

Global Tropics Hazards And Benefits Outlook

4/6/2021

Brad Pugh

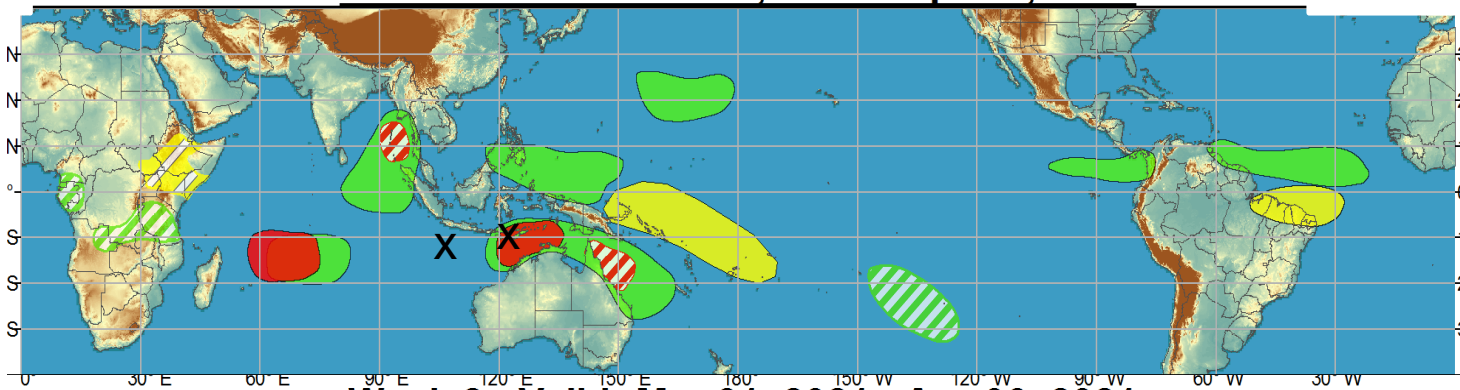
Outline

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

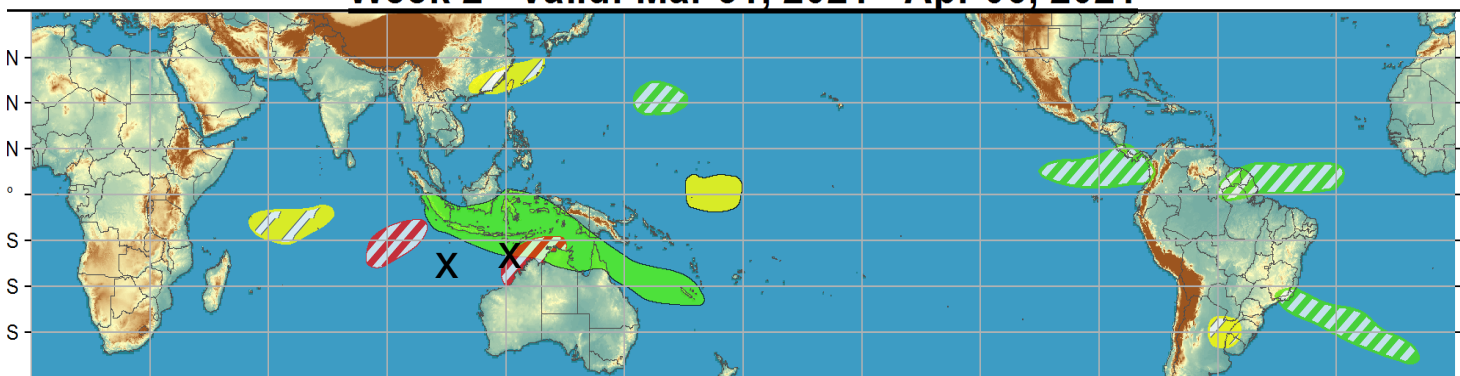
Outlook Review

X = tropical
cyclone
development

Week 1 - Valid: Mar 31, 2021 - Apr 06, 2021

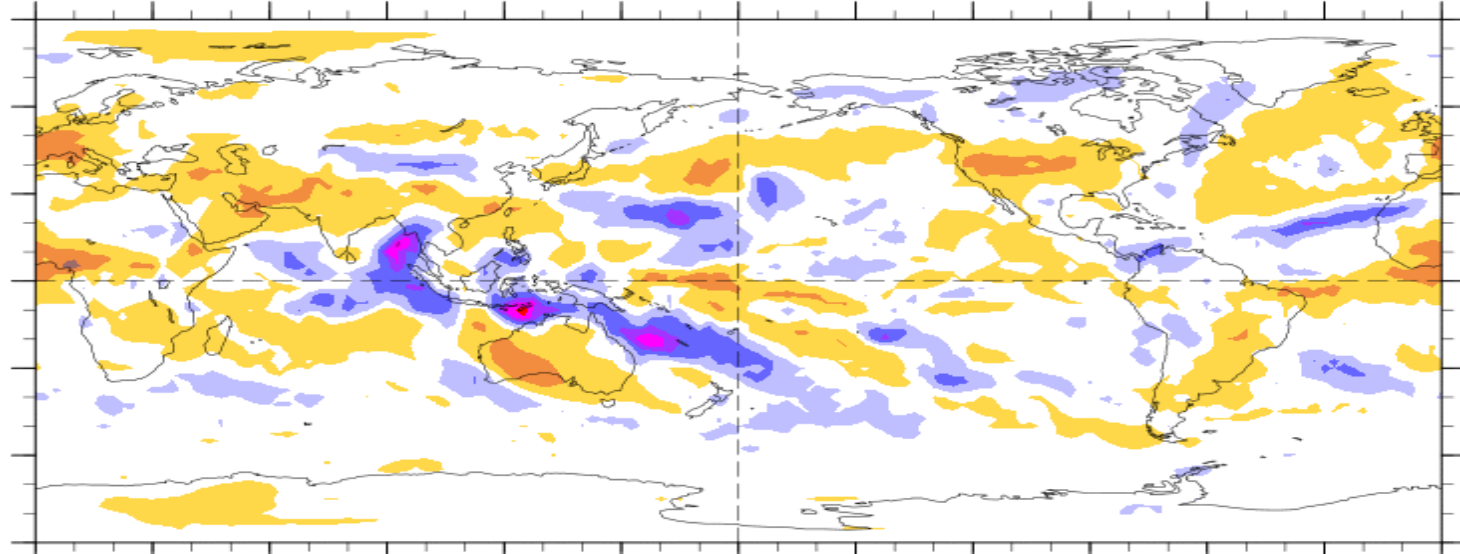


Week 2 - Valid: Mar 31, 2021 - Apr 06, 2021



7-Day Average OLR Anomaly

2021/03/29 - 2021/04/04



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (March 11, 2021 Update)

next update on Apr. 8, 2021

- ENSO Alert System Status: [La Niña Advisory](#)
- There is a ~60% chance of a transition from La Niña to ENSO-Neutral during the Northern Hemisphere spring 2021 (April-June).

