

# Re: Annotated Einstein Clock

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*Source:* <http://sci.tech--archive.net/Archive/sci.physics.relativity/2005-08/msg00736.html>

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- *From:* "sue jahn" <[susysewshow@xxxxxxxxxxxx](mailto:susyshow@xxxxxxxxxxxx)>
  - *Date:* Mon, 8 Aug 2005 05:11:12 -0400
- 

"The Ghost In The Machine" <[ewill@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:ewill@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)> wrote in message [news:pv1js2-5hr.ln1@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:pv1js2-5hr.ln1@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)

> In sci.physics.relativity, Paul B. Andersen  
> <[paul.b.andersen@xxxxxx](mailto:paul.b.andersen@xxxxxx)>  
> wrote  
> on 7 Aug 2005 13:30:31 -0700  
> <[1123446631.198172.114300@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:1123446631.198172.114300@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)>:  
>>  
>> The Ghost In The Machine skrev:  
>>> In sci.physics.relativity, Paul B. Andersen  
>>> <[paul.b.andersen@xxxxxx](mailto:paul.b.andersen@xxxxxx)>  
>>> wrote  
>>> on 6 Aug 2005 12:50:58 -0700  
>>> <[1123357858.889675.79020@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:1123357858.889675.79020@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)>:  
>>>>  
>>>> Sue... skrev:  
>>>>> Sue... wrote:  
>>>>> Hint:  
>>>>> If you take three links out of a bicycle chain  
>>>>> does it increase or decrease the road speed ?  
>>>>>  
>>>>> Sue...  
>>>>>  
>>>> With missing links in the chain, the road speed  
>>>> will decrease uphill and increase downhill.  
>>>>  
>>>> Have we falsified relativity now, Sue?  
>>>>  
>>>> Paul  
>>>>  
>>>>  
>>> Erm, how does the \*road\* have speed anyway? :-)  
>>  
>> It sure has.  
>> Look down when you are cycling, and you will see it.  
>> And if you fall off, you will even feel it.  
>> I know, because I have tried.  
>

Re: Annotated Einstein Clock

> Hmm...well, OK, I guess it does depend on one's coordinate  
> system. \*wince\*

>  
>>  
>>> In any event, any bicyclist knows that taking links out  
>>> of the chain will either cause a malfunction (if one has  
>>> a single-rear-gear affair or takes out too many links) or  
>>> adjust the derailleur (a spring-mounted affair on the rear  
>>> wheel, near the sprocket gears). It will not change the  
>>> gear ratio -- the true determiner, along with pedal crank  
>>> length, wheel diameter, air resistance, and health and  
>>> weight of the rider, of the travel speed of the vehicle.

>>  
>> Of course.  
>> I considered this too obvious to deserve a serious answer.  
>> So my answer was based on the fact that if there are  
>> missing links in the chain, then it is broken. :-)

>  
> What, me pedantic? :-)  
Cool... I have seen some of those ped antics on stunt bikes.  
Don't forget you helmet and keep all adult supervision at  
a safe distance.

>  
>>  
>>> (Weight, as the weight helps to push down on the pedals.  
>>> There's admittedly a few issues here, though.)  
>>>  
>>> Also, a vehicle moving 30 m/s (67.1 mph) will have a  
>>> relativistic correction factor of about  $5 * 10^{-15}$   
>>> (this would be rather fast for a bicycle, admittedly).  
>>> The bicyclist crossing the United States (5000 km from  
>>> SF to Boston) might notice a shrinkage of 1/20th of the  
>>> wavelength of a visible light photon, and a reduction in  
>>> his travel time of about 5/6th of a nanosecond -- assuming  
>>> he doesn't get stuck in traffic or his mount gets a flat.  
>>>  
>>> For the sake of comparison, the Tour de France is 3607 km.  
>>> Vive la America, and Lance Armstrong's 7th consecutive  
>>> and final victory. :-)

>>  
>> Quite.  
>> Lance Armstrong is a terrific guy.  
>> One of the two greatest cyclists in the history of cycling.  
>> (The other one is obviously Eddy Merx.)

>  
> FSVO "obvious", admittedly. I've not kept up with the sport myself. :-)

>  
>>

Re: Annotated Einstein Clock

>> BTW, Thor Hushovd, the winner of the green jersey in le Tour  
>> is from my home town, Grimstad.  
>> <http://ca.sports.yahoo.com/sc/news?slug=reu-tourhushovdfactbox&prov=reuters&type=lgns>  
>> <http://www.thor-hushovd.com/>  
>>  
>> I have known him since he was a kid,  
>> even raced together with him in our local cycle club.  
>> (Not in the same age class, though. He was a kid, and  
>> I was – well – older.)  
>> <http://www.grimstadsk.no/>  
>>  
>> A bit off topic.  
>> Sorry.  
>>  
>>> <http://studenttravel.about.com/od/tourdefrance2005/a/tourroutemap05.htm>  
>>> [http://studenttravel.about.com/od/tourdefrance2005/a/tourroutemap05\\_2.htm](http://studenttravel.about.com/od/tourdefrance2005/a/tourroutemap05_2.htm)  
>>>  
>>> Apparently I picked the wrong two cities; there's several webpages  
>>> suggesting the Race Across America (RAAM), from San Diego to  
>>> Atlantic City, New Jersey. This is slightly less: 4620 km,  
>>> give or take.  
>>  
>> But still pretty long.  
>> The longest race I have participated in was a mere 560 km. :-)  
>> (Trondheim – Oslo)  
>  
> Impressive. I can ride maybe 12 miles or so, if that. Of course  
> I don't have an ultralightweight 25-speed bicycle, either. :-)  
> It's a very old 10-speed.

I have several of old Raleigh and Schwinn's that followed me home from yard sales. The road moves beneath a few of them. Most are better at demonstrating the principle of particle annihilation/creation.

Sue...

>  
>>  
>> Paul  
>>  
>  
>  
> --  
> #191, ewill3@xxxxxxxxxxxxxx  
> It's still legal to go .sigless.

- **References:**
  - ◆ ***Annotated Einstein Clock***
    - ◇ *From: sue jahn*
  - ◆ ***Re: Annotated Einstein Clock***
    - ◇ *From: Paul B. Andersen*
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