Weeks 2-3 Global Tropics Hazards Outlook

4/29/2025

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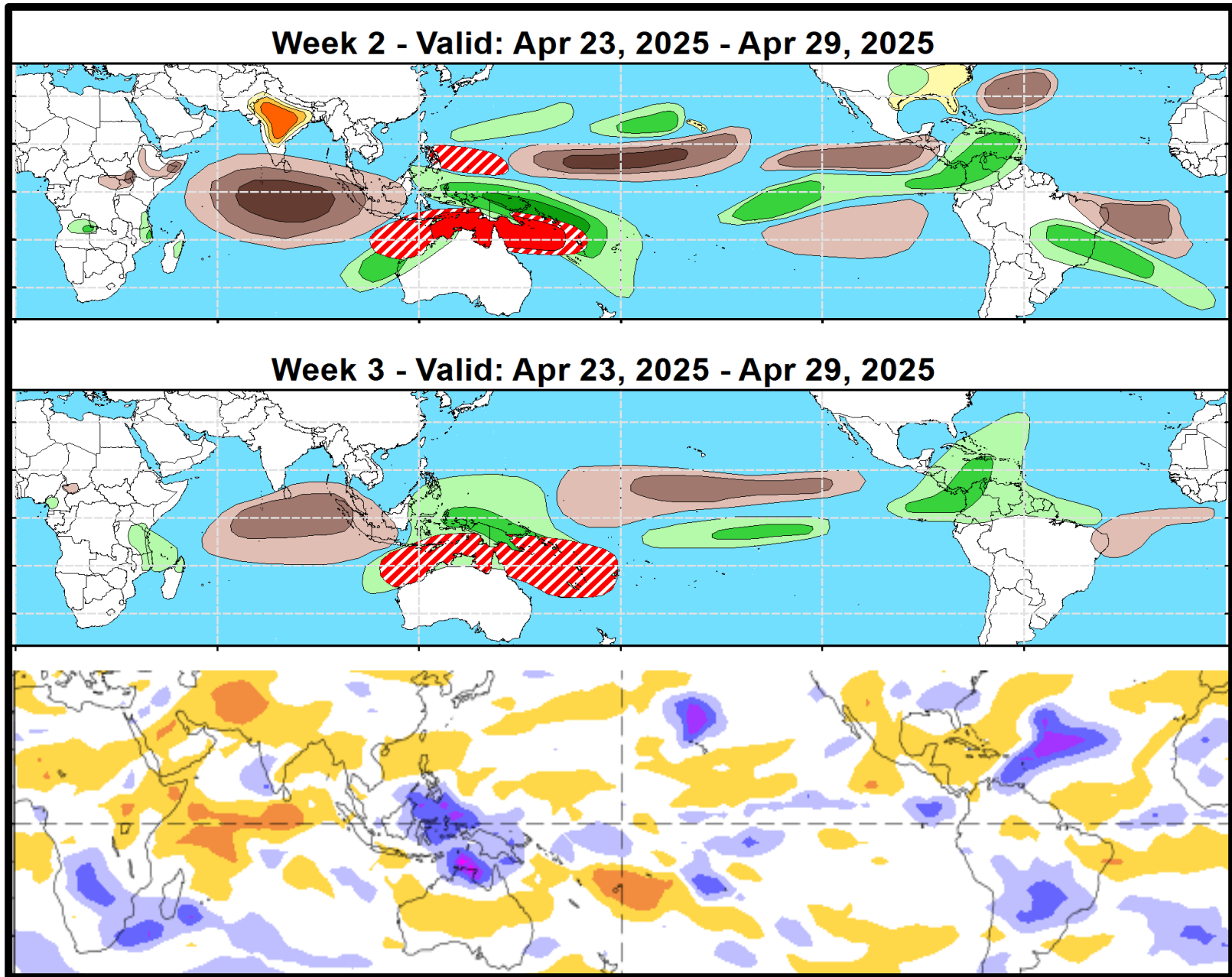
NWS / NCEP / Climate Prediction Center

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

- No TCs this week

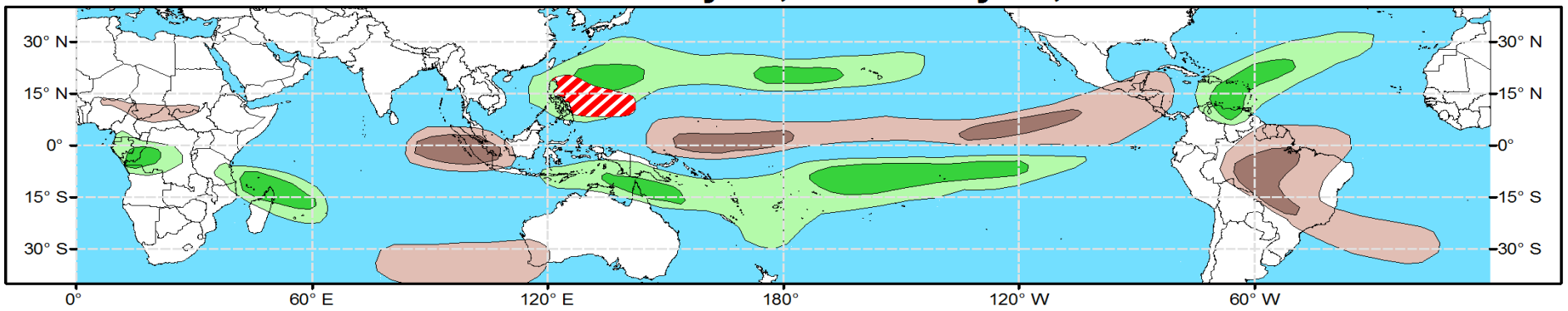


GTH Outlook:

Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: May 07, 2025 - May 13, 2025



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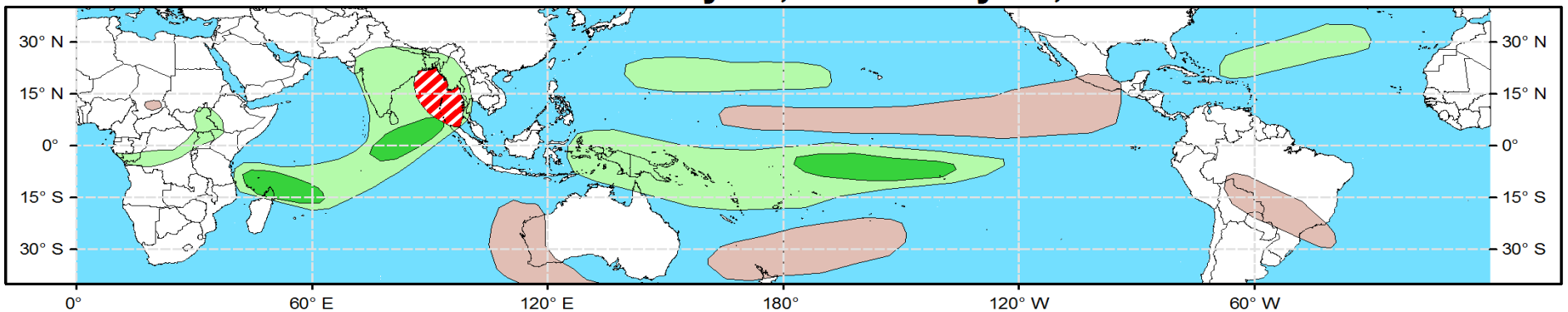

Tropical Cyclone (TC) Formation Probability

>20% >40% >60%

Tropical Depression (TD) or greater strength

Above-Average Rainfall Probability

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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 max temperatures in the Upper third of the historical range

Below-Average Temperatures Probability

>50% >65% >80%

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

Issued: 04/29/2025

Forecaster: Barandiaran

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Consult your local responsible forecast agency.

Synopsis of Climate Modes:

ENSO: (Apr 10, 2025 Update) ***next update on Thursday, May 8th***

- ENSO Alert System Status: Final La Niña Advisory

- ENSO-neutral is favored during the Northern Hemisphere summer, with a greater than 50% chance through August-October 2025.

MJO and other subseasonal tropical variability:

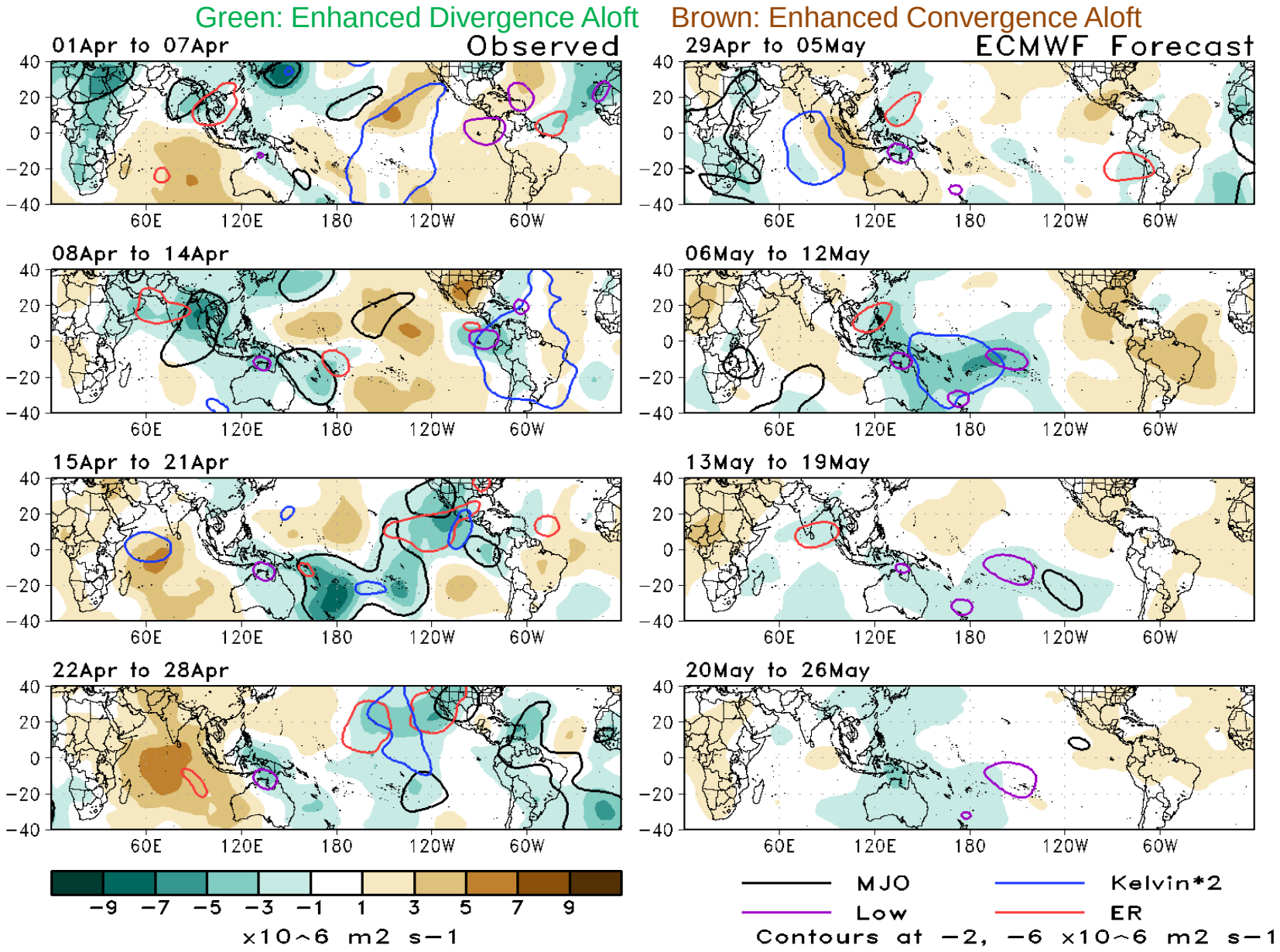
- Global tropical circulation continues to have multiple modes of variability in play, leading to the potential for interference between modes. Over the last month the RMM index has indicated weak MJO activity, with the index rarely leaving the unit circle.

