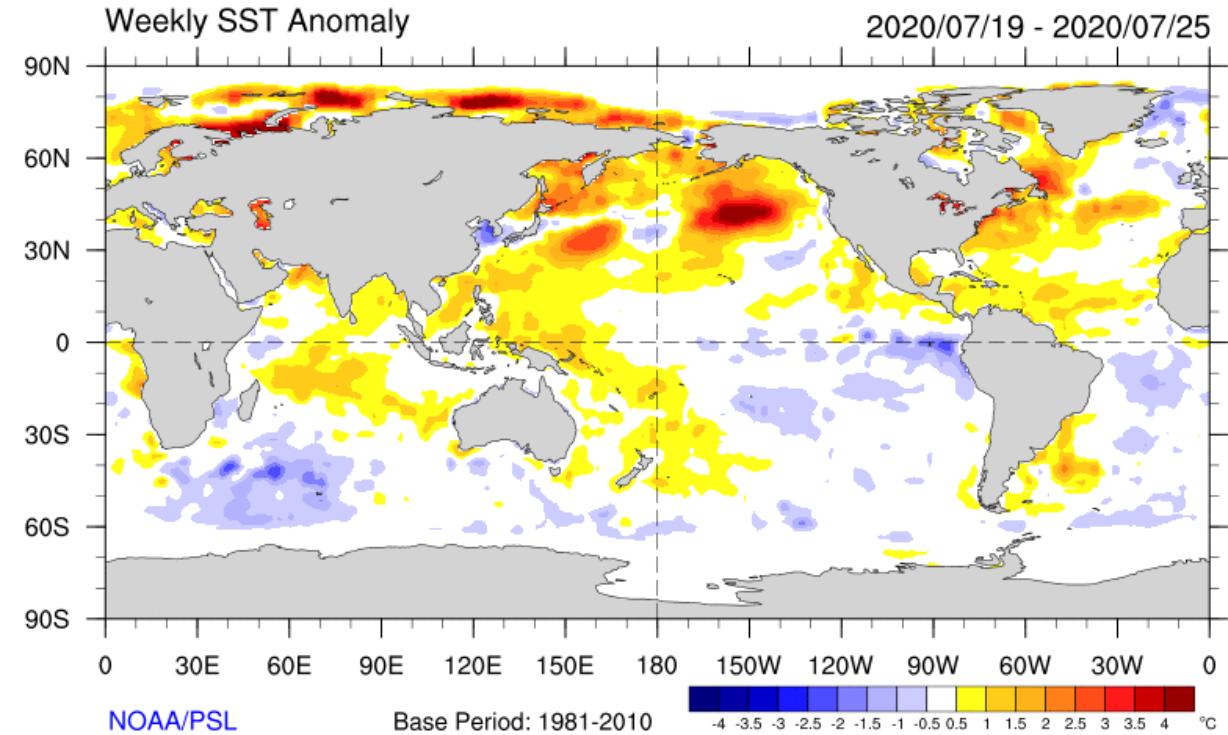
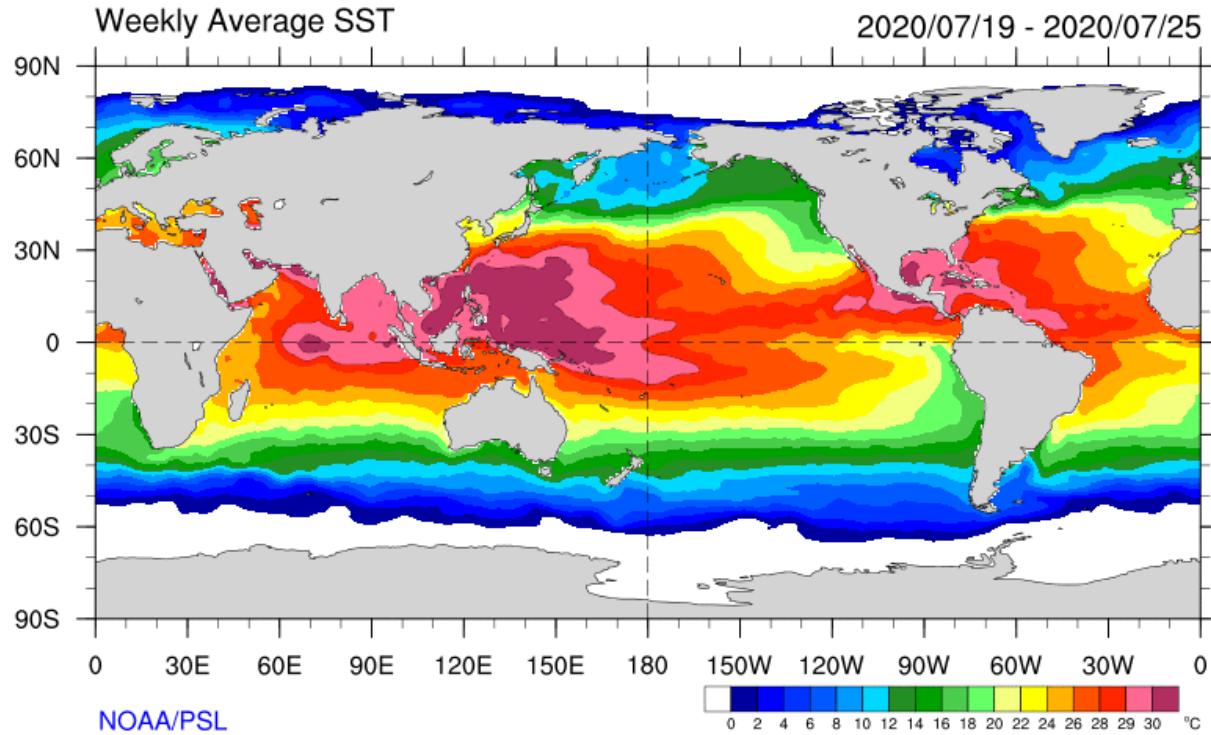




