Atmos. Chem. Phys. Discuss., 13, C1469–C1470, 2013
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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Coherent uncertainty analysis of aerosol measurements from multiple satellite sensors" *by* M. Petrenko and C. Ichoku

Anonymous Referee #1

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his paper analyses aerosol optical thickness products derive from satellite observations against measurements acquired by sunphotometer from the AERONET network. The measurement from sunphotometer is not affected by atmospheric scattering which makes it a near direct measurement and is therefore presumably more accurate and precise than the satellite products. It is therefore well suited for validation. The author do show that some satellite products are better than other. They also clearly demonstrate that some aerosols products are better suited to specific aerosol types or underlying surfaces. This demonstration is clearly the most interesting result of the paper.

This paper is certainly interesting for a broad community that uses satellite aerosol products and needs some information on the product quality.

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Interactive Discussion
Discussion Paper

Overall, the paper is very clearly presented. The figures are of high quality, the discussion flows naturally from the results and the abstract presents a well balanced summary of the paper method and results. It may be published as is. Just a suggestion that the authors may consider. There was a paper published recently with a very similar objective and that could get cited: Bréon, FM, A. Vermeulen, J. Descloitres, 2011: An evaluation of satellite aerosol products against sunphotometer measurements. Rem. Sens. Env, 115, 3102–3111

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 4637, 2013.