

Global Tropics Hazards And Benefits Outlook

7/5/2022

Adam Allgood

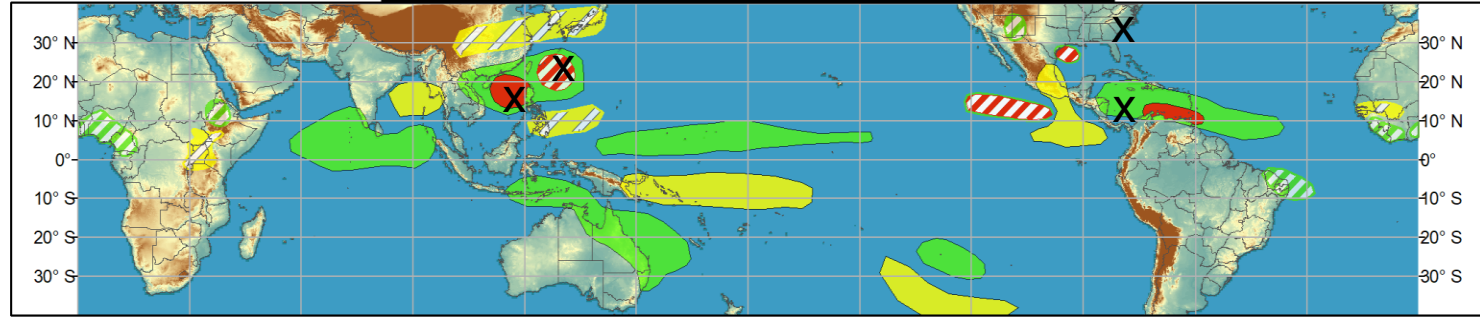
Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

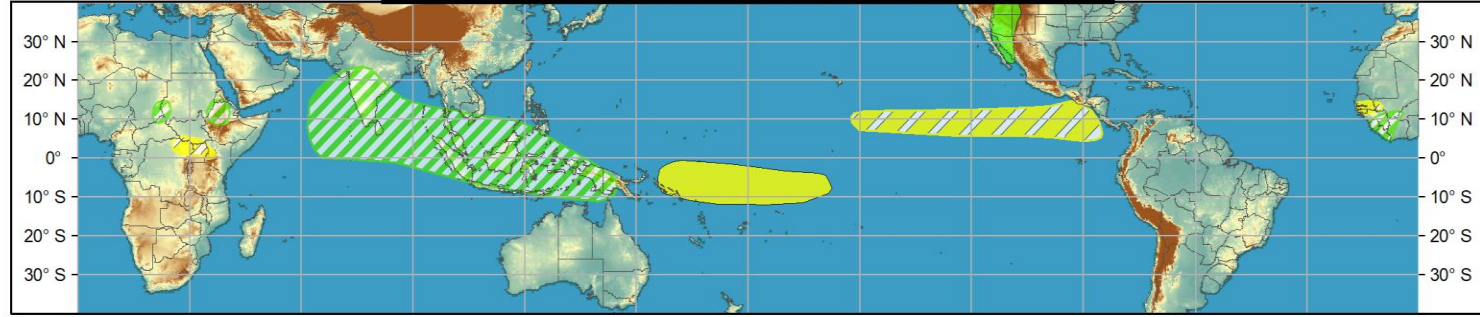
Outlook Review



Week 1 - Valid: Jun 29, 2022 - Jul 05, 2022

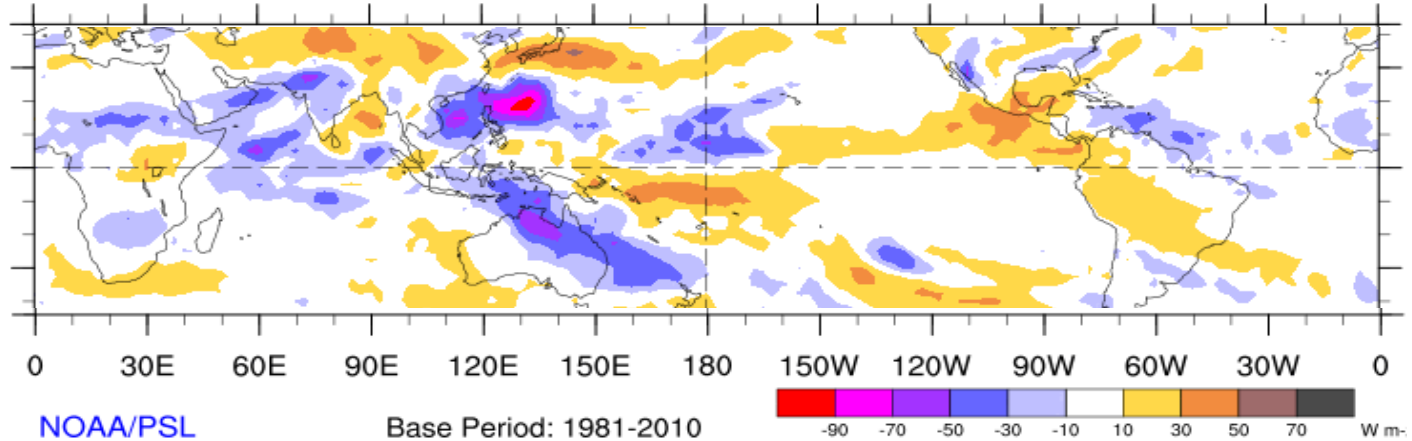


Week 2 - Valid: Jun 29, 2022 - Jul 05, 2022



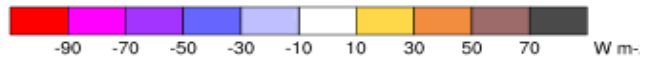
7-Day Average OLR Anomaly

2022/06/27 - 2022/07/03



NOAA/PSL

Base Period: 1981-2010



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (June 9, 2022 Update)

next update on Thursday, July 14th

- ENSO Alert System Status: [La Niña Advisory](#)
- Though La Niña is favored to continue through the end of the year, the odds for La Niña decrease into the Northern Hemisphere late summer (52% chance in July-September 2022) before slightly increasing through the Northern Hemisphere fall and early winter 2022 (58-59% chance)

MJO and other subseasonal tropical variability:

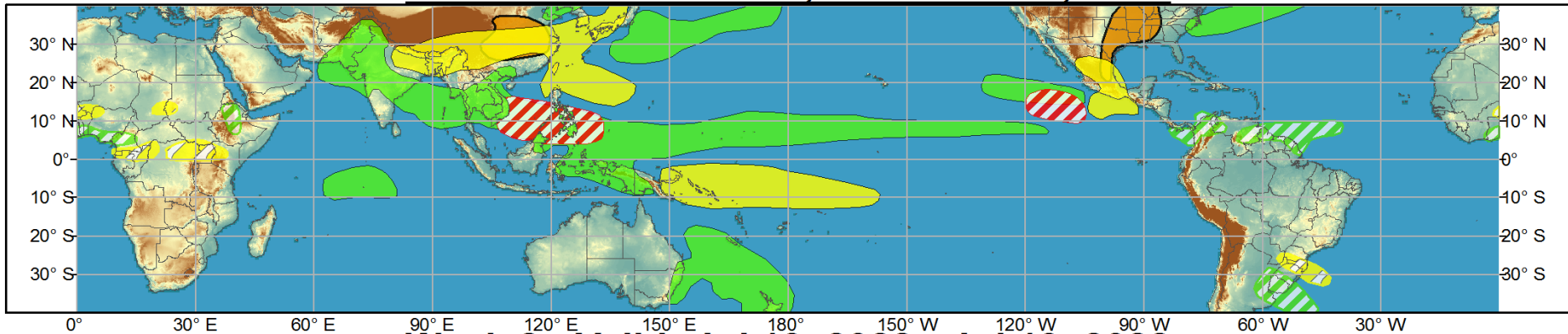
- A more active MJO pattern has become established, with eastward propagation from the Indian Ocean to the Maritime Continent
- High uncertainty regarding future evolution of the signal across the Pacific, as Equatorial Rossby wave and La Niña conditions may interfere with the signal.
- Maritime Continent MJO events are generally associated with reduced TC activity across the Atlantic and East Pacific basins.
- An enhanced monsoon trough extending across the South China Sea and West Pacific may provide favorability for TC genesis.



