

Global Tropics Hazards And Benefits Outlook

6/9/2020

Kyle MacRitchie

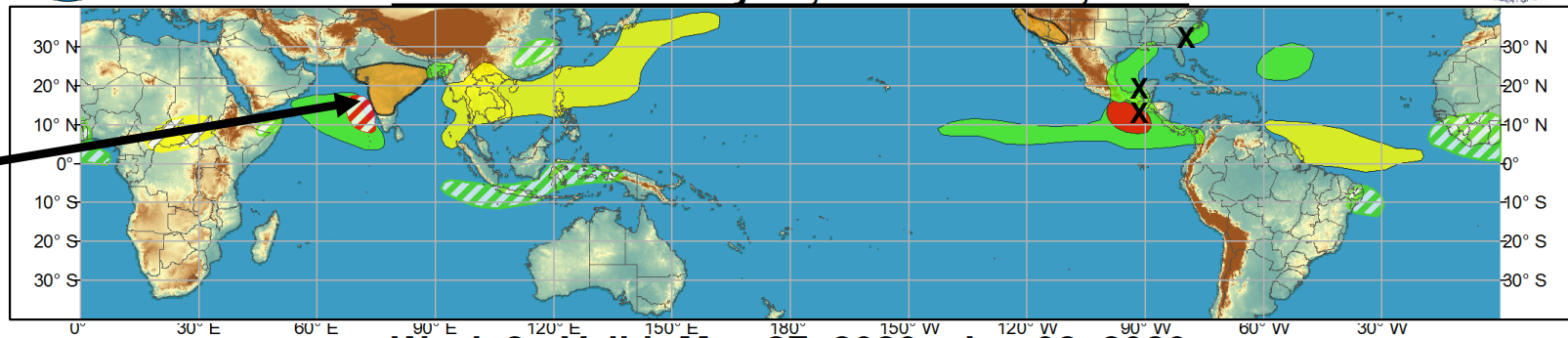
Outline

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

Outlook Review



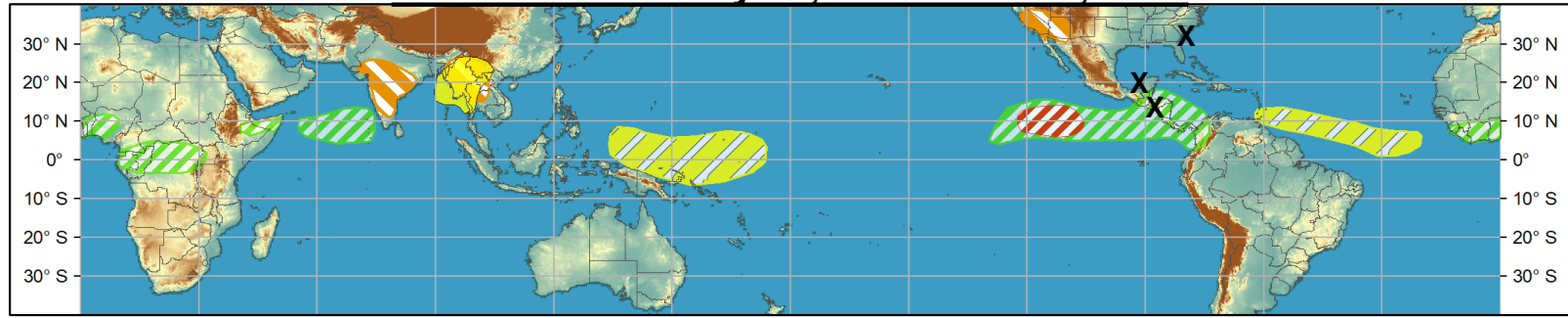
Week 1 - Valid: May 27, 2020 - Jun 02, 2020



TC Nisarga



Week 2 - Valid: May 27, 2020 - Jun 02, 2020

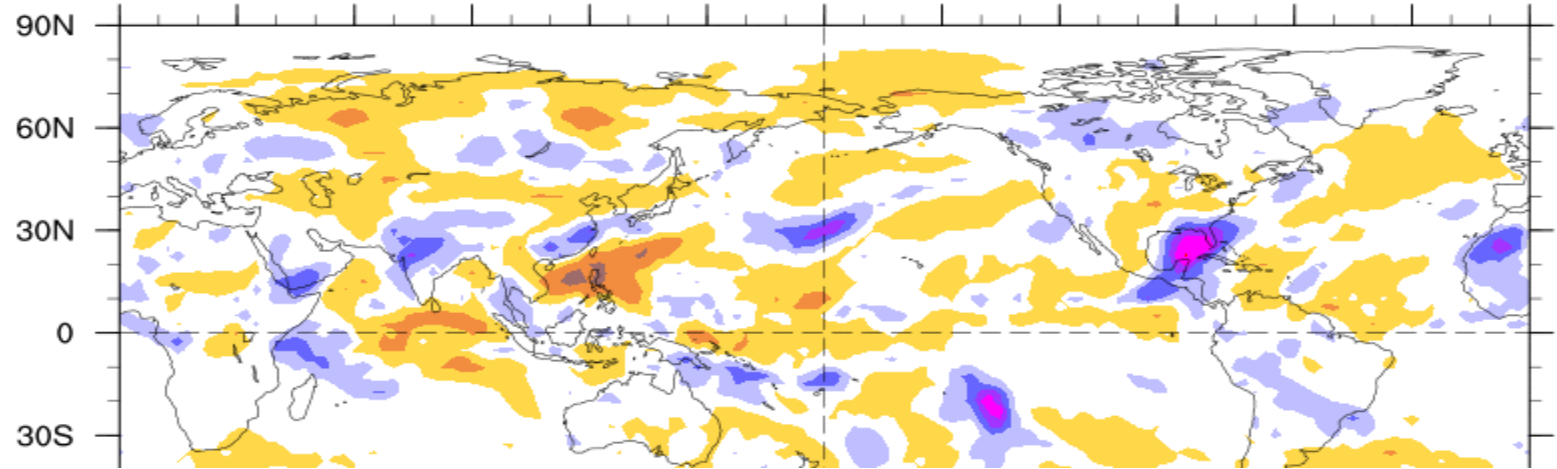


7-Day Average OLR Anomaly

2020/06/01 - 2020/06/07

Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO: (May 14, 2020 Update)

next update on Thursday (6/11)!

- 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:

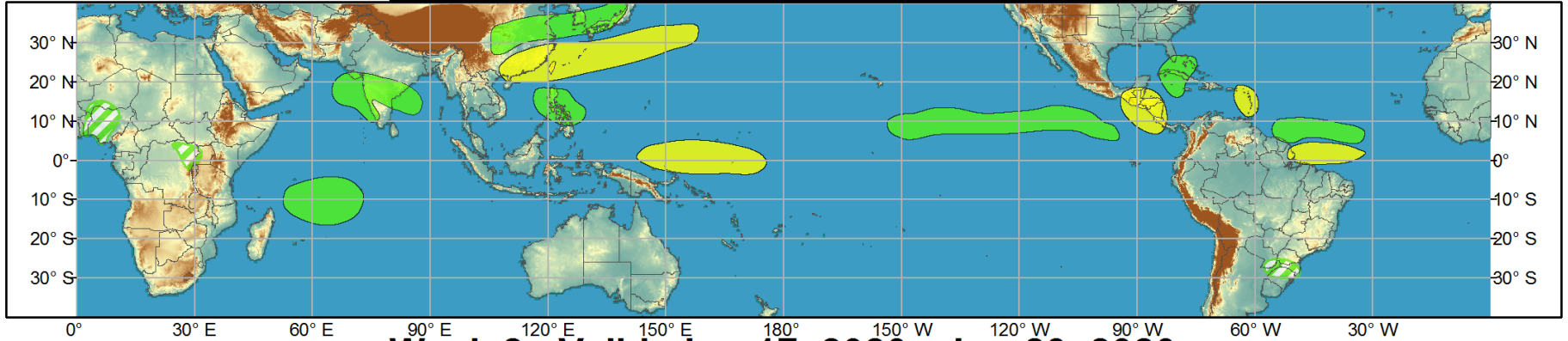
- The upper-level VP pattern resembles an MJO signal but is more likely due to a strong Kelvin Wave that is currently over the West Pacific.
- Dynamical model RMM index forecasts suggest that the MJO will stay inactive, even though the Kelvin Wave is forecast to circumnavigate the Tropics again.



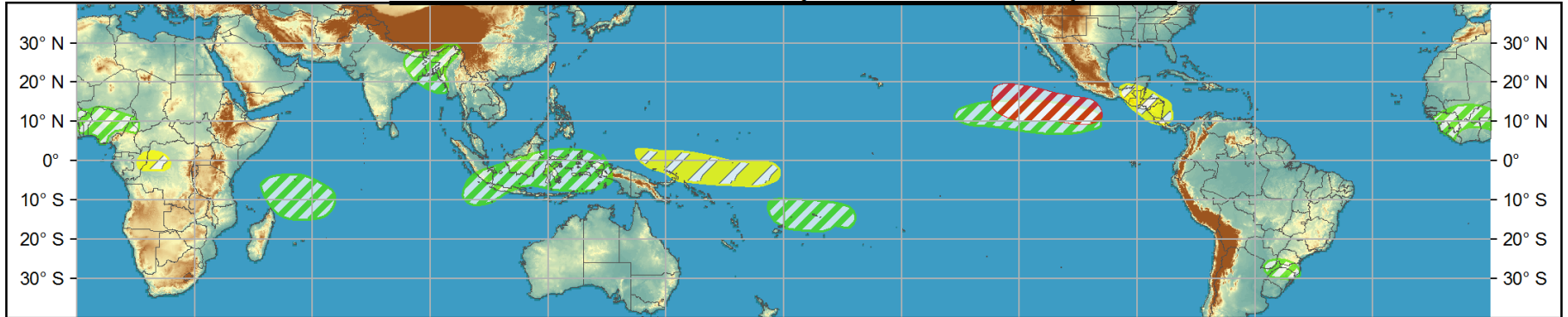
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 10, 2020 - Jun 16, 2020



Week 2 - Valid: Jun 17, 2020 - Jun 23, 2020



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: 06/09/2020

Forecaster: MacRitchie

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.

