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Atmospheric Chemistry and Physics Discussions



# *Interactive comment on* "The challenge to $NO_x$ emission control for heavy-duty diesel vehicles in China" *by* Y. Wu et al.

**Anonymous Referee #1**

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The authors discuss NOx emission factors derived from on-road measurements on a range of trucks and buses in Beijing and compare the results with the emissions derived from test cycles. They find that the on-road NOx emissions are significantly higher than those based on test cycles and that there is no decrease in emissions with progressive Euro standards. They also show that the total NOx emissions in Beijing and in China nationally are significantly higher than the official estimates. The paper has a clear structure is well balanced and reads very well. My compliments to the authors for a good job. Below a few detailed comments:

P18573, L6: I think there should be a time (T) also in the denominator. The units now do not seem to be correct. The numerator shows the total emission in grams. The denominator should give the total driving distance, not the speed. P18757, L10:



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Specify what the uncertainty range given by the emissions represents. It it the min-max or standard deviation on the total set of data? P18580, L7: Please explain 'ESC control zone'. P18599, Fig 3: The COPERT model has updated the NOx emission factors for Euro-IV, -V and -VI trucks in 2010 (Gkatzoflias and Ntziachristos, COPERT 4 v8.0, Report No. 10.RE.0037.V1, 2010). Has this been taken into account in the data in Figure 3?

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 18565, 2012.