

Global Tropics Hazards And Benefits Outlook

7/13/2021

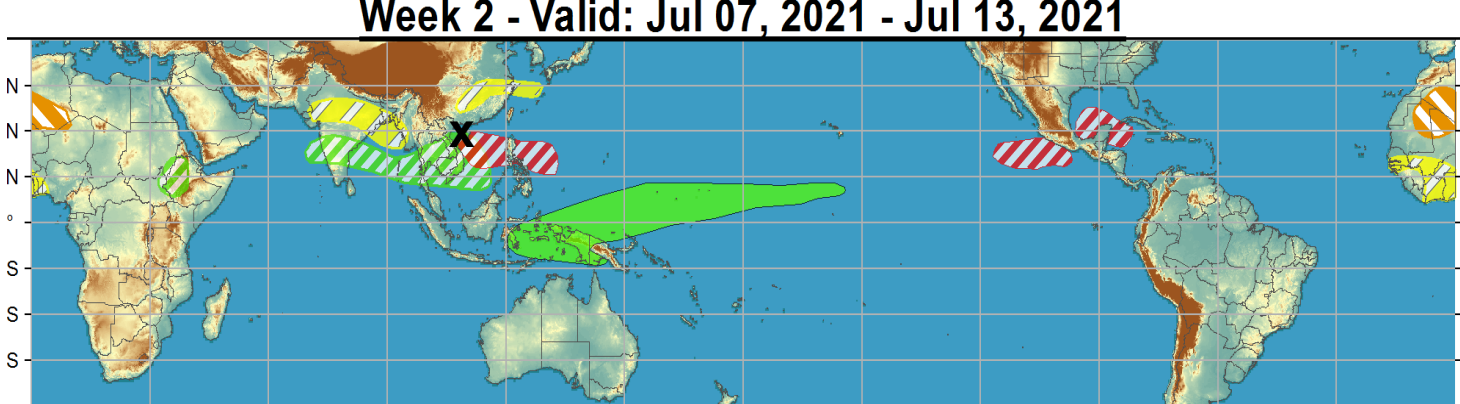
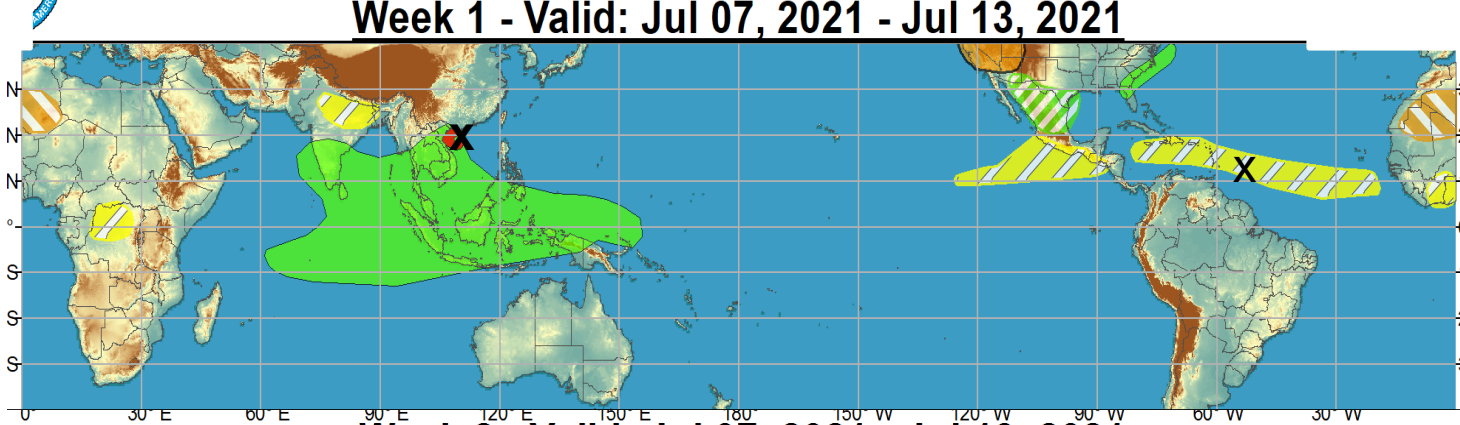
Nick Novella

Outline

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

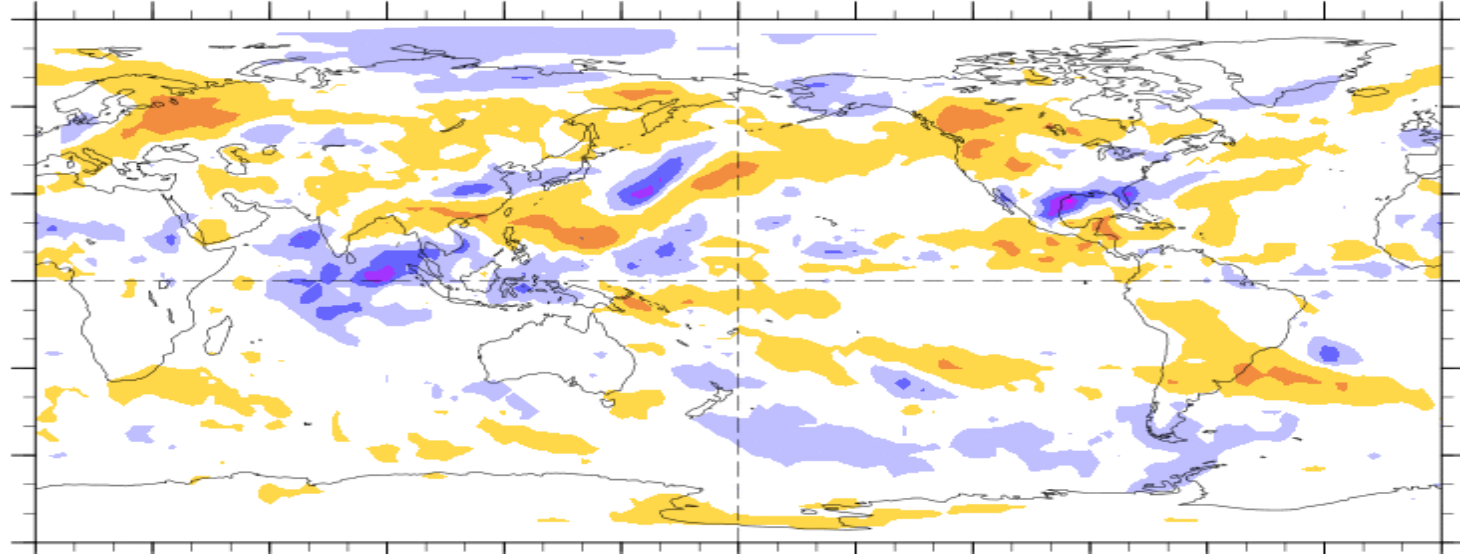
Outlook Review

Since 7/7:
WPAC 08W



7-Day Average OLR Anomaly

2021/07/05 - 2021/07/11



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (8 July, 2021 Update)

next update on 12th of August

- ENSO Alert System Status: [La Niña Watch](#)
- ENSO-neutral is favored through the Northern Hemisphere summer and into the fall (51% chance for ASO), with La Niña potentially emerging during the SON season and lasting through the winter (66% chance for NDJ).

