phase:

OND MJO Composite: GPCP1DD (mm/day)

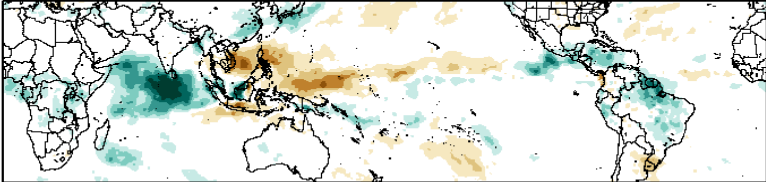
Phase 1



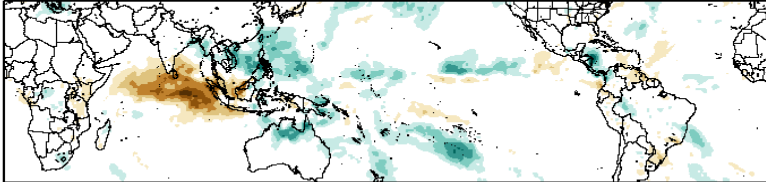
Phase 5



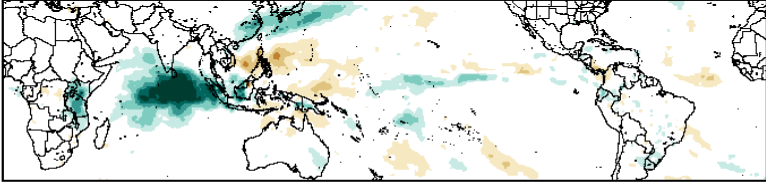
Phase 2



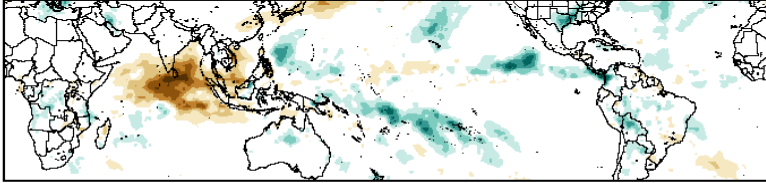
Phase 6



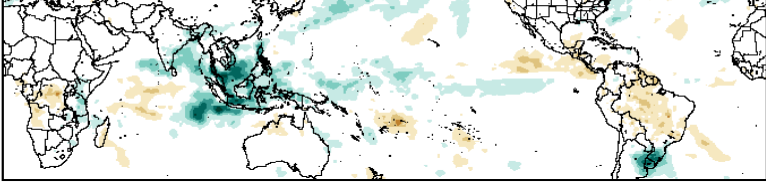
Phase 3



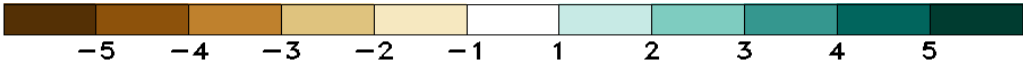
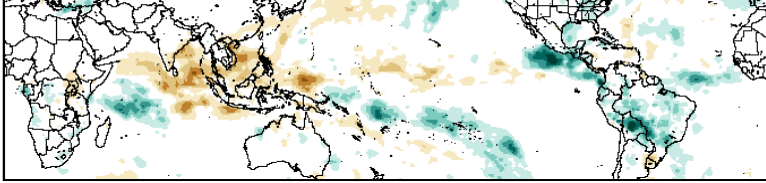
Phase 7



