

## ***Interactive comment on “Contribution of garbage burning to chloride and PM<sub>2.5</sub> in Mexico City” by G. Li et al.***

**Anonymous Referee #2**

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### General Comments

The paper is well written, and the subject is of importance to understand the HCL, PM 2.5 and BBSOA concentrations in Mexico City, and in similar cities where biomass/garbage burning is important. The contribution of 3-30 % to PM<sub>2.5</sub> concentrations is remarkably high, indicating the importance of this often neglected source. The comparison with observations of the MCMA-2006 field campaign shows an overall good agreement between model results and observations

### Specific comments.

The WRF-Chem model is used in this study, and it is stated that this model is developed by Li et al. As far as I know the original WRF-Chem model is developed by Georg

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Grell et al. Would it be more correct to state that a specific version of WRF-CHEM is developed by Liu?. In addition, reference is made to Liu 2011 c, which is missing in the reference list. The model has a lowest layer of 50 m. Does that mean that the observations are compared to the 50 m averaged modelled concentrations, and does that have an impact?. Boundary conditions are taken from MOZart, I assume that MOZART has been run for the same episode? The figures seem to indicate that the BC for HCL and BBOA are near zero, and are ca. 20  $\mu\text{g}/\text{m}^3$  for PM 2.5, is that correct? It is stated that the uncertainty of the GB emissions is a factor of 2 or more, is there a reference for that? The model runs most likely have a spin-up time, is that 1-2 days or so? It would be useful to add some sentences under summary and conclusions about the impact of the factor 2 uncertainty in GB-emissions on the results found

### Technical corrections

Figure 2b states it shows the diurnal cycle. I assume this is the 5 day averaged diurnal cycle? ( page 13674, line 13) Page 13677, line 6 should be Fig 5b, not 4 b, and line 14 it should be 5c, and not 4c

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