



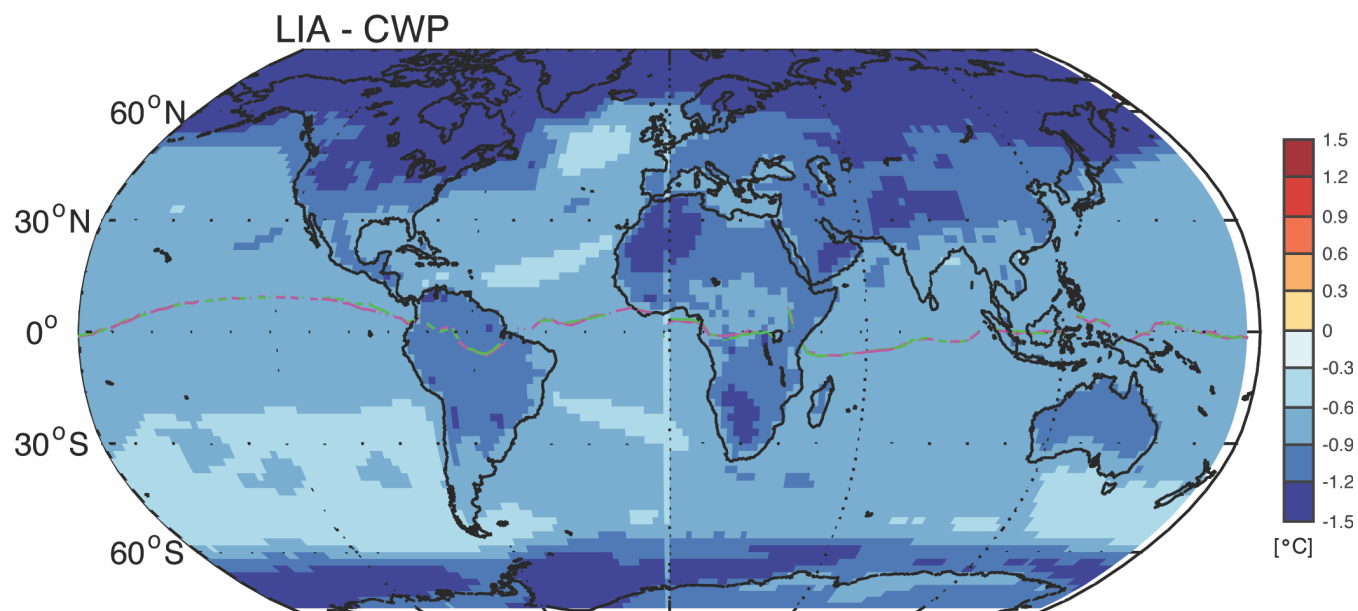
## *Supplement of*

# **South Pacific Subtropical High from the late Holocene to the end of the 21st century: insights from climate proxies and general circulation models**

