

Answer to the Report 2

The authors thank the reviewer for the helpful comments.

The revision of this paper is substantially improved and has met the concerns of the original reviews. The only remaining substantial issue is the organization of the paper (plus a few minor points and spelling and grammar mistakes that the authors should attend to).

In terms of organization, the early sections of the paper are laid out in a confusing order. Figure 2 is called out before Figure 1, and the discussion surrounding Figure 1 comes much later. Then the effect of the changes in the retrieval on ozone trends are discussed immediately at the end of section 2.1 before anything to do with ozone trends, including methodology, are mentioned and/or referenced (this comes much later in section 4). I realize that they are addressing two different issues (retrieval updates and level 1 spectra updates), however the authors need to review the overall story of the paper once more and organize appropriately.

We reorganized the paper accordingly.

Two other smaller issues:

(1) The claim made at the end of section 2.3 on the “clear improvement” in the UTLS. This is certainly not clear from the figure. More philosophically, if a profile has both high and low biases at various altitudes and a change is made that results in a simple shift of the entire profile (as seems to be the case here), is it fair to say that the regions now closer to zero are improved?

If the new bias profile was shifted, we would agree that one can obviously not speak about improvement. However, at Figure 7, green and blue curves are not shifted, there are points where they coincide (22 km, 29 km, 42 km), and there are regions, where the green curve (corresponding to new version) is closer to zero. We argue that this is an improvement.

(2) The claim that the drift is “clearly linear” at the end of section 3.2 is unsubstantiated.

We changed it to “approximately linear”.

Corrections:

- Page 3, line 25: “change as to 2D field”
- Page 4, line 12: reference CCM4-REFC1SD
- Page 5, line 5: “compared *i* climatological”
- Page 7, line 5: “desactivated”
- Page 7, line 11: “inidividual”
- Page 7, line 18: rephrase “non-trustful” here and elsewhere
- Page 7, line 19: “The is no”
- Page 10, line 8: “are not be visible”
- Page 13, line 6: “see the Figure 9”
- Page 14, line 21: not a sentence
- Page 17, line 16: “access” is not a good choice of wording here

All done