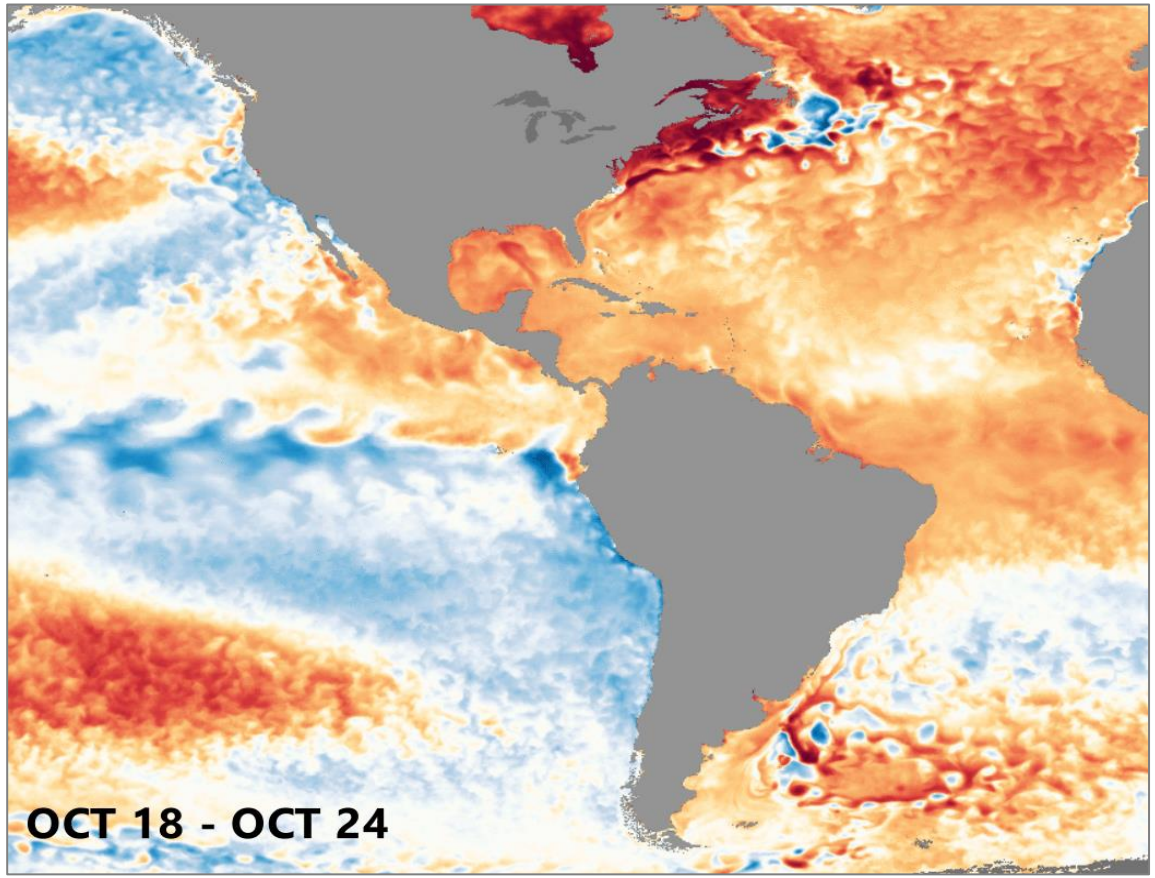
Monthly Regional Focus Group Session

Wednesday 24 November 2021

Sea Surface Temperatures

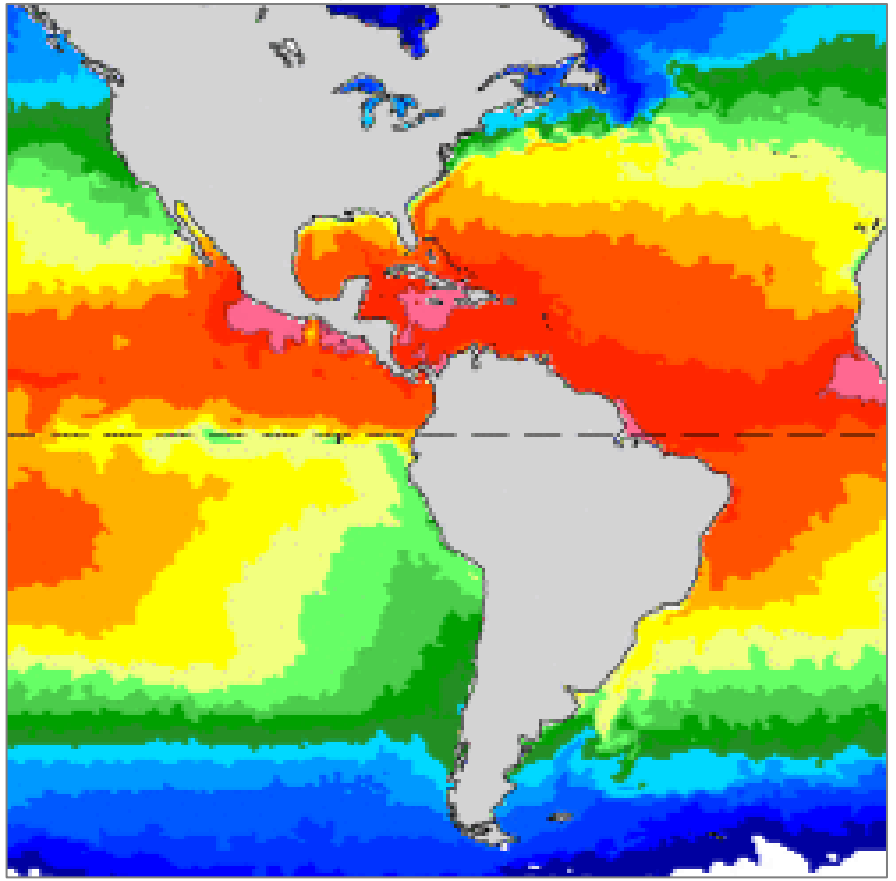
Anomaly Evolution



OISST, NOAA NNVL

https://www.nnvl.noaa.gov/view/globaldata.html#SSTA

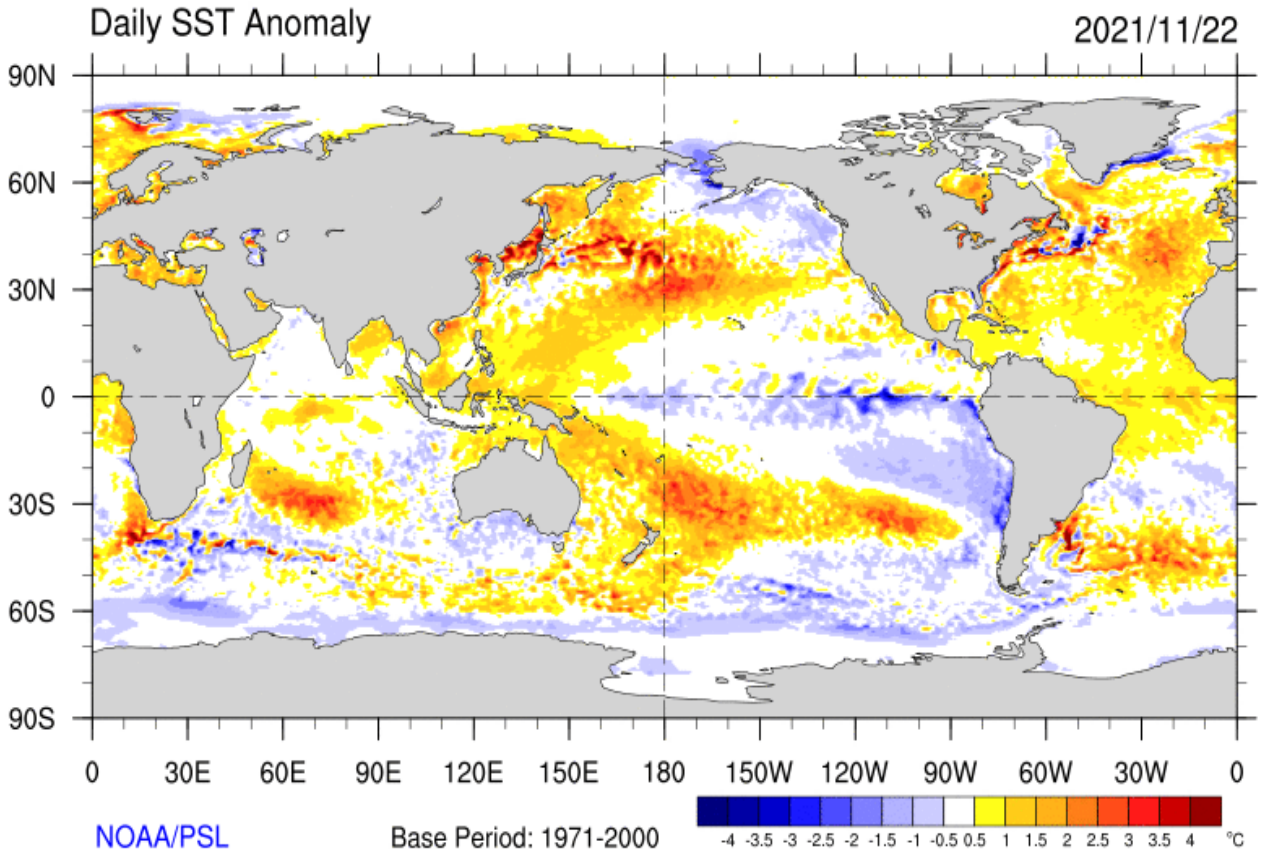
Daily SST Nov 22



https://psl.noaa.gov/map/clim/sst.shtml

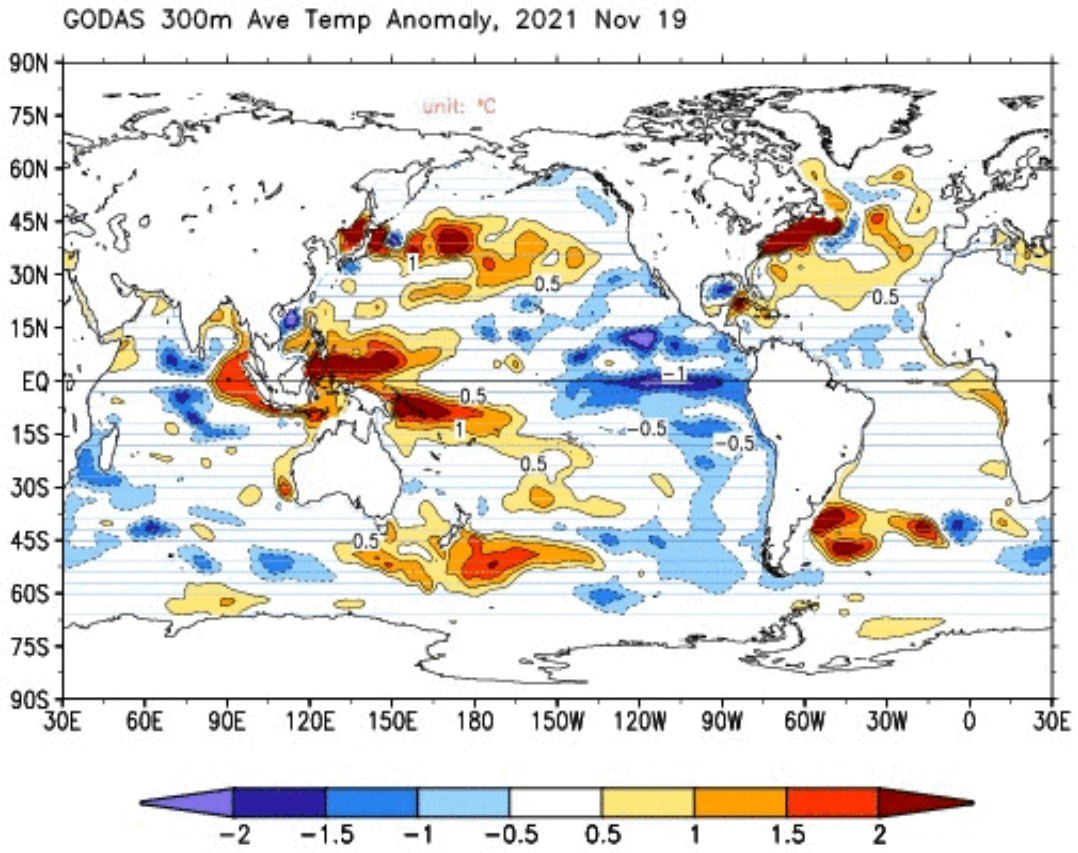
Are the anomalies deep?

Deep anomalies tend to last longer, becoming useful for subseasonal forecasting.