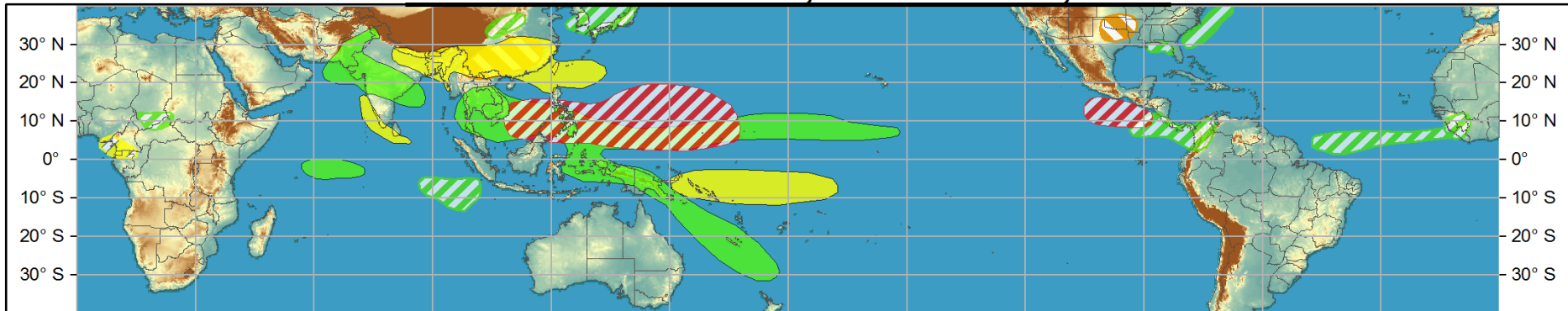
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jul 06, 2022 - Jul 12, 2022



Week 2 - Valid: Jul 13, 2022 - Jul 19, 2022



Produced: 07/05/2022

Forecaster: Allgood

- | | Confidence | | |
|-----------------------------------|------------|----------|--|
| | High | Moderate | |
| Tropical Cyclone Formation | | | Development of a tropical cyclone (tropical depression - TD, or greater strength). |
| Above-average rainfall | | | Weekly total rainfall in the upper third of the historical range. |
| Below-average rainfall | | | Weekly total rainfall in the lower third of the historical range. |
| Above-normal temperatures | | | 7-day mean temperatures in the upper third of the historical range. |
| Below-normal temperatures | | | 7-day mean temperatures in the lower third of the historical range. |

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



IR Satellite & 200-hpa Velocity Potential Anomalies

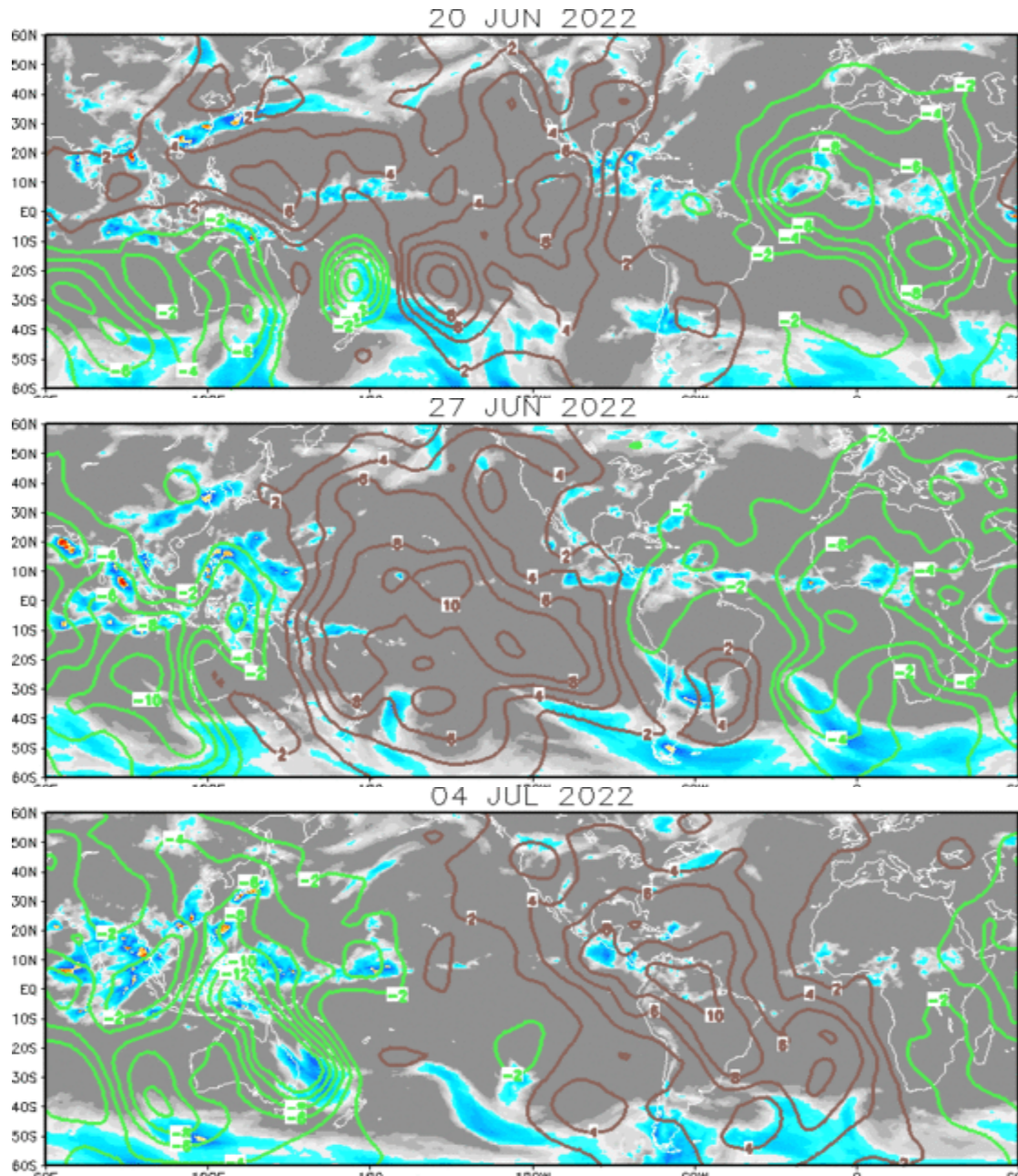
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-1, consistent with ENSO cold.

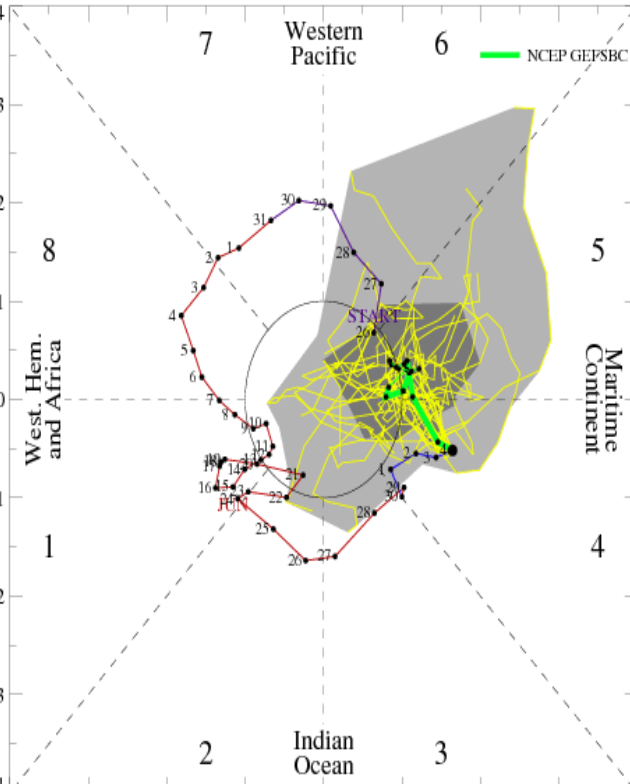
Little eastward propagation was evident through mid to late June.

More recently, eastward propagation has been established.

