

Interactive comment on “EARLINET Single Calculus Chain – technical Part 2: Calculation of optical products” by Ina Mattis et al.

Anonymous Referee #2

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The paper is well written and suitable for publication in AMT. I would like to ask the authors to address the following points:

Major comments:

As already stated during the quick review, I would like to see charts of the ELDA workflow similar to Figures 2 and 3 in the SSC technical part 1 (D’Amico et al., 2016).

You mention that the merge region needs to fulfill all of the criteria given on page 17. But in Figure 5 you present an example where the merge window is put into a height region where one or more criteria are not fulfilled (as is shown by gray shading). Do the criteria only have to be fulfilled in the center of the merge window? Please clarify.

Minor comments:

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page 3, line 31: It’s worthwhile to point out that the lower vertical resolution is the result of signal smoothing

page 11, line 12/13: What is meant with this statement?

page 23, line 4: It might be better to rename the clear layer into aerosol-free layer. Please check if this applies elsewhere in the text.

page 29, line 21/22: Please add a comment about future plans regarding the automated analysis of depolarization ratio measurements with ELDA.

Figure 1 and discussion: For completeness, it would be nice to know where the calibration height range was identified and what the reference value was in that region.

Figure 3: caption mentions 8 iteration steps, legend gives 10 for the blue line...

Figure 7: clarify in the caption that OVL is the overlap region

Figures 8-12: I am confused about the error bars in those figures. Do they refer to the error of the ELDA retrieval? Are they ever discussed in the text? Clarification is needed.

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