

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:

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

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

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

¹Wirkungsquantum