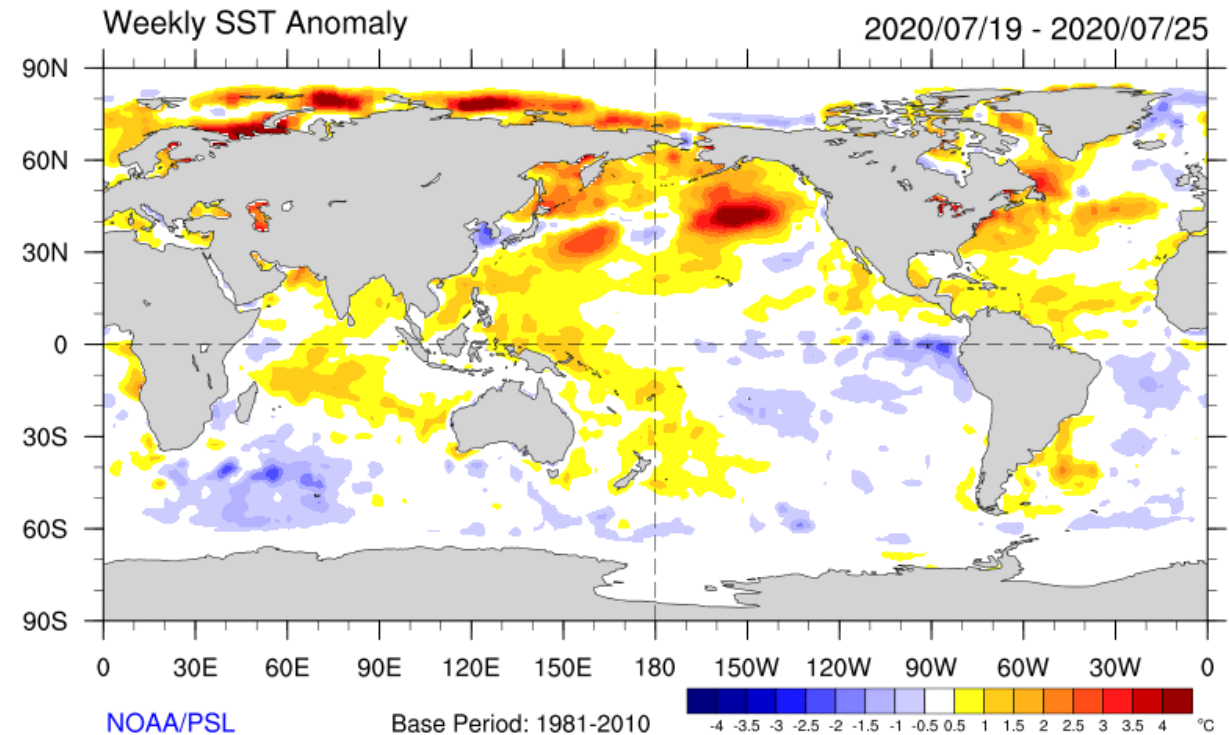
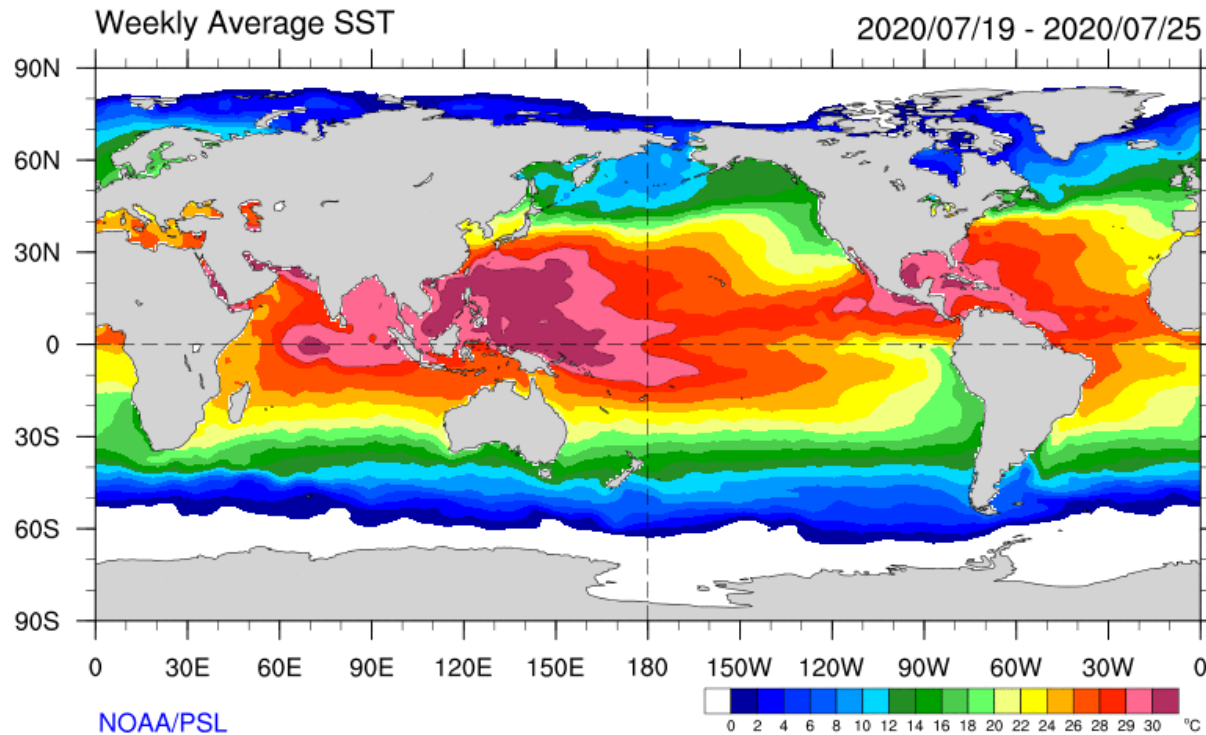




Monthly Regional Focus Group Session

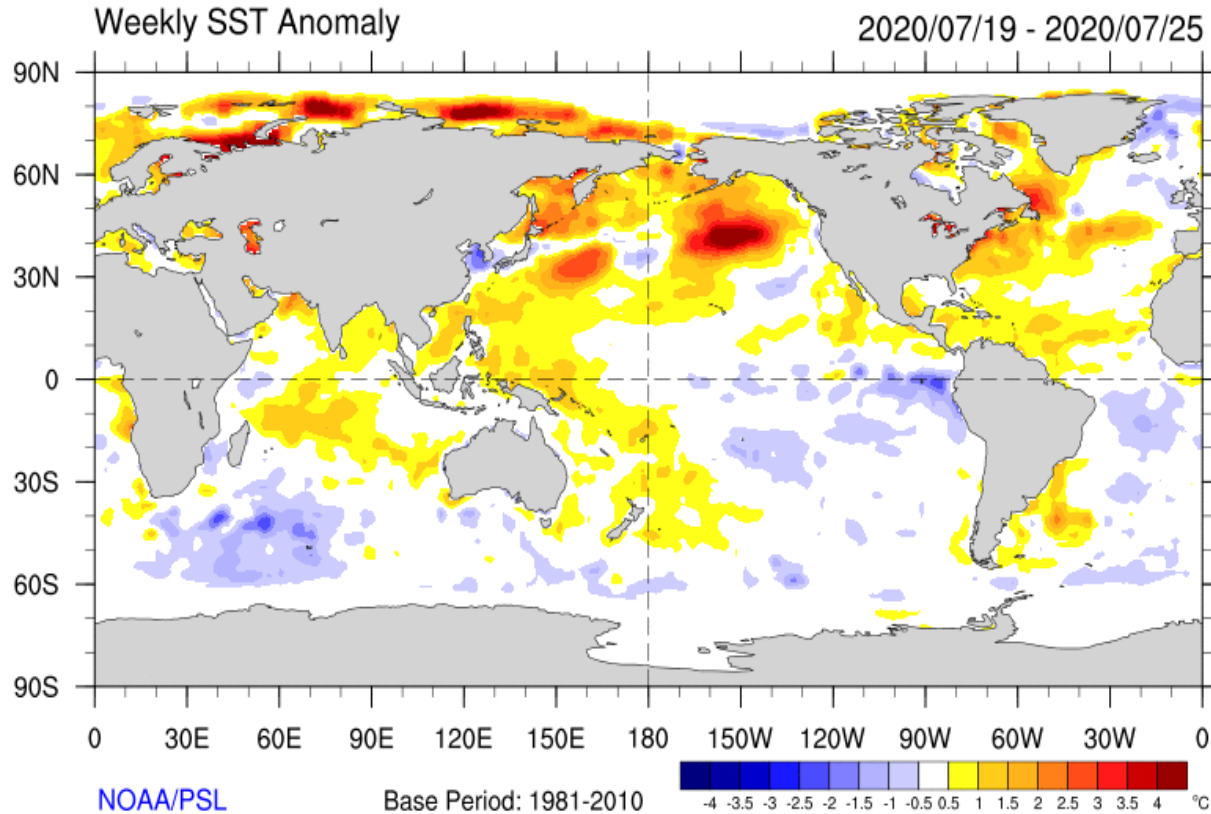
Wednesday 29 July 2020

Sea Surface Temperature Anomalies (Last Week)

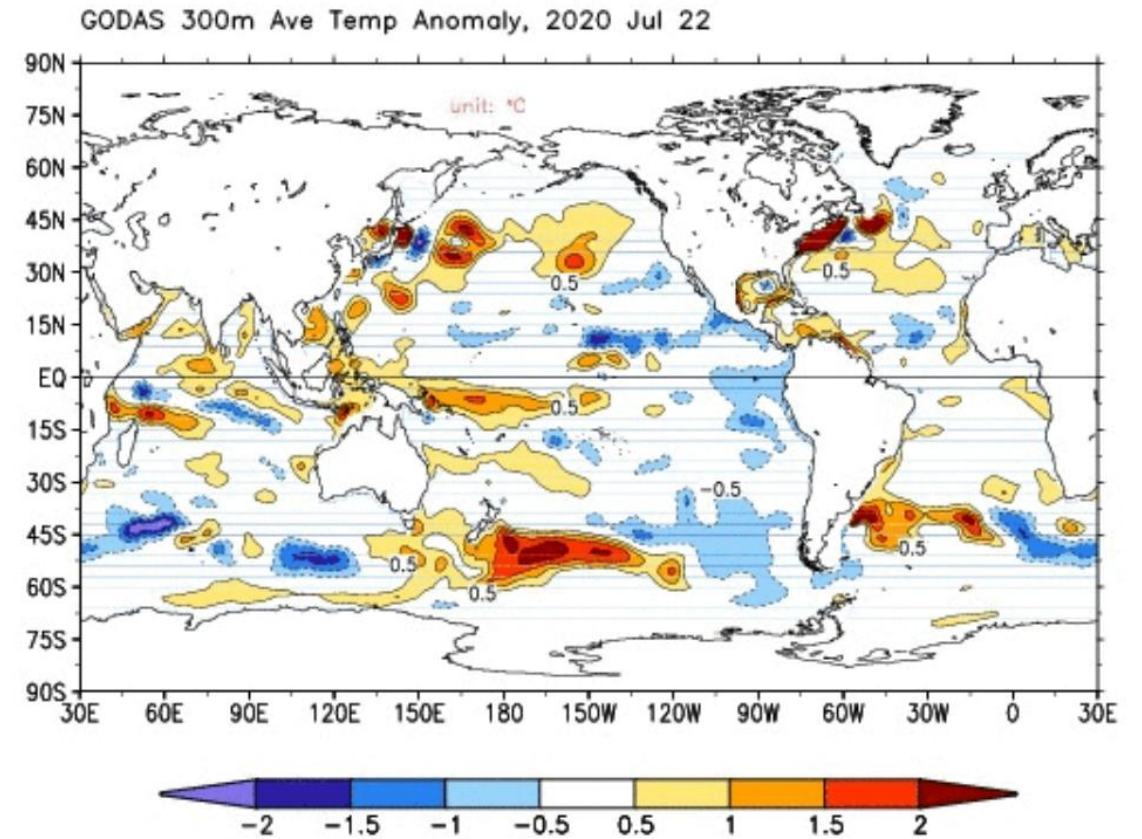


Are the Surface Anomalies Deep?

Sea Surface Temperature Anomaly
19-25 July 2020



Top 300-m Sea Temperature Anomaly
22 July 2020



Source: GODAS, CPC

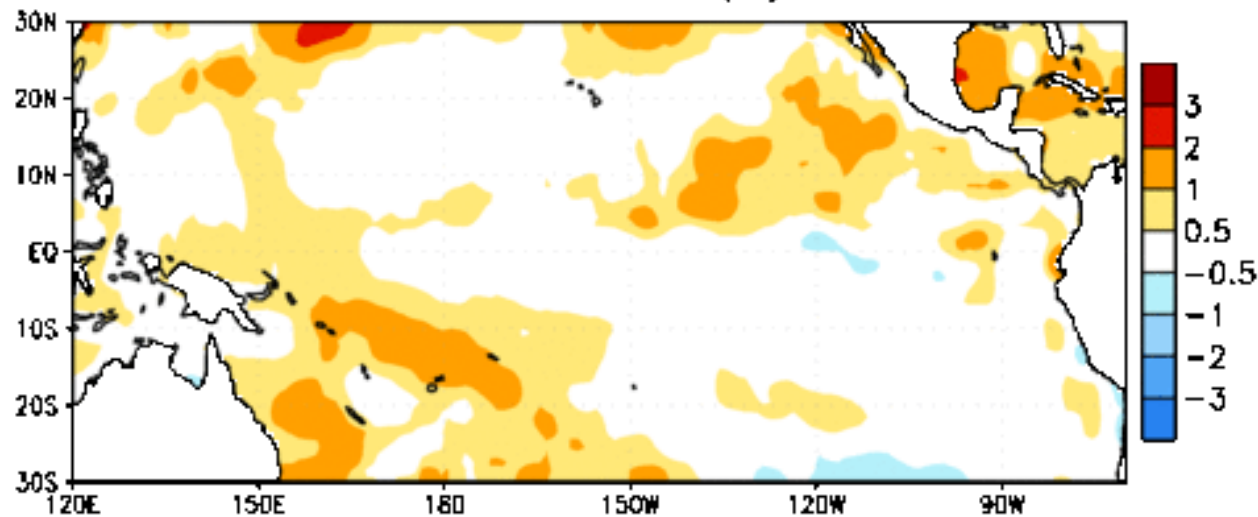
ENSO Neutral

La Niña Watch

- ENSO-neutral conditions are present.
- Equatorial sea surface temperatures (SSTs) are near-to-below average across the east-central and eastern Pacific Ocean, and the tropical atmospheric circulation is consistent with ENSO-neutral.

