

Interactive comment on “Validation of GOMOS ozone precision estimates in the stratosphere” by V. F. Sofieva et al.

Anonymous Referee #2

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General comments: This paper describes a simple method for validation of the GOMOS ozone profile precision estimates. The so-called differential method is appropriate for these measurements and provides a good indication that the retrieved precision is reasonable for occultations of bright stars at stratospheric altitudes. The technique and these results are suitable for publication in AMT and I recommend this paper for publication after the following minor comments are addressed.

Minor comments:

The comparison of the difference in sample variance with the difference in squared precision in Fig. 4 is shown for only 4 pairs of stars and the conclusion is made that there is perfect agreement for stars of visual magnitude less than 2. The use of the

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word “perfect” is certainly an overstatement and should be revised. Also, what are the criteria used to establish this agreement, i.e. a good uncertainly estimate, for stars of magnitude less than 2? (Note that this values changes to 1.9 as quoted later in the paper) It should be possible to do this same analysis for many pairs of stars and to show that the agreement becomes significantly worse at this point.

The speculation on page 2471 on the influence of the QBO is intriguing; however, without references to such a phenomenon from other literature, or further analysis of the GOMOS data set, which is definitely possible with essentially a decade of GOMOS data, this should probably be removed from the paper.

Specific editorial comments:

The use of parentheses in almost every sentence of the first paragraph is distracting and could be improved simply by using “such as” or simple rephrasing of the sentences.

P 2462, line 4: No parentheses required for this list of references.

P 2462, Section 2: The name of this section is not clear, particularly with the use of the period

P 2472, line 27: “invisible” is not a good choice of word here – “insignificant” would be better

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