

Supporting Information for
“Response of the Intertropical Convergence Zone to Antarctic Ice Sheet melt”

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Contents

1. Figures S1 to S5

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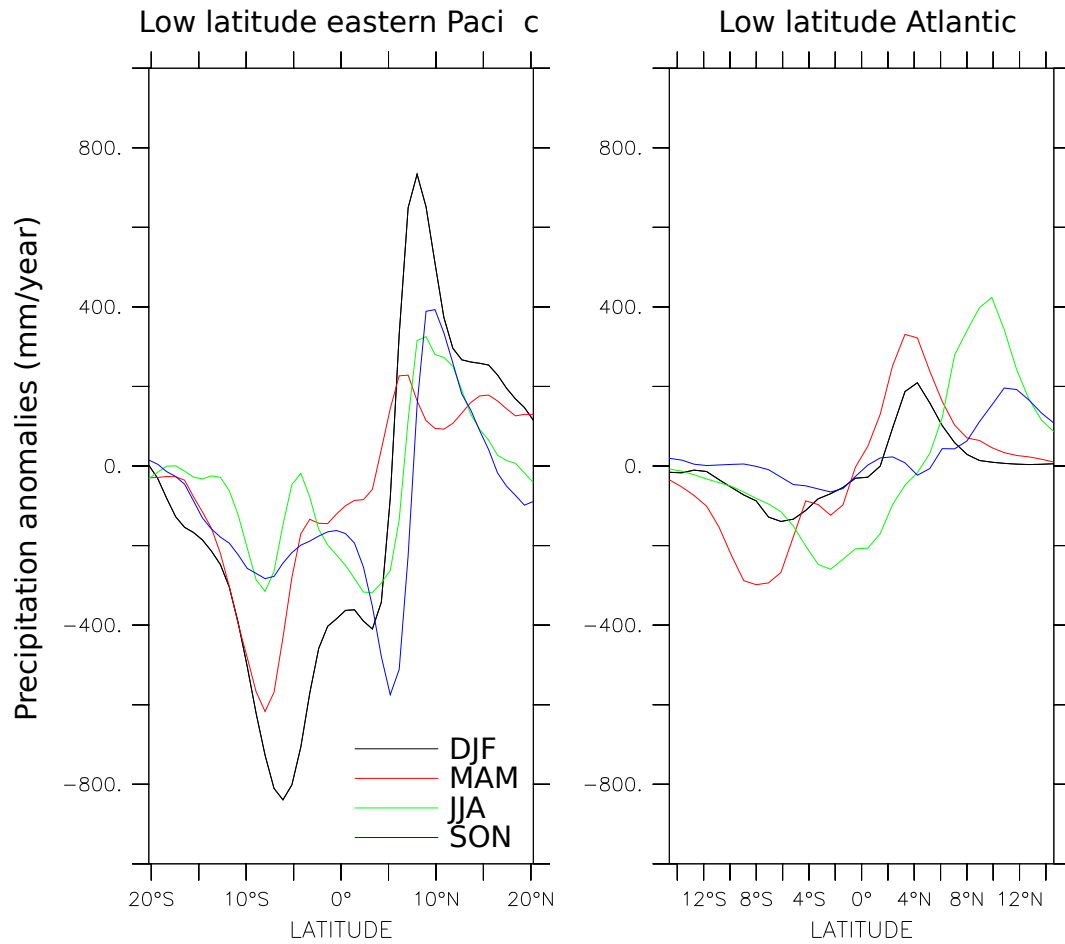


Figure 1. Zonal mean precipitation anomalies (mm year^{-1}) over the low latitudes of the Eastern Pacific (left) and Atlantic (right) for different seasons in simulation PI200 with respect to simulation PI. The two regions are defined as: Pacific $170^{\circ}\text{E}-80^{\circ}\text{W}$; Atlantic $60^{\circ}\text{W}-10^{\circ}\text{E}$.

