

## ***Interactive comment on “Quantification of organic carbon sampling artifacts in US non-urban and urban networks” by J. C. Chow et al.***

**Anonymous Referee #1**

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This manuscript is well presented, is scientifically significant, and has large implications for the accurate measurement of particulate-phase organic carbon. Here I offer some minor comments and suggestions:

- 1) General: What is your criteria for defining an “urban” site and a “non-urban” site?
- 2) Page 27363, Line 9: Authors did not introduce this idea prior to hypothesis 3, and it strikes the reader as out of context. Please introduce this idea prior to this point (e.g., discuss SANDWICH method before introducing hypotheses)
- 3) Comment: Do the authors know how 1-15 minutes ever became a standard exposure time for STN/CSN and SEARCH bQF? This seems way too short.
- 4) Page 27365, Line 3: What causes outliers?

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- 5) Table3: Please include a footnote in Table3 to define ug/cm<sup>2</sup> and ug/m<sup>3</sup> as areal density and ambient concentration equivalent, respectively.
- 6) Page 27366, Lines 11-12: include range for EC fraction of TC (e.g., ~0 - 6% from looking at the table)
- 7) Page 27366, Lines 13-14: suggest changing “can be used interchangeably” to “will be used interchangeably”
- 8) Page 27367, Lines 16-17: May be worth noting this finding in the conclusions for hypothesis1.
- 9) Page 27368, Line 9: suggest changing “abundance” to something like “fractional contributions”
- 10) Page 27368, Line 16: Authors originally stated a 30% difference between urban and non-urban SEARCH OCbQF, now state 24%, but still looks like a smaller difference on the figure.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 27359, 2009.