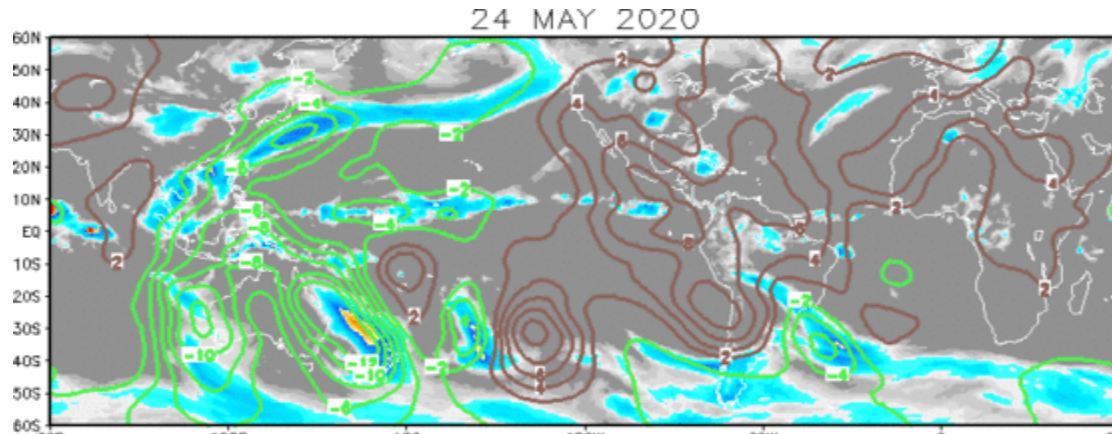


IR Satellite & 200-hpa Velocity Potential Anomalies

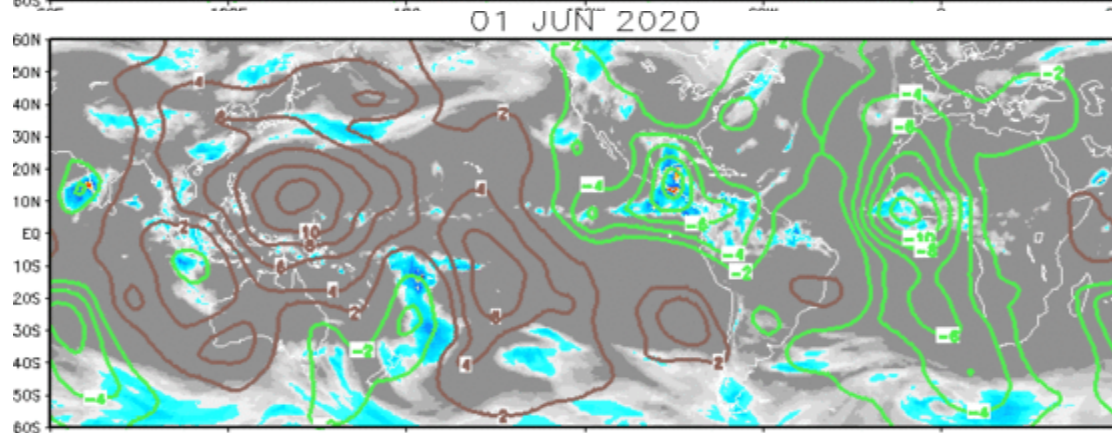
Green: Enhanced Divergence

Brown: Enhanced Convergence

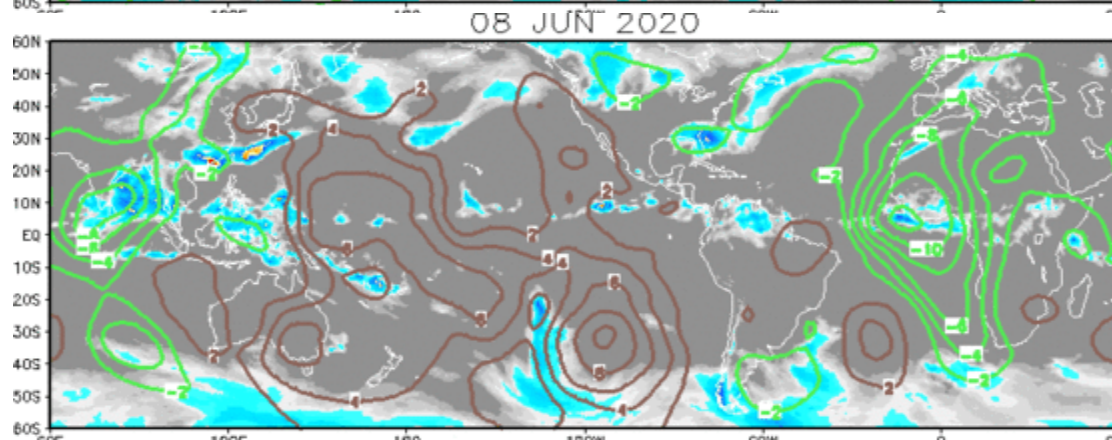
Wave-1 pattern, strong frontal activity off eastern Asia.



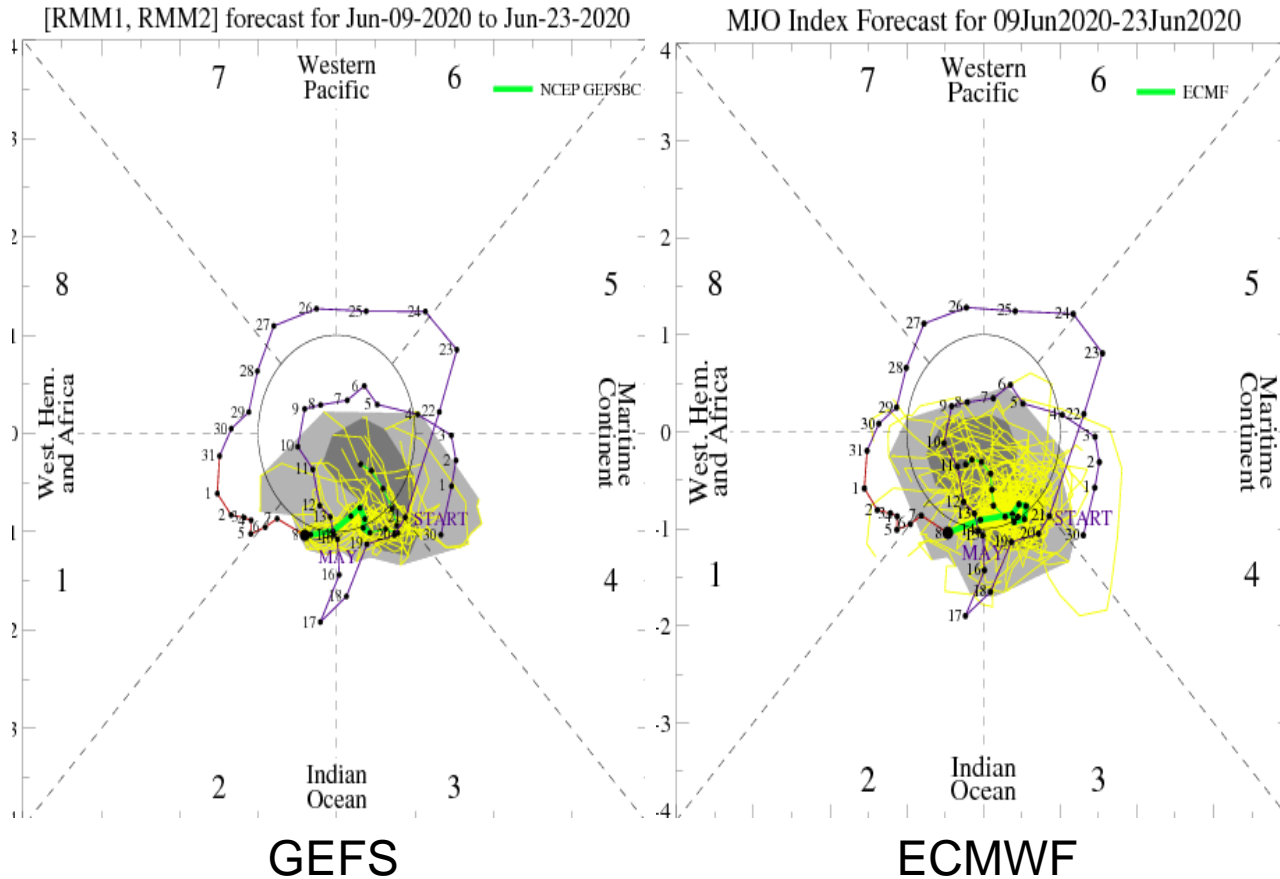
Enhanced convection over Central America and western Africa.



Wave-1 pattern that resembles a strong MJO, but is more likely due to a slow Kelvin Wave.