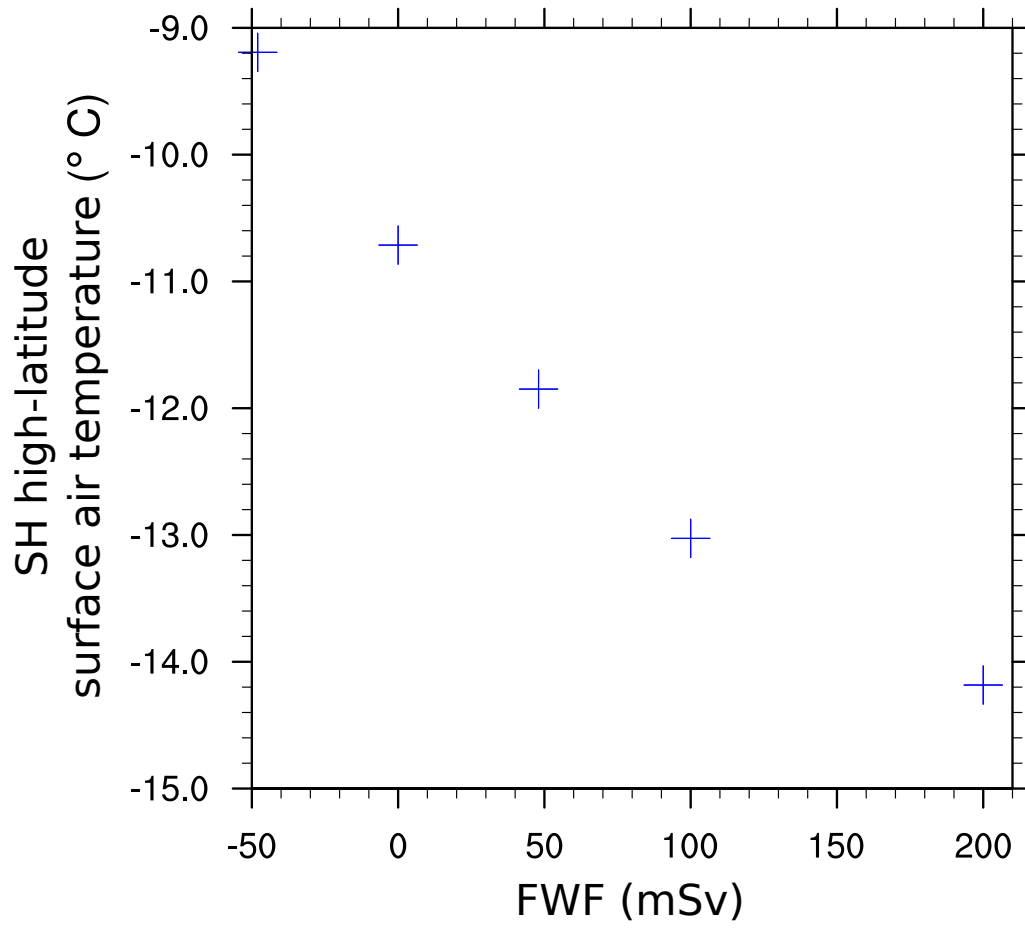


Figure 2. Changes in Southern Hemisphere (SH) high-latitude (south of 50°S) surface air temperatures (°C) as a function of the imposed freshwater forcing (FWF; in mSv)