Source: https://psl.noaa.gov/map/clim/sst.shtml

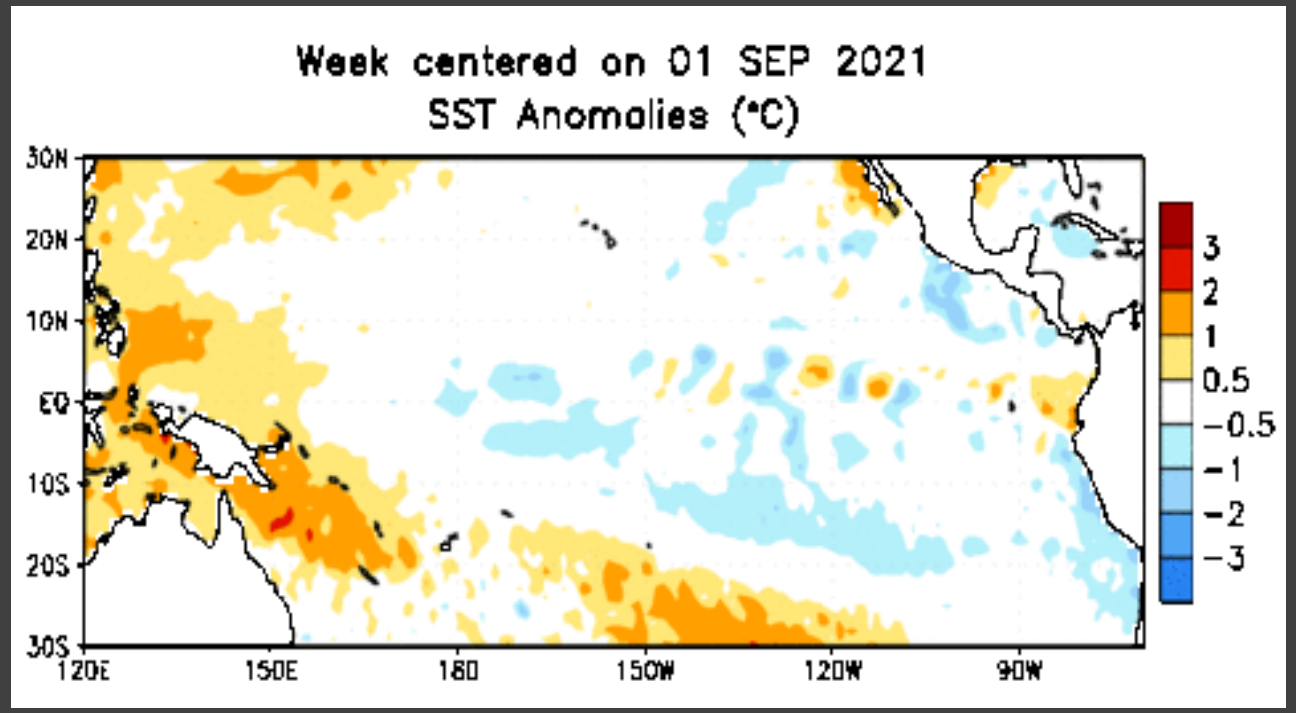
Top 300m Layer Anomaly

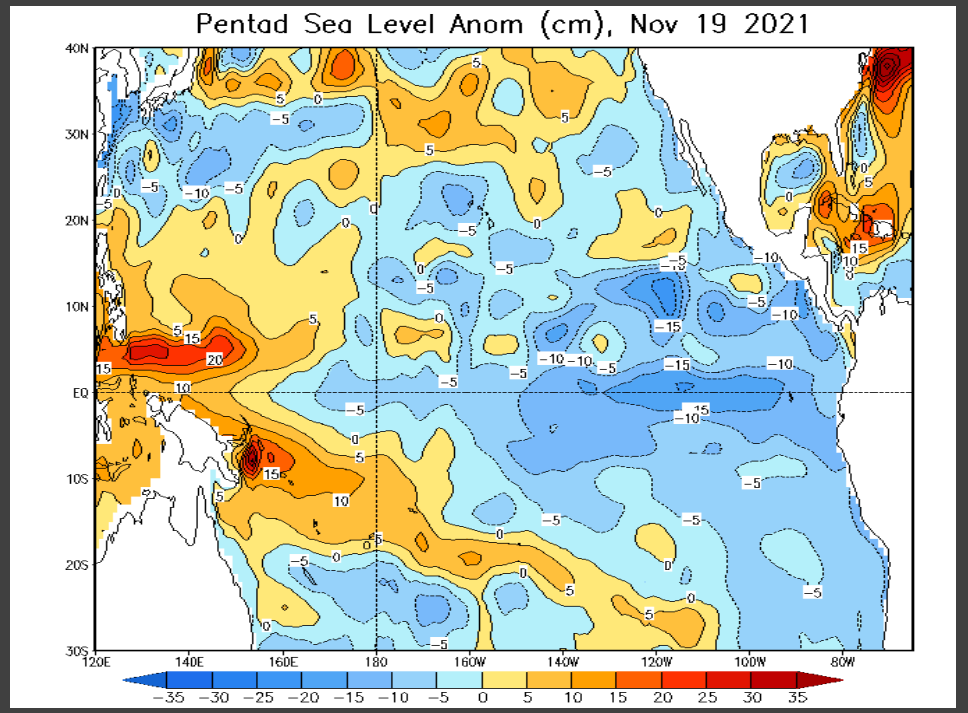


Source: CPC GODAS, https://www.cpc.ncep.noaa.gov/products/GODAS/

ENSO: La Niña

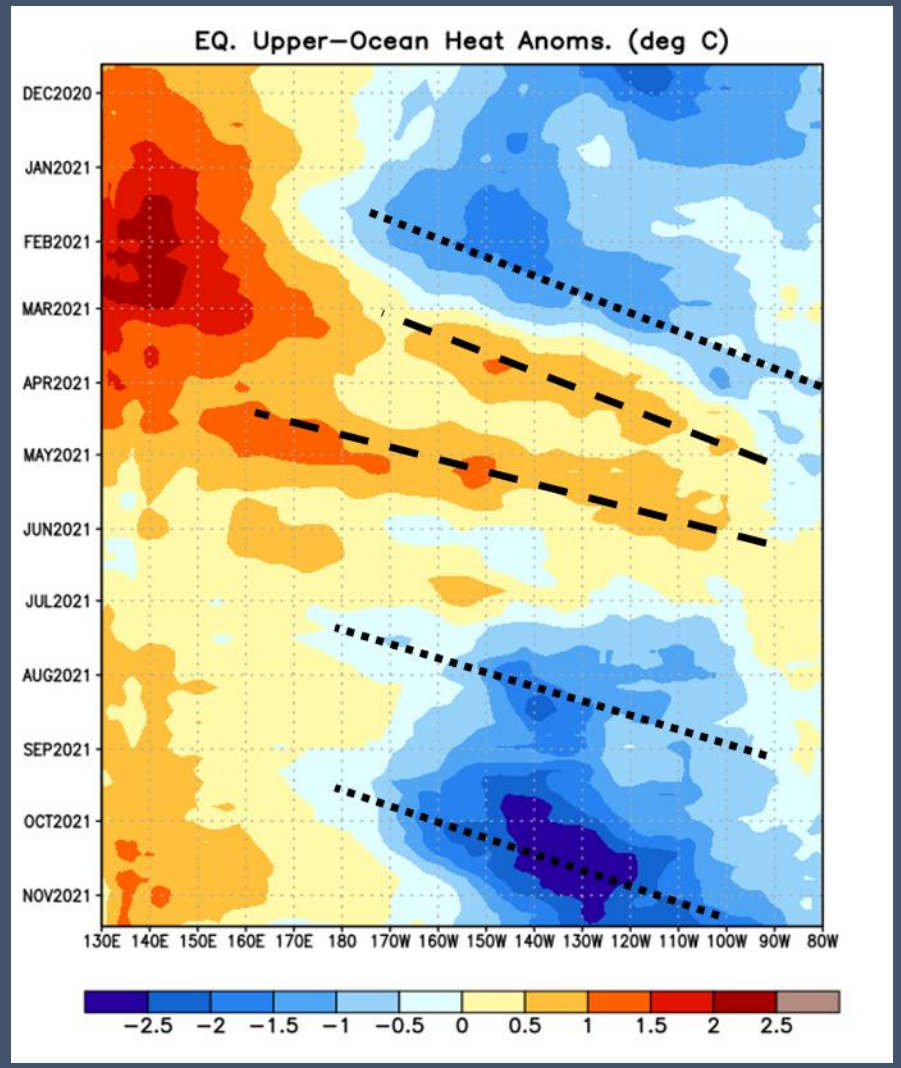
- La Niña is present.*
- Equatorial sea surface temperatures (SSTs) are below average across the central and east-central Pacific Ocean.
- The tropical Pacific atmosphere is consistent with La Niña conditions.