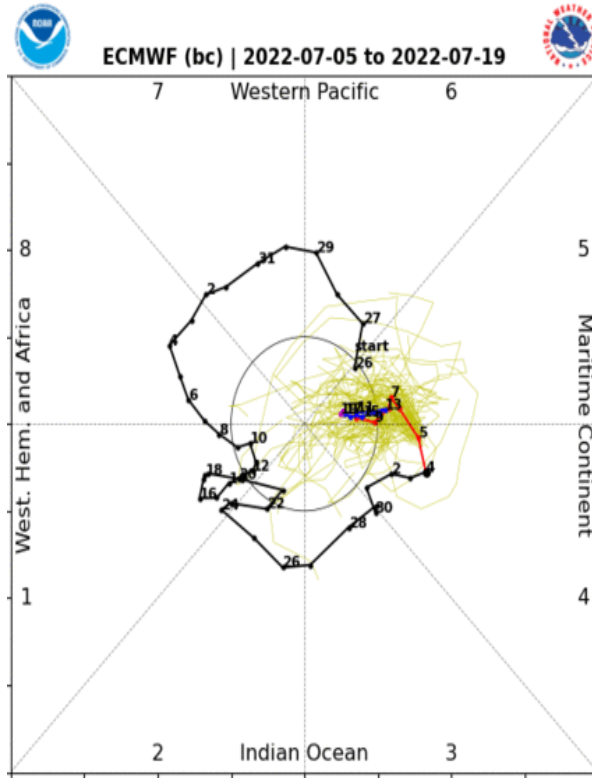


MJO Observation/Forecast

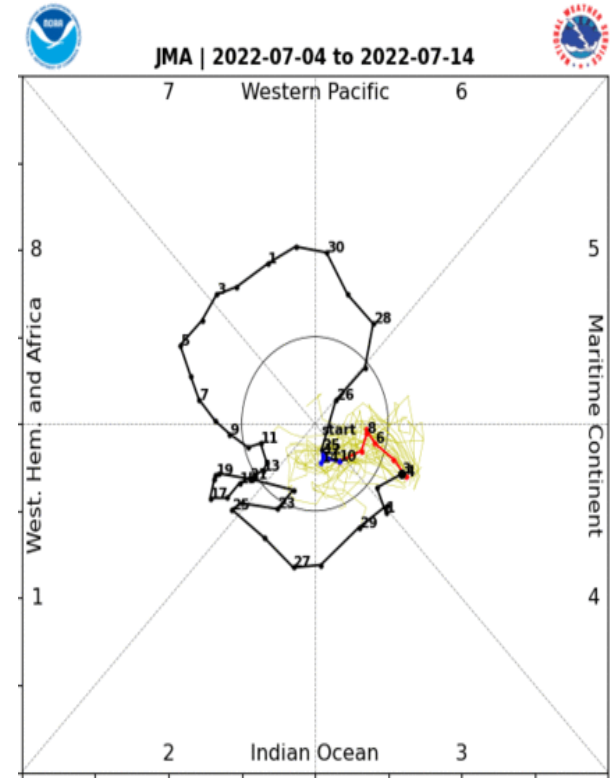
[RMM1, RMM2] forecast for Jul-05-2022 to Jul-19-2022



GEFS



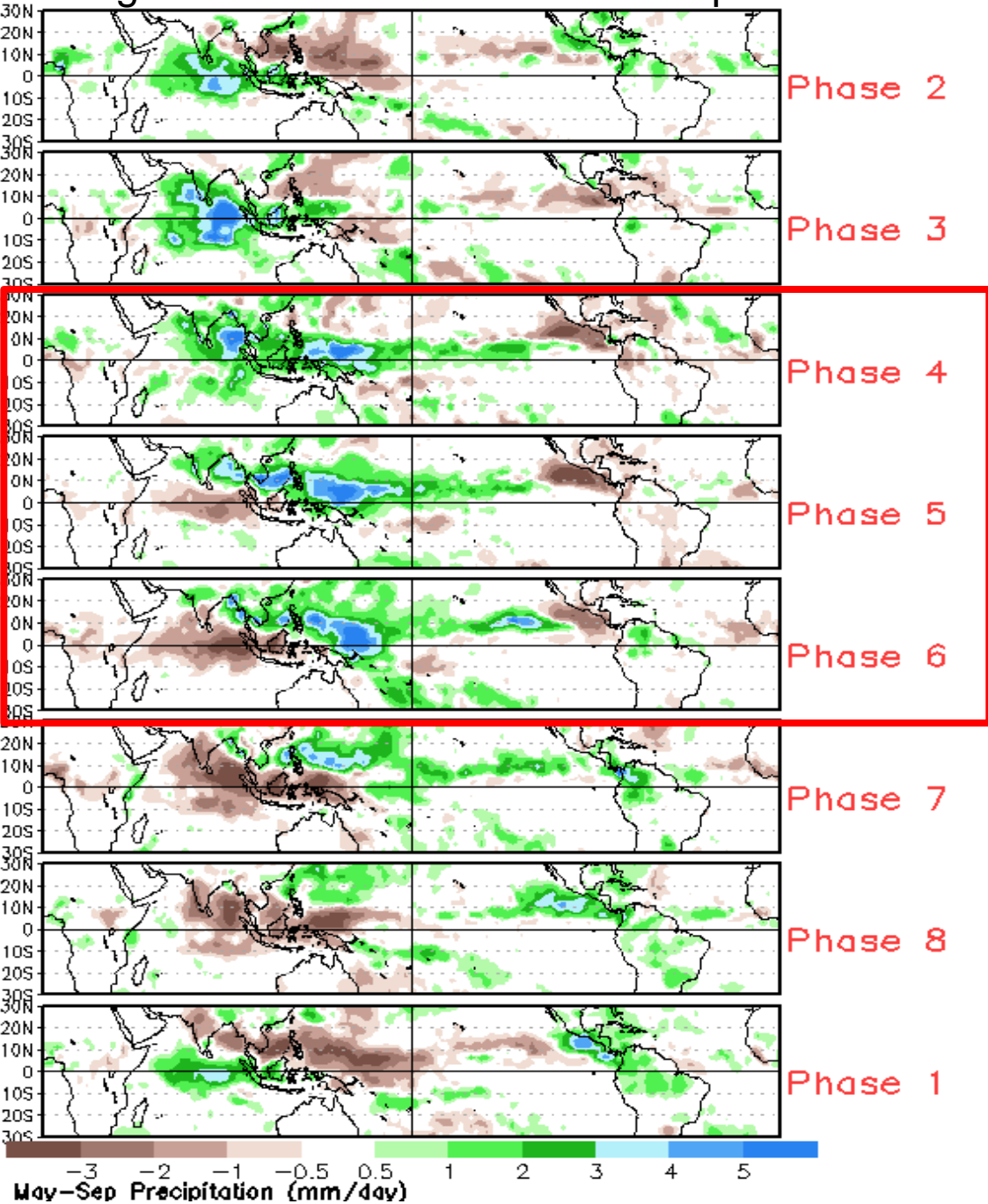
ECMWF



JMA

Some GEFS and ECMWF ensemble members show propagation to the West Pacific. Others, however, stall the signal over the Maritime Continent (base state interference) or take a hard “left turn” into the unit circle (Rossby wave interference)

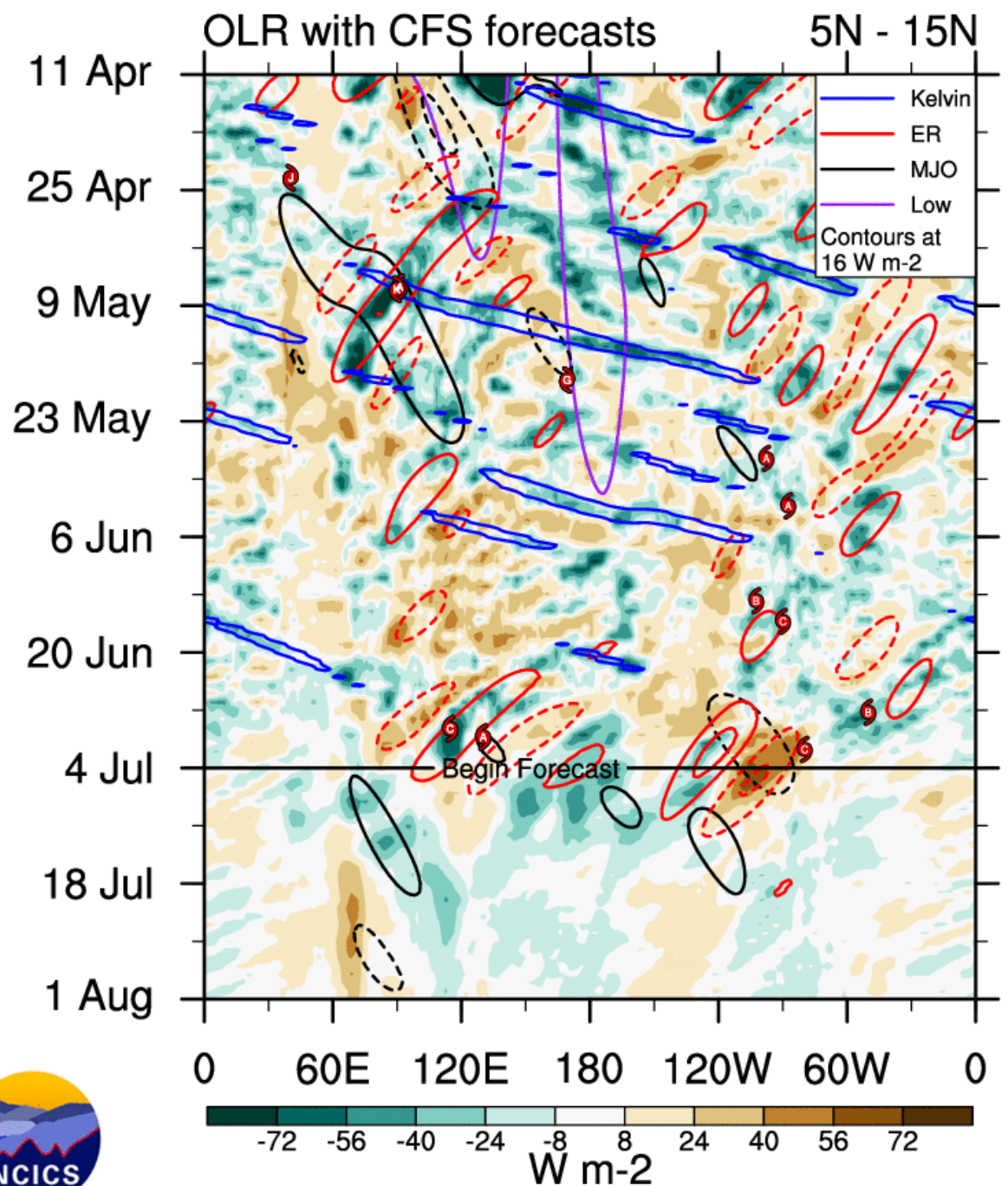
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

