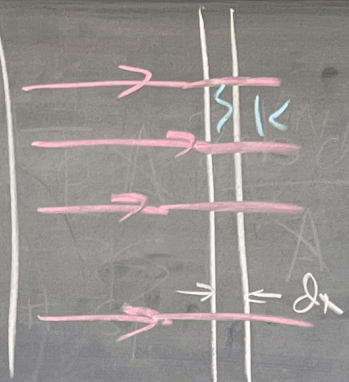


$$\Phi = \frac{N v_{\text{shell}}}{m^2 \cdot s}$$

k_e



$$\frac{dP}{dk} = n dx \frac{d\sigma}{dk}$$

density, e^-

$$\frac{d\sigma}{dk} = 2\pi b \left| \frac{db}{dk} \right|$$

$$P_f = \int_{-\infty}^{\infty} \vec{F} \cdot dt = \frac{q q_m}{c b}$$

$$K = \frac{P_f^2}{2m_e} = \frac{q^2 q_m^2}{2c^2 b^2 m_e}$$

$$\frac{dk}{dx} = \int_{k_{\text{min}}}^{k_{\text{max}}} dk \quad K \frac{d\sigma}{dk} = \frac{n q^2 q_m^2 \pi^2}{m_e c^2} \ln\left(\frac{\sigma - 1}{m}\right)$$

10 meV/m 4

