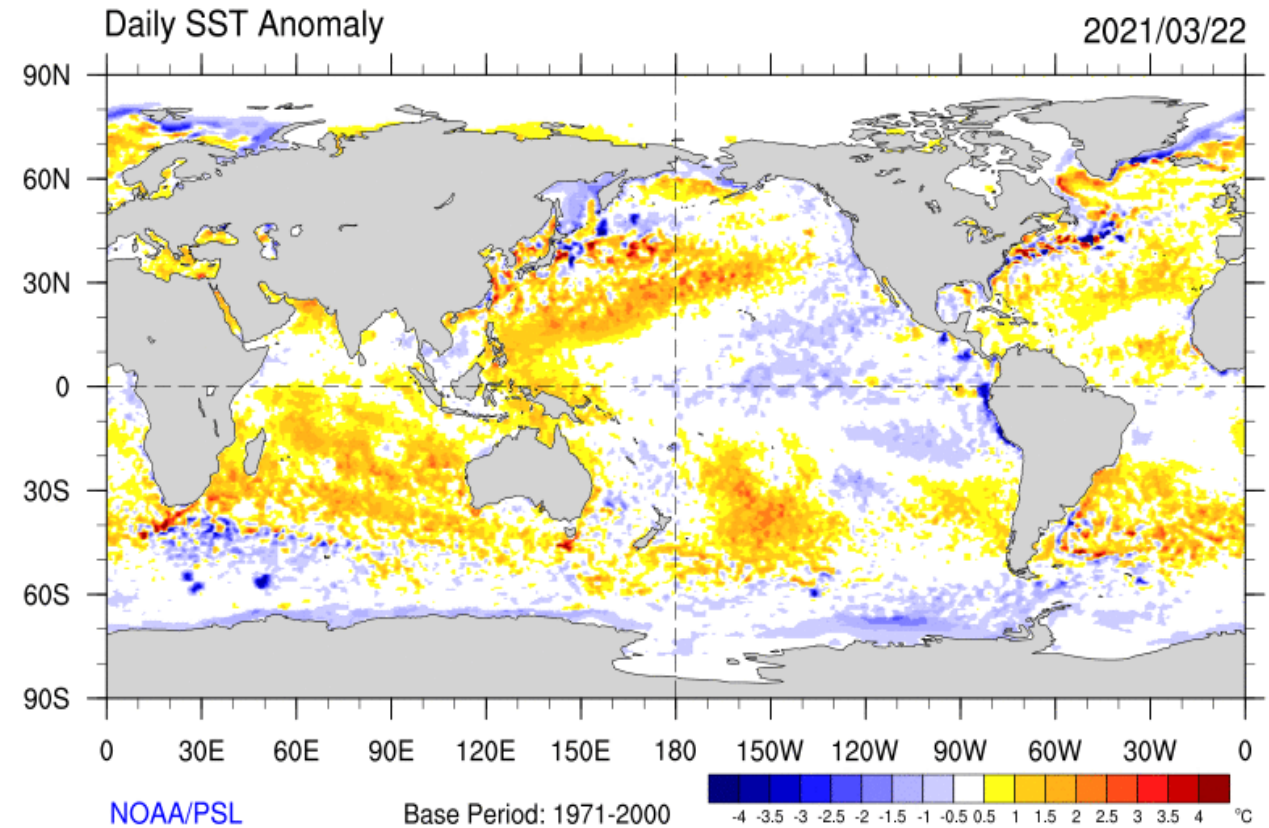
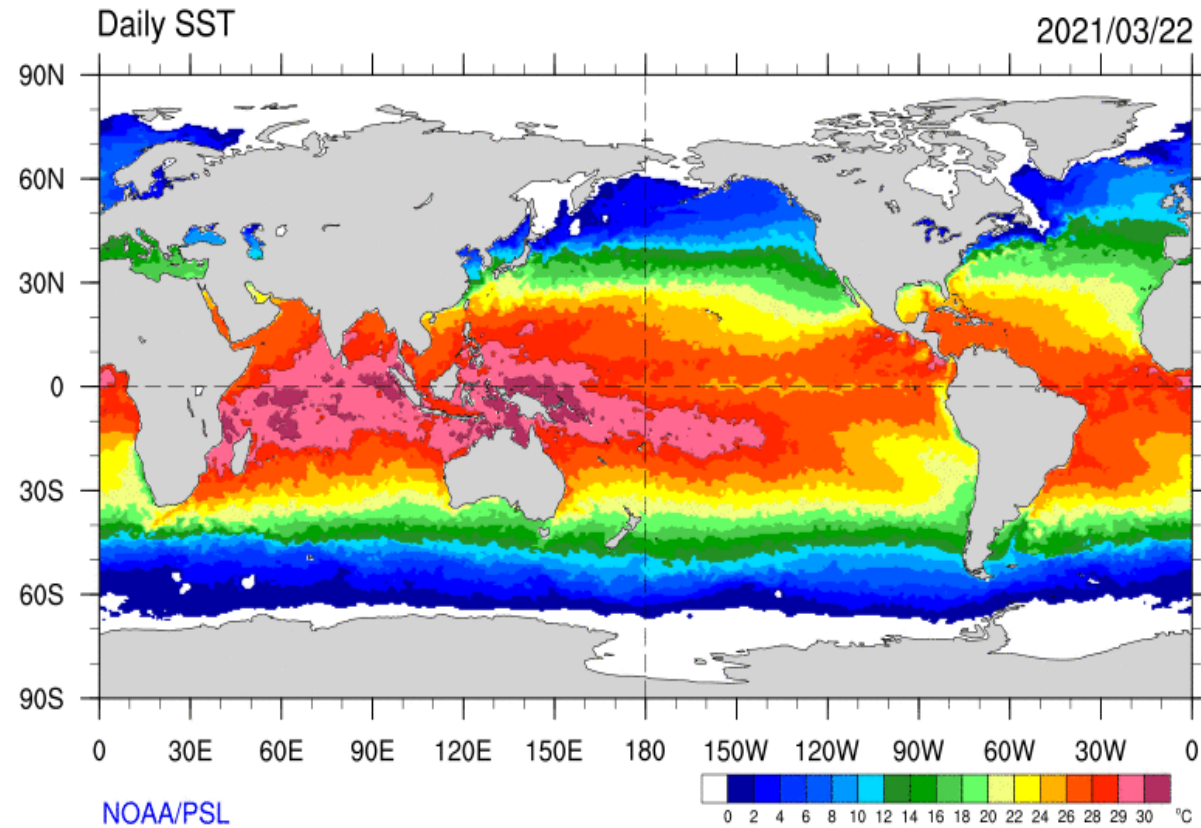


Monthly Regional Focus Group Session

Wednesday 24 March 2021

Sea Surface Temperatures (Last Week)