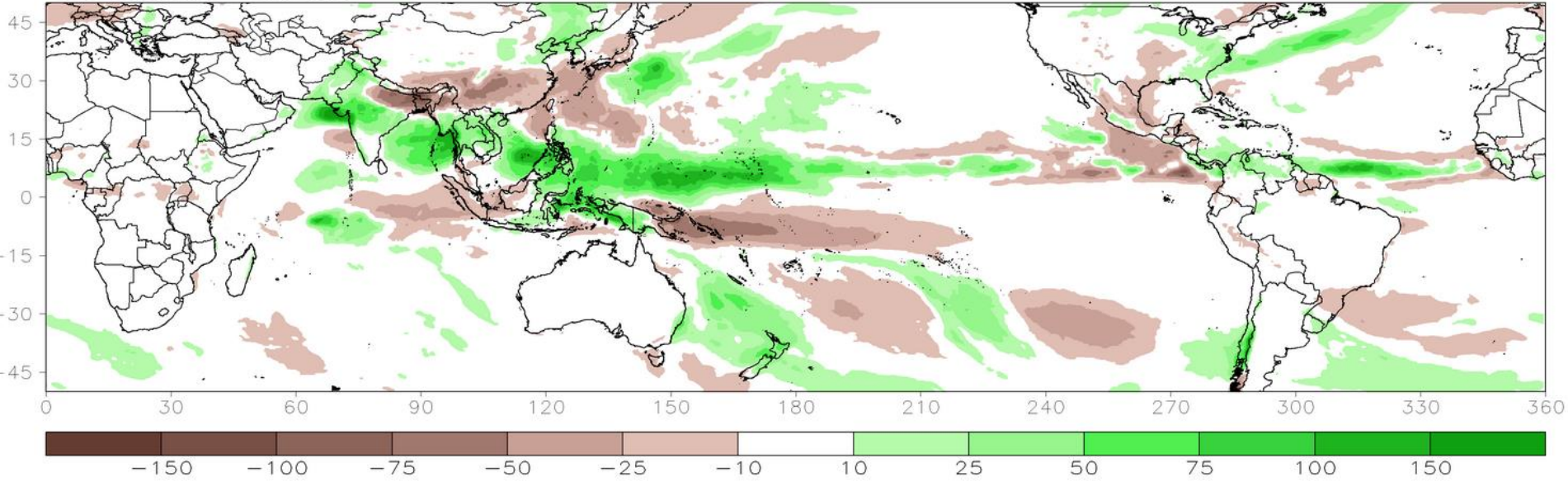
MJO activity is not coming through the filtering despite a clear signal in the upper-level VP field.

Rossby wave activity is apparent over the Maritime Continent and West Pacific.



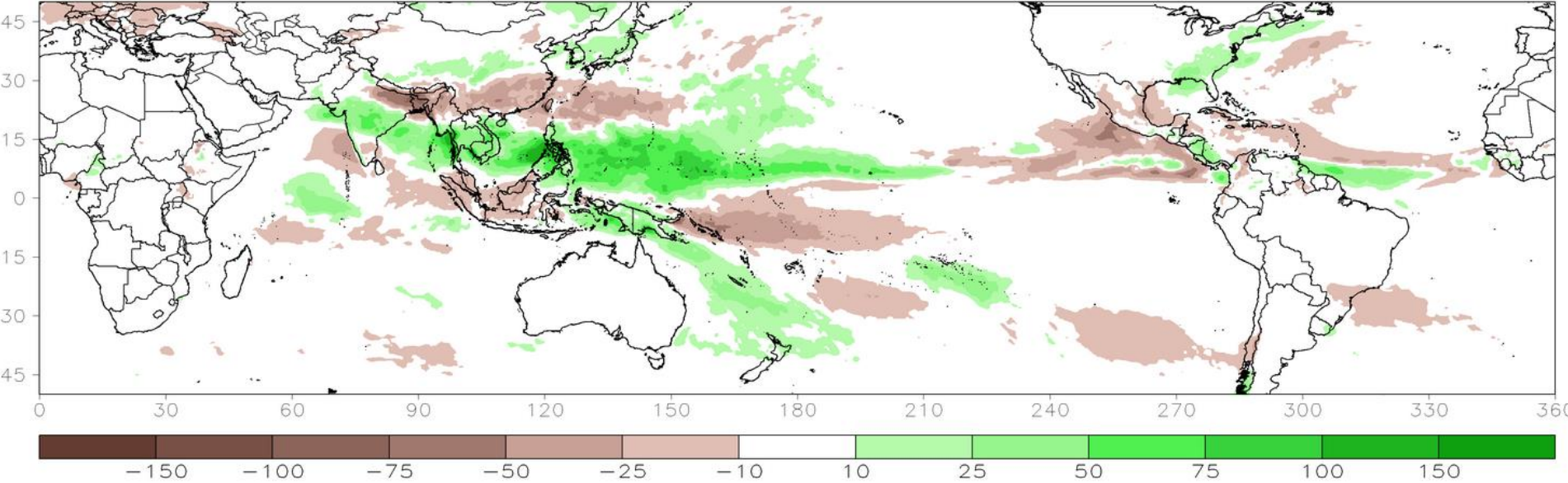
GEFSv12 00z Ensemble Mean: Week1 Total Rainfall Anomaly (mm)

Valid: 06Jul2022-12Jul2022



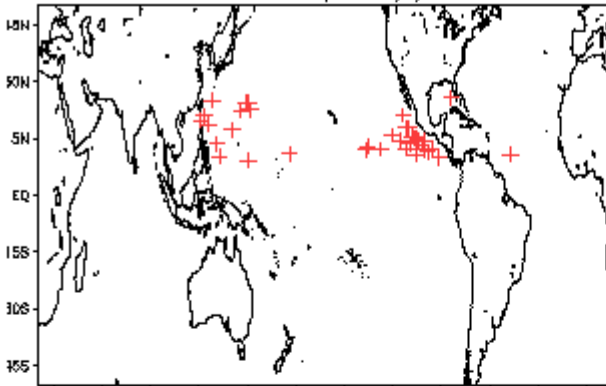
GEFSv12 00z Ensemble Mean: Week2 Total Rainfall Anomaly (mm)

