# Are the teleconnections for canonical and El Niño Modoki events different?

*Muhammad Mobasha Dogar & Sebastian Milinski*

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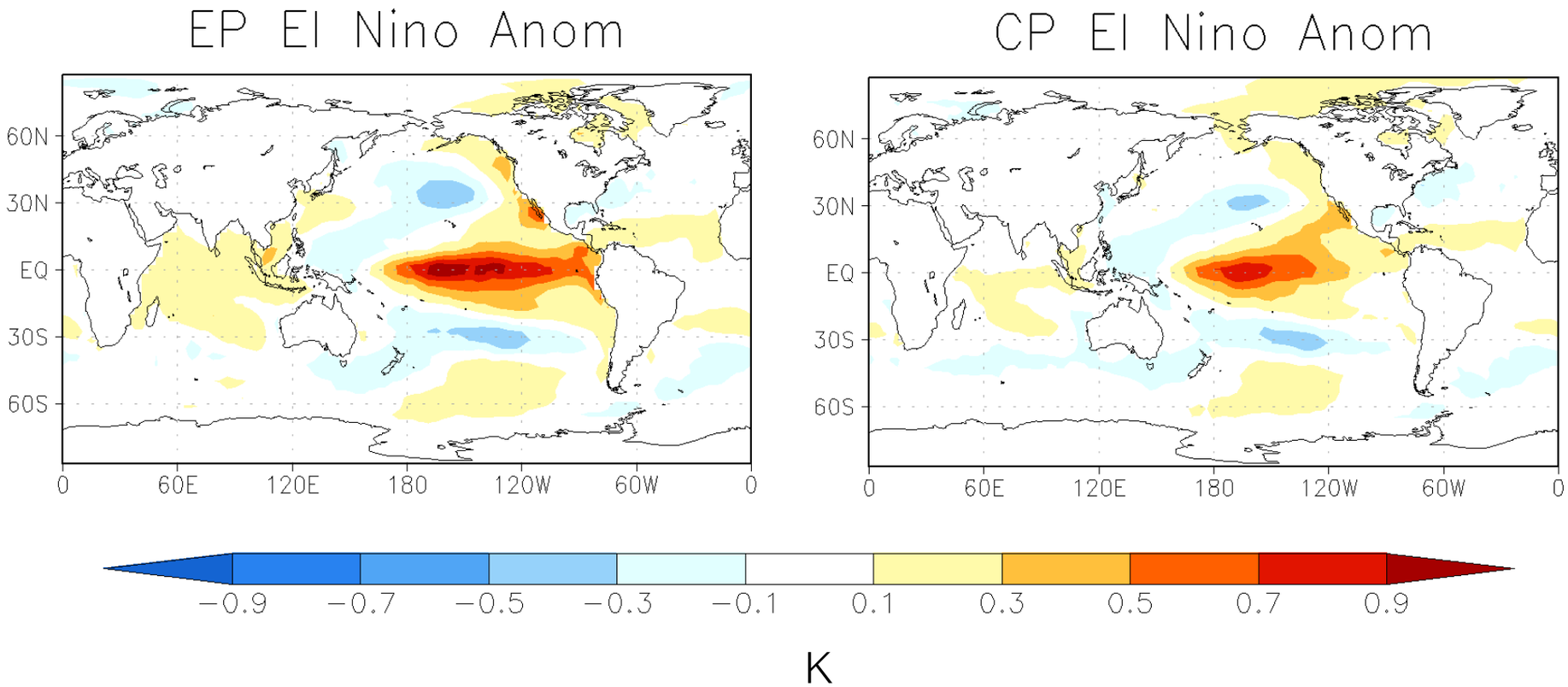
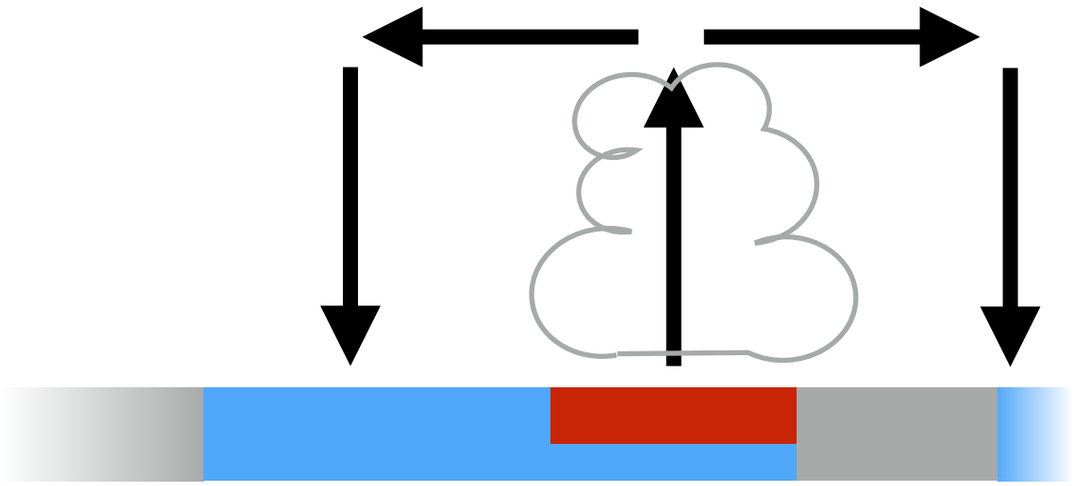



