

Response to Reviewer 2

We sincerely thank the reviewer for their thorough and constructive comments. Their feedback has substantially improved the manuscript. Below, we address each comment. Reviewer comments are shown in black, and our responses are in blue. All revisions are included in the updated manuscript.

Thanks for addressing my comments in the first round of review. I believe the manuscript has improved substantially and is now ready for publication. Please find below a few remaining remarks:

- L10: Perhaps I missed something, but here you state that “how these processes influence the projected change in extreme DTDT variations under warming scenarios remains unknown” before first establishing that projected changes in extreme DTDT variations actually exist. Consider rephrasing this part for better logical flow and consistency.

Response: We thank the reviewer for this helpful comment. The revised text now reads: “Extreme DTDT variations are projected to change under future warming; however, how and which processes drive these changes remain poorly understood.”

- L56: Please use “for the past” instead of “in the past” (this was mentioned as corrected in the response to reviewers, but it has not yet been changed in the manuscript).

Response: We have changed this.

L418: “oceanic air masses”

Response: We thank the reviewer for this careful observation. The mistake has been corrected.

- L648: Consider using “found” (or a similar term) instead of “observed”.

Response: We have changed this.

- L705: What exactly is meant by “resolved wind fields”? This is not entirely clear to me.

Response: Now the sentence reads as: “Note, however, that these results must be interpreted with caution, as the trajectory calculations use wind fields from the model grid and therefore cannot capture the full spectrum of convective and turbulent motions”.