MJO and other subseasonal tropical variability:

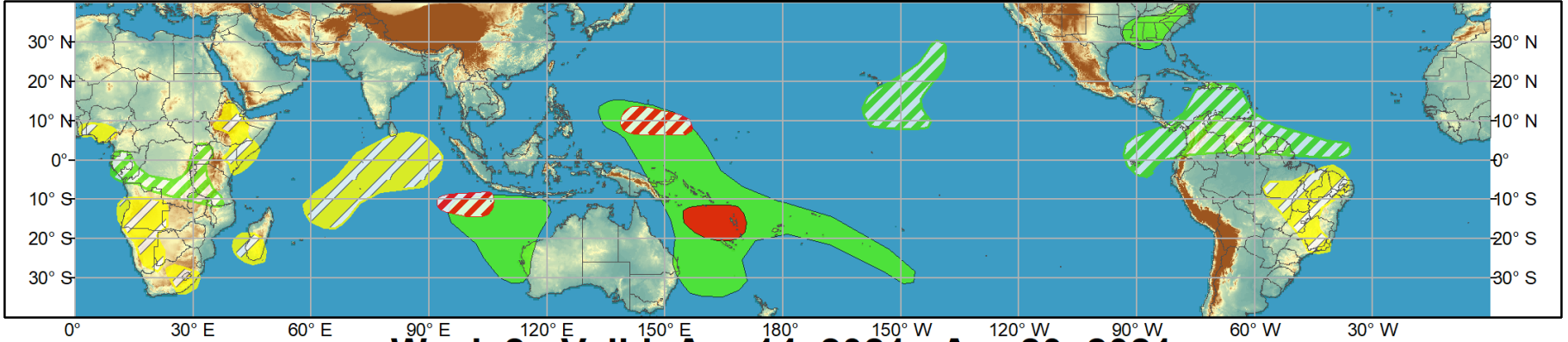
- The MJO has been active since early March; its enhanced phase propagated from the Indian Ocean to the West Pacific since late March.
- Dynamical models are in good agreement that the MJO continues its eastward propagation over the Pacific through mid-April.
- A favorable large-scale environment, related to the MJO, elevates chances of tropical cyclone development across the Coral Sea and West Pacific.
- The evolving longwave pattern over North America is consistent with the current and predicted state of the MJO.



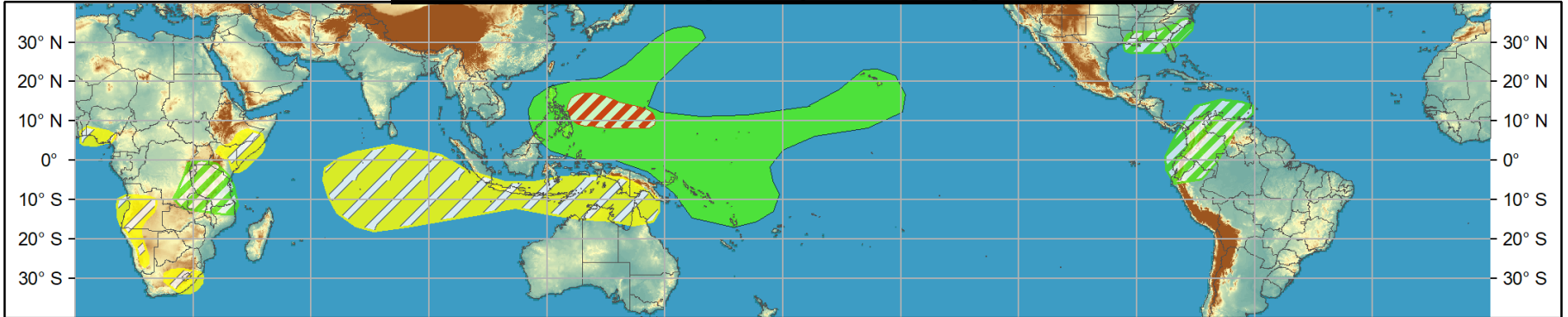
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Apr 07, 2021 - Apr 13, 2021



Week 2 - Valid: Apr 14, 2021 - Apr 20, 2021



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.
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Produced: 04/06/2021
Forecaster: Pugh

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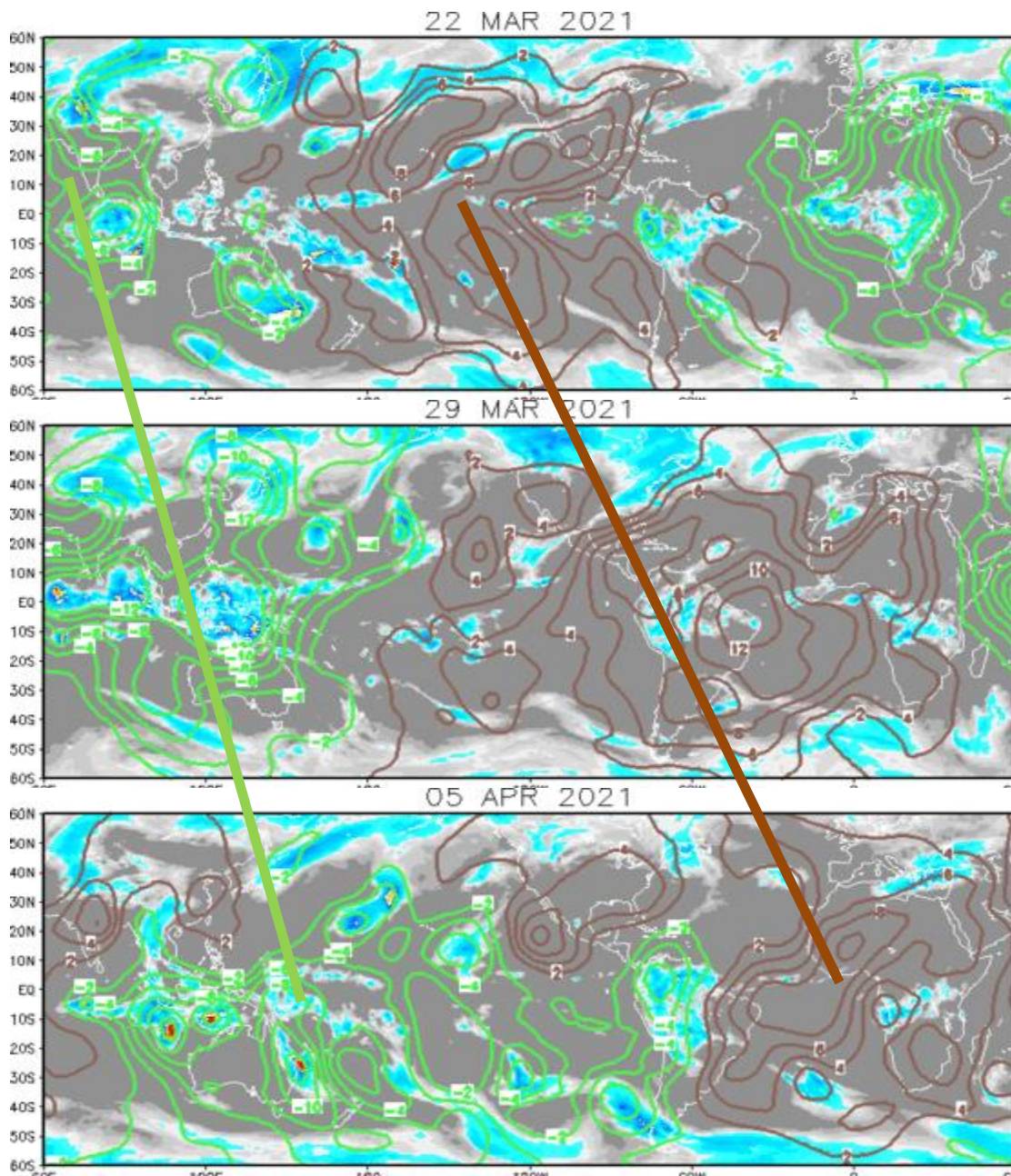


