

Re: Practical/concept. defenition of "meter", Part2

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Dear rotchm:

<rotchm@yahoo.com> wrote in message
news:1102913952.063666.265020@c13g2000cwb.googlegroups.com...

...

>>> Remember that both frames are equivalent. We can start the whole

>>> argument with O2 instead of O1.

>

>>Right. But do it without invoking "reality" or "instantaneous

>>communication". Base it on measurement, observability, etc.

>

> Do you mean that to analyse such experiments or thoughts, we should not

> invoke "reality", we should not try to figure out what is "really"

> happening, but just base our stuff on observations?

We don't have access to reality, except through measurements. We can infer things, like how fast a signal can propagate in one direction. Doesn't necessarily make it so.

> Magicians really would like that!

>

> Why couldnt I analyse such situations invoking "reality"? what is the

> drawback in doing so?

If one measures in frame O1, certain things can be known. If one makes those measurements from O2 into O1, or O1 into O2, then you're going to have one-way communication and propagation delays. So asking O1 what O2 will measure with O1's clock (what will O1 measure at 1/c seconds? What will O2 measure then?) is a fundamental mistake. k1 and k2 have *possibly* different time rates based on relative velocity, depending on whether you believe experiment or not.

Dirk has spent considerable time responding to you. Perhaps his reponse will be clearer.

David A. Smith