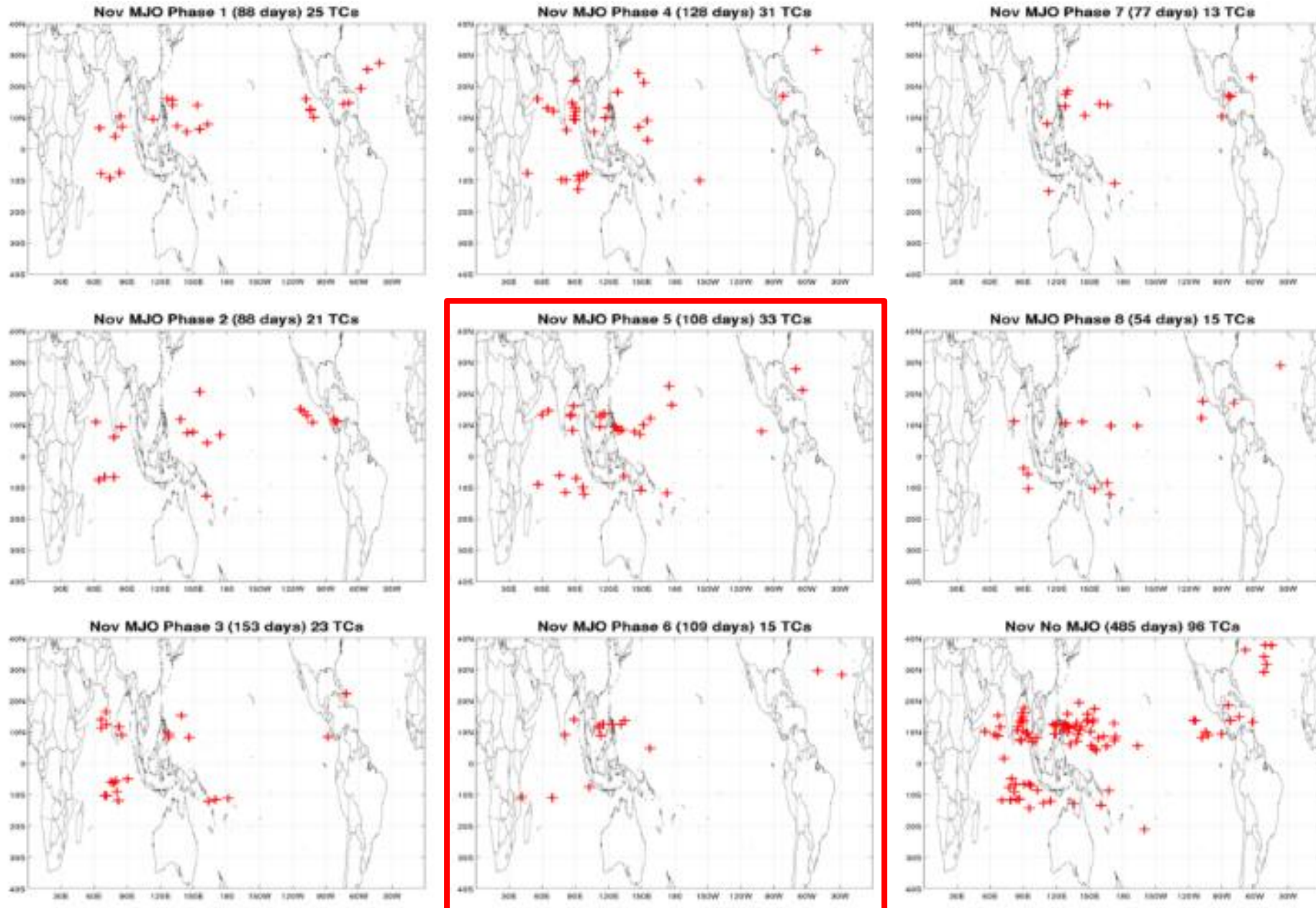
Phase 4



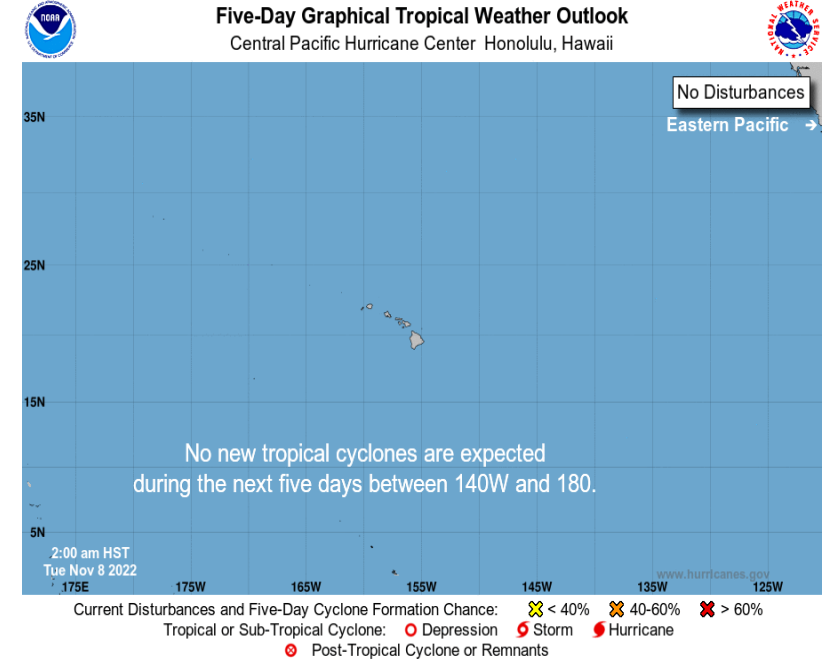
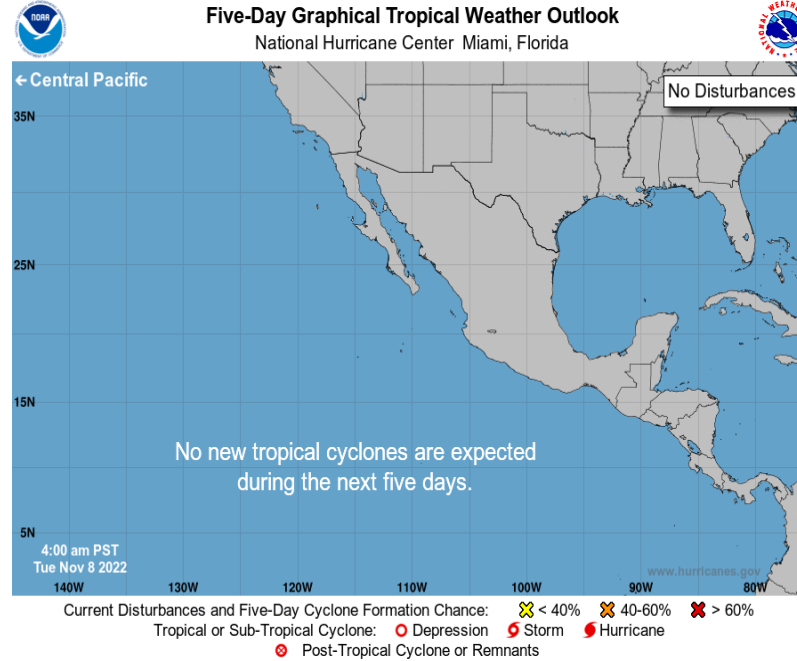
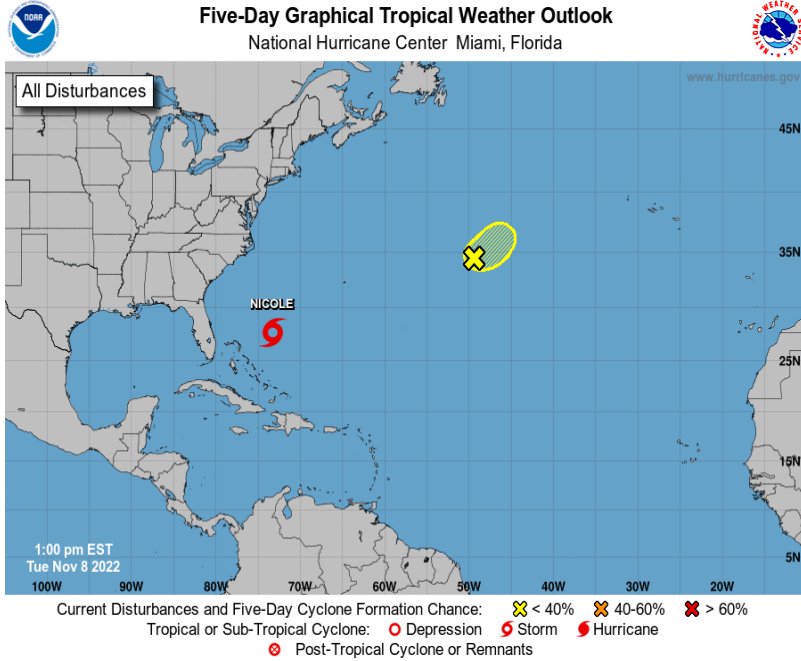
Phase 8

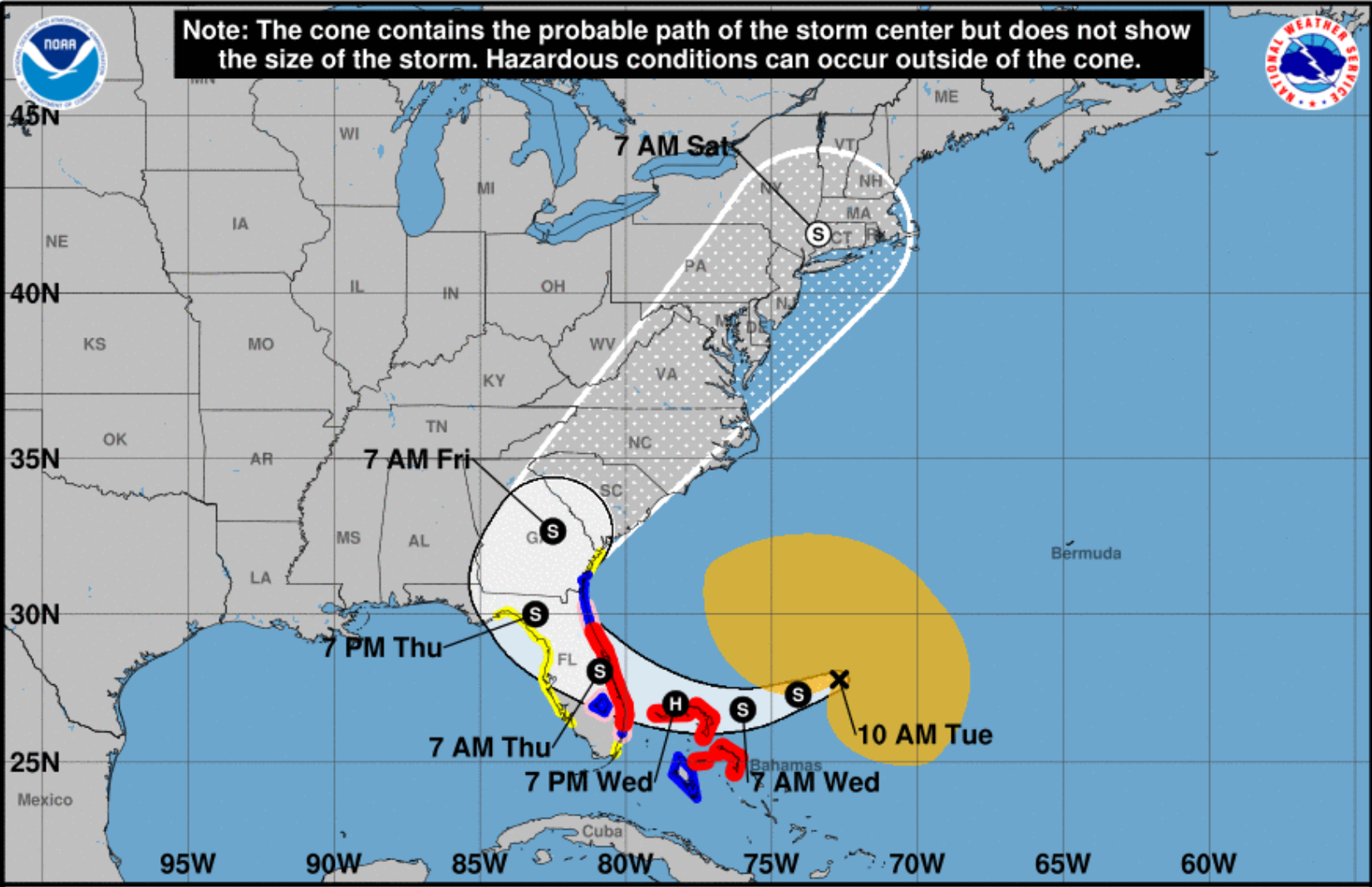


Historical TC Genesis Origins By MJO Phase:



