

Global Tropics Hazards And Benefits Outlook

6/1/2021

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

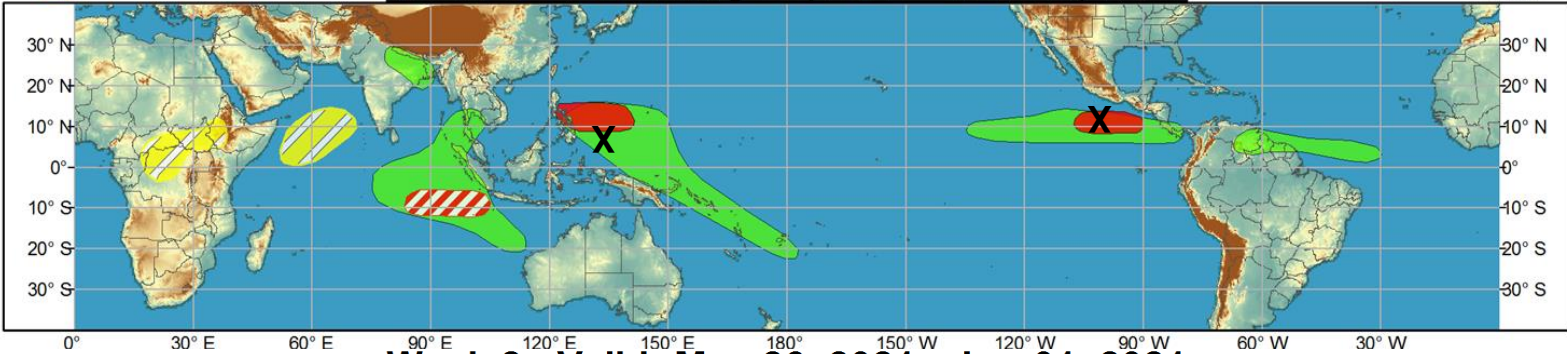
Outlook Review



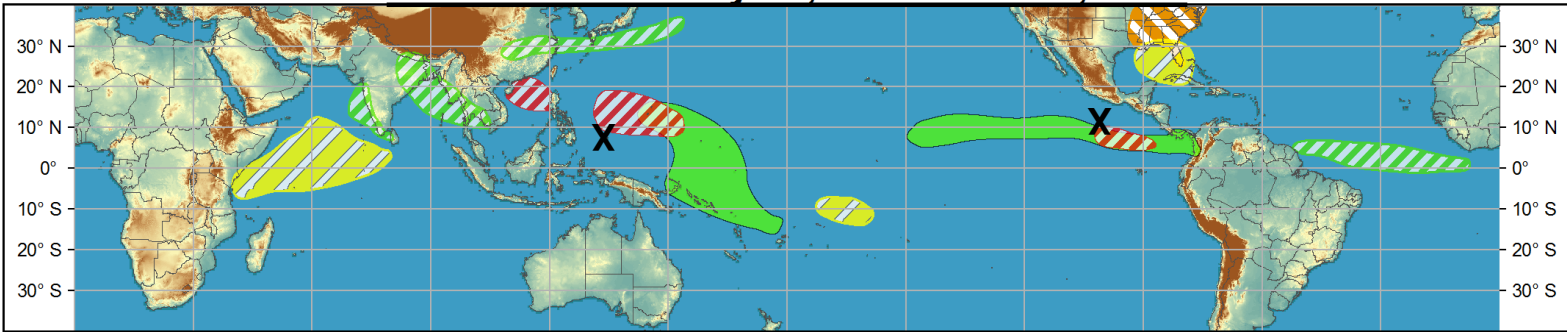
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: May 26, 2021 - Jun 01, 2021



Week 2 - Valid: May 26, 2021 - Jun 01, 2021

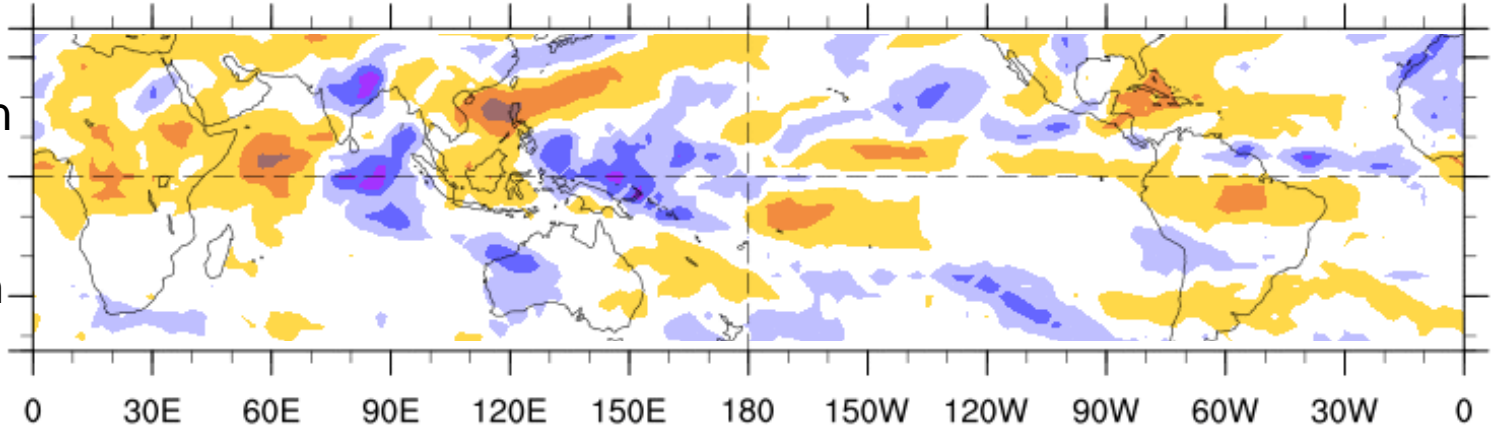


7-Day Average OLR Anomaly

2021/05/24 - 2021/05/30

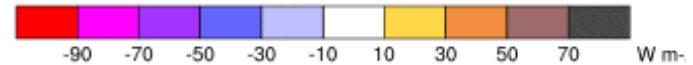
Cool shading
More clouds/rain

Warm shading
Less clouds/rain



NOAA/PSL

Base Period: 1981-2010



Synopsis of Climate Modes

ENSO: (September 10, 2020 Update)

next update on 10th of June!

- ENSO Alert System Status: [Final La Niña Advisory](#)
- La Niña has ended, with ENSO-neutral likely to continue through the Northern Hemisphere summer (67% chance in June-August 2021).

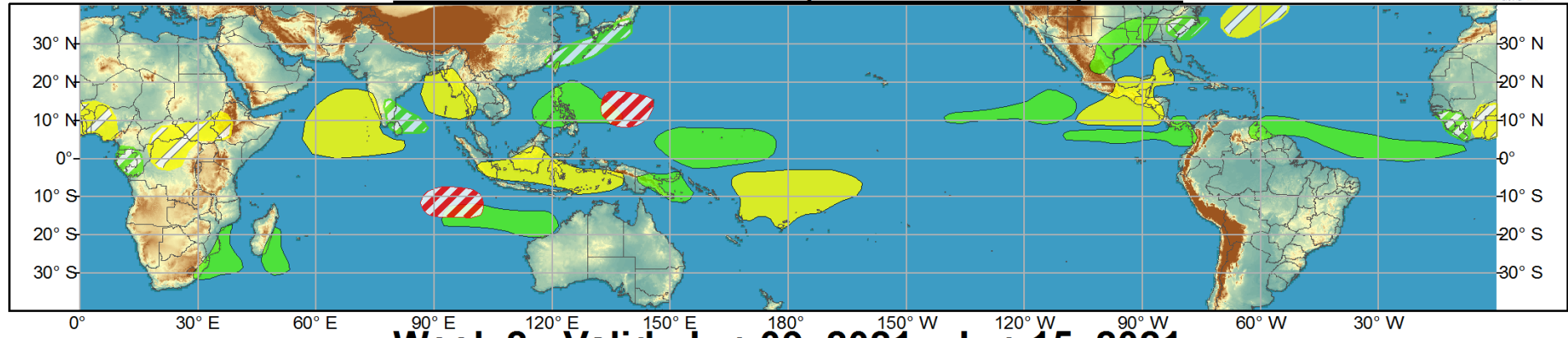
MJO and other subseasonal tropical variability:

- The MJO propagated from the Maritime Continent to the West Pacific.
- Rossby wave activity over the West Pacific is interfering with the signal, and may help promote TC formations over the Northwest Pacific and Southeast Indian Oceans.
- Dynamical model MJO index forecasts depict renewed fast eastward propagation of the MJO index over the Western Hemisphere during Week-2, possible Kelvin wave projection.
- Given the MJO forecast, both the East Pacific and Atlantic basins may become more favorable for development during Week-2. There is a moderate potential for development over the western Caribbean Sea.

