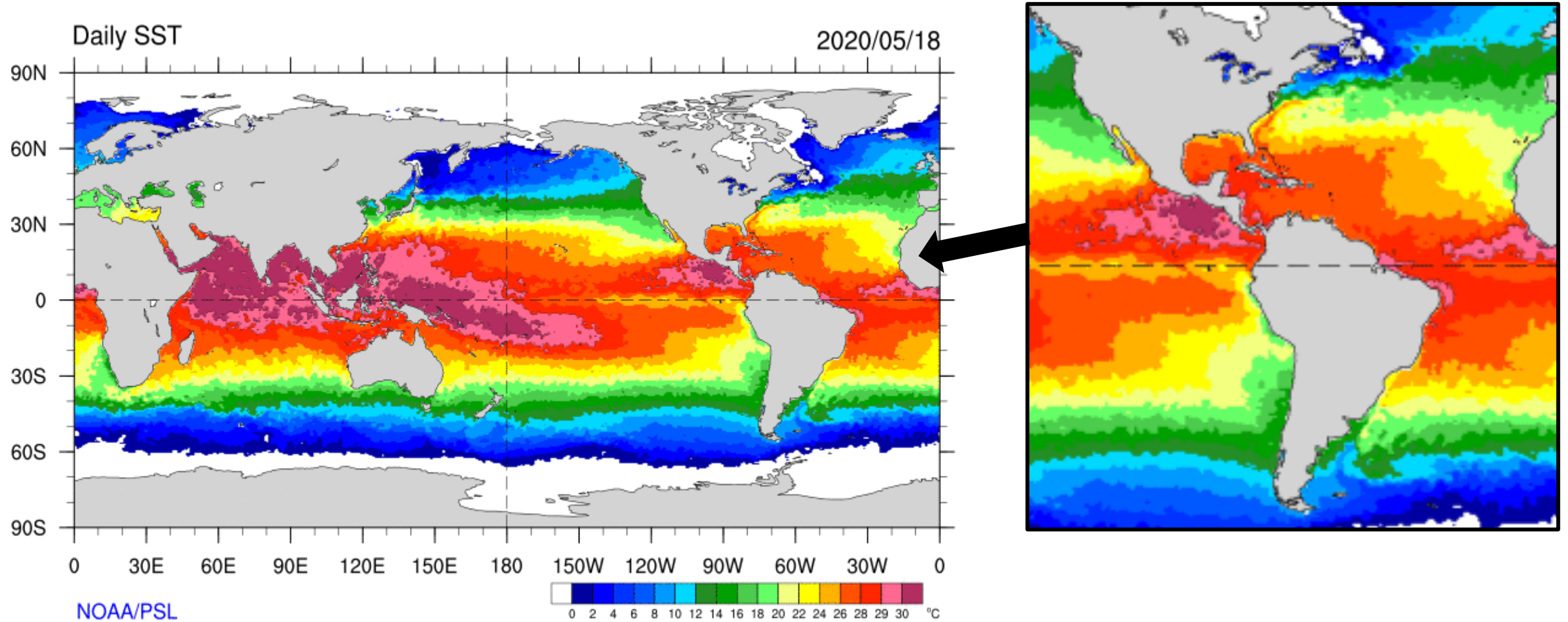




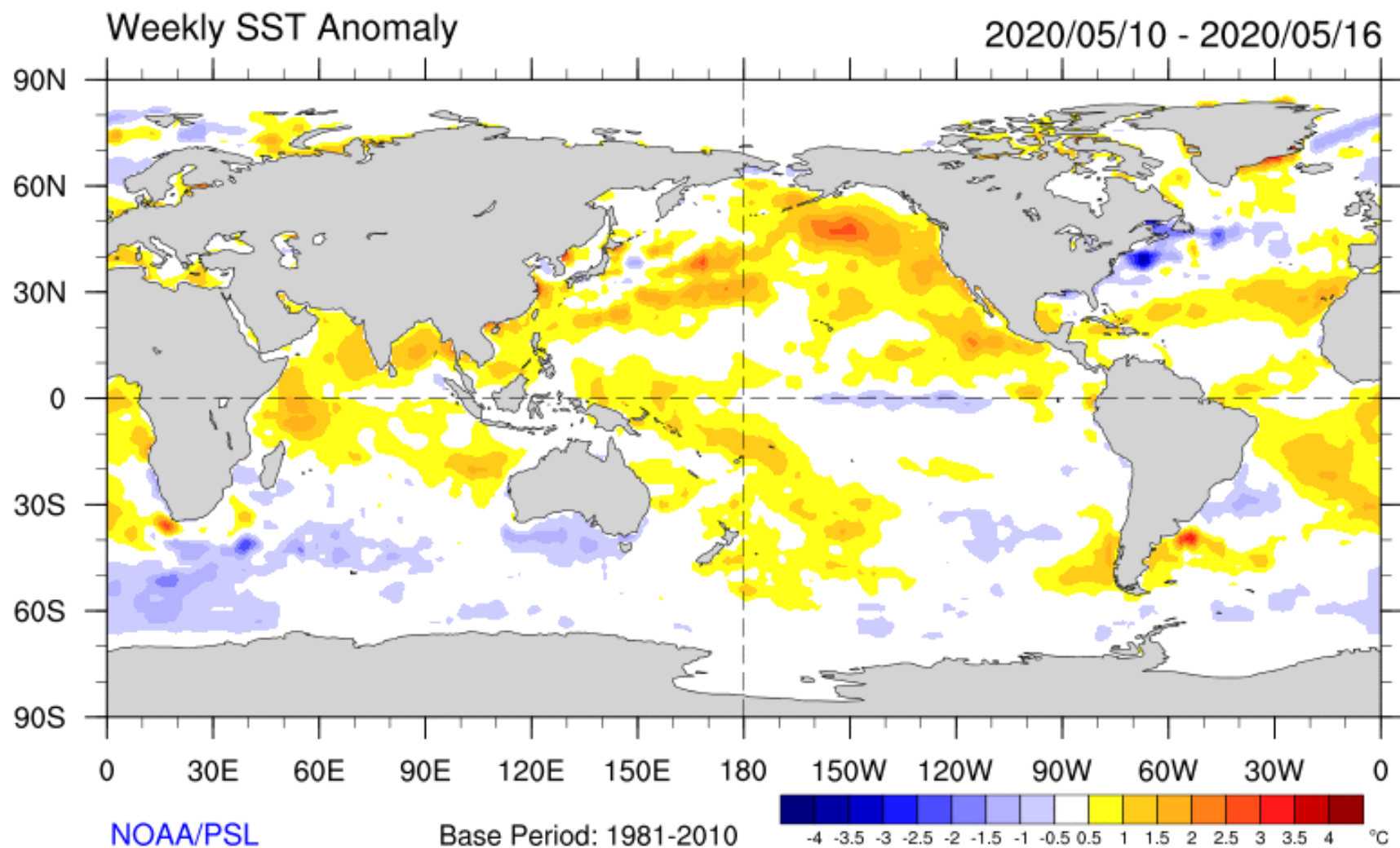
Monthly Regional Focus Group Session

Wednesday 20 May 2020

Current Sea Surface Temperatures

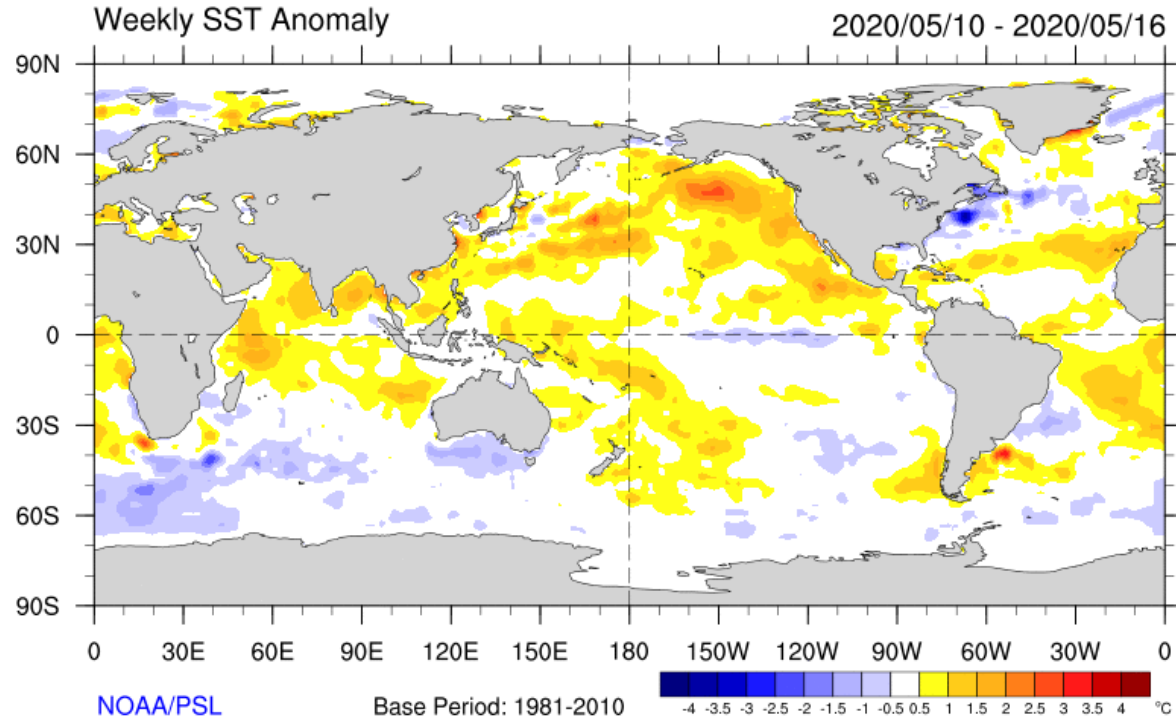


Sea Surface Temperature Anomalies (Last Week)

