

Re: Does photons really travel?

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- *From:* Smooth John <yoshioory@xxxxxxxxxxx>
 - *Date:* Tue, 6 May 2008 14:53:18 -0700 (PDT)
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On May 6, 6:19 am, The Ghost In The Machine
<ew...@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

In sci.physics.relativity, Smooth John
<yoshio...@xxxxxxxxxxx>
wrote
on Mon, 5 May 2008 12:40:55 -0700 (PDT)
<5d7b2167-a326-4860-abb-c4a68a1d5...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>:

From a photon point of view, it never travel. For it, now is all the time.

Debatable. Let's assume that a photon starts at $(x,t) = (0,0)$, from the still observer's point of view. Since we can't quite use the Lorentz we need to get creative regarding limits, but we do know that

$$x' = (x-vt)/\sqrt{1-v^2/c^2}$$

Why $(x-vt)$ and not $(x+vt)$, explain

What is your location, the light departs from you or arrives to you?

$$t' = (t-vx/c^2)/\sqrt{1-v^2/c^2}$$

similar here

for any massive particle.

Since for a photon $x^2 = c^2t^2$, we can substitute:

Re: Does photons really travel?

$$\begin{aligned}x'^2 &= (x-vt)^2 / (1 - v^2/c^2) \\&= (x^2 - v^2t^2 - 2xvt) / (1 - v^2/c^2) \\&= (c^2t^2 - v^2t^2 - 2xvt) / (1 - v^2/c^2) \\t'^2 &= (t-vx/c^2)^2 / (1 - v^2/c^2) \\&= (t^2 - v^2x^2/c^4 - 2xv/c^2) / (1 - v^2/c^2) \\&= (t^2 - v^2t^2/c^2 - 2xv/c^2) / (1 - v^2/c^2) \\&= x'^2/c^2\end{aligned}$$

Last time I checked

$$(x-vt)^2 \text{ was } (x^2 + v^2t^2 - 2xvt)$$

Why you do mistakes?

This is fine for any massive particle, but since the denominator becomes 0 at the limit, the best I can do there is note that the numerator must be 0 as well, which basically means it will be created and destroyed in an instant (since the photon is fixed at $x'=0$ in its coordinate-space).

So, in a way, you're right, it never travels. We'll never know anyway; we weigh too much, and even the best diets won't help... ;-)

Paradoxically, when for photons is now all the time, since the beginning Big Bang, it still takes billions of years for the rest of us.

This is likely to be impossible.

I don't see a problem here. Could you clarify?

I don't know if I can. If for light is "now" all the time, implies that light never ages from own point of view. Therefore the detected light and radiation from BigBang is 100% fresh.

However, the new light generated after the BigBang has same

Re: Does photons really travel?

Re: Does photons really travel?

age as the primordially BigBang light. Even when light comes later also in the future into existence, from our point of view, light has the same age. Therefore from lights point of view light is the same light for ever

If you understand this, I dont in any case

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#191, ewi...@xxxxxxxxxxxxxx

Linux sucks efficiently, but Windows just blows around a lot of hot air and vapor.

** Posted from <http://www.teranews.com> **