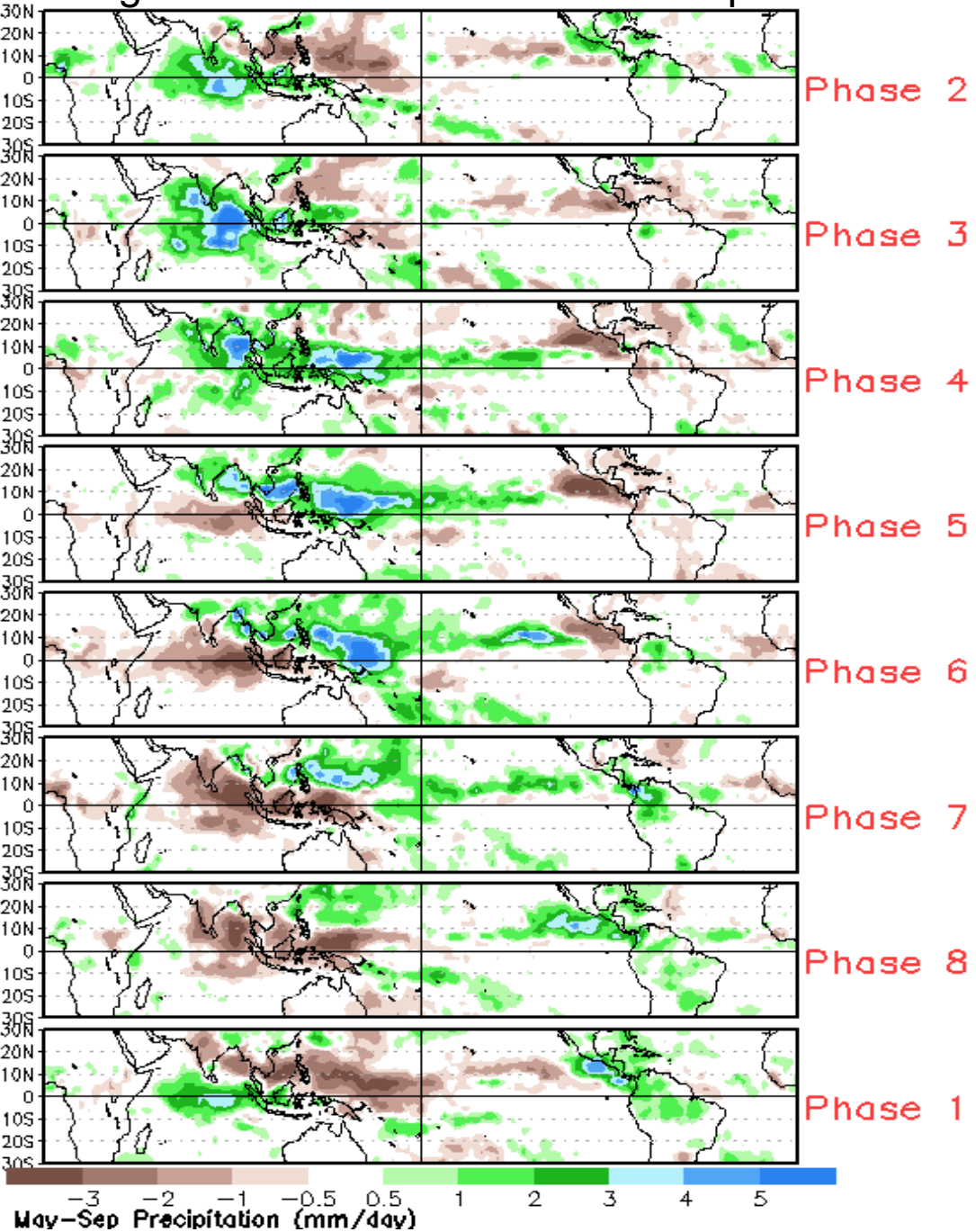


MJO Observation/Forecast



The GEFS and ECMWF forecast a weak MJO signal during the next two weeks.

Average Conditions when the MJO is present

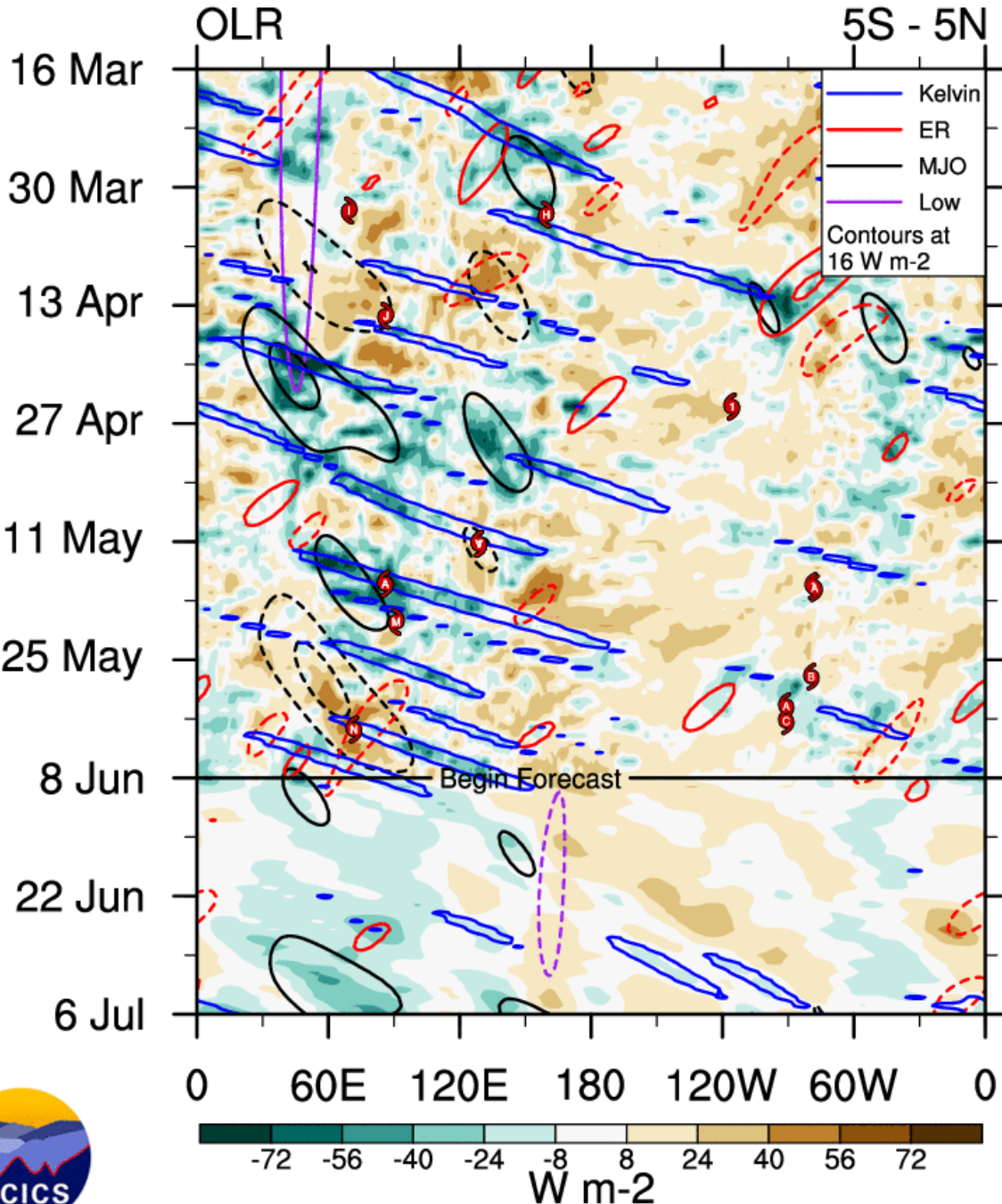


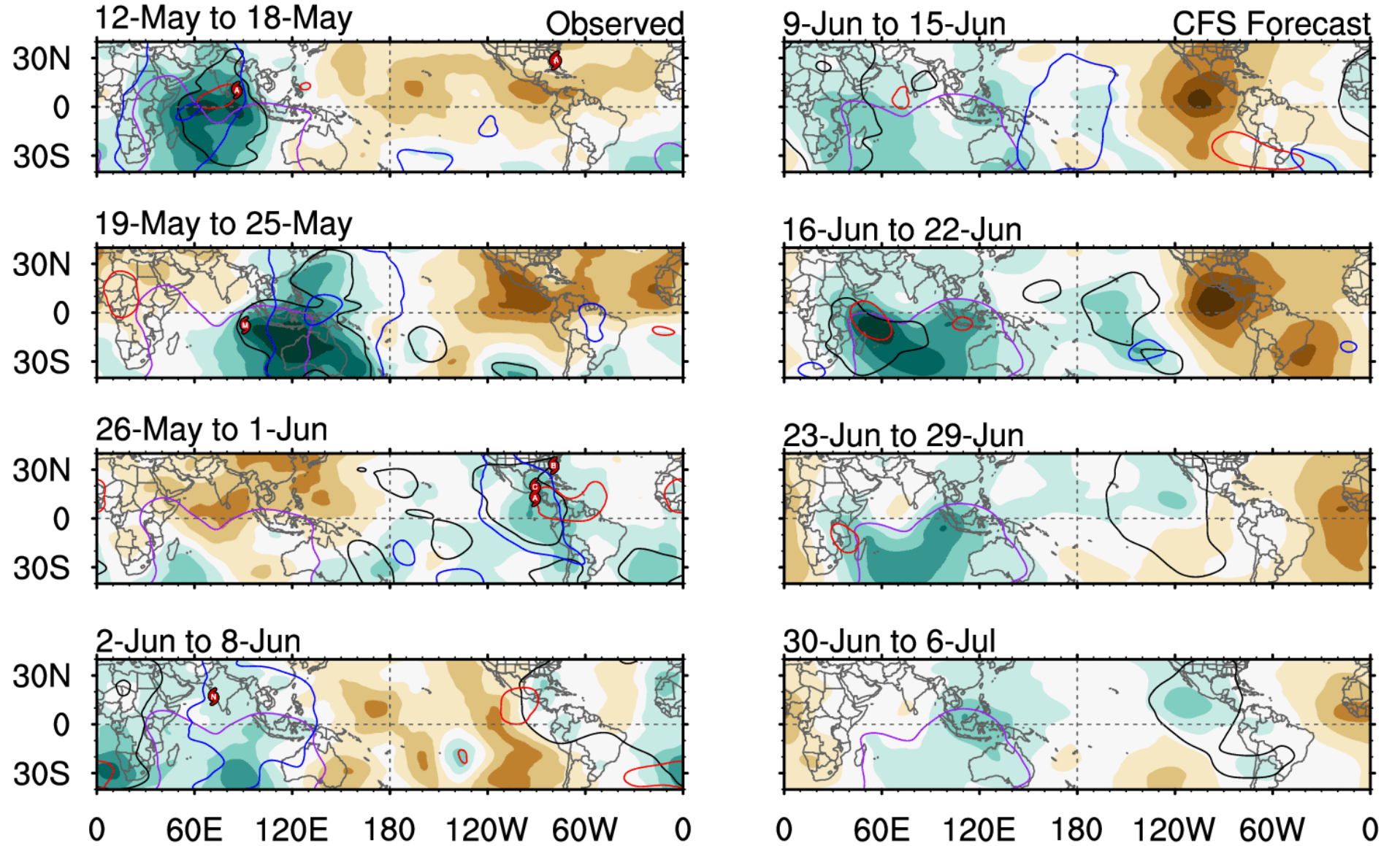
CAVEAT: These panels are representative of robust MJO events.

Kelvin wave activity in the Indian Ocean and West Pacific.

Faint **MJO** signal.

Hints of **Rossby wave** activity over the West Pacific in early June.





