

Solution to the New Paradox of Special Relativity

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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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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 by the formula:

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

where v is spaceship velocity. Is assumed, that the acceleration can be arbitrary high, and so, the ship practically travels all the time at constant speed v . Then $\tau < T$. Here is $T = S/v$, where S is the travelled distance.

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. Here comes the problem: for large velocity the meeting with this asteroid lasts longer, than entire journey: $t > \tau$; in the limit $v \rightarrow c$ it comes to $L/c = t > \tau = 0$.

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

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

where the Lorentz contraction used. Thus, $A > T > \tau$. But because must be $A = \tau$, then $v = 0$. We came to cotradiction.

I. 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.