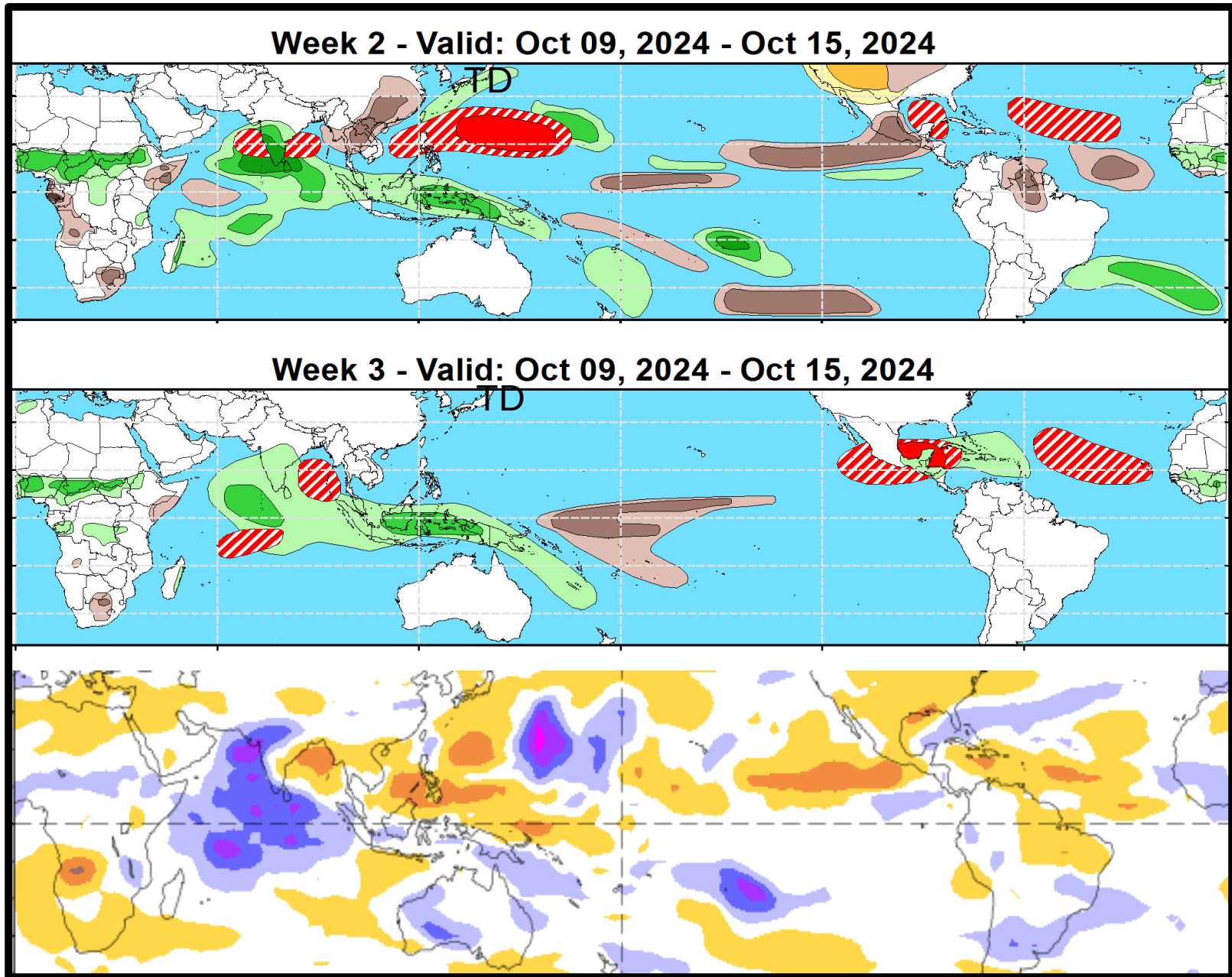
Weeks 2-3 Global Tropics Hazards Outlook

10/15/2024

Nick Novella
NWS / NCEP / Climate Prediction Center

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

- Unnamed TD (10/12)



Synopsis of Climate Modes:

ENSO: (Oct 10, 2024 Update) ***next update on Thursday, Nov 14th***

- ENSO Alert System Status: La Niña Watch

- La Niña is favored to emerge in September-November (60% chance) and is expected to persist through January-March 2025.

MJO and other subseasonal tropical variability:

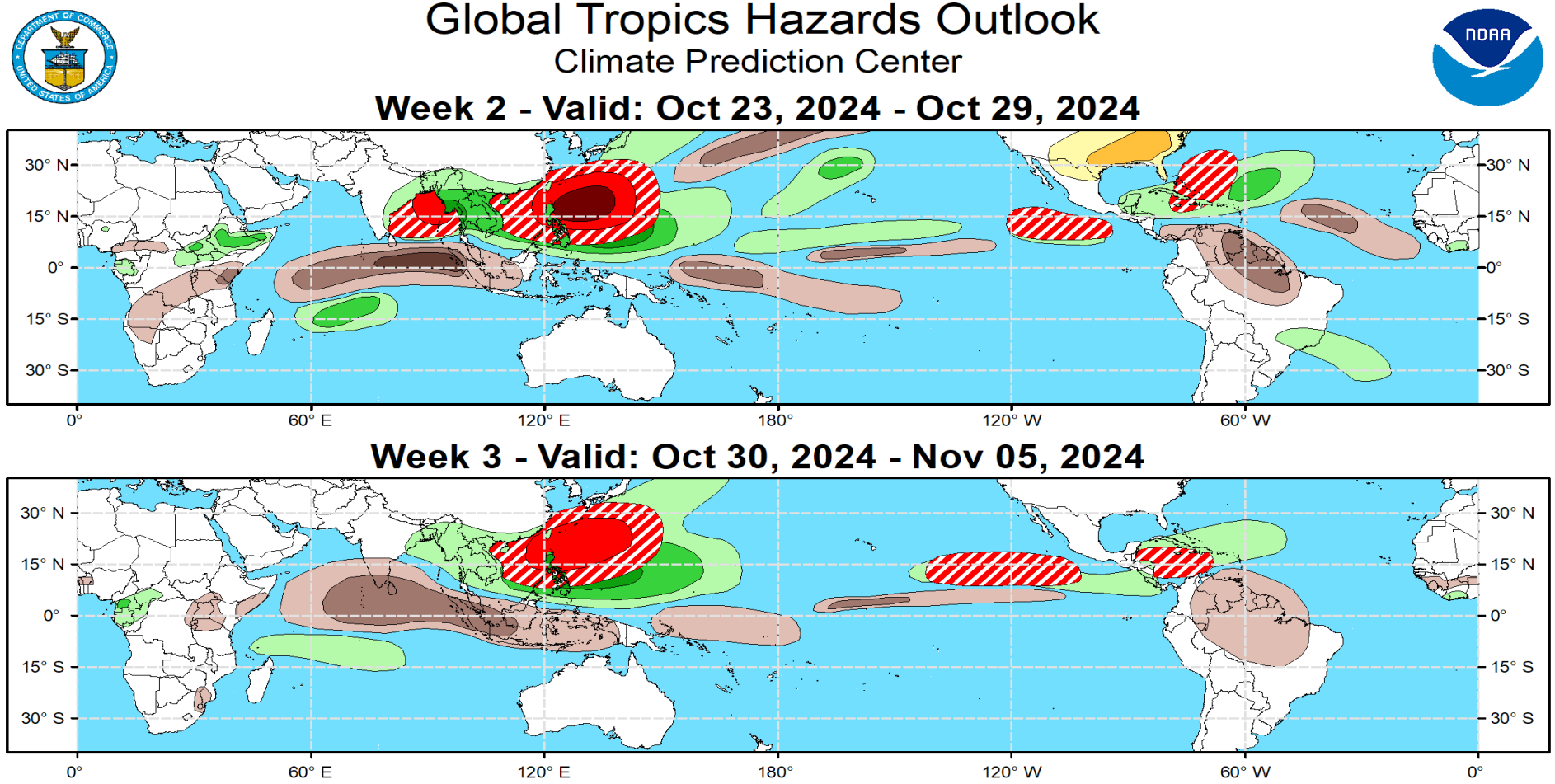
- Despite some weakening and slowing in RMM observations, the MJO has remained fairly coherent over the Indian Ocean based on upper-level velocity potential anomaly fields.

- Models have been consistent in favoring an amplifying MJO over the Maritime Continent and propagating eastward into the Western Hemisphere towards the end of week-2. Beyond this time, uncertainty increases due to varying subseasonal phase speeds favored in the models.

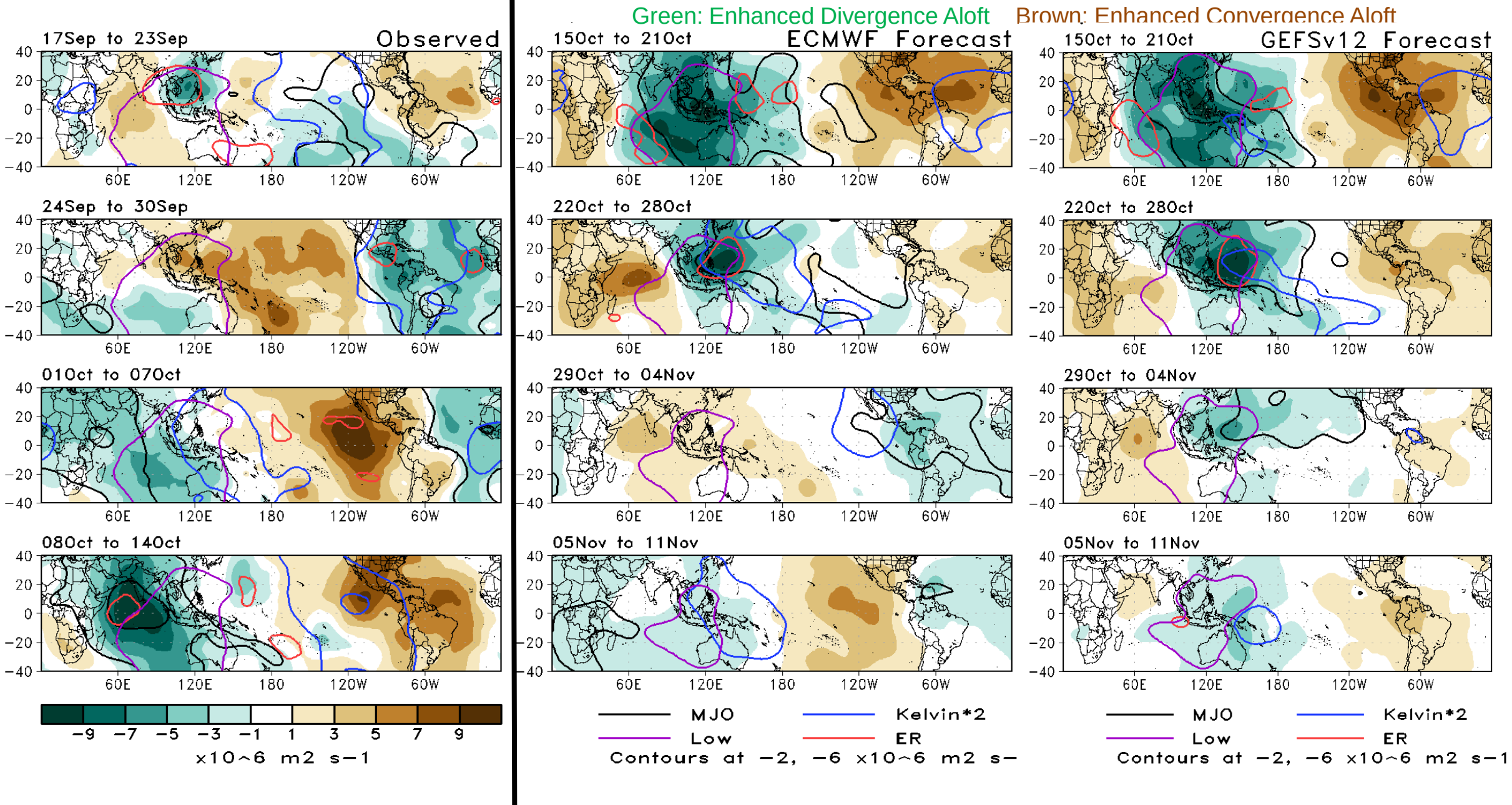
- Regardless of the uncertainty with the evolution of the MJO, the large-scale environment is expected to be favorable for Tropical Cyclone (TC) formation in the Indian Ocean (week-1 into week-2), and Western Pacific (week 2 and 3).

- Conversely, decreased chances for TC genesis are favored over the Western Hemisphere, though the outlook is not ruling out late-seasonal development initiated by higher frequency variability in the Atlantic and Eastern Pacific over the next several weeks.

