

# ALBERT EINSTEIN RECOGNIZED THAT THERE ARE SPEEDS IN NATURE GREATER THAN THE SPEED OF LIGHT IN A VACUUM, AND USED IT IN HIS IMAGINARY EXPERIMENT

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Article history:	Abstract:
<b>Received:</b> 11 <sup>th</sup> July 2022	This article shows that in Albert Einstein's proof of the relativity of lengths in the special theory of relativity, the existence of velocities greater than the speed of light in a vacuum is confirmed. It has been shown to lead to illogicality if the proof is done within the postulata.
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## INTRODUCTION

When we look at the development of human science, we see many selfless geniuses of their time, scientists. The contribution of their selfless services to science cannot be compared with anything else. Including the great physicist Albert Einstein, he became one of the greatest scientists of the 20th century. His extraordinary thinking was formed on the basis of the information that came to him, and he developed a special theory of relativity about the structure of the universe. This theory made a radical turn in science, a revolution, so to speak. He went down in history as a scientist who was able to bring the views of classical mechanics to a completely new perspective. Thanks to his selfless and prolific creativity, humanity has become the reason for today's advanced scientific achievements. The scientist's services to science will always be recognized by humanity.

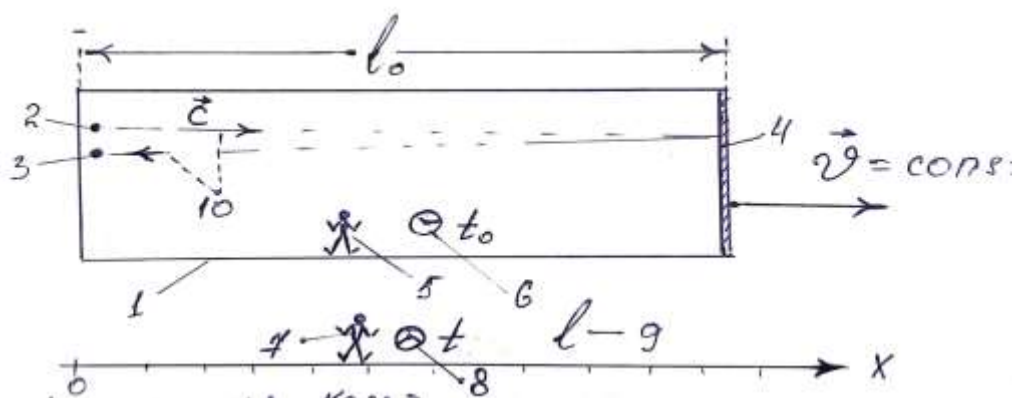
But science cannot stand still. If it is permissible to continue the work of the scientists who passed before us, it is up to the scientists of today to continue the relay. If some shortcomings are identified in the work of previous scholars and corrections are made, this work will not reproach them at all.

Now Kamina is working as an independent physics researcher at M.N.N. allow me to describe some of the differences and contradictions that I encountered in It is not surprising that finding the solution to these problems will lead to further development of science.

## MAIN PART

Let's get acquainted with Albert Einstein's fantastic description of the relativity of distances in the Special Theory of Relativity.

Let's imagine a spacecraft moving along the x axis with speed  $\theta$ . We assume that this spacecraft has a sufficiently long  $l_0$ -eigenlength. Figure 1



In this case, 1- spaceship, 2- flash light source, 3- light-receiving sensor, 4- flat mirror reflecting light, 5- experimenter inside the spaceship, 6- on the clock of the spaceship showing the private time  $t_0$ , 7- on the x-axis ( the observer on the ground, 8- the time of the observer (on the ground) connected to the x axis  $t$ , 9- the length of the spacecraft in the eyes of the observer connected to the x axis (on the ground), 10- the light of the test experiment,  $c$ - the speed of light in a vacuum,  $\theta$ - relative to the x axis of the spacecraft velocity, known by the experimenter inside the

spacecraft as an inertial reference frame integrated with the spacecraft. At the start of the experiment, 2 flashes of light from the light source, moving towards the bow of the ship, hitting 4 flat mirrors, breaking and returning. The returned light should be recorded by the 3rd beam receiving sensor in the stern part of the ship. During the transition period of the experiment, 5 observers do not notice the ship moving with speed  $\theta = \text{const}$ . For this reason, light source-2, flat mirror-4, sensor-3 inside the ship are considered to be stationary relative to the observer. Observer 5 with his private watch 6 should measure the time of the test beam 10 flying from the stern of the ship, returning from the mirror 4, and hitting the dacha 3. We can calculate the duration of the test beam's movement time,  $t_0$ - specific time in hours, as follows. Since this experiment was carried out in an inertial reference frame, the light travels at the same speed across the ship to a mirror mounted on the bow of the ship. Just like in peace.

