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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Vehicular fuel composition and atmospheric emissions in South China: Hong Kong, Macau, Guangzhou, and Zhuhai" *by* W. Y. Tsai et al.

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The authors would like to thank for the valuable comments.

1. In Section 2.1: "In additional to auto-exhaust, evaporative loss of unburned fuel is an important emission source from automobiles.", reference from Na et al., 2004 has been added. Due to the limited data collected in this study, the authors can only make a conclusion that evaporative losses of unburned fuel contributed to the elevated NMHCs level in the roadside atmosphere and quantification from this emission source needs further study.

2. A table describing the vehicle fleet composition in different cities during the period of roadside and tunnel sampling has been added in the text. The usage/sales of gasoline

by different gasoline company in each region are not available and thus we cannot use such information to scale the results.

3. Reference from Colman et al., 2001 has been added for the detailed description of methods used for determining the measurement precision and accuracy. The accuracy for the discussed NMHCs has been checked and revised to be 5%.

4. As mentioned in comment 2, a table describing the vehicle fleet composition during roadside and tunnel sampling period has been added in the text. Emphases are added to clarify that evaporative composition of fuel was measured.

5. The authors agree that it is interesting and valuable to study the influence from other non-mobile sources of LPG. But as the main concern for this study is on vehicular emission, the contribution from non-mobile sources of LPG were not studied and their influence cannot be quantified here.

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