

Global Tropics Hazards And Benefits Outlook

5/26/2020

Adam Allgood

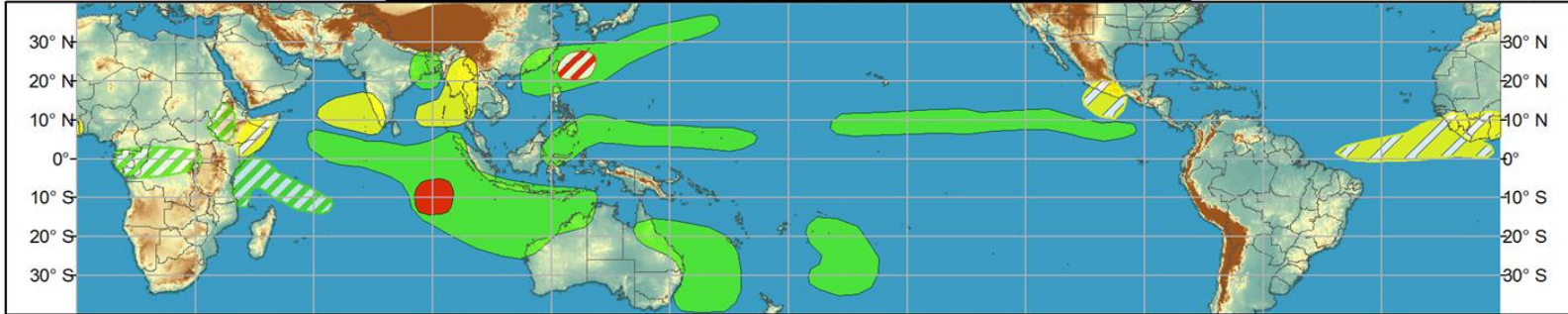
Outline

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

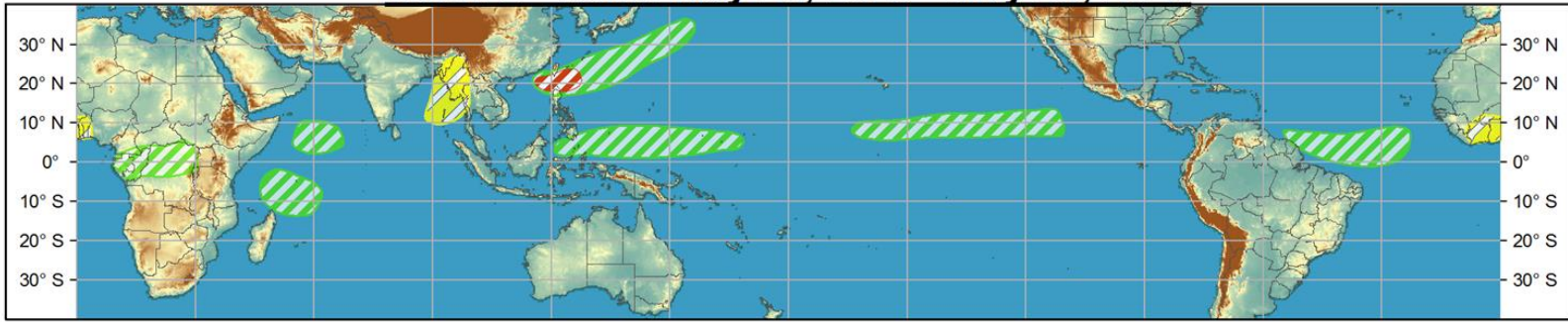
Outlook Review



Week 1 - Valid: May 20, 2020 - May 26, 2020

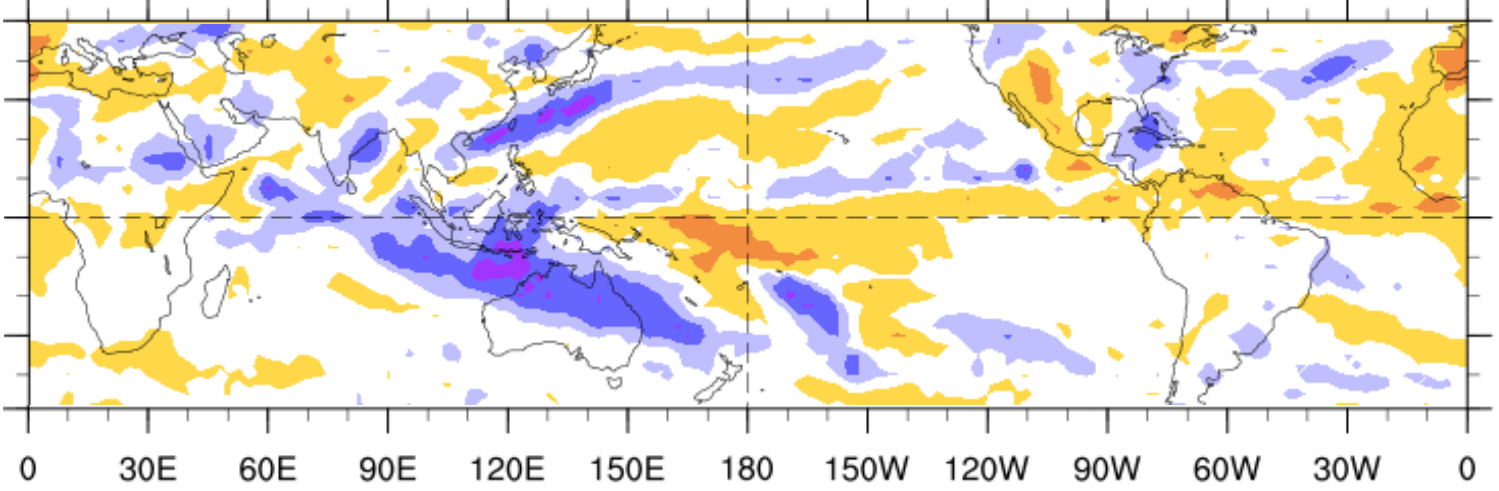


Week 2 - Valid: May 20, 2020 - May 26, 2020



7-Day Average OLR Anomaly

2020/05/18 - 2020/05/24



Cool shading
More
clouds/rain

Warm shading
Less
clouds/rain

Synopsis of Climate Modes

ENSO: (May 14, 2020 Update)

next update on 11th of June!

- ENSO Alert System Status: Not Active
- There is a ~65% chance of ENSO-neutral during Northern Hemisphere summer 2020, with chances decreasing through the autumn (to 45-50%).

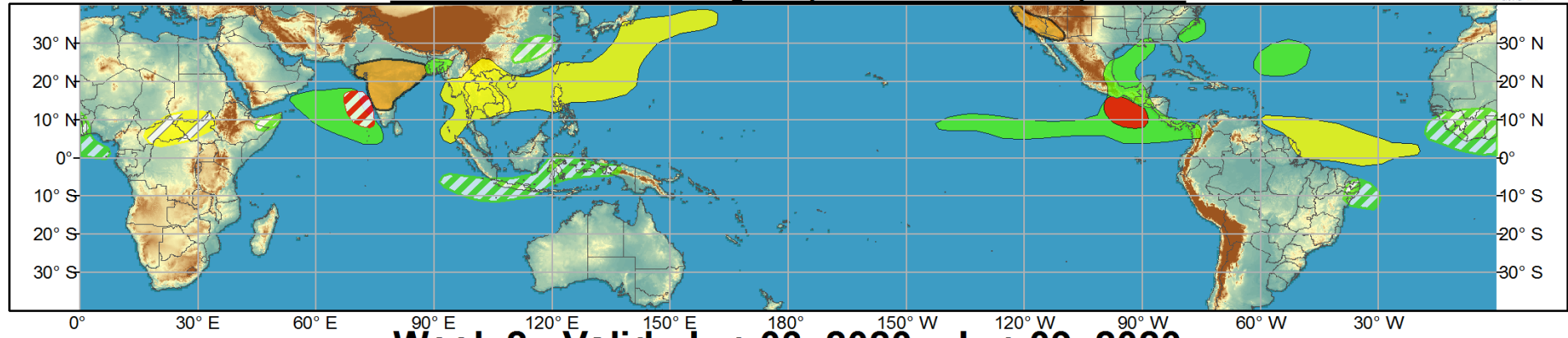
MJO and other subseasonal tropical variability:

- The enhanced phase of the slower MJO envelope diminished as a strong Kelvin wave began crossing the Pacific.
- The Kelvin wave appears to be convectively coupled with the North Pacific ITCZ, and will help conditions become more favorable for East Pacific tropical cyclogenesis during Week-1.
- During Week-2, the area of favorability may expand to include parts of the Gulf of Mexico and western Caribbean. Numerous GEFS ensemble members depict a tropical cyclone formation.
- Dynamical model MJO index forecasts depict the Kelvin wave activity better than the remnant MJO.