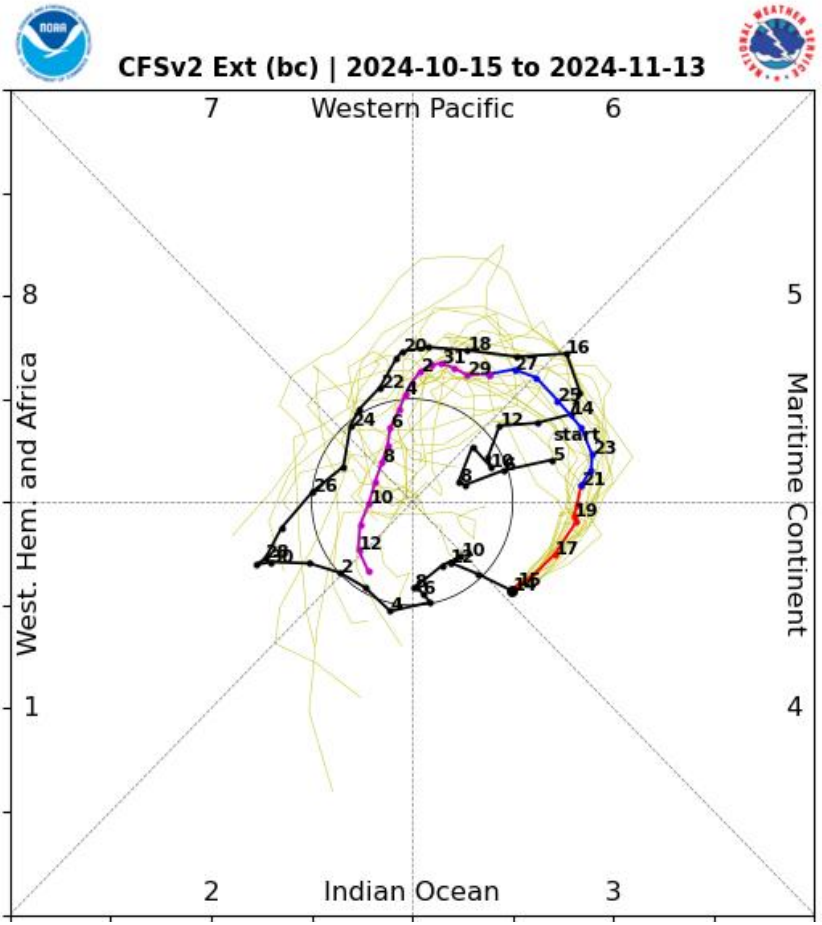
GTH Outlook:

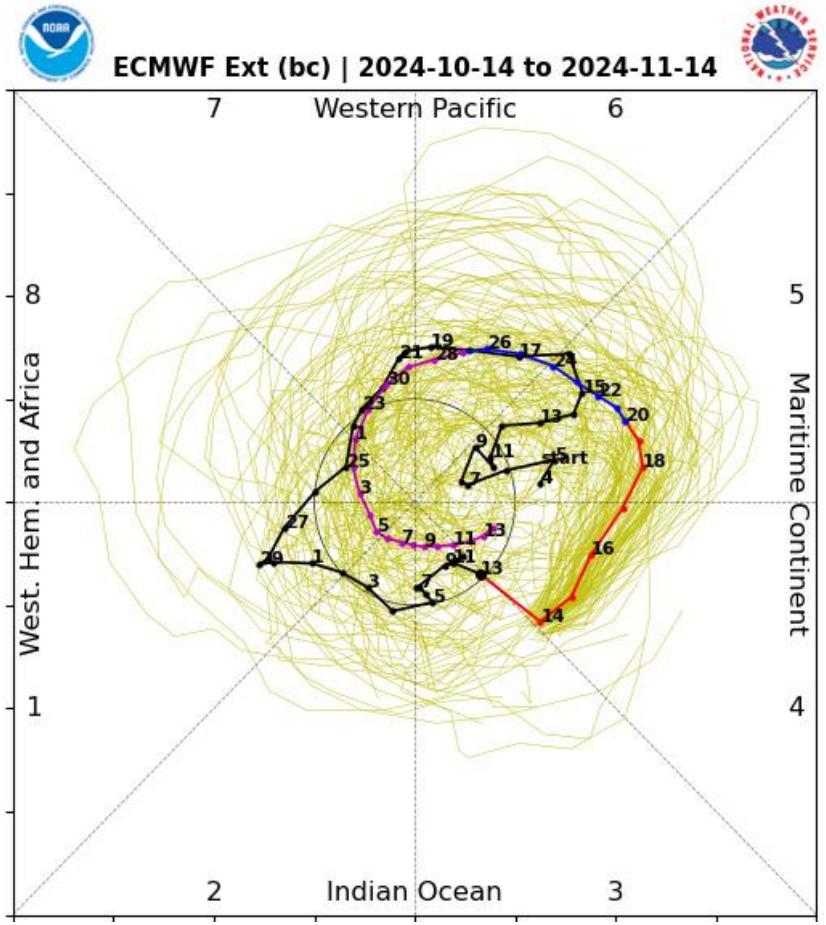

Global Tropics Hazards Outlook
Climate Prediction Center
Week 2 - Valid: Oct 23, 2024 - Oct 29, 2024
30° N
15° N
0°
15° S
30° S
0°
60° E
120° E
180°
120° W
60° W
Week 3 - Valid: Oct 30, 2024 - Nov 05, 2024
30° N
15° N
0°
15° S
30° S
0°
60° E
120° E
180°
120° W
60° W
0°
Tropical Cyclone (TC) Formation 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
Issued: 10/15/2024
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.

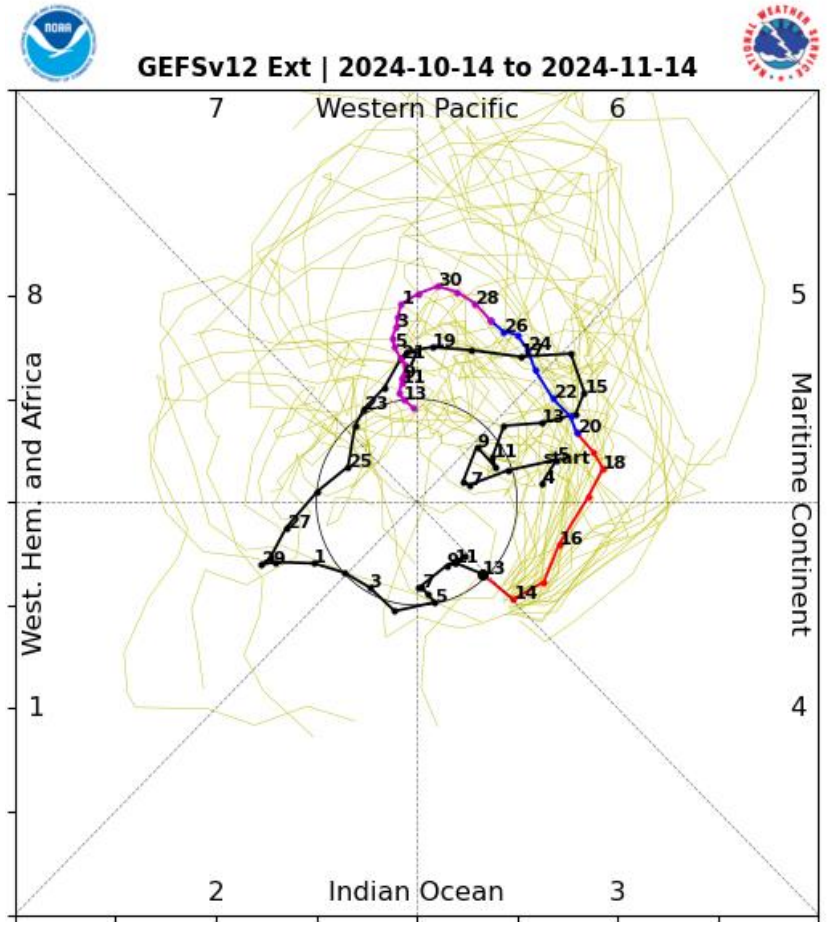
200-hPa Velocity Potential Anomaly Maps:



RMM Index Observations & Forecasts:

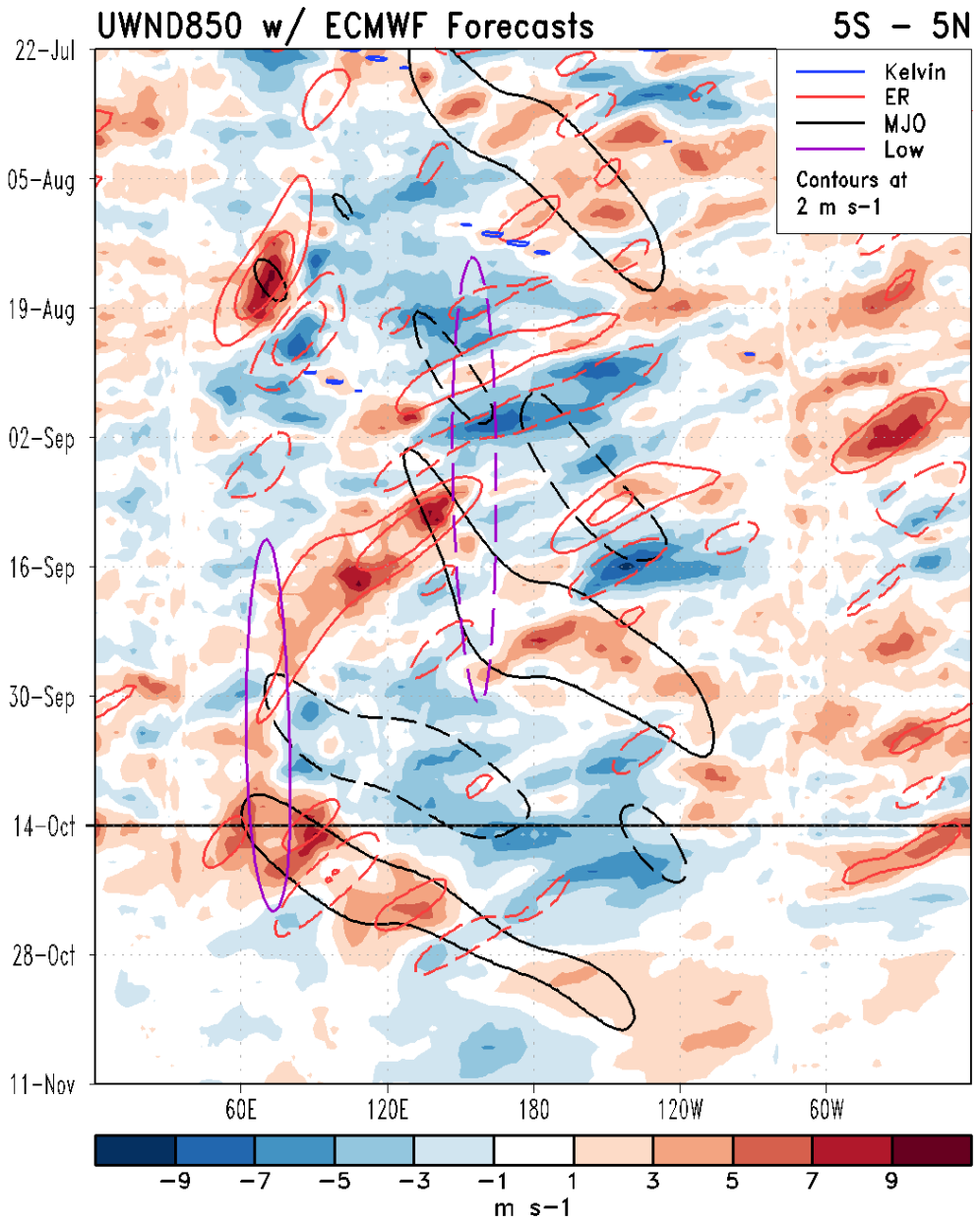


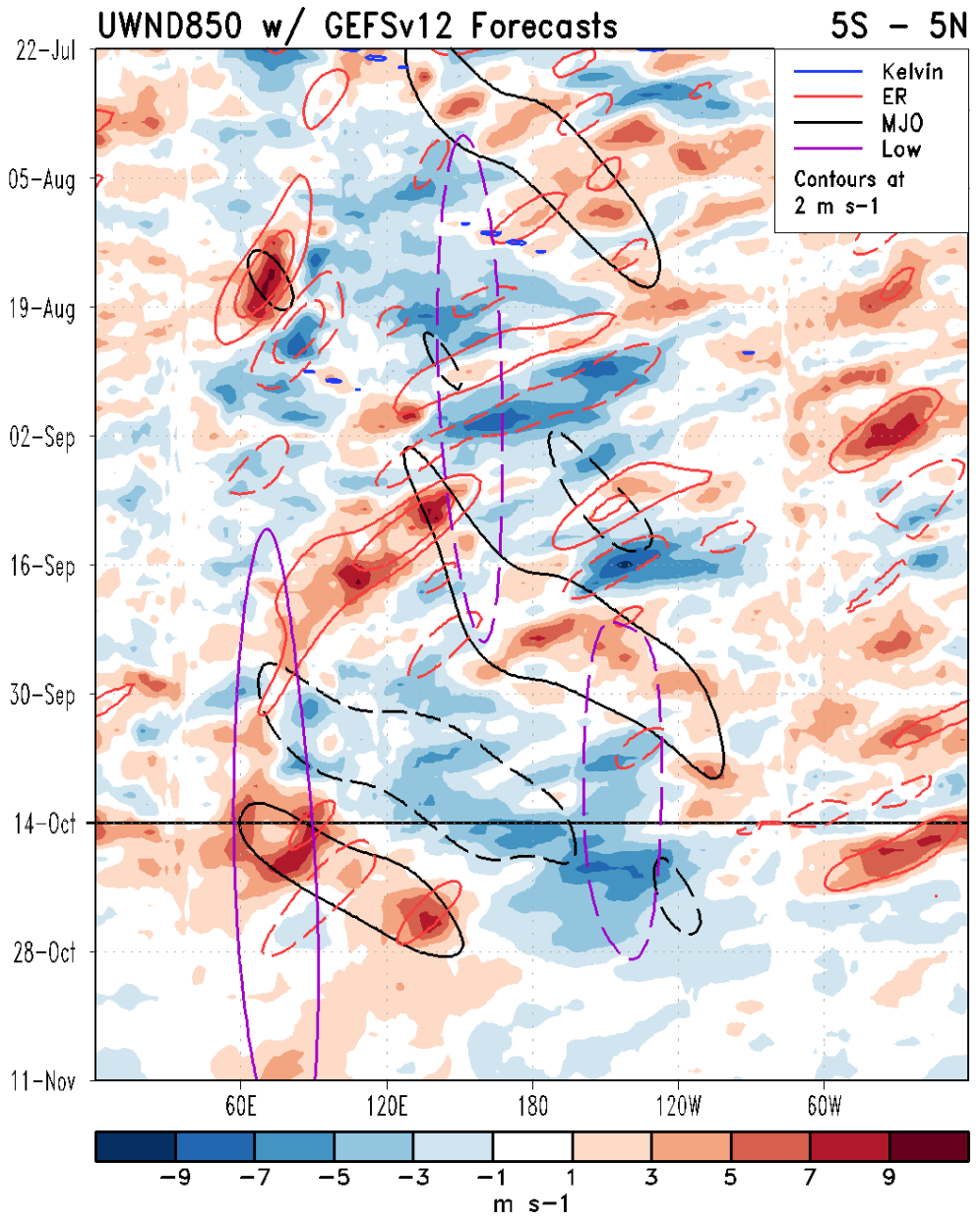




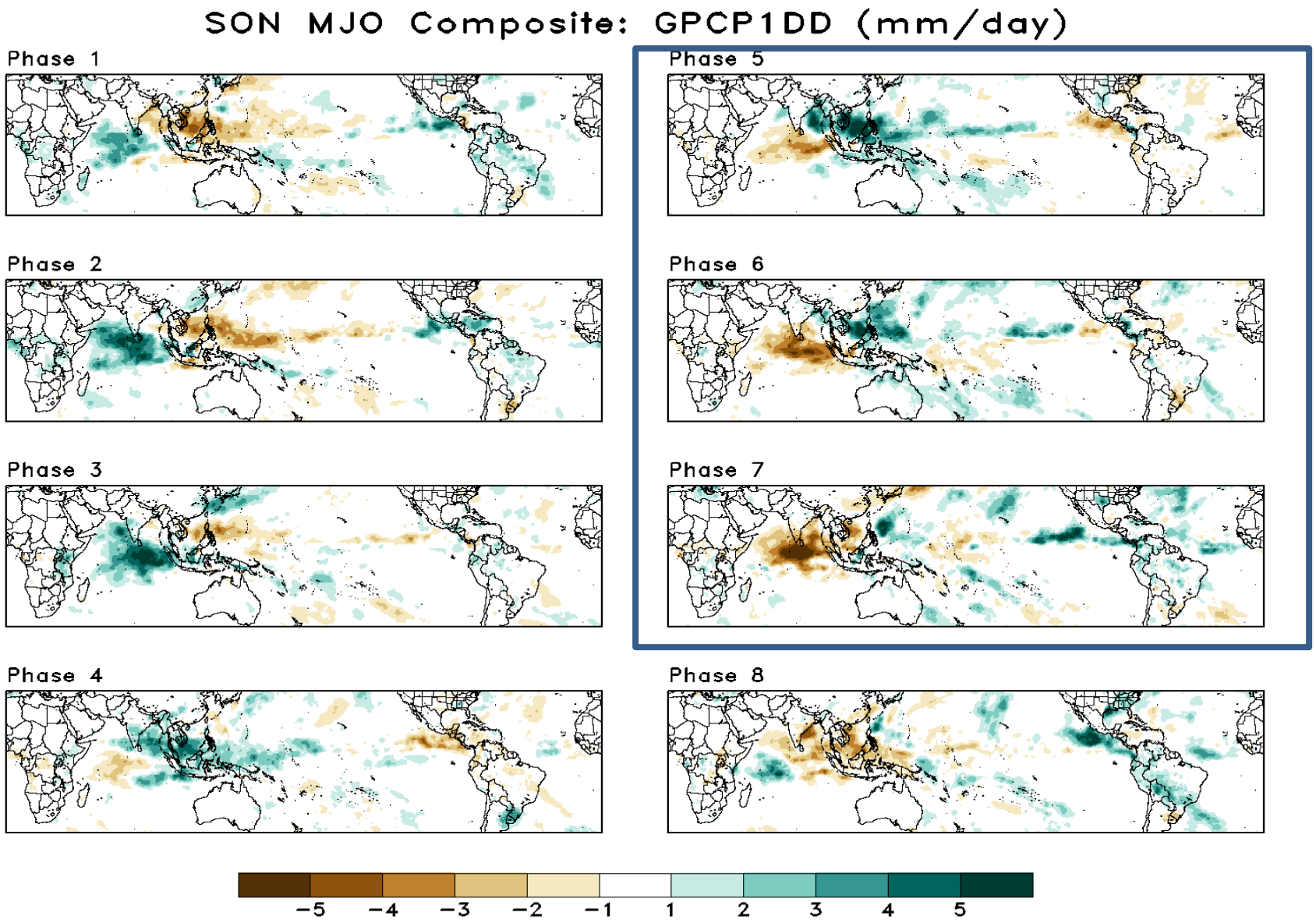
- Models agree that the MJO signal will gain amplitude over the Maritime Continent and reach the Western Pacific during mid to late week-2.
- However, models disagreement in regards to the phase speed of the MJO, where the GEFS (ECMWF and CFS) favors more of slower (faster) mean solution.
- There is also some concern as to “Maritime Continent Barrier” effect, based on its previous two trips over this part of the tropics.

850-hPa Zonal Wind Anomaly Time/Lon Plots:

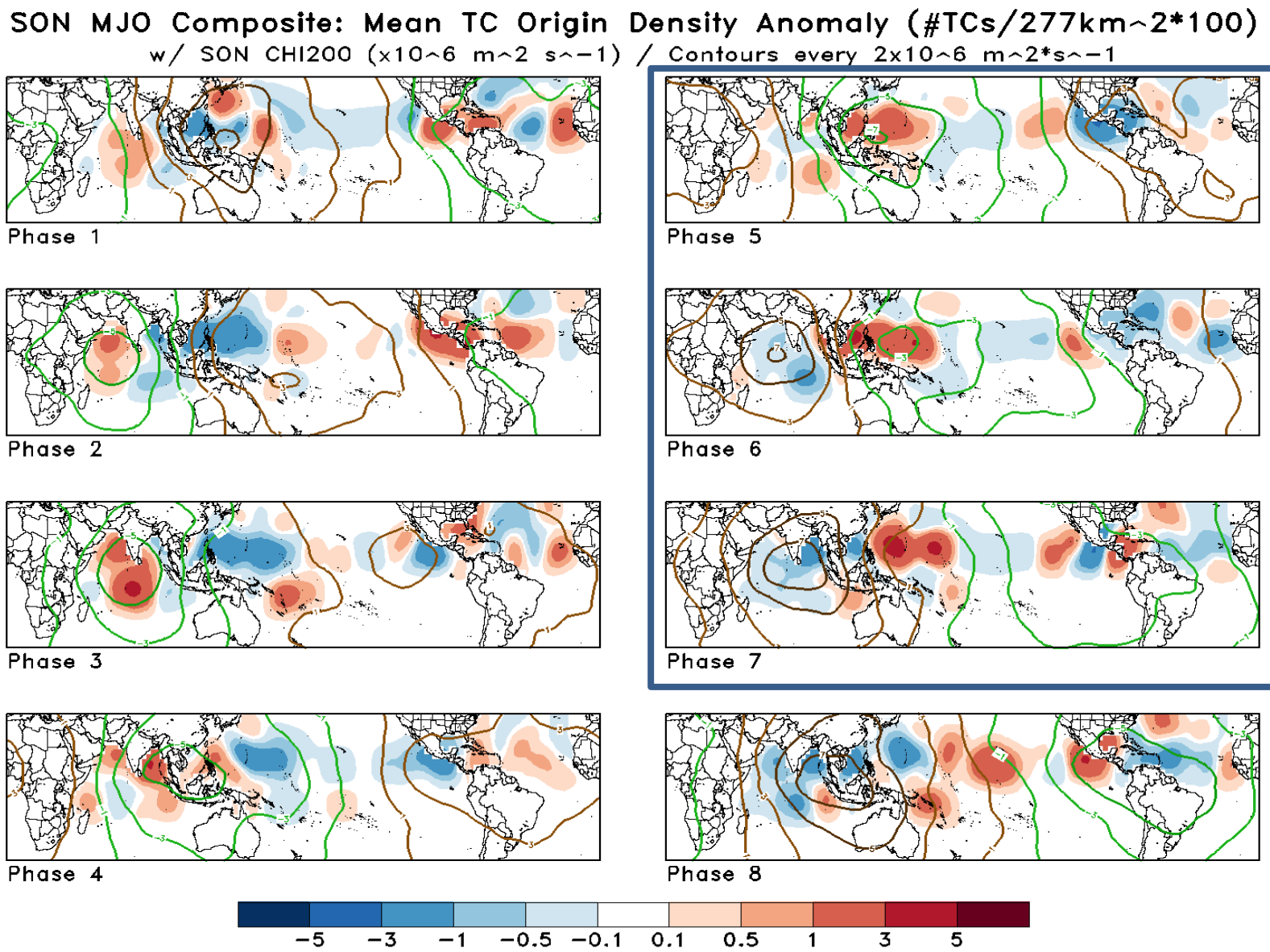


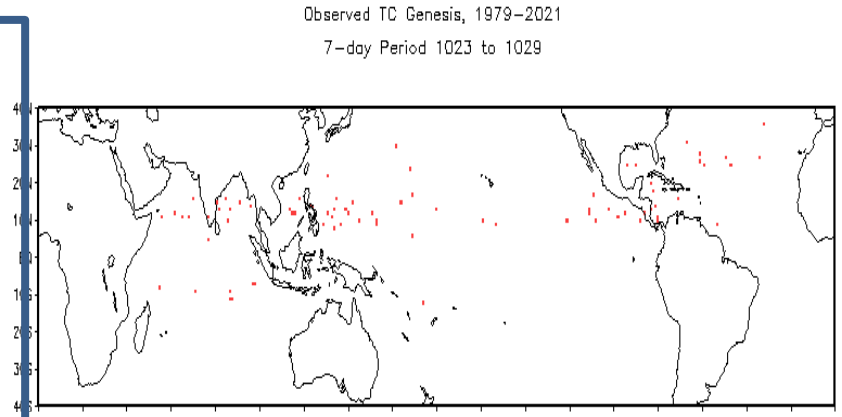


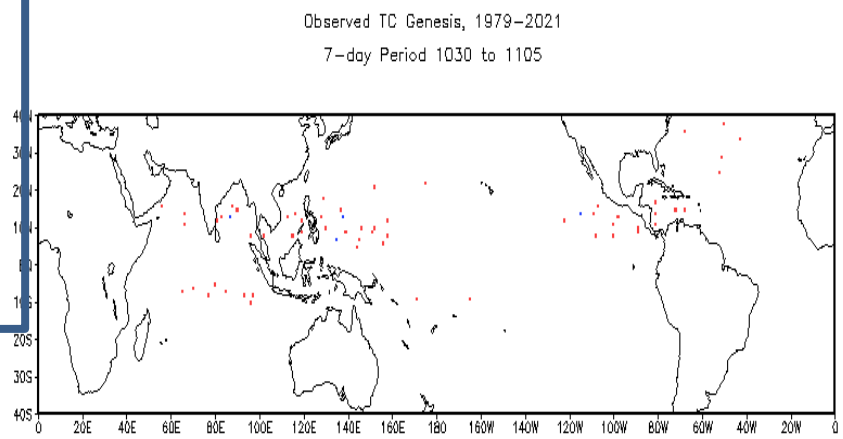
Historical Precipitation Anomalies By MJO Phase:



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

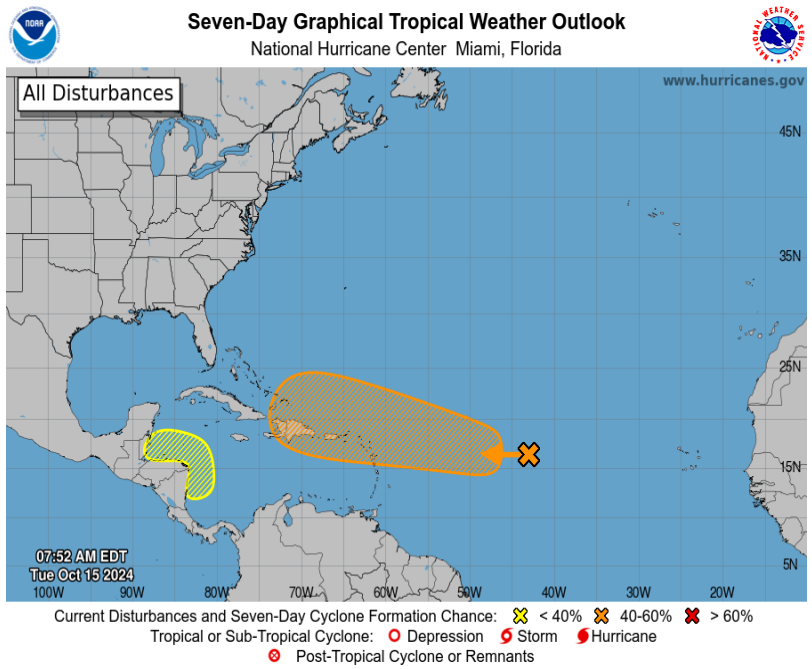


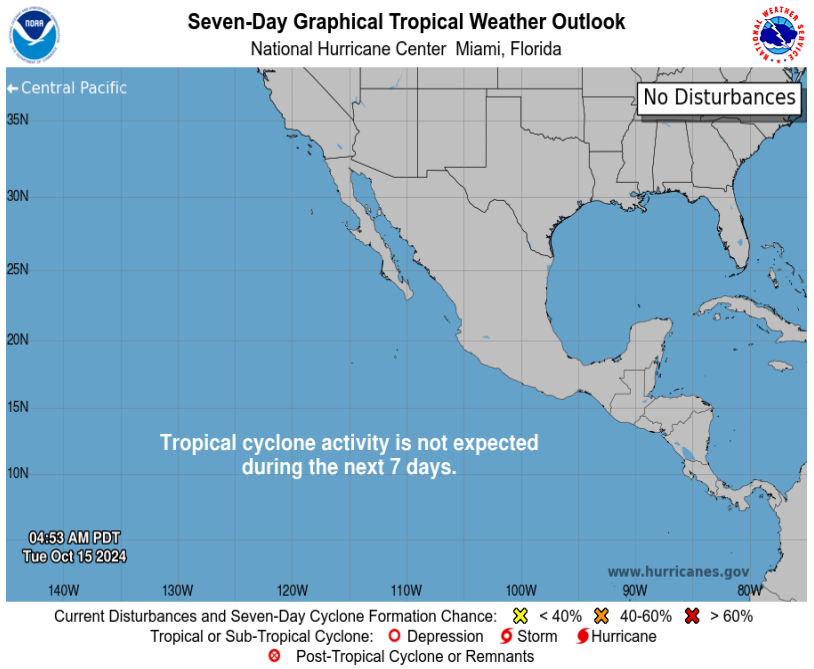


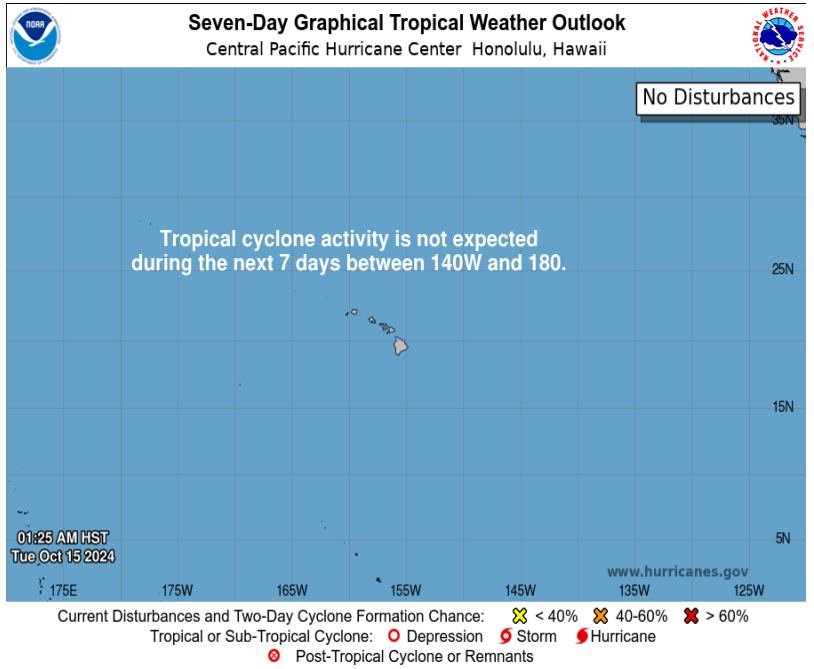


Experimental

Tropical Cyclone Monitoring/Forecast: NHC / CPHC



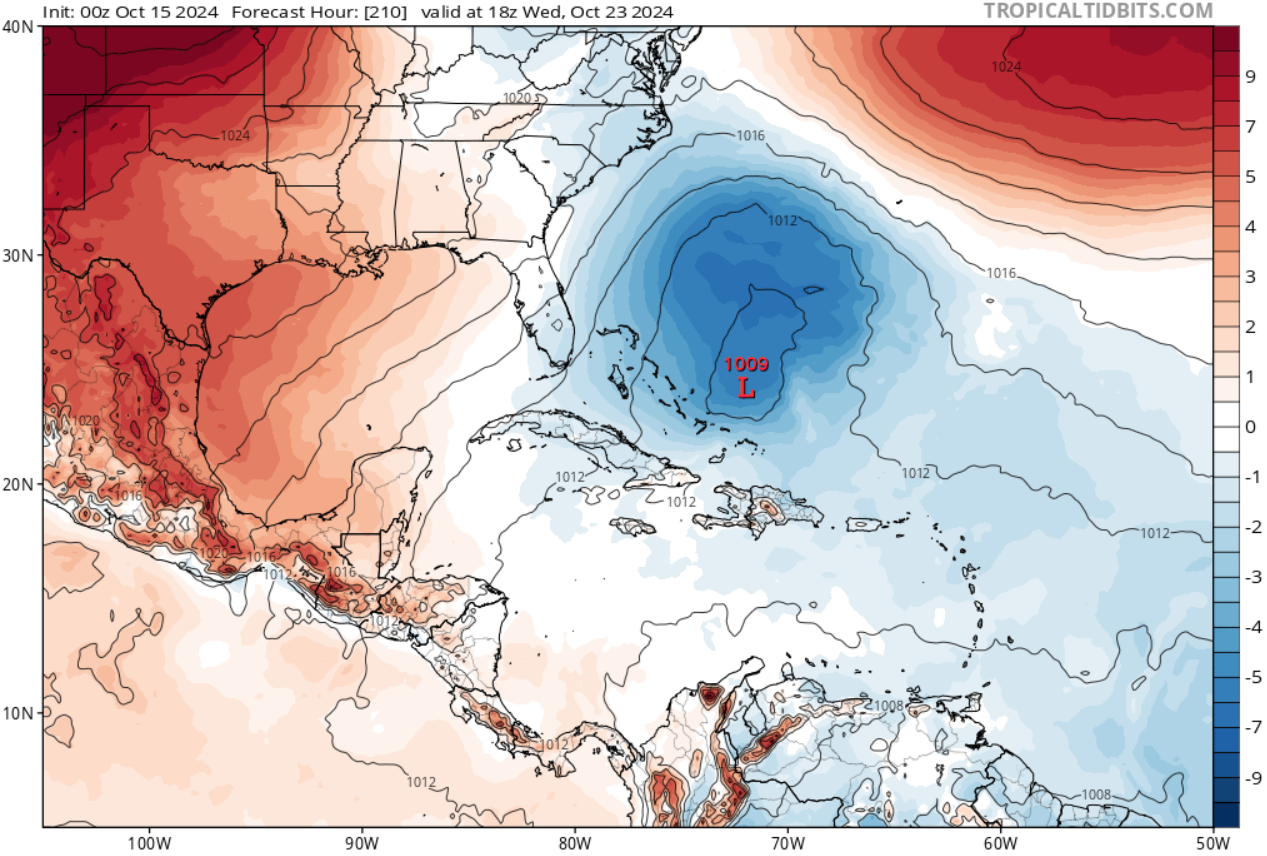




ECMWF MSLP and Anomaly (hPa) (based on CFSR 1981-2010 Climatology)