IR Satellite & 200-hpa Velocity Potential Anomalies

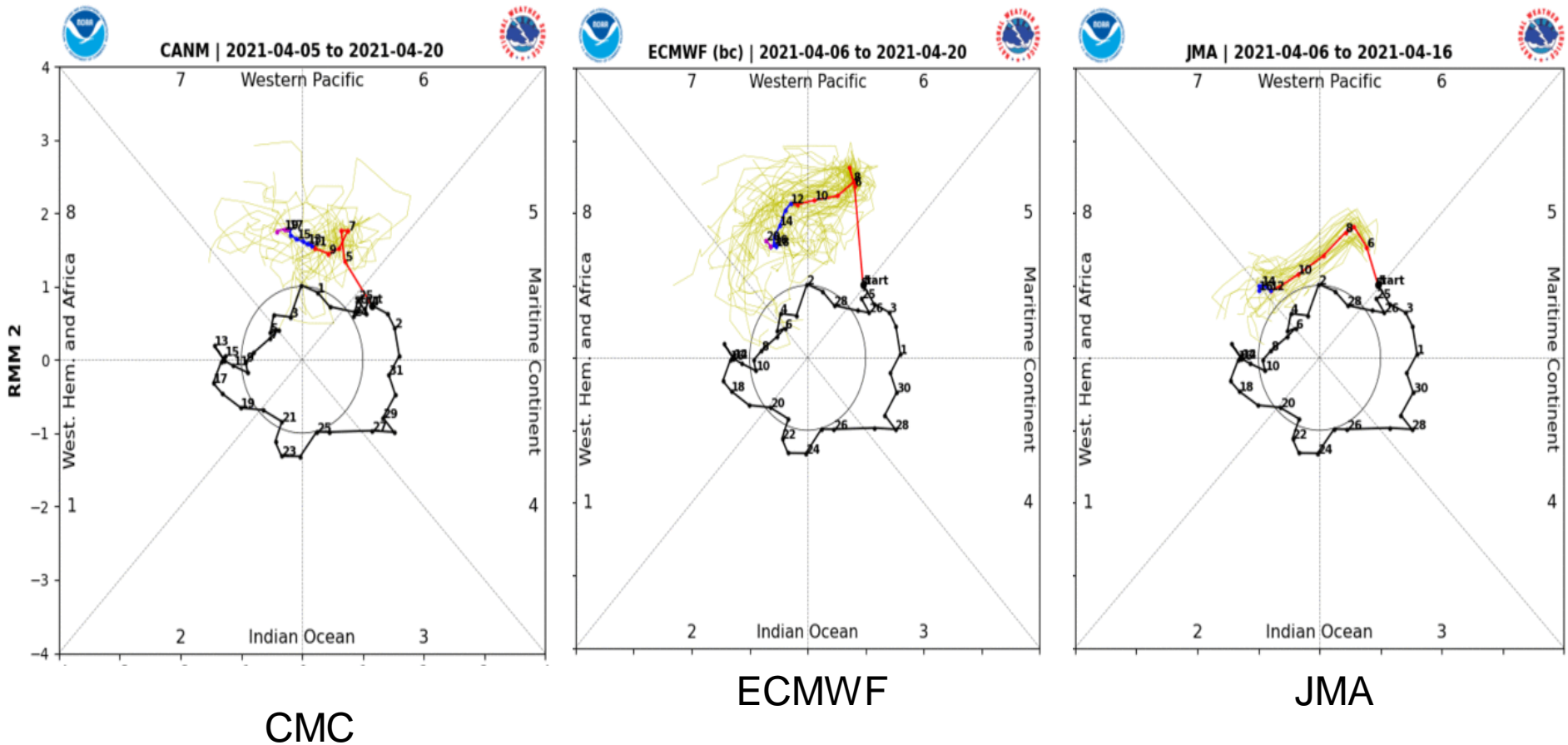
Green: Enhanced Divergence

Brown: Enhanced Convergence

The large scale convective field has propagated eastward since March, consistent with a well-established MJO.

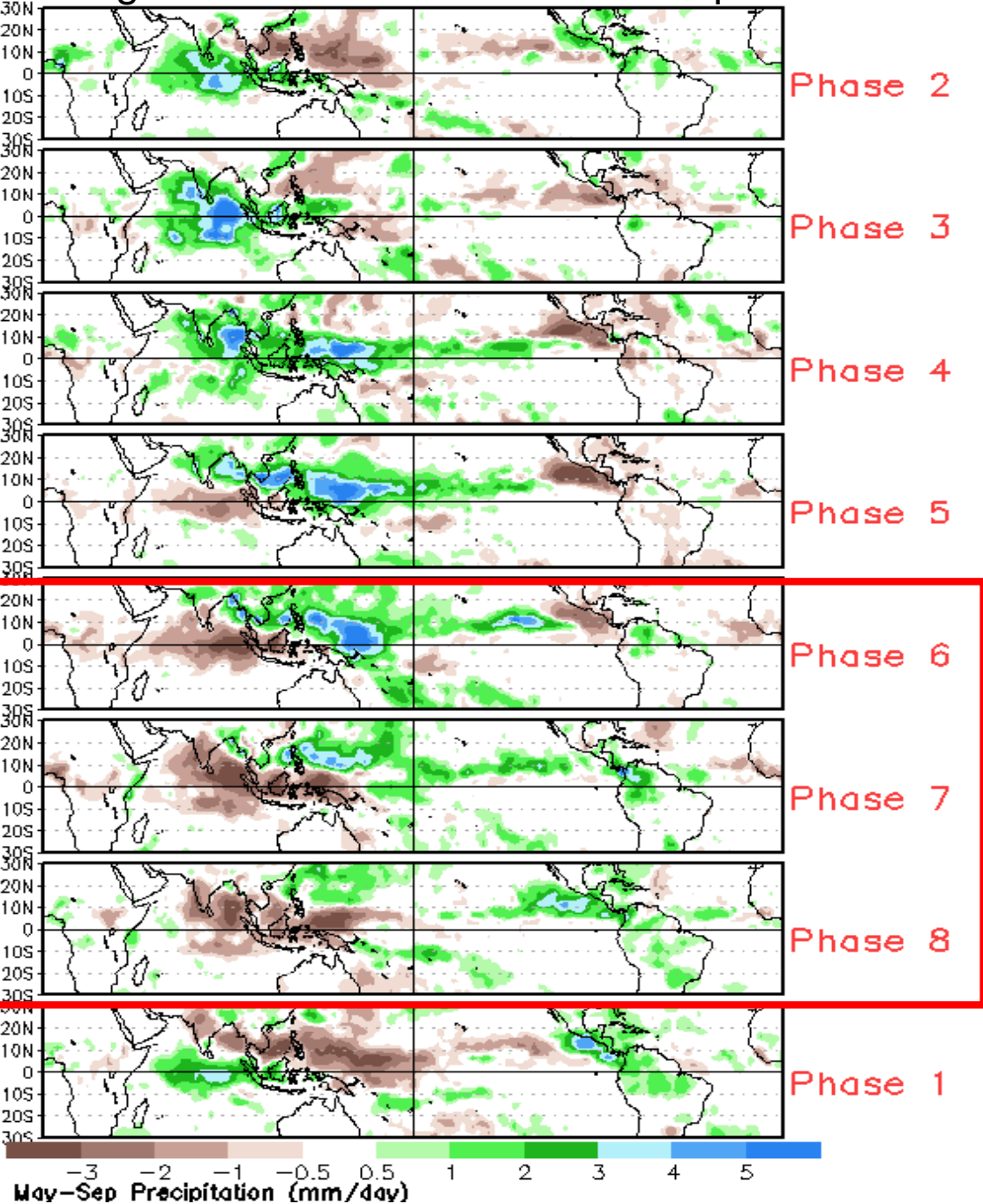


MJO Observation/Forecast



Dynamical models are in good agreement with continued eastward propagation from phase 6 to 8.