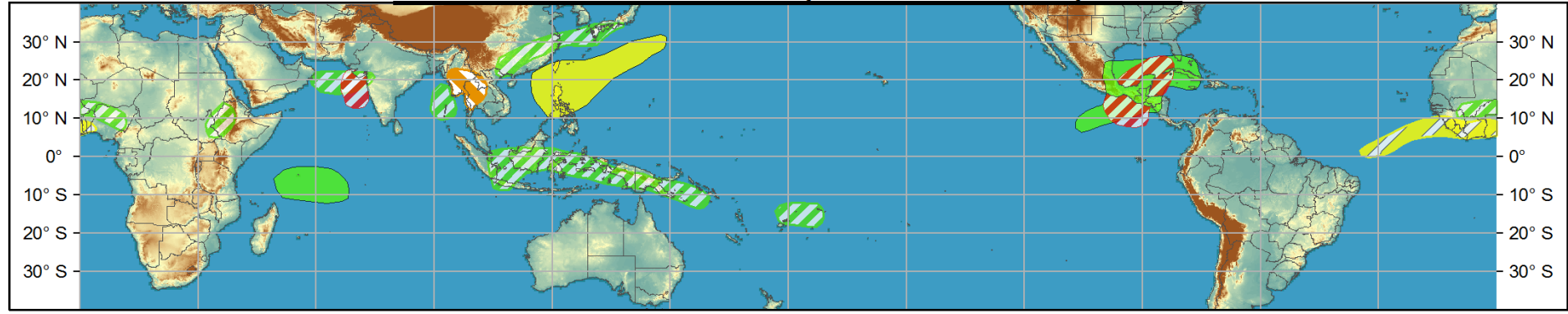


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: May 27, 2020 - Jun 02, 2020



Week 2 - Valid: Jun 03, 2020 - Jun 09, 2020



Produced: 05/26/2020
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.

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IR Satellite & 200-hpa Velocity Potential Anomalies

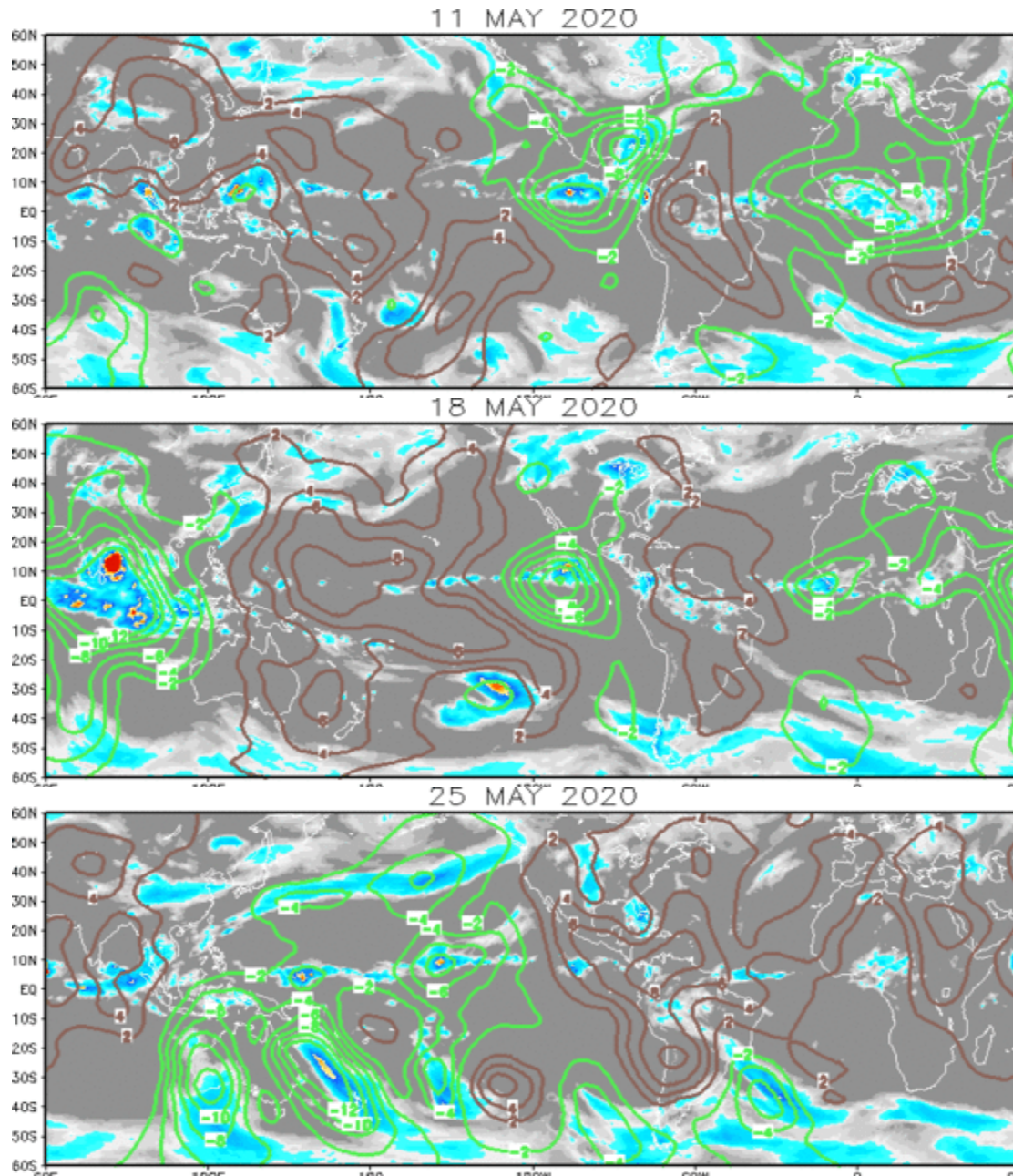
Green: Enhanced Divergence

Brown: Enhanced Convergence

Not a very coherent signal, but some evidence of enhanced (suppressed) phase over Western Hemisphere (Pacific)

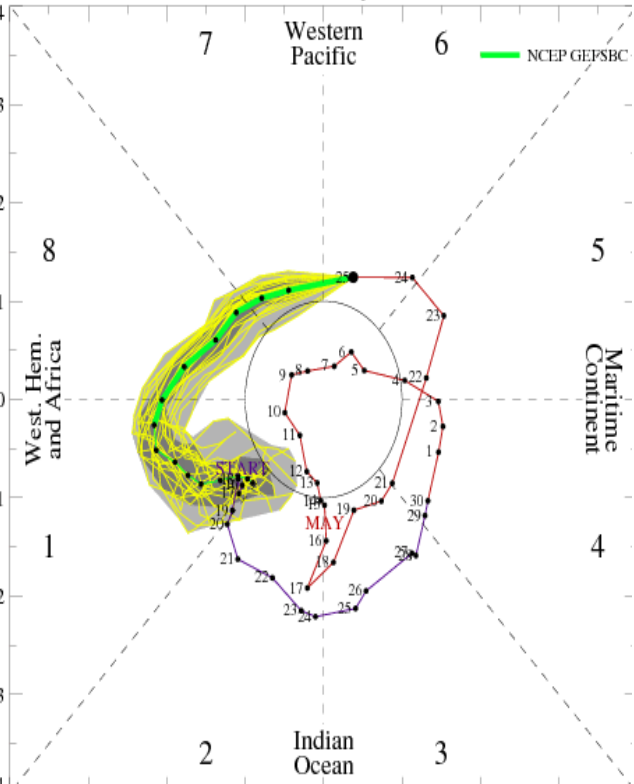
Robust Indian Ocean signal, influenced heavily by extremely intense Cyclone Amphan