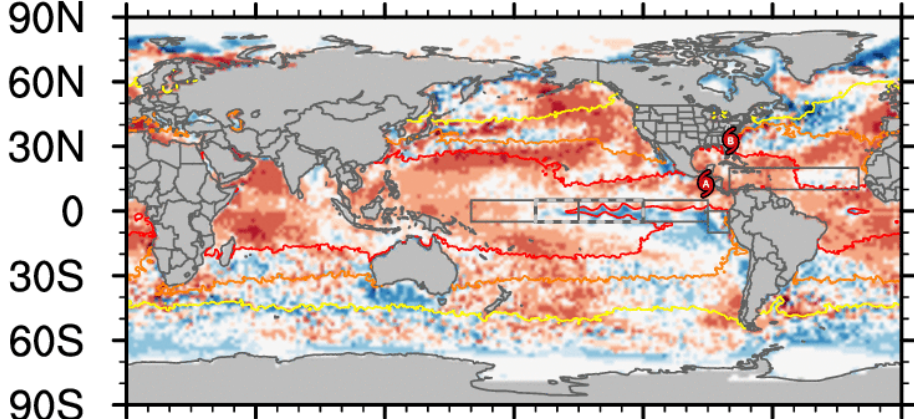
7-day CHI200 with CFS forecasts



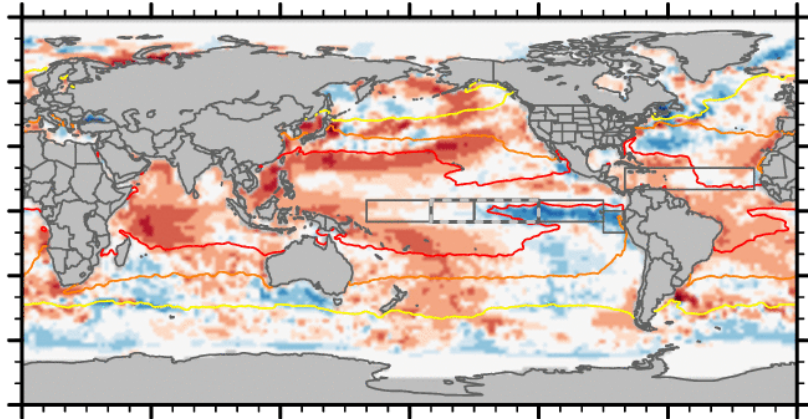
— MJO — Kelvin x2
 — Low — ER

Contours at -2, -6 $\times 10^6$ m² s⁻¹

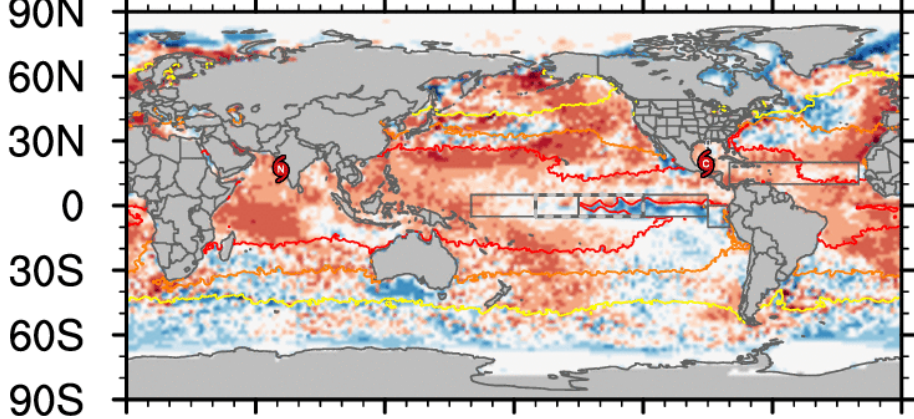
25-May to 31-May OI SST Observations



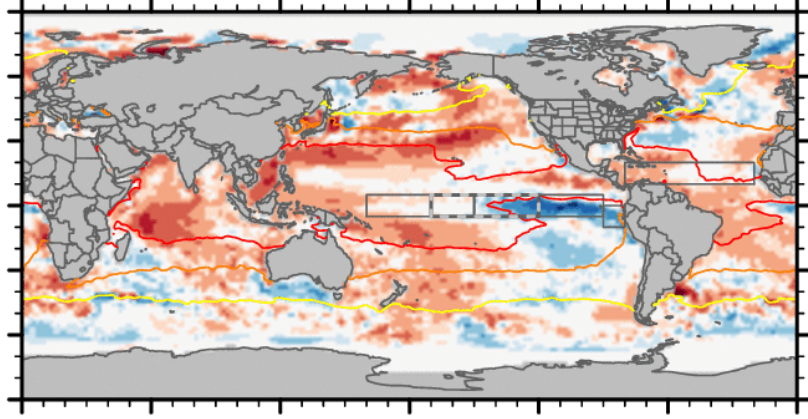
9-Jun to 15-Jun CFS Forecast



1-Jun to 7-Jun

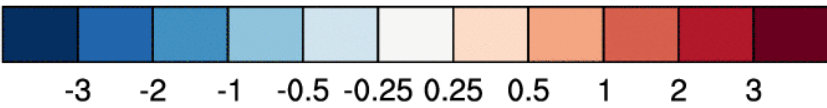


16-Jun to 22-Jun



0 60E 120E 180 120W 60W 0

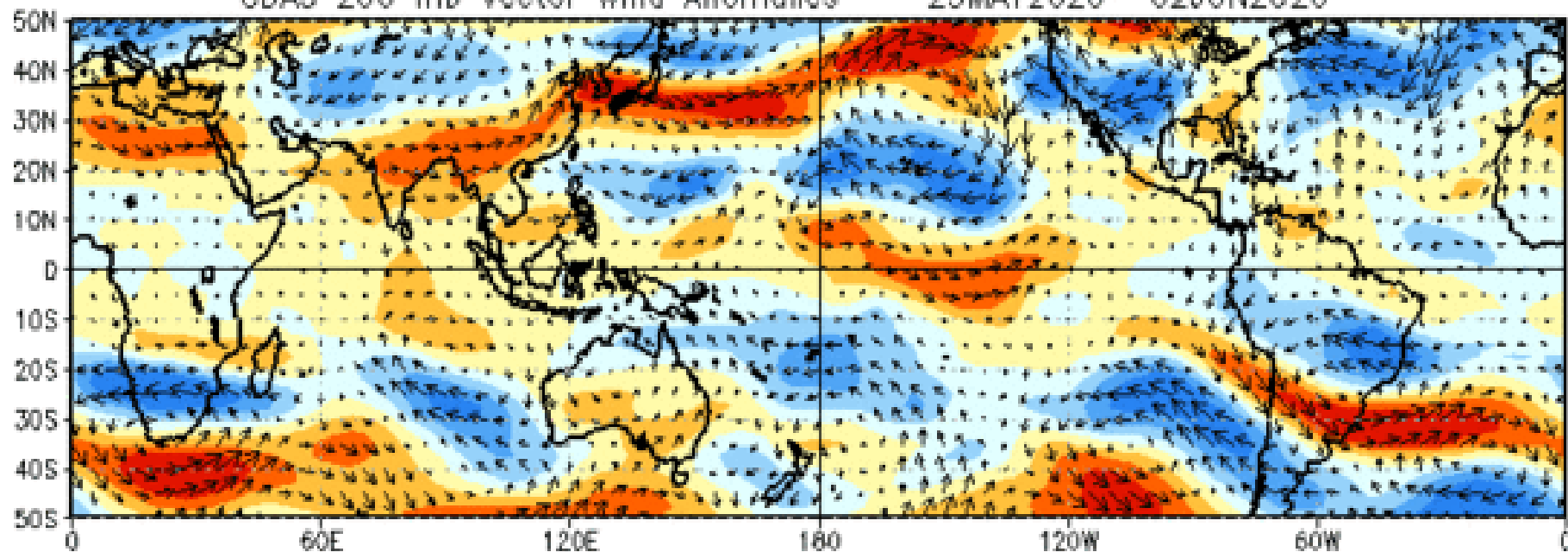
0 60E 120E 180 120W 60W 0



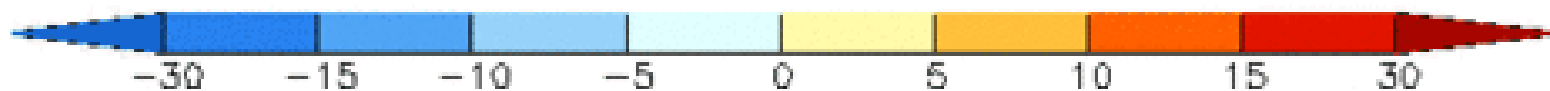
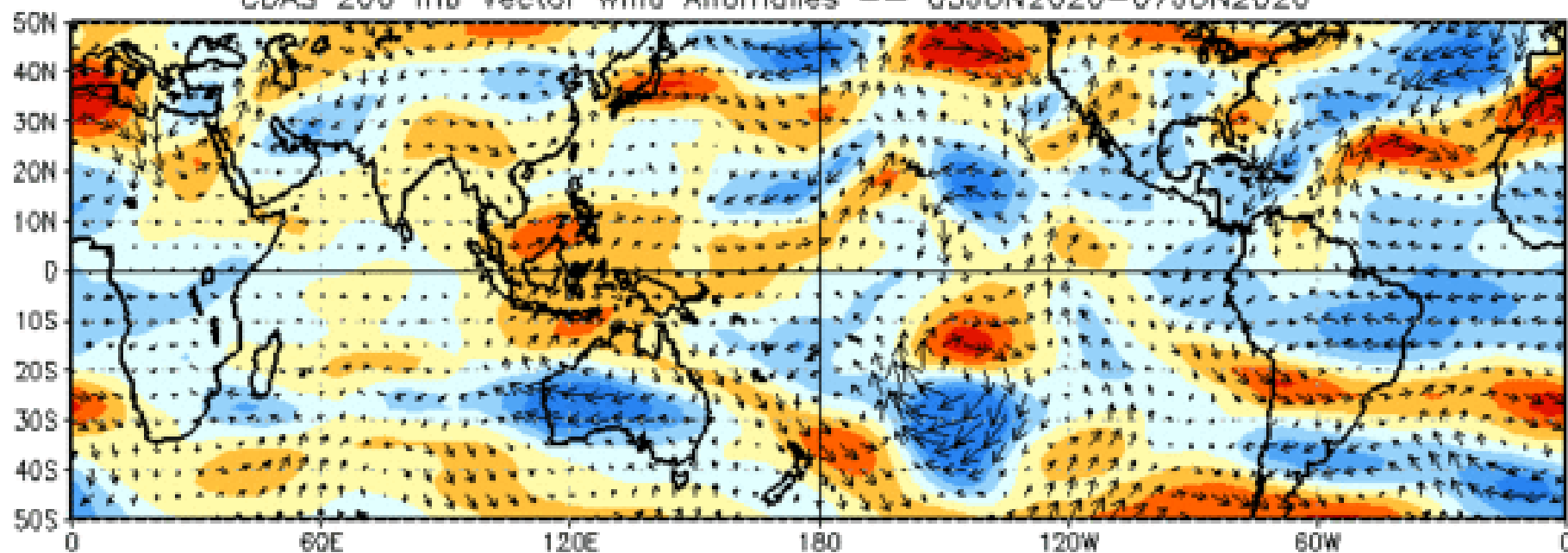
7-day ANOM