MJO and other subseasonal tropical variability:

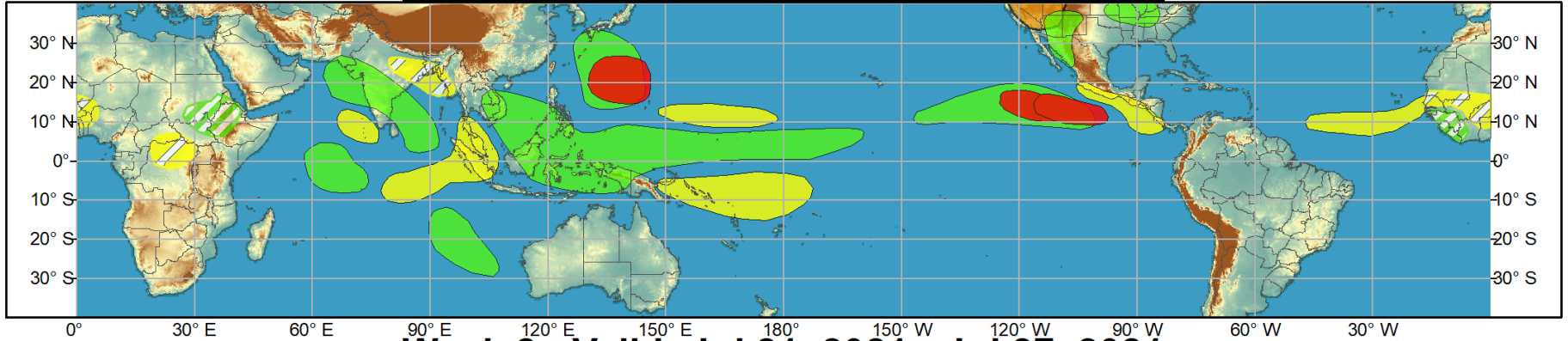
- The MJO remains active with the enhanced (suppressed) phase centered over the Indian Ocean (Western Hemisphere).
- Following competing interference with Rossby wave activity which stalled the intraseasonal signal during the past week, dynamical models favor the MJO to resume propagating eastward to and across the Maritime Continent during the next two weeks. However, there remains large ensemble spread adding to uncertainty regarding the strength and evolution of the MJO later in July.
- With the exception of TC formation favored in the Eastern Pacific during week-1, the large scale environment is anticipated to be unfavorable for TC activity over the Western Hemisphere through late July.



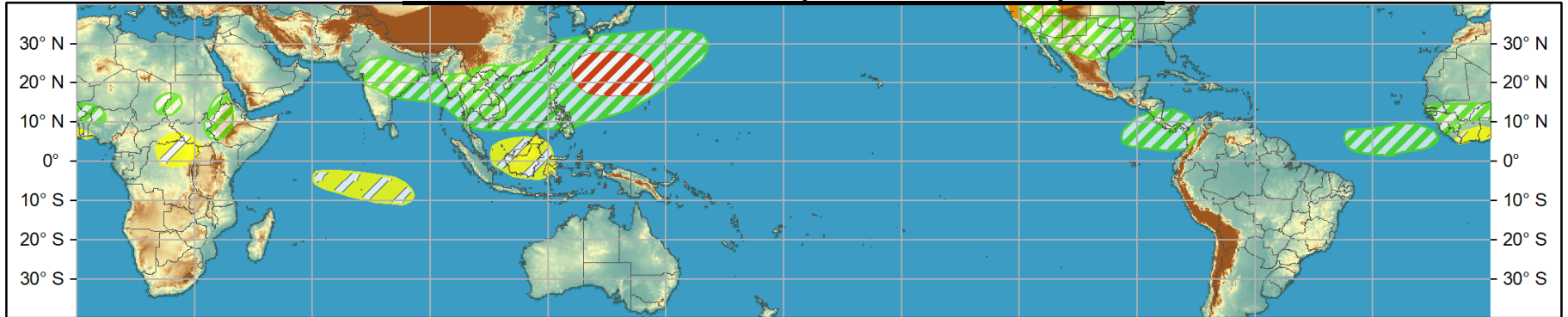
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jul 14, 2021 - Jul 20, 2021



Week 2 - Valid: Jul 21, 2021 - Jul 27, 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.

Below-normal temperatures



7-day mean temperatures in the lower third of the historical range.

Produced: 07/13/2021

Forecaster: Novella

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IR Satellite & 200-hpa Velocity Potential Anomalies

