

Global Tropics Hazards And Benefits Outlook

3/02/2020

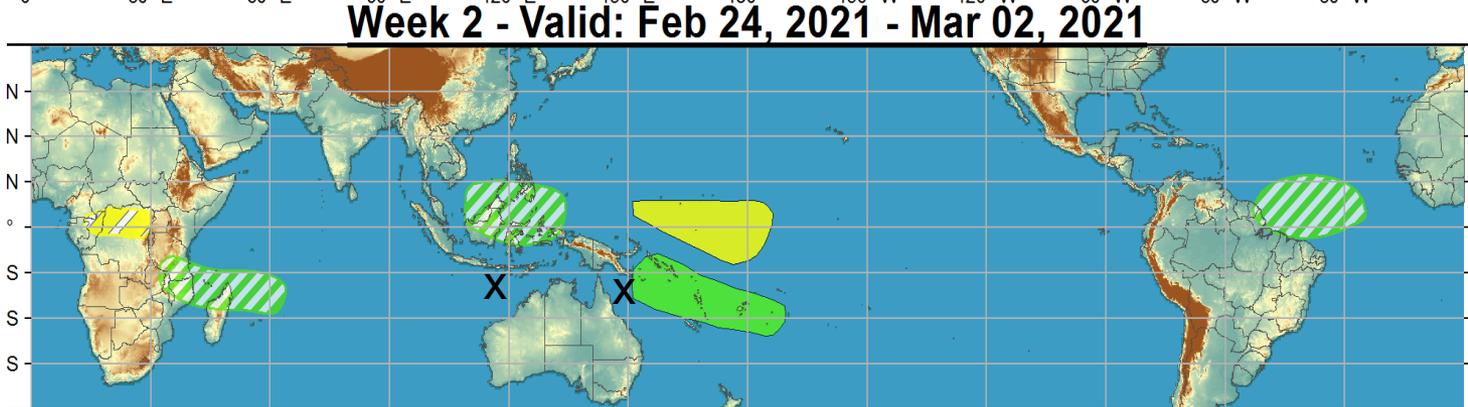
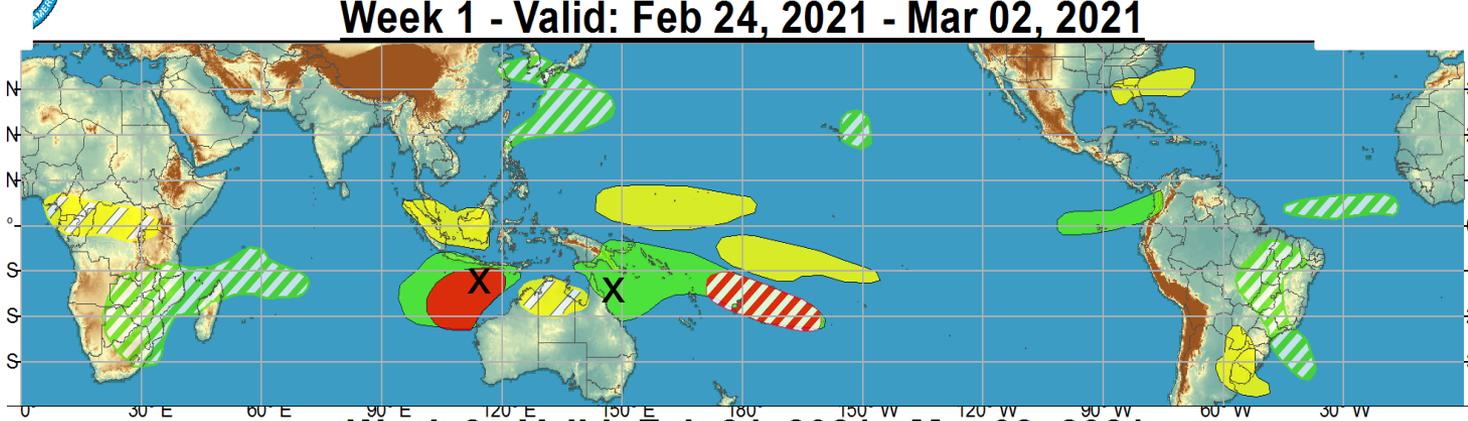
Brad Pugh

Outline

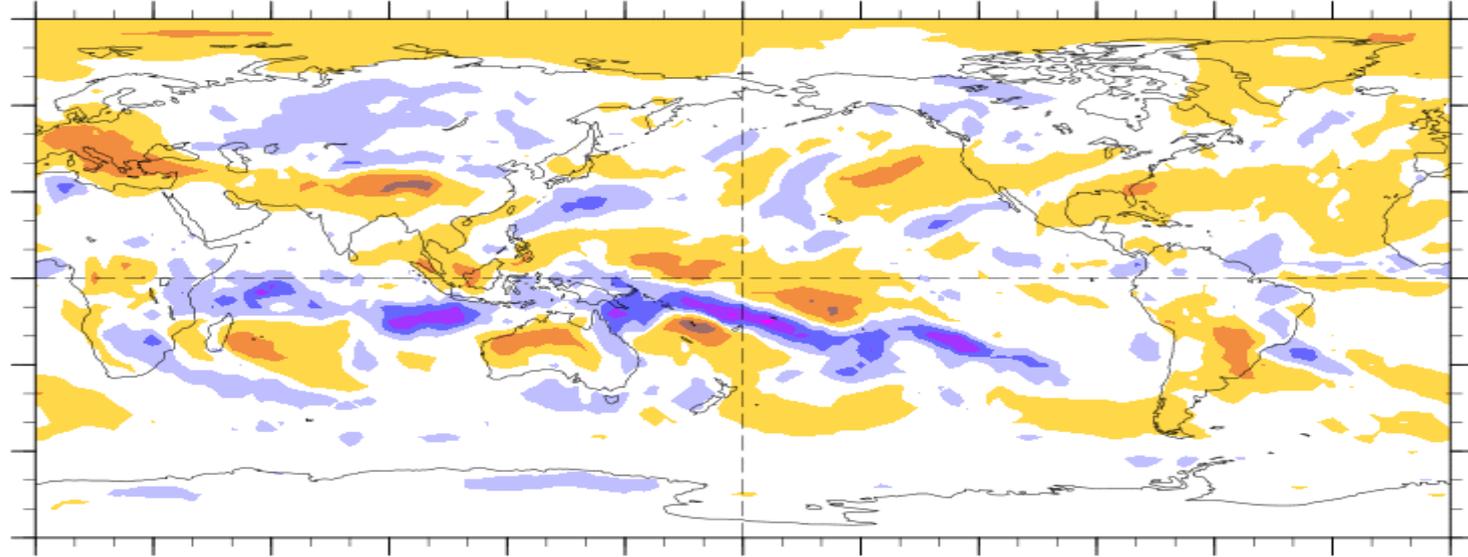
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Two Tropical
Cyclones
(Feb 24-Mar 2)



