

Response Letter for the Referee #2

We appreciate the comment for this manuscript. The comments of the reviewer and the corresponding corrections are listed.

Thank you for addressing my comments, I have a few more suggested edits and additions for the revised manuscript:

Pg 2, Line 26: change “toward around” to “near”

Corrected.

Pg 3, Line 66: change “three decadal scale simulation” to “30 year simulation”

Corrected.

Pg 6, Lines 139-142: Given that the methods are largely taken from ML12 it is important to be careful not to plagiarize the text. This sentence, for example, is taken practically verbatim from ML12.

Thanks to the advice, we have changed the sentences.

Pg 6, Lines 157-161: I would still like to see more information about how dust is treated in the model. You mention in your response that absorption of radiation by dust will impact model clouds by the semi-direct effect. This is very important for the reader to understand when evaluating the model results and should be at least mentioned in the methods section. Also please mention that dust is radiatively active in the SW and the LW and that dust is not microphysically active. The latter may be implied by the “passive tracer” sentence but should be explicitly stated so there is no ambiguity.

Agreed. We have added additional information of dust in the model. Line 157-160.