What is time, The paradox of special relativity

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Abstract: This article explores the contradiction between time dilation and constancy of light velocity and between time dilation and limit of speed.

Change is the essence of time. Time is relative and also absolutive. If all the atoms of an object change slowly, then the time of the object will slow down. Similar to all happened things on earth like a movie, when the movie is played in a speed of 0.5 times, the time on the earth will slow down by half. If all the particles of a person change slower, then the time of the person will slow down, if all the particles of a person change faster, then in other people’s observation this person’s time is speed up. If all particles in earth except a person, changing speed more faster, then the person will “time travel to the future”. If all the particles’ status except a person, become the same status as the past time, then this person will “time travel to the past”. My definition of time is that everyone has their own "time". We are living in the same space, so the universe has a uniform time, that is, one second is defined as the duration of 9,192,631,770 cycles of radiation corresponding to the transition between the two hypersonic energy orders in the ground state of the undisturbed cesium-133 atom.

According to Einstein’s theory of relativity, if a person on the ground observes a high-speed moving transparent aircraft, the phenomenon he observes is that the time of the aircraft and the objects inside it slows down. If there is a light beam in the aircraft, the observed time of the light beam will also slow down, that is, the observed light beam is slowing down, and the slower light beam changes are reflected in the slower speed of light. If a observer in the aircraft observes the ground, the observed phenomenon is that the time on the ground becomes faster, that is, the observed changes on the ground become faster. If the changes on the ground become faster, the speed of light on the ground observed by the person in the aircraft will also become faster. This is conflict with Einstein's theory that the speed of light is constant. The velocity of the object that observer in aircraft measured is

\[ v_2 = \frac{s}{t} = \frac{v_1 t_1}{t_2}, \]

where \( v_1 \) is the speed of the object in ground, \( t_1 \) is the time that the clock in ground indicated, \( t_2 \) is the time that the clock in high speed aircraft indicated. Assuming 3 seconds in ground is equal to 1 second in aircraft because of time dilation, Then when the clock pointer in ground moving to 3 seconds the clock in high speed aircraft indicate 1 second. In the high speed observer’s view, the moving speed of the clock that in ground is faster than the moving speed of the clock that in aircraft. Only in this way could satisfy the time past 1 second in aircraft but in ground the time pasted 3 seconds, and only in this way could satisfy when the person in high speed aircraft back to ground the person is younger than his twin brother. According to Einstein’s theory of time dilation, if a aircraft in speed of infinitely close to light speed, what the observer in the aircraft observed is the movement speed of objects absolutely faster than light speed. For example, an immortal person keep walking for several centuries, the observer in the aircraft with speed of infinitely close
to light speed will see the person moving faster than light. Because in the theory of
relativity, a observer who is in a speed of infinitely close light, in his observation one
second, the time of ground maybe pasted several centuries. What the observer in aircraft
with infinitely close to light speed observed is the changing process of ground of several
centuries. What the observer see is one second the ground pasted several centuries, the
distance that the immortal people walked must longer than light distance in one
second, so if a observer in a speed of infinitely close to light speed, what he observed
must faster than light speed, even if the observer look clocks in ground, in the observer’s
view the spinning speed of pointer of these clocks are faster than light, so Einstein's
theory of relativity is logically contradictory. (explanation: The direction of high
speed aircraft is perpendicular to the ground, Because it could avoid length contraction
and velocity stacking)

Experimental idea, control time: A person holds a flashlight and turns it on, and then
records the scene. After that, the speed of light is measured by playing the video at 2
times the speed

\[
\begin{align*}
\frac{s}{t} &= v_1 \\
v_2 &= \frac{s}{0.5t} \\
\frac{s}{t} &= 0.5v_2 \\
v_2 &= 2v_1
\end{align*}
\]

Or

\[
\frac{v_1t_1}{t_2} = v_2 \quad \text{If it is played at 2 times speed } t_2 = 0.5t_1 \quad v_2 = 2v_1
\]

If it is played at 2 times speed, the speed of the light becomes 2c.

