

# Re: Another Rotating Cylinder Problem – explain from moving frame view

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*Source:* <http://sci.tech–archive.net/Archive/sci.physics.relativity/2006–04/msg01182.html>

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- *From:* David <dseppala@xxxxxxxxxxxxxx>
  - *Date:* Mon, 17 Apr 2006 03:16:54 GMT
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On Sat, 15 Apr 2006 11:02:17 +0100, "Martin Hogbin"  
<goatREMOVETHIS123@xxxxxxxxxx> wrote:

"David" <dseppala@xxxxxxxxxxxxxx> wrote in message  
<news:27814211vufjvsa14pmj5fnvk52d3mutdd@xxxxxxxxxx>

On Fri, 14 Apr 2006 18:29:50 +0100, "Martin Hogbin"  
<goatREMOVETHIS123@xxxxxxxxxx> wrote:

"David" <dseppala@xxxxxxxxxxxxxx> wrote in message  
<news:5e5v32hhd167p57ikjfcvnm82o1thjecu@xxxxxxxxxx>

Can anyone explain this rotating disk  
problem from the point of view  
of a moving observer?

Davis Seppala is one of the mysteries of this group. Unlike  
Spaceman, for example, he is smart enough to dream up  
endless SR puzzles, many of them involving accelerating  
reference frames, yet by his own admission he has practically  
no understanding of SR.

Is he really an expert on the subject testing posters'  
understanding?

Is he a bunch of psychology students performing  
some kind of experiment on us all?

Is he just a troll who delights in stirring up discussion  
and argument?

Any suggestions?

## Re: Another Rotating Cylinder Problem – explain from moving frame view

He is none of the above. David's understanding of Einstein's notions so far is much like David's comprehension of E. M. Escher's drawings. He gets to points in problems where there seems to be contradictory results as in his posting on 4/10/2006 where a moving rigid rod is always parallel to the x-axis and loops about the x-axis in a circular pattern at a 10 meter diameter circle yet no forces are applied to the rod to make it continue in this circular pattern. Or in this posting where as tension on a straight wire increases the center of the wire moves away from a straight line. This is opposite to typical experiences – wires form straight lines when stretched from two points with nothing in between them to interfere with the straight line. This does not make sense to David.

Then what David should do, as he has been told many times, is to make sure he fully understands basic SR \_in inertial frames\_ with only \_inertial motion\_ involved.

If he could demonstrate a sound understanding of Einstein's postulates,

I cannot demonstrate a clear "understanding" of Einstein's postulates. I know the two main hypotheses stated in relativity are that all physical laws are the same in any given inertial reference frame and that the speed of light is constant and independent of the motion of the emitting source. The translated text I read actually used the word "velocity" of light instead of speed. We all know the velocity of light (speed and direction) must vary with the motion of the light source but the speed can possibly be constant. Although stated as a definition and not as a hypothesis Einstein states that "time" at two points cannot be defined at all unless the "time" required to travel from A to B equals the "time" required to travel from B to A. I readily admit that this statement of time that Einstein characterizes as "true by definition" seems to me more like a hypothesis than something true by definition.

what an inertial frame is,

An inertial frame is one in which no accelerations or higher order changes in position of objects occur. In a real sense we do not find inertial frames except in rare situations since any kind of motion causes the frame to accelerate slightly. But these are negligible in a practical sense.

the train experiment,

I'm not certain which train experiment you are referring to. To demonstrate that one inertial frame is identical to every other frame there is a real life experiment where the acceleration of a train is so small that passengers on either of two trains cannot easily tell which train is moving out of the station or not. This is not much of

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a physics experiment since it merely demonstrates lack of needed sensitivity in measuring devices, so I don't know if this is the experiment you are referring to or not.

and the pole and barn paradox the others would be much more willing to help him.

The pole and barn paradox. What am I supposed to do here? Plug in values in the time and length separation formulas to show in one inertial frame where the two door closings are simultaneous and the pole just fits gives values that in another inertial frame the two doors open and close at different times and this is compensated precisely by the length contraction? Maybe you want me to plug in the length contraction, and then add the product of the time difference &  $V$  (distance traveled) to see if I get the correct number. This only demonstrates an understanding of algebra.

I should point out that is no good his saying, 'Yes, yes, yes, I know all that', he must clearly demonstrate that he fully understands basic SR before anyone will accept that his questions are serious.

I suspect this posting still won't result in any physics answers to my two cylinder questions I posted – this one and the one 4/10/2006. But we'll see.  
David

Will he make a concerted effort to understand the basics and show that he has done so or will he continue as before? We shall see.

Martin Hogbin