Re: A Challenge to Orthodox Relativity

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* *Date*: Thu, 07 Dec 2006 22:42:39 GMT

<Paradise_@xxxxxxxx> wrote in message
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> Pax wrote:
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> > > Pax wrote:
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> > > > Paradise wrote:
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> > > > > > > Paul Cardinale wrote:
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> > > > > > > > Paradise wrote:
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> > > > > > > > > Although it is said that time

slows down and stops at the event horizon of a black hole (due to the supposed fact that a local increase of gravity slows the local rate of time flow), I intuitively disagree. I would expect that time would run infinitely fast at the event horizon. That's because time is a measure of entropy or change. Acceleration is a measure of change in velocity, and velocity is a measure of change in position. In other words, acceleration is a measure of change in the change of position. Since a mass accelerates as it approaches the event horizon, the time rate of change (in position), or entropy, of the mass is increasing. Therefore, the rate of time flow for a mass entering a black hole should be increasing. I believe that the velocity of the mass increases purely because it's local rate of time flow is increasing.

So according to your intuition,

time dilation is proportional to acceleration.

Yes.

A massive object's velocity increases in response to an increase of gravitational force.

Yes, since gravity and acceleration are identical forces, according to Relativity.

Yet, according to the standard interpretation and application of Einstein's equations, the velocity of a massive object entering a black hole will appear to decrease as it gets progressively closer to the event horizon and will actually never be observed to enter the black hole because it will take an infinite amount of time for it to reach the event horizon (from a relatively stationary perspective outside the event horizon).

Yes, I have heard just that said.

Yet, the fact is that the object's velocity should increase as it approaches the event horizon, not decrease.

Logically, yes.

If the object's observed/measured velocity decreased in response to an increase of gravitational force a paradox would be created. An object cannot be accelerating and decelerating simultaneously.

Except through an illusionary effect causing what is observed to differ from what is actually occurring, perhaps.

I will concede that an observer may not be able to see an objects true position due to delays in the propagation of reflected light. For the same reason, we are not able to see the true positions of distant stars. We see it's past state and position. Not it's present state or position. The same would be true of an acclerated object. Yet, the magnitude of such a delay would depend upon it's distance from an observer as opposed to it's velocity (alone).

> I really need to think about this more before
> I even attempt an
> answer...
> which I may not ever have, actually. lol In
> the meantime, I'll just
> read
> and, perhaps, pop in from time to time with
> comments.
>
> By the way, I found your initial post very
> interesting, and worth
> further
> consideration, especially since the claims re
> the Lorentz
> transformation
> have always bothered me on a level I really
> can't articulate properly.

Thank you.

> It seems logical to me that the
> transformation should only be
> illusory,
> not actual yet, from what I can tell, it is
> asserted as an actual,
> physical transformation.

The situation is far more complex than was outlined in my
intial post.
I
presently believe that a Lorentz−Fitzgerald contraction may
manifest in
the case of some non−gravitationally accelerated masses and
would be
the
result of inertial forces. For example, a rocket, where the aft
is
prevented from expanding opposite the direction of motion
by the thrust
force of propellent. One will therefore observe or measure a
contraction
in the length of the rocket if observed/measured
perpendicular to the
axis
of the rocket's motion (since it's aft cannot expand so as to
counterbalance the cotraction in the fore of the rocket). The
rocket's

contraction would be a real physical deformation rather than an illusory deformation. Such a contraction may be counterbalanced at certain (relative) velocities by the effect of a delay between photon absorption and emission (or reflection) by visible or detectable EM radiation which would cause the object (the rocket in this case) to appear stretched or expanded along the axis of motion. One must take into consideration the distance of the object on it's apparent or relative velocity (remember what I said to you and Midjis in another forum concerning what I shared with professor Kaku?). The further away an object is, the slower it will appear to move. So, you may be able to observe the physical contraction which occurs as a result of acceleration without the contraction being counterbalanced by an illusory expansion or stretching along the axis of motion if it appears to move slow enough. If it is close, so as to appear to move fast, it's contraction will be offset by the illusory expansion.

> Another of my main curiosities concerns the math: Why is it a given y' = y when, from what I can see, it shouldn't? It appears that, since y' is also subjected to forward movement, it should transform as well, though not as markedly as x'.

I believe you are correct. Yet the transformation along the Y axis would be due to the effect of particles being displaced along the X

axis as
opposed to an interaction with the Aether. In other words,
matter
expands
along the Y axis the same as a sphere of maleable material
can be
deformed
into a disk having a larger diameter than the sphere, if
compressed.
Imagine that horizontal surface upon which the sphere of
maleable
material
is compressed corresponds to the Y axis and the vector of
compression,
which is perpendicular to the Y axis, corresponds to the X
axis.
Obviously, the expansion of the sphere along the Y axis is
caused by
the
subsequent displacement of the material's particles as a result
of
displacement along the X axis. Do you see?

Yes... but I can't accept it due to the fact the acceleration is steady
in a
single direction in a straight line with x'. x' is contracted along its
entire length, therefore, if the contraction holds true, y' should not be
able to expand in the direction of acceleration regardless of
malleability.