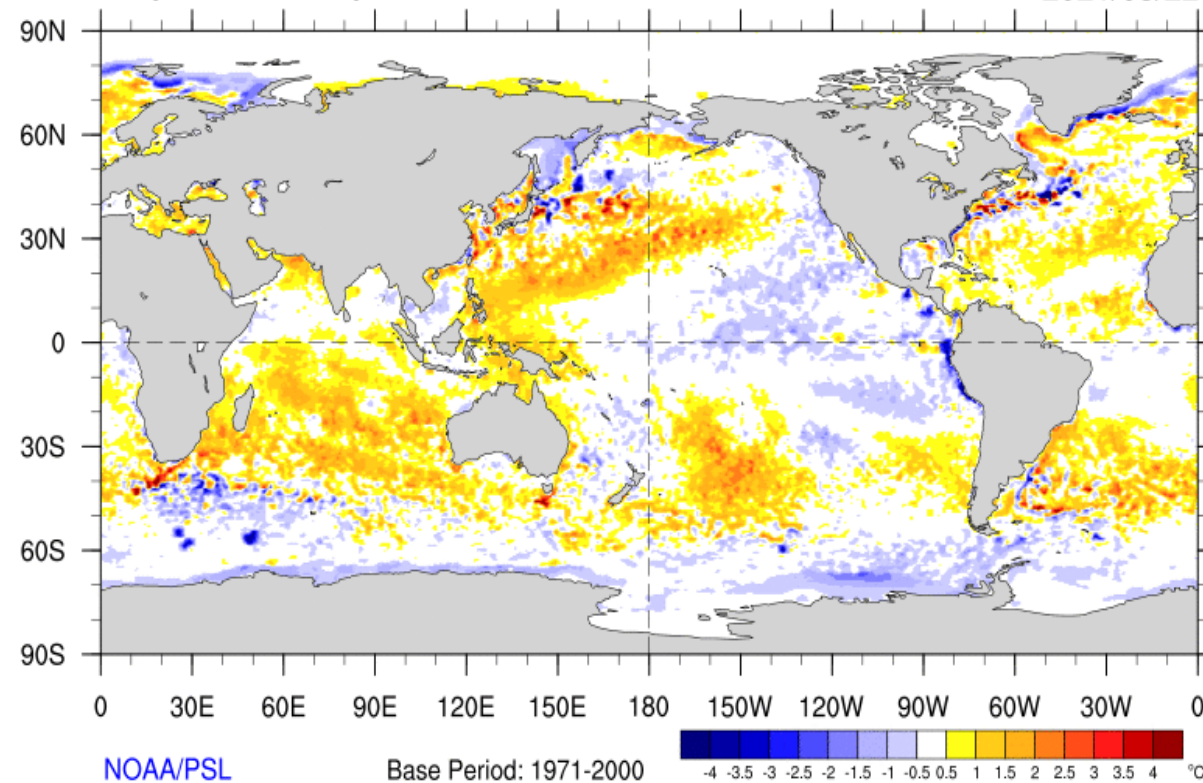


Are the temperature anomalies deep?

Deep anomalies tend to last longer and are useful for subseasonal forecasting.

