

Re: 1c+1c Closing Velocity of Light and Matter

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-01/0949.html>

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Tom Capizzi wrote:

> *"Henri Wilson" <H@..> wrote in message*
> *news:4p3mt0h4jspkhpfacvidnjddjfqnlqp7cv@4ax.com...*
> > *On Wed, 5 Jan 2005 05:54:40 +1000, Timo Nieminen*
> > *<uqtniemi@mailbox.uq.edu.au>*
> > *wrote:*
> >
> >> *On Tue, 4 Jan 2005, The Ghost In The Machine wrote:*
> >>
> >>> *In sci.physics, Sam Wormley wrote:*
> >>> *> jgreenfield@seol.net.au wrote:*
> >>> >> *Sam Wormley wrote:*
> >>> >>
> >>> >>> *jgreenfield@seol.net.au wrote:*
> >>> >>>
> >>> >>>> *Sam W states that a moving rod IS shortened*
> >>> >>>
> >
> > *It's all bunkum.*
> >
> > *Question: If the speed of a rod is altered by the application of a*
force,
> > *does*
> > *the rod become longer or shorter?*
> >
> > *Answer: Its velocity change can be + or -, depending on the*
observer.
> > *Therefore*
> > *SR's gamma transform can also increase or decrease, depending on*
the
> > *observer.*
> > *Therefore the 'apparent' length of the rod can either increase of*
> > *decrease....but it obviously cannot do both simultaneously IN THE*
PHYSICAL
> > **SENSE.**
>
> *In the same frame of reference. From different frames both conditions*

are

> *possible.*

>

>> *The SR effect is an observational illusion.*

>>

>> *Clearly, after the force is removed, the rod is exactly the same as it was*

>> *beforehand.*

>

> *Again, only in the frame of the rod itself. The application of a force must*

> *change*

> *the velocity of the rod. To an observer in another inertial frame, the*

> *difference*

> *in velocity becomes a difference in gamma, and a changed length.*

So whence the force? If the train is pulled from the front, it should stretch; shunted it should compress. SR considers not this contradiction, and just uses "Proof by proclamation", that a moving train is shorter than a stationary one.

>

>> *Exactly the same argument applies to clock rates.*

>>

>

> *Ditto.*

>

>> *Conclusion: Neither rod lengths nor clock rates are physically altered by*

>> *the*

>> *application and subsequent removal of a force.*

>>

>

> *Again, only in the frame of the moving rod itself.*

>

> *I don't like the predictions of SR either, but when confronted by evidence,*

> *I am*

> *forced to accept reality. There is a classic experiment involving the decay*

> *rate*

> *of some subatomic particle (muon, I think). At non-relativistic speeds these*

> *particles have a known half life. Detectors are situated at the top and*

> *bottom*

> *of a mountain. It takes a known amount of time for these high speed*

> *particles*

> *to travel to the ground level. Based on the half-life, a certain fraction of*

> *them*

- > *are expected to decay. In fact, fewer particles decay than their half-life*
- > *would*
- > *justify. According to SR, the observer in the stationary frame can attribute*
- > *this*
- > *observation to time dilation as experienced by the particles. In the moving*
- > *frame*
- > *of the particles, there is no time dilation. However, the particle frame*
- > *experiences*
- > *length contraction of the height of the mountain, and simply doesn't travel*
- > *as*
- > *far to the ground. To the stationary observer, the mountain doesn't shrink*
- > *and*
- > *to the moving observer time does not dilate. However, when the particles*
- > *arrive*
- > *at the detector, more of them have not decayed than their half-life*
- > *requires. Both*
- > *observers correctly predict the percentage of decayed particles using SR,*
- > *even*
- > *though their explanations couldn't be more different. So, are the effects of*
- > *SR*
- > *real or illusion? Ask the surviving particles!*

No! Ask who made the assumptions on which the light operated clocks which quantify these "measurements" depend. I am not privvy to the workings of these experiments, but I believe that considered examination would show that the thing being tested, really whether $c=c+v$, is done using the assumption (in the clocks' operations), that c is invariant— another classical use of circular logic. Henri or Andro may be able to check it out more concisely.

Jim G
 $c'=c+v$