Interactive comment on "Algorithmic Differentiation for Cloud Schemes" *by* Manuel Baumgartner et al.

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I am writing as an executive editor of GMD to highlight a number of ways in which this manuscript does not currently comply with GMD policy requirements. These need to be remedied before a revised manuscript can be accepted.

Title

As the manuscript types page[1] specifies, "methods for the assessment of models" papers are subject to the same title rules as other papers. That is, the name and

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[1]https://www.geoscientific-model-development.net/about/manuscript_types.html

version number of the code must appear in the title. In this case, this would appear to apply to both the cloud model and the AD tool: these should both be named in the manuscript title with their version numbers given.

Code availability

The cloud model is described as being available "on request". This does not fulfil GMD requirements. Source code must be provided and publicly archived unless it is not possible to do so for reasons beyond the authors' control. Even in those circumstances, the restrictions which apply need to be documented. Please therefore publicly archive the cloud model and cite that archive from the code availability section.

A GitHub URL is provided for the AD tool. GitHub is an excellent development platform but it does not provide the persistence required for a journal publication, nor does it identify the precise version of the code used in the manuscript. For this reason, GMD policy requires a more persistent and precise archive. This can be achieved using GitHub's Zenodo integration[2].

Finally, no mention is made of the scripts which were used to run the model and produce the results presented. These scripts are also essential to the reproducibility of the manuscript and form part of the code which must be presented. Please therefore also archive and cite this code.

For more details on the requirements for code archiving, please see the GMD model code and data policy[3]. A more expansive explanation of the policy is given in the latest GMD editorial[4].

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[2]https://guides.github.com/activities/citable-code/

[3]https://www.geoscientific-model-development.net/about/code_and_data_policy.html

[4]https://doi.org/10.5194/gmd-12-2215-2019