Dear editor,

We added a figure into the supplementary showing standard deviation of the surface air temperatures of the control run (pre-industrial forcing over 450 yrs). We further show the ratio of the absolute changes in air temperature of the coupled run (NorESM2) and the control standard deviation. The SAT changes by 2100s and 2300s are over 15 and 35 times the standard deviation of the control run representing internal model variability.

We added these sentences into the manuscript (line 179ff, also referring to the figure):

Overall, the internal model variability is smaller than the changes due to climate forcing (Fig. A1). Comparing standard deviation of the climate change signal in NorESM2 by 2100s exceeds the 15 sigma range of inter-annual variability in some places. Changes by 2300s are locally over 30 times the inter-annual variability. This emphasizes that the changes seen in the simulation over time are outside of the internal model variability.

We would like to add that variability for globally averaged variables (like SAT, SST, SSS etc.) can be seen in Figure 1 - where both control and NorESM2 results are shown.

We hope we could address your suggestion with these adjustments.

Kind regards,
Konstanze Haubner
Heiko Goelzer
Andreas Born

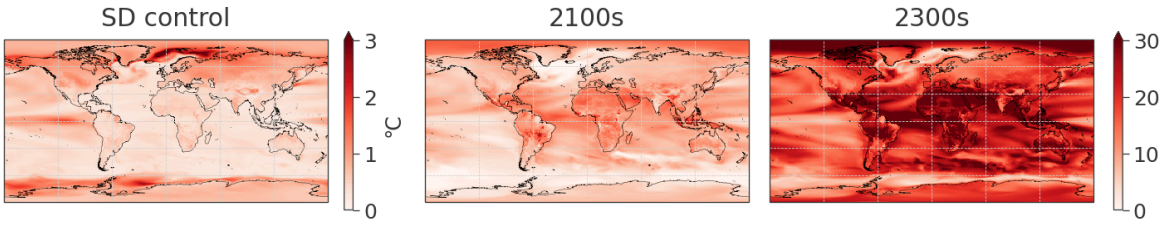

Figure A1. Left: SAT standard deviation (SD) of the control run (pre-industrial forcing from 1850 to 2300). Middle and right show the ratio of the absolute SAT changes (by 2100s and 2300s respectively) and the SD of the control run.