

Re: relativity of simultaneity – real or perceived?

Source: <http://sci.tech–archive.net/Archive/sci.physics.relativity/2005–05/msg01041.html>

- *From:* "Curious" <anthonyroseuk–curious@xxxxxxxxxxx>
 - *Date:* 14 May 2005 17:01:47 –0700
-

Jon, I am very surprised to see your diagram! Thanks very much – it makes the figures very much clearer. This confirms my understanding of what you are saying.

However, this is not where my curiosity lies.

I need to know whether the equations are telling us where the particles would be *perceived* to be to an observer at $x' = 0$ and $t' = 0$, or whether they are telling us where the particle actually is wrt to frame 2. If for example we were on a spaceship travelling at $0.5c$ some time before this event, and had to be able to calculate exactly where the two particles would be at time $t' = 0$ given that we know where they will be wrt frame 1 at time $t = 0$, would we expect particle B to be at $x' = 0.87$ and the right end of the box at $x' = 1.3$?

Is this saying that for frame of reference 2, the two particles do NOT pass each end of the box simultaneously – in other words, is this saying that two contradictory scenarios both occur?

Would you agree with Paul that they are EITHER simultaneous events OR not? Or do you go for the 'there is no absolute reality, we can only know what we measure' view shared by Dave A. Smith, and believe that they are both simultaneous AND non-simultaneous?

Or do you say that this is where the evidence leads, despite that fact that it is beyond us to understand the multiple 'realities'?

If the box was a bomb that blew up instantly when two photons hit it simultaneously at both ends, would an observer in frame 1 see it explode but an observer in frame 2 see it remain unexploded?

.

- *Follow-Ups:*
 - ◆ ***Re: relativity of simultaneity – real or perceived?***
◇ *From:* Martin Hogbin
 - ◆ ***Re: relativity of simultaneity – real or perceived?***
◇ *From:* Jon Bell
- *References:*
 - ◆ ***relativity of simultaneity – real or perceived?***
◇ *From:* Curious
 - ◆ ***Re: relativity of simultaneity – real or perceived?***

Re: relativity of simultaneity – real or perceived?

◇ *From:* Paul Stowe

◆ ***Re: relativity of simultaneity – real or perceived?***

◇ *From:* Curious

◆ ***Re: relativity of simultaneity – real or perceived?***

◇ *From:* Jon Bell

◆ ***Re: relativity of simultaneity – real or perceived?***

◇ *From:* Jon Bell

- Prev by Date: ***Re: The Limitations of Mathematics in Physics***
- Next by Date: ***Re: Comparisons between SR and LET.***
- Previous by thread: ***Re: relativity of simultaneity – real or perceived?***
- Next by thread: ***Re: relativity of simultaneity – real or perceived?***
- Index(es):
 - ◆ ***Date***
 - ◆ ***Thread***