7-Day Average OLR Anomaly 2021/02/22 - 2021/02/28



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (February 11, 2021 Update)

next update on 11th of March

- 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:

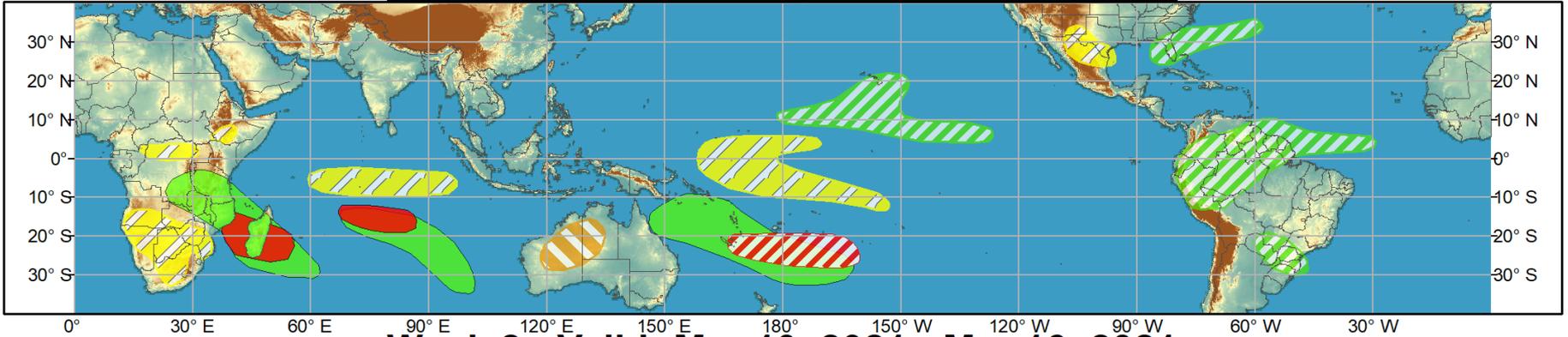
- The MJO has become more coherent with its enhanced phase over the West Pacific.
- This enhanced MJO phase is forecast to shift eastward over the Western Hemisphere during early to mid-March.
- Increasingly wet pattern for South America (weeks 1 and 2), while a drying trend is expected for the Indian Ocean by mid-March.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Mar 03, 2021 - Mar 09, 2021



Week 2 - Valid: Mar 10, 2021 - Mar 16, 2021



Confidence
 High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
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Produced: 03/02/2021
Forecaster: Pugh

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IR Satellite & 200-hpa Velocity Potential Anomalies

