

We would like to thank the Editor, Dr. Patrick Jöckel for his valuable comments. Please see our responses below in blue.

The minor issue: Please remove "quite" before "comparable" in line 262 (line number refers to the document with highlighted modifications), because this is not a suited quantification.

Done

The major issue is related to your section on "Code availability". The URL you provide is for the access and documentation of the GEOS-5 ESM, but no information about the availability of your ECCOH code is presented. This needs to be clarified according to the GMD code and data policy (see http://www.geoscientific-model-development.net/about/code_and_data_policy.html for detailed instructions). Please note that your manuscript is on ECCOH, not on GEOS-5 ESM in general.

The code is now provided in the supplementary materials. We also update the Code availability section in the manuscript as following:

"Code availability

The GEOS-5 source code is available under the NASA Open-Source Agreement at <http://opensource.gsfc.nasa.gov/projects/GEOS-5/>.

The GEOS-5 CCM version that includes our ECCOH chemistry module is available in the supplementary material. For documentation and installation instructions, please visit the GEOS-5 online wiki: http://geos5.org/wiki/index.php?title=GEOS-5_Earth_System_Modeling_and_Data_Assimilation."