Osnovni zakoni narave

Gibalni zakon

$$\frac{\mathrm{d}\boldsymbol{G}}{\mathrm{d}t} = \boldsymbol{F}$$

$$\boldsymbol{G} = \frac{m\boldsymbol{v}}{\sqrt{(1 - v^2 / \mathrm{c}^2)}}$$

Gravitacijsko polje

$$\boldsymbol{F} = m\boldsymbol{g}$$

$$\boldsymbol{g}_\mathrm{P} = \sum_\mathrm{Q} \kappa \frac{m_\mathrm{Q}}{{r_\mathrm{PQ}}^2} \boldsymbol{e}_\mathrm{PQ}$$

Elektromagnetno polje

$$\boldsymbol{F} = e(\boldsymbol{E} + \boldsymbol{v} \times \boldsymbol{B})$$

$$\boldsymbol{\nabla} \cdot \boldsymbol{E} = \frac{\rho}{\varepsilon_0}$$

$$\boldsymbol{\nabla} \times \boldsymbol{E} = -\frac{\partial \boldsymbol{B}}{\partial t}$$

$$\boldsymbol{\nabla} \cdot \boldsymbol{B} = 0$$

$$\mathrm{c}^2 \boldsymbol{\nabla} \times \boldsymbol{B} = \frac{\boldsymbol{j}}{\varepsilon_0} + \frac{\partial \boldsymbol{E}}{\partial t}$$

Kvantni gibalni zakon

$$\frac{\mathrm{d}P}{\mathrm{d}V} = |\Psi|^2$$

$$\mathrm{i}\hbar \frac{\partial \Psi}{\partial t} = \hat{\mathrm{H}}\Psi$$

$$\hat{\mathrm{H}} = -\frac{\hbar^2}{2m}\boldsymbol{\nabla}^2 + \hat{\mathrm{U}}$$