Weeks 2-3 Global Tropics Hazards Outlook

1/30/2024

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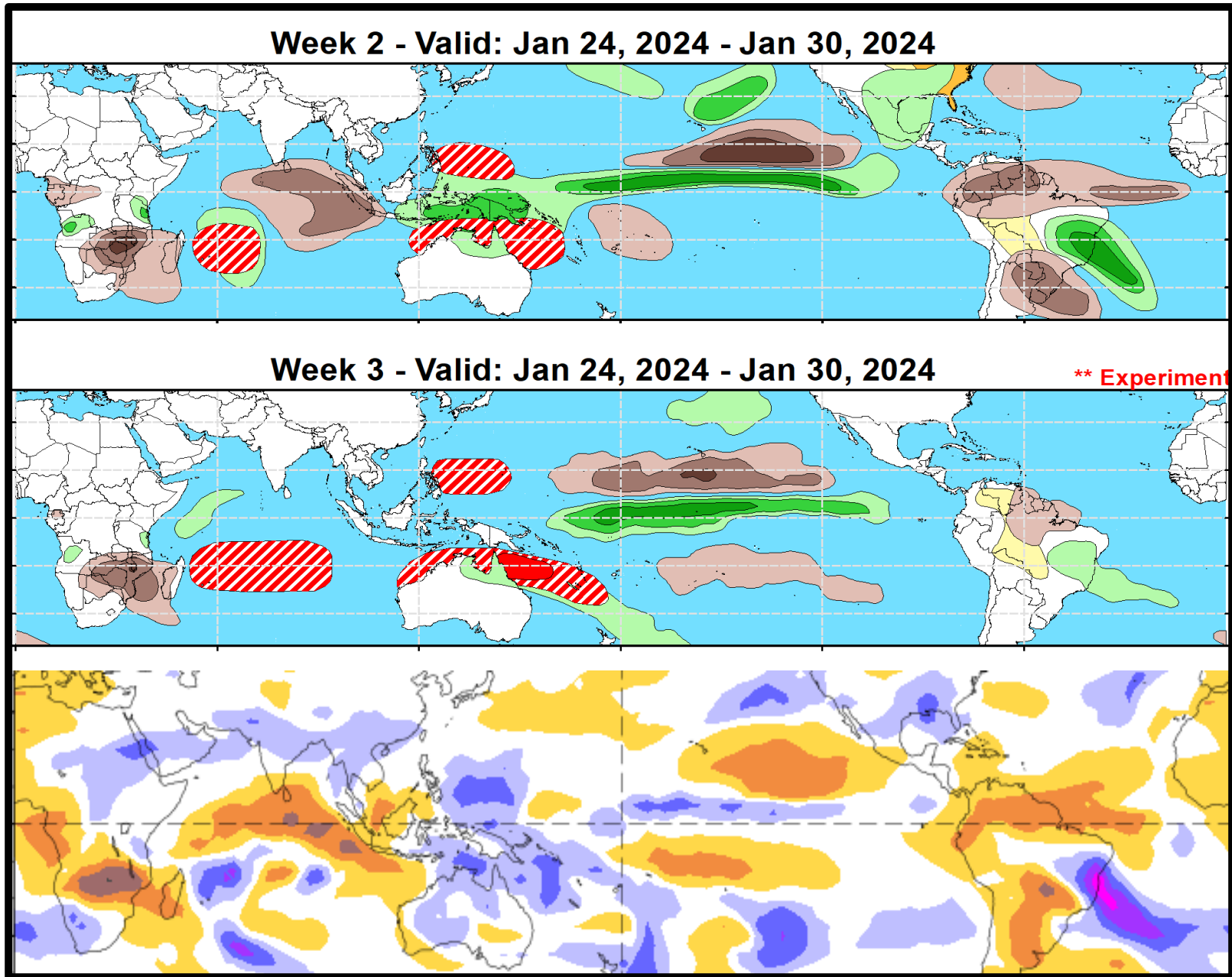
NWS / NCEP / Climate Prediction Center

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

- No TCs this week



Synopsis of Climate Modes:

ENSO: (Jan 11, 2024 Update) ***next update on Thursday, Feb 8th***

- ENSO Alert System Status: El Niño Advisory

- El Niño is expected to continue for the next several seasons, with ENSO-neutral favored during April-June, 20224 (73% chance).

MJO and other subseasonal tropical variability:

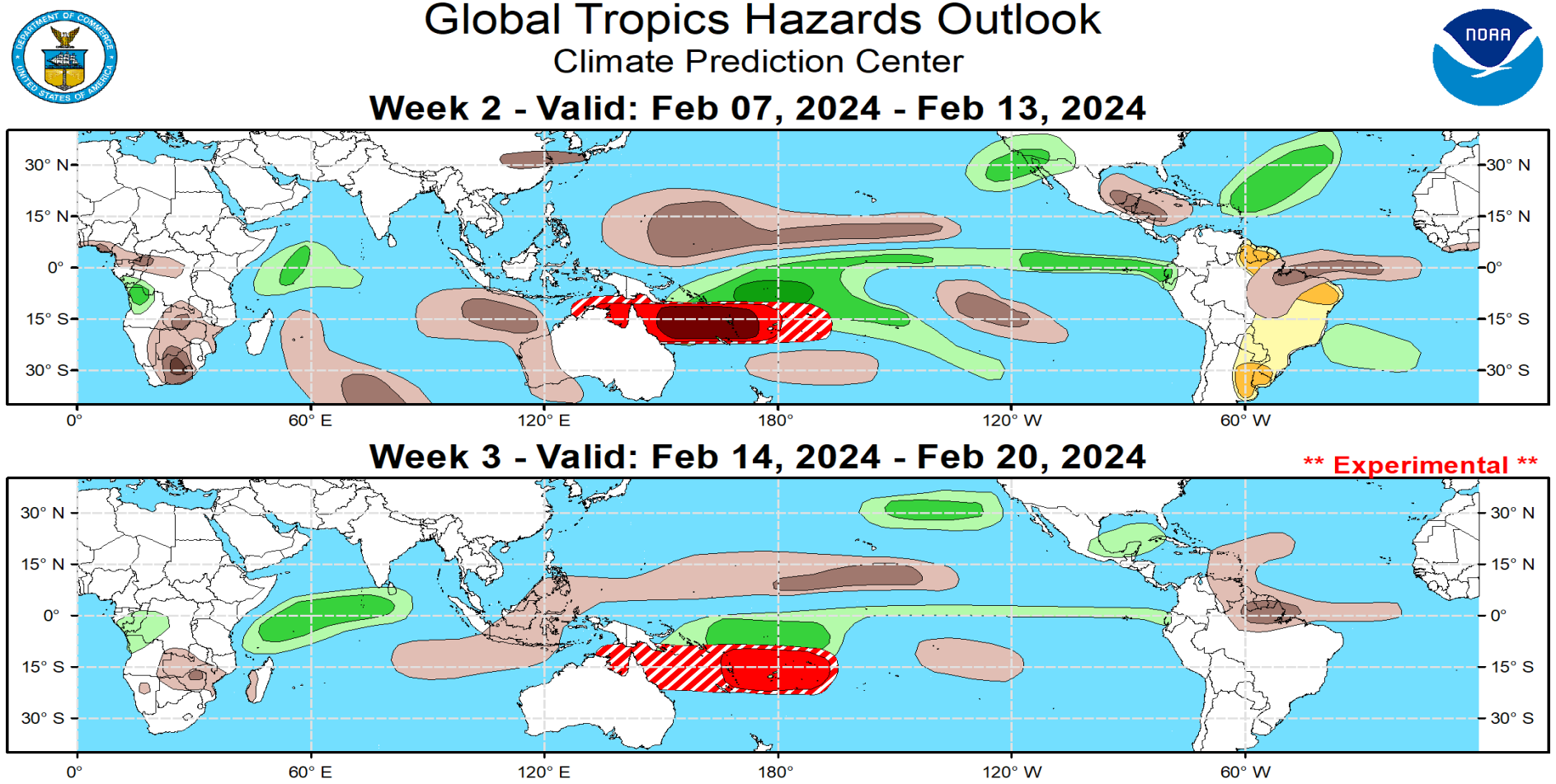
- A strong MJO event continues as the RMM-index has moved into phase 7 (Western Pacific).

- Dynamical model solutions diverge more this week, but generally portray a weakening signal in the near future as the MJO is favored to encounter competing interference with other modes of tropical variability.

- Enhanced convection associated with MJO activity and a westerly wind burst (WWB) is expected to provide favorable conditions for Tropical Cyclone (TC) development over the South Pacific Ocean throughout the coming forecast period.

- Strong subtropical westerly flow is forecast both near the surface and aloft, potentially leading to an atmospheric river event to affect the West Coast of the U.S. during the week-2 period.

GTH Outlook:



Issued: 01/30/2024

Forecaster: Barandiaran

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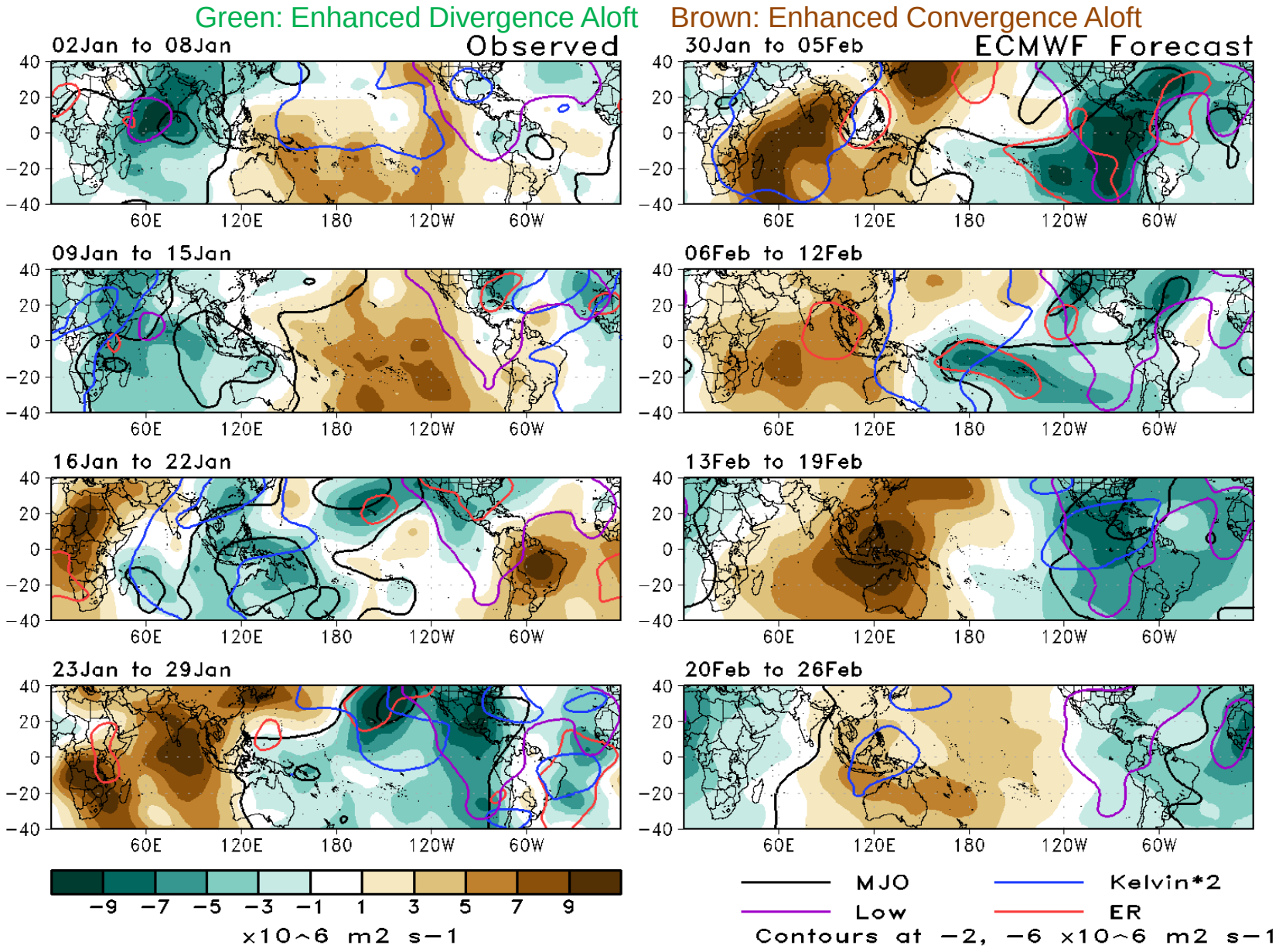
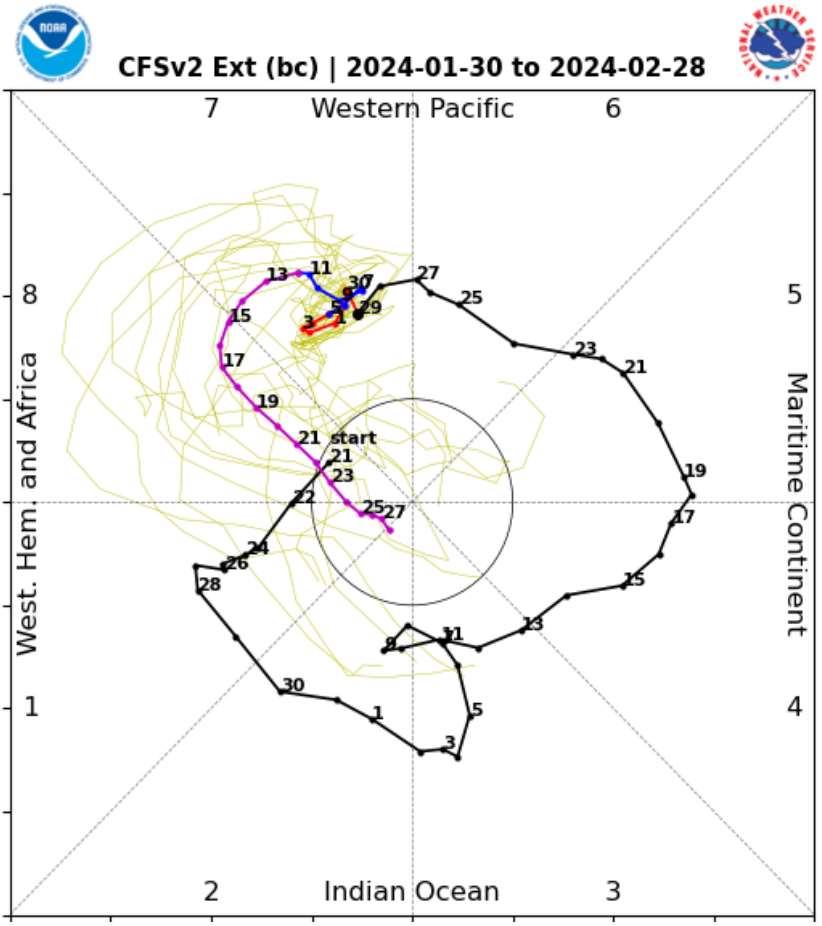
Consult your local responsible forecast agency.

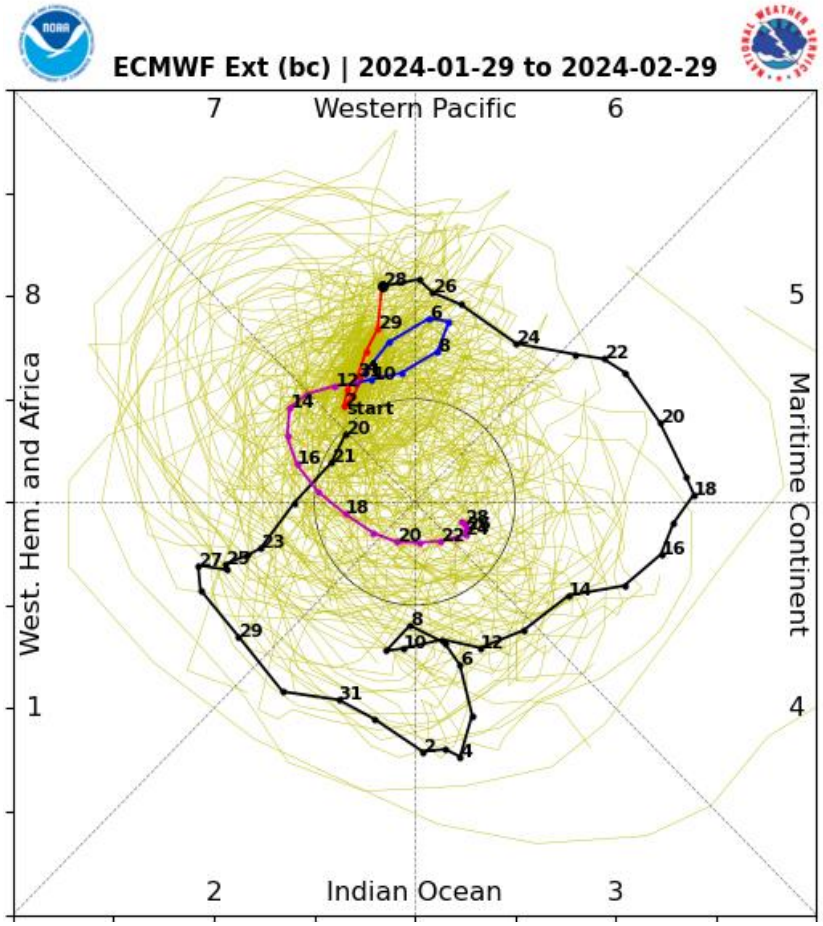
200-hPa Velocity Potential Anomaly Maps:

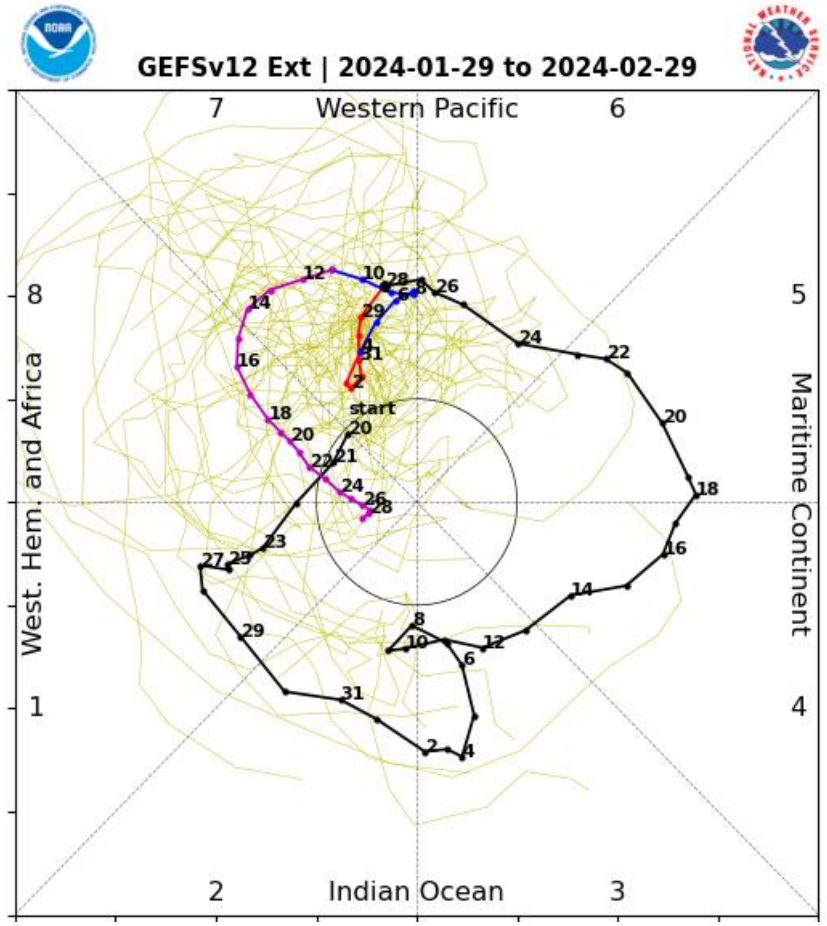
- The suppressed phase of the MJO is working its way across the Indian Ocean, while the enhanced phase is favored to move out of the Pacific in the coming weeks.
- Enhanced convergence lingers over the South Pacific and peaks in week-2, providing a favorable environment for TC genesis.



RMM Index Observations & Forecasts:

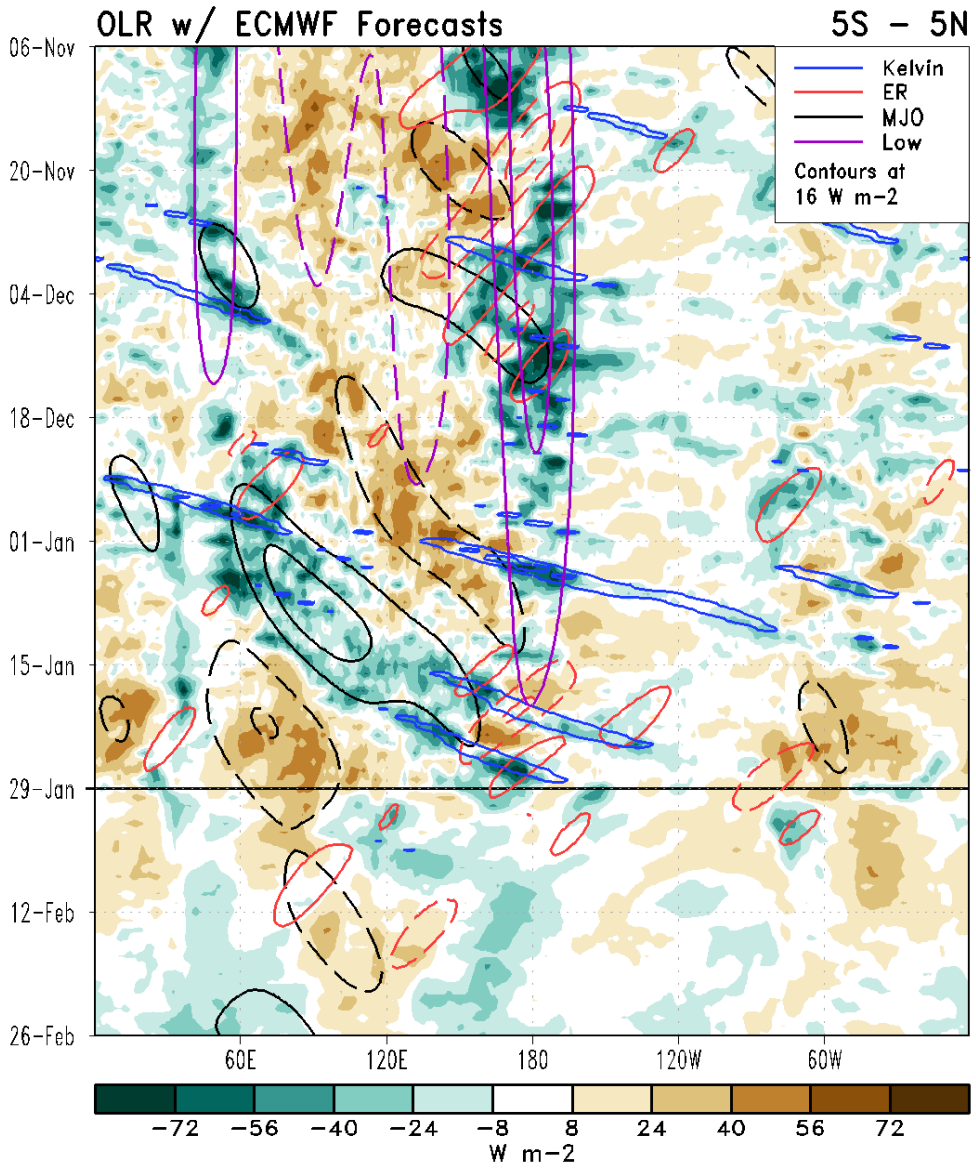


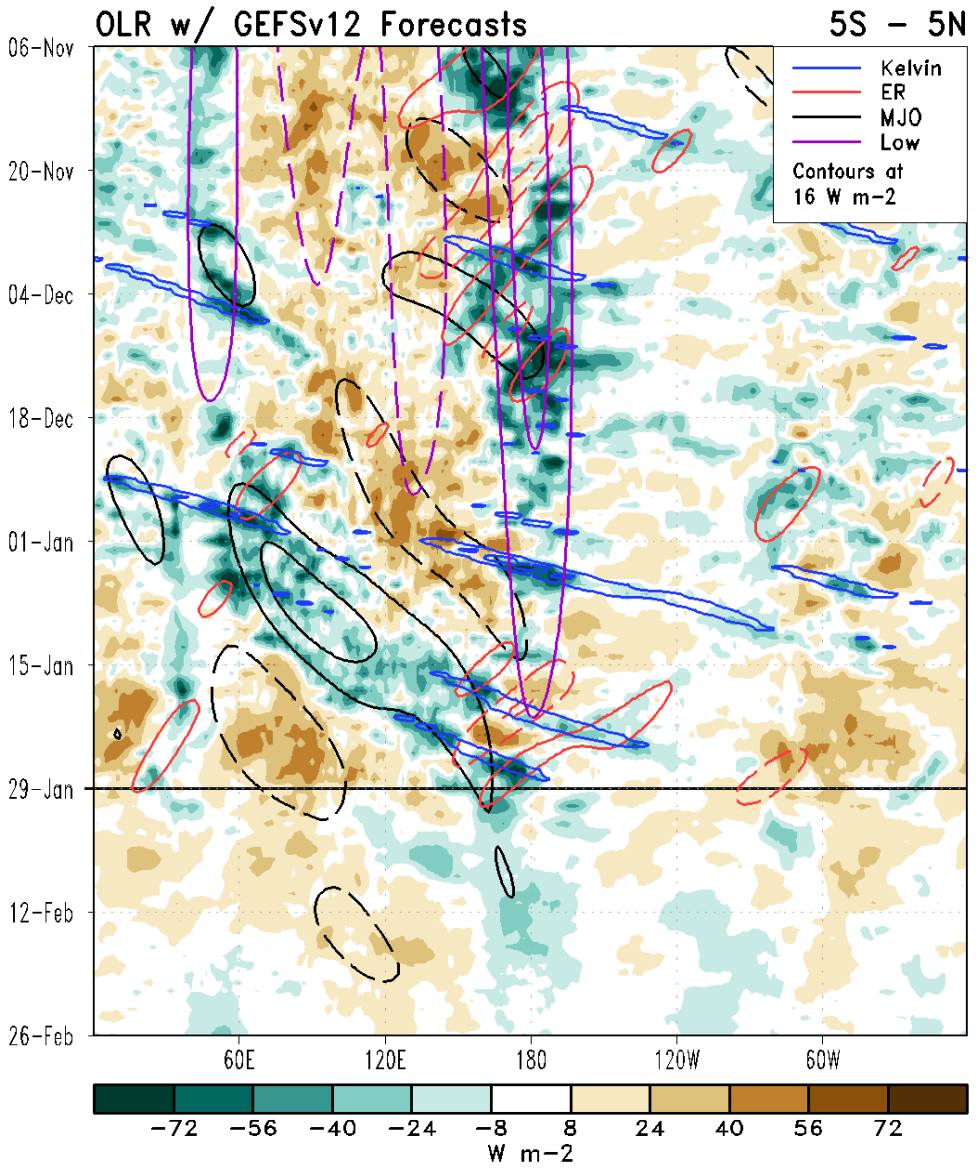




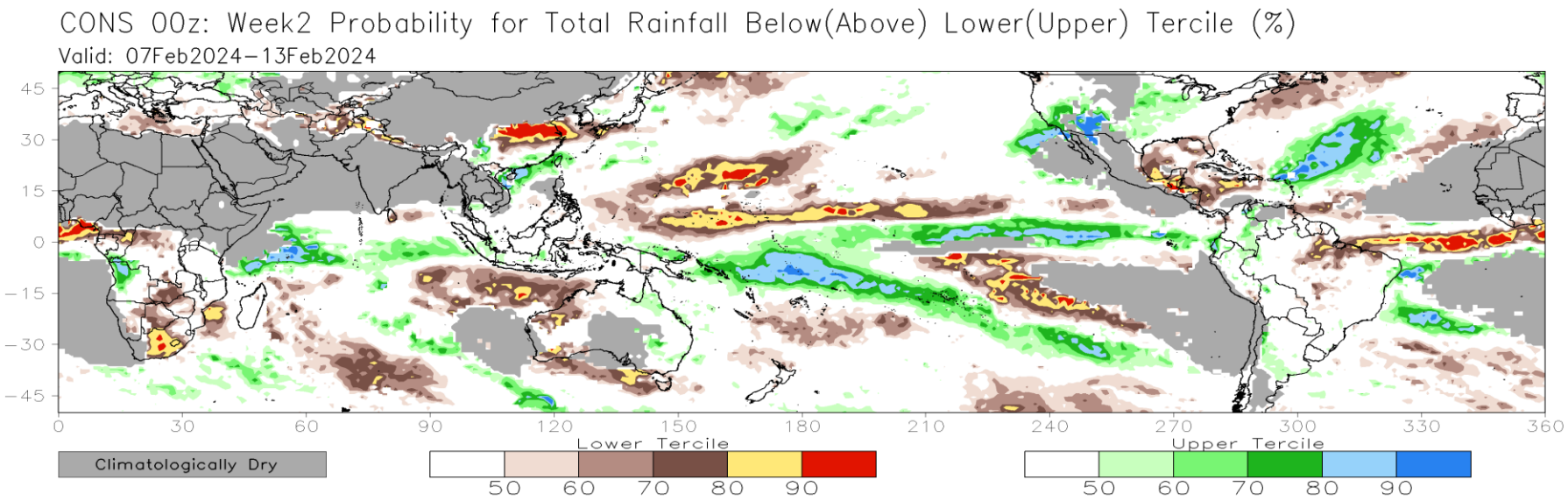
- Model solutions show less agreement than last week, but generally indicate a weakening of the RMM signal with a slower phase speed during weeks 1&2. This tracks well with forecasts from last week, both in terms of the general picture portrayed and the increased model spread.
- This has a similar appearance to the “hiccup” in early January as the MJO encountered interference with the El Nino footprint, and likely has a similar explanation as the dry phase of the MJO begins to interact with the ENSO-enhanced precipitation near the Date Line.

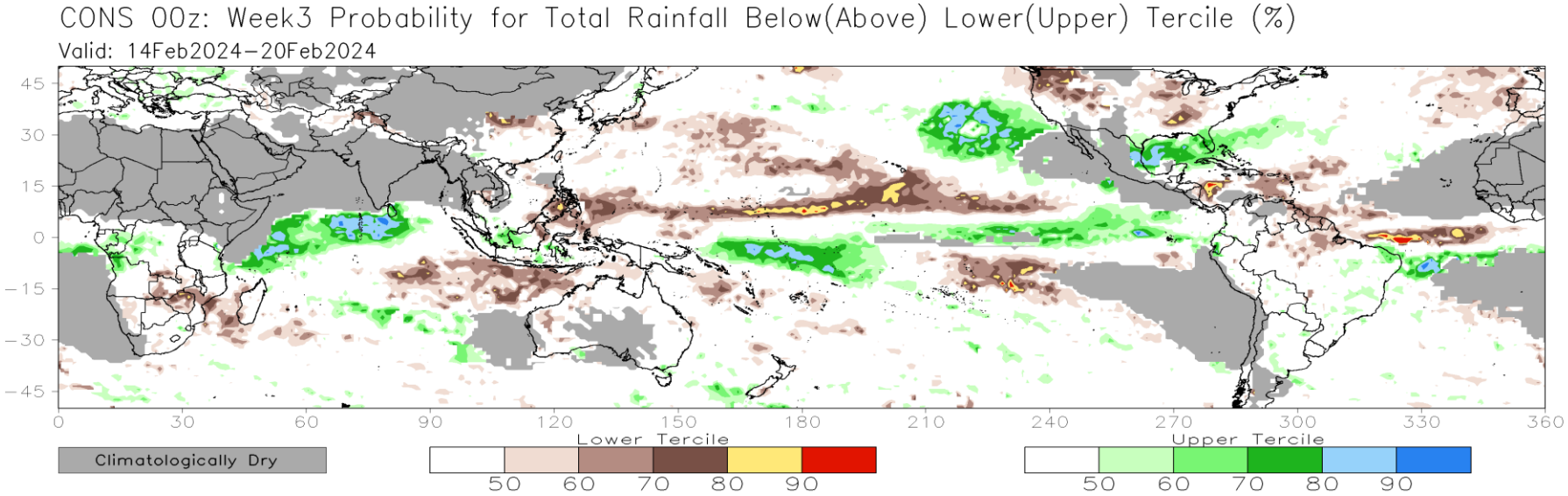
Outgoing Longwave Radiation (OLR) Anomaly Time/Lon Plots:



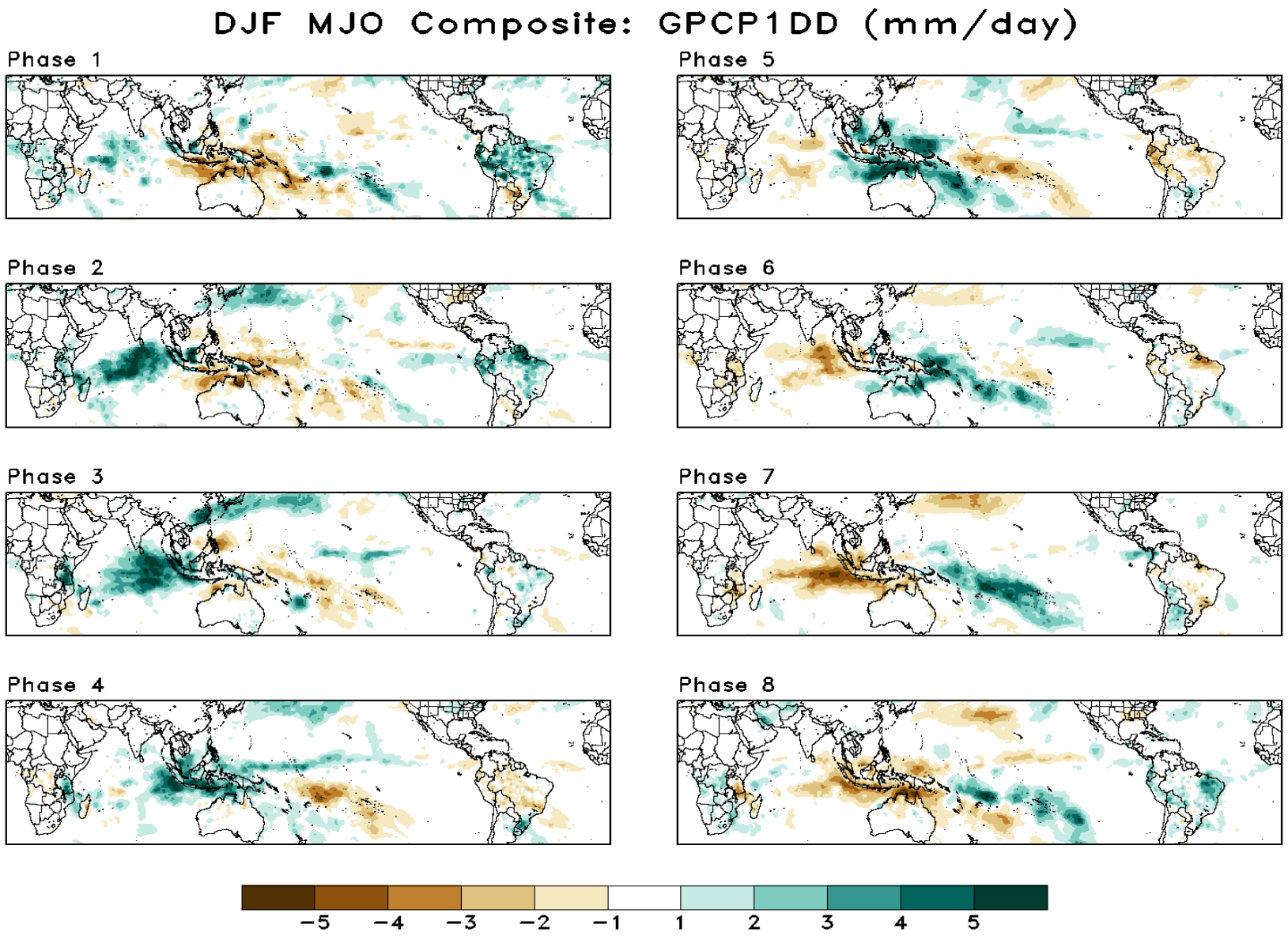


Consolidated Probabilistic Precipitation: Weeks 2 & 3

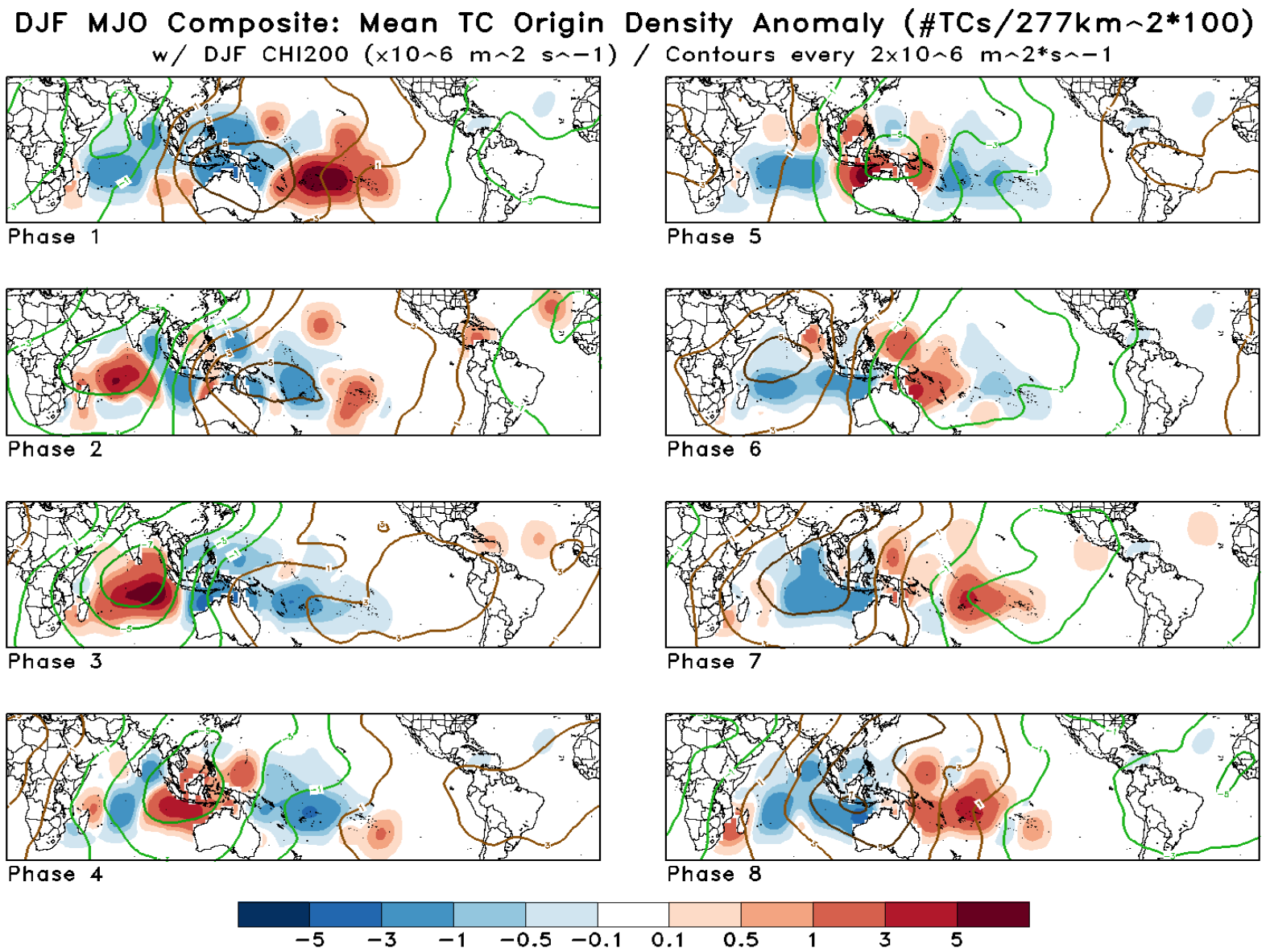


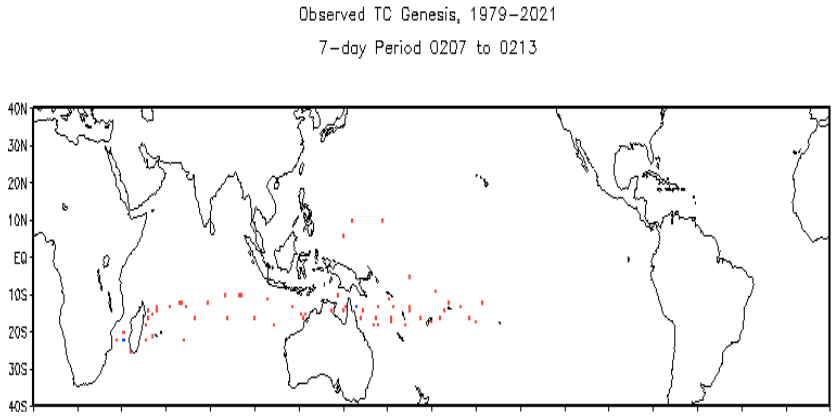


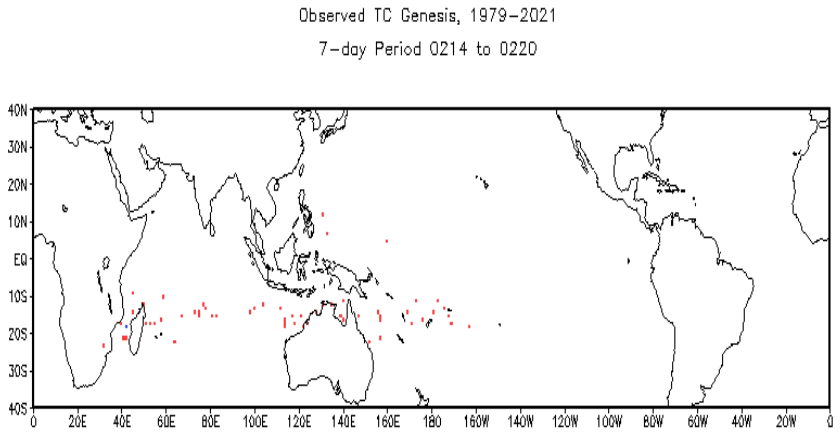
Historical Precipitation Anomalies By MJO Phase:



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

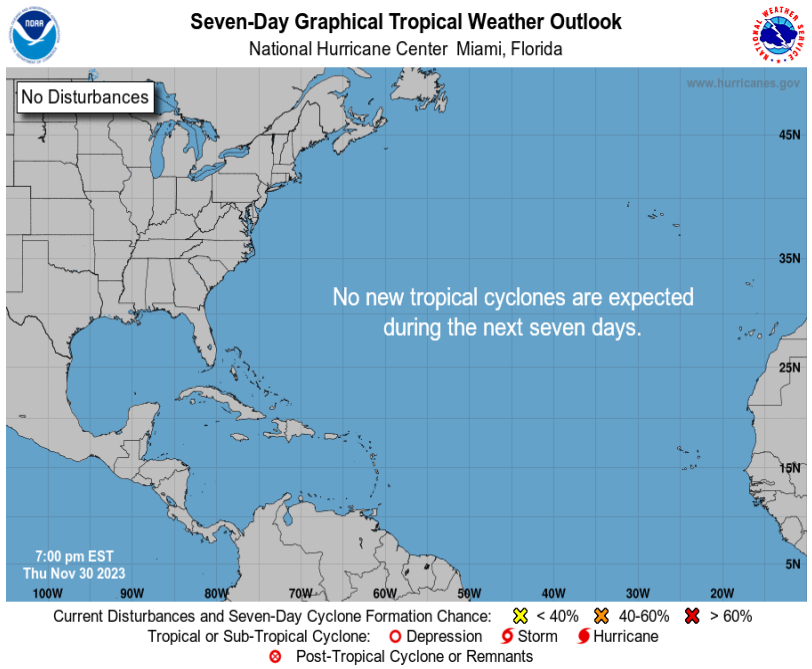


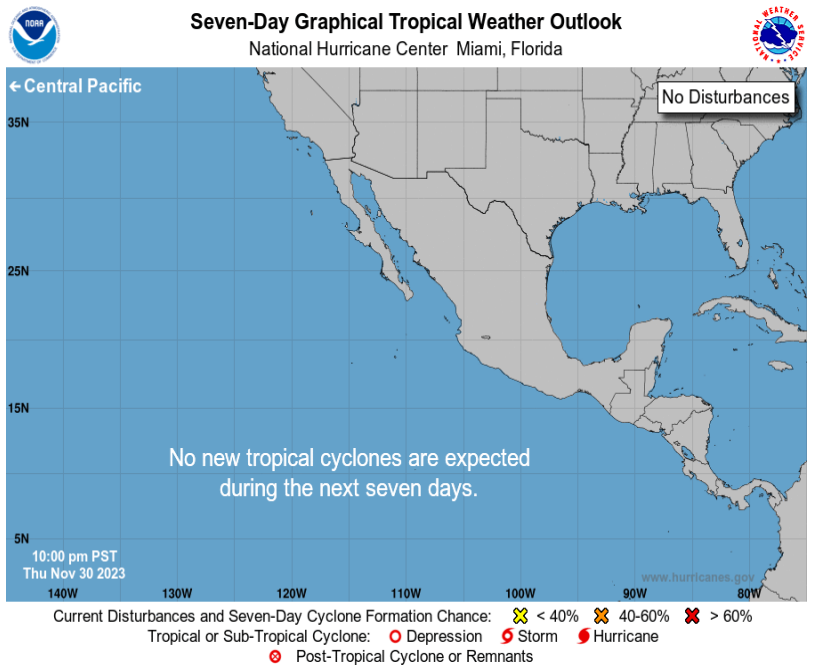


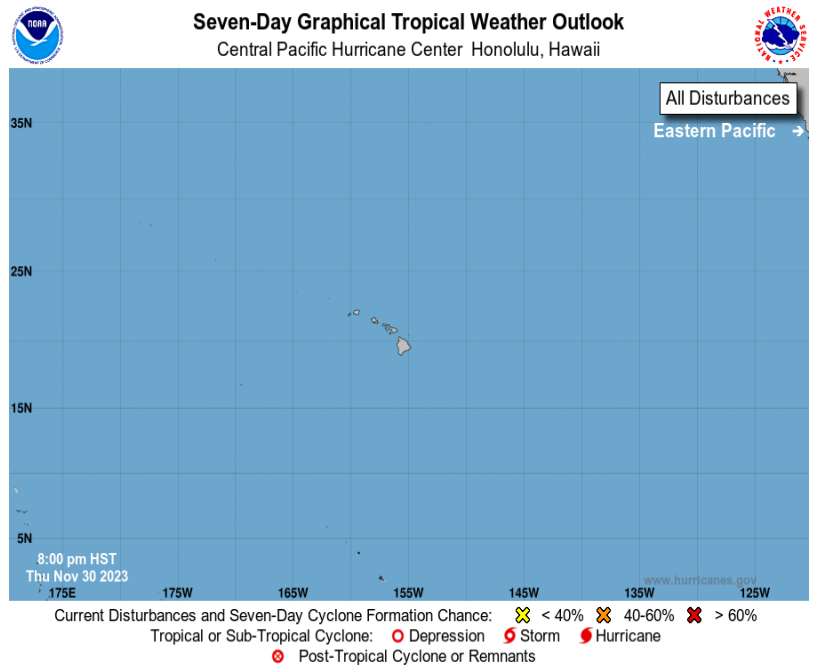


Experimental

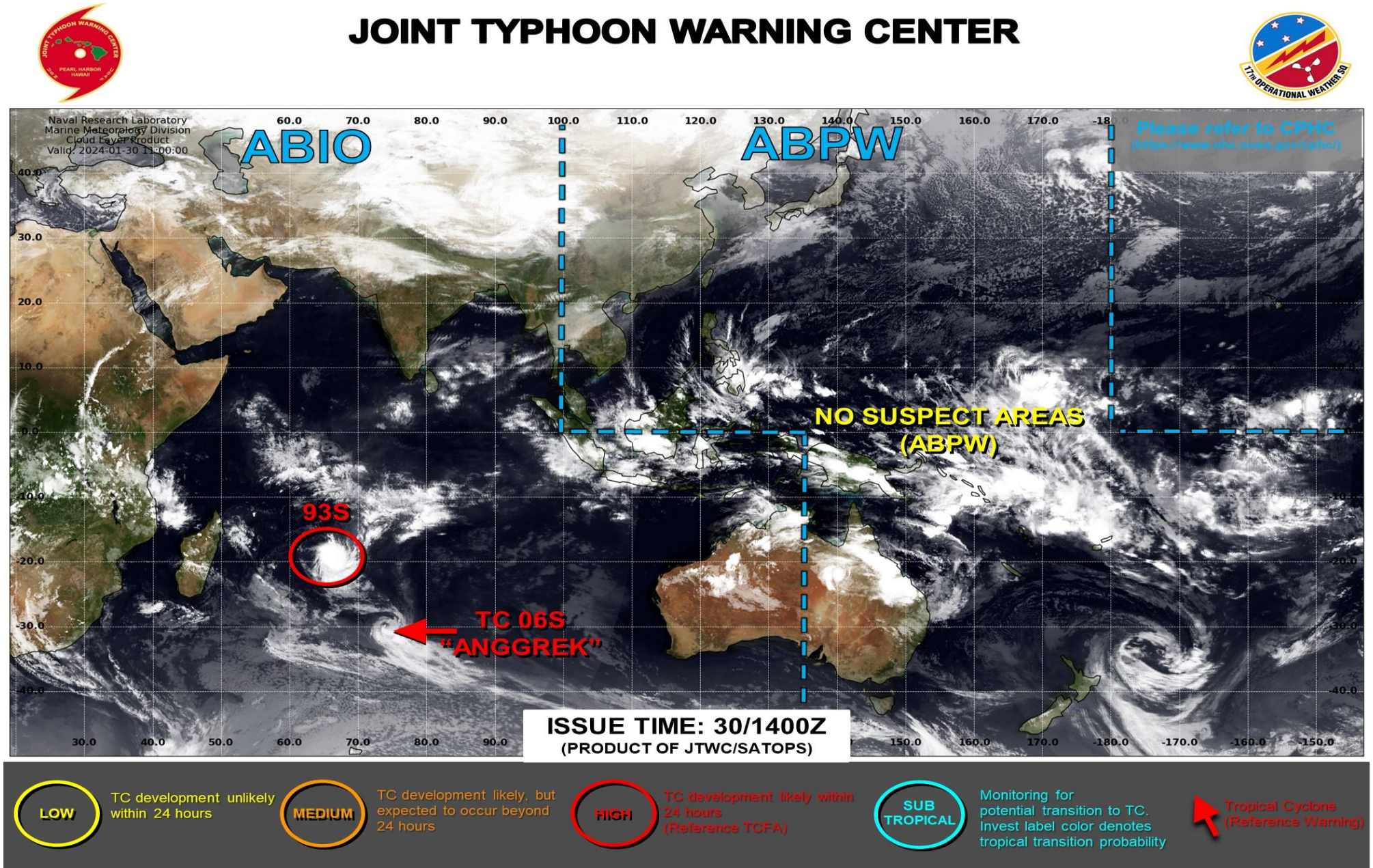
Tropical Cyclone Monitoring/Forecast: NHC / CPHC



