

Dear editor,

in the following we provide a short response to your comments and suggestions:

„l 155 ff: I am confused about the use of the term "nudging". I think you use "nudging" when you mean "prescribing". [...] Using this terminology, the paragraph should read: SD-WACCM4 meteorology is fully prescribed up to 50 km using GEOS-5 fields.“

Below 50 km altitude, the SD-WACCM4 meteorological fields are replaced by a combination of 99% model predicted and 1% GEOS-5 fields, thus, it is not fully prescribed but relaxed to external meteorological fields. We replaced line 155-160 with the above mentioned description.

„l 588: quencher -> quenchers“

fixed

„I think it would be advantageous if you could add another short paragraph in Sect. 8 where you list and shortly discuss all critical assumptions and uncertainties which might affect your results (e.g. the use of SABER atomic O which is indirectly inferred, etc).

We included a short list of critical assumptions in line 619-626 and highlight the impact of the uncertainty of the O quenching rate term to our results.