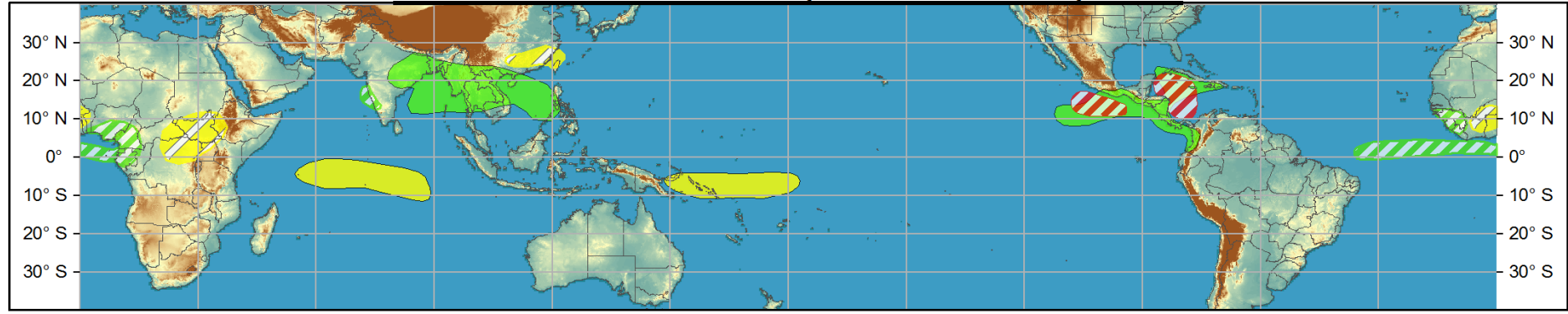


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 02, 2021 - Jun 08, 2021



Week 2 - Valid: Jun 09, 2021 - Jun 15, 2021



Produced: 06/01/2021
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

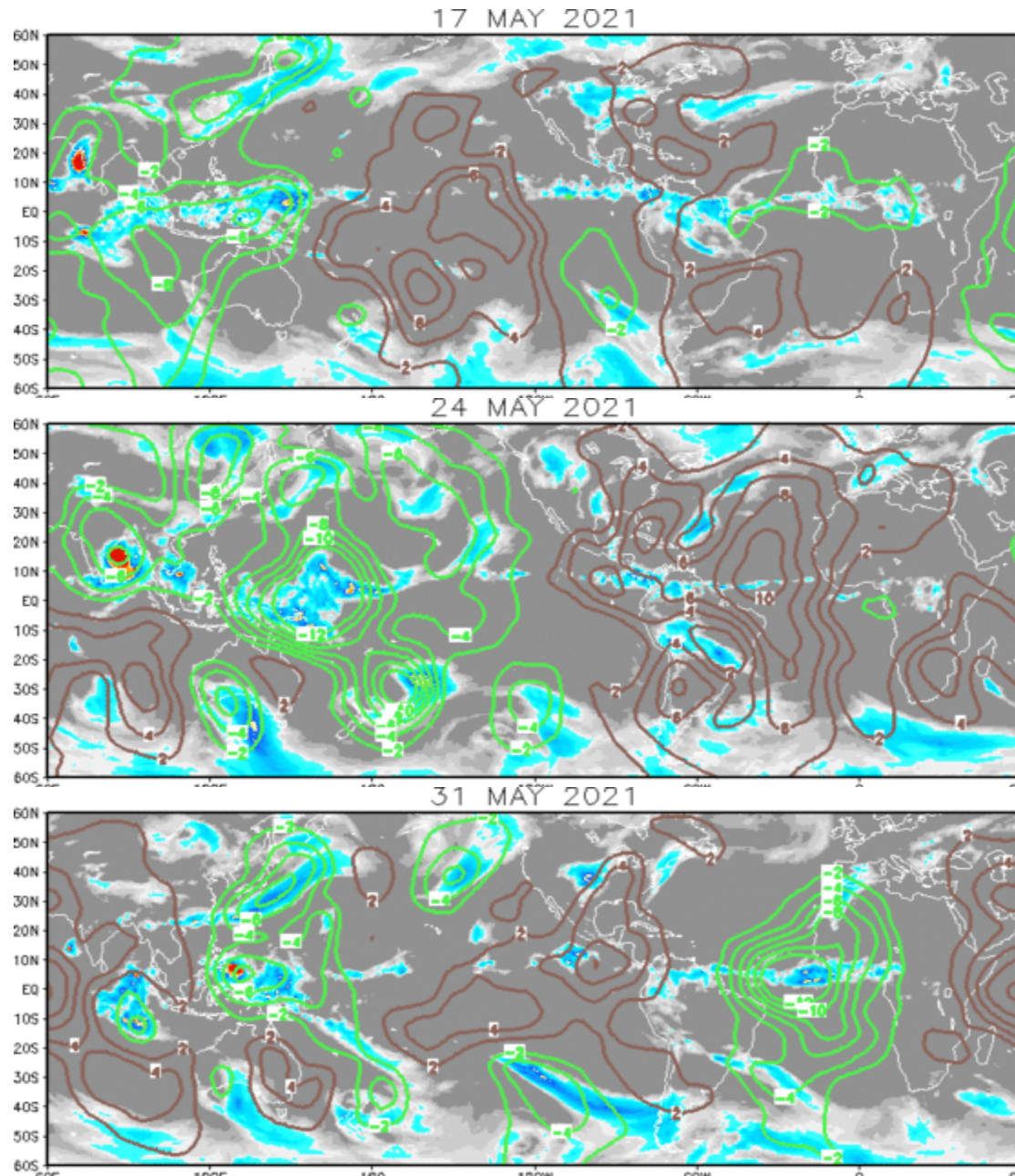
Green: Enhanced Divergence

Brown: Enhanced Convergence

Generally Wave-1 structure, with enhanced phase over the Indian Ocean

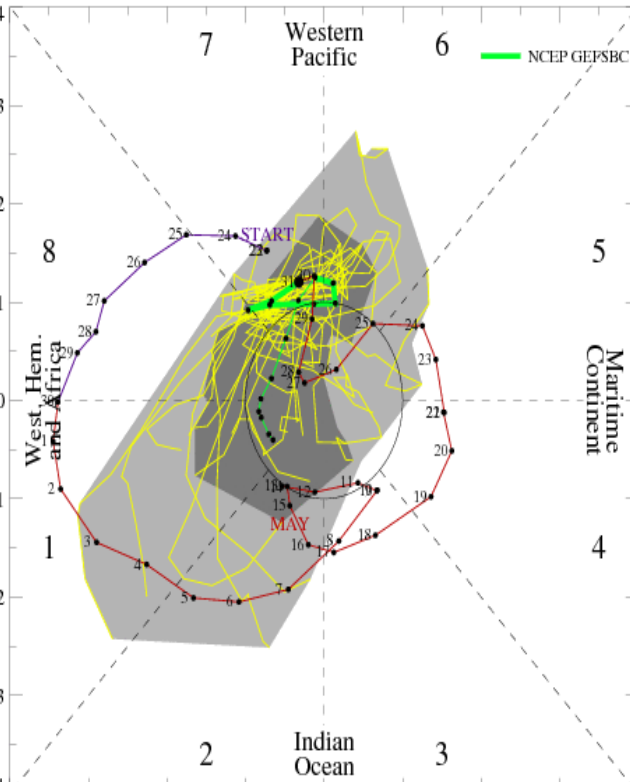
Bay of Bengal TC formation aided by MJO as the enhanced phase moved across the Maritime Continent.

Wave-2 asymmetry as a strong Kelvin wave approaches Africa and Rossby waves interfere with the Pacific enhanced phase.

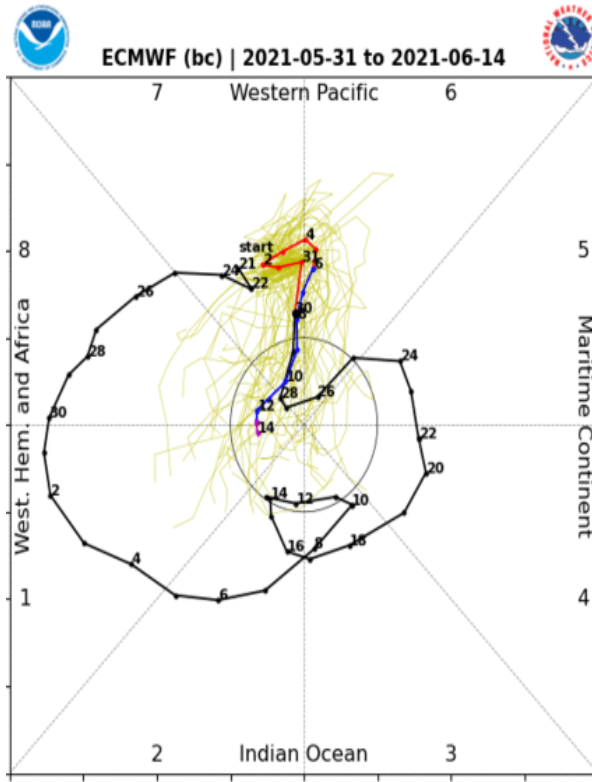


MJO Observation/Forecast

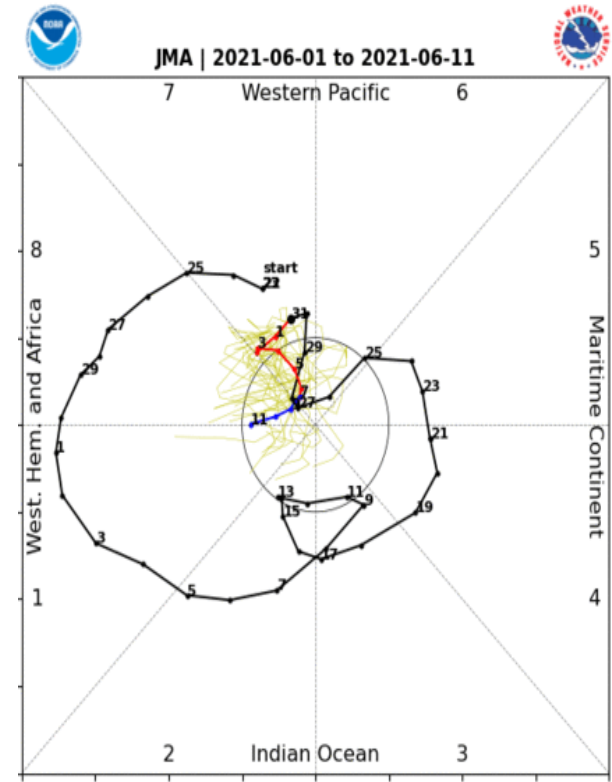
[RMM1, RMM2] forecast for Jun-01-2021 to Jun-15-2021