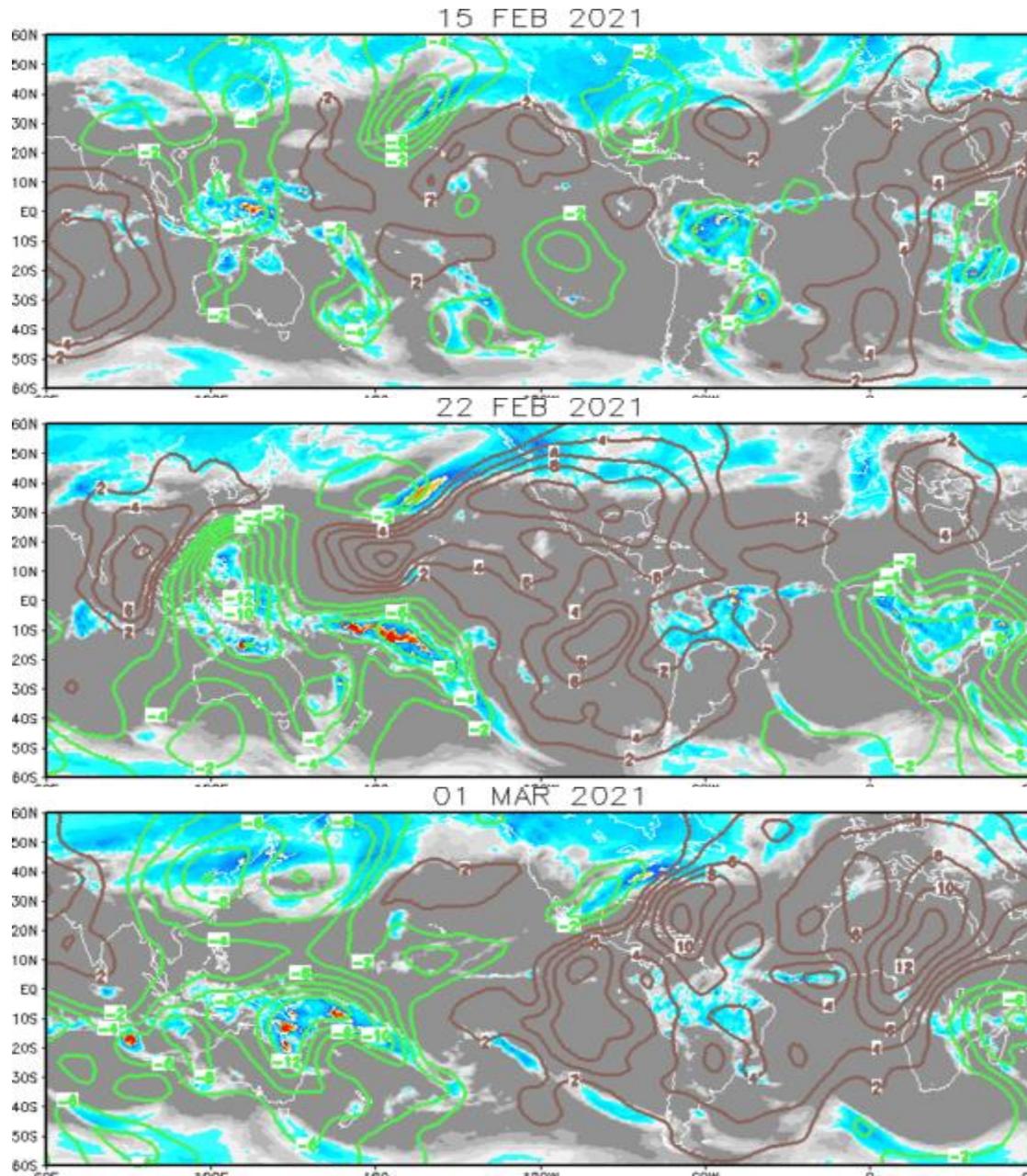
Green: Enhanced Divergence

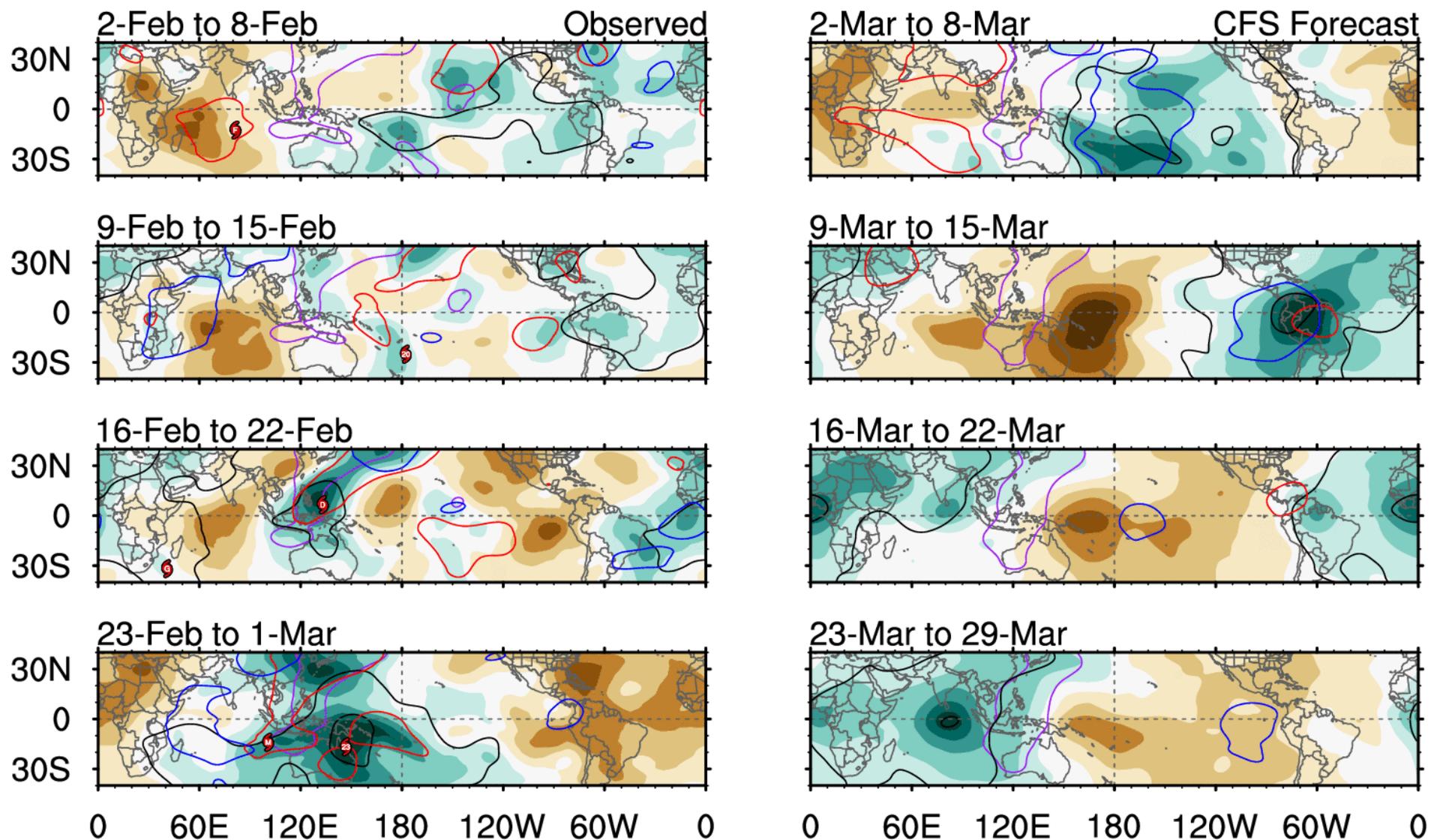
Brown: Enhanced Convergence

By mid-February, the tropical convective pattern became disorganized.

Rossby wave now over the Maritime Continent; SPCZ remains active. Note enhancement over Africa/western IO (Kelvin wave).

More coherent Wave-1 spatial pattern developed by the beginning of March.





