

Spacetime doesn't exist

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Abstract – Relativity theory is wrong and spacetime doesn't exist, because x and t are not space and time but wavelength and period of an electromagnetic wave.

Lorentz equations give the Doppler effect for transversal waves, the true and original meaning.

Lorentz equation:

$$\left\{ \begin{array}{l} x = \frac{x_0 - vt_0}{\sqrt{1 - v^2/c^2}} \\ t = \frac{t_0 - vx_0/c^2}{\sqrt{1 - v^2/c^2}} \end{array} \right. \Leftrightarrow \dots \Leftrightarrow \left\{ \begin{array}{l} v^2(c^2t_0^2 + x^2) - 2vc^2x_0t_0 + c^2(x_0^2 - x^2) = 0 \\ v^2(c^2t^2 + x_0^2) - 2vc^2x_0t_0 + c^4(t_0^2 - t^2) = 0 \end{array} \right. \Leftrightarrow$$

Equating the coefficients:

$$\Leftrightarrow \dots \Leftrightarrow \frac{-2c^2x_0t_0}{c^2t_0^2 + x^2} = \frac{-2c^2x_0t_0}{c^2t^2 + x_0^2} \dots \text{and} \dots \Leftrightarrow \frac{c^2(x_0^2 - x^2)}{c^2t_0^2 + x^2} = \frac{c^4(t_0^2 - t^2)}{c^2t^2 + x_0^2} \dots \Leftrightarrow$$

$$\Leftrightarrow \dots \Leftrightarrow c^2t^2 - x^2 = c^2t_0^2 - x_0^2 = S_1$$

$$\left\{ \begin{array}{l} x_2 = \frac{x_1 - v_{12}t_1}{\sqrt{1 - v_{12}^2/c^2}} \\ t_2 = \frac{t_1 - v_{12}x_1/c^2}{\sqrt{1 - v_{12}^2/c^2}} \end{array} \right. \dots \Leftrightarrow \dots \Leftrightarrow c^2t_2^2 - x_2^2 = c^2t_1^2 - x_1^2 = S_2$$

But there's also a relative speed between the frames x,t and x₁,t₁, so:

$$\left\{ \begin{array}{l} x_1 = \frac{x - v_1t}{\sqrt{1 - v_1^2/c^2}} \\ t_1 = \frac{t - v_1x/c^2}{\sqrt{1 - v_1^2/c^2}} \end{array} \right. \dots \Leftrightarrow \dots \Leftrightarrow c^2t_1^2 - x_1^2 = c^2t^2 - x^2 = S_3$$

$$\Leftrightarrow \dots \Leftrightarrow c^2t_0^2 - x_0^2 = c^2t^2 - x^2 = c^2t_1^2 - x_1^2 = c^2t_2^2 - x_2^2 = S_1 = S_2 = S_3 = S \dots \Leftrightarrow$$

$$\Leftrightarrow \dots \Leftrightarrow c^2t_n^2 - x_n^2 = S \dots \text{Universal constant}$$

$$S = \frac{h\alpha^3}{72.\varepsilon_0^3 c^3} = 1.9121 \times 10^{-34} m^2$$

According Einstein relativity S is a variable that can be zero, positive and negative. But we have proved that it is a universal constant.

x and t – Wavelength and period; v – Relative speed; c – Light speed constant; h – Planck constant; α – *Fine..structure..constant*; ε_0 – *Vacuum..permittivity*.

Correction to the paper: magnetic field of a beam of electrons

Dr David Stone has corrected the value of the power of the high voltage transformer to 60 Watt, our value was wrong:

$$v = 5.715 \times 10^7 m/s; \dots d = 0.3m; \dots B = 1.2 \times 10^{-3} T$$

$$I_E = 3mA; \dots Q_e = \frac{I_E d}{v} = 1.575 \times 10^{-11} C = n_e q_e$$

$$n_e = 9.83 \times 10^7$$

$$B = \frac{\mu_0 I_E}{2R} \dots \Leftrightarrow \dots R = 1.571 \times 10^{-6} m$$

$$V_E = \frac{Q_e}{18.\pi.\varepsilon_0 R}$$

$$B = \frac{9\pi.V_E v}{dc^2} = 1.2 \times 10^{-3} T$$

The conclusion is the same, is the movement of the electrons that generate their magnetic fields.