

Outline of New Version of Relativity

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Abstract: The changes and constant ideas towards the original Einstein Relativity have been recapitulated. The results of the Swiss-Italian experiments with neutrinos have been explained.

In my previous works I retain all equations of General Relativity and Special Relativity. There is not a distinguished reference system. There is equiponderance of gravitational mass and inertial mass and the mass-energy equiponderance. I enlarge the range of the use of Relativity for the regions of Reality $v > c$. I introduce the additional dimensions $D > 4$ (and $D \geq 8$) and the conception of ether explaining the arising of $v > c$. I prove that the conception of ether does not introduce a distinguished reference system.

An experiment with neutrinos detected not only the velocity $v > c$ but the additional dimensions too. It is necessary to repeat it with the parameters at which $v > c$ and to change them insignificantly. Then one should determine the scope of parameters at which $v > c$.

The discovery by the Swiss and Italians of the fact that neutrinos move with the velocity $v > c$ means the discovery of additional dimensions too. It means next that the discovery of Ashtekar's loops, Duff's membranes and Witten's strings is possible. The second "unsuccessful" experiment (repeated) by the same researchers means practically at least one additional dimension $D > 4$.

In the 8-dimensional space-time we have two time dimensions:

$$t = t_A + it_B$$

and

$$x = x_A + ix_B$$

The following variants of velocity are possible:

$$v = \frac{dx_A}{dt_A}, \quad v = \frac{d(ix_B)}{dt_A}, \quad v = \frac{dx_A}{d(it_B)}, \quad v = \frac{d(it_B)}{d(it_A)}$$

and general: $\frac{dx}{dt} = \frac{d(x_A + ix_B)}{d(t_A + it_B)}$.

The lack of the repeatability could have been caused by the fact that every time another velocity could have been measured.

The regions with real mass and velocity v purely real bigger than c are not accessible.

Special Relativity indicates it practically.

The real mass is only for velocities below c ($v < c$).

The corrections of Einstein's vision of Relativity do not shake the merits of King of physicists. There were at least three changes in General Relativity:

- 1) The singularities in this theory are interpreted now as black holes (S. Chandrasekhar); A. Einstein had thought that it was an artefact of his theory.
- 2) E. Hubble had discovered that all galaxies moved away mutually with the velocity directly proportional to their distance. Einstein treated our Universe as "stable".
- 3) S. Hawking has introduced the conception of the parallel Universes similarly as Giordano Bruno the conception of great number of planetary systems.