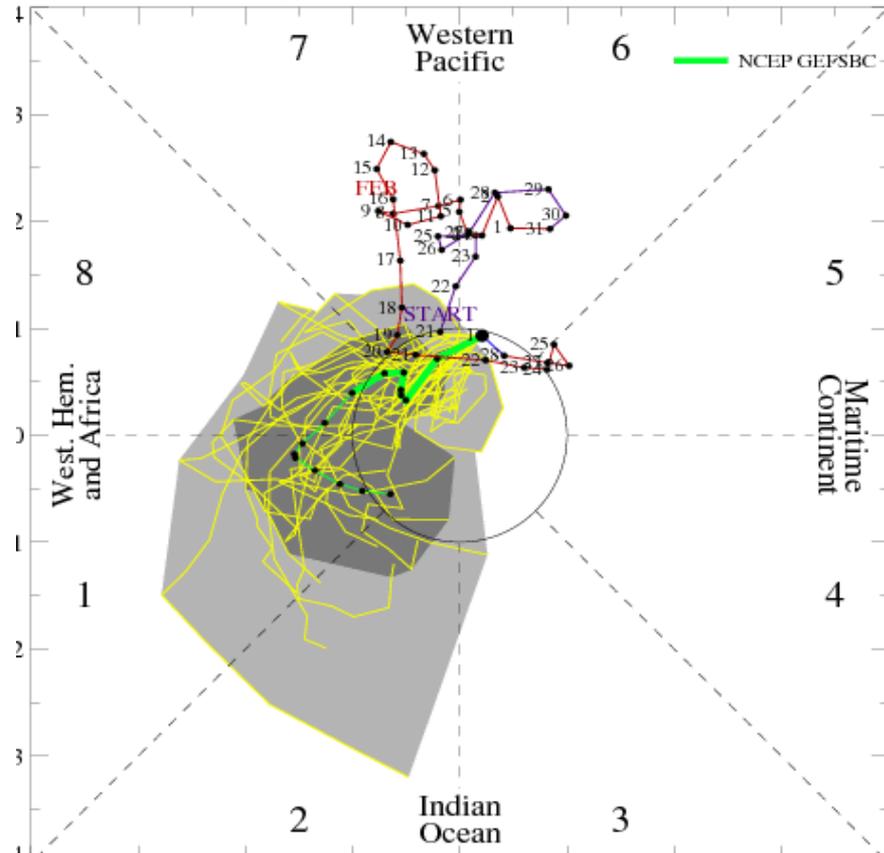
— MJO — Kelvin x2
 — Low — ER

7-day CHI200 with CFS forecasts

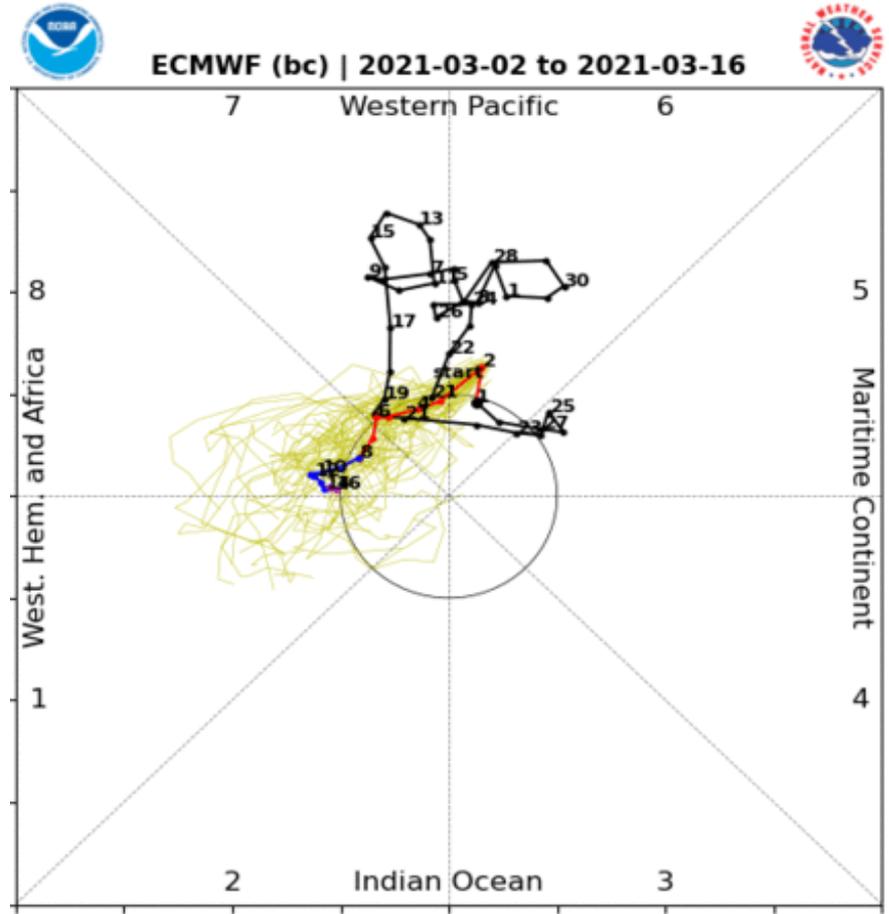
Contours at -2, -6 x10⁶ m² s⁻¹

MJO Observation/Forecast

[RMM1, RMM2] forecast for Mar-02-2021 to Mar-16-2021



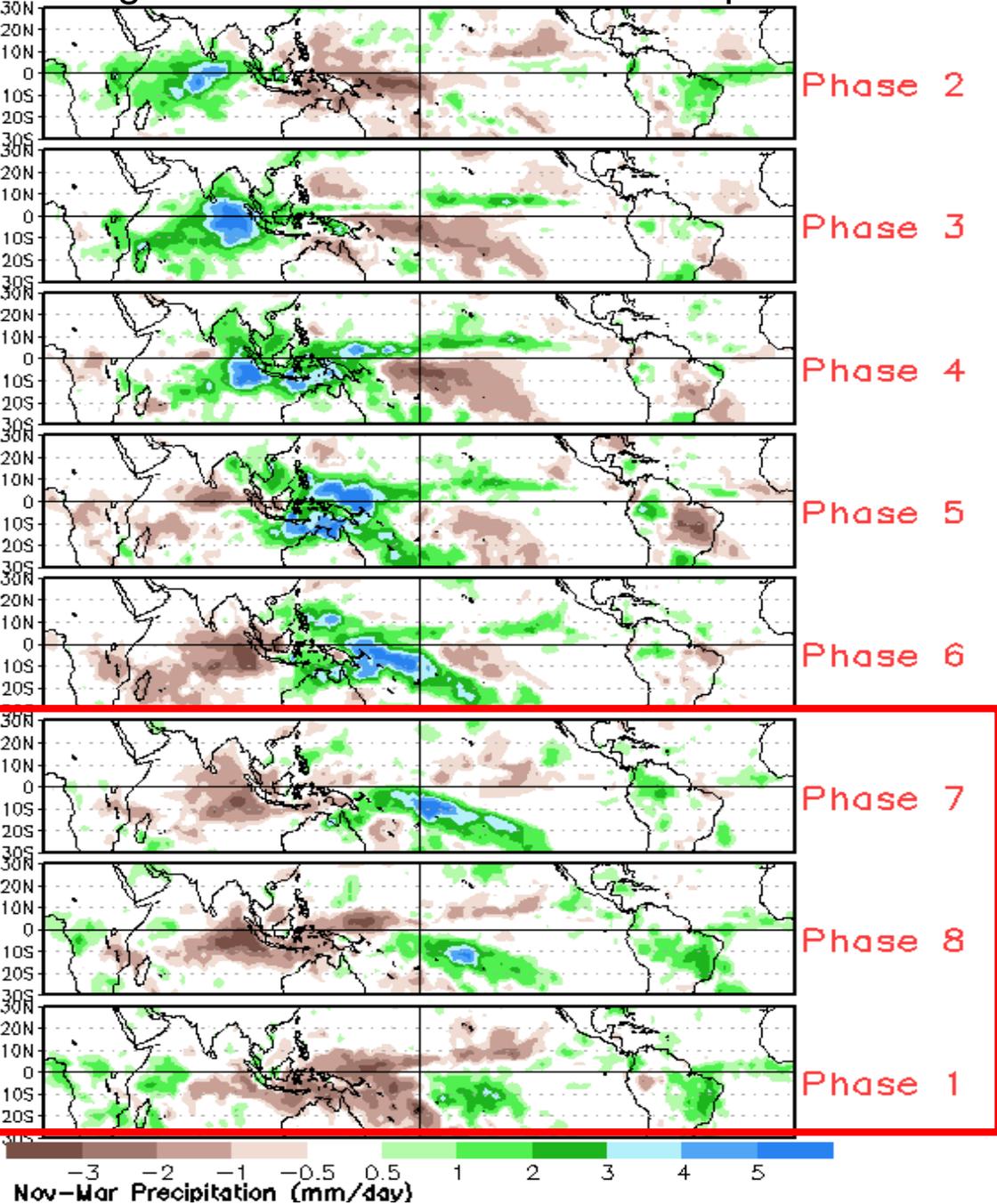
GEFS



ECMWF

Good model agreement and consistency that the MJO propagate eastward during the next two weeks (West Pacific to Western Hemisphere)

