Re: answer to YBM's bell problem

Source: http://sci.tech−archive.net/Archive/sci.physics.relativity/2008−09/msg00822.html

- *From*: YBM <ybmess@xxxxxxxx>
- *Date*: Fri, 12 Sep 2008 01:37:07 +0200

rbwinn a écrit :

> On Sep 11, 2:12ýpm, YBM <ybm...@xxxxxxxx> wrote:
>
> > rbwinn a ýcrit :
> >
> > > On Sep 11, 12:34 pm, YBM <ybm...@xxxxxxxx> wrote:
> >
> > ...
> >
> > > > The rays of light will
> > > > not meet at the origins of
> > > > both frames of reference. So
> > > > from A, an
> > > > observer will only observe
> > > > the bell in A to ring, from B
> > > > an observer
> > > > will only observe the bell in
> > > > B to ring.
> > > > With my equations, the bell
> > > > in A will ring first, then the
> > > > bell in
> > > > B. You will hear both bells
> > > > in both frames of reference.
> > >
> > > Now,
> > > YBM,
> > > explain
> > > the
> > > same
> > > events
> > > using
> > > the
> > > Lorentz

equations.

I did here :http://groups.google.com/group/sci.physics.relativity/msg/a39fe2523

There is no such absurdities in SR : for SR, the bell rings in both frames... It just happens that in frame B they were emitted at coordinates (−a/sqrt(1−v^2/c^2),0,0) at time va/(c^2*sqrt(1−v^2/c^2)) for the "left" light ray, and : (a/sqrt(1−v^2/c^2),0,0) at time −va/(c^2*sqrt(1−v^2/c^2))

Uh huh.

> Is there something you don't understand
> above ?
>
> > But if you put a bell at the
> > origin of each frame of
> > reference, what will
> > happen?
> > Robert B. Winn
> >
> > > So it is
> > > quite certain
> > > that you
> > > didn't read.
> >
> > No, I read it, YBM. So
> > explain what happens if
> > there are two bells,
> > one at the origin of each
> > frame of reference.
>
> Look carefully at the coordinates of events
> I've provided
> above. Then figure out yourself :
> − at what time in B does both light rays have
> been emitted ?
> are they the same ?

Because of relativity of simultaneioty that the Lorentz equation
require, the beams of light are not emitted at the same time in B.

right.

Therefore, according to you only the bell at the origin of A will ring
as observed by the observer in A.

> − are the positions of the points of emission
> in frame B symetric
> with respect to the origin of B ?

The points of emission are equal distances from the origin of B.

right.

> − given that velocities of the light rays are c
> and −c in B

> > are they going to meet at the origin of B ?
> >
> > I say they will, but the Lorentz equations say they will not. ý
> >
> > At least you should notice that the Lorentz equations are
> > perfectly coherent.
> >
> > > If you
> > > have a bell at the origin of A and a bell at the origin of B,
> > > only one
> > > of the bells will ring.
> >
> > You mean according to LT, right ?
> >
> > So, now you "theory" says : both bells will ring, right ?
> > (even if this not what your formulas implies).
> >
> > This is sooooo utterly absurd that I suggest you to take
> > a rest and think a bit about it.− Hide quoted text −
>
> Well, I have thought about it. The Lorentz equations say both bells
> will ring,

DEFINITELY NOT !

This is really amazing ! So far :
− you lied about what Galilean Transformations say
− you lied about what your formulas say
− you lied about what LTs say

> but only if you consider the problem from both frames of
> reference, the same way I did with the Galilean transformation
> equations, treating each frame in turn as a preferred frame of
> reference.

there is no preferred frame of reference in GT.

> Both bells will ring by anyone's equations. But the objections you
> make to my interpretation of the Galilean transformation equations can
> also be applied to the Lorentz equations because under their current
> interpretation, an observer in one frame of reference cannot see both
> bells ring without a consideration from the other frame of reference.

Wrong, silly, stupid, meaningless, ill, all of that is so few words !

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