This experiment is for simulate in theory of relativity the scene of a observer with
infinitely close to light speed observing ground.

时间的本质，相对论悖论

张翌阳

时间的本质是变化。时间是相对的也是绝对的。如果一个物体的所有原子变化都变慢，
那这个物体的时间就会变慢。这就好比地球上发生的事情是一场电影，如果以0.5倍速播放，
那地球的时间就会变慢一半。如果一个人身上的所有粒子变化都变慢，那么他的时间就会变
慢。如果一个人身上的所有粒子的变化都变快，那么在别人眼中他的时间就是变快的。如果地球上只剩下一个人，其他物体的变化速度都变快了，那么这个人就“穿越到了未来”。如果地球上除了一个人，其他的所有粒子都变成了过去的某一状态，那么这个人就“回到了过去”。

我对时间的定义是每个人都拥有属于自己的“时间”，我生活在同一空间内，所以界规定了统一时间，也就是以铯未受干扰的铯-133 的原子基态两个超精细能阶跃迁对应辐射的 9,192,631,770 个周期的持续时间为 1 秒。我们用一个世界统一的时间量来表示一个物体存在过的时间，比如说一个人的年龄就是一个时间量。

根据爱因斯坦的观点，如果地面上一个人观察一个高速运动的透明飞行器，观察到的现象是飞行器及里面的物体的时间变慢。如果这个飞行器中有光束，观察到的光束时间也会变慢，也就是观察到的光束变化变慢，光束变化变慢体现光的速度变慢。如果飞行器中的人观察地面，观察到的现象是地面上的时间变快，也就是观察到的地上面的变化会变快，如果地面上的变化变快，飞行器中的人观察到的地上面的光的速度也会变快。这与相对论中的光速不变相互矛盾。飞行器中的观察者观察到的地面的物体运动速度满足 $v_2 = s = \frac{v_1 t_1}{t_2}$，其中 $v_1$ 为地面物体的速度，$t_1$ 为地面表显示的时间，$t_2$ 为高速飞行器中的表显示的时间。假设由于时间膨胀效应，地面上 3 秒等于高速飞行器上面 1 秒，那么地面上的表走到 3 秒时高速飞行器上的表显示的是 1 秒。在高速飞行器中的观察者视角，地面上的表的转速要比飞行器中的表的转速快。只有这样才能满足飞行器上过了 1 秒地面上已经过了 3 秒，才能满足飞行器上的人回来之后地面上的人年轻的情景，才能满足时间膨胀效应。根据爱因斯坦理论中的时间膨胀效应，如果飞行器的运动速度无限接近于光速，那么飞行器里面的观察者观察到的地面的运动速度是超光速的。假设一个地面上的一个永生的人以正常速度一直走，那么按照相对论中的理论，一个无限接近于光速的飞行器中的观察者观察到的这个人的速度一定是超光速的。因为在相对论中，无限接近光速的观察者眼中一秒钟地面上可能已经过去了几个世纪，这几个世纪这个人的距离肯定大于光一秒钟走的距离。飞行器中的观察者一秒钟观察到的是地面上几个世纪的变化。所以在相对论中无限接近光速的人观察地面的运动必然是超光速的。即使是观察地面上的表，表的转速也是超光速的，所以相对论是逻辑自相矛盾的。（说明：高速飞行器的运动方向和地面上的方向是垂直的，因为这样可以避免尺缩效应带来的影响，也可以避免速度叠加问题。）

实验思路，控制时间：一个人拿着手电筒把手电筒打开，然后把这个画面录下来。以 2 倍速播放测一下光速。若播放速度为 2 倍速，则实际播放所需时间为原速播放时间的 1/2。

$s/t=v_1$

$v_2=s/0.5t$

$s/t=0.5v_2$

$v_2=2v_1$

如果以 2 倍速播放，这束光的速度就变成了 2 倍的光速。

或者 $v_1 t_1 / t_2 = v_2$ 当 2 倍速播放时 $t_2 = 0.5t_1$ $v_2 = 2v_1$

此实验为了模拟相对论高速运动的飞行器的观察者观察地面的场景。