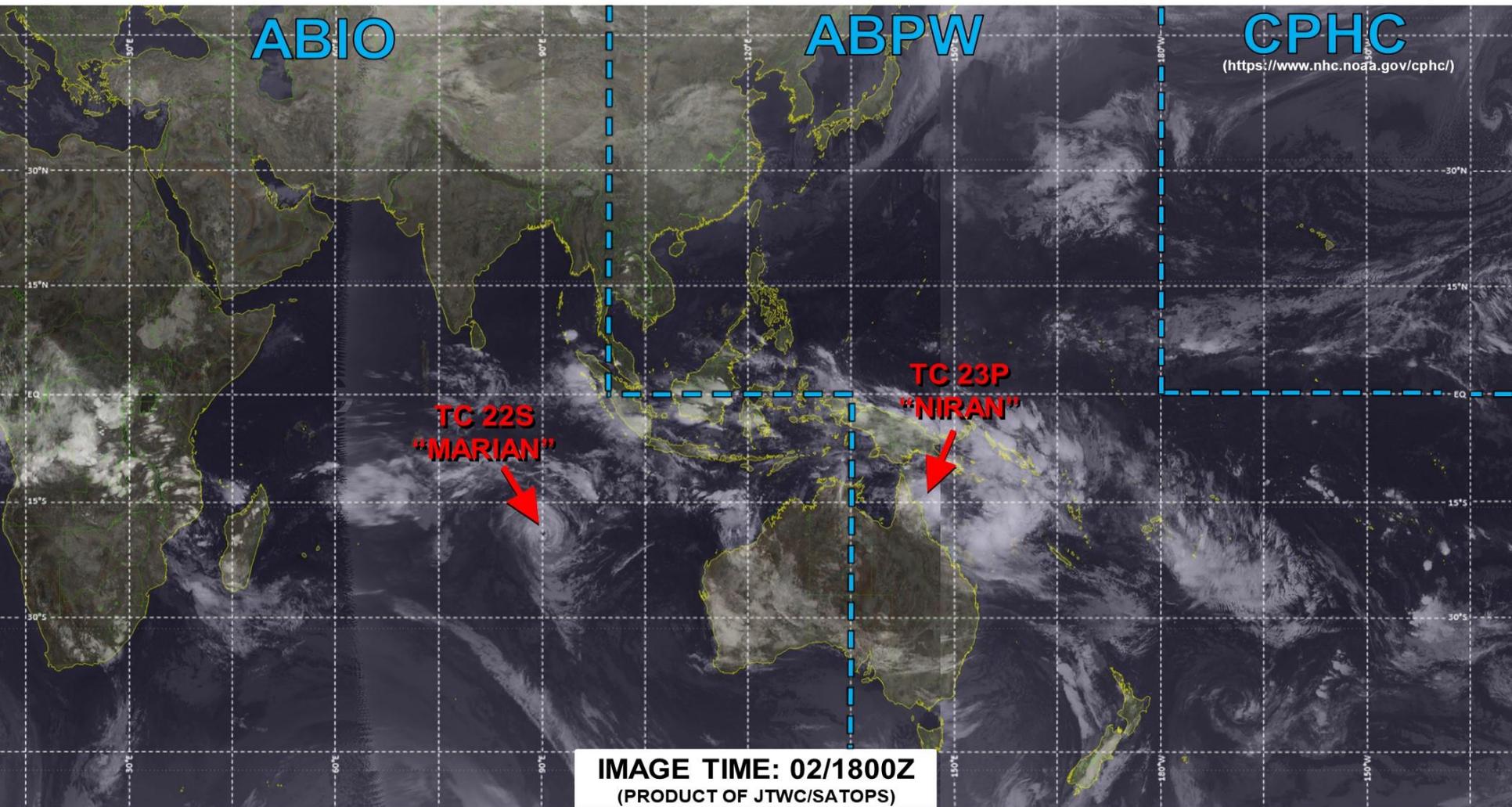
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.



JOINT TYPHOON WARNING CENTER



ABIO

ABPW

CPHC
[\(https://www.nhc.noaa.gov/cphc/\)](https://www.nhc.noaa.gov/cphc/)

TC 22S
"MARIAN"

TC 23P
"NIRAN"

IMAGE TIME: 02/1800Z
(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 Cyclone (Reference Warning)

Tropical Cyclone Marian

6 PM BST Tue Mar 2 2021
Position 18.7 S 89.8 E
Maximum Winds 90 mph Gusts 110 mph
Movement ESE at 2 mph
Minimum Pressure mb

Storm Category

Tropical Depression	Tropical Storm	Category 1	Category 2	Category 3	Category 4	Category 5
< 39 mph	39-73 mph	74-95 mph	96-110 mph	111-129 mph	130-156 mph	157+ mph

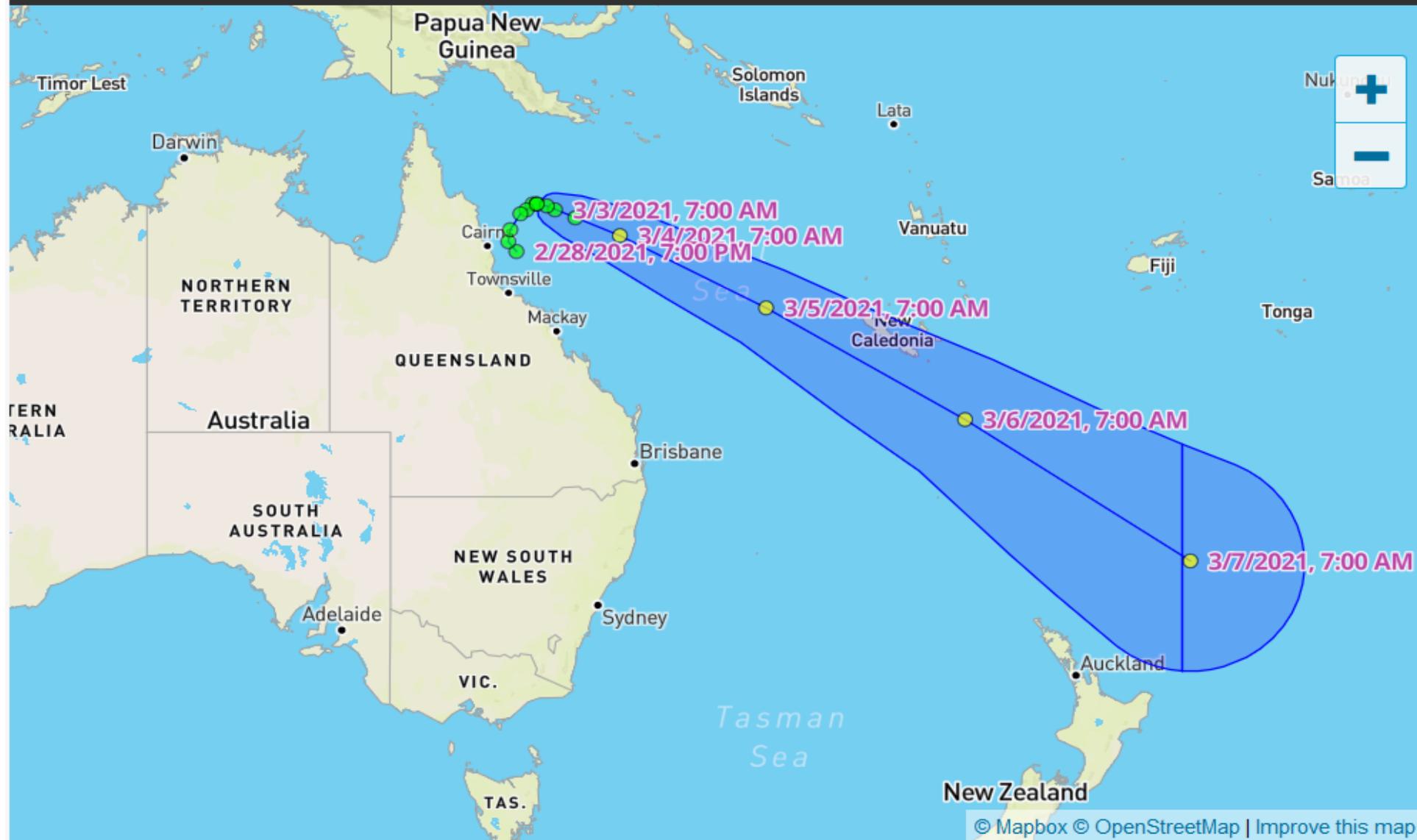


Tropical Cyclone Niran

11 PM AEDT Tue Mar 2 2021
Position 14.8 S 148.2 E
Maximum Winds 55 mph Gusts 70 mph
Movement E at 2 mph
Minimum Pressure mb