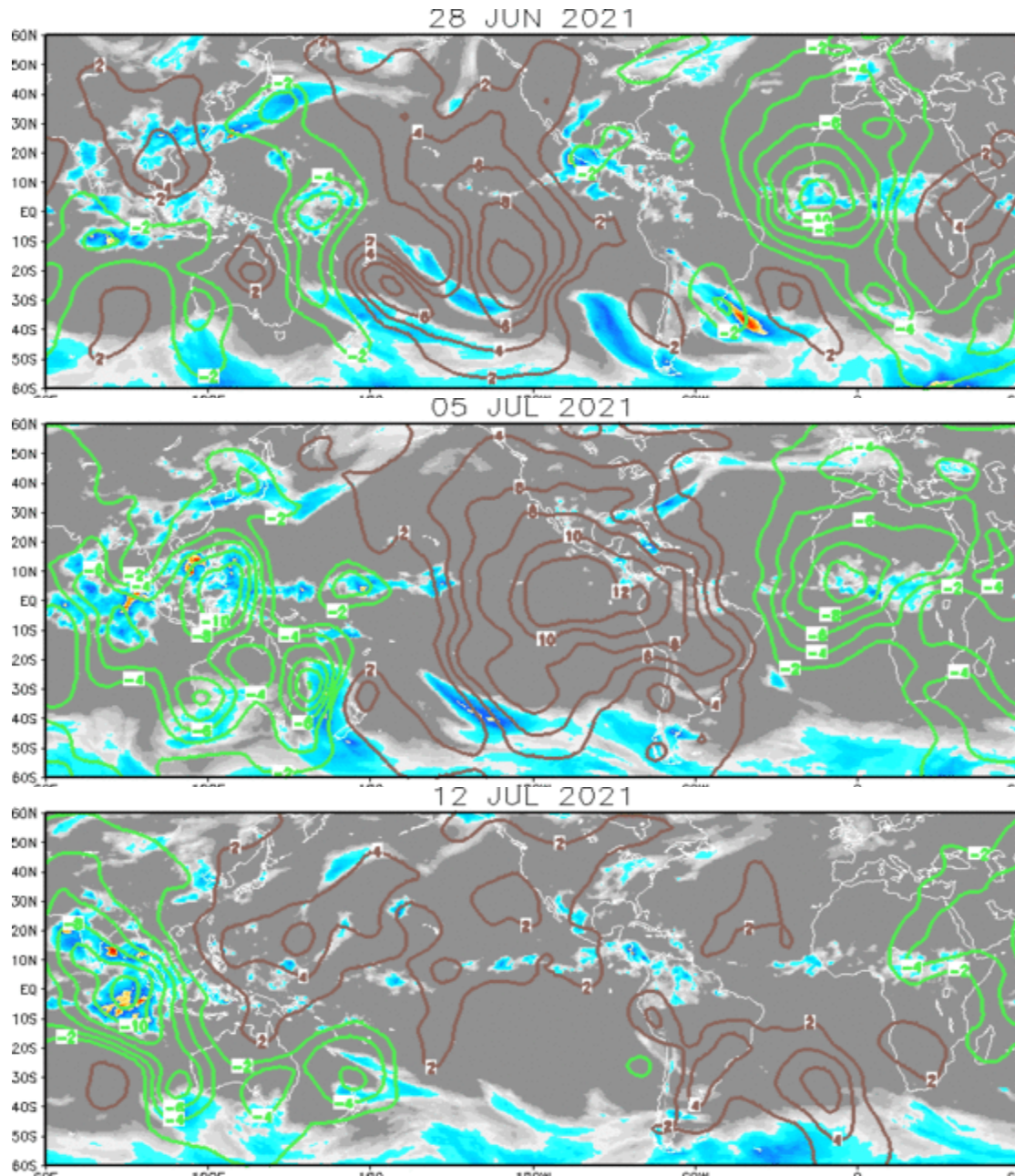
Green: Enhanced Divergence

Brown: Enhanced Convergence

A wave-2 pattern continues, with the growth of the West Africa signal and a Kelvin wave present over the Pacific.

By the beginning of July, a wave-1 pattern emerged which is more consistent with a MJO.

Enhanced conditions persist over the Indian Ocean, with weaker suppressed conditions over the Americas likely tied to the passage of a Kelvin Wave.

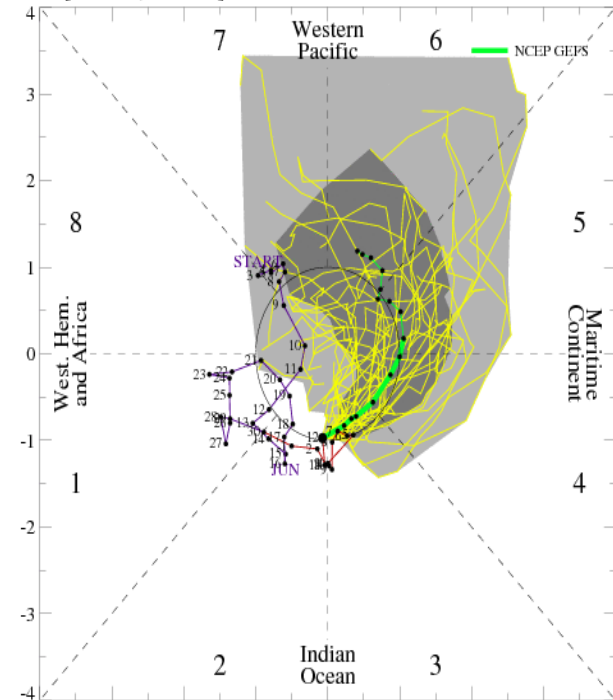


MJO Observation/Forecast

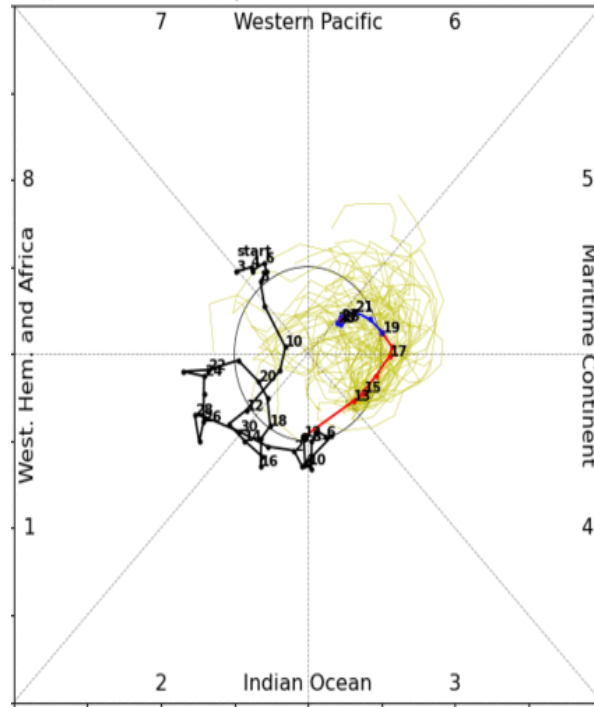
[RMM1, RMM2] forecast for Jul-13-2021 to Jul-27-2021

ECMWF (bc) | 2021-07-13 to 2021-07-27

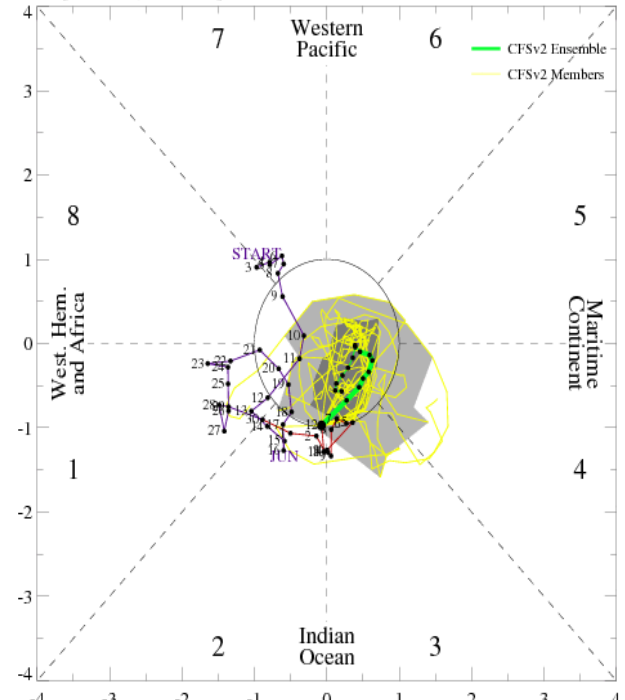
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GEFS



