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THE PARADOXICAL WORLD OF THE THEORY OF RELATIVELY AND REALITY

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It is impossible to get to know reality with the theories of modern physics, because they were built on the basis of paradoxical, therefore incorrect, postulates and hypotheses. According to relativity theory, the kinetic energy of a body moving with velocity close to light is equal to:

$$E_k = \frac{mc^2}{\sqrt{1-V^2/c}} - mc^2 \qquad (1)$$

The last formula applies to particles that are accelerated in accelerators, but it is considered true for other possible cases. Errors have been allowed in the conclusion. So, force from which the electric field in the accelerator operates on a particle is equal to:

$$F = \frac{d}{dt}\left(mV^{/}\right) = \frac{d}{dt}\left(\frac{mV}{\sqrt{1-V^2/c^2}}\right) = \frac{m\dfrac{dV}{dt}}{\left(\sqrt{1-V^2/c^2}\right)^3} \qquad \textbf{(2)}$$

According to this expression, in the process of increasing the particle velocity, the force, which operates on it is continuously increasing and at the approach of particle velocity to that of light, force approaches infinity. However, it contradicts the universally recognized fact of finiteness of extension of interaction velocity. According to this, the force that operates on the particle must approach zero.

In the first parentheses of equation (6) we write mV' instead of mV, and so we have shown that it is not the particle's mass ***m*** that is increasing with the increas of velocity, but the velocity itself is a quantity that depends on the movement effect. As it was shown in work [1]

$$V^{/} = \frac{V}{\sqrt{1-V^2/c^2}}$$

Equation (2) is written towards such view, and describes the dependence of force, which operates on the moving electron in the atom, on its velocity. According to relativity theory, the kinetic energy is [2]:

$$E_k = \int_0^V \frac{mVdV}{\left(\sqrt{1-V^2/c^2}\right)^3} \qquad \textbf{(3)}$$

After integration, we derive formula (1). This formula can be used for the definition of kinetic energy of electrons in

atoms, because the error was allowed in its conclusion. In formula (3) the efficient V is written without taking the movement effect to into consideration. The right expression for the kinetic energy is:

$$E_k = \int_0^V \frac{mV'dV}{\left(\sqrt{1-V^2/c^2}\right)^3} = \int_0^V \frac{mVdV}{\sqrt{1-V^2/c^2}\left(\sqrt{1-V^2/c^2}\right)^3} = \frac{mV^2c^2}{2\left(c^2-V^2\right)} = \frac{mV'^2}{2} \quad \textbf{(4)}$$

Comparing formulas (1) and (4), we confirm the incorrectness of the conclusions which were made on the basis of formula (1). The energy can be converted to mass, and visa versa. Definitions, such as the rest energy and the total energy, the rest mass and the relativistic mass are senseless and do not reflect real facts.

It is possible to bring out the right formula for the kinetic energy of a particle moving in an accelerator. The higher the velocity of the particle, the less force with which the electromagnetic field acts on the particle:

$$F = \frac{d}{dt}\left(mV\sqrt{1-V^2/c^2}\right) = \frac{m\dfrac{dV}{dt}}{\sqrt{1-V^2/c^2}}$$

Taking into account the effect of movement, we'll find an expression for the kinetic energy of a particle in an accelerator:

$$E_k = \int_0^x Fdx = \int_0^V FV'dt = \int_0^V \frac{mV'dV}{\sqrt{1-V^2/c^2}} = \frac{mV\sqrt{1-V^2/c^2}dB}{\sqrt{1-V^2/c^2}} = \frac{mV^2}{2} \quad (5)$$

where x is the length of the path travelled by the accelerated particle. At the approach of the particle velocity to light velocity, the kinetic energy will approach the value, $\boldsymbol{mc^2/2}$. In such a case, both the formula for kinetic energy for electrons which are moving in atoms, and the formula for kinetic energy for the particles which are moving in accelerators, prove that such definitions as rest energy $\boldsymbol{E_0}$ and full energy $\boldsymbol{E}$ do not have physical meaning.

In summary we'll show an example clearly illustrating an important situation existing in the creation of powerful accelerators of charged particles. The accelerator in Serpuhov can accelerate protons to a velocity of 0,99995 C, and an accelerator in Batavia (Illinois, USA) can accelerate protons to a velocity of 0,999998 C [3]. If we use the formulas of relativity, the Serpuhov accelerator gives the protons an energy equal to 76 GeV, and the Batavia accelerator, 500 GeV. As it was shown above, the formulas are incorrect. According to our formula for accelerators (11), protons in the Serpuhov accelerator will create an energy of 469,089 MeV, and in the Batavia accelerator, 469,134 MeV. In such cases, the costs of building and maintenance of the Batavia accelerator is incommensurably more than the Serpuhov accelerator, but the additional energy received by the protons, is only 45 eV.