$$t_0 = \frac{2l_0}{c}$$

But if the same experiment is viewed from the point of view of observer 7, who is connected to the x-axis on the ground, this observer observes the length of the ship as  $l$ . But we cannot say that  $\lambda = \lambda_0$  yet, since we are building our concepts anew, departing from the laws of the classical theory. Therefore, for the 7th observer, we take the length of the spaceship as  $\lambda$ . According to the results of MNN, the test light-10 moves with speed  $s$  relative to the x-axis. In the eyes of 7 observers, test light 10 from source 2 must move from the stern of ship 1 to the bow of ship and reach mirror 4, and must travel the distance  $l$  in time  $t_1$ . But when the test beam has traveled the distance  $l$  in the time  $t_1$ , mirror 4 moves with the ship 1 at a speed  $\theta = \text{const}$  and moves a certain distance from its original position to avoid the test beam 10, which means that the beam had to travel a distance greater than  $l_0$ . For this situation, we can write the time taken by the test light to reach the 4th mirror as follows. To do this, the length of the ship and the forward displacement of the ship must be covered.

$$t_1 = \frac{l + \theta t_1}{c}$$

In this case,  $t_1$  is the time spent until the 1st light leaves the 2nd source and reaches the 4th mirror. The travel time  $t_1$  is counted until the 10 test beams leave the 2nd source and reach the 4th mirror. The time spent hitting the 4th mirror and returning to the 3rd cell can be written as follows:

$$t_2 = \frac{l - \theta t_2}{c}$$

In this case, the test beam 10 leaves the 4th mirror at the end of the ship and moves towards the stern of the ship within the time  $t_2$ , with the 3-seater ship, moving against the test beam with a speed  $\theta = \text{const}$ , causing it to move a certain distance, so the test beam 10 is less than the length  $l$  travels a distance of  $l - \theta t_2$ . If we divide this distance by the speed of light in a vacuum  $s$ , we find the time  $t_2$  for the test light to return from the 4th mirror to the 3rd plate. In this case, to find the travel times of the 10th test beam from 3 to 4 for the 7th observer on the ground, we find their sum  $t_1 + t_2$ . Let's first define  $t_1$ .

$$t_1 = \frac{l + \theta t_1}{c} \Rightarrow ct_1 = l + \theta t_1 \Rightarrow ct_1 - \theta t_1 = l \Rightarrow t_1(c - \theta) = l$$

$$t_1 = \frac{l}{c - \theta}$$

From our second equation, we can determine  $t_2$ :

$$t_2 = \frac{l - \theta t_2}{c} \Rightarrow ct_2 = l - \theta t_2 \Rightarrow ct_2 + \theta t_2 = l \Rightarrow t_2(c + \theta) = l$$

$$t_2 = \frac{l}{c + \theta}$$

If we determine  $t$  for 7 observers by his clock.

$$t = t_1 + t_2 = \frac{l}{c - \theta} + \frac{l}{c + \theta} = \frac{l(c + \theta) + l(c - \theta)}{c^2 - \theta^2} = \frac{cl + \theta l + cl - \theta l}{c^2 - \theta^2} = \frac{2cl}{c^2 - \theta^2}$$

In order to connect the obtained results, we need to make a similar image for  $t_0$  and  $t$ . For this, if we divide the numerator and denominator of  $t$  by  $s^2$ :

$$t = \frac{\frac{2cl}{c^2}}{\frac{c^2 - \theta^2}{c^2}} = \frac{2l}{c} \cdot \frac{1}{1 - \frac{\theta^2}{c^2}} = \frac{2l}{c \left(1 - \frac{\theta^2}{c^2}\right)}$$

If we determine  $2/s$  for the 6th hour of 5 observers, we can connect  $t$ ,  $t_0$ ,  $l_0$  and  $l$  by replacing the above equation with  $2/s$ . In this:

$$t_0 = \frac{2l_0}{c} \Rightarrow \frac{2}{c} = \frac{t_0}{l_0}$$

It came out. it became possible to put  $t_0/l_0$  instead of  $2/s$  in the equation  $t$ .

$$t = \frac{2l}{c \left(1 - \frac{\theta^2}{c^2}\right)} = \frac{t_0}{l_0} \cdot \frac{l}{1 - \frac{\theta^2}{c^2}} \Rightarrow \frac{t_0}{l_0} = \frac{t}{l} \cdot \left(1 - \frac{\theta^2}{c^2}\right)$$

The formula appeared. In this formula, two inertial counting systems  $t_0$ ,  $t$ ,  $l_0$ ,  $l$ ,  $s$  and  $\theta$  are involved in the relationship of interconnection. From this we get the following relationship:

$$\frac{t_0}{t} = \frac{l_0}{l} \cdot \left(1 - \frac{\theta^2}{c^2}\right)$$

It can be seen from this formula that when  $t_0 = t$ , it gives the conclusion that  $l_0 \neq l$ . On the contrary, if  $\lambda_0 = \lambda$ , we would have the idea that  $t_0 \neq t$ .

