

Re: Speed of Light

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- *From:* "dlzc" <dlzc1@xxxxxxx>
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Dear jillbones:

jillbones wrote:

Eric Gisse wrote:

jillbones wrote:

A vessel 300,000,000 meters wide is traveling at near light speed. $> .99 c$

Presumably wrt the Earth... ?

Would the time required for a photon to travel from

.... "light signal" to travel from ...

one side of the ship to the other side be ;

- (1) One second according to the ship's clock? or
- (2) One second according to a clock on Earth? or
- (3) One second according to both clocks? or
- (4) Some arbitrary time not related to the nominal speed of light?

How about (5) ?

(5): We won't do your homework for you

In other words, you CANT answer the question!

The answer is (1) and not {(2), (3), or (4)}.

Re: Speed of Light

The path for (2) is "much" longer than the path for (1), since the ship moves a very significant distance forward between the time of emission at one end, and the time of detection at the other.

For more on the topic, consider the gedanken of a light signal being bounced back and forth transverse to the mirrors' motion. You have exactly half of this.

Assuming this wasn't just a multiple guess question that you didn't want to think about.

David A. Smith