Re: Is there length contraction in SRT, uncle Ben?

Source: http://sci.tech−archive.net/Archive/sci.physics.relativity/2008−07/msg02962.html

- *From*: "Dirk Van de moortel" <dirkvandemoortel@xxxxxxxxxxxxxxxxxxxxxxxxxxx>
- *Date*: Wed, 30 Jul 2008 19:00:40 +0200

xray4abc <lemhenyil@xxxxxxxx> wrote in message
752648d3−463a−41cf−87b5−cbb98d291972@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

> On Jul 30, 5:06 am, "Dirk Van de moortel" <dirkvandemoor...@ThankS−NO−
> SperM.hotmail.com> wrote:
>
> > xray4abc <lemhen...@xxxxxxxx> wrote in message
> >
> > cfdeda6f−9219−4338−9a08−13086221f...@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

What SRT does say about length contraction?
Consider a rod along OX axis be resting in IRF K and
moving in frame K .
Consider 2 observers in the 2 frames, measuring the
length of the rod, setting up measurements at their will,
where they localize the endpoints in a simultaneous
manner, each in his frame.

In frame K :
Measured values are: X1, X2 in moments T1=T2
Calculated values, from Lorentz transformations are
XÉ and XÊ
which give L =L* Gamma
where L is the calculated length for K
and L is the measured (and at the same time the proper)
length
of the object in frame K.
As Gamma>1
We get L >L that is : the length attributed to be valid
for frame K (the moving frame) IS BIGGER than the
measured length
(that is the proper length)

> (So far nothing new!)

> Alas, you are completely wrong here.
>
> If the rod is at rest in K (T1=T2), then it is not at rest in K',
> so the value L =L* Gamma is not the calculated length for
> K since the times of measurement not the same and the
> rod is *moving* in K'.

> Then, what is it L'=L*Gamma by your opinion?
> One uses simultaneous marking of the endpoints of the rod
> no matter in which frame he is in.

When the thing is moving, you must use simultaneous measurements
to be able to substract the distances and call it the "measured length".
When it is not moving, it doesn't matter whether the measurements
are simultaneous to substract the distances and call it the "proper length".

When you understand that, we can continue.
Do you understand that?

Dirk Vdm

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