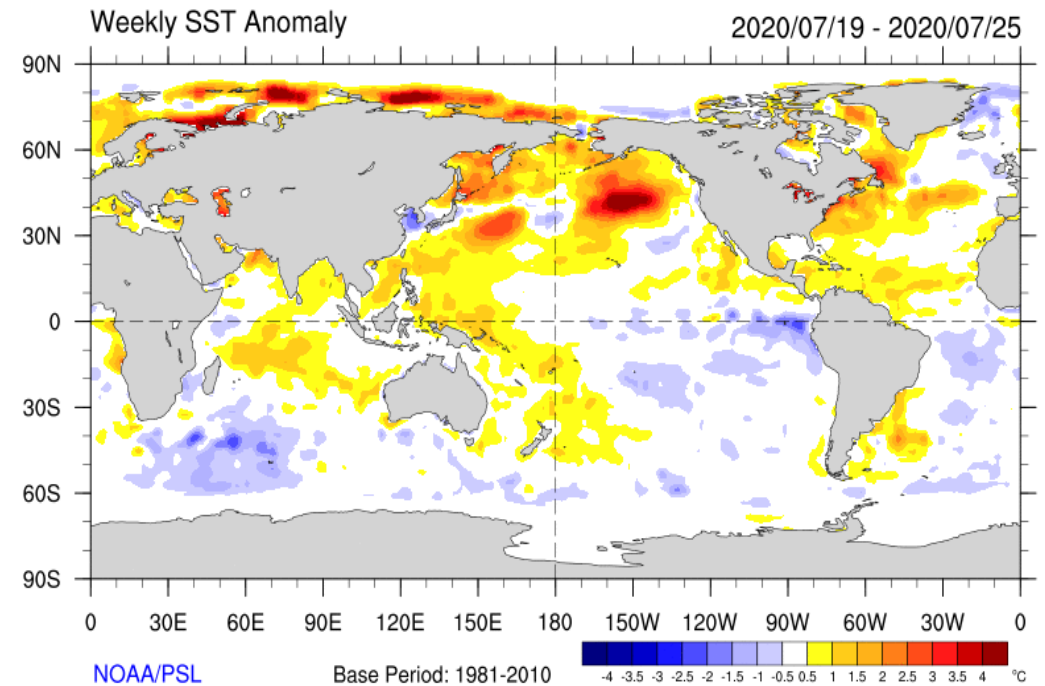
Evolution: 06-May through 22-Jul

Week centered on 06 MAY 2020
SST Anomalies (°C)



Source: CPC

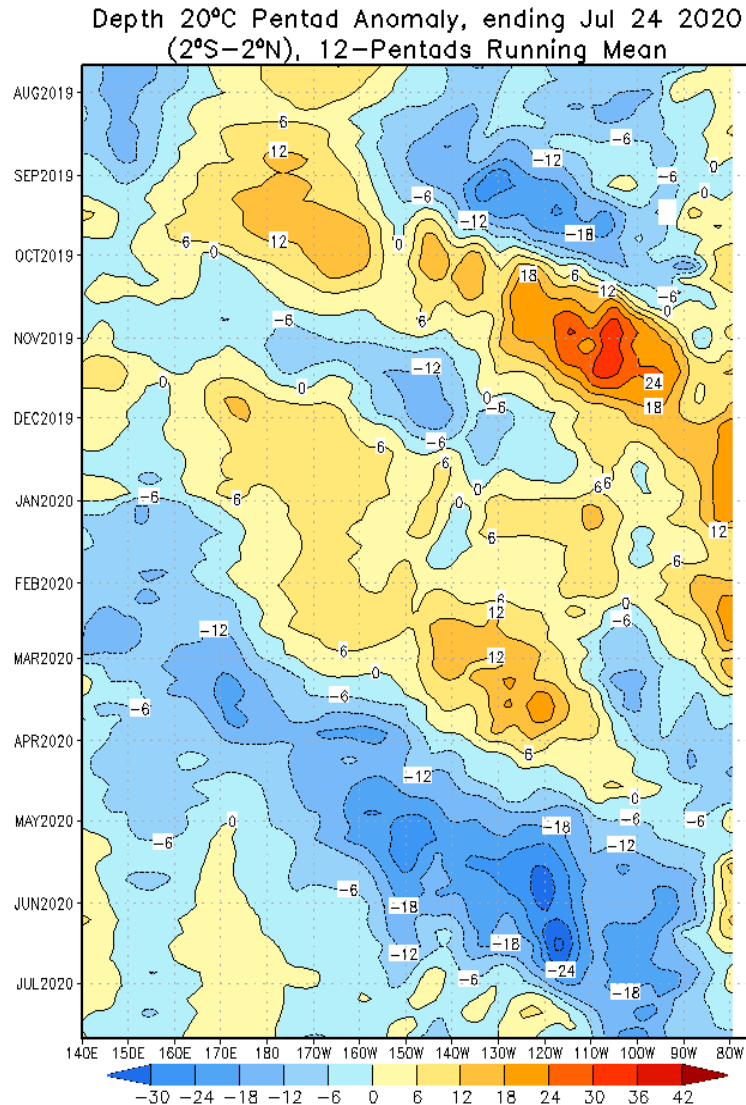
Last week's anomalies



Source: Physical Sciences Laboratory (PSL)

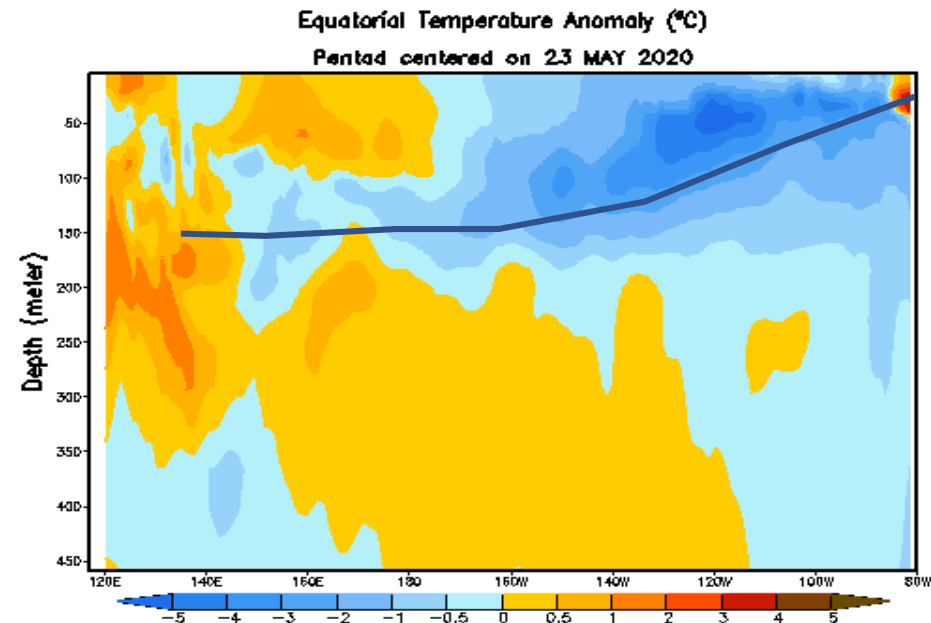
ENSO

Hovmöller of thermocline depth anomalies



Upwelling (cool) Kelvin Wave propagating

- Blues: Shallow thermocline = cooler
- Eastern Pacific: Approaching peak cooling.
- **Forecast: No more Kelvin waves on the way. Ocean temperatures becoming more neutral?**



