

***Interactive comment on* “Technical Note: The single particle soot photometer fails to detect PALAS soot nanoparticles” by M. Gysel et al.**

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This is an interesting finding. The authors attribute the inability of the SP2 to detect soot from the Palas generator as being due to a very low effective density of soot. Would they expect a wavelength dependence in this effect? It might be useful to discuss other laser-based techniques that have detected individual Palas generated soot particles. For example, Su et al. and Spencer et al. (below) detected Palas single particle MS which using on-line laser desorption with a laser at 266 nm. Is it possible there is a difference in the timing of the signal(i.e. do they gate the time when they look for incandescence)? If they sent them through high RH and collapsed their structure, would they then be able to detect them? It would be worth adding a bit more discussion

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as to why the soot particles are not detected by their particular set-up.

1. Su, Y.X., M.F. Sipin, K.A. Prather, R.M. Gelein, A. Lunts, and G. Oberdorster, ATOFMS characterization of individual model aerosol particles used for exposure studies. *Aerosol Science and Technology*, 2005. 39(5): p. 400-407.

2. Spencer, M.T. and K.A. Prather, Using ATOFMS to determine OC/EC mass fractions in particles. *Aerosol Science and Technology*, 2006. 40(8): p. 585-594.

Interactive comment on *Atmos. Meas. Tech. Discuss.*, 5, 4905, 2012.

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