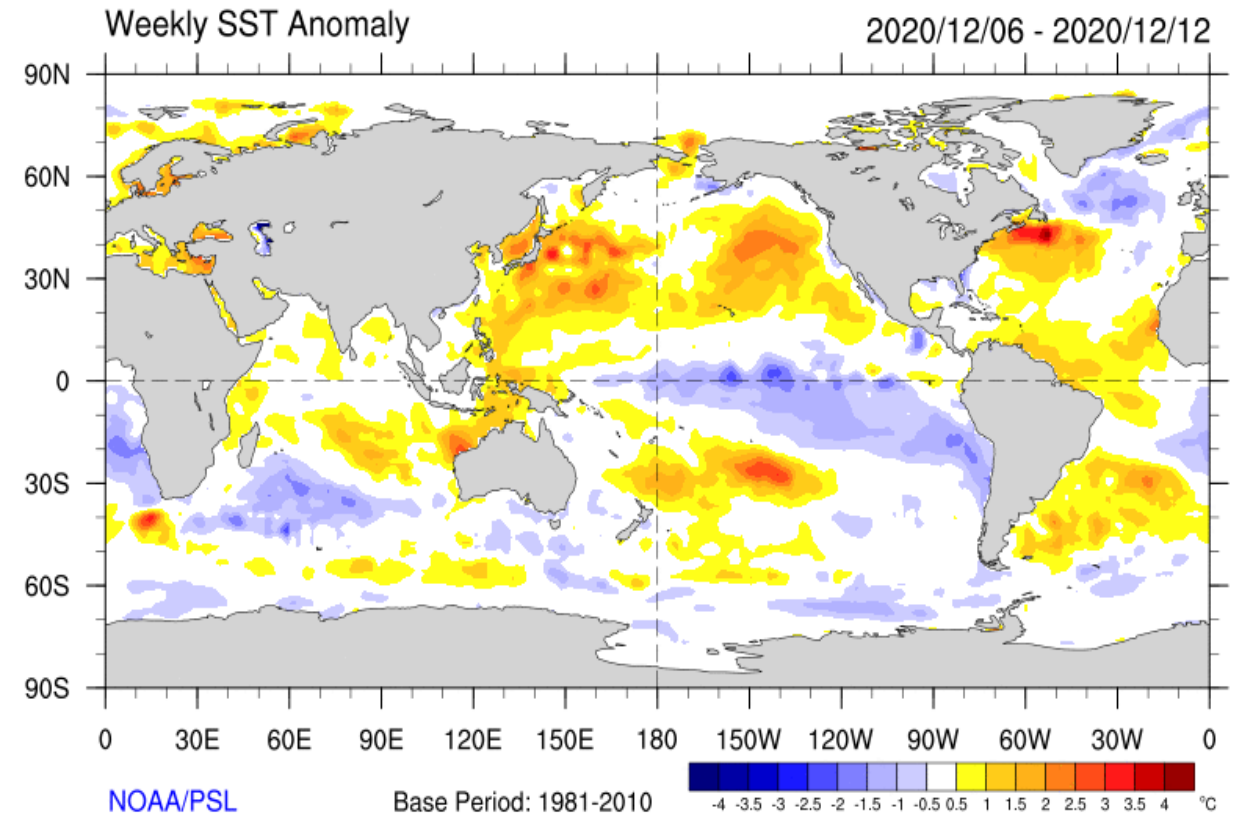
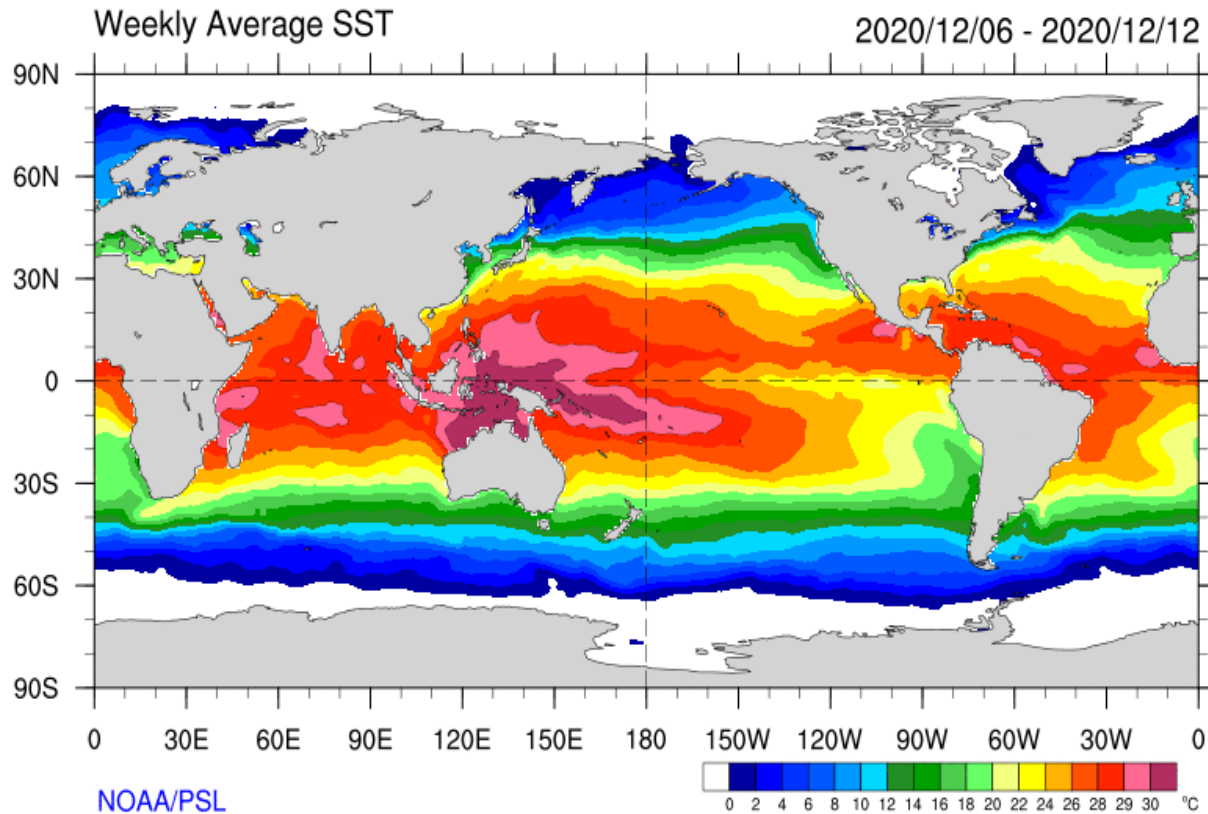


