

Re: why lorentz transformation?

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- *From:* D.McAnally@i'm_a_gnu.uq.net.au (David McAnally)
 - *Date:* Sat, 17 Sep 2005 11:34:47 +0000 (UTC)
-

"JanPB" <filmart@xxxxxxxxxx> writes:

>Androcles wrote:

>>

>> Hey phuckwit! Deal with the math or shut the fuck up.

>Math? Since you know almost nothing about it, I find it odd that you
>should lecture people (or more like, INSULT) on that very subject.

Androcles reserves these sorts of insults almost exclusively to people who actually have mathematical ability.

Androcles, you used your claim of kill-filing me in order to evade having to deal with the rest of what I wrote in the post to which you responded to the kill-filing. For this reason, I reproduce the post in question, verbatim, starting immediately after the comment which led to your claim of kill-filing me. There are two points of particular note here. The first was your continued misinterpretation of what Einstein meant by a specific comment, in spite of having had the correct interpretation given to you. The second was your strange notation in which you mark off values of x' equal to 0', 1', 2', etc, where the normal and sensible thing to do is to mark off the values of x' equal to 0, 1, 2, etc. You never did explain why you adopted the odd notation of putting the prime on 0, 1, 2, 3, etc, when discussing values of x' .

The post is quoted below. I have also taken care to attribute the statements to the appropriate person.

>From me:

I allowed you an insight into what Einstein meant when he wrote that (or, rather, when he wrote the original German), and you ridicule it. Have you no natural curiosity about the way things REALLY are? Or do you prefer to construct your own fantasy about the way the world works, and what people actually mean (and then insist that people abide by your fantasy), and shut your ears to those who disagree with you? Secondly, I followed up my above comment with a detailed explanation as to the

Re: why lorentz transformation?

significance of the word "plays", and an explanation as to what Einstein was getting at.

What you quoted from Einstein was not a statement that c is infinitely great. If it had been, then Einstein would have explicitly said so, rather than using the more vague language that he used.

The fact is that Einstein did not say that c is infinite, as you falsely claimed. Einstein said that c played a role in special relativity which was analogous to that played by infinite speed in classical mechanics, and I went to a lot of trouble to explain exactly what that analogous role was.

>From me:

>>Androcles effectively states that the only viable interpretation is
>>that Einstein states that c is infinite.

>From Androcles:

>or $v = 0$. I notice you've ignored the equation.

>From me:

I did not ignore the equation. The reason why I did not refer to the equation was because the equation was irrelevant to what Einstein meant when he wrote that the role of c in special relativity is analogous to that of infinite speed in classical mechanics. The equation comes from near the beginning of Section 3 of Einstein's 1905 paper. Throughout what Einstein wrote following the equation, c was assumed to be finite.

Einstein's observation, that the role of c in special relativity was analogous to that of infinite speed in classical mechanics, was made at the beginning of Section 4, and it meant no more than what I have already specified: the role of c in special relativity as the unattainable supremum to those speeds attainable by material bodies is exactly analogous to the role of infinite speed in classical mechanics as the unattainable supremum to those speeds attainable by material bodies.

>From me:

>>Here is an alternative interpretation for Androcles to consider. In
>>classical mechanics, infinite speed is the unattainable supremum for
>>attainable speeds (i.e. all finite speeds are theoretically
>>attainable, infinite speed is unattainable for material bodies, and
>>all material bodies travel at less than infinite speed). In special
>>relativity, c is the unattainable supremum for attainable speeds speed
>>(i.e. all speeds less than c are theoretically attainable, c is
>>unattainable for material bodies, and all material bodies travel at
>>speed less than c). This means that, from a physical point of view,

Re: why lorentz transformation?

Re: why lorentz transformation?

>>the role of c in special relativity as the unattainable maximum
>>possible speed (i.e. an unattainable supremum) is analogous to the
>>role of infinite speed in classical mechanics as the unattainable
>>maximum possible speed (i.e. an unattainable supremum).

>From Androcles:

>It takes finite time to travel from $(0,0,0)$ to $(x',0,0)$ and the
>tip of the ray returns to $(0,0,0)$ IN THE MOVING SYSTEM.

>From me:

That is irrelevant because Einstein never stated that c is infinite. Of course c is finite, and of course it takes nonzero time for light to travel a nonzero distance. But c is the unattainable supremum for the attainable speeds of material bodies, just as infinite speed is the unattainable supremum for attainable speeds for material bodies in classical mechanics. THAT was the point that Einstein was making when he made the remark at the beginning of Section 4 of his paper. I have ALREADY explained that fact to you.

I noted recently that you have a habit of introducing irrelevant comments when you do not have anything to offer on the topic at hand. Look at how you introduced irrelevant comments about Einstein's 1905 paper in response to my discussion on the Galilean invariance of Maxwell's homogeneous equations, the Galilean invariance of Maxwell's inhomogeneous equations, and the symmetry between primed and unprimed frames. Even though none of these had anything to do with Einstein's 1905 paper, you tried to introduce irrelevant comments about the paper into the discussion. I also noted that, at the same time, you exhibited other odd behaviour by refusing to acknowledge that x' can take values like 0, 1, 2, but instead you insisted on denoting the values by the unrecognized notation of $0'$, $1'$, $2'$.

>From Androcles:

>Therefore either the moving system has not moved or the velocity of
>light is infinite as Einstein clearly states in his theory.

>From me:

He did not clearly state anything of the sort. He stated that c in special relativity was LIKE infinite speed in classical mechanics. The manner in which they are alike is that in their respective theories (special relativity in the case of c , and classical mechanics in the case of infinite speed), each is the unattainable supremum of the attainable speeds for material bodies.

Note that Einstein stated that c plays the part of infinitely great speeds. If he had intended to say that c was infinite in its own right, he would have said "the speed of light is infinite", or "the speed of

Re: why lorentz transformation?

light is infinitely great", instead of what he actually did say. Is the distinction between "the speed of light is infinite" (or "the speed of light is infinitely great") and "the speed of light plays the part of an infinitely great speed" beyond your comprehension? If you genuinely believe that what Einstein wrote meant that c is infinite, then tell me why he did not just come out and explicitly state that c is infinite.

>From me:

>>From this analogous physical behaviour of c in special relativity and
>>infinite speed in classical mechanics (from the point of view of both
>>being unattainable suprema for attainable speeds for material bodies
>>in their respective theories), it is reasonable to suggest that it was
>>*this* that Einstein was thinking of when he wrote in Section 4 of his
>>paper that

>>"we shall, however, find in what follows, that the velocity of light
>>in our theory plays the part, physically, of an infinitely great
>>velocity."

>>David

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• *Follow-Ups:*

- ◆ *Re: why lorentz transformation?*
 ◇ *From: Androcles*

• *References:*

- ◆ *why lorentz transformation?*
 ◇ *From: francisco*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: Sue...*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: David McAnally*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: Sue...*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: David McAnally*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: Sue...*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: David McAnally*
- ◆ *Re: why lorentz transformation?*
 ◇ *From: Androcles*
- ◆ *Re: why lorentz transformation?*

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◇ *From:* JanPB

- Prev by Date: ***Re: Black holes radiate – the end of GR is there***
- Next by Date: ***Re: Black holes radiate – the end of GR is there***
- Previous by thread: ***Re: why lorentz transformation?***
- Next by thread: ***Re: why lorentz transformation?***
- Index(es):
 - ◆ ***Date***
 - ◆ ***Thread***