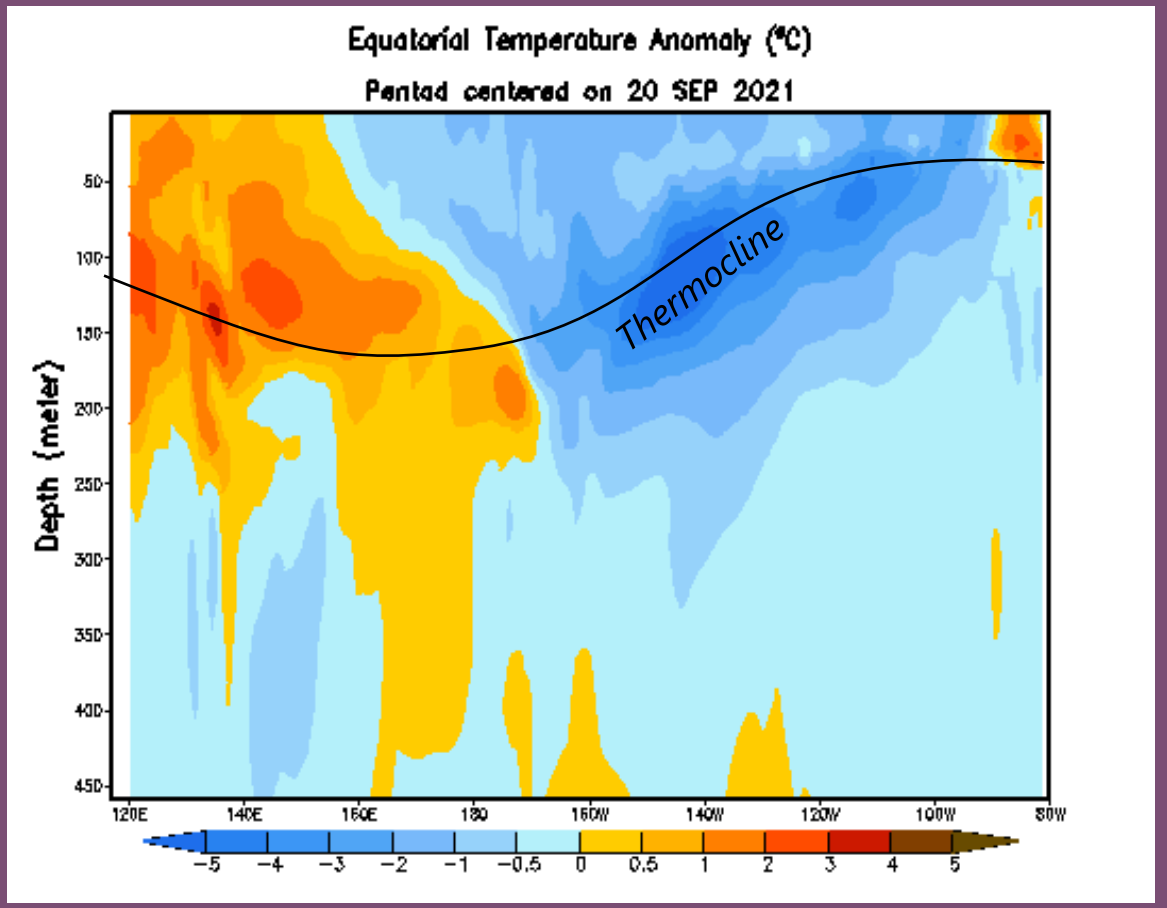
ENSO: Oceanic Kelvin Waves

Heat Content Hovmöller



Source: CPC

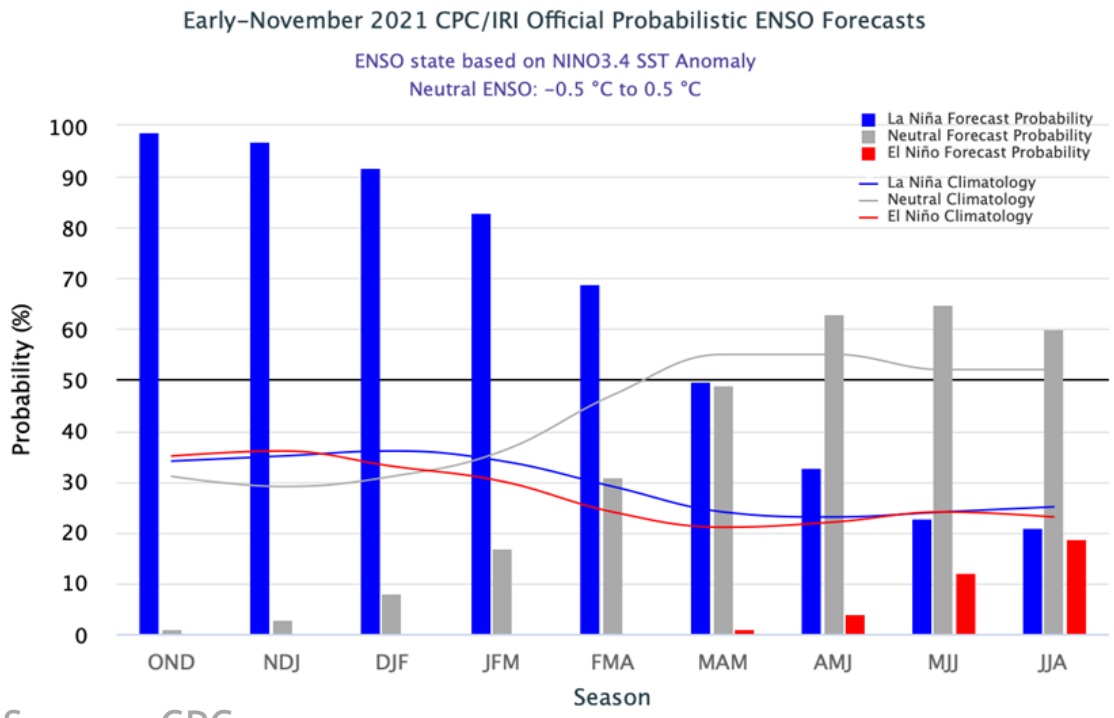
Equatorial Pacific Temp. Anomaly



ENSO Outlook

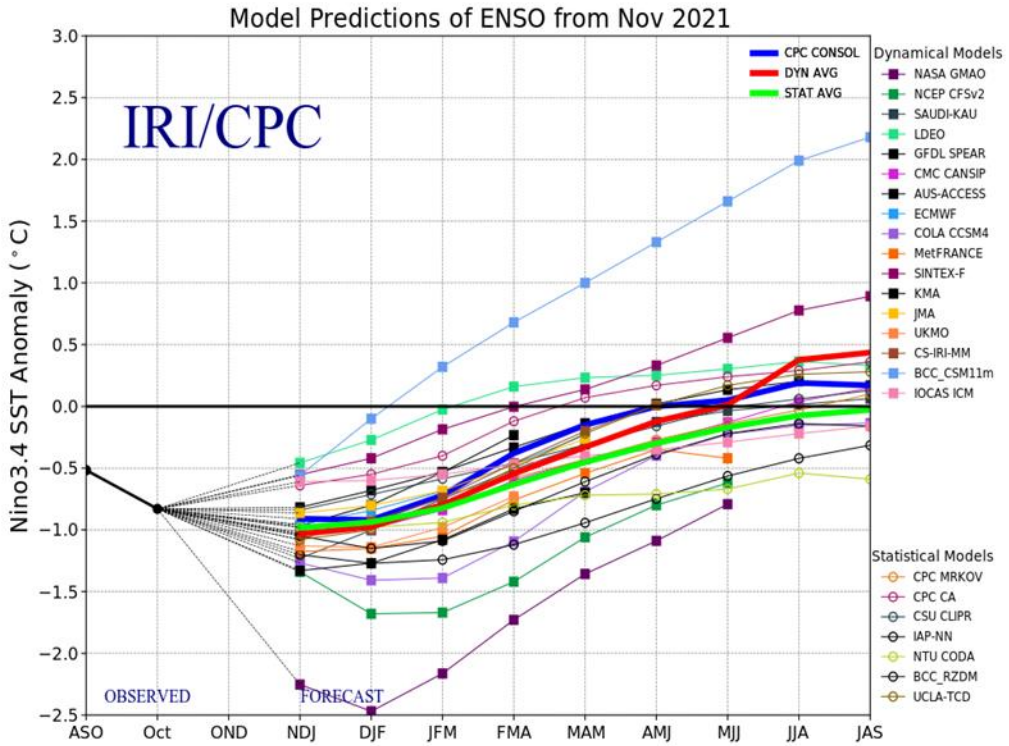
La Niña is likely to continue through the Northern Hemisphere winter 2021-22 (~90% chance) and into spring 2022 (~50% chance during March-May).*

