

Re: The real twin paradox.

## Re: The real twin paradox.

---

*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2007-11/msg01466.html>

---

- *From:* "Sue..." <[suzysewnshow@xxxxxxxxxxxxx](mailto:suzysewnshow@xxxxxxxxxxxxx)>
  - *Date:* Thu, 22 Nov 2007 03:33:05 -0800 (PST)
- 

On Nov 22, 3:27 am, bz <[bz+...@xxxxxxxxxxxxxxxxxxxxx](mailto:bz+...@xxxxxxxxxxxxxxxxxxxxx)> wrote:

"Sue..." <[suzysewns...@xxxxxxxxxxxxx](mailto:suzysewns...@xxxxxxxxxxxxx)> wrote  
[innews:7c3700d6-75df-4a6d-a7d2-ff1a5d44a7a8@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:innews:7c3700d6-75df-4a6d-a7d2-ff1a5d44a7a8@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx):

On Nov 21, 8:33 pm, bz <[bz+...@xxxxxxxxxxxxxxxxxxxxx](mailto:bz+...@xxxxxxxxxxxxxxxxxxxxx)> wrote:  
[...]

Oh, light clocks are not difficult to build.  
You can take a fiber optic transceiver and a mirror and a bit  
of  
electronics.

Do a little optical impedance matching to free space and set  
up your  
mirror at a convenient distance.  
Set the electronics so that every time a tick is received, a new  
tick  
is launched.  
Press the little 'starter' button.  
You have a light clock.

Any high school kid can build one.

The real trick is to build a 'normal clock' that ACTS like sue  
says a

Re: The real twin paradox.

'normal clock' should act.

Have you read the chapter is SR about Fizeau's experiment?

'the chapter is SR'? perhaps you mean 'in'?

Fizeau measured effects of moving medium on light.

Does the Fizeau Experiment Really Test Special Relativity?

Authors: Clement, Gerard American Journal of Physics, v48 n12 p1059–62

Dec

1980 The motivation and interpretation of the Fizeau experiment are reviewed, and its status as a test of special relativity is discussed. It is shown, with the aid of a simplified, purely mechanical model of the propagation of light in matter, that the experiment actually cannot discriminate between Galilean and relativistic kinematics. (Author/SK)

The Experiment of Fizeau as a Test of Relativistic Simultaneity

Curt Renshaw — he thinks Fizeau falsifies SR. He includes Doppler effects in his calculations in a way that may not be valid.

Do you know how to use vector addition to compute the round trip of an aeroplane?

yes. I can even use vectors to calculate instantaneous power in a reactive circuit. I don't need to use imaginary numbers or suppose that the power is imaginary.

[quote from <http://www.maths.abdn.ac.uk/events/einstein/reid.html>]

Much more recently, there was some controversy over what happens when the medium is moving at right angles to the direction of travel of the light. The result was settled by an experiment carried out here in Aberdeen in 1971, with Prof R.V. Jones building the equipment and with Prof Mike Player covering the theory. The result vindicated the predictions of Maxwell's equations and the predictions of special relativity. [unquote]

You and Dave still seem unfamiliar with this material.

<http://www.glenbrook.k12.il.us/gbssci/phys/Class/vectors/u311f.html>

Re: The real twin paradox.

Do you know how to use it to compute how much a light-clock slows?

Light clocks gave Einstein a simple way to derive the Lorentz equations.  
You seem to think that ONLY light clocks are effected by relativistic motion.

\*Only\* light clocks will match the Lornetz transform.

Again: !!!

<<A Lorentz transformation or any other coordinate transformation will convert electric or magnetic fields into mixtures of electric and magnetic fields, but no transformation mixes them with the gravitational field. >>

<http://www.aip.org/pt/vol-58/iss-11/p31.html>

[http://en.wikipedia.org/wiki/Gauge\\_fixing](http://en.wikipedia.org/wiki/Gauge_fixing)

<http://arxiv.org/abs/physics/0204034>

!!!

Light does not move inertially. You have said so yourself.

[...]

....

Would you bet your life on Special Relativity being true? Anyone who relies on GPS in bad weather may be doing just that. Probably thousands of aircraft passengers and crew do so every day. ....

Conclusion

You are not using GR. You are in fact inadvertantly arguing against its most basic assumptions. Inertial couplings can be modeled through mass energy equivalence when Newton's ether is abandoned.

You keep putting the ether back into the interacton but you are not insisting on a mass to make the coupling.

From the SUMO link you probably noticed moving mass is

not condidered equivalent to moving light. If you believe it is then you need to offer your services to develop

Re: The real twin paradox.

Re: The real twin paradox.

long-range atom lasers.

I'm showing as a final slide a table that made an impression on me when I first saw it many years ago. It lists 13 key experiments that have a testing relevance to Special Relativity in the columns, and the predictions of 6 alternative theories to Special Relativity in the rows. The red boxes mark the places where the experimental results disagree with the predictions of the theory. Only Special Relativity is in agreement with all testing experiments. ....