# Monthly Regional Focus Group Session

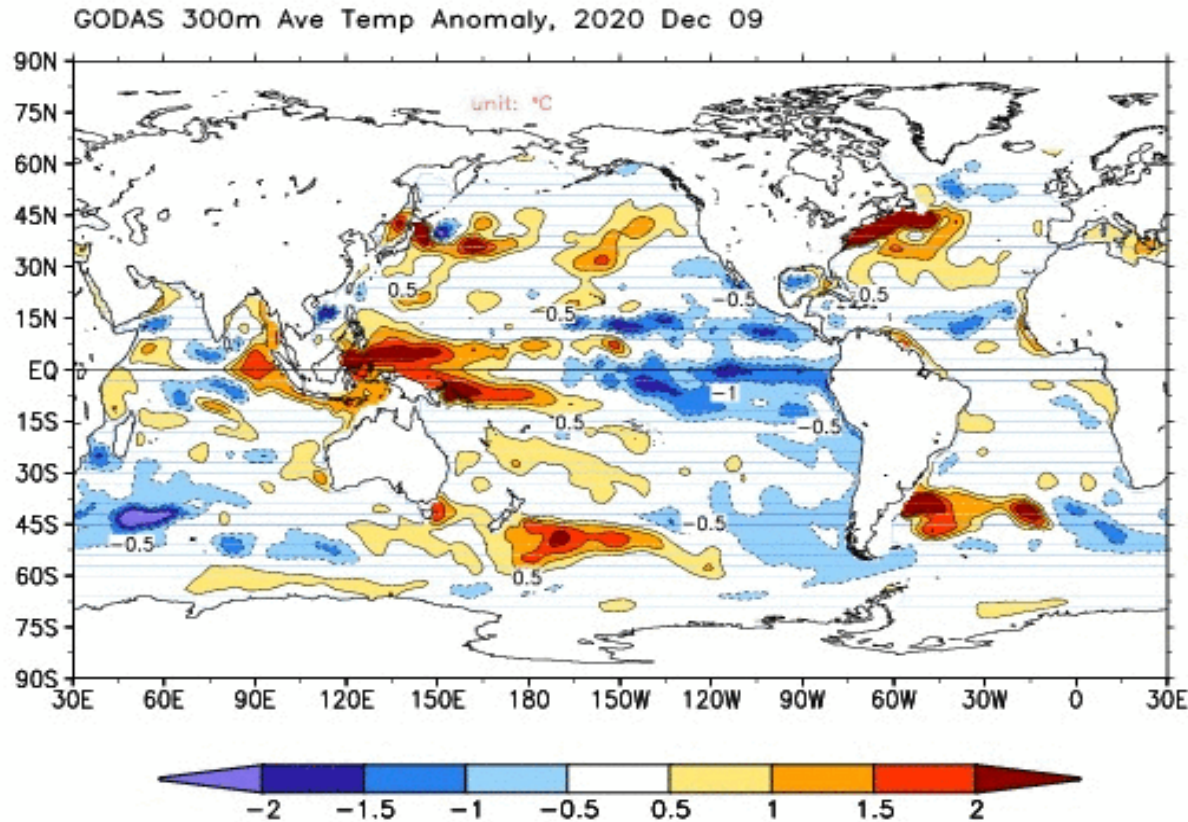
Wednesday 16 December 2020

# Sea Surface Temperatures (Last Week)

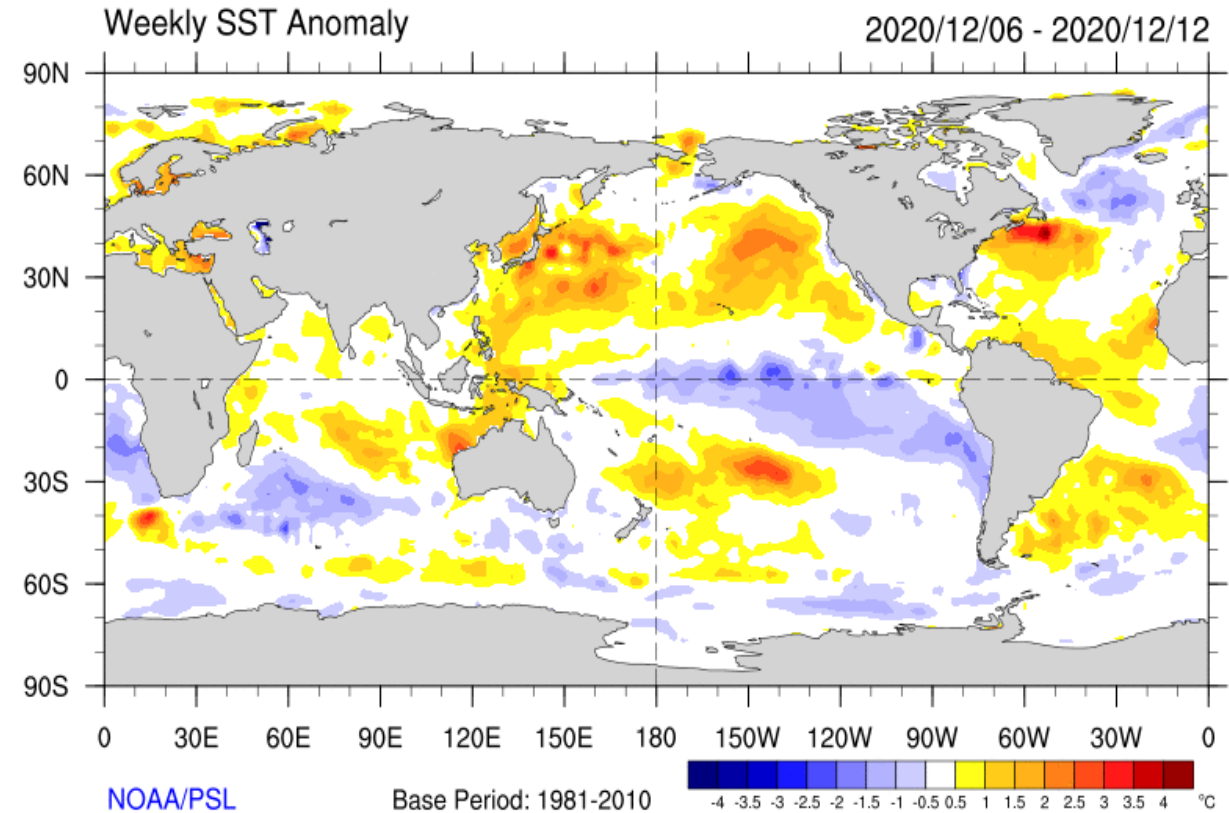


# Deep Ocean Temperature Anomalies last longer:

## Top 300-m Sea Temperature Anomaly



## Sea Surface Temperature Anomaly



Source: GODAS, CPC