# Monthly Regional Focus Group Session

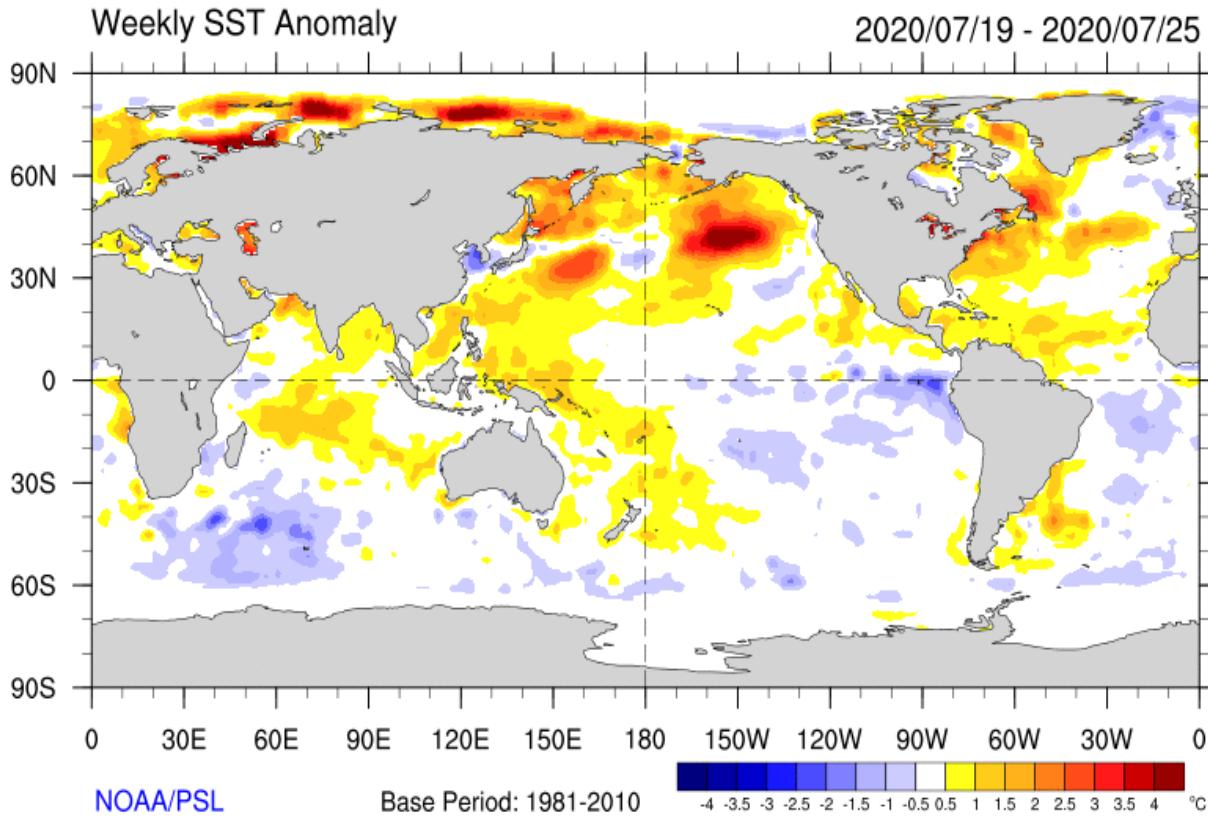
Wednesday 29 July 2020

# Sea Surface Temperature Anomalies (Last Week)

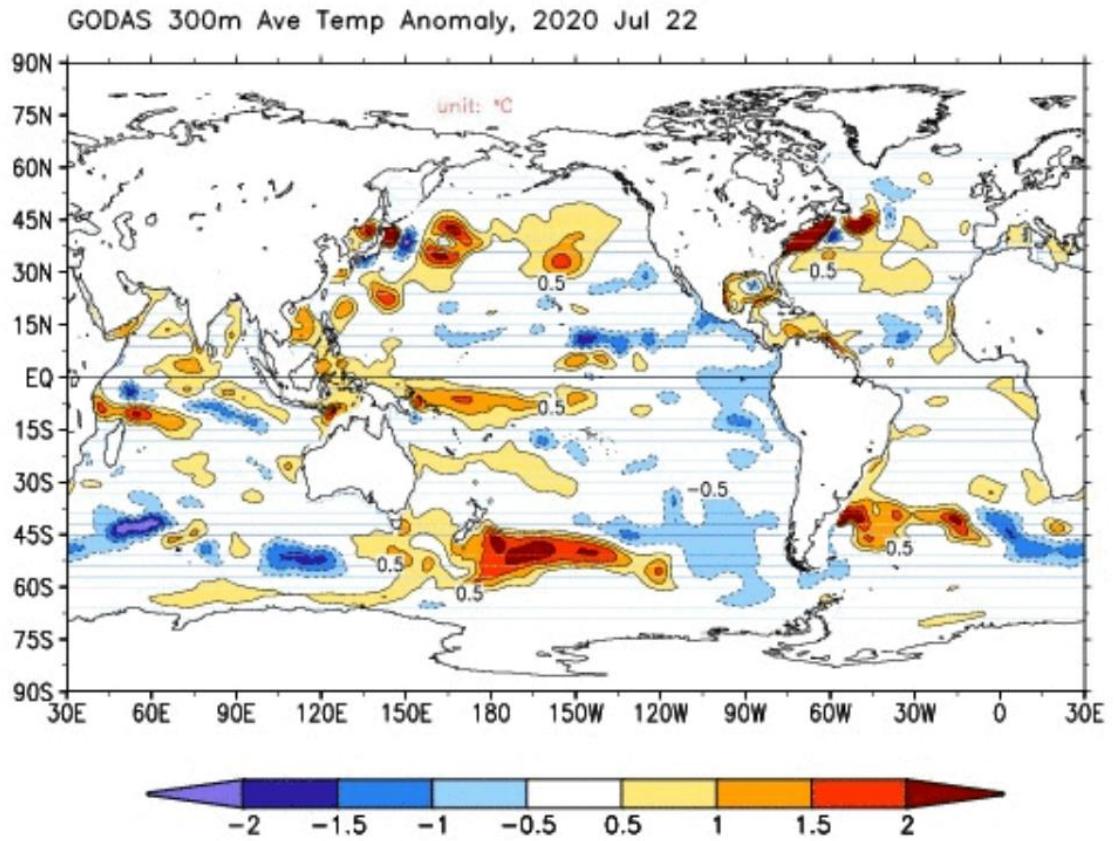


# Are the Surface Anomalies Deep?

**Sea Surface Temperature Anomaly**  
19-25 July 2020



**Top 300-m Sea Temperature Anomaly**  
22 July 2020



