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Erratum: "A Laguerre expansion method for the field particle portion in the linearized Coulomb collision operator" [Phys. Plasmas 22, 122503 (2015)]

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In Ref. 1, Eqs. (20) and (21) for the second Legendre order $l=2$ were incorrect. The correct integral formulas are

$$\int x_a^2 P_2(\xi) C_{ab}(f_{aM}, f_b) \mathrm{d}^3\mathbf{v} = 16\pi^2 n_a \left(\frac{e_a e_b}{m_a}\right)^2 \ln\Lambda_{ab} \int_0^\infty \left[\left(\frac{m_a}{m_b}+\frac{3}{2}\right)\left\{\frac{3G(x_a)}{x_a} - \frac{2}{\sqrt{\pi}}\exp\left(-x_a^2\right)\right\} - x_a G(x_a)\right]\left(\int_{-1}^{1} P_2(\xi)\bar{f}_b \mathrm{d}\xi\right) x_a^2 \mathrm{d}x_a, \tag{1}$$

and

$$\int x_a^2 L_1^{(5/2)}\left(x_a^2\right) P_2(\xi) C_{ab}(f_{aM}, f_b) \mathrm{d}^3\mathbf{v} = 16\pi^2 n_a \left(\frac{e_a e_b}{m_a}\right)^2 \ln\Lambda_{ab} \int_0^\infty \left[4\left(1+\frac{m_a}{m_b}\right)\frac{x_a^2}{\sqrt{\pi}}\exp\left(-x_a^2\right) - 3\left\{\frac{3G(x_a)}{x_a} - \frac{2}{\sqrt{\pi}}\exp\left(-x_a^2\right)\right\}\right]\left(\int_{-1}^{1} P_2(\xi)\bar{f}_b \mathrm{d}\xi\right) x_a^2 \mathrm{d}x_a, \tag{2}$$

that satisfy the symmetric relation

$$\int x_a^2 L_1^{(5/2)}\left(x_a^2\right) P_2(\xi) C_{ab}\left(f_{aM}, x_b^2 P_2(\xi) f_{bM}\right) \mathrm{d}^3\mathbf{v} = \int x_b^2 P_2(\xi) C_{ba}\left(f_{bM}, x_a^2 L_1^{(5/2)}\left(x_a^2\right) P_2(\xi) f_{aM}\right) \mathrm{d}^3\mathbf{v} = \frac{9 n_a}{5\tau_{ab}} \frac{m_a}{m_b}\left(1+\frac{m_a}{m_b}\right)^{-5/2}, \tag{3}$$

of the Braginskii's matrix elements for thermal-thermal collisions with $T_a = T_b$ due to the self-adjoint property.

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