

## ***Interactive comment on “Collection efficiency of $\alpha$ -pinene secondary organic aerosol particles explored via light scattering single particle aerosol mass spectrometry” by Ellis Shipley Robinson et al.***

**Ellis Shipley Robinson et al.**

shipleYROBINSON@gmail.com

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RC1 Response - AMTD CE - amt-2016-271 We appreciate the reviewer’s time to read and comment on our manuscript. The feedback was helpful, and the suggested changes have made the paper stronger. We have organized our responses to the reviews by using the same numbering as the initial review, and then putting our responses in blue.

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1. “Line 125: Becquerel (Bq) is the SI unit for activity.” -We have changed the abbreviation of milliCuries to the correct “mCi” instead of how it was written before (mC).
2. “Line 339: Please explain what you mean by ‘sizzle.’” -We removed this sentence. The previous sentence sums up what we meant by “sizzle.”
3. “Figure 3: Please use two more distinct colours.” -We changed the magenta trace to a teal one to make these two traces more distinct.
4. “Figure 5: Rather than normalised frequency per bin, it would be better to do this as a probability density function (taking bin width into account). The data could then be legitimately plotted as lines (rather than sticks), making the figure easier to read.” -We considered this suggestion at first, but don’t think it quite works as well as the sticks. Our reason is the following: the null category has a very sharp distribution compared to the prompt and delayed distributions. Additionally, the split y-axis is required to show the null distribution (which would make the use of lines fairly confusing). Lastly, we choose not to bin our data any finer because the distributions become so noisy as to not properly convey the information visually. Anyway, considering all of these things, lines would work fine for the prompt and delayed particles, but not the null, and so to keep everything uniform this is the best we feel we can do with this plot.

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-271, 2016.

C2