

Solution to the New Paradox of Special Relativity

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(Dated: 8.Nov.2019)

Abstract

Albert Einstein said against Quantum Physics: “God does not play dice”. Einstein has never accepted the Quantum Physics. So, there can be contradiction between the Theory of Relativity and Quantum Physics. That mean, that one or more of these two theories are incomplete. Just like the Gödel incompleteness theorem says, that formal arithmetic is incomplete.

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I. I AM NOT STUPID

Reason of rejection from the official archive preprints.org is - “the world has sinned by murdering Godman, and does not like to find the truth; for Truth is God.”

Science is falsifiable, tells well accepted Popper’s criterion of Science. So, it is not surprising then, that Science can be false. I know, that I know nothing, says the Greek philosopher.

Science is defined as the quest for knowledge. The journals of Scientific Community are not only a way to grants, Nobel prize, and glory, but rather the enterprise for making the Truth from incoming information. However, the human factor rejects both effectively the revolutionary true papers, and absurd ones: the genius often looks like crazy one; recall the photo with the tongue of Albert Einstein and rejection of the million USD by Dr. Grigori Perelman. Somebody smart-looking filmed a complaint: “Nature is a pseudo elitist joke” YouTube. That is why the following text found no place in serious journals, so the reader could decide for himself is author a genius like TV Doctor Who or a “crazy scientist” like Nicola Tesla. Why am I in light, but many people are in delusion? I just follow the guiding star: “Guiding Star - Original Song” YouTube.

II. THE PARADOX

The parameter of worldline of ship is his proper time τ . Motion with high velocity means, that τ practically unchanged during large traveled distances. So, the proper time of meeting with asteroid tends to zero. Thus, the velocity of meeting with asteroid tends to infinity, because the proper size of the ship L does not contract.

III. MOREOVER

Einstein tells us often, that a spaceship, which starts from Earth space journey and returns back to Earth spends by own clock τ , but at Earth would pass time T_0 by the formula:

$$\tau = T \sqrt{1 - v^2/c^2} + \psi,$$

where v is spaceship velocity and ψ is influence of accelerations. Is assumed, that the acceleration can be arbitrary high, and so, the ship practically travels all the time at constant

speed v . Here is $T_0 = T + T_s$, $T = S/v$, where S is the part of the traveled distance with constant speed, the T_s is time on Earth for distance s , which is traveled with acceleration.

Then let this spaceship fly by an asteroid, then the meeting with the asteroid lasts

$$t = \frac{L}{v},$$

where L is spaceship proper-length, latter one the astronaut inside the ship measures. The asteroid size is not a factor. The asteroid can be replaced by a dust particle or an electron, which floats in space. Being inside the spaceship, the astronaut does not notice the Lorentz contraction of the spaceship cabin. But the asteroid being like a mathematical point, moves along the wall of cabin with the velocity v , because the spaceship flies at this velocity, but the asteroid has zero velocity. Yes, we have two coordinates: co-moving with the ship ones and the coordinates connected with Earth. In latter, the ship flies with v , and the asteroid has zero velocity. The Lorentz transformation can show, that in the ship co-moving coordinates, the velocity of the ship is zero, but the asteroid has exact v .

Here comes the problem: for large velocity the meeting with this asteroid can last longer, than entire journey: $t > \tau$; latter in the limit $v \rightarrow c$ is $L/c = t > \tau = \psi$.

What if there N asteroids to be met? Then the time spent at asteroids, if their amount is maximum high, but the ship meets only one asteroid at a time is

$$A := t_1 + t_2 + \dots + t_N = N \frac{L}{v} = \frac{S L}{L v \sqrt{1 - v^2/c^2}},$$

where the Lorentz contraction used. The $A + \psi = \tau$, which gives $\frac{S}{v \sqrt{1 - v^2/c^2}} + \psi = (S/v), \sqrt{1 - v^2/c^2} + \psi$ which is only possible for $v = 0$. We came to cotradiction with motion $v \neq 0$.

IV. UP TO THE PLUTO, PASSING NEPTUN

Imagine spaceship with proper length, which astronaut measures is 1000 meters. The super-powerful engine, which uses Dak Matter like substance - Virtual Matter, accelerates the ship at almost speed of light without hurting the astronaut: 99.999 percent of it. According to Earth observation, the meeting of the ship with Neptun lasts 0.0000001 seconds, so after passing it and turn back to Earth at Pluto, the ship has no contact with Neptun even

in his own co-moving coordinate system. How it is possible (to loose contact with Neptun), if the speed of the ship is almost c , so the Lorenz contracted size of the solar system is just 2 meters, compared to 1000 meters of the ship size? No, there is no problem if to consider this situation in Lorentz transformations. However, if to consider the departure from Earth and return back to Earth of spaceship, there is problem.

V. SOLUTION TO THE PROBLEM

The use of Virtual Terms as mathematical modifications of the equations (which have no axiomatic reason to be inserted: they are inserated “by hand”), one example of it is Dark Matter and Dark Energy. Latter are Virtual Matter, latter is a Virtual Term.