CPC/IRI Probabilistic Forecast



Source: CPC

IRI/CPC Dynamic Models

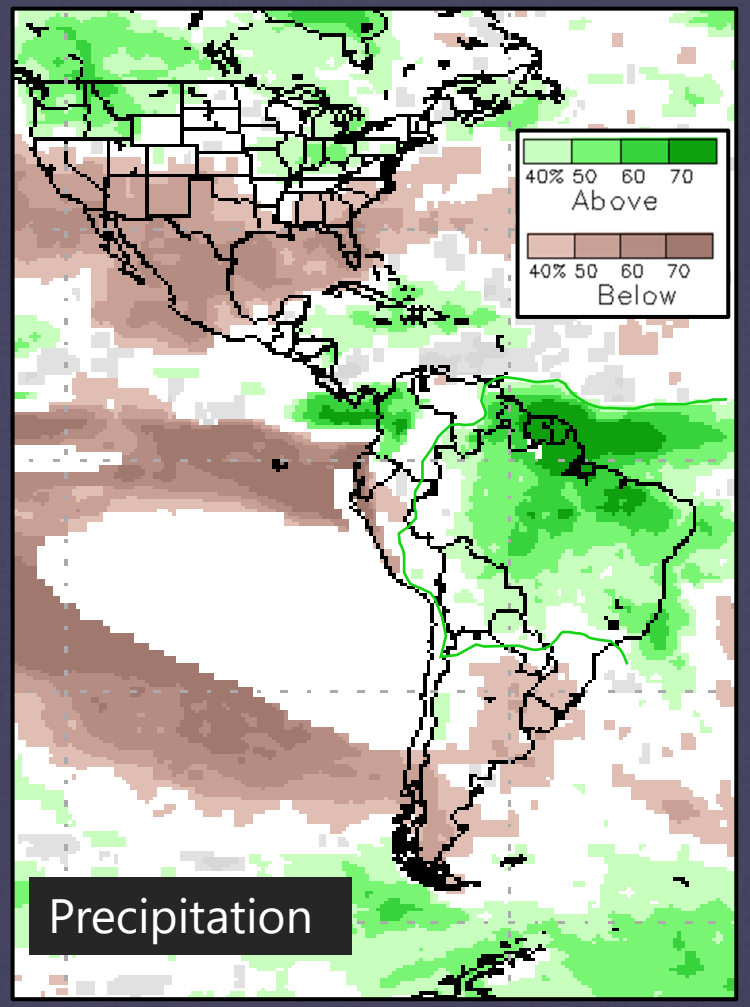


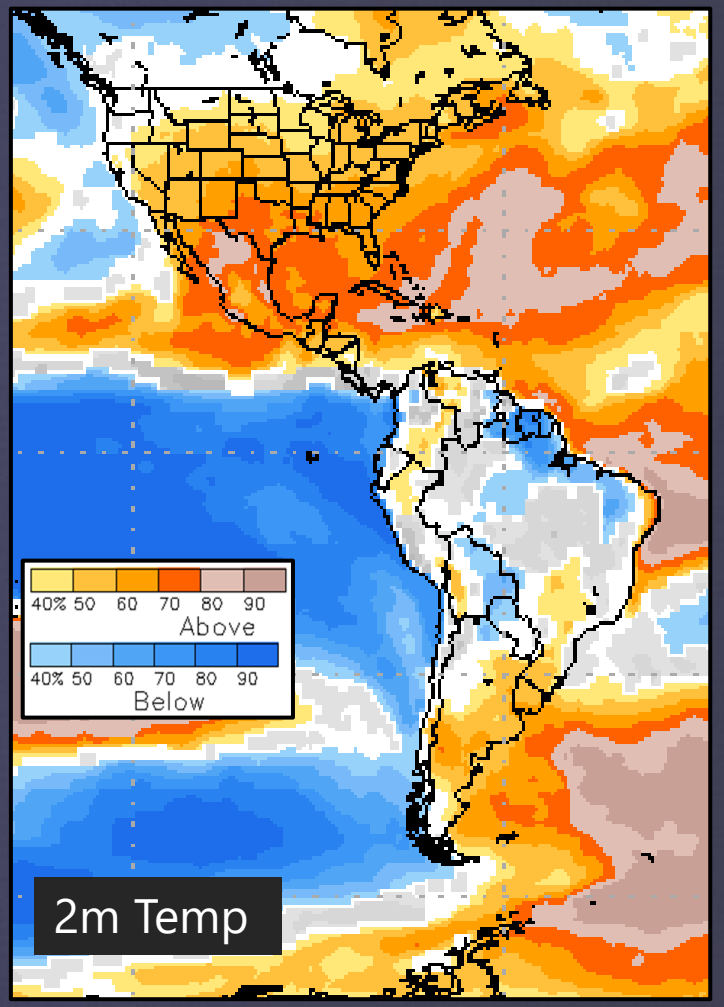
Dec-Feb Outlooks: NMME Forecasts

- NMME = North American Multi-model Ensemble.
- Output of 7 Global Models, analyzed statistically.
- Ensemble mean shows generally a La Niña Signal on Rainfall Forecasts.
- NMME References:

https://www.ncei.noaa.gov/products/weather-climate-models/north-american-multi-model

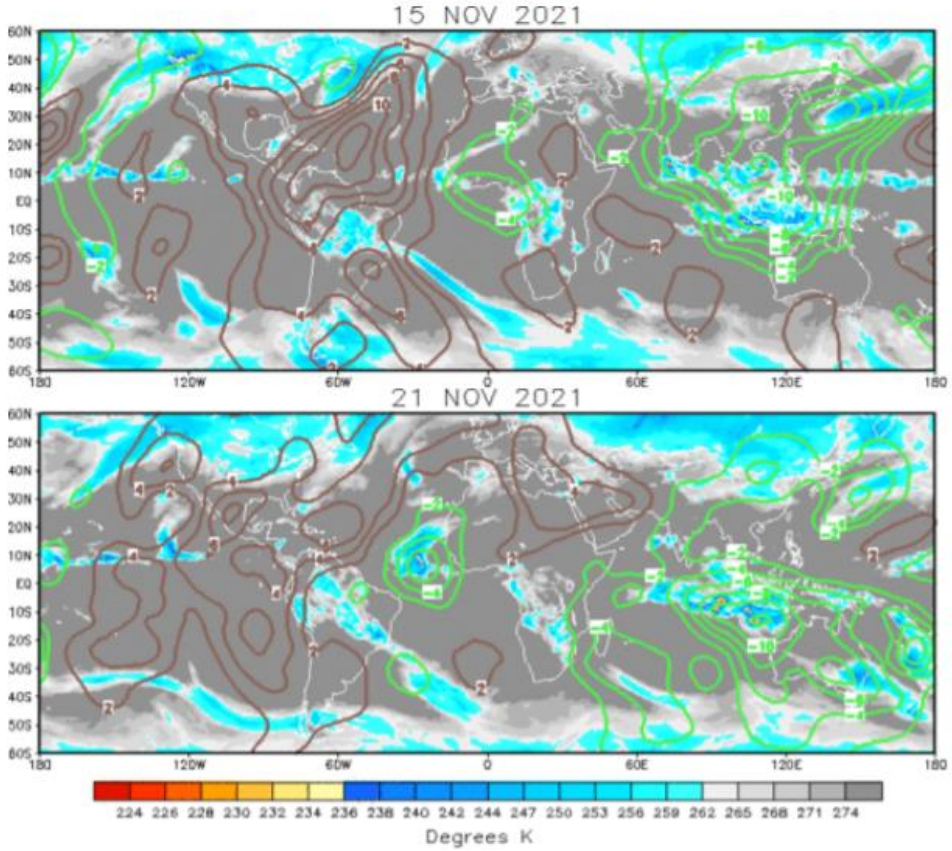
https://www.cpc.ncep.noaa.gov/products/NMME/seasanom.shtml



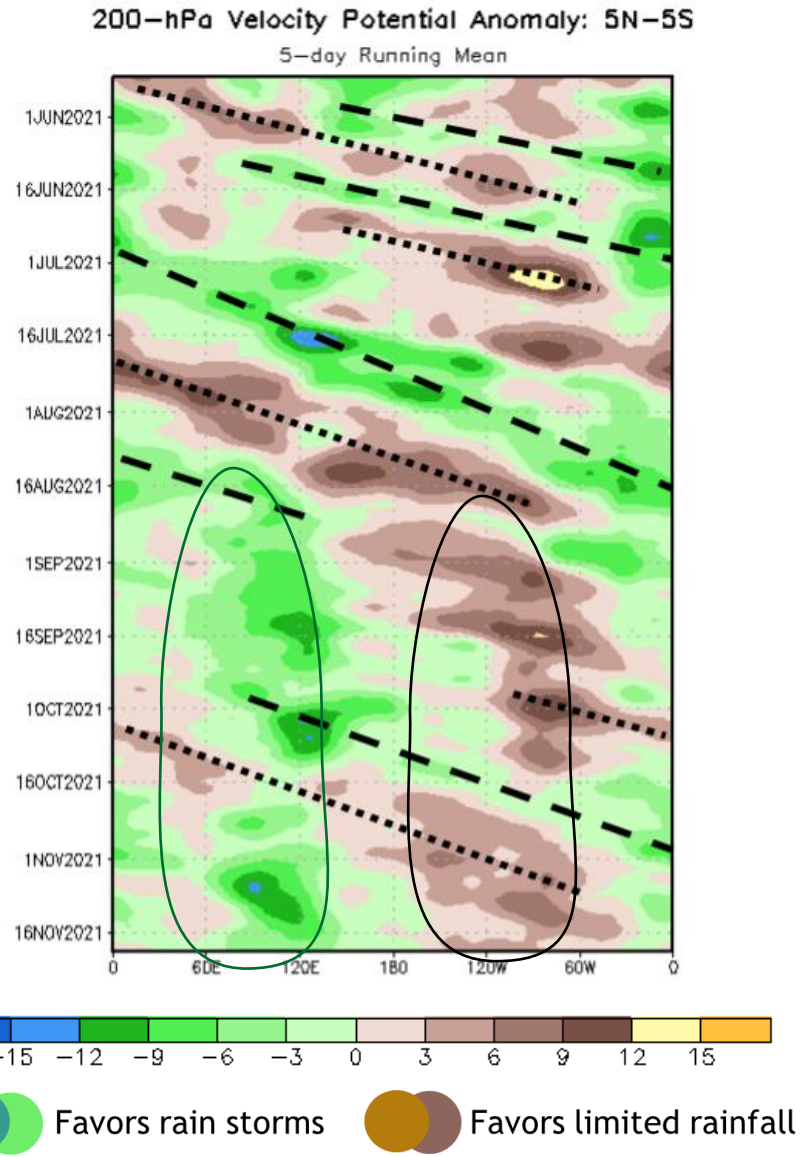


Madden-Julian Oscillation (MJO)

- MJO propagation remains weak and reflective of enhanced convection over the Maritime Continent (consistent with La Niña).
- Rossby wave activity in the Indian Ocean is interfering with propagation