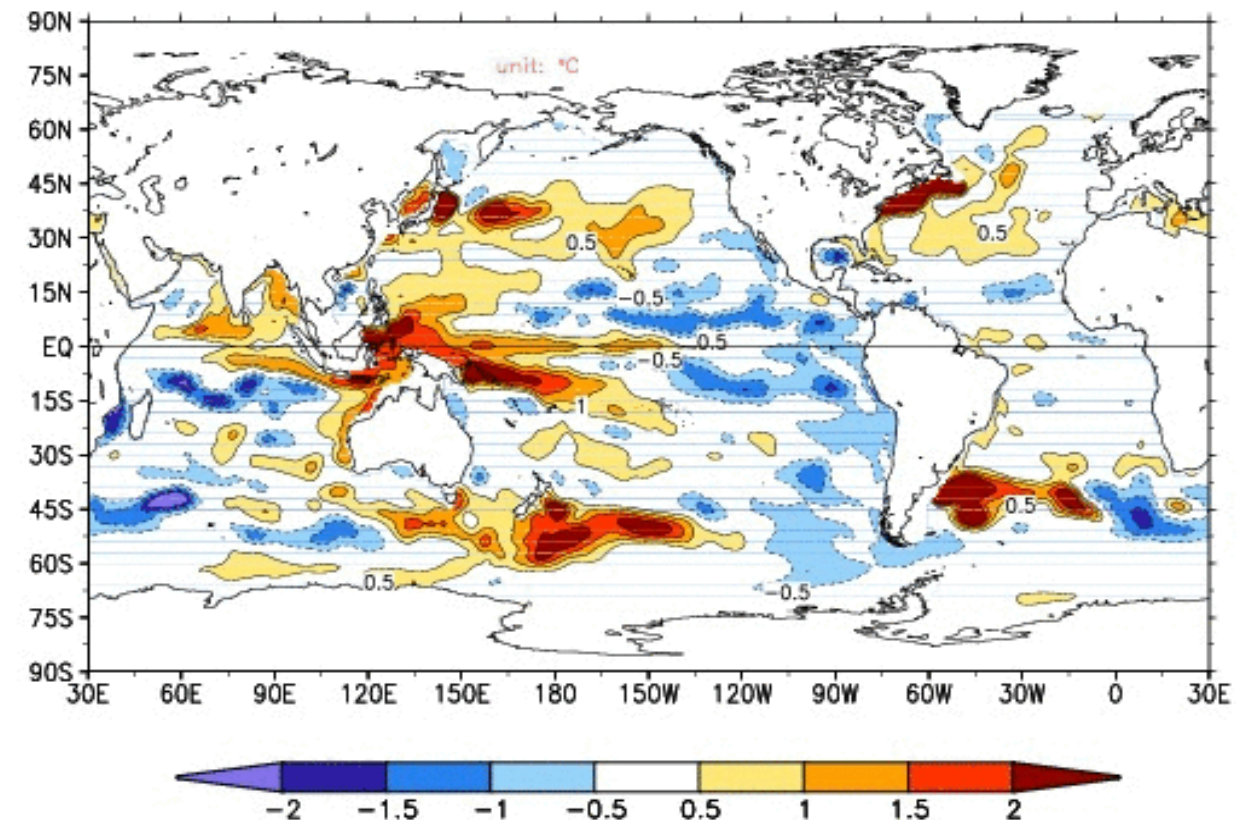
Daily SST Anomaly

2021/03/22



Top 300m Layer Anomaly

GODAS 300m Ave Temp Anomaly, 2021 Mar 19

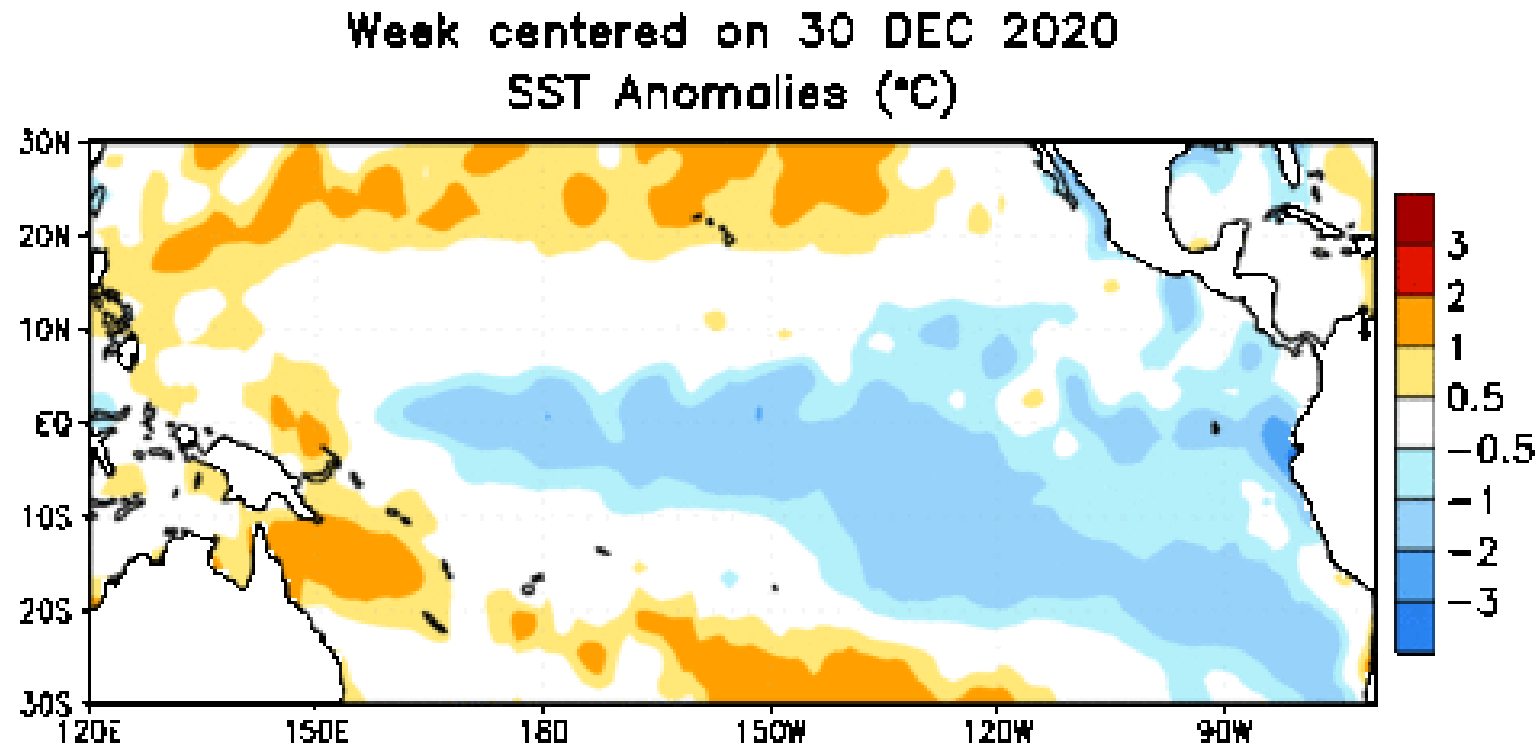


Source: CPC GODAS, <https://www.cpc.ncep.noaa.gov/products/GODAS/>

ENSO:

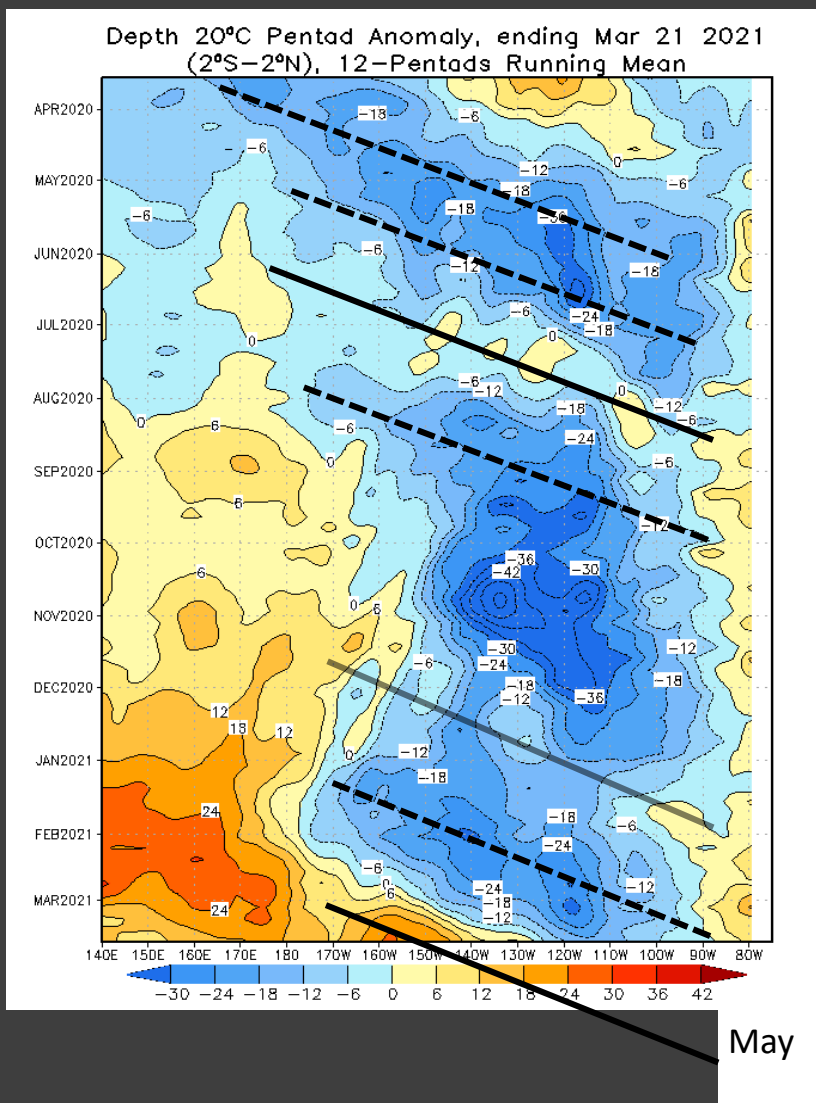
La Niña

- La Niña is 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.