I

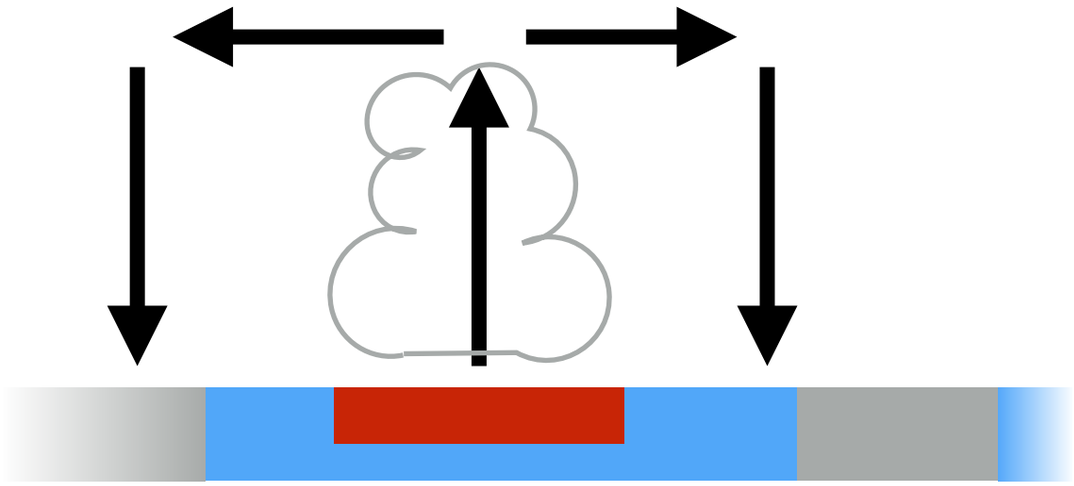
# Motivation / Hypothesis

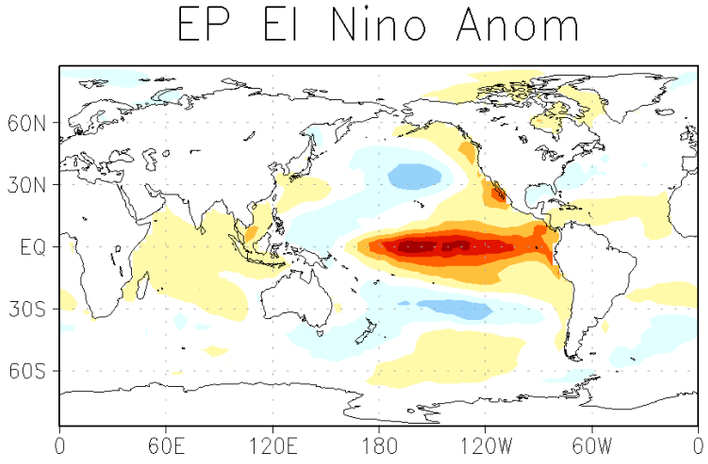
- The western displacement of the warm anomaly in El Niño Modoki might have a different impact on the Walker circulation

