

Weather Clim. Dynam. Discuss., referee comment RC2  
<https://doi.org/10.5194/wcd-2021-62-RC2>, 2021  
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## Comment on wcd-2021-62

Anonymous Referee #2

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Referee comment on "Sudden stratospheric warmings during El Niño and La Niña: sensitivity to atmospheric model biases" by Nicholas L. Tyrrell et al., Weather Clim. Dynam. Discuss., <https://doi.org/10.5194/wcd-2021-62-RC2>, 2021

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In the manuscript, the authors examine the effect of a bias correction process in a general circulation model on the representation of the ENSO-SSW teleconnection in the model. The authors use GCM bias-corrected and control runs and compare them to reanalysis data.

The manuscript is well-written and clear. The results are interesting and bear importance for the atmospheric modeling community. Therefore, I recommend publication after the following minor revisions are addressed:

Figure 1: What do the dashed lines and bold parts represent? Please add this to the caption. In addition, in line 370: c) -> d)

Figure 2: Is the polar-cap geopotential height cosine-weighted?

Figure 4: No November statistics. It seems like in December the difference is not so large between CTRL and ERA5, so I wouldn't put it in the same category with March.

Line 164: Figure 4 -> Figure 5

Line 190: Please mention the significance level represented by solid lines also in the caption of figure 7.