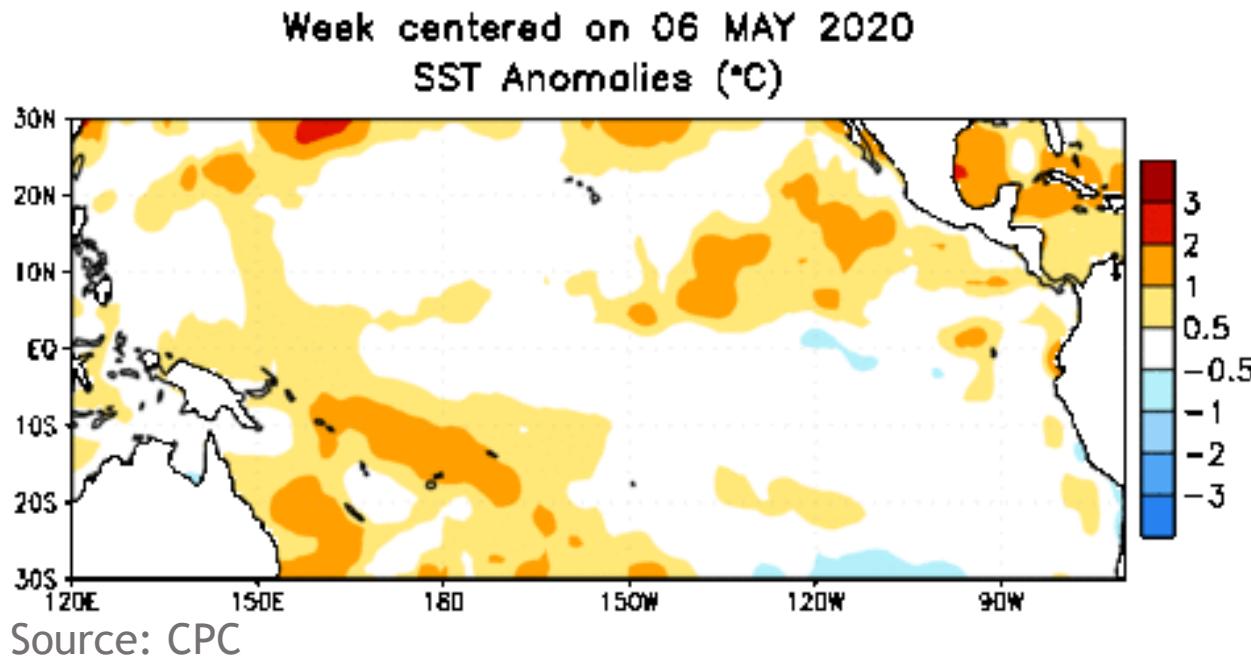
Source: GODAS, CPC

# ENSO Neutral

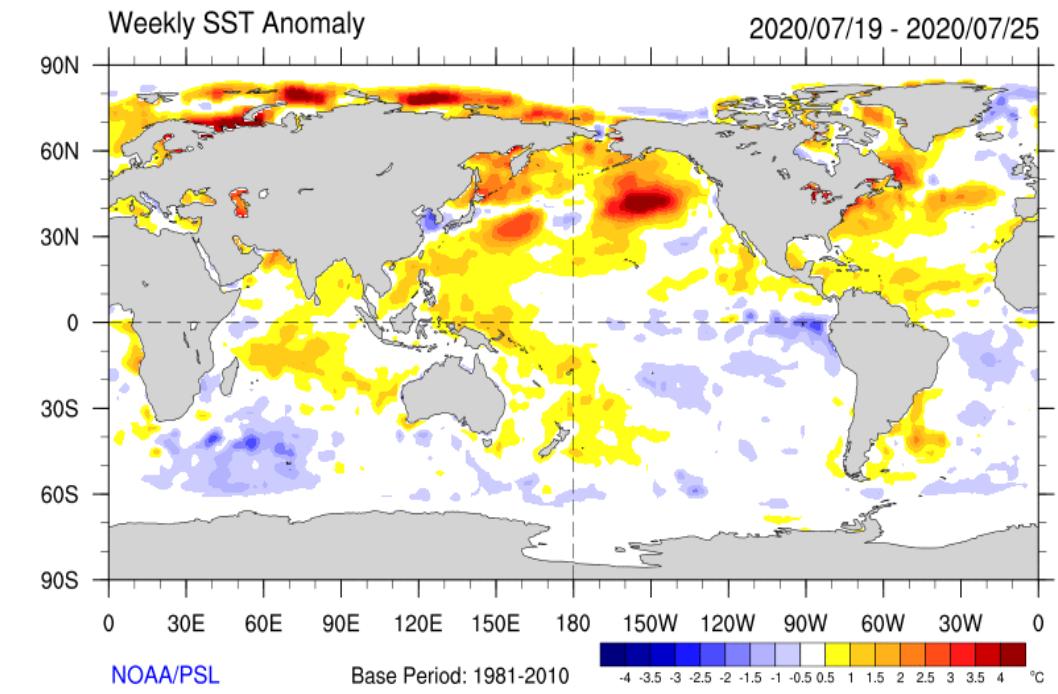
## La Niña Watch

- 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



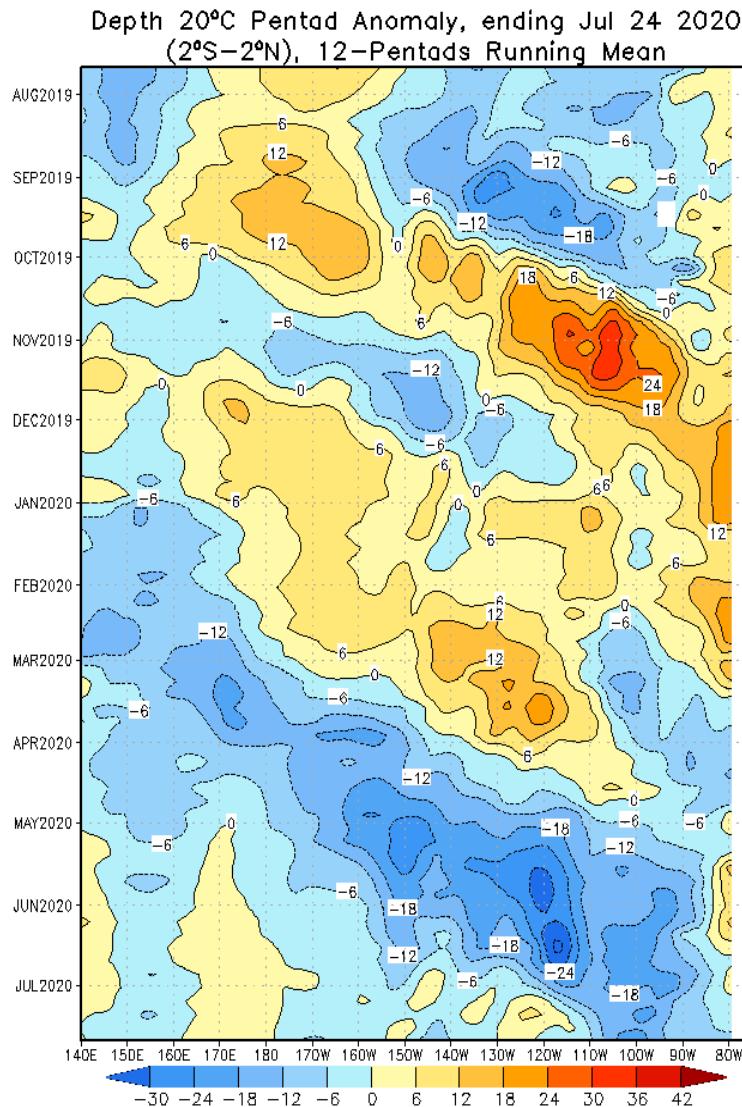
### Last week's anomalies



Source: Physical Sciences Laboratory (PSL)