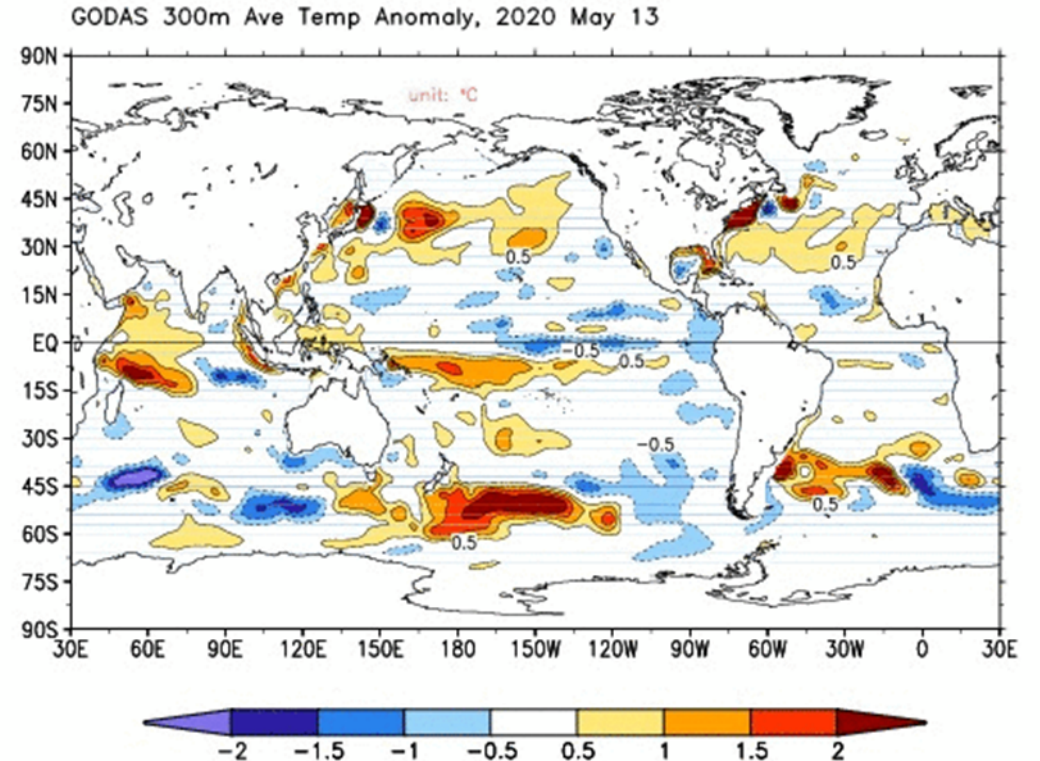


Are the Surface Anomalies Deep?

Sea Surface Temperature Anomaly
10-16 May 2020



Top 300-m Sea Temperature Anomaly
13 May 2020

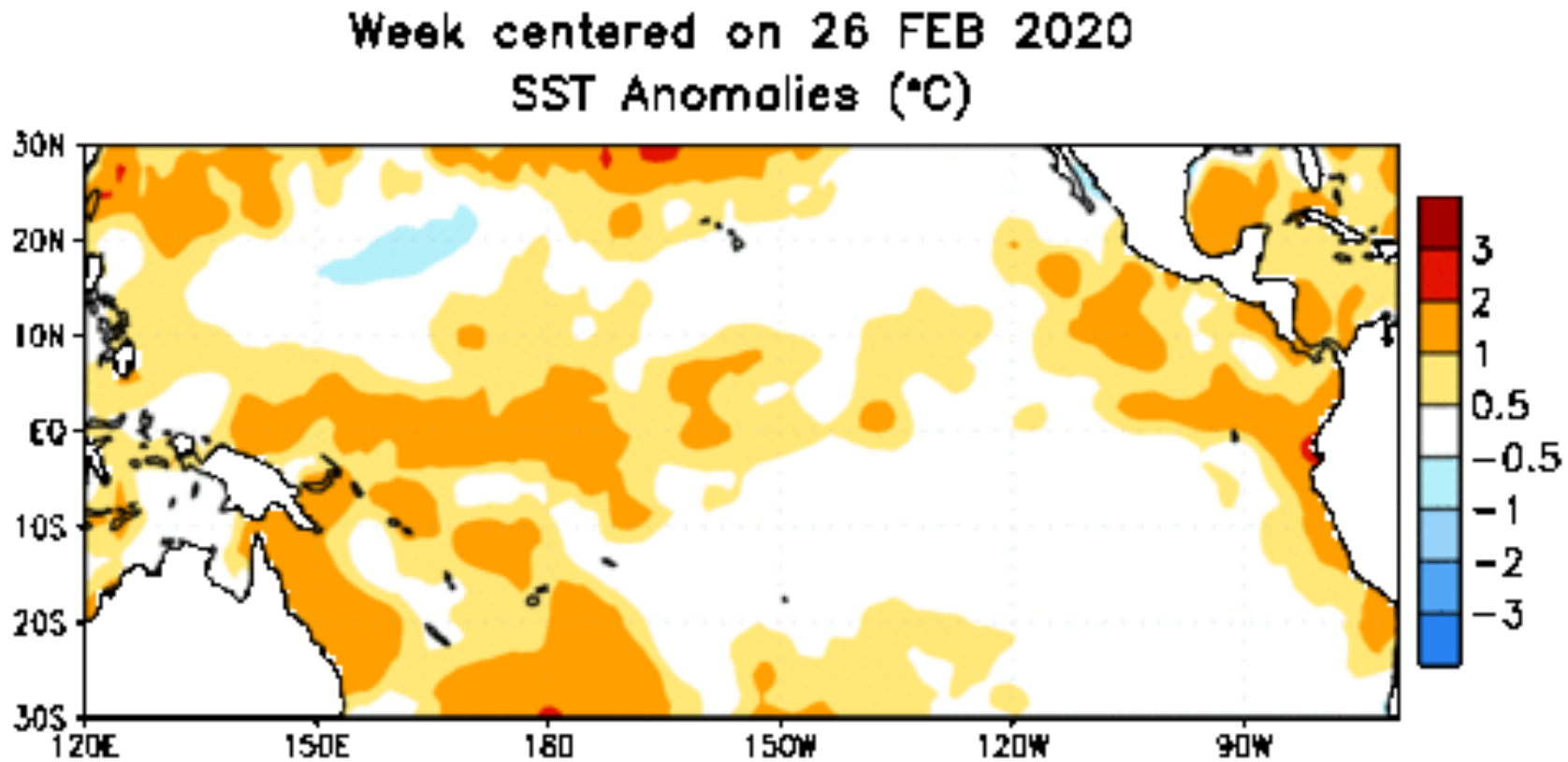


Source: GODAS, CPC

ENSO

Neutral

- Neutral conditions are present.
- Equatorial SSTs are near-to-above average across the Pacific.
- The tropical atmospheric circulation is generally consistent.

