**Erratum: Self-consistent time dependent two dimensional and three dimensional
space charge distributions with linear force
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We have detected some typographical errors in our paper on self-consistent 2D and 3D space charge distributions. The first error appears in Eq. (37): the argument of the tangent should be 2φ , rather than φ . The equation should read:

$$\operatorname{tg} 2\varphi = -\frac{2(fb + ea)}{a^2 + b^2 - e^2 - f^2}. \quad (1)$$

The second error is that the coefficients c_1 and c_2 in Eq. (38)

$$\frac{x_N^2}{c_1^2} + \frac{y_N^2}{c_2^2} = 1, \quad (2)$$

miss a factor of $(af - eb)$. The equations for the coefficients should read $c_1^2 = (af - eb)^2 / [(e^2 + f^2)\cos^2\varphi + (a^2 + b^2)\sin^2\varphi + 2(fb + ea)\cos\varphi\sin\varphi]$, $c_2^2 = (af - eb)^2 / [(e^2 + f^2)\sin^2\varphi + (a^2 + b^2)\cos^2\varphi - 2(fb + ea)\cos\varphi\sin\varphi]$.

The third error appears in Eqs. (41) for the constants c, d, g, h have differentiation on the wrong side of the equations. They should read:

$$c = a', \quad d = b', \quad g = e', \quad h = f'. \quad (3)$$

We apologize for the mistakes, but note that these equations were presented as an example, were never used in the paper, and the paper's results remain unchanged.