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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Determination of particulate lead during MILAGRO/MCMA-2006 using Aerosol Mass Spectrometry" *by* D. Salcedo et al.

Anonymous Referee #1

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The manuscript presents an interesting and good quality piece of work, investigating the presence and distribution of Pb-bearing particulates in the metropolitan area of Mexico city. The work successfully achieves its aim of showing the value of the AMS equipment and the extensive details given will be useful to atmospheric researcher interested in this technique. I consider the work ready for publication after relatively minor modifications that are outlined below.

Specific comments: - The title is not really consistent with the work presented as results in Mexico city are not shown until page 13: I would change it focussing more on the technique applied. - Line 30: T0 has not been defined. - Line 52: specify what are very

low concentrations" - Line 230: explain for Figure 2 and 3 which ambient aerosol is being measured. - Line 410: the section on "sources of Pb impacting the T0 site" does not describe at all any type of possible sources present in the area. Some information on which industrial and urban emissions could be responsible for these Pb particles would be useful. - Line 450: explain what do you consider as "variable winds" to know which winds have been included in the analysis. - Paragraph 465: how do you link results in figures 13 and 14? in figure 13 (A) Pb seems to be higher in the north (Tula) and SW of T0. - Line 482: which other Pb compounds could be contributing? - Paragraph 513: how does this relate to figure 13? - Line 549: Pb source seems to be located south of T0 in figure 14. - Figure 8:ICP-MS analysis seem to be wrong on the 30th of March - In general there is a lack of discussion on possible Pb sources in the area and on the integration of all results obtained.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 2581, 2010.