Logical Disproof of Relativity's Description of Gravitational 'Time Dilation' and Establishment of Absolute Time

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Abstract

The observed changes in rate of atomic clocks with velocity and gravitational fields are normally cited as evidence of relativity of time. We show that these changes in clock rates cannot be cited as a disproof of absolute time. We establish the validity of absolute time and show a self-contradiction in relativity.

Introduction

With the advent of relativity theory, the notion of absolute time has been abandoned for over a century. The theory of relativity developed from the 'null' results of early first order and second order experiments. However, absolute motion has been unambiguously detected in a number of relatively recent experiments, such as the Silvertooth and the Marinov experiments[1].

One of the evidences being cited for the relativity of time is the observed increase in the rate of GPS atomic clocks with altitude, and it is claimed that this confirms gravitational time dilation of general relativity. In this paper, we present an argument to establish absolute time and a logical disproof of relativity's description of gravitational 'time dilation' effect.

Establishment of absolute time

One of the arguments being cited in support of relativity of time is the observed changes in the rate of atomic clocks with velocity and with distance from massive objects such as the earth. However, I argue that this change in the rate of atomic clocks cannot be cited to disprove the notion of absolute time.

Clock rates could depend on several factors including (absolute) velocity, gravitational field, magnetic field, . . . and yet we still can have an absolute clock [2]. The most straightforward way to make an absolute clock is to use an accurate atomic clock and keep it at absolute rest, and in a constant gravitational field, in a constant magnetic field and constant electric field, at a constant temperature, etc. In other words, an absolute clock is just an accurate clock kept under unchanging conditions.

Therefore, to build an absolute reference clock we need to keep the clock in a state of uniform absolute motion (preferably at absolute rest) and in a constant gravitational field. For this, we need an absolute velocity sensor (such as the Silvertooth experiment) and a gravitational field sensor onboard, integrated with the clock.

The first step to build an absolute clock is to do an experimental study of how absolute velocity and gravitational field affect its rate. For example, two atomic clocks A and B are synchronized while both are at absolute rest at the same location. Then clock B is set into absolute motion in a circular path with a known absolute velocity and then comes to rest at its starting position, at the location of clock A, and the two clock readings compared. This is done for many possible absolute velocity values and a correction table is prepared. The correction table gives the clock rate correction in nanoseconds per second for every absolute velocity. This study is also done for the effect of gravitational fields and a correction table is prepared which gives the rate correction in nanoseconds per second for every possible value of gravitational field.

Now, every clock has an absolute motion sensor, a gravitational field sensor and correction tables onboard. We ALWAYS keep one clock at absolute rest (any state of uniform absolute motion is possible) and keep it in a constant gravitational field. This clock (Clock O) will serve as our absolute reference clock in the universe. To keep it perfect, this clock also has absolute velocity and gravity sensors onboard and automatically corrects its velocity to keep it in uniform absolute motion (preferably absolute rest). There will also be a mechanism to automatically correct the gravitational field surrounding the clock, to keep the gravitational field constant. This clock always stays at absolute rest and in a constant gravitational field, making automatic corrections for small changes in motion and small fluctuations in gravitational field, based on the signals from its onboard motion and gravity sensors.

Now, every other clock is brought to rest at the location of this reference clock O and synchronized with it. Once synchronized with the reference clock, the clocks can be in absolute motion anywhere in the universe, passing through gravitational field gradients, and still will be in synch with the reference clock and with each other because of the automatic correction. The clocks will then come back to the reference clock O at longer intervals to resynchronize because there will be drifts due to imperfect corrections. All clocks, even if light years apart and in absolute and relative motions, will be in synch and keep absolute time.

Disproof of general relativity's formulation of gravitational 'time dilation' effect

According to general relativity, gravitational 'time dilation', that is the speeding up of GPS atomic clocks with altitude, depends on gravitational *potential*, not on gravitational *field*. Our hypothetical absolute clocks above are based on and sense gravitational *field*, not gravitational *potential*, to make automatic corrections.

I argue that 'gravitational field strength' , not 'gravitational potential' , description of gravitational 'time dilation' effect is correct . My reason is that there is no way to have an absolute clock if gravitational 'time dilation' depends on gravitational potential because gravitational potential cannot be sensed/detected at a point in space. There is no sensor to detect gravitational potential at a point in space, so that it can be used for automatic correction of clock rates.

Therefore, our absolute clocks above will have gravitational field sensors onboard to automatically correct their rates by using correction tables, to stay in synch.

But this also leads me to question the 'gravitational potential' description of general relativity (GRT). We know that the current practice is to adjust GPS clocks on earth, prior to launch. That correction works correctly only for one altitude. The question is: is it theoretically possible (according to GRT) to have an (atomic) clock that automatically adjusts its rate with altitude? For example, an onboard system senses the gravitational potential to automatically adjust the clock rate. But there is no sensor for gravitational potential at a point of space. There can only be a gravitational field sensor. Therefore, correction for the effect of gravity cannot be based on gravitational potential because there is no way to measure gravitational potential at a point in space. So, according to general relativity, there is no way to automatically adjust clock rates with altitude.

This raises yet another question. If there is no sensor for gravitational potential, how can the rate of an atomic clock respond to changes in gravitational potential in the first place? I mean the atoms in an atomic clock cannot sense gravitational potential to change their rates accordingly. In other words, general relativity predicts that gravitational time dilation cannot exist. Wouldn't this disprove the 'gravitational potential' description of general relativity?

Conclusion

We have presented a logical argument to establish absolute time and to show a self-contradiction in the theory of relativity. General relativity's 'gravitational potential' description of gravitational 'time dilation' effect leads to a self-contradiction that gravitational time dilation cannot exist.

Glory be to Almighty God Jesus Christ and His Mother Our Lady Saint Virgin Mary

Notes and references

1. *A New Theoretical Framework of Absolute and Relative Motion, the Speed of Light, Electromagnetism and Gravity*, by Henok Tadesse, www.vixra.org

2. This paper is based on my responses to comments on an internet forum: *https://www.thenakedscientists.com/forum/index.php?topic=77760.60*