

Global Tropics Hazards And Benefits Outlook

6/16/2020

Nick Novella

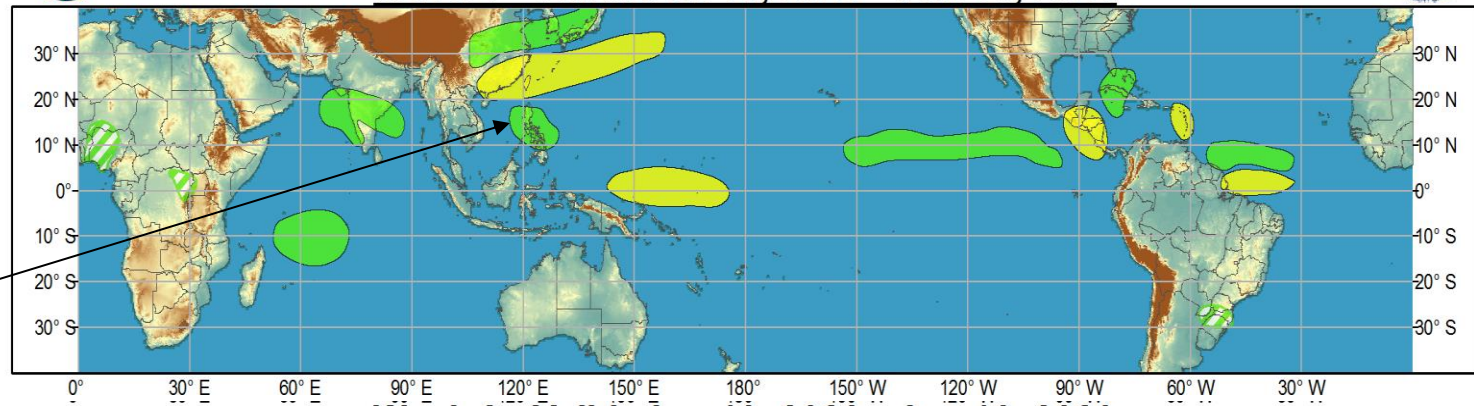
Outline

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

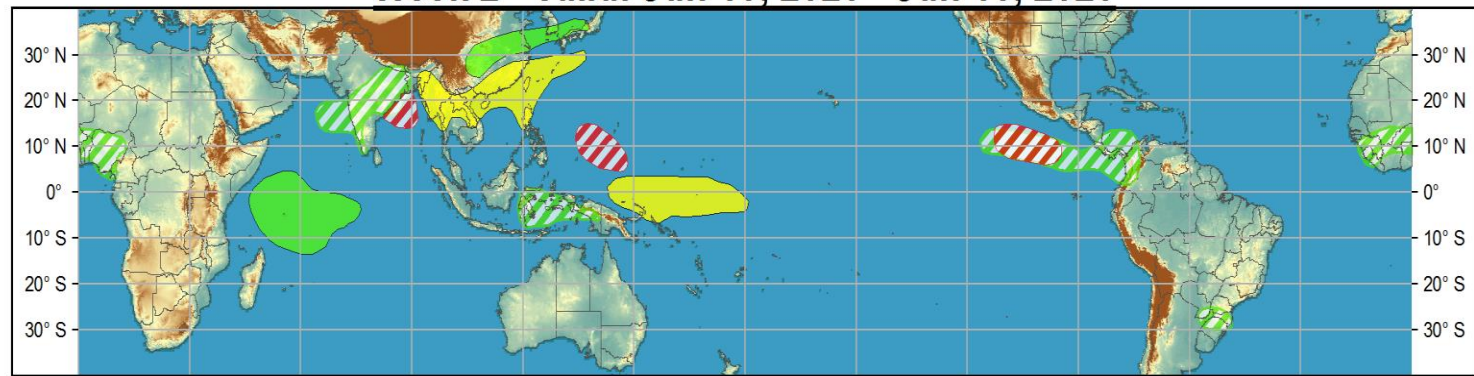
Outlook Review

TC Nuri
(6/13-6-14)

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

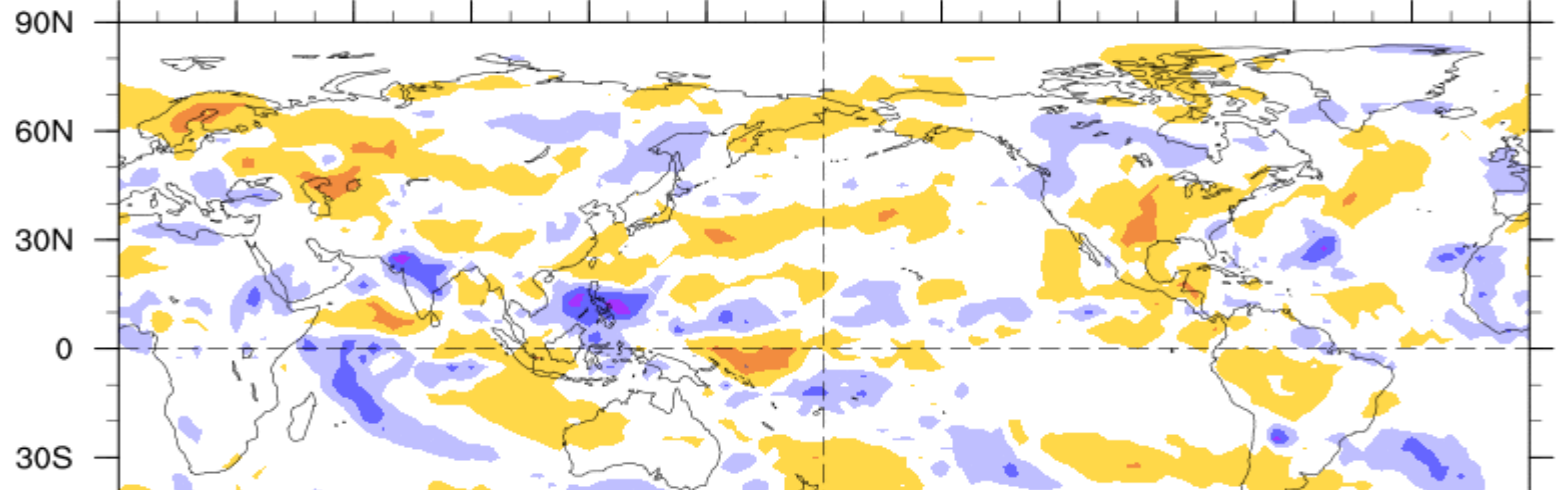


Week 2 - Valid: Jun 10, 2020 - Jun 16, 2020



7-Day Average OLR Anomaly

2020/06/08 - 2020/06/14



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (June 11, 2020 Update)

- ENSO Alert System Status: Not Active
- There is a ~60% (from 65%) chance of ENSO-neutral during Northern Hemisphere summer 2020, with roughly equal chances (~40-50%) of La Nina or ENSO-neutral during the autumn and winter 2020-2021.

MJO and other subseasonal tropical variability:

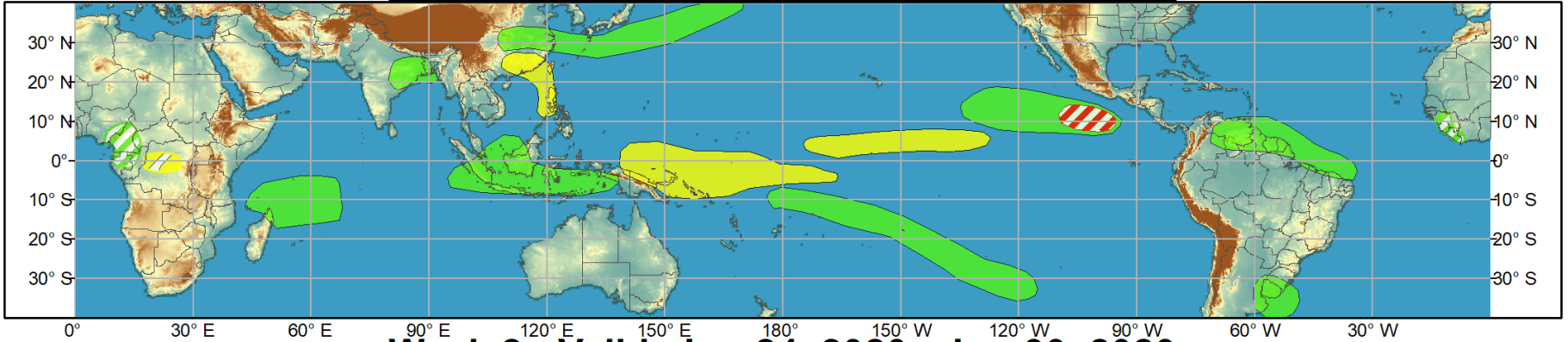
- The upper-level VP pattern has become more incoherent with little eastward propagation of the convective envelope during mid-June. Most of the convection is likely tied to Rossby Wave activity and the remnants of TC Nuri.
- Dynamical model RMM index forecasts suggests that any renewal of the MJO is unlikely, as most solutions favor the subseasonal signal to propagate westward through the next two weeks.
- However, a Kelvin wave traversing the Pacific is expected to elevate chances of TC formation over the East Pacific late in week-1 and into week-2.