GEFS



ECMWF



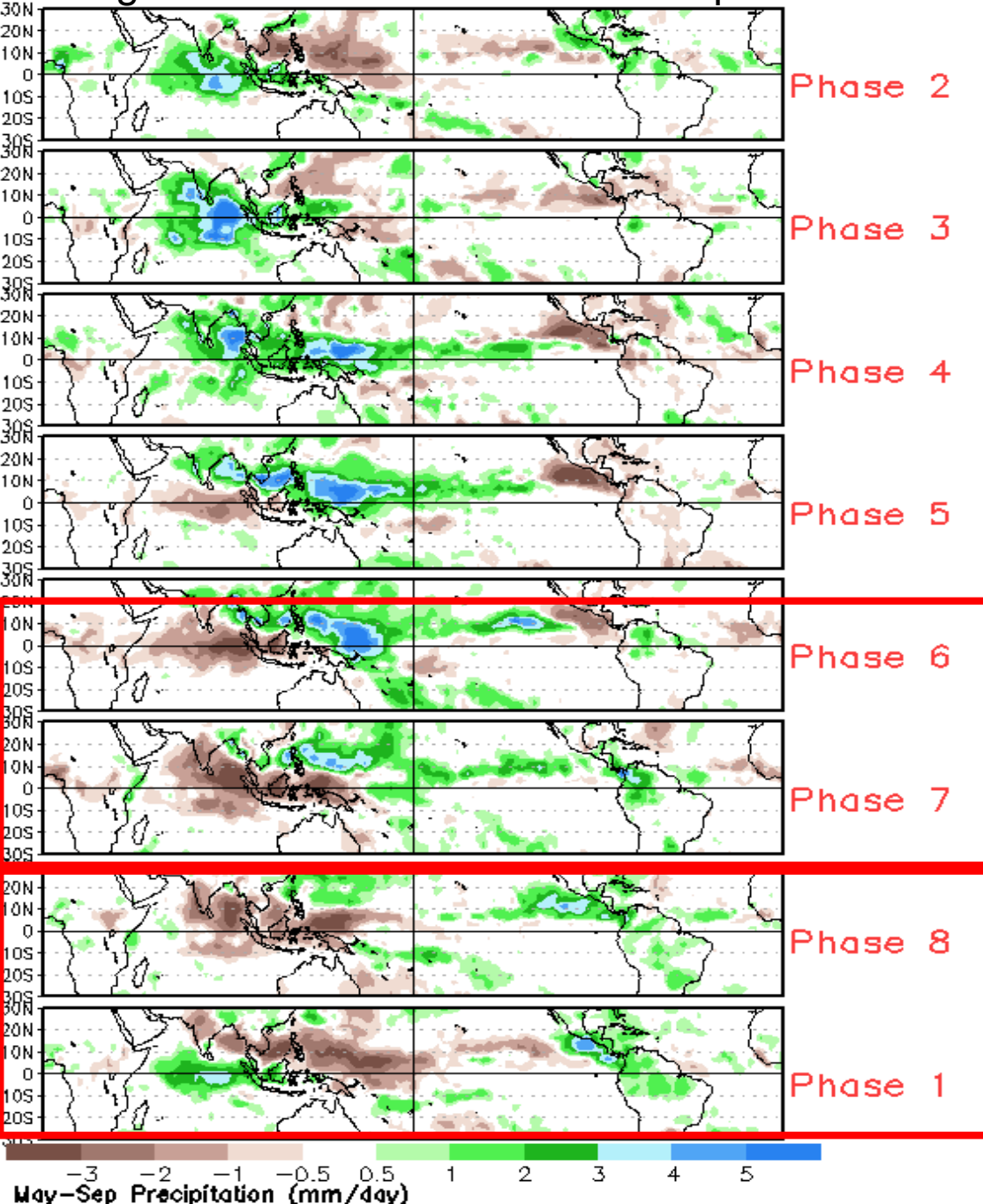
JMA

GEFS and ECWFMF show meandering/looping over the West Pac, characteristic of Rossby wave interference.

Eastward propagation resumes in Week-2, with model differences in amplitude and phase speed.

JMA depicts weak eastward propagation of the MJO.

Average Conditions when the MJO is present

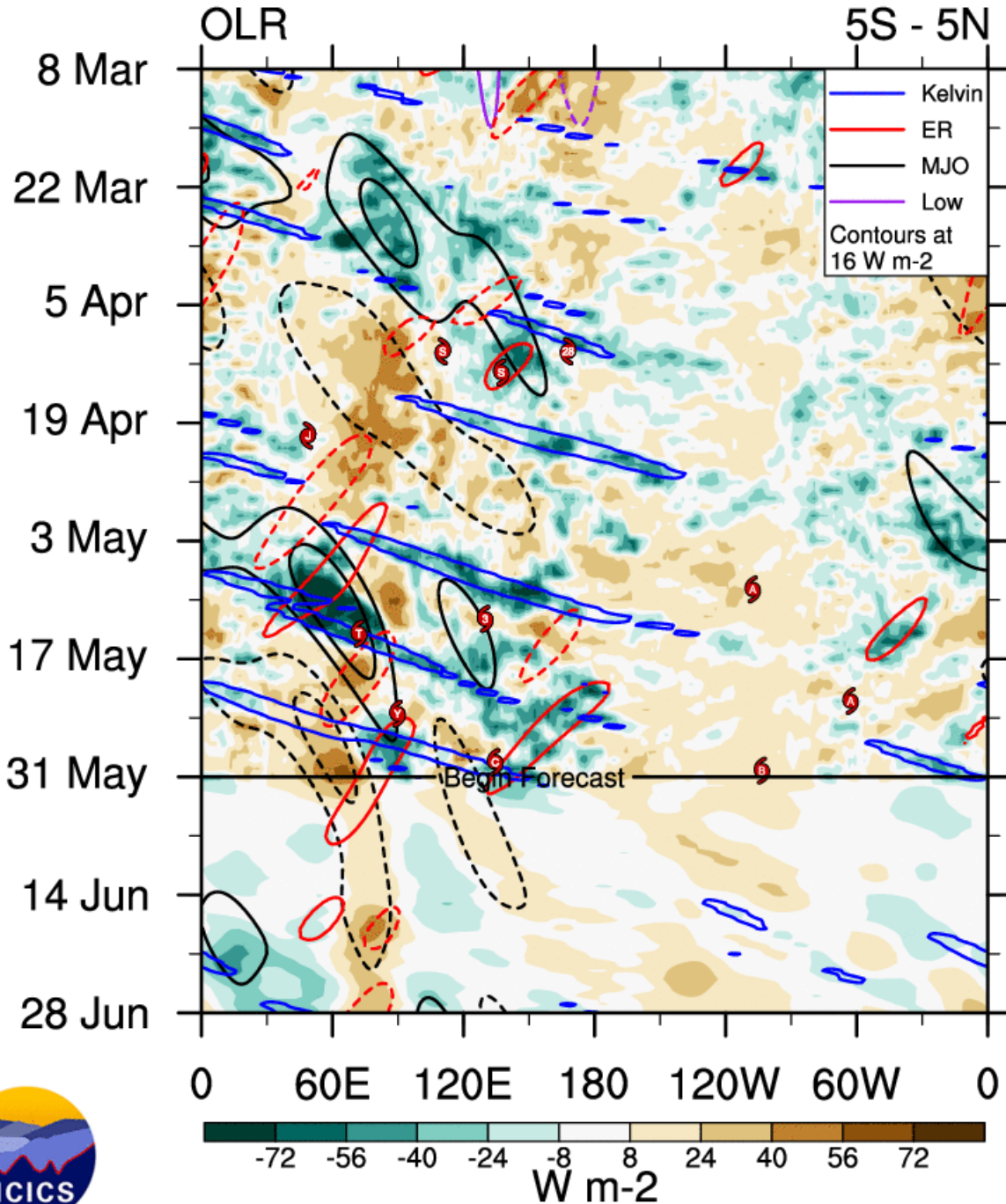


CAVEAT: These panels are representative of robust MJO events.

