

Interactive comment on “On the growth of nucleation mode particles: source rates of condensable vapor in polluted and clean environments” by M. Kulmala et al.

M. Kulmala et al.

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The author wish to thank the referee 1 for the comments.

Specific comments:

In the equation (1), where rate of change of condensable vapour is introduced, the reader is referred to earlier works. As suggested by the referee, the text after the equation is changed to: "where Q is the source rate of the vapor and CS is its condensation sink (see Eq.4) to the pre-existing aerosol. The condensation itself is driven by the vapor pressure difference far away and on the surface of the pre-existing particle surface. In this work the vapor pressure at the surface is assumed to be zero, yielding a

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maximum mass flux of condensable vapor to the aerosol phase. With this assumption, an unknown activity coefficient plays no role in the estimated condensation flux."

Page 6950 Line 14 spelling error is fixed.

Page 6951 Line 2 typo is fixed.

The referee points out the data from long-term measurement stations are presented at the same detail as are the short field campaigns. The authors share the opinion of the referee that the long-term measurements deserves a more thorough analysis and discussion. However, this is left for another publication for the sake of equal treatment of all data and briefness of the current article.

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 6943, 2004.

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