

Minor revisions to EGUSPHERE-2022-167

Many thanks to the reviewers for their input during the publication of this paper. We are pleased to address the remaining concerns in this revision.

Reviewer 1

1) Referring to Table 3 before Table 2 has been discussed or shown comes across weirdly when read (Page 3 line 26). Can the authors reorder the tables, so they are referred to in chronological order?

Done - order reversed

2) Figure 1 Caption: "The shortest timescale model with errors within a .5 percent" should be "0.5 percent".

Done

3) Figure 2 Caption: The blue line does not appear on every panel. The authors should consider making a note in the caption that the blue line does not appear for every model, and why.

Done

4) Figure 2 legend: The light green dots are not included in the legend

Now included

5) Figure 3 legend: Grey and green dots are not included in the legend

Now included

6) Figure 4 legend: Green dots are not included in the legend

Now included

7) figure 4 caption: The authors should provide a disclaimer in the caption that the y-axis for each panel is not the same. For example, CESM104 goes to about 7.5 K, but CNRMCM61 right next to it exceeds 10 K. Figures 1, 2, and 3 have the same y-axis across all of the panels, so the reader might not notice they change in Figure 4.

Done

Reviewer 2

In the text following equations (1), it is said that these apply to a unit step change in forcing, but later it is said the ABRUPT4x simulations are directly fitted to these equations. Judging by the parameter labels in equations (1), I suspect the "unit step size" is supposed to be the abrupt 4xCO₂ forcing, but this is not clarified in the text. Further, if that is the case, equations (2) are

missing a scaling factor (by the forcing in abrupt4xCO2). This should be clarified and harmonized in the text.

This interpretation is correct. Text and equations have been adjusted to reflect this.