

A Fundamental Particle of Relativistic Mass

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In 1905, Einstein postulated that the speed of light is invariant regardless of the velocities of platforms traveling relative to each other [1]. In addition, he stipulated that the laws of physics must hold true in all circumstances. In order for this postulate to be valid, the measurement parameters (time, linear dimension and mass) must warp according to the Lorentz transformations. As luminal speed is approached, a traveling object increases in mass. Einstein's relativistic mass requires an agent of mass transfer.

An elemental particle is hereby proposed to facilitate the increase in mass. The conservation of energy is a fundamental law of physics. Under these conditions the conservation of energy is upheld. Since mass is equivalent to energy and the conservation of energy is to be maintained, mass also must be conserved [2].

For application purposes, fluid mechanics becomes quantum mechanics. The Q-particle is an agent for mass transfer from the surroundings to the particle in flight.

$$E_Q = m_Q c^2 = hf_Q$$

$$m_Q = hf_Q / c^2$$

The interaction of Q particles opens the door for a wide area of relativistic fluid mechanics. For example, the continuity equation can be applied to the Q field so that mass becomes a vortex of Q particles.

References:

[1] A. Einstein, "On the Electrodynamics of Moving Bodies," *Annalen Derphysic*, vol 17, no 5, September 26, 1905, pp 891-921.

[2] A. Einstein, "Does the Inertia of a Body Depend Upon its Energy?" *Annalen Derphysic*, vol 18, no 3, November 21, 1905, pp 639-641.