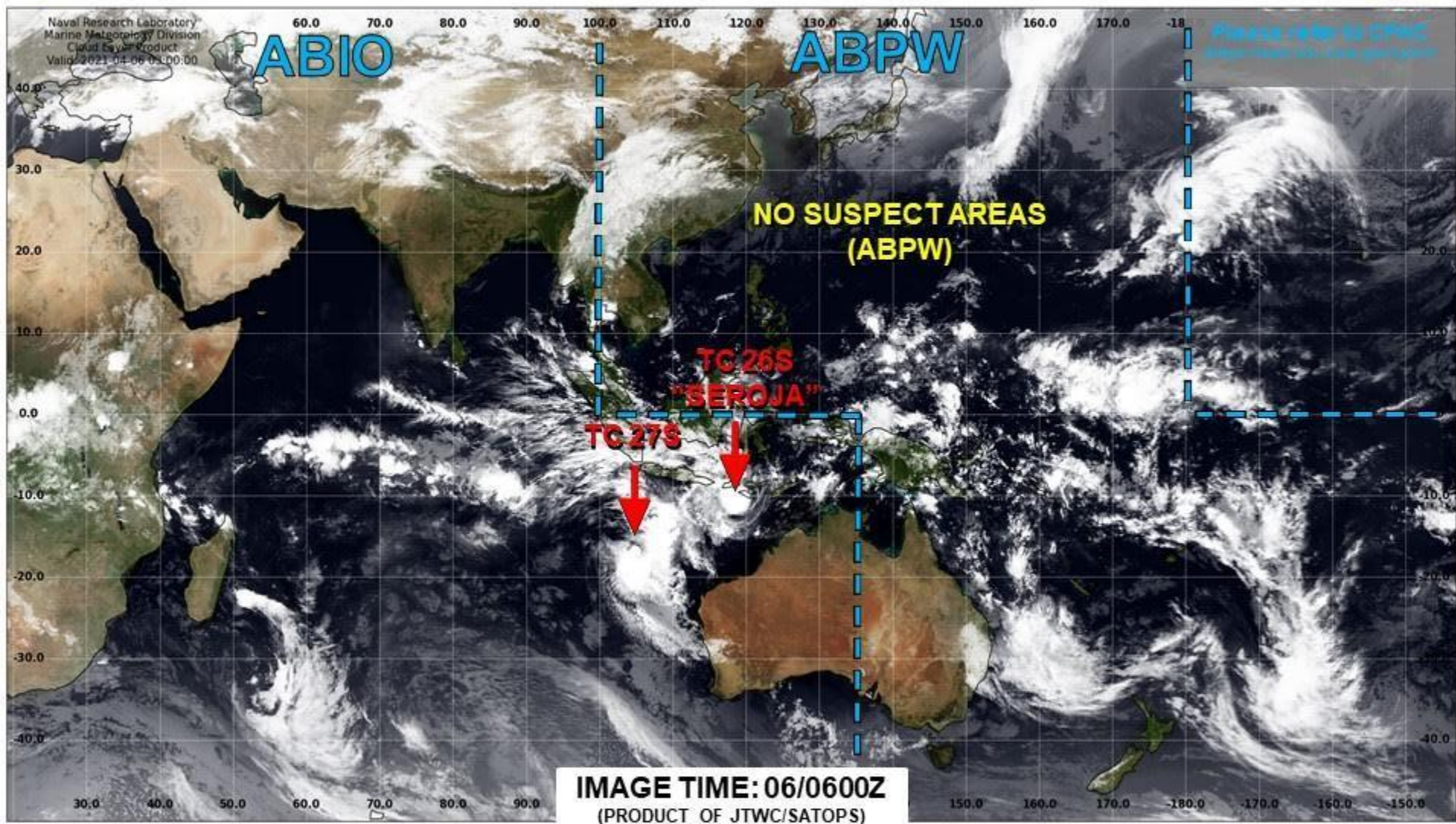
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



JOINT TYPHOON WARNING CENTER



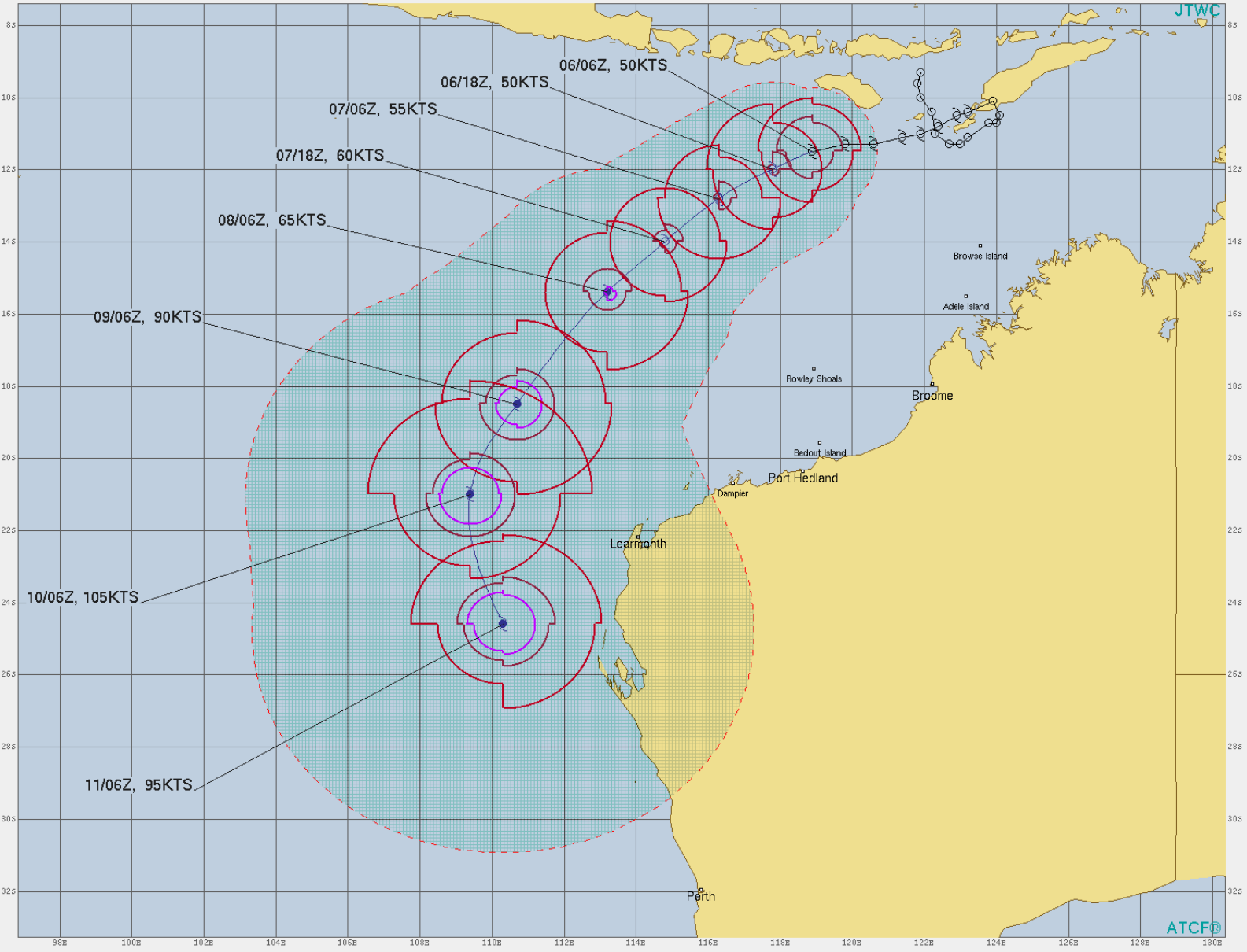
LOW TC development unlikely within 24 hours