Valid: 13Jul2022-19Jul2022

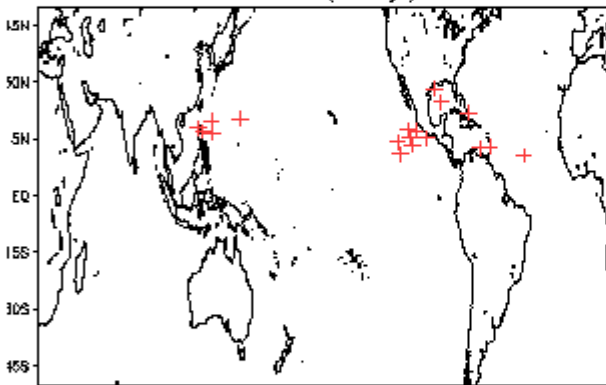


July Tropical Storm Formation by MJO phase

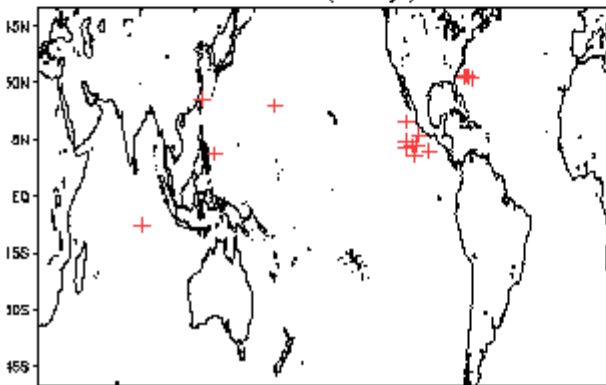
Phase 1 (144 days) 37 storms



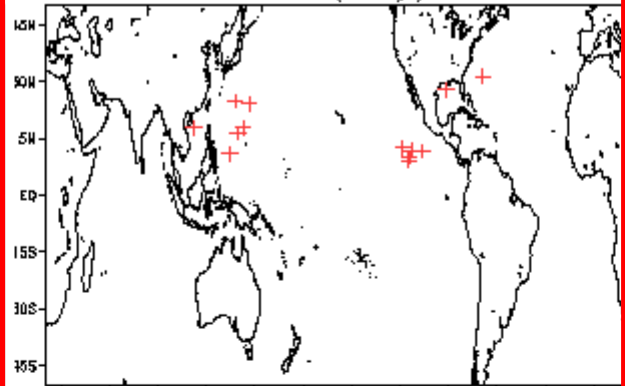
Phase 2 (74 days) 20 storms



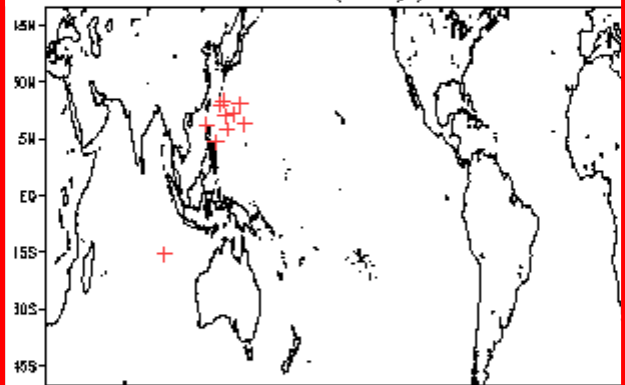
Phase 3 (49 days) 17 storms



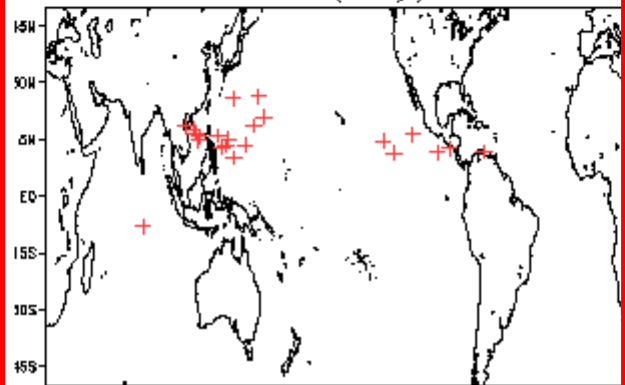
Phase 4 (40 days) 14 storms



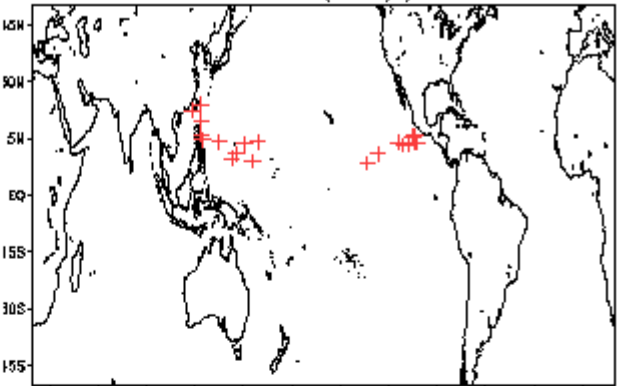
Phase 5 (63 days) 11 storms



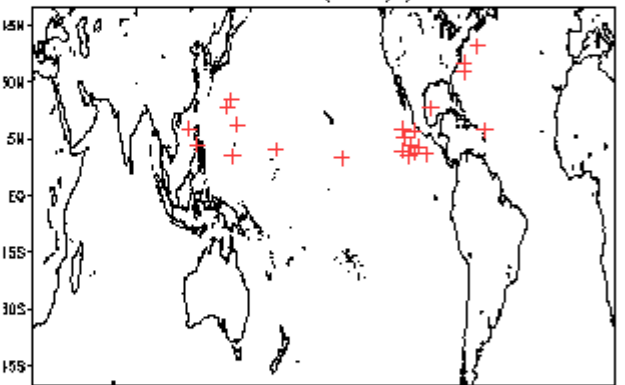
Phase 6 (60 days) 23 storms



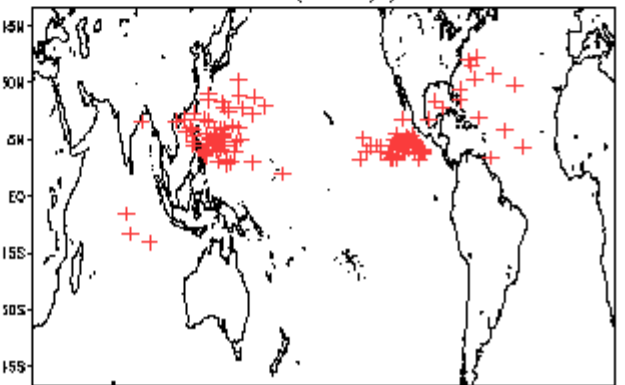
Phase 7 (87 days) 21 storms



Phase 8 (61 days) 24 storms



Null (480 days) 130 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



2:00 pm EDT
Tue Jul 5 2022

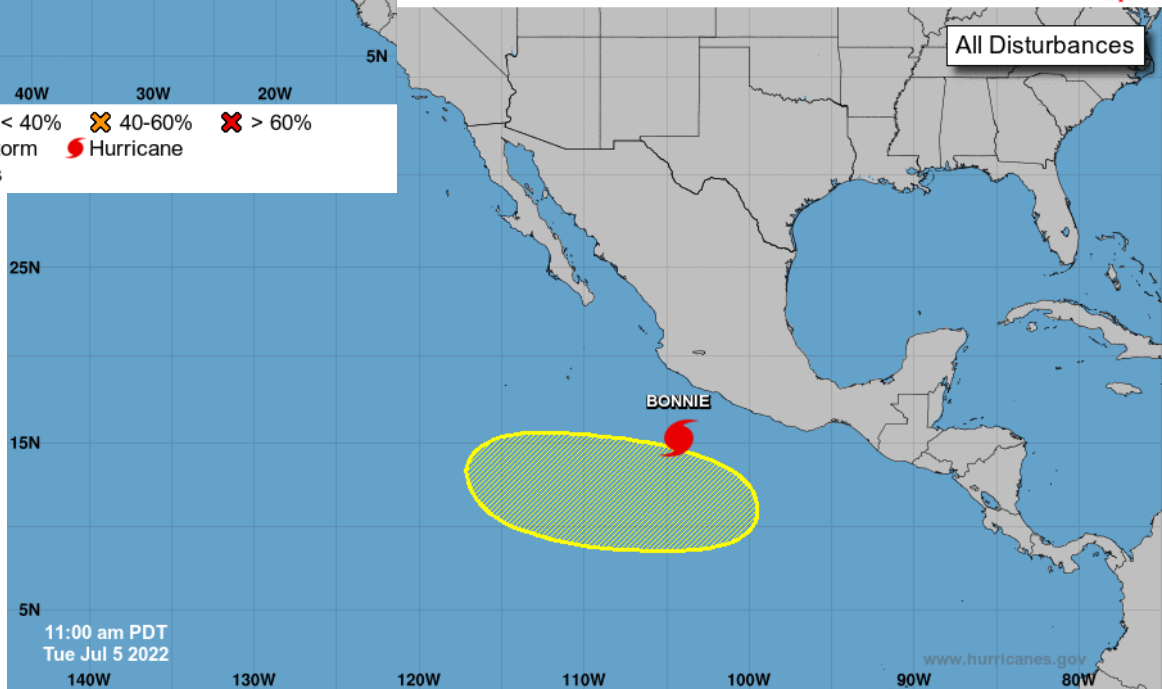
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