# ENSO: La Niña

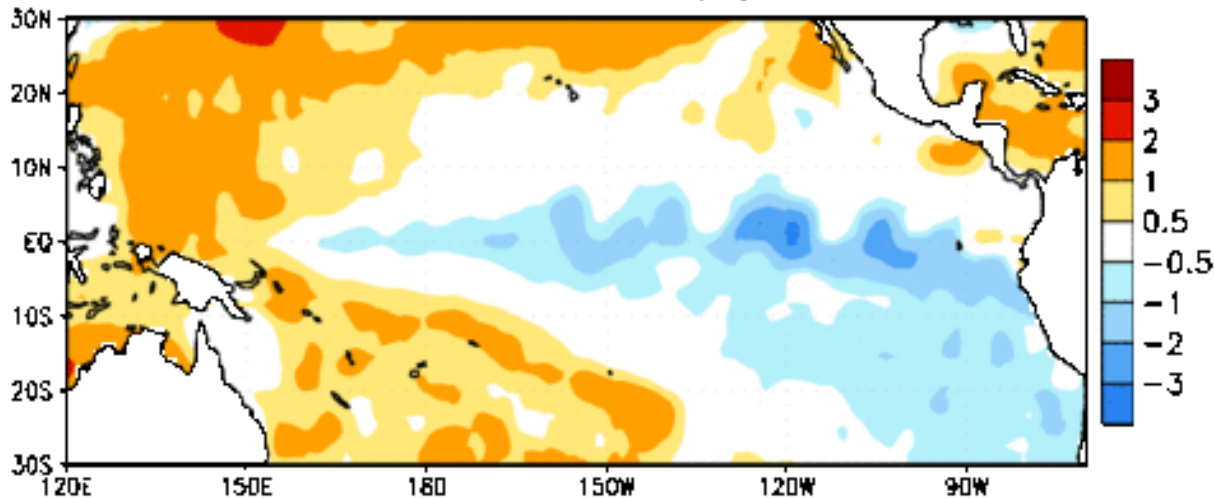
La Niña conditions are present.\*

Equatorial sea surface temperatures (SSTs) are below average from the west-central to eastern Pacific Ocean.

The tropical atmospheric circulation is consistent with La Niña.

## Temperature Anomalies

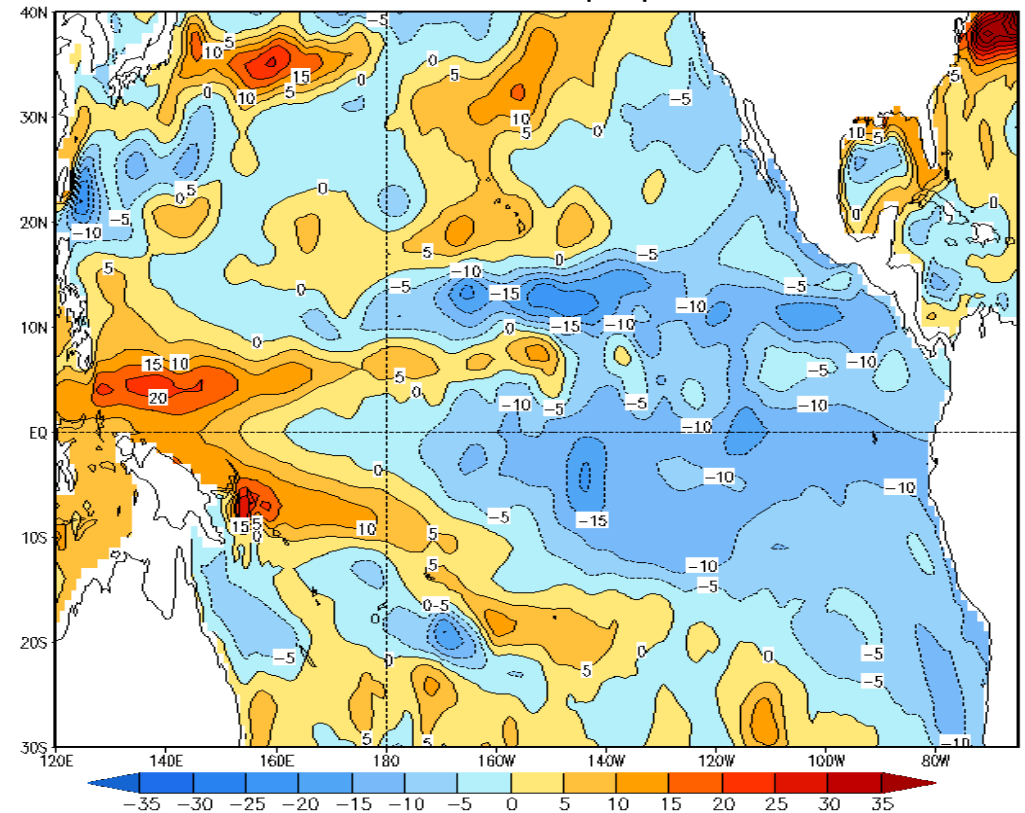
Week centered on 23 SEP 2020  
SST Anomalies (°C)



