

Dr. Temur Z. Kalanov

Letter to all Physicists

June 24, 2002

Dear Professor,

I shall be much obliged if you find the opportunity to express your opinion of my work, "On Logical Errors underlying the Special Theory of Relativity" (APPENDIX I, below). It contains irrefutable (i.e. theoretical and experimental) proof of incorrectness of the generally accepted theory.

On January 8, 2002 I submitted my manuscript, "On Logical Errors underlying the Special Theory of Relativity" (code number LN8083), to the "Physical Review Letters" journal. Unfortunately, the negative responses that I have received from Mr. Jerome Malenfant (Senior Assistant Editor), Mr. Richard Price (Divisional Associate Editor for Relativity) and Mr. Jack Sandweiss (Editor and Chairman of the Divisional Associate Editors) are simply nonscientific excuse: the responses do not contain any essential scientific estimation of my statements.

For example, the Editors could not refute or confirm my key statement. That is the following statement: "(a) the Earth and the Sun are in a relative motion (V is the velocity of the relative motion). This means that the Earth is moving only in the Sun frame, and the Sun is moving only in the Earth frame; (b) the Michelson-Morley interferometer and an observer (doing measurements and calculations) are in the Earth frame. Consequently, the interferometer and the observer are in the resting frame. Because of it, the comparison of experimental and calculated data must be made in the resting frame" (this is a law of logic!). Moreover, the Editors did not understand the essential idea: in the case of resting frame, Michelson-Morley' formulae do not include the velocity V and, therefore, the experimental and calculated data of Michelson-Morley are in complete agreement with each other. On the other hand, such agreement proves that the Earth is a resting frame under the conditions of the Michelson-Morley experiments. This means that the Michelson-Morley experiments refute the special theory of relativity. Thus, there is no scientific proof of incorrectness of my work in Editors' responses, and Editors' level of perception of my original revolutionary work is low (APPEDIX II, III).

That is why I ask you for a discussion of my work. Please, let me hope for a confirmation or a refutation of my key statements.

APENDIX I

On Logical Errors underlying the Special Theory of Relativity
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The kinematic basis of the special theory of relativity is analyzed critically. It is shown that the basis includes the essential logical errors. They are irrefutable proof of incorrectness of the generally accepted theory.

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Science is an inductive way of knowledge of the world. Consequently, a scientific truth (as a system of experimental facts and theories) obeys the principle of dialectical development. The dialectical development (i.e., quantitative and qualitative changes in the direction of ascension from simple forms to complicated ones) of the truth includes the "birth and extermination" of some theories, transformation and unification of others. Selection of theories is made on the base of criteria of validity. According to Einstein, there exist two criteria: the "external justification" criterion (i.e. agreement with experimental data) and the "internal perfection" criterion (i.e. accordance with laws of logic, with sense of harmony and beauty). The theories that do not satisfy these criteria are obviously incorrect. But they are not unavailing ones. Incorrect theories are psychological means of surmounting of borders of human consciousness. In my point of view, one of such incorrect theories of the 20th century is Larmor-Lorentz-Poincare-Einstein's special theory of relativity. Today all physicists know this theory, many analyze critically consequences of it, but only some are aware of instability of the foundation of the theory.

I have analyzed critically [1] the kinematic basis of the special theory of relativity: namely, the interference experiments and the calculations of Michelson-Morley, the contraction hypothesis and the Lorentz transformation formulae. The

results of the analysis are as follows.

- (1) The statement that there exist the contradiction between the experimental and calculated data of Michelson-Morley is the starting-point of Larmor-Lorentz-Poincare-Einstein's special theory of relativity.
- (2) The contradiction between the experimental and calculated data of Michelson-Morley is due to that the fundamental comparison between them was made incorrectly. In fact, the experimental and calculated data belong to the different systems of reference: the experimental data belong to the reference system related immobility with the Earth, and the calculated ones containing the velocity V of the motion of the Earth belong to the reference system related immobility with the Sun. Therefore, the comparison of this data with each other is the first and principal logical error. This error leads inevitably to the contraction hypothesis and its mathematical representation - Lorentz transformation formulae.
- (3) The experimental and calculated data of Michelson-Morley are in complete agreement with each other if they belong to one and the same reference system related immobility with the Earth. From viewpoint of logic, this means that the contraction hypothesis and the Lorentz transformation formulae are not in agreement with Michelson-Morley's experiments and formulae.
- (4) Michelson-Morley's formulae present conditions that an individual light point consists with interferometer's mirror at the certain moment of time. Therefore, the spacial coordinates of the point of coincidence and the time of coincidence are constant in those formulae.
- (5) The second logical error is that the spacial coordinates of the point of coincidence and the time of coincidence are variables in the Lorentz transformation formulae. From viewpoint of the Michelson-Morley experiments this error means that the individual light point consisting with the mirror at the unique moment of time will also consist with it at any following moment of time. Consequently, a relation between the spacial coordinates and the time is appeared. But the existence of the relation is in conflict with the principle of constancy of light velocity because a mirror can be always considered as a light source or receiver. (6) The third logical error is that the Lorentz transformation formulae include the contraction factor. The contraction factor transmutes mutually independent motions - the motion of the mirror (i.e., of the light source or receiver) relative to the Sun and the motion of the light - into dependent motions. Just because of it, the dependence of the velocity V of the mirror upon the velocity c of the light is appeared and have the form $V/c < 1$. Moreover, the spacial and time intervals become dependent on V . Consequently, the contraction factor is in conflict with the principle of constancy of light velocity.
- (7) The principle of constancy of light velocity is valid in any arbitrary system of reference. Actually, if the velocity of light in vacuo is independent of the velocity of light source or receiver, then it is also independent of change of velocity of light source or receiver.
- (8) The constancy of light velocity is explained by the fact that the light is not a material point of classical mechanics but a multitude of quantum particles - photons. The motion of any quantum particle (in particular, photon) relative to a reference system is the absolute motion. The absolute motion is invariant under choosing of a reference system (this means that the velocity addition theorem is not valid).

