

Re: The train and the light inside.

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- *From:* "tomgee" <[tyropress@xxxxxxxxxx](mailto:tyropress@xxxxxxxxxx)>
  - *Date:* 28 Feb 2006 16:41:28 -0800
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PD wrote:

tomgee wrote:

PD wrote:

[snip]

Do you or do you not think that CV means "constant velocity" with respect to something?

Yes, of course, but it applies to two or more objects. You cannot have constant velocity wrt a single object.

Do you or do you not think that a zero velocity with respect to something is constant velocity?

Only if that "something" is another object moving in the same direction as the first object.

Do you or do you not think that an unchanging velocity of 32 mph eastward with respect to a stop sign is constant velocity?

Not unless the unchanging velocity refers to a visible object and the stop sign is also moving at the same speed and in the same direction as the other object.

Tom, you're a hoot. I ask you if an object A can have a constant zero

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velocity with respect to another object B, and you say only if object B has the same speed and direction as object A. I then ask you if an object A can have a 32 mph eastward velocity with respect to another object B, and you say only if object B has the same speed and direction as object A.

Do you have ANY idea what you're babbling about when you spend so much time babbling it? Is your time really so worthless that you've got nothing better to do with it than babble?

It's only babble to you because you have no babelfish to help you understand the meaning of constant velocity. You think it means "relative motion", which is not CV.

SNIP

One more time: You are in a train stationary at the station. The earth is moving through space at say, 30000mph, and so you and the train are also moving at that very same speed as you sit still upon the earth. You and everything else on the surface of the earth that is stationary are at CV wrt the earth because you are all moving through space at the same speed and in the same direction as the earth. If and when anything stationary moves upon the surface of the earth at, say, 30 mph, it is no longer at CV because it is no longer moving at the same speed as the earth, but it is now moving at 30 mph faster than the 30000 mph it was moving when it was at CV wrt the earth. Now, it is moving at 30030 mph (if my math is correct).

Are you sure? If the earth is moving through space from "left" to "right" in whatever picture you want to make of that motion at 30000 mph (it's not that value, but I'll let you figure out what a better

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value might be), and then the train moves on the surface of the earth,  
but from "right" to "left" in the same picture, is it going  
30030 mph  
or 29970 mph?

It does not matter in which direction the earth is moving or at what speed. An object on its surface is at constant velocity wrt earth only so long as it is stationary upon the surface of the earth, regardless of the earth's direction and speed. If the train is moving at 30 mph, it is no longer at constant velocity wrt the earth, but now it is moving 30 mph faster than the earth plus or minus the speed gained or lost by any differences in the directions of the motion of the earth in space. Any object moving on the earth's surface cannot move at a slower speed through space than the earth; it can only move faster through space than the earth.

Oh dear, Tom. You've outdone yourself in patently stupid remarks.

That's your opinion and you're welcome tuit, but it's no more than that unless  
or until you support it with specific support.

Let's back up. When I walk backward at 3 mph in a train going 94 mph, is my speed relative to the tracks greater or less than the train's speed relative to the tracks?

If by "backward" you mean opposite to the direction the train is moving,  
obviously your speed is less. But that is not what you said. You were  
not so specific with your wording that it was as clear as the above.

You do know what "speed relative to the tracks" means, don't you?  
You do know what 94 mph is measured with respect to, don't you?

Nasty nasty. Go pee or something, PD, you're getting hot under the collar again. Don't come back till you're cool enough to not bust any brain arteries. I don't want your family to find your dead body slumped  
over your pc and trace that back to me.

In order to move about the planet, one must

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increase their speed from  
the speed at which the planet is traveling  
through space. Wait til you  
hear my ideas about AE's silly notion of the  
spaceship that appears to  
us to be sitting on its platform while it is  
traveling along in curved  
space-time!! I don't recommend you get into  
that until you master CV.

During  
the  
time  
you  
went  
off  
and  
returned,  
time  
for  
you  
passed  
slightly  
slower  
than  
it  
did  
for  
your  
TV  
and  
the  
Earth.  
Meaning  
that  
you  
aged  
slightly  
less  
than  
did  
your  
TV  
or  
the  
planet.  
I  
know  
it's  
hard

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for  
you  
to  
believe  
all  
this,  
but  
it's  
based  
on  
SR  
and  
the  
second  
law  
of  
thermodynamics.

If  
it  
so  
happens  
that  
the  
train  
is  
traveling  
west,  
then  
I  
think  
I  
can  
argue  
that  
the  
train  
is  
traveling  
\*slower\*  
than  
the  
fella  
on  
the  
tracks.  
Do  
you  
see  
why?

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Assuming  
the  
experiment  
declared  
a  
certain  
direction  
in  
which  
the  
train  
is  
moving,  
the  
experiment  
did  
not  
depend  
on  
the  
direction  
at  
all  
since  
the  
two  
observers  
were  
not  
said  
to  
be  
at  
CV  
wrt  
each  
other.  
Direction,  
then,  
does  
not  
enter  
into  
the  
experiment,  
only  
the  
fact  
that

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one  
observer  
is  
moving  
faster  
than  
the  
other.

So,  
regardless  
whether  
I  
walk  
to  
the  
front  
of  
the  
train  
or  
toward  
the  
back  
of  
the  
train  
(see  
example  
2  
above),  
I'm  
still  
traveling  
faster  
than  
the  
train.

Yes.

I see. So both 94 mph and  
100 mph are both faster than  
the train's 97  
mph with respect to the  
track.

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That's not what I said. They are faster than the earth's motions through space.

You're not getting it. If by walking in the opposite direction as the train's motion while inside the train makes me go slower (94 mph) than the train (97 mph) relative to the earth, then don't you think you could apply the same idea for motion on the earth that is done in a direction opposite the earth's motion? Don't you think that could result in motion that is slower than the earth's motion?

You're the one who doesn't get it. I've said that it is possible, but hardly likely. As you move on the surface of the earth, the planet is moving through space while rotating on its axis. For you to know and to follow the exact path the earth takes as it does that would take a lot more brains than you've got.

No, not possible for it to move slower than the earth's speed through space. The earth's motion is through space and any object on its surface moves at the speed the earth moves THROUGH SPACE plus the speed at which the object moves.

Not so, Tom. You've not explained why I need to do \*plus\* or \*minus\* for the train, depending on which way I walk in the train, but I have to do plus and plus only, regardless of which way I walk on the Earth.

Yes, I have, you just don't get it. On the train, it's easy to know when you're walking back and forth and even sideways wrt the train's direction. But wrt the earth, that is not as easy because of the reasons I give up above. How would you know when you are actually moving opposite to or in the same direction in which the earth happens to be moving at any given moment? I suppose it's plot-able, and properly done, it's possible.

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In your walk on the train wrt the speed of it and you ignores the speed of the earth through space because that is not relevant to the FoR you set up.  
But when your scene has to do with your walk on the planet, you cannot ignore the fact that the earth's motion through space is indeed relevant.

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