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

HIGH TC development likely within 24 hours (Reference: JCPA)

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





TROPICAL CYCLONE 26S (SEROJA) WARNING #8
 WT6531 P07W 060900
 060800G POSIT: NEAR 11.5S 118.9E
 MOVING 255 DEGREES TRUE AT 03 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 21 FEET
 06/06Z, WINDS 050 KTS, GUSTS TO 065 KTS
 06/18Z, WINDS 050 KTS, GUSTS TO 065 KTS
 07/06Z, WINDS 055 KTS, GUSTS TO 070 KTS
 07/18Z, WINDS 050 KTS, GUSTS TO 075 KTS
 08/06Z, WINDS 065 KTS, GUSTS TO 080 KTS
 09/06Z, WINDS 090 KTS, GUSTS TO 110 KTS
 10/06Z, WINDS 105 KTS, GUSTS TO 130 KTS
 11/06Z, WINDS 095 KTS, GUSTS TO 115 KTS

CPA TO:	NR	DTG
LEARNMOUTH	249	11/01Z

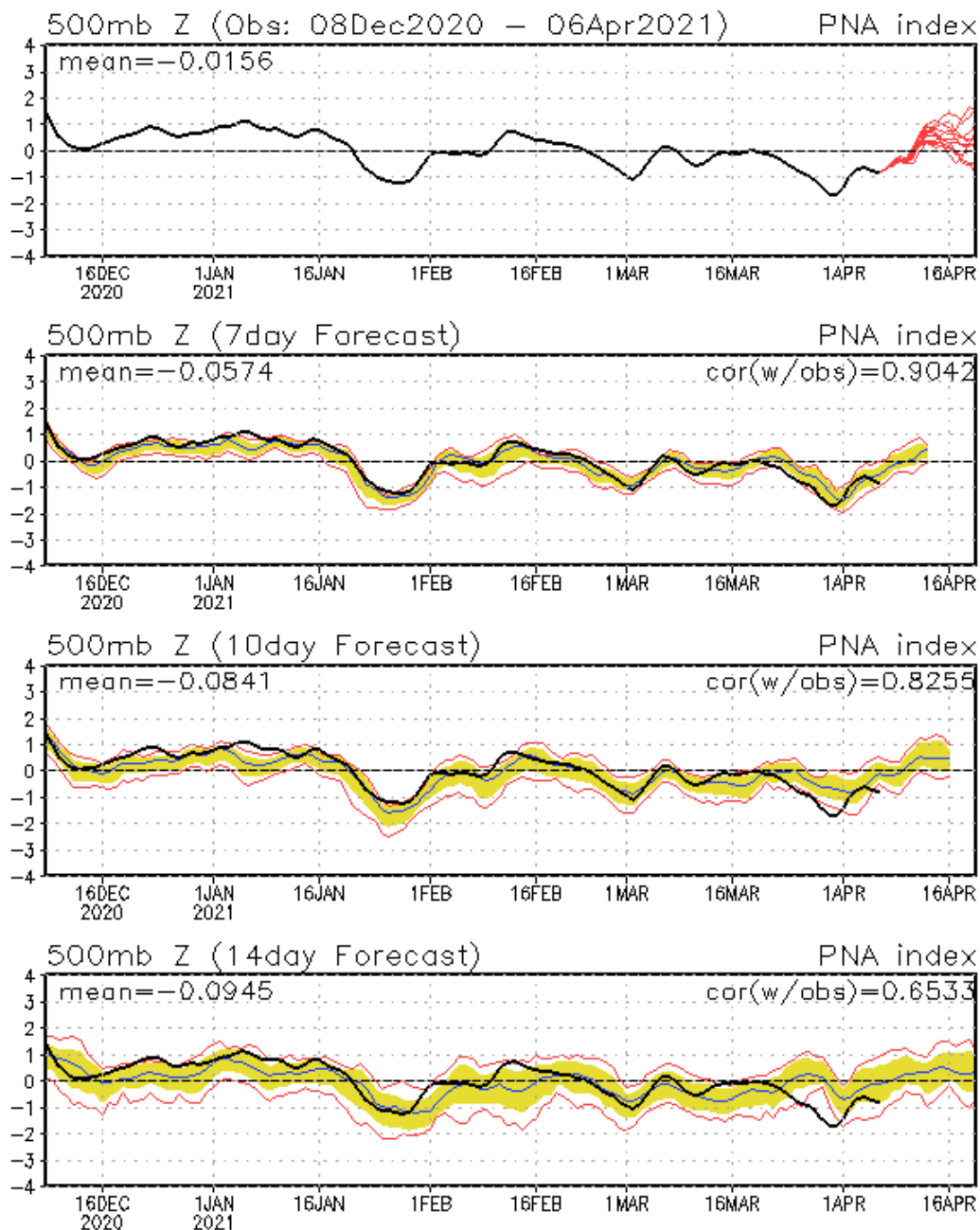
- LESS THAN 34 KNOTS
- 34-63 KNOTS
- MORE THAN 63 KNOTS
- FORECAST CYCLONE TRACK
- PAST CYCLONE TRACK
- DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA
- FORECAST 34/50/64 KNOT WIND RADII