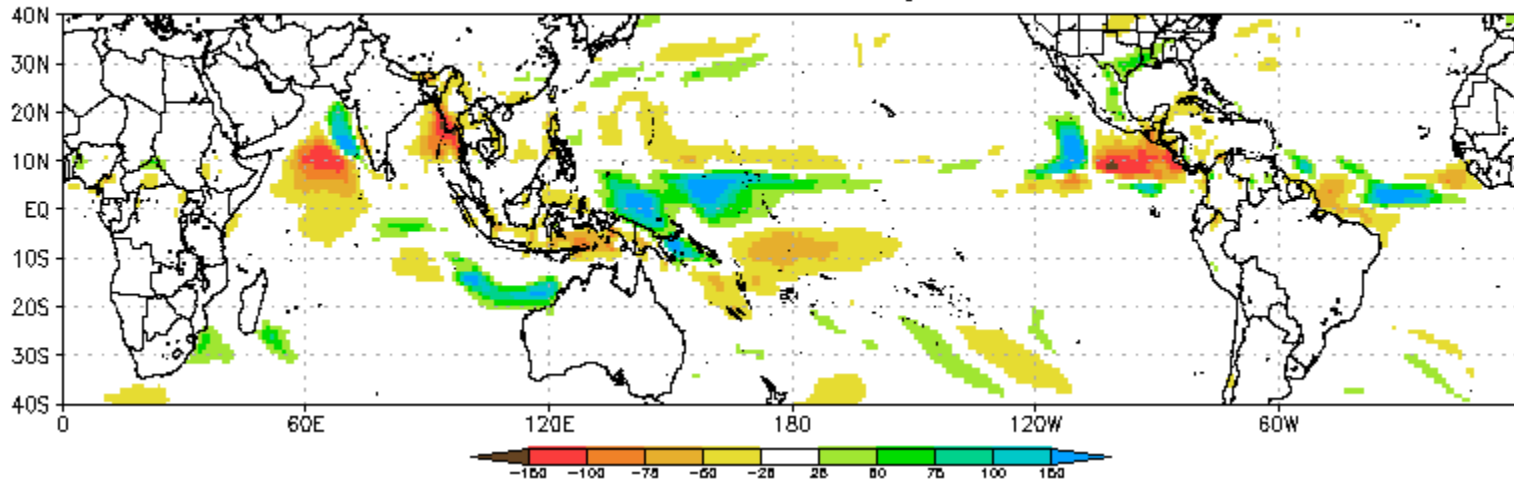
MJO activity is coming through the filtering, but less coherent than during early/mid-May.

Kelvin wave activity apparent near Africa, with another KW potentially about to cross the Pacific.

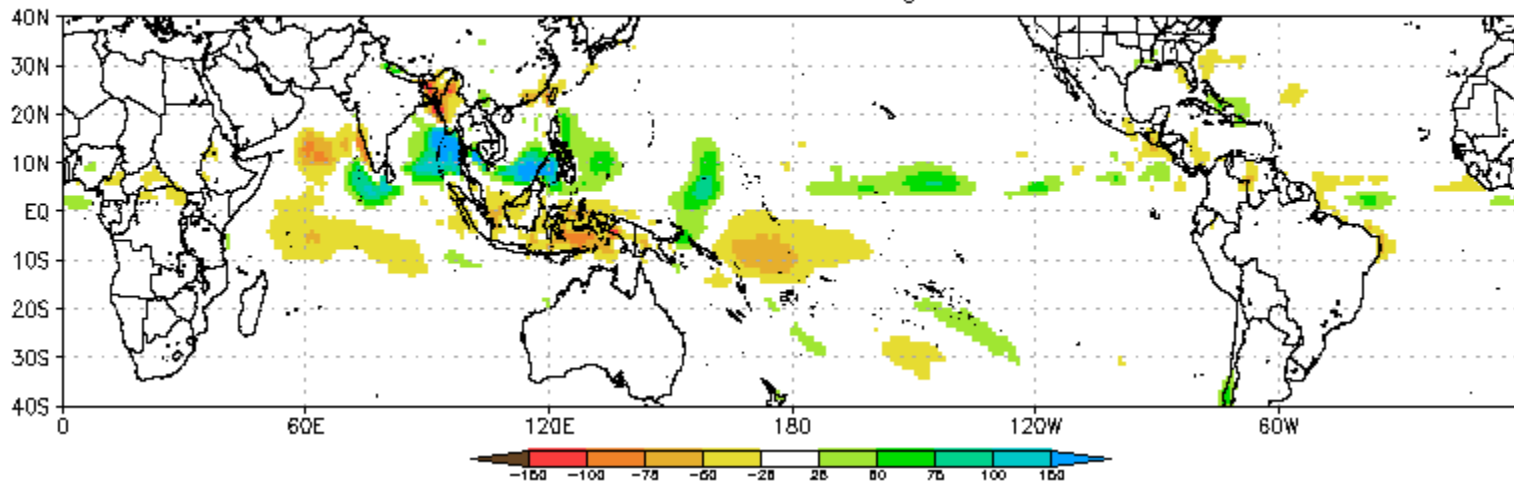
Low frequency is no longer analyzed on the objective wave monitoring.



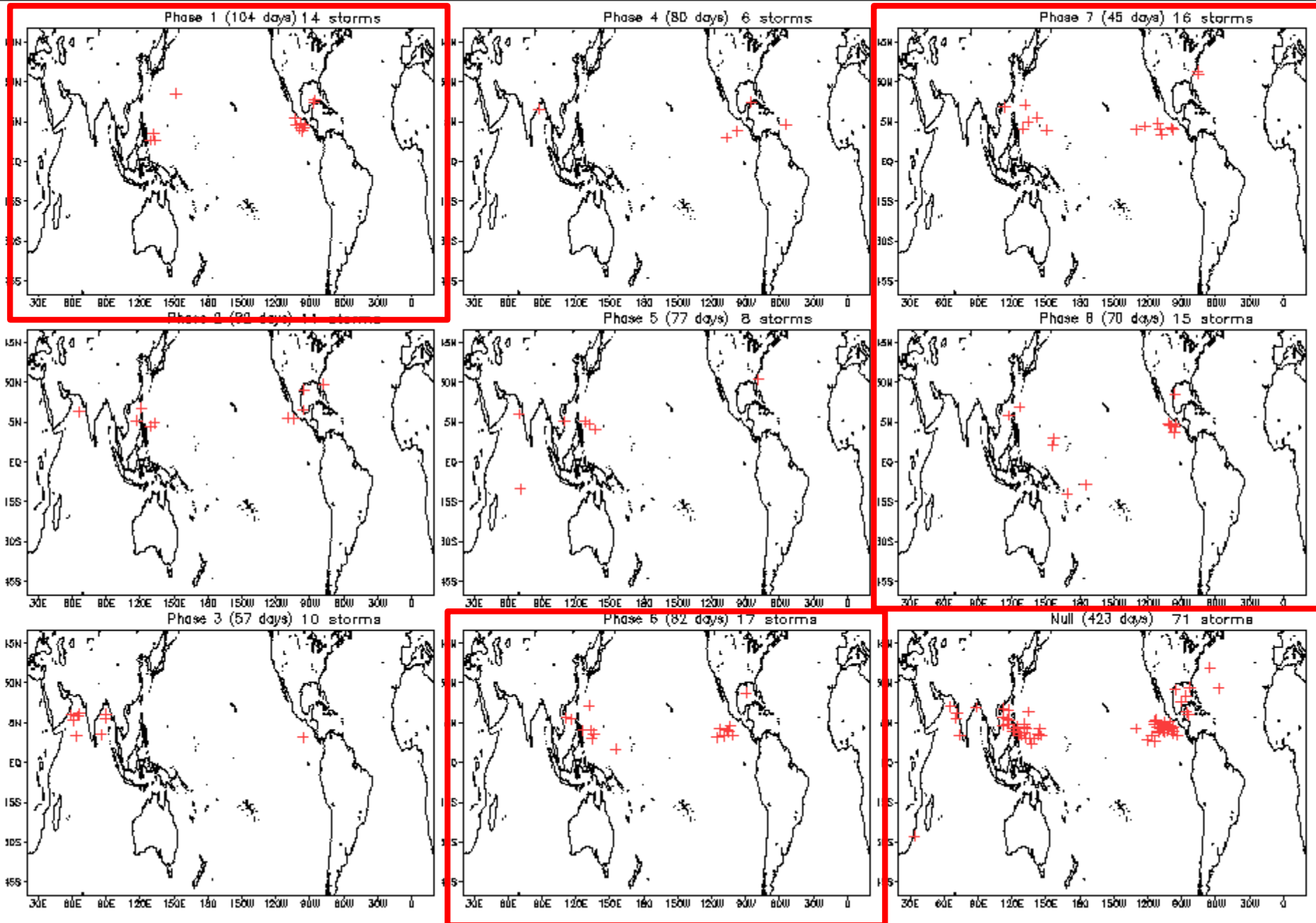
CFS Precipitation Anomalies (mm) Issued 31May2021
Week-1 Forecast Ending 08Jun2021



CFS Precipitation Anomalies (mm) Issued 31May2021
Week-2 Forecast Ending 15Jun2021



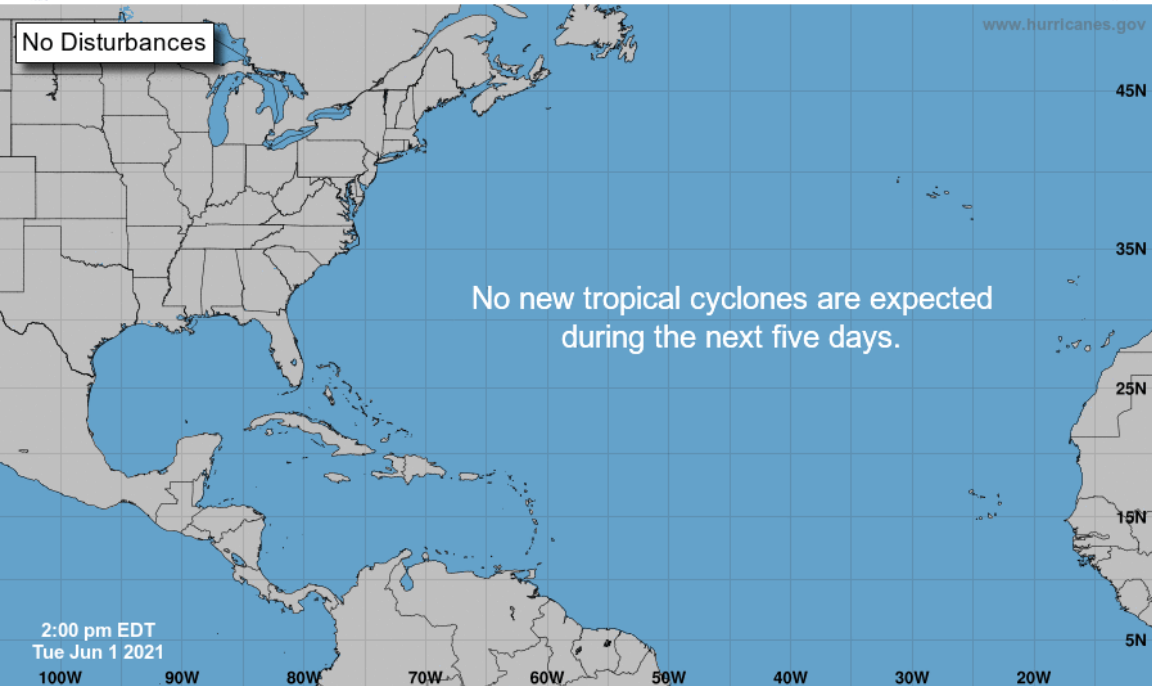
June Tropical Storm Formation by MJO phase