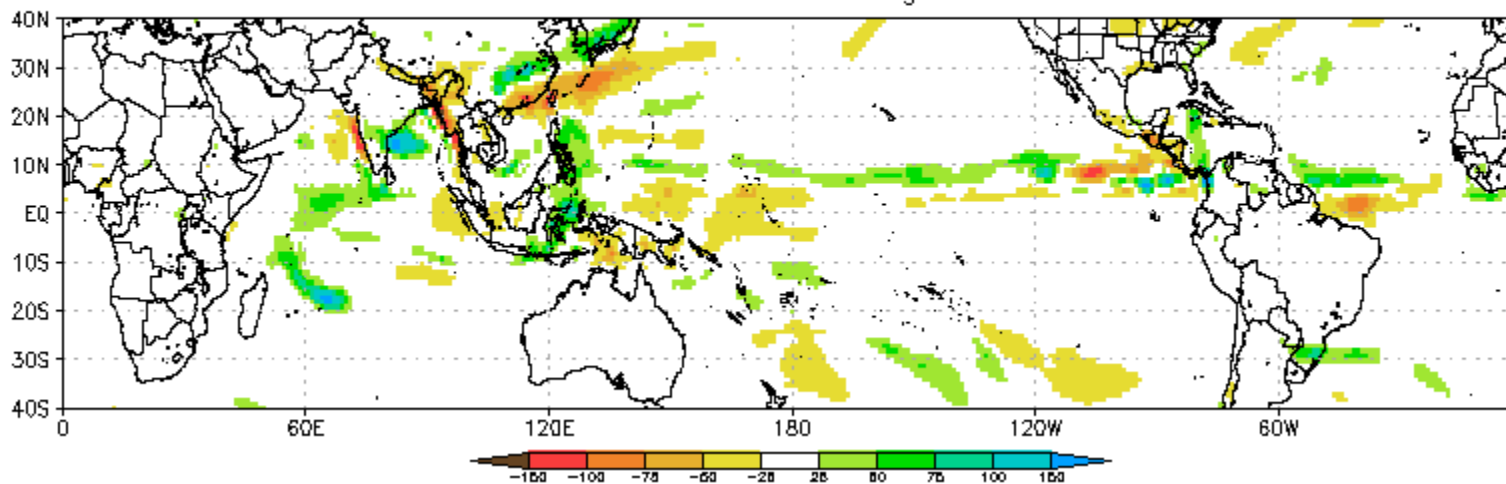
CDAS 200 mb Vector Wind Anomalies -- 29MAY2020- 02JUN2020



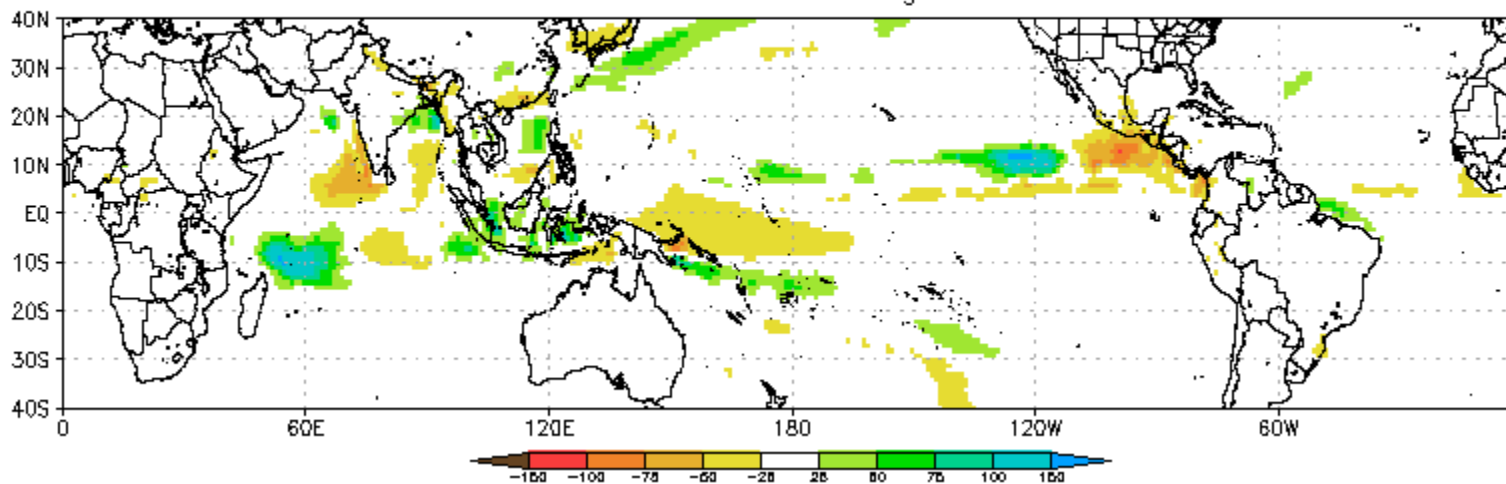
CDAS 200 mb Vector Wind Anomalies -- 03JUN2020-07JUN2020



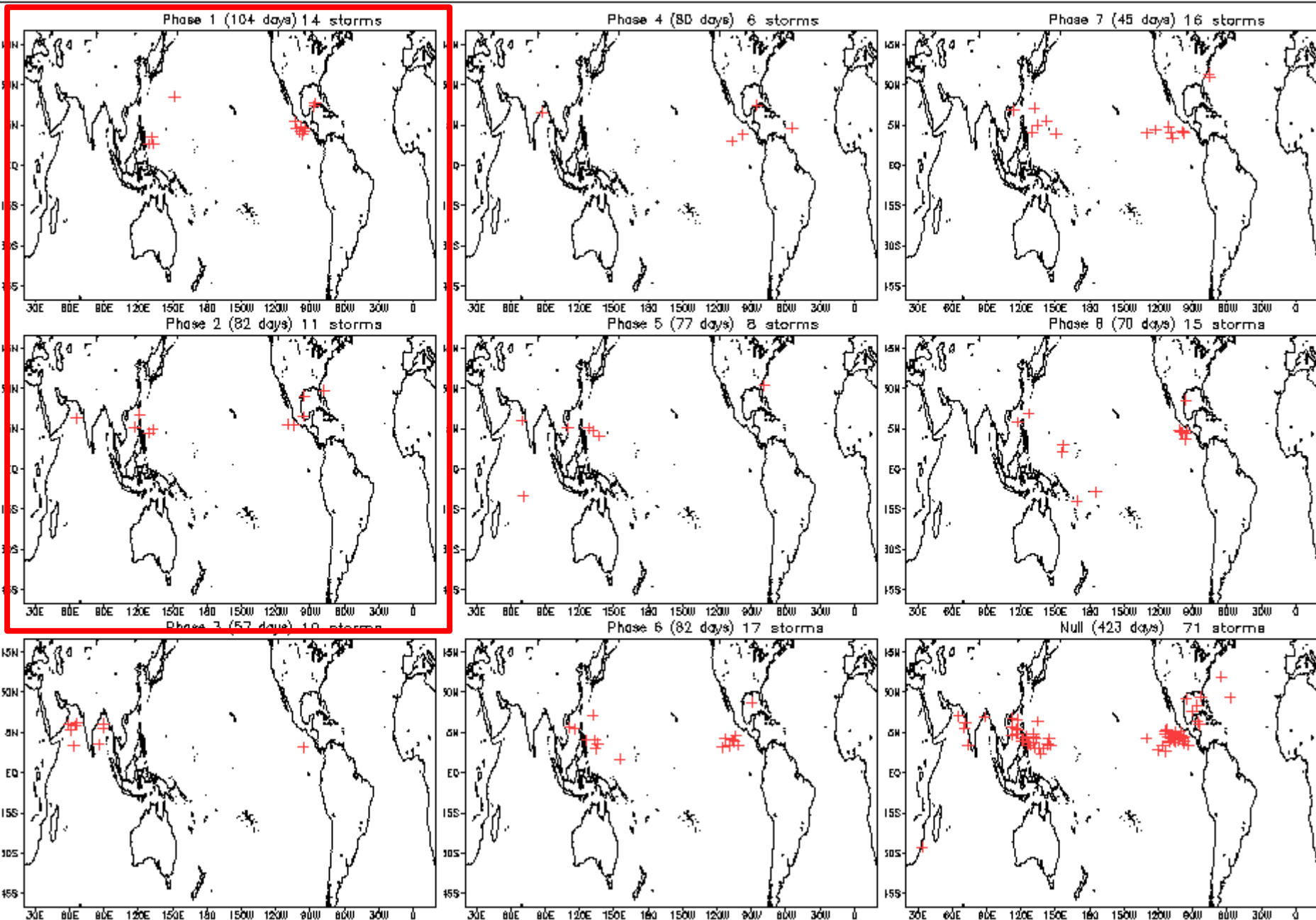
CFS Precipitation Anomalies (mm) Issued 08Jun2020
Week-1 Forecast Ending 16Jun2020



CFS Precipitation Anomalies (mm) Issued 08Jun2020
Week-2 Forecast Ending 23Jun2020



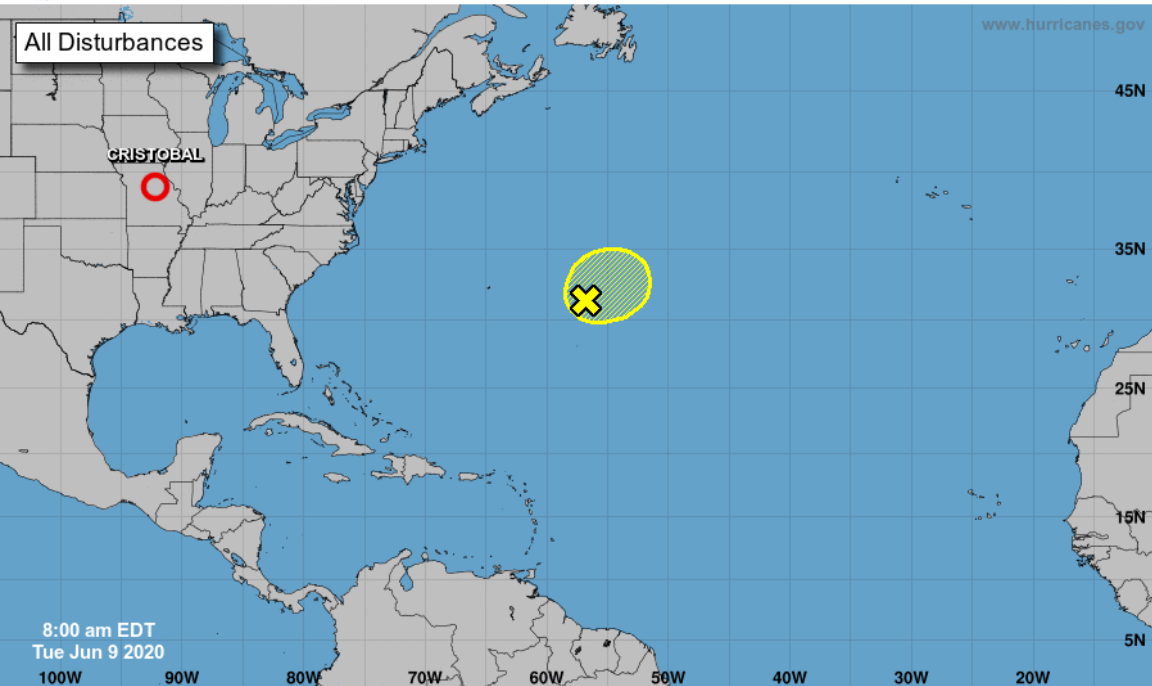
June Tropical Storm Formation by MJO phase