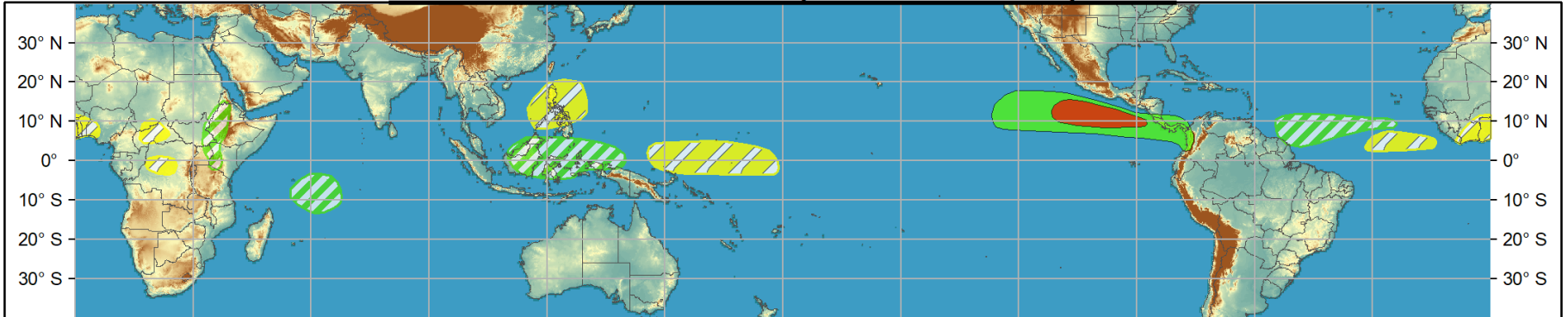
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 17, 2020 - Jun 23, 2020



Week 2 - Valid: Jun 24, 2020 - Jun 30, 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: 06/16/2020
Forecaster: Novella

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

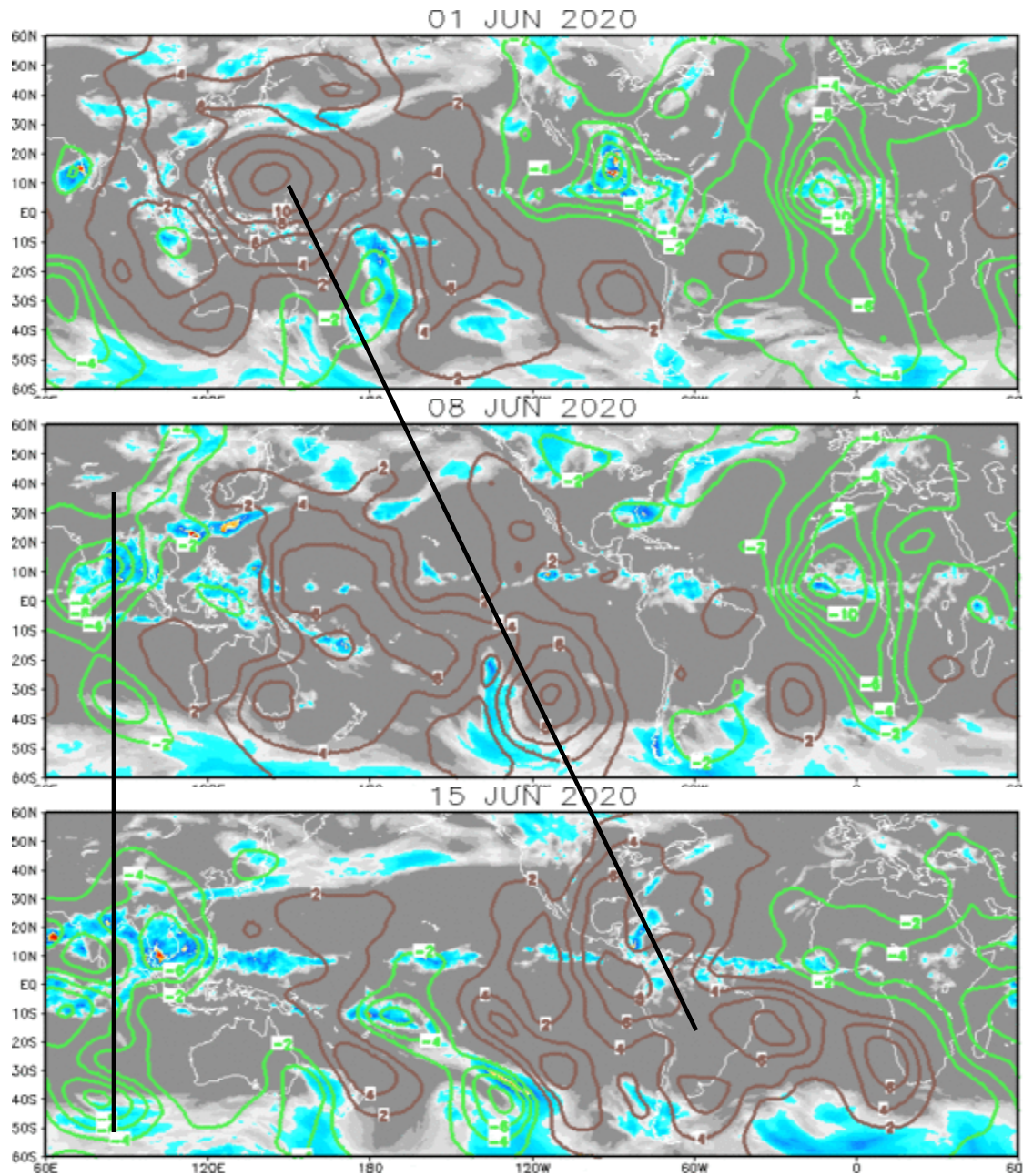
Green: Enhanced Divergence

Brown: Enhanced Convergence

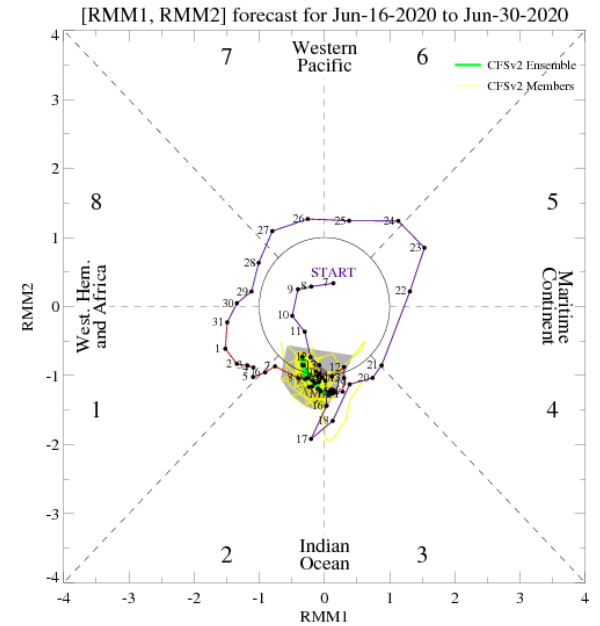
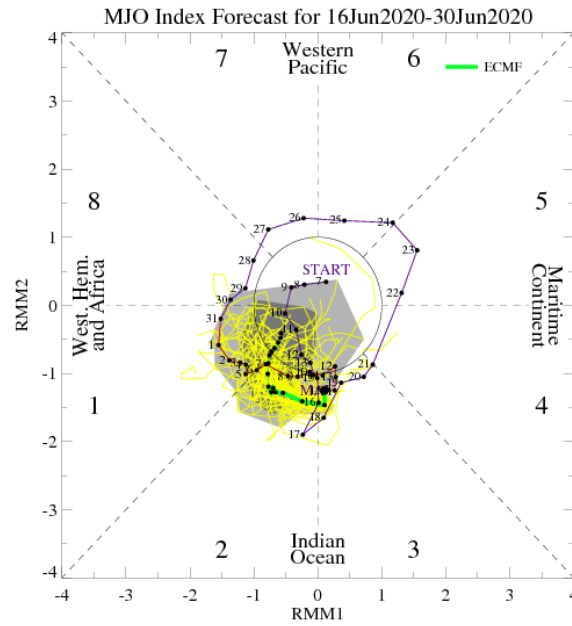
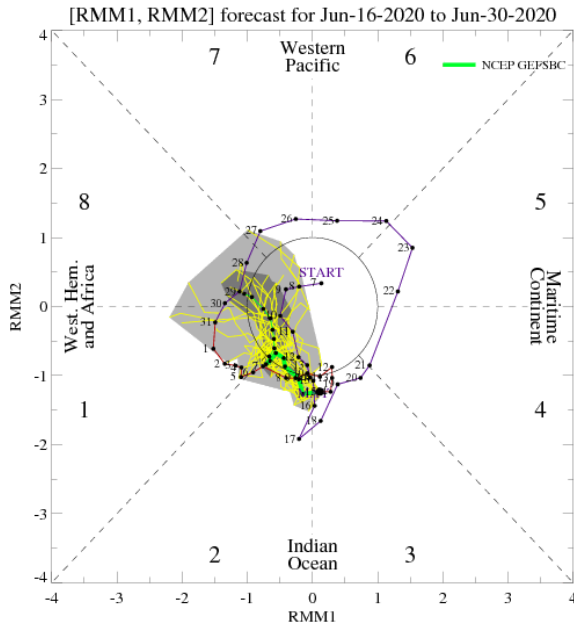
Enhanced convection over Central America and western Africa.

