

ANONYMOUS REFEREE # 1

The paper gives a useful evaluation of how the application of the known effective temperature dependence on Dobson spectrometer improves the satellite ground base comparison. The authors validate the Tef f calculations derived from satellite retrieval and with the ECWMF weather model based Temperature profiles with the same a priori climatology used from the satellite retrieval with ozonesonde based derivation.

The improvement of the comparison is clear which suggest to implement an operative implementation for Dobson ozone observations

*We would like to warmly thank referee #1 for his/her valuable comments towards the improvement of our paper.*

As other referee comment a mention of the different ozone cross section used by satellite retrieval and Brewer /Dobson will be mentioned.

*We agree and apologize for this small omission. The relevant paragraph has been added in the text.*

Page 5 5 Some references are missing on the bibliography (Anton and Labow)

*References added.*

Page 7 25 Can you give more details about the operative analysis used.

*A line to that affect was added in the text.*

Page 8 10 Do you have an estimation of the bias on Tef f calculated by ozonesondes due the fact of limited altitude of the ozonesonde.

*We have added a relevant analysis, with a new Figure and statistics in the relevant section.*

Page 9 10, I think This formula was used from first time by Roozendaal 1998 (Formula4)

*Reference added in the text.*

Page 11 10 : The "known solar zenith angle" dependence should be described and or referenced.

*A relevant paragraph was added in the text.*

Page 11 10: The brewer comparison are not shown.

*A relevant mention to this fact was included.*

Table 1: I suggest to add also the ECWMF vs SONDE stats and include the mean values of the figure 2.

*The requested statistics were added to the table.*

Figure 2: Plotting the differences to the ozonesonde rather the series could be more illustrative of the comparison.

*Indeed, plotting differences is illustrative for most cases, however since the differences here are so small the Figures become too crowded and the seasonality effect is not as evident. We have added more statistics in the Table and we hope that this will cover any remaining questions.*

Figure 5 : The lower panel a description of how the zenith angle and temperature dependence are calculated.

*The relevant information was added in the text.*