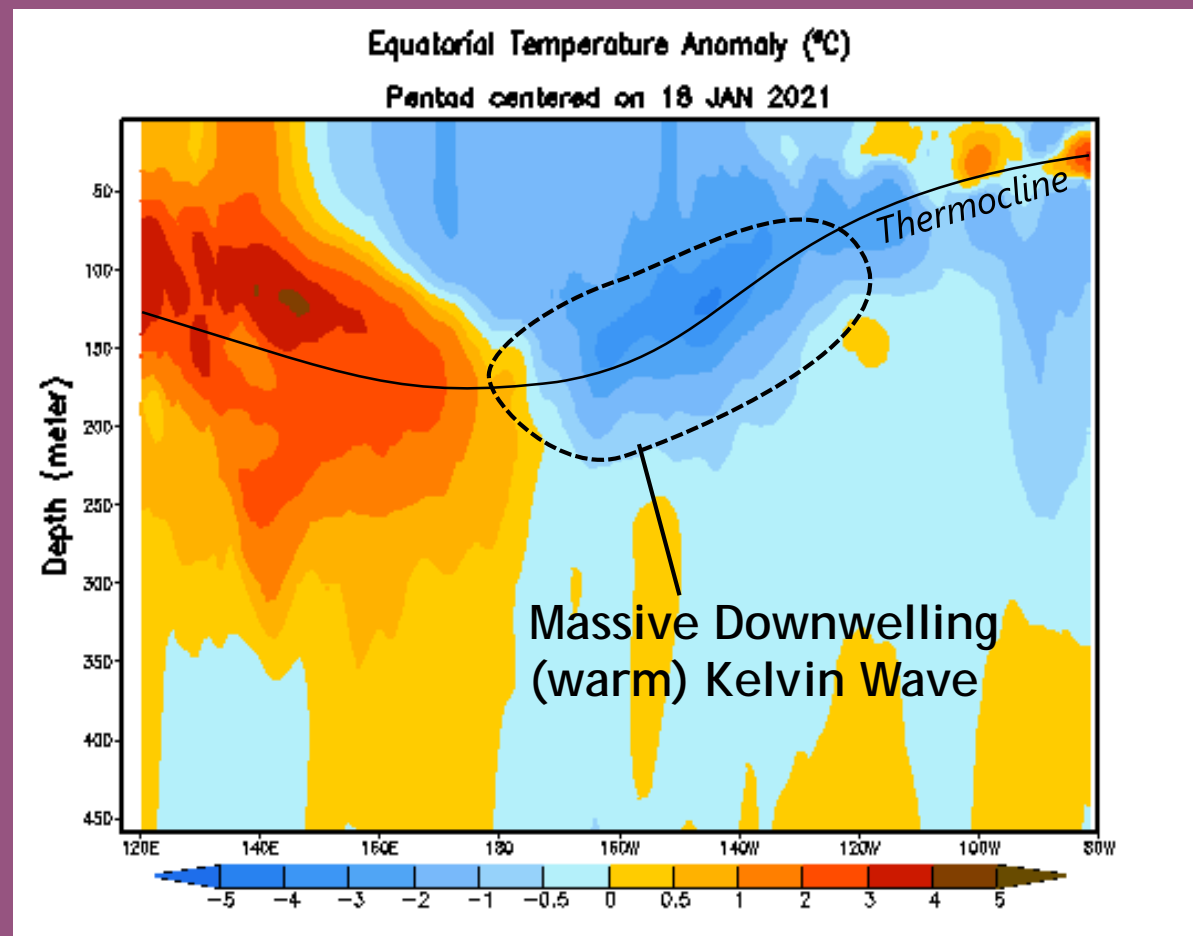


ENSO

Hovmöller: Heat Content

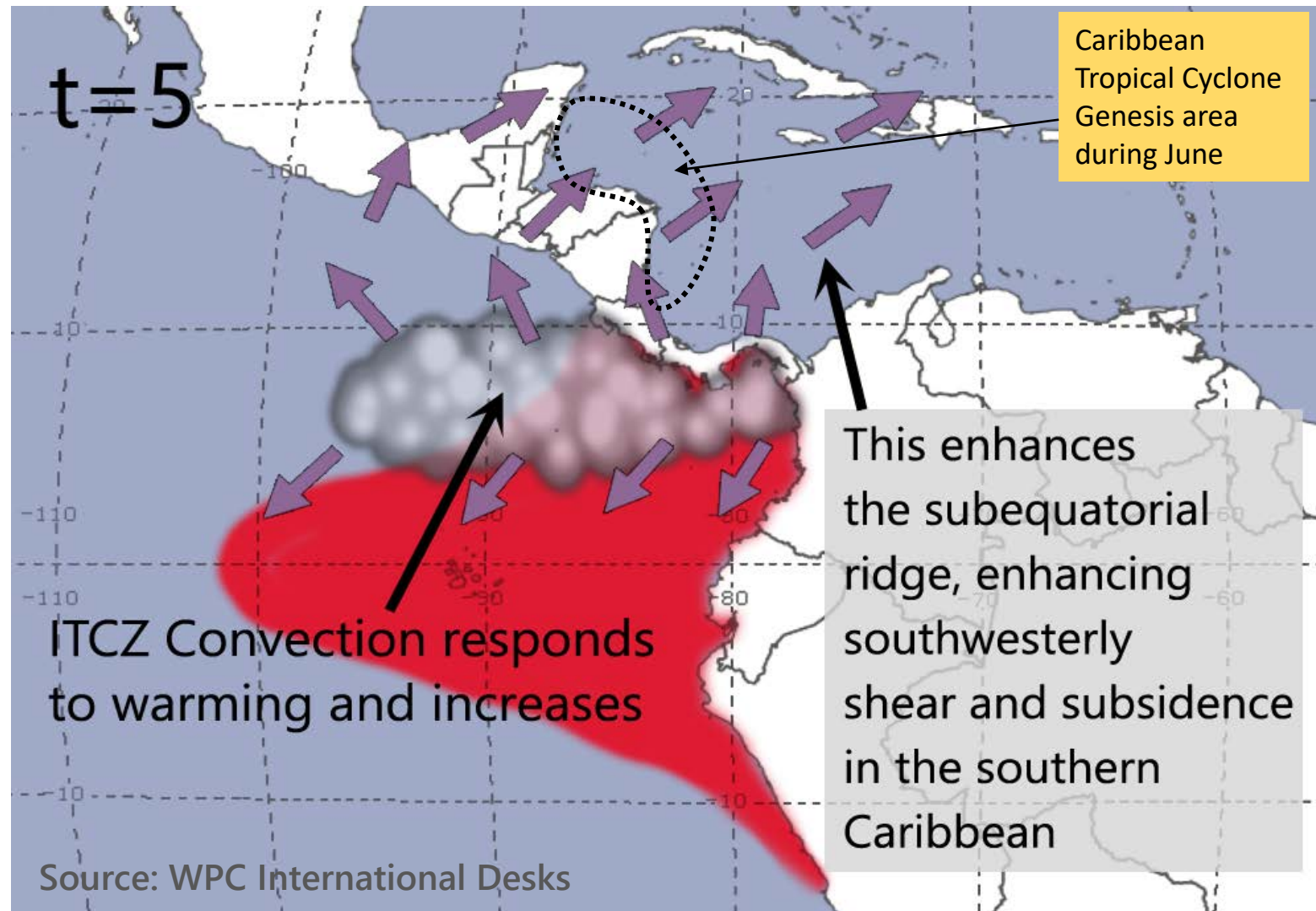


Equatorial Pacific Temp. Anomaly



Potential SST Warming in May/June

- Potential SST Warming in May/June in the Eastern Pacific
- Tends to favor more SW shear in the region where tropical cyclones form = less chance for cyclones.
- Could mean a more active Pacific season during onset.



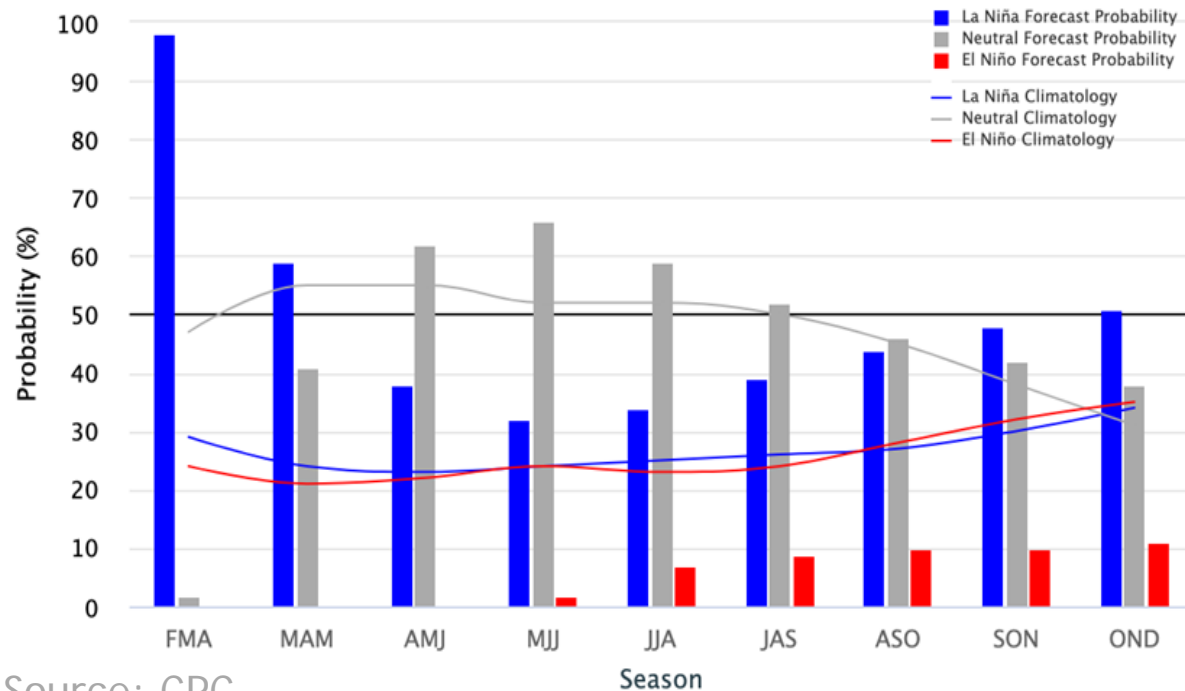
ENSO Outlook

There is a ~60% chance of a transition from La Niña to ENSO-Neutral during the Northern Hemisphere spring 2021 (April-June).*

