

**Erratum: Dynamical properties of random charge fluctuations in a dusty plasma
with different charging mechanisms
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S. A. Khrapak,* A. P. Nefedov, O. F. Petrov, and O. S. Vaulina

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We wish to correct a mistake in our paper, which slightly affects some of the results. We point out that the charge $\langle Z \rangle$ in the charge neutrality condition [Eq. (15)] is the equilibrium charge of the dust particles. Thus, it must be considered as a constant when entering into the expression for electron current [Eq. (17)]. Therefore, the expressions for the fluctuation frequency and amplitude for charging by thermionic emission (Sec. III B [Eqs. (18) and (19)]) become

$$\beta_{te} = \pi a^2 n_p \left(\frac{8T_e}{\pi m_e} \right)^{1/2} \gamma_{te} (1 + \gamma_{te}), \quad (1)$$

$$\alpha_{te} = \gamma_{te}^{-1/2}. \quad (2)$$

The difference between these equations and Eqs. (18) and (19) becomes important for sufficiently small γ_{te} , indicating that the curves for $n_p = 5 \times 10^7 \text{ cm}^{-3}$ in Figs. 2 and 3 are no longer valid. Equation (2) shows that the amplitude of charge fluctuations becomes infinite when $\gamma_{te} \rightarrow 0$. However, small fluctuations $\Delta Z \ll \langle Z \rangle$ were considered in the model presented. Thus, Eq. (2) is correct when $\gamma_{te} \gg \langle Z \rangle^{-1}$.

Similarly, the expressions for the frequency and amplitude of charge fluctuations for charging by uv irradiation (Sec. III C [Eqs. (21) and (22)]) have to be corrected. We obtain

$$\beta_{pe} = \pi a^2 n_p \left(\frac{8T_e}{\pi m_e} \right)^{1/2} \gamma_{pe} \left[1 + (1 + \gamma_{pe}) \frac{T_e}{T_{pe}} \right], \quad (3)$$

$$\alpha_{pe} = \left[\frac{1 + \gamma_{pe}}{\gamma_{pe} \left[1 + (1 + \gamma_{pe}) \frac{T_e}{T_{pe}} \right]} \right]^{1/2}. \quad (4)$$

In the low-neutral-gas-pressure limit $T_e \simeq T_{pe}$ and Eq. (4) is reduced to $\alpha_{pe} = [(1 + \gamma_{pe}) / \gamma_{pe} (2 + \gamma_{pe})]^{1/2}$. The difference between these equations and Eqs. (21) and (22) becomes significant for sufficiently small γ_{pe} . Thus, results presented in Figs. 5 and 6 for high values of dust number densities (small γ_{pe}) have to be corrected. The results of Sec. II and Sec. III A are not affected by these corrections.

*Electronic address: ipdustpl@redline.ru