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Dear Dr Hargreaves,

I enclose the revised version of our manuscript. These changes are very minor, so I list them here:

Reviewer #1:

P2 L5 parameterizations may be made for
P2 L30 such a systematic intercomparison
Table 1 Parameter -> Parameter

All these typos are corrected.

Reviewer #2:

I would like to thank the authors for addressing the majority of my concerns, particularly for reducing the number of runs and for adding experiments 3 and 9. I only have two minor concerns, once these have been addressed I will be happy to recommend the paper for publication in GMD.

1) On page 1, lines 14 to 19: The authors still state that deriving the surface temperature of a planet "is a conceptually simple physics problem". As I said in my previous report, this is not true, and the authors do not need to say this to motivate their intercomparison project. To motivate their study the authors should rather argue that performing accurate radiative transfer calculations is the number one priority in any climate model.

We have replaced "This is a conceptually simple physics problem" with "To first approximation".

2) I am concerned that radiation schemes designed for anoxic atmospheres may not be able to participate in most of these experiments. To avoid adding more experiments, I suggest that O2 and O3 could be removed from experiments 3 and 9. I believe this would both broaden and ease participation in these experiments, but I will leave the final decision on this to the authors.

This is a good idea, which we have adopted.

Additionally, we have added the following paragraph to section 2.1:

"If some absorbing gases are missing, experiments which do not focus on these can still be run, with notes in the metadata and in discussion with the project team. As our analysis will focus on forcings (change from standard conditions) comparison to the standard conditions *from that model* will minimise the effect of any systematic offset from missing absorbers. For example, models without oxygen or ozone absorption could still run the experiments focussing on clouds."

I have appended a graphical diff made with LaTeXdiff. Thank you again for considering this manuscript.

Yours sincerely,

Colin Goldblatt