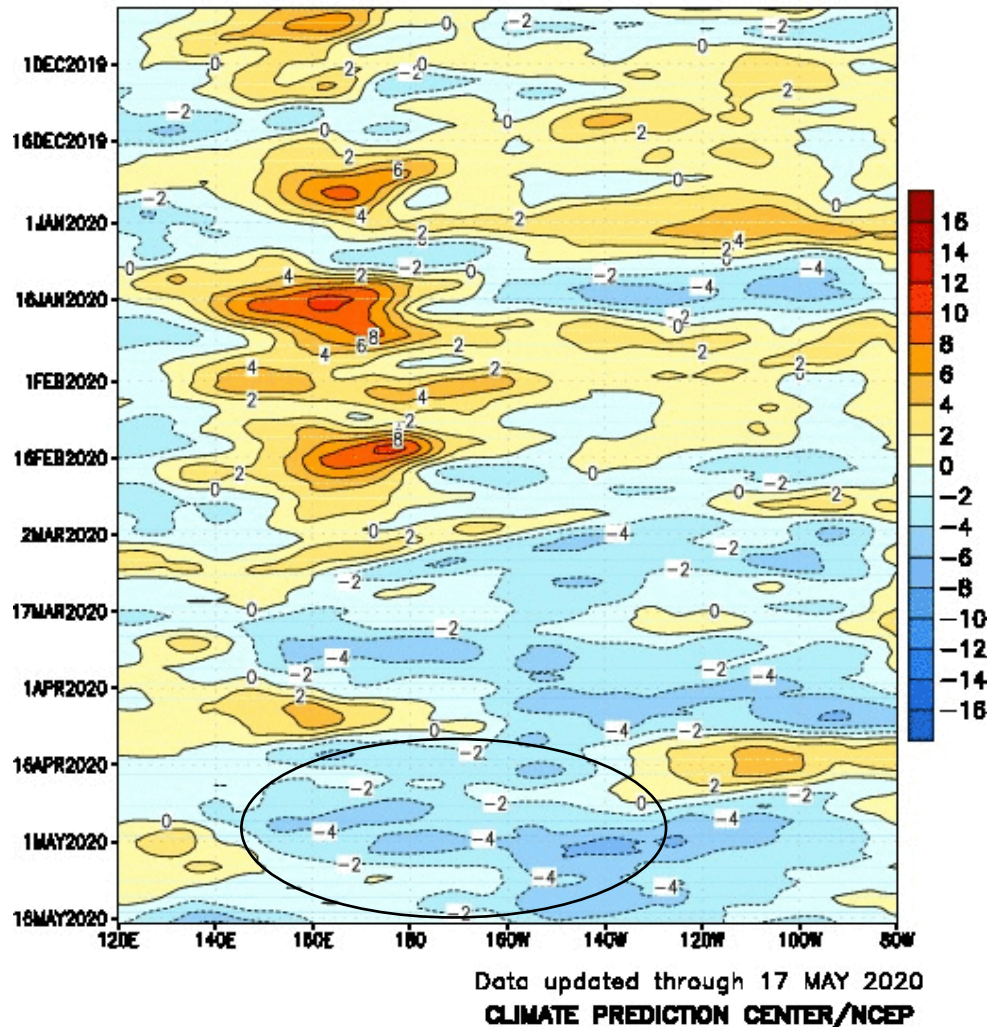


Source: CPC

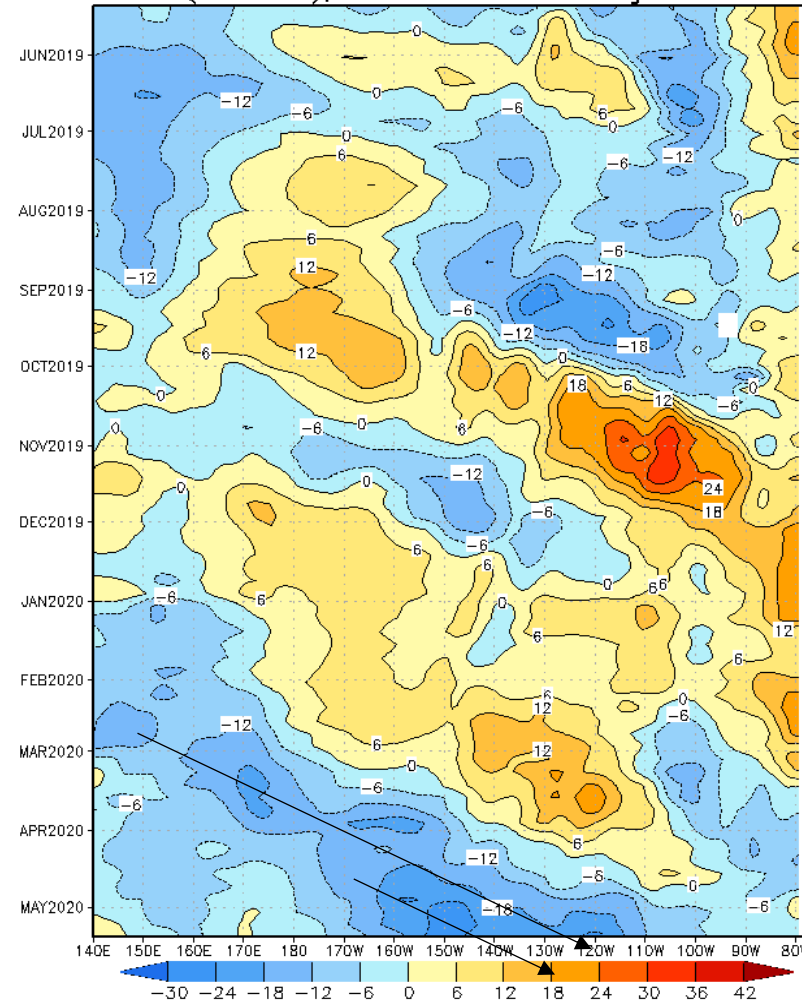
ENSO

850 hPa Anomalous Winds and Kelvin Wave Propagation

CDAS 850-hPa U Anoms. (5N–5S)



Depth 20°C Pentad Anomaly, ending May 15 2020
(2°S–2°N), 12-Pentads Running Mean

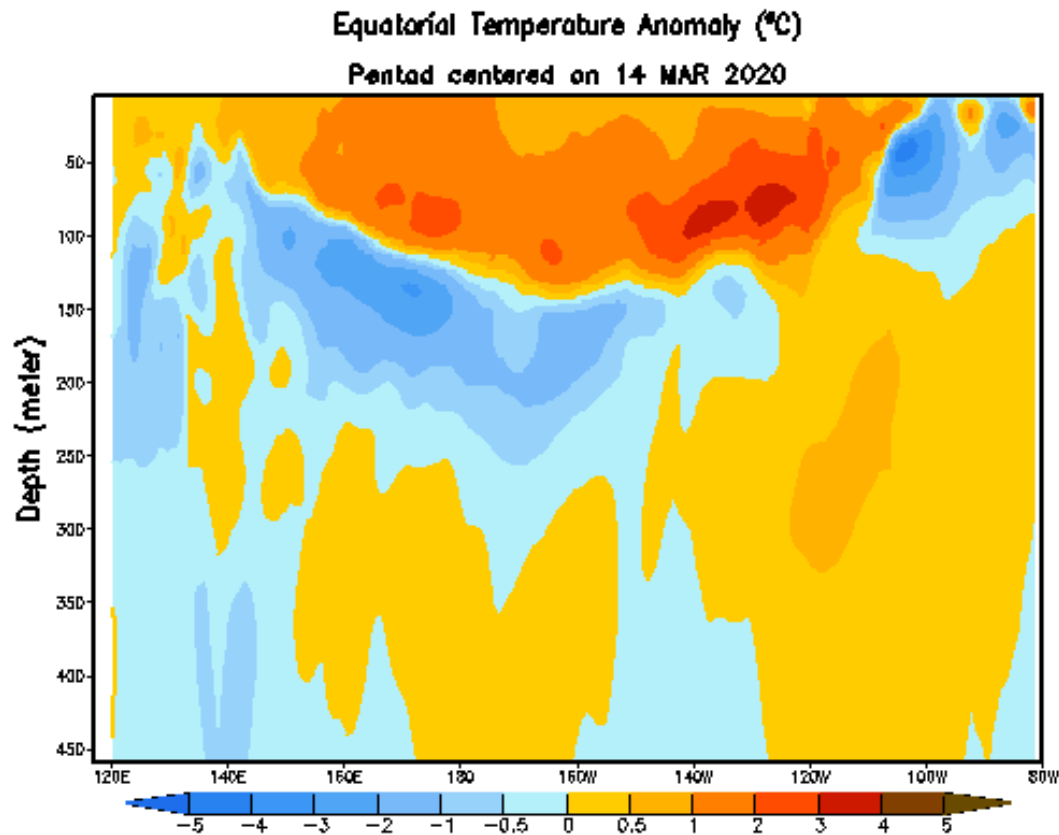


Upwelling (Cool)
Kelvin Wave arriving
in South America by
mid June.

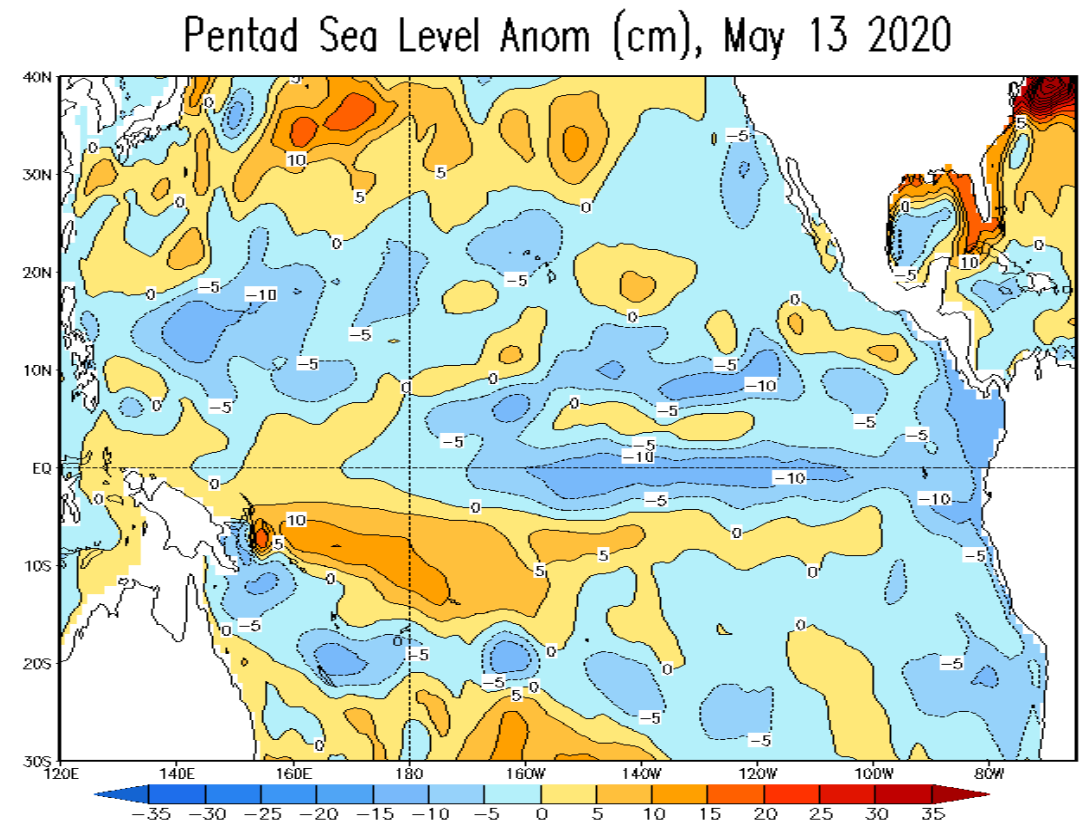
Reinforcement of
the cooling of the
Eastern Pacific by
mid-June into July.