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



2:00 pm EDT
Tue Jun 1 2021

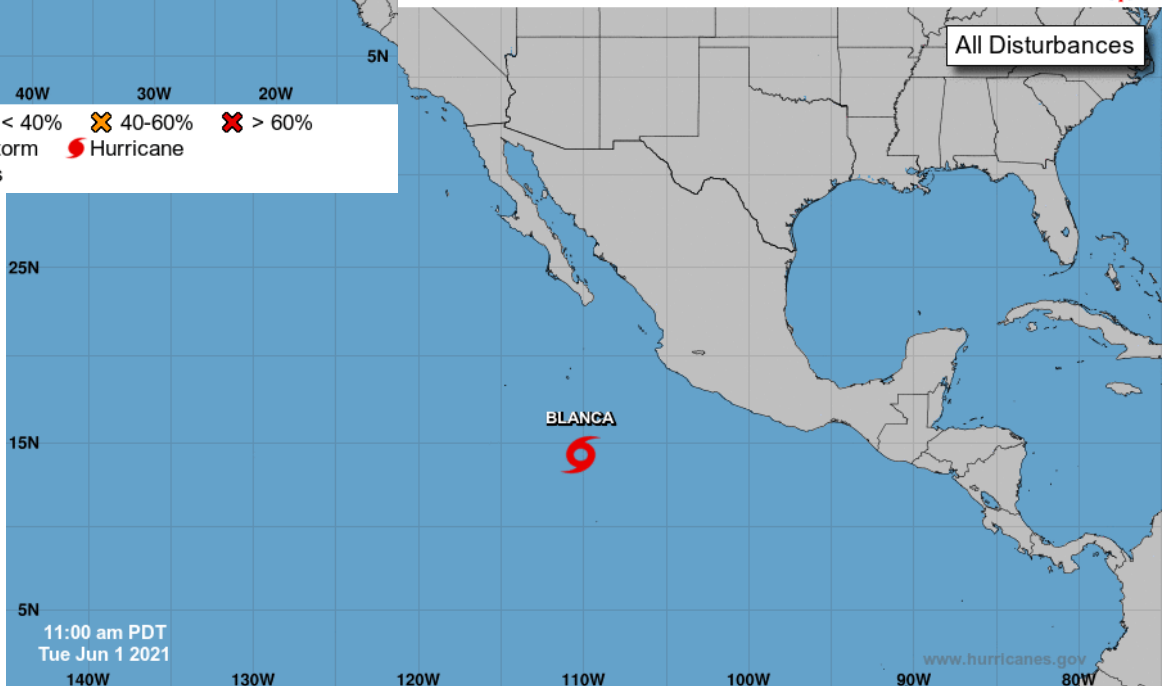
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



11:00 am PDT
Tue Jun 1 2021

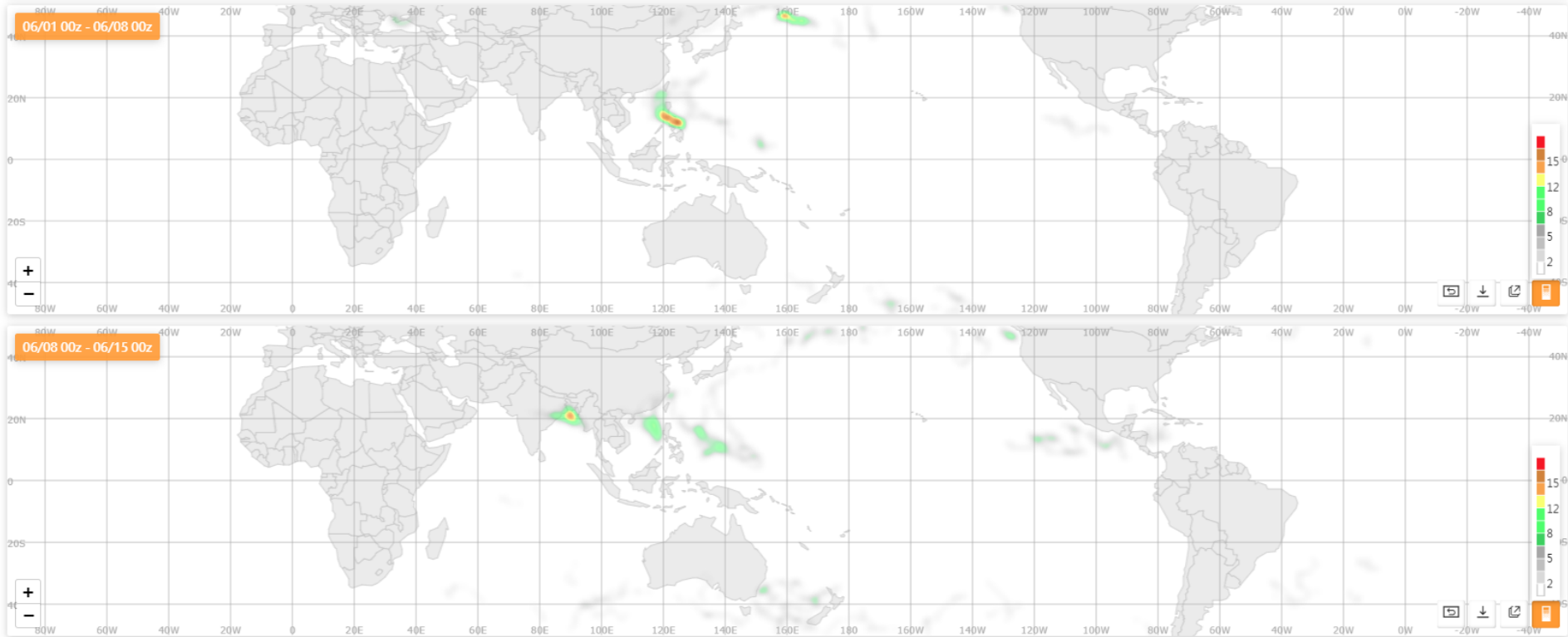
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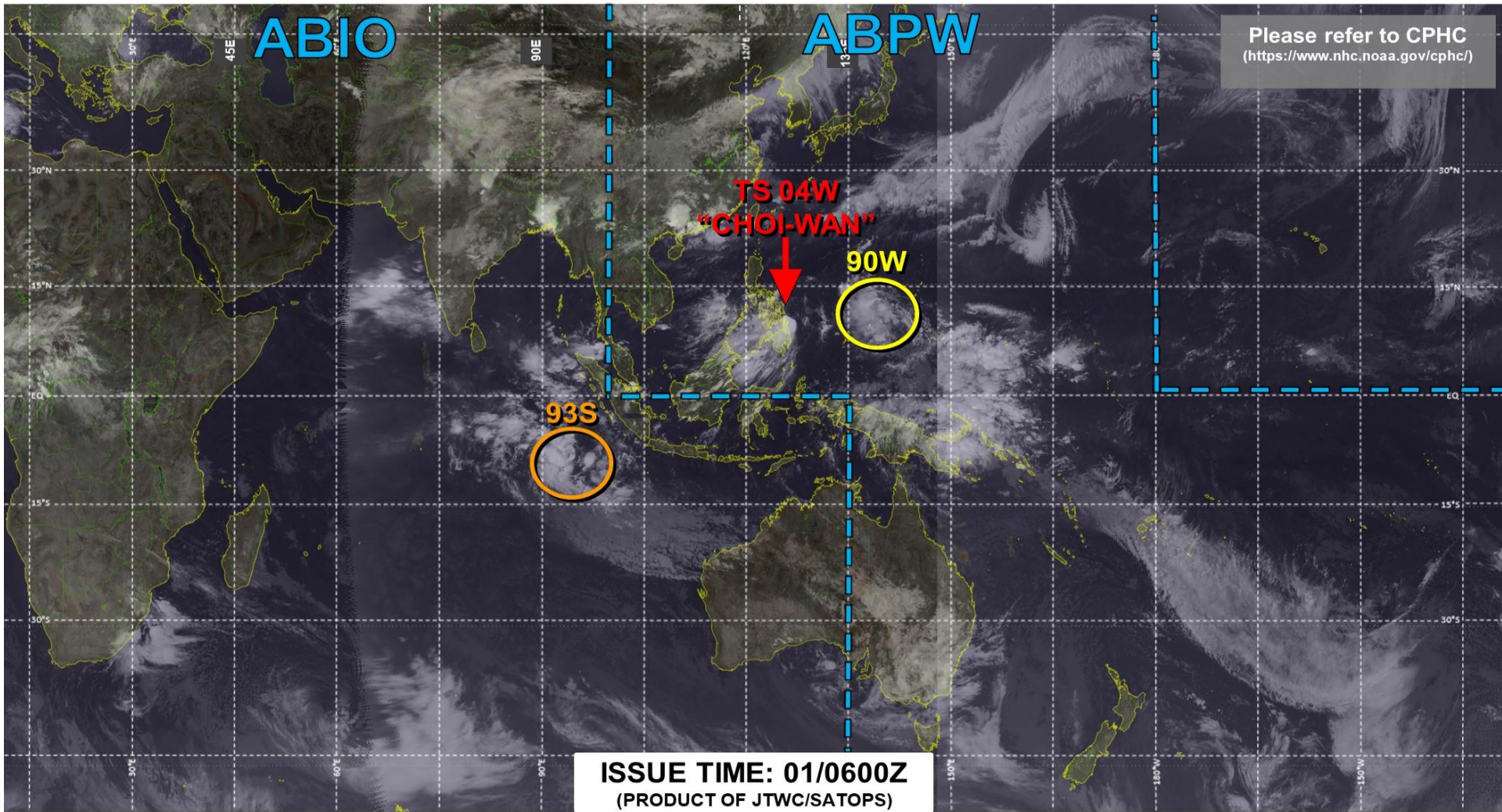
Taiwan CWB GEFS based TC formation tool