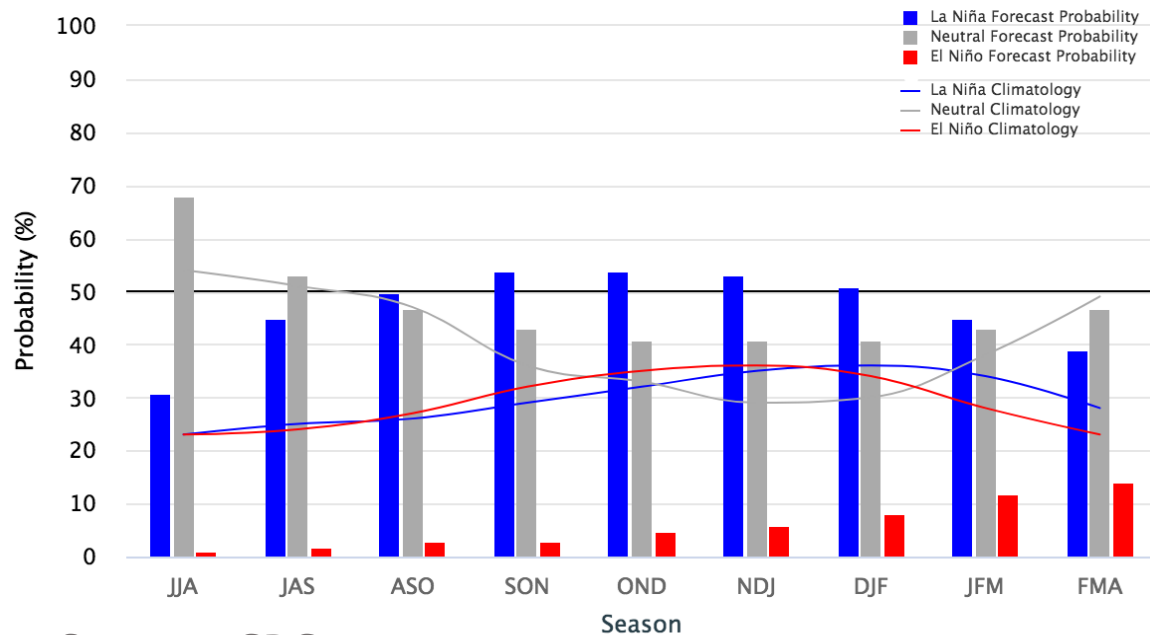
ENSO Outlook

ENSO-neutral is favored to continue through the summer, with a 50-55% chance of La Niña development during Northern Hemisphere fall 2020 and continuing through winter 2020-21 (~50% chance).*

CPC/IRI Probabilistic Forecast

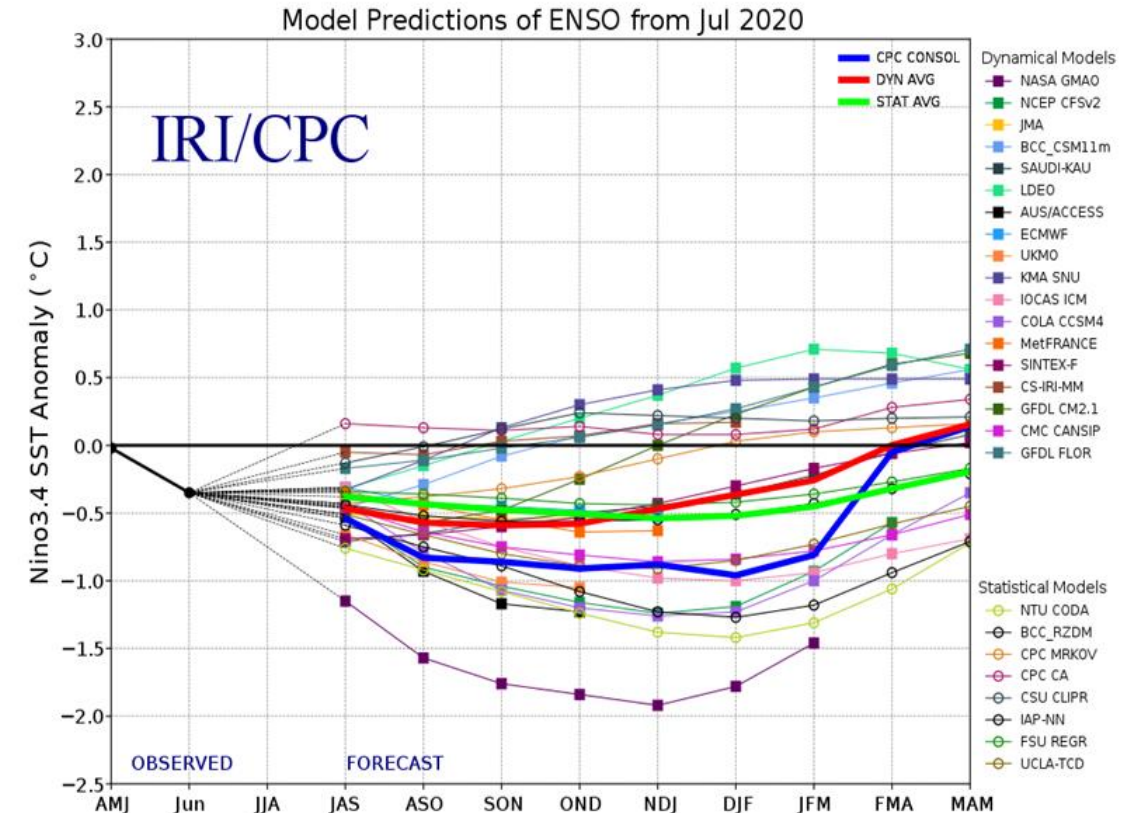
Early-July 2020 CPC/IRI Official Probabilistic ENSO Forecasts