Source: CPC

## Sea Level Anomalies

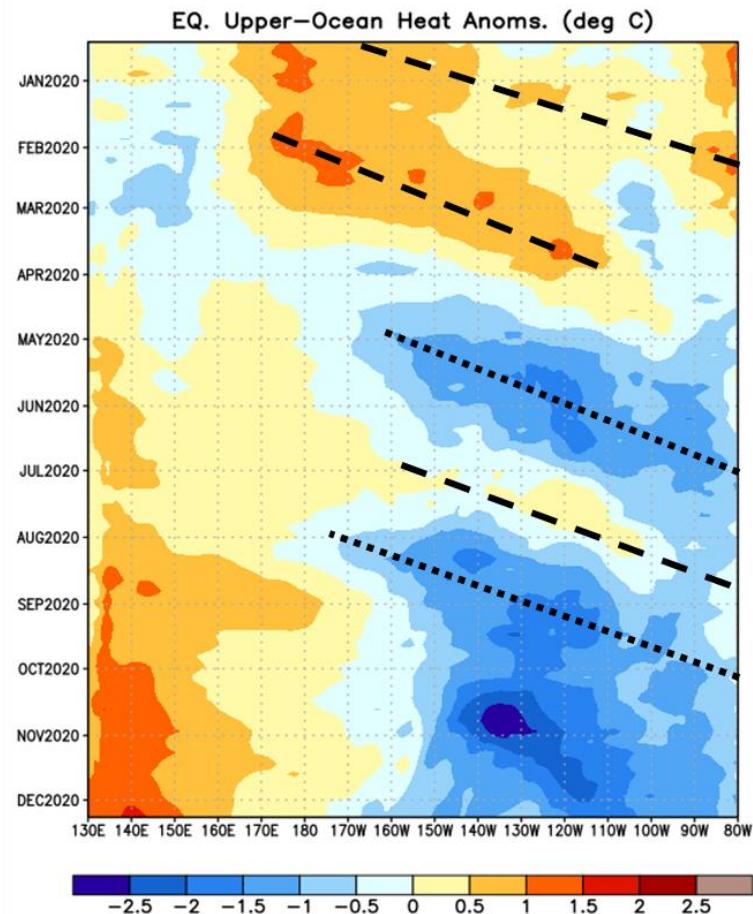
Pentad Sea Level Anom (cm), Dec 09 2020





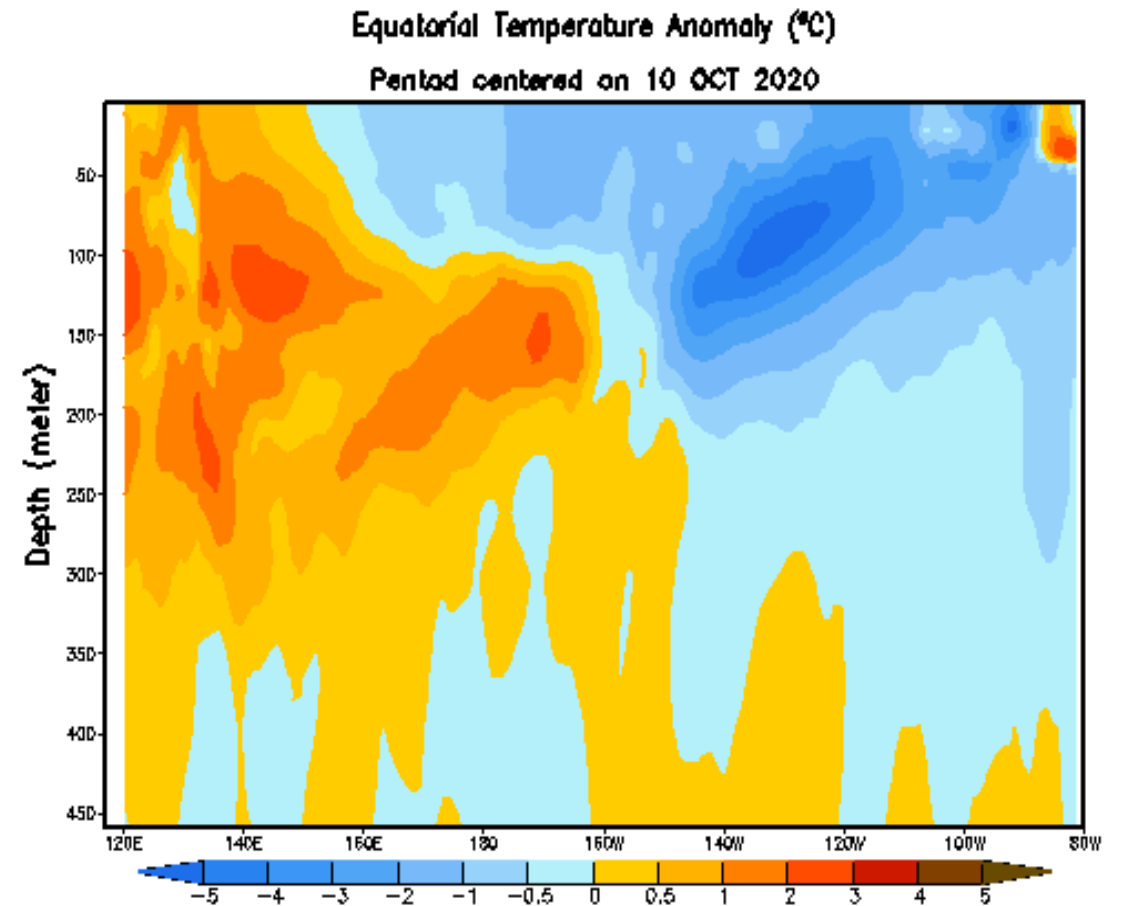
# ENSO

## Hovmöller: Heat Content



Source: CPC

## Animation: Pacific Temp. Anomaly



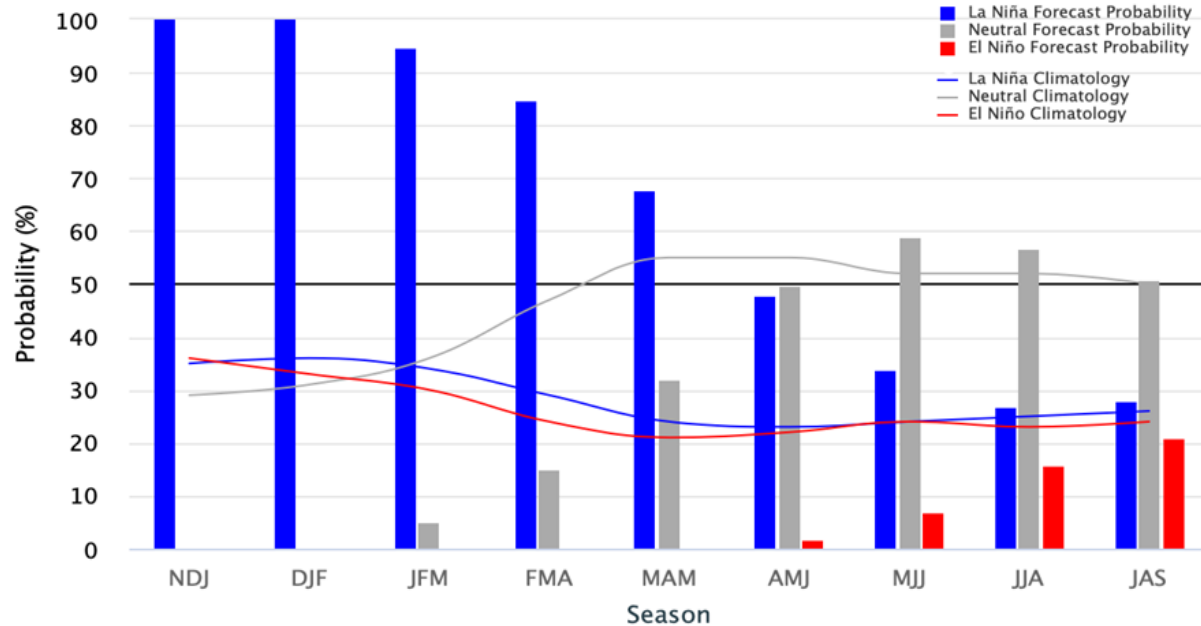
# ENSO Outlook

La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition during the spring 2021 (~50% chance of Neutral during April-June).\*

