

## ***Interactive comment on “Interaction of aerosol particles composed of protein and salts with water vapor: hygroscopic growth and microstructural rearrangement” by E. Mikhailov et al.***

**E. Mikhailov et al.**

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We would like to thank both referees, Ari Laaksonen and Ernest Weingartner, for the thorough review, positive evaluation, and constructive suggestions for improvement of our manuscript. Currently we are preparing a detailed response to all comments and a revised manuscript, which we plan to complete and submit within the next weeks.

In the course of this work we have realized that a few equations and symbols were misprinted in the discussion paper. The misprinting is not related to the referee comments and has not affected our calculations and results, but we want to correct it without further delay.

In the description of the average solute volume additivity (AS-VA) model for multi-component particles, equations (24)-(26) and the subsequent paragraph (pp. 4772

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and 4773) should read:

$$\mu_y = \frac{m_y}{M_y m_w} = \frac{\rho_s x_{s,y}}{M_y \rho_w (g_{m,s}^3 - 1)} \quad (24)$$

$$\mu_y = \frac{\rho_y}{M_y \rho_w (g_{\text{eff},y}^3 - 1)} \quad (25)$$

$$g_{\text{eff},y} = \left( \frac{\rho_y}{\rho_s x_{s,y}} (g_{m,s}^3 - 1) + 1 \right)^{1/3} \quad (26)$$

Based on the volume additivity assumption,  $g_{\text{eff},y}^3$  can be regarded as the volume fraction of the pure solute  $y$  in the reference solution, and thus  $g_{\text{eff},y}$  can be inserted for  $g_{m,s}$  in Eq. (19) to calculate  $\Phi_y$ .

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Interactive comment on Atmos. Chem. Phys. Discuss., 3, 4755, 2003.

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