ECMWF

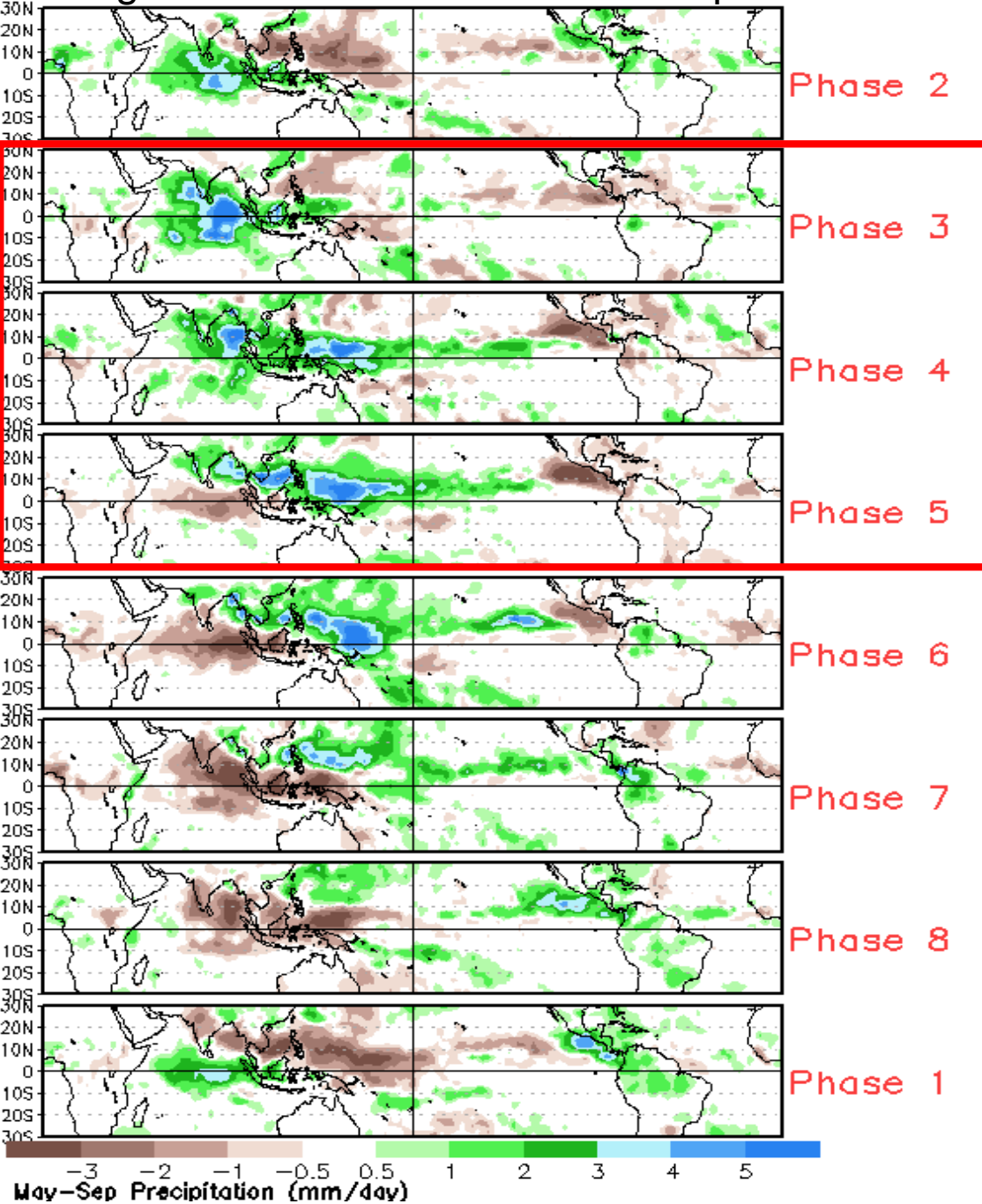


CFS

Dynamical models favor a renewed eastward propagation of the MJO at a low amplitude across the Indian Ocean and into the Maritime Continent during week-1.

By week-2, RMM mean solutions diverge where the GEFS features a more progressive signal (with several ensemble members reflecting a high amplitude event), whereas the ECMWF, and to a greater extent the CFS, favor a weakening event over the Maritime Continent.

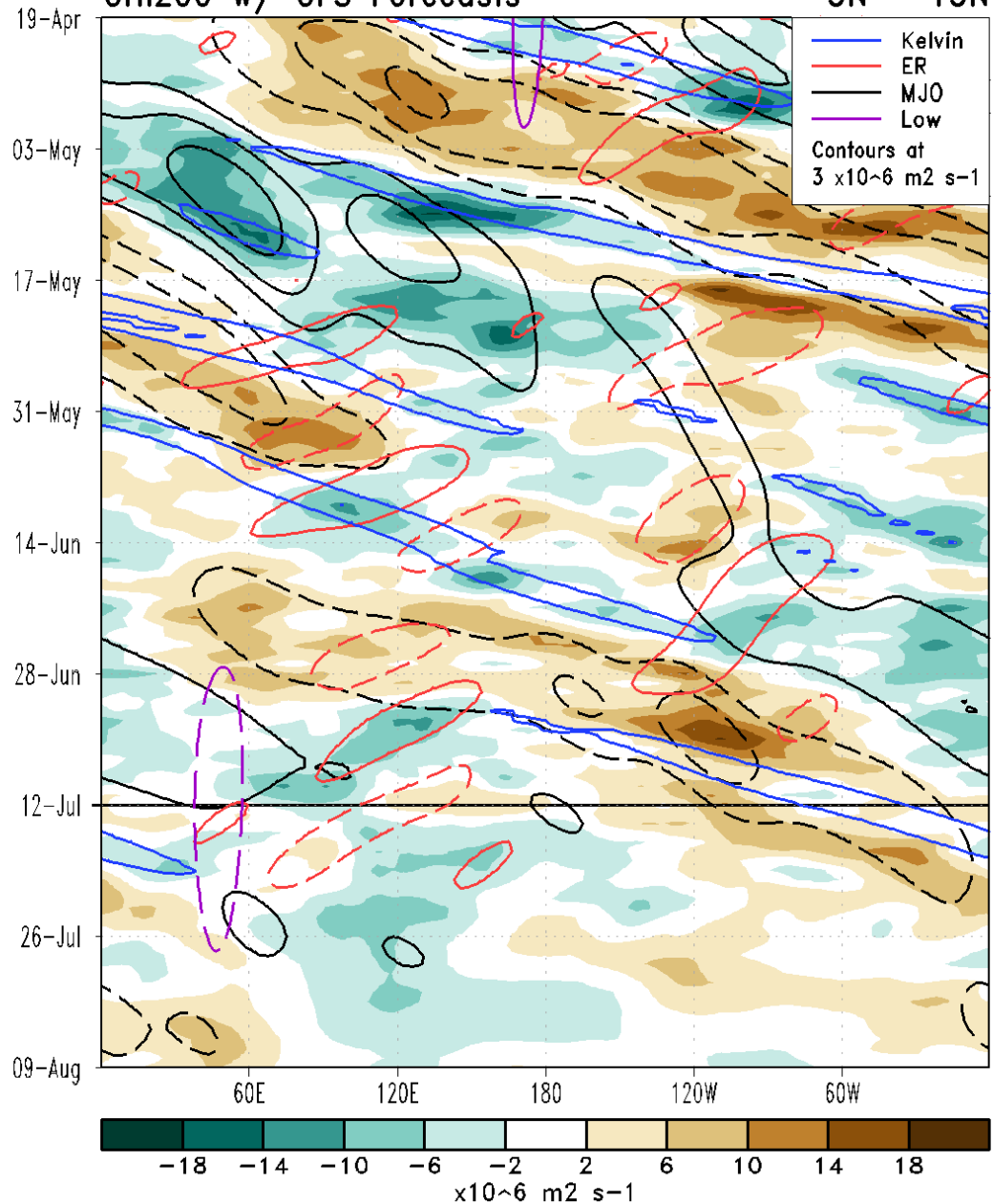
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

CHI200 w/ CFS Forecasts

5N - 15N



MJO activity is coming through the filtering in the VP field.