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



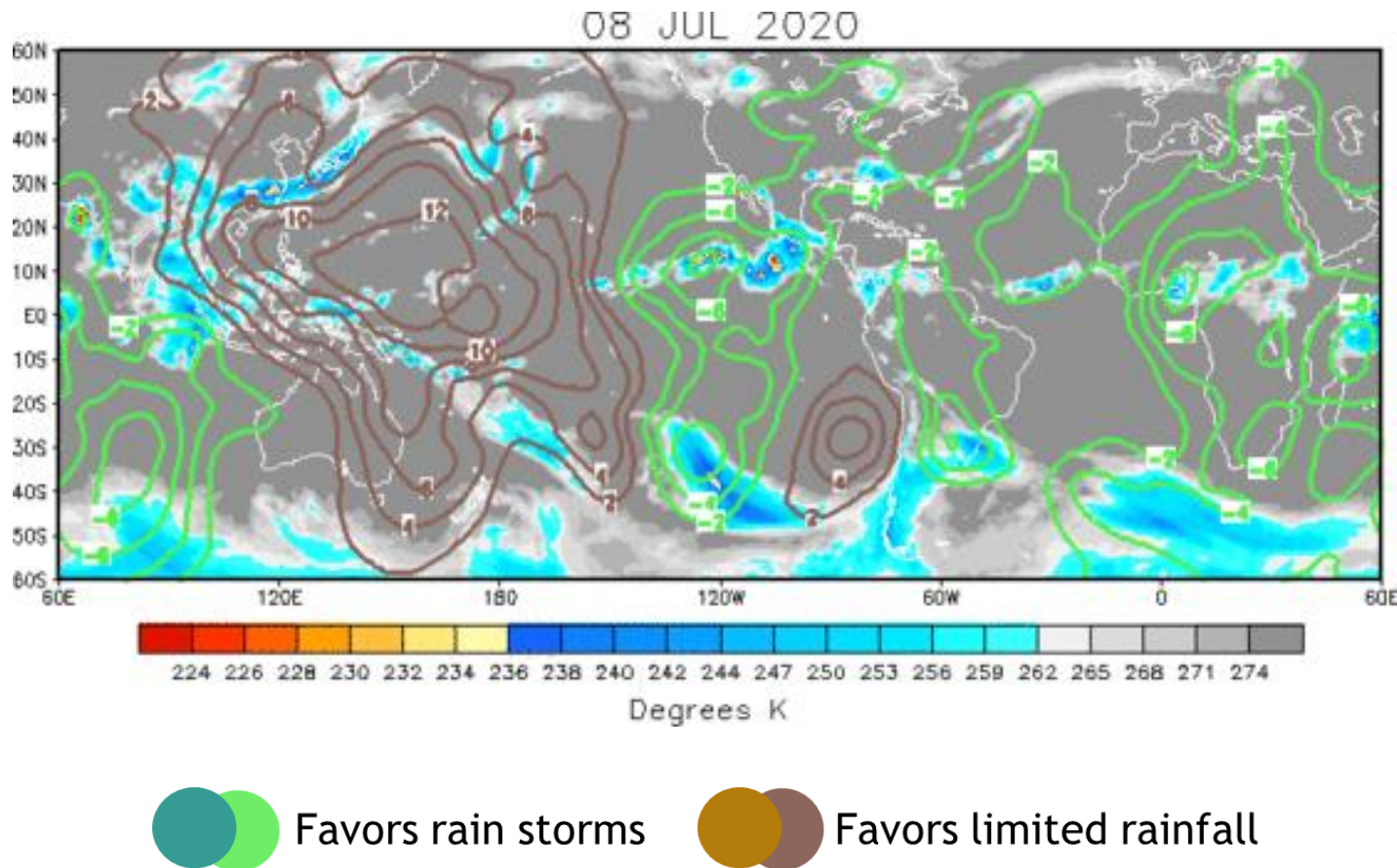
Source: CPC

IRI/CPC Dynamic Models

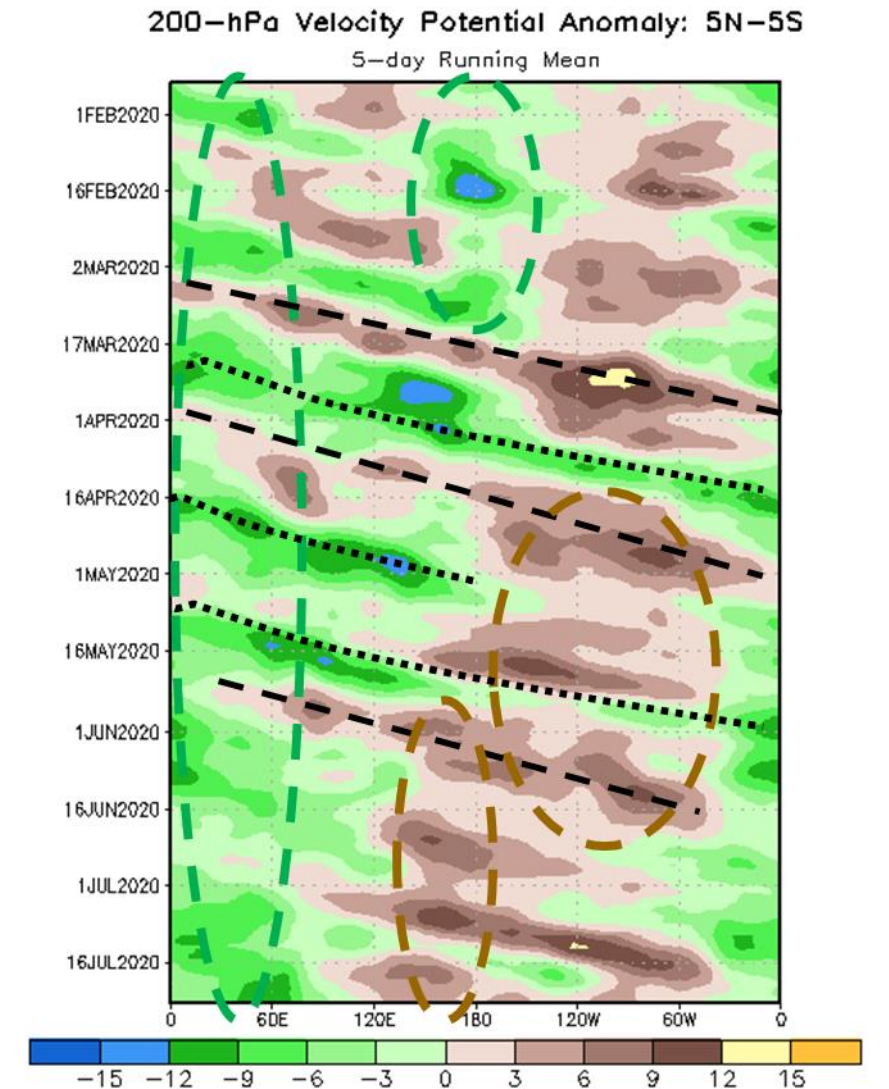


Madden-Julian Oscillation (MJO)

Animation: 200 hPa Velocity Potential (CHI) and Outgoing Long Wave Radiation (OLR) Daily Anomalies

