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Dear Geoscientific Communication editors, referees and reviewers,

We received two review comments and one short comment. We have addressed their comments in this document, and made changes to the main document, also attached. We're like to thank both anonymous referees and the short comment author for their helpful comments. Thanks to their contributions, this work is in a much better state and should be easier to follow.

For clarity, we will reproduce the comments and respond to them in turn. Our responses are marked in bold and begin with "**LdM:**". The new text are included with an indent and may include some latex grammar. Alternatively, a document showing the difference between the old and the new version is also available.

Sincerely,

Lee de Mora – representing the authorship team.

## Short Comment: Paul Pukite

**We have also received the following comment from Paul Pukite:**

In my years following scientific research, I have no idea what the meaning of this is <https://www.youtube.com/watch?v=RxBhLNPH8Is> Music appreciation is subjective, but scientific research results should not be. Sorry if I don't get what the point is.

**Paul has also added a comment on the youtube channel, and we have been communicating with him directly there. We wrote:**

The idea here is to use music to draw people in, then they learn about how Earth System Modelling works. This piece was the first one in a series of six, and the main idea here is just to show how the musification process works. I.e, we take Earth System Model data and turn it into music.

The next piece in the series introduces the concept of a control run. Then the following piece shows how future scenarios work in the context of global warming, then there's a piece about ocean acidification and how historical runs branch from the pre-industrial control run. There's also a piece about how the model is spun up, and another about the 7 SSP scenarios in CMIP6. These are all key concepts in climate modelling, but might not be known outside our community. The goal isn't really to use the data to identify new behaviours in the model, but to show how we make models in a (hopefully) fun way.

Happy to answer more questions if you have any!