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Atmospheric Measurement Techniques Discussions

Interactive comment on "Fast time-resolved aerosol collector: proof of concept" *by* X.-Y. Yu et al.

Anonymous Referee #2

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The manuscript is well written, the presentation is clear and concise, and the scope of the manuscript is well matched to the journal. I have just a few minor comments.

1. In the manuscript, the presentation of the size of optical images at 50X and 20X is missing. The optical image sizes are the analysis area, so that the description given in lines 13-15 of p. 2518 is better to be given for actual image sizes obtainable in this measurement system.

2. The S/N value for an 100 nm particle (Fig. 5) should be smaller than that of a 200 nm particle (Fig. 4). However, the expose times to get the optical images should also be different for the two different framing rates, resulting in different S/N values. It will be better to discuss about this point, if possible quantitatively.

3. The authors are concerned about the field-of-depth problem. Related to this concern, the size of image field also needs to be considered with different field-of-depth setups.

4. In line 16 of p. 2521 and line 7 of p. 2522, the widths of 8-pixel band are 1.2 and 0.8 microns, respectively. Why are they different?

5. Lines 20-27 of p. 2521 : When the count rates are discussed, the missing particles which pass through the holes needs to be mentioned as the discussion might give a false impression such that all particles are collected.

6. Line 16 of p. 2517 : The paper of "Laskin and Cowin, 2001" is not related to TRAC sampler.

7. Lines 24-25 of p. 2517 : A reference is better to be given.

Interactive comment on Atmos. Meas. Tech. Discuss., 3, 2515, 2010.