

# Re: Twin paradox revisited II

---

*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2007-07/msg02381.html>

---

- *From:* "Jeckyl" <noone@xxxxxxxxxxxx>
  - *Date:* Sat, 21 Jul 2007 15:15:03 +1000
- 

"bill" <cosmosco@xxxxxxxxxxxx> wrote in message  
<news:1184981064.527191.20310@xx>

No I would not. I cannot accept that the traveler *\*really\** believes that the earth is orbiting the sun at around 1m-s nor do I believe that this is what would 'really' be happening.

What has the belief of some astronaut got to do with the physics?

During the acceleration the situation is much more complicated but the answer is essentially the same.

As regards whether it is 'physically' happening, I cannot answer this question unless you define exactly what you mean 'physically'.

By 'physically' I mean the concept that the earth is 'really' orbiting the sun at 1m-s as distinct from 'apparently' as determined by the traveller.

In the traveller iFoR it is

It has nothing whatsoever to do with what *\*we\**, as stay at home observers, think but what is claimed the *\*traveler\** determines is reality.

Yes, for the traveller.

So he *\*really\** believes that the earth is *\*physicaly\** orbiting the sun at 1m-s?

It is .. in his iFoR

## Re: Twin paradox revisited II

What we can tell is that, when the two twins meet up, the travelling twin has aged less than the earthbound twin.

One could argue that inertial clocks run as quickly as possible and that the best way of describing what has happened is to say that the non-inertial (travelling) twin's clock has been slowed down.

Other than what one 'could argue' I fully agree with those comments but I cannot agree, as expressed above, that the stay at home \*physically\* ages at the faster rate thus that the traveler could obliterate all life on earth by taking his foot off the gas pedal.

You need to define 'physically'.

That the traveler destroys all life on the planet.

He destroys nothing .. it just happens over the long period of time that elapses on the earth

When he returns home he learns – hopefully – that this has not \*physically\* taken place.

But it has

The fact that the traveler finds on his return that everything is 'normal' back here – that life continues – should indicate to him that the earth had \*not\* been orbiting the sun at near light speed, that what he saw or determined was nothing more than a visual illusion

## Re: Twin paradox revisited II

generated by his rate of travel.

No, it indicates that the passage of time is not universal. Of course, on his return, the traveller will be aware that, from the earthbound twin's point of view, nothing unusual has happened.

Having 'believed' that all life on the planet has been obliterated it would not only be 'from the earthbound twin's point of view, nothing unusual has happened' but also from the \*traveler's\* point of view.

It really happens

The bit you have not grasped is that the passage of time is not universal. This is very counterintuitive but it is the inescapable conclusion of experiment.

Or rather, in the \*interpretations\* of those experiments. As far as I am aware there has been no experiment which proved that from the traveler's point of view it is his twin that ages at the faster rate than himself.

Time dilation is experimentally proven .. time goes slower for moving objects.

.