

## ***Interactive comment on “Mobile mini-DOAS measurement of the emission of NO<sub>2</sub> and HCHO from Mexico City” by M. Johansson et al.***

**M. Johansson et al.**

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### General Comments

We thank the reviewer for his comments on our paper.

### Specific Comments

The purpose with the paper is to show that the mobile mini-DOAS can be used to measure the distribution and outflow of HCHO, something which has never before been done. Thus, the paper focuses heavily on how the measurement was done to enable others to perform mobile mini-DOAS measurements of HCHO, something which in the future could help improve the understanding of chemical processes in the polluted atmosphere. We have expanded on the explanations in the abstract and the conclusions to make this point more clear than it previously was.

It is true that the largest error source in the flux measurements lies in the uncertainty of the wind speed and wind direction as pointed out by one of the referees. However, the errors in the fluxes have been calculated using the uncertainty in the spectral fit only since these are the errors that affect the comparison between the measurements and the model, the same wind field has been used to calculate the flux for both the modelled columns and the measurements.

In the passive DOAS technique, the measured spectra are divided by a measured Fraunhofer spectrum with the purpose of removing the Fraunhofer structures in the collected spectrum. Thus the word ratioed is more appropriate than fitted or scaled.

#### Technical Comments

Changed the title; removed the term 'emission' and replaced it with 'outflow'.

Figure 5 has been updated as it was discovered that the labels 'T2'; and 'Pachuca' had been switched.

Corrected the small grammatical errors pointed out.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 865, 2009.

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