CPC/IRI Probabilistic Forecast

Early-March 2021 CPC/IRI Official Probabilistic ENSO Forecasts

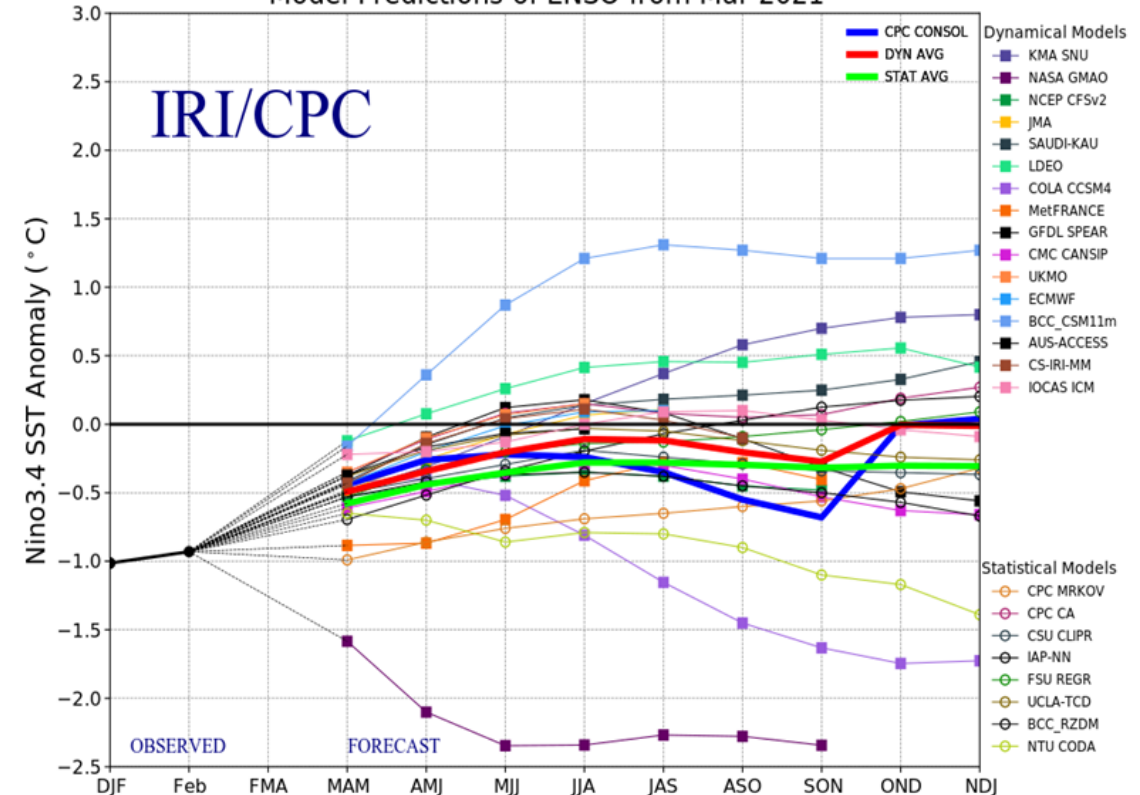
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5°C to 0.5°C



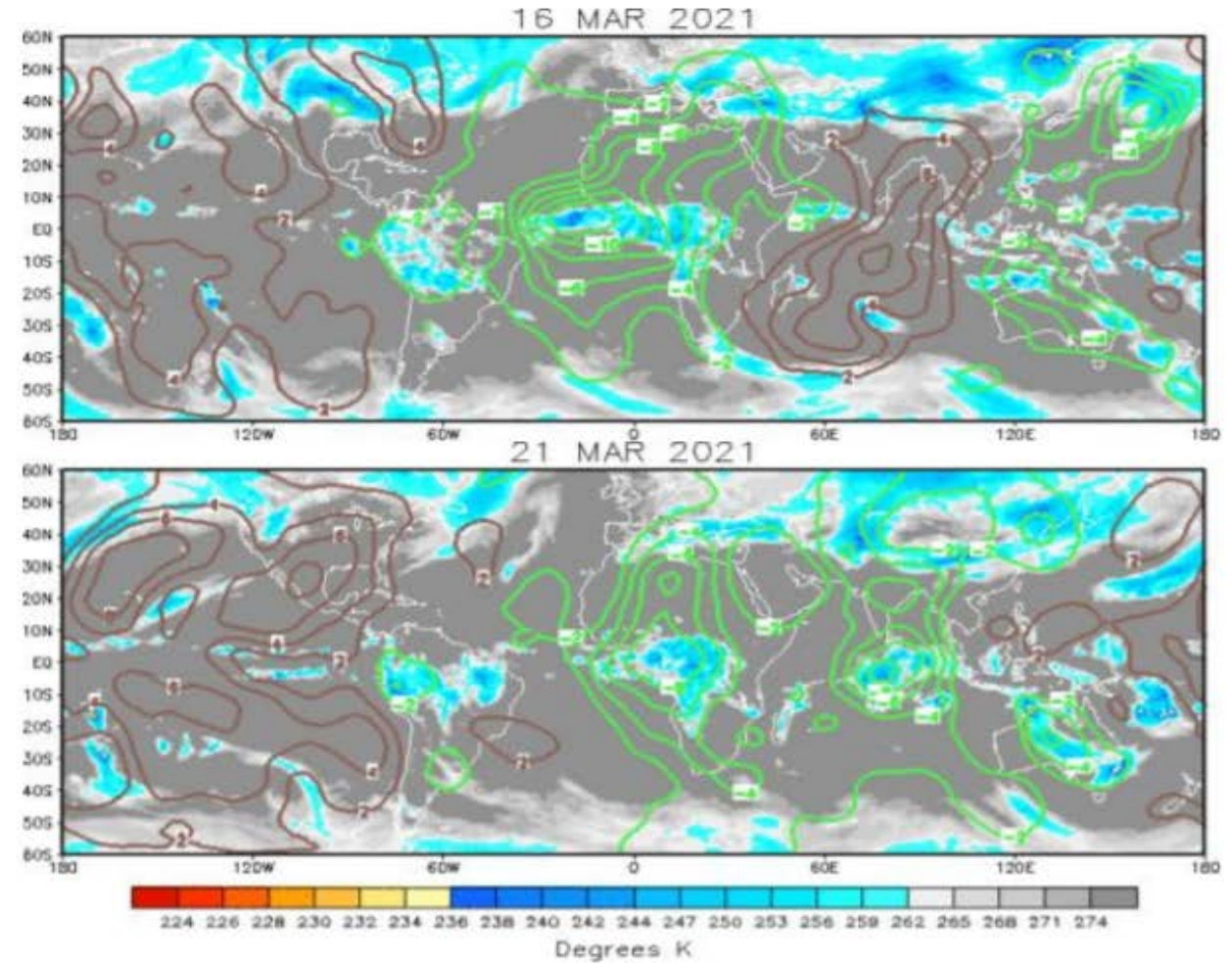
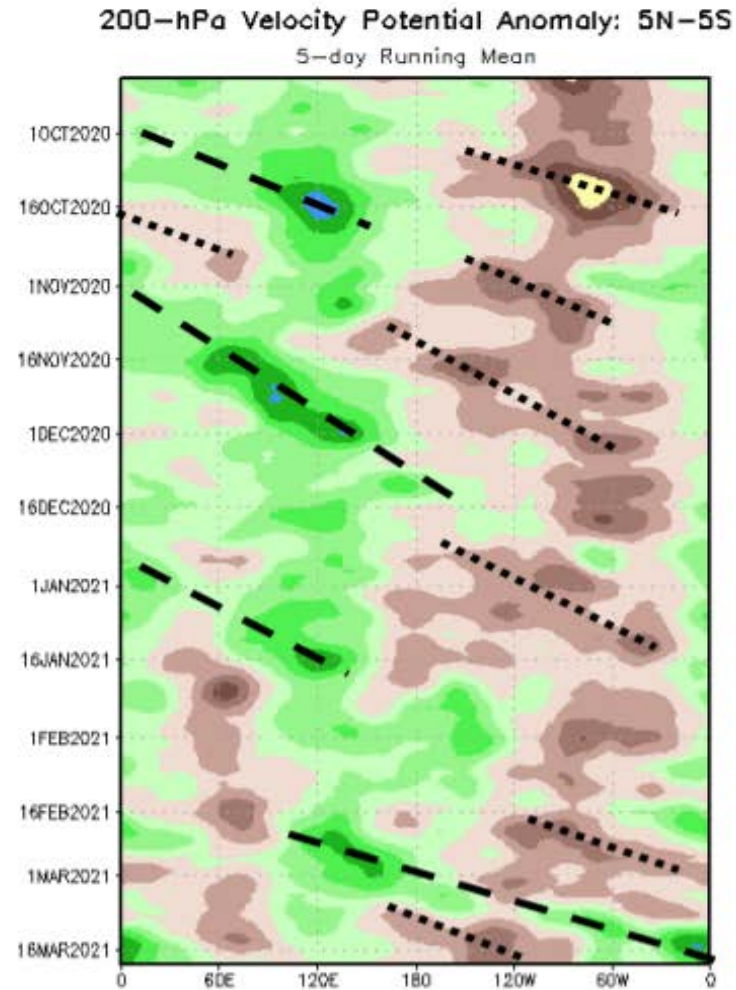
Source: CPC