ENSO

Anomalous Temperature Cross Section and Sea Level Anomalies



Source: CPC



Source: CPC

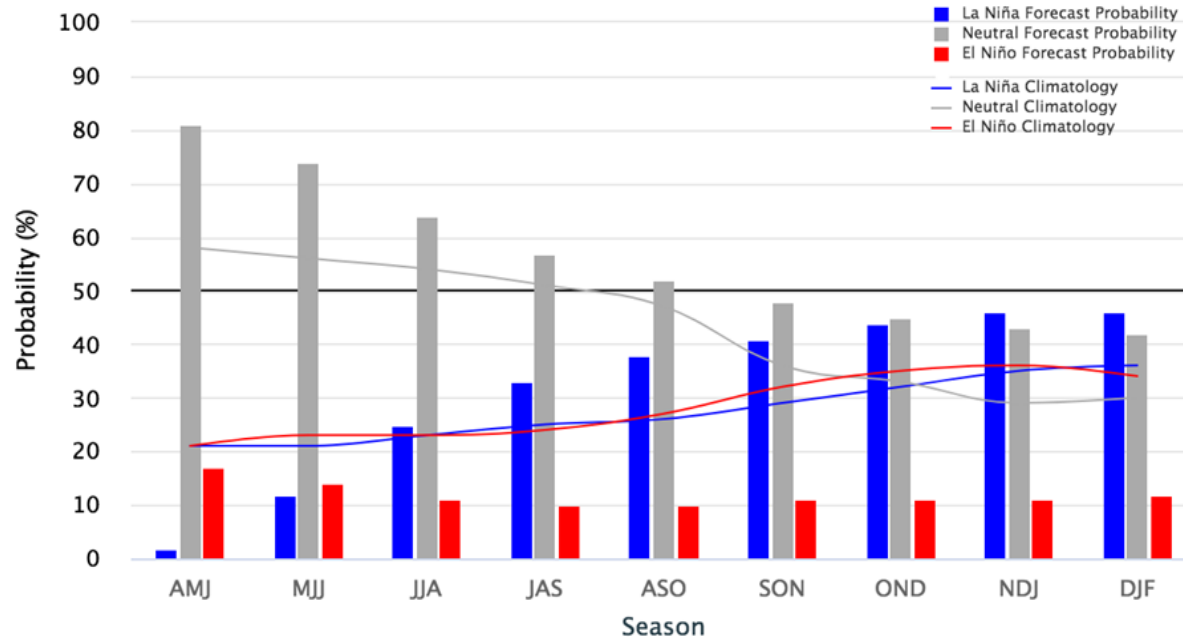
ENSO Outlook

There is a ~65% chance of ENSO-neutral during Northern Hemisphere summer 2020, with chances decreasing through the autumn (to 45-50%).*

CPC/IRI Probabilistic Forecast

Early-May 2020 CPC/IRI Official Probabilistic ENSO Forecasts

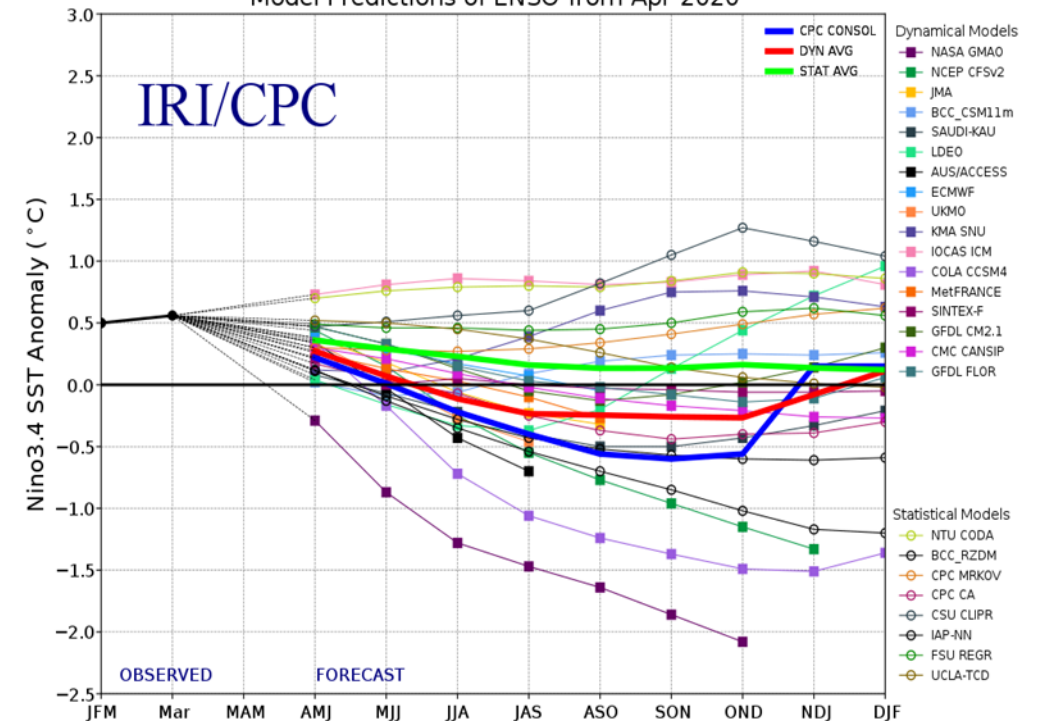
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5°C to 0.5°C



Source: CPC

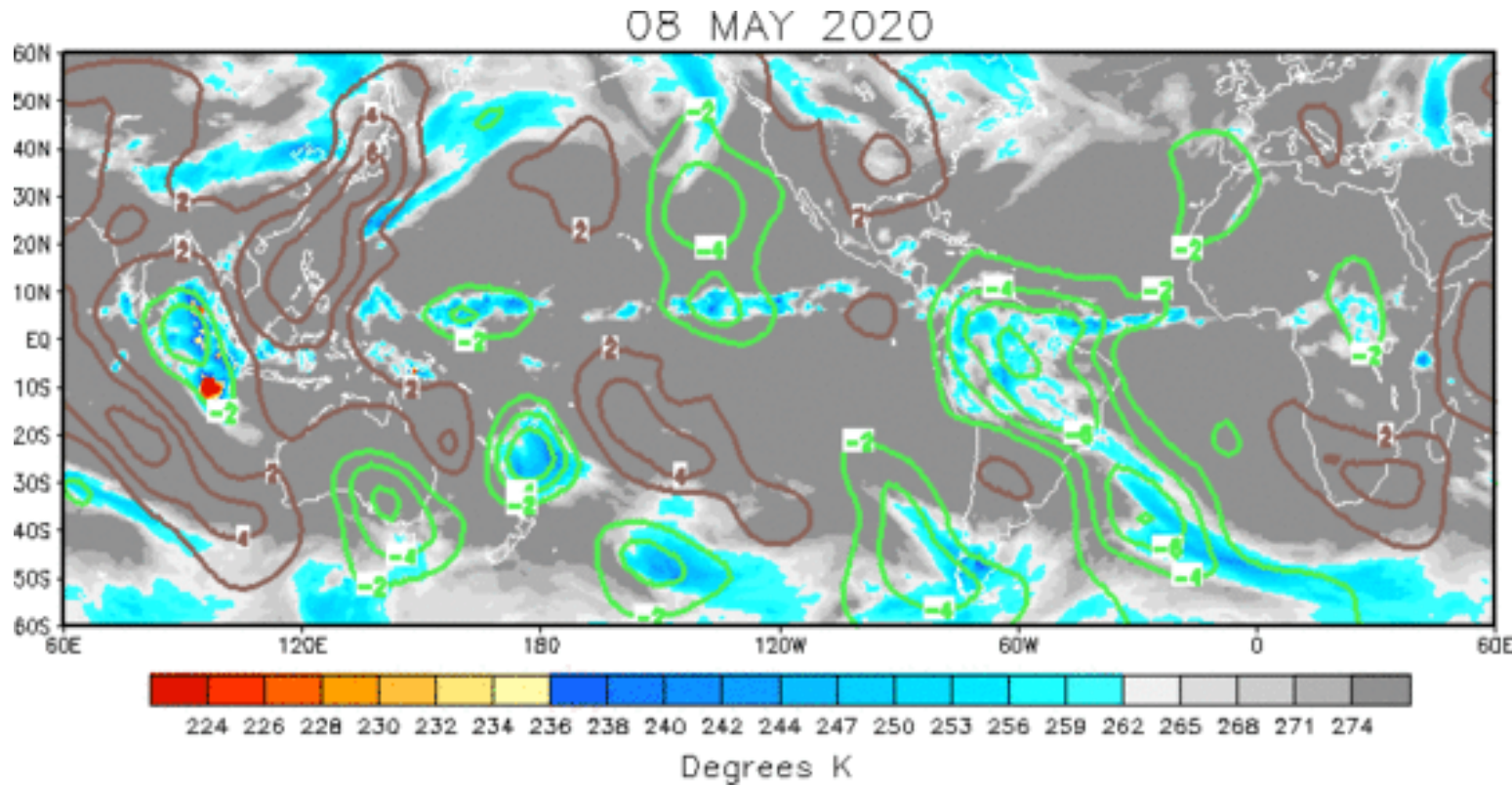
IRI/CPC Dynamic Models

Model Predictions of ENSO from Apr 2020



Madden-Julian Oscillation (MJO)