Tropical Cyclone Monitoring/Forecast: NHC





Tropical Storm Nicole

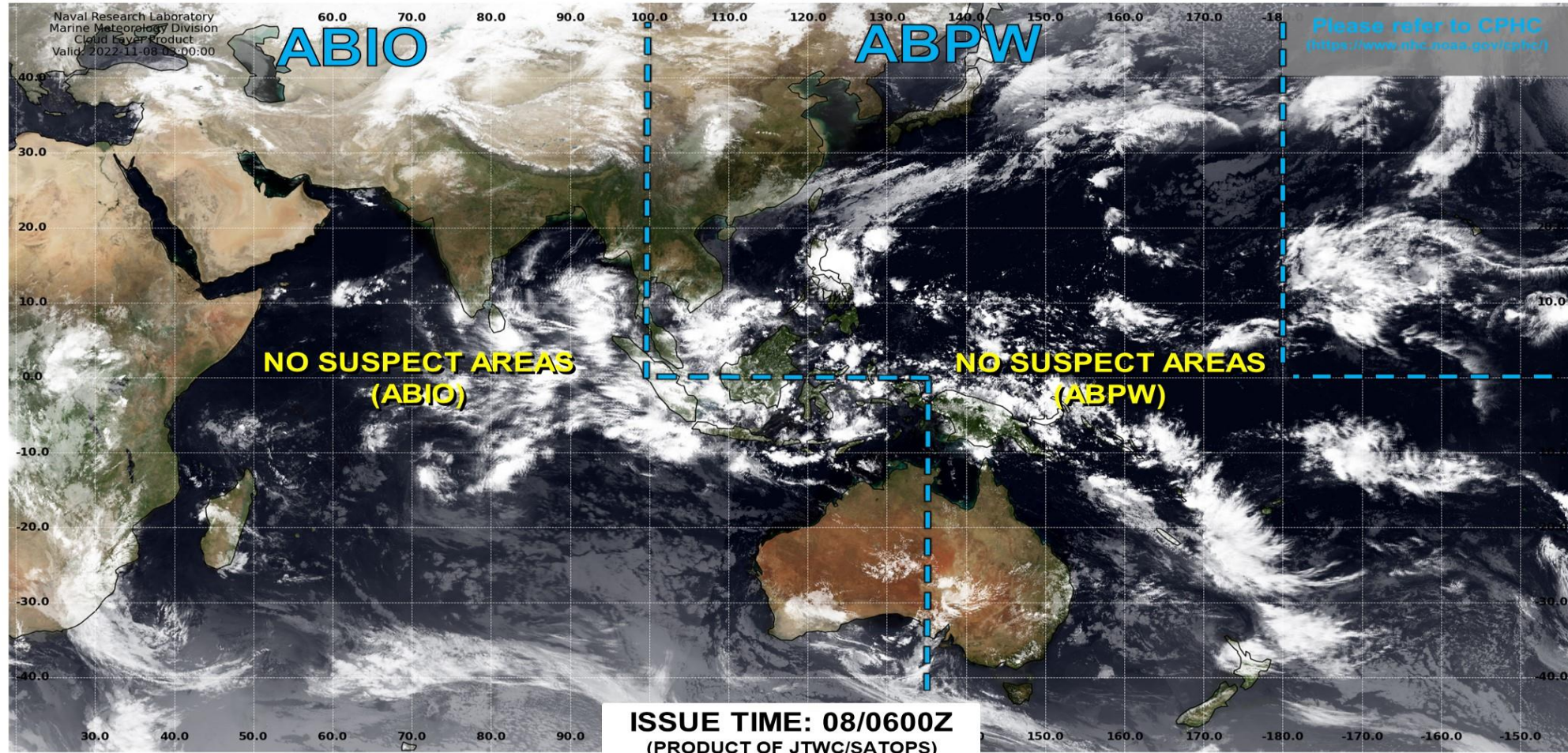
- Developed as a subtropical system on 11/7, became fully tropical on 11/8.
- Forecast to reach the east coast of Florida Wednesday night or early Thursday as a category-1 hurricane.
- Thereafter, troughing over the central U.S. is forecast to result in Nicole making a rapid turn to the north-northeast resulting in heavy rain over the Eastern Seaboard Friday into Saturday.

Tropical Storm Nicole Tuesday November 08, 2022 10 AM EST Advisory 6 NWS National Hurricane Center	Current information: x Center location 27.8 N 72.7 W Maximum sustained wind 50 mph Movement W at 9 mph	Forecast positions: ● Tropical Cyclone ○ Post/Potential TC Sustained winds: D < 39 mph S 39-73 mph H 74-110 mph M > 110 mph	
Potential track area: Day 1-3 (solid line) Day 4-5 (dotted line)	Watches: Hurricane (pink) Trop Stm (yellow)	Warnings: Hurricane (red) Trop Stm (blue)	Current wind extent: Hurricane (brown) Trop Stm (orange)

Tropical Cyclone Monitoring/Forecast: JTWC



JOINT TYPHOON WARNING CENTER



LOW TC development unlikely within 24 hours



MEDIUM TC development likely, but expected to occur beyond 24 hours



HIGH TC development likely within 24 hours (Reference TCFA)

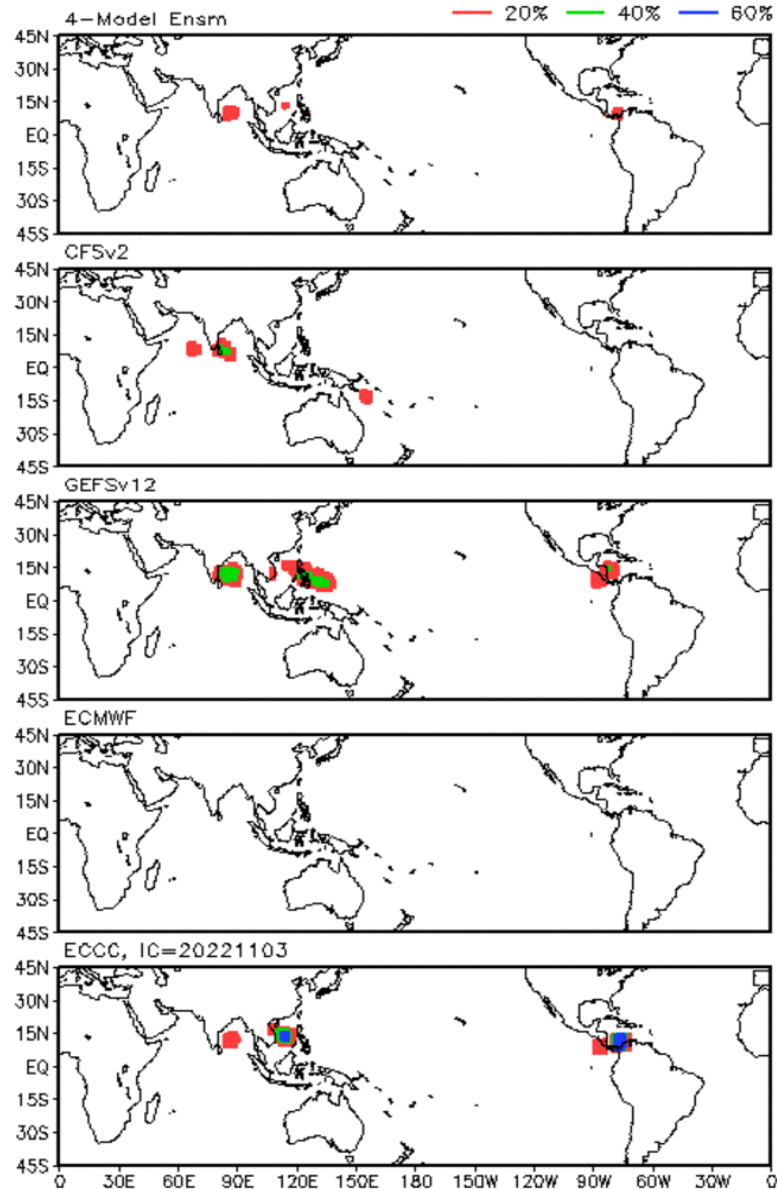


SUB TROPICAL Monitoring for potential transition to TC. Invest label color denotes tropical transition probability