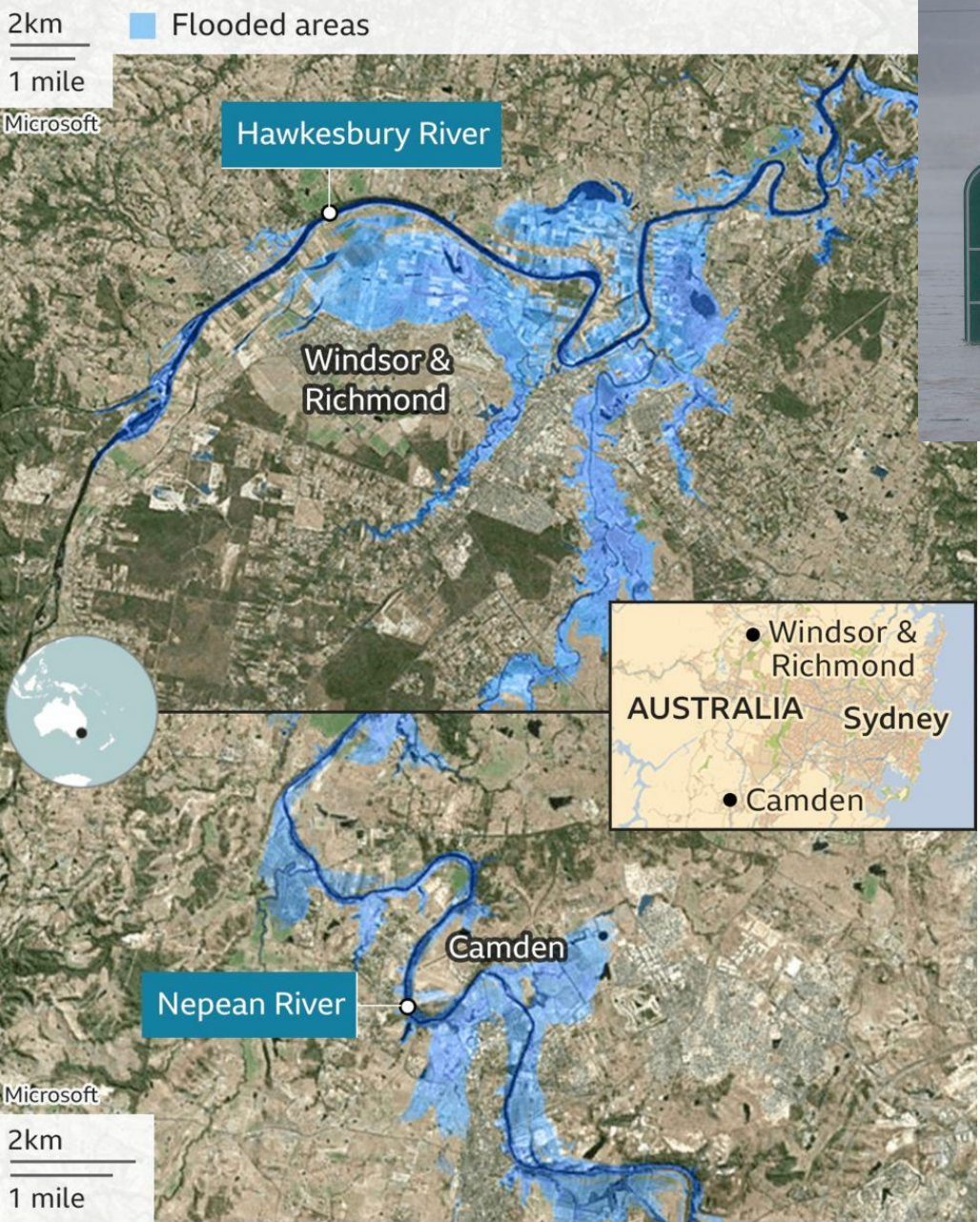
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Rainfall causes flooding in Sydney suburbs

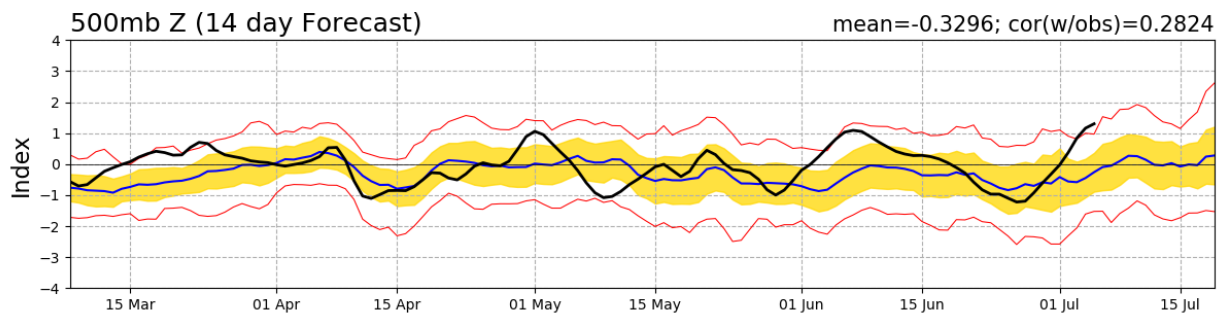
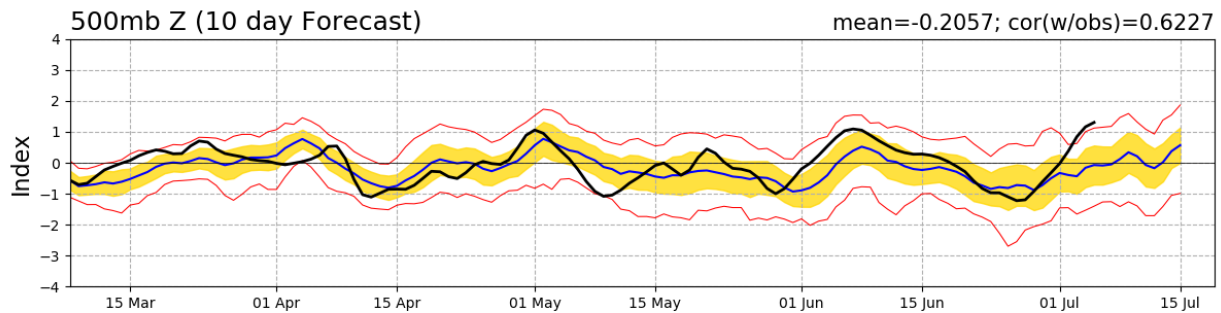
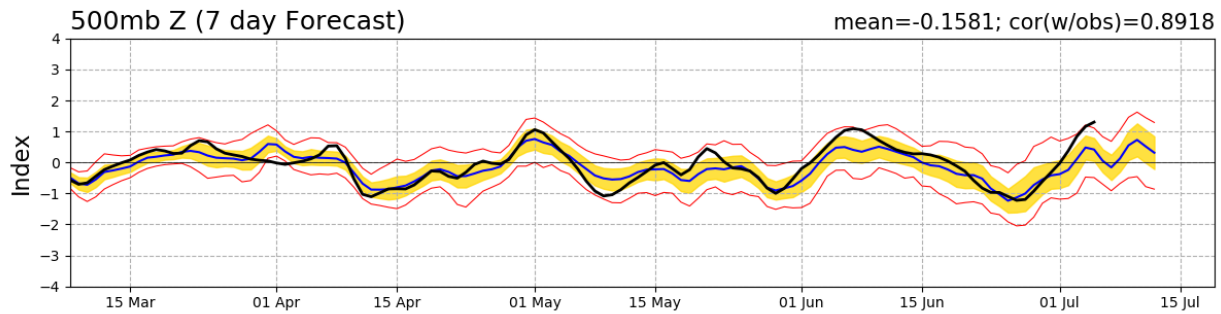
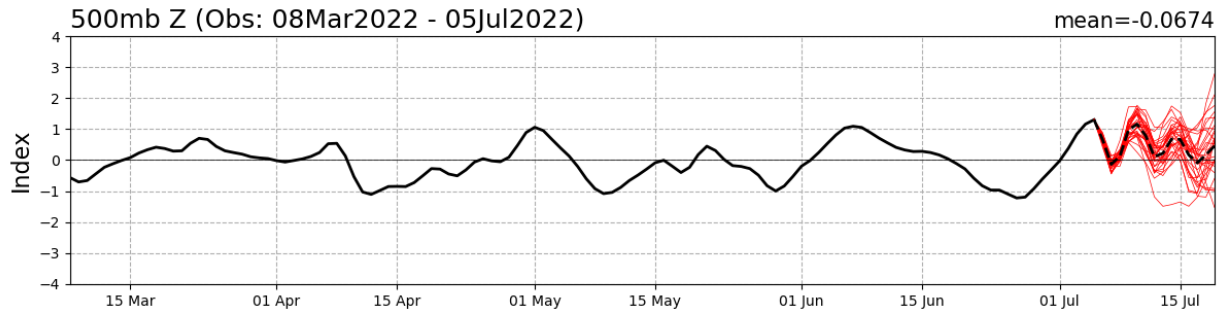
Satellite analysis shows extent of flooding