IRI/CPC Dynamic Models

Model Predictions of ENSO from Mar 2021



Madden-Julian Oscillation (MJO)

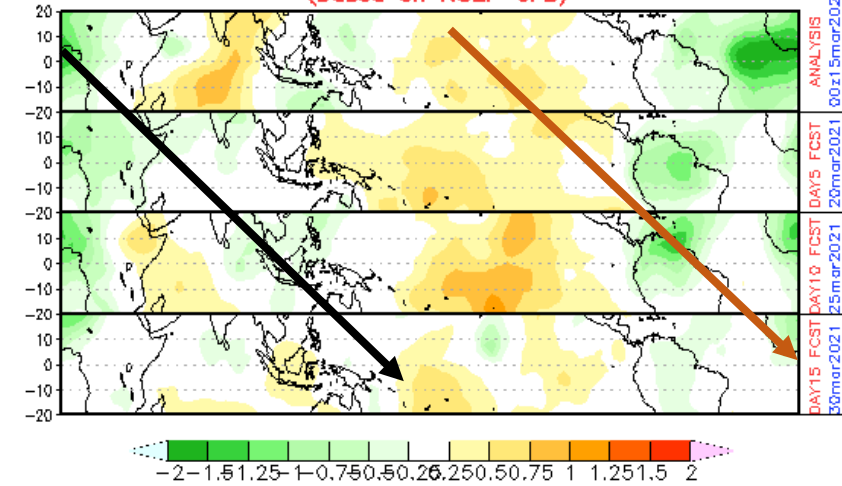


 Favors rain storms  Favors limited rainfall

MJO Forecasts

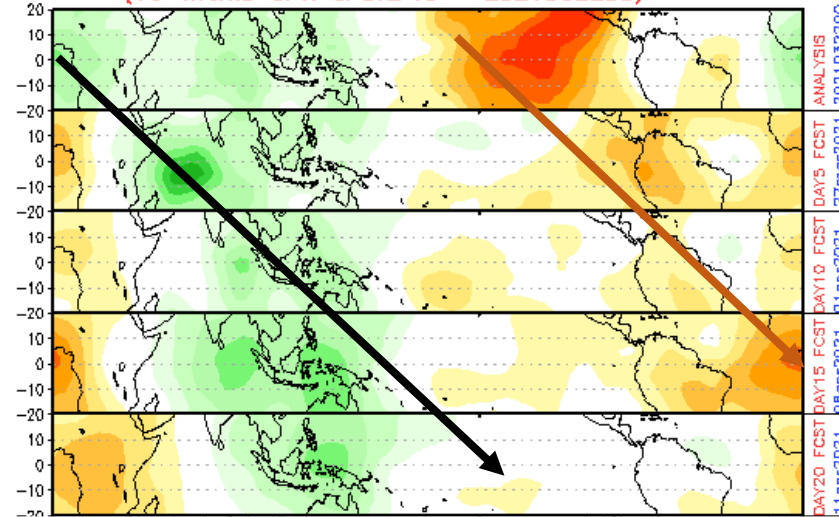
GFS

CHI 200 hPa 15-DAY forecast (00z15mar2021-30mar2021)
(based on NCEP GFS)



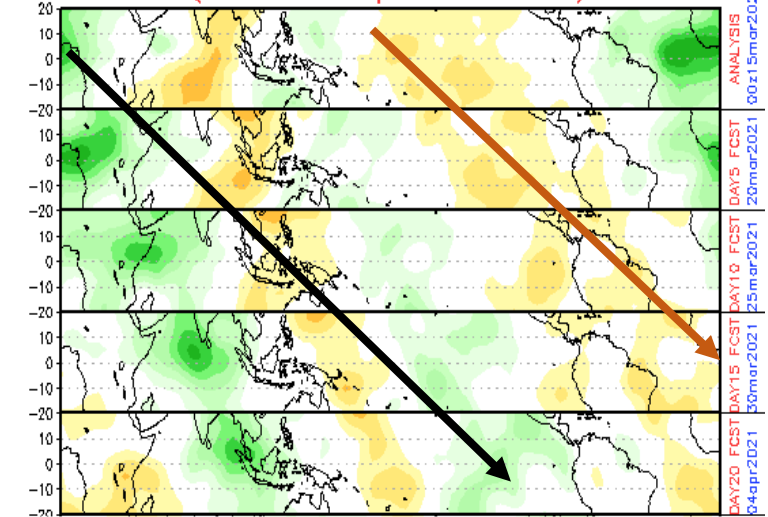
CFS

CHI 200 hPa 40-DAY forecast (00z22mar2021-01may2021)
(16-memb OPR CFSv2 IC = 2021032200)



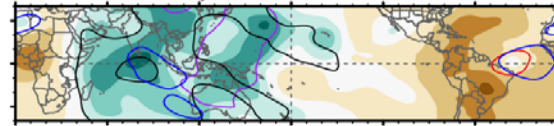
EWP

CHI 200 hPa 40-DAY forecast (00z15mar2021-24apr2021)
(based on EWP spherical harmonics)

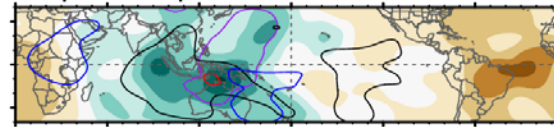


Upper divergent phase:
Weak and in Mid April?