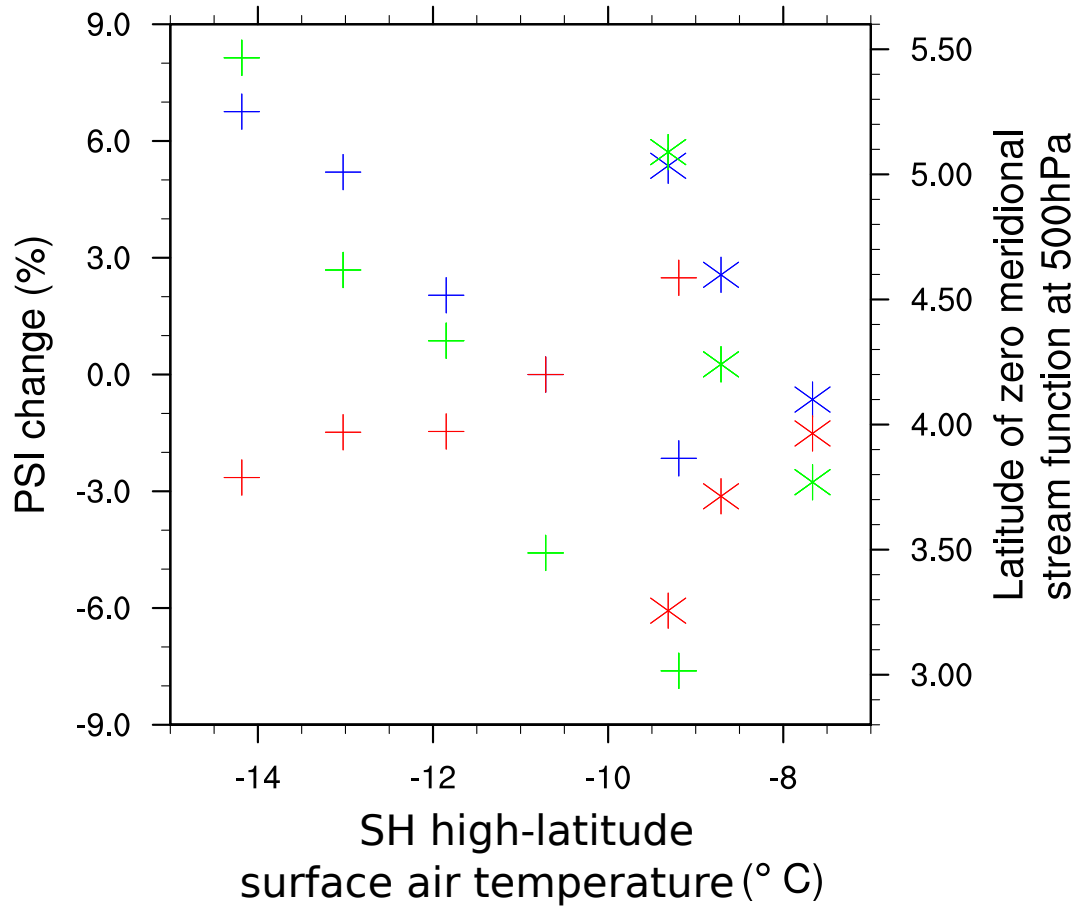


Figure 3. Low latitude atmospheric dynamics as a function of SH high-latitude (south of 50°S) surface air temperatures (°C) in the pre-industrial (PI) and global warming (RCP4.5) experiments. In blue (red) the changes in the minimum (maximum) values of the meridional streamfunction (left-hand-side vertical axis; %) and in green the location of the ITCZ (right-hand-side vertical axis; °N) as a function of SH high-latitude (south of 50°S) surface air temperatures (°C). The PI results are given by the plus-symbols and the RCP4.5 results by the asterisks-symbols. The latitude of zero meridional streamfunction at 500hPa is used as a measure of the position of the mean ITCZ.