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

Pattern appears more incoherent with little eastward propagation of enhanced envelope.

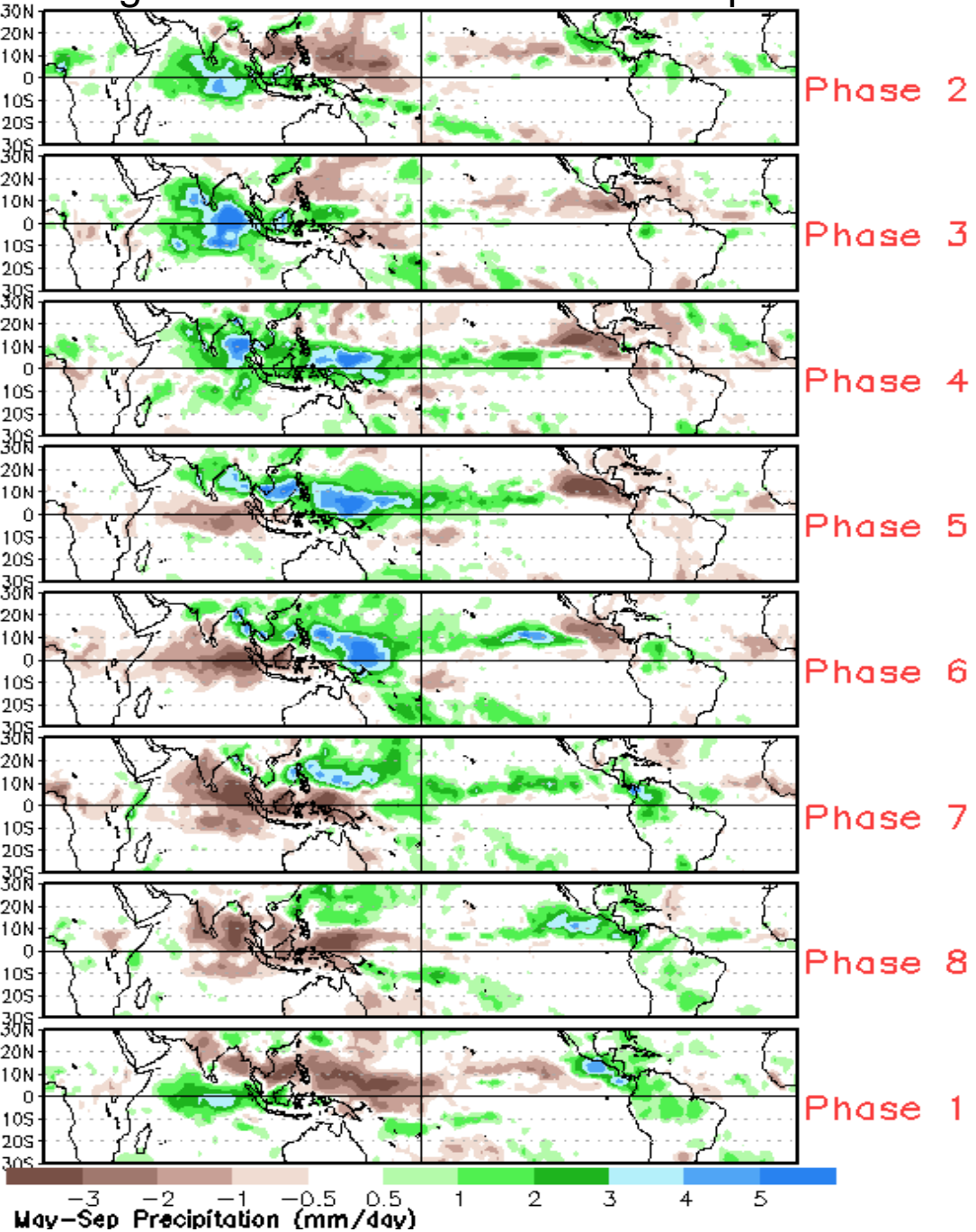


MJO Observation/Forecast



All dynamical models favor a westward propagating signal with decreasing amplitude during the next two weeks.

Average Conditions when the MJO is present

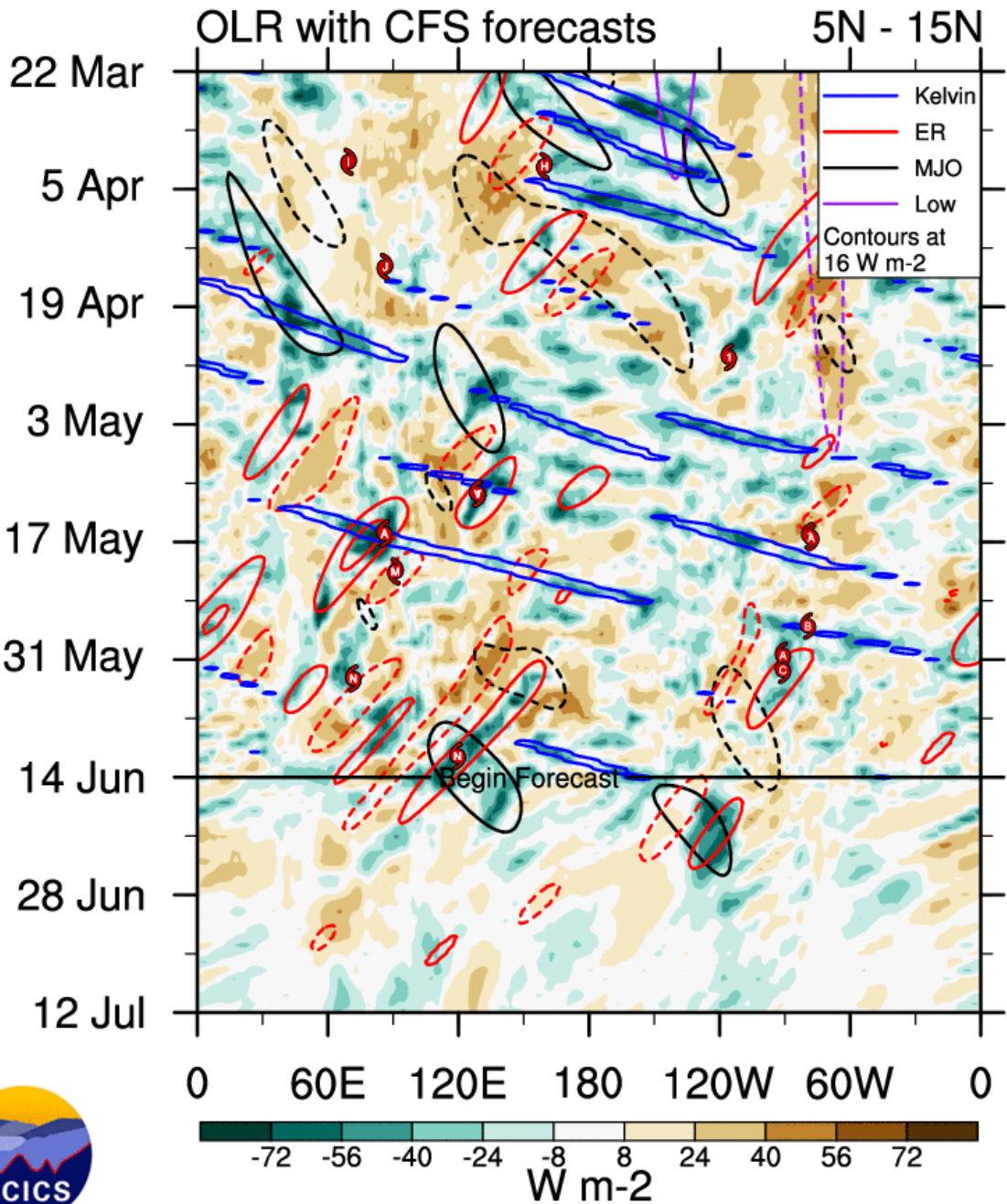


CAVEAT: These panels are representative of robust MJO events.

Slight signal in OLR fields of **Kelvin wave** currently near Date Line.