But according to MNN, the connection of  $t_0$  and  $t$  can be obtained by using the formula given in the topic of time relativity:

$$t = \frac{t_0}{\sqrt{1 - \frac{\theta^2}{c^2}}} \Rightarrow \frac{t_0}{t} = \sqrt{1 - \frac{\theta^2}{c^2}}$$

It can be shown that From there we go to the following view:

$$\frac{t_0}{t} = \frac{l_0}{l} \cdot \left(1 - \frac{\theta^2}{c^2}\right) \Rightarrow \sqrt{1 - \frac{\theta^2}{c^2}} = \frac{l_0}{l} \cdot \left(1 - \frac{\theta^2}{c^2}\right)$$

We have obtained the following equation.

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

we use the fact that it is possible to write in the form

$$\sqrt{1 - \frac{\theta^2}{c^2}} = \frac{l_0}{l} \cdot \left(\sqrt{1 - \frac{\theta^2}{c^2}}\right)^2 \Rightarrow l = l_0 \cdot \sqrt{1 - \frac{\theta^2}{c^2}}$$

The above equation is derived. That is, for an observer on the ground connected to the x-axis, spaceship 1 is shortened compared to the actual length  $l_0$ . As the speed of the ship  $\theta \rightarrow s$  approaches the speed of light in a vacuum, the length of the ship compared to the ground observation  $l \rightarrow 0$  decreases and approaches zero. As the speed of the ship  $\theta \rightarrow s$  approaches the speed of light in a vacuum, the value under the root  $\sqrt{1 - \theta^2/s^2} \rightarrow 0$  tends to zero. The smaller we multiply  $l_0$ , the smaller the value of  $l$  will be. For example, if  $\theta = 0.8s$ , let's make calculations.

$$l = l_0 \cdot \sqrt{1 - \left(\frac{0.8c}{c}\right)^2} = l_0 \cdot \sqrt{1 - 0.64} = l_0 \cdot \sqrt{0.36} = l_0 \cdot 0.6$$

if the spacecraft is  $l_0 = 10$  meters, then  $l = 10 \cdot 0.6 = 6$  meters. That is, in the eyes of the 7th observer, the length of the ship appears to be 6 meters.

Similarly, objects with a geometric shape such as length explain that as the speed  $\theta \rightarrow s$  approaches the speed of light in a vacuum, it decreases in the direction of motion.

A change (increase) in density is deduced using the reduction in length.

The reduction in body volume is found by the following formula:

$$V = V_0 \cdot \sqrt{1 - \frac{\theta^2}{c^2}}$$

$V$  is the volume of a body moving relative to an observer on earth.

$V_0$  is the specific volume of the moving body.

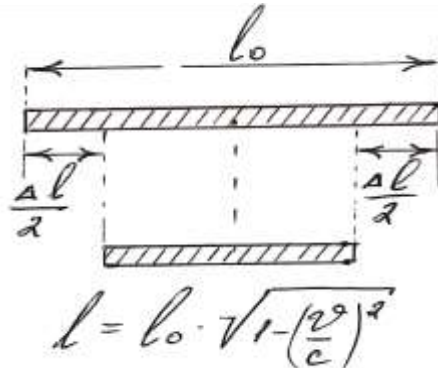
The following conclusions follow from the length reduction formula.

$t_0/t = l_0/l \cdot (1 - \theta^2/s^2)$  in the formula, since  $t_0/t \geq 0$ ,  $l_0/l \geq 0$ ,  $(1 - \theta^2/s^2) \geq 0$  which must also be positive. Then it follows that  $\theta \leq s$ .

That is, a body moving with speed  $s$  cannot reach a speed greater than the speed of light in a vacuum. On the subject of reduction of lengths of MNN. If we pay attention to the formula of the relative change of lengths, it can be understood that there is no change in the length of the ship for the observer in the spaceship, but only for the observers connected to the x-axis on the ground, it will be  $\lambda < l_0$ . At the same time, the formula does not negate the classical laws. Because at small speeds  $l \approx l_0$  it is explained that the difference between the lengths is almost imperceptible.

Explaining about the shortening of the length, it is explained that the mass of the body shortens from the center of the body, and it shortens from both sides.

Figure 2



The reduction in length is explained as follows. In the same way, the change of shape of a sphere, cube, triangle and other bodies is explained, as well as compression towards the center of mass in the direction of movement.

The above statements explained the relativity of lengths of MNN through an imaginary experiment and proved its formula  $\lambda = l_0 \cdot \sqrt{1 - \theta^2/s^2}$ .

Now let's talk about this oil. Let's leave aside the fact that whoever brought it is recognized as a genius by the whole world, let's think about the method of proof and the fantastic experiment. The goal of science is not to find the scientific truth, to follow personalities or to put them aside. Moving on to the goal.

Let's recreate the conditions of the experiment. Let's make some changes to its shape.

Figure 3

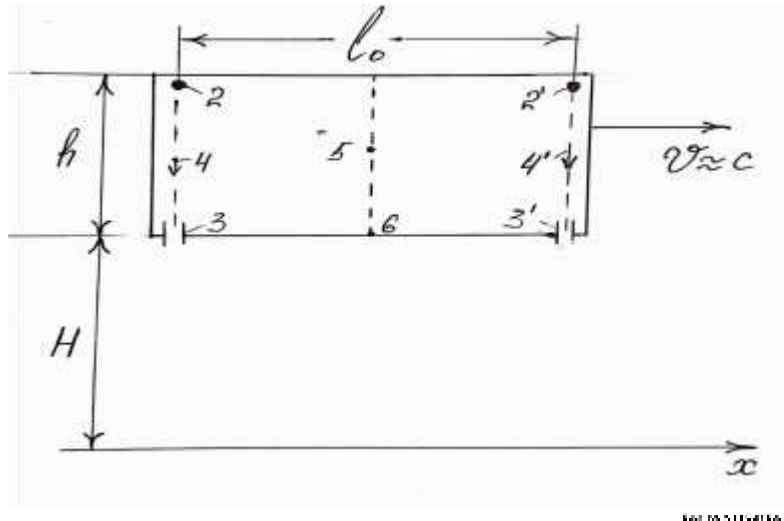
1- a spacecraft moving parallel to the x-axis with speed  $\theta = \text{const}$ .

2, 2' flash light sources located at a distance  $l_0$  from each other in the upper part of the spacecraft relative to the x axis.

We should consider the points 2, 2', 3, 3' parallel to the axis connecting the light sources 2 and 2' and 3 and 3' as the four corners of a rectangle.

4, 4' - flash light source 2 and test light from 2'

5- the axis passing through the center of the test beam inside the spacecraft (you can think of it as the center of gravity)



$l_0$  - the specific length between points 2 and 2' and 3 and 3'.

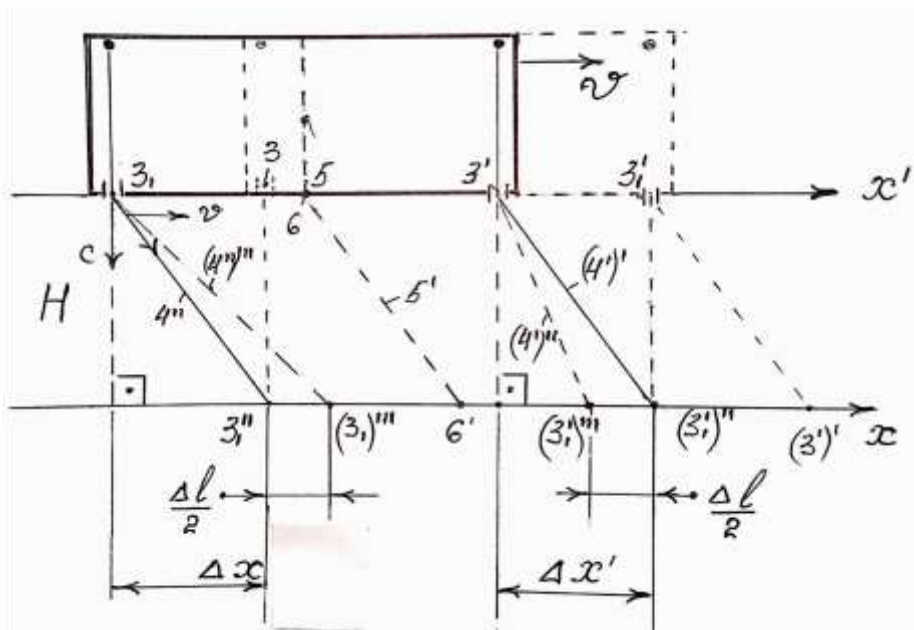
We assume that  $\theta$  is the speed of the spacecraft  $\theta \approx c$

$H$  is the distance between the bottom of the spacecraft (relative to the ground or x-axis) and the x-axis

6- the lower point of the ship's center of gravity (the middle of the ship)

According to the experiment, a flash occurred from the flash light sources 2 and 2' at the time  $t_0$ , the test rays from the sources 2 and 2' spread at the same time and with the same speed  $s$  and moved towards the slits 3 and 3'. These test beams move trajectories 4 and 4' parallel to each other. Since the interior of the ship is an inertial frame, let us assume that the speed  $\theta$  of the ship does not affect the rays 4 and 4'. 4, 4' test beams 3 and 3' flew out of the ship at the same time towards the x-axis. The distance between test beams 4 and 4' was equal to  $l_0$  in watt leaving the ship. Let's describe the trajectories of the test beams towards the x-axis based on the principles of MNN.