From the above, it follows that: (a) the special theory of relativity is absolutely incorrect; (b) the principle of constancy of light velocity is a reference point of a new quantum theory.

[1] T.Z. Kalanov, Bull. Am. Phys. Soc. 46, 99 (2001).

APPENDIX II

Letter to Editor-in-Chief LN8083 Kalanov
Dear Prof. George Trilling, President of APS,
Dear Prof. Martin Blume, Editor-in-Chief of the "Phys. Rev. Lett."

I did not find satisfaction in Mr. Richard Price's response to my manuscript, "On Logical Errors underlying the Special Theory of Relativity" (code number LN 8083).

The essence of my manuscript is in the principal statement:

"(2) The contradiction between the experimental and calculated data of Michelson-Morley is due to that the fundamental comparison between them was made incorrectly. In fact, the experimental and calculated data belong to the different systems of reference: the experimental data belong to the reference system related immobility with the

Earth, and the calculated ones containing the velocity V of the motion of the Earth belong to the reference system related immobility with the Sun. Therefore, the comparison of this data with each other is the first and principal logical error. This error lead inevitably to the contraction hypothesis and its mathematical representation - Lorentz transformation formulae". Obviously, a scientific estimation this simple statement must consist of only one word: "Yes" or "No". Mr. Richard Price could not do it. Instead of it, he imputed to me incorrect statement which was not in the manuscript. Let me quote his words: "You seem to claim that the analysis of the Michelson-Morley experiment should be done in the comoving earth frame". In contrast to him, I state the following:

a) the Earth and the Sun are in a relative motion (V is the velocity of the relative motion). This means that the Earth is moving only in the Sun frame, and the Sun is moving only in the Earth frame.

(b) the Michelson-Morley interferometer and an observer (doing measurements and calculations) are in the Earth frame.

Consequently, the interferometer and the observer are in the resting frame. Because of it, the comparison of experimental and calculated data must be made in the resting frame. This is a law of logic! Unfortunately, Mr. Richard Price did not understand it, therefore, he talked nonsense.

This is why I kindly ask you to send my manuscript to any student or the reviewers that are not afraid to think independently (there are only psychological difficulties in knowledge of the World!).

APPENDIX III

Letter to Editor-in-Chief LN8083 Kalanov

Dear Prof. George Trilling, President of APS,

Dear Prof. Martin Blume, Editor-in-Chief of the "Phys. Rev. Lett.",

I did not find satisfaction in Mr. Jack Sandweiss, Editor and Chairman of the Divisional Associate Editors' response (26 March 2002) to my manuscript, "On Logical Errors underlying the Special Theory of Relativity" (code number LN 8083).

The essence of my manuscript is in the principal statement:

"(2) The contradiction between the experimental and calculated data of Michelson-Morley is due to that the fundamental comparison between them was made incorrectly. In fact, the experimental and calculated data belong to the different systems of reference: the experimental data belong to the reference system related immobility with the Earth, and the calculated ones containing the velocity V of the motion of the Earth belong to the reference system related immobility with the Sun. Therefore, the comparison of this data with each other is the first and principal logical error. This error lead inevitably to the contraction hypothesis and its mathematical representation - Lorentz transformation formulae".

Obviously, a scientific estimation this simple statement must consist of only one word: "Yes" or "No". Mr. Jack Sandweiss could not do it. Instead of it, he have written about other things which was not in the manuscript. I repeat once more:

(a) the Earth and the Sun are in a relative motion (V is the velocity of the relative motion). This means that the Earth is moving only in the Sun frame, and the Sun is moving only in the Earth frame;

(b) the Michelson-Morley interferometer and an observer (doing measurements and calculations) are in the Earth frame.

Consequently, the interferometer and the observer are in the resting frame. Because of it, the comparison of experimental and calculated data must be made in the resting frame. This is a law of logic! Unfortunately, Mr. Jack Sandweiss did not understand it.

This is why I kindly ask you to send my manuscript to any student or the reviewers that are not afraid to think independently (to my regret, Mr. Jack Sandweiss cannot think independently).

Thanking you in anticipation, with high respect for you,
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