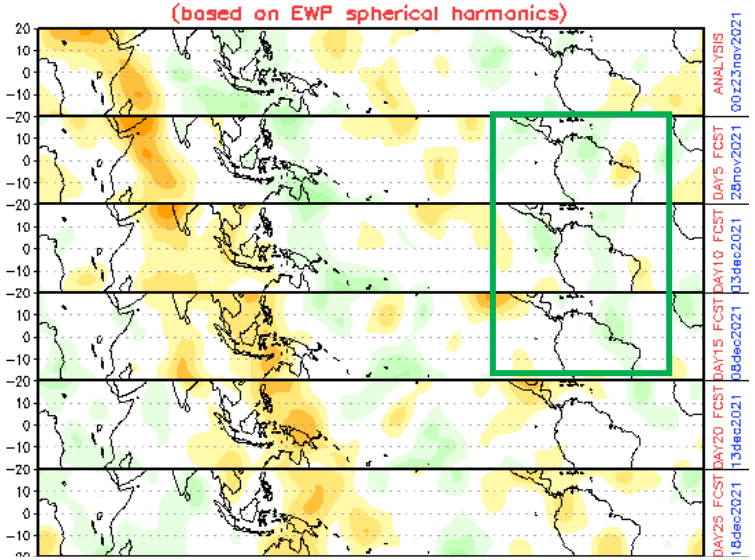


Source: CPC

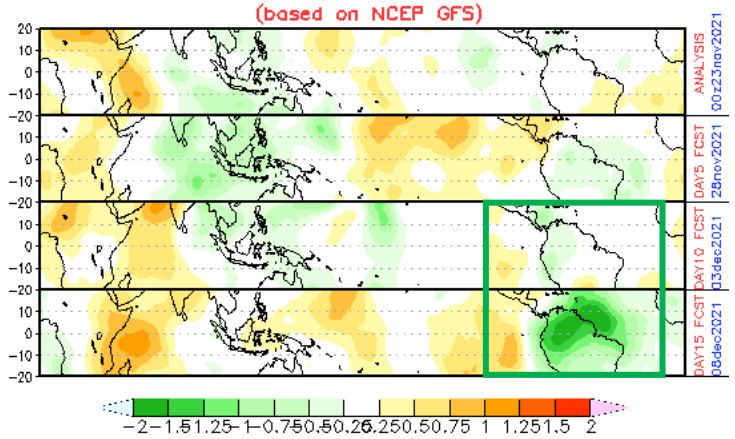


MJO Forecasts

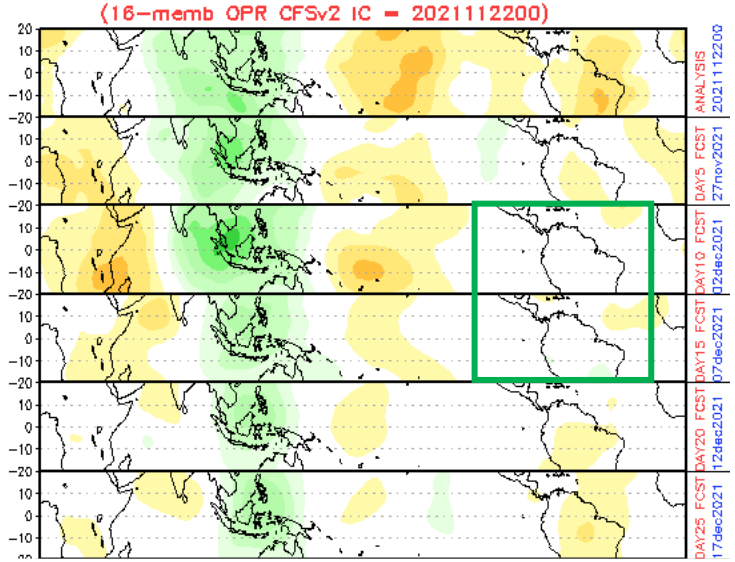
EWP



GFS



CFS



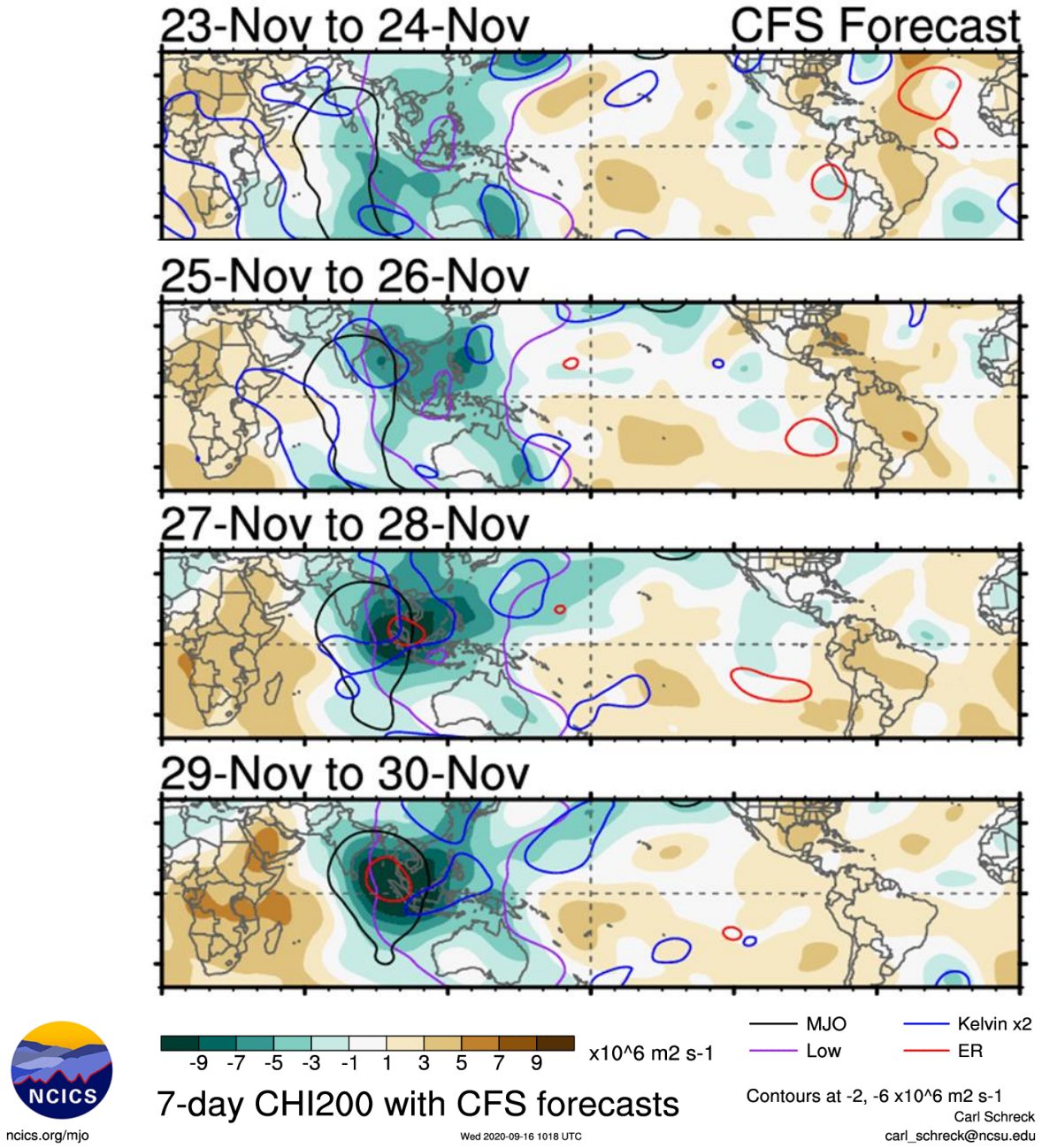
Dec 3

Dec 7

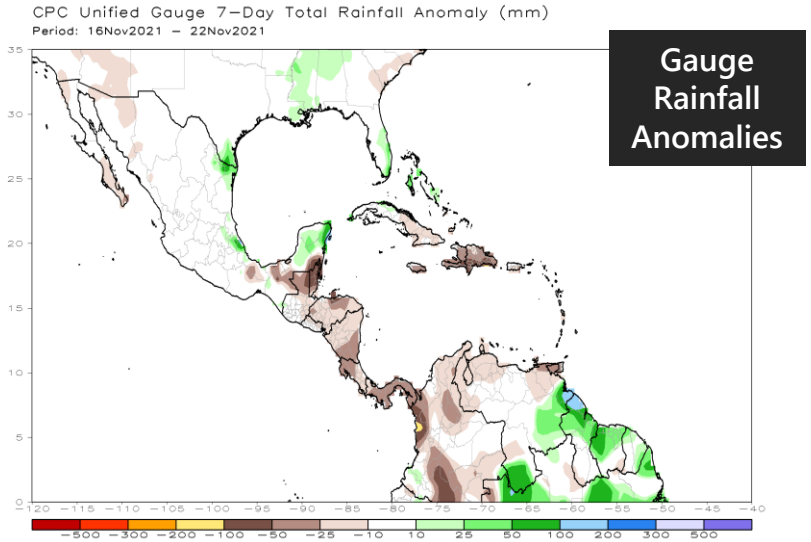
- Weak MJO signature
- Slightly wetter (more upper divergent) on the first week of December
- Dec 1-10 signal might be more pronounced in the Southern Hemisphere