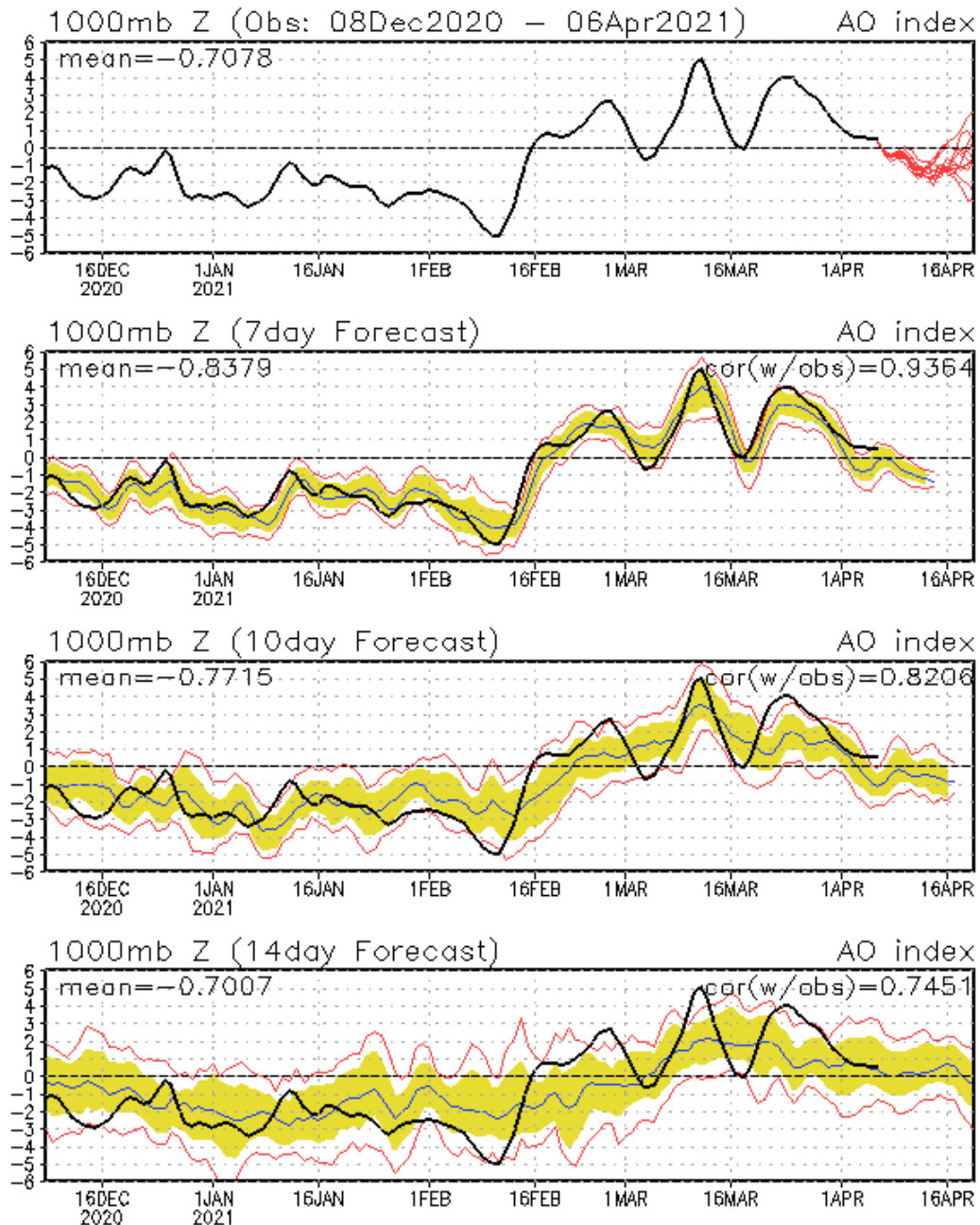
ATCF®

Connections to U.S. Impacts

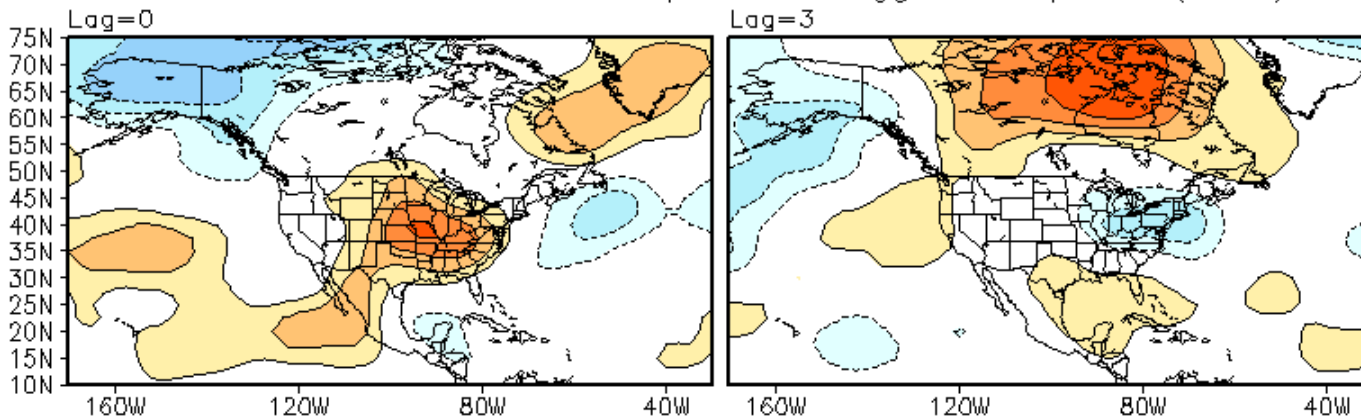
PNA: Observed & ENSM forecasts



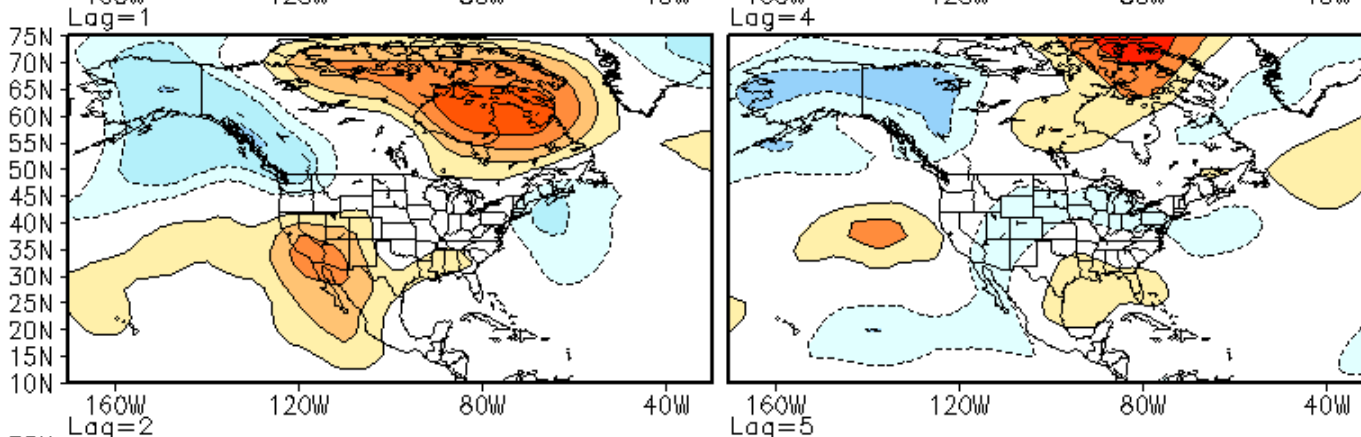
AO: Observed & ENSM forecasts



RMM Phase 6 850-hPa Temperature Lagged Composite (mam)