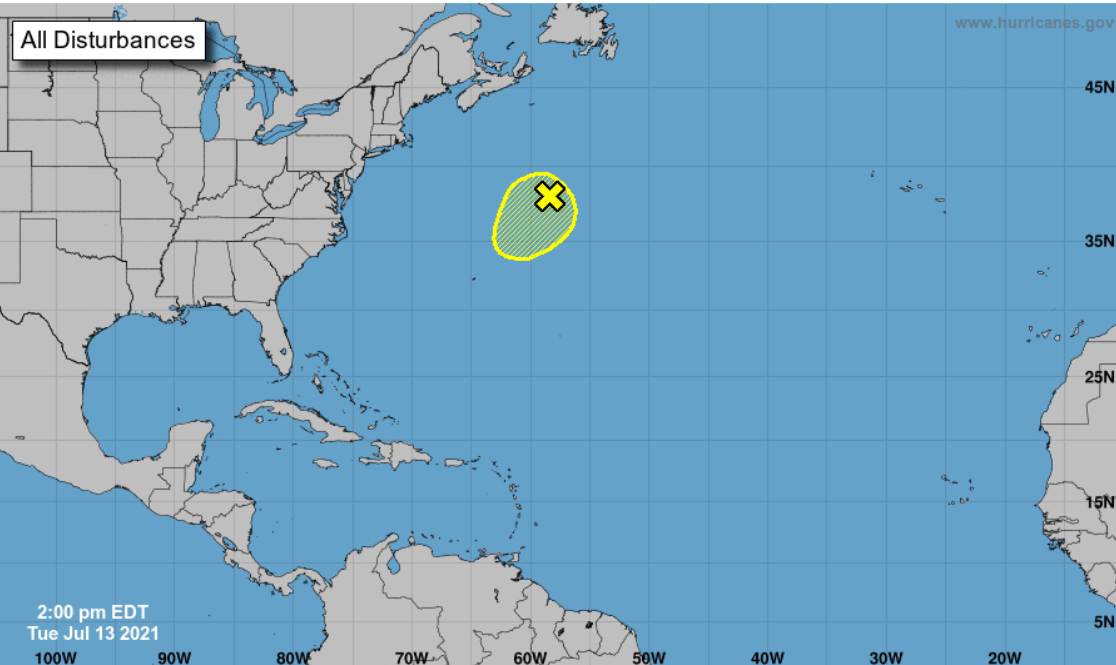
Kelvin wave activity over the may have help TC formation in East Pacific .

Rossby wave activity is evident over Maritime Continent and Indian Ocean during the last week.



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



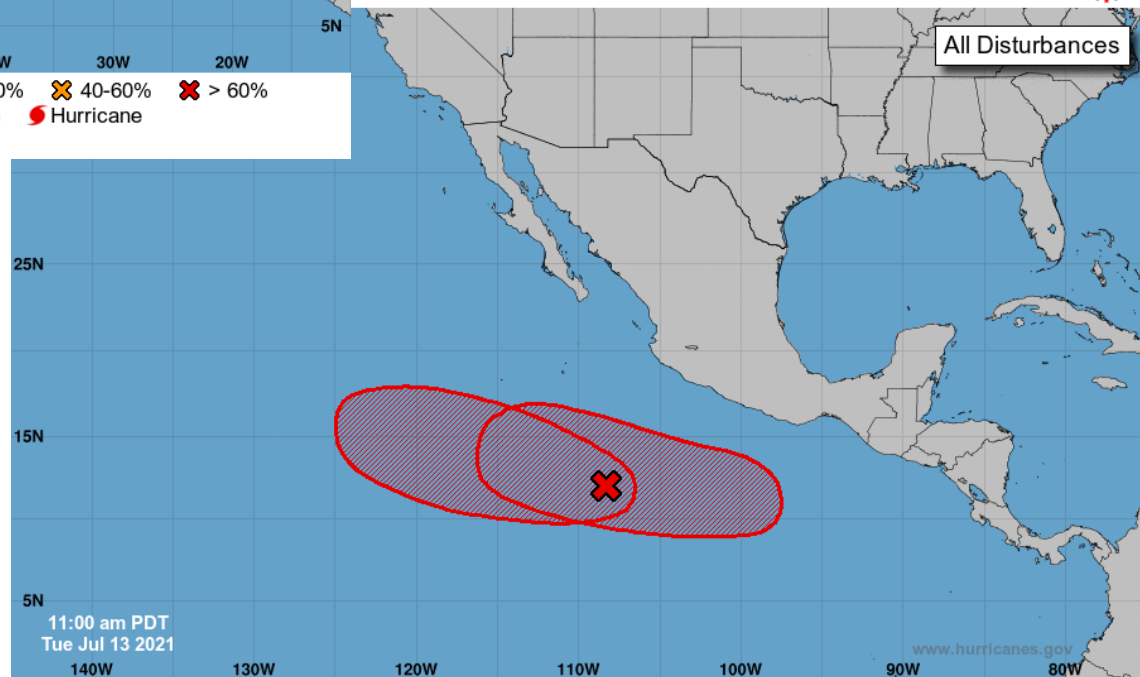
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