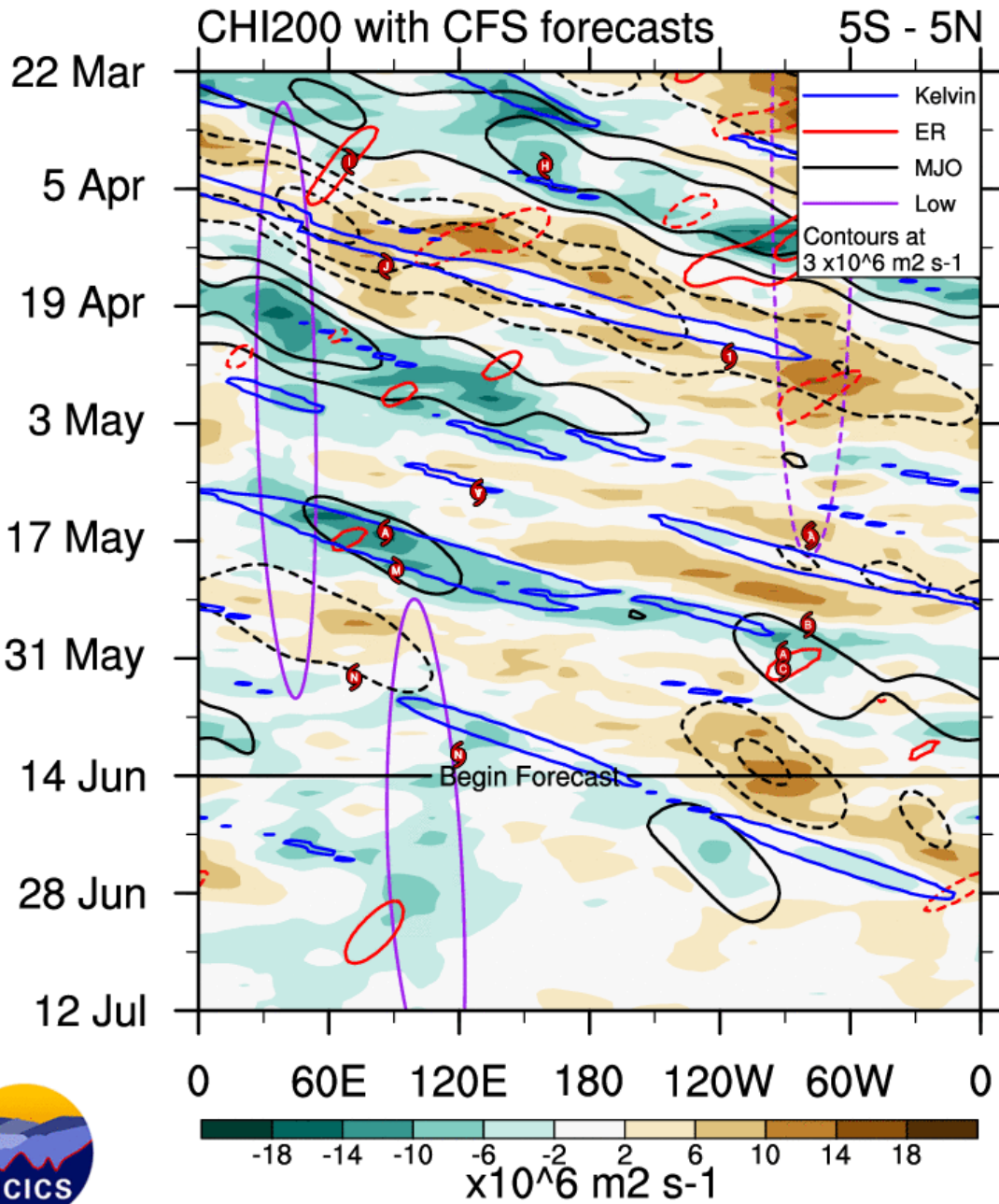
Faint **MJO** signal.

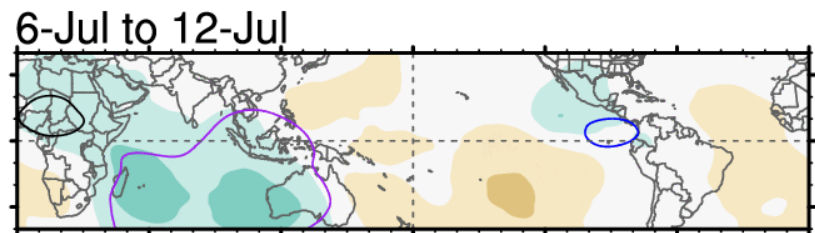
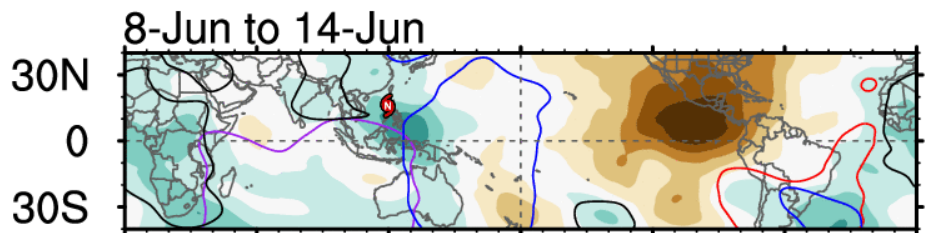
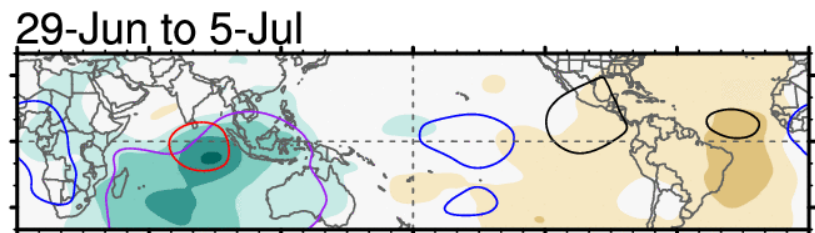
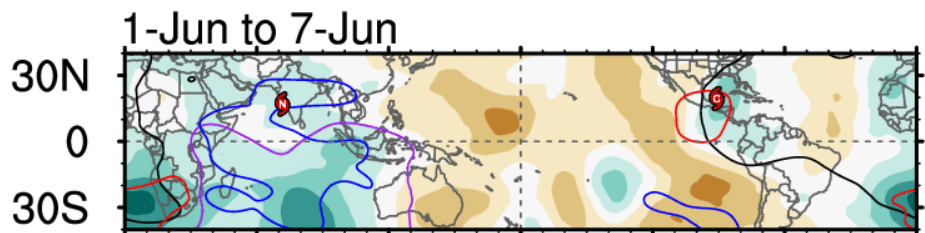
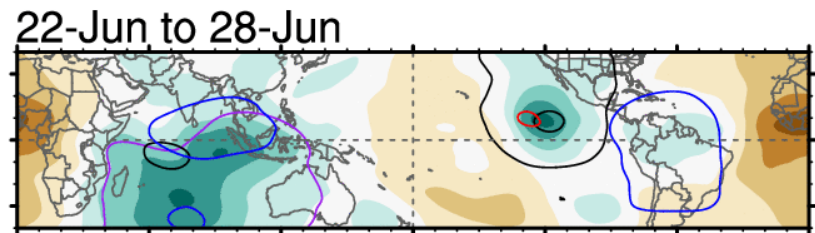
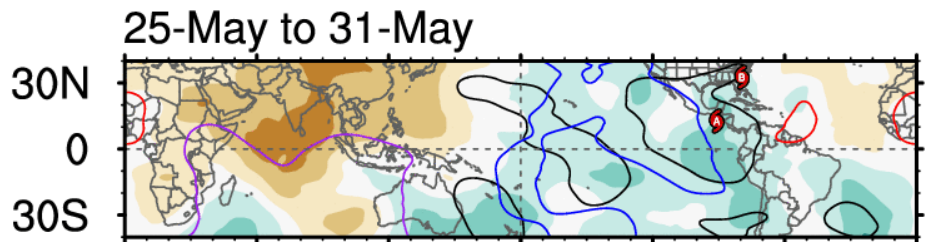
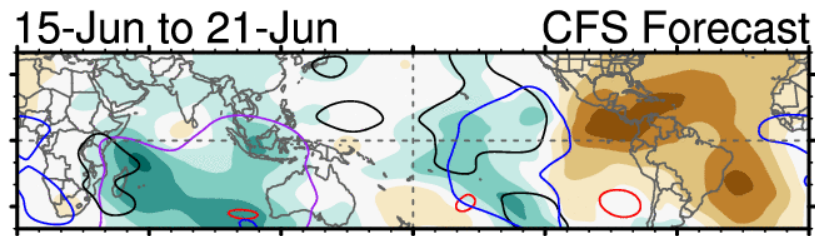
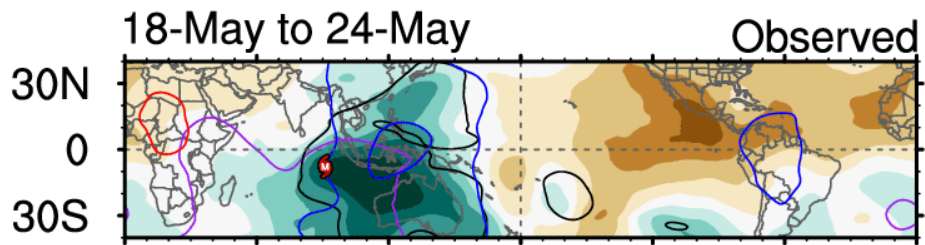
Rossby wave activity in Eastern Hemisphere appears to be dominant mode of subseasonal variability recently.



Kelvin wave predicted to keep propagating across western Hemisphere during outlook period.

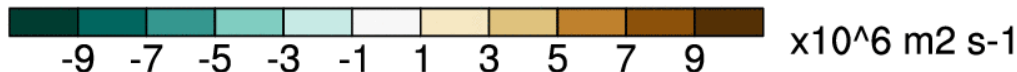
Low frequency detected over Maritime Continent in VP field.