Init: 00z Oct 15 2024 Forecast Hour: [210] valid at 18z Wed, Oct 23 2024

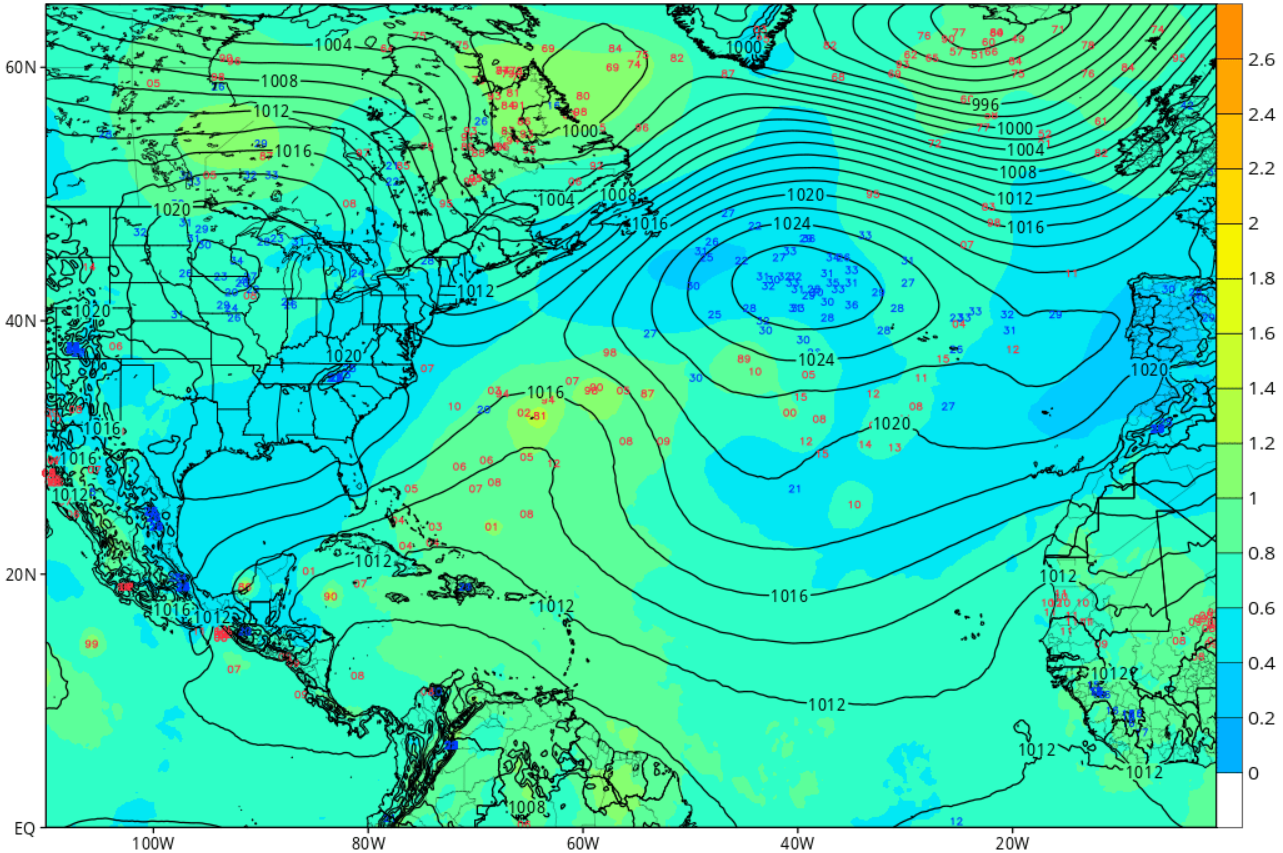
TROPICALTIDBITS.COM

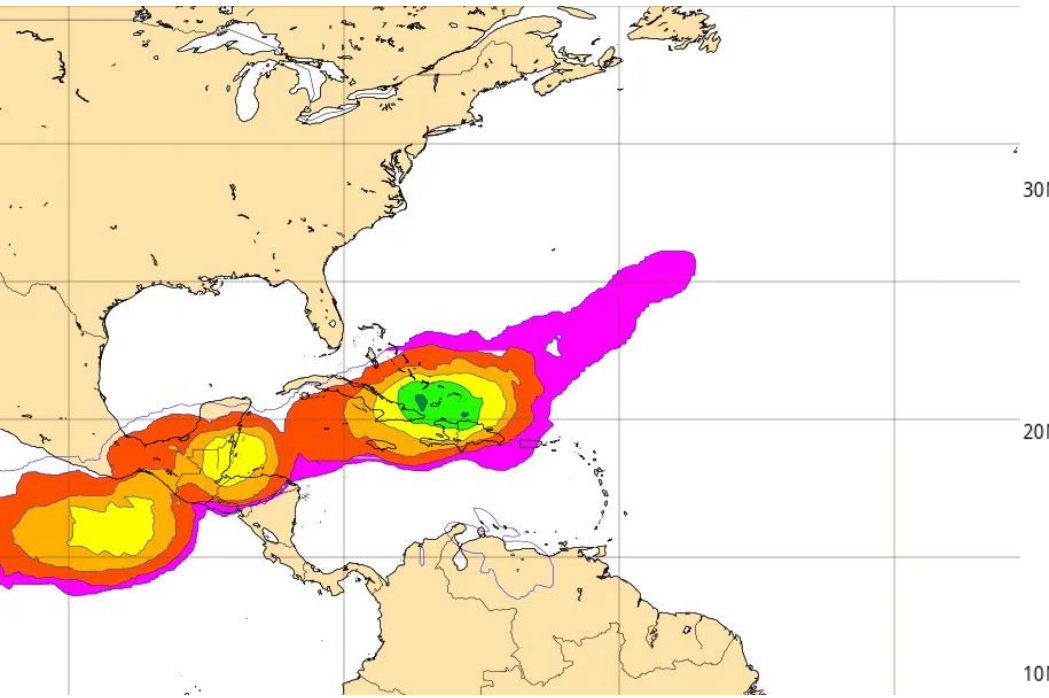


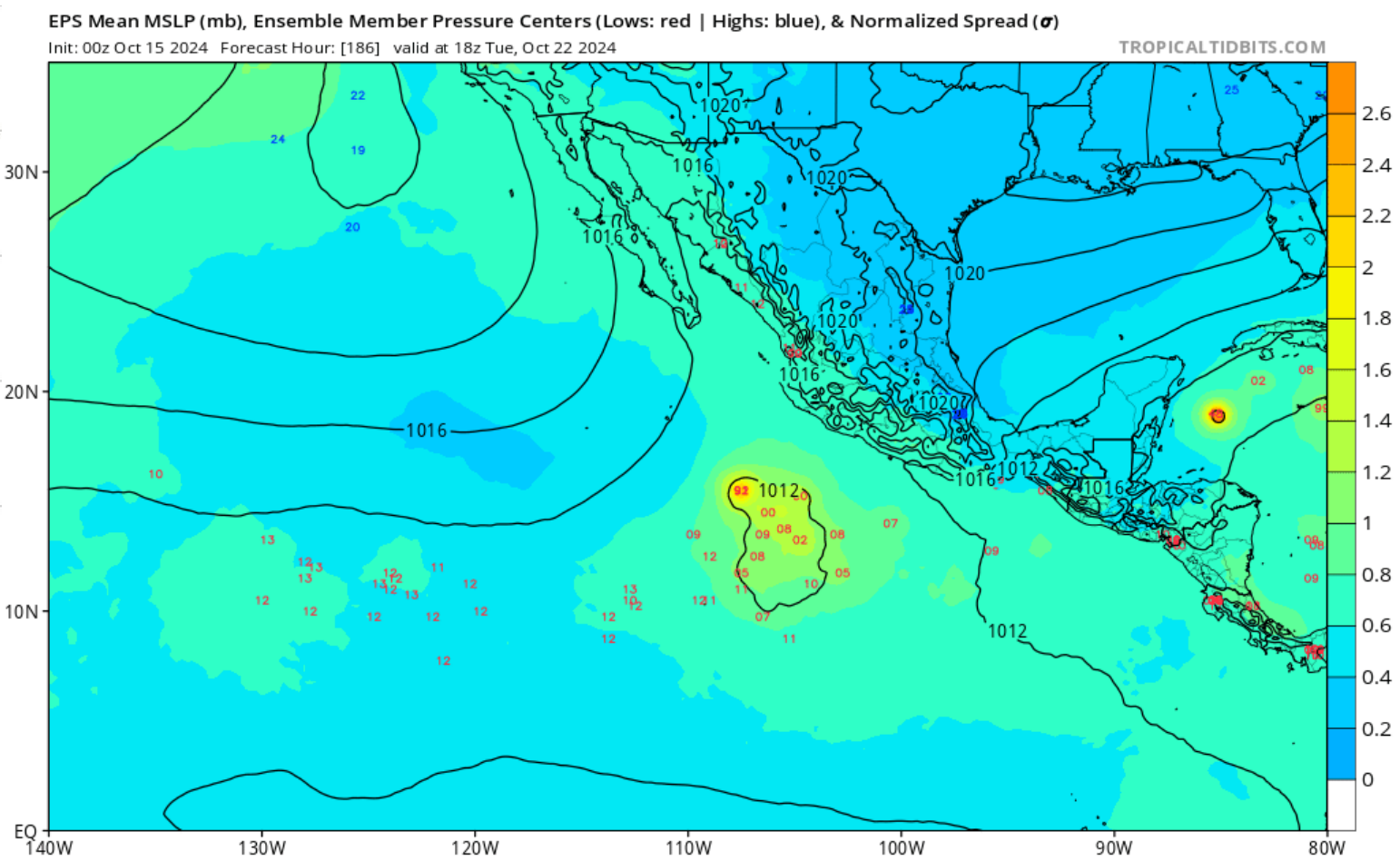
EPS Mean MSLP (mb), Ensemble Member Pressure Centers (Lows: red | Highs: blue), & Normalized Spread (σ)

Init: 00z Oct 15 2024 Forecast Hour: [216] valid at 00z Thu, Oct 24 2024

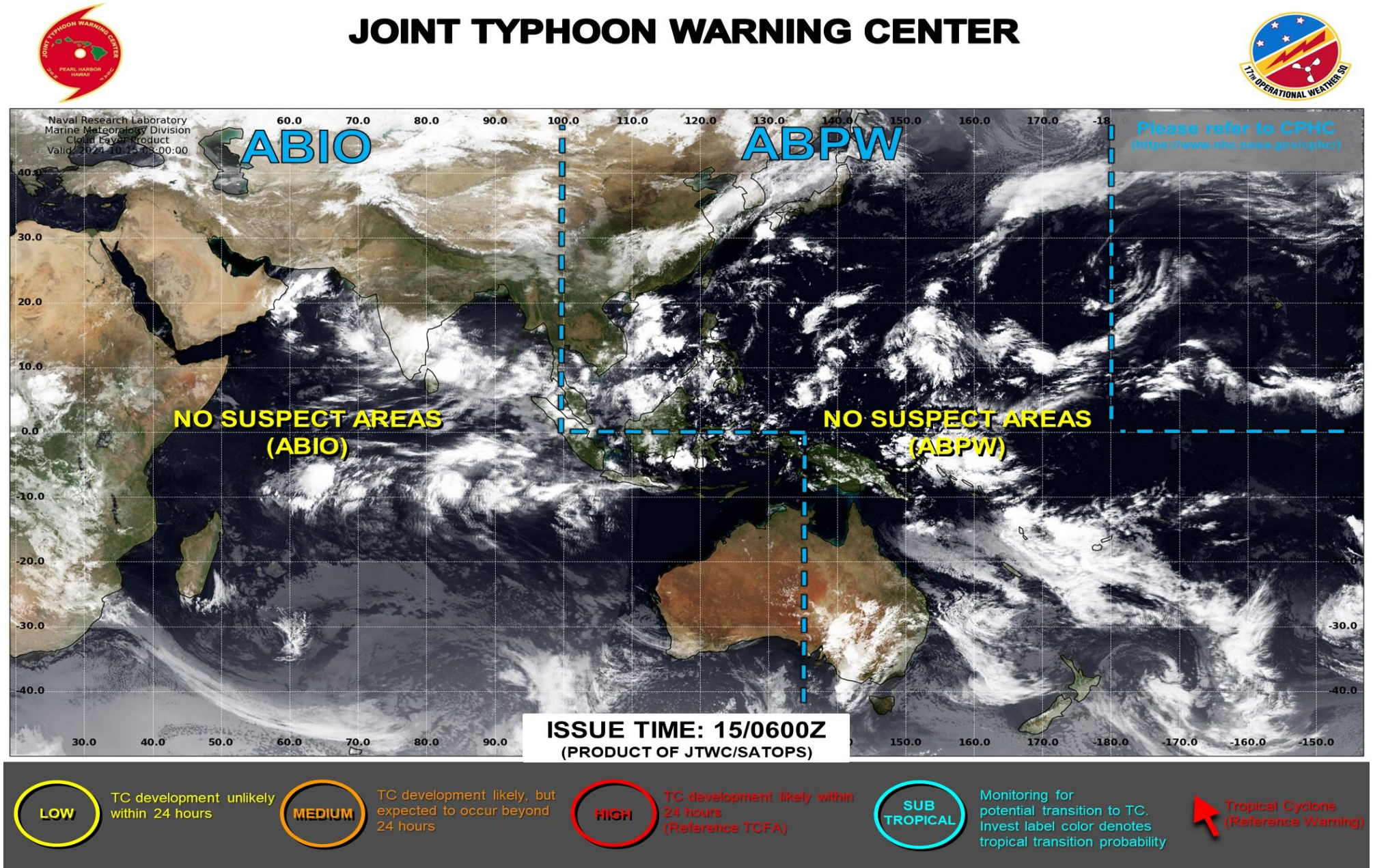
TROPICALTIDBITS.COM



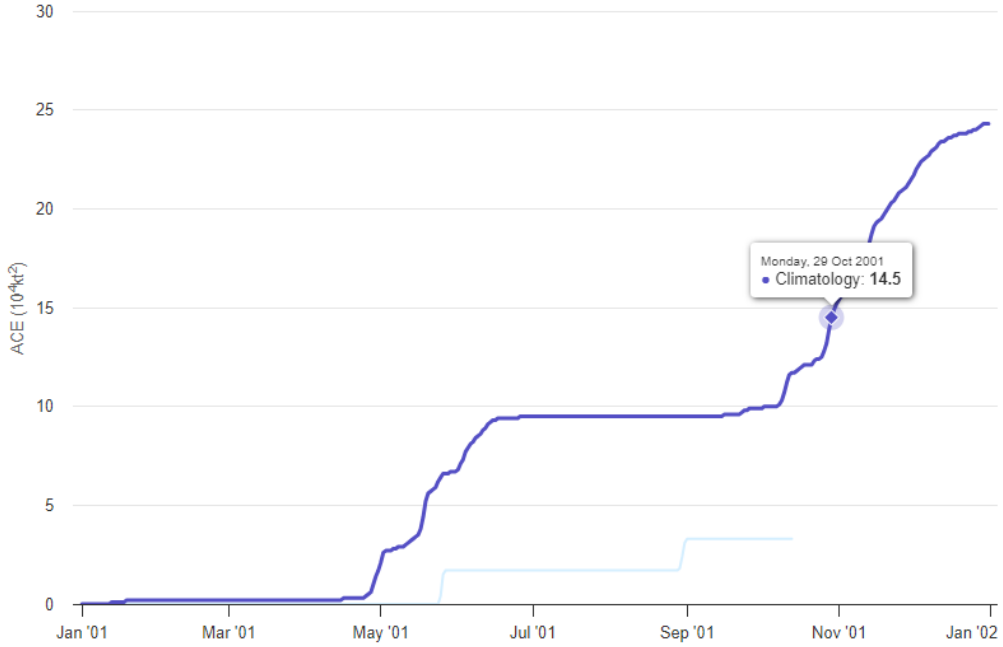



EPS Mean MSLP (mb), Ensemble Member Pressure Centers (Lows: red | Highs: blue), & Normalized Spread (σ)
Init: 00z Oct 15 2024 Forecast Hour: [186] valid at 18z Tue, Oct 22 2024
TROPICALTIDBITS.COM
30N
20N
10N
EQ
140W
130W
120W
110W
100W
90W
80W
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0