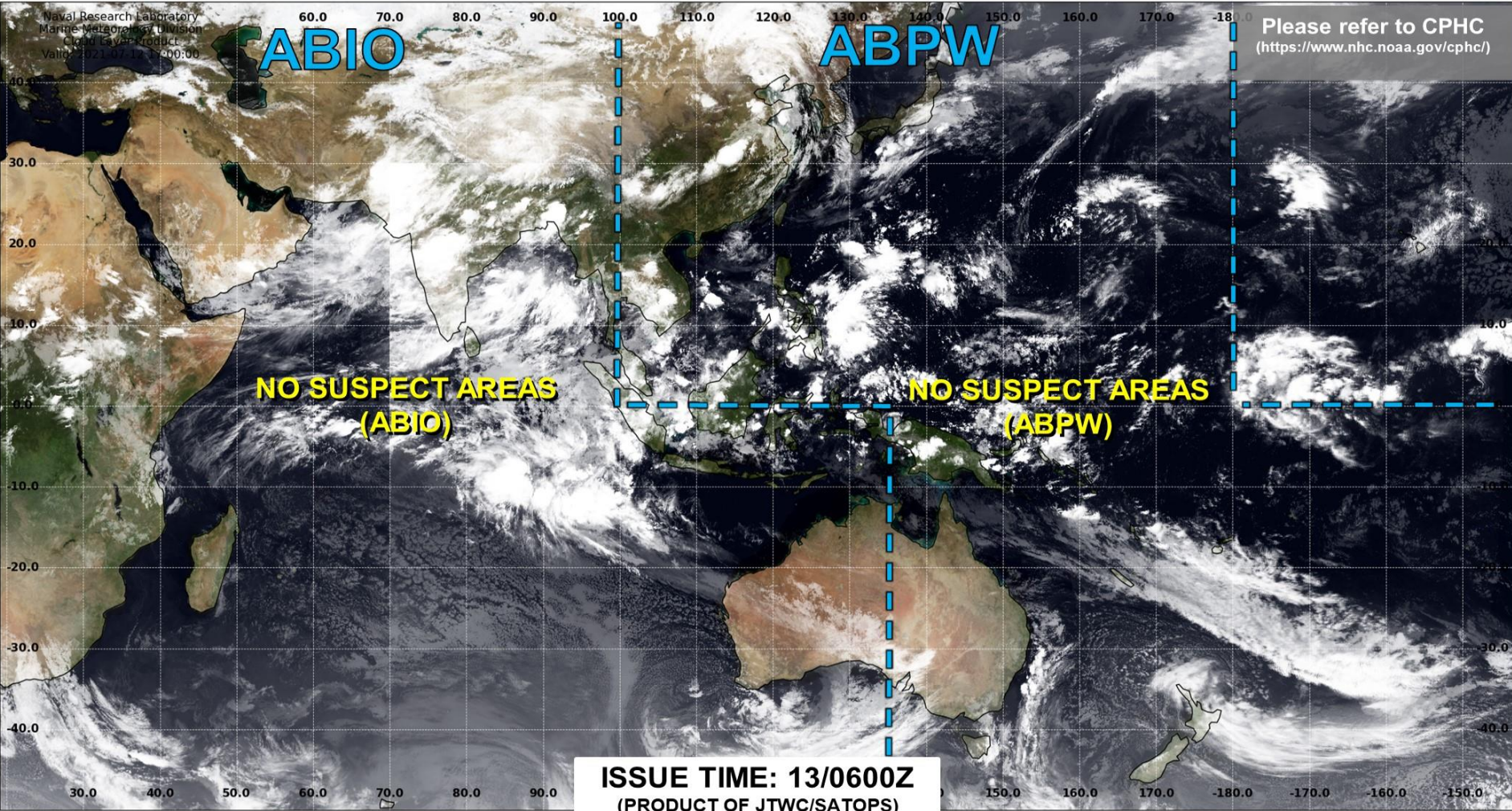
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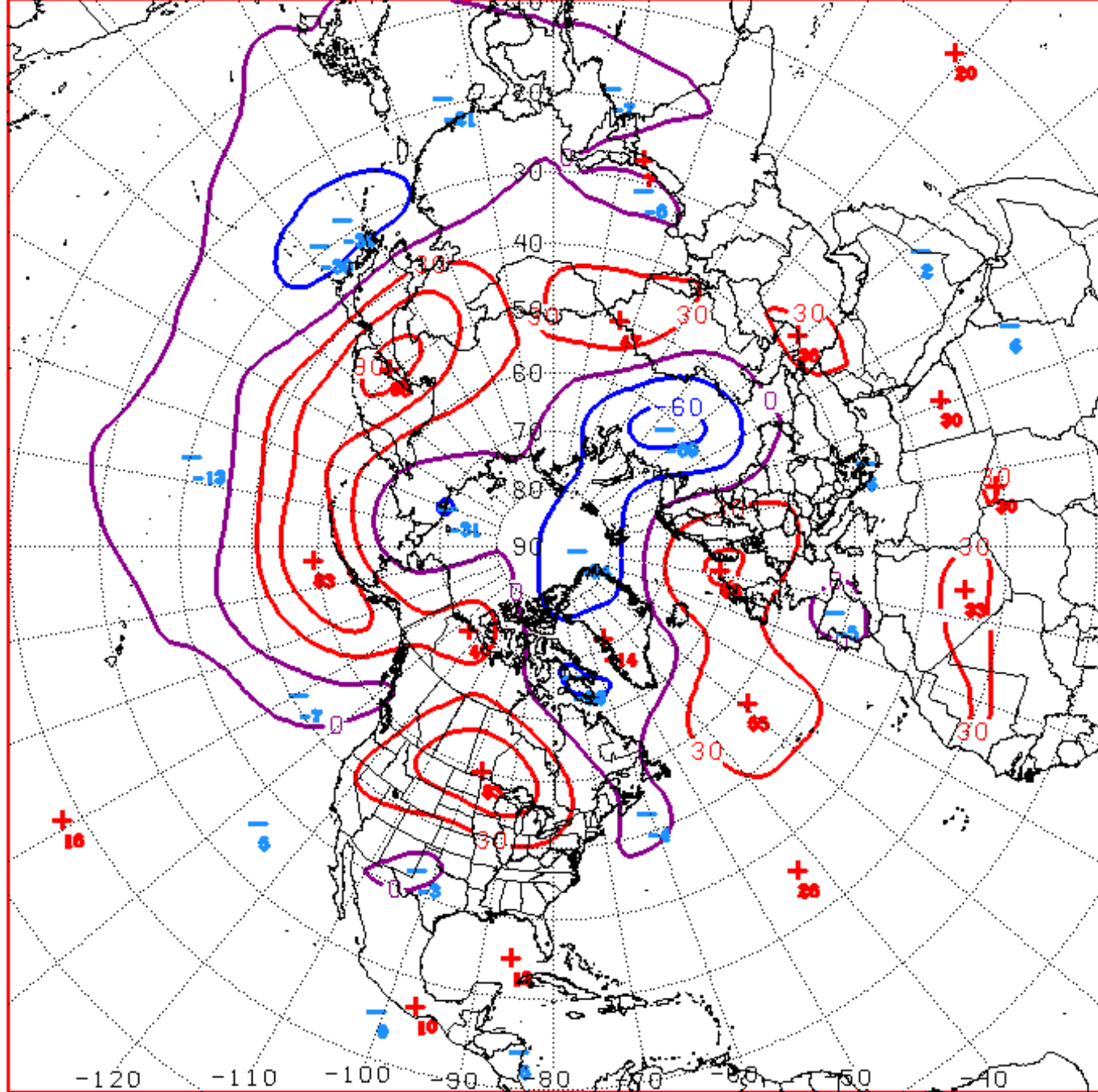