1: Aberration, 2: Fizeau convection coefficient; 3: Michelson-Morley; 4: Kennedy-Thorndike; 5: Moving sources and mirrors; 6: De Sitter spectroscopic binaries; 7: Michelson-Morley, using sunlight 8: Variation of mass with velocity; 9: General Mass-Energy equivalence; 10: Radiation from moving charges; 11: Muon decay at high velocity; 12: Trouton-Noble; 13: Unipolar induction, using moving magnet. [unquote]

Is special relativity running for public office?

That is no substitute for some evidence that light moves inertially.

My automobile does not recoil backward when I switch on the headlamps so I am not hopeful you will find any evidence.

You, on the other hand seem to be a proponent of fringe science theories such as those at

<http://www.wbabin.net/physics/light.htm>

Most of my URL's are to Einstein 1920 paper, his Nobel lecture Weinberg's articles or Fitzpatrick's lectures. Which are you calling \*fringe science\* ?

[quote]

The article I never offered snipped and it's URL crippled. If you want to argue about something I offered, I am happy to do so, but don't ask me to support or refute something you can only attribute to a Vulcan mind-meld.

....and stop trying to read my mind. It is Written in Swahili.

Re: The real twin paradox.

Re: The real twin paradox.

:o)

Maybe L. B. Boldyreva and N. B. Sotina, HW, KS, and Sue are right. Maybe time IS absolute and independent of motion through space. Maybe the clocks in the GPS satellites only SEEM to be influenced by relativity. Maybe when they are brought back to earth the missing ticks will be found to have accumulated in a little 'tick bucket' and the clocks will be shown to be the exact same age as their earthbound twins. Maybe the sun rises in the west and sets in the east.

I don't know about L. B. Boldyreva and N. B. Sotina but Einstein, Hilbert and Noether seemed to think time had to be as invariant as mass.

<< invariance with respect to time translation  
gives the well known law of conservation of energy >>  
[http://en.wikipedia.org/wiki/Noether's\\_theorem](http://en.wikipedia.org/wiki/Noether's_theorem)

If you want to trade energy for time then drive a faster car to work. The \*time\* you saved in transit will appear on you fuel bill.

....and you'll also find that silly plot of proper-time intervals used as a feeble prop for the twins myth, actually corresponds to a real world phenomena instead of absurd nonsense. It will correspond to the \*energy\* exchanged by your automobile.

Show me one clock that doesn't appear to be influenced by relativistic motion. [besides the pendulum clock which doesn't even run at zero G].

No... You need to better define terms if you want to prompt meaningful study of some particular clock design.

\*appear\* \*relativistic\*

Also consider the part played by mass, inertia and oscillator path length for any particular design.

Why do we need to postulate some magical property of space [that we are unable to observe here] and tie the observed slowing of all kinds of clocks to the way that magical property interacts with moving matter?

## Re: The real twin paradox.

We need to do this because we do not have a mechanism for gravity. When a pushed car pushes back for a period of \*time\* we are attributing the effect to a mass elsewhere that the car cannot communicate with, faster than the speed of light.

<< I shall turn to those problems which are related to the development which I have traced. Already Newton recognized that the law of inertia is unsatisfactory in a context so far unmentioned in this exposition, namely that it gives no real cause for the special physical position of the states of motion of the inertial frames relative to all other states of motion. It makes the observable material bodies responsible for the gravitational behaviour of a material point, yet indicates no material cause for the inertial behaviour of the material point but devises the cause for it (absolute space or inertial ether). This is not logically inadmissible although it is unsatisfactory. For this reason E. Mach demanded a modification of the law of inertia in the sense that the inertia should be interpreted as an acceleration resistance of the bodies against one another and not against "space". This interpretation governs the expectation that accelerated bodies have concordant accelerating action in the same sense on other bodies (acceleration induction). This interpretation is even more plausible according to general relativity which eliminates the distinction between inertial and gravitational effects. It amounts to stipulating that, apart from the arbitrariness governed by the free choice of coordinates, the  $g_{\mu\nu}$ -field shall be completely determined by the matter. Mach's stipulation is favoured in general relativity by the circumstance that acceleration induction in accordance with the gravitational field equations really exists, although of such slight intensity that direct detection by mechanical experiments is out of the question. >>

[http://nobelprize.org/nobel\\_prizes/physics/laureates/1921/einstein-lecture.html](http://nobelprize.org/nobel_prizes/physics/laureates/1921/einstein-lecture.html)

Sue...

Re: The real twin paradox.

Re: The real twin paradox.

--  
bz

please pardon my infinite ignorance, the set-of-things-I-do-not-know is an infinite set.

bz+...@xxxxxxxxxxxxxxxxxxxx remove ch100-5 to avoid spam trap- Hide quoted text -

- Show quoted text -