I am not saying that the object's Y axis expands along the X axis. I am
saying the object's Y axis expands along the Y axis.

I see that now. :)

An interesting visualization is a five−pointed star shape. Assume the top
point of the star has its tip pointing directly along the x' axis, so
that
the star is balanced equally, with half of it (half the top point, one
"arm"
and one "leg") to either side of the x' axis. The side "arms" of the star
contain both a z' coordinate and a y' coordinate, which y' is *behind*
z',
away from the direction of movement.

If the y' undergoes transformation, what happens to the z' tied to it? On
top of that, the system would also have a w' coordinate, to correspond to

> > the sides that join to make the tip of the top point of the star, that
> > should also undergo transformation. What happens along that w'
> > coordinate,
> > which is directly tied to the y' coordinate?
> >
> > It's easy to lose the thrust of the argument concerning transformation
> > when
> > considering either a round shape or a bullet shape, but a shape such as a
> > five−pointed star brings the process into sharp focus for me... well, at
> > least as concerns a transformation's required methods of action upon an
> > object. lol When considering all that, one can more readily understand
> > why
> > Einstein decided to forget about trying to transform y' and just made it
> > equal to y. <grin>

> I am experiencing difficulty deciphering your description.

I'm not surprised, since I had it so screwed up. lol Perhaps it's due to
my missing the very important word "perpendicular" in Einstein's example? Of
course y' wouldn't be affected if it is perpendicular to x'. Good thing I'm
old enough to be used to getting things wrong. I was assuming a flat... y'
was... oh, nevermind. <grin>

> Yet, I intuitively understand what you are saying, or so I believe.
> Hopefully, the response above clarifies my perspective where this issue is
> concerned?

Yes. Thanks for bearing with me. :)

Anyway, what happens to the angles of the star in the direction of flight?
Does the thing appear to crumple in on itself? There are some parts of the
shape that are more subject to forward acceleration than others, are they
more affected, or is the affect uniform from nose to tail, regardless of
angle?

If
an
object
were
to
appear
motionless
at
the
speed
of

light, photons would not propagate and massive particles accelerated in a paticle accelerator would take progressively longer to reach a target as the velocity is increased. Yet, THIS is not what is observed. Photons DO propagate. And accelerated particles intersect with their targets in less time when accelerated at increased velocities.

Obviously, the standard interpretation is "empirically wrong". Not I.

Wanted to mention I thought the above was a great bit of logic.

Thank you.

As an interesting aside, from the FoR of one ion in an accelerator moving at almost c, the other ion coming at it from the opposite direction (also moving at almost c) is approaching it at almost 2c. From the FoR of one of the researchers, the ions are coming together at almost 2c. Yet, in a conversation I had with a researcher from

RHIC
a couple of
years ago,
he refused
to even
consider
that simple
observation,
insisting
velocities in
excess of c
were not
possible.

Although the relative
velocity between the two
particles may
appear
to exceed c, the velocitities
of the two particles does not
exceed c
relative to the boundary (in
other words, from the
reference frame
of
the ZPE "Aether").

If you take the PoV assumed in Relativity,
and visualize the encounter
from the FoR of one or the other ion, both
which are assume to be at
rest
in their own inertial frames (once they have
achieved maximum
velocity),
the other ion is approaching them at almost
2c. Yes, neither of the
ions,
when considered from external to their FoRs
is moving faster than c,
however Relativity doesn't assume that
position and, actually, neither
do
the experimenters, since they rely on a
collision at almost 2c in
their
experiment.

I would guess it must be considered a

> > > > "fictitious" problem, as Tom
> > > > Roberts alluded to in another post. However,
> > > > it brings up an
> > > > interesting
> > > > point where two objects in the universe are
> > > > each moving at almost c.
> > > > If
> > > > they are moving toward each other, would
> > > > an observer on either object
> > > > see
> > > > the other object approaching? From the FoR
> > > > of one object, at rest in
> > > > its
> > > > inertial frame, wouldn't the other object be
> > > > considered to be
> > > > traveling
> > > > superluminally?
>
> > > According to SR they are travelling superluminally. I am
> > > inclined to
> > > say
> > > that the other particle will appear to be an anti−particle from
> > > the FoR
> > > of
> > > each particle.
>
> > From collider experiments, it seems obvious both objects would still
> > interact catastrophically, even if they never saw each other coming. Of
> > course, that's *iff* the collider results translate into real world
> > applications.
>
> Yes, they would probably interact catastrophically. I suspect it all
> depends upon the nature of the particles. For example two electrons
> accelerated towards each other would repel. The coulomb repulsion would
> increase as velocity increased. The question I ask is whether the two
> electrons could actually collide. Would the coulomb force prevent them
> from colliding or not. I would expect that the coulomb force would prevent
> them from colliding. Yet, I intuitively suspect that it is possible for
> two electrons to collide. If so, I wonder whether it becomes possible
> because they "see" each other as oppositely charged due to relativistic
> phase inversions resulting from the relative supraluminal motion.

If they are each moving superluminally in relation to the other, how could
either detect the other?

Be well − Pax

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