200 hPa Velocity Potential (CHI) and OLR Daily Anomalies



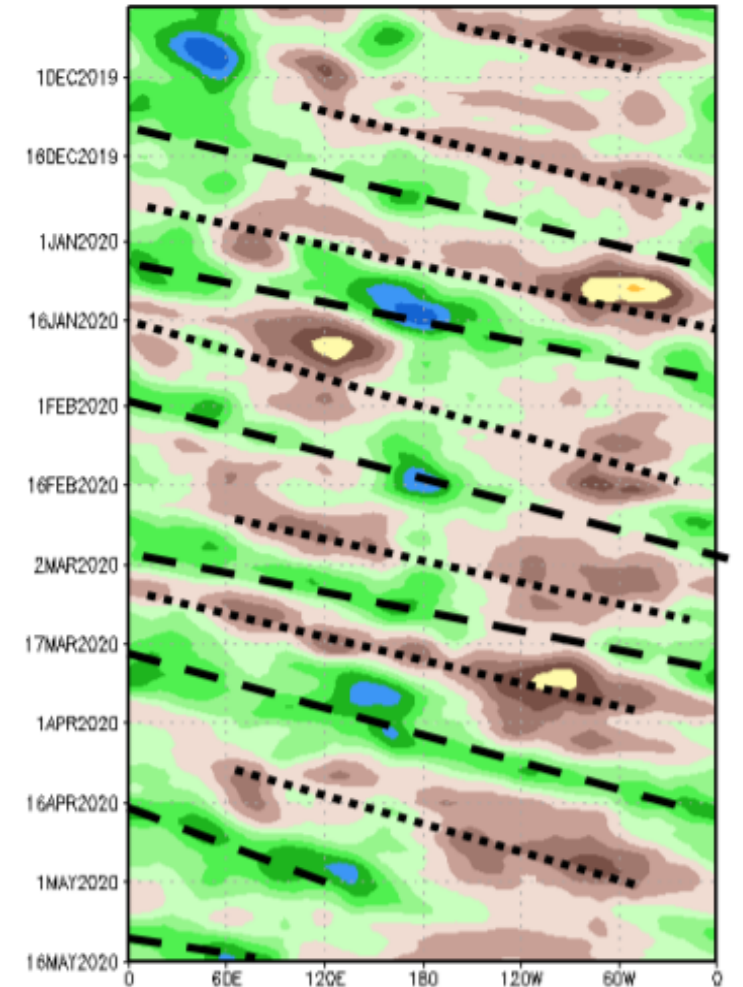
Favors rain storms



Favors limited rainfall

Source: CPC

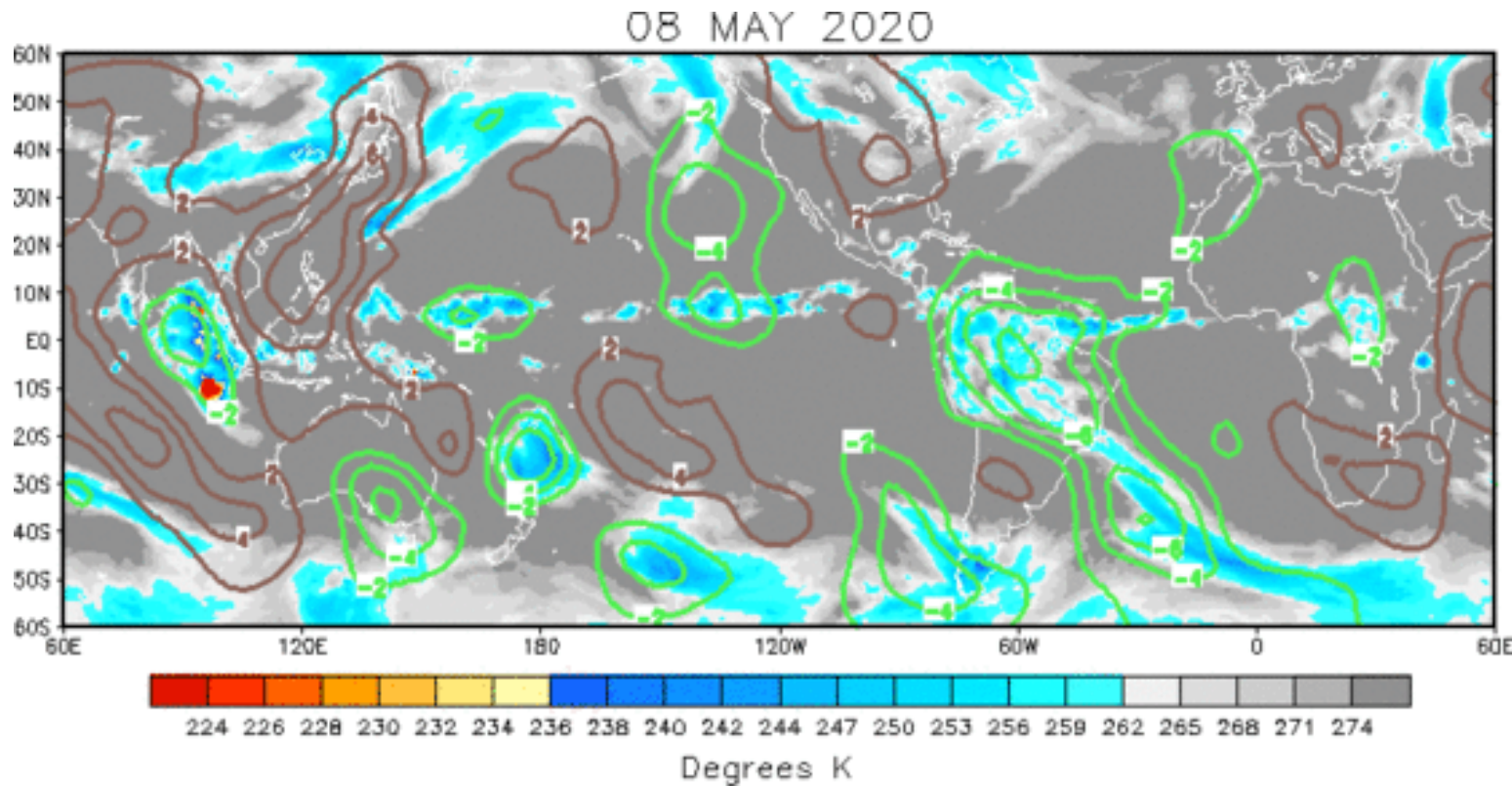
200-hPa Velocity Potential Anomaly: 5N-5S
5-day Running Mean



Source: CPC

Madden-Julian Oscillation (MJO)

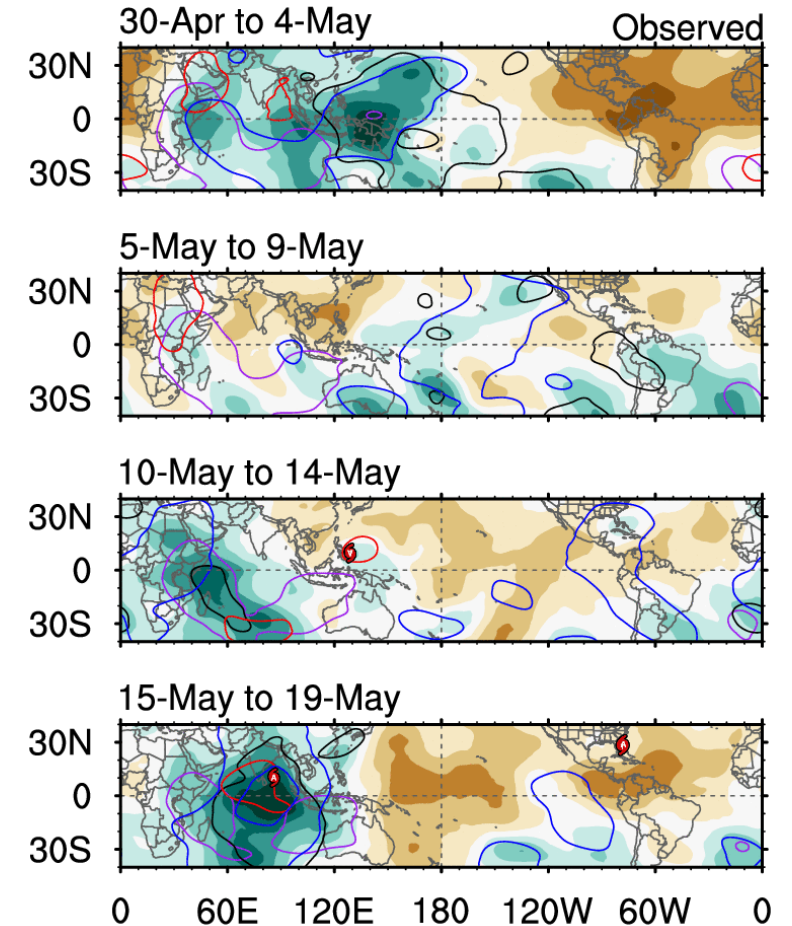
200 hPa Velocity Potential (CHI) and OLR Daily Anomalies