Figure 4



The distance between the 31st and 3<sup>1</sup> slits is l0, and when the test beams 411 and (41)1 fly out of them at the same time and at the same speed, in the same direction,

From the perspective of an observer on the x-axis, the test control beams 411 and (41)1 approach the x-axis with equal speed along the resulting directions of the horizontal  $\theta$  speed of the ship and the vertical  $\sigma$  speeds. The test beams 41 and (41)1 move opposite to the x axis and connect with the x axis at the points 3\_1<sup>1</sup>11 and (3\_1<sup>1</sup>)11. Of these points, at the time of the collision of the light, 3 points of 31 shifted 3, and 3\_1<sup>1</sup> points of 31 shifted at time t will arrive. This distance is marked by  $\Delta x$  in the drawing :  $\Delta x = \theta t$

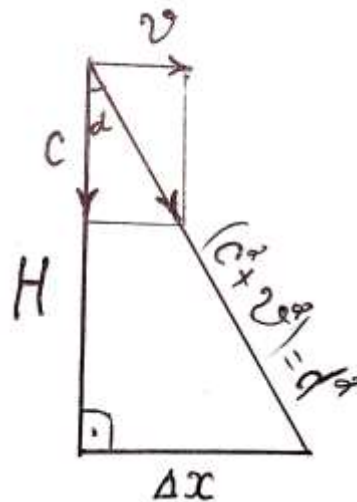
This distance is also valid for the x-axis projection of 31 and 3 perpendicular to them. At the same time, it is also appropriate for points (3\_1<sup>1</sup>)11 – (31)1, which are perpendicular to 31 and 3\_1<sup>1</sup>.

We can say that the line connecting points 6 and 61 is parallel to the trajectories of test rays 411 and (41)1 and the line dividing the center of the heart.

We are not interested in the path traveled by the light and the time spent. Of interest is whether or not the trajectory lines 411 and (41)1 retain their parallelism or move to the red dashed trajectory in the plot to fulfill the relativistic length reduction law.

We use geometric laws to determine the direction of the test rays through the sum of the velocity vectors. Since the velocities  $s$  and  $\theta$  cross perpendicularly, their resultant direction (the force (it doesn't matter if this force exceeds  $c$  or not))

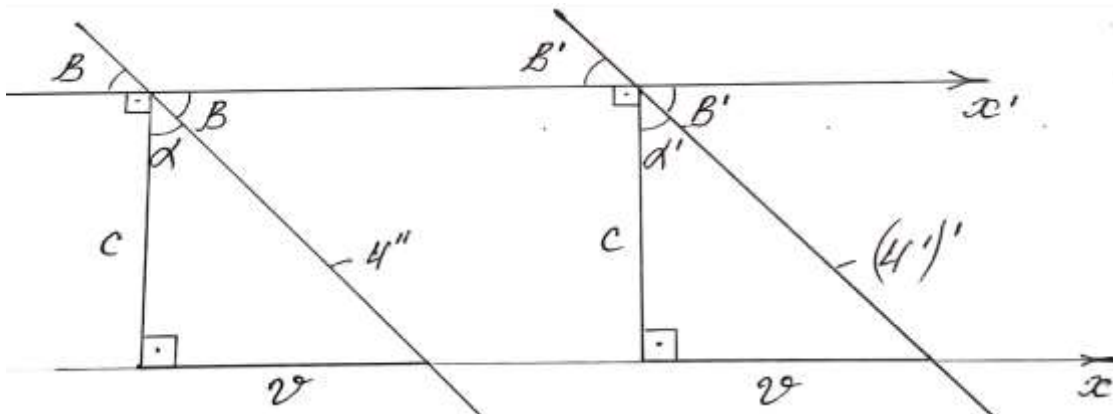
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Since it forms a right triangle, we know that the Pythagorean theorem is valid.

If  $d = \sqrt{v^2 + \theta^2}$ , we can exchange the height of our triangle, i.e., the attached leg  $N$ , so that the speed of light in vacuum corresponds to  $c$ . We can replace the distance  $\Delta x$  of the cat, lying opposite the angle  $\alpha$ , with the speed  $\theta$  of the spaceship relative to the x-axis.

Let's denote the hypotenuse of the triangle with legs  $c$  and  $\theta$  as  $d$ . Now let's see that the lines 411 and (41)1 in the drawing are not parallel. Figure 6



$180 - (90 + \alpha) = \beta$  for lines 411 and (41)1 to be parallel to each other and

We need to prove that  $180 - (90 + \alpha_1) = \beta_1$  are mutually equal.

If  $b = \beta$ , according to the rules of geometry, the lines 411 and (41)1 are 2 lines that cross one common line at the same angle, and we can consider them to be parallel to each other. And if  $b \neq \beta$ , if we push these lines together and lay them on top of each other on the  $x_1$  axis, they will become one line. If  $b \neq \beta$ , they are not parallel. To check this, we

need to determine the angle  $\alpha$ .  $l_0 \neq l$  should turn out only if the trajectory of the test beams is not parallel, or it is due to the time difference between the tail and the nose of the spacecraft.

$$tga = \frac{\theta}{c}; \quad tga^1 = \frac{\theta}{c}; \quad \theta = \theta; \quad c=c \Rightarrow \frac{\theta}{c} = \frac{\theta}{c} \Rightarrow tga = tga^1$$

The legs of a right-angled triangle opposite the acute angles  $a$  and  $\hat{a}$  and the leg adjacent to the angle  $a$  form  $tga$  with respect to  $c$ .