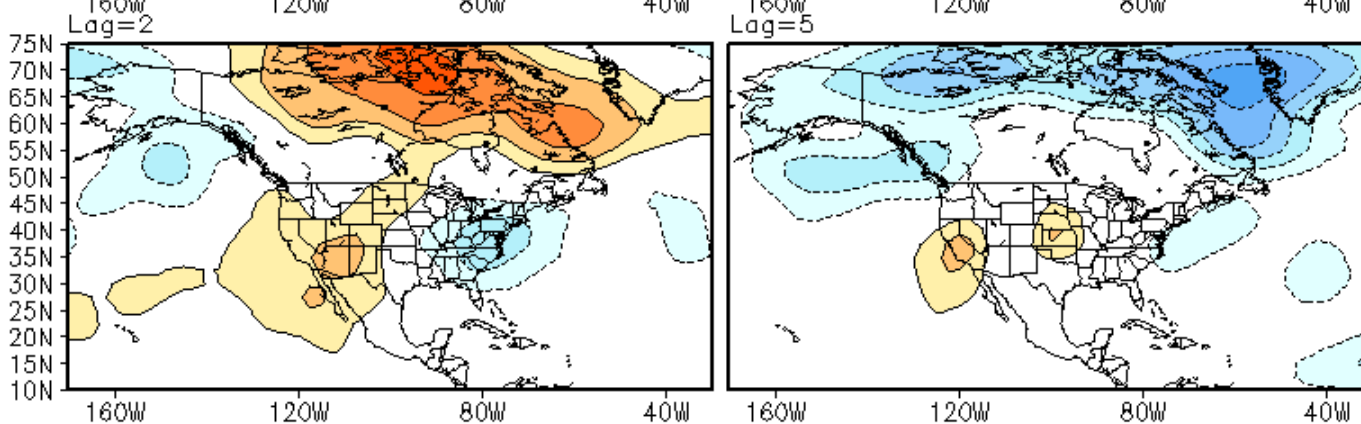


Day 15



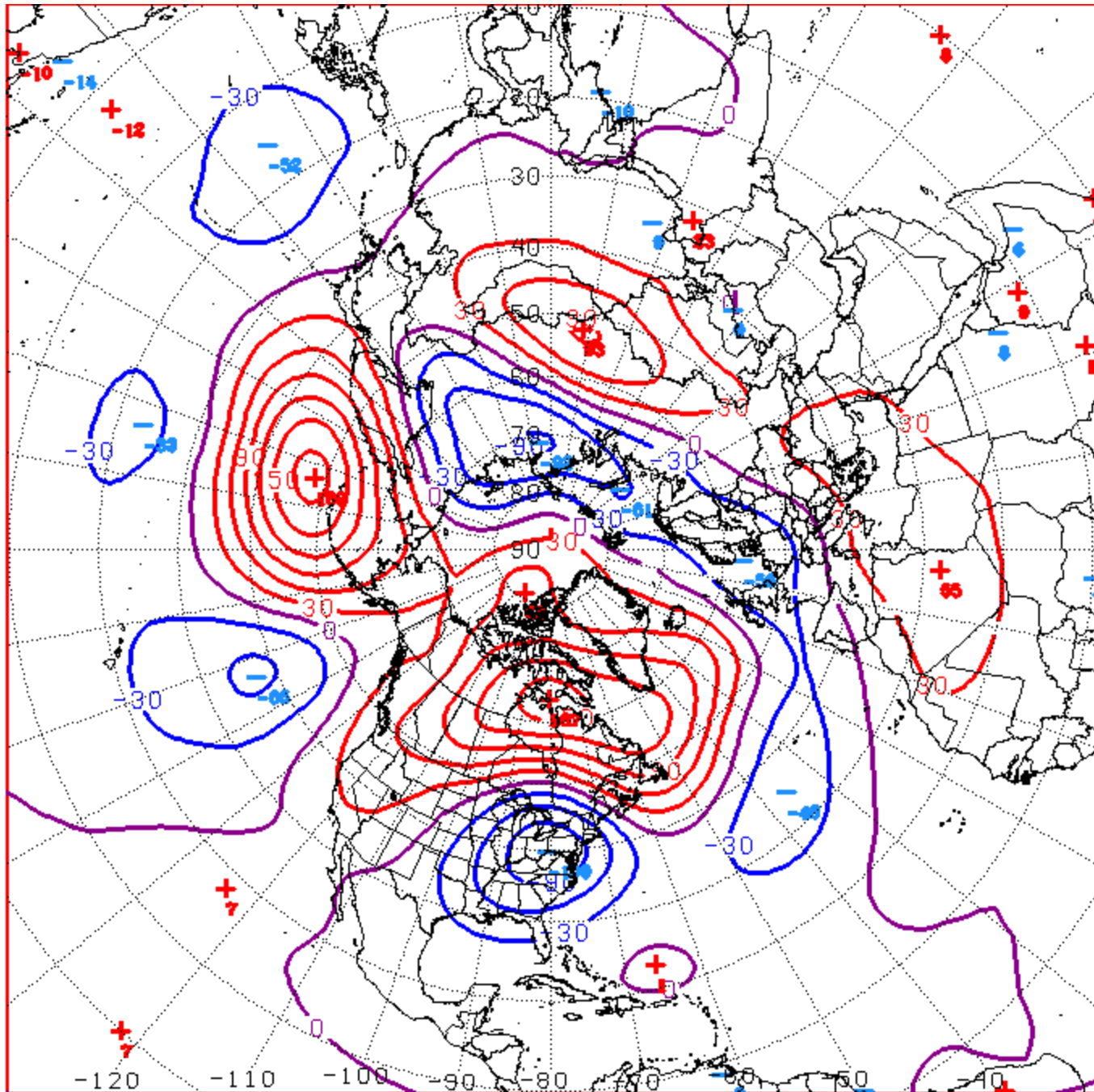
Day 5

Day 20



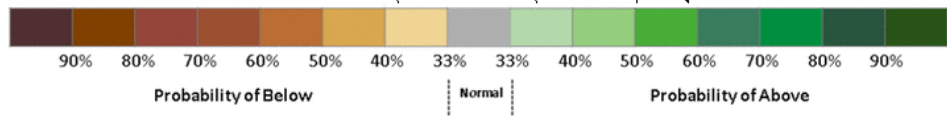
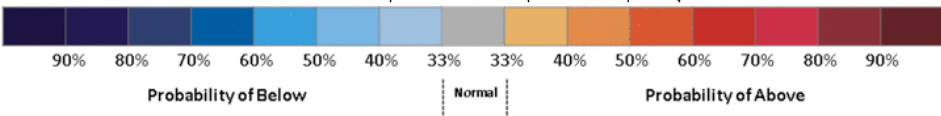
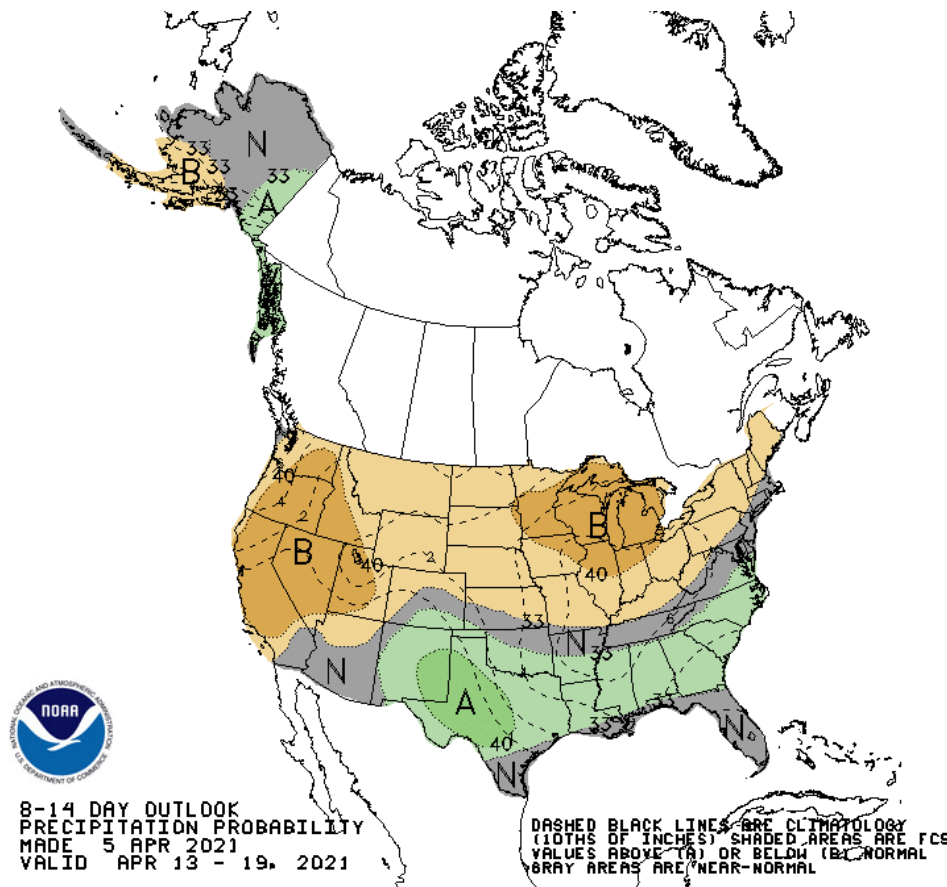
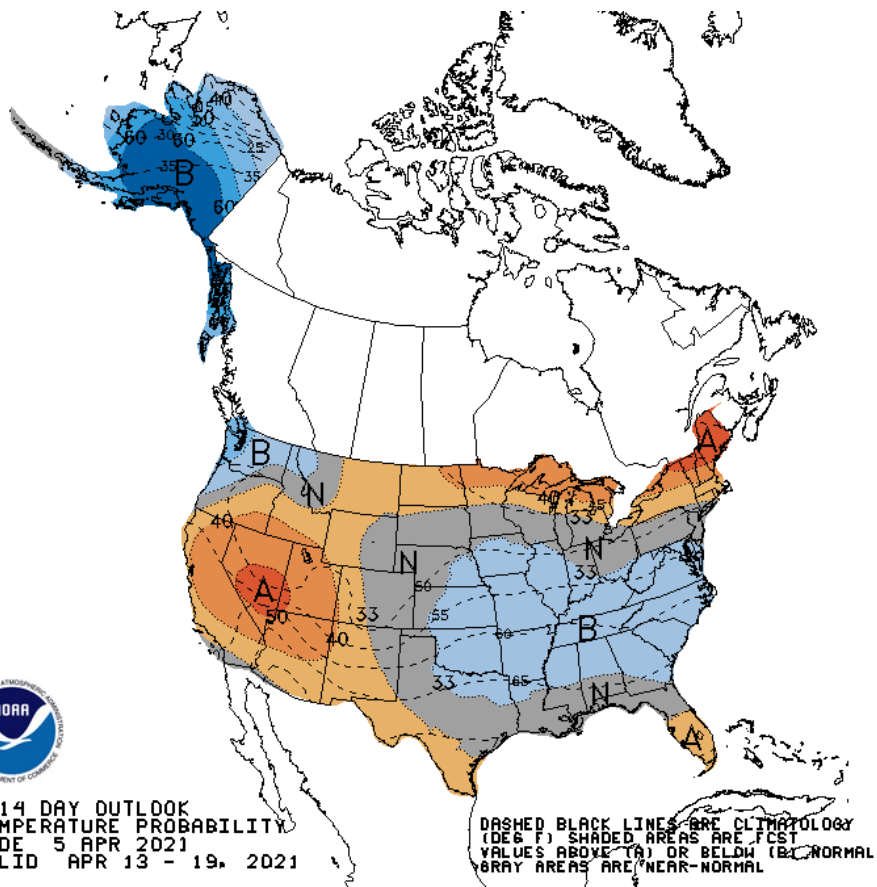