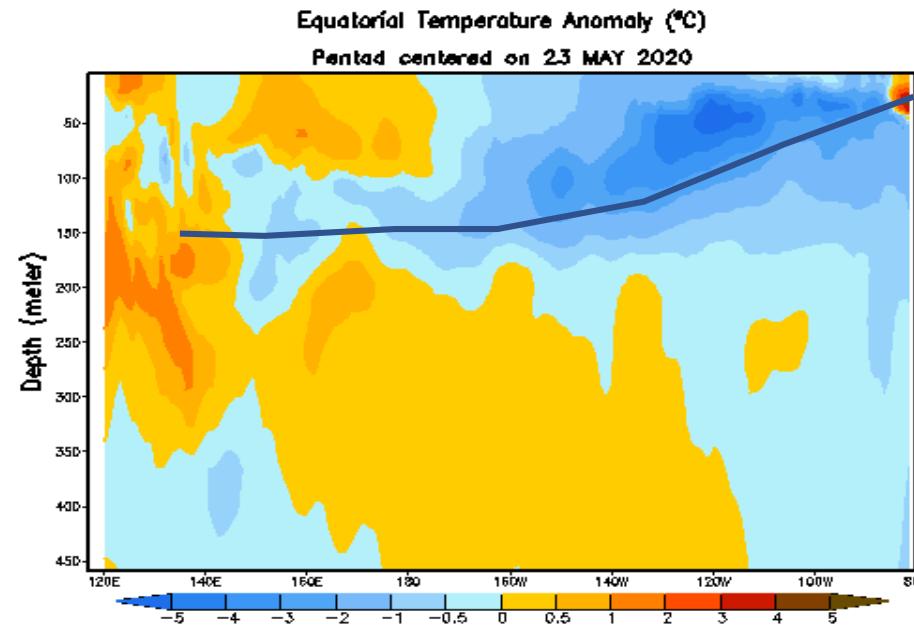
# ENSO

## Hovmöller of thermocline depth anomalies



### Upwelling (cool) Kelvin Wave propagating

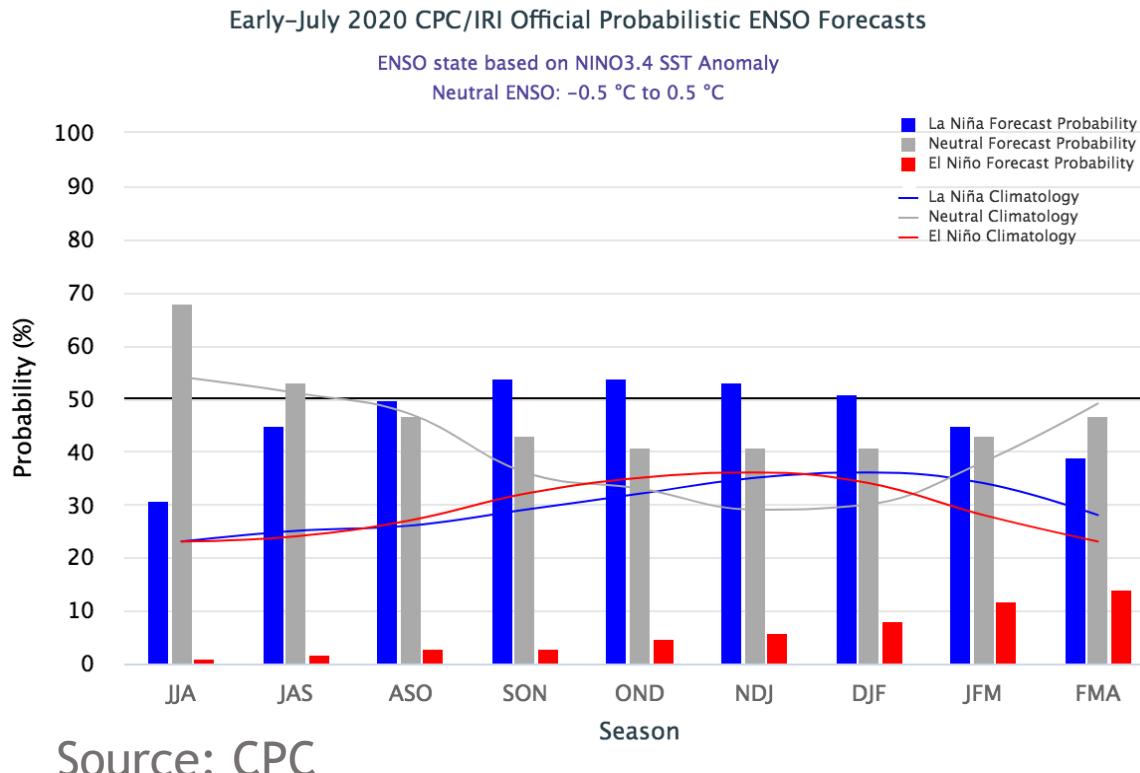
- Blues: Shallow thermocline = cooler
- Eastern Pacific: Approaching peak cooling.
- Forecast: No more Kelvin waves on the way. Ocean temperatures becoming more neutral?



