Re: The real twin paradox.

Source: http://sci.tech−archive.net/Archive/sci.physics.relativity/2007−11/msg01403.html

- *From*: "Sue..." <suzysewnshow@xxxxxxxxxxxx>
- *Date*: Wed, 21 Nov 2007 10:21:26 −0800 (PST)

On Nov 21, 11:48 am, "Josef Matz" <josefm...@xxxxxxxx> wrote:

> "Dirk Van de moortel" <dirkvandemoor...@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> schrieb
> im Newsbeitragnews:tWT0j.217820$gM5.12435682@xxxxxxxxxxxxxxxxxxxxxxxx
>
> > "colp" <c...@xxxxxxxxxxxxx> wrote in message
> >
> > news:06b84031−18aa−4644−bfb7−43f49f46ae6a@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
> >
> > > This thought experiment is like the classic twin paradox, but
> > in this
> > > expirement both twins leave earth and travel symmetric
> > return trips in
> > > opposite directions.
> > >
> > > Since the paths taken by the twins in this experiment are
> > symmetric,
> > > they must be the same age when they meet on their return to
> > earth.
> > >
> > > In this experiment the twins maintain constant observation of
> > each
> > > other's clocks, from when they depart until they return and
> > find that
> > > their clocks tell the same time.

> Special relativity says that each twin must observe that the other's
> clock is running slow, and at no time does special relativity allow
> for an observation which shows that the other clock is running fast.

No, special relativity says much more precise than that
"moving clocks" are running slow.

It says something about intertial observers who measure
times between ticks on remote, moving clocks.

When your two clocks fly apart, each clock will measure
this time to be longer and conclude that the other clock
is "running slower".
While clock A is coasting, according to clock A, each
tick on clock A is simultaneous with some tick on clock B
with a smaller time value.
While clock B is coasting, according to clock B, each
tick on clock B is simultaneous with some tick on clock A
with a smaller time value.

After clock A has made its turnaround, it has shifted to
another inertial frame, in which according to clock A, each
tick on clock A is simultaneous with some tick on clock B
with a larger time value.
After clock B has made its turnaround, it has shifted to
another inertial frame, in which according to clock B, each
tick on clock B is simultaneous with some tick on clock A
with a larger time value.

> The paradox is that special relativity says that a twin will never see
> the other twin's clock catch up, but the clocks must show the same
> time at the end of the experiment because of symmetry.

> When they finally meet, for both clocks, this larger time reading of the simultaneous events on the other clock is compensated by the "more slowly running time" on that clock such that they read the same time when they are reunited.

Hello Dirk

If you could mathematically demonstrate that the time delays of the symmetric clock A as viewed by B can be
compensated somehow you have solved the paradox !

Would you tell us idiots how this runs in SR ?

And please: SR says that both clocks go physically physically different (slower) than the other.

You have to use a light−clock moving in stationary media to get the *physical* behavior because light does not move inertially.
http://www.anselm.edu/homepage/dbanach/st9.jpg

<<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

If you want to relate the light−clock's rate to inertial frames or kinetic energy, mass/energy equivalence is used to couple to an inertial field or pseudo−ether.

http://www.bartleby.com/173/15.html

What the travelers see each other's light−clocks or normal clock doing is irrelevant. They all have to agree on the total number of ticks at experiment's conclusion and normal clocks that are not responsive to motion through a dielectic shouldn't change rate.

Sue...

Josef

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