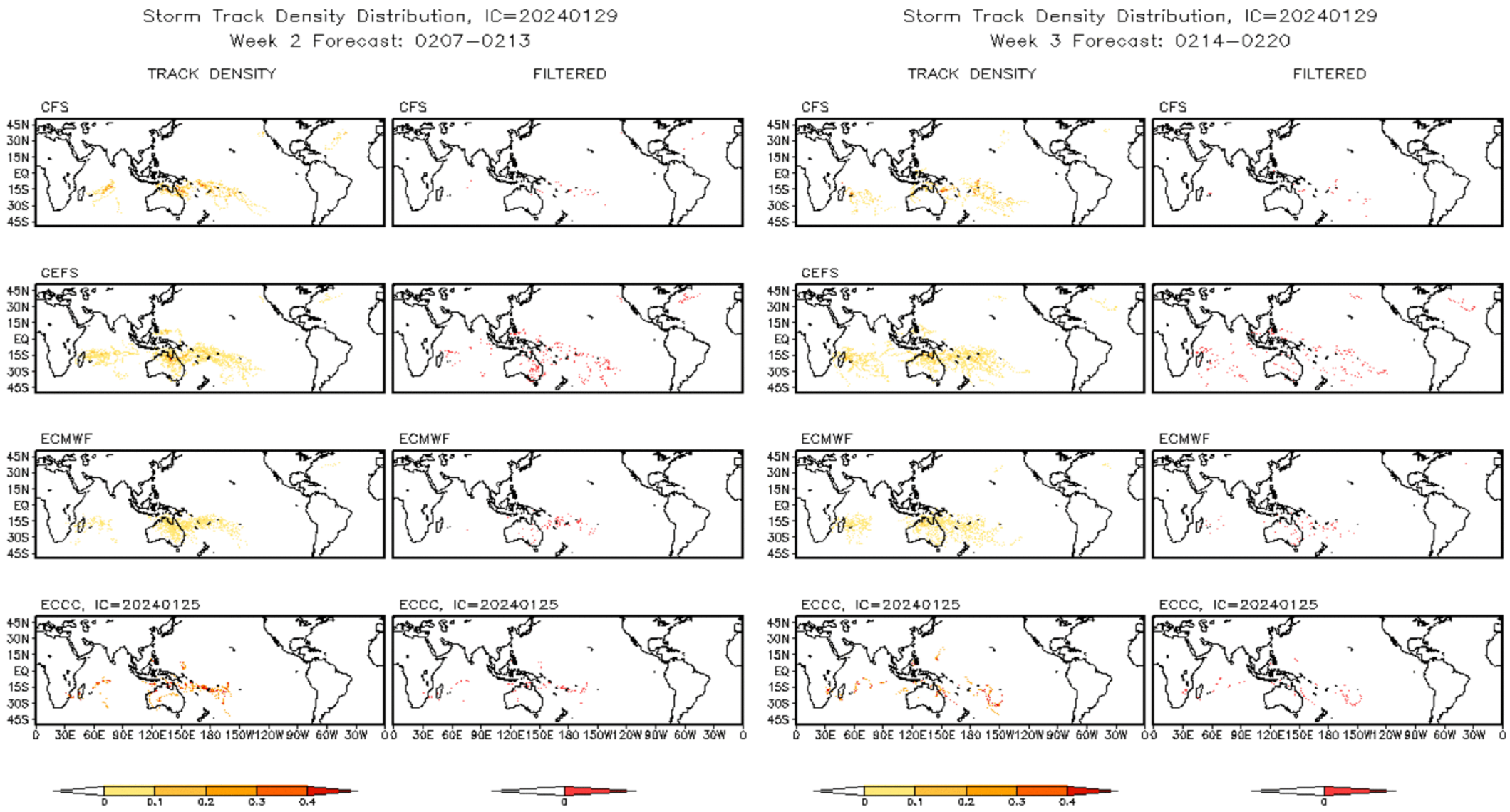




Tropical Cyclone Monitoring/Forecast: JTWC

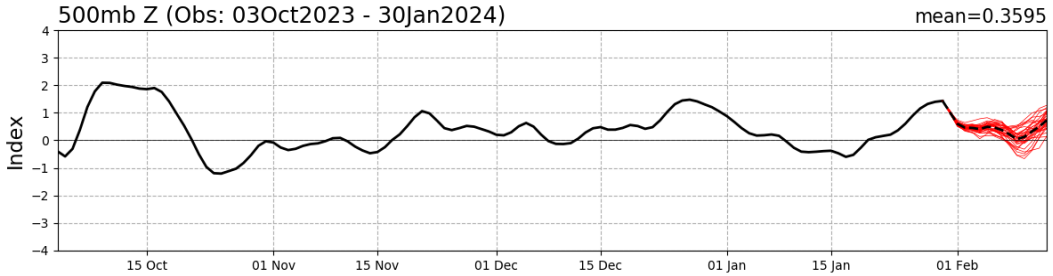


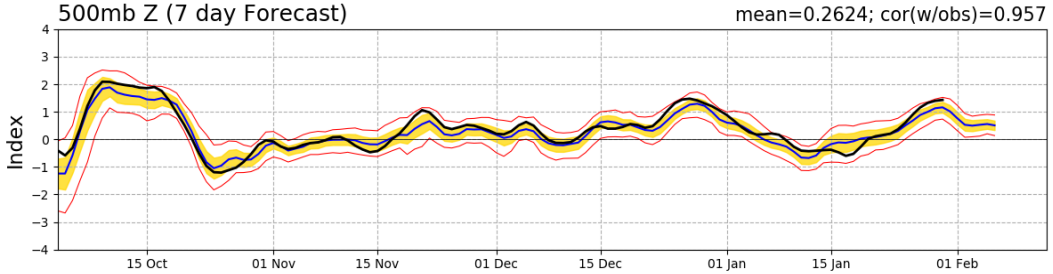
Multi-Model TC Track Densities: Weeks 2+3

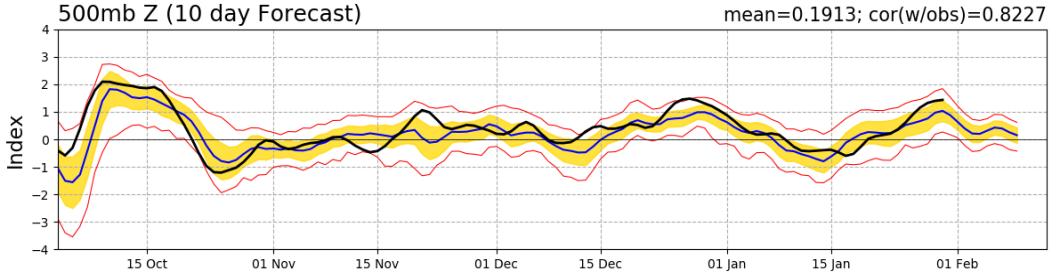


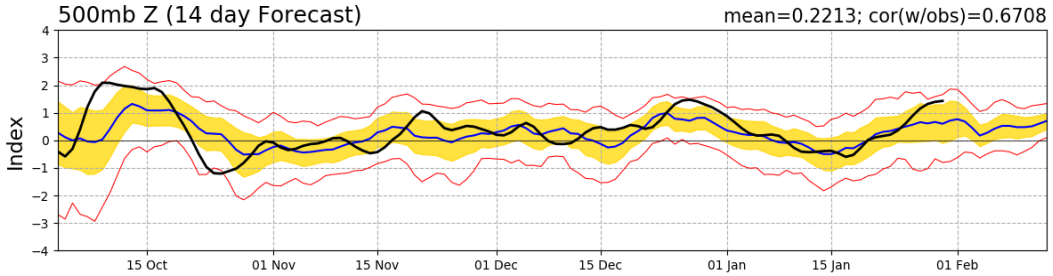
Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts

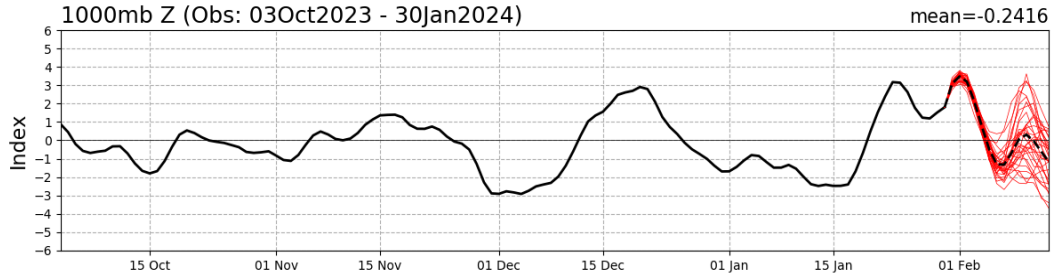


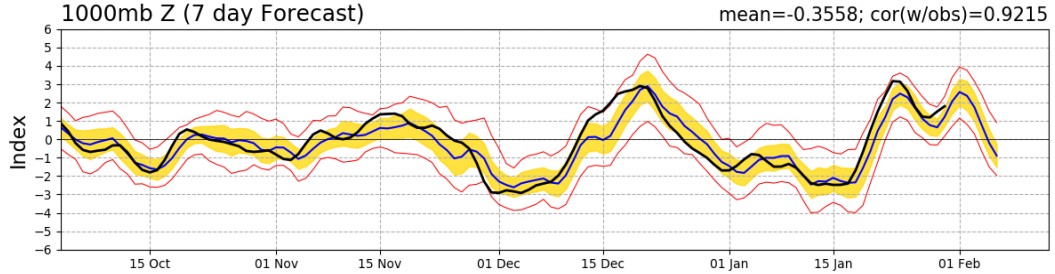


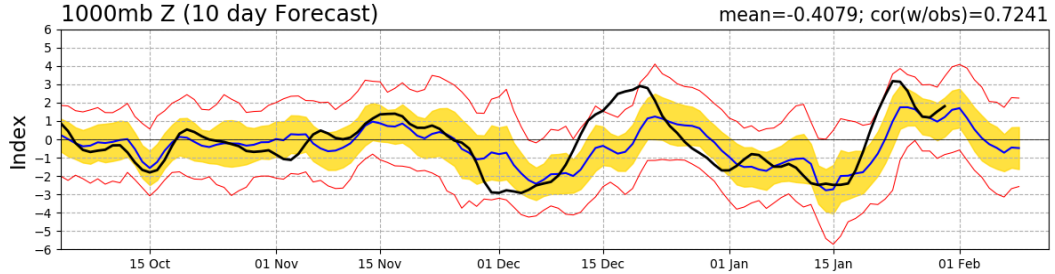


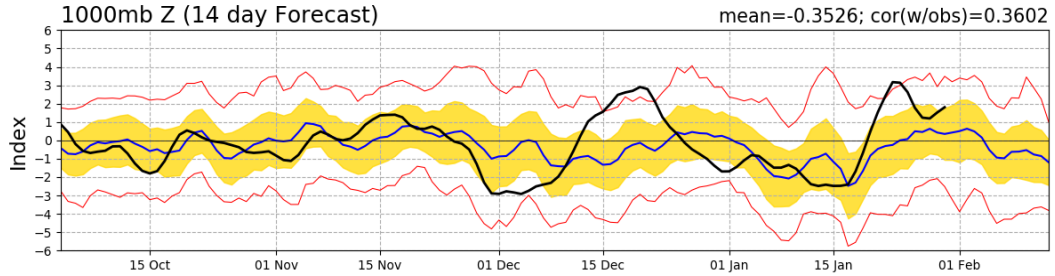


AO Index: Observed & GEFS Forecasts

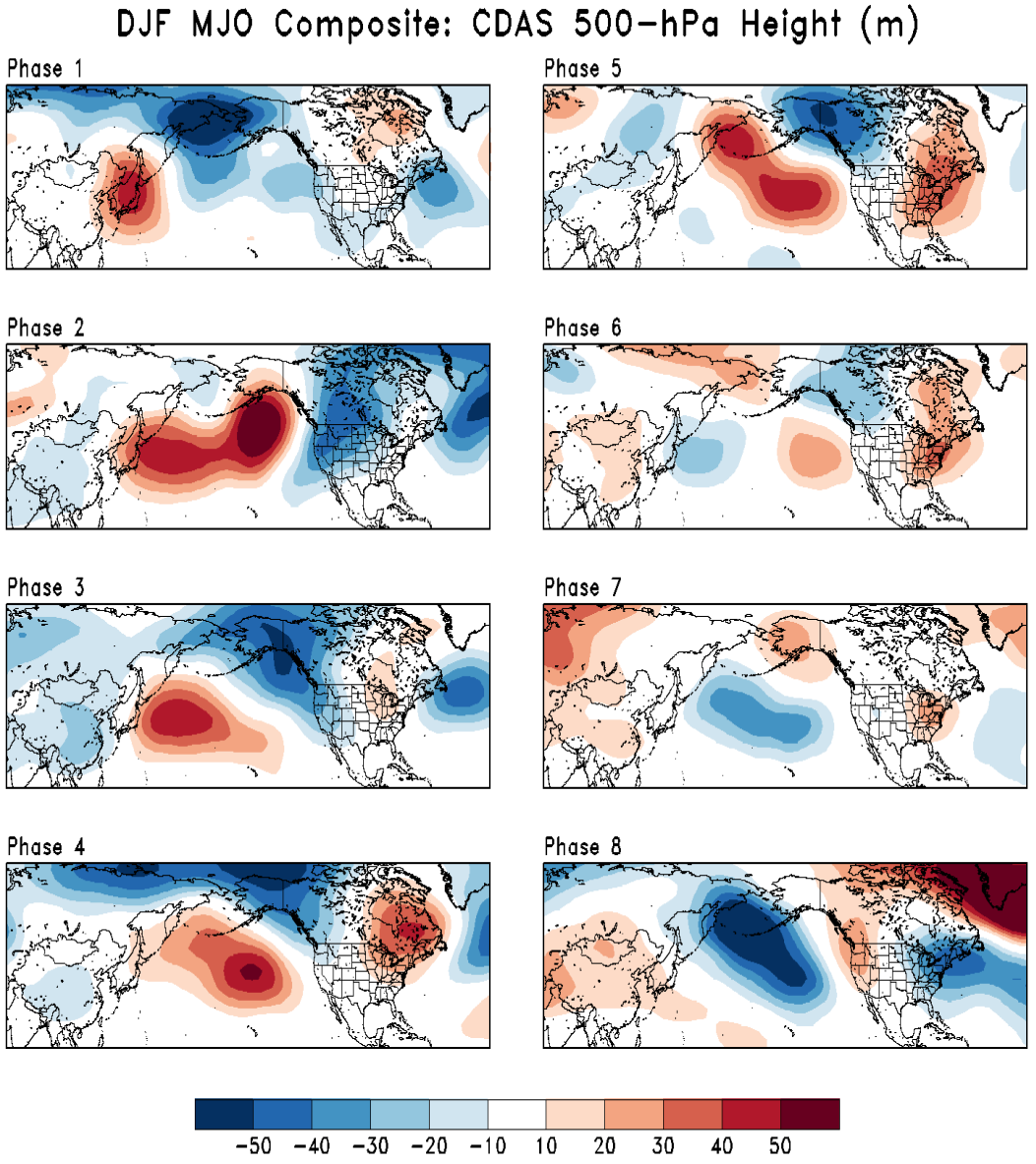


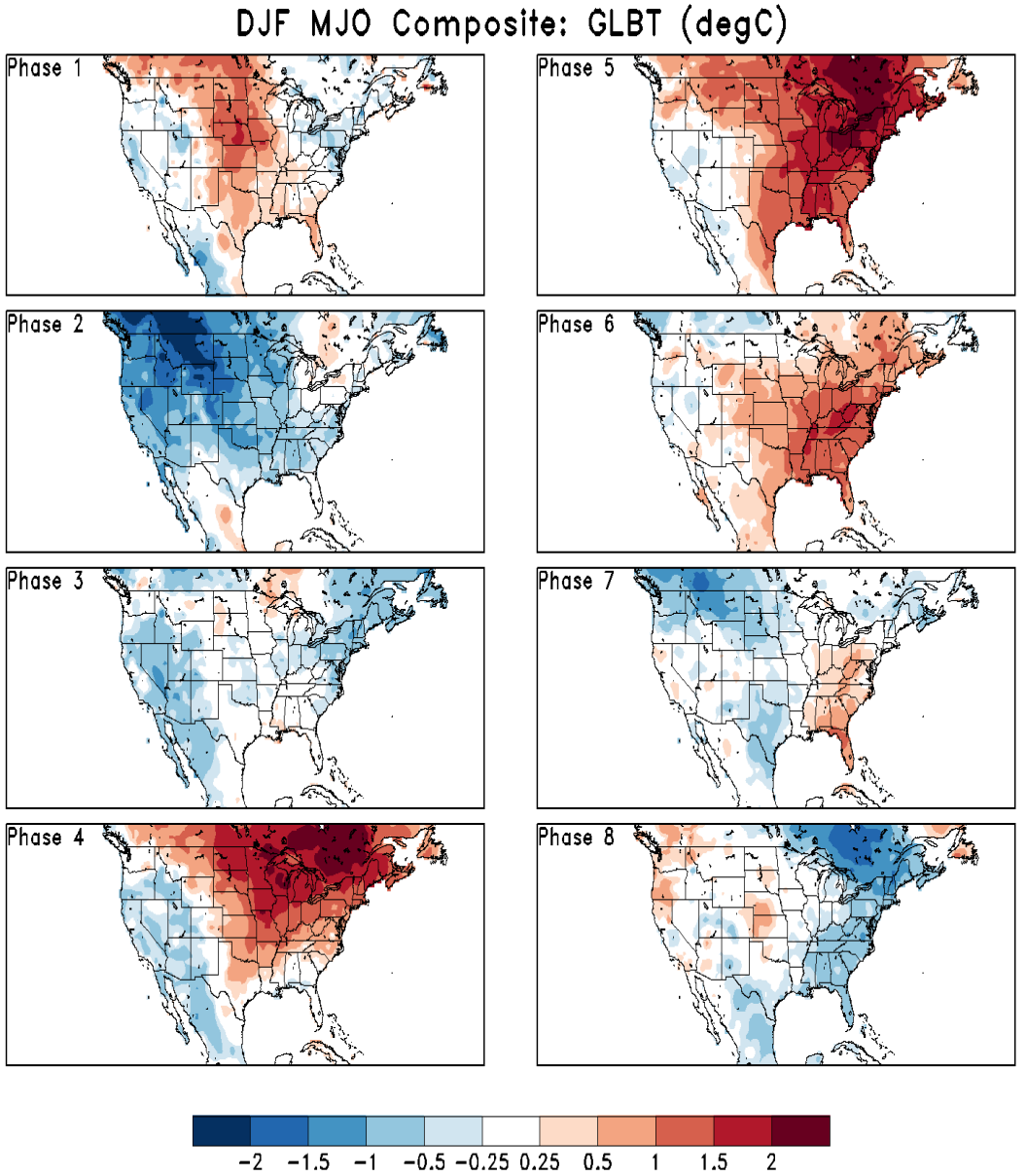




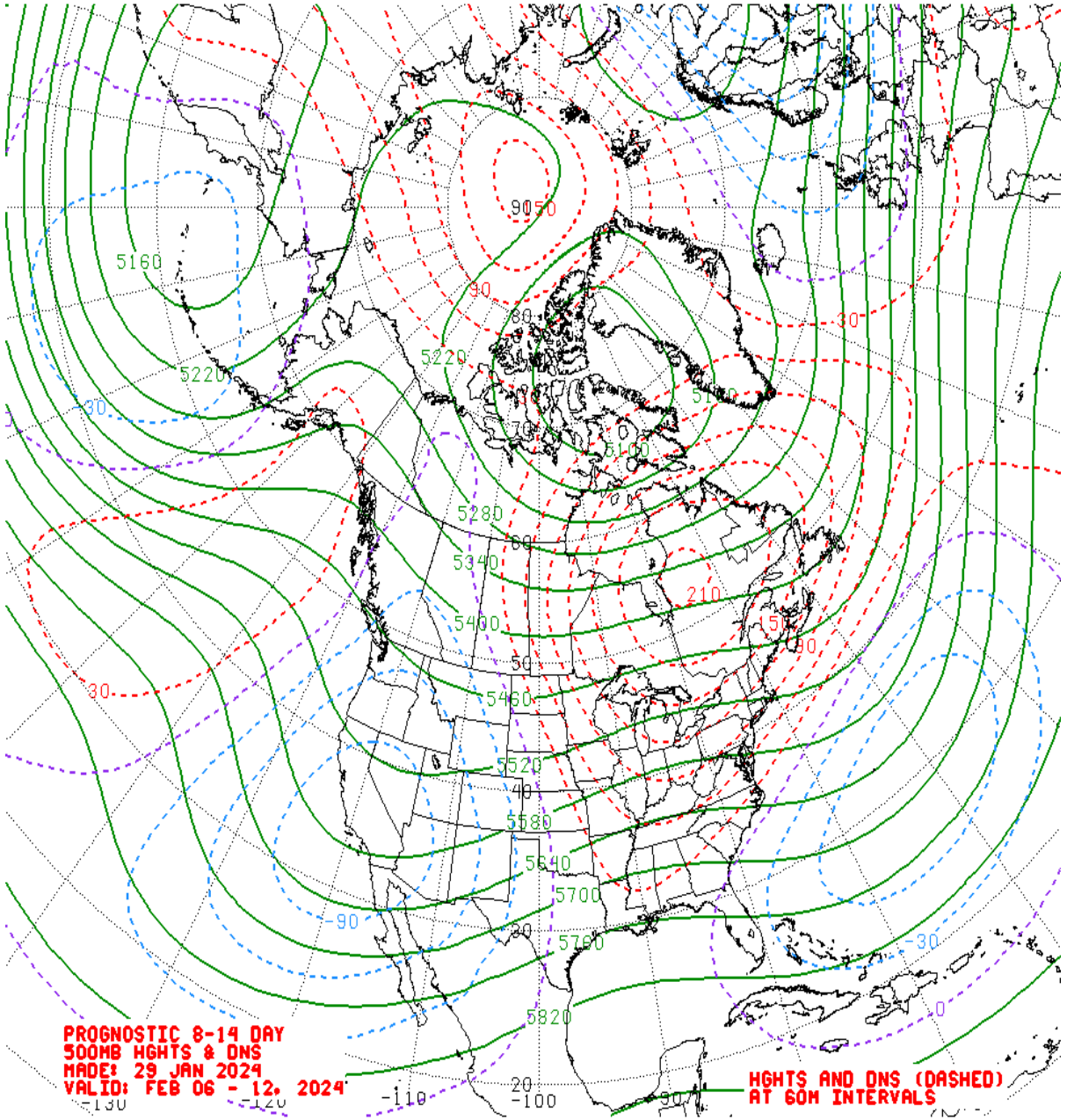


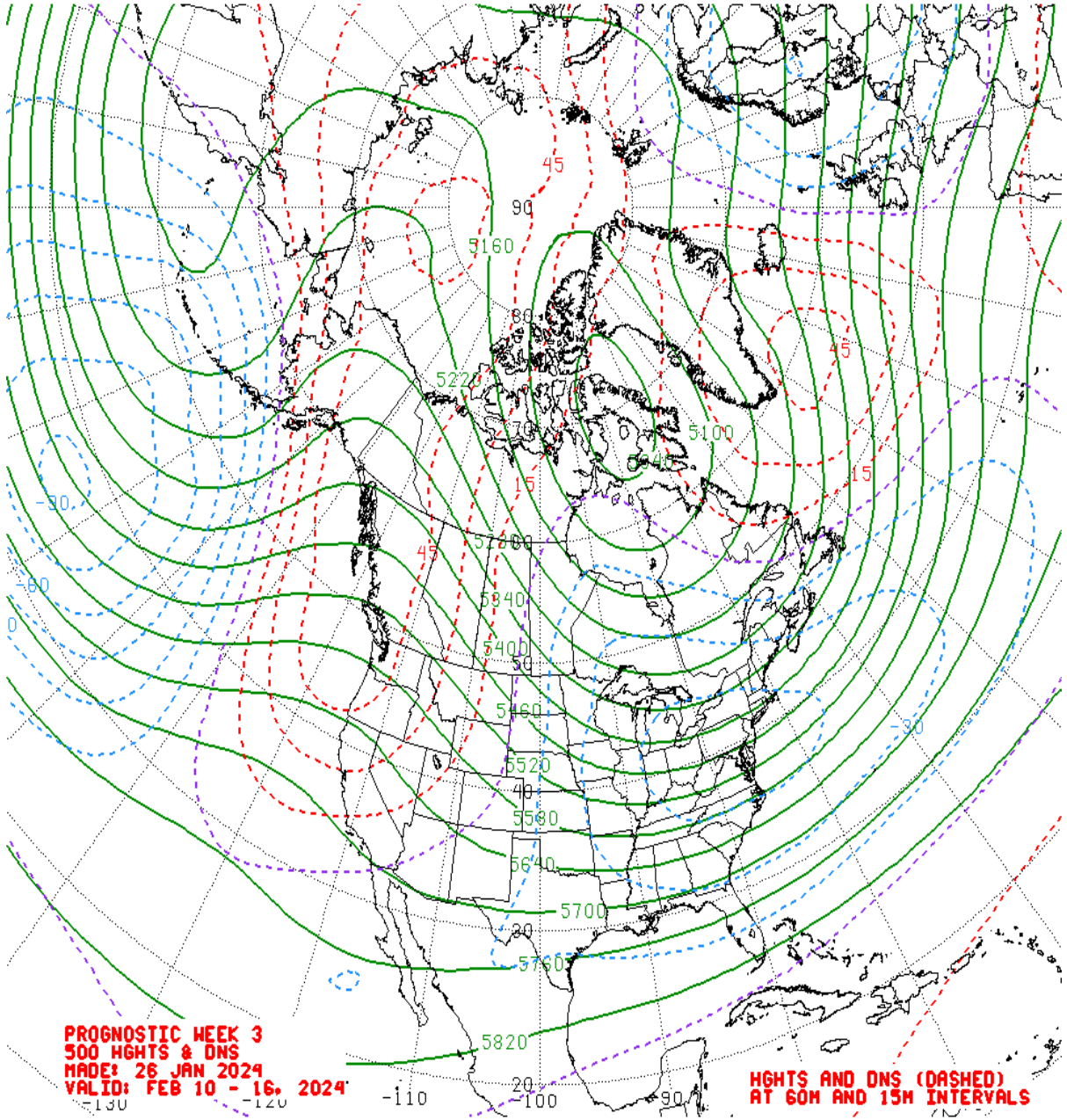
Historical 500-hPa Height & U.S. Temperatures By MJO Phase:



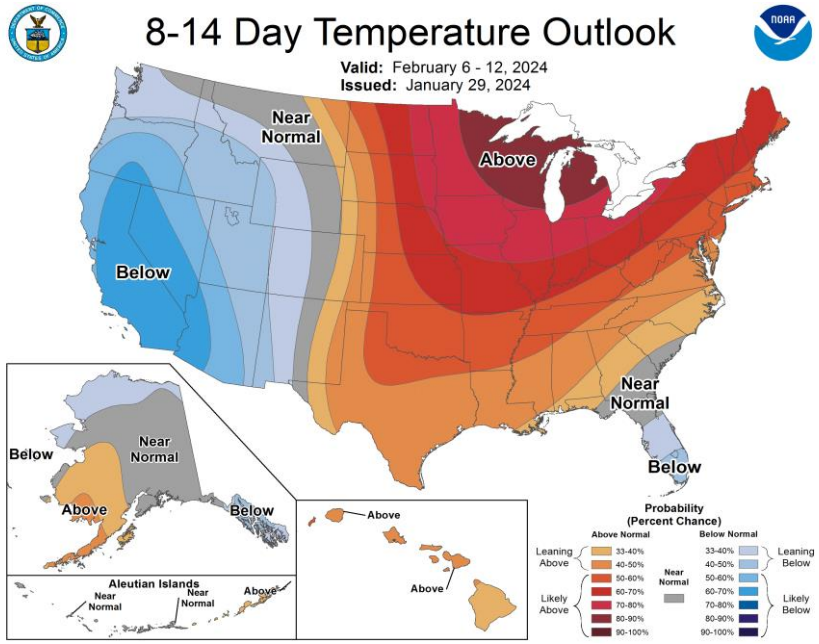


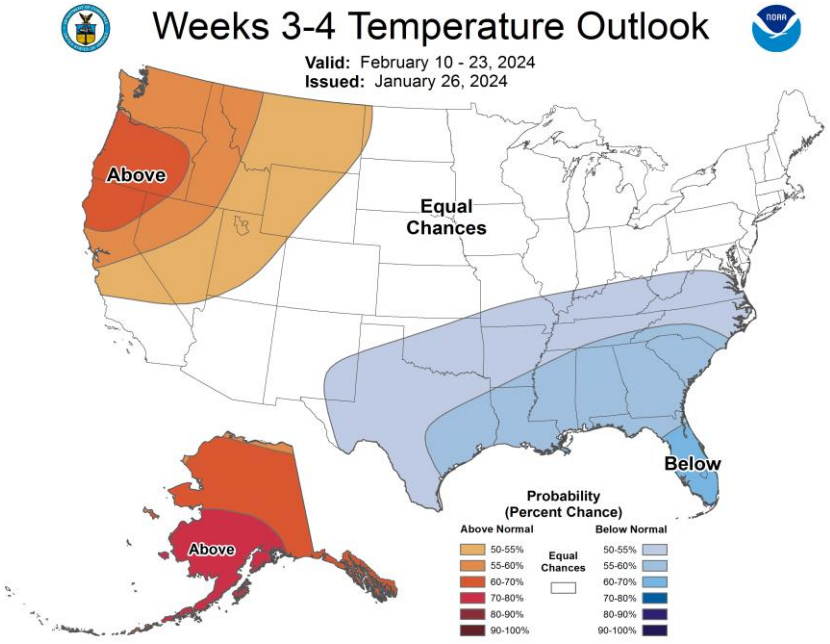
Mean 500-hPa Height Anomaly Forecasts: Weeks 2+3

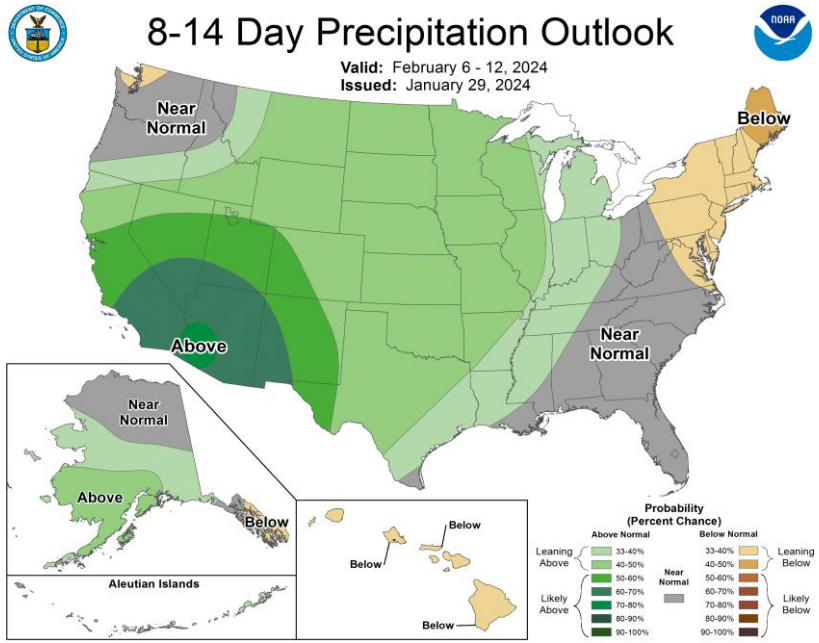


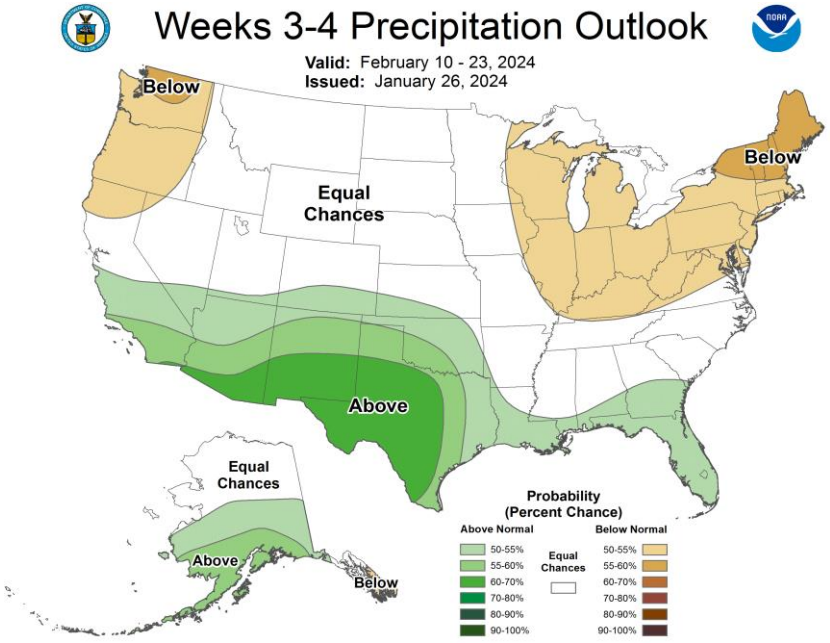


Official Temperature & Precipitation Forecasts:





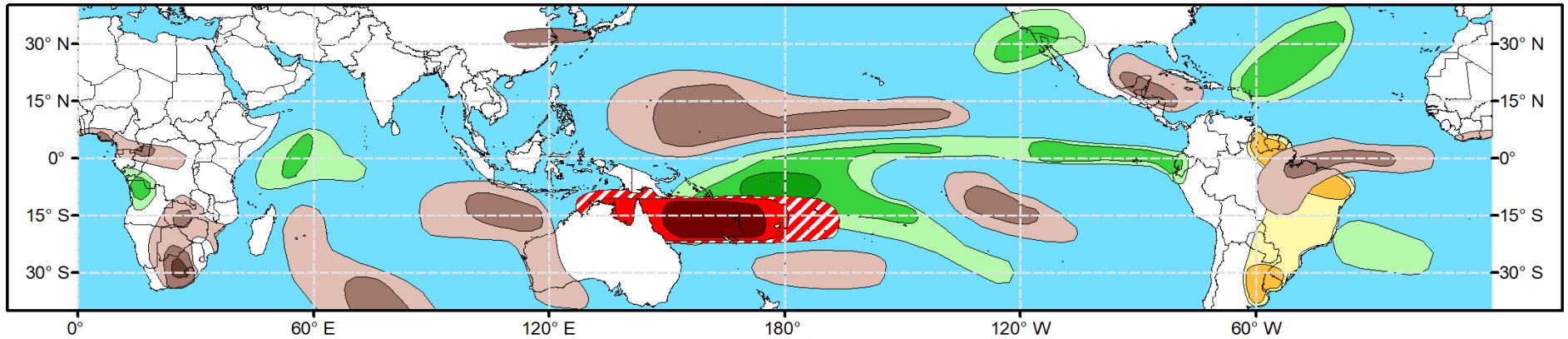




Global Tropics Hazards Outlook

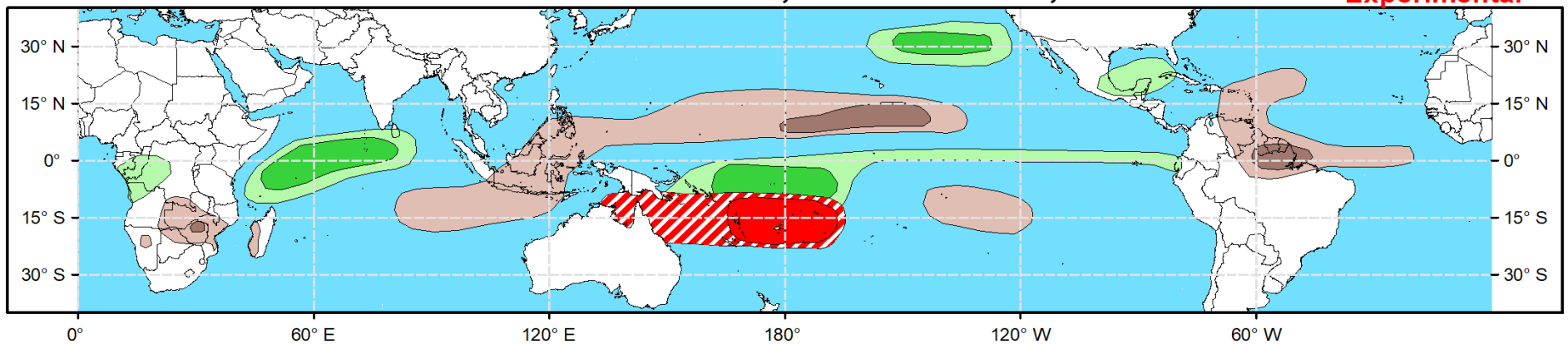
Climate Prediction Center

Week 2 - Valid: Feb 07, 2024 - Feb 13, 2024



Week 3 - Valid: Feb 14, 2024 - Feb 20, 2024

**** 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

>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

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