

Re: Einstein's Train Gedanken Re-visited

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2009-06/msg02572.html>

- *From:* "Whoever" <noone@xxxxxxxxxxxx>
 - *Date:* Fri, 26 Jun 2009 08:48:13 +1000
-

"jem" <xxx@xxxxxxx> wrote in message [news:eMK0m.1145\\$dz7.393@xxxxxxxxxxxxxxxx](mailto:news:eMK0m.1145$dz7.393@xxxxxxxxxxxxxxxx)

On Jun 24, 9:38 pm, "Whoever" <no...@xxxxxxxxxxxx> wrote:

"Bruce Richmond" <bsr3...@xxxxxxxxxxxx> wrote in message

news:b044dd85-4e58-44f2-a2ba-f20bb13d94b6@xx

On Jun 24, 1:20 am, "Whoever" <no...@xxxxxxxxxxxx> wrote:

"Bruce Richmond" <bsr3...@xxxxxxxxxxxx> wrote in message news:dcf2a5b6-21b5-4d0f-bd5b-0ff69cf82776@xx

On Jun 23, 10:54 pm, "Whoever" <no...@xxxxxxxxxxxx> wrote:

"Bruce Richmond" <bsr3...@xxxxxxxxxxxx> wrote in message news:2939b7dd-20fb-43d8-9210-3f346f67e78f@xxxxxxxx

For starters what

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you
proposed
and
what
you
described
were
not
the
same
thing.

Yes
..
they
are

Your
discription
still
had
the
clock(s)
moving
on
the
earth's
surface.

No
..
it
clearly
didn't.
Only
one
of
them.

Ok, I'll
grant you
that. I
misinterpereted
what you
were
saying.

That's ok .. glad we cleared
that up

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==>>

>>

So

..

what
would
happen
if
we
moved
the
clocks
apart
at
the
same
speed

according
to
the
(almost)
inertial
frame
of
the
center
of
the
earth.
So
(for
example)
the
one
moving
with
the
earth
would
stay
'still'
(relative
to
the
earth)
and
the
other
one
move

away
at
twice
the
speed
of
earth's
rotation
in
the
opposite
direction.

==
See
there
"the
one
moving
with
the
earth
would
stay
'still'
(relative
to
the
earth)
"

So
they
are
still
moving
along
curved
paths
in
the
ECI
system.

Yes
they
are

Combine
that
with

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the
fact
that
even
the
ECI
system
is
not
truly
inertial
and
it
becomes
very
unlikely
that
the
effects
will
cancel
out.

http://en.wikipedia.org/wiki/Earth_Centered_Inertial

"It
should
be
noted
that
ECI
frames
are
not
truly
inertial
since
the
Earth
itself
is
accelerating
as
it
travels
in
its
orbit
about
the
Sun."

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Grr
...
Picky
..
so
the
only
affect
is
due
to
the
movement
of
the
earth
around
the
sun
and
the
sun
around
galactic
core,
and
whatever
non-inertial
movement
the
galaxy
may
have.
So
..
ignoring
those
effects
..
treating
the
ECI
as
inertial
for
the
sake
of
this
thought
experiment

..
(which
seemed
to
be
obvious
from
context,
but
I
see
we
need
to
make
it
explicit)
what
do
you
claim
about
the
clocks
as
described?–
Hide
quoted
text
–
–
Show
quoted
text
–

I thought
the whole
purpose of
this exercise
was to get
clocks in
sync
without
using light
signals so
that a real
world
experiment
could be
done to

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measure
one way
light speed
isotropy.

Yeup .. this would be one way to do it .. moving one way westward with the appropriate speed would keep it in sync.
Or ... put both clocks on a train heading west at the appropriate speed , and do mutual clock transport there and they'd be in sync and the train frame would then be (close to) inertial. Again, we're ignoring here the orbit of the earth, perturbations from other bodies, movement of sun around galaxy etc. its pretty much impossible to get a perfectly inertial frame
..
and that a suitable train and track (or plane) would be very impractical
:)

The plane sounds like the best idea so far. It could be done. And according to SR the clocks should stay in sync as they are moved apart, and when moved slowly still be in sync when brought back together.
But once again we are using an assumption of SR to come to that conclusion. LET says that the clocks go out of sync when apart but return to being in sync when brought back together.

Well .. LET always says two things. What we measure and observe as happening (which is reality as far as we are concerned) and what REALLY

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really is happening in the ether frame (which is not reality as far as we are concerned).

LET does say that we need clocks synced as per SR to make a measurement that is valid for our frame of reference. BUT it also says that any measurement we make that is valid in our frame of reference is REALLY not valid at all because REALLY everything has contracted and slowed down due to movement through the aether .. which of course, we cannot detect or determine. One thing about LET, it REALLY just makes things unnecessarily confusing.

As opposed to SR which also uses different coordinate systems for each frame, which do not agree with each other. Which is why you get relative simultaneity and have to use the LT when comparing coordinates from the two frames. For many that is confusing.

What's more, if you check them using light signals when they are apart you will measure them to be in sync, if you assume that light travels at c relative to your central master clock. But since it is highly unlikely that the master clock is at rest in the ether frame that is not a valid assumption.

LET says we will measure what SR says we will measure. LET just adds to what SR says by claiming that everything we observe and measure is an illusion and wrong :):)

Do you think the fact that thermometers don't measure IQ makes their measurements "illusion and wrong"? In LET, clocks and rulers don't measure time and distance (nor are they meant to).

Yes they do. If they don't, it makes them rather pointless then. LET claims that the clocks and rulers are distorted by the motion through the aether, which 'magically' slows down every process and shrinks every length, and so the measurements they give are wrong. They still measure length and time. They just give distorted answers. Unless of course, the observer happens to be at rest in the aether. In which case the answer

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he gets are correct. Except he doesn't know it because the aether is undetectable (one of its 'magical' properties. its also a perfectly rigi solid and permeates all matter .. amazing stuff).

I can only imagine that LET followers end up

needing psychological help knowing that everything they see
is an illusion
:):)

There are no illusions in models.

LET claims everything we see is an illusion .. a distortion of the true reality .. which is the the spheres we see are not spherical, the cubes are not cubes. A distortion that happens to make things at rest relative to us look like what they would in true reality if we were all actually at rest in the aether.