Equator-centered enhanced phase is weak as KW races ahead (central Pac), and remnants of Mangga merged with front over Australia



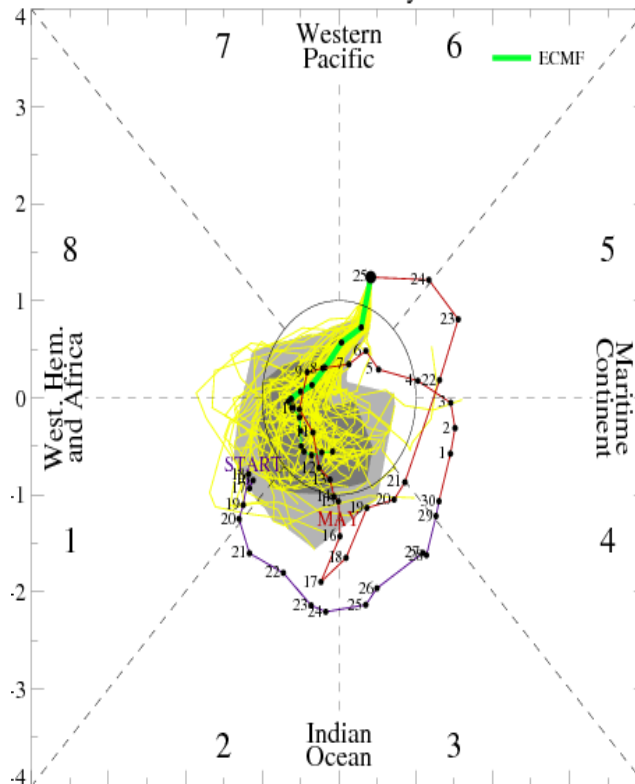
MJO Observation/Forecast

[RMM1, RMM2] forecast for May-26-2020 to Jun-09-2020



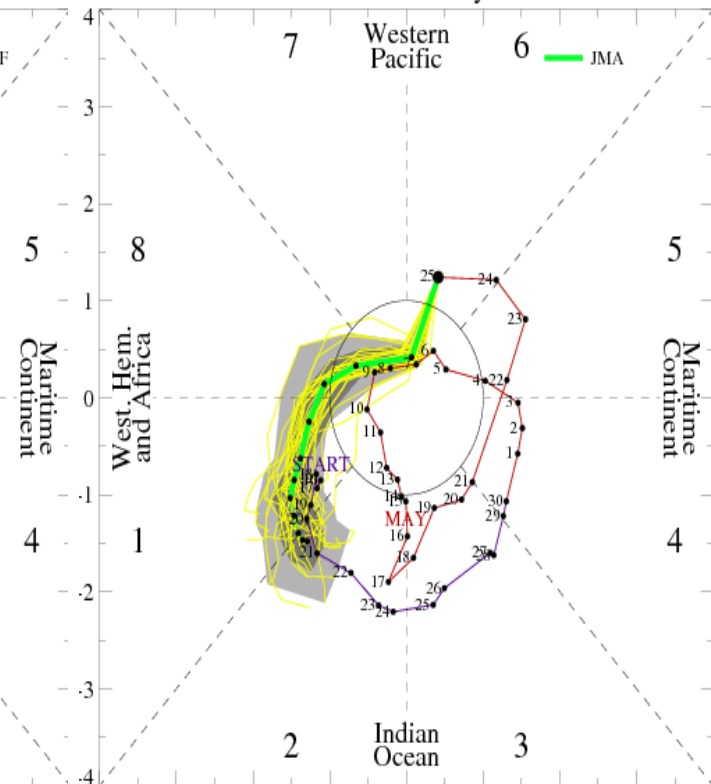
GEFS

MJO Index Forecast for 26 May 2020 to 09 Jun 2020



ECMWF

MJO Index Forecast for 26 May 2020 to 03 Jun 2020



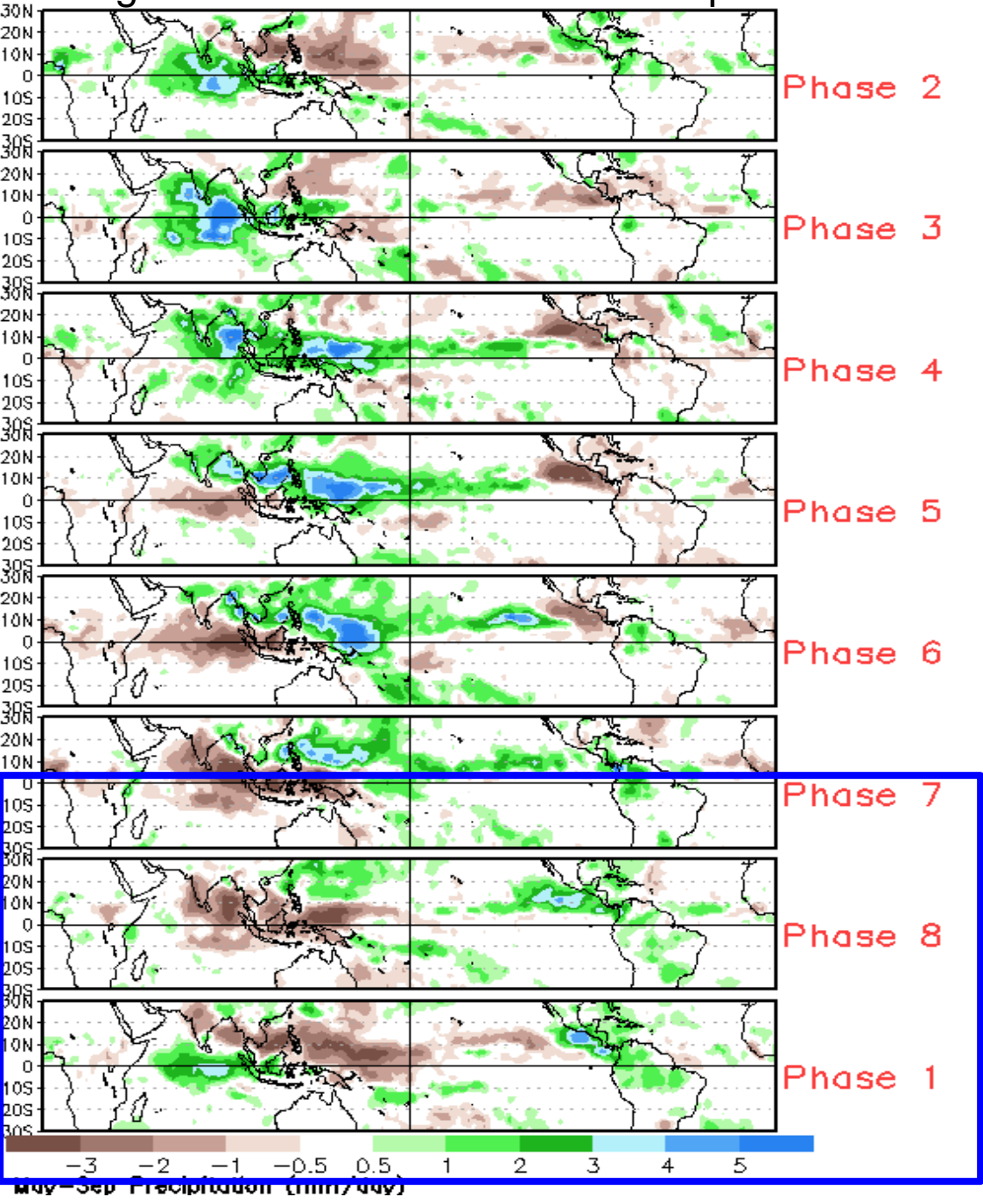
JMA

Note the very fast progression from the Indian Ocean to the West Pacific. This is evidence of the Kelvin wave.

GEFS and JMA key in on this KW and show the signal returning to the Indian Ocean at the end of Week-2.