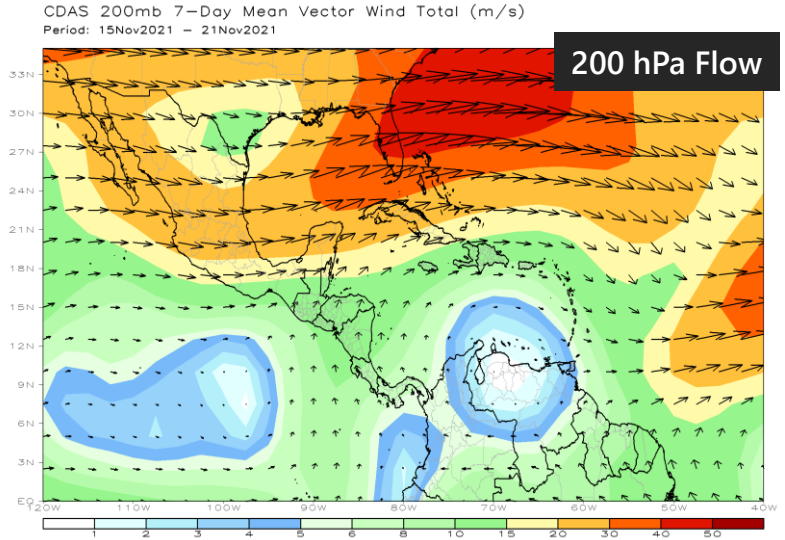
Tropospheric Equatorial Waves

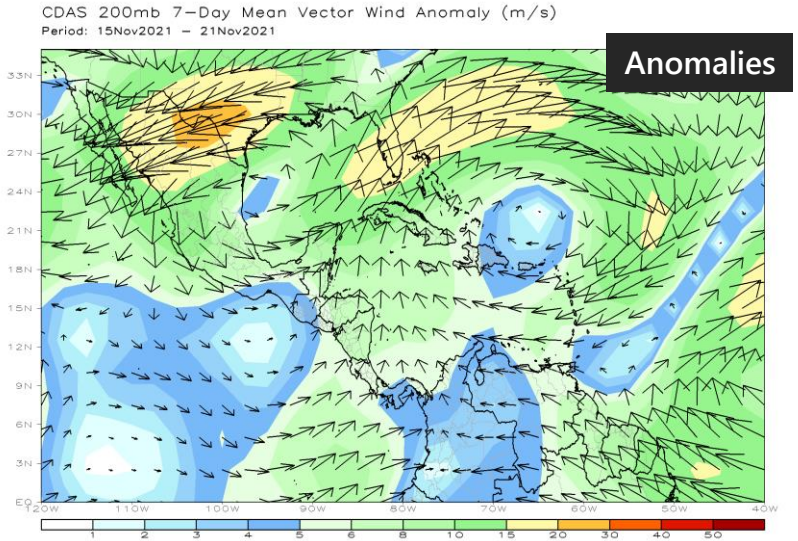
- No significant equatorial wave activity
- Weak convergence dominates
- Wetter weekend: Central America and the Bahamas
- MJO divergent:
  - No strong signal.
  - Relative peak near the first week of December?

