Erratum: "The parametric decay of dust ion acoustic waves in non-uniform quantum dusty magnetoplasmas" [Phys. Plasmas 18, 063705 (2011)]

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There is an error in Ref. 1. The Eq. (18) should read as

$$n_j^L = \frac{n_{0j}}{\omega}(k_z v_{jz}^L + k_x v_{jx}^L) + \frac{n_0' j}{i\omega} v_{jx}^L. \tag{1}$$

The resulting Eqs. (19), (20), and (29) would become, respectively,

$$n_j^L = \frac{\frac{q_j n_{0j} k^2}{m_j}\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]\phi}{k^2 - k^2 V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]} = -\frac{k^2\chi_j\phi}{4\pi q_j}. \tag{2}$$

$$\chi_j = -\frac{\omega_{pj}^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}{k^2 - k^2 V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}. \tag{3}$$

and

$$\begin{aligned}\mathbf{P} = &\sum_j \frac{q_j k_0^2 \chi_{0j}}{8\pi m_j}\frac{\omega k_x}{\omega^2-\omega_{cj}^2}\left(1 + \frac{V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}{1 - V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}\right)\hat{x} \\ &+ \sum_j \frac{q_j k_0^2 \chi_{0j}}{8\pi m_j}\frac{\omega_{cj} k_x}{\omega^2-\omega_{cj}^2}\left(1 + \frac{V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}{1 - V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}\right)\hat{y} \\ &+ \sum_j \frac{q_j}{8\pi m_j}\left[\frac{k_0^2 k_z \chi_{0j}}{\omega}\left(1 + \frac{V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}{1 - V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}\right) - \left(\frac{\frac{\omega_{pj}^2 k_0}{\omega_0}\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}{1 - V_{Fj}'^2\left[\frac{k_z^2}{\omega^2} + \frac{1}{L_j}\frac{k_x}{\omega^2-\omega_{cj}^2}(1+L_j k_x)\right]}\right)\right]\hat{z}.\end{aligned} \tag{4}$$

In Eqs. (2), (3), and (4), the terms $L_j k_x$ were missed earlier. From these corrected equations, we can easily retrieve the results for a homogeneous plasma by taking limit $L_j \to \infty$. However, graphically the results show no difference since the contribution from these terms are rather small.

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