



**ABC Amber Text Converter Trial version**

Please register to remove this banner.

<http://www.processtext.com/abctxt.html>

## Specijalna teorija relativiteta

$$x = a_{11}x' + a_{12}t'$$

$$t = a_{21}x' + a_{22}t'$$

$$x' = a_{11}(x - vt) \dots$$

$$x = a_{11}(x' + vt')$$

$$x' = ct', x = ct$$

$$ct = a_{11}(ct' + vt')$$

$$ct' = a_{11}(ct - vt)$$

$$c^2 tt' = a_{11}^2 t t' (c^2 - v^2)$$

$$a_{11} = 1 / (1 - v^2 / c^2)^{0.5}$$

$$x' = (x - vt) / (1 - v^2 / c^2)^{0.5}$$

$$y' = y$$

$$z' = z$$

$$t' = (t - (v/c^2)x) / (1 - v^2 / c^2)^{0.5}$$

$$m = m_0 / (1 - v^2 / c^2)^{0.5}$$

$$\vec{p} = m\vec{v}$$

$$dE_k = dA = \vec{F}\vec{v}dt$$

$$\vec{F} = d / dt(m\vec{v})$$

$$dE_k = \{0.5m_0v^2 / (1 - v^2 / c^2)^{3/2}\} d / dt(v^2 / c^2) + m_0v / (1 - v^2 / c^2)^{1/2} dv / dt \} dt$$

$$vdv / dt = 0.5d / dt(v^2) = (c^2 / 2)d / dt(v^2 / c^2)$$

$$\int dE_k = \int d(m_0c^2 / (1 - v^2 / c^2)^{1/2})$$

$$E_k = m_0c^2 / (1 - v^2 / c^2)^{1/2} + const.$$

$$const. = -m_0c^2$$

$$E_k = m_0c^2 / (1 - v^2 / c^2)^{1/2} - m_0c^2$$

$$E_k = mc^2 - m_0c^2$$

$$p_x = m_0v_x / (1 - v^2 / c^2)^{1/2}$$

$$p_y = m_0v_y / (1 - v^2 / c^2)^{1/2}$$

$$p_z = m_0v_z / (1 - v^2 / c^2)^{1/2}$$

$$p_4 = im_0c / (1 - v^2 / c^2)^{1/2} = i / c(mc^2) = iE / c$$

$$p = p_x^2 + p_y^2 + p_z^2 + (iE / c)^2$$

$$i = (-1)^{1/2}$$

$$p = (p_x^2 + p_y^2 + p_z^2)^{1/2}$$

$$E = (p^2c^2 + m_0^2c^4)^{1/2}$$



ABC Amber Text Converter Trial version

Please register to remove this banner.

<http://www.processtext.com/abctxt.html>