Favors rain storms



Favors limited rainfall

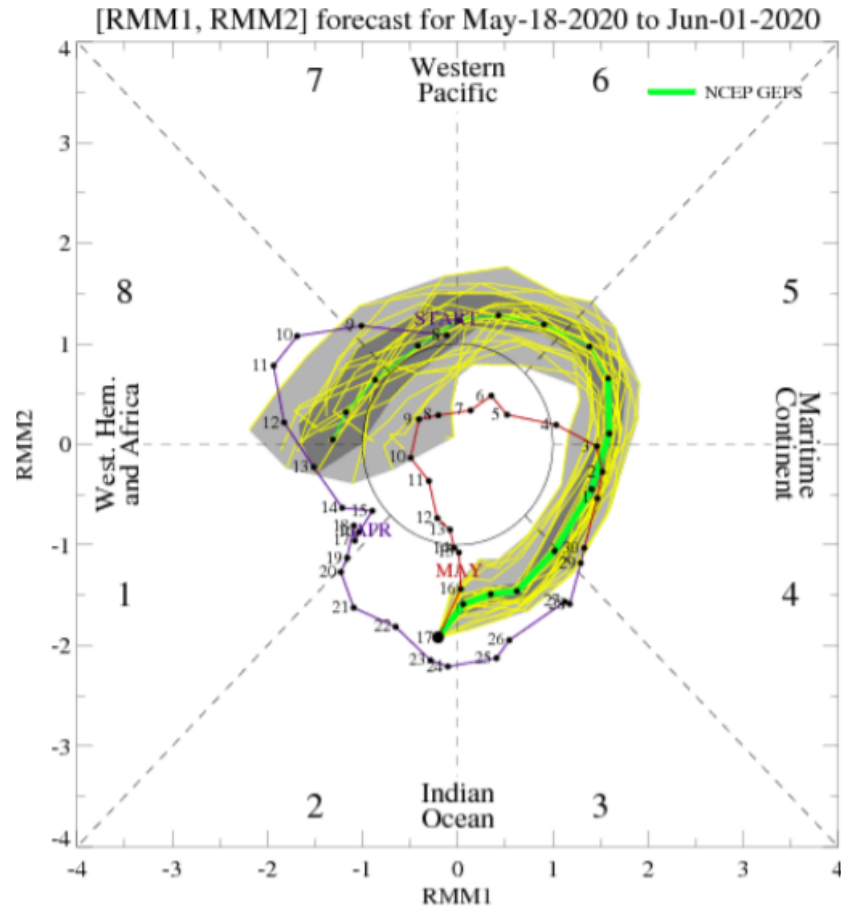


5-day CHI200 with CFS forecasts

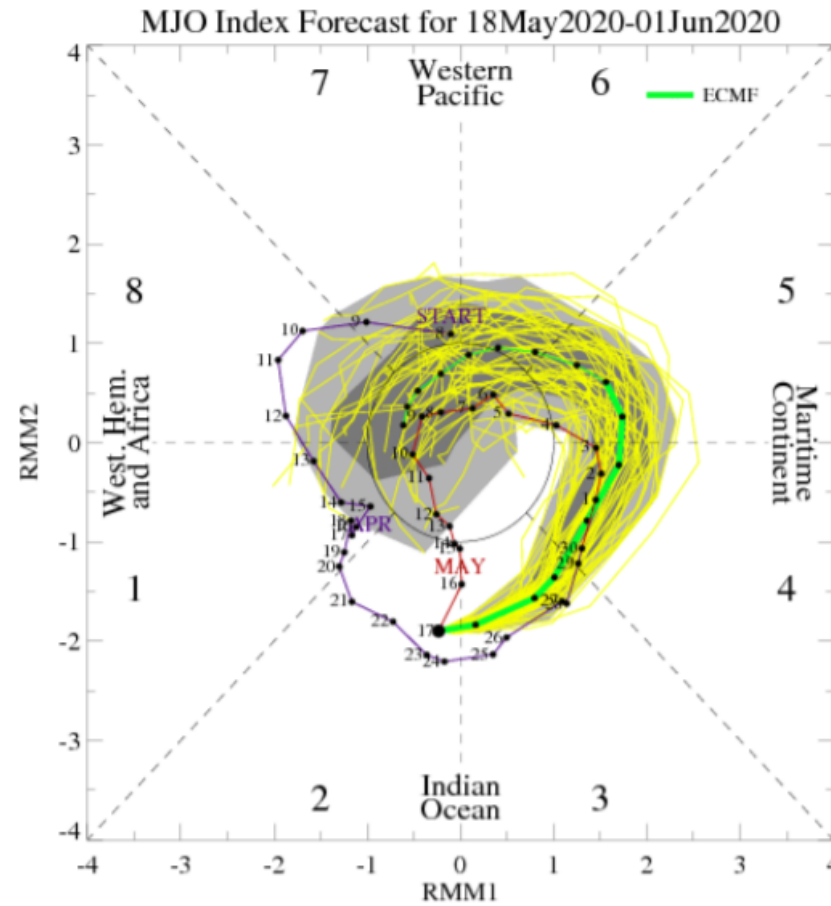
Contours at -2, -6 $\times 10^6$ m² s⁻¹
Carl Schreck
carl_schreck@ncsu.edu

MJO Forecasts

MJO Index: Forecast Evolution



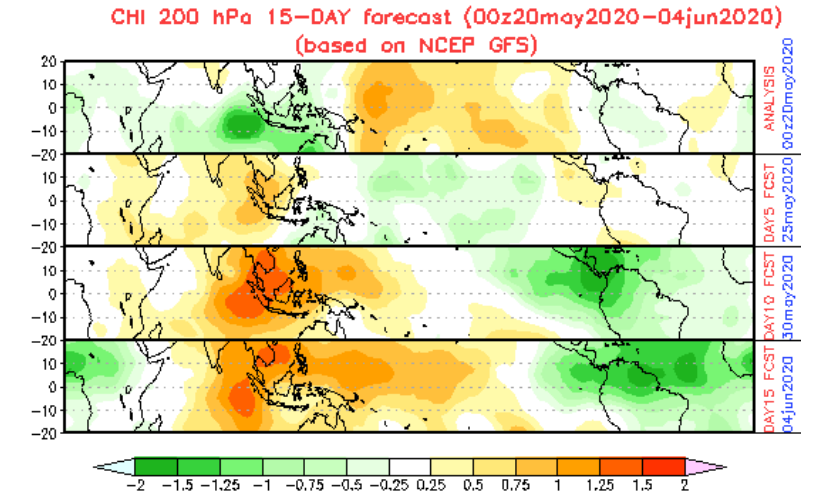
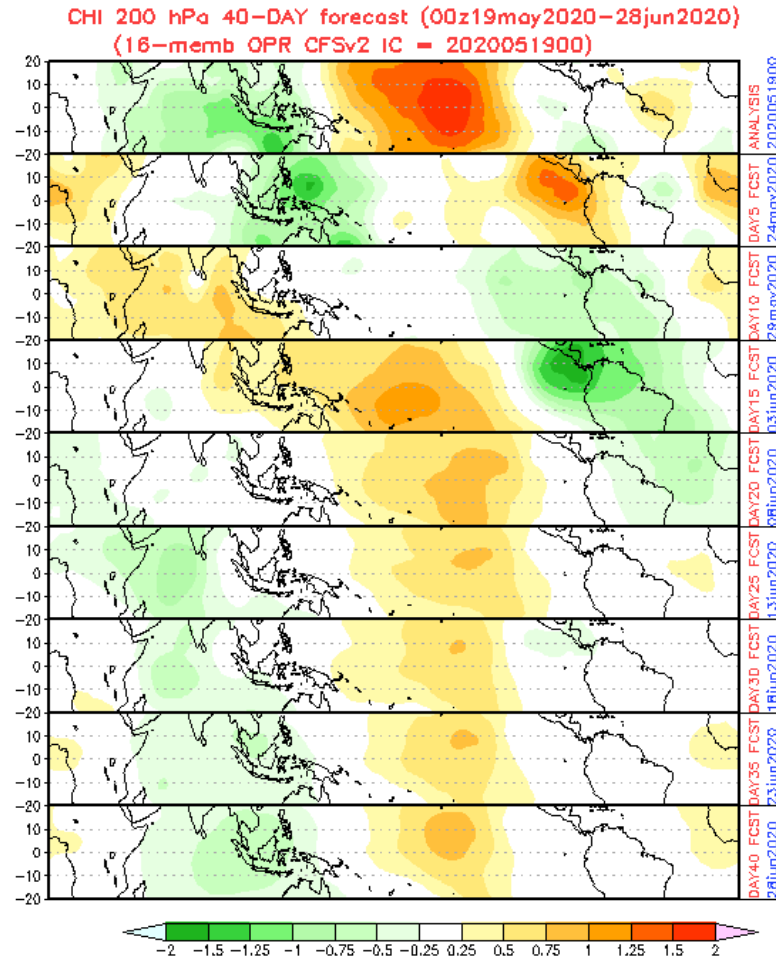
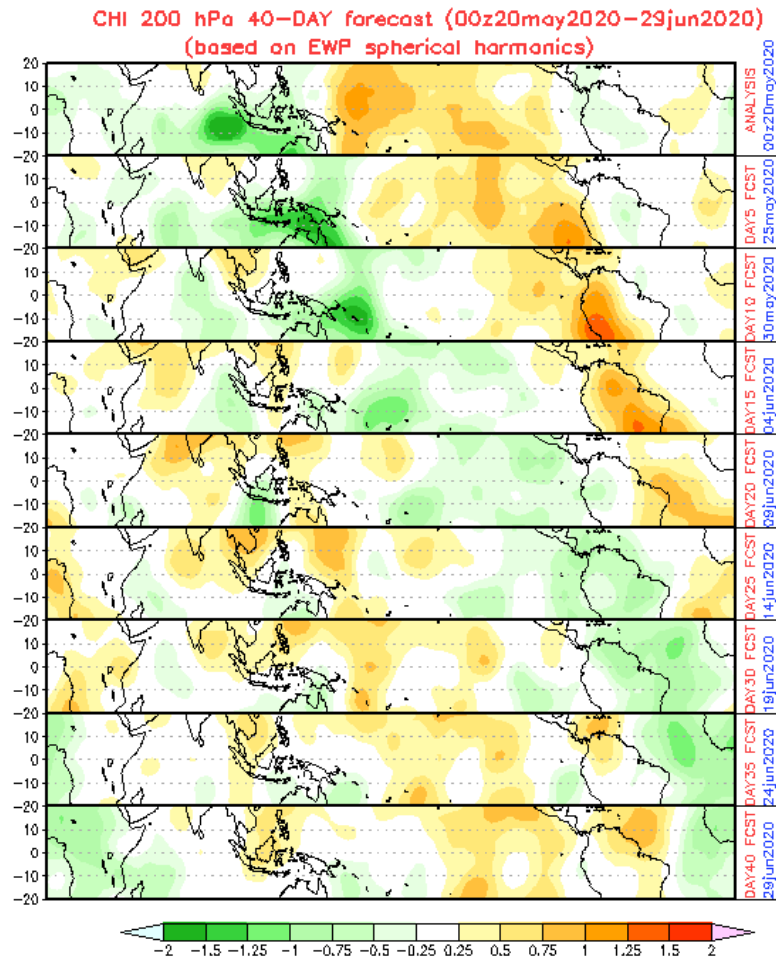
GEFS Forecast



ECMWF Forecast

Agreement on MJO organizing, and next upper divergent phase arriving by the last week of May / first week of June.