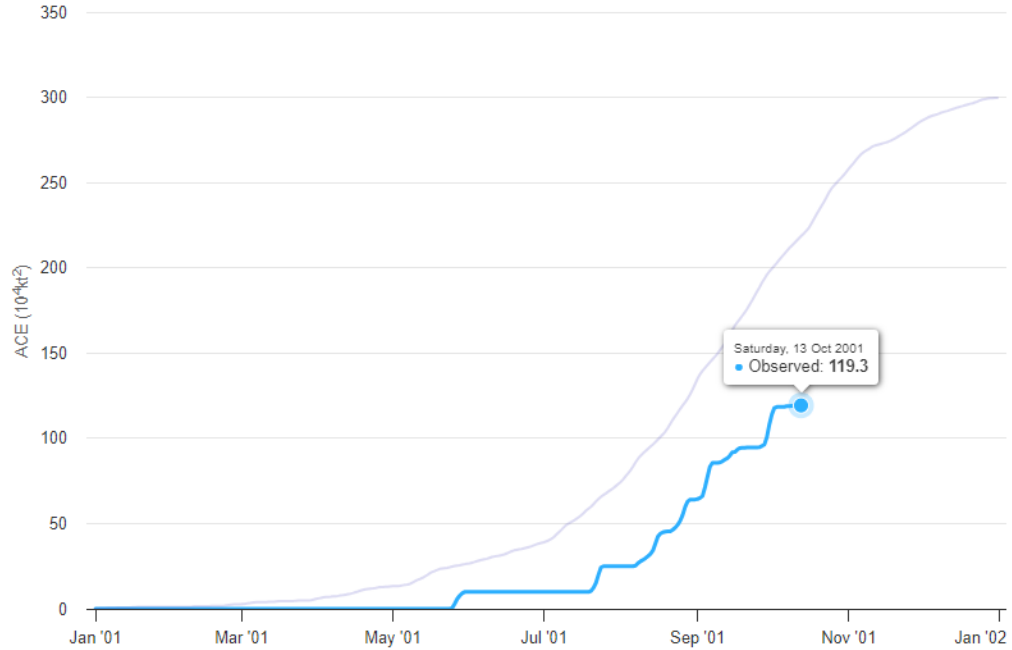
Tropical Cyclone Monitoring/Forecast: JTWC

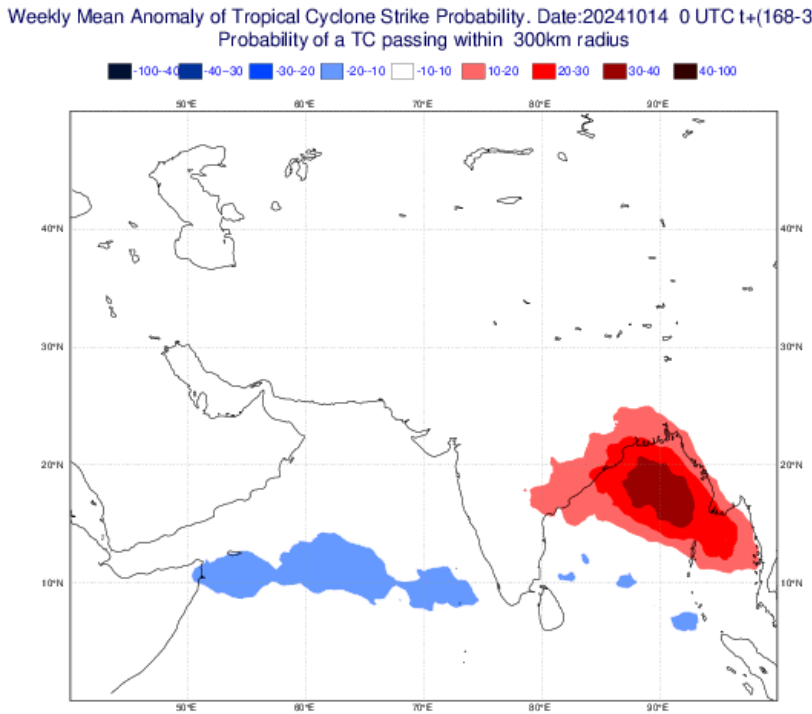


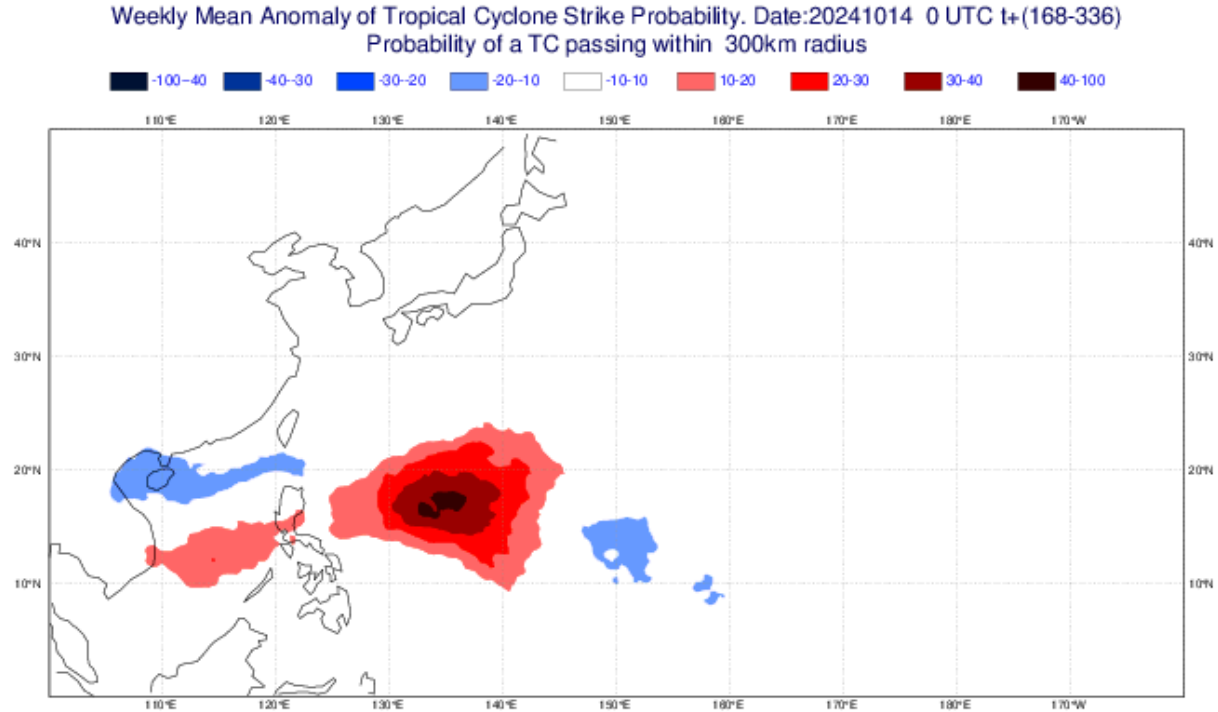
Current Season North Indian Ocean ACE (1991-2020 Climatology)



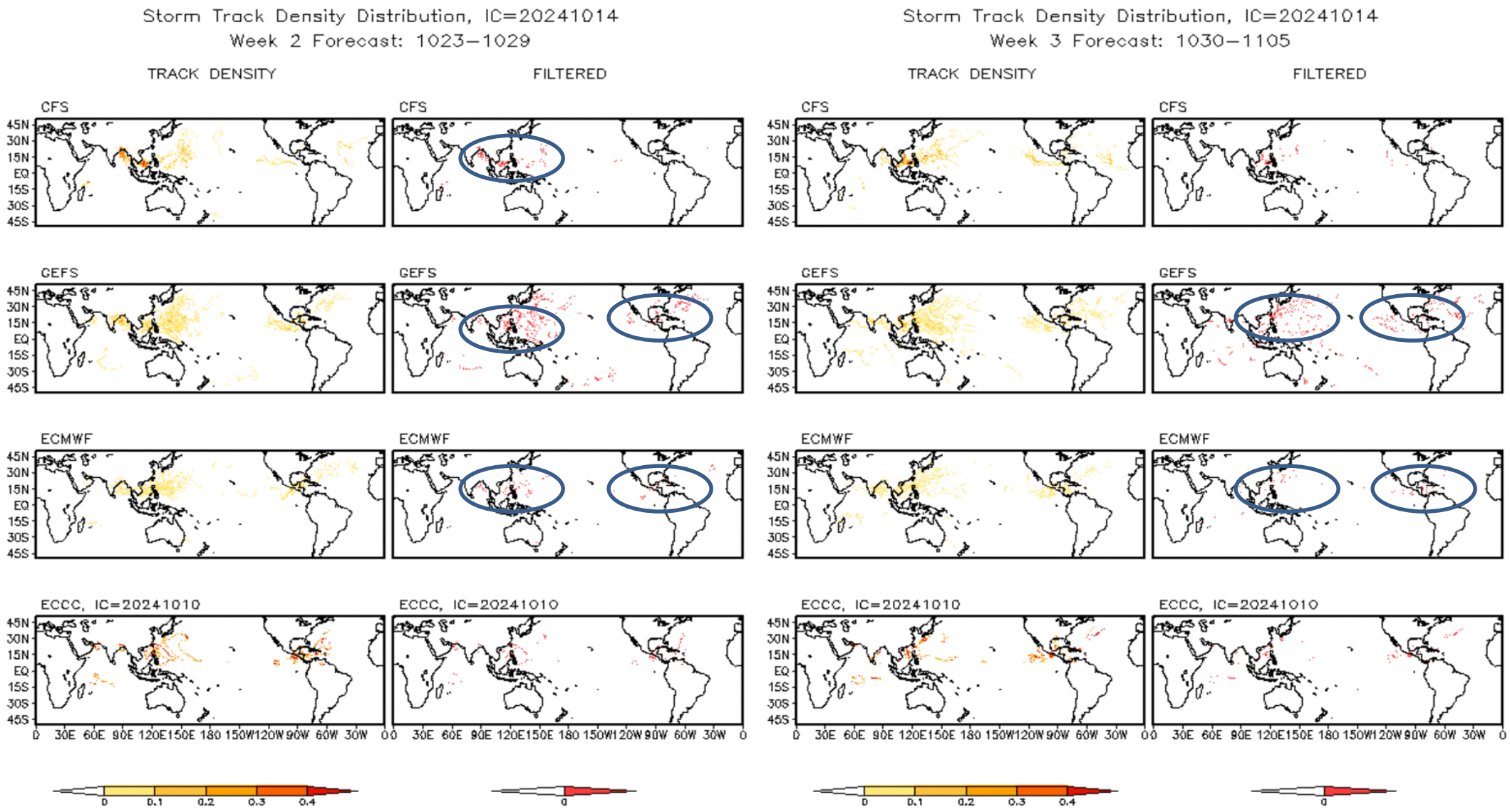
Current Season Northwest Pacific Ocean ACE (1991-2020 Climatology)





