**Atmospheric
Chemistry
and Physics
Discussions**

Interactive
Comment

Interactive comment on "Study of suitability of cheap AvaSpec array spectrometer for solar UV field measurements" by I. Ansko et al.

Anonymous Referee #1

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The manuscript has been improved compared to the first version. At some places the language has still to be improved. It is sometimes difficult to understand the meaning of the text. The manuscript gives valuable details concerning the handling, calibration and the accuracy which is achievable with the cheap AvaSpec array spectrometer. As such this is useful information for the scientific community and I therefore recommend the publication of this manuscript. Following aspects should however be taken into account before.

Beside the language and the clarity of the explanations that has to be improved, I see following important points that should be taken into account.

A) Concerning the comparisons with the LIBRADTRAN model more information about

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the uncertainty of the LIBRADTRAN model should be provided. This uncertainty should be simulated assuming an uncertainty in the determination of the model input parameters. This is important for the interpretation of the comparison between measurements and model. More information should be also given concerning the magnitude of the model input parameters (aerosol optical depth, albedo, ozone).

B) Here it would also make sense not only to compare the UVA/UVB ratio but also the absolute values. Eg. compare modelled to measured UV index.

Minor remarks

P. 4200 l. 19-20 language! The biases between calculated by means...

P. 4201 l. 13 reference (Basics of spectral..., 2003 ?????

P. 4202 l. 14 The analysis of the complex.... of the present paper. I do not understand the sentence.

P. 4202 l. 23 Entrance slit width is 50μm. You can leave this information but I think that the FWHM is more interesting.

P. 4203 l. 3 ... to reduce the longwave radiation... My understanding is that longwave radiation is between 3 and 100 μm. I would replace longwave by visible.

P. 4203 l. 19 ... at a constant temperature +7°C.... => ... at a constant temperature of +7°C....

P. 4205 l. 19: The AOD in the UV-B region was expected to... => The AOD in the UV-B region was therefore expected to....

P. 4205 l. 19 I this respect why did you not try to use the Angström law to extrapolate the AOD in the UVB part of the spectrum?

P. 4205, l. 19: You very often use the word aside. I personally would replace it by beside.

P. 4206 3 Results and agreement with the filter instruments Either you write only results Or you start with e.g.

3. Results

3.1. Comparison of spectral measurements with broad band filter measurements

3.2. xxxx

P. 4207 l. 23 At SZA below $70°$ the biases.... values occurred small... Please replace occurred by remained or by was.

P. 4208 l. 14 ...reaching in some cases for 20%... => reaching in some cases 20%

P. 4208 l. 16 ...and by the LibRadtran codes ar???

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 4199, 2008.

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