Interactive comment on "The impact of the ozone effective temperature on satellite validation using the Dobson spectrophotometer network" *by* M. E. Koukouli et al.

Anonymous Referee #1

The impact of the ozone effective temperature on satellite validation using the Dobson spectrophotometer network

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1   Summary

The paper gives a useful evaluation of how the application of the know effective temperature dependence on Dobson spectrometer improves the satellite ground base comparison. The authors validate the T_{eff} 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

2 Comments

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

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

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

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

Page 9 10, I think This formula was used from first time by Roozendael 1998 (Formula 4)

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

Page 11 10: The brewer comparison are not shown.

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

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

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