Based on the 00Z 01 June GEFS





JOINT TYPHOON WARNING CENTER



Please refer to CPHC
(<https://www.nhc.noaa.gov/cphc/>)

ISSUE TIME: 01/0600Z
(PRODUCT OF JTWC/SATOPS)



LOW TC development unlikely within 24 hours



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

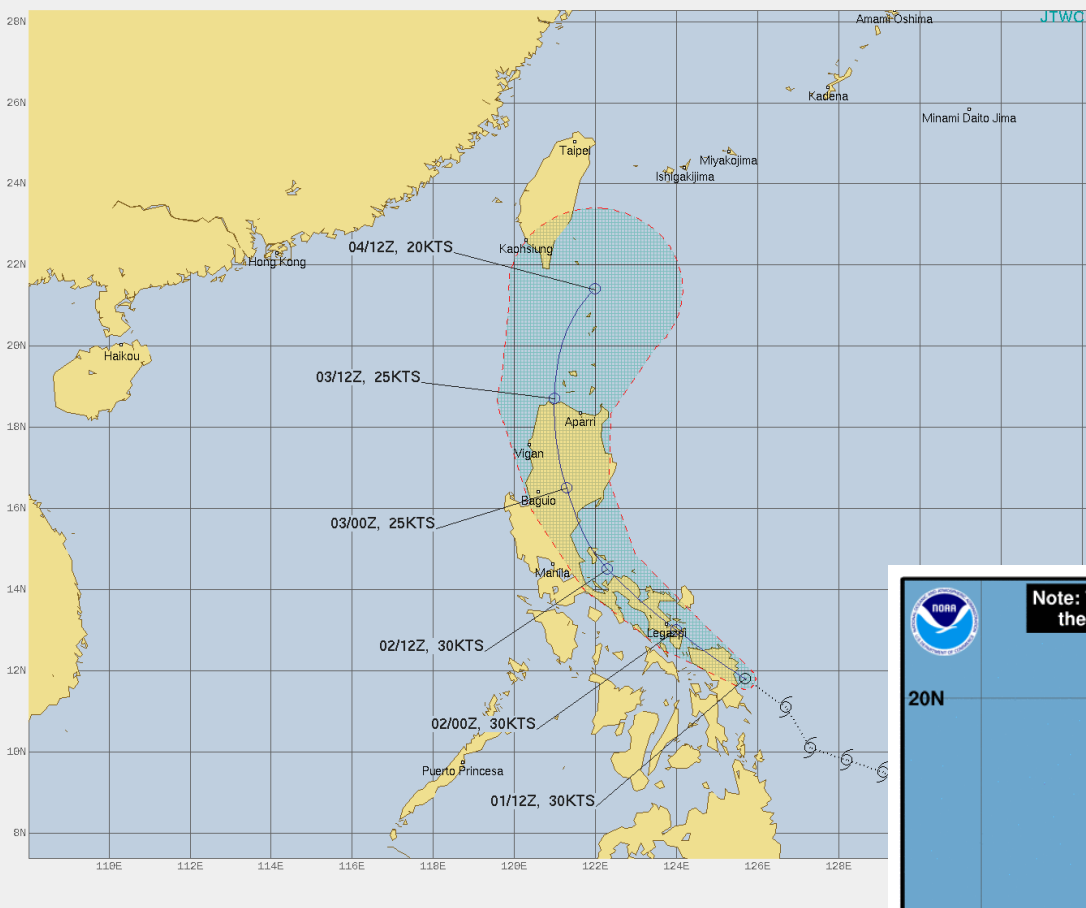


HIGH TC development likely within 24 hours (Reference TCFA)



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





TROPICAL DEPRESSION 04W (CHOI-WAN) WARNING #12
 WTPN31 PGTW 011500
 011200Z POSIT: NEAR 11.8N 125.7E
 MOVING 305 DEGREES TRUE AT 12 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 14 FEET
 01/12Z, WINDS 030 KTS, GUSTS TO 040 KTS
 02/00Z, WINDS 030 KTS, GUSTS TO 040 KTS
 02/12Z, WINDS 030 KTS, GUSTS TO 040 KTS
 03/00Z, WINDS 025 KTS, GUSTS TO 035 KTS
 03/12Z, WINDS 025 KTS, GUSTS TO 035 KTS
 04/12Z, WINDS 020 KTS, GUSTS TO 030 KTS

CPA TO:	NM	DTG
PUERTO PRINCESA	351	06/02/08Z
MANILA	60	06/02/16Z
SUBIC BAY	96	06/02/18Z
CLARK AB	65	06/02/19Z
KAOHSIUNG	119	06/04/11Z
TAIPEI	224	06/04/12Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
CLARK_AB	124	361	0
MANILA	121	322	0
SUBIC_BAY	119	368	0
ZAMBOANGA	036	363	0
DAVAO	091	282	0

○ LESS THAN 34 KNOTS
 ○ 34-63 KNOTS
 ● MORE THAN 63 KNOTS
 — FORECAST CYCLONE TRACK
 - - - PAST CYCLONE TRACK
 [Red Dotted Area] DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA
 [Blue Shaded Area] FORECAST 34/50/64 KNOT WIND RADII (WINDS VALID OVER OPEN OCEAN ONLY)

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Tropical Storm Blanca
 Tuesday June 01, 2021
 9 AM MDT Advisory 8
 NWS National Hurricane Center

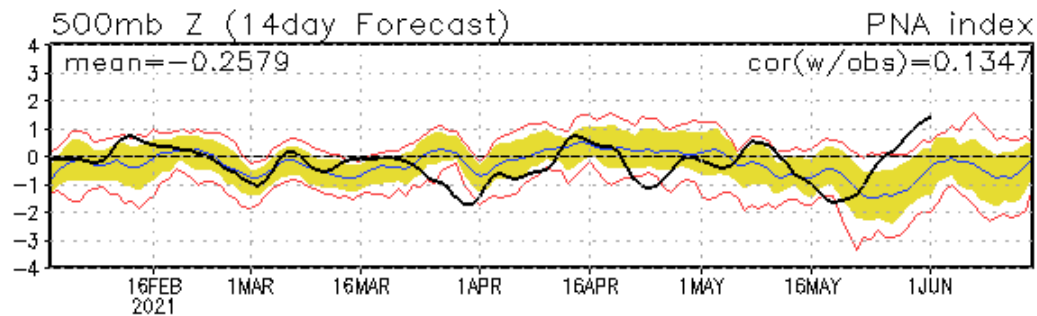
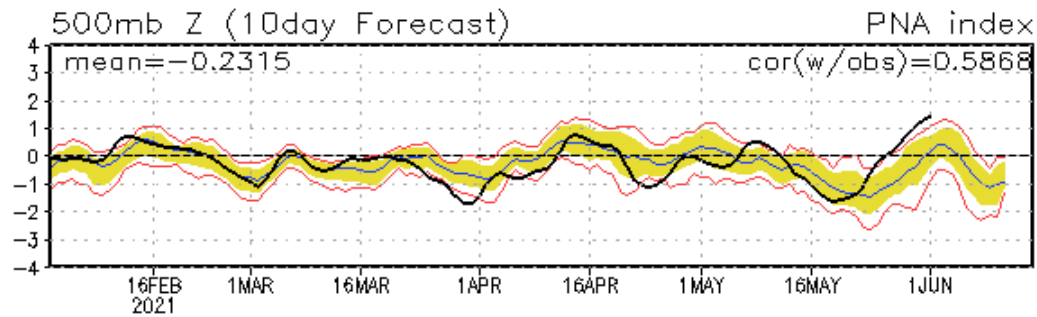
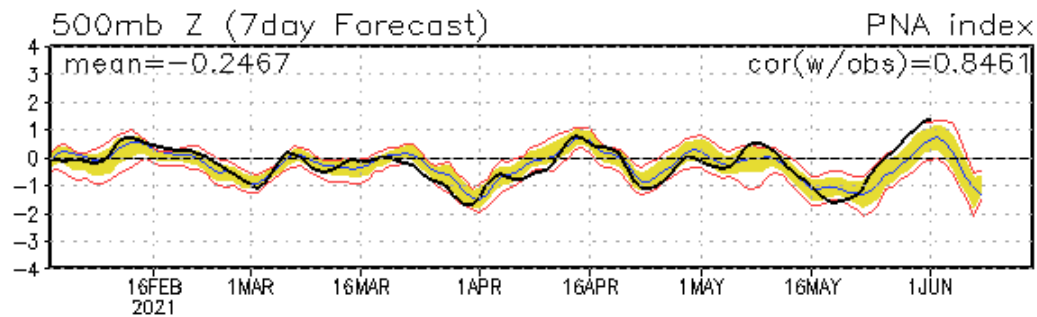
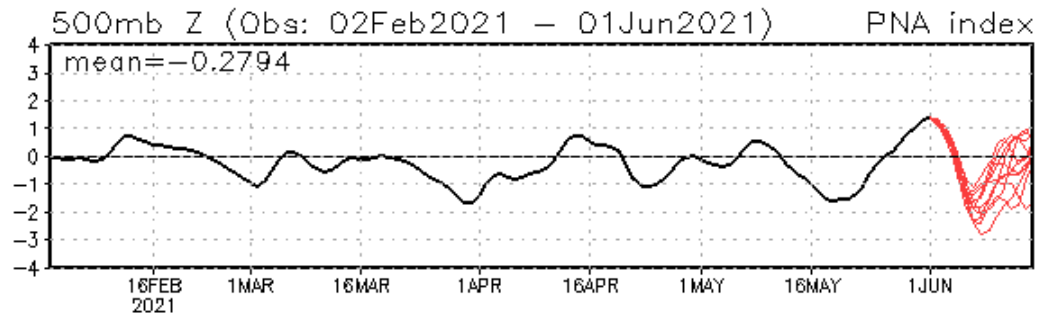
Current information: x
 Center location 14.3 N 110.2 W
 Maximum sustained wind 60 mph
 Movement WNW at 7 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