## CPC/IRI Probabilistic Forecast

Early-December 2020 CPC/IRI Official Probabilistic ENSO Forecasts

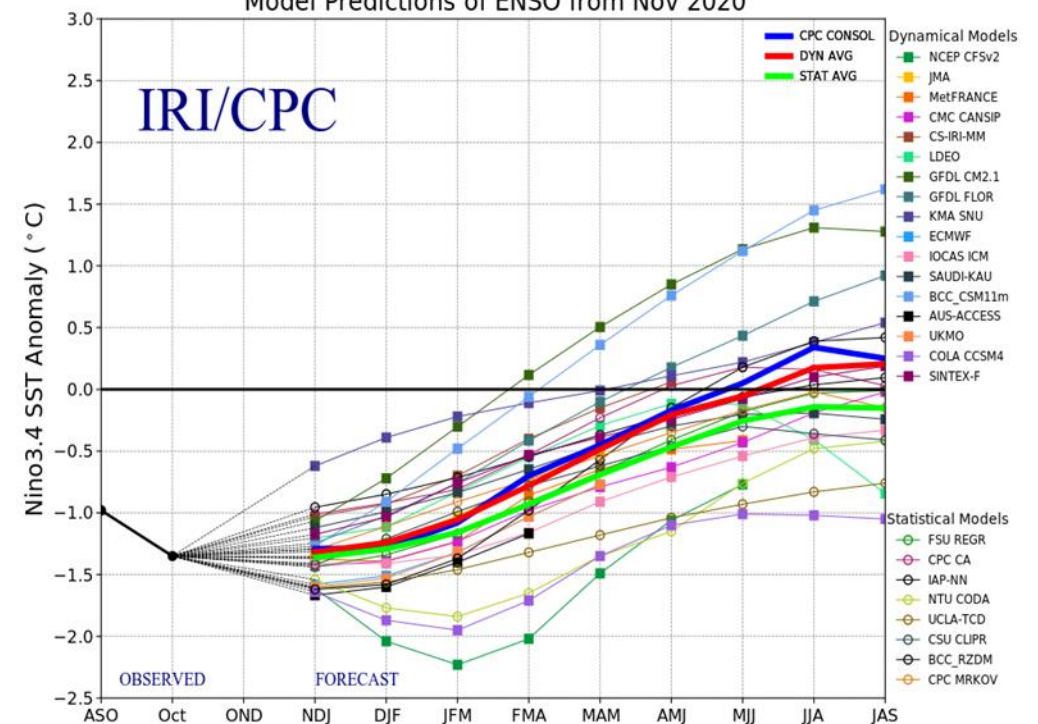
ENSO state based on NINO3.4 SST Anomaly  
Neutral ENSO: -0.5 °C to 0.5 °C