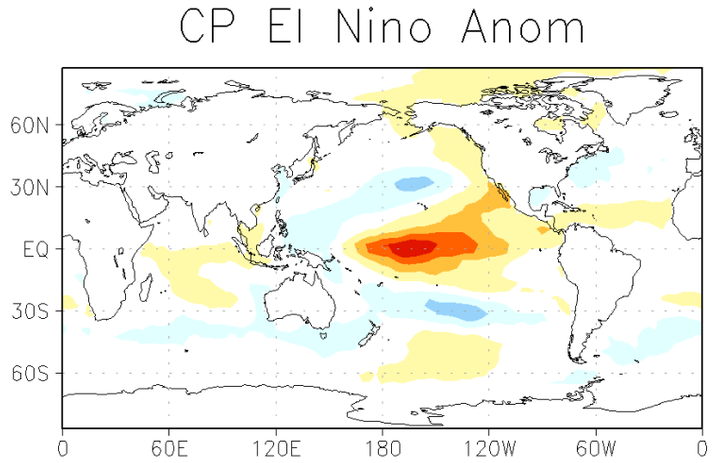
**canonical**



**Modoki**





# Method

Model

- Speedy v41.5 (T31)
- prescribed SST

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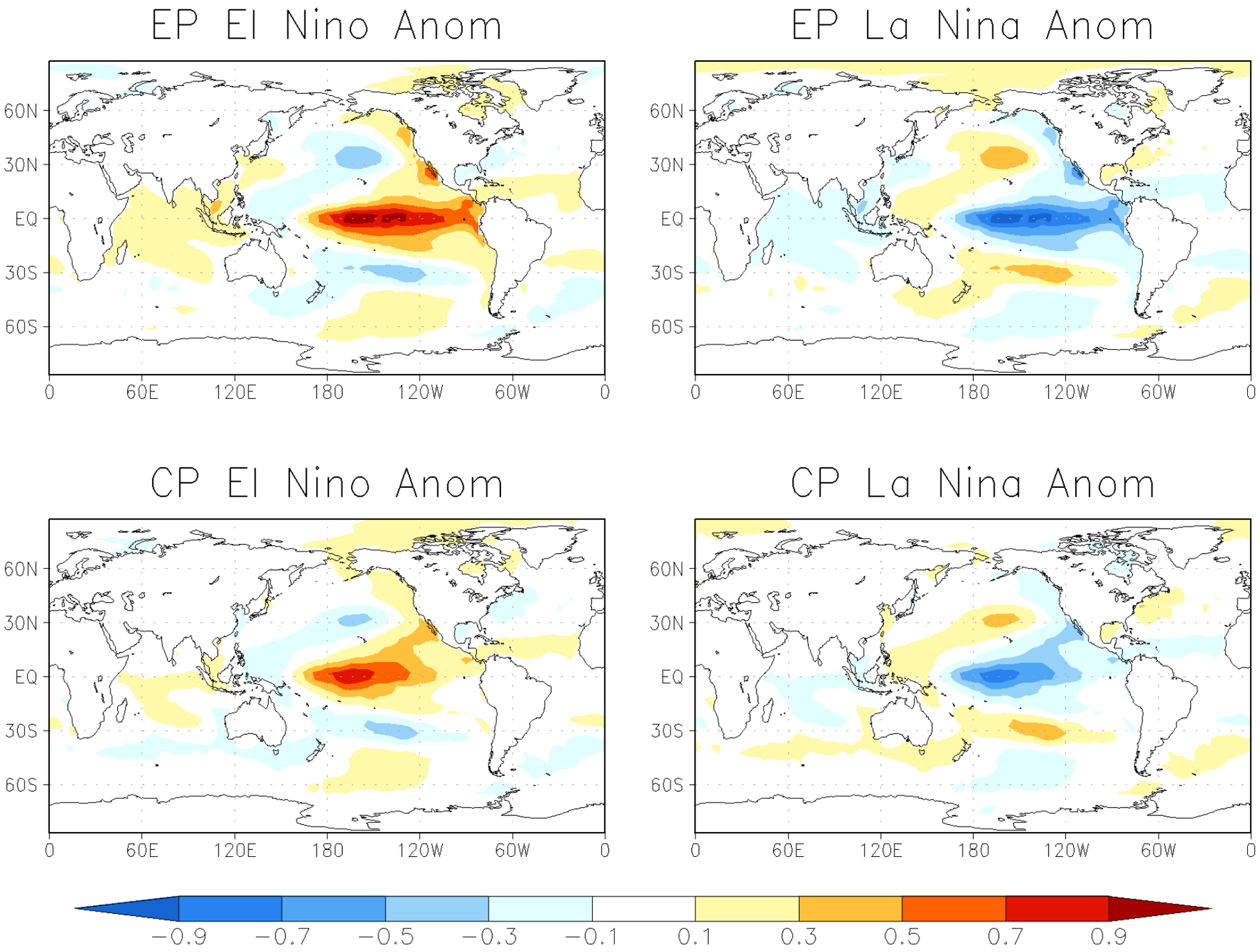
- Speedy v41.5 (T31)
- prescribed SST