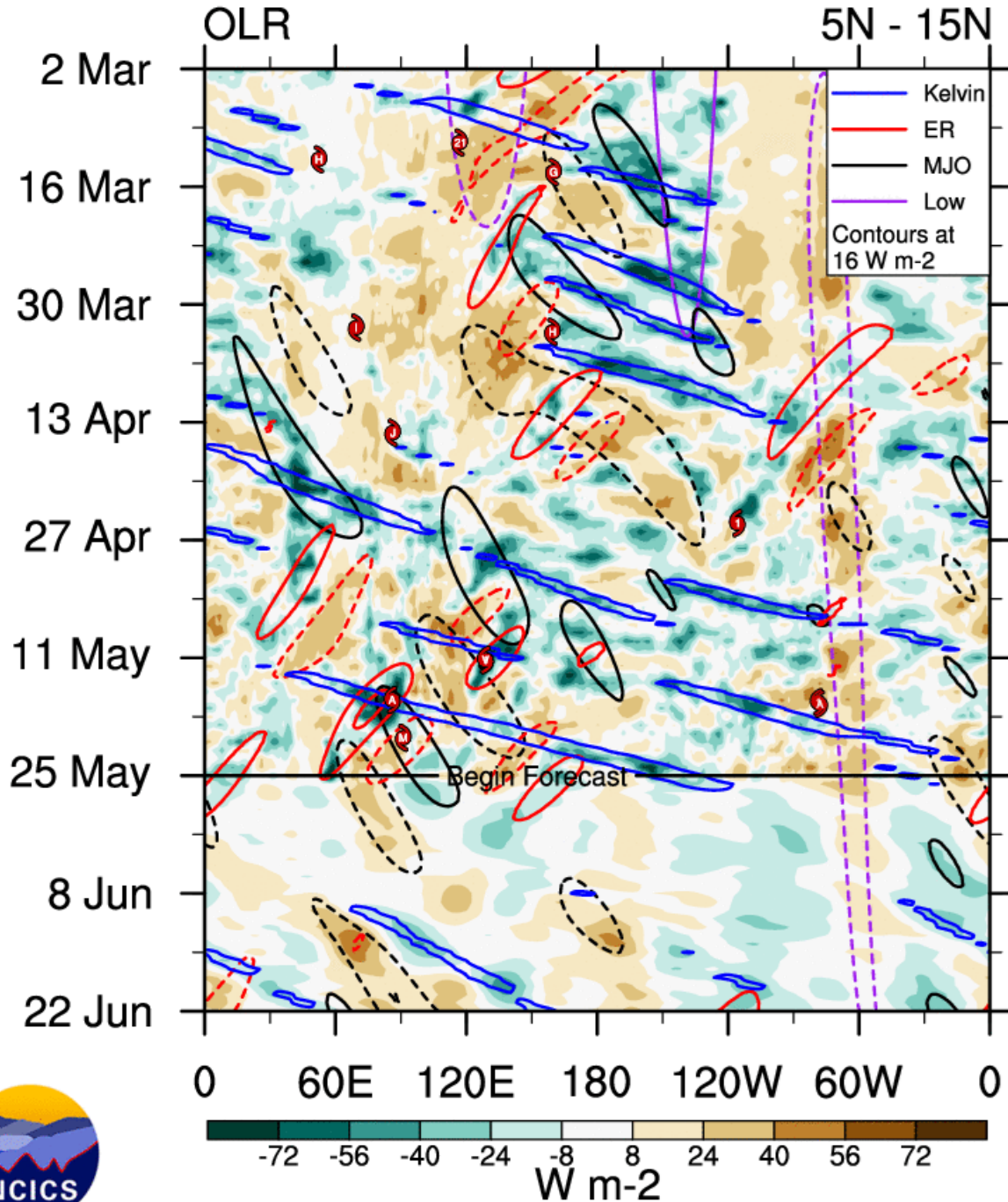
The ECMWF shows the competing signals a bit more, with weaker amplitude.

Average Conditions when the MJO is present

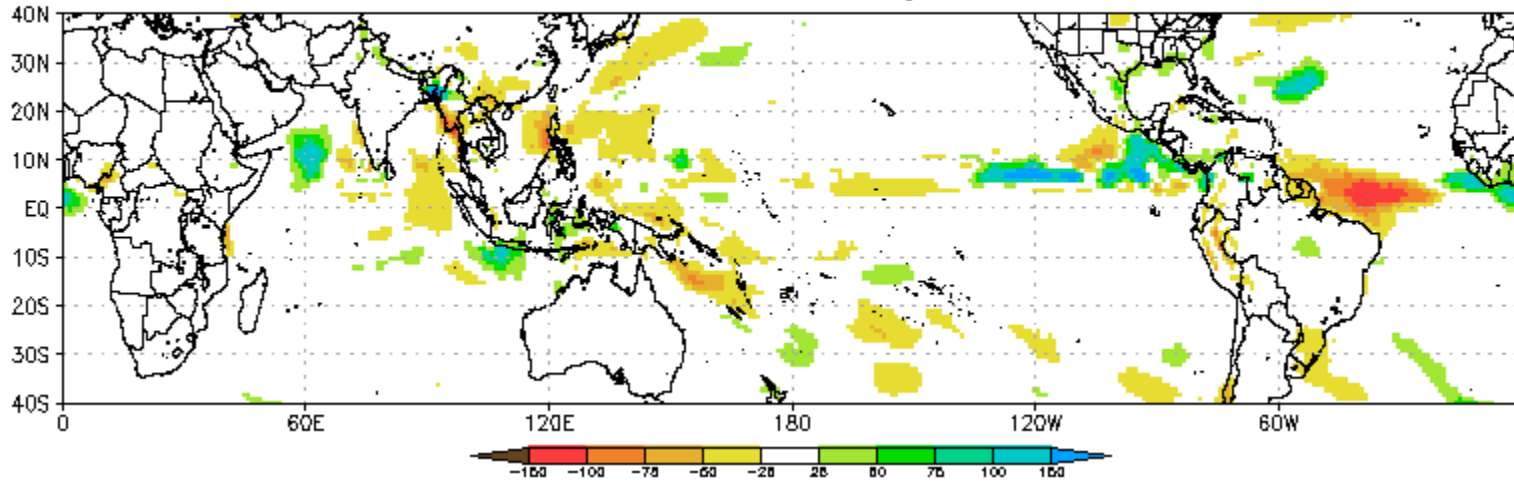


CAVEAT: These panels are representative of robust MJO events.

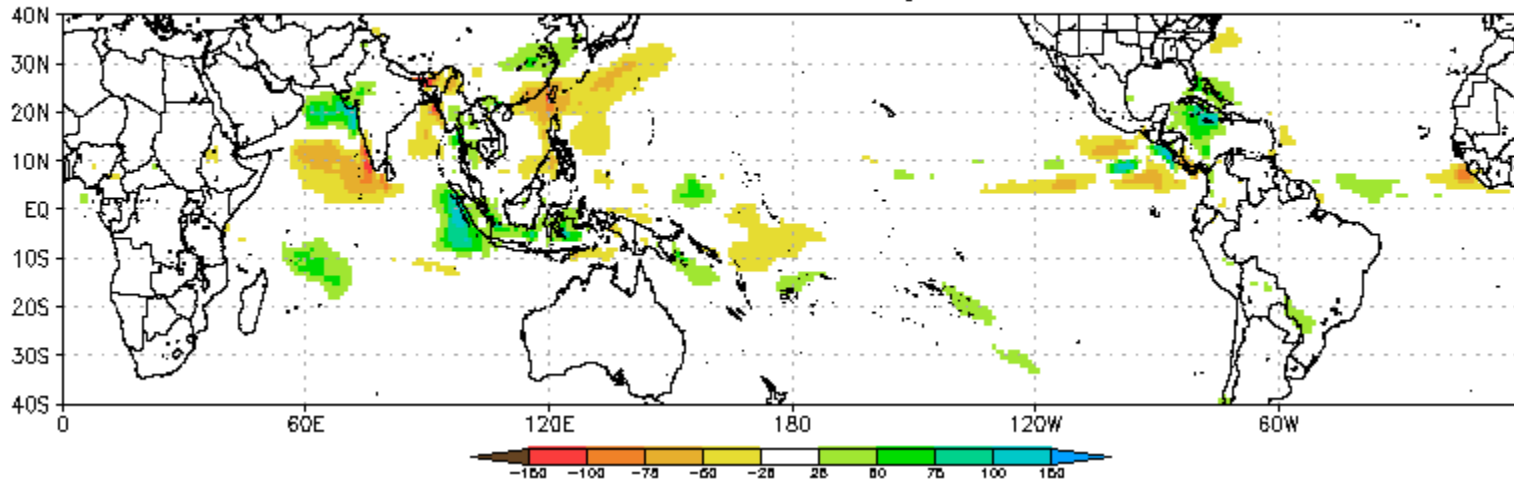
Kelvin wave over the Pacific projects strongly in the 5N-15N band. It's amplitude is weaker in equator-centered analyses.



