Erratum: Identity method for particle number fluctuations and correlations
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There was a misleading notation in Eq. (10),

$$u_{ji}^s \equiv \frac{1}{\langle N_i \rangle} \int dm w_j^s(m) \rho_i(m), \quad (10)$$

with $s = 1, 2$. Index $s = 2$ in this formula did not correspond to the square sign, and that implied $u_{ji}^2 \neq (u_{ji})^2$. It led to mistakes in several subsequent equations. This happens because the expressions of $(u_{ji})^2$ were mixed up with those of u_{ji}^2 . In order to correct everything, I suggest the following modifications. Equation (10) should be replaced by

$$u_{ji} \equiv \frac{1}{\langle N_i \rangle} \int dm w_j(m) \rho_i(m), \quad \overline{u_{ji}^2} \equiv \frac{1}{\langle N_i \rangle} \int dm w_j^2(m) \rho_i(m), \quad (10^*)$$

and the first equation in Eq. (12),

$$\langle W_j^2 \rangle - \sum_{i=1}^k \langle N_i \rangle [u_{ji}^2 - (u_{ji})^2] \equiv b_j, \quad (12)$$

with $u_{ji}^2 \neq (u_{ji})^2$ in Eq. (12), should be replaced by

$$\langle W_j^2 \rangle - \sum_{i=1}^k \langle N_i \rangle [\overline{u_{ji}^2} - u_{ji}^2] \equiv b_j. \quad (12^*)$$

After these replacements, one has $u_{ji}^2 = (u_{ji})^2$ in Eq. (12*) and in all subsequent equations of the original paper. The expressions $\overline{u_{ji}^2}$ are only entered in b_j quantities, and with new Eqs. (10*) and (12*), all subsequent formulas become correct. Note that the corrections in formulas (10) and (12) proposed in this Erratum make all equations self-consistent. These corrections do not change, however, any statements and/or conclusions made in the original paper.

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