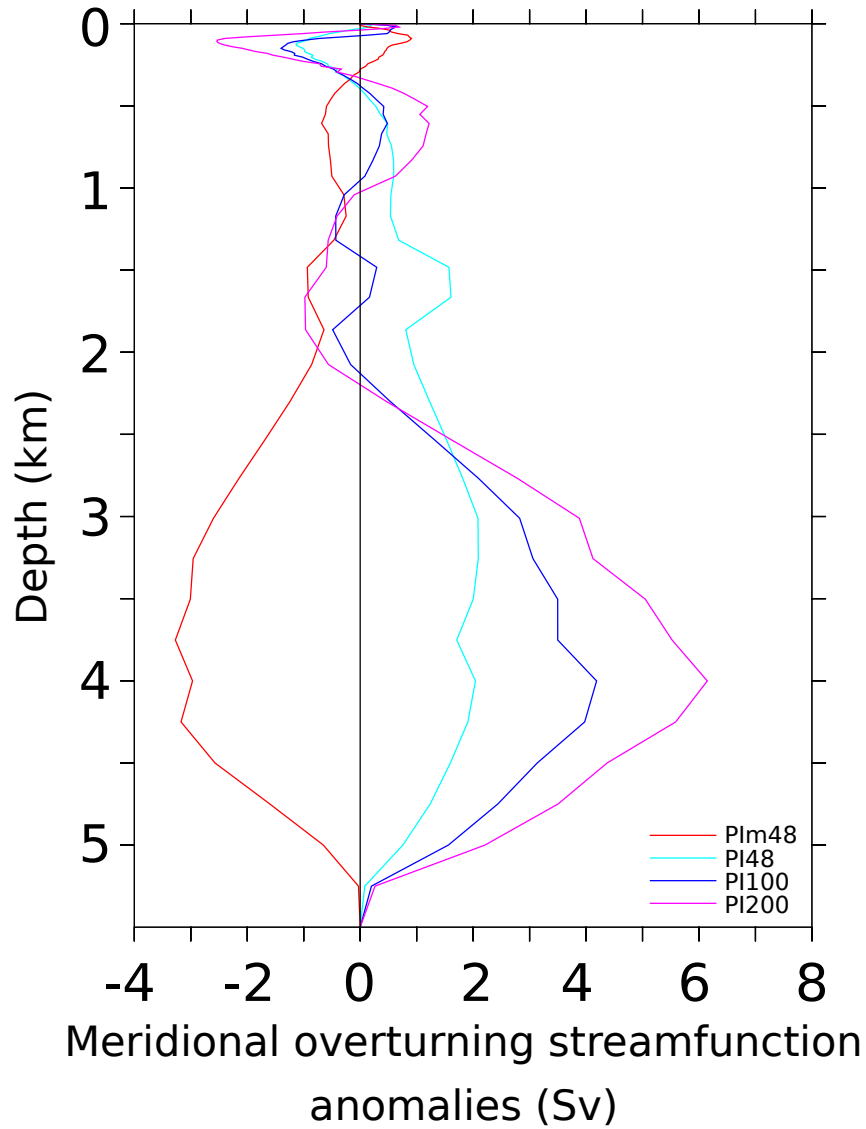


Figure 4. Equatorial meridional overturning streamfunction anomalies (Sv). Shown are anomalies compared to the PI reference case for FWF magnitudes of -48 mSv, 48 mSv, 100 mSv and 200 mSv.

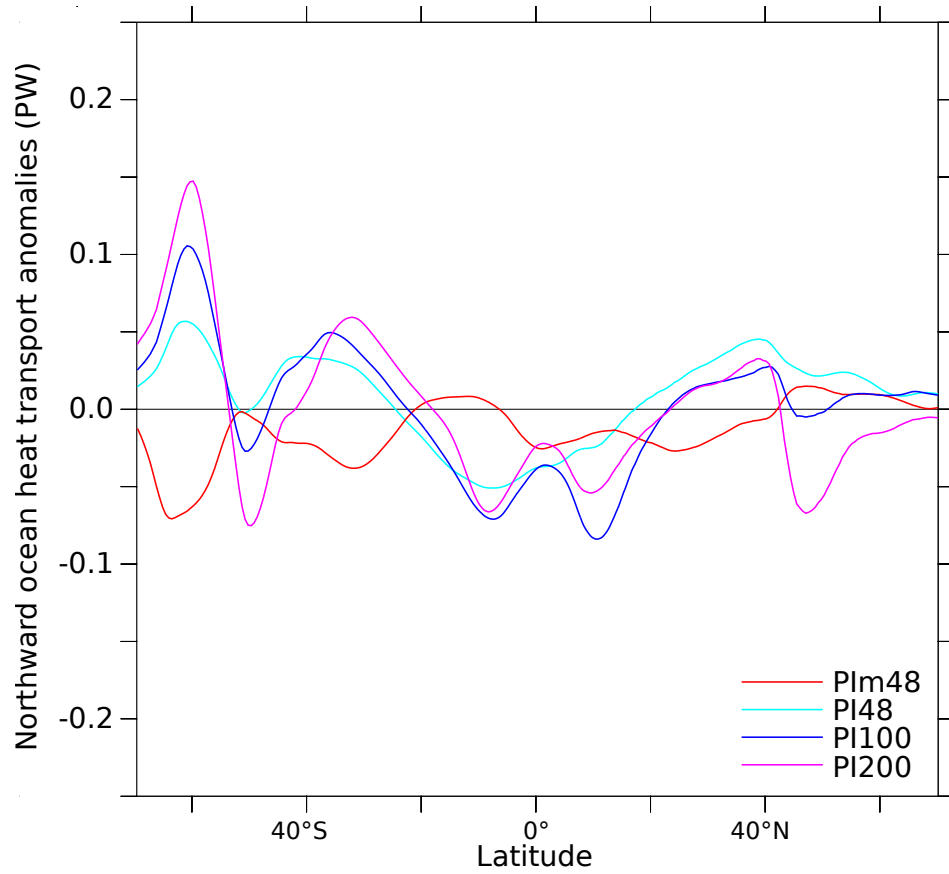


Figure 5. Northward oceanic heat transport anomalies (PW). Shown are anomalies compared to the PI reference case for FWF magnitudes of -48 mSv, 48 mSv, 100 mSv and 200 mSv. Oceanic heat transport is calculated inline.