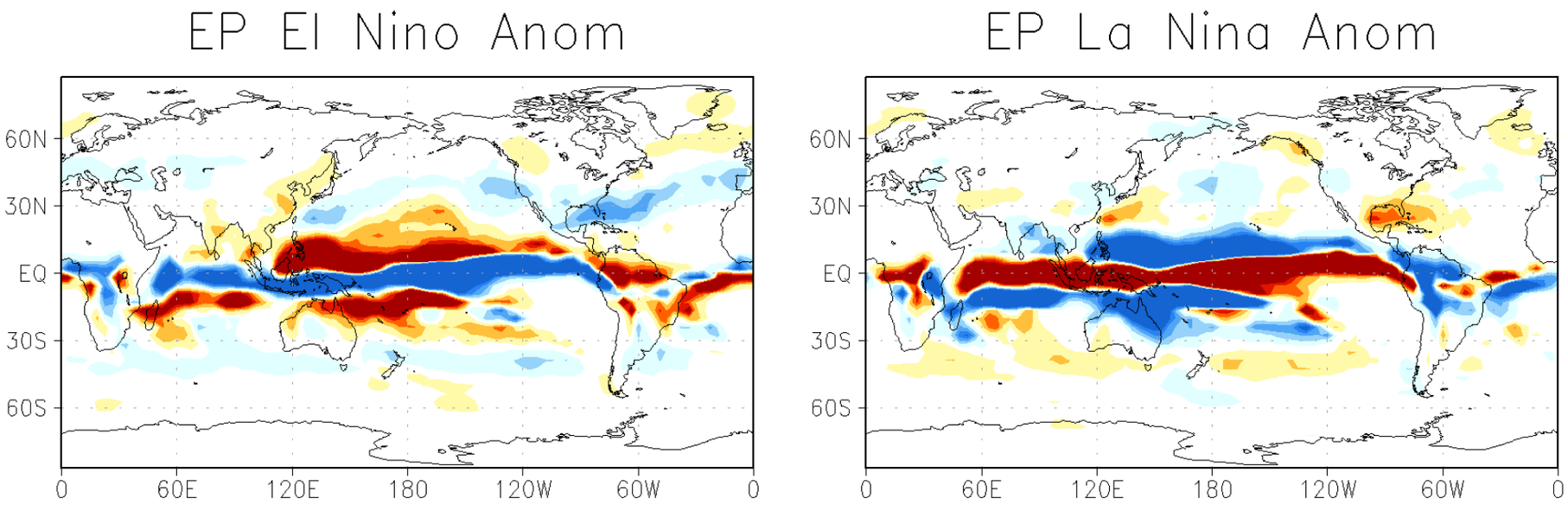
| | | |
|---|---|---|
| Control run | climatological SST | 1 year, 100 members |
| Canonical (+/-) | climatological SST + canonical anomaly | 1 year, 100 members |
| Modoki (+/-) | climatological SST + Modoki anomaly | 1 year, 100 members |