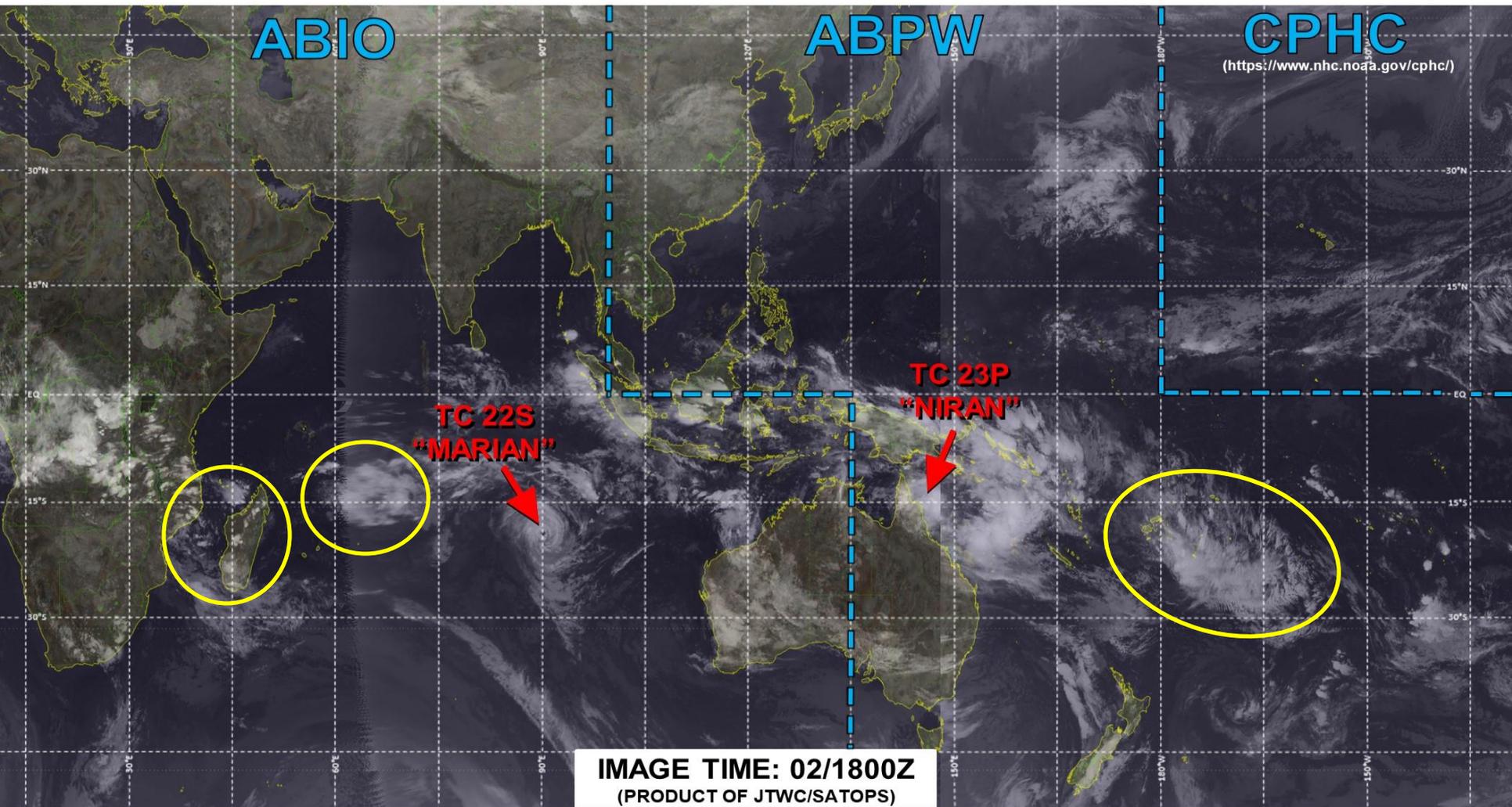
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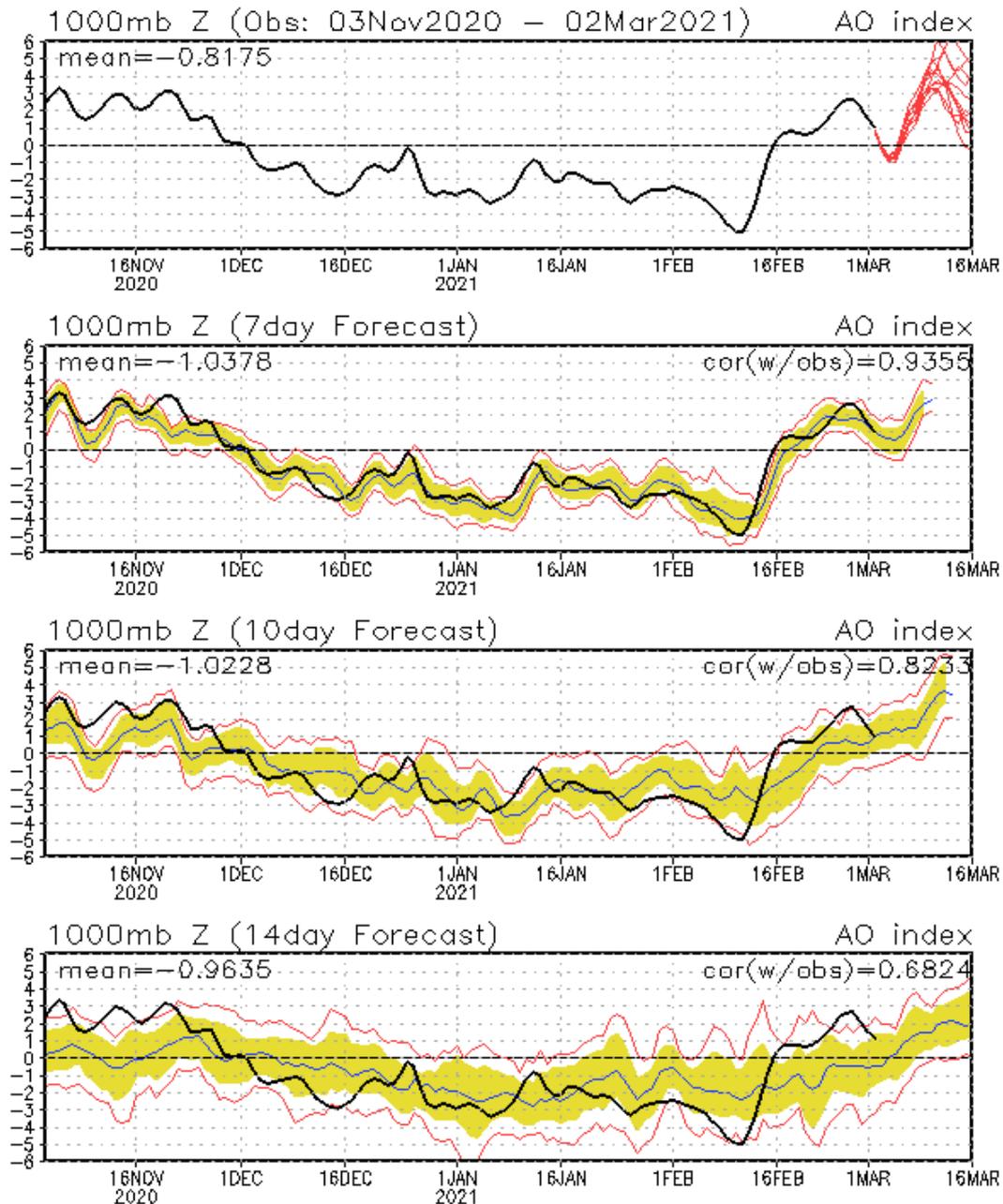
HIGH TC development likely within 24 hours (Reference TCFA)