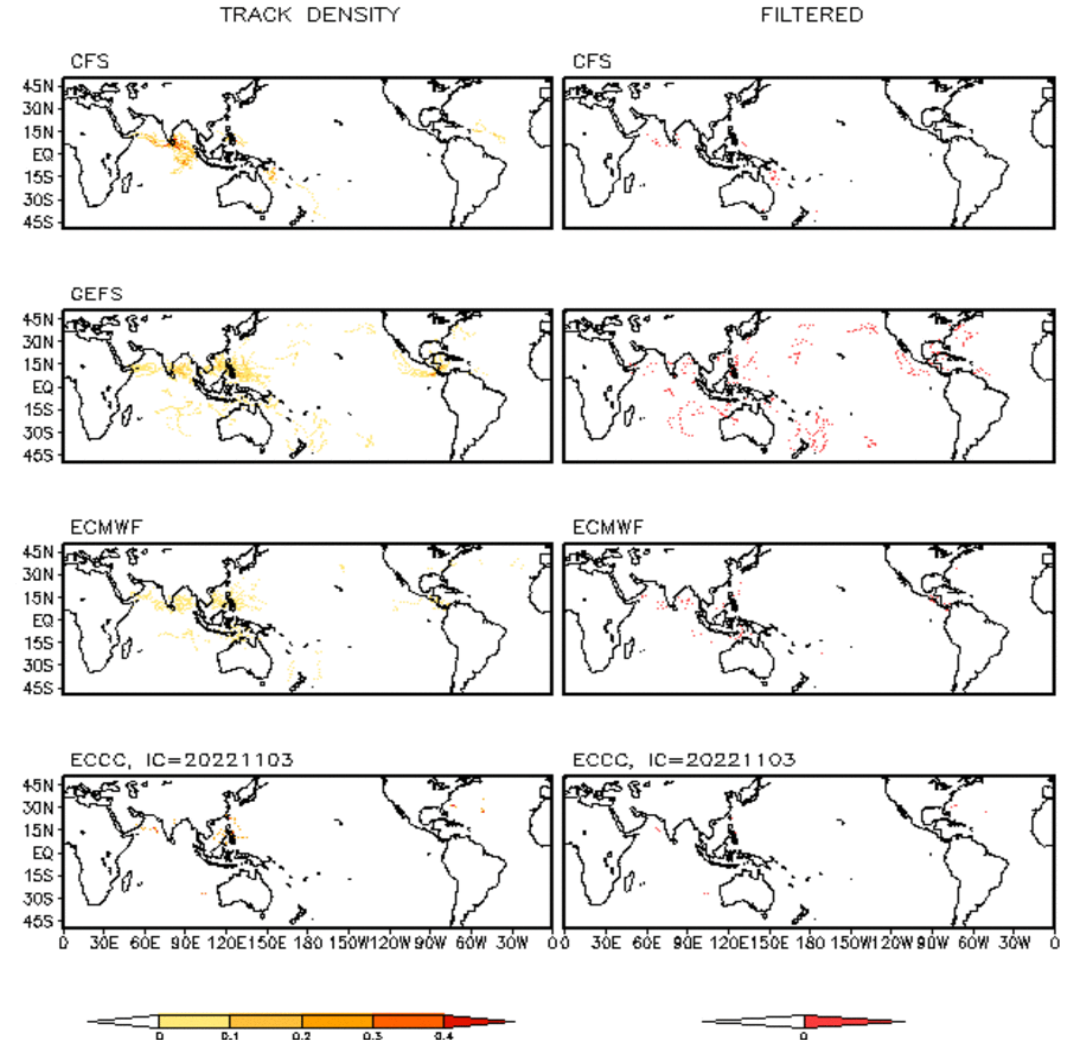
Tropical Cyclone (Reference Warning)

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

Storm Track Probabilities, IC=20221107
Week 2: 1116 - 1122



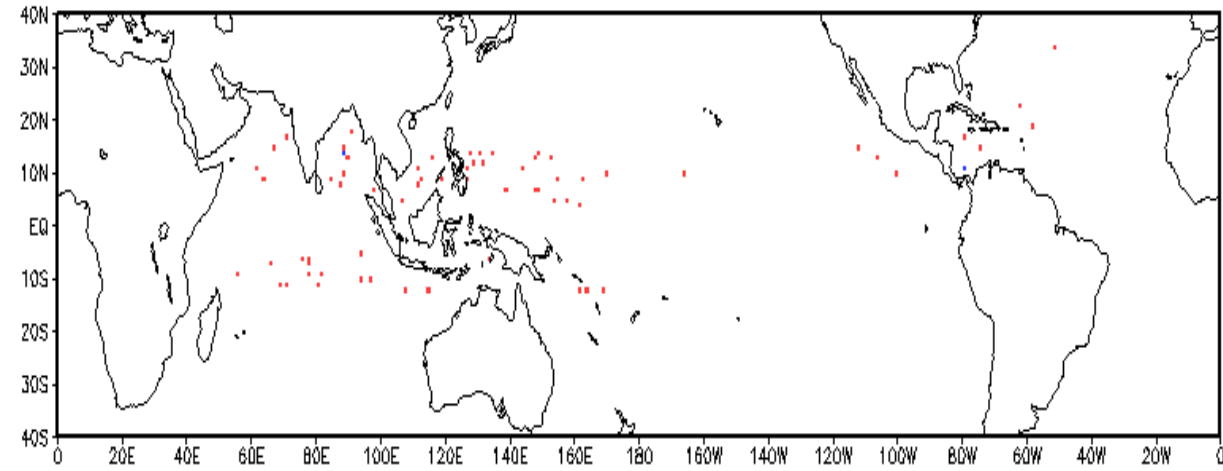
Storm Track Density Distribution, IC=20221107
Week 2 Forecast: 1116-1122