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Jun 9 2020

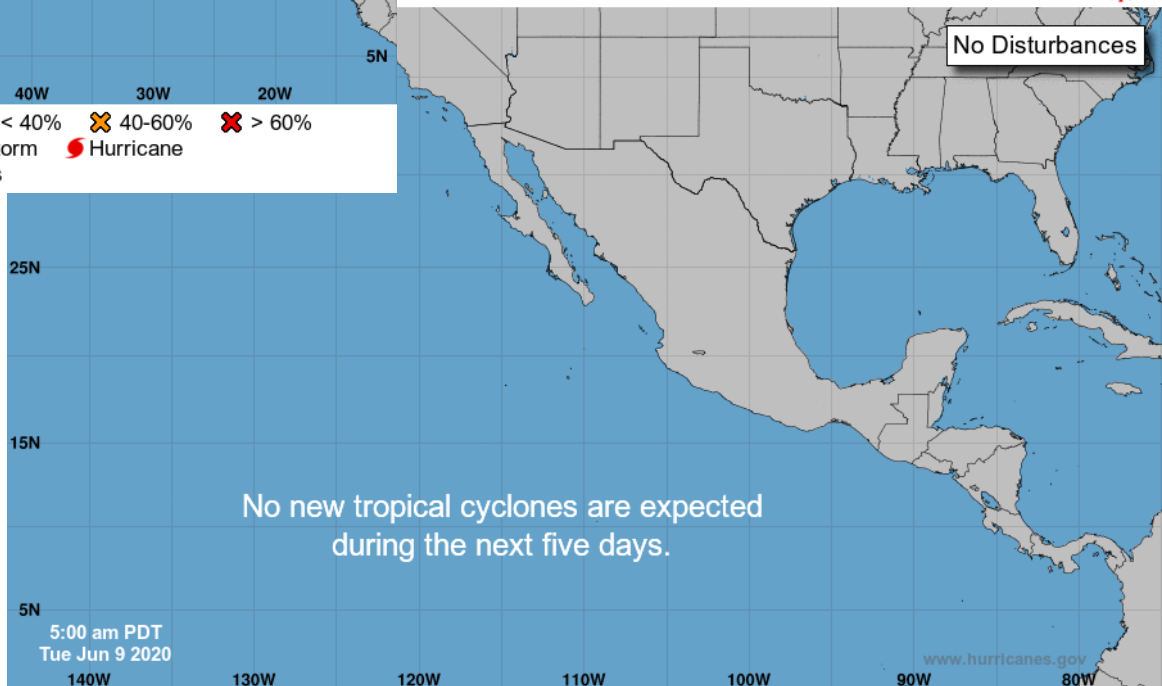
100W 90W 80W 70W 60W 50W 40W 30W 20W

Current Disturbances and Five-Day Cyclone Formation Chance:
 Tropical or Sub-Tropical Cyclone:
 Post-Tropical Cyclone or Remnants

- < 40%
- 40-60%
- > 60%
- Depression
- Storm
- Hurricane
- Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



No Disturbances

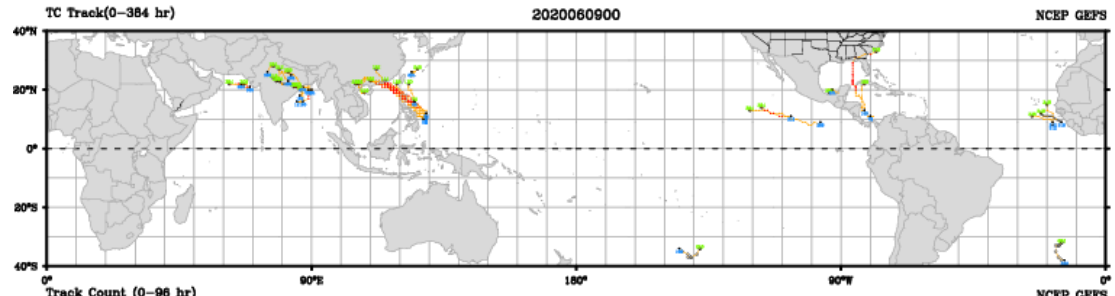
5:00 am PDT
Tue Jun 9 2020

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

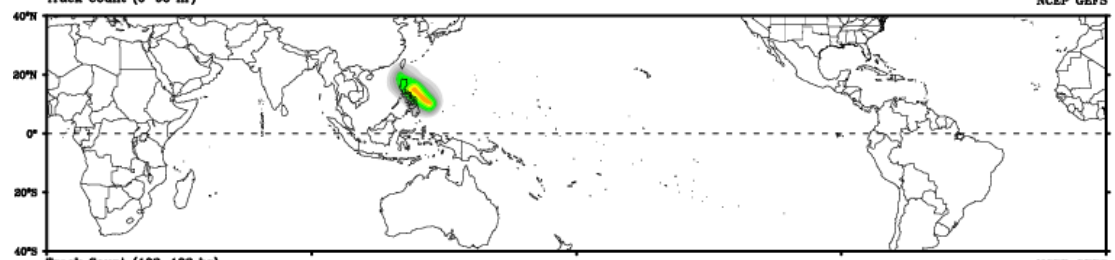
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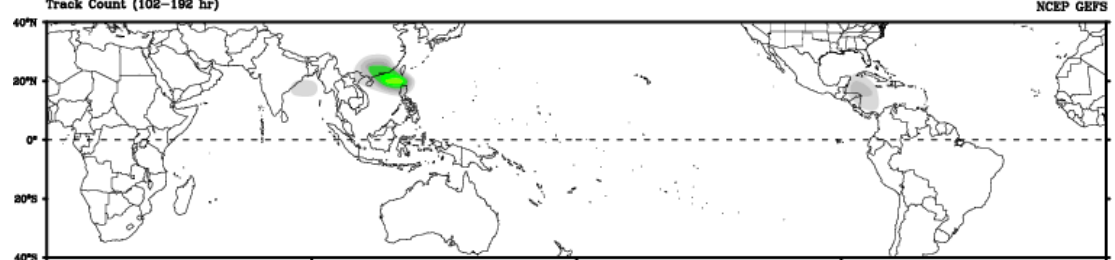
No new tropical cyclones are expected during the next five days.



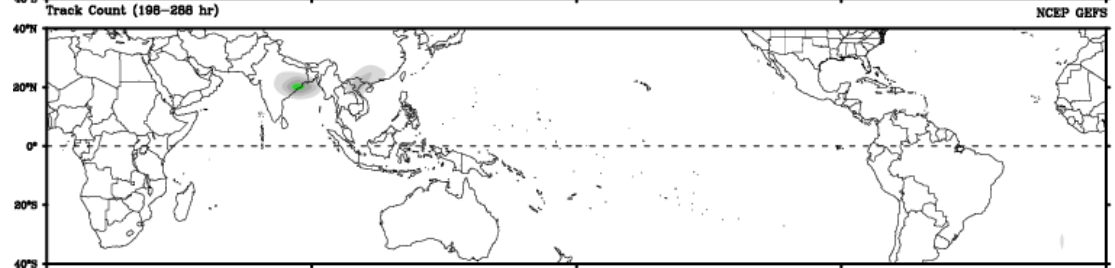
Days 1-4



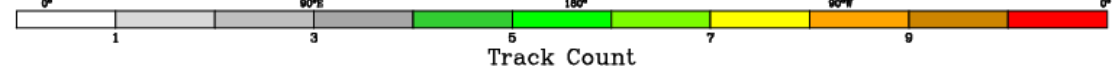
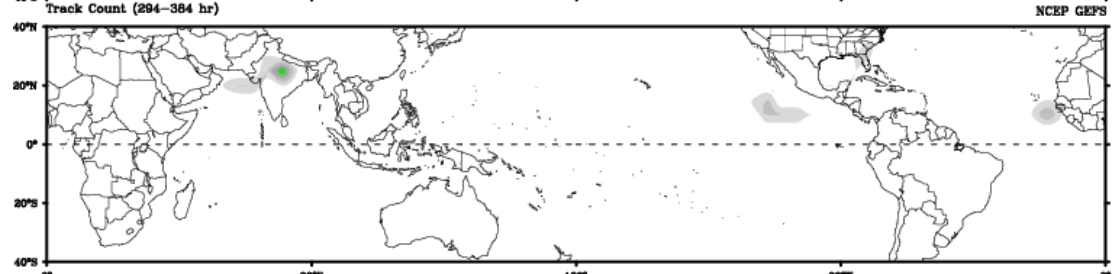
Day 5-8



