

## ***Interactive comment on “Micro-physical properties of carbonaceous aerosol particles generated by laser ablation of a graphite target” by T. Ajtai et al.***

**Anonymous Referee #2**

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The paper presents an approach to generate model soot particles for instrument calibration or laboratory studies. While the method proposed may be of interest, the lack of rigorous quality assurance data regarding the generated particles makes the the reliability and consistency of the proposed mechanism difficult to evaluate.

The authors stress the flexibility of the proposed method - by varying the purge gas flow rate or laser power, different number concentrations and particle sizes can be generated. However, this flexibility is only of value if it is robustly repeatable. A series of controlled duplicate measurements would lend credence to the ability of the proposed technique to be used as a calibration method or to generate particles of known size.

Further, while mass and particle size data are presented, no information on the chem-

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ical composition is provided making it difficult to assess if the particles would be truly valuable as a black soot surrogate. Simple thermal-optical characterization on the generated particles should be performed.

Finally, the above mentioned shortcomings are significant and without being properly addressed, the value of the proposed method compared to existing approaches is difficult to assess. If the authors can address the above concerns, they should also more strongly assert why the proposed method is of value over other approaches to generate calibration or model carbon soot particles.

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