- RMM-based forecasts generally favor a continuance of this behavior from the MJO well into May. Model solutions mostly keep the RMM index within the unit circle, and there is a noticeable clustering of individual solutions on the top half of the RMM diagram.

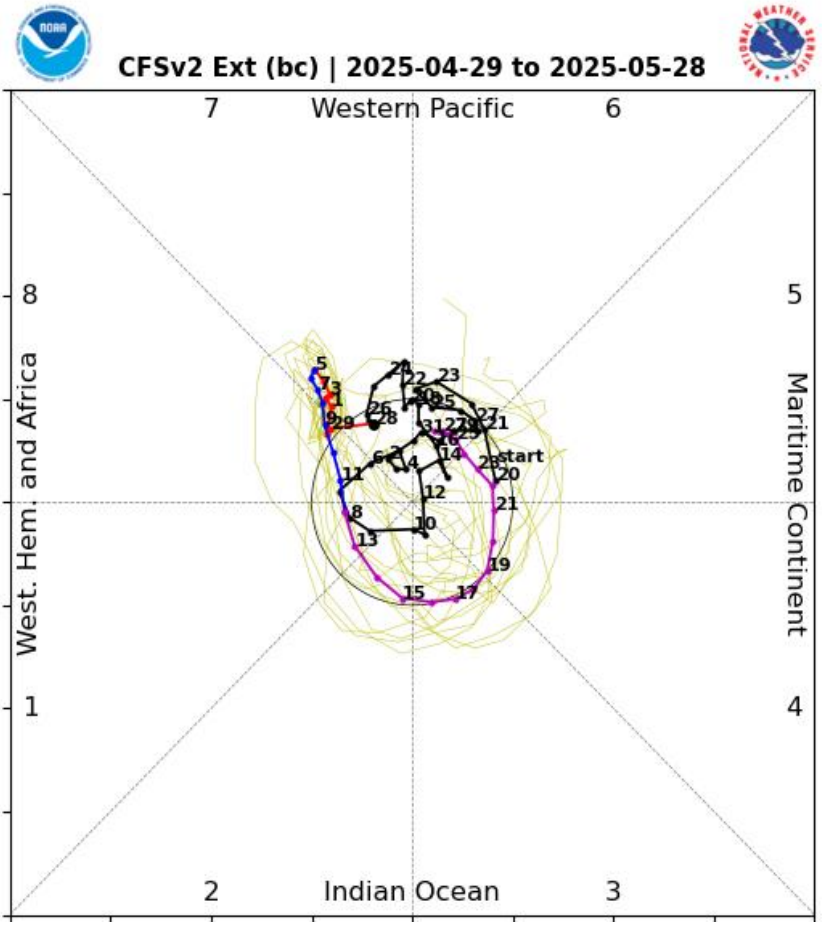
- Tropical cyclone (TC) activity has been minimal recently, consistent with global TC climatology which exhibits its minimum in April. Model guidance favors continued low levels of TC activity during the forecast period.

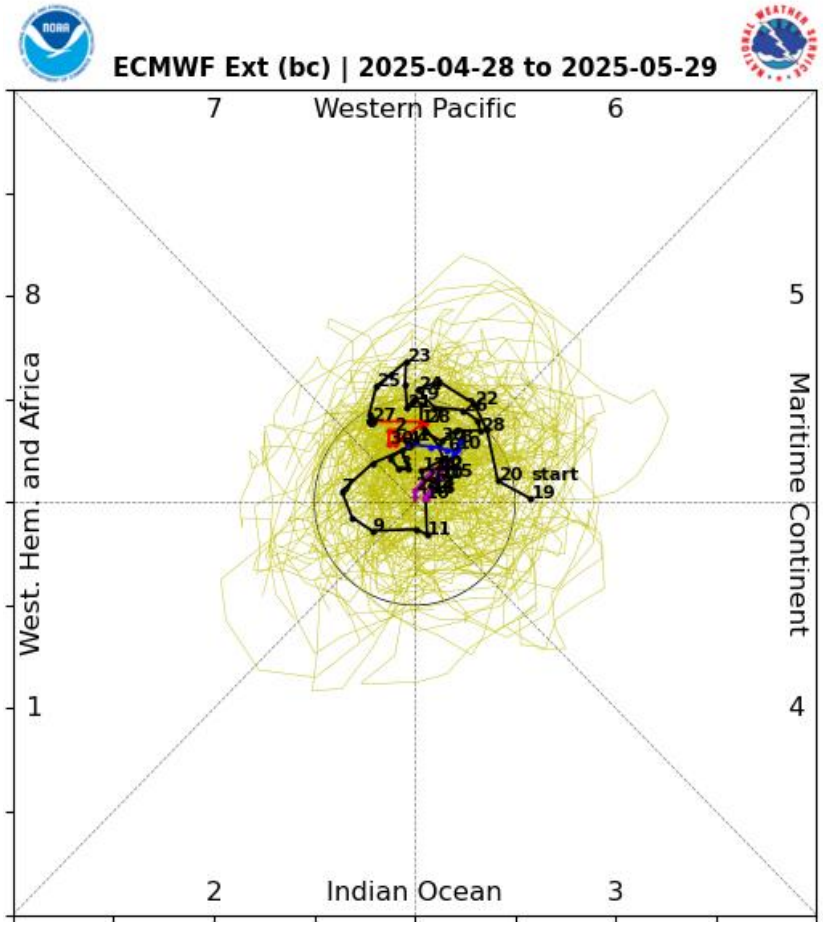
200-hPa Velocity Potential Anomaly Maps:

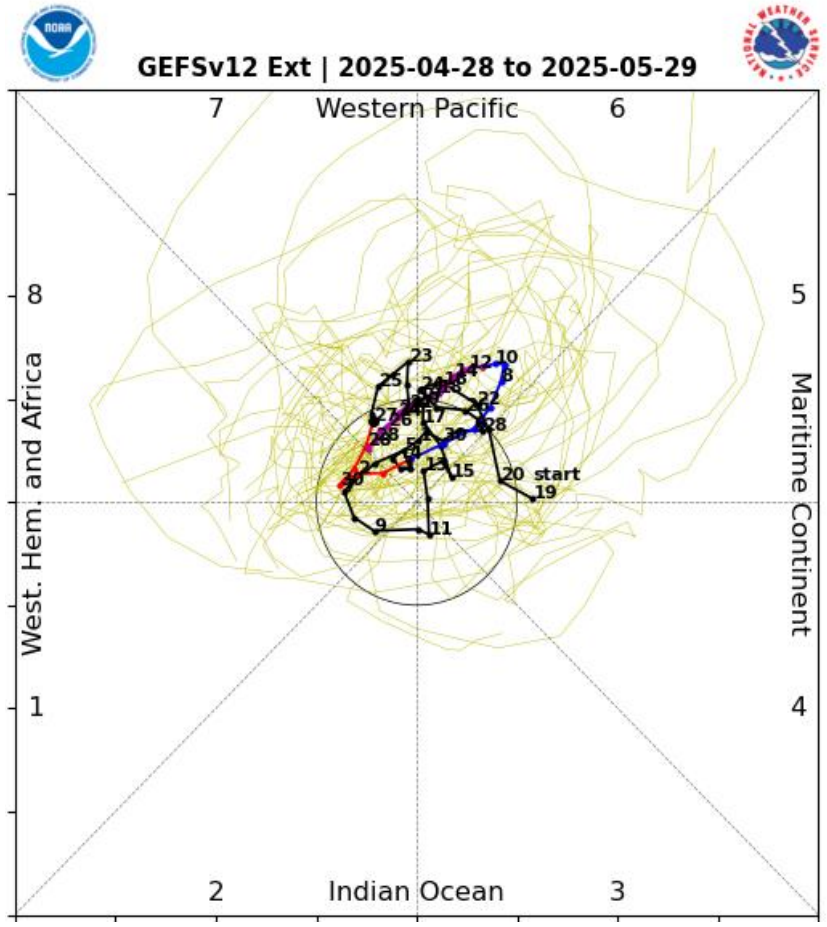
- Tropical circulation has been rather chaotic lately, with many modes of variability influencing the global pattern.
- Traces of MJO activity can be discerned over the last month, but ECMWF forecasts favor a continuation of the disorganized pattern and little forcing from any modes.