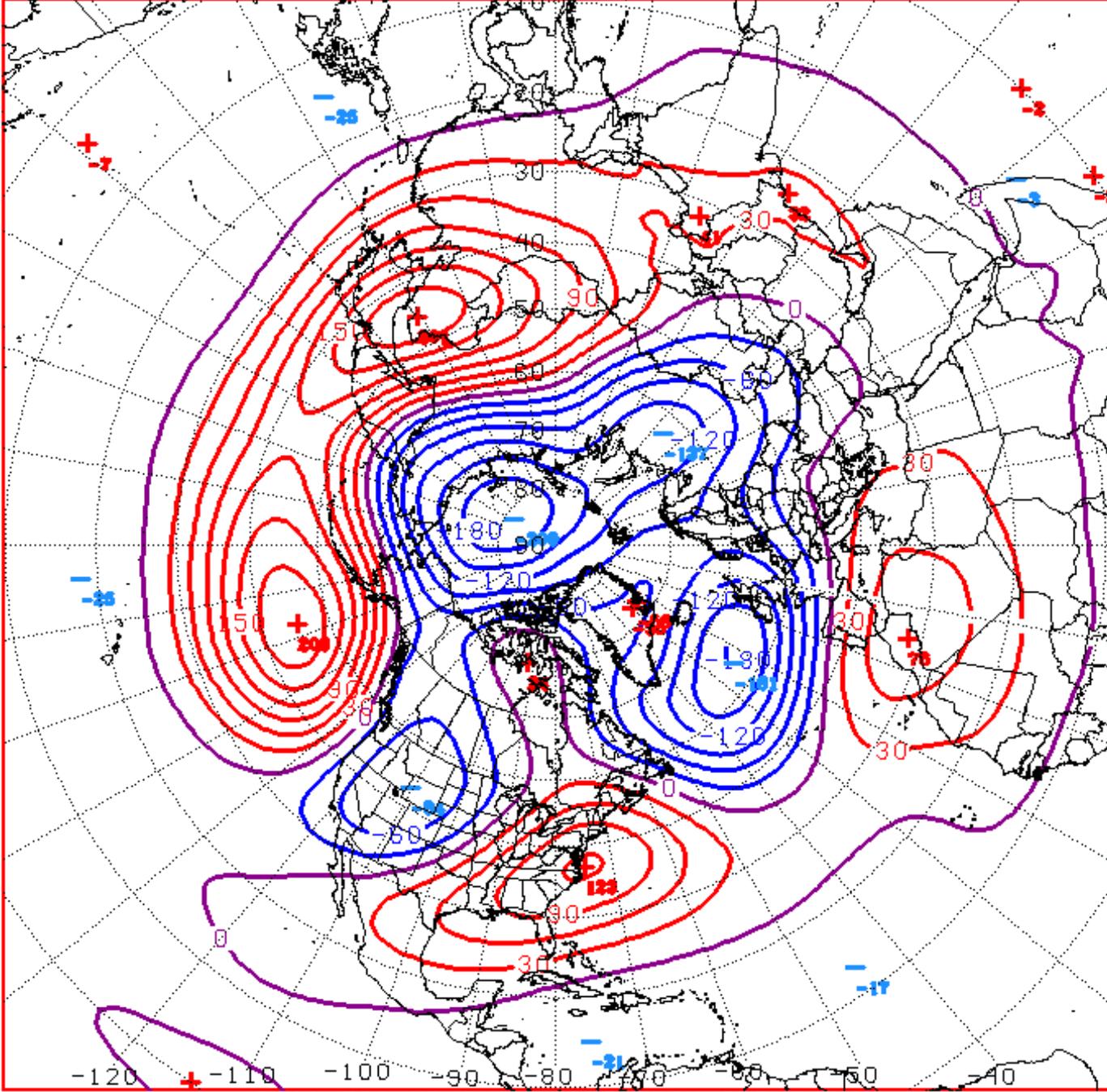
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Connections to U.S. Impacts