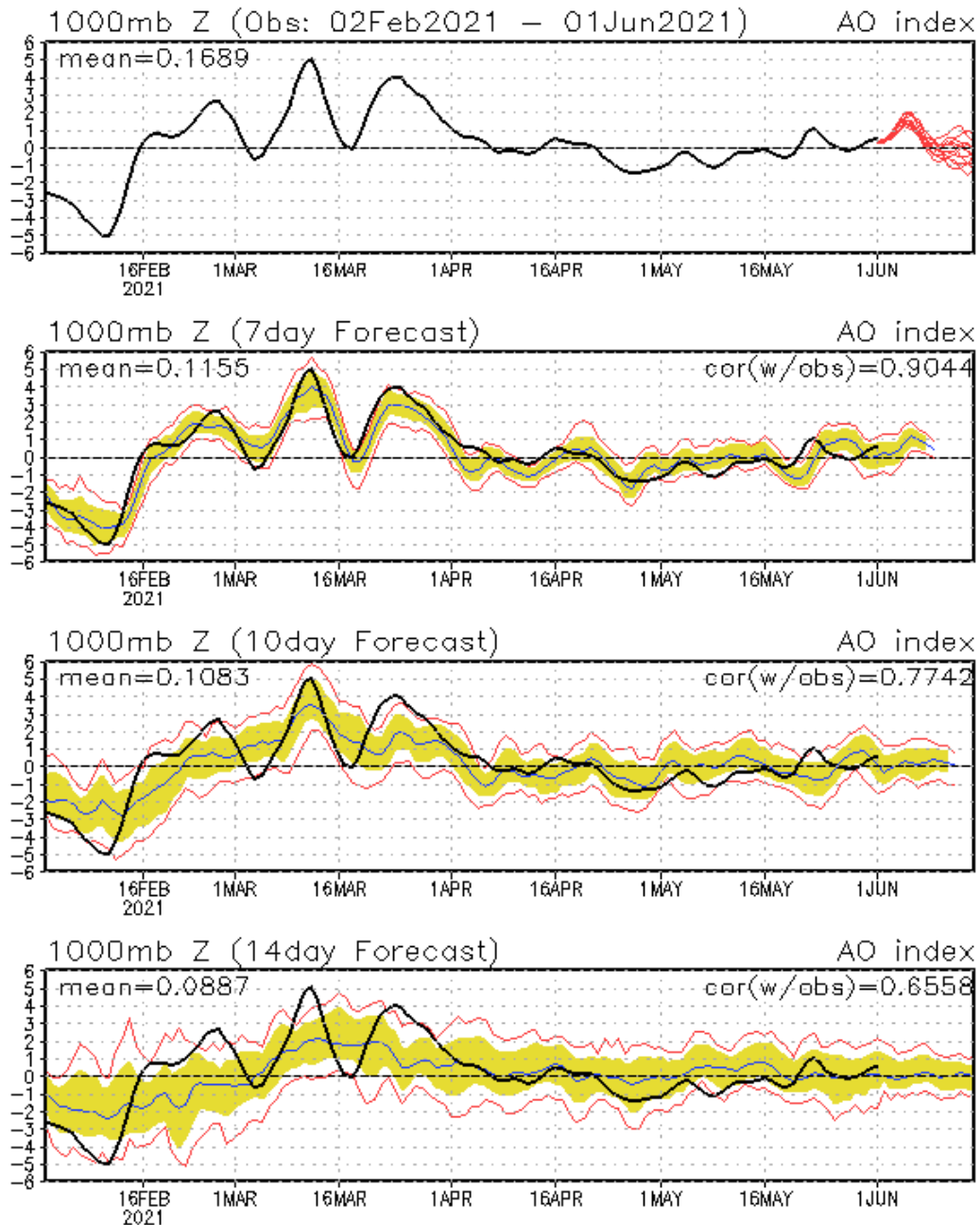
Potential track area: [Line] Day 1-3 [Dotted Area] Day 4-5
Watches: [Pink] Hurricane [Yellow] Trop Stm
Warnings: [Red] Hurricane [Blue] Trop Stm
Current wind extent: [Red] Hurricane [Yellow] Trop Stm

