Very simple proof that theory of special relativity is false

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Abstract

This article contains proof that theory of special relativity is false. To attract attention to this proof I also published on vixra.org my mathematical work under title: “Methods of finding infinitely many integer solutions of wide class of Diophantine equations”.

Finally I can present part of my work. Thanks for reading.

Please, give me an endorsement on arxiv (on physics, math), If you can. My username on arxiv: Zbigniew_Plotnicki

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Some paragraphs are in two languages: English//Polish

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Suppose we have three inertial frames of reference S, S', S'' where frame S is standing in place, frame S' has speed v and frame S'' has speed $-v$.

So we have a second reference frame S', whose spatial axes and clock exactly coincide with that of S at time zero, but it is moving at a constant velocity v with respect to S along the x-axis.

And we have a third reference frame S'', whose spatial axes and clock exactly coincide with that of S and S' at time zero, but it is moving at a constant velocity $-v$ with respect to S along the x-axis.

So of course frame S' is moving at a constant velocity $v_2 = \frac{v+v}{1+\frac{v*v}{c^2}}$ with respect to S'' along the x-axis.

So there is sufficed condition that origins of these frames $O = (x, y, z, t)$, $O' = (x', y', z', t')$, $O'' = (x'', y'', z'', t'')$ are coincident in time and space at the begining: $x = x' = x'' = y = y' = y'' = z = z' = z'' = t = t' = t'' = 0$.

So for two events $A = (x_1, t_1), B = (x_2, t_2)$ given in frame S we have:

$$transformation\ of\ these\ events\ beetween\ S\ and\ S': \begin{cases} x_1' = \gamma(x_1 - vt_1), x_2' = \gamma(x_2 - vt_2) \\ t_1' = \gamma\left(t_1 - \frac{vx_1}{c^2}\right), t_2' = \gamma\left(t_2 - \frac{vx_2}{c^2}\right) \end{cases}$$

$$transformation\ of\ these\ events\ beetween\ S\ and\ S'': \begin{cases} x_1'' = \gamma(x_1 + vt_1), x_2'' = \gamma(x_2 + vt_2) \\ t_1'' = \gamma\left(t_1 + \frac{vx_1}{c^2}\right), t_2'' = \gamma\left(t_2 + \frac{vx_2}{c^2}\right) \end{cases}$$

$$transformation\ of\ these\ events\ beetween\ S''\ and\ S': \begin{cases} x_1' = \gamma_2(x_1'' - v_2 t_1''), x_2' = \gamma_2(x_2'' - v_2 t_2'') \\ t_1' = \gamma_2\left(t_1'' - \frac{v_2 x_1''}{c^2}\right), t_2' = \gamma_2\left(t_2'' - \frac{v_2 x_2''}{c^2}\right) \end{cases}$$

where

$$\gamma = \frac{1}{\sqrt{1 - \left(\frac{v}{c}\right)^2}}, v_2 = \frac{2v}{1 + \frac{v^2}{c^2}}, \gamma_2 = \frac{1}{\sqrt{1 - \left(\frac{v_2}{c}\right)^2}}$$

Let's choose any two co-local events in frame S, for example: $A = (0, t_1), B = (0, t_2)$ where $t_1 < t_2$.

Then we have:

$$x_1' = -\gamma v t_1, x_2' = -\gamma v t_2$$

$$t_1' = \gamma t_1, t_2' = \gamma t_2$$

$$x_1'' = \gamma v t_1, x_2'' = \gamma v t_2$$

$$t_1'' = \gamma t_1, t_2'' = \gamma t_2$$

As you can see there is a symmetry, so:

$$\Delta x' = x_2' - x_1' = \gamma v(t_1 - t_2) = -\Delta x'' = -(x_2'' - x_1'') = -\gamma v(t_2 - t_1)$$

What is more there is the same time interval in S' and S''.

$$\Delta t' = t_2' - t_1' = \Delta t'' = t_2'' - t_1'' = \gamma(t_2 - t_1)$$

So from Lorentz tranformation beetween frame S' and S'' we have:

$$\Delta x' = \gamma_2(\Delta x'' - v_2 \Delta t''), \Delta x'' = \gamma_2(\Delta x' + v_2 \Delta t')$$

$$-\Delta x'' = \gamma_2(\Delta x'' - v_2 \Delta t'')$$

$$\Delta x'' = \frac{\gamma_2 v_2 \Delta t''}{\gamma_2 + 1}$$

$$v_2 = \frac{\Delta x''}{\Delta t''}\left(1 + \frac{1}{\gamma_2}\right)$$

$$\frac{2v}{1 + \frac{v^2}{c^2}} = v\left(1 + \frac{1}{\gamma_2}\right)$$

$$\frac{2}{1 + \frac{v^2}{c^2}} = 1 + \frac{1}{\sqrt{1 - \left(\frac{\left(\frac{2v}{1 + \frac{v^2}{c^2}}\right)^2}{c^2}\right)}}$$