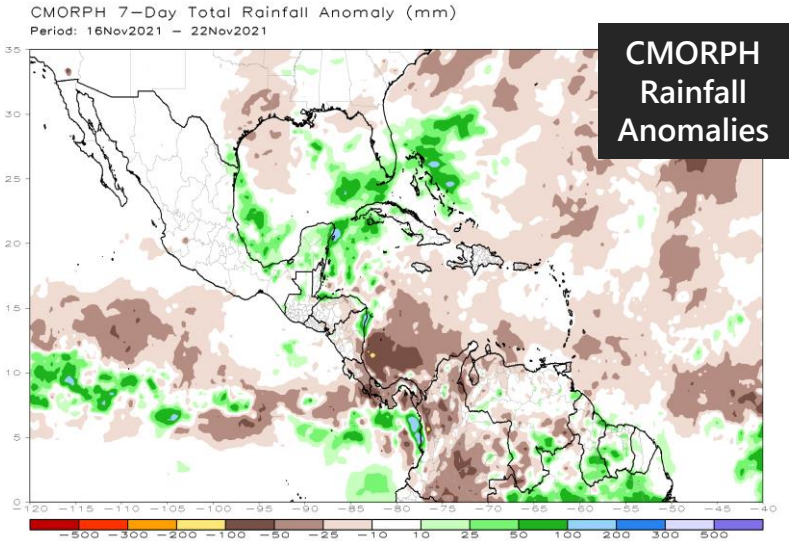


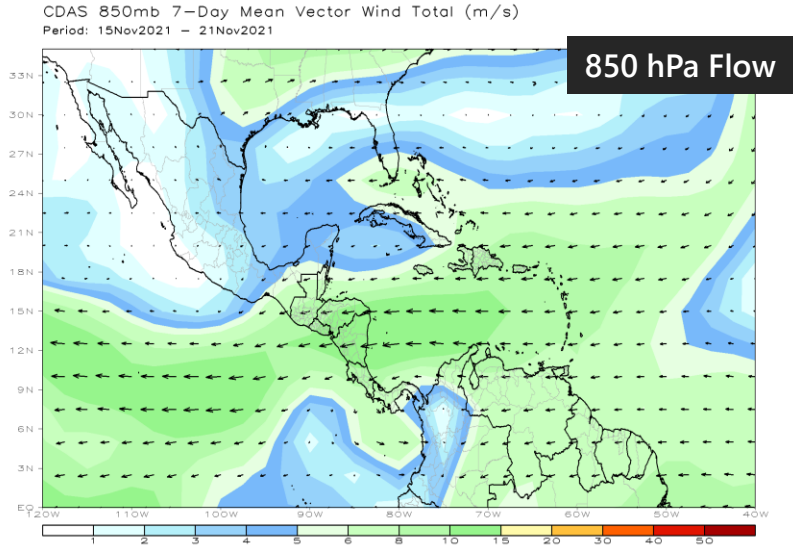
Tropical Americas: Last 7 Days

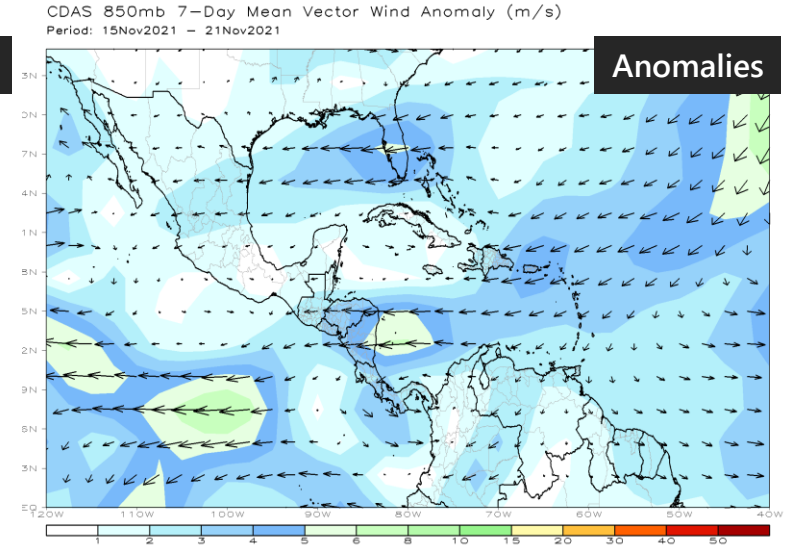




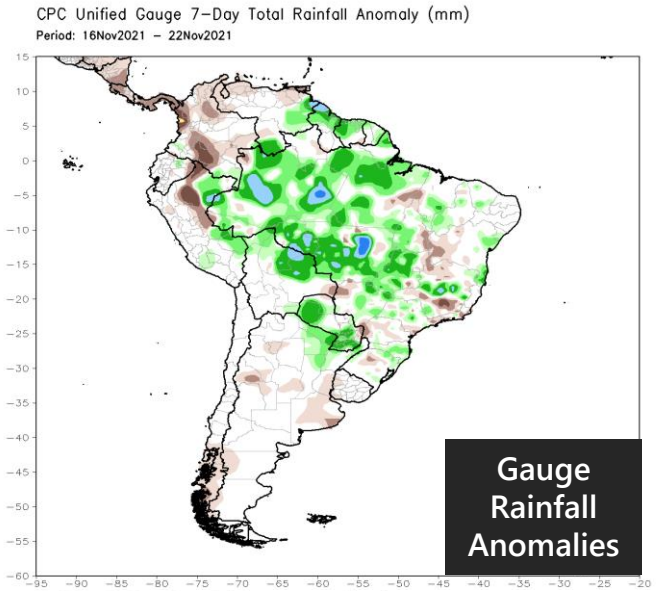


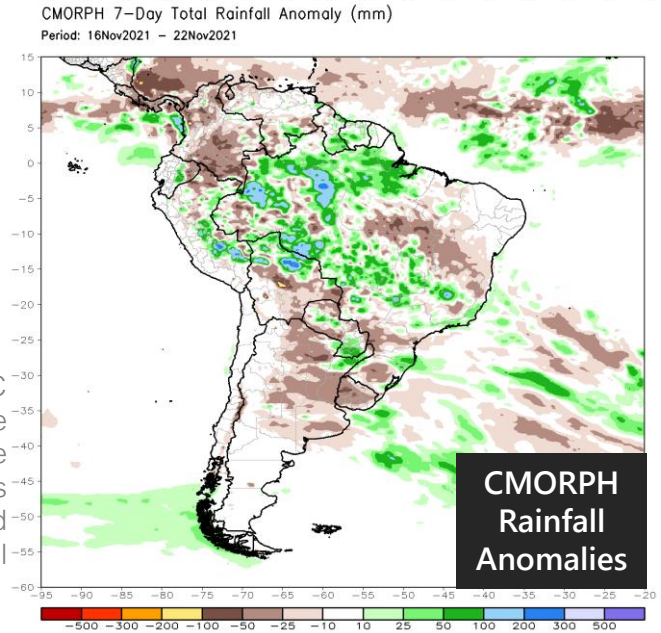




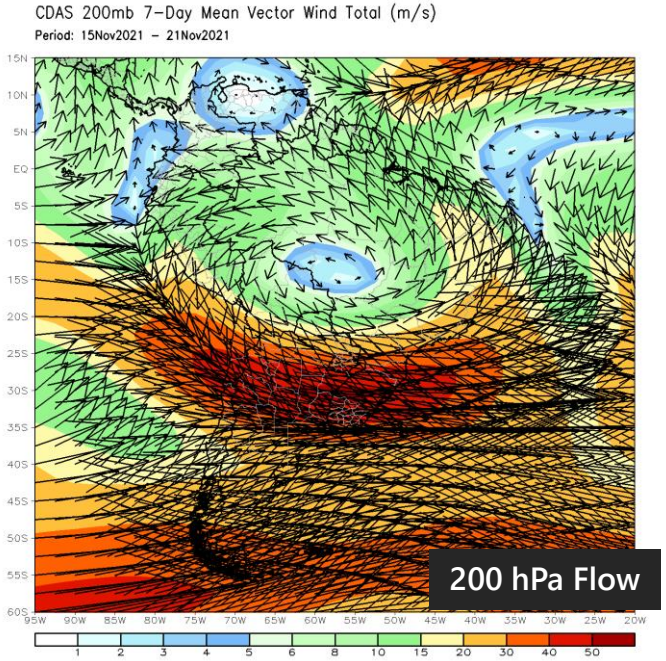


