

Re: Ambiguity in the "Affine Connection"

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-02/7767.html>

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globarr@yahoo.com wrote:

> In <1108484659.721716.65280@z14g2000cwz.googlegroups.com>

> Shevek <Shevek4@yahoo.com> wrote:

> > globarr...@yahoo.com wrote:

> > > shevek4 <shev...@yahoo.com> wrote:

> > > > Gerald L. O'Barr wrote:

> > > > > Jack Sarfatti <sarfa...@pacbell.net> wrote:

> > > > > > . . .

> >

> > O'Barr wrote: . . .

> > > Were you asking this question for a reason?

>

> Shevek wrote: [..]

>

> Gerald L. O'Barr <globarr...@yahoo.com> comments:

> / remove 3 dots for e-mail

> A most important question! When you are only

> doing math, and you are only interested in what you

> will mathematically measure (that is, mathematically

> measure in any SR measurement), then there is nothing

> absolute involved in anything! And mathematically

> the ether velocity will be just like any other

> velocity, exactly as you say. And you can be just as

> happy as you want to be with all this (but dumb!)

> Physically, the ether velocity is what allows you

> to know what the real physical lengths are, and real

> physical rates are, of everything being considered.

> This is what is absolute, and it involves physical

> absolutes, not mathematical measurement absolutes.

> The experts in SR do not want to separate their

> thinking into SR math and LET physical. But this is

> what must be done if we are going to be scientific.

> In LET, the mathematically measured length of any

> object can change for two reasons: The object itself

> can change, or the tools being used to make the

> measurement can change. (These changes in the tools

> must of course include changes in the syncs between

- > *the clocks being used.) Many problems in SR include*
- > *changes only in the object or only in changes in the*
- > *tools. Thus, when an SR expert says that there are*
- > *no real changes in an object, only a change in*
- > *perspective, they sometimes are correct. But just*
- > *changes in perspective alone cannot account for all*
- > *of what is seen in all measurements. Real changes in*
- > *objects must also occur, along with changes in the*
- > *tools, to account for all the effects that are*
- > *observed.*
- > *Let me say this again: In SR, you can measure the*
- > *length of a fixed, inertial object, and get as many*
- > *different length values for this object as you use*
- > *unique reference frames to measure it. We have to*
- > *know that the real length of this inertial object*
- > *cannot be changing just because you choose to use a*
- > *different reference frame to measure it. The only*
- > *things that can be changing are changes in the tools*
- > *being used to do the measurement.*
- > *With LET, with having an ether velocity, we would,*
- > *in this theory, insure that the real length of this*
- > *object did not change, and that only changes in the*
- > *tools occurred, as common sense would demand. But in*
- > *SR, such thoughts are not allowed. You are required*
- > *to believe that all these funny things occur, with no*
- > *real changes for anything, and yet we measure all*
- > *these un-allowed changes. It is plain sick to try to*
- > *understand SR, because there is no understand there,*
- > *on the physical level.*

Thanks again. I agree with your thoughts on LET as superior to a pure SR approach, especially on the level of understanding. Your argument sounds similar to that of Boltzmann and the early kinetic gas physicists. Sure, the laws of thermodynamics work; but why? Perhaps there are atoms, and we can derive the laws of thermodynamics. Similarly, the laws of SR and more should be derived from laws of constituent particles.. atoms of space or aether.

However, I still disagree that the theory allows for absolutes. The "real physical length" of an object depends on the definition. Something must be compared, a unit is needed, as everything is indeed relative. There simply is no way to measure the length of an isolated object – or the velocity of an isolated object. The nature of thought and language, requires adjectives to be comparative. I agree that local space–time conditions could provide a natural system to compare to, but not an absolute one.

- >
- > *O'Barr wrote: [..]*
- >
- > *Shevek wrote:[..]*

- > *O'Barr comments:*
- > *Except if there were a real ether, with real flow*
- > *and real speeds and real pressures, these would have*
- > *to have one and only one value at any one position in*
- > *space. And only LET allows this to happen, even on a*
- > *conceptual basis. SR is a weak theory, and does not*
- > *allow any kind of a reality based theory to exist.*
- >

Flow speeds with respect to what? With respect to the laboratory (or another single frame), you're right there must be one value. This could be viewed as a strength to SR – it doesn't require the knowledge of motion of the aether. Quite handy actually, as determining that motion is quite difficult.

- >
- >> *Shevek wrote: [..] [..]*
- >>
- > *Shevek wrote:*
- >> *That experiment tries to measure an ether flow speed*
- >> *through the earth. The "local" measurement in this*
- >> *case is local to the earth. The way I understand it*
- >> *the experiment ruled out a flow through the earth of*
- >> *300 km/s (as expected from CMBR motion), but was*
- >> *not accurate enough to rule out a flow of 30 km/s*
- >> *(as expected from orbital motion).*
- >
- > *O'Barr comments:*
- > *Say whatever you want to say. To really measure*
- > *our ether velocity would first of all take a*
- > *theoretically sound principle, and test with a*
- > *sensitivity that would be hopefully within our*
- > *rotation velocity range, but orbital velocity as a*
- > *minimum. I personally would like to suggest the*
- > *rotating bar experiment. But any test is better than*
- > *none. If we have any major absolute velocity at all,*
- > *either around our galaxy, or any other motion, then*
- > *our absolute velocity should stand out as we rotate*
- > *the direction of the experiment, if the experiment is*
- > *direction sensitive.*

Thanks, I'll look into what the rotating bar experiment is. The only way I'd seen was something like what Krisher et al. did.

- > *O'Barr comments:*
- > *You should be happy with SR math. After all, it*
- > *is Lorentz transforms, so it has to be right! The*
- > *math of SR is absolute math, perfectly. It might not*
- > *have started at this point, but that is what it ended*
- > *up with, exactly!*
- >

It is quite remarkable, beautiful in many ways.

> *O'Barr comments:*

- > *I can predict what my wife is going to say, but I*
- > *still do not understand her.*

Good example. I know exactly what you mean.

- > *Understanding is a very*
- > *valuable thing. And sometimes, we can understand and*
- > *still not be able to predict. You are taking a very*
- > *low road if all you want is to predict, but not*
- > *understand. To predict that a rock will fall, even*
- > *fall at a predictable rate, is great. But to*
- > *understand why the earth can attract us as it does is*
- > *even better than actually knowing the rate at which*
- > *it occurs.*
- >

Understanding is a delicate balance that includes fooling yourself at some level. You shouldn't try to understand the phenomenon of understanding too hard, you will wind up like Ouroboros.

Cheers – shevek