$$\frac{1 + \left(\frac{v}{c}\right)^2}{1 - \left(\frac{v}{c}\right)^2} = \sqrt{1 - \left(\frac{\left(\frac{2v}{1 + \frac{v^2}{c^2}}\right)^2}{c^2}\right)}$$

$$\left(\frac{1 + \left(\frac{v}{c}\right)^2}{1 - \left(\frac{v}{c}\right)^2}\right)^2 + \left(\frac{\left(\frac{2v}{1 + \frac{v^2}{c^2}}\right)^2}{c^2}\right) = 1$$

where:

$$\left(\frac{1+\left(\frac{v}{c}\right)^2}{1-\left(\frac{v}{c}\right)^2}\right)^2 \geq 1 \; and \; \left(\frac{\left(\frac{2v}{1+\frac{v^2}{c^2}}\right)^2}{c^2}\right) \geq 0$$

So:

$$\boldsymbol{v = 0}$$

So this is a proof that Lorentz transformation is not objective, because it depends on the frame of reference selected as a subjective perspective (as there is no preferred frame that could give objective measure).

So this is a proof that only Galilean transformation is correct (under condition that Lorentz tranformation is the only possible specetime transformation that makes some speed constant):

$$\boldsymbol{x' = x - vt}$$

QED.

The same we can get when we choose any two co-local points $A = (x_1, t_1), B = (x_1, t_2)$ in frame S, where $t_1 < t_2$:

$$\Delta x' = x'_2 - x'_1 = \gamma v(t_1 - t_2) = -\Delta x'' = -\gamma v(t_2 - t_1)$$

$$\Delta t' = t'_2 - t'_1 = \Delta t'' = t''_2 - t''_1 = \gamma(t_2 - t_1)$$

Summary

So this is a proof that the speed of any object may not be constant regardless of the frame of reference, and that there is no speed limit, that is, that the speed limit is a plus infinite, for which formulas transform in the Galilean transformation.

// To jest to dowód, że prędkość jakiegokolwiek obiektu nie może być stała bez względu na układ odniesienia oraz, że nie istnieje prędkość graniczna, czyli, że prędkość graniczna jest plus nieskończona, dla której wzory przekształcają się w transformację Galileusza.

The same thing has happened with the similarly calculated length contraction and mass in special relativity.

// Identycznie rzecz ma się z analogicznie obliczaną kontrakcją przestrzeni i masą relatywistyczną.

$$S' = \frac{S}{\gamma}$$

$$m' = m\gamma$$

So Lorentz among other things made a mistake, assuming that the speed of light is constant, while Einstein was suggested by the incorrect transformation.

// Tak więc Lorentz popełnił błąd, zakładając, że prędkość światła nie zależy od układu odniesienia, natomiast Einstein zasugerował się tym błędnym przekształceniem.

Of course, theory of relativity is based on the Lorentz transformation, so in this way the theory of relativity has been disproved.

// Oczywiście teoria względności oparta jest na transformacji Lorentza, zatem w ten oto sposób teoria względności została obalona.

So equation:

// Tak więc równanie:

$$E_k = m'c^2 - mc^2 = mc^2(\gamma - 1) = 0$$

So Einstein's $E = 0$.

// Więc Einstainowskie $E = 0$

Einstein postulates

So Einstein postulates are wrong. The only possible consistent (non-contradicted) postulates for special relativity are like this:

A' = “for every frame speed of light can subjectively be not dependend on the frame of reference” (that is the place where Lorentz transformation is making constant speed of light from any other speed of light in any frame of reference by treating the time like a gum – that’s exactly what is happening)

X = ”there is no preferred frame of reference” (so every measure depends on subjective frame of reference, but now we are happy with subjectively constant speed of light, because that does not matter that all measurement is subjective)

New postulates about every movement.

1. First of all, for every movement there is always mass field related “main frame” of reference – real background of movement that is the resultant in given point of gravitational interactions of all masses. It is possible that there exist absolute frame (exactly one), that mean that every point of this field has absolute zero speed, but every other “main frame” is not absolute. So every point of space has its own “main frame”, and points that are close to each other have a slightly different “main frame”, because have slightly different position in relation to the all masses. And that is why rays of light around great masses are curved and why speed of light is almost constant in any direction on the surface of a great mass as planet Earth. It is because gravity of Earth is dominant near to its surface.
2. Second: speed of light depends on the frame of reference and is constant in all directions only in this “main frame”, since the “main frame” gravitational field keeps the waves of light, because if mass rotates, for example mass of galaxy, then its “main frame” also rotates, because everything in reach of this mass is “kept” by this mass.
3. Speed of any object depends on the frame of reference.

// Tak więc obydwa postulaty szczególnej teorii względności są błędne.

