

## Response to Co-Editor

Comments to the Author:

- 5 The authors have addressed all reviewer's comments and the manuscript has been improved.  
I have three minor comments that the authors could take into account for the final version of the manuscript.

**Comment a:**

- 10 The second reviewer is mentioning this and i do not think that there is a clear answer: Figure 1 needs some clarification on what exactly are the data used.

**Response a:** We have tried to describe the data more clearly by being more explicit, as follows:

- 15 *“Figure 1 shows the relationship between UVER diffuse fraction ( $f_{UVER}$ ) and UVER transmissivity ( $k_{UVER}$ ), as derived from Equations (1) and (2), respectively. Thus, the UVER diffuse fraction was obtained as the ratio between the measurements of  $D_{UVER,0}$  and  $G_{UVER,0}$  performed by K&Z radiometers. On the other hand, the UVER transmissivity was calculated as the ratio between the measurements of  $G_{UVER,0}$  and the values of  $G_{UVER,TOA}$  obtained by applying Equation (3).”*

20 **Comment b:**

On the discussion at page 1 line 34, i think that Zerefos et al., 2012 (<https://www.atmos-chem-phys.net/12/2469/2012/>) provide an extended discussion on cloud, aerosol , ozone effects on solar radiation for a number of stations. In addition, den Outer et al, 2005 (<http://onlinelibrary.wiley.com/doi/10.1029/2004JD004824/pdf>) compiled a great study of this aspect on national level. I think both references could be added.

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**Response b:** Both references have been added (page 1, line 34; and list of references).

den Outer, P.N., H. Slaper, and R. B. Tax: UV radiation in the Netherlands: Assessing long-term variability and trends in relation to ozone and clouds, Journal of Geophysical Research, 110, D02203, 2005. DOI:10.1029/2004JD004824, 2005.

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Zerefos, C.S., K. TourpalI, K. Eleftheratos, S. Kazadzis, C. Meleti, U. Feister, T. Koskela, and A. Heikkilä: Evidence of a possible turning point in solar UV-B over Canada, Europe and Japan, Atmos. Chem. Phys., 12, 2469–2477, 2012.

- 35 **Comment c:** page 4 , line 138 aerosol scattering versus wavelength is basic atmospheric physics so I do not think the Kaskaoutis et al reference is appropriate. A more general refence should be used.

**Response c:** The reference has been replaced by the more general reference Iqbal [1983], which was already in the list of references.

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We would like to thanks the referres for their valuable comments that have improved this manuscript. For that reason, we have been included the following sentence in the Acknowledgements section:

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*“Thanks to the referees for their comments and suggestions, which notably improved this paper.”*