0 60E 120E 180 120W 60W 0

0 60E 120E 180 120W 60W 0



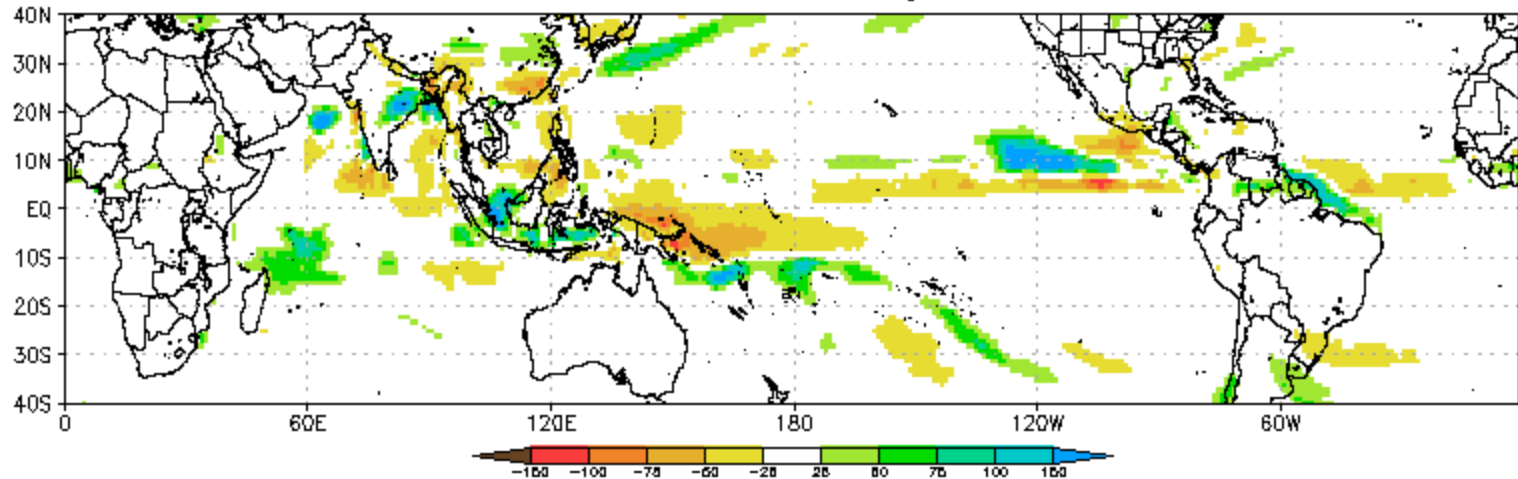
— MJO — Kelvin x2
 — Low — ER

Contours at -2, -6 $\times 10^6 \text{ m}^2 \text{ s}^{-1}$

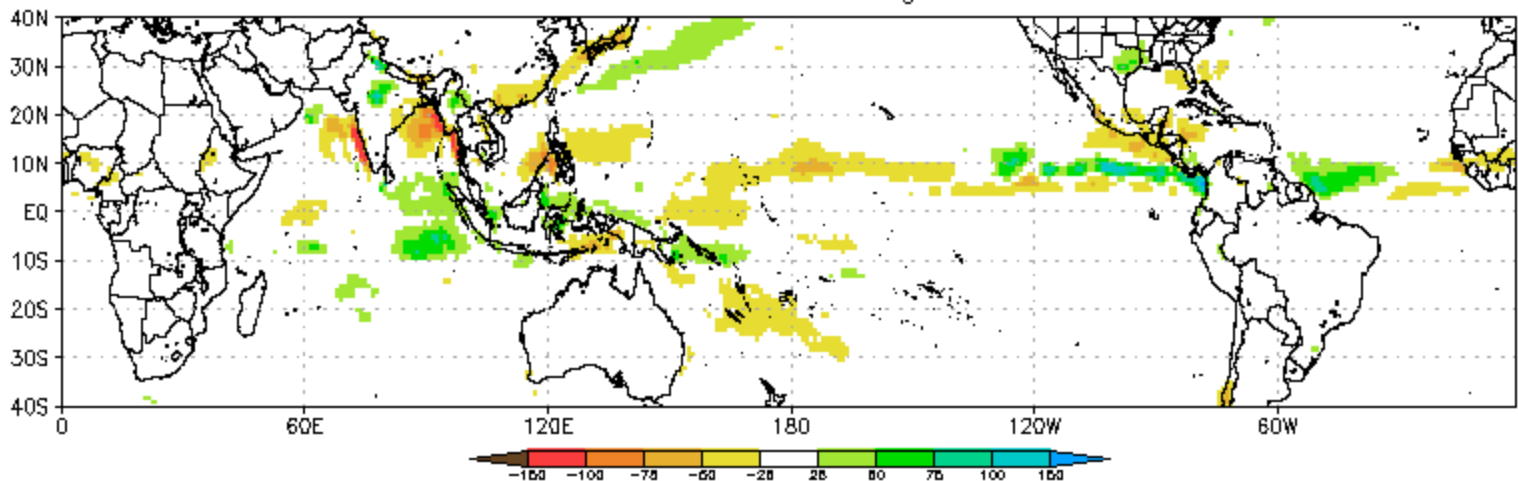
7-day CHI200 with CFS forecasts



CFS Precipitation Anomalies (mm) Issued 15Jun2020
Week-1 Forecast Ending 23Jun2020



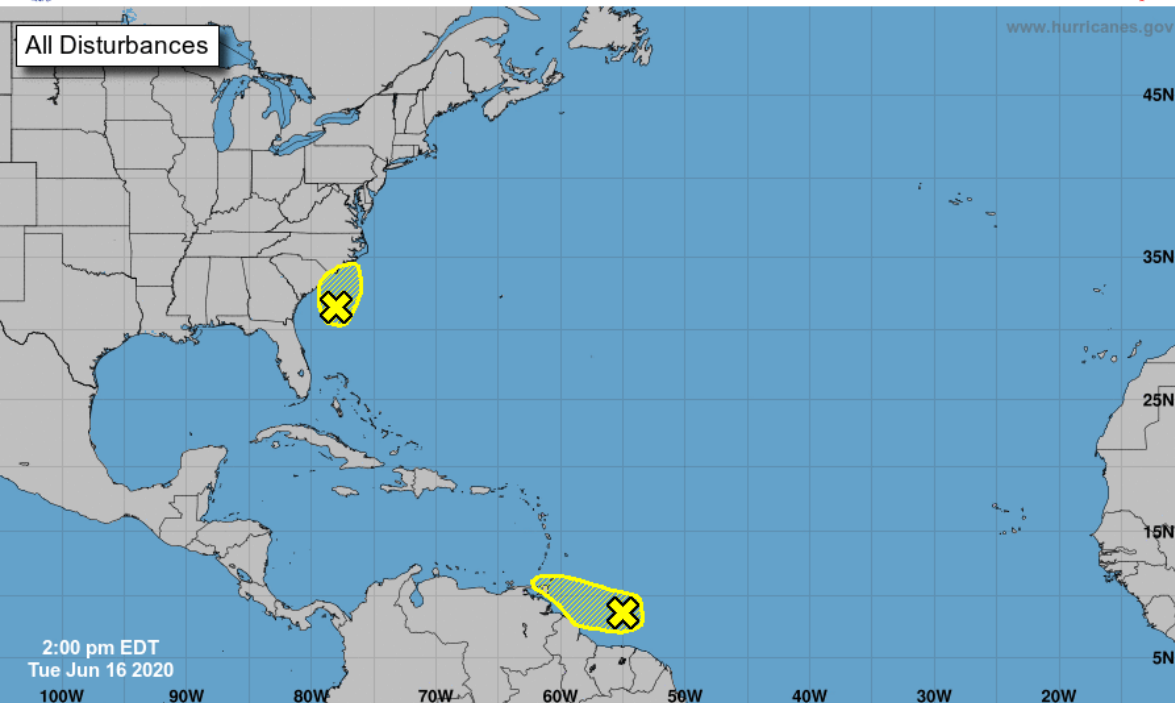
CFS Precipitation Anomalies (mm) Issued 15Jun2020
Week-2 Forecast Ending 30Jun2020





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



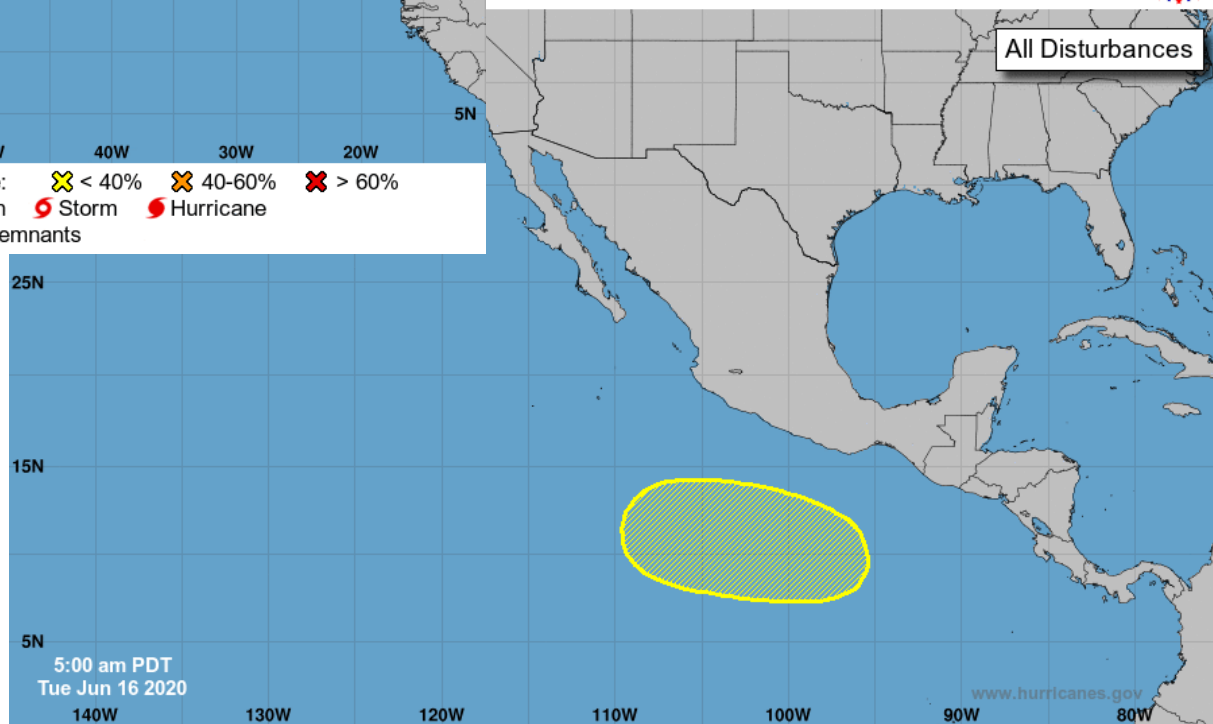
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