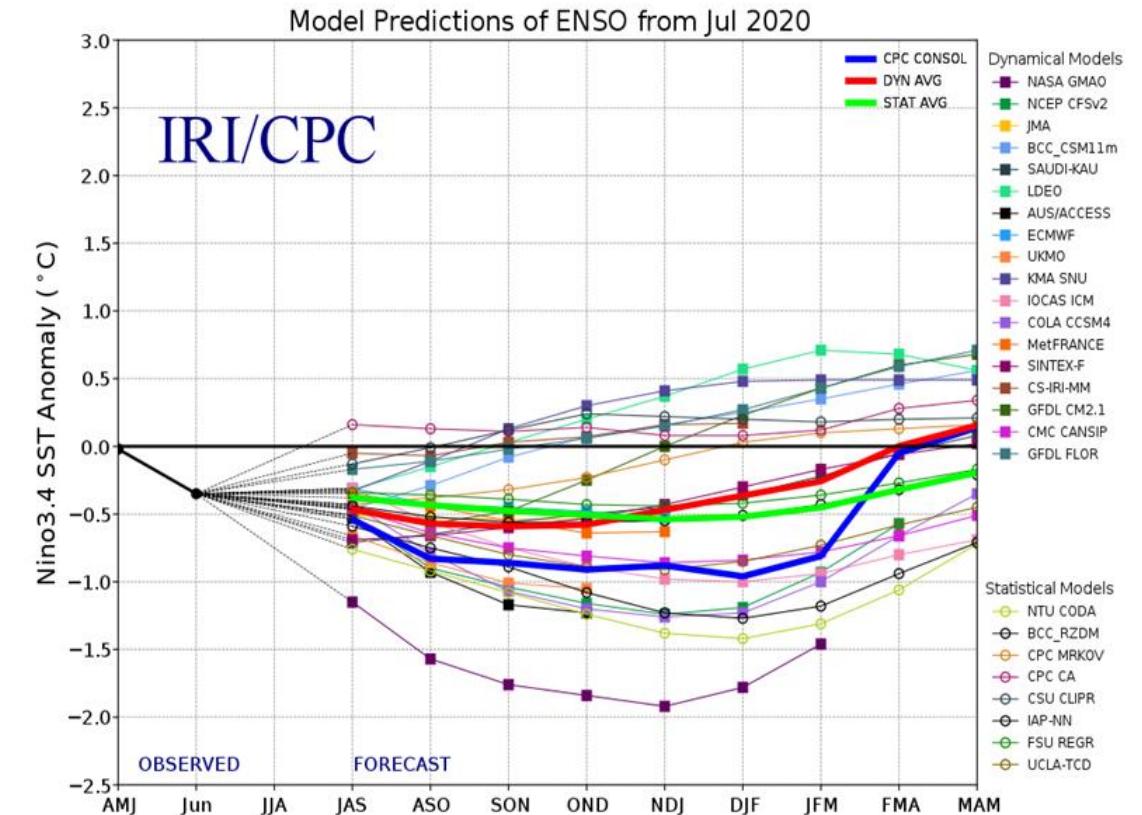
# ENSO Outlook

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

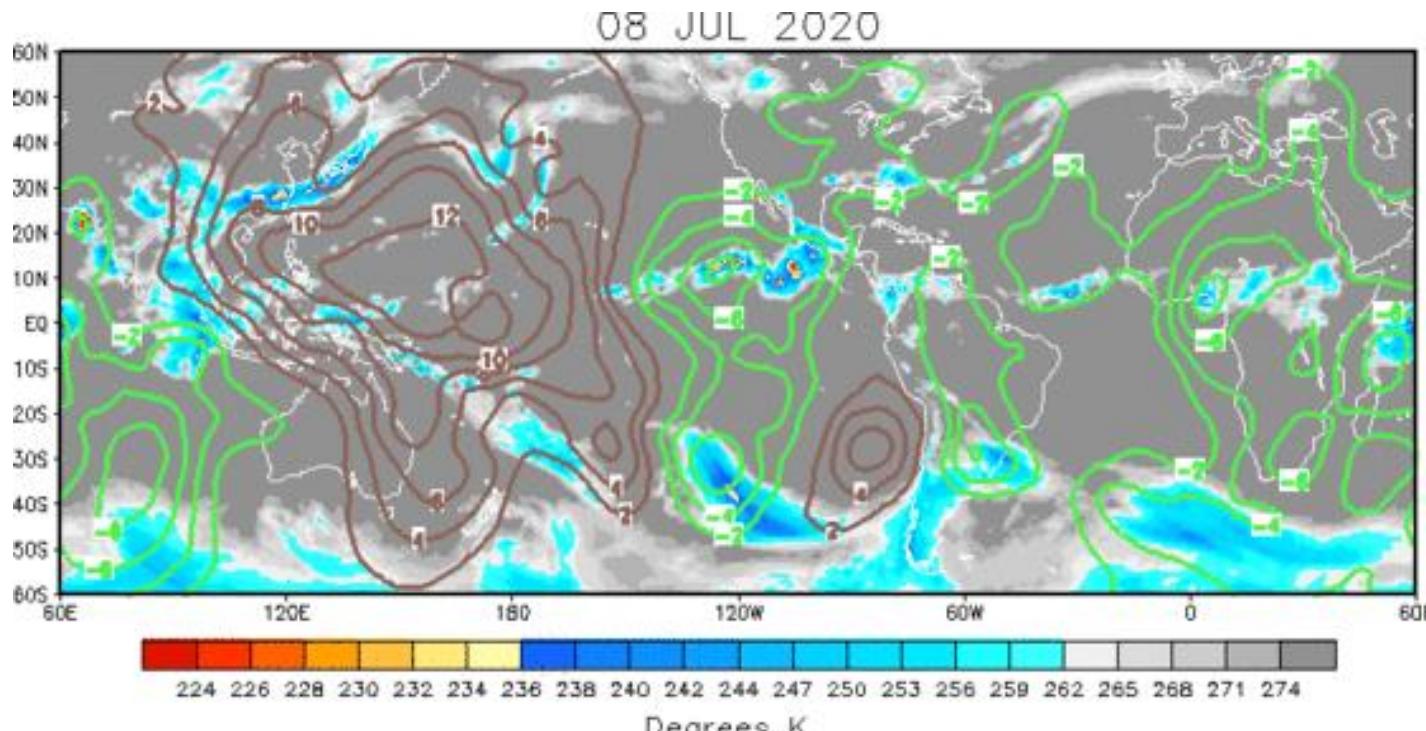


## IRI/CPC Dynamic Models



# Madden-Julian Oscillation (MJO)

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



