

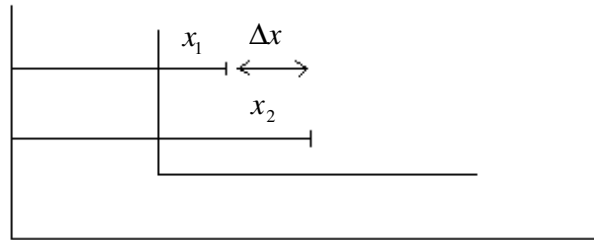
Relative and Absolute Motion

António Saraiva – 2009-09-02
ajps2@hotmail.com

See Unified Absolute Relativity Theory at:

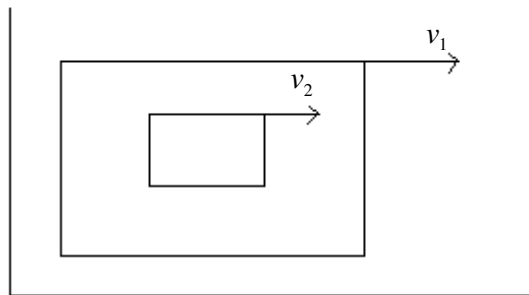
<http://www.wbabin.net/saraiva/saraiva105.pdf>
<http://www.wbabin.net/saraiva/saraiva223.pdf>

Relative and absolute distance (not space):



The distance is relative but a difference in distances is absolute.

Relative and absolute speed:



A speed is relative but a difference in speeds is absolute.

The time is always relative:

$$t = \frac{x}{v}$$

$$\Delta t = \frac{x_2}{v_2} - \frac{x_1}{v_1} = \frac{x_2 v_1 - x_1 v_2}{v_1 v_2}$$

Absolute rotation:

A true frame is a point with no dimensions.

A point can't rotate.

For the existence of rotation two or more frames in the same body is necessary.

Each frame moves relative to other point frames.

The bodies rotate relative to itself, so we have a difference of speeds.

Mach's principle is wrong.

Light speed, permittivity and permeability

Fine structure constant:

$$\alpha^{-1} = \sqrt{137^2 + \pi^2} = 137.03601572$$

Electron mass:

$$m_e = 9.10938188 \times 10^{-31}$$

Electron charge:

$$q_e = 1.602176462 \times 10^{-19}$$

Planck constant:

$$h = 6.62606876 \times 10^{-34}$$

True light speed:

$$c = 2.997924574 \times 10^8 \quad (\pm 1.0)$$

Permittivity:

$$\epsilon_0 = \frac{q_e^4}{m_e^4} \frac{h(\alpha^{-1})^2}{16\pi \cdot c^3} \quad (\text{Modified Planck formula})$$

$$\epsilon_0 = 8.79182786177 \times 10^{-12} m$$

Permeability:

$$\mu_0 = \frac{1}{c^2 \epsilon_0} = 4\pi 1.00709294962 \times 10^{-7} m^{-3} s^2$$

$$\mu_0 = 1.26555032402 \times 10^{-6} m^{-3} s^2$$