

Interactive
Comment

Interactive comment on “Light scattering at small angles by atmospheric irregular particles: modelling and laboratory measurements” by T. Lurton et al.

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The study case is interesting, measuring the size of aerosol particles by scattering at forward angles, and improving the Mie modelling. Being able to see so large range of sizes, starting with so small size is nice. I am convinced that the experiment and modelling are in principle OK, but that is not becoming clear enough in the text.

Before publication, I would like to see several improvements:

-the text contains typically many long and difficult to follow sentences. Make shorter and more clear throughout. Any sentence in 3 lines is too long, first sentence of para-

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graph even shorter. -define the particle shape model better, now remains far too vague, How comparable to many stochastic models used by other modellers, e.g. Muinonen, Penttilä, etc? -Describe the scattering model better. Mie model with randomized phases? Why? -what is meant by particulates nature? -Describe the instrument and measurements more, what is mV telling to a reader? -"Perfect agreements" with only one observed scattering angle, wavelength, and state of polarisation is not a convincing proof of model goodness. How many parameters you have to make a fit?

-what is saturation limit in P 7577? -all figure captions need more explanations, what measurements are shown, why, what are axis, etc.. -references to both measurements and modelling are tight. I thought there are many more measurements to mention, and more modelling aspects to discuss. -rethink also all the discussion objects raised, they are all valid, but it sounds a bit, that you want to explain them out.

I encourage the authors to submit an improved version of the manuscript.

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 7565, 2013.

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