

Response to editor for production manuscript upload:

We thank the editor for managing the review of this manuscript. Below is a list of changes made to the manuscript in advance of uploading the production version of the manuscript.

- 1) A citation to the dataset documented in the paper is referenced at the end of the first paragraph in section 2.5 (line 226) and the reference has been added to the list of references.
- 2) The date ranges for the Terra MODIS and Aqua MODIS datasets in line 231 have been adjusted slightly to be consistent with the first version of the dataset being hosted by NASA. These date ranges will be expanded in a reprocessing update of the dataset planned in the next few months.
- 3) “Code availability”, “Data availability” and “Author contribution” sections have been added between the conclusion section and the “Competing interests” sections. The content of the “Data availability” section has been amended to list only the permanent DOIs assigned to the deep cloud database.