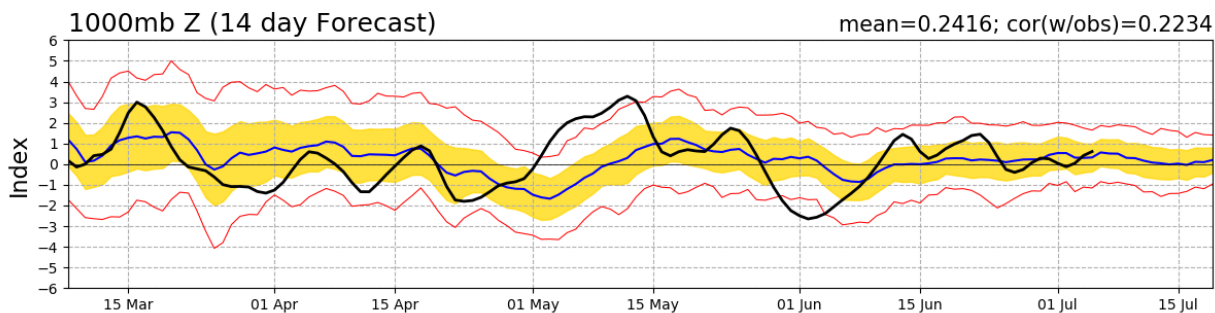
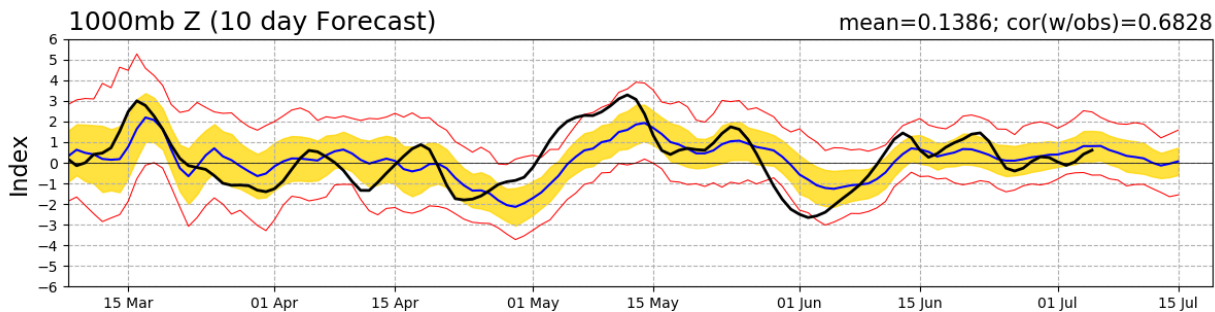
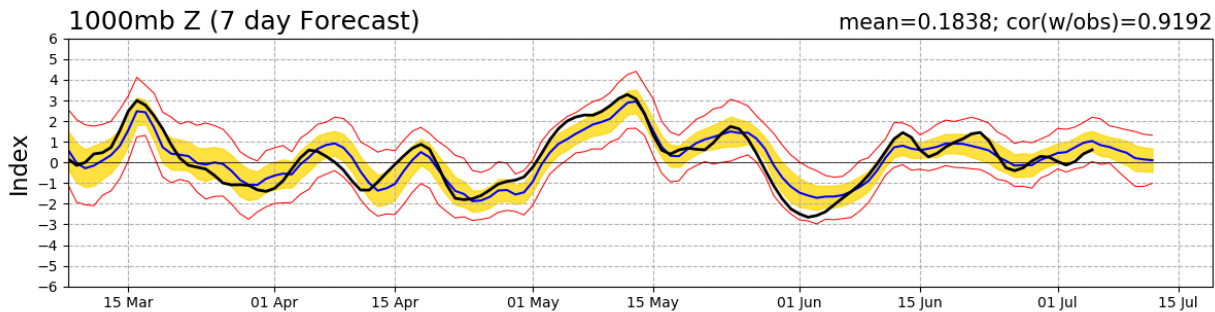
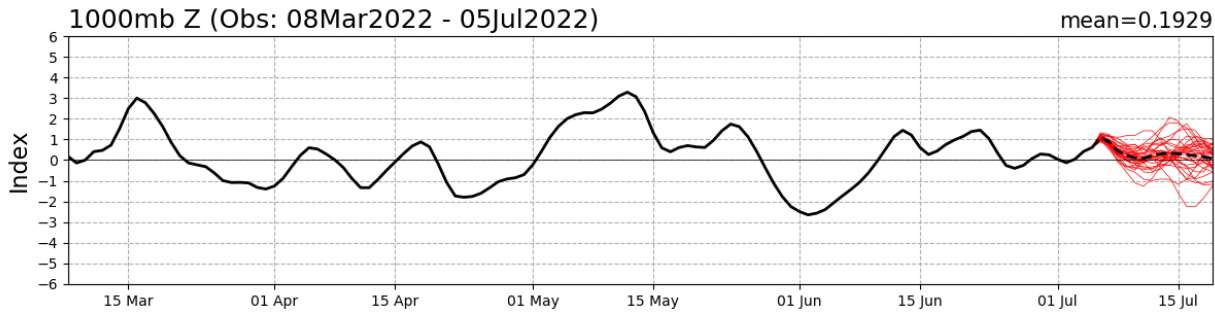
Source: ICEYE, 4 July

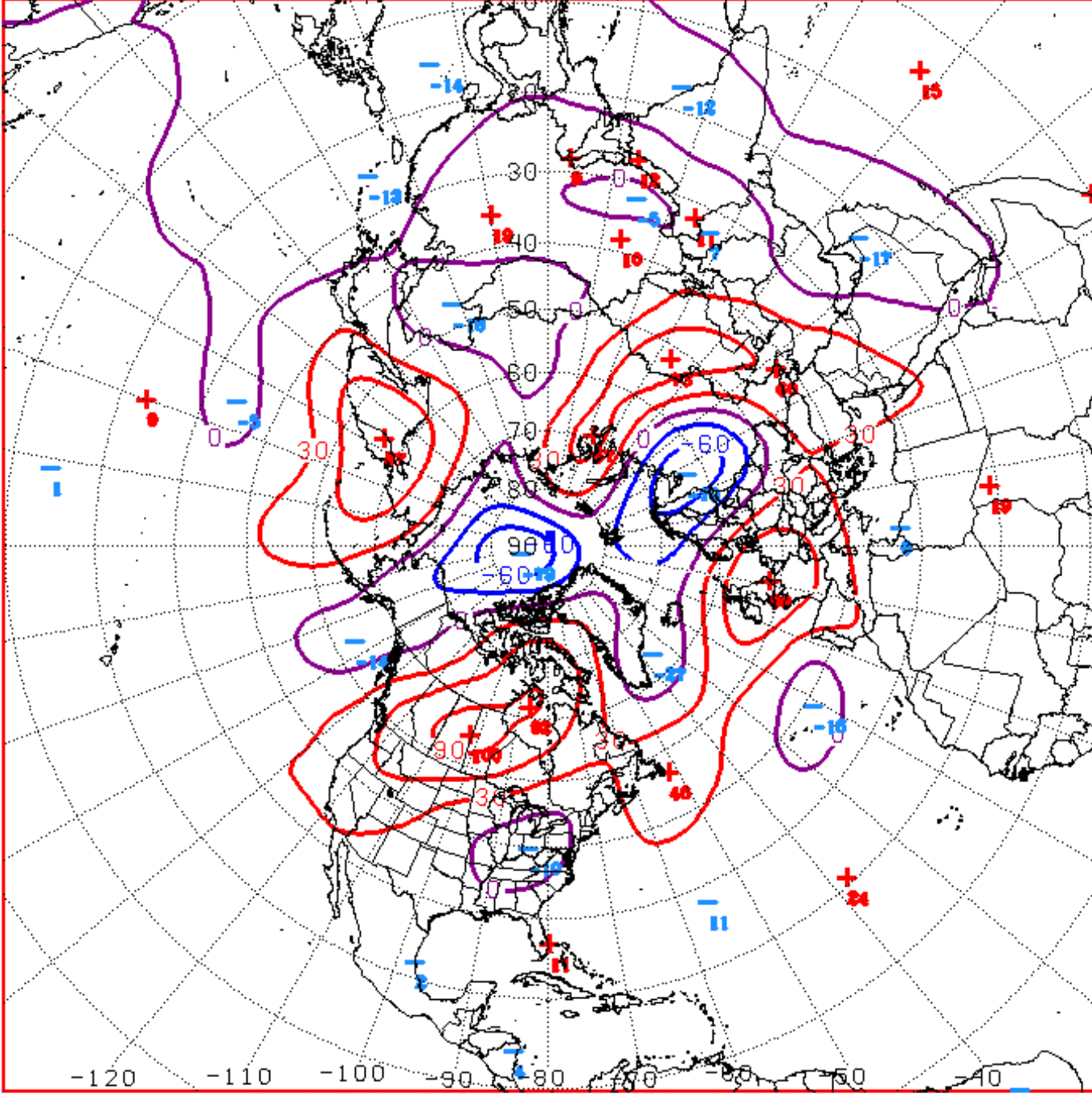
Connections to U.S. Impacts

PNA Index: Observed & GEFS Forecasts



AO Index: Observed & GEFS Forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE JUL 05 2022 1349 UTC CNTD JUL 16 2022

