PRIMITIVITY OF THE EINSTEIN RELATIVITY THEORY

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Annotation

The conclusions of the critical analysis of Einstein's theory of relativity are given. It is noted that the theory of relativity is a primitive theory based on linear equations, wrapped in a beautiful wrapper of philosophical reasoning about the relativity of space-time, the relativity of simultaneity.

In [1], the inconsistency of Einstein's special theory of relativity is shown. It must be considered as an imitation model, which in certain special cases gives correct final solutions, but does not reflect the objective connections of nature. This theory is based on linear, simplified equations of electrodynamics. The world is nonlinear, the attempt to describe the nonlinear world by linear equations leads to a distortion of the real connections of nature.

Let us summarize the critical analysis of the theory of relativity of Einstein and reduce all the remarks together.

1. Refusal of the "luminiferous ether". This is one of the main mistakes of the theory of relativity. Ether exists, but at that time science could not answer the question, what it is itself. As shown in [1], the ether is an electronic medium that fills the entire space in which electrons retain a short-range order. Maxwell built his electrodynamics, widely using the method of electrohydrodynamic analogies. And this analogy is not formal, but inherent in the nature of things. Equations of the dynamics of the vacuum externally coincide with the equations of acoustics for a moving medium. Eliminating the broadcast, Einstein lost a powerful method of cognition.

2. The principle of Einstein's relativity. A generally accepted point of view is that Einstein generalized the principle of the relativity of mechanics to all laws of nature. But, as shown in [1], this is not so. The principle of Einstein's relativity has nothing to do with Galileo's principle of relativity, according to which the rectilinear and uniform motion of the material system as a whole does not affect the course of processes occurring within the system. According to the principle of Einstein's relativity, the laws of nature must be invariant with respect to Lorentz transformations. But for the coincidence of the processes taking place within the system, the initial conditions must also coincide. In Einstein's principle of relativity, the same process is viewed from different frames of reference, which leads to different initial conditions. Consequently, even with the invariance of the laws of nature, in the principle of Einstein's relativity, processes in different inertial frames of reference will proceed in different ways. The principle of Einstein's relativity is a formal mathematical principle. Nobody forbids describing physical processes from different frames of reference, but this is not physics, but exercises in mathematics.

3. The principle of the constancy of the speed of light. As proof of the principle of the constancy of the speed of light, the proponents of the theory of relativity cite the Michelson-Morley experiment to detect the motion of the earth relative to the luminiferous ether. But this is not true. The authors of the experience interpreted it as evidence of the full entrainment of the ether. Indeed,

if you are on a moving forward ship, then any experiments in the ship's cabin to detect its forward motion will give a negative result, as the electronic environment and air are completely carried away by the ship. As in the acoustics of a moving medium, where the velocity of propagation depends on the speed of sound, the velocity of the medium, and on the velocity of the reference frame with respect to the stationary medium, in electrodynamics the propagation velocity will be composed of the speed of light, the speed of the electronic medium, and the speed of the reference frame with respect to motionless environment. This follows from the coincidence of the equations of acoustics of a moving medium and the equations of the dynamics of a vacuum with allowance for nonlinear terms.

The speed of light is not the limiting speed for moving objects, since in the nonlinear equations of the dynamics of vacuum the ratio of the speed of the object to the speed of light does not enter under the square root sign.

4. Lorentz transformations. The Lorentz transformations preserve the linear equations invariant. The world is not linear. An attempt to describe a nonlinear world by linear equations leads to a distortion of the real connections of nature. The Lorentz transformations are of interest from the point of view of mathematics and are formal mathematical transformations.

An attempt to interpret Lorentz transformations as physical leads to distortion of real connections and incorrect conclusions.

5. Space, time. In the theory of relativity, Einstein used Gestalt switching from real physical problems to the problems of space-time, the problem of the relativity of simultaneity, leading the physics into the jungle of demagogic reasoning, which have nothing in common with reality.

