

Re: Another Question They Cannot Answer

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2006-02/msg00310.html>

- *From:* "Sue..." <suzysewnshow@xxxxxxxxxxxxx>
 - *Date:* 3 Feb 2006 23:01:41 -0800
-

Henri Wilson wrote:

On 3 Feb 2006 07:26:34 -0800, "PD" <TheDraperFamily@xxxxxxxxxx> wrote:

Henri Wilson wrote:

On 2 Feb 2006 05:52:23 -0800, "PD"
<TheDraperFamily@xxxxxxxxxx> wrote:

That's a generality. Explain precisely, using
an example, of what the
deviation from the truth is.

You must be acting dumb.

..get a bloody telescope and look at a star 500 LYs away.

What do you see?

A 500 yo willusion of that star, of course.

I'm sorry, I was under the impression that "history" and "illusion"
meant different things.

Are you saying that the star was NOT that way 500 years ago?

Well the star WAS that way but you are still seeing a willusion of it. For one
thing YOU have moved. Its light will be doppler shifted differently than it
would have been if you had remained where you were 500 years ago.

But basically the willusion is all about how, where and what the star is really
doing NOW rather than 500 years ago.

You have the willusion of it then, the problem is to determine what it is like

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NOW.

Or are you saying that when I measure a moving object's length, I'm not measuring the length as it is NOW but as it was a little while ago?

That depends on the accuracy of your measurement. Basically, the closer it is, the more accurate will be the measurement.
Every observation you make is $D/(c+v)$ seconds behind your own 'present'.

Surely you know that.

Luckily this doesn't have much practical significance on Earth...except maybe the delay in TV satellite hookups.

It isn't there, where you are looking, any more...and it might have changed colour or brightness.

The question is to try to determine the current position and state of the star from the illusion you see.

2. Length is defined in terms of a measurement procedure.

Only measurements carried out in the object's frame can be accepted as being 100% correct.

And yet...

1. The laws of physics are identical, regardless of the frame chosen.

The laws might be but parameter values aren't. That's only a postulate anyway.

Yes, you're right, there's a careful distinction between laws and parameter values. Note that length is a parameter value, and an observer-dependent one, not a law.

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No, the actual length is NOT observer dependent.
Observers simply make mistakes in their measurements of it.

While Einstein elevated for the sake of his paper the invariance of physical laws to a postulate, it is a *highly tested* postulate. The invariance of the laws of electrodynamics and mechanics are thoroughly tested in experiment. The invariance of the laws for quantum field theory (including all interactions in the Standard Model) was built in, and the frame-invariance of those laws are *extremely* well-tested.

Preach to yourself as much as you like but you wont be impressing ME.

<< There is NO evidence in support of SR. >>

Much of it may be bogus interpretation but it can hardly be wise to get that close to saying Pythagoras had it all wrong.

What we lack is evidence of a "space-time continuum".

Print this diagram and its mirror image on the right hand side of the paper.

<< Figure 3: The wave impedance measures the relative strength of electric and magnetic fields. It is a function of source structure. >>

<http://www.conformity.com/0102reflectionsfig3.gif>

<http://www.conformity.com/0102reflections.html>

That is all the evidence you need of a mechanism that provides what *seems* an observer that can affect incident light. In fact, effective observers do alter E/H energy distribution in their near-field and that is sufficient for SR... as the two postulates apply to electromagnetism.

That is why we polish telescopes and fibre optic ends.

"Relativity and electromagnetism"

<http://farside.ph.utexas.edu/teaching/jk1/lectures/node6.html>

The theory runs into trouble when local EM effects of material coupling structures are carelessly extended to free space. It is improper to add up the absolute value of retarded and advanced potential.

Replacing the circle-tending-polygon of the 1905 paper, we have instead in 1920:

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<< I am guilty of a certain slovenliness of treatment, which, as we know from the special theory of relativity, is far from being unimportant and pardonable. It is now high time that we remedy this defect; but I would mention at the outset, that this matter lays no small claims on the patience and on the power of abstraction of the reader. >>

<http://www.bartleby.com/173/23.html>

Further abstraction is, of course, no remedy for equating temporal advance with temporal delay.

<< It should be pointed out that the Feynman–Wheeler model runs into trouble when one tries to combine electromagnetism with quantum mechanics. These difficulties have yet to be resolved, so at present the status of this model is that it is ``an interesting idea," but it is still not fully accepted into the canon of physics. >>

<http://farside.ph.utexas.edu/teaching/em/lectures/node51.html>

Sue...

2. You don't hold the same restrictions when it comes to measurements of velocity, acceleration, force, momentum, kinetic energy, potential energy, and so on and so forth. This restriction ONLY applies to length and time. Why?

I have told you. It is obvious.

No, I'm sorry, it's not obvious. You simply say the numerator and denominator of a ratio each must be measured only in the rest frame, but the ratio can be measured reliably in any frame. You say this fact is "interesting", but you don't defend it at all.

Well my statement above about 'dx' explains it.
Movement is about the position of a POINT on the object, not about its length.

These
statements
are
not

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contradictory,
as
I've
said
over
and
over
again.
HW,
however,
cannot
fathom
how
physical
length
can
NOT
be
an
intrinsic
property
of
the
rod,
though
he
has
no
problem
accepting
this
for
velocity
or
momentum
or
kinetic
energy.

Don't
lie.
Length
IS
an
intrinsic
property
of
the
rod.
It

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occupies
an
absolutely
constant
interval
of
space
no
matter
how
or
where
it
is
taken.

I'm not
lying. No, it
doesn't.
That's
precisely
the point.
Your
assertion
that it does
doesn't
make it fact.

But you and your friends
have agreed that nothing
happens to the rod when it is
moved. Have you changed
your mind again?

No. That's because length is not an intrinsic
property of the rod.
Observing a change in the length does not
imply a change in the
intrinsic physical properties of the rod. I
don't know why you would
have thought I had reversed my statement
about this. I've been
absolutely consistent.

'OBSERVING' a change when you know there hasn't been
one is evidence of a
willusion.

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I'm sorry, I don't KNOW there hasn't been one. That erroneous conclusion stems from an improper *assumption* that length is an intrinsic property of the object, and that since nothing physical happens to the object, no intrinsic property of the object can change. Unfortunately, the assumption is incorrect, and so the conclusion is also faulty.

Look, if one thousand observers were equipped with identical measuring rods and clocks and then subsequently fired at different speeds past a metre rod – the length which they are required to measure – would and should they all get the same answer?

They SHOULD because they were measuring the same object.....but they WOULD NOT because they would be dependent on light's finite travel time.

Therefore their measurements would all be wrong by different amounts...but the rod didn't change one iota.

PD

HW.

www.users.bigpond.com/hewn/index.htm