- Climatological SST (ERA-interim,1979-2008)
- SST anomaly for canonical and Modoki (HadISST regression)
- different initial conditions for ensemble members

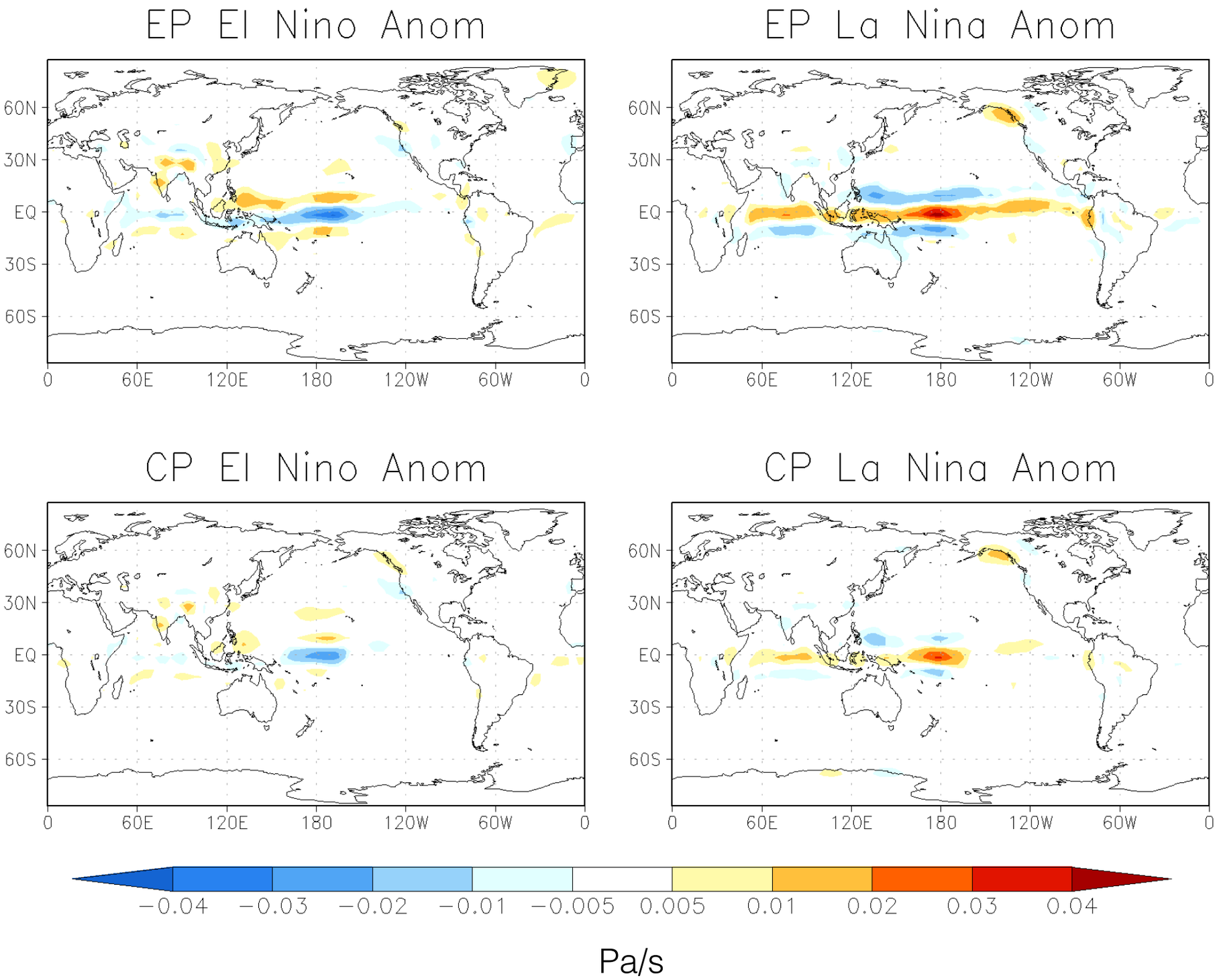
# Method - prescribed SST anomaly (JFM)