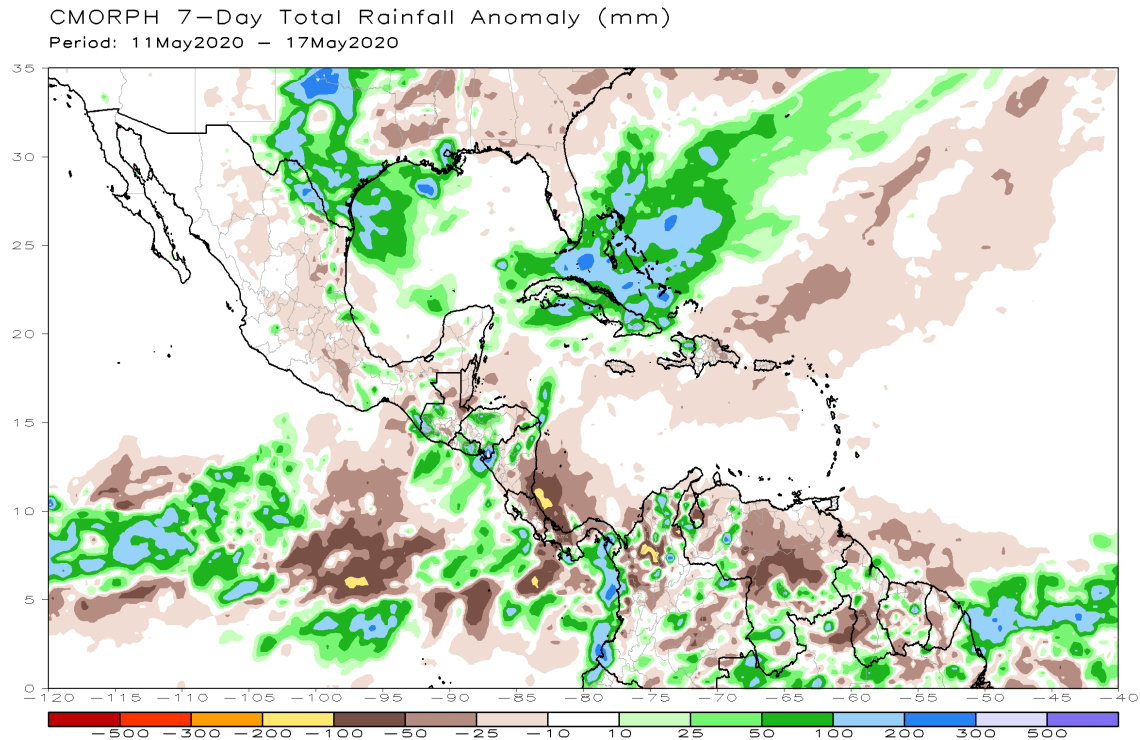
MJO Forecasts



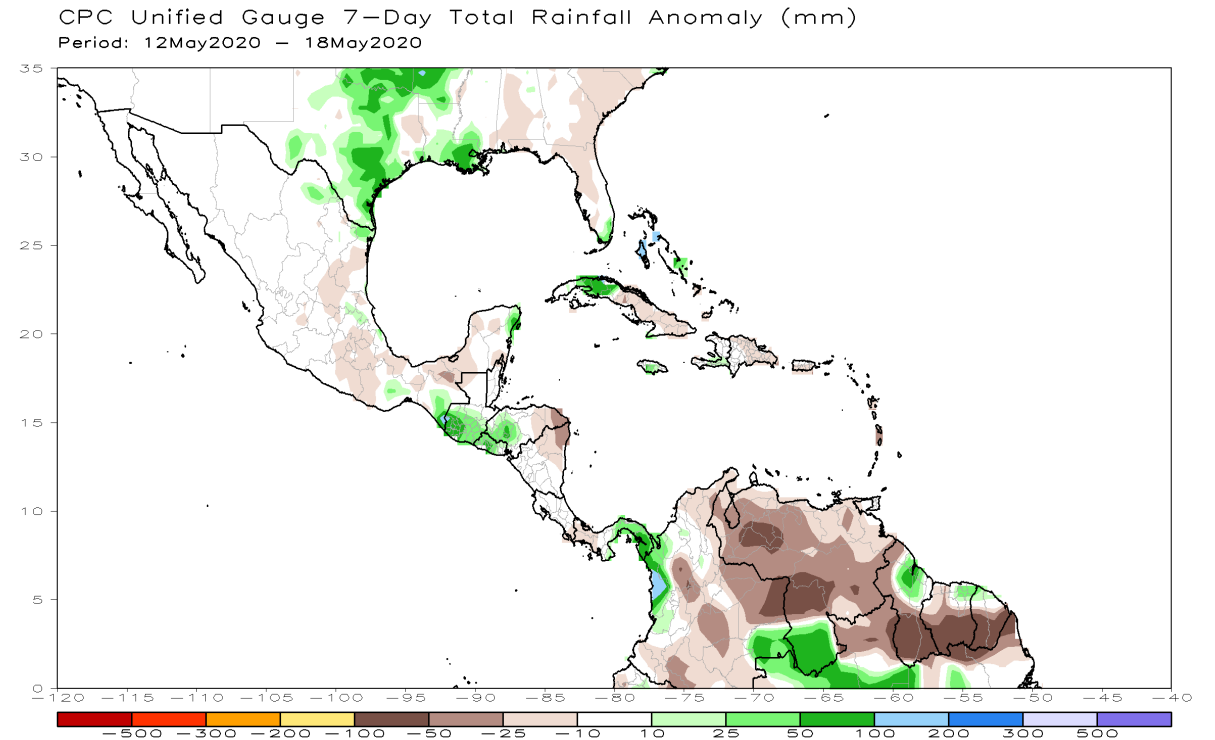
Agreement on MJO
organizing, CFS also
suggests upper
divergent phase
arriving by the end
of May/first week of
June.