Favors rain storms

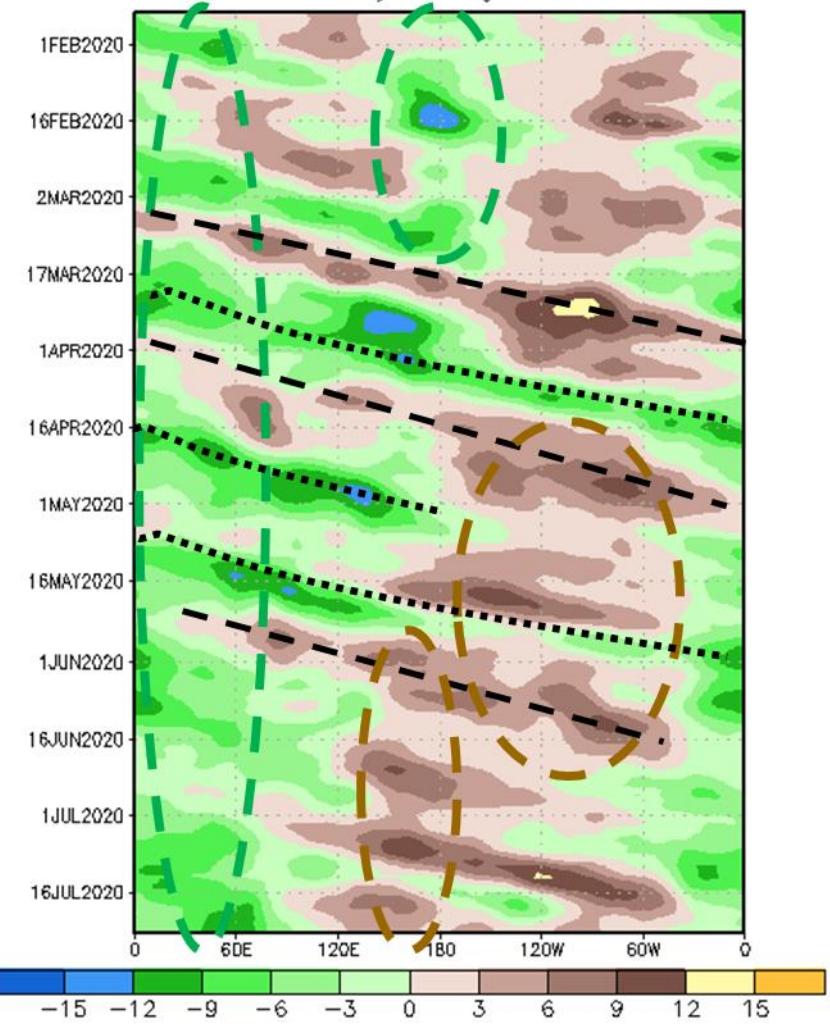


Favors limited rainfall

Source: CPC

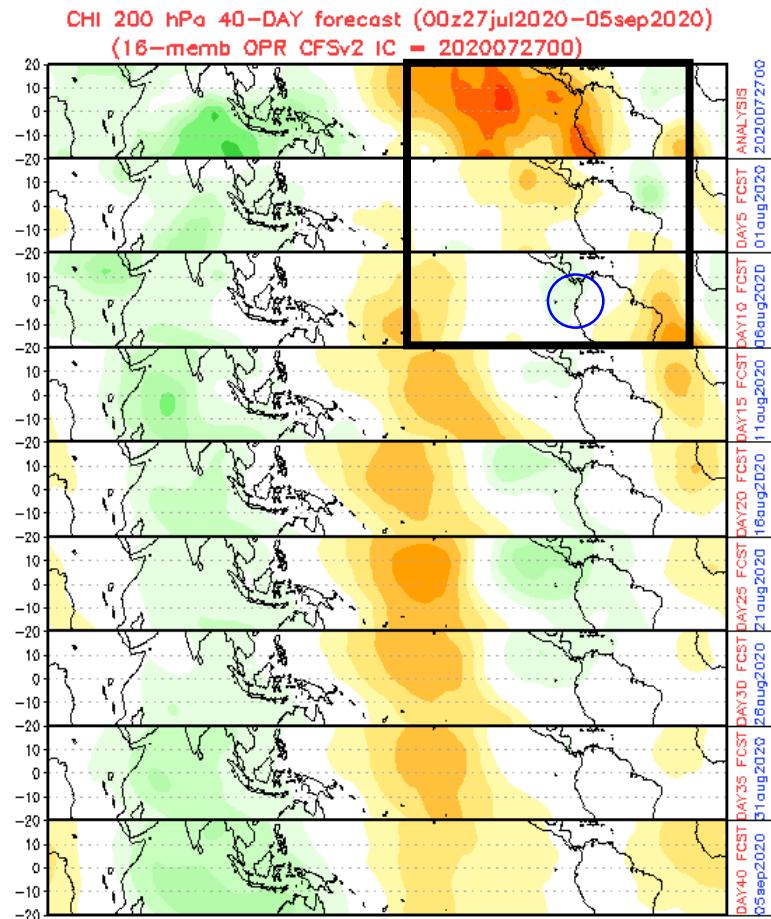
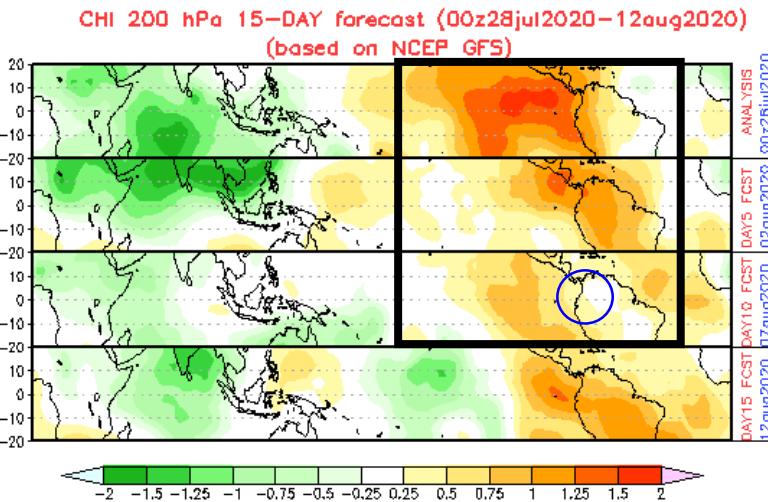
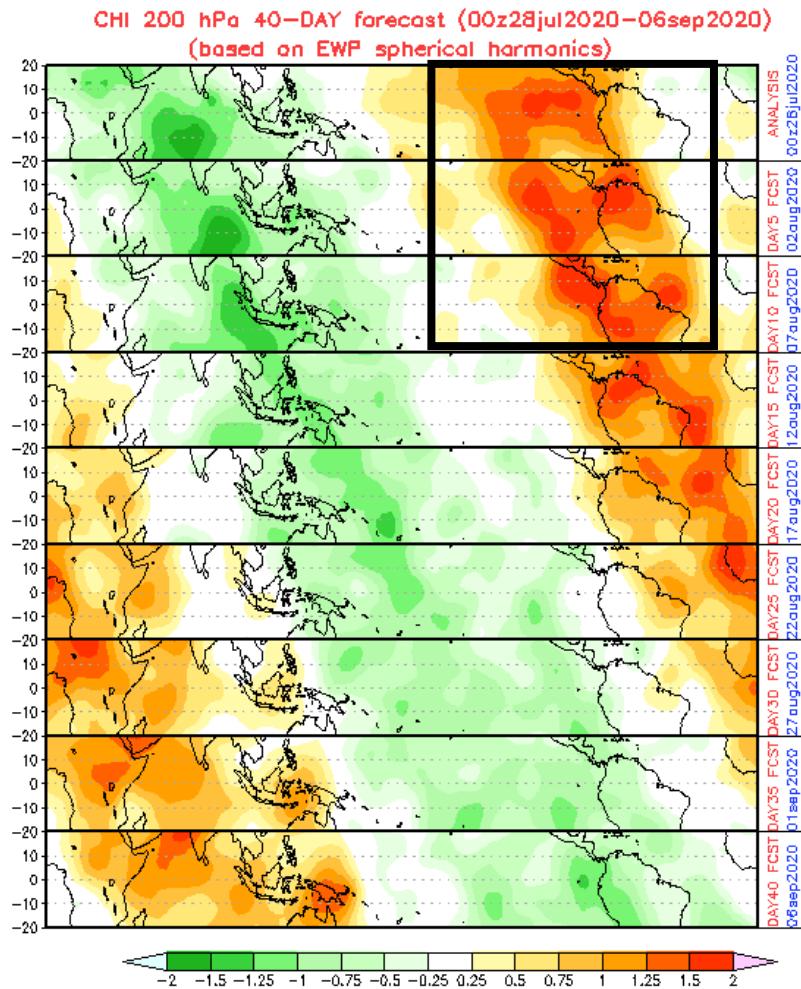
200-hPa Velocity Potential Anomaly: 5N-5S