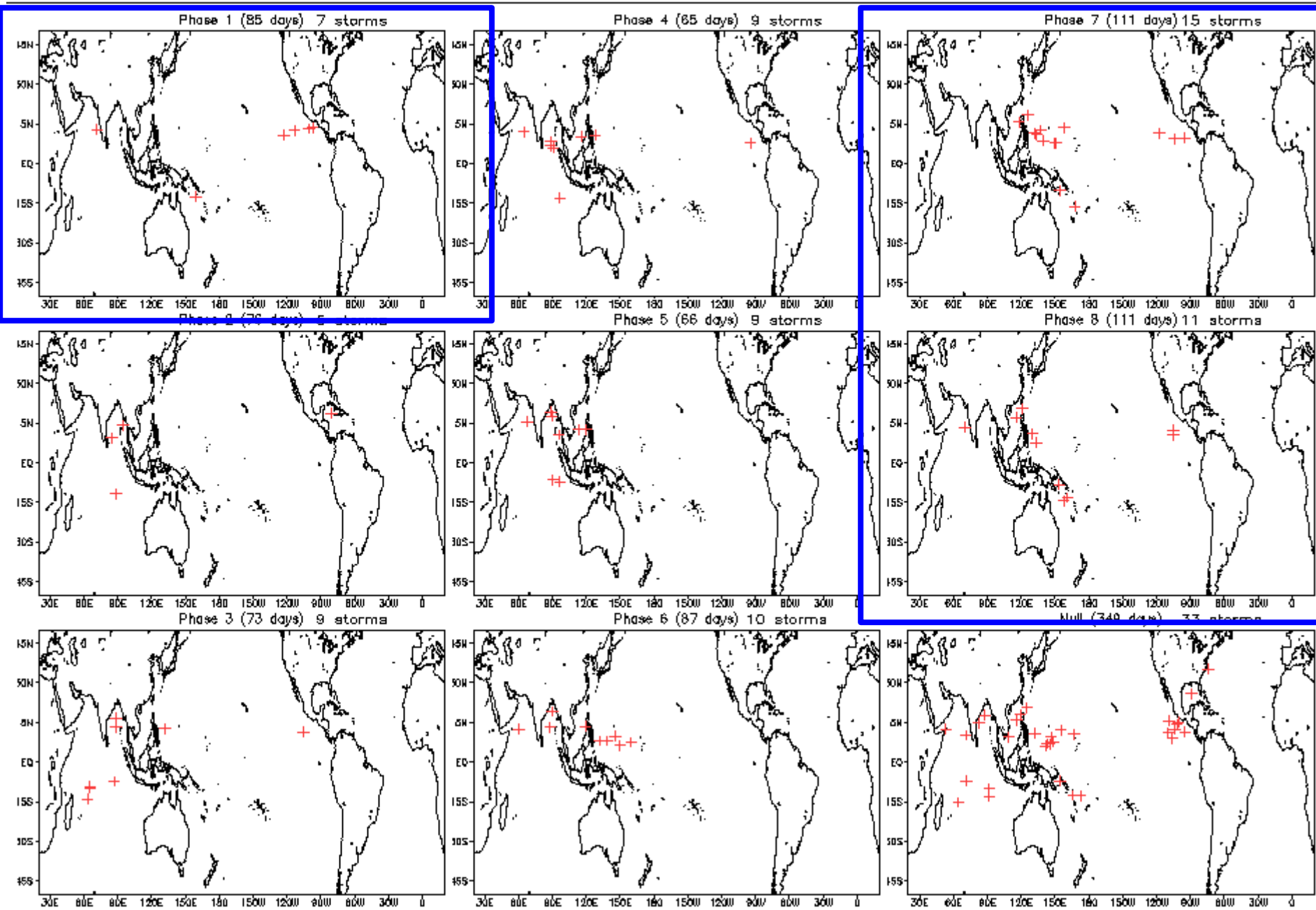
CFS Precipitation Anomalies (mm) Issued 25May2020
Week-1 Forecast Ending 02Jun2020



CFS Precipitation Anomalies (mm) Issued 25May2020
Week-2 Forecast Ending 09Jun2020



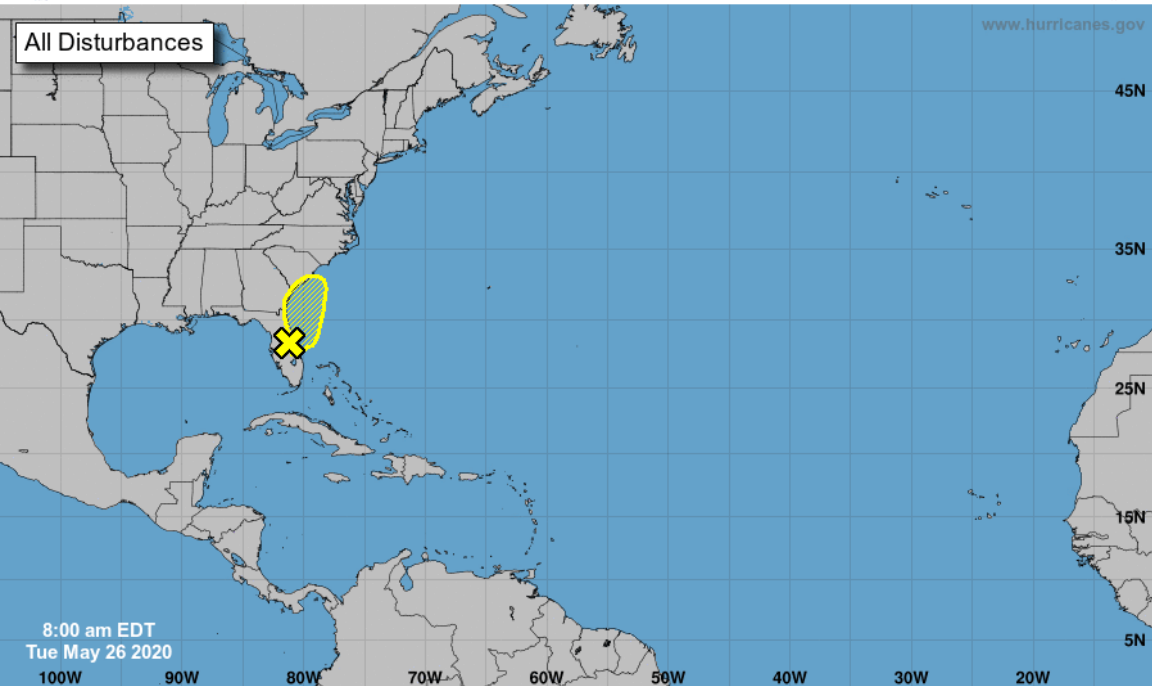
May Tropical Storm Formation by MJO phase





