

Re: SRT , GRT and " Minkowski space " .

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- *From:* valls@xxxxxxxxxxxx
 - *Date:* Fri, 24 Aug 2007 10:32:02 -0700
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On 23 ago, 17:37, "Jeckyl" <no...@xxxxxxxxxxxx> wrote:

<va...@xxxxxxxxxxxx> wrote in message

news:1187891405.299006.66700@xx

On 23 ago, 06:05, "Jeckyl" <no...@xxxxxxxxxxxx> wrote:

"Androcles" <Engin...@xxxxxxxxxxxxxxxx> wrote in message

[news:oHdzi.52422\\$L85.1526@xx](mailto:news:oHdzi.52422$L85.1526@xx)

"socratus" <israel...@xxxxxxxxxxxx> wrote in message

news:1187863911.728547.158600@xx

: =====

: SRT doesn't have a gravity field.

: If there is no gravity field , the space will be flat,

: and this space is called " Minkowski space "

: (negative 4-D united space/time continuum).

: =====.

: Is the " Minkowski space "abstract continuum, as everybody says?

: I think this space is a real one.

: I think this space is Vacuum.

: Why?

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- : 1. " Minkowski space "has no gravity field, but negative parameter.
- : 2. Only Vacuum space has negative parameter : $T = -273$.
- : 3. And this negative parameter is united with space/ time ,
- : which are joined together absolutely .
- : 4. And the second SRT postulate tells about moving light quanta in Vacuum.
- : 5. It is impossible SRT to be the right theory
- : and space around SRT to be an abstract theory.
- : 6. If in our brain abstract and real ideas are mixed together
- : then the interpretation of physics must be paradoxical.
- : =====.
- : And in 1915 Einstein put a " MASS " in the " Minkowski space " and it curved. Why?
- : And in 1921 A. Freedman put " TIME" in the " Minkowski space " and it also curved. Why?
- : =====
- : If mathematician makes a small mistake in the beginning of his calculations then after some operations it grows into a big one.

This isn't a "small mistake", it's an outright arrogant lie:
'we establish by definition that the "time" required by light to travel from A to B equals the "time" it requires to travel from B to A' because I SAY SO and you have to agree because I'm the great genius, STOOOPIID, don't you dare question it. --- Albert Einstein,

One track mind Androcles with his distorted quotes. And not a single piece

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of logical reasoning why the time to travels from A to B
should NOT be
the
same as the time to travel from B to A

You need first a space in order to have afterward points A and B in it. Einstein considers the ether superfluous, not existing at all. Then, he has only bodies to state his theory. If he considers a point A over some body and another point B some distance apart, he needs to be very careful when sending a light ray from A to B. A little ahead in his writing he considers two clocks fixed to the ends of a moving rigid rod, needing to re-synchronize them in a condition where vacuum light speed is c in the "stationary system" and independent on source velocity (postulate 2). But is the rod moving or not? For a "stationary system" observer the rod is moving, for a "moving system" observer the rod is at rest. This is why Einstein needs at the beginning to DEFINE that light takes equal time to go from A to B that from B to A, as part of his explanation about the meaning of the "time" concept, reaching at the end to a relative time depending on coordinate system. The time to travel from A to B IS different to the time to travel from B to A if the points (clocks) are moving! Since then, time is no more absolute (clocks synchronization as defined by Einstein is frame dependent).
By the way, I think that the condition of constant velocity for the moving rod is not necessary. The two clocks at the extremes of the rod remain re-synchronized even changing later the velocity!
(This post is specially directed to both, Jeckyl and my good friend Androcles.)

RVHG (Rafael Valls Hidalgo-Gato)

Of course, the second postulate of SR says that light will travel at c in all frames of reference, so therefore the time taken MUST be the same fro A to B and B to A. Otherwise the postulates of SR would not hold.

I recommended you to study with all detail at least the two first paragraphs of the 1905 Einstein's Jun 30 paper (it is not an easy task!). Almost at the beginning of paragraph 2 you can read the second postulate as follows:

{2. Any ray of light moves in the "stationary" system of co-ordinates with the determined velocity c , whether the ray be emitted by a stationary or by a moving body }

Notice that the postulate 2 refers ONLY to the "stationary" system and NOT to the "moving" one. When an observer at rest in the "stationary" system describes the process of synchronization of the two clocks attached at the extremes of the moving rod, he obtains the following result (almost at the end of paragraph 2):

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$$t_B - t_A = r_{AB}/(c-v) \text{ and } t'_A - t'_B = r_{AB}/(c+v)$$

As you see, the time that expends light to go from A to B is NOT the time it expends to go from B to A (for the "stationary" system observer). But an observer at rest in the moving rod the things are different. He claims that his system is the "stationary" one and the "moving" one the other, applying Einstein's DEFINITION that light expend in the "stationary" system same time going from A to B than from B to A. Einstein definition in paragraph 1 plays then an essential role in the definition of what "time" is, it is NOT a consequence of postulate 2. (Androcles denoted it as "postulate 3").

There is no particular reason to think that because a rod is moving its clocks will or will not remain in sync. You cannot categorically say that "the time to travel from A to B IS different to the time to travel from B to A if the points (clocks) are moving" .. it really depends on your model of the universe. Yes?

I tried to explain all for you above. In paragraph 1 Einstein DEFINES what simultaneity is, then defining implicitly what "time" is. Before him no men was able to do that! And he does it in a form so natural and trivial that I am completely sure that ANY person that reads it for first time doesn't realize at all its meaning and importance. Defining time Einstein is really making a Universe model, based on the postulated constant vacuum light speed independent of source velocity... in any "stationary" system!

But what is a "stationary" system? I am claiming that in 1905 Relativity "stationary" system must be always the centre of mass inertial system corresponding to some body set (if ether doesn't exist at all, bodies themselves are the unique ones that can determine an inertial system, this is my reasoning). If you want to know more about it see my following thread in this group:

Hierarchical Inertial System (HIS) in Einstein's 1905 Relativity

http://groups.google.com/cu/group/sci.physics.relativity/browse_frm/thread/66654597fa9beb77/176b2ccdb1ef7ff6?hl=

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