JOINT TYPHOON WARNING CENTER

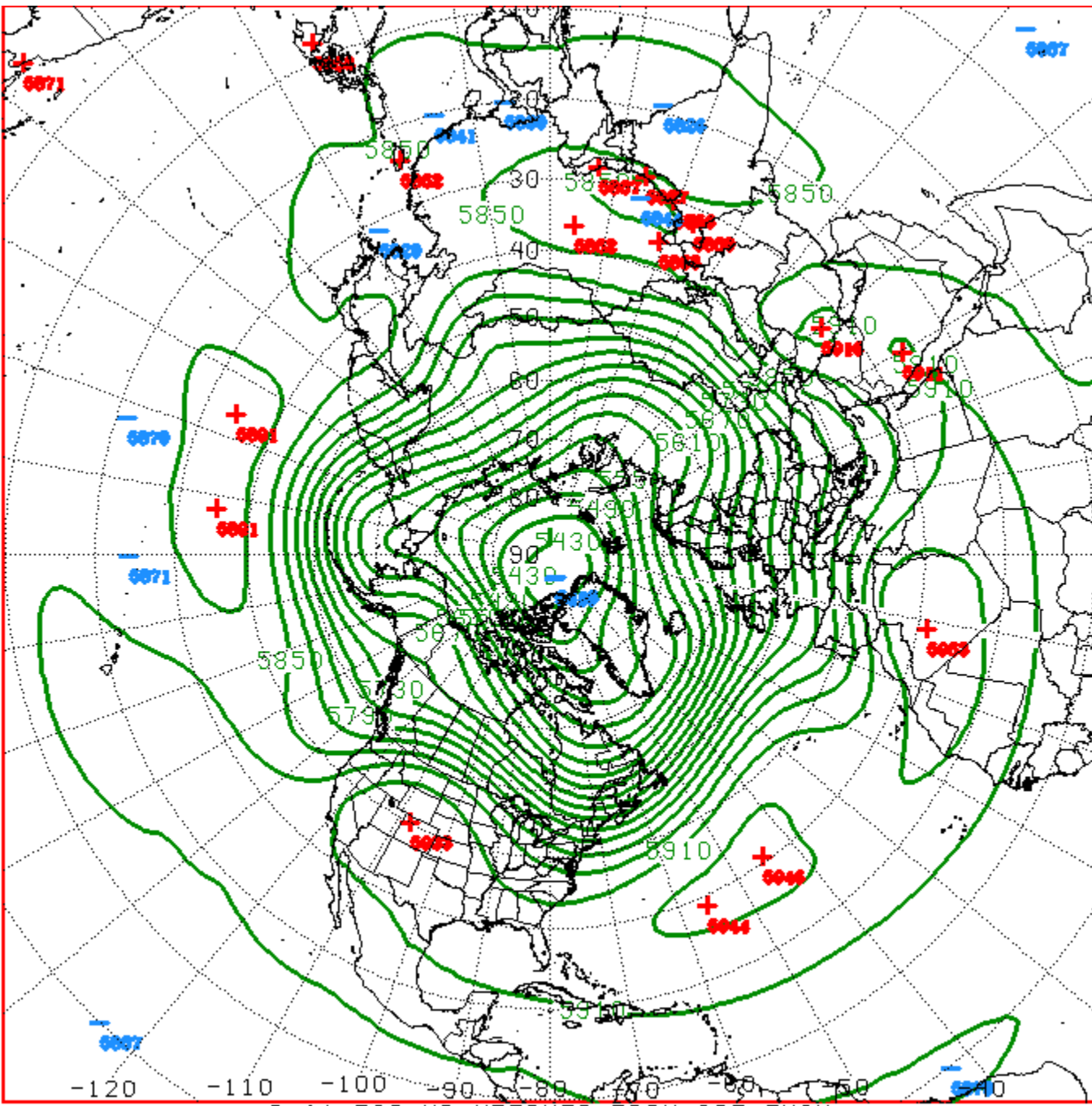


 <p>LOW</p>	<p>TC development unlikely within 24 hours</p>	 <p>MEDIUM</p>	<p>TC development likely, but expected to occur beyond 24 hours</p>	 <p>HIGH</p>	<p>TC development likely within 24 hours (Reference TCFA)</p>	 <p>SUB TROPICAL</p>	<p>Monitoring for potential transition to TC. Invest label color denotes tropical transition probability</p>	 <p>Tropical Cyclone (Reference Warning)</p>
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Connections to U.S. Impacts

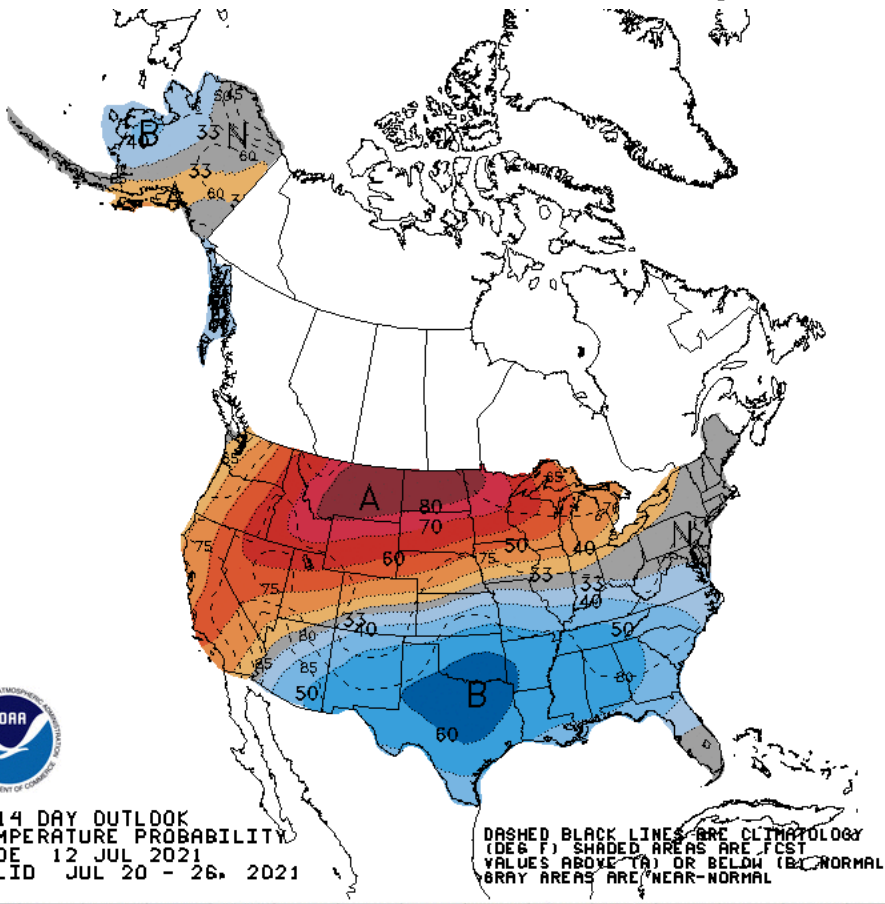


D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUL 13 2021 1357 UTC CNTD JUL 24 2021



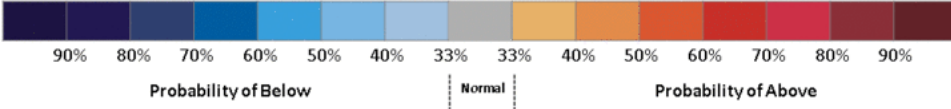
D+11 500 MB HEIGHTS FROM 00Z ENSM
 CPC MAP MADE JUL 13 2021 0736 UTC CNTD JUL 24 2021