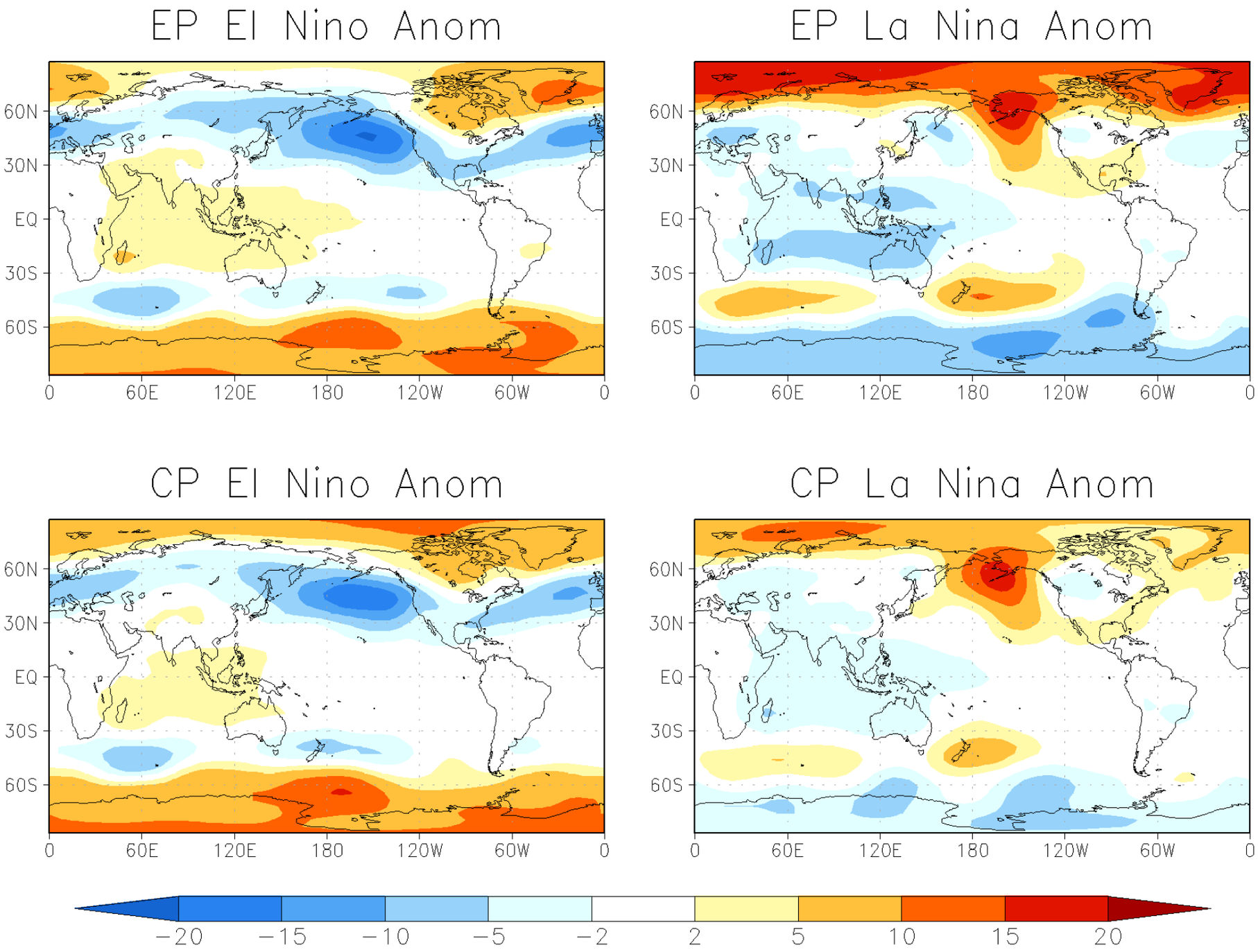
# precipitation response (JFM)