Day 10

Day 25



D+11 500 MB ANOMALIES FROM 06Z ENSM
CPC MAP MADE APR 06 2021 1412 UTC CNTD APR 17 2021

Yesterday's Week-2 Outlooks

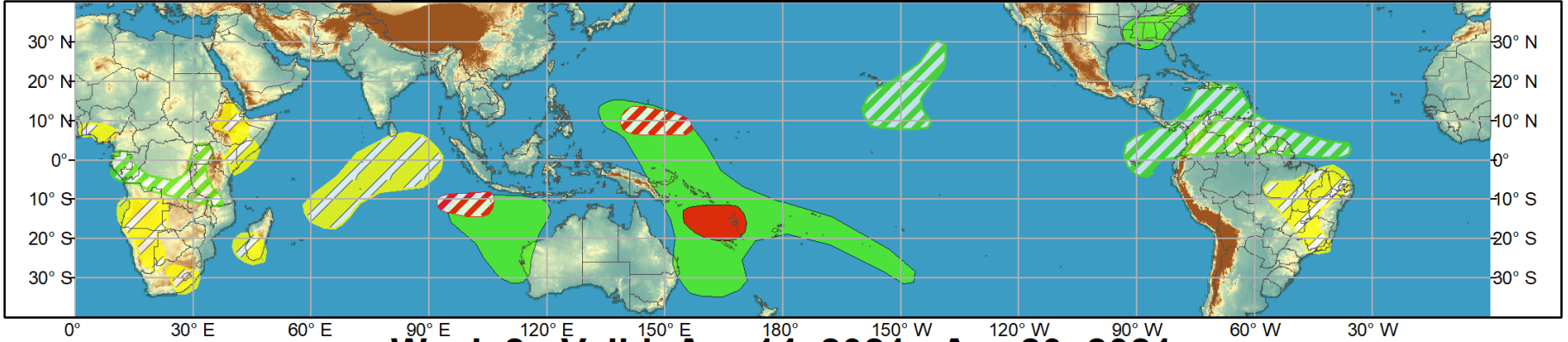




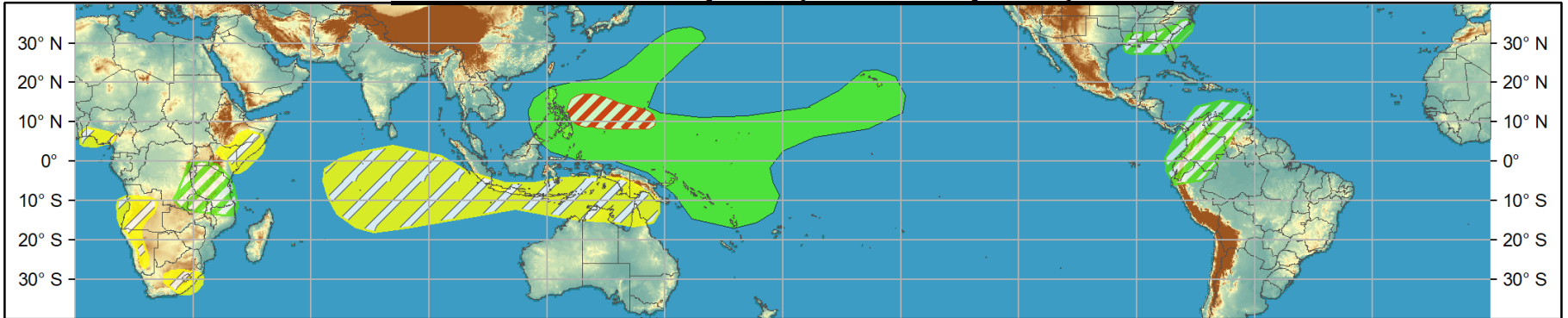
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