

***Interactive comment on* “Elemental content of
PM_{2.5} aerosol particles collected in Göteborg
during the Göte-2005 campaign in February 2005”
by J. Boman et al.**

J. Boman et al.

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We first of all would like to thank the reviewers and editor for the effort put into reviewing and commenting our manuscript. Please find below the answers to the questions and comments raised by the reviewers. Our intention is to revise the manuscript and submit it to ACP.

Editor comment

As pointed out By the editor some of the mistakes of the original manuscript sent for initial review have been taken care of in the revised version now available in ACPD.

Anonymous Referee #1 (AR1)

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Interactive Discussion

Discussion Paper



After the initial comments by the reviewers we have restructured the manuscript in the version available on APCD, and we have improved the structure in the next version even more after the full comments now received from the reviewers. The manuscript now presents the content in a more structured and well organized way. The text is also rephrased in some section to improve the difference between our new results and findings from those we refer to. More relevant and updated references are also added. Since the field is large, not all references available are used but we consider the new selection we have done appropriate. The discussion is also widened and more structured, as explained below.

Introduction: The part describing the PM_{2.5} and wind profiles is being extended and relevant references added. A further explanation of the special geographical, climatic and thus pollution conditions of Gothenburg is also added, especially describing the problems of temperature inversions. The general part of the MP₁₀ and PM_{2.5} legisla-tionis reduced.

Methods: the certified uncertainty is the uncertainty specified by the Manufacturer. Rephrasing the sentence and use "specified" instead of "certified" will make the sen-tence clearer. The 5% mean analytical precision was calculated from 5 repeated runs of two different samples. This information will be included in the manuscript.

Results and discussion: Tables 2 and 3 are now re-structured. Median values are removed and the discussion changed accordingly. This could be done without loss of important discussion parts or conclusions. In the table the number of filters with concentration above DL are removed and explained briefly in the text instead: "The concentrations for most elements were above the DL in a majority of the samples. In the cases were concentrations were below detection limit (DL) the concentration was replaced by DL/2 in the statistical calculations. <DL in the tables indicates that more than half of the samples have concentrations below DL." Since the tables present different data sets it is difficult to merge them into one. We hope the removal of some of the information in the tables will make them more comprehensive and understandable.

We prefer leaving all elements for all days in the tables, since the concentrations can be used by other authors as a reference for further publications. A discussion about the air masses and expected trends will be added, as suggested by AR1. Additional references for S and Pb in fine particles will be added as that part of the manuscript is restructured. A clearer description of the sea as a potential source of S will be given, referring to the work of Jaenicke and Schutz. The data from the IC analysis is included in Table 3. The discussion about inversions during the period and the influence of the inversion will be described in more detail. The local influence of larger particles as well as the size distribution of particles containing Cl will be elucidated. Figure 1 will be re-drawn to make it easier to interpret.

Anonymous referee #3 (AR3)

We agree that the paper will be more interesting in connection to other manuscripts in the special issue where it is published, although it will be of interest on its own merits after the correction done according to the questions and comments by the reviewers.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 7703, 2008.

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