

Interactive comment on “Estimating Uncertainties in the SBUV Version 8.6 Merged Profile Ozone Dataset” by Stacey M. Frith et al.

Anonymous Referee #1

Received and published: 4 July 2017

The paper is dedicated to the important issue: uncertainty estimates for the merged SBUV MOD v8.6 ozone profile dataset. This paper contributes to understanding the differences between two SBUV datasets, and dominating sources of uncertainties in the merged dataset. The implications for the evaluation of ozone trends are discussed. The paper is interesting and well-written. Please find below my comments and suggestions.

MAIN COMMENTS

1. Please clarify whether uncertainties of NOAA-9 data (which are not used in the MOD dataset) are used for the illustration in Figure 7. If yes, I suggest including one more panel, which will illustrate only uncertainties associated with the data that are actually used for creating the MOD dataset.

2. In Sect. 3.4, please provide more details (briefly) on the NOAA Cohesive dataset. It seems to be different from that used in (Tummon et al., 2015) – true? What are the differences?

3. I think, in Figure 1 it is worth to include all NOAA-SBUV satellites, also before 2000.

4. Figure 3 and the related text: what will be the changes in error bars if autocorrelation is taken into account?

DETAILED COMMENTS (small clarification, technical corrections)

P.1 L. 21 “dominate” -> dominant?

P.2. L. 24 “Damedeo” -> “Damadeo”

P.4, L. 31 “In the 6.4 to 4 hPa layer we see a smaller decrease” in the 1980-2000 period?

P.8 L. 5 “though” -> “through”

P.8 L. 10 “very little difference” – How small? Please quantify.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-412>, 2017.

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Discussion paper