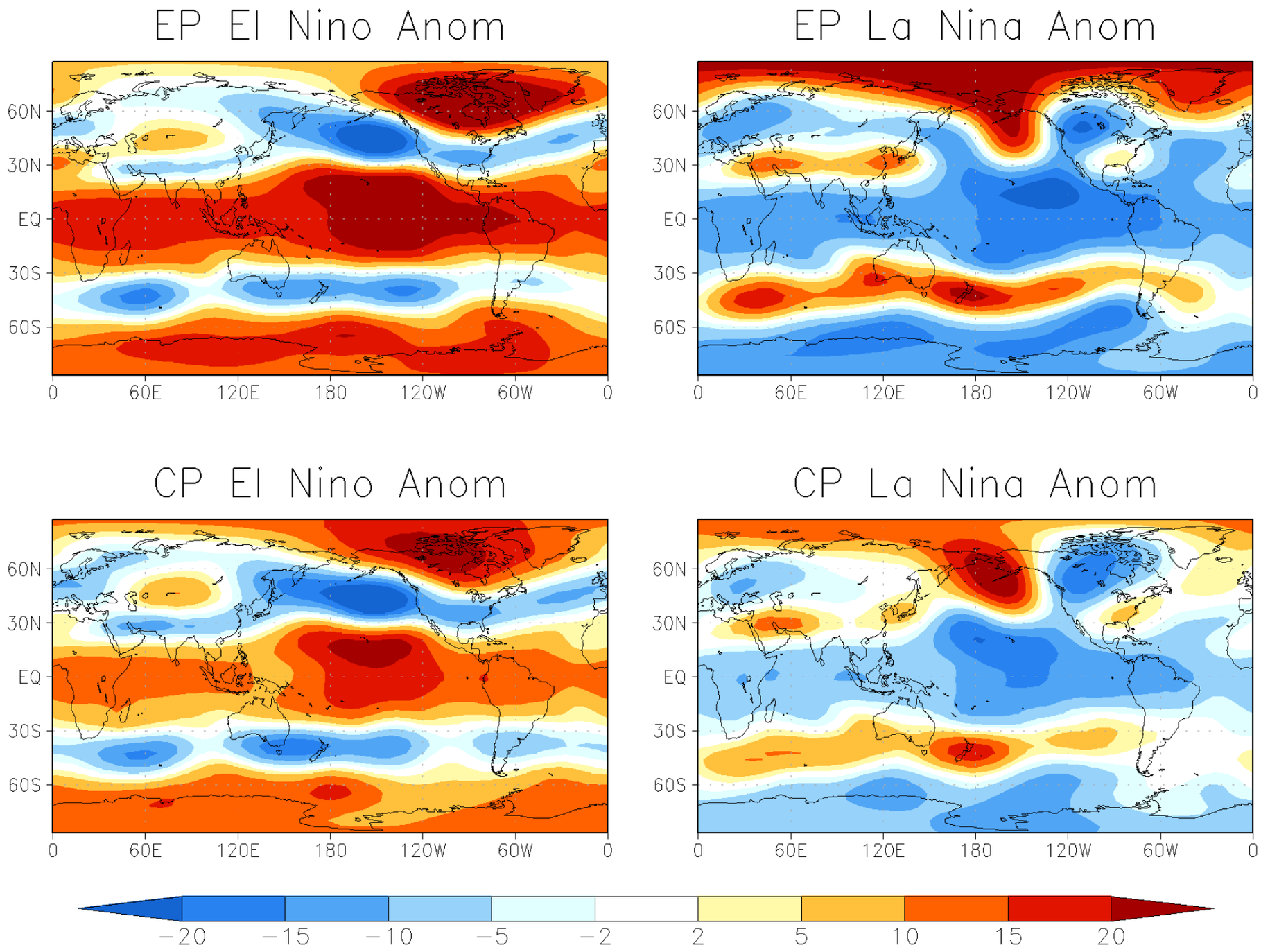
# Vertical velocity (JFM)



