

Interactive comment on “An urban agglomeration effect on surface UV doses: Comparison of the Brewer measurements in Warsaw and at Belsk, Poland, for the period 2013–2015” by Agnieszka E. Czerwińska et al.

Anonymous Referee #1

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The paper by Czerwińska et al provides useful information regarding the effect of an urban agglomeration on the levels of the solar UV irradiance. It highlights the importance of the aerosol optical properties for the determination of the UV irradiance that reaches the earth surface and has the potential to contribute in the better understanding of the complex interactions between aerosols, clouds, surface albedo and UV radiation in an urban environment. The authors compare the erythemal and UV-A1 (340-400 nm) doses measured by the Brewer spectrophotometers in Warsaw (52.3°N, 21.0°E) and Belsk (51.8°N, 20.8°E) and are trying to quantify the effects of differences in surface albedo, cloudiness, aerosol optical depth and aerosol single scattering albedo.

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However, there are some parts of the manuscript that have to be improved before it is ready for publication. The main problem in the data analysis is that the effect of different latitude (thus of different SZAs for the measured UV doses) has not been removed (or quantified) properly. Additionally, there is a large number of editorial, grammatical and linguistic errors in the manuscript that have to be corrected. Detailed comments and suggestions are in the supplement .pdf file.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/acp-2016-366/acp-2016-366-RC1-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-366, 2016.

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