It is necessary to understand that Einstein's special theory of relativity is a primitive theory based on linear equations, wrapped in a beautiful wrapper of philosophical reasoning about the relativity of space-time, the relativity of simultaneity.

6. Einstein's formula - the equivalence of mass and energy.

Einstein's formula

$$E = mc^2, \tag{1}$$

where E is the energy, m is the mass, c is the speed of light,

is presented as the top of the theoretical thought of the twentieth century. This formula allegedly lies at the base of modern nuclear power engineering. But is it really so?

Let us show that this formula expresses the elastic properties of the ether-electronic medium. The electronic medium is compressible. The compressibility coefficient β_φ and the elastic modulus G of the electronic medium are defined as

$$\beta_\varphi = \frac{1}{\eta}\frac{d\eta}{d\varphi} = \frac{1}{\eta c^2} = \frac{1}{2{,}42\cdot 10^{16}\cdot(3\cdot 10^8)^2} = 4{,}6\cdot 10^{-34}\ \ \mathrm{m^2/N}, \tag{2}$$

$$G = \frac{1}{\beta_\varphi} = \eta c^2 = 2{,}42\cdot 10^{16}\cdot\left(3\cdot 10^8\right)^2 = 2{,}18\cdot 10^{33}\ \ \mathrm{N/m^2}, \tag{3}$$

where η is the density of the electron and, accordingly, of the electronic medium; φ is the electric potential; c is the speed of light.

Consider the fixed volume of the electronic medium V. The electron medium has a density η and an elastic modulus G. We multiply the volume by the modulus of elasticity. We get

$$E = V\cdot G = V\eta c^2 = mc^2, \tag{4}$$

where $m = V \cdot \eta$ is the mass of an electron medium of volume V.

Formula (4) is the Einstein formula (1). From our consideration it follows that the Einstein formula (1) actually expresses the elastic properties of the electronic medium.

A similar formula can be obtained for air. Let us find the coefficient of compressibility β_p and the modulus of elasticity G of air

$$\beta_p = \frac{1}{\rho}\frac{d\rho}{dp} = \frac{1}{\rho a^2} = \frac{1}{1{,}2 \cdot (343)^2} = 7{,}1 \cdot 10^{-6} \ \ m^2/N, \tag{5}$$

$$G = \frac{1}{\beta_p} = \rho a^2 = 1{,}2 \cdot (343)^2 = 1{,}41 \cdot 10^5 \ \ N/m^2, \tag{6}$$

where ρ, p is the density and air pressure, respectively; a is the speed of sound.

Let us consider a fixed volume of the air medium V. Then for air we obtain

$$E = V \cdot G = V\rho a^2 = ma^2, \tag{7}$$

where $m = V \cdot \rho$ is the mass of air of volume V.

Formula (7), we write it in the form

$$E = ma^2, \tag{8}$$

is similar to Einstein's formula (1). But from the analysis of formula (8) we do not infer that the mass of air is equivalent to energy.

Formulas (1) and (8) use the formal coincidence of the energy dimension ($J = N \cdot m$) and the elastic modulus multiplied by the volume ($\frac{N}{m^2} \cdot m^3 = N \cdot m$).

The Einstein formula (1) underlies the energy calculations of nuclear physics. But the controlled nuclear reactions of the synthesis of light nuclei, which are theoretically more energy efficient, have not been received for today. Although this direction has been developed for more than 60 years. Is there something wrong with the theory?

As shown in the work of Etkin [2], Einstein's postulate on the equivalence of mass and energy contradicts the law of conservation of energy and does not correspond to the essence of the matter.

7. The value of Einstein's theory of relativity. The positive value of the theory of relativity consisted in the appearance in the solutions of the equations of the relativistic factor, which should appear not from Lorentz transformations, but from solutions of nonlinear equations of the dynamics of vacuum [1]. That is, the theory of relativity in some particular cases yielded solutions that coincide with the true solutions of the nonlinear equations of the dynamics of vacuum. But in general, the theory of relativity distorts the real connections of nature, uses simplified linear equations and requires a radical revision.

Literature

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