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Atmospheric Measurement Techniques Discussions

Interactive comment on "Seasonal distribution of aerosol properties over Europe and their impact on UV irradiance" *by* N. Y. Chubarova

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I would like to thank Peter Koepke for his useful comments.

Concerning the publishing in AMT or ACP this should be decided in the editorial office. 1. page 2, line 22: .....According to (Remer wt al. 2008), the... change to .....According to Remer et al. (2008), the... p.3, This has been corrected. 2. p.3, Eq.1: Eq (1) should be omitted, because AOD and SSA are also assumed to be known, which is ok for the probable readers of the paper. Yes, I agree that they are well known characteristics but sometimes it is useful to remind the formal definition of the parameters. I tried to save the space and gave the definition to SSA just in the text. However, it is not easy to describe the asymmetry factor that is why I decided to give the equation. I have also included the Angstrom parameter definition as the equation (2). If I leave only

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Discussion Paper

one equation (2) with definition of Angstrom parameter this will not be perfect. That is why I decided to leave the equation (1) as well. 3. p.3, Eq.2 : ...dln_ change to ... dln(_)... The brackets have been added. 4. p.4 , l.15 : add ïĄą after ... Angstrom parameter... Sorry, but I can not find at this page and line the “Angstrom parameter”. The notation ïĄą was given at page 3 line 21 before the equation. 5. p.6, l.1 and Fig. 7: use either "temperate“ or "moderate” in both cases. I have changed all to “temperate” characteristic of climate. 6. p.6, l.16: Don’t use a foot note. Put the information to the text body. I put this information in the text in brackets. 7. p.7, l.2 : ... In (Smirnov et al., 2002) it... change to ..... In Smirnov et al. (2002) it... Changed. 8. p.9, l. 5: .. square ... change to ...area... Changed. 9. p.11, l.20 and Tab.1 : Her the time period 2000 -2008 that is valid for the mean values should be mentioned again. I used a combined statistics from AERONET and MODIS. That is why when speaking of AOT in UV range I can not refer only to the data period of MODIS. But I added the information on the preiods in the abstract. 10. P.15, l. 26 and Fig. 10 : ... absolute attenuation in monthly UVI... change to ... absolute reduction in monthly UVI...because it is the difference Changed. 11. p.16, l.14: Don’t use a foot note. Put the information to the text body I put this information in the text in brackets. 12. P. 16 l.11. Say a few words to the topic that during the past decades the aerosol properties have been changed. The shown results are valid as mean values after 2008, but could (will) be different in the years before. Yes, I have included this information in the introduction with necessary references and in the part “Discussion and Conclusion” as the paragraph shown below. It should be emphasized that the obtained spatial distribution of aerosol parameters can be used for the description of the latest period, since, as it is mentioned in the Introduction, there are the pronounced negative trends in aerosol optical thickness of about -0.04-0.05 per decade since 1980s.

Interactive comment on Atmos. Meas. Tech. Discuss., 2, 1863, 2009.