Re: Time Dilation reduces the Speed of moving Objects

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- *From*: Eric Gisse <jowr.pi@xxxxxxxxx>
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On Sep 19, 1:14 am, Peter Riedt <rie...@xxxxxxxxxxx> wrote:

> On Sep 19, 3:31 am, Darwin123 <drosen0...@xxxxxxxxx> wrote:

> Isn't this an internal contradiction? You assumed that the object was going at 200000 km/s. That was the number you plugged into the time dilation formula. If the speed changes to 14907 km/s, then you have to place that new speed into the time dilation formula. Then you get a new speed, and you have to plug the speed in again. This results in an infinite series.
> The result is the spaceship goes at 0 km/s. It can never go at any other velocity. Every time it starts to move, you have to shrink the speed repeatedly until it is zero.
> Funny! The way physicists use the Lorentz transformation is they plug the speed of the object into the time dilation formula only once. One justification is that recalculating the rate of ticks in a clock doesn't change the original speed of the space ship. that the measuring instrument in the spaceship are in one and only one reference frame.
> If that is too abstract for you, go back to the approach used by H.A. Lorentz.
> Assume that the spaceship contains a clock made entirely of electrically charged particles, that is somehow held together only by electromagnetic forces. Say the clock is made of protons and electrons, with no neutrons. The spaceship is moving at 200000 km/s. All the particles in the clock are moving at 200000 km/s, with a slight variation due to the mechanism of the clock. Moving electric charges generate an extra magnetic field as well as an altered electric field. The magnetic field and altered electric field slow down the mechanism of the clock.
> A similar clock is moving at 0 km/s. It has no extra magnetic field or electric field due to motion. So the clock isn't slowed down by extra electric or extra magnetic fields. So the clock on earth ticks faster.
> During the turn around of the space ship, there are extra

electric and magnetic fields generated by the acceleration of the clock. These acceleration generated electric and magnetic fields result in a speed up of the space ship clock that more than makes up for the slow down caused by uniform motion. Sp when the spaceship clock gets back to earth, it is behind the earth clock.

Okay, the clocks have neutrons as well as protons and electrons.. If I wanted generality, I would have stuck with Einstein. Never the less, you see the point.

The electromagnetic forces would cause a slow up in the spaceship clock even if Einstein's relativity were not exactly true. Time dilation would exist, because all clocks have electrically charged particles. However, the time dilation wouldn't exactly be described by the Lorentz transformation. There is no way a rapidly moving clock containing electrically charged particles could avoid slowing down. Similarly, there is no way a ruler containing electrically charged particles could avoid being shorten. Every object in the universe contains electrically charged particles. Therefore, even without the invariance of the speeed of light there would be a problem building a self consistent standard for measuring time and space.

Einstein provided an exact formula, the Lorentz transformation, that would apply at all relative velocities. Lorentz provided the equations, as it turned out. However, he never showed that these formulas were always true.

The way Lorentz formulated it, the equation for energy of a charged particle− Hide quoted text −

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Darwin,
very well put but it is not a contradiction; it is an impossibility. I should change the subject to "Time dilation reduces the speed of objects to zero". In respect of Lorentz's idea that contraction is caused by compression of electrical particles within the body due to motion or whatever, this has been discarded by SR experts. They now believe that contraction and time dilation are perceptions of an observer due to his speed relative to the observed object. You may disagree but that is the weirdest theory ever devised.

Peter Riedt

Rotate an object such that the observed width decreases. Is the object getting smaller? No − its' a projection effect.

Lather rinse repeat for special relativity, which is effectively
rotations through a complex angle. I got serious drink in me and it
still makes sense − what's your problem??
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