Since the legs of the triangles formed by both of our test beams form common  $\theta$  and  $c$ , their ratio is equal to each other, which proves that the angles  $a$  and  $\hat{a}$  are equal to each other. Assuming that  $\theta = c$ ,  $tga = tga^1 = \theta/c = c/c = 1$   $tga = 1$   $a=45^\circ$ , the test rays move parallel to each other and form the projection of  $l_0$  on  $x$ , and  $l_0=l$ . Proof According to the laws of geometry, if the lines  $x_1 \parallel x$  and  $411 \parallel (41)1$  cross each other parallel to each other, the resulting four corners form an equilateral (in our example, a parallelogram) geometric shape.

For example: if  $\theta = 0.8c$ :  $tga = (0.8c)/c = 0.8$  where arctan is equal to the angle  $0.8 = 38.6^\circ$   $a=38.6^\circ$ .

It was found that  $b = 180 - (90 + a) = 180 - (90 + 38.6) = 180 - 128.6 = 51.4$ .

The conclusion is that  $l_0 = l$ .

But according to the relativistic length relativity formula, it was  $l_0 > l$ .

$$l = l_0 \cdot \sqrt{1 - \left(\frac{\theta}{c}\right)^2}$$

$$\theta = 0,8 \cdot c; \quad l_0 = 10 \text{ M};$$

$$l = 10 \text{ M} \cdot \sqrt{1 - \left(\frac{0,8 \cdot c}{c}\right)^2} = 10 \cdot \sqrt{1 - 0,64} = 10 \cdot \sqrt{0,36} = 10 \cdot 0,6 = 6 \text{ M}$$

$$\Delta l = l_0 - l = 10 - 6 = 4 \text{ M}$$

The projection of  $l_0$  on the  $x$ -axis is  $l = l_0 \cdot 0.6$  and  $l < l_0$ .  $\Delta l = l_0 \cdot 0.4$

If we pay attention to the plot from our repeated test experiment, the 411 line should be shifted to (411)11 and moved by a distance  $(\Delta l)/2$  on the  $x$ -axis in order to create  $l_0$ . And our line (41)1 should move towards the center of gravity to the red line (41)11 and decrease to  $(3_1^1)11$  point  $(3_1^1)11$  point  $(\Delta l)/2$  on the  $x$  axis.

For this case, if we pay attention to the speed of movement that makes up the sides of the right triangle, we will see that the cates representing the speed of the ship have changed. If  $\Delta l / 2 = 4 / 2 = 2$ . Then the velocities at two points of the ship will be:

The speed of the ship at the stern

$$\theta_d = \theta + \Delta\theta$$

Bow speed of the ship

$$\theta_t = \theta - \Delta\theta$$

it is. Here,  $\Delta\theta$  is the additional speed that compensates for the difference in length change.

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In order to prove the relativistic laws, the non-parallel test ray lines (411)11 and (41)11 at the value  $\theta_d > \theta_t$  should form trajectories, and these lines should intersect at a point after traveling a certain distance.

It is even more interesting that the conditions  $l < l_0$  and  $a < 45^\circ$  are fulfilled

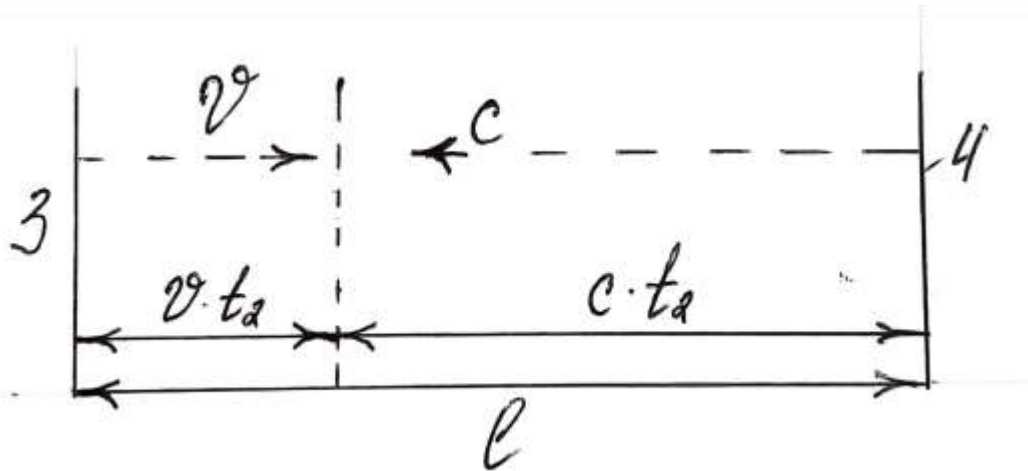
$\theta_d > \theta_t$  that is, the speed of the tail of the ship 31 must be greater than the speed of the bow, and this must occur in a straight line, not in a circular motion.