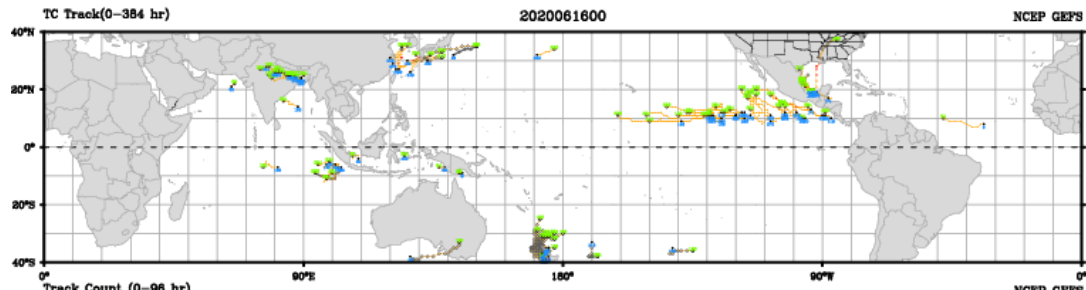


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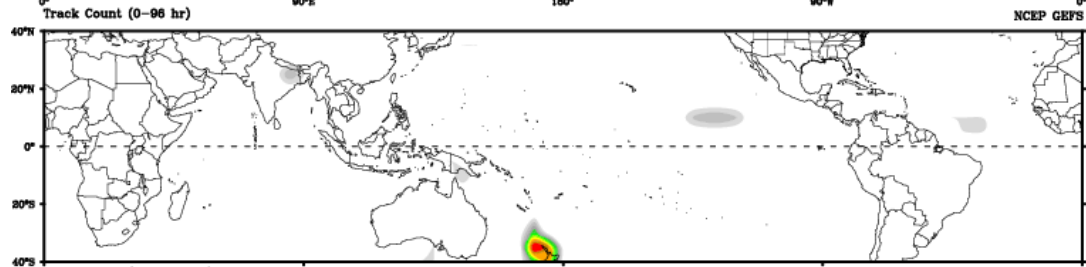
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

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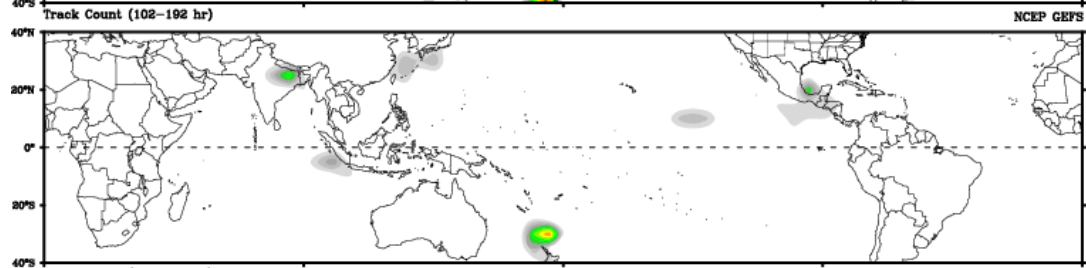
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



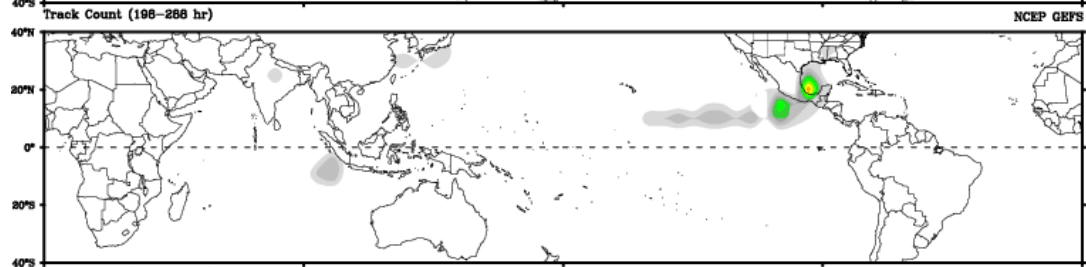
Days 1-4



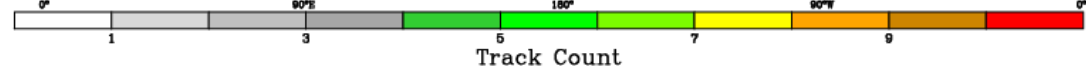
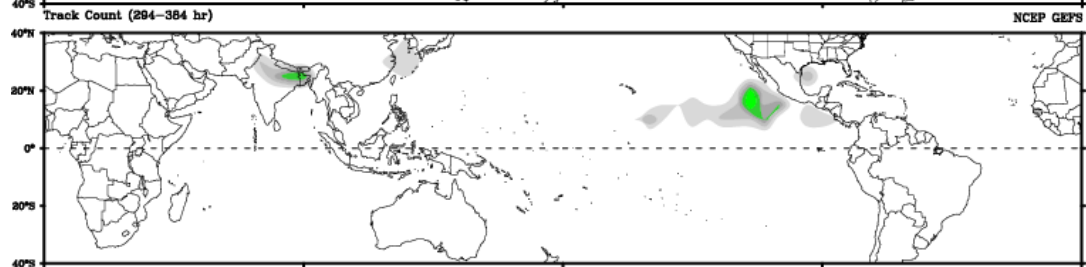
Day 5-8



