Interactive comment on “Real-time characterization of particle-bound polycyclic aromatic hydrocarbons in ambient aerosols and from motor-vehicle exhaust” by A. Polidori et al.

Anonymous Referee #1

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The manuscript reports (1) measurements of the ambient particles at a site in Los Angeles, (2) a dynamometer test results of diesel trucks, and (3) an exposure-risk assessment result due to the particulate PAHs. While the authors did present a wide range of measurement results, my major concern is that no further understanding or insight be gained by presenting the three results in one manuscript. The major point in the manuscript is rather on the relationship among the instrument results, especially, between the photo-electric aerosol sensor and the particulate levels from the integrated-filter samples. It needs more data analysis on the behavior of the ambient particulate PAHs. The dynamometer test results are potentially important but with the data given in the manuscript it is hard to carry out further in-depth data analysis. The
l lung-cancer risk analysis itself is an elementary one and can be an important part if more detailed data analysis on the characteristics of the particulate PAHs at the sampling site. Thus, at present form, the manuscript is not suitable for publication at the Atmospheric Chemistry and Physics. I recommend the manuscript be resubmitted with a focused research goals. Two minor points are: (1) to use a consistent notation such as 'Km' and 'km' in section 2.1 and (2) figure caption can be more improved.