Day 9-12

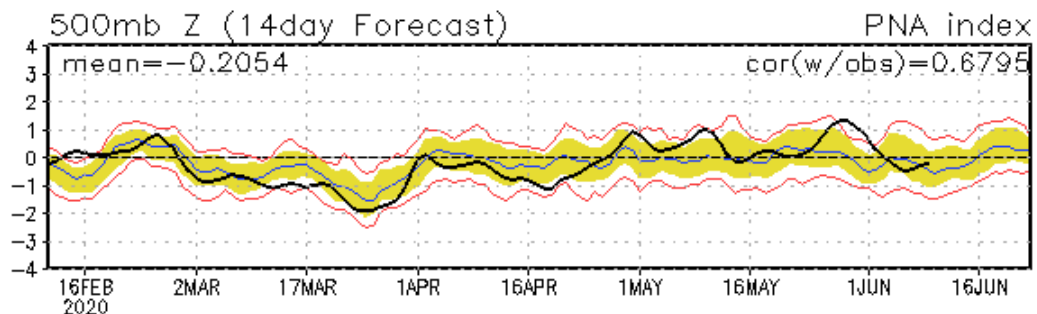
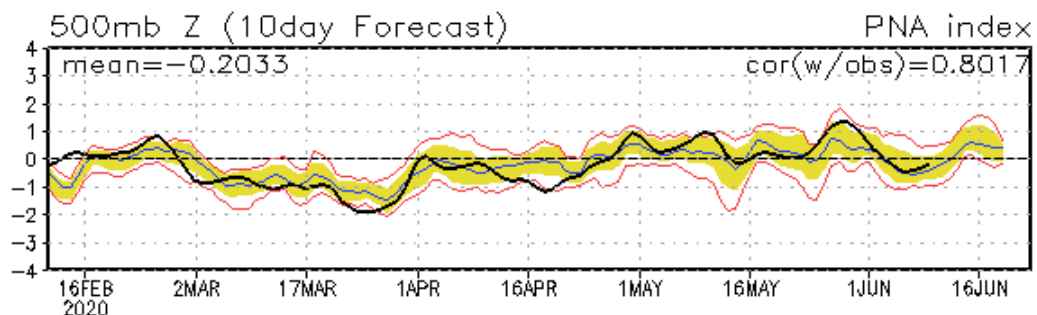
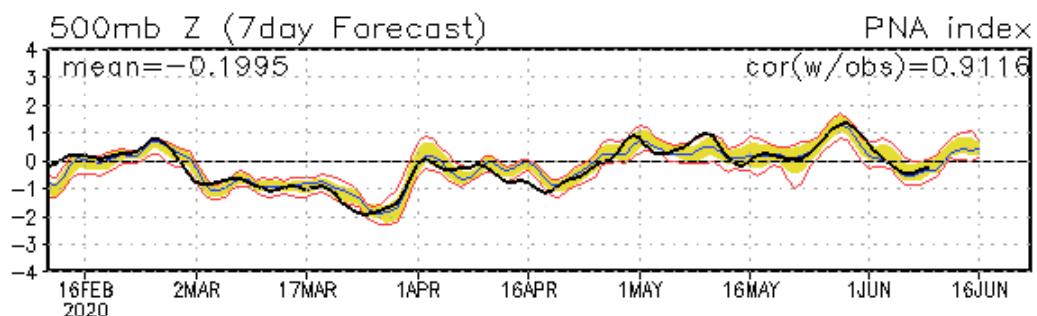
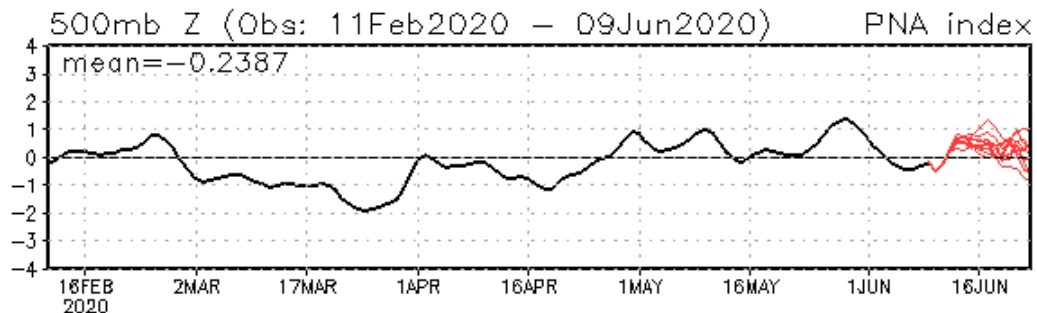