RMM Index Observations & Forecasts:

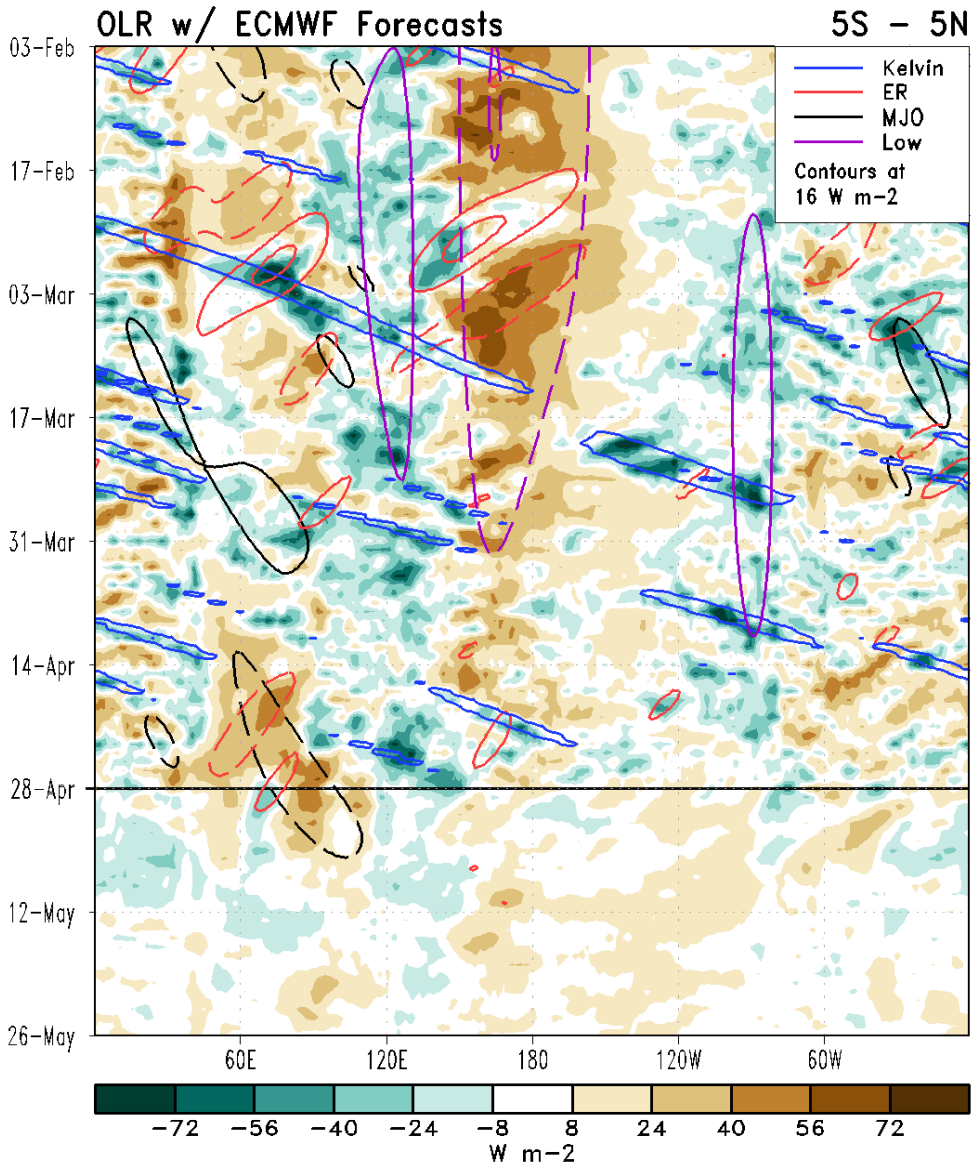


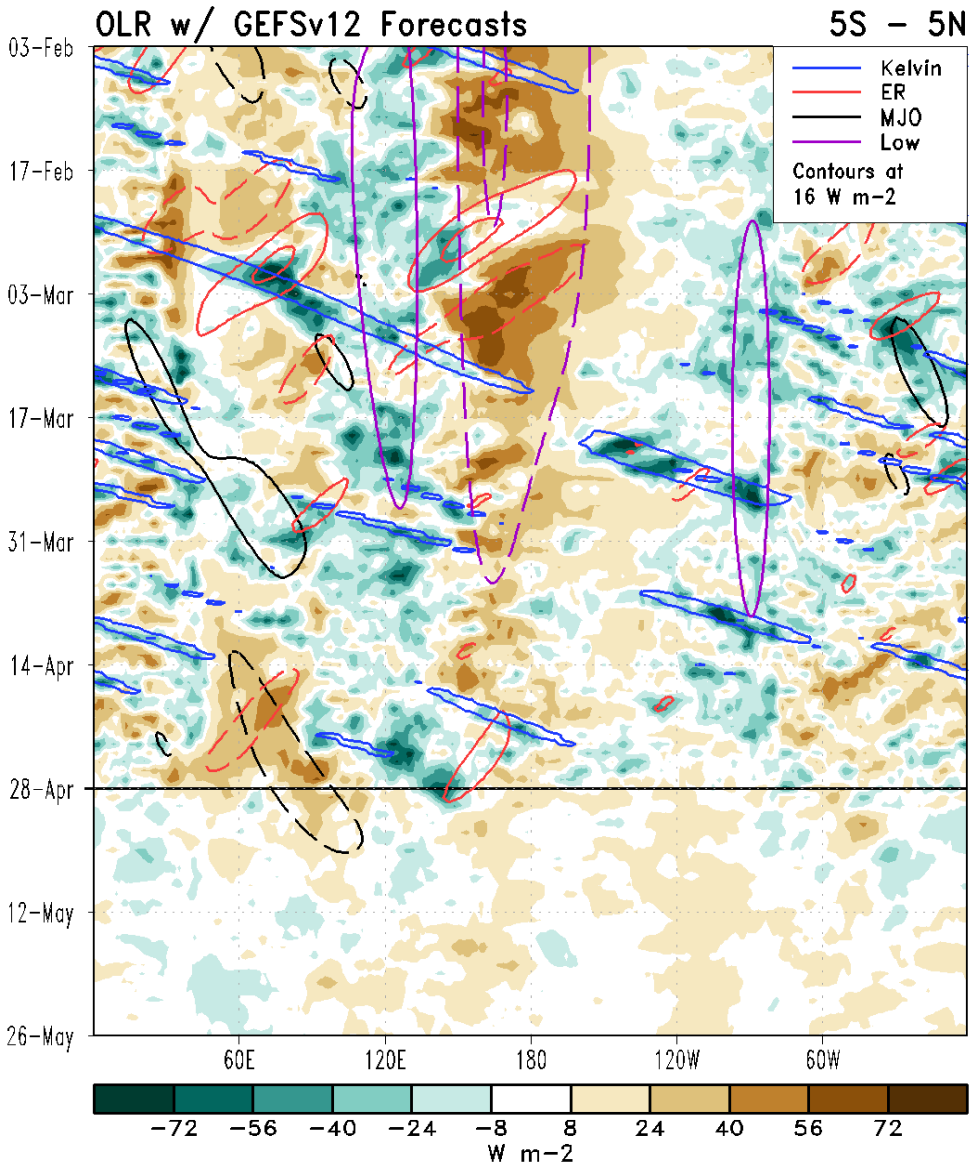




- Dynamical models generally agree on the MJO evolution into mid-May with ensemble means mostly staying within the unit circle throughout the forecast period. The CFS indicates a wider sweep into the lower half of the RMM diagram, but this has little support from other models.
- Similar to recent observations, ensemble member forecasts tend to cluster over the top half of the diagram.

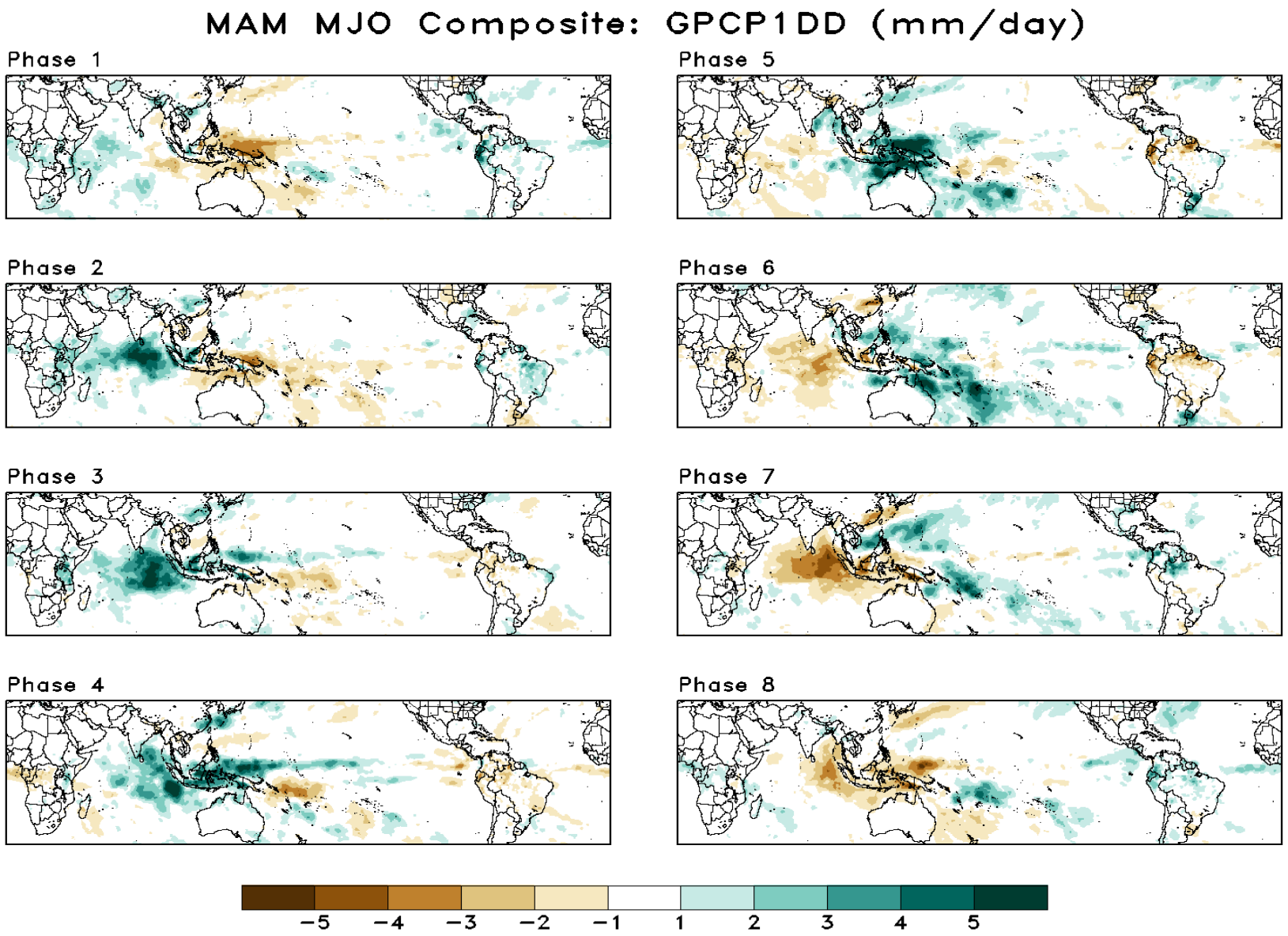
Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



