

## ***Interactive comment on “Black carbon concentration trends in Helsinki during 1996–2005” by L. Järvi et al.***

### **Anonymous Referee #1**

Received and published: 12 November 2007

The authors deal with the black carbon (BC) concentrations measured in Helsinki in three campaigns from 1996 to 2005. The objectives of the MS represent a timely and important contribution to our knowledge on BC in urban environments. Nevertheless, the MS should be further improved before it is accepted in the ACP.

The authors compare and evaluate selected data for four common time intervals. The selection of the common periods (via day by day agreement) means an unnecessary reduction in the number of data available. The authors would rather evaluate the data e.g., grouped for winter and spring periods for 1996 and 2000, and for four seasons for 2004–05. This would represent a more reliable approach for their interpretations. In this way, they could also determine the seasonal variation of BC for the period 2004–05, which is completely missing now but could be one of the key conclusions of the MS.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

The authors are encouraged to change the title to a more specific form highlighting more the time variation according to the previous section.

The impact of domestic heating on the BC concentrations is left out from the considerations in Introduction, section 2 on pages 2-3. It should be implemented, or it is to be explained if there is a special (negligible) contribution of it in the Helsinki area.

It is understandable that the atmospheric concentrations and meteorological data were logarithmically transformed before the regression analysis. However, the authors should explain why they did the same for the traffic rate in paragraph 2.5.

The present reviewer thinks that the estimation of the emission factors of BC is not worked out satisfactorily in the MS, and, therefore, the authors may want to skip this part (last several sentences of paragraph 3.2), or they should improve it substantially.

Some specific comments:

p. 2: ... the main constituents of FINE-SIZED PM has been ... p. 2: ... considered as a CONSERVATIVE tracer ...

The MS should be also improved from typing and grammatical point of view.

---

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 14265, 2007.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper