

PRINCIPAL PROBLEM OF SCIENCE

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Studying Nature, scientists have established speed limits in the material world, equal to the speed of light in vacuum ("The Great Limit"). Subsequent experimental studies have not confirmed this finding, although the search for particles moving with superluminal speed - tachyons ongoing, but so far without success.

Great limit etherodynamics, tachyons, exorbitant rate reinterpretation of events, the positron.

World deepest bowels of matter - a strange and wonderful world, which will operate in science and technology of the new century. And today outlines the contours of some parts of the world. To solve a number of fundamental problems. Mankind and its avant-garde part - scientists have unraveled many of the laws of nature, and it is admirable. They have seen how wise nature that comply with these laws and are reluctant to share them with humanity. This occurs, in part, perhaps, because the man is too loosely drawn from these laws, often causing considerable damage to the nature. You can put any questions to Nature, but not all of them make sense. Thus, eg., Can and should investigate the causes of various phenomena, but try to find out why there is a reason at all - it is useless. Following the dialectical logic, one could argue that as the level of civilization of mankind, their number will increase dramatically, but the problem will not be easy.

Consider one of them in historical terms and in terms of the possible ways to solve it: it is linked with the great beyond - the speed of propagation of electromagnetic interaction (light) in vacuum. The development of electrodynamics shows that the classical principle of relativity in this case is not fulfilled. Maxwell's equations under transformations of Galileo not retain their shape, t. E. The light in a vacuum in different inertial systems should be subject to a different rate. [1]

First, according to calculations tachyons have to spend on the Cherenkov radiation most of its energy already in the first millimeter of the way from the starting point, after which the supply of energy drops to zero, and the speed will increase to very high values. Sign-up flash of Cerenkov radiation on such a small way and in a very short time - the task is technically unsolvable.

Secondly, there are no full confidence that the movement will be accompanied by tachyon Cerenkov radiation. The fact that the rate in the framework of Einstein's picture of the world - is relative. And if even for a single observer in one inertial coordinate system, the particle is superlight, t. E. Tachyon, another observer in a different frame of reference, the same particle can appear as a slower-than- light.

In 2000, prof. Princeton Univ Wang Lijun was passed through a flask with a cesium vapor powerful beam of laser light, which was distributed at a rate 310 times greater than the speed of light in vacuum. Moreover, the fastest photons arrive at your destination before you turn on the light beam. It was later published two more reports that the propagation of light can be slowed and even reversed. However, the details in the description of such experiments are not available, and to make any conclusions premature. If these results are confirmed, it is likely that the experience will not be possible with any physical bodies, and with a laser beam, they have gone because there is no rest mass of photons.

Conclusions

Describe the experience, of course, can not be considered definitive, they require clarifications and reps. I hope for the detection of tachyon flashed, but has not disappeared, but rather strengthened. Whatever it was, but the idea of the great limit is incorrect. The solution, therefore, is not removed from the agenda for scientific research, it only postpone the solution to the future.