Correction to "New particle formation from photooxidation of diiodomethane (CH_2I_2)"

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INDEX TERMS: 0312 Atmospheric Composition and Structure: Air/sea constituent fluxes (3339, 4504); 0315 Atmospheric Composition and Structure: Biosphere/atmosphere interactions; 0322 Atmospheric Composition and Structure: Constituent sources and sinks; 0365 Atmospheric Composition and Structure: Troposphere—composition and chemistry; 9900 Corrections; *KEYWORDS:* new particle formation, aerosol mass spectrometer, smog chamber, aerodynamic diameter, mobility diameter, shape factor

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[1] In the paper "New particle formation from photooxidation of diiodomethane (CH_2I_2)" by J. L. Jimenez et al. (*Journal of Geophysical Research*, *108*(D10), 4318, doi:10.1029/2002JD002452, 2003), equation (9) contains an error and should read as follows:

$$D_{va} = \frac{\rho_p}{\rho_0}\frac{D_v}{\chi_v} = \frac{\rho_p}{\rho_0}\chi_{v,inv}D_v = \frac{\rho_p}{\rho_0}SD_m, \qquad (9)$$

where D_{va} is the vacuum aerodynamic diameter, D_v is the volume equivalent diameter, D_m is the electrical mobility diameter, ρ_p is the density of the particle material, ρ_0 is the unit density (1 g cm^{-3}), χ_v is the dynamic shape factor in the free-molecular regime, $\chi_{v,inv}$ is the inverse of the free-molecular shape factor (= $1/\chi_v$), and S is the "Jayne shape factor" as defined for the Aerodyne Aerosol Mass Spectrometer by *Jayne et al.* [2000]. The last equality is effectively the definition of *S*. *S* is not the reciprocal of the dynamic shape factor χ_v. The relationship between χ_v and *S* can be derived using the relationship between D_m and D_v (see equation (3) in original paper) and will be presented in a future publication (P. DeCarlo et al., manuscript in preparation).

References

Jayne, J. T., D. C. Leard, X. Zhang, P. Davidovits, K. A. Smith, C. E. Kolb, and D. R. Worsnop, Development of an aerosol mass spectrometer for size and composition: Analysis of submicron particles, *Aerosol Sci. Technol.*, *33*, 49–70, 2000.

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