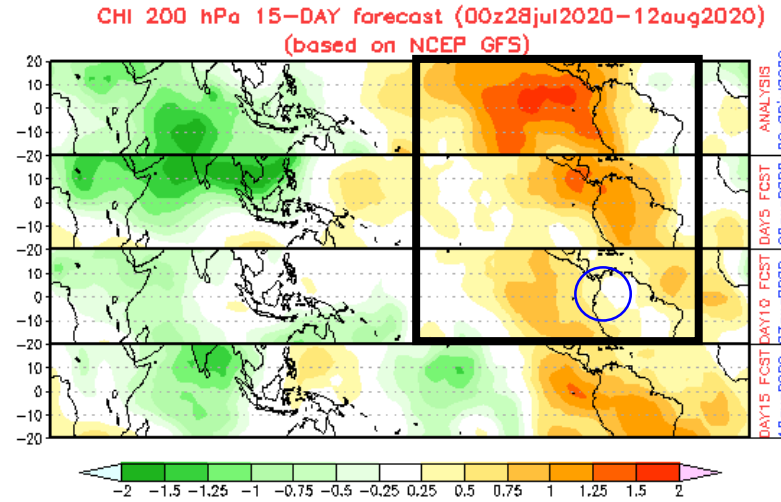
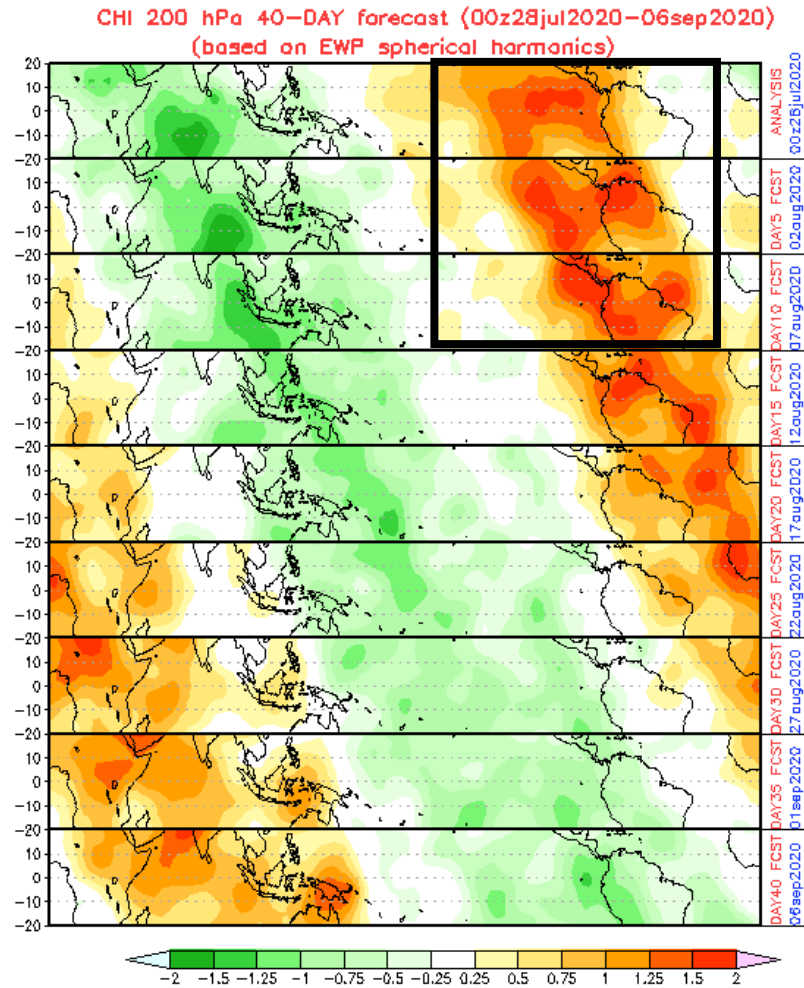


Source: CPC

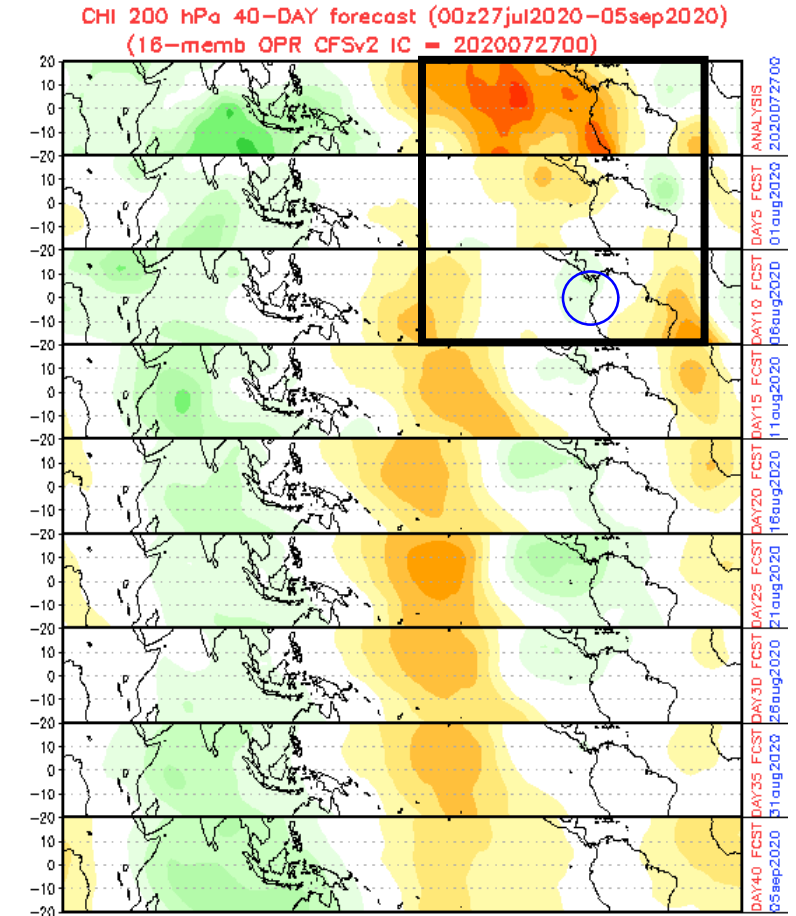


Source: CPC

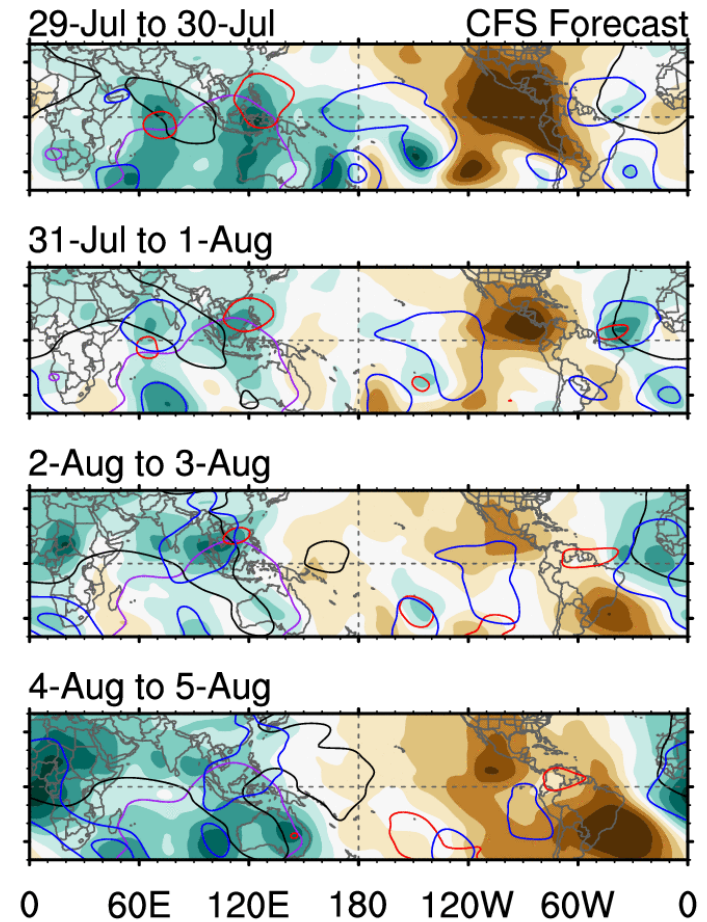
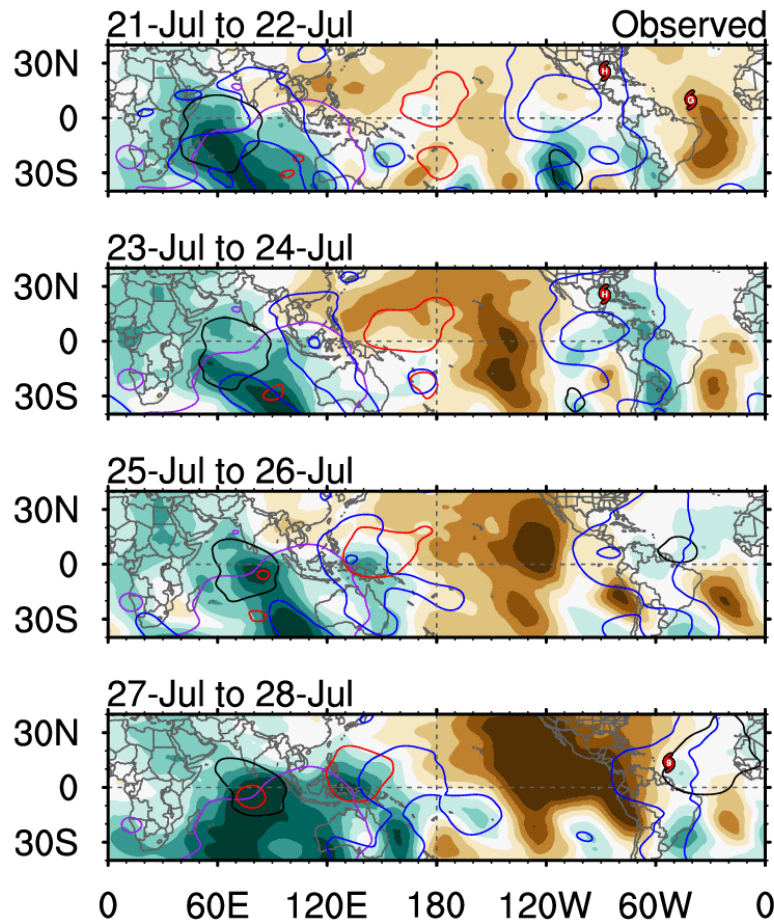
MJO Forecasts