TC Climatological Genesis: Weeks 2 & 3

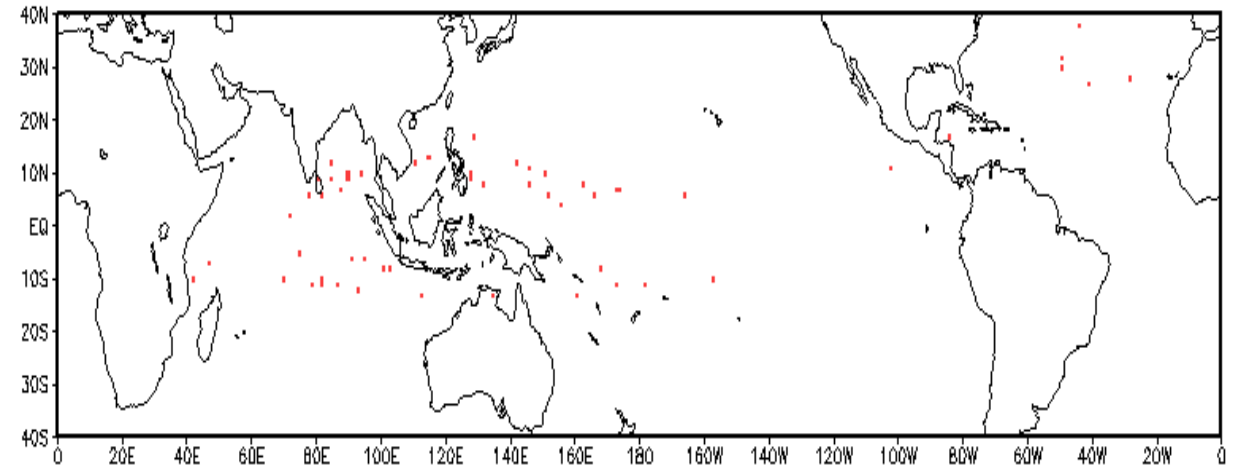
Observed TC Genesis, 1979–2021

7-day Period 1116 to 1122



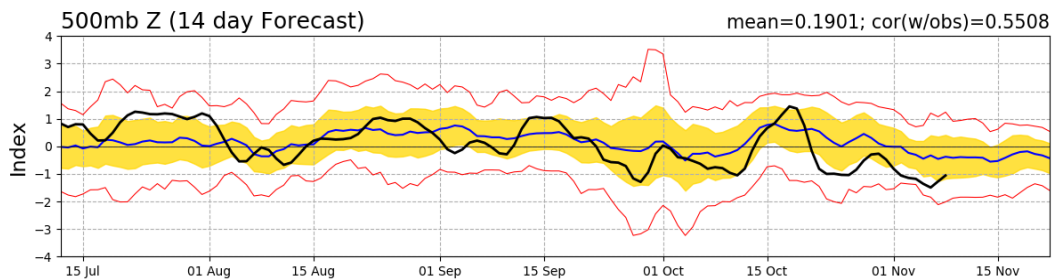
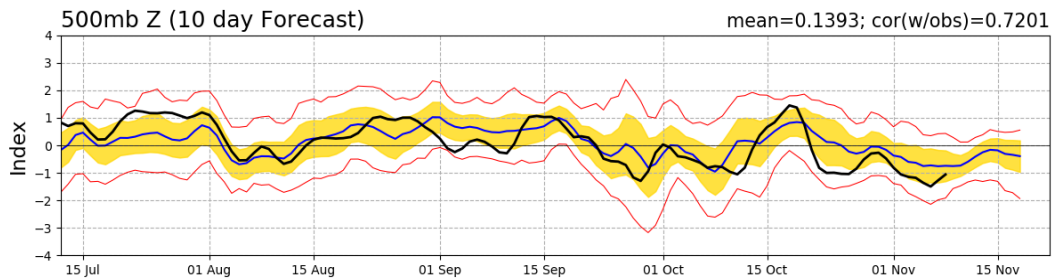
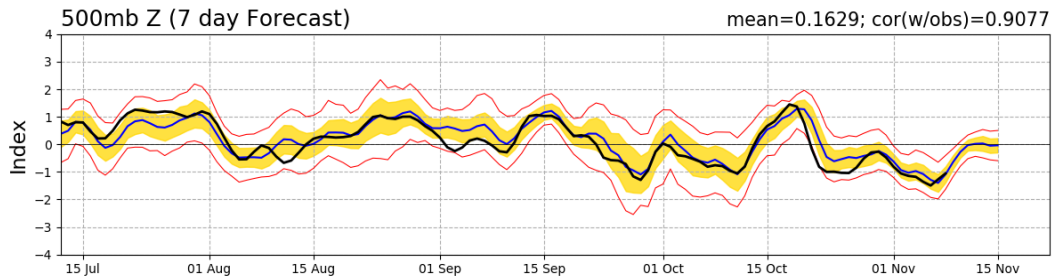
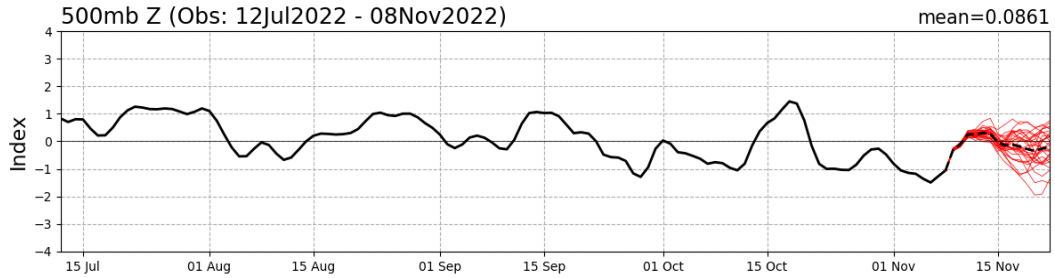
Observed TC Genesis, 1979–2021

7-day Period 1123 to 1129

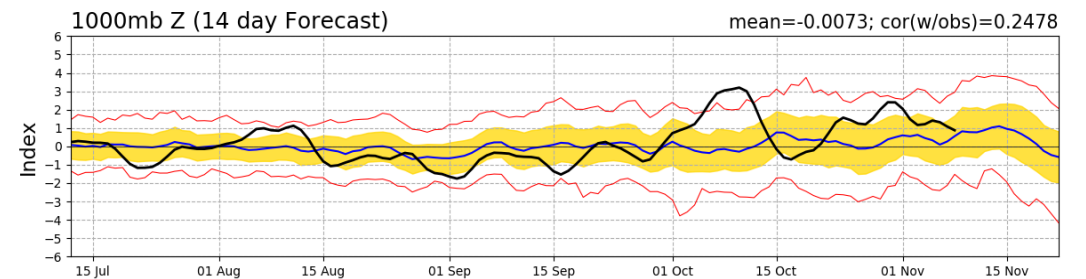
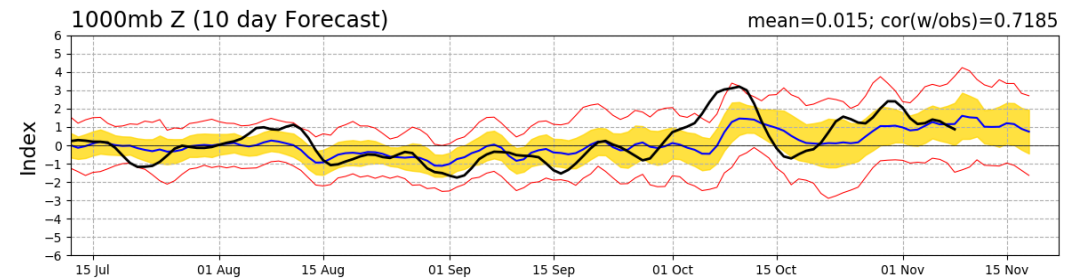
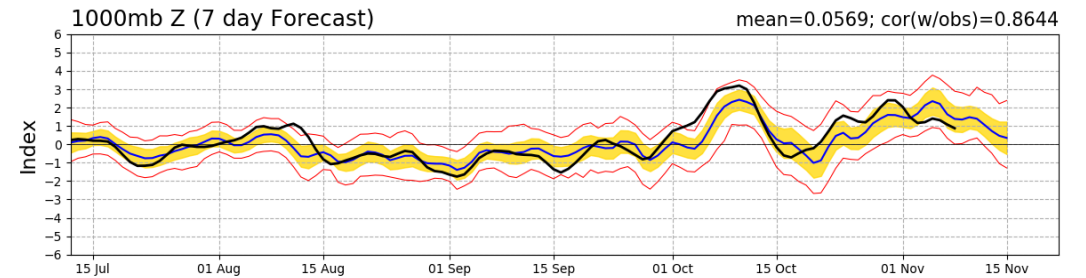
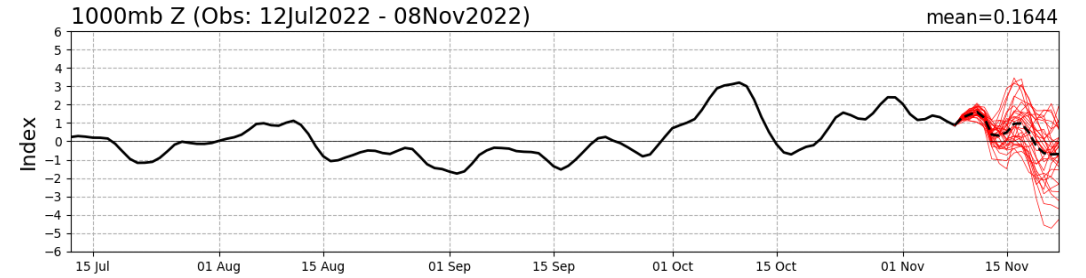


Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts

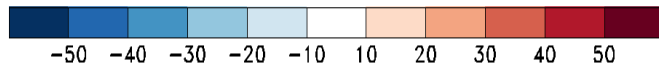
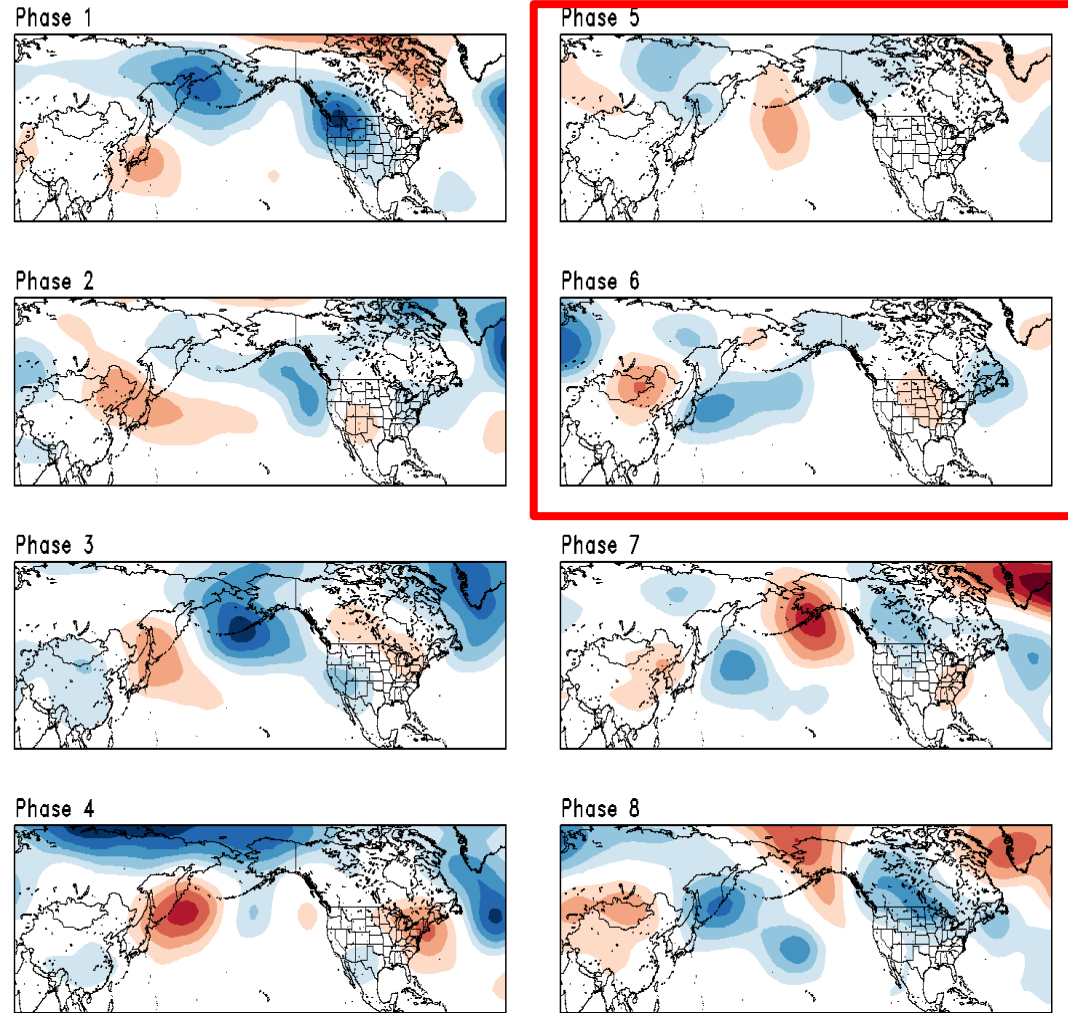


AO Index: Observed & GEFS Forecasts

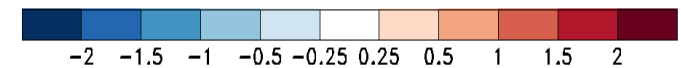
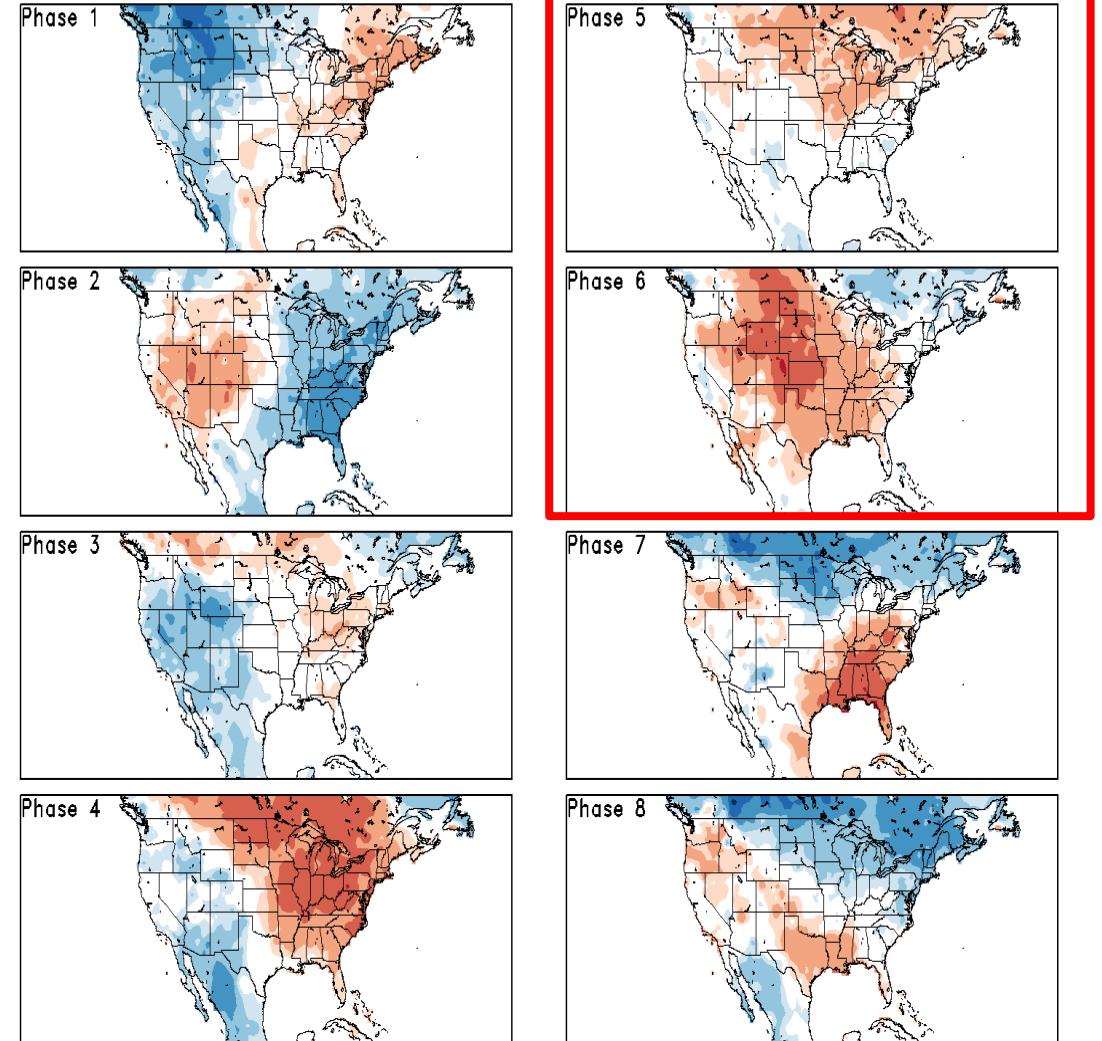


Historical 500-hPa Height & U.S. Temperatures By MJO Phase:

