Re: Principle of equivalence

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- *From*: Bryan Olson <fakeaddress@xxxxxxxxxxx>
- *Date*: Fri, 18 Apr 2008 22:14:01 −0700

rbwinn wrote:

> Well, in the first place, Bryan, there is no way to know for certain
> what the Lorentz equations say with regard to where a clock thrown
> from a moving frame of reference will hit just by saying it was thrown
> from the frame of reference.

"In the first place" you posted wrong or nonsensical statements on what the Lorentz transform predicts. In the second place, I did the math you challenged me to do, and showed the result for which you asked. We're not in the first place anymore, nor the second. Now you are changing the question because the theory you do not like turned out to work in the first place, contrary to your reporting.

> So if I say that a clock is thrown from
> the moving frame of reference in the opposite direction to the motion
> of the frame of reference at half the velocity of the frame of
> reference, then does that clock hit in S at x=0?

What a mess. I assume you mean it is thrown from the train such that in our frame of reference S its velocity is v/2, or in S' its velocity is −v/2.

> No, I do not think so.

Did anyone say it would in that case? If so, who?

> So how do you figure out where it hits in S using the Lorentz
> equations?

The Lorentz transform expresses the S'coordinates of an event as functions of the the S coordinates. In this case, we have

all the quantities relative to S, and you ask for "where it hits in S". What's to transform?

If you want see the key bit of math showing that the Lorentz transform supports the princi