Erratum: Mesoscopic solvent simulations: Multiparticle-collision dynamics of three-dimensional flows [Phys. Rev. E 66, 036702 (2002)]

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While the data produced by our multiparticle-collision dynamics (MPCD) program are correct, we made a couple of errors when introducing dimensionless quantities. The following corrections are noted.

(1) At the beginning of Sec. IV A, the correct definition of the dimensionless gravitation constant is $g^* = gl_c/k_BT$, instead of $g^* = gh/\sqrt{k_BT}$. Furthermore, throughout the paper, the old values of $g^* = 0.005$ and $g^* = 0.0025$ have to be replaced by $g^* = 0.0044$ and $g^* = 0.0022$, respectively.

(2) The multiplier for the rescaled velocity v' in the captions of Figs. 4, 5, and 6 is 10 instead of 10^2, i.e., the correct relation is $v' = (v/\sqrt{k_BT}) \times 10$.

(3) The correct definition of dimensionless viscosity in Figs. 7 and 9 is $(\nu h/l_c^2) \times 10$ instead of $\nu h/L_y^2 \, 10^3$. For the same reason, in Fig. 10 the dimensionless viscosity $(\nu h/l_c^2) \times 10^2$ should be used instead of $\nu h/L_y^2 \, 10^4$.

(4) In Eq. (7), 18 in the denominator should be replaced by 6 and a factor l_c^2 has to be added to the numerator. The correct equation then reads

$$\nu = \frac{l_c^2}{6h}\Lambda^2\frac{3(1-e^{-M})+2M}{e^{-M}-1+M}. \tag{1}$$

The correct expression was used in the original version of Fig. 9.

(5) Since the definition of the dimensionless viscosity is now different, its values in the paragraphs before and after Eq. (6) are also changed. The correct values are as follows. Line 4 before Eq. (6): $\nu^* = \nu h/l_c^2 = 5 \times 10^{-2}$; line 1 after Eq. (6): $\nu^* = \nu h/l_c^2 = 8.3 \times 10^{-2}$.

(6) In Fig. 9, in addition to the new definition of the dimensionless viscosity noted above, the line of the analytical estimate for small Λ is also changed. The updated figure is shown here.
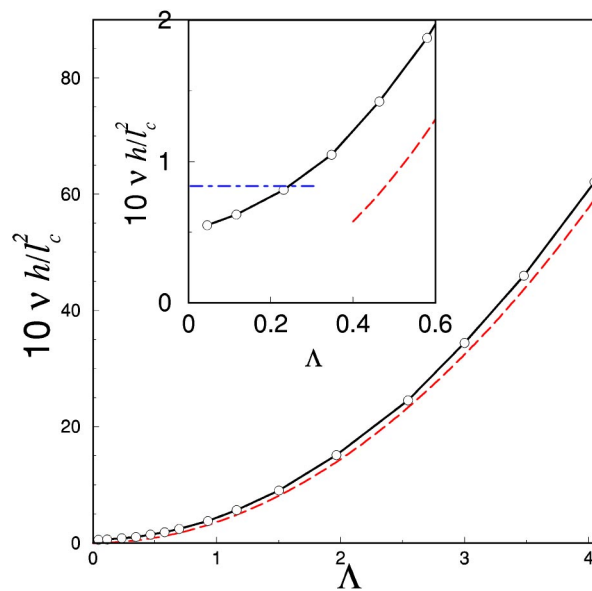

FIG. 9.