Day 9-12

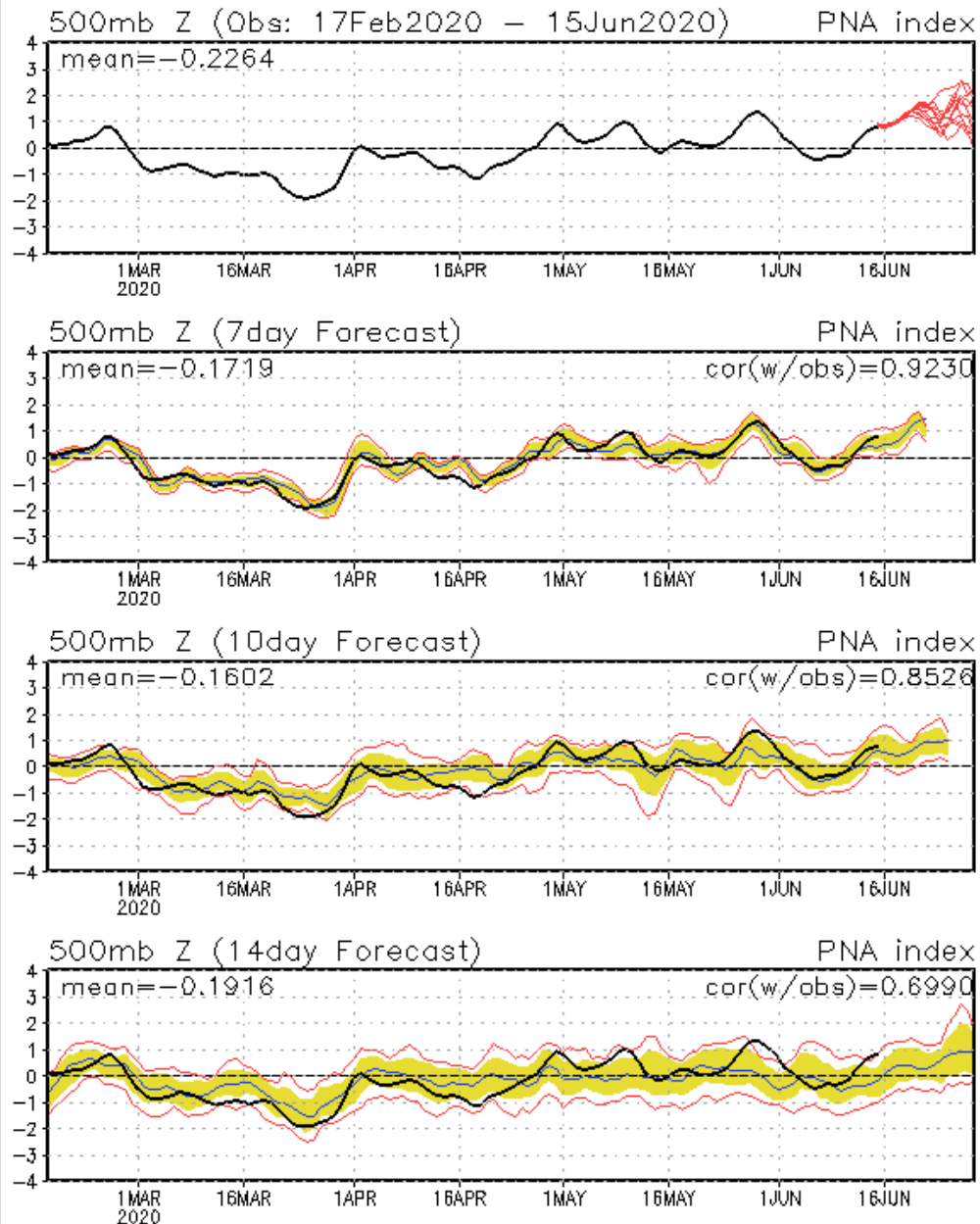


Day 13-15

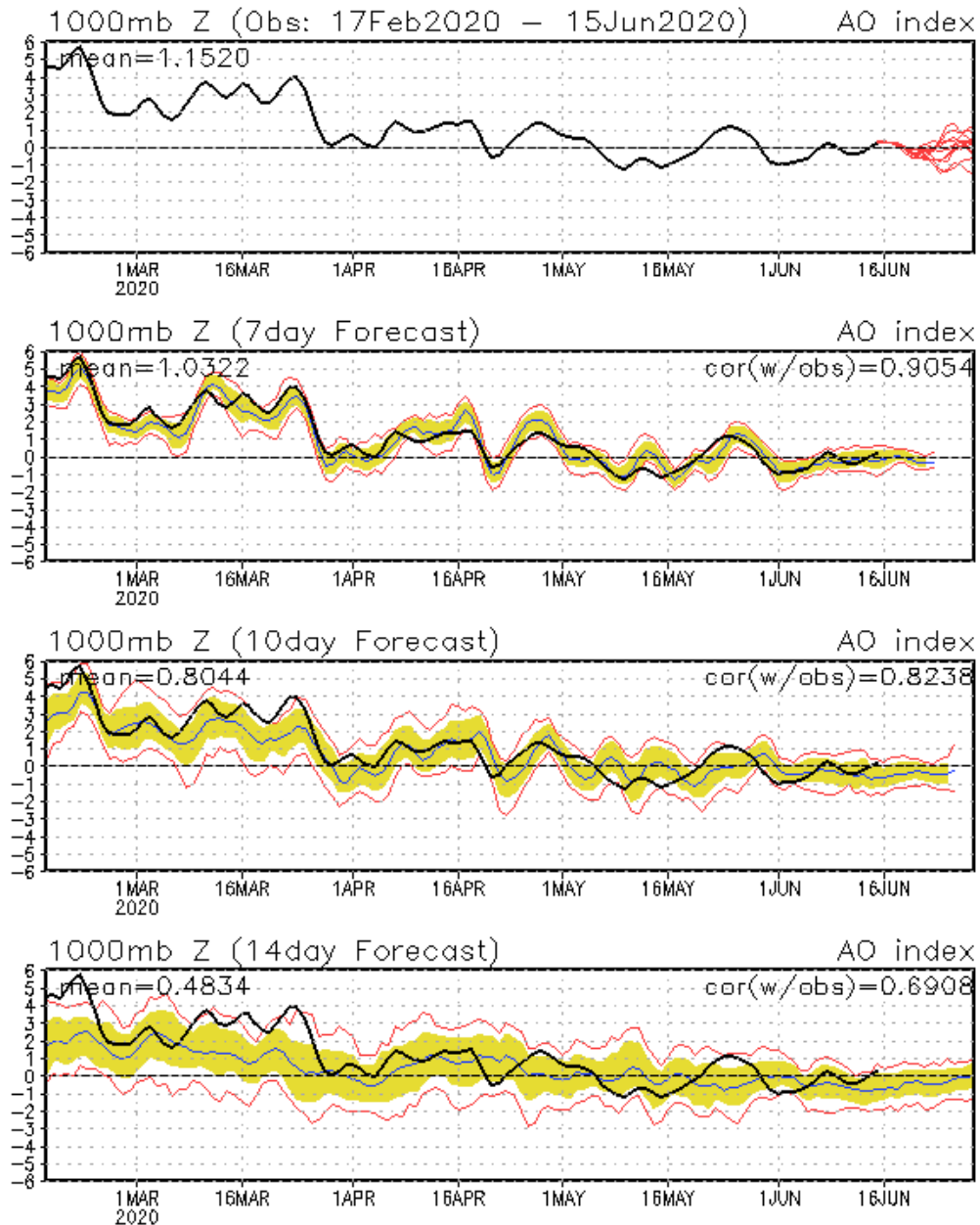


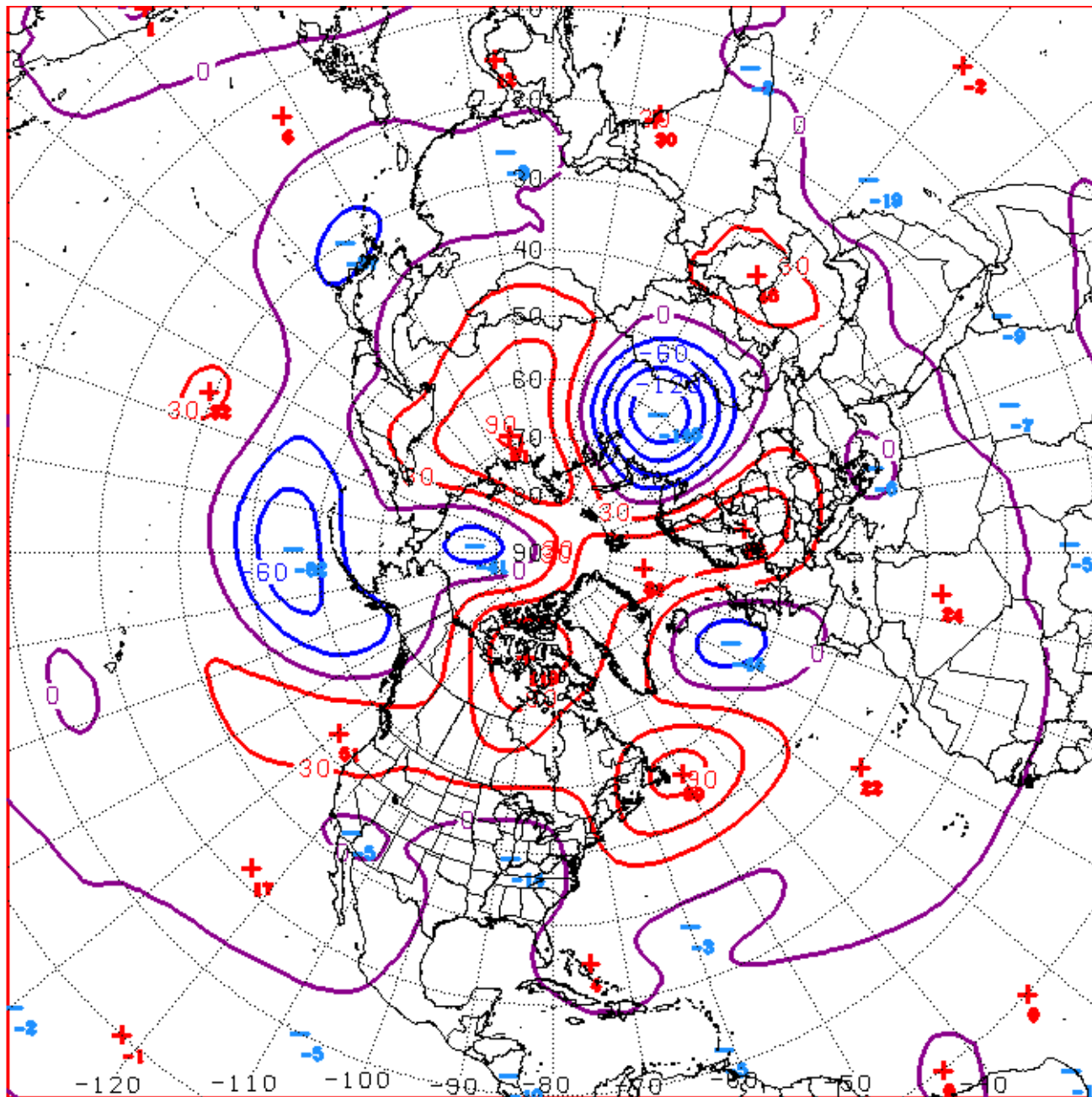
Connections to U.S. Impacts

PNA: Observed & ENSM forecasts



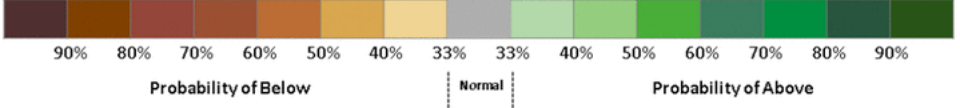
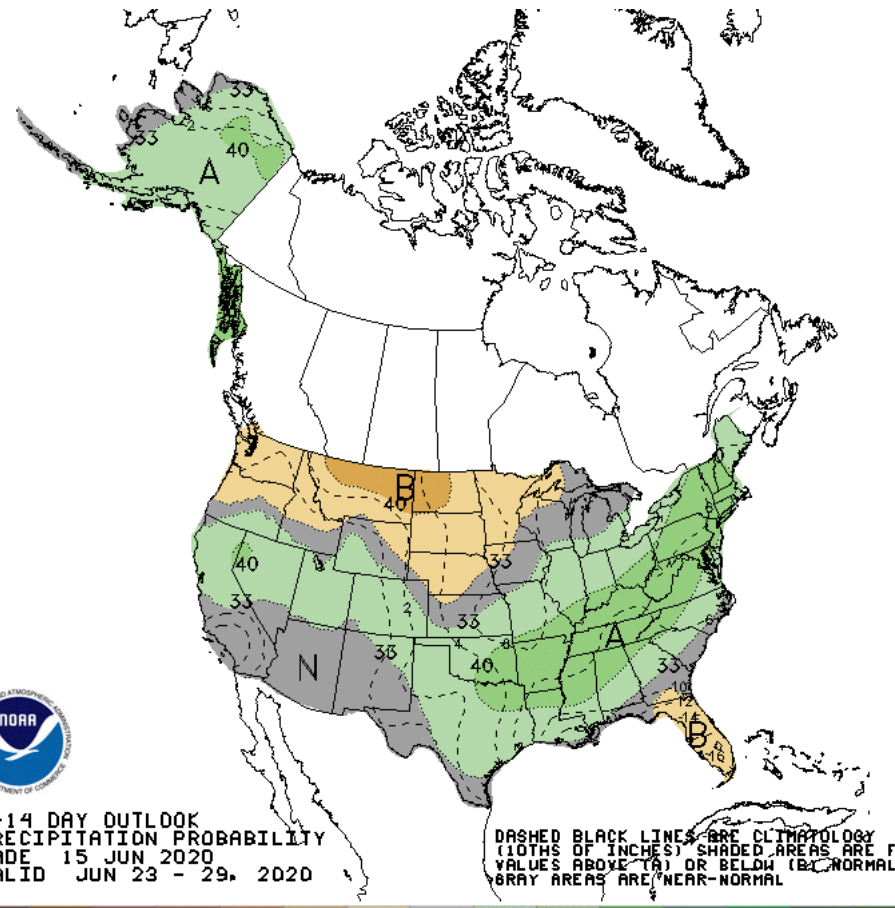
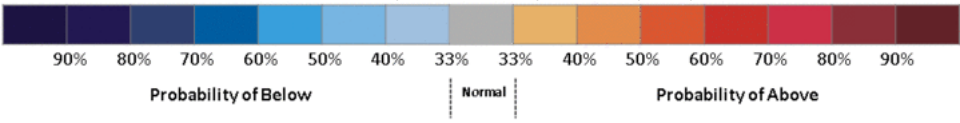
