

Re: SR Postulate on Speed of Light

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Curious wrote:

1. 'Reality' as opposed to perception: If we cannot tell whether the 'real' speed of light is constant (or even if there is such a thing as a 'real' speed of light), this doesn't remove the question from physics. It just removes the answer from physics. For now. In future we may be able to answer this in some way by physics. [...]
But perhaps you misunderstand what I mean
by philosophy. I don't mean airy-fairy wonderings about angels on pins.

This last statement is interesting. Why do questions about angels on pinheads seem "airy-fairy" to you, while questions about the constancy of the speed of light do not?

I really know nothing about the history of the angel question -- it may be an urban legend for all I know -- so you should take this with a grain of salt. But at the time that people were seriously thinking about this kind of question, people took it for granted that angels were real. Asking a question about angels then was no stranger than asking a question about electrons is now. The modern perception of angels is totally different, even among people who identify themselves as having Judeo-Christian beliefs. As a result, the question now seems silly. It's a matter of historical era, not of philosophers vs ordinary folk.

I would argue that your gut feeling that there must be a /real/ speed of light is inextricably tied up with a Newtonian worldview. It's because you take Newtonian physics for granted that the question seems to make sense, and it's specifically a Newtonian speed that you expect light to have. Once you understand special relativity -- and I have no doubt that you eventually will -- the question will not seem quite as interesting any more. If the question ever becomes interesting again in light of a future theory, it will be a /different question/, because the words will be interpreted in terms of the new theory.

-- Ben
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