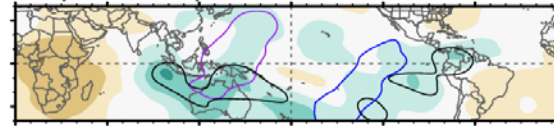
28-Mar to 1-Apr



2-Apr to 6-Apr



7-Apr to 11-Apr



Color bar: -9 -7 -5 -3 -1 1 3 5 7 9 $\times 10^6 \text{ m}^2 \text{ s}^{-1}$

7-day CHI200 with CFS forecasts

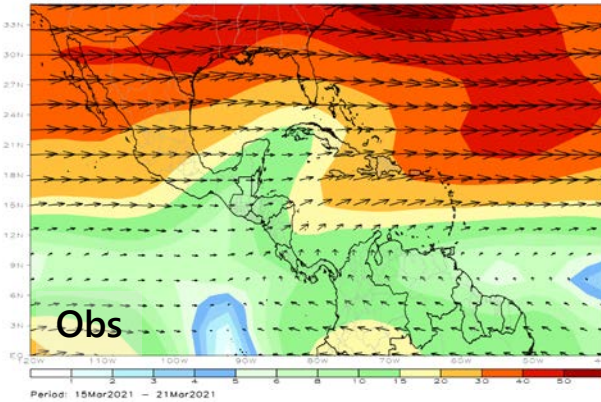
Wed 2020-09-16 10:18 UTC

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

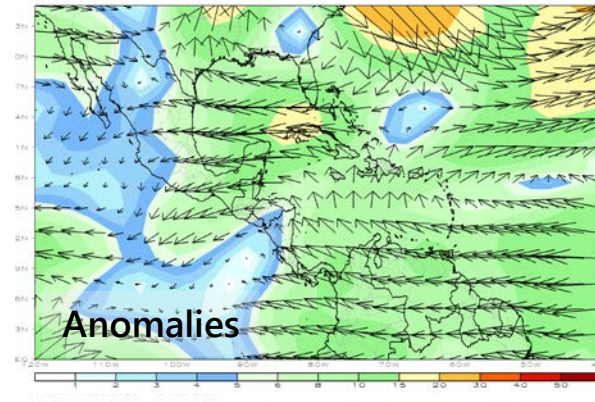
Last Week's Circulation and Rainfall – Tropical Americas

200
hPa

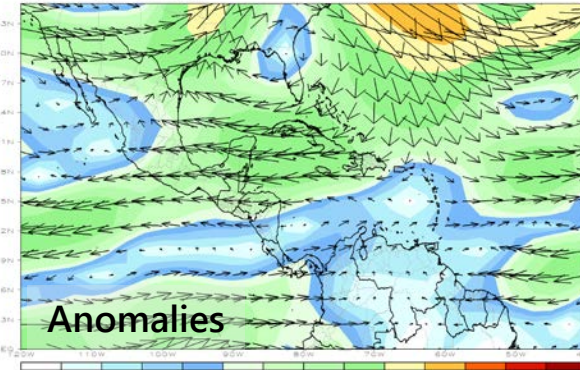
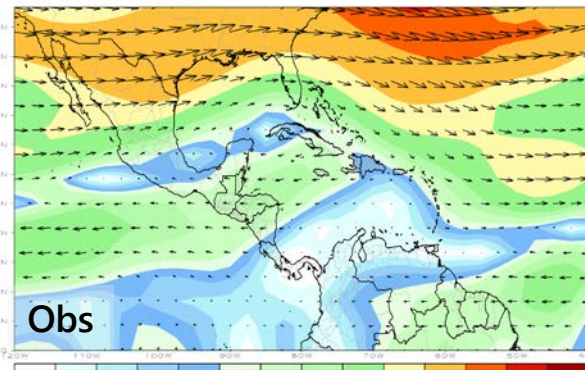
CDAS 200mb 7-Day Mean Vector Wind Total (m/s)
Period: 15Mar2021 – 21Mar2021



CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 15Mar2021 – 21Mar2021

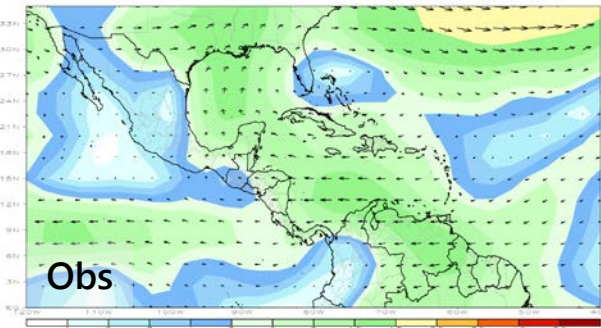


500
hPa

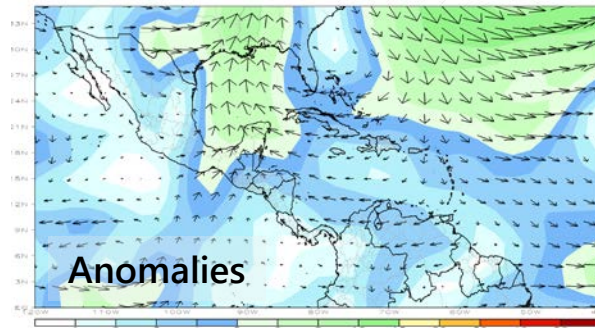


850
hPa

CDAS 850mb 7-Day Mean Vector Wind Total (m/s)
Period: 15Mar2021 – 21Mar2021

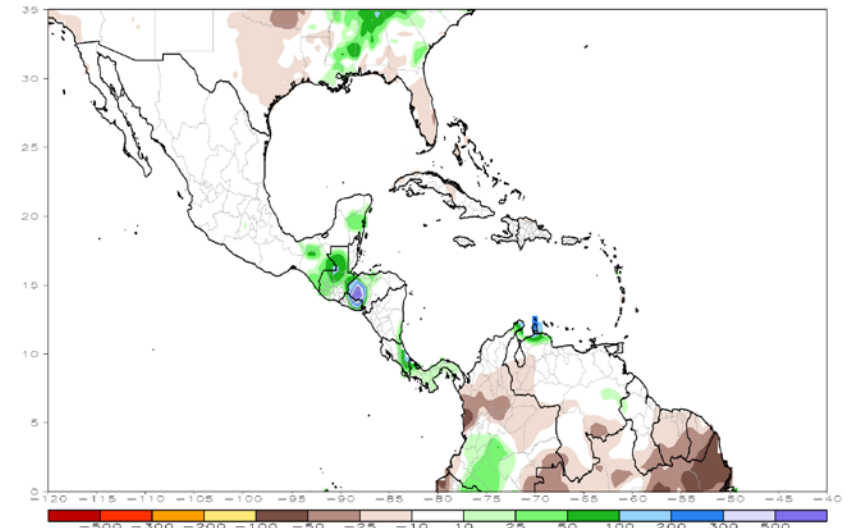


CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 15Mar2021 – 21Mar2021

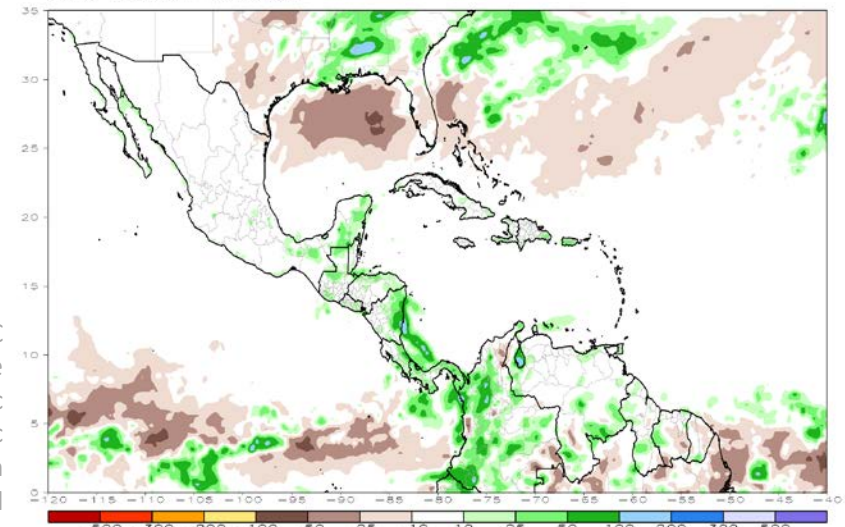


Rainfall

CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)
Period: 16Mar2021 – 22Mar2021



