Atmos. Chem. Phys. Discuss., 14, C9317–C9318, 2014
www.atmos-chem-phys-discuss.net/14/C9317/2014/

Atmospheric Chemistry and Physics Discussions

ACPD
14, C9317–C9318, 2014

Interactive Comment

Interactive comment on "Characteristics of trace metals in traffic-derived particles in Hsuehshan Tunnel, Taiwan: size distribution, fingerprinting metal ratio, and emission factor" *by* Y.-C. Lin et al.

Anonymous Referee #3

Received and published: 18 November 2014

General comment:

This manuscript entitled "Characteristics of Trace metals in Traffic-Derived Particles in Hsuehshan Tunnel, Taiwan: Size Distribution, Fingerprinting Metal Ratio, and Emission Factor" by Lin et al. mainly describes the PM metals in the 2nd longest tunnel in Asia. It is well reported and discussed what the authors found. In general, the paper is well organized and easy to follow. It is suitable for inclusion in Atmospheric Chemistry and Physics. The manuscript is scientifically sound and should be accepted for publication after moderate revision and address. The comments are in the following:

1. P. 13971 Line 21-24. The abundance of submicron PM at the outlet site was due to enhancing carbonaceous PM. Do the authors have experimental data to support this hypothesis? If no, it should be removed.

2. P. 13980 line 1: The emission factor of PM was significantly lower than other studies. Is the ventilation system triggered during the sampling period? If so, how about the influence of ventilation on the estimated emission factor?

3. P. 13996. Please correct “Petrolium refining” to “petroleum refining”.

4. Cu/Sb is an important ratio to trace the traffic-produced PM. However, the Cu/Sb ratio in this study is lower especially when compared with those in US. The authors should clarify this reason.

5. P 13998. The resolution of Figure 1(b) is very poor. Please replot this figure.

6. Please describe the temperature and CO concentration during the sampling period. It is very important information, whether the ventilation system is triggered or not.

7. Is this the only one paper for estimated emission factor on Hsuehshan Tunnel? If not, please cite all the related paper in this manuscript.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 13963, 2014.