If we take into account that the time in the tail part of the spaceship is ahead of the time in the nose part from the point of view of the observer on the Bourdieu  $x$  axis, then the test light 411 in Figure 4 will touch the spacecraft before the test light (41)1, and after a certain time the test light (41)1 will touch the spaceship. leaves the ship. But if we take into account that the spacecraft travels a certain distance during the time difference between the separation of these test beams from the spacecraft, then the distance between the test beams 411 and (41)1 increases, that is,  $l > l_0$ . The points of impact of these test beams on the  $x$  axis should be considered as the projection of the spacecraft on this axis. According to the MNN formula of the relativity of lengths, the length of the spacecraft should be reduced relative to the observer on the  $x$ -axis. The result of the experiment shows that it will lengthen on the contrary.

Conclusion The formula  $\lambda = l_0 \cdot \sqrt{1 - (\theta/c)^2}$  contradicts logic and it is proved that it is absolutely impossible.

Let's now carefully study A. Einstein's fantastic experiment that proved the relativity of lengths. Maybe there was a mistake or confusion. I ask you to pay attention to the calculation of the return time  $t_2$  of the test light-10 from the point of view of the observer connected to the  $x$ -axis.

Figure 7



$$t_2 = \frac{l - \vartheta t_2}{c} \Rightarrow ct_2 = l - \vartheta t_2 \Rightarrow ct_2 + \vartheta t_2 = l \Rightarrow t_2(c + \vartheta) = l$$

$$t_2 = \frac{l}{c + \vartheta}$$

The event is happening as follows. The task is to calculate the time  $t_2$  for the 10th test light returning from the 4th flat mirror to hit the tail of the 3rd ship moving with speed  $s$ . For this, it was taken into account that the two motions of the test light and the detectors move in opposite directions towards each other and cover the total distance  $l$  together. For this, when the 10th test beam is moving to the left (the stern part of the ship) with speed  $s$  in time  $t_2$ , at the same time, the tail part of the ship is also moving towards the 3rd test beam and the 10th test beam in the opposite direction with speed  $\vartheta$  in time  $t_2$   $\lambda$  covers  $\vartheta \cdot t_2$  of the distance. So, 10 test beams and 3 sensors moved towards each other for a distance  $l$  from both sides and met after  $t_2$  time.

$$l = c \cdot t_2 + \vartheta \cdot t_2 = t_2(c + \vartheta)$$

That is, this is exactly the same as the example of determining the time  $t_2$  by finding their relative speeds if two moving objects are moving in a straight line towards each other.

$$t_2 = \frac{l}{(c + \vartheta)}; \quad l = ct_2 + \vartheta t_2 = t_2(c + \vartheta);$$

$$\vartheta_2 = \frac{l}{t_2} = (c + \vartheta)$$

Thus, in order to determine the total movement time  $t_2$  of the objects moving towards each other, it is noted that the total path  $\lambda$  is found by dividing the sum of the relative speeds of the objects moving towards each other by  $\vartheta_2 = (c + \vartheta)$ . For example, if the speed of the spacecraft is  $\vartheta = 0.8s$ , and the speed of the test light is equal to  $s$ , then

$$\vartheta_2 = (c + \vartheta) = c + 0.8c = 1.8c$$

will be Although MNN. according to pastulata, the greatest speed in nature was not the speed of a crack in a vacuum? MNN. even when adding the speeds at , the total relative speed  $s$  would not exceed the speed of the crack in vacuum !

$$\vartheta_2 = \frac{\vartheta_1 + \vartheta}{1 + \frac{\vartheta_1 \vartheta}{c^2}} = \frac{0.8c + c}{1 + \frac{0.8c \cdot c}{c^2}} = c$$

It should have been. But for some reason A. Einstein

$$\vartheta_2 = (c + \vartheta) = c + 0.8c = 1.8c > \frac{\vartheta_1 + \vartheta}{1 + \frac{\vartheta_1 \vartheta}{c^2}} = \frac{0.8c + c}{1 + \frac{0.8c \cdot c}{c^2}} = c$$

recognizing that and using it in practice. So where does the relativistic method of adding velocities come from? Pastulata? Or does it prove that  $(c + \vartheta) = s$  by first recognizing that  $(c + \vartheta) > s$ ? We have learned that usually finding the value of the unknown  $x$  in the equation and substituting it for  $x$  will satisfy the answer. For example, if we determine the value of  $x$  in the equation  $2x = 4$  and put the numerical value of  $x$  instead of the main equation, the answer will be appropriate and not contradict each other.  $x = 4/2 = 2$ ,  $2 \cdot 2 = 4$ . But this is not the case in MNN, first it uses  $(c + \vartheta) > s$ , then it proves that  $(c + \vartheta) = s$ , then if we substitute the answer, it gives contradictions.

