

### Units Variation with Speed

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**Abstract** -- Speed is the relative unification parameter of the entire universe.

Length  $x = x_0 \sqrt{1 - v^2 / c^2}$

Time  $t = t_0 / \sqrt{1 - v^2 / c^2}$

Speed  $v_x = v_0 (1 - v^2 / c^2)$

Magnetic field  $\vec{B} = \vec{B}_0$

Electric field  $\vec{E} = \vec{E}_0 (1 - v^2 / c^2)$

Energy  $E = E_0 \sqrt{1 - v^2 / c^2}$

Mass  $m = m_0 / (1 - v^2 / c^2)^{3/2}$

Acceleration  $a = a_0 (1 - v^2 / c^2)^{3/2}$

Electric charge  $q = q_0 / (1 - v^2 / c^2)$

Force  $F = F_0$

Planck's constant  $h = h_0$

Inductance  $L = L_0 (1 - v^2 / c^2)^{3/2}$

Permittivity  $\epsilon = \epsilon_0 / (1 - v^2 / c^2)^3$

Permeability  $\mu = \mu_0 (1 - v^2 / c^2)$

Capacitance  $C = C_0 / (1 - v^2 / c^2)^{5/2}$

Magnetic charge  $q_m = q_{m0} (1 - v^2 / c^2)$

Gravitational constant  $G = G_0 (1 - v^2 / c^2)^4$

Magnetic potential  $A = A_0 (1 - v^2 / c^2)^{3/2}$

Voltage  $V = V_0 (1 - v^2 / c^2)^{3/2}$

Magnetic strength  $H = H_0 / (1 - v^2 / c^2)$

Electric current  $I = I_0 / \sqrt{1 - v^2 / c^2}$

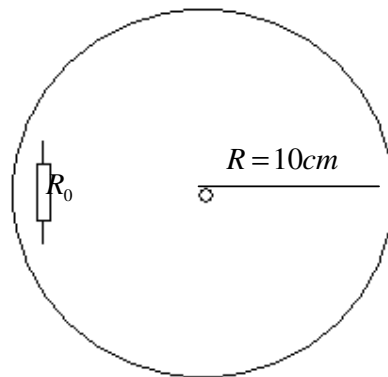
Resistance  $R = R_0 (1 - v^2 / c^2)^2$

Momentum  $p = p_0 / \sqrt{1 - v^2 / c^2}$

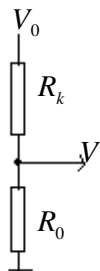
Temperature  $T = T_0 / \sqrt{1 - v^2 / c^2}$

### Detection of resistance variation

We use a disc that rotates at  $\omega = 10000 \text{rot} / \text{min} = 167 \text{rot} / \text{s}$  where we put a resistor.



$$P = 2\pi \cdot 0.1 = 0.63 \text{m} ; \quad v = \frac{P\omega}{1} = 105 \text{ms}^{-1}$$



$$R_0 = R_k$$

$$\Delta R_0 = \frac{4R_0 v^2}{c^2} \quad \text{and} \quad \Delta V = V_0 \frac{\Delta R_0}{4R_k} \quad \Leftrightarrow$$

$$\Leftrightarrow \quad \Delta V = \frac{V_0 v^2}{c^2} \quad \text{and} \quad V_0 = 25000 \text{V}$$

$$\Delta V = 3 \text{nV}$$