1. Po pierwsze istnieje zawsze wyróżniony układ związany z polem masy, który jest wypadkową w danym punkcie oddziaływań wszystkich mas. Możliwe, że istnieje absolutny układ odniesienia (dokładnie jeden), ale każdy inny wyróżniony układ odniesienia nie jest absolutny. Tak więc każdy punkt ma swój wyróżniony układ, i wszystkie bliskie sobie punkty mają trochę inny wyróżniony układ odniesienia, ponieważ mają trochę inną pozycję względem wszystkich mas. I oto dlaczego promienie światła są zakrzywione wokół wielkich mas, i dlaczego prędkość światła jest prawie stała w każdym kierunku na powierzchni wielkiej masy takiej jak planeta Ziemia. Jest tak dlatego, że grawitacja Ziemii jest dominująca blisko jej powierzchni.
2. Po drugie prędkość światła zależy od układu odniesienia i w wyróżnionym układzie jest stała we wszystkich kierunkach, gdyż w nim pole masy utrzymuje fale światła, ponieważ jeśli na przykład masa galaktyki rotuje wtedy wyróżniony układ także rotuje, ponieważ wszystko w zasięgu tej masy jest „trzymane” przez masę.
3. Prędkość dowolnego obiektu zawsze zależy od układu odniesienia.

Gravity is the result of accumulation of an ordinary influence of atomic interactions in a larger distance. Therefore, the more atoms the greater gravity. A similar accumulation on larger gravitational distances can make the galaxies be more attracted than it was due to the sum of their masses, and that is the fifth interaction (super-gravity). There is probably infinitely many degrees of such impact, if there is infinitely many degrees of clusters (body, galaxy, galaxies cluster, etc.). And successive derivations of mass interactions holds the light in their field.

// Grawitacja jest rezultatem nawarstwienia zwykłego oddziaływania atomowego na większej odległości. Dlatego im więcej atomów tym większa grawitacja. Podobne nawarstwienie oddziaływania grawitacyjnego na większych odległościach może sprawiać, że galaktyki przyciągają się bardziej niż by to wynikało z sumy ich mas – jest to piąte oddziaływanie (supergrawitacja). Prawdopodobnie jest nieskończenie dużo stopni takiego oddziaływania, jeśli jest nieskończenie dużo

stopni gromad (ciało, galaktyka, gromada, itd.). I to właśnie kolejne pochodne oddziaływania mas trzymają światło w swoim polu.

Optical relativity

So the only relativity in movement that we have is optical relativity:

$O = (o_x, o_y, o_z)$ is an observer point,

$P_1 = (x_1, y_1, z_1)$ is a begining of movement as it is seen,

$P_2 = (x_2, y_2, z_2) = (x_1 + tv_x, y_1 + tv_y, z_1 + tv_z)$ is and end of movement as it is seen,

$v' = (v_x', v_y', v_z')$ is vector of real velocity of movement,

Relativistic (as it is seen) time (where t' is real time):

$$\boldsymbol{t = t' + \frac{OP_2}{c} - \frac{OP_1}{c}}$$

Real coordinates of object:

$$\boldsymbol{x_1' = x_1 - v_x' \frac{OP_1}{c}}$$

$$\boldsymbol{x_2' = x_2 - v_x' \frac{OP_2}{c}}$$

Velocity of movement:

$$v' = \frac{P_2' - P_1'}{t'} = \frac{P_2 - P_1 - \frac{v'}{c}(OP_2 - OP_1)}{t - \left(\frac{OP_2}{c} - \frac{OP_1}{c}\right)} = \frac{c(P_2 - P_1) - v'(OP_2 - OP_1)}{c} * \frac{c}{tc - (OP_2 - OP_1)}$$

$$= \frac{\left(c(P_2 - P_1) - v'(OP_2 - OP_1)\right)}{tc - (OP_2 - OP_1)}$$

$$v' = \frac{c(P_2 - P_1) - v'(OP_2 - OP_1)}{tc - (OP_2 - OP_1)}$$

$$\boldsymbol{v' = \frac{c(P_2 - P_1)}{tc} = \frac{P_2 - P_1}{t} = v}$$

$$\frac{t'}{t} = \frac{P_2' - P_1'}{P_2 - P_1} = \frac{c(P_2 - P_1) - v'(OP_2 - OP_1)}{c} * \frac{1}{P_2 - P_1} = 1 - \frac{v}{c}\frac{OP_2 - OP_1}{P_2 - P_1}$$

So we have:

$$\boldsymbol{v' = v}$$

$$\boldsymbol{P_1' = P_1 - \frac{v}{c} OP_1}$$

$$\boldsymbol{P_2' = P_2 - \frac{v}{c} OP_2}$$

$$\boldsymbol{t = t' + \frac{OP_2}{c} - \frac{OP_1}{c}}$$