Erratum: Existence and damping of dust acoustic solitary waves in a bounded geometry [Phys. Rev. E 87, 063101 (2013)]

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The propagation of the solitary wave in a dusty plasma bounded in finite geometry has been investigated in this paper. It is noted that there are several errors that should be corrected. The corrections are as follows: Eqs. (11)–(13) can be substituted into Eq. (8) only in the linearized case. Therefore, the term containing ψ^2 in Eqs. (14), (16), and (26) should be deleted. Equations (14), (16), and (26) in the paper should be replaced by the following equations, respectively:

$$\frac{\frac{\partial^2 Y_0(r)}{\partial r^2}+\frac{1}{r}\frac{\partial Y_0(r)}{\partial r}}{Y_0(r)}=\frac{Z_d N_d+(s\beta'\nu+s\eta)\psi-\frac{\partial^2\psi}{\partial x^2}}{\psi}=\lambda, \tag{14}$$

$$\frac{\partial^2\psi}{\partial x^2}+\lambda\psi=Z_d N_d+(s\beta'\nu+s\eta)\psi, \tag{16}$$

$$\frac{\partial^2\psi}{\partial x^2}-\beta^2\psi=Z_d N_d+(s\beta'\nu+s\eta)\psi. \tag{26}$$

Moreover, Eq. (34) should be replaced by

$$A=\frac{6\pi R Z_d}{2\beta' c}J_1(\beta R). \tag{34}$$

The corrected equations cannot be treated in the manner of the original paper, retaining the nonlinear terms; therefore, the results obtained cannot be considered reliable for solitary waves.

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[1] X. Yang, C.-B. Liu, Y. Yang, Y.-R. Shi, Y.-X. Xu, D.-N. Gao, W.-S. Duan, and L. Yang, Phys. Rev. E **87**, 063101 (2013).

