

# Re: Two photons... relative distance question

---

*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-05/msg00372.html>

---

- *From:* "Curious" <[anthonyroseuk-curious@xxxxxxxxxxx](mailto:anthonyroseuk-curious@xxxxxxxxxxx)>
  - *Date:* 6 May 2005 11:25:45 -0700
- 

Note that the two frames are aligned on photon A so that photon A's position =  $A_x = A_x' = 0$ ;  
and they are aligned with respect to time so that  $t = t' = 0$ .  
I think that the answer is as follows, where  $B_x' =$  photon B's position in Frame 1 and  $B_x =$  photon B's position in Frame 2:

$$\begin{aligned} B_x &= \gamma B_x' + \gamma v t' \\ &= \gamma 449688687\text{m} + \gamma 0.5c \cdot 0 \\ &= \gamma 449688687\text{m} \\ &= 1 / \sqrt{1 - v^2/c^2} * 449688687\text{m} \\ &= 1 / \sqrt{1 - 0.5c^2/c^2} * 449688687\text{m} \\ &= 1 / \sqrt{1 - 0.25} * 449688687\text{m} \\ &= 1 / \sqrt{0.75} * 449688687\text{m} \\ &= 1 / 0.86602540378443864676372317075294 * 449688687\text{m} \\ &= 1.1547005383792515290182975610039 * 449688687\text{m} \\ &= 519255768.9819587\text{m} \end{aligned}$$

Is that right?

.

---

- *Follow-Ups:*
  - ◆ [\*\*Re: Two photons... relative distance question\*\*](#)  
◇ *From:* Jon Bell
- *References:*
  - ◆ [\*\*Two photons... relative distance question\*\*](#)  
◇ *From:* Curious
- Prev by Date: [\*\*Re: why Pray to God , pray to George\*\*](#)
- Next by Date: [\*\*Re: Two photons... relative distance question\*\*](#)
- Previous by thread: [\*\*Re: Two photons... relative distance question\*\*](#)
- Next by thread: [\*\*Re: Two photons... relative distance question\*\*](#)
- Index(es):
  - ◆ [\*\*Date\*\*](#)
  - ◆ [\*\*Thread\*\*](#)