

Interactive comment on “Sensitivity of PARASOL multi-angle photo-polarimetric aerosol retrievals to cloud contamination” by F. A. Stap et al.

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Dear referee,

First of all we would like to thank you for your constructive review and your suggestions on how to improve the grammar.

comment 1 We have changed section 4.1 to better explain the radiative transfer code that is used to create the partially clouded data-set.

comment 2 Indeed the stated error on intensity of 0.0005% is wrong and should have been 0.5%. This is indeed still lower than the assumed uncertainties used in the inversion of the synthetic data-set and complicates a comparison. Therefor we have

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changed our prior uncertainty assumption to that used in the synthetic study (1.0% on intensity and 0.005 (absolute) on DoLP) and re-done the analyses. This leads to different χ^2 -limits. Except for a slight loss in sensitivity to cirrus clouds, the conclusions remain the same. Note that figure 5 and 7-13 have slightly changed.

comment 3 In the revised version we elaborate a bit more on equation 2 and have included a reference to Zhai et al. 2013.

comment 4 We have adjusted the text accordingly.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 10673, 2014.

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