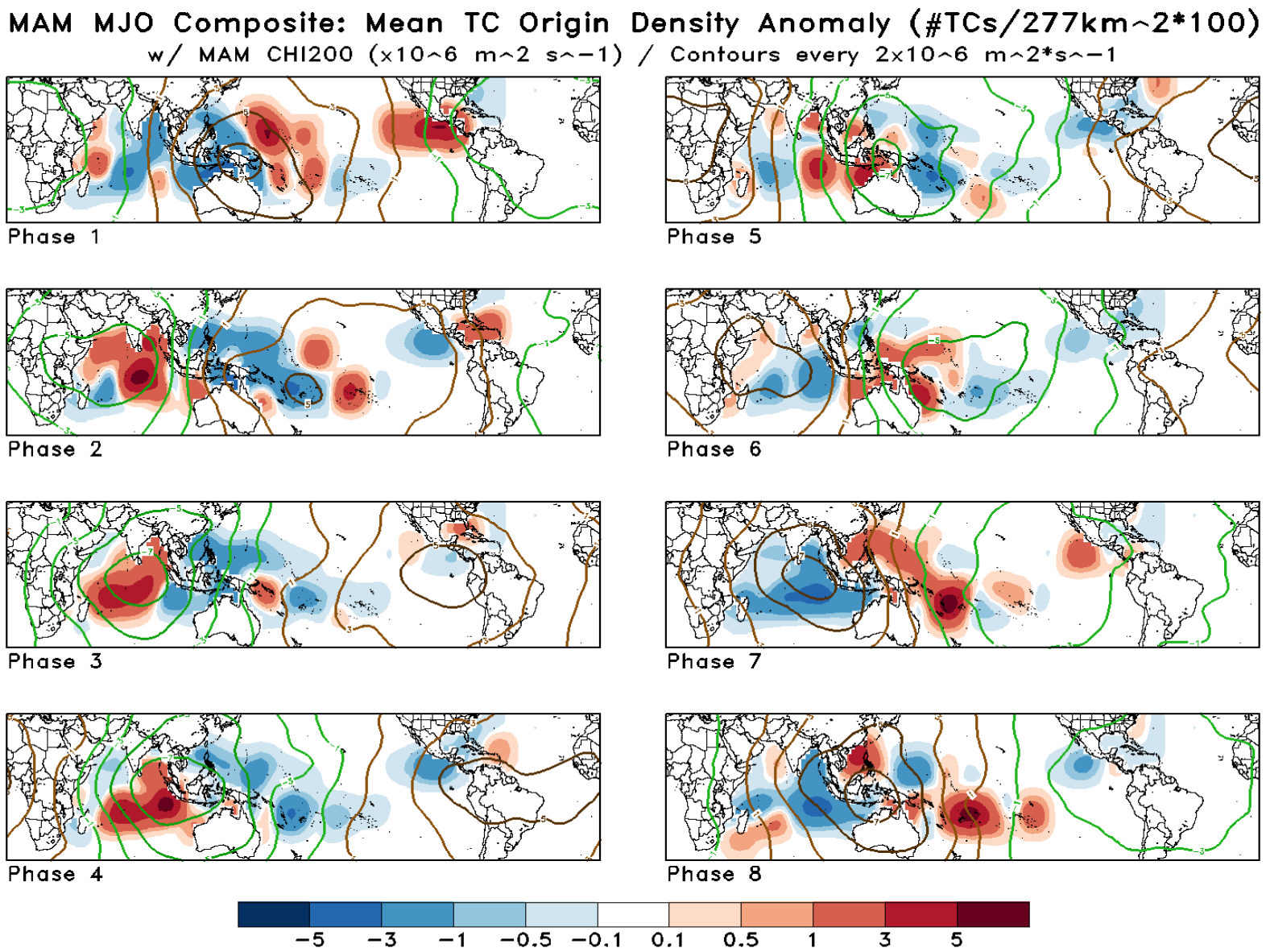


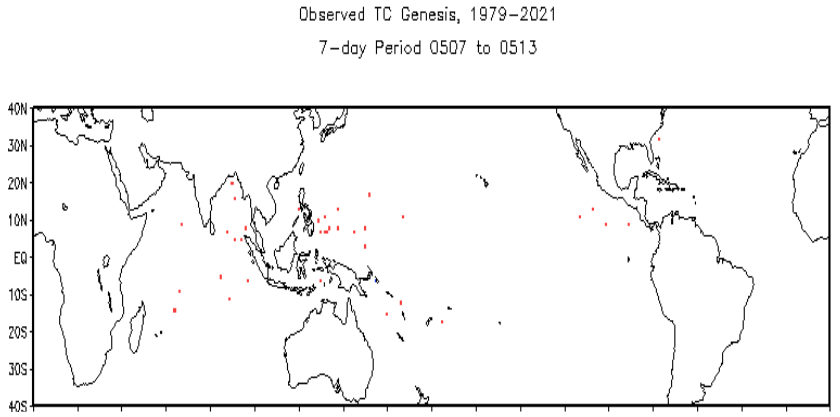
Consolidated Probabilistic Precipitation: Weeks 2 & 3

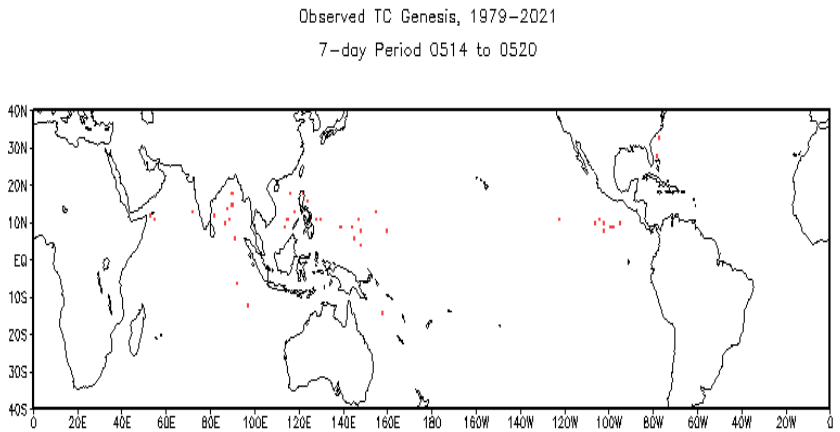
Historical Precipitation Anomalies By MJO Phase:



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

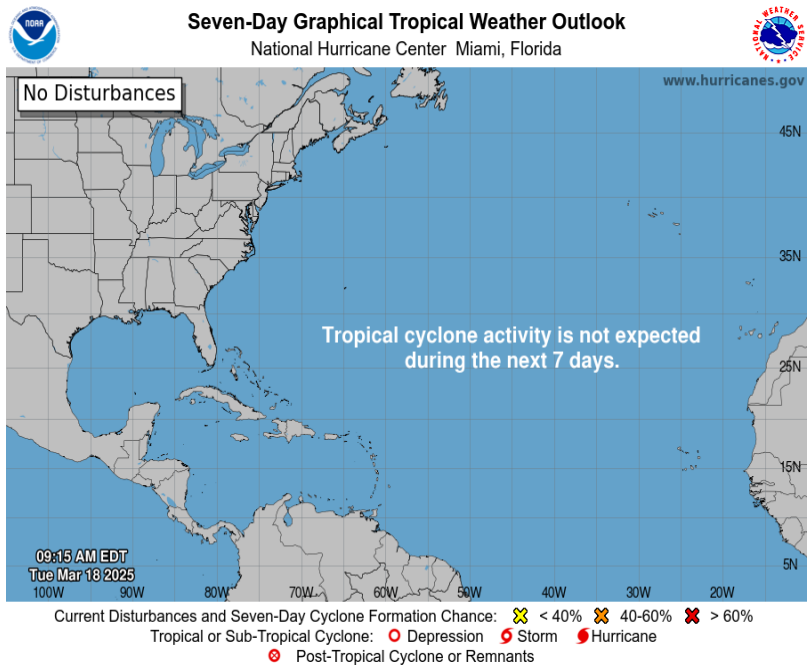


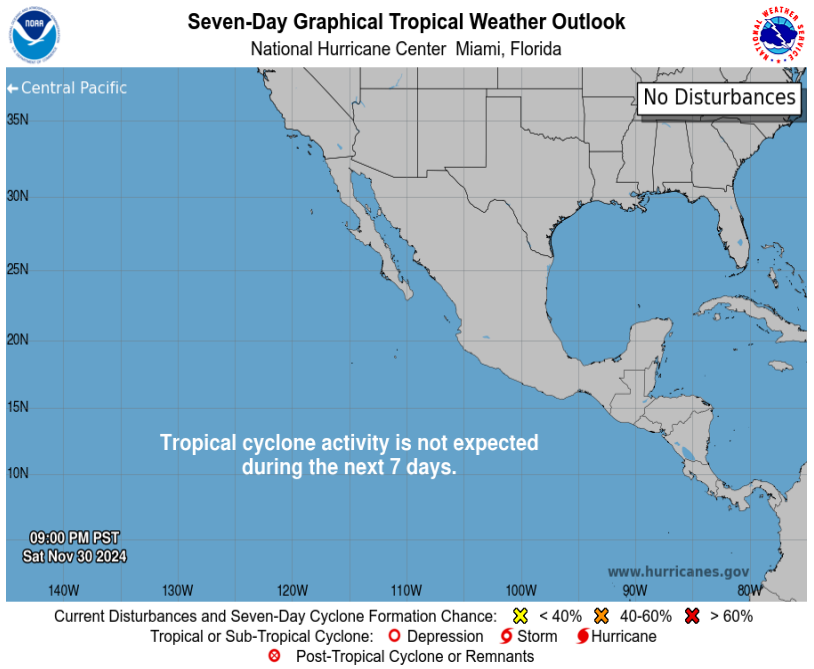


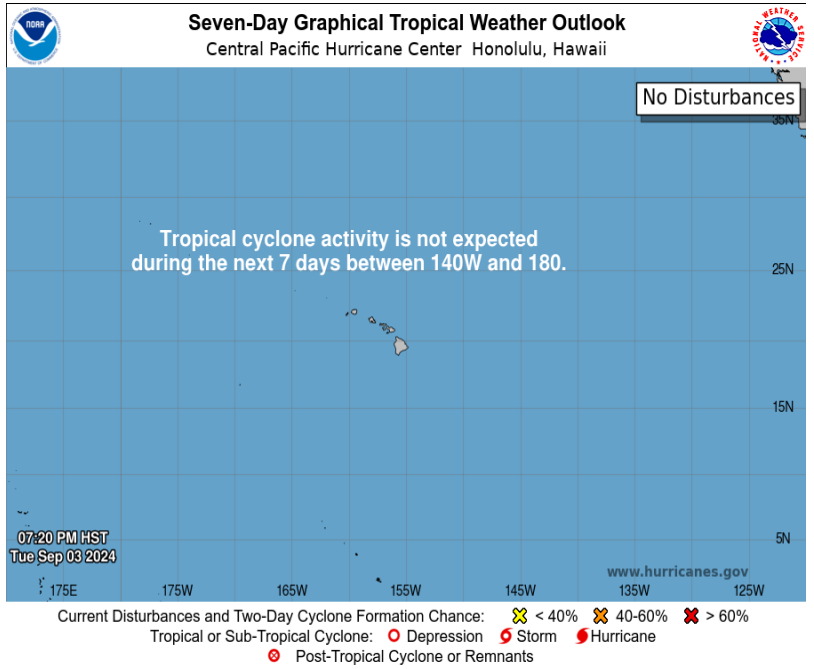


Experimental

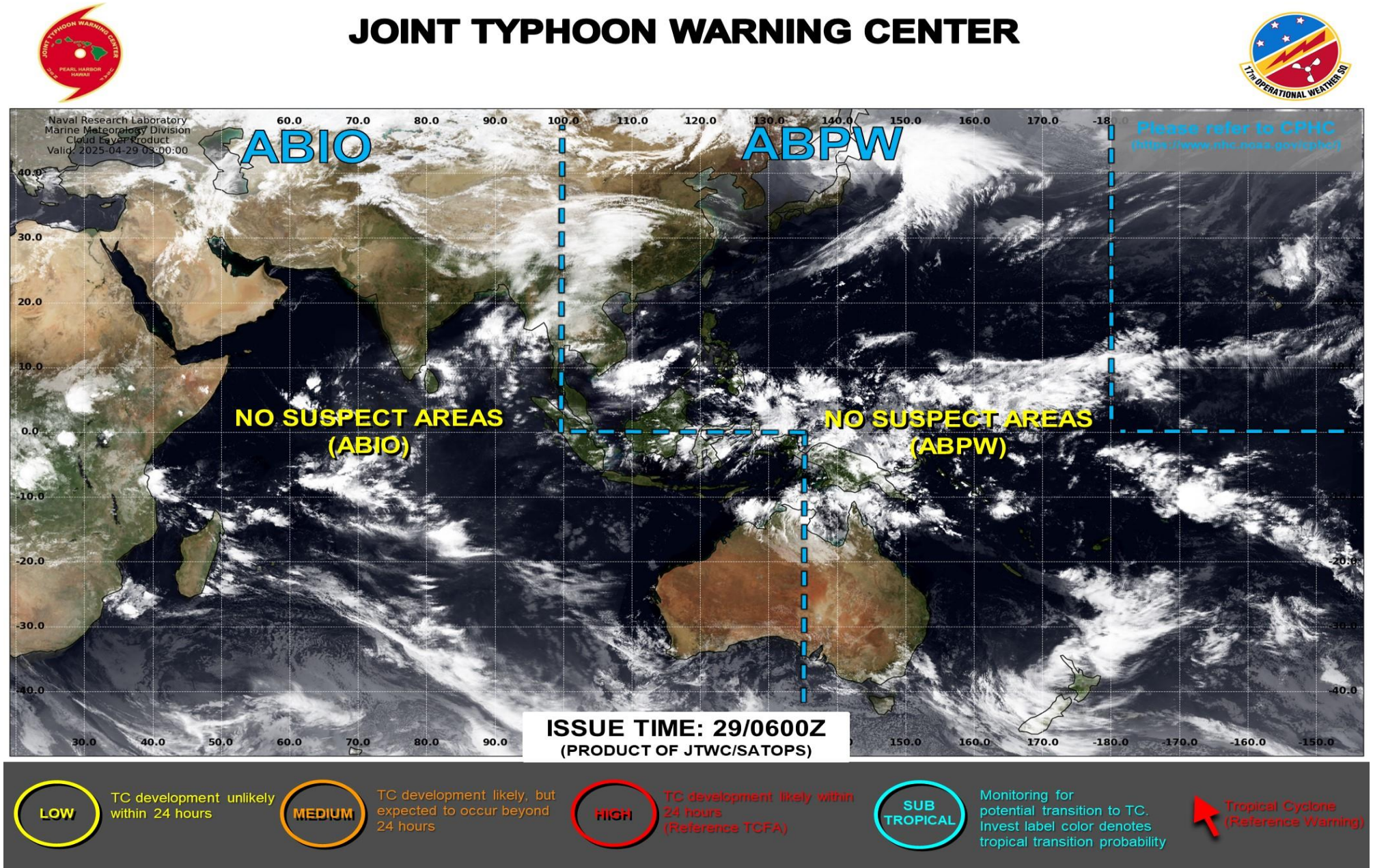
Tropical Cyclone Monitoring/Forecast: NHC / CPHC



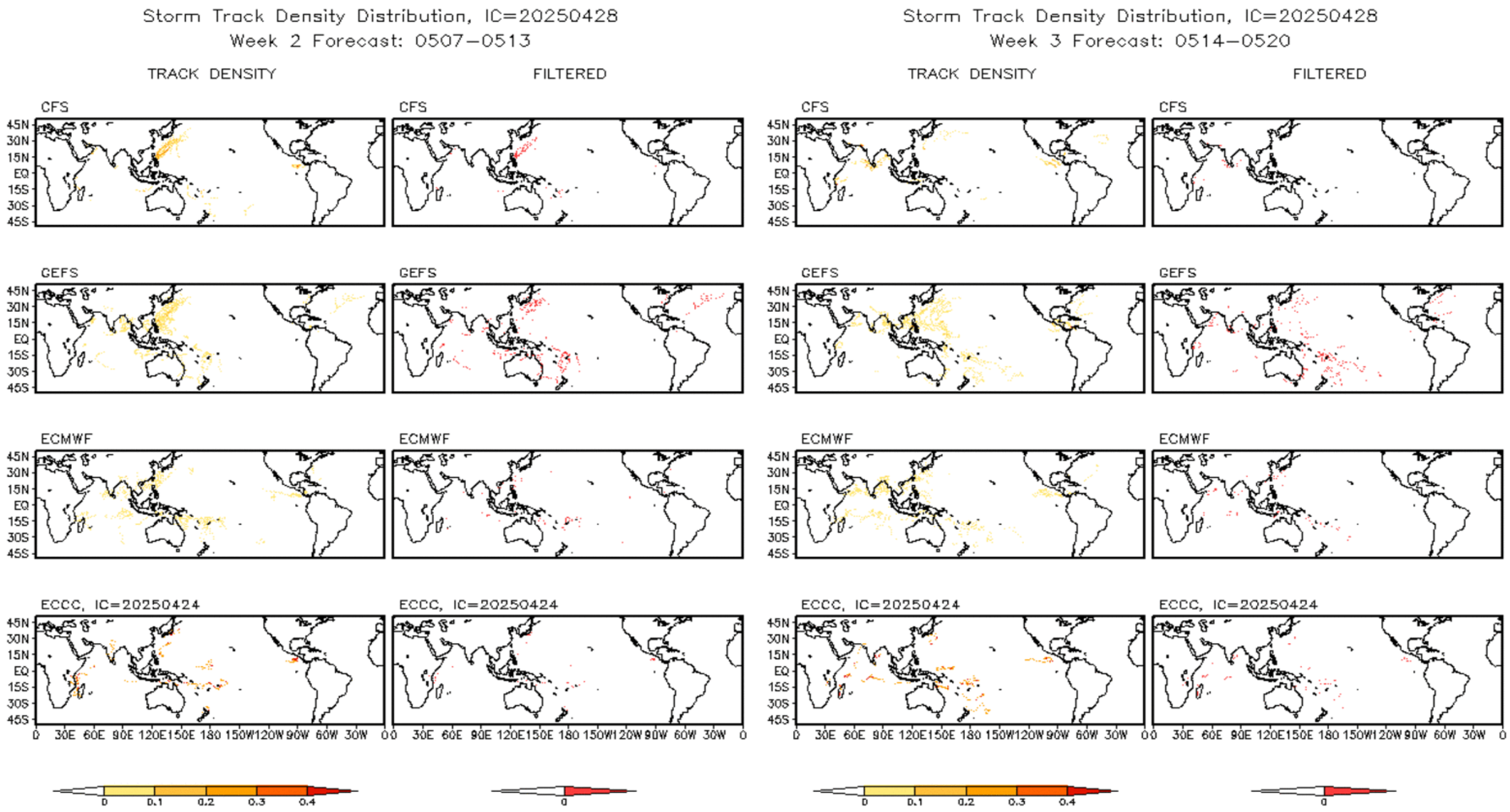




Tropical Cyclone Monitoring/Forecast: JTWC

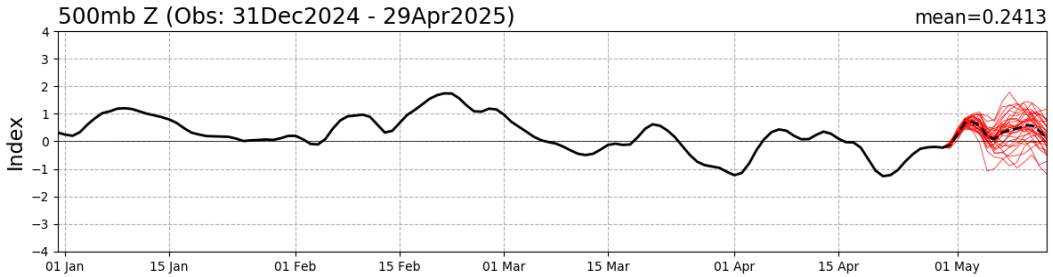


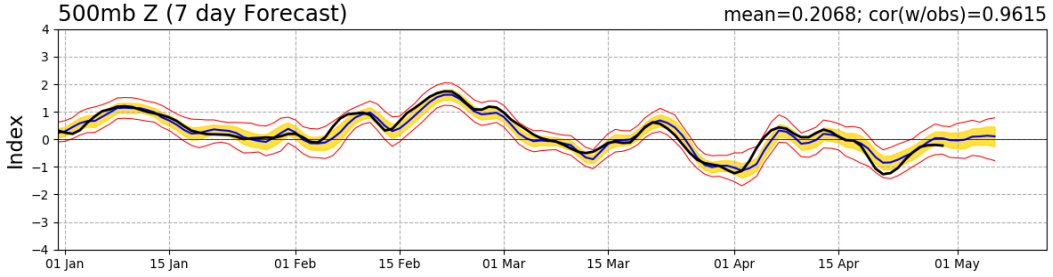
Multi-Model TC Track Densities: Weeks 2+3