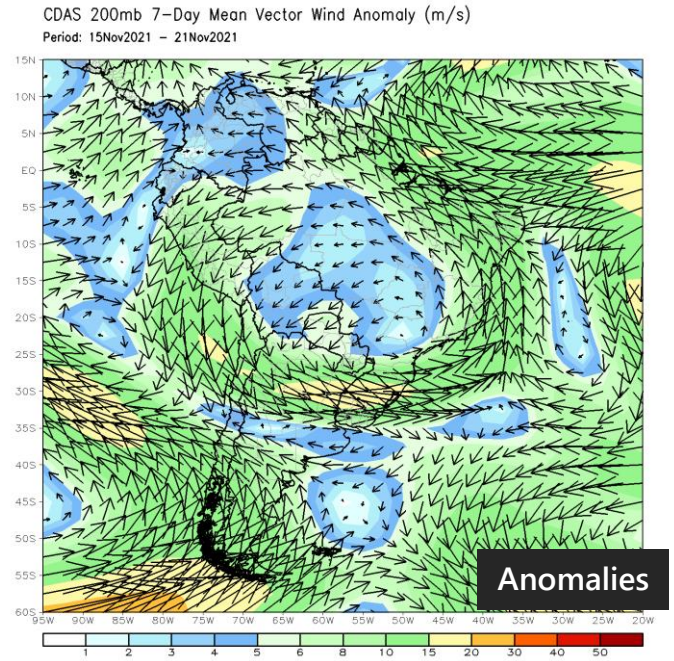
South America: Last 7 Days

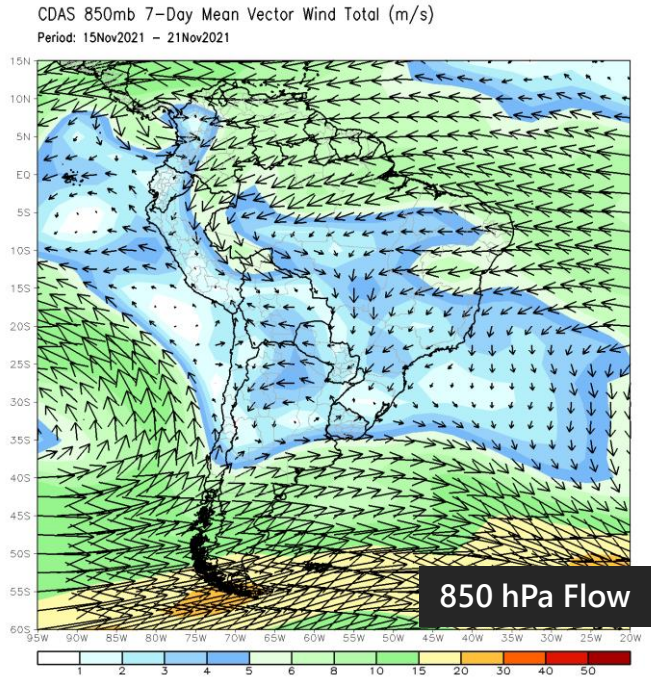


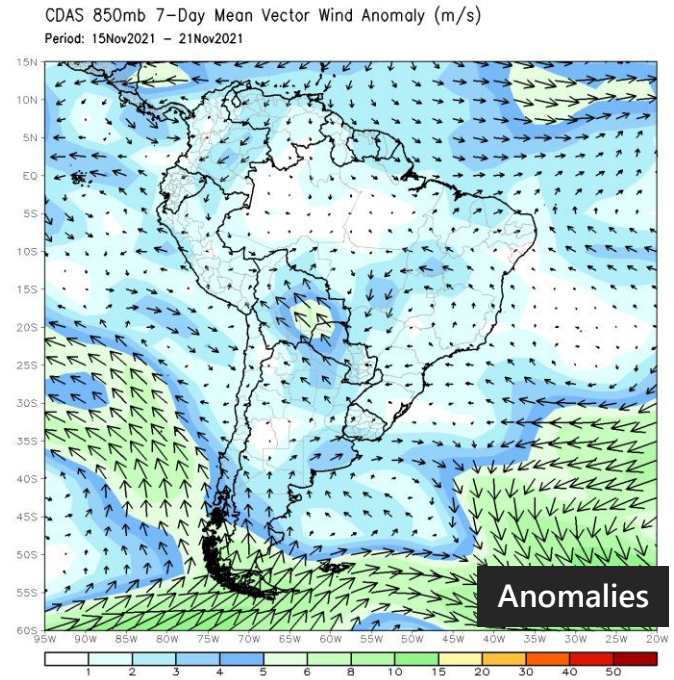


CMORPH: CPC Morphing Technique https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html









¡Gracias!

Thank you!