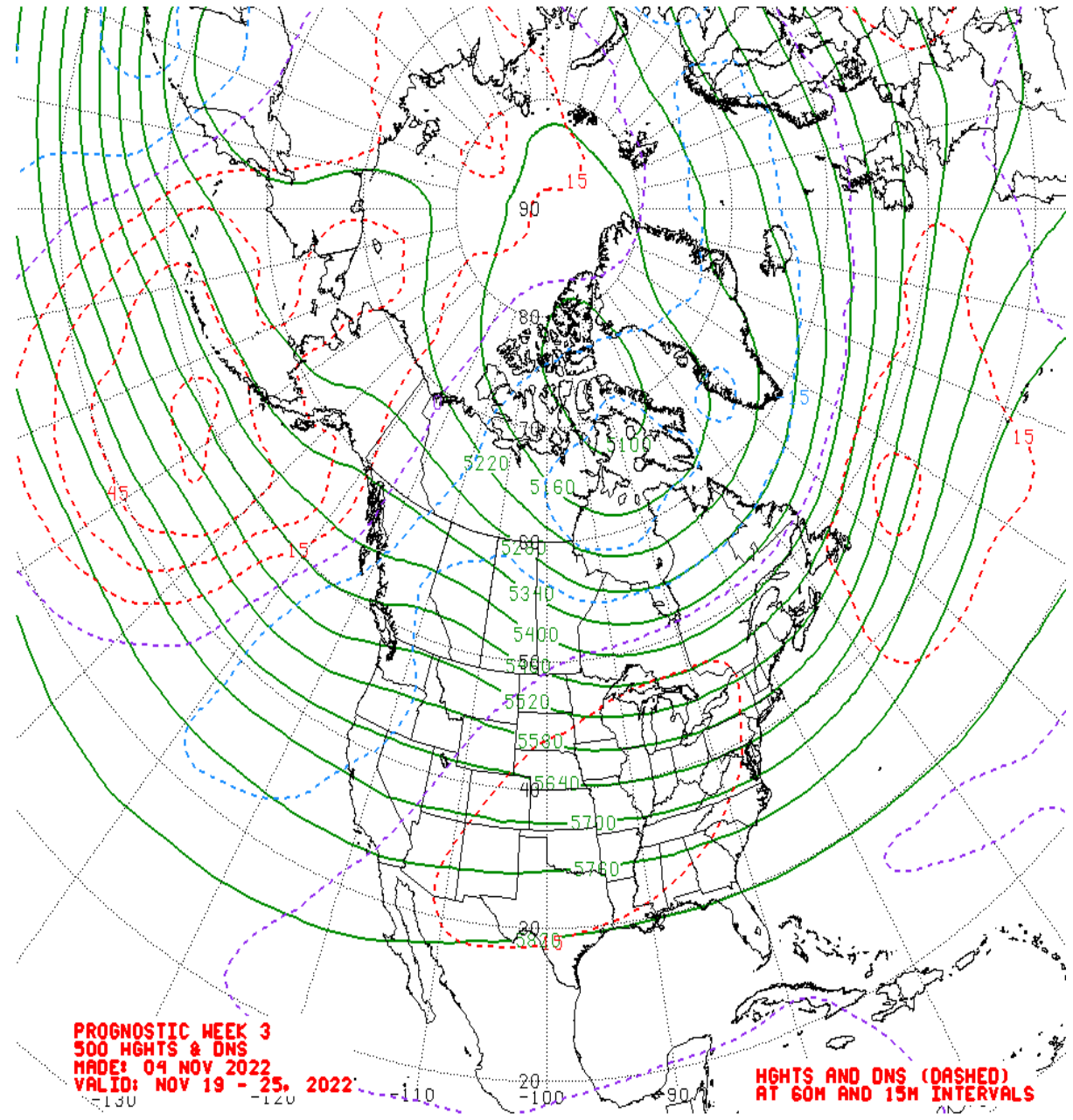
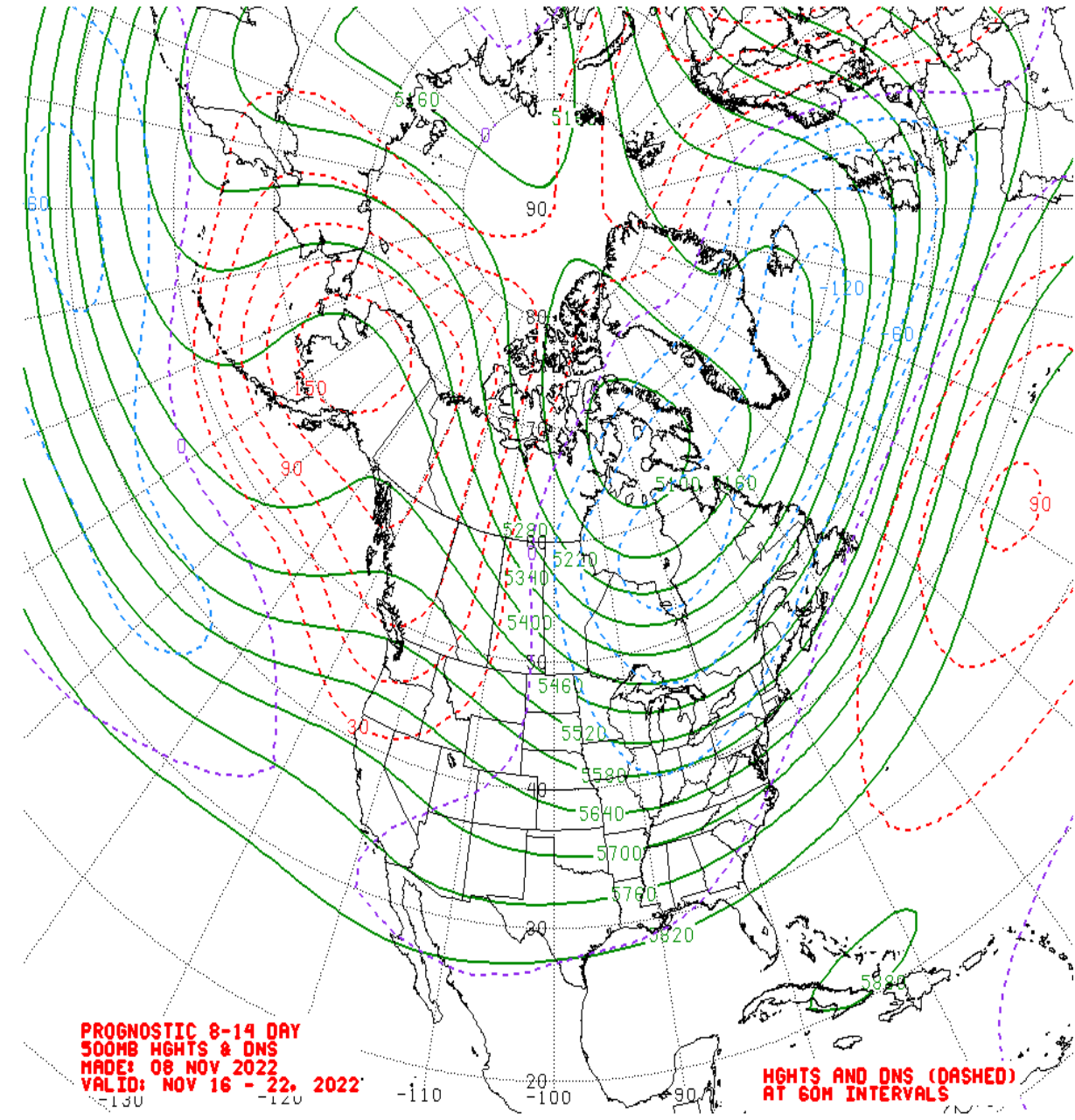
OND MJO Composite: CDAS 500-hPa Height (m)



