

Interactive comment on “Optical properties, morphology and elemental chemical composition of atmospheric particles at T1 supersite on MILAGRO campaign” by G. Carabali et al.

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Prior to present our response we would like to thank the reviewer for his scrutiny of our paper, his attention to detail, and constructive comments. The clarity and quality of our manuscript is greatly improved as a result of his diligence. We would like to address the questions, comments and suggestions with the same order presented by the reviewer on his comments: The hypothesis of our work is to demonstrate that there is a difference in shape between particles generated locally at T1 and those transported by the wind to the site. So, in order to do that, we calculated particle border-based fractal dimension (Df) and evaluate the average at each sampling period. We used

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histograms to illustrate the morphology distributions of particles, since averages show only a central tendency concept. Then we compared the distributions on days with and without Mexico City pollutants plume transport at the sampling site. We believe that our findings demonstrate the influence of Mexico City pollution on the site, based on different distributions in particle shapes. The morphology of particles is described through statistical data in Tables 2 and 3. Figures 5 and 6 complement this information. The distributions indicate trends that give us a general idea of the particle shape. We used copper grids coated with collodion (LF-200-Cu mesh grids). We have included this information in the manuscript. In our study the elemental composition is merely used to provide additional information. The elemental particle analysis is inconclusive, because it was done on a small population, and is only indicative of the particles analyzed. Finally, as referee #2 stated, we had included in the Conclusions section the results from our study, and carefully read the references recommended by the reviewer. We know that those comments have resulted in a better and more complete manuscript. In addition, we have corrected grammar errors and revised the language style, and we apologize for those mistakes written involuntarily.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/11/C8436/2011/acpd-11-C8436-2011-supplement.pdf>

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