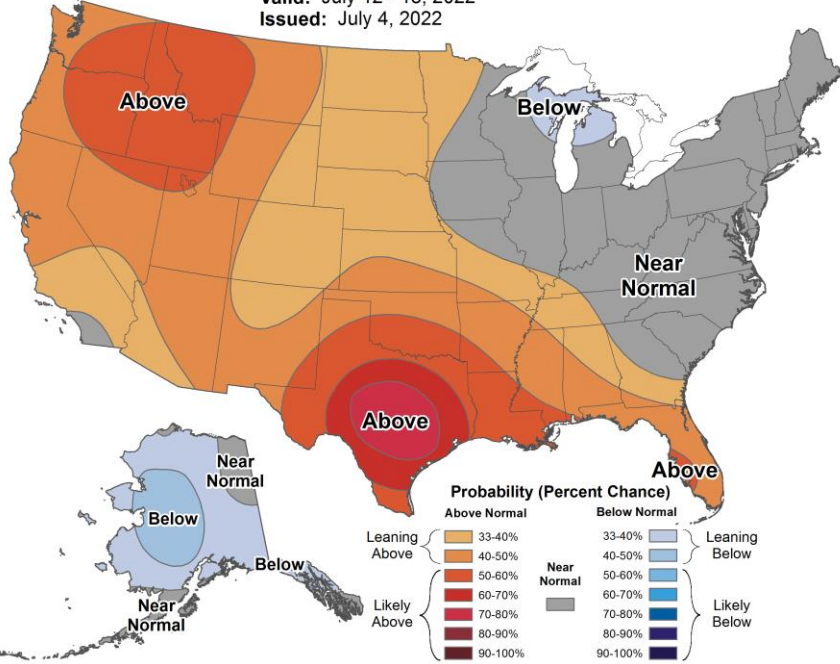
Week 2 – Temperature and Precipitation



8-14 Day Temperature Outlook



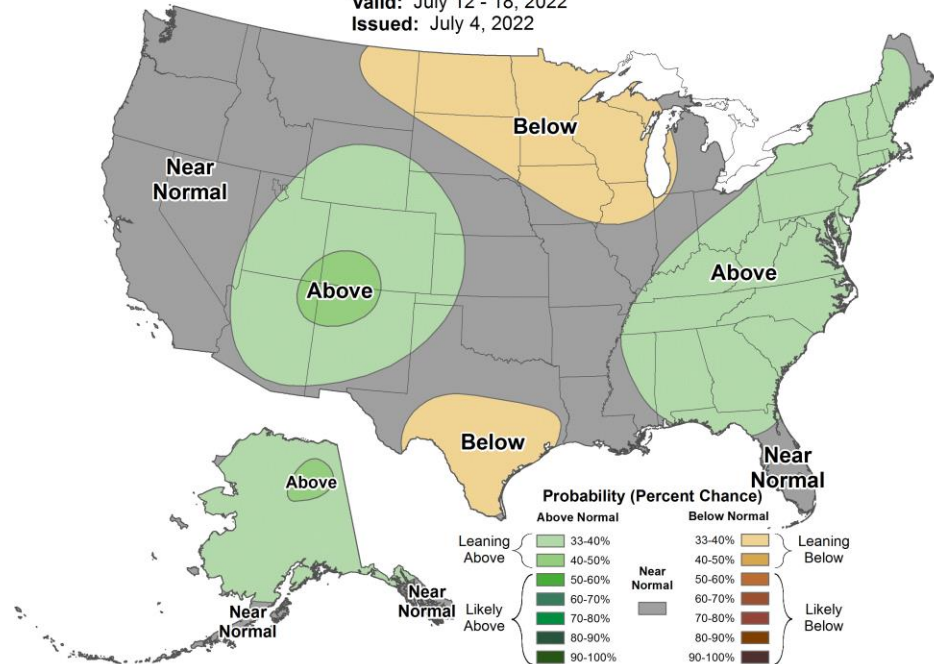
Valid: July 12 - 18, 2022
 Issued: July 4, 2022



8-14 Day Precipitation Outlook



Valid: July 12 - 18, 2022
 Issued: July 4, 2022

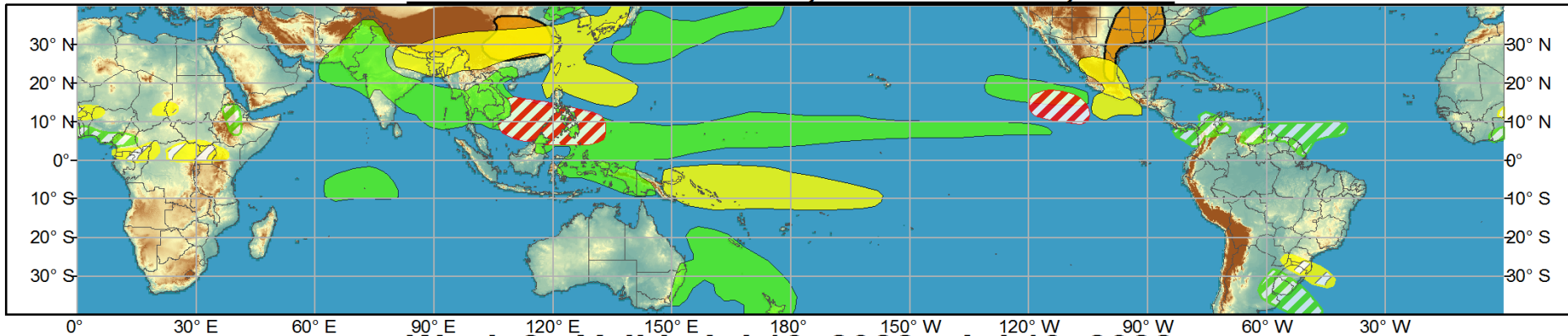




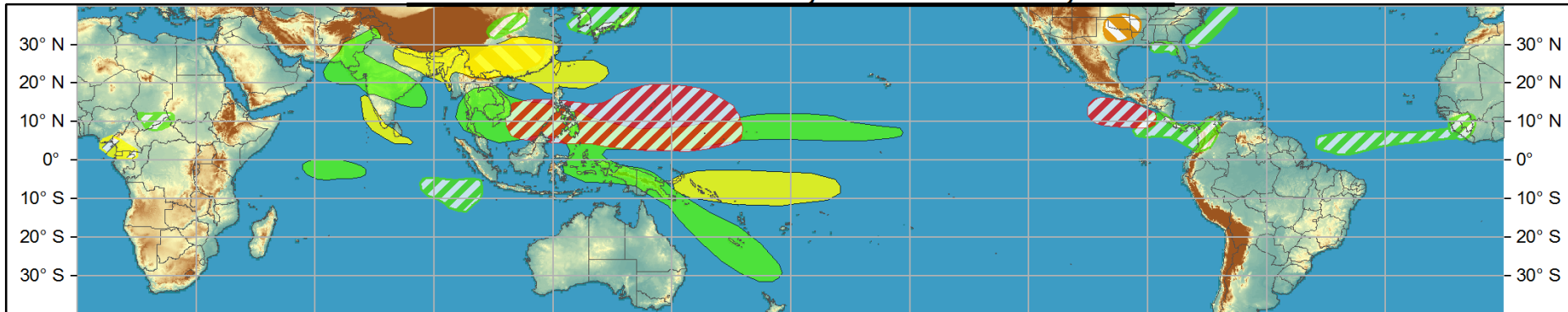
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