5-day Running Mean



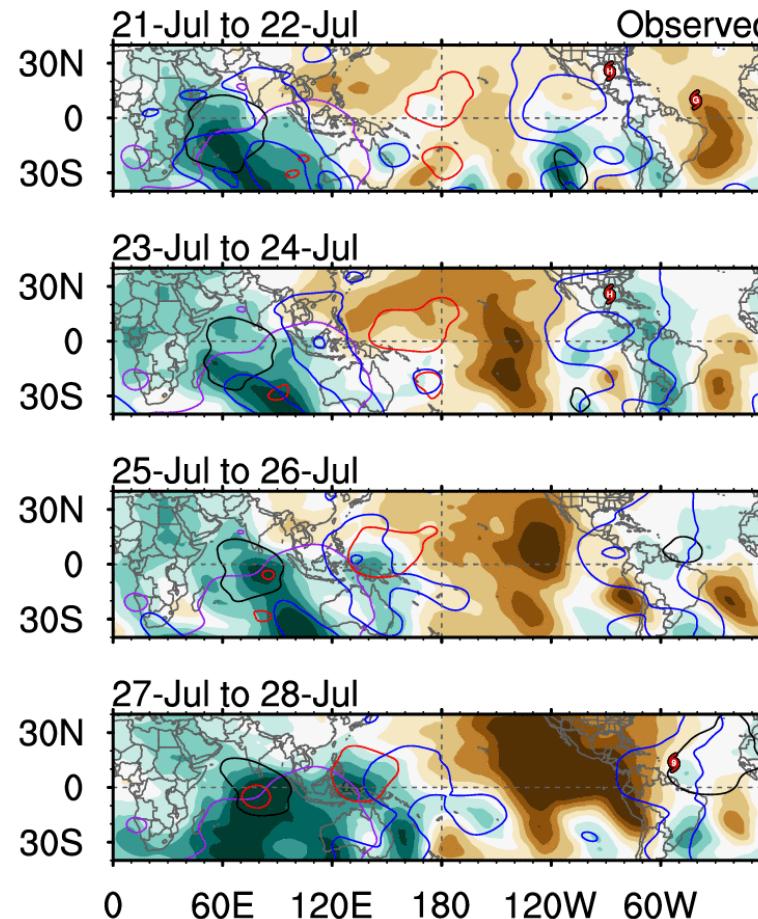
Source: CPC

# MJO Forecasts



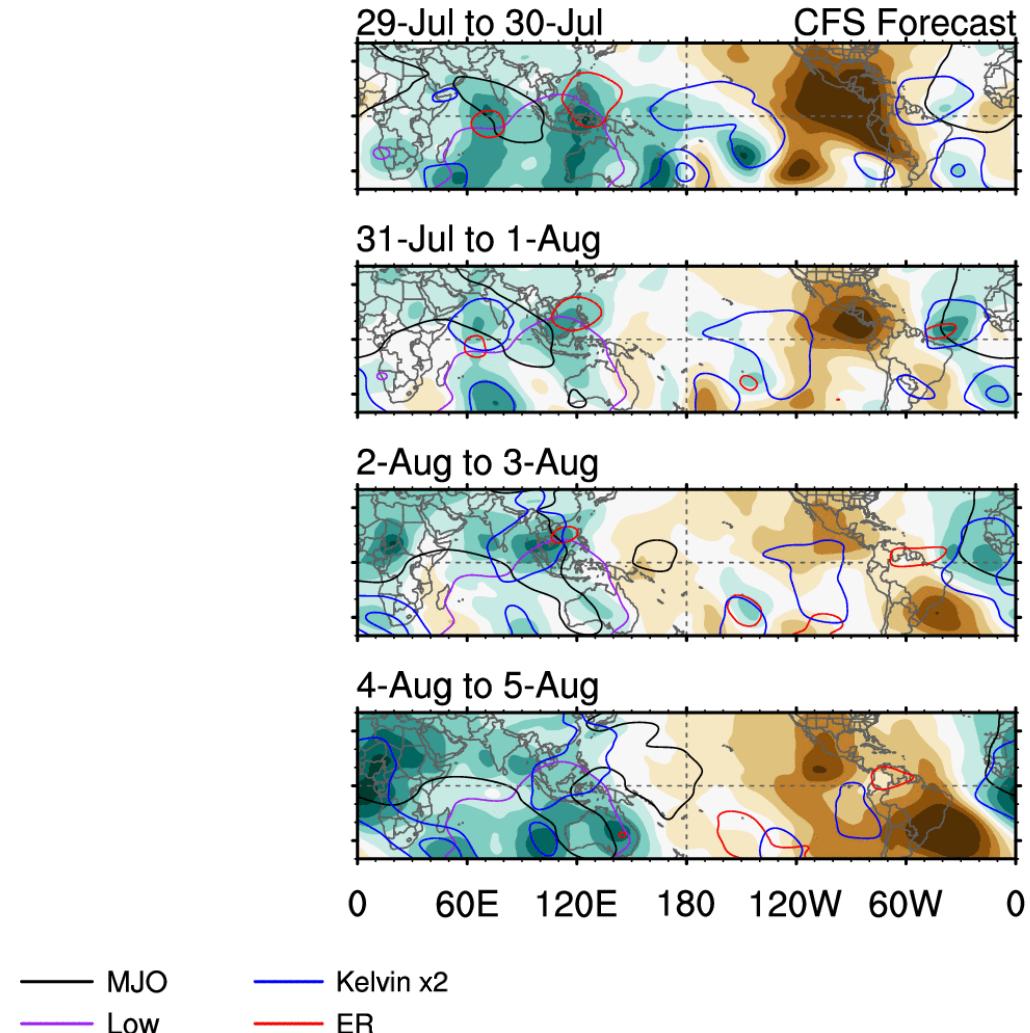
- Upper convergent
- Kelvin Wave in Panama / Colombia Aug 6?
- Upper divergent second half of August?

# MJO and Equatorial Tropospheric Waves CFS Forecasts



2-day CHI200 with CFS forecasts

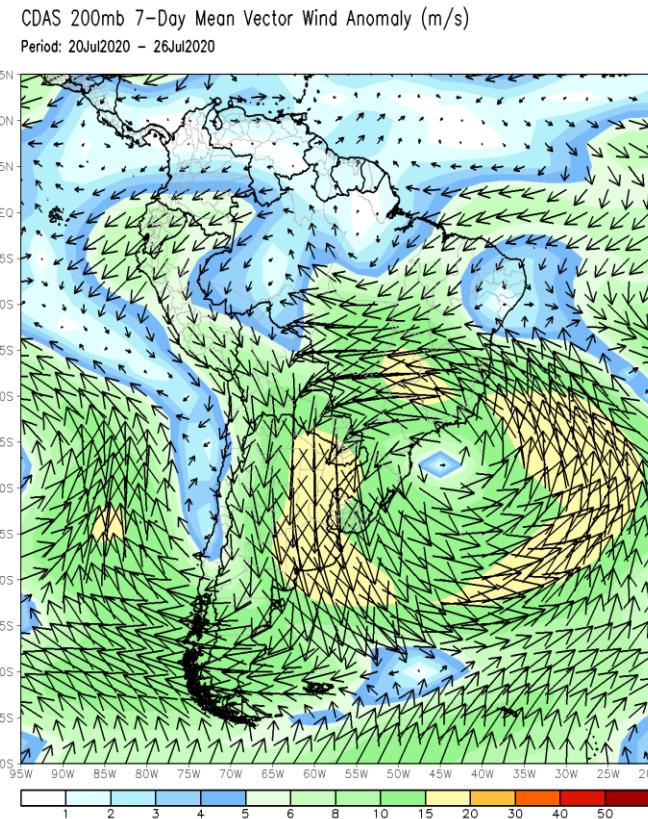
Wed 2020-07-29 1012 UTC



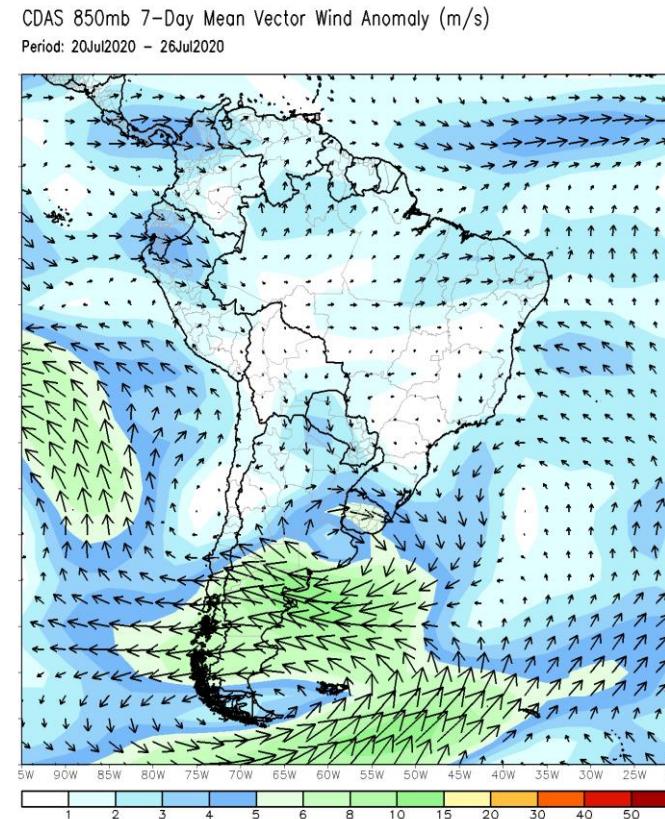
Contours at  $-2, -6 \times 10^6 \text{ m}^2 \text{ s}^{-1}$   
Carl Schreck  
carl\_schreck@ncsu.edu