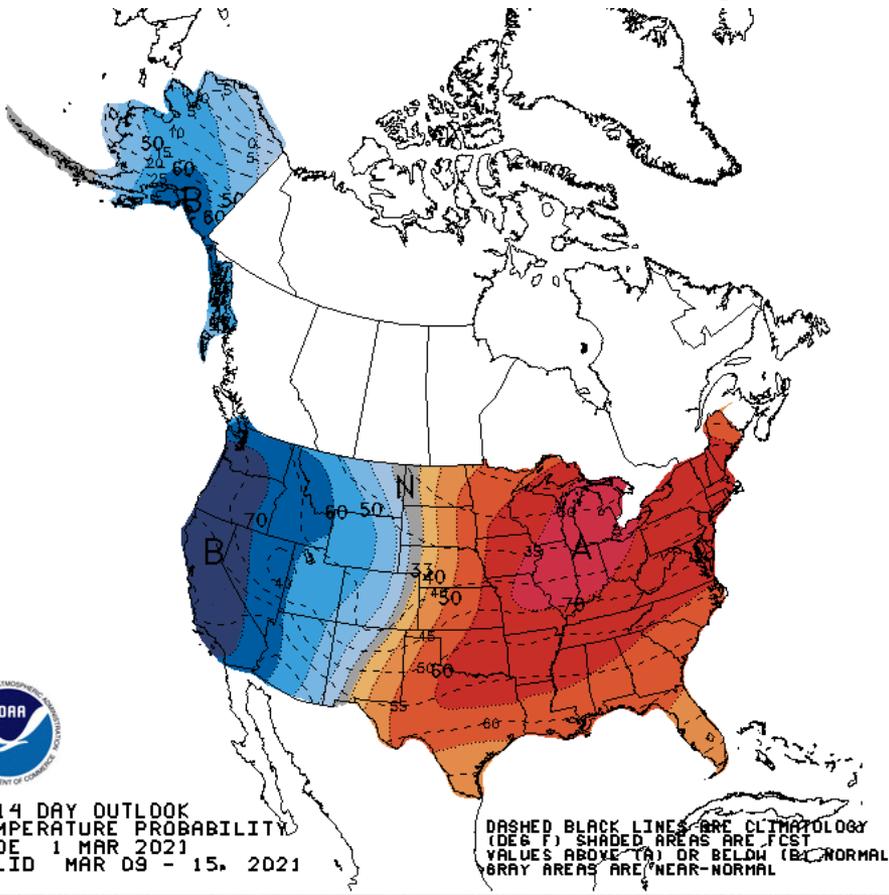
AO: Observed & ENSM forecasts





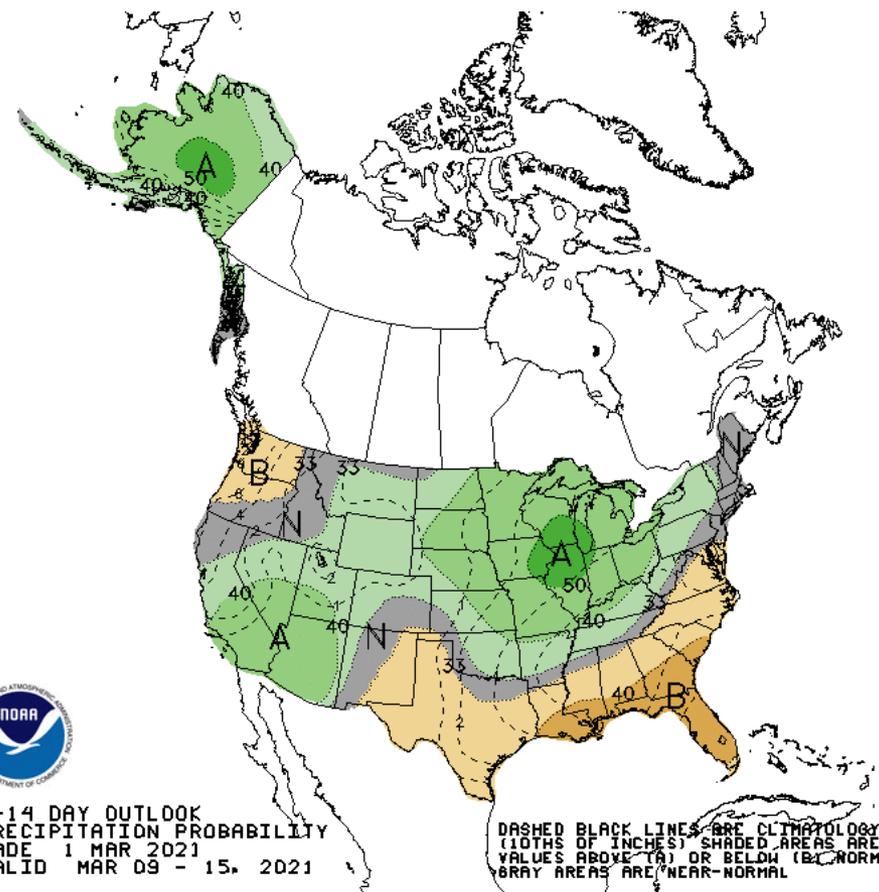
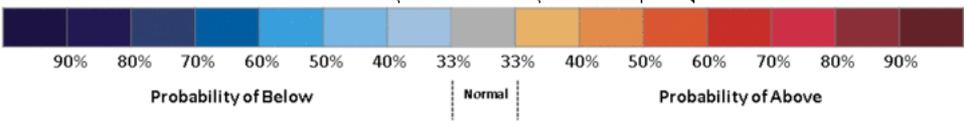
D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE MAR 02 2021 1425 UTC CNTD MAR 13 2021

Week 2 – Temperature and Precipitation



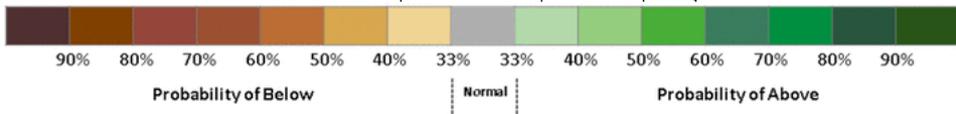
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 1 MAR 2021
VALID MAR 09 - 15, 2021

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 1 MAR 2021
VALID MAR 09 - 15, 2021

DASHED BLACK LINES ARE CLIMATOLOGY (10THS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.

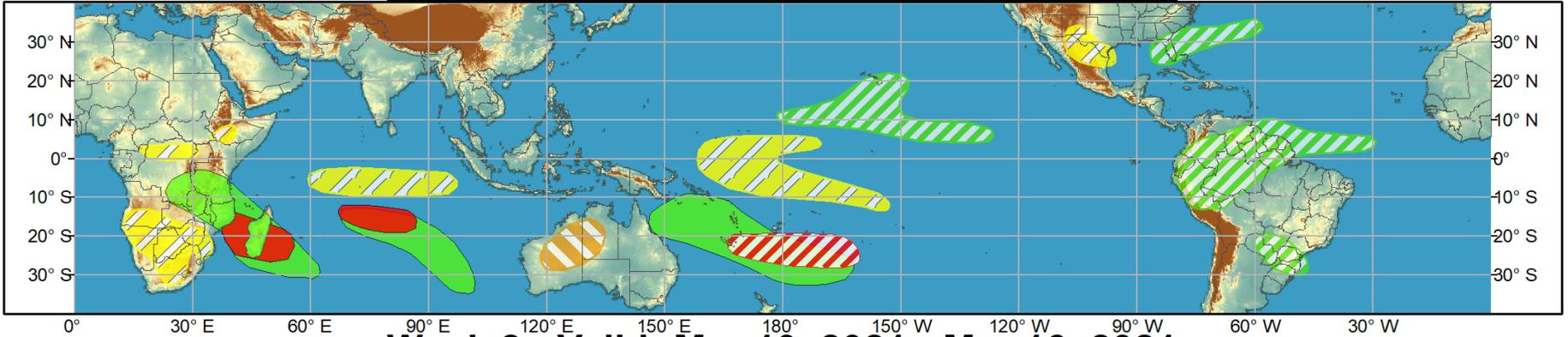




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