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue May 26 2020

100W 90W 80W 70W 60W 50W 40W 30W 20W

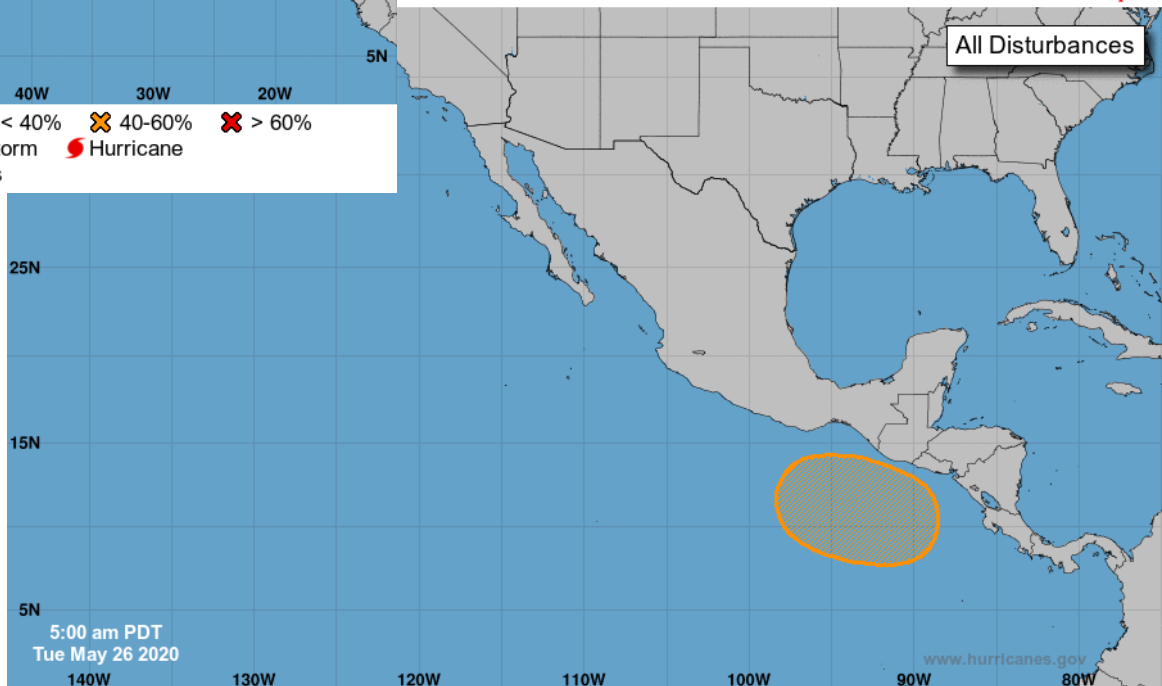
Current Disturbances and Five-Day Cyclone Formation Chance: X < 40% X 40-60% X > 60%

