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Atmospheric Measurement Techniques Discussions

Interactive comment on "Dead time effect on the Brewer measurements: correction and estimated uncertainties" *by* I. Fountoulakis et al.

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General comments: the paper makes a good review of the existing knowledge state about a particular characteristic of the Brewer spectrophotometer photon counting system, the dead time (DT), and provides some new ways to estimate it and analysis of its effects on the final products like total ozone column (TOC), spectral UV and the aerosol optical depth (AOD). Some parts of the text need more accuracy and precision, while others seem to be not fully relevant and can be removed. In one numerical experiment described in the paper that I was able to replicate the authors did not recognized that the algorithm for the DT calculations has to be changed (the number of iterations has to be increased for the calculation process to converge) when the data collection method changes. This led to a misleading plot in the paper as well as references through

out the text assuming there is a limitation to when DT can be successfully calculated. Those parts of the paper will need to be changed.

Please see the supplement pdf for detailed comments/suggestions.

Please also note the supplement to this comment:
http://www.atmos-meas-tech-discuss.net/8/C4829/2016/amtd-8-C4829-2016-supplement.pdf

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Interactive comment on Atmos. Meas. Tech. Discuss., 8, 12589, 2015.