Author's response to interactive comments by Exexutive Editor of GMD, Lutz Gross:

The authors would like to thank the Executive Editor for the very constructive review comment, which is repeated below in bold font, followed by our reply.

As outlined in https://www.geoscientific-model-development.net/about/manuscript_types.html GMD is encouraging authors to provide access to the release of the source code matching the model described in manuscript preferable through a DOI. The information provided are incomplete. When copyright or licensing restrictions prevent the public release of model code, or in the cases where there is some other good reason for not allowing public access to the code, authors need to state the reasons for why access is restricted and need to explain how access can be obtained (e.g. signing a license agree or join a consortium).

This manuscript is a documentation of the aerosol and atmosphere module of NorESM1.2, CAM5.3-Oslo, but the rest of the ESM has not yet been documented and published. The code for NorESM1.2 is all on the same github repositoy, and CAM5.3-Oslo cannot easily be put on a separate repository. This would imply a huge additional effort by many scientists, which we are unable to defend and afford at the moment.

Making the code available to everyone through a doi number (or alternative solutions) is something that will be discussed in a new infrastructure project funded by the Norwegian Research Council (INES, lead by Mats Bentsen and Michael Schulz). Since NorESM1.2 is partly based on CESM1.2 from NCAR in USA, the code availablility indirectly relies on the user agreement between us as NorESM developers and NCAR. Potentially new users are also asked to become CESM users, which is necessary for obtaining access to new model input data (as well as code) from NCAR, most of which are also used in NorESM.

Based on the above, we suggest to rewrite the first part of the Code and data availability section on lines 8 and 9 as follows:

«The source code for CAM5.3-Oslo is part of a restricted NorESM2 pre-release and stored within the private github NorESM repository (https://github.com/metno/noresm/tree/NorESM1.2-v1.0.0). Access to the code and simulation output data produced in this study can be obtained upon reasonable request to noresm-ncc@met.no and requires entering a NorESM Climate modeling Consortium (NCC) user agreement.»