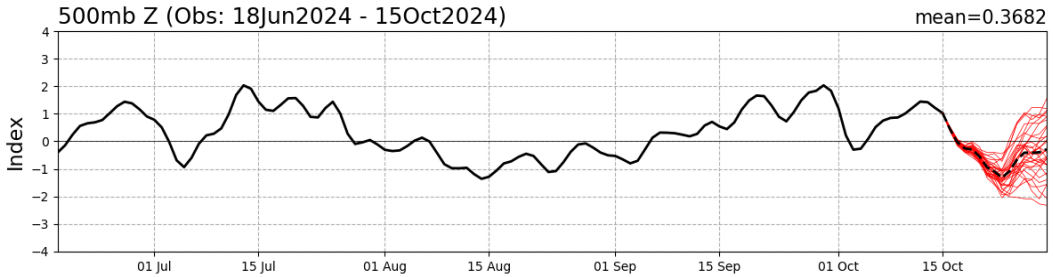


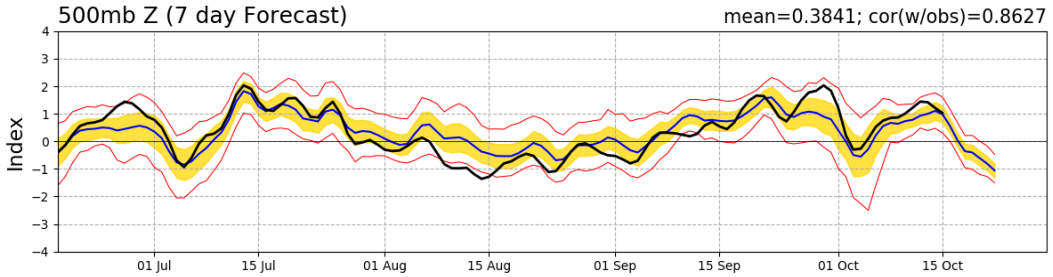
Multi-Model TC Track Densities: Weeks 2+3

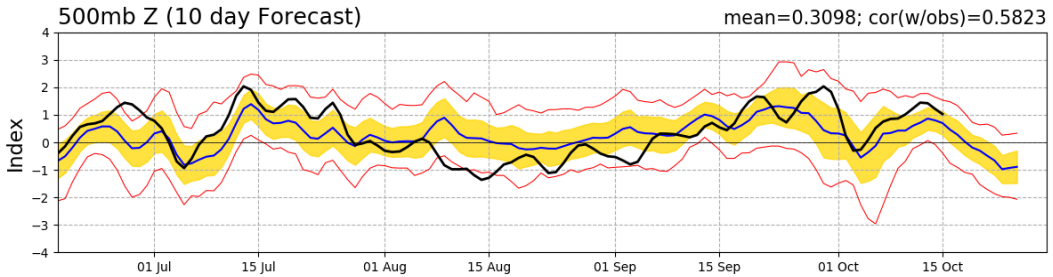


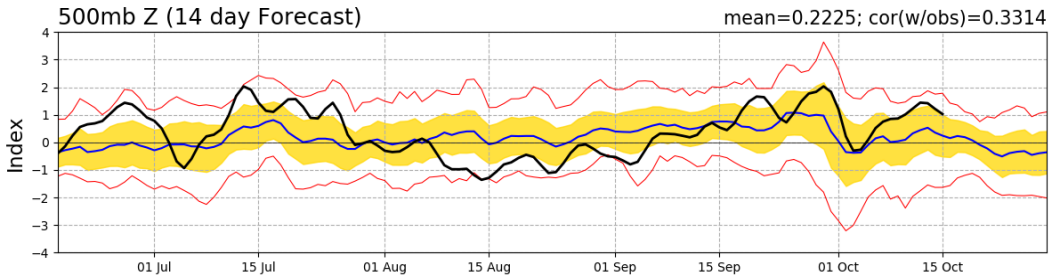
Teleconnection Indices: PNA / AO:

PNA Index: Observed & GEFS Forecasts

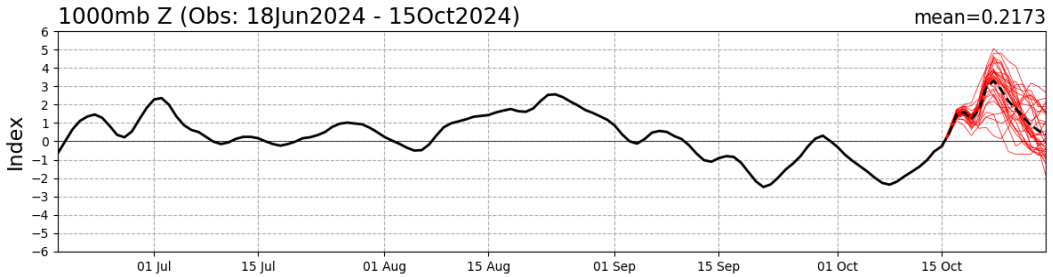


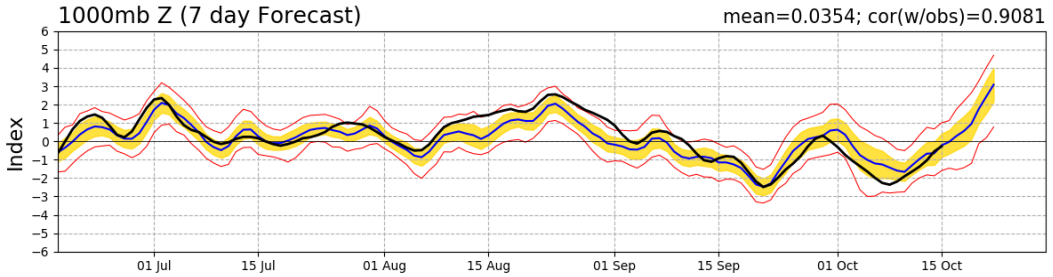


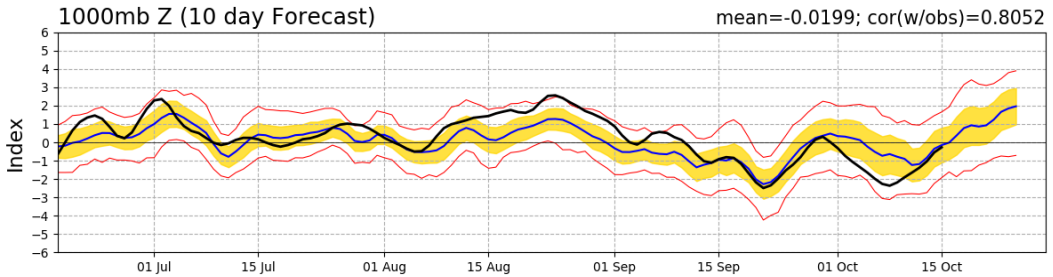


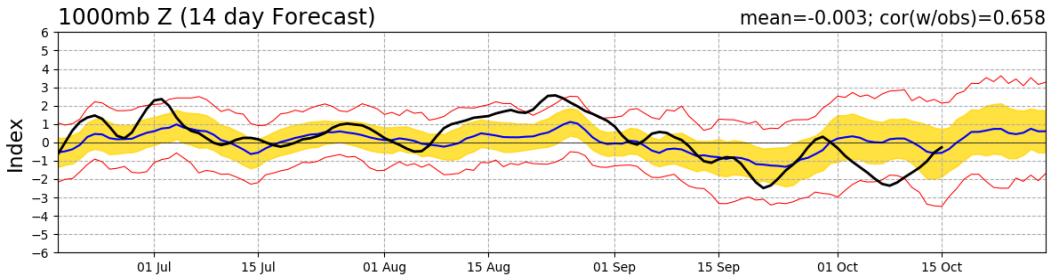


AO Index: Observed & GEFS Forecasts

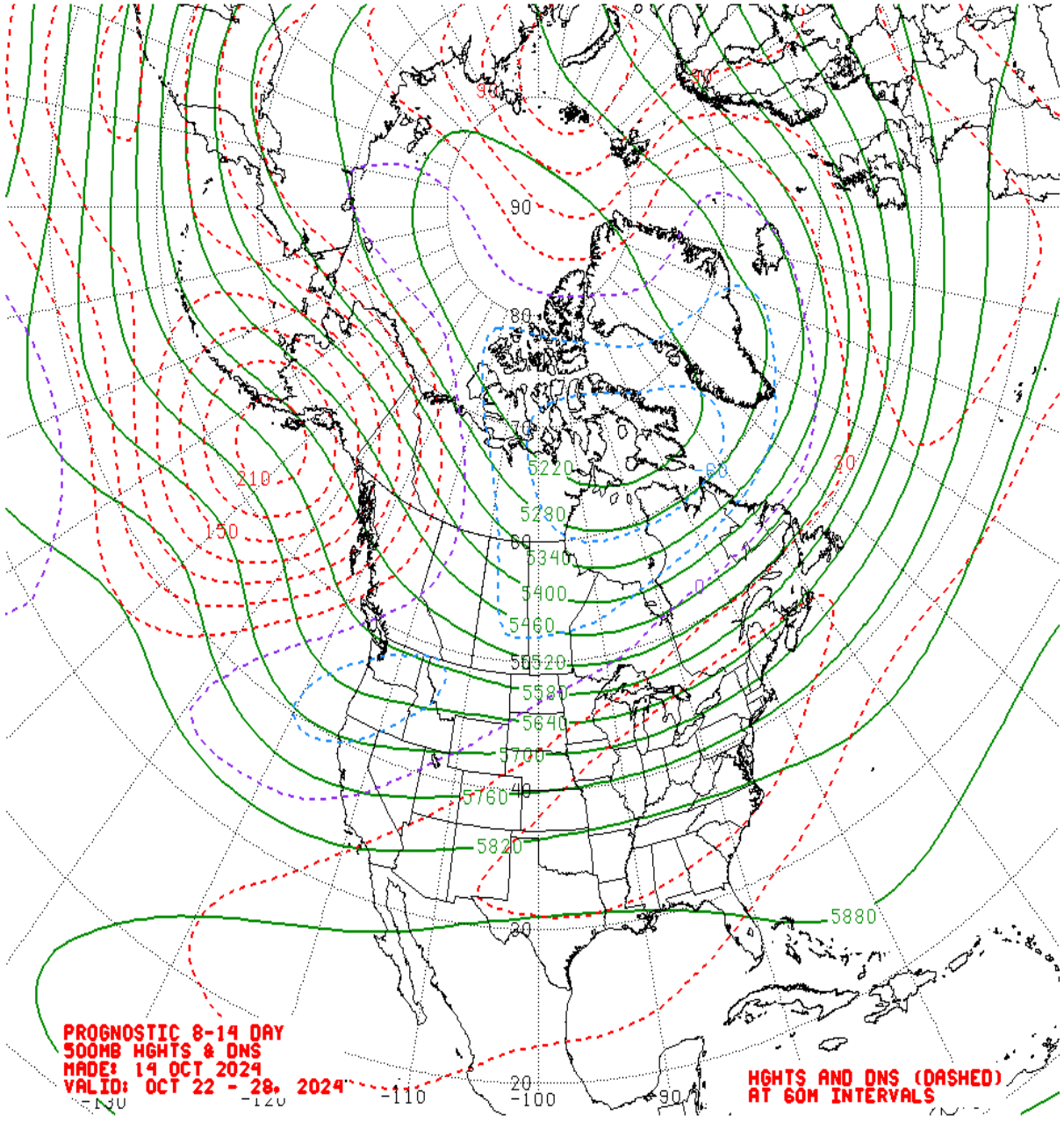


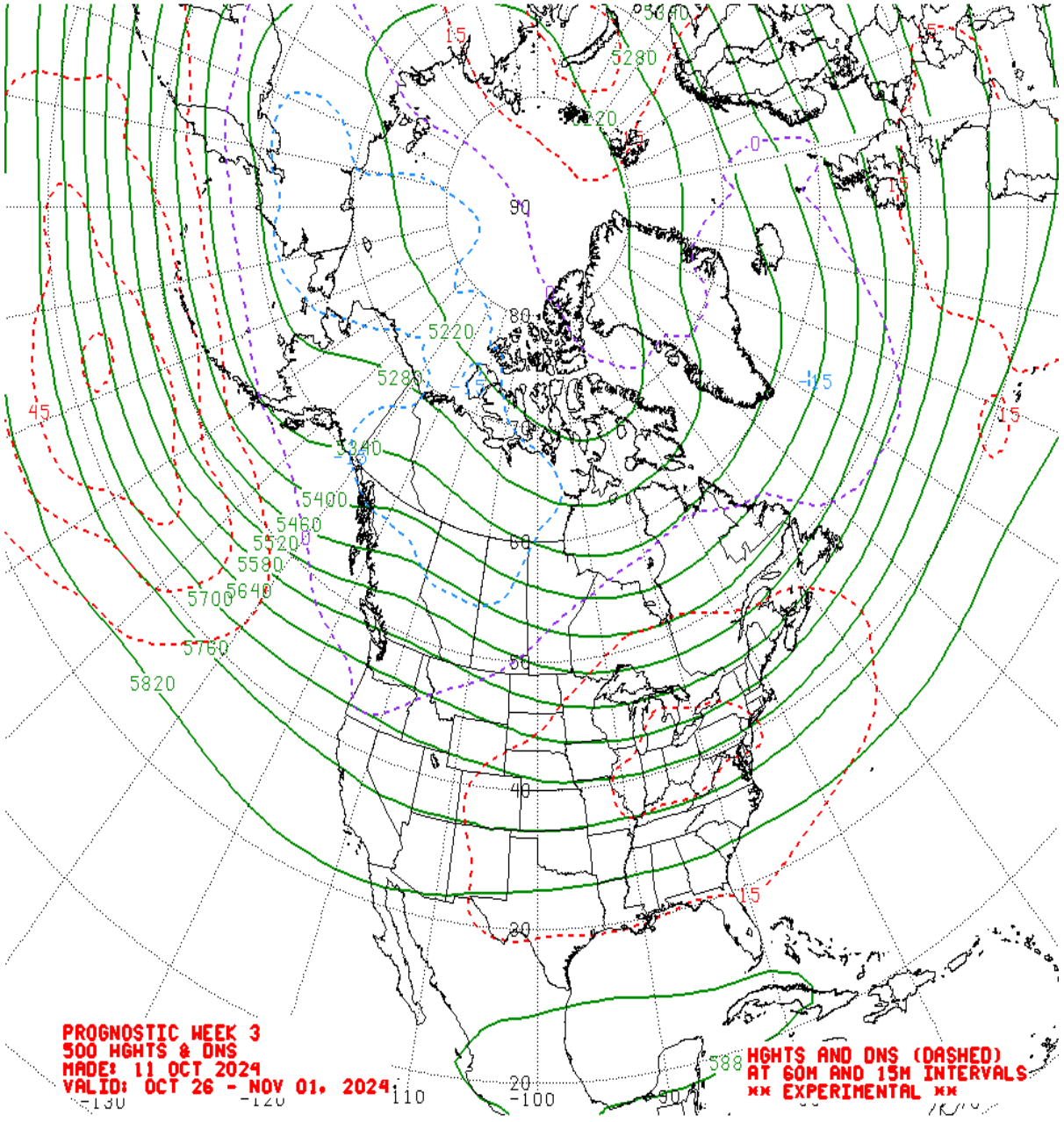




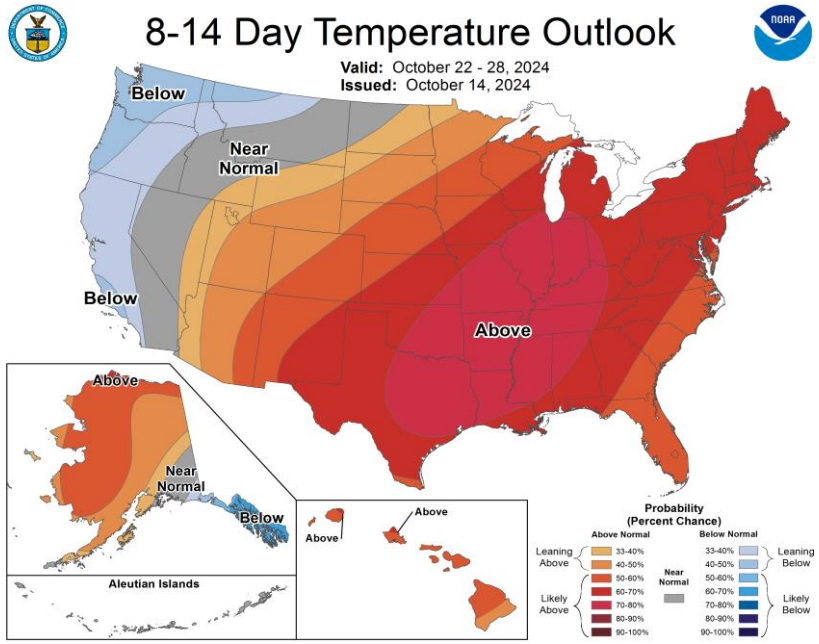


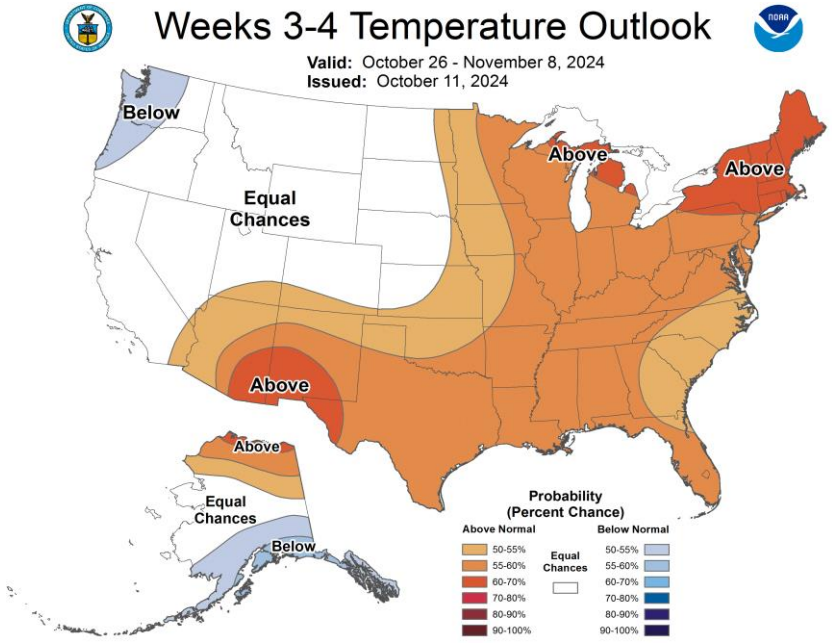
Mean 500-hPa Height Anomaly Forecasts: Weeks 2+3

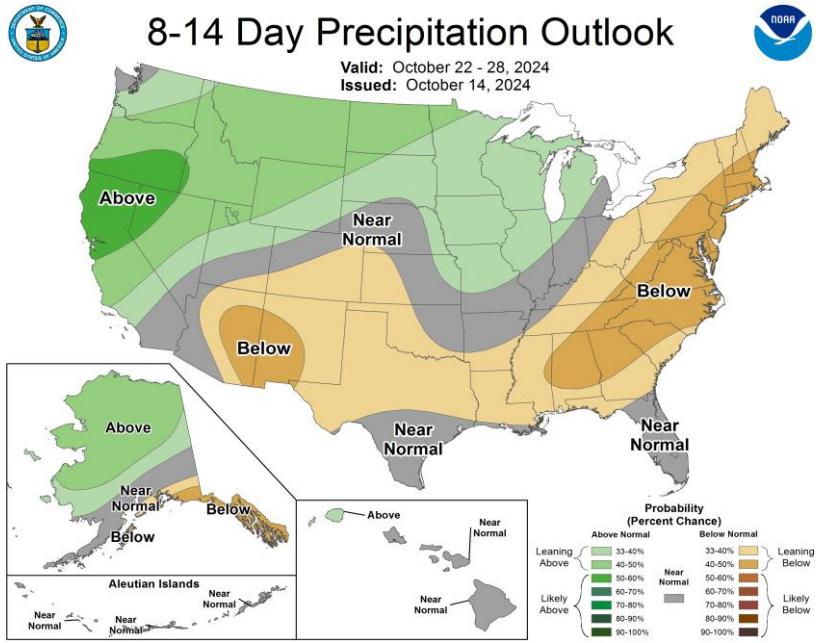


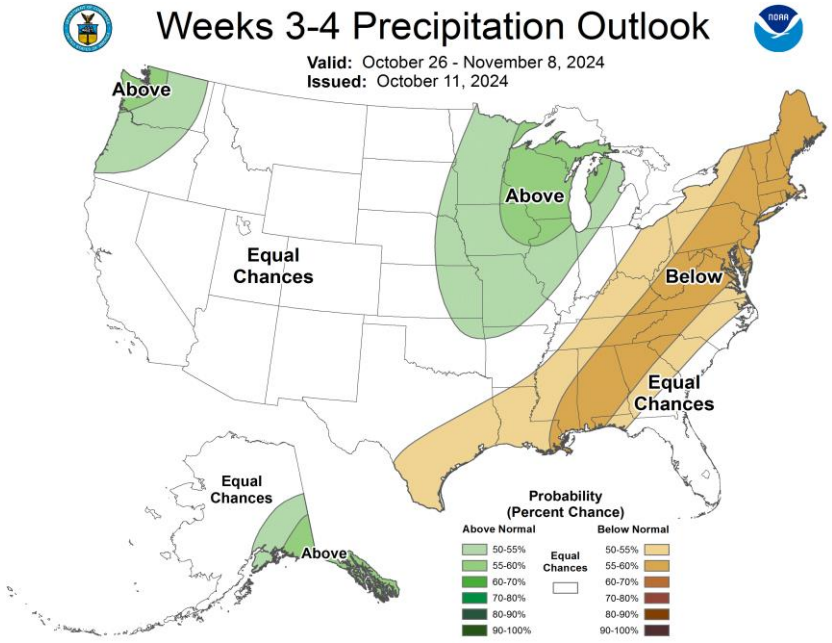


Official Temperature & Precipitation Forecasts:





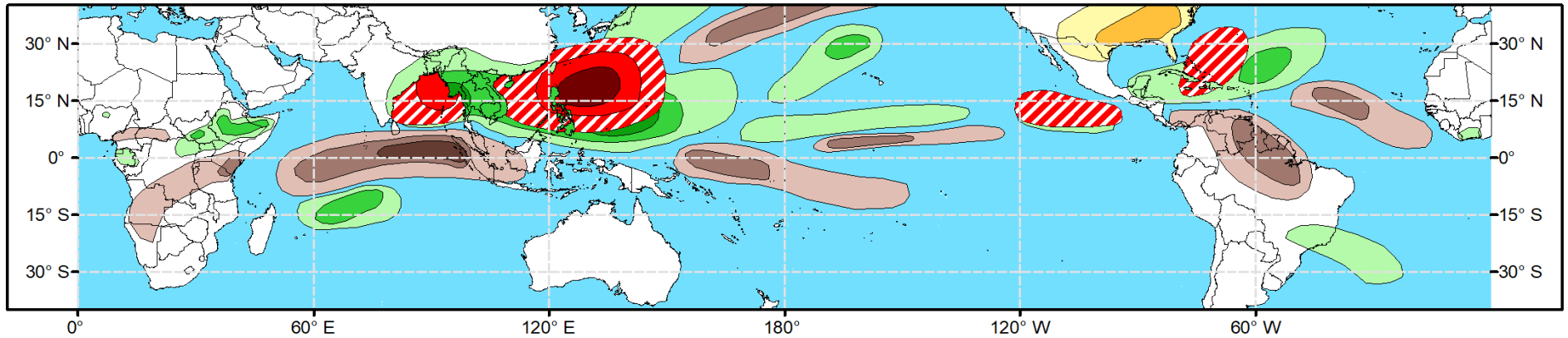




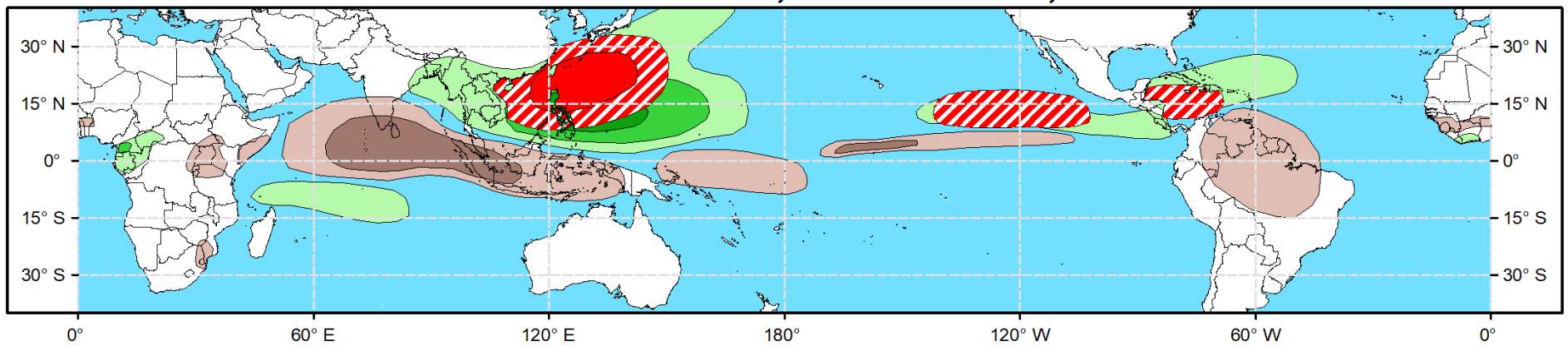
Global Tropics Hazards Outlook

Climate Prediction Center

Week 2 - Valid: Oct 23, 2024 - Oct 29, 2024



Week 3 - Valid: Oct 30, 2024 - Nov 05, 2024



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

Issued: 10/15/2024

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.