# Last week's anomalies for South America

## 200 hPa Flow

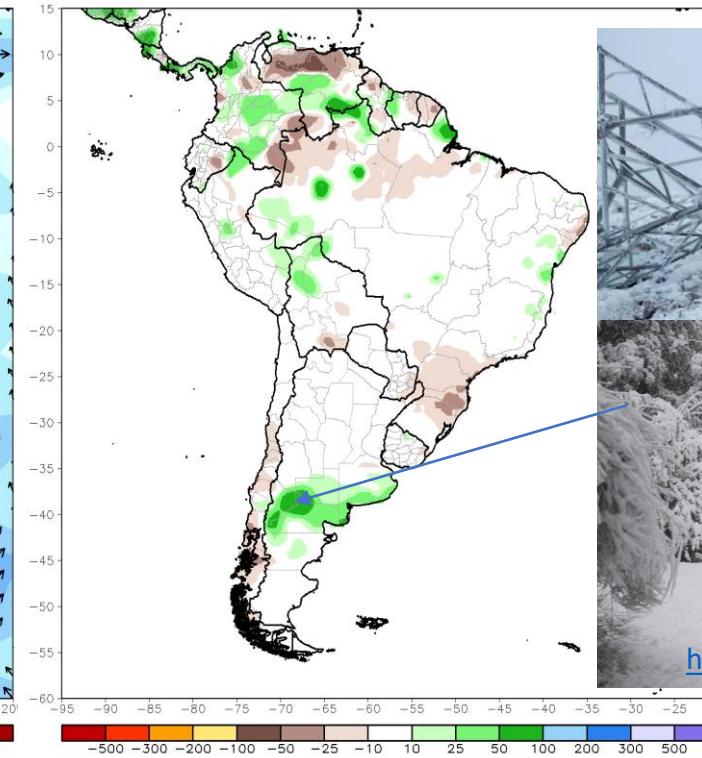


## 850 hPa Flow



## Rainfall

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



<https://opisantacruz.com.ar/>

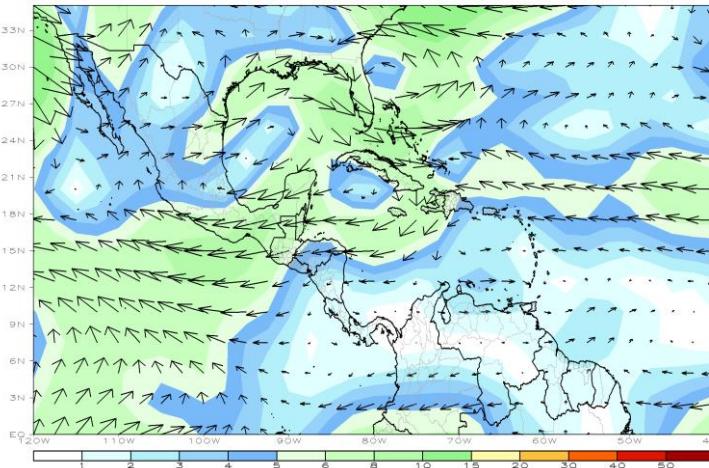


<https://www.telam.com.ar/>

# Last Week's anomalies for the Tropical Americas

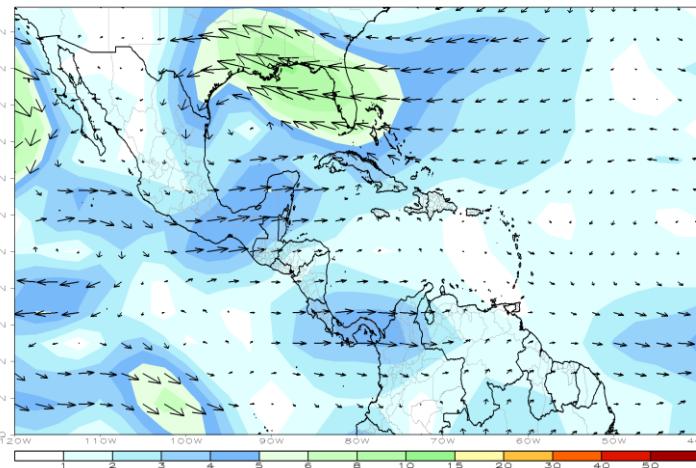
## 200 hPa Flow

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



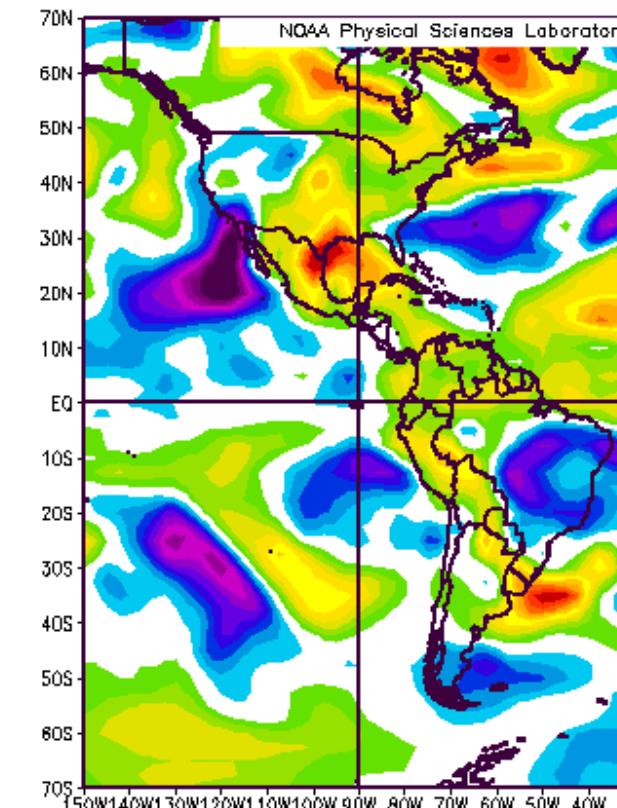
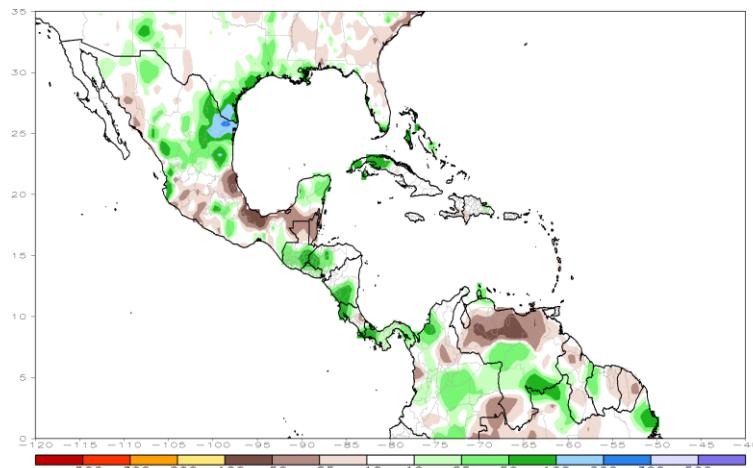
## 850 hPa Flow

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



Columnar Precipitable Water kg/m² Composite Anomaly (1981–2010 Climatology)  
7/21/20 to 7/27/20  
NCEP/NCAR Reanalysis



¡Gracias!

Thank you!