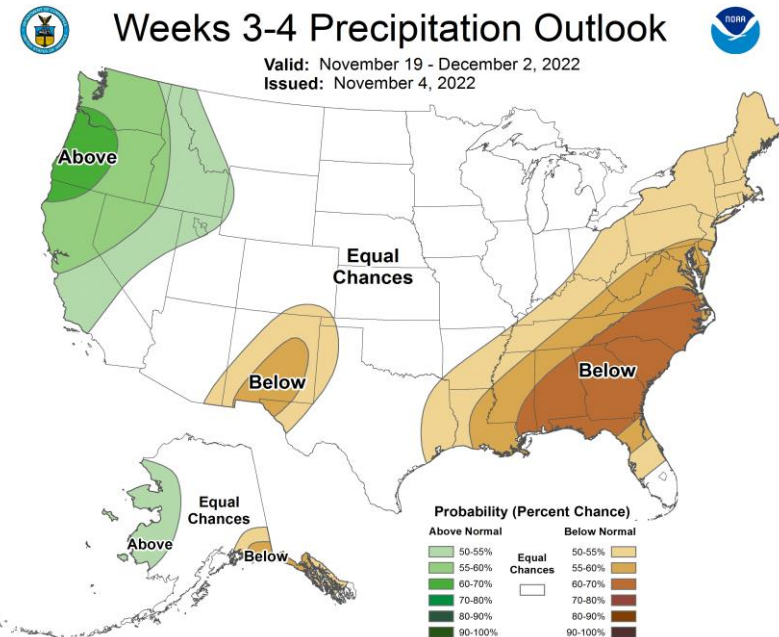
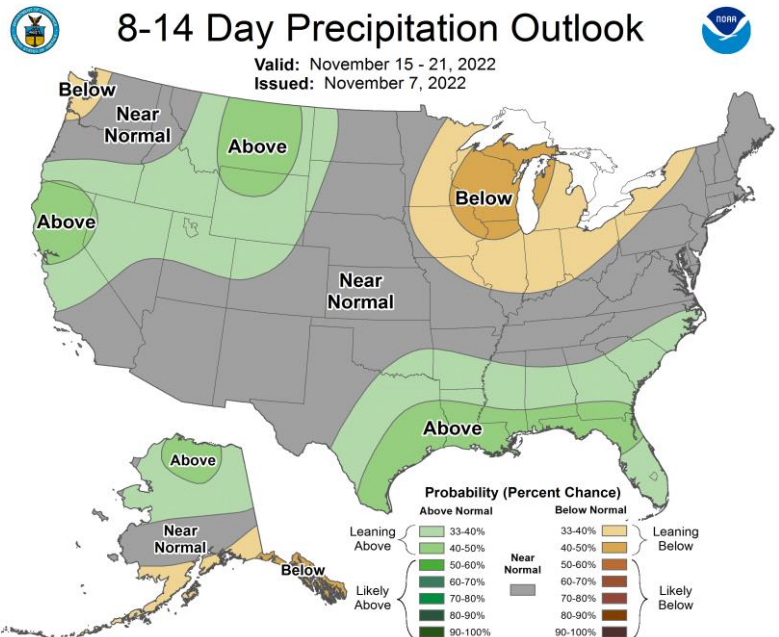
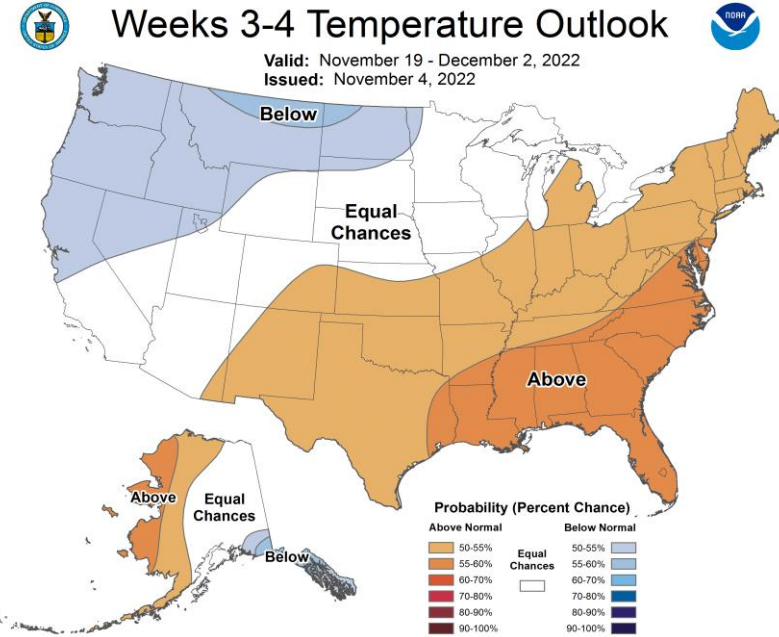
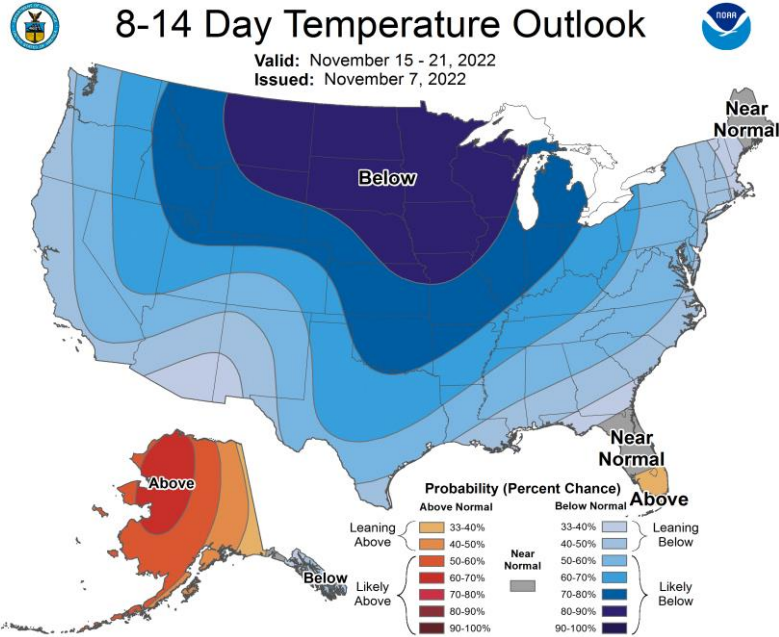
OND MJO Composite: GLBT (degC)



Mean 500-hPa Height Anomaly Forecasts:



Official Temperature & Precipitation Forecasts:



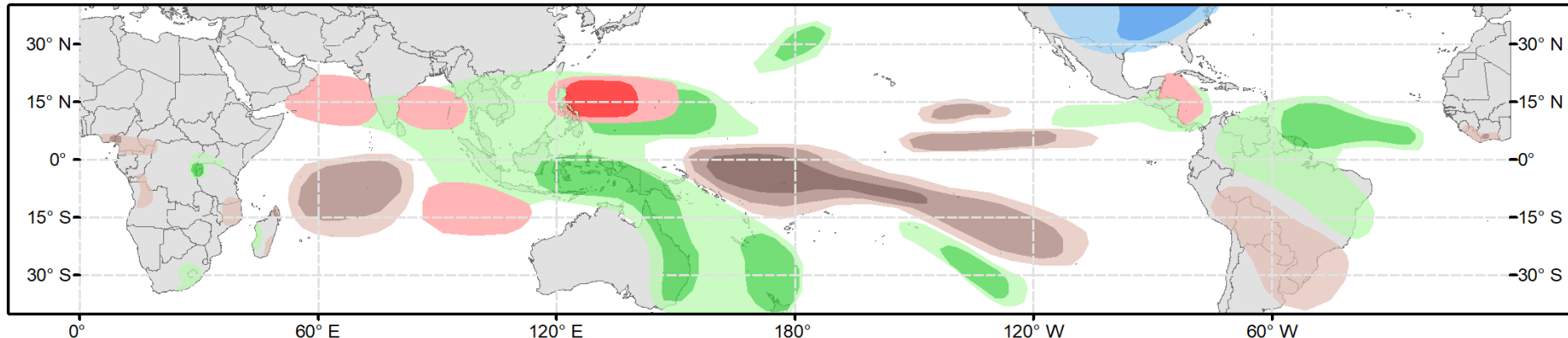


Global Tropics Hazards Outlook

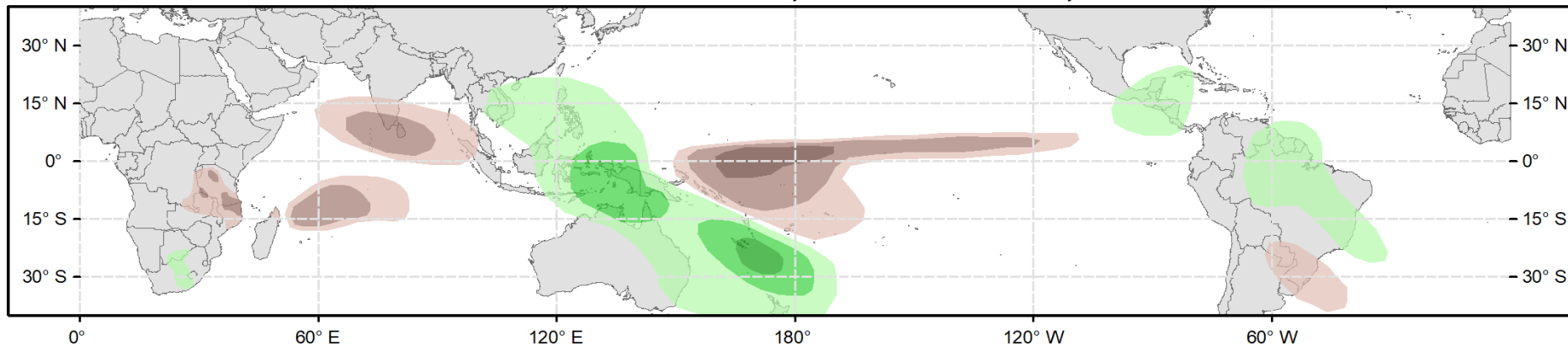
Climate Prediction Center



Week 2 - Valid: Nov 16, 2022 - Nov 22, 2022



Week 3 - Valid: Nov 23, 2022 - Nov 29, 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

>50% >65% >80%

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

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