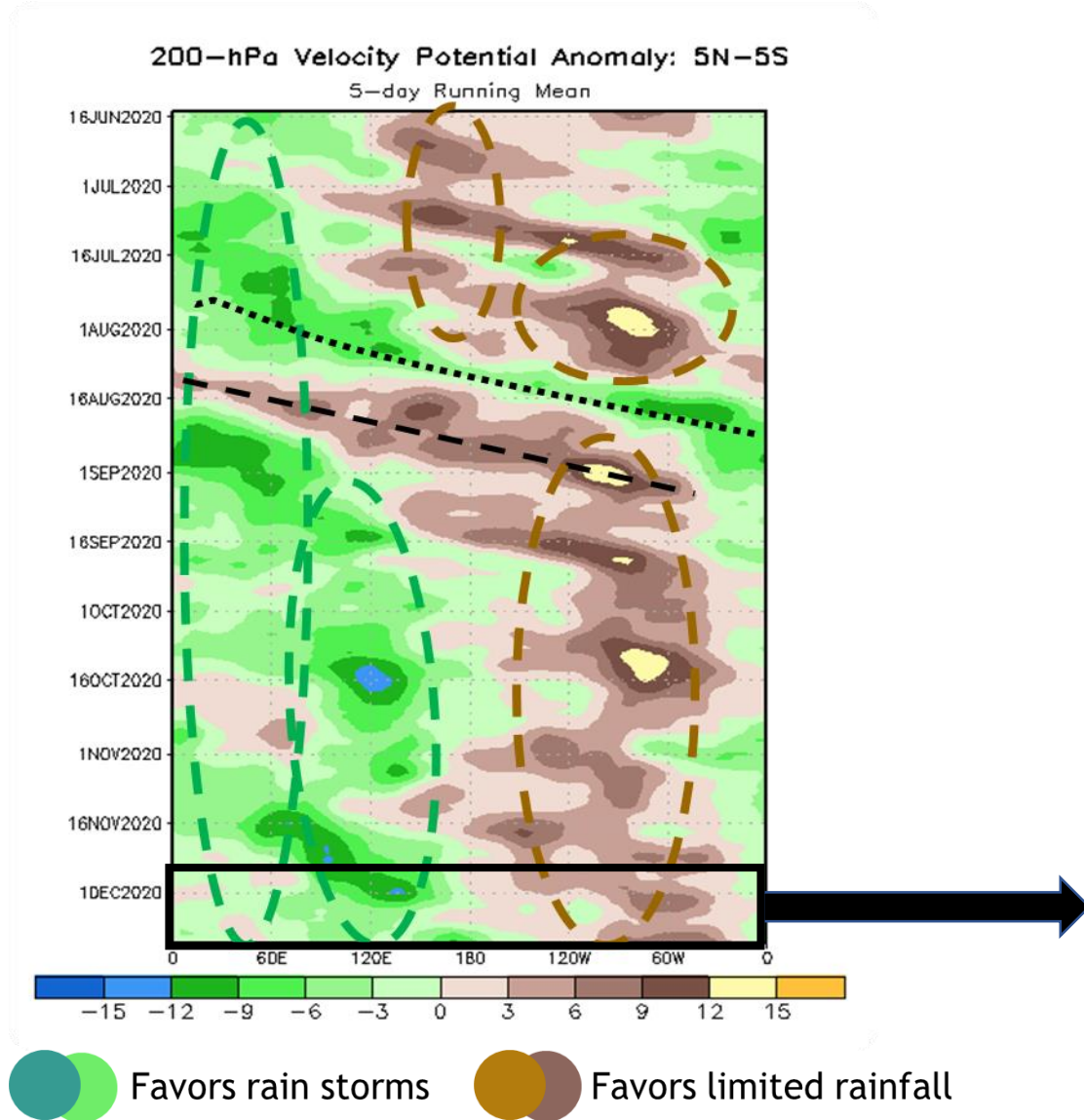
Source: CPC

## IRI/CPC Dynamic Models

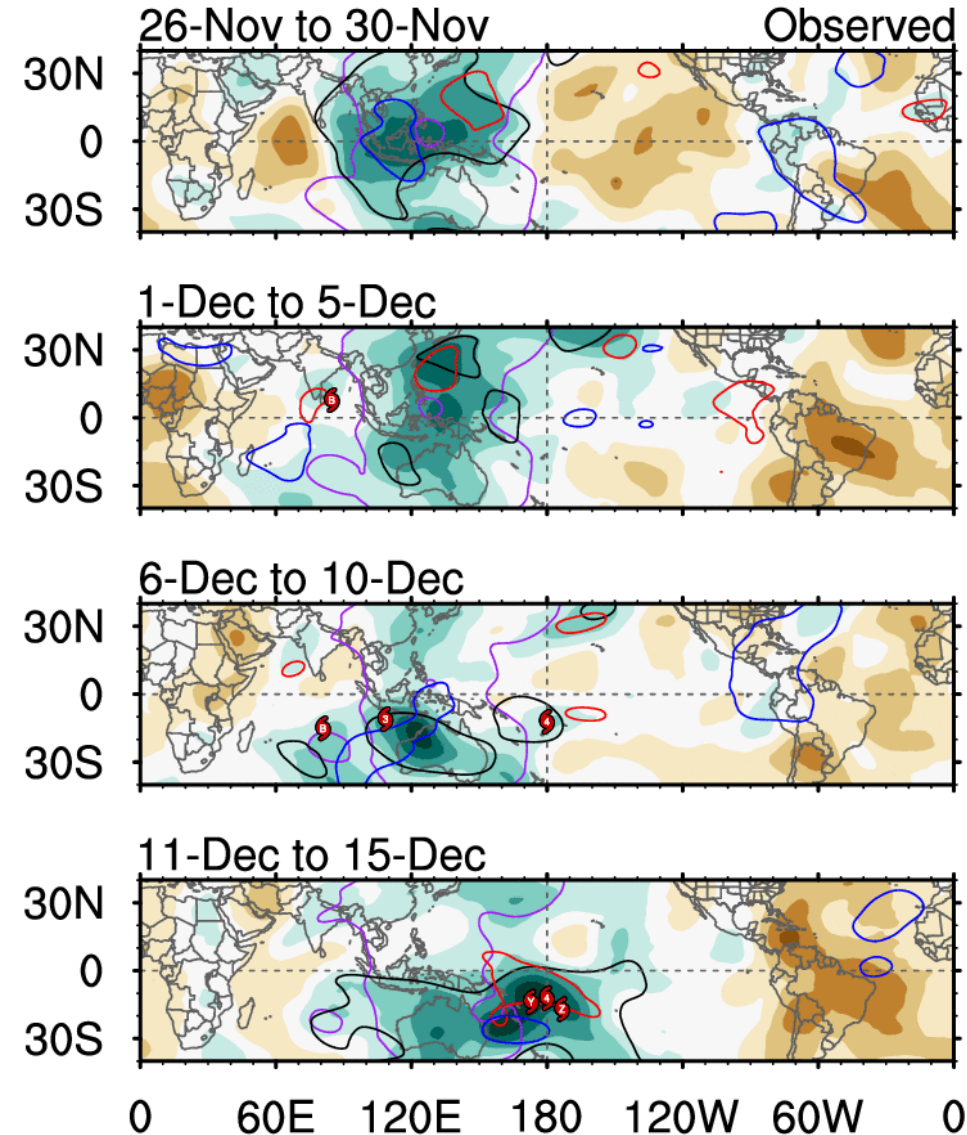
Model Predictions of ENSO from Nov 2020



# Madden-Julian Oscillation (MJO)



Source: CPC

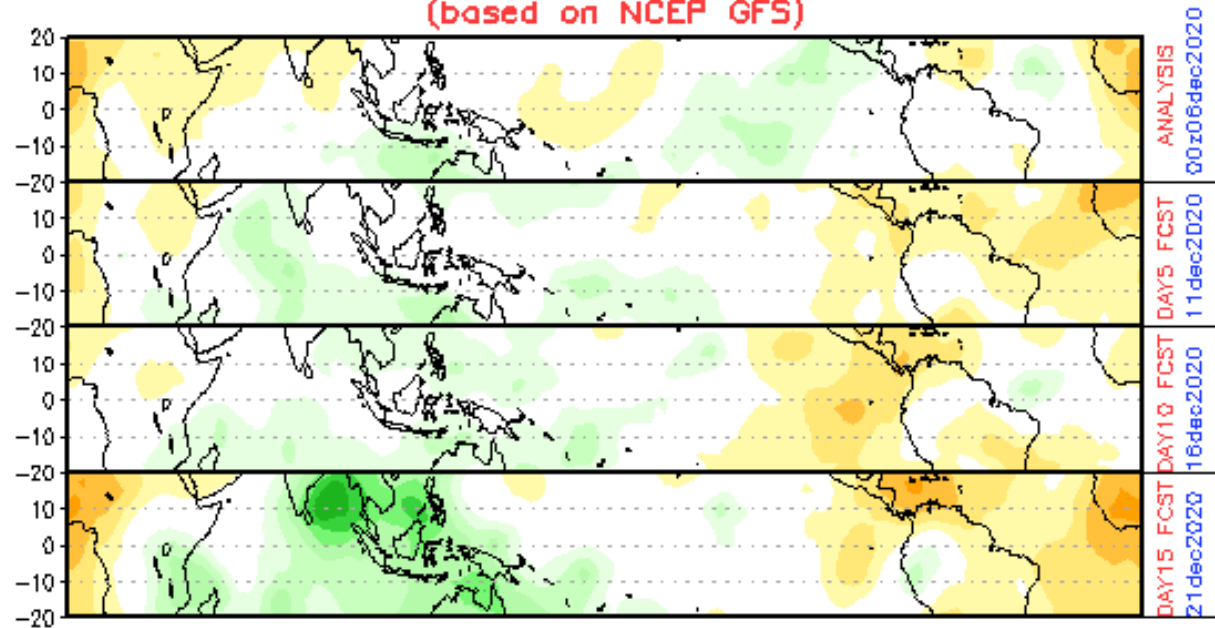




# MJO Forecasts

## GFS

CHI 200 hPa 15-DAY forecast (00z06dec2020-21dec2020)  
(based on NCEP GFS)



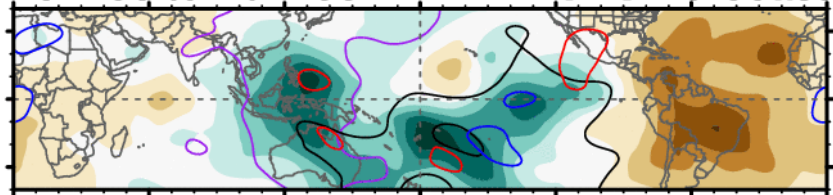
7-day CHI200 with CFS forecasts

Wed 2020-09-16 1018 UTC

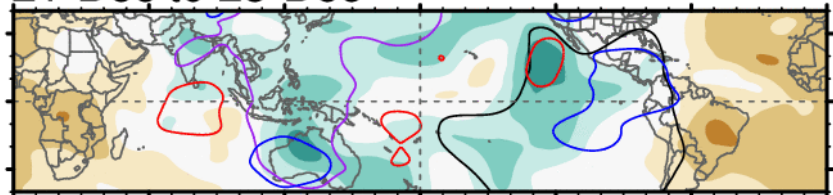
— MJO      — Kelvin x2  
— Low      — ER  
Contours at -2, -6 x10<sup>6</sup> m2 s<sup>-1</sup>  
Carl Schreck  
carl\_schreck@ncsu.edu