So, when calculating the relative speeds of bodies,  $\vartheta_2 = (c + \vartheta) > s$  can be A. It turns out that Einstein himself confirmed it. Otherwise, in his experiment, he would not have calculated the travel times of the test light inside the ship to the mirror in relation to the observer on the ground:

$$t = t_1 + t_2 = \frac{l}{c - \vartheta} + \frac{l}{c + \vartheta} = \frac{l(c + \vartheta) + l(c - \vartheta)}{c^2 - \vartheta^2} = \frac{cl + \vartheta l + cl - \vartheta l}{c^2 - \vartheta^2} = \frac{2cl}{c^2 - \vartheta^2}$$

Note that this equation gives a common denominator. Let's use numbers to make it even clearer. if  $\theta = 0.8s$ ,

$$(c - \theta)(c + \theta) = c^2 - \theta^2 \Rightarrow (c - 0.8c)(c + 0.8c) = c^2 - 0.8c^2 = 0.36c^2$$

Ўки  $(c - 0.8c)(c + 0.8c) = 1.8c \cdot 0.2c = 0.36c^2$  этибор беринг

$$(c + 0.8c) = 1.8c > c$$

Агар  $(c + \theta) > c$  эмас  $(c + \theta) = c$  бўлганида эди нималар бўлар экан:

$$t = t_1 + t_2 = \frac{l}{c - \theta} + \frac{l}{c + \theta} = \frac{l}{c - \theta} + \frac{l}{c} = \frac{cl + cl - \theta l}{c(c - \theta)} = \frac{l(2c - \theta)}{c^2 - c\theta}$$

, we divide the numerator and denominator of the last fraction by  $s^2$

$$\frac{\frac{l(2c-\theta)}{c^2}}{\frac{c^2-c\theta}{c^2}} = \frac{l(2c-\theta)}{c^2} \cdot \frac{c^2}{c^2-c\theta} = \frac{l(2c-\theta)}{c^2} \cdot \left(1 - \frac{c}{\theta}\right) = \frac{l(2c-\theta)}{c^2} - \frac{l(2c-\theta)}{\theta c^2} =$$

$$= \frac{\theta l(2c-\theta)}{\theta c^2} - \frac{l(2c-\theta)}{\theta c^2} = \frac{2c\theta l - \theta^2 l - 2c^2 l + c\theta l}{\theta c^2} = \frac{c\theta l + 2c\theta l - 2c^2 l - \theta^2 l}{\theta c^2} = \frac{c\theta l - \theta^2 l + 2c\theta l - 2c^2 l}{\theta c^2} = \frac{\theta l(c - \theta) + 2cl(\theta - c)}{\theta c^2},$$

o, we divide the numerator and denominator of the last fraction by  $s^2$

$$\theta l(c - \theta) < 2cl(\theta - c)$$

because the image of the fraction turned out to be negative. Then the fraction itself turned out to be negative

$$\theta l(c - \theta) + 2cl(\theta - c) < 0 \quad \text{y xolda}$$

$$t = t_1 + t_2 = \frac{\theta l(c - \theta) + 2cl(\theta - c)}{\theta c^2} < 0$$

What happened now!? Time turned out to be negative!

### CONCLUSION AND DISCUSSION

So  $\theta_2 = (\theta_1 + \theta) / (1 + (\theta_1 \theta) / c^2) = s$ , not  $(c + \theta) > s$ . The formula of length relativity is not  $\lambda = \lambda_0 \cdot \sqrt{(1 - \theta^2 / s^2)}$ , but  $\lambda = \lambda_0$ .

It turned out that the speed of light in a vacuum does not affect relativistic velocities. Accordingly, since the greatest speed in nature (relative speed) is greater than the speed of light in a vacuum, Albert Einstein's theory of special relativity is inappropriate in real life.

According to the postulate of MNN, since the greatest speed in nature  $s$  is the speed of light in a vacuum, the doubt  $\lambda = l_0 \cdot \sqrt{(1 - \theta^2 / s^2)}$  and other formulas of MNN are appropriate only when the speed of the spacecraft is  $\theta = 0$ . Otherwise, since  $(c + \theta) > s$ , MNN formulas will be inappropriate. MNN accepted that this would be the case when it chose its pastulatas.

The MNN length relativity formula was not confirmed. All the formulas derived on the basis of this formula (on the basis of MNN) are appropriate only when the speed of the body is  $\theta = 0$ .

At the same time, Albert Einstein's famous formula  $E = mc^2$  connecting mass and energy has also lost its basis. In turn, there was a need to revise all the results and conclusions based on the  $E = mc^2$  formula. For example, atomic nuclear binding energy, Planck's constant, mass of an electron (equal at rest and in motion). Since the conclusion that space and time are relative turns out to be unfounded, this theory is inappropriate to use the four-dimensional Minkowski space.

But we believe that the famous scientist Albert Einstein's reasoning about the connection of mass and energy is reasonable. At the same time, in our newly proposed "EXISTENCE" theory, we presented a new interpretation of the formula of mass and energy connection.

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