

Erratum to: A semiclassical treatment of the interaction of non-uniform electric fields with the electric quadrupole moment of a neutral particle

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After publication, the author noticed that some equations needed amendments. Here follows their correct version:

1) Equation (15) should read

$$\begin{aligned} \frac{1}{\hbar} \int_0^{r_2} q(r) dr &= \frac{1}{\hbar} \sqrt{2m\mu Q} \int_0^{r_2} \sqrt{r_2 - r} dr \\ &= \frac{2}{3\hbar} \sqrt{2m\mu Q} (r_2)^{3/2}. \end{aligned} \quad (15)$$

2) Equation(16) should read

$$\mathcal{E}_{n,0} = \mu Q \left[\frac{9\hbar^2\pi^2}{8m\mu Q} \left(n - \frac{1}{2} \right)^2 \right]^{1/3}. \quad (16)$$

3) Equation (29) should read

$$\begin{aligned} \frac{1}{\hbar} \int_0^{r_2} q(r) dr &= \frac{r_2}{\hbar} \sqrt{m Q E_0} \int_0^\infty \sqrt{x} e^{-x} dx \\ &= \frac{r_2}{\hbar} \sqrt{m Q E_0} \frac{\sqrt{\pi}}{2}. \end{aligned} \quad (29)$$

4) Equation (30) should read

$$\mathcal{E}_{n,0} = \frac{Q E_0}{2} \ln \left(\frac{\hbar}{r_0} \sqrt{\frac{\pi}{Q E_0 m}} \left[n - \frac{1}{2} \right] \right) - \frac{Q E_0}{4}. \quad (30)$$

These corrections do not affect the physical conclusion of the paper.

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