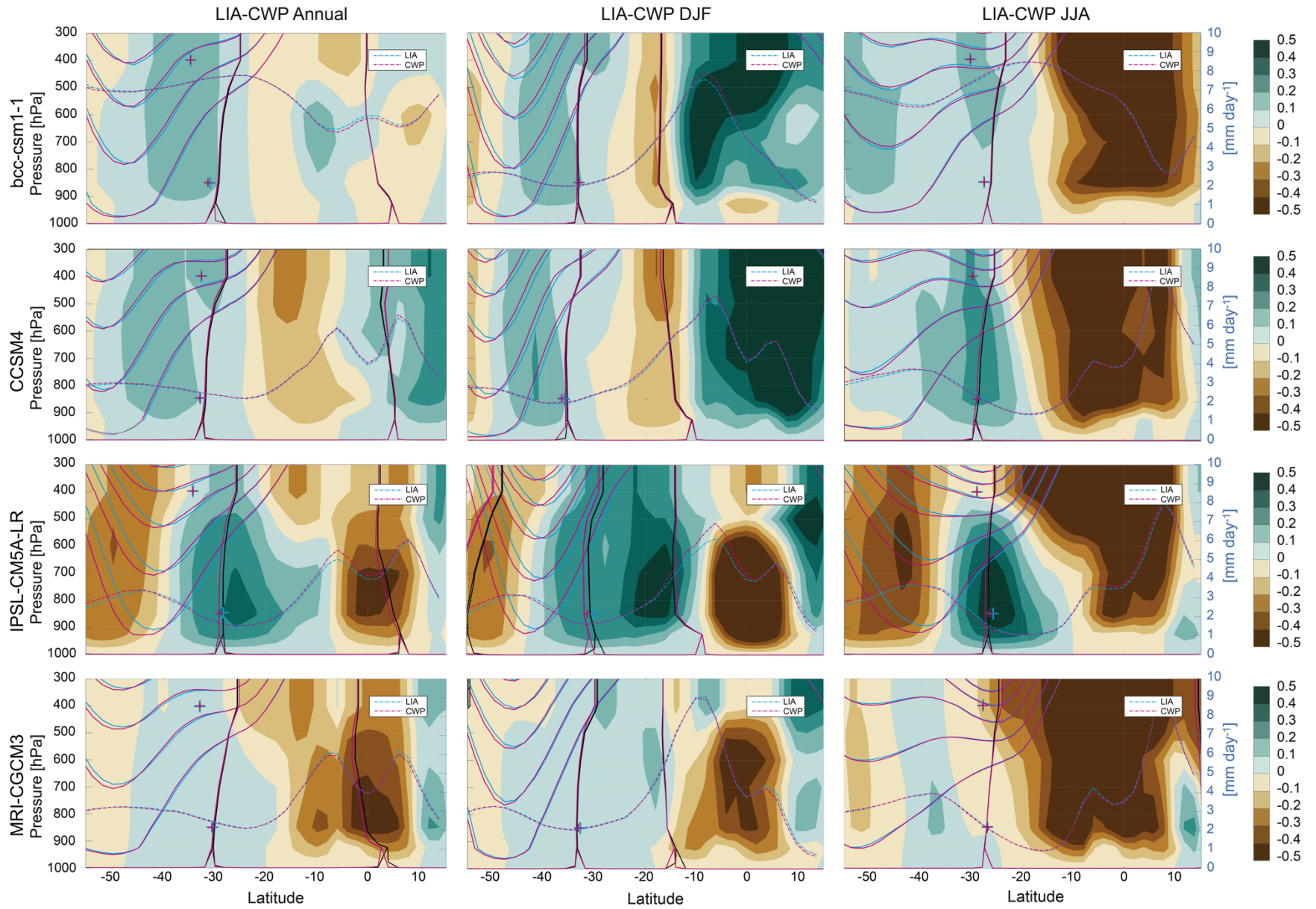
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**Figure S1: Model ensemble mean temperature difference between the LIA and the CWP. Note that models reproduce a small temperature variation ( $\leq 0.3^\circ\text{C}$ ) between both periods in most of the Pacific Ocean. Magenta line: ITCZ position during the CWP; green line: ITCZ position during the LIA.**



**Figure S2: Mass stream function during the LIA-CWP (shades), for austral summer (DJF), austral winter (JJA) and annual mean (ANN). for each model. Zonal mean precipitation (dash-dotted lines), zonal mean winds (solid lines), subtropical ridge position (lower stars) and latitude of maximum zonal winds at 200 hPa (upper stars) during the LIA (cyan) and the CWP (fuchsia) are also shown.**

	Period	Lat. (°S)	Lon (°W)
Annual	LIA	-29,6	-91,5
	CWP	-29,8	-91,4
	21C	-31,0	-93,0
	ERA-Interim	-30,0	-91,0
DJF	LIA	-32,3	-97,0
	CWP	-32,7	-96,3
	21C	-33,5	-101,2
	ERA-Interim	-32,0	-107,0
JJA	LIA	-27,2	-89,6
	CWP	-27,3	-89,2
	21C	-28,3	-90,3
	ERA-Interim	-27,0	-93,0

**Table S1: Mean location of SPSH center (maximum values of SLP) at annual and seasonal scales, during the LIA, the CWP, the 21C and according to ERA-Interim reanalysis data.**