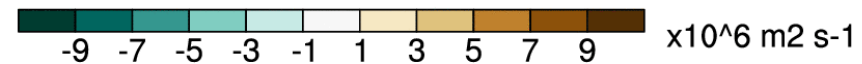
- Upper convergent
- Kelvin Wave in Panama / Colombia Aug 6?
- Upper divergent second half of August?



MJO and Equatorial Tropospheric Waves CFS Forecasts



ncics.org/mjo



2-day CHI200 with CFS forecasts

Wed 2020-07-29 1012 UTC

— MJO
— Low
— Kelvin x2
— ER

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

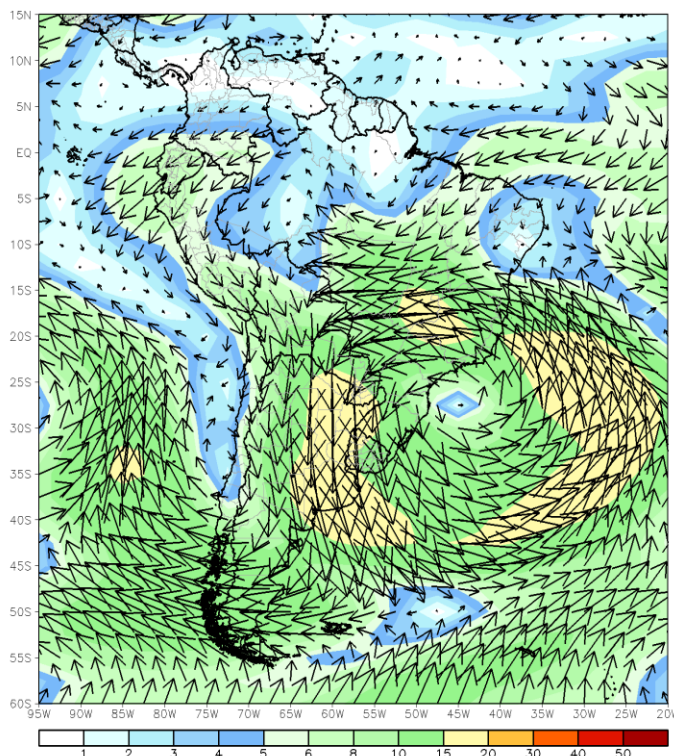
Carl Schreck
carl_schreck@ncsu.edu

Last week's anomalies for South America

200 hPa Flow

CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)

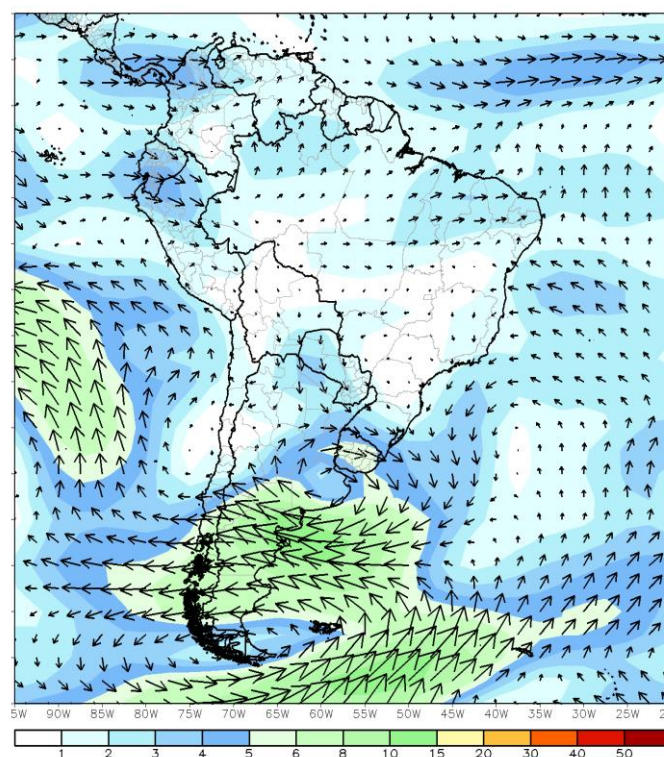
Period: 20Jul2020 - 26Jul2020



850 hPa Flow

CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)

