

Interactive comment on “Modeled and observed ozone sensitivity to mobile-source emissions in Mexico City” by M. Zavala et al.

Anonymous Referee #2

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This paper analyzes the trend of air pollutants in Mexico City between 1990 and 2005, and discusses the impact of surface emissions on the trend of ozone. The paper is well written and organized. The paper discusses an important scientific issue regarding air pollution control strategy in large polluted cities. As a result, this paper has scientific merits to be published in ACP. I suggest publishing this paper after some revisions.

Comments

(1) In section 2.3, it said that the NO_x emission factors do not show any strong trend. However, the measurement of NO_x emission factors is only available between 2000 and 2005. During this period, the trend of CO emission factors is also small. The only strong trend of CO emission factors occurs between 1990 and 2000. This statement

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is somewhat misleading, and should be revised. (2) From Table 1, it shows that the automobile emission factors for CO and NO_x are large (99.3% and 83.8). It needs more clearly discussion why CO is dramatically decreased between 1990 and 2005, while NO_x only has a minor change during this period. This can be a very important point of the paper for the application in air pollutant control strategy. (3) The authors should add some focus on what are the main factors which lead to the long-term ozone trend between 1990 and 2005. They should use the measured CO and NO_x trends to show how these trends affect the ozone trend. In addition, they also should make some assumptions based on the CO measurement for the VOC trend. There are also lacks of discussions on what is the role of CO trend on the ozone trend in this paper. (4) Some editorial errors need to be corrected. For example, in the caption of Figure 1, c) and d) need to be bolded.

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