## CFS

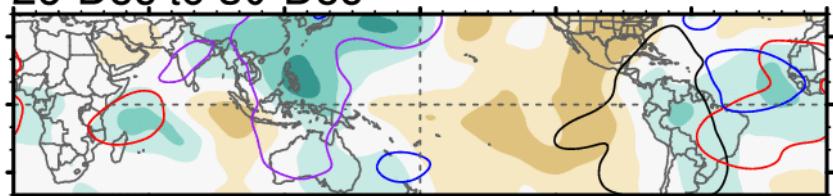
16-Dec to 20-Dec      CFS Forecast



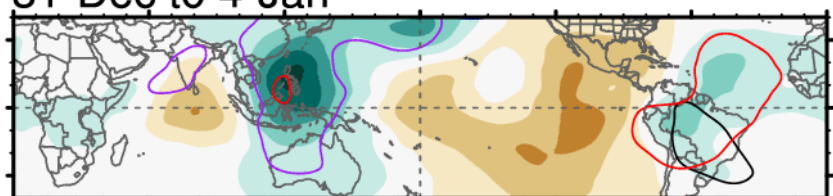
21-Dec to 25-Dec



26-Dec to 30-Dec



31-Dec to 4-Jan



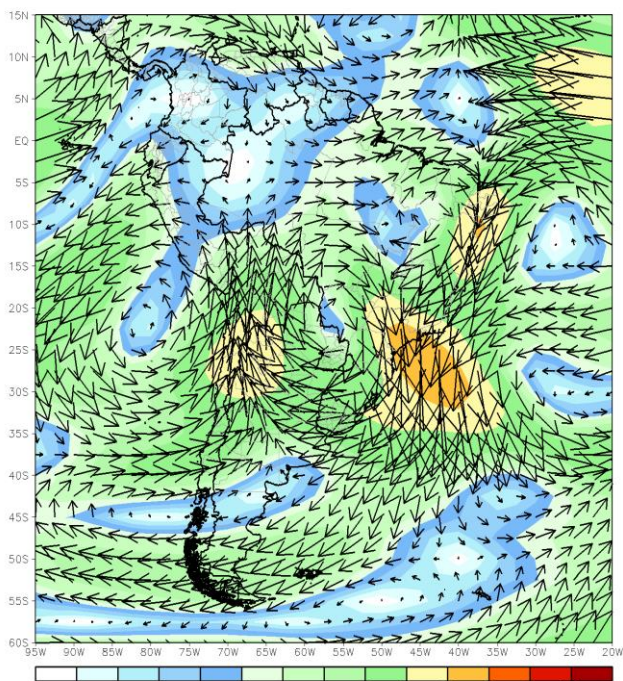
0      60E      120E      180      120W      60W      0



# Last week's anomalies for South America

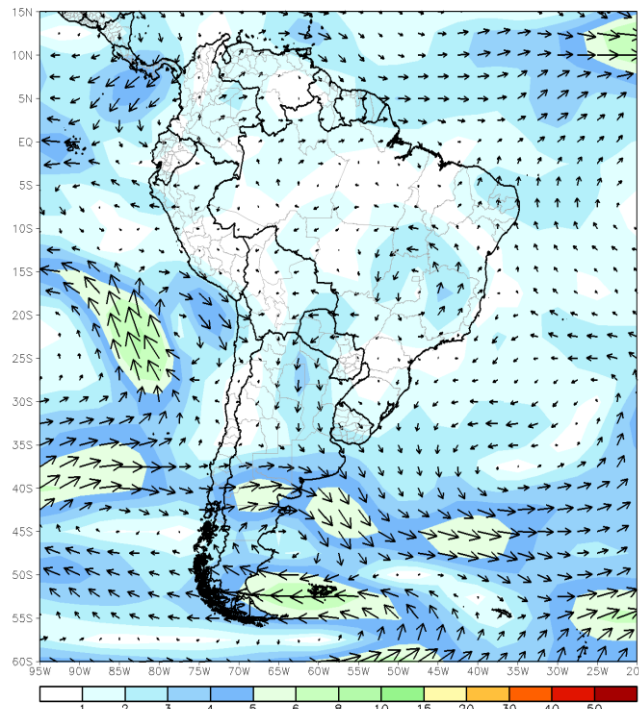
## 200 hPa Flow

CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 07Dec2020 - 13Dec2020



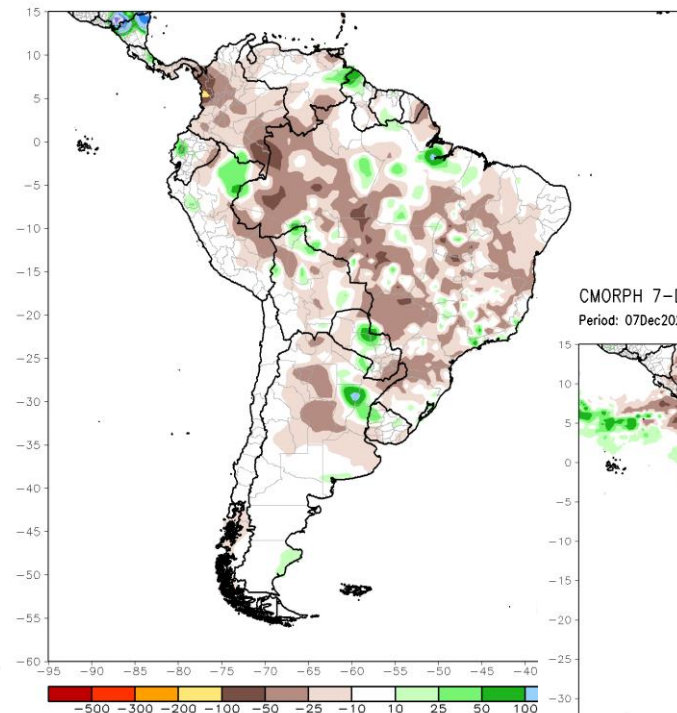
## 850 hPa Flow

CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 07Dec2020 - 13Dec2020

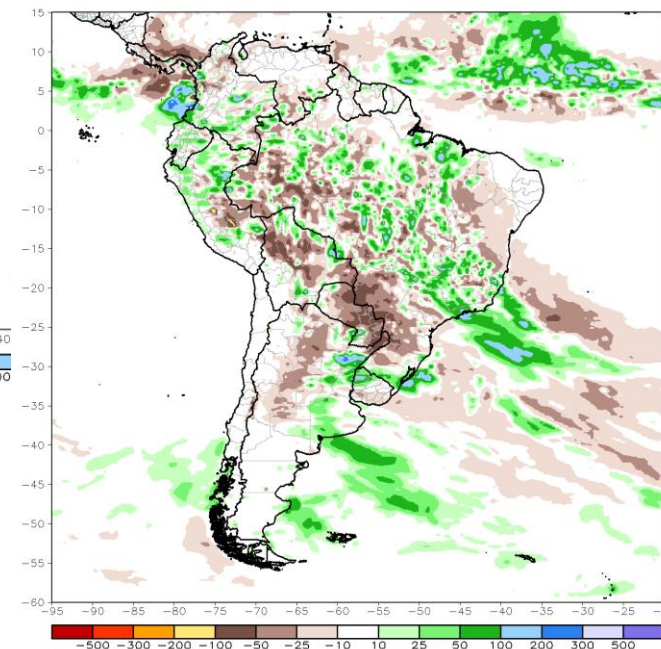


## Rainfall

CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)  
Period: 08Dec2020 - 14Dec2020



