
Table of contents

Potential (intrinsic energy of inertia)

Electric Potential U :

$$e = \text{electron charge} \quad q = ne = \text{charge} \quad n \in \mathbb{N} \quad (1)$$

$$U = \frac{E_{pot}}{q} = \frac{m}{q}c^2 = \kappa c^2 \quad (2)$$

Voltage (potential difference, tension):

$$V = \Delta U = d \cdot \mathcal{E} = Z \cdot I = \dots \quad Z = \text{Resistance} \quad (3)$$

$$E_{kin}^{max} = eV_0 = h(\nu - \nu_0) \quad (4)$$

Action Quantum, Planck Constant (Energy-Frequency-Slope)¹:

$$\begin{aligned} h &= \tan(\alpha) = \frac{E_{kin}}{\nu_i - \nu_0} = \frac{eV_{0i}}{\nu_i - \nu_0} \equiv \\ \frac{\Delta E}{\nu_0} &= \frac{W}{\nu_0} = \frac{F_{EM} \cdot x}{\nu_0} = \hbar k \lambda \end{aligned} \quad (5)$$

$$\hbar = \frac{\Delta E}{\omega} = \quad (6)$$

$$\begin{aligned} \alpha &= \angle(E_{kin}, \nu) \quad e = \text{electron charge} \\ V_0 &= \text{Opposing Potential } (I = 0) \quad E_{kin}^{max} = eV_0 \end{aligned} \quad (7)$$

¹Wirkungsquantum