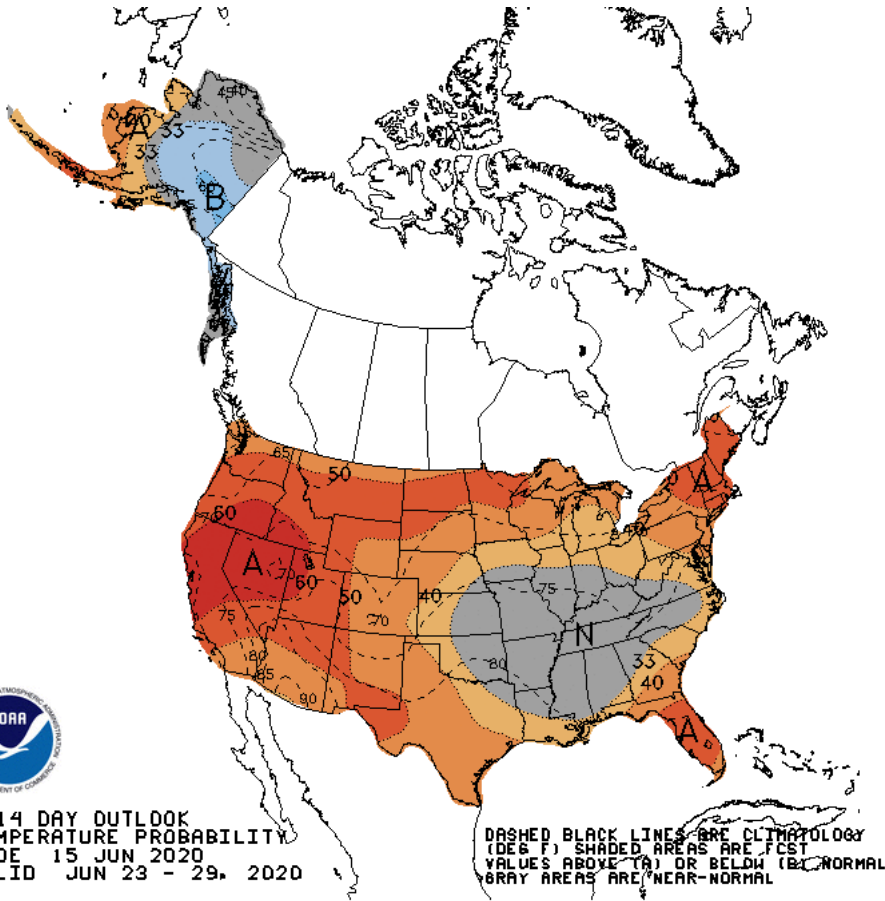
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE JUN 15 2020 1228 UTC CNTD JUN 26 2020

Week 2 – Temperature and Precipitation

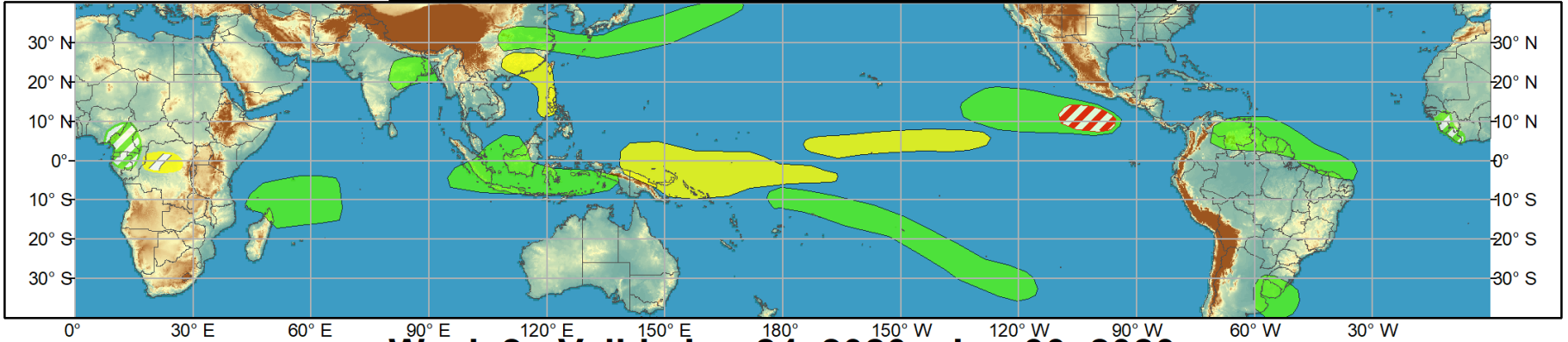




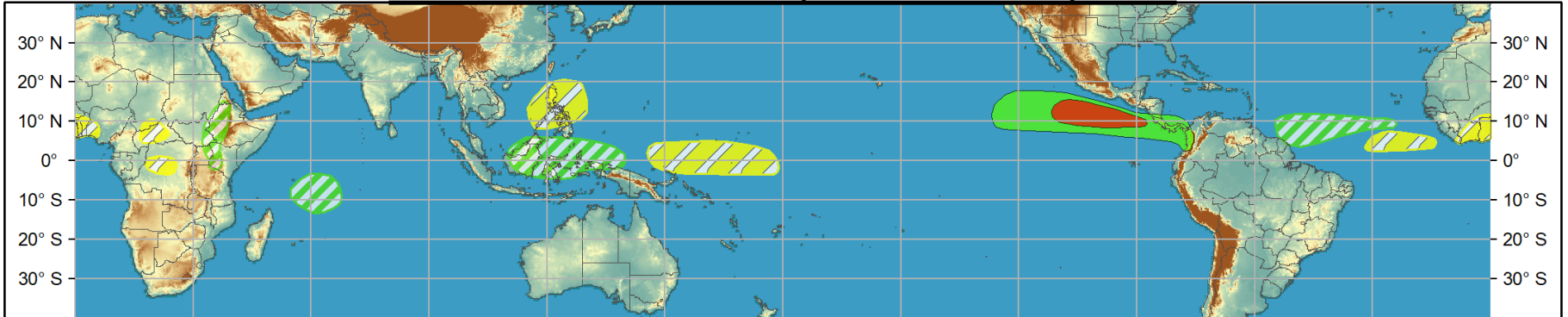
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