# Geopotential height anomaly 850 hPa (JFM)



# Geopotential height anomaly 200 hPa (JFM)

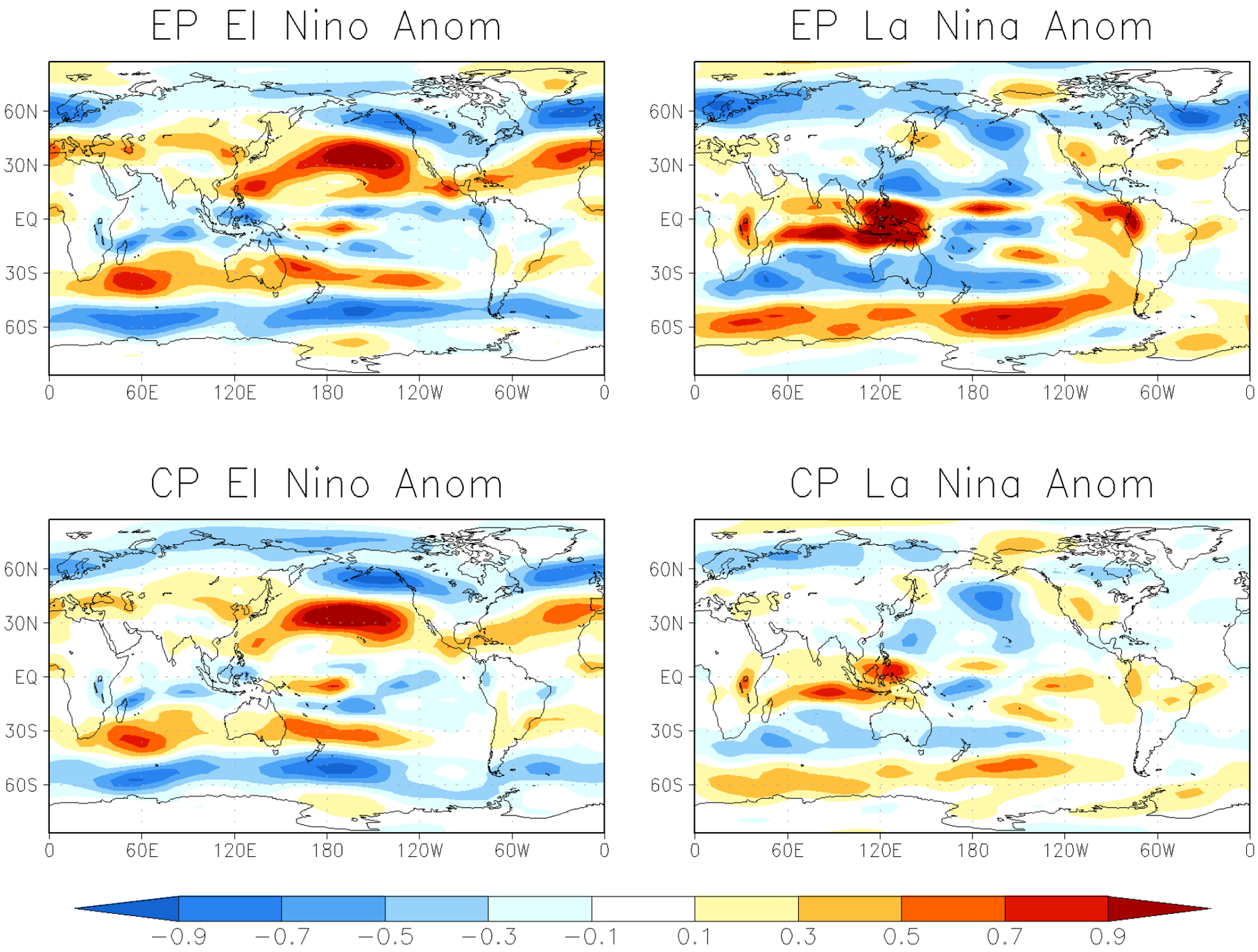


# Conclusions

- No evidence for different teleconnections for eastern or central Pacific **El Niño** in SPEEDY
- Response to **La Niña** seems to be different

- Is an interactive ocean (slab ocean) necessary to capture feedback mechanisms leading to a different response to central and eastern Pacific anomalies in remote regions?

# Zonal wind (JFM)



# 2m temperature response (JFM)