Day 13-15

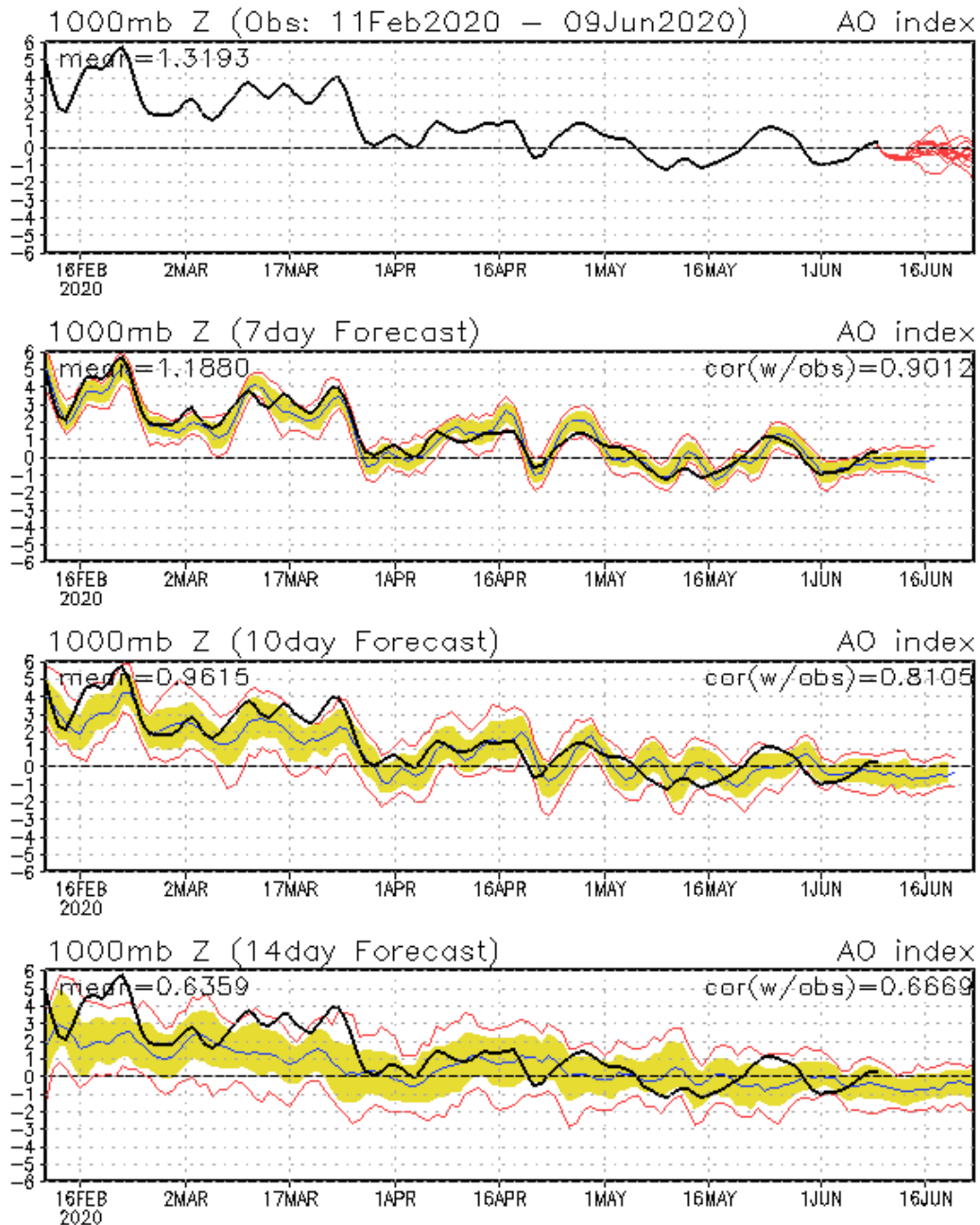


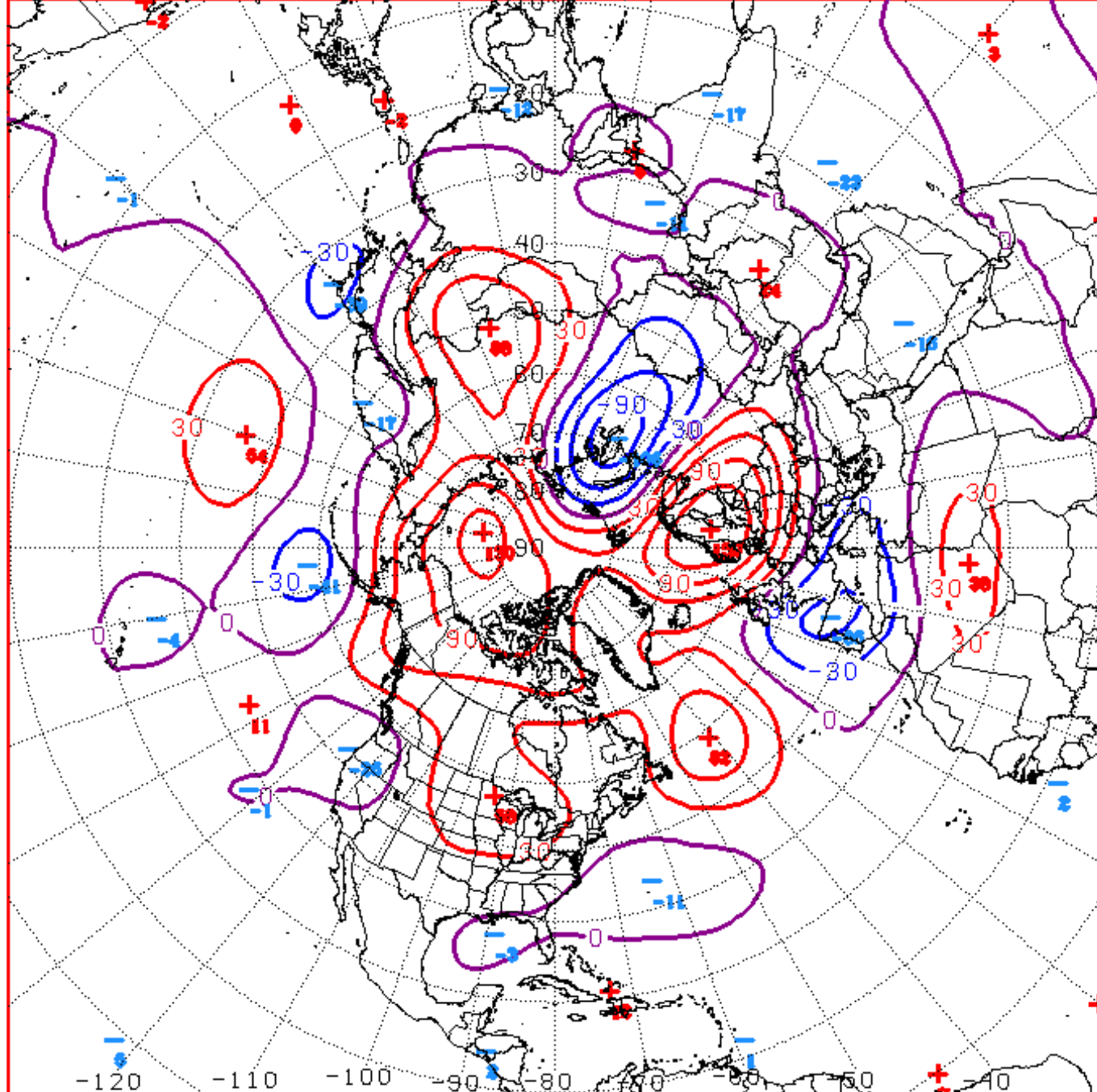
Connections to U.S. Impacts

PNA: Observed & ENSM forecasts



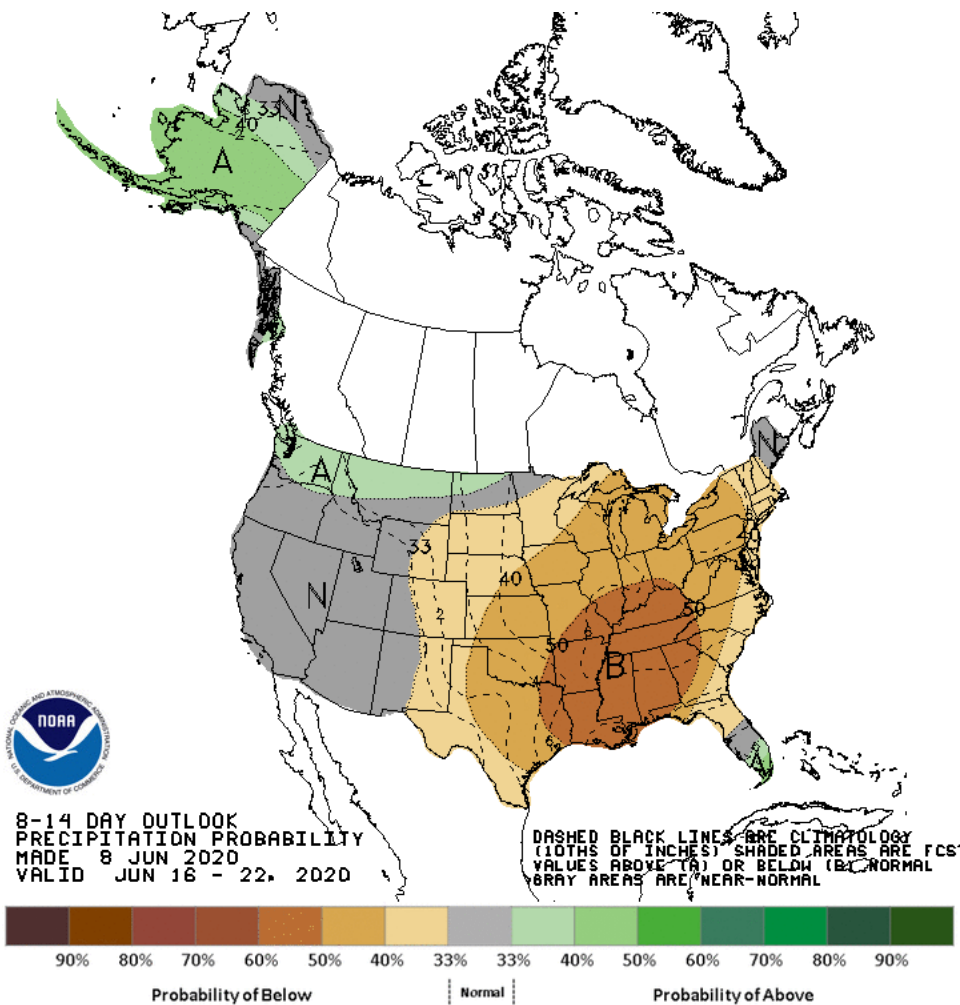
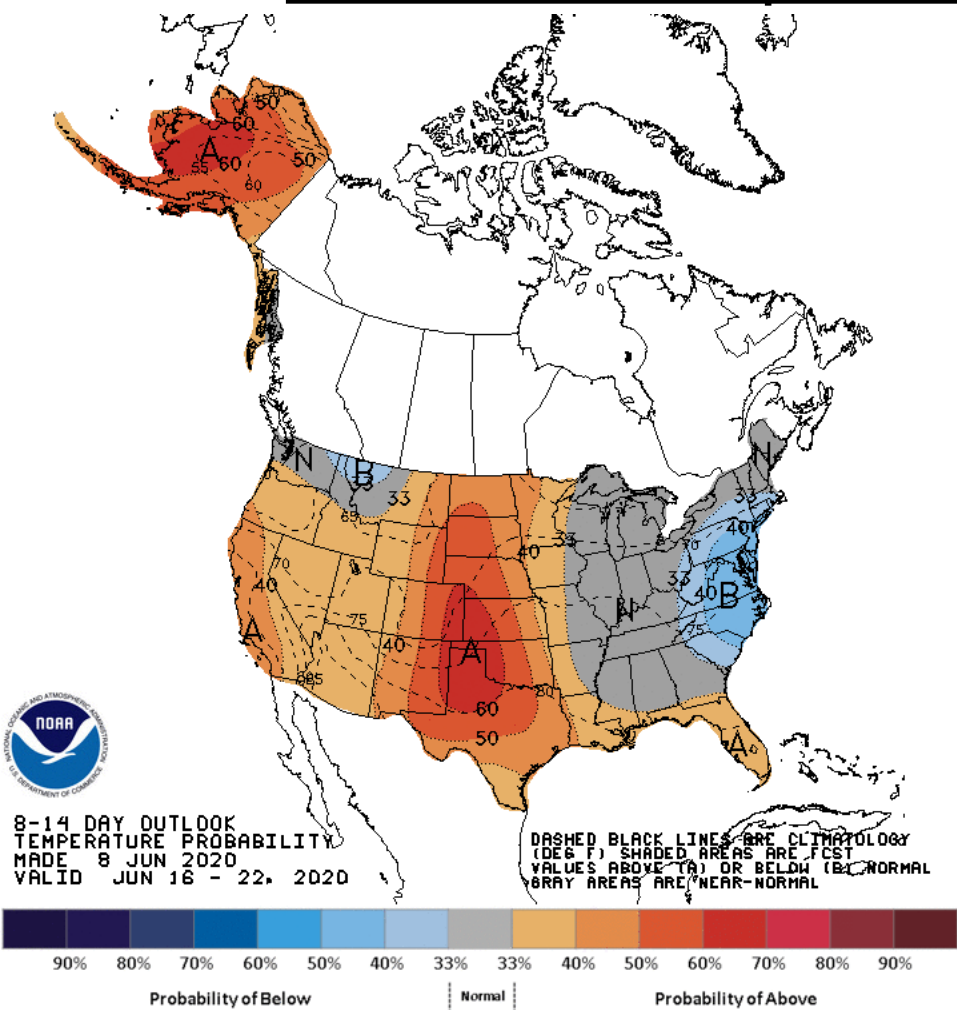
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUN 09 2020 1236 UTC CNTD JUN 20 2020

Week 2 – Temperature and Precipitation

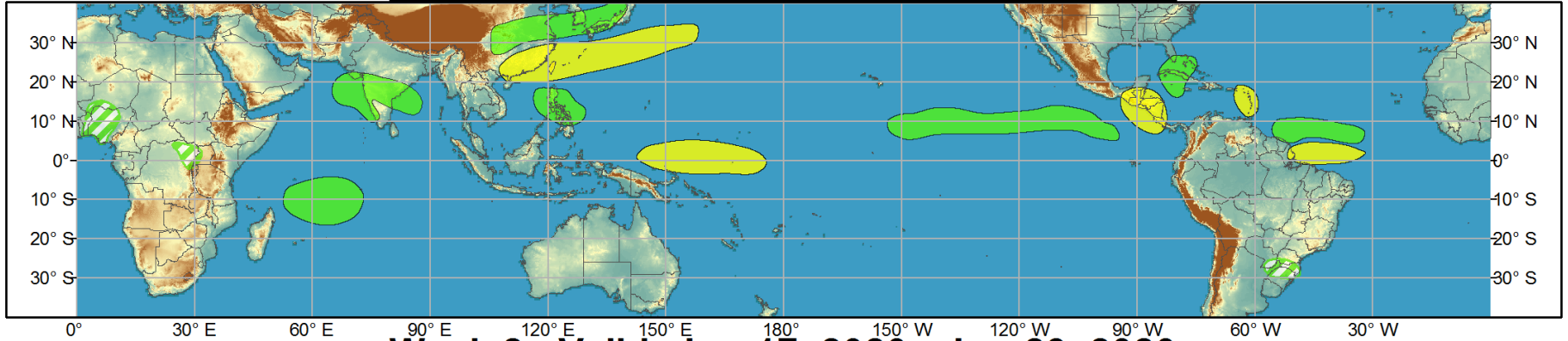




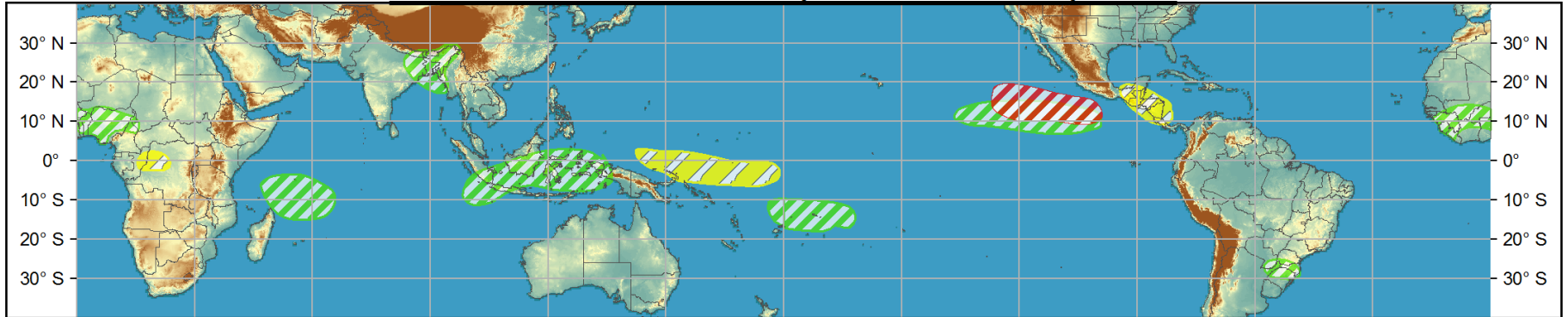
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