CMORPH 7-Day Total Rainfall Anomaly (mm)
Period: 15Mar2021 – 21Mar2021

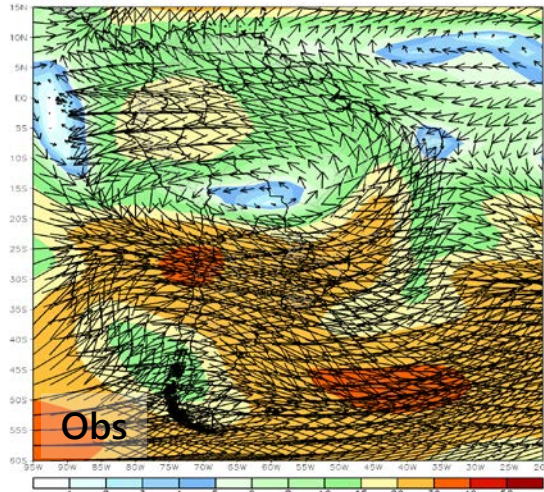


CMORPH: CPC
Morphing Technique
https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html

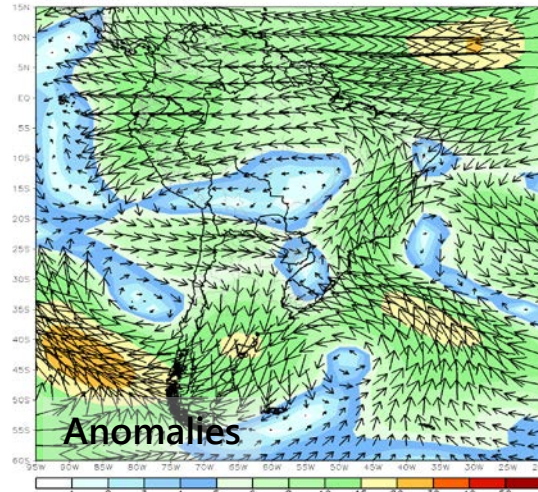
Last Week's Circulation and Rainfall – South America

200
hPa

CDAS 200mb 7-Day Mean Vector Wind Total (m/s)
Period: 15Mar2021 – 21Mar2021

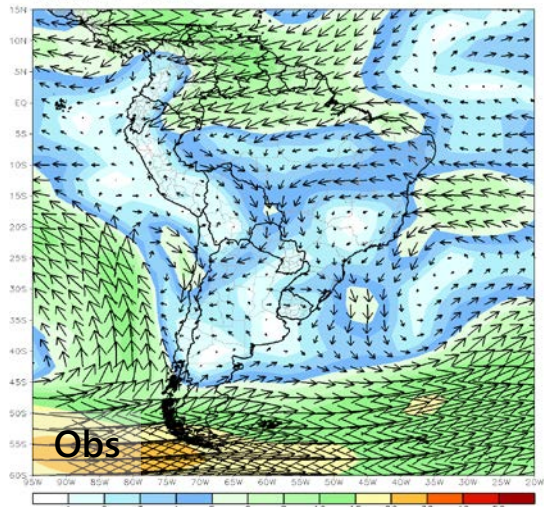


CDAS 200mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 15Mar2021 – 21Mar2021

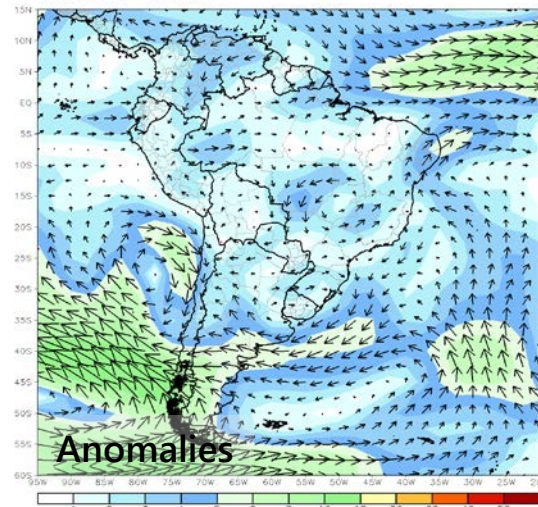


850
hPa

CDAS 850mb 7-Day Mean Vector Wind Total (m/s)
Period: 15Mar2021 – 21Mar2021

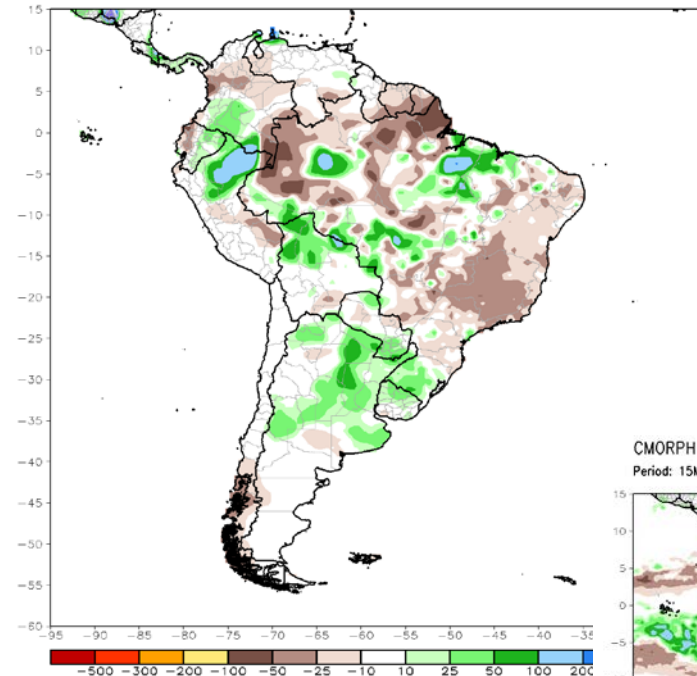


CDAS 850mb 7-Day Mean Vector Wind Anomaly (m/s)
Period: 15Mar2021 – 21Mar2021

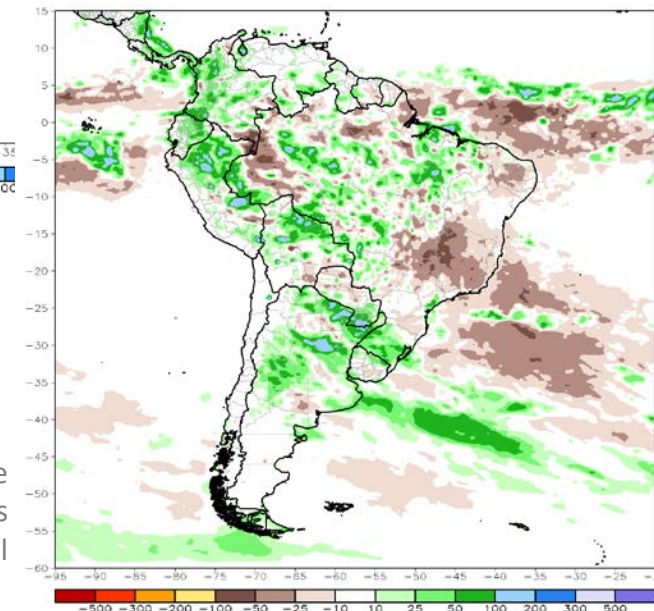


CPC Unified Gauge 7-Day Total Rainfall Anomaly (mm)
Period: 16Mar2021 – 22Mar2021

Rainfall



CMORPH 7-Day Total Rainfall Anomaly (mm)
Period: 15Mar2021 – 21Mar2021



CMORPH: CPC Morphing Technique
https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html



¡Gracias!

Thank you!