

$$\rho_e = \frac{n e^2}{2\pi^2} \vec{b} \cdot \vec{B}$$

$$\delta q = \int \rho_e d^2 a = \frac{n e^2}{2\pi^2} b \phi$$

$$\stackrel{e=1, b=\frac{\pi}{2}}{=} \frac{n}{2\pi^2} \cdot \frac{\pi}{2} \phi$$

$$= \frac{n}{4\pi} \phi$$

We measure δQ in the unit of $\frac{e}{\pi}$

$$= n \frac{1}{2} \frac{\phi}{\underbrace{2\pi}_{\phi_0}} \phi_0$$

$$\delta Q = \frac{\delta q}{\frac{e}{\pi}} = \frac{\delta q}{\frac{1}{\pi}}$$

$$= n \cdot \frac{\pi}{2} \cdot \frac{\phi}{\phi_0}$$

From simulations I get a factor of 0.977 instead of the theoretical slope of 1.

0.977