

Interactive comment on “The AERONET Version 3 aerosol retrieval algorithm, associated uncertainties and comparisons to Version 2” by A. Sinyuk et al.

Anonymous Referee #4

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The manuscript presents the details of the new AERONET v3 algorithm, comparing the results that can be obtained with those from the previous v2. It also evaluates the uncertainties associated with the parameters that can be obtained by the v3 inversion at different wavelengths, most of them not known before (v2).

Even recognizing the importance and the accuracy of the present work, the general impression is that most of the results need a deeper discussion, while most of the times the compression is left to the reader. On the other hand, the manuscript is already very long and its extension not desirable. One solution could be to split it into 2 parts, the description on the algorithm and the evaluation of uncertainties.

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The length and the amount of material presented in the manuscript is so high that it also makes necessary to better organize the tables and figures. In general, I suggest the following:

- * Tables 1.1 to 4.3 could be grouped in some way, by parameter or by site. Same for Table 6.1 to 6.3.
- * The same apply for figures 9-10, 13 to 16, 17-18 and 26 to 29.
- * In order to facilitate comparisons, all the panels in the same figure should have the same y range when showing the same variable.
- * Also, it is desirable to use a color scheme for the different wavelength throughout all the figures.

The caption of the tables 1.1 to 4.3 speaks of statistic, without specify that the shown values are averages.

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