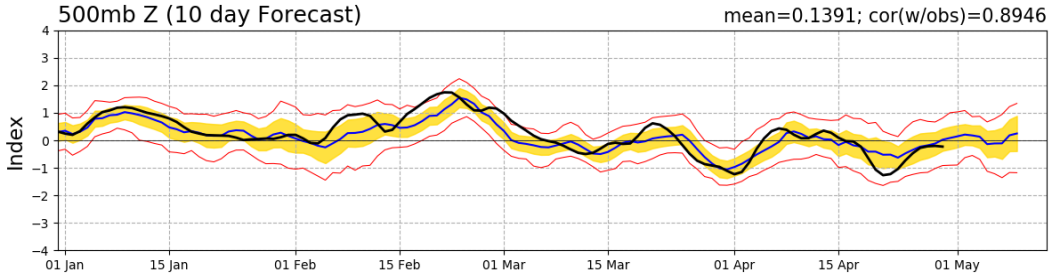


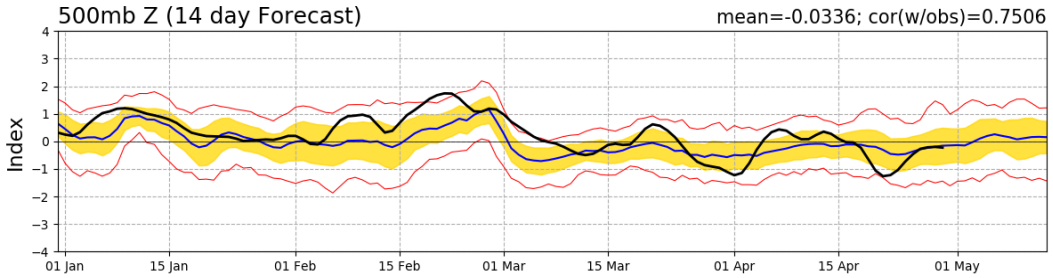
Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts

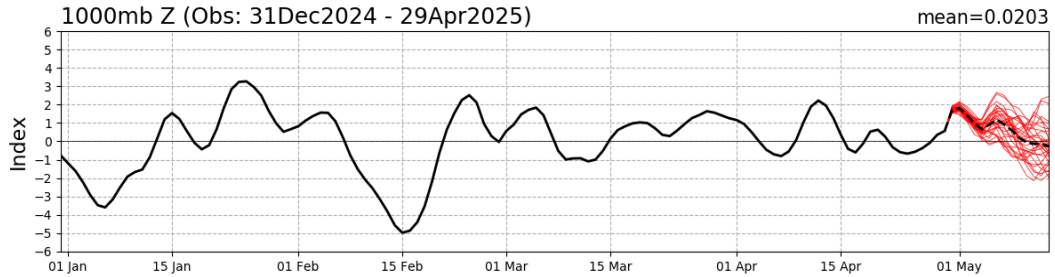


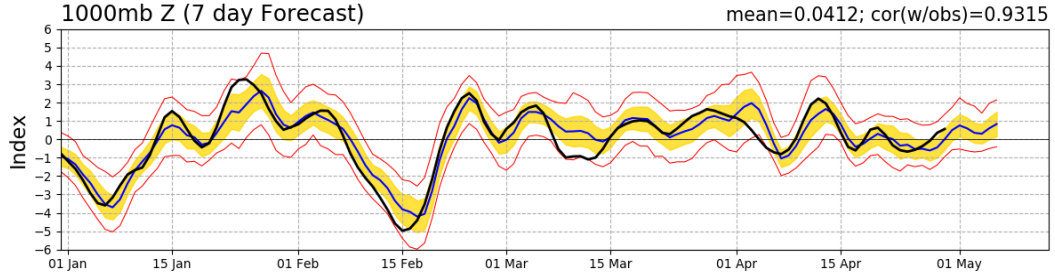


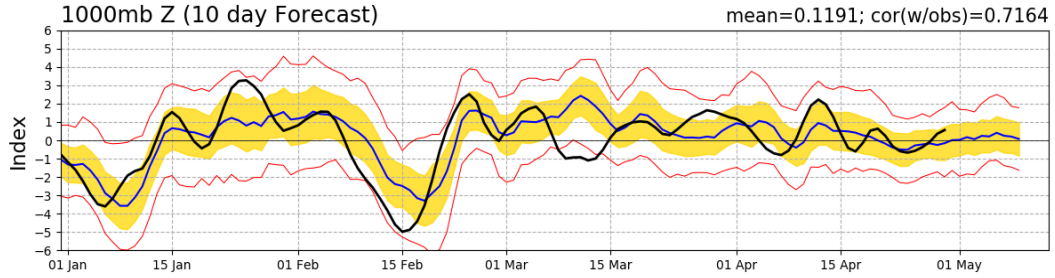


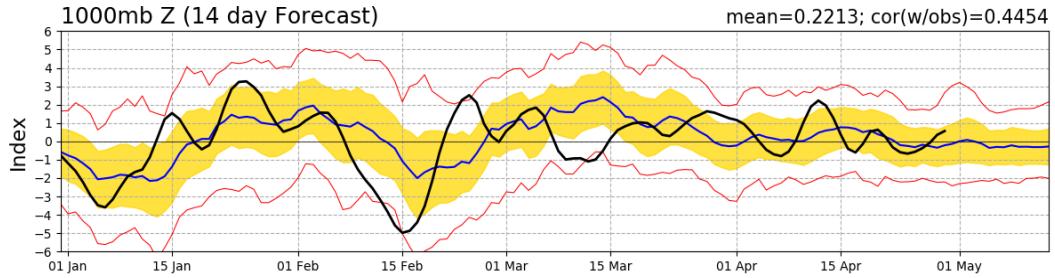


AO Index: Observed & GEFS Forecasts

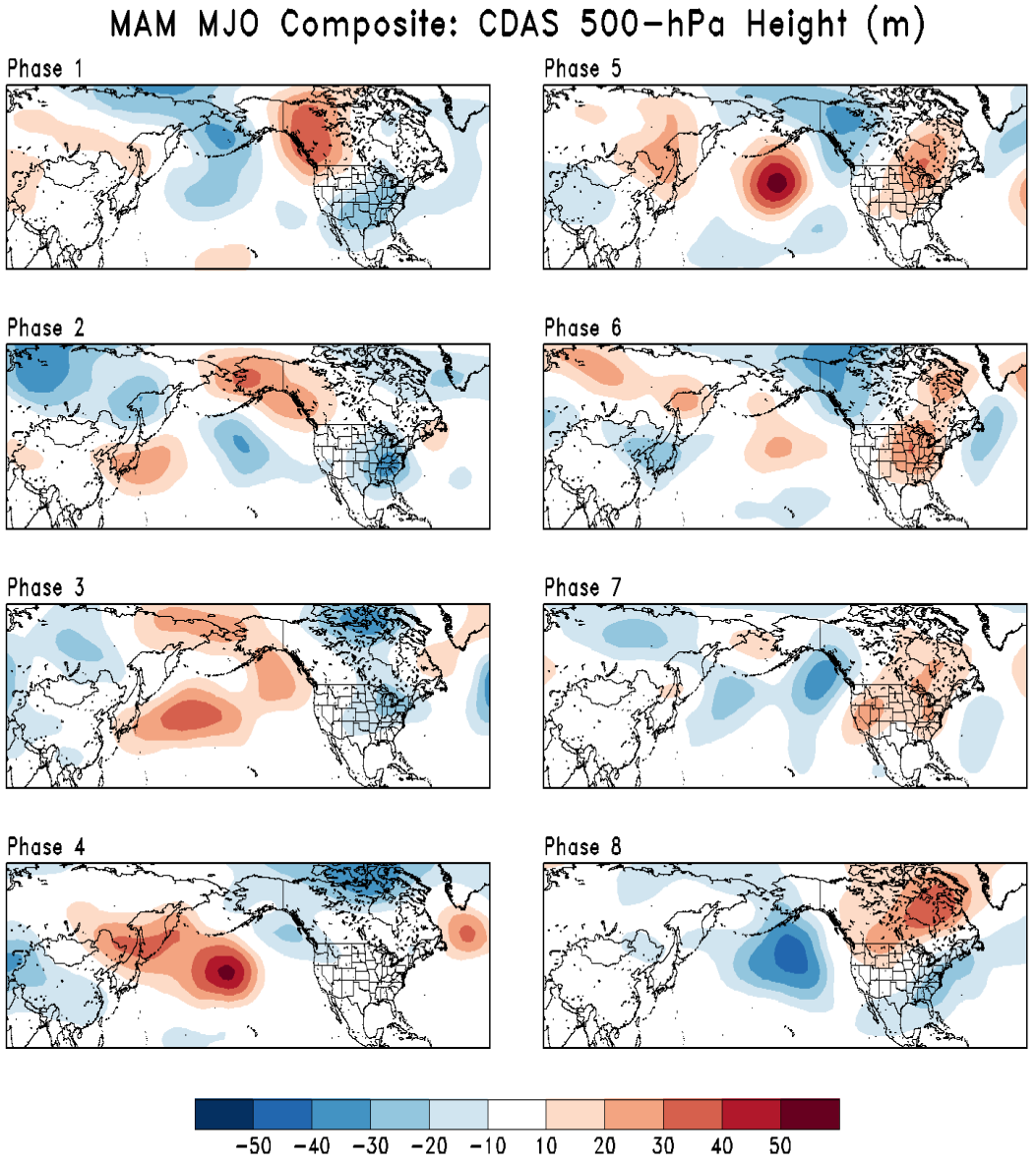


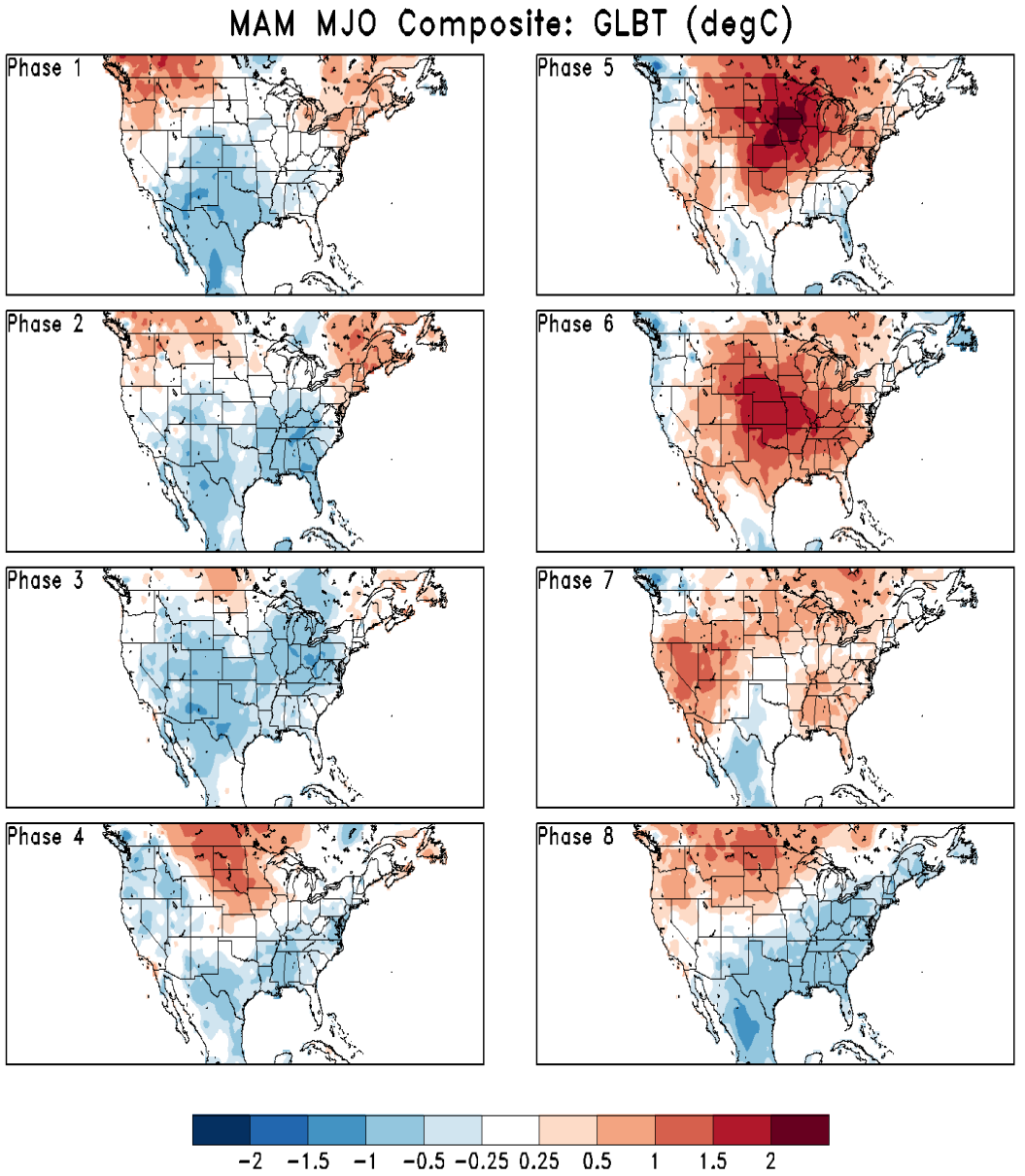




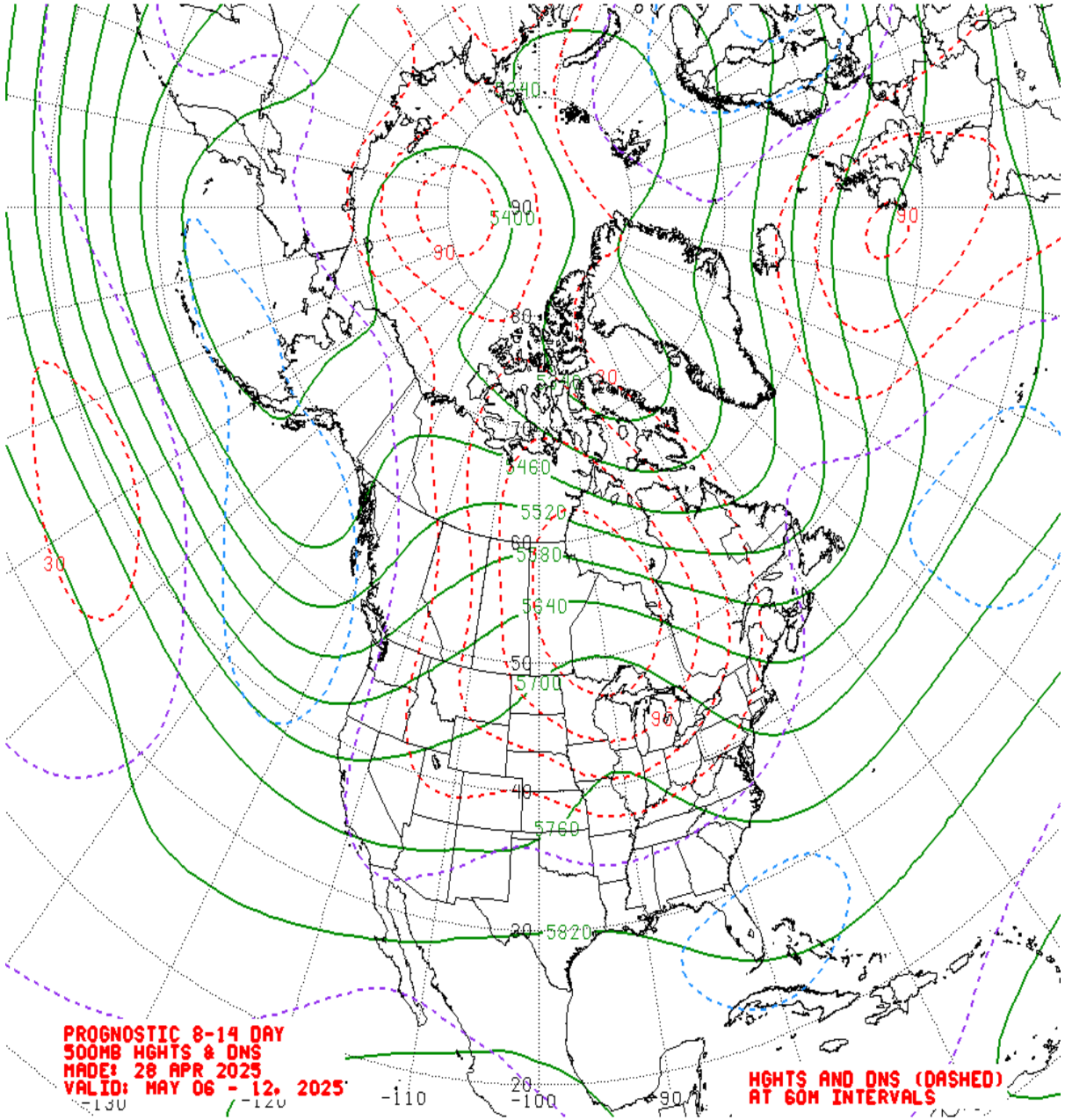


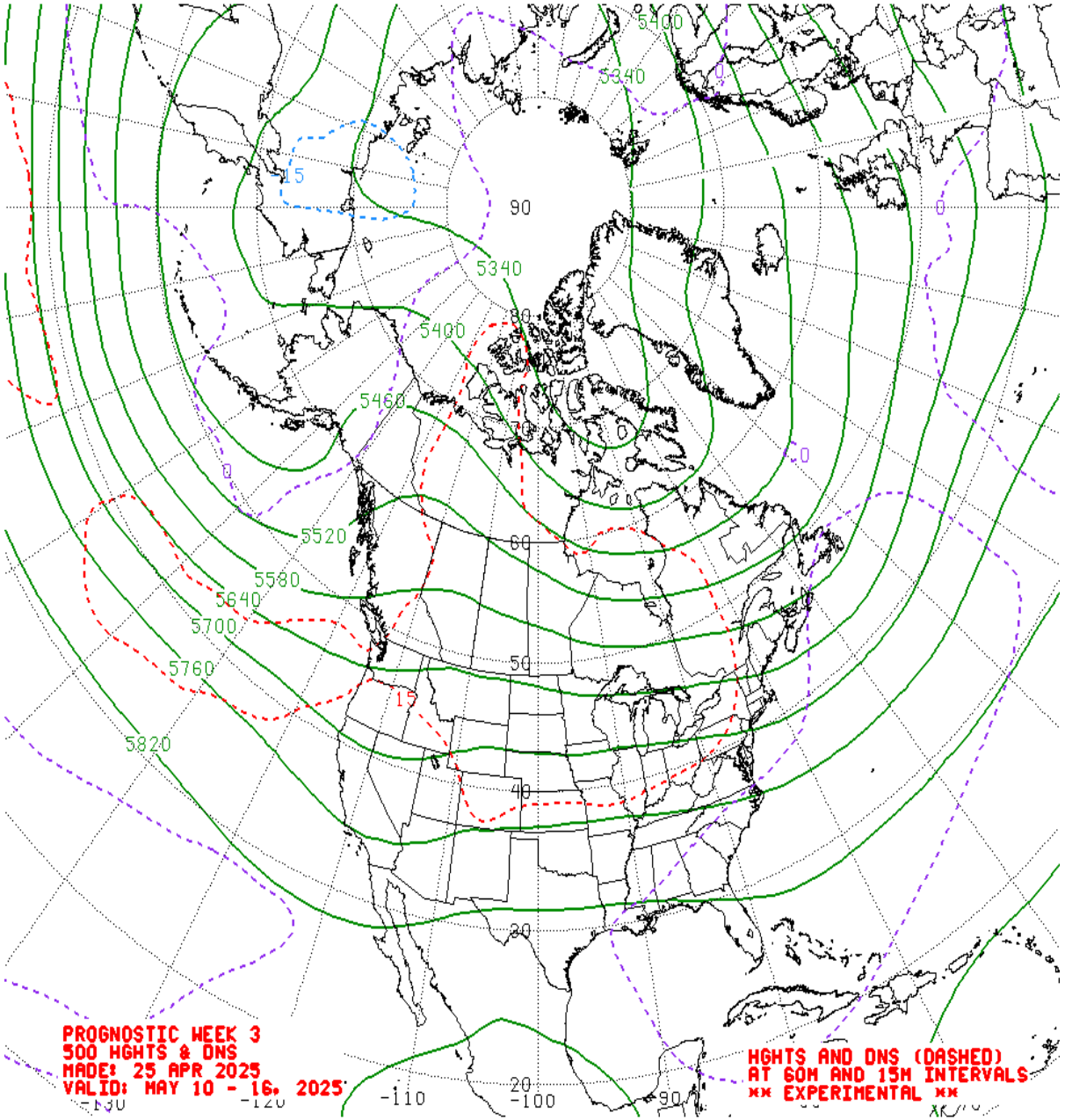
Historical 500-hPa Height & U.S. Temperatures By MJO Phase:



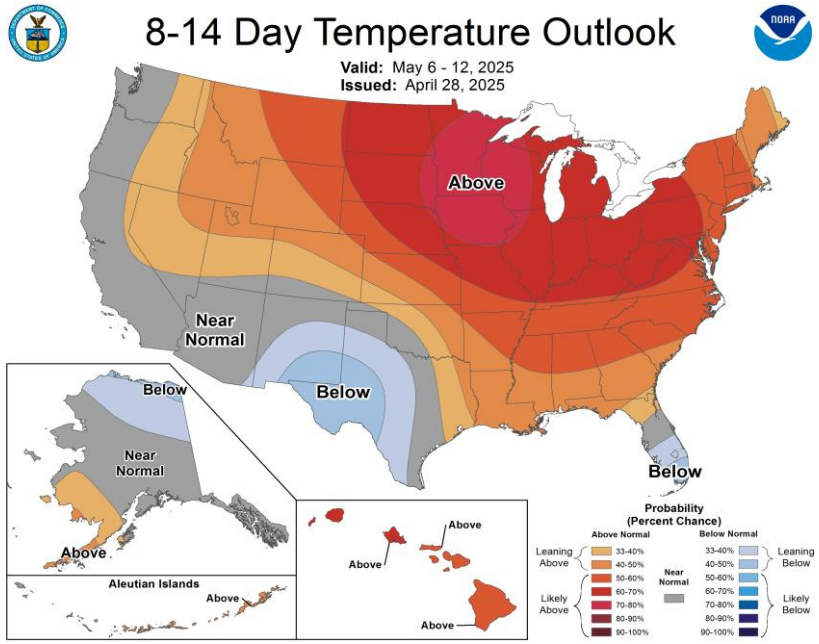


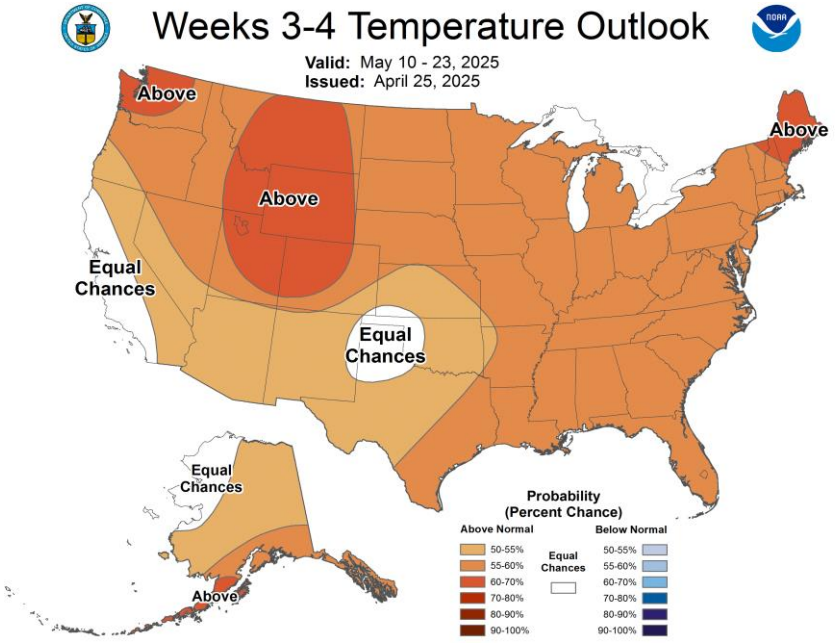
Mean 500-hPa Height Anomaly Forecasts: Weeks 2+3

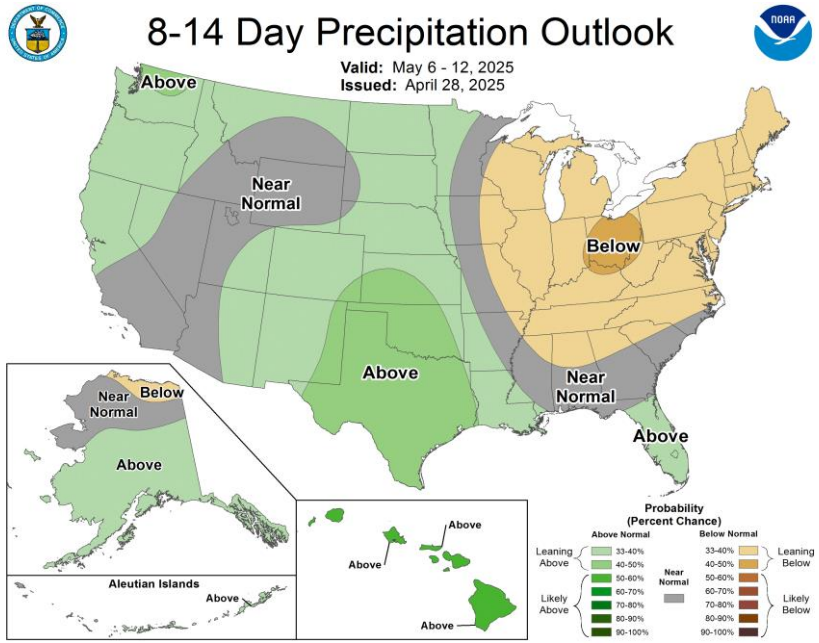


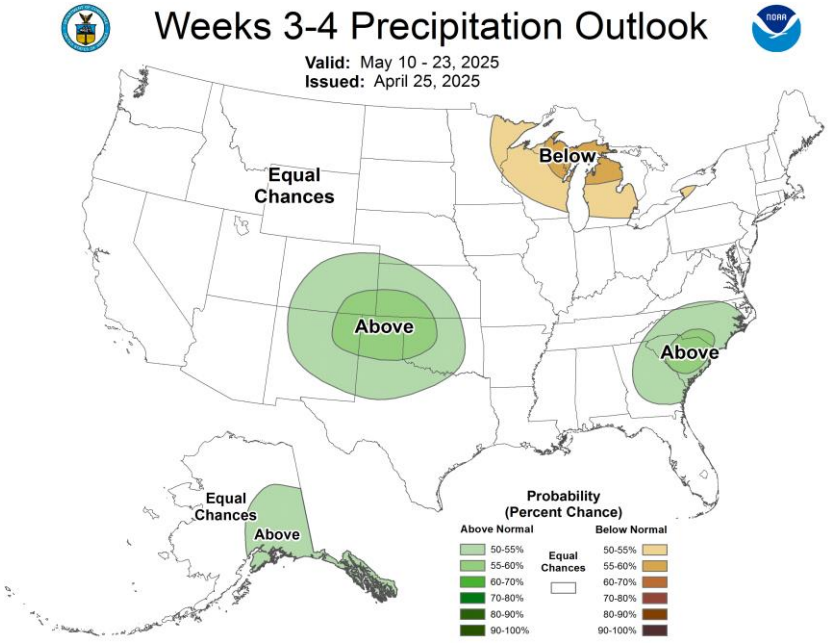


Official Temperature & Precipitation Forecasts:









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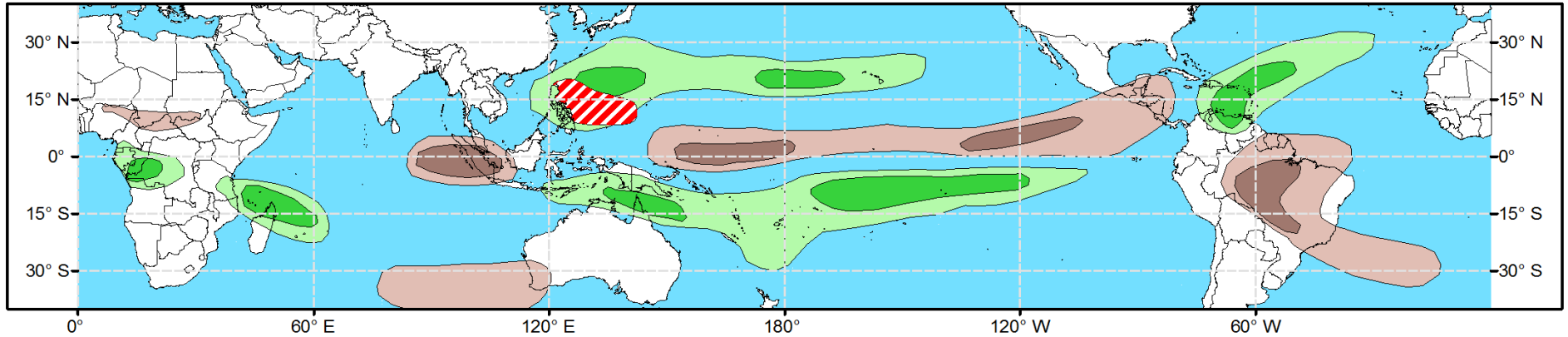

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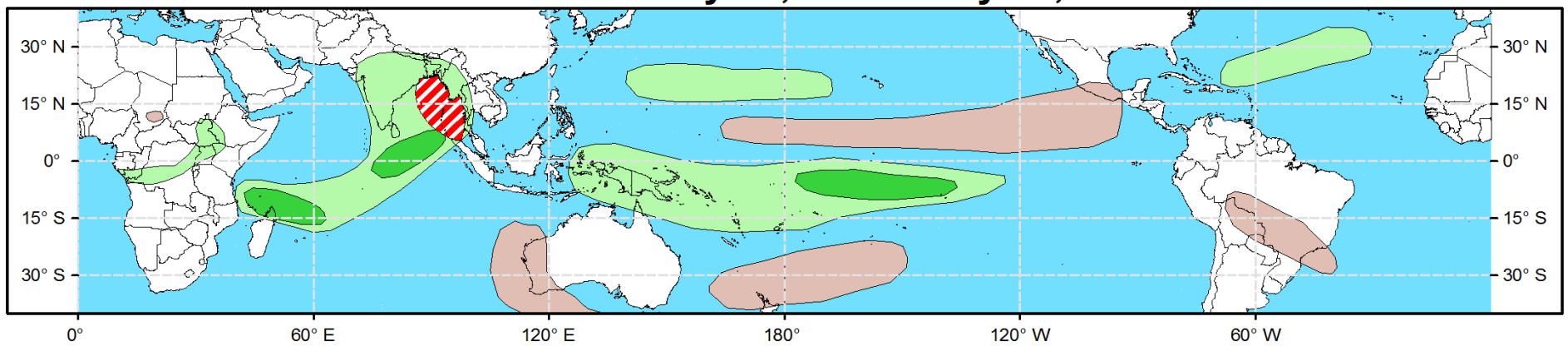

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