

## ***Interactive comment on “Tempo-spatial variation of emission inventories of speciated volatile organic compounds from on-road vehicles in China” by H. Cai and S. D. Xie***

**Anonymous Referee #2**

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General comments: This paper focused on the development of specified NMVOCs profiles for on-road vehicles in China from 1980 to 2005. The paper is well structured and used the techniques to establish an emission database with 40 km X 40 km spatial resolution and annual variation of emission trends. The paper is acceptable after the following revision for more clear description of the estimation methods with results.

Specific comments:

Page 11055, line 15, “. . . which includes six situations. . .” - The meaning of six situations is not clear. Authors need to provide more explanation about six situations.

Page 11057, line 12-26, - The provincial emissions were allocated to the country-level  
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emissions and to the grid cell level emissions, based on economical variable (GDP). The temporal pattern of emissions was strongly correlated with the GDP as depicted in this paper; however, spatial pattern was generally allocated by the geographical variables (e.g. road networks) in the previous works (Tuia et al.2007; Ossés de Eicker et al. 2008). Authors should include a comment for the limitation of the spatial allocation factor.

Reference

Tuia et al.: Evaluation of a simplified top-down model for the spatial assessment of hot traffic emissions in mid-sized cities: 41, 3658-3671, 2007. Ossés de Eicker et al.: Spatial accuracy of a simplified disaggregation method for traffic emissions applied in seven mid-sized Chilean cities, Atmos. Environ., 42, 1491-1502, 2008.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 11051, 2009.