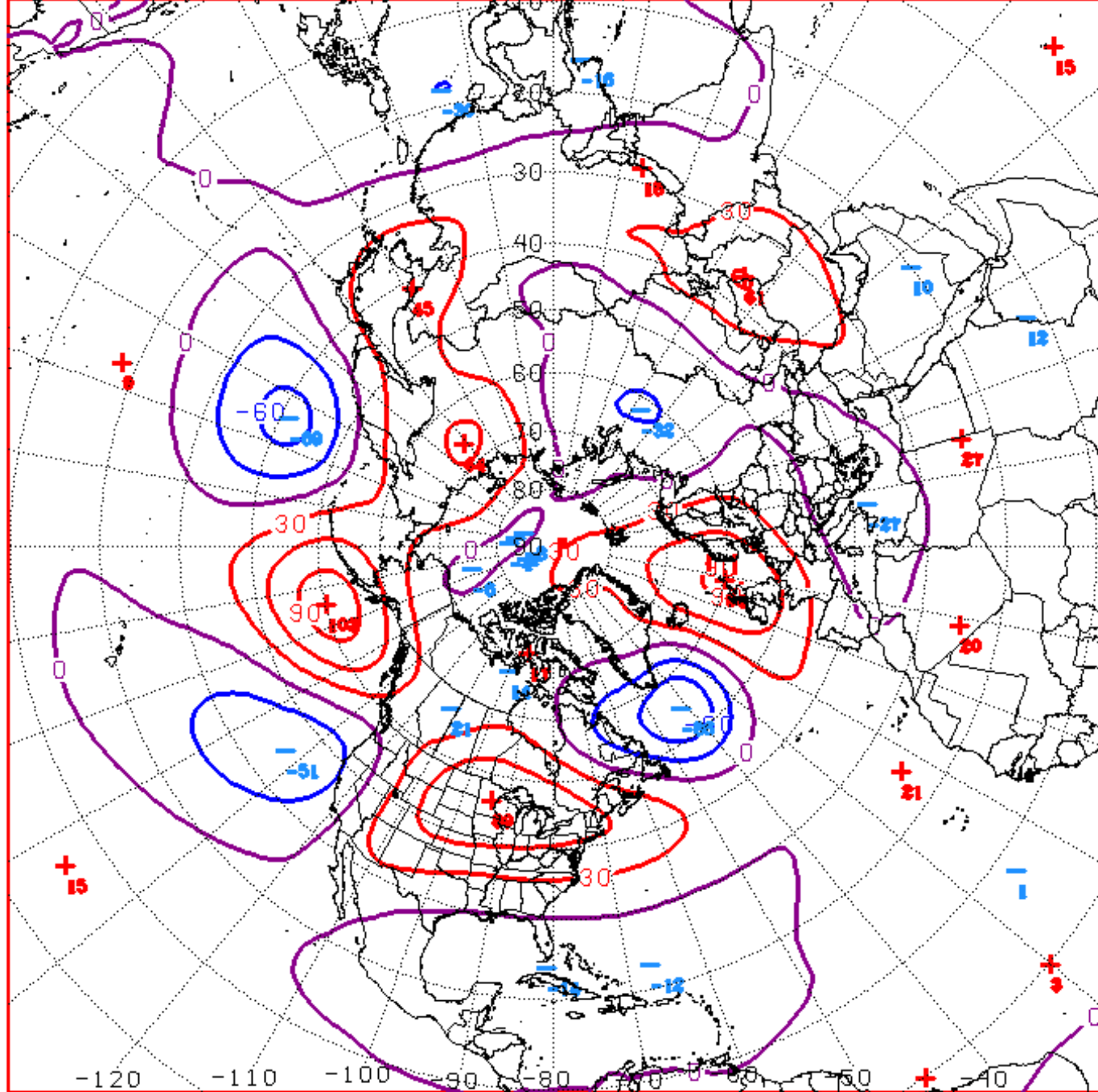
Connections to U.S. Impacts

PNA: Observed & ENSM forecasts



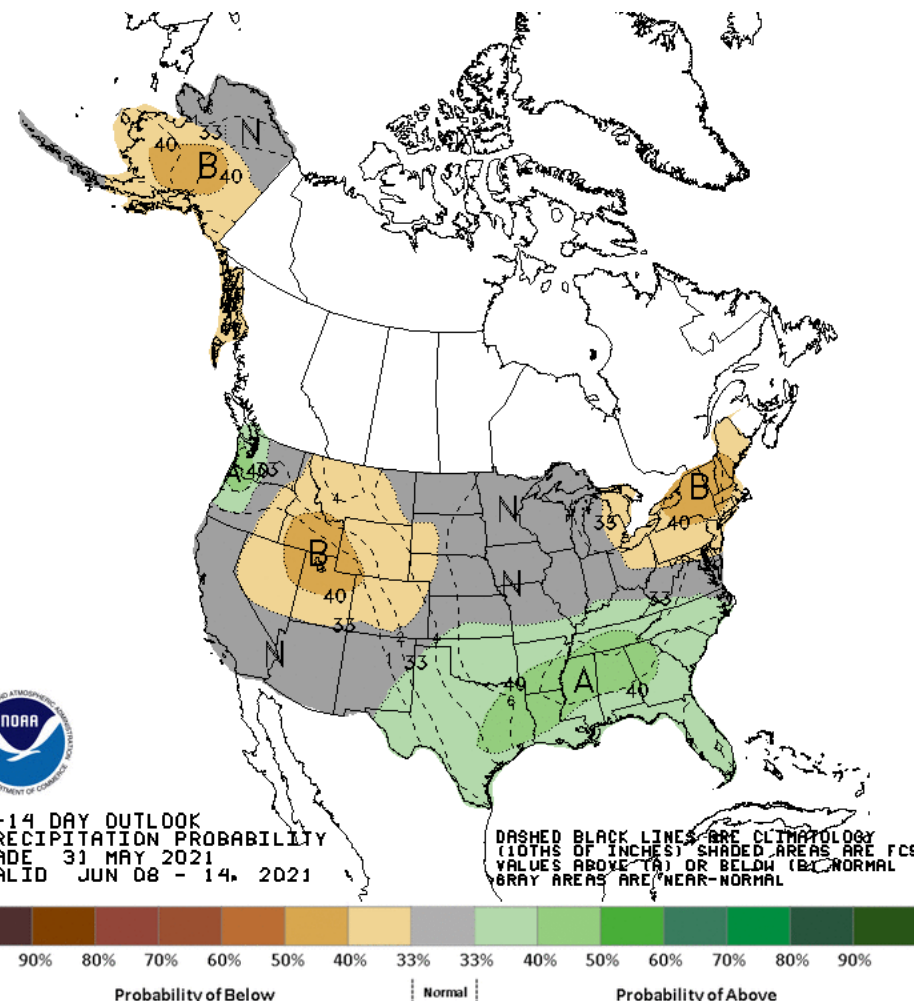
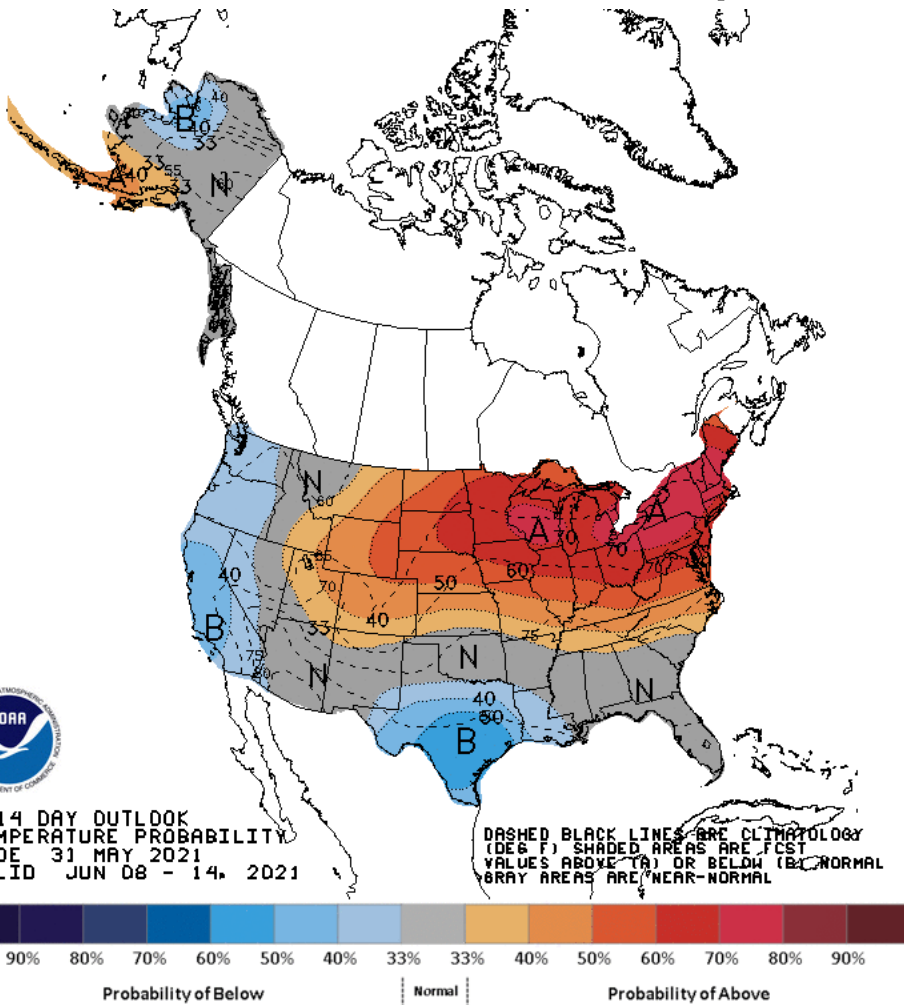
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE JUN 01 2021 1356 UTC CNTD JUN 12 2021

Week 2 – Temperature and Precipitation

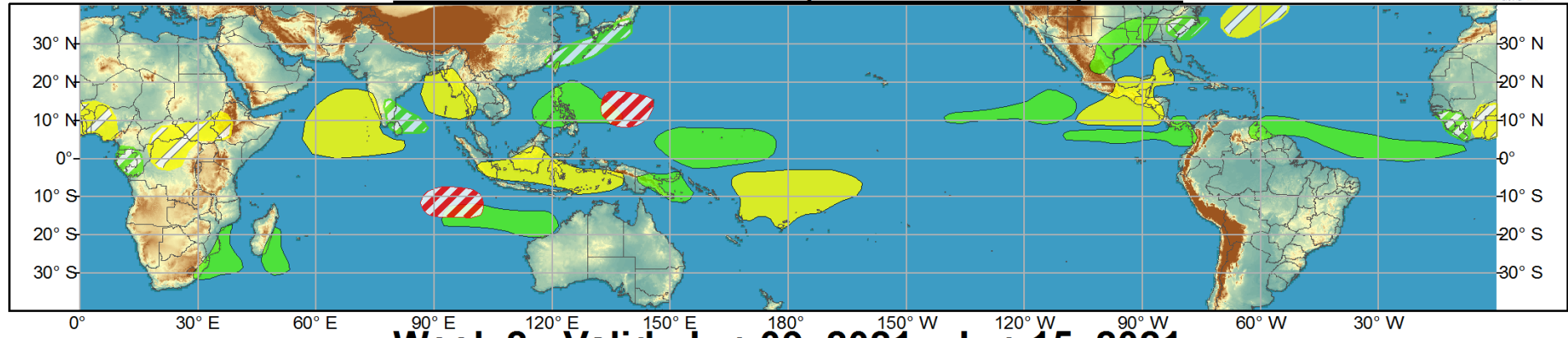


Since we are in an amplified, stable pattern today's outlooks are likely to be similar.

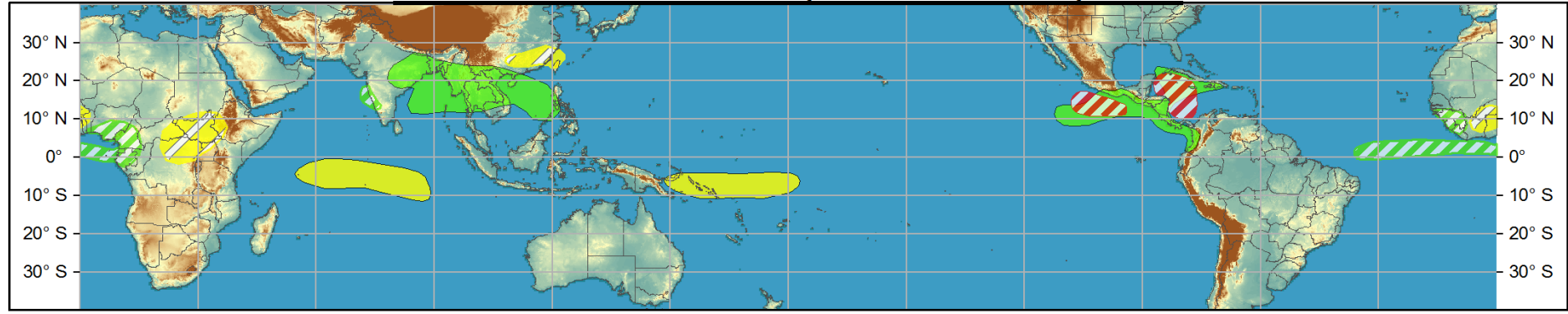


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