Week 2 – Temperature and Precipitation

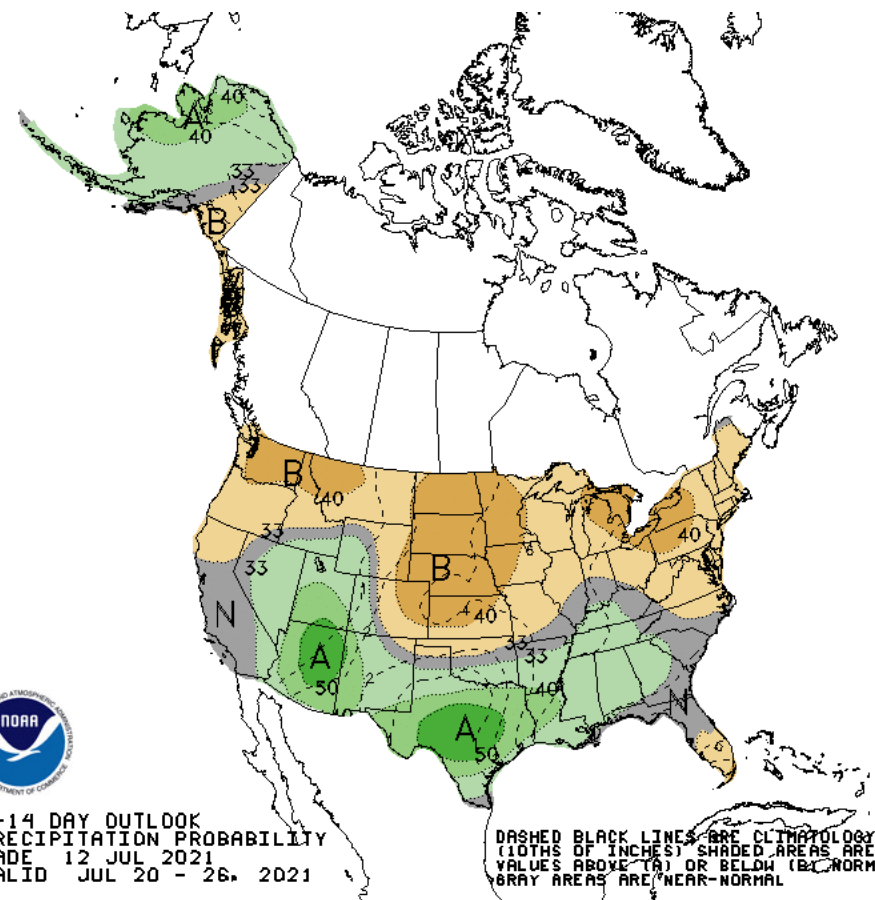


8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 12 JUL 2021
VALID JUL 20 - 26, 2021

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

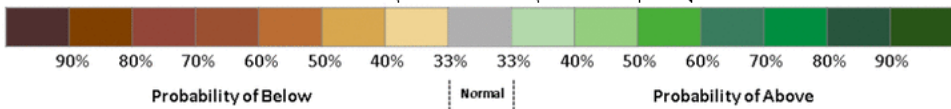


Periods of enhanced North American Monsoon into late July



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 12 JUL 2021
VALID JUL 20 - 26, 2021

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

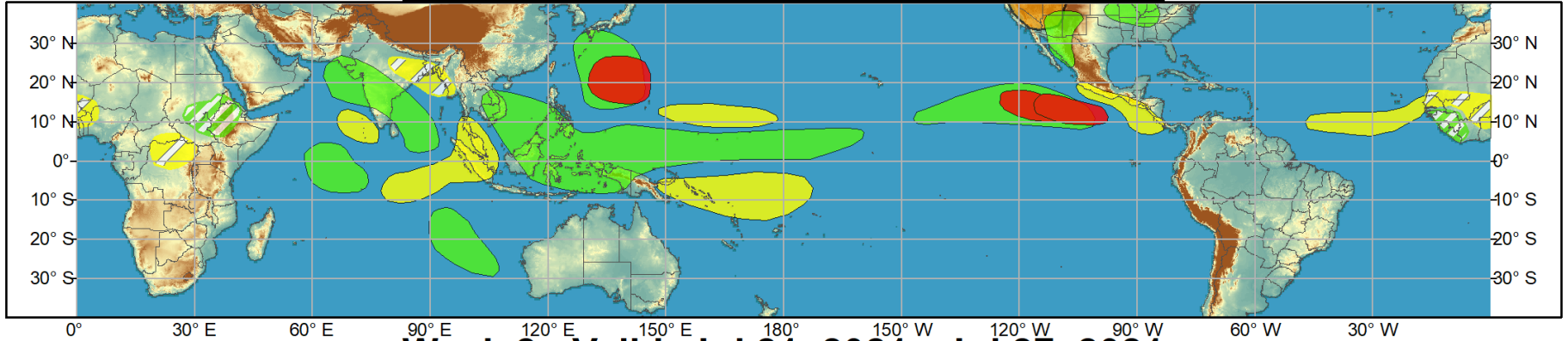




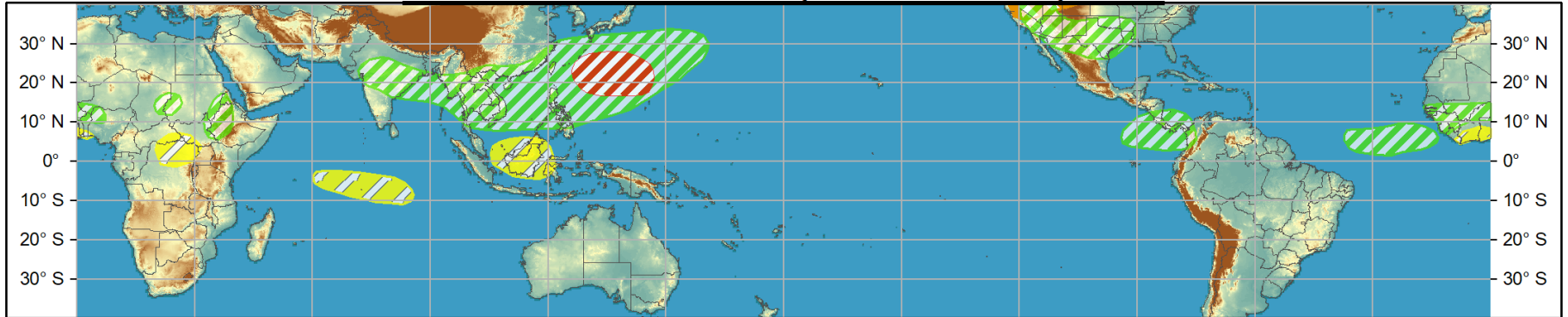
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- Below-average rainfall**  Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures**  7-day mean temperatures in the upper third of the historical range.
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