Tropical or Sub-Tropical Cyclone: ○ Depression ◐ Storm ◑ Hurricane

⊗ Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



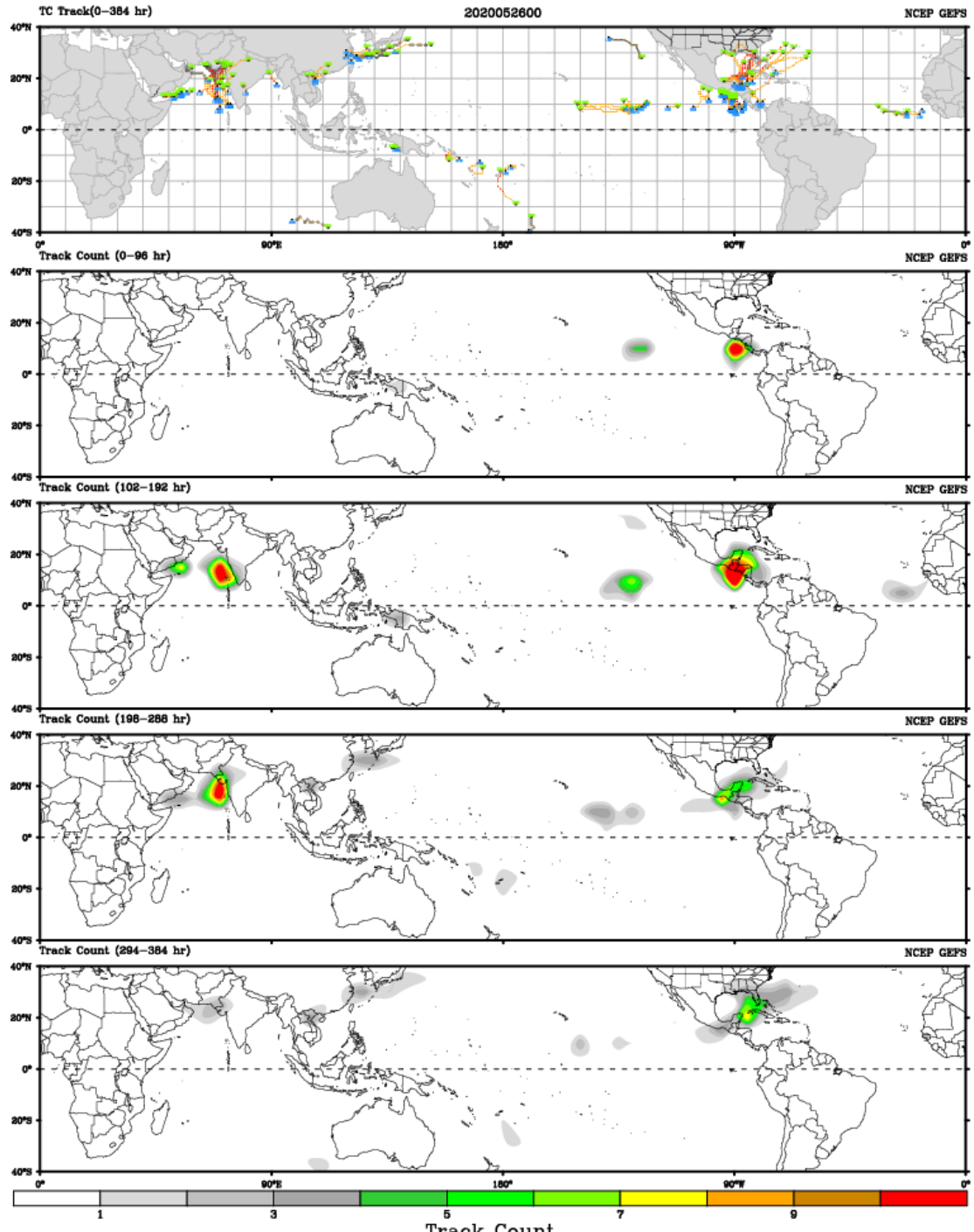
5:00 am PDT
Tue May 26 2020

140W 130W 120W 110W 100W 90W 80W

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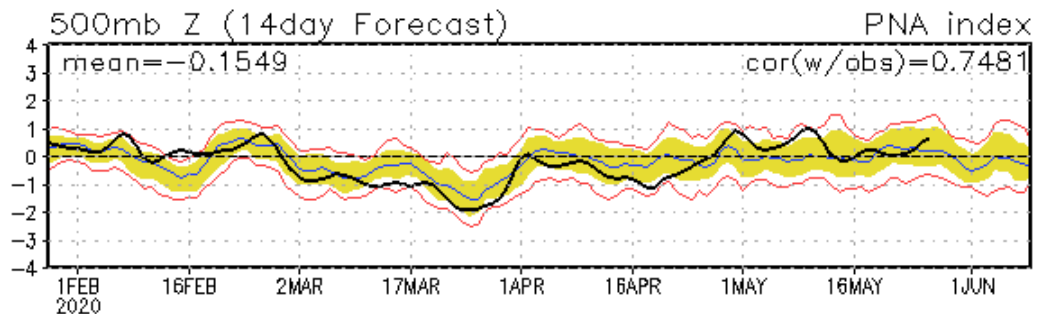
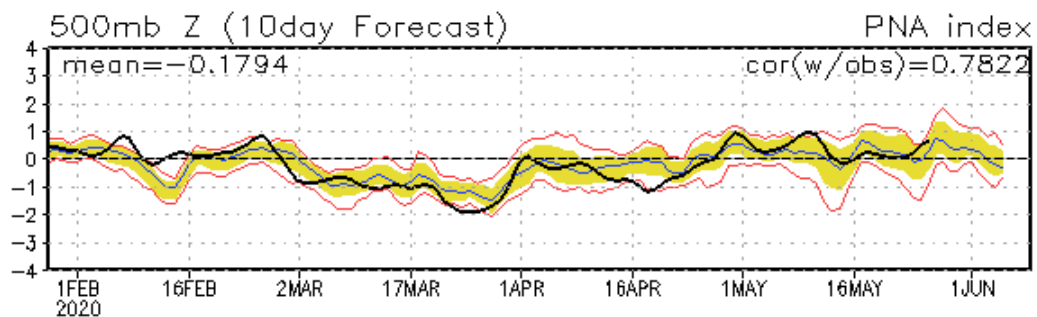
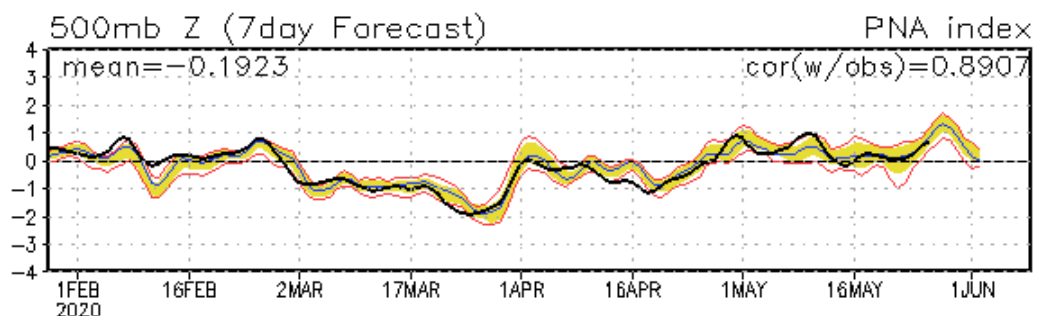
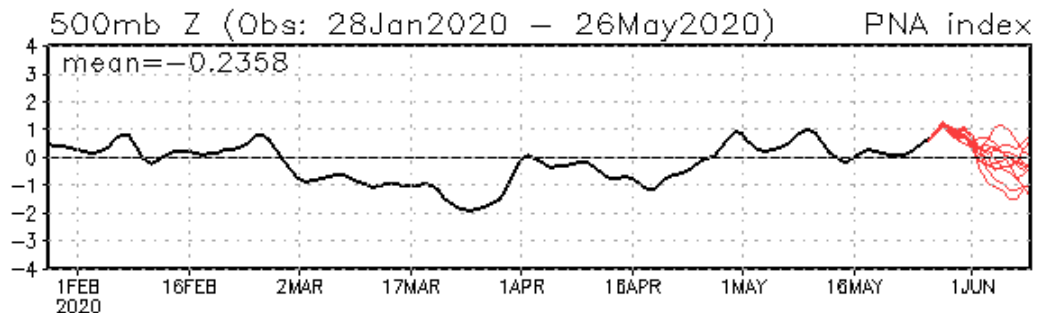
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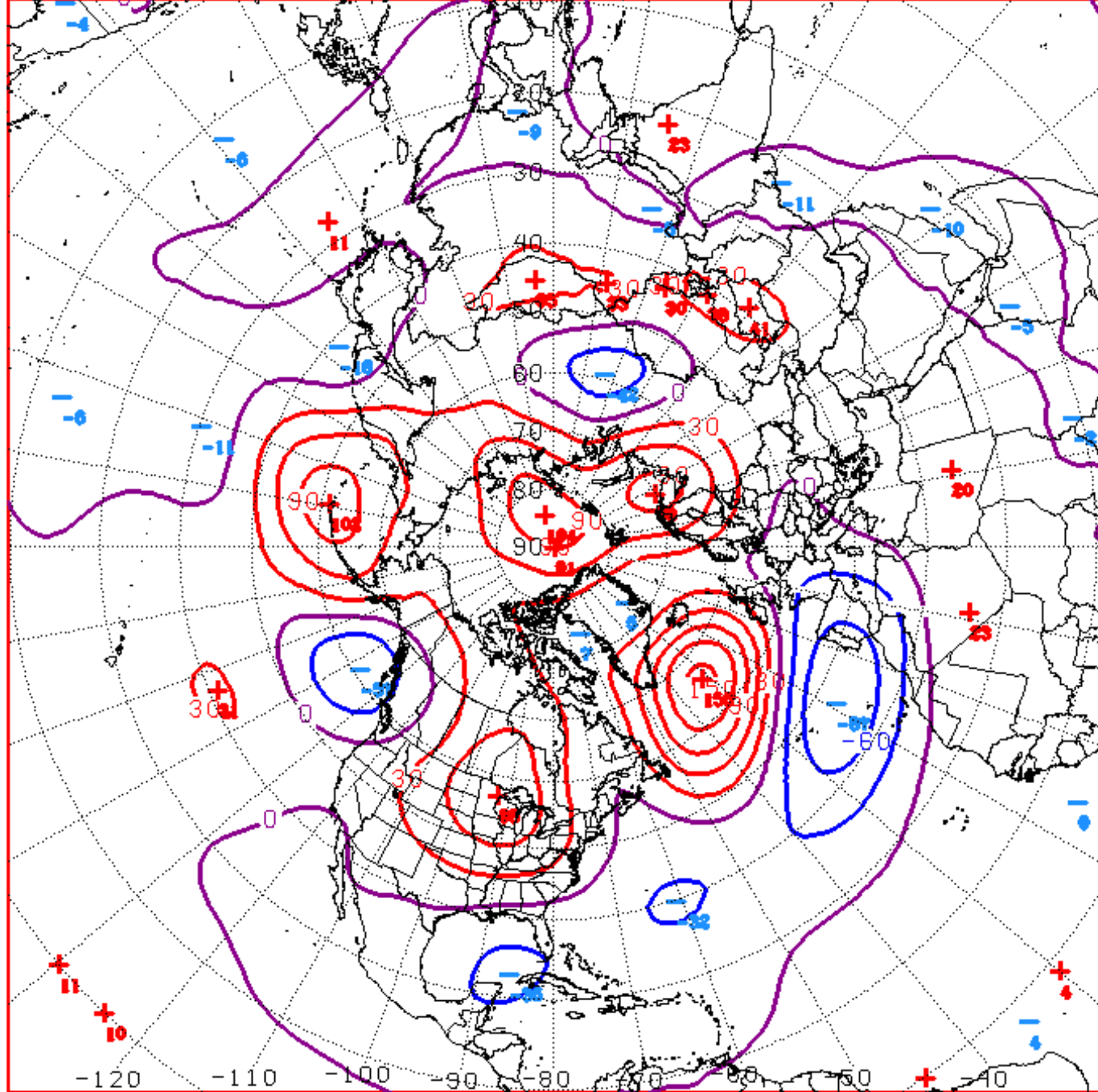
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Connections to U.S. Impacts