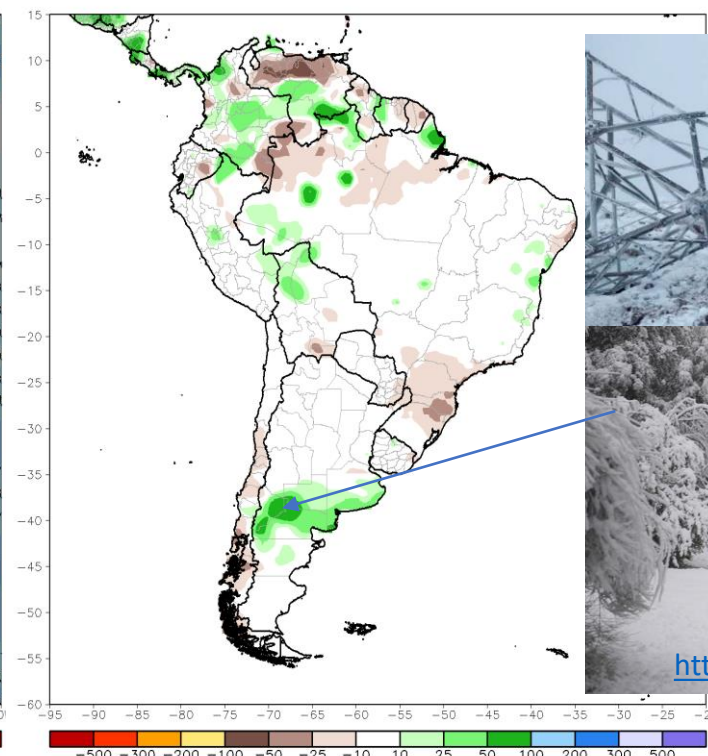
Period: 20Jul2020 - 26Jul2020



Rainfall

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

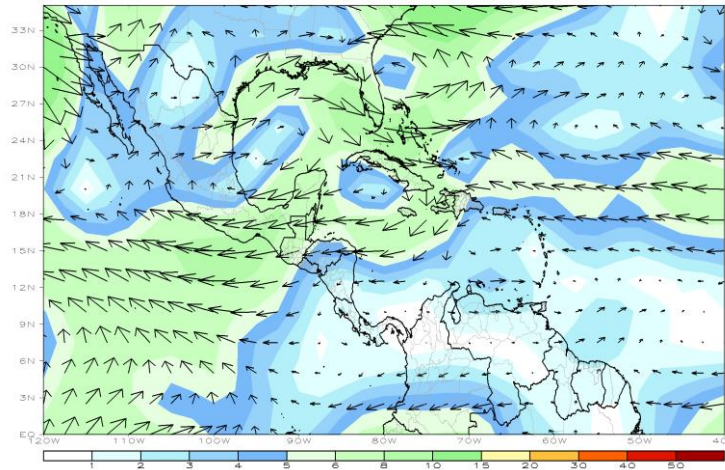
Period: 21Jul2020 - 27Jul2020



Last Week's anomalies for the Tropical Americas

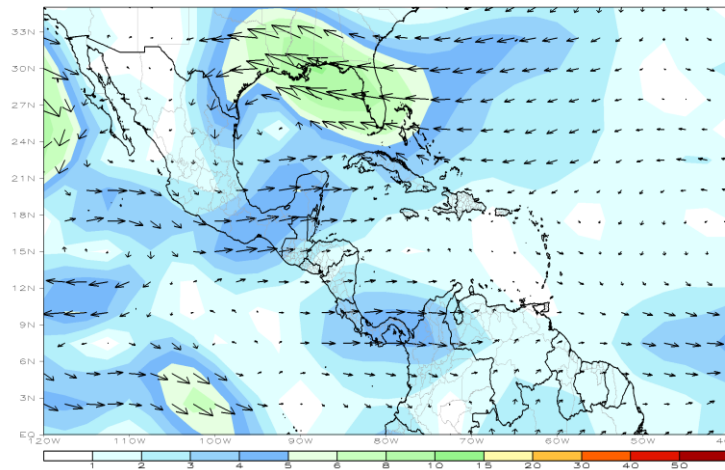
200 hPa Flow

CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 20Jul2020 - 26Jul2020



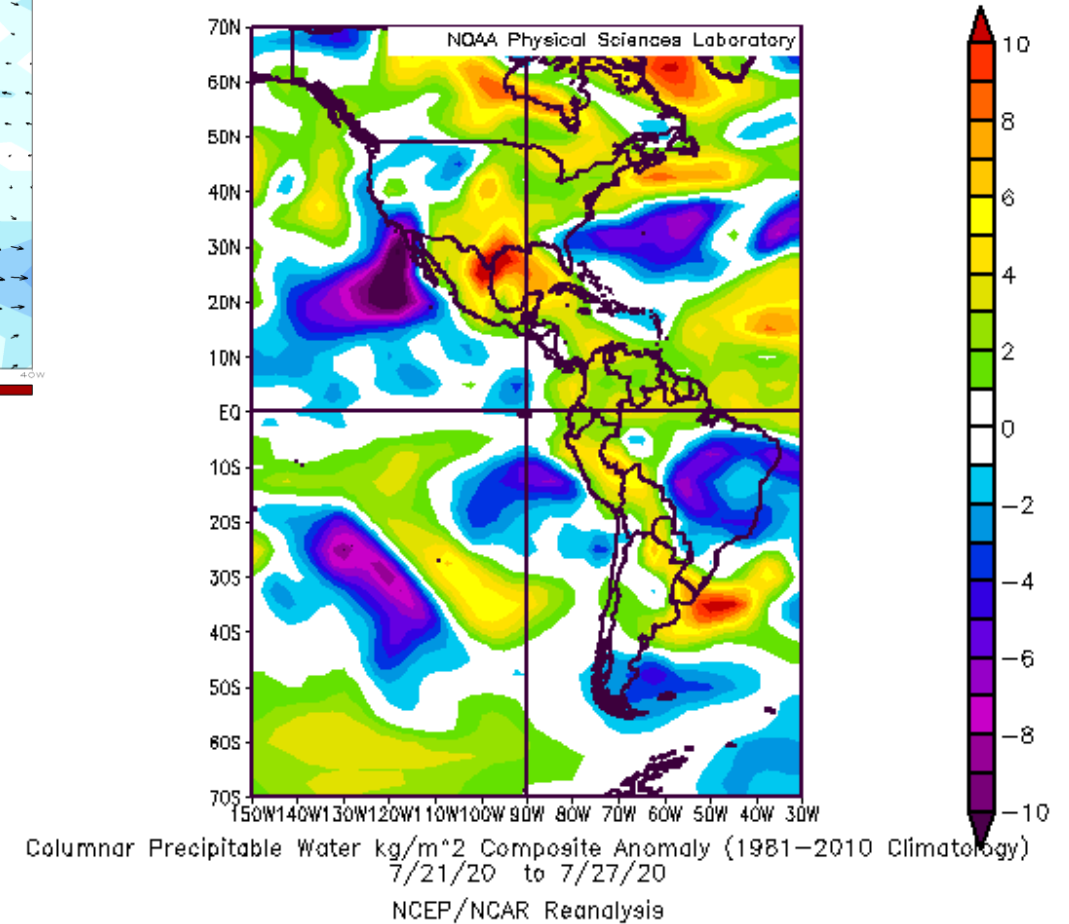
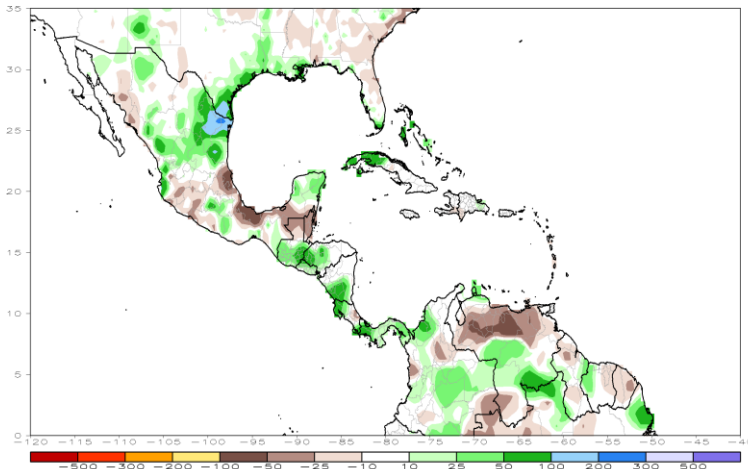
850 hPa Flow

CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 20Jul2020 - 26Jul2020



Rainfall

CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)
Period: 21Jul2020 - 27Jul2020



¡Gracias!

Thank you!