

| COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RESPONSE OF AUTHORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>EDITOR</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Dear authors, your manuscript has now been re-evaluated by two reviewers, which are generally happy with the changes. Reviewer 2 asks for some minor changes, and it particularly this one is quite important</p> <p>4. Please mention the use of Pseudo Global Warming method in the summary and conclusion. This is a pillar of your research and has not been mentioned. Mention its use to simulate past, present and future conditions. And highlight why is it relevant for this research. It means, you are not taking just a set of random TCs in a climatological dataset, but you are simulating specific events in different climates.</p> <p>Therefore, the manuscript is returned for a hopefully straightforward minor revision, looking forward to receiving the updated version!</p> | <p>Thank you very much for your positive review of the revised manuscript. We are glad that the major concerns have been addressed and that the manuscript is now almost ready for acceptance.</p> <p>We appreciate this important point and we have now revised the Summary and conclusions section to explicitly mention the PGW technique and its purpose.</p> <p>We have provided point-by-point responses to the remaining minor technical comments and describe the corresponding revisions made to the manuscript.</p> |
| <b>REVIEWER 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| The author has addressed all of my concerns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | We sincerely thank the reviewer for the positive assessment and for their helpful feedback to improve the manuscript.                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>REVIEWER 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Dear authors,</p> <p>Thanks for considering our comments. I am personally happy with the current state of the manuscript. It reads smoothly and certainly the separation to the inner-core is a great add-on to the analysis. The experiments are now clearer and better structured, as well as the figures. My doubts and comments were successfully addressed. Therefore, I would recommend to accept after technical corrections.</p> <p>I have minimal observations:</p>                                                                                                                                                                                                                                                                                                                         | <p>We thank the reviewer for the positive assessment of the revised manuscript. We are very pleased to know that the revisions have improved the manuscript well.</p> <p>We are grateful for the recommendation to accept pending minor technical corrections, which we have fully addressed below and in the revised manuscript.</p>                                                                                                                                                                                         |
| 1. there is a mistake in the description of new Figure 1. The colors in the text do not correspond to the legends in the figure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Thank you for noticing this. We have revised the figure caption as well as the color descriptions to match the figure                                                                                                                                                                                                                                                                                                                                                                                                         |

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|                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>legend in Lines 214-216 (tracked version)</p> <p>We also updated the Figure 3 caption to include the colors in the caption in Lines 259-262 (tracked version)</p>                                                                                                                                                                                                                                             |
| 2. Be consistent, either call it pre-industrial or preindustrial throughout the text.                                                                                                                                                                                                                                                                                                                                        | <p>Thanks for pointing this out. We have revised the manuscript and now consistently use “pre-industrial” throughout the text.</p>                                                                                                                                                                                                                                                                               |
| 3. In some paragraphs it reads odd that the scale factor is 'per degree Celsius' and 'per Kelvin'. Please be consistent. Ex: paragraph 2 of the conclusions.                                                                                                                                                                                                                                                                 | <p>We have also revised the manuscript so that all temperature scaling is now reported consistently as per degree Celsius (°C)</p>                                                                                                                                                                                                                                                                               |
| 4. Please mention the use of Pseudo Global Warming method in the summary and conclusion. This is a pillar of your research and has not been mentioned. Mention its use to simulate past, present and future conditions. And highlight why is it relevant for this research. It means, you are not taking just a set of random TCs in a climatological dataset, but you are simulating specific events in different climates. | <p>We thank the reviewer for this important suggestion. We have now revised both the Summary and Conclusions to explicitly include the PGW approach including its purpose, specifically in Lines 535-539 (tracked version).</p> <p>We also added a couple of lines in the Methods section to further highlight the purpose and implications of the use of PGW technique, in Lines 121-125 (tracked version).</p> |