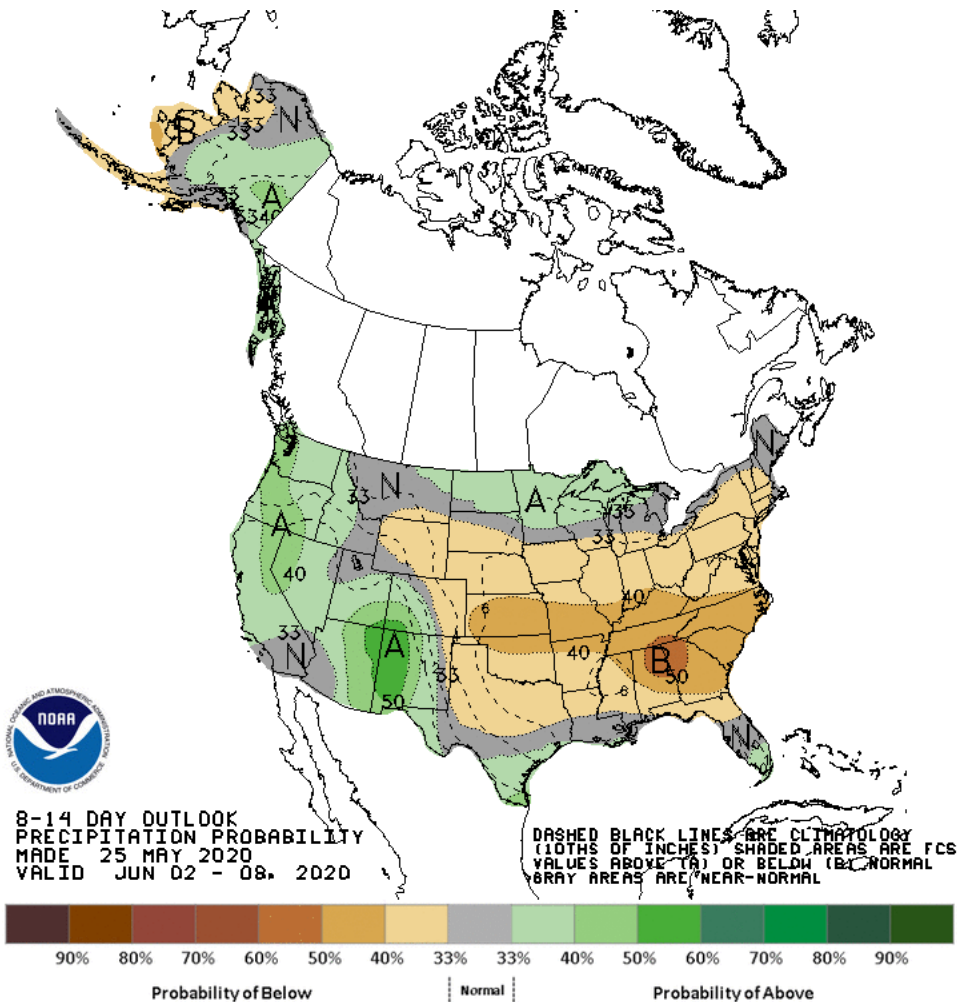
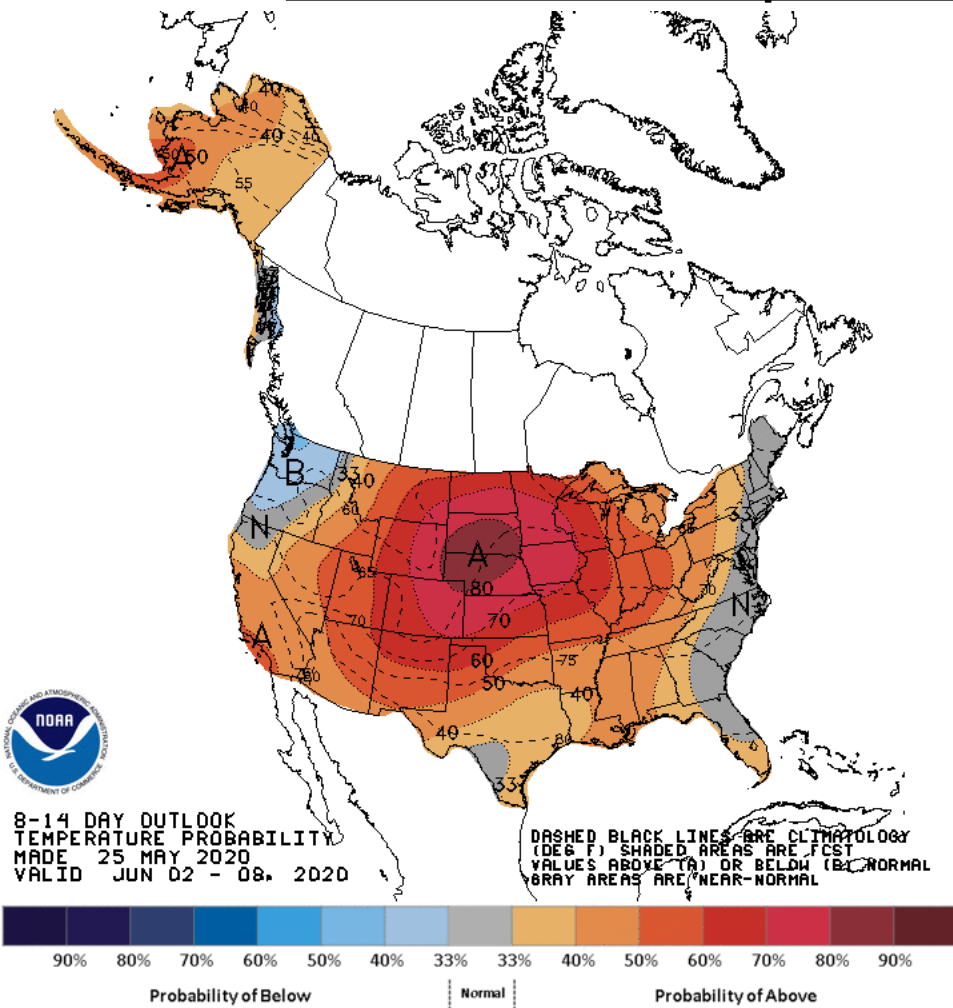
PNA: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE MAY 26 2020 1328 UTC CNTD JUN 06 2020

Week 2 – Temperature and Precipitation

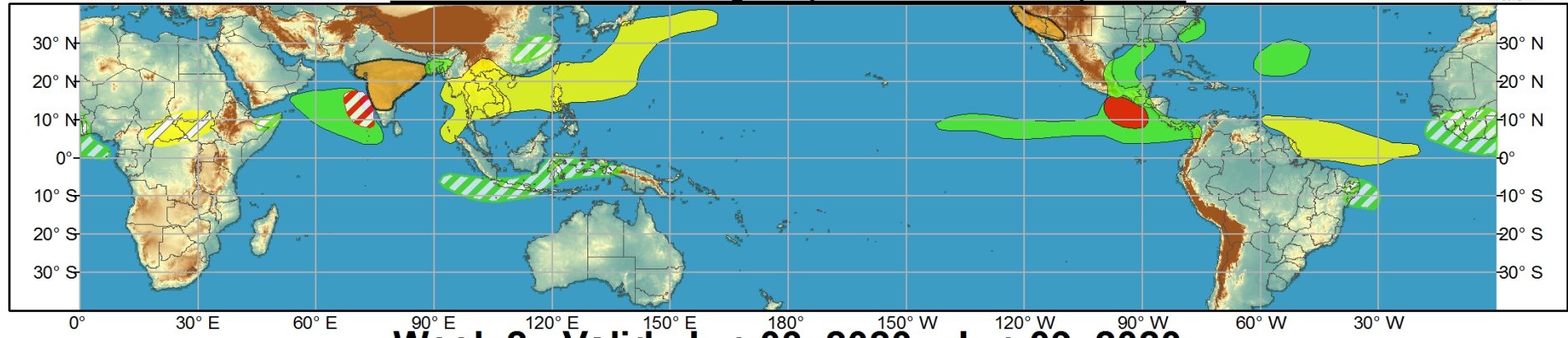


Since we are in an amplified, stable pattern today's outlooks are likely to be similar.

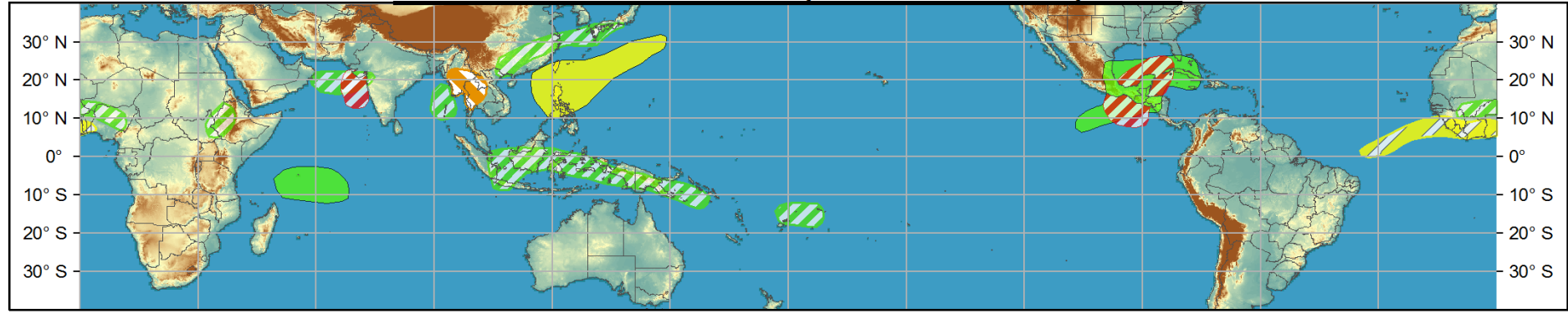


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