CMORPH 7-Day Total Rainfall Anomaly (mm)  
Period: 07Dec2020 - 13Dec2020

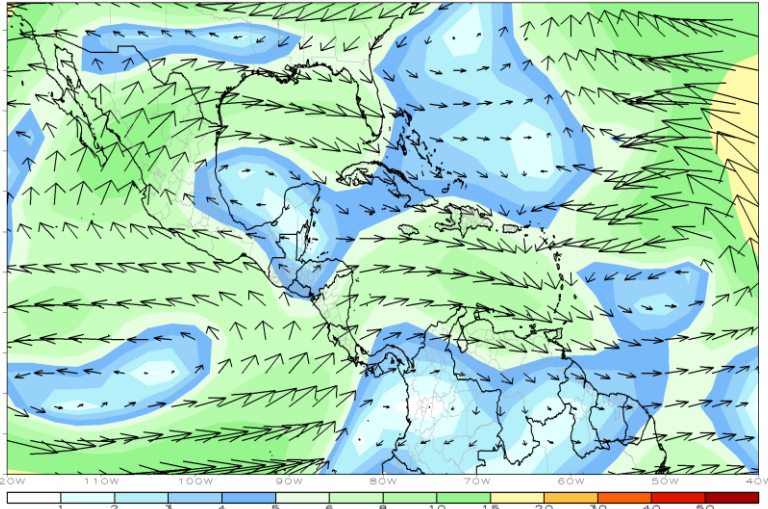


CMORPH: CPC Morphing Technique  
[https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph\\_description.html](https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html)

# Last Week's anomalies for the Tropical Americas

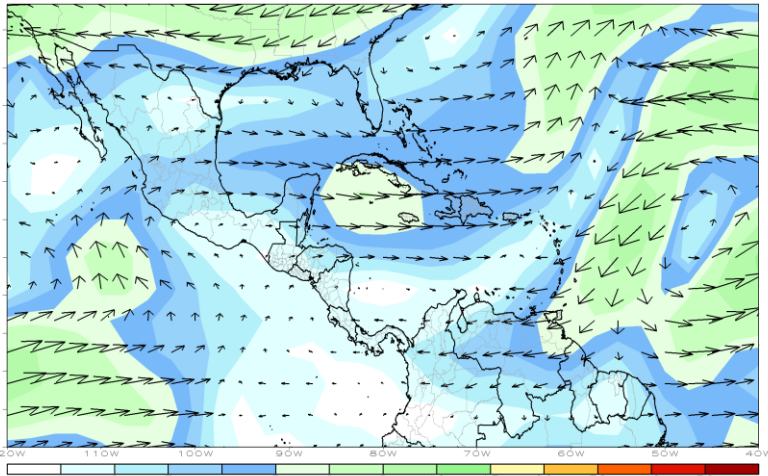
## 200 hPa Flow

CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 07Dec2020 - 13Dec2020



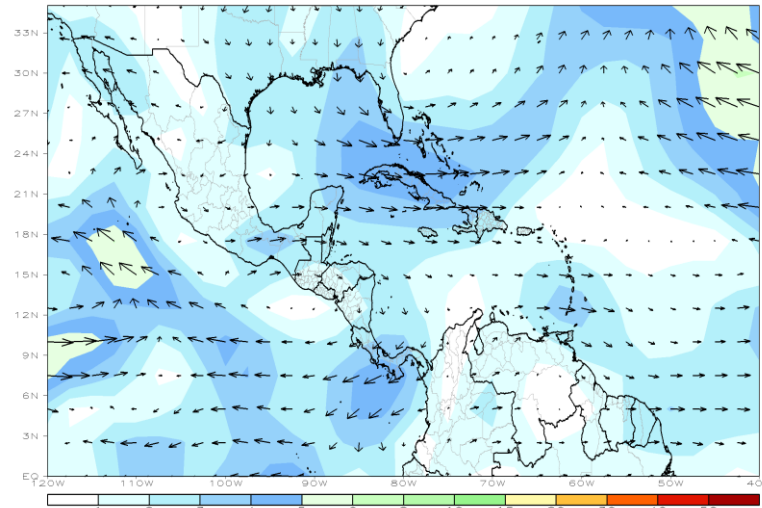
## 500 hPa Flow

CDAS 500mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 07Dec2020 - 13Dec2020



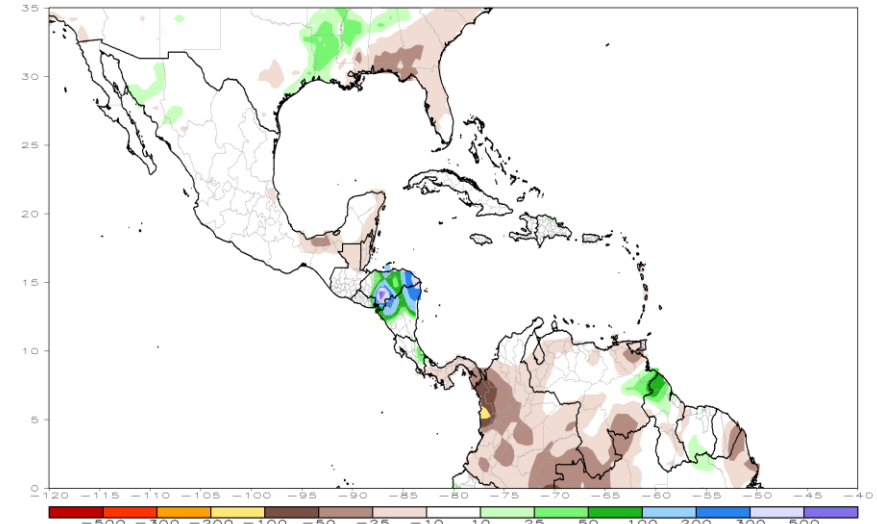
## 850 hPa Flow

CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)  
Period: 07Dec2020 - 13Dec2020

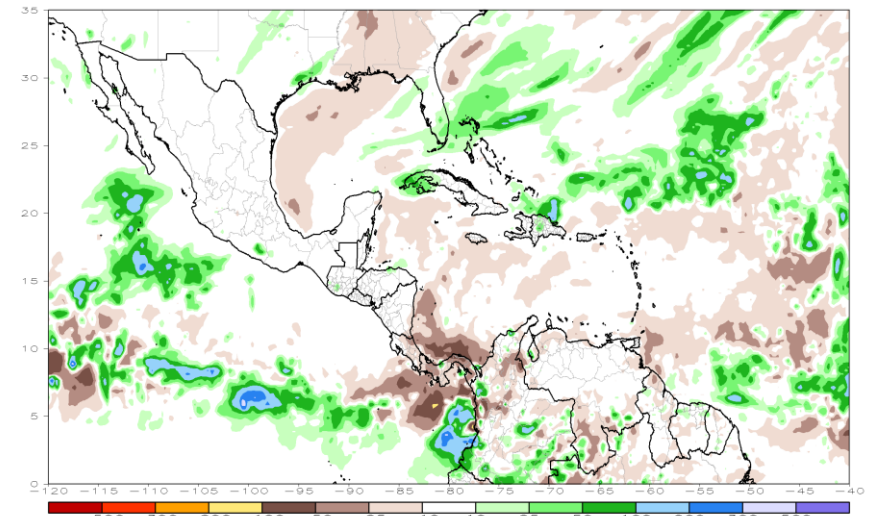


## Rainfall

CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)  
Period: 08Dec2020 - 14Dec2020



CMORPH 7-Day Total Rainfall Anomaly (mm)  
Period: 07Dec2020 - 13Dec2020



CMORPH: CPC Morphing Technique  
[https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph\\_description.html](https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html)



**¡Gracias!**

**Thank you!**