OBSERVED: Last Week's Rainfall Anomalies

CMORPH



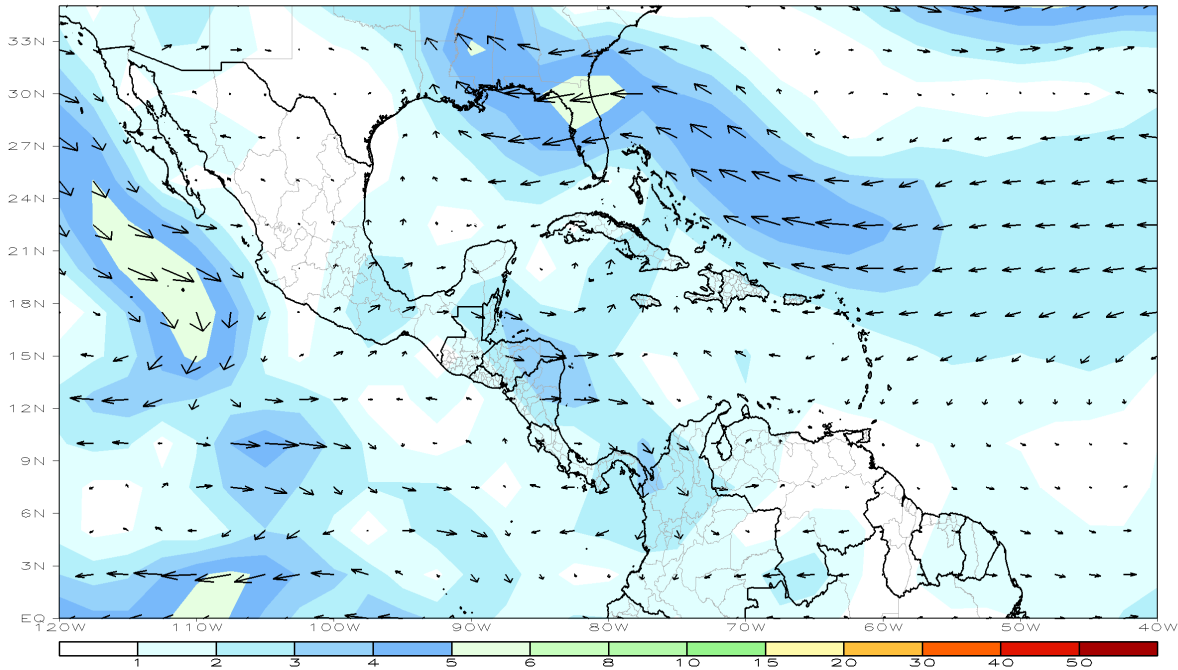
CPC Unified Analysis



OBSERVED: Last Week's Wind Anomalies

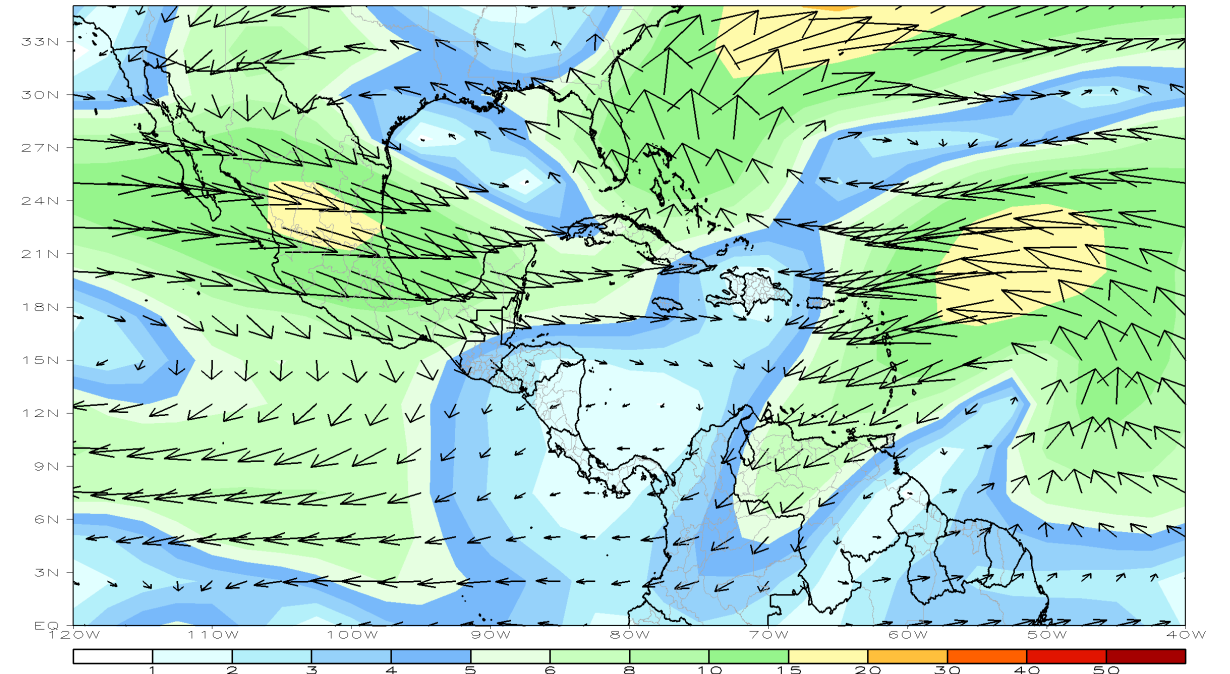
850 hPa

CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 11May2020 - 17May2020



200 hPa

CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 11May2020 - 17May2020

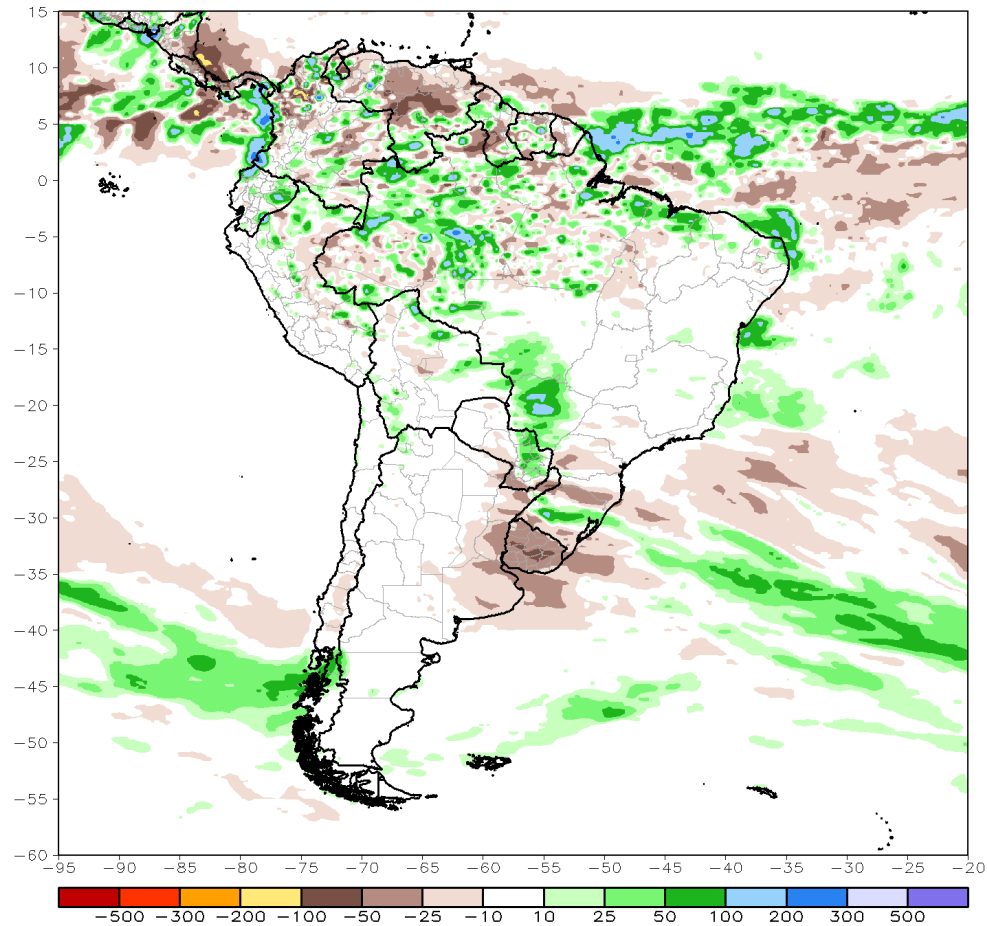


OBSERVED: Last Week's Rainfall Anomalies

CMORPH

CMORPH 7-Day Total Rainfall Anomaly (mm)

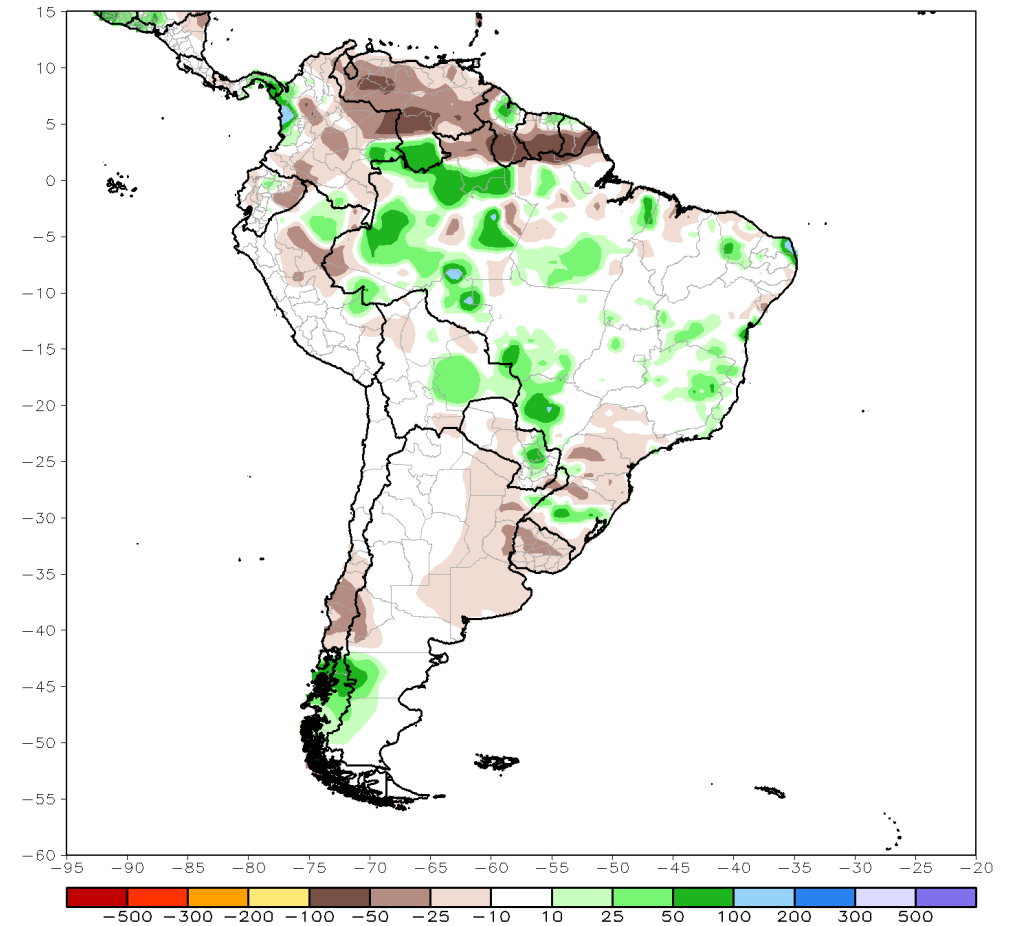
Period: 11May2020 - 17May2020



CPC Unified Analysis

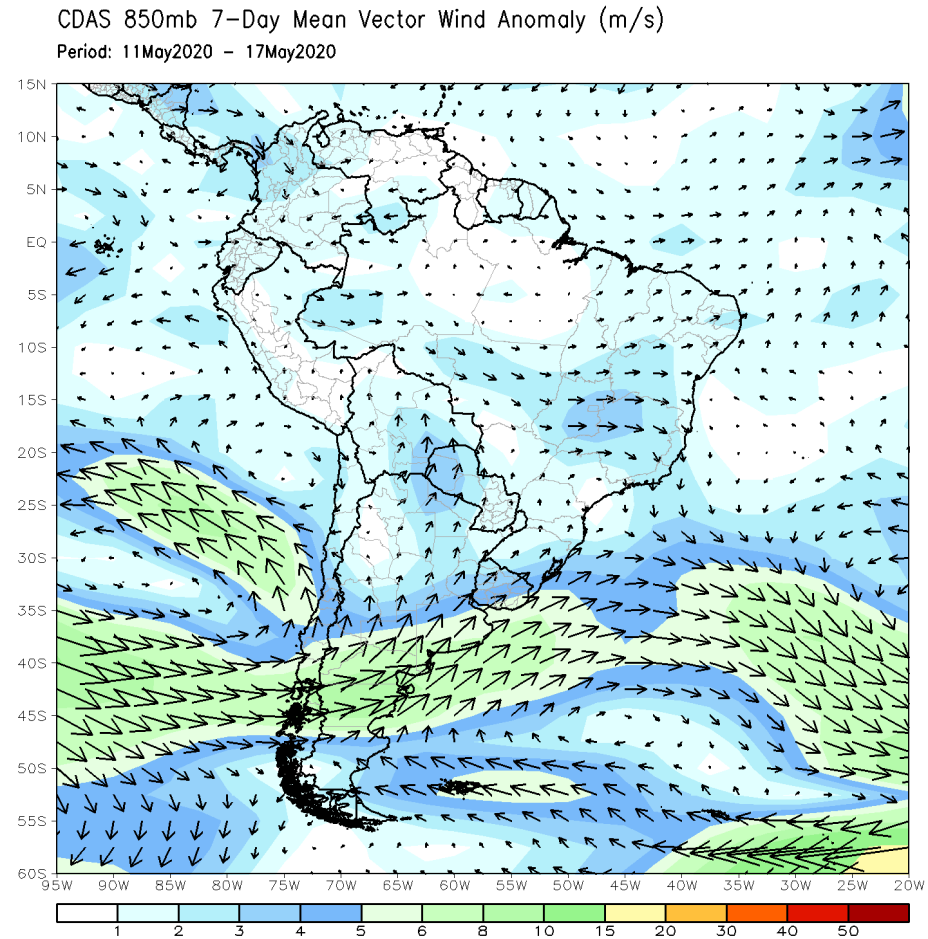
CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)

Period: 12May2020 - 18May2020



OBSERVED: Last Week's Wind Anomalies

850 hPa



200 hPa

