

< ※ Some parts of this paper have been revised. If you want to see the revisions, please move to the new entries in "**27. Spatial structure of the Earth's Gravitational Field and Misunderstanding of the Law of the Constant Speed of Light.**"(← click)>

Spatial Independence of the Earth's Gravitational Field and Fabrication of the Law of the Constant Speed of Light (2)

- The law of the constant speed of light in the special theory of relativity should be discarded. -

Young sik, Kim *

Abstract

1. The gravitational field of the earth has its own spatial and coordinate system independently separated in space. In addition, the spatial system of the gravitational field of the earth is always pushed out at a uniform velocity of 9.8 m/sec towards the sky. The path and spread of light waves expressed within the gravitational field are not influenced by orbital motion.

2. The gravitational field of the earth typically preserves the path of light waves, and an observer of the movement enters the gravitational field of the earth. Therefore, the displacement of light waves measured in the position of an observer of the movement should have $L_1 + L_2$, and the speed of the spread of light should be expressed as $C + V$. In other words, the law of the constant speed of light in the special theory of relativity cannot be established for an observer of the movement.

PACS number: 01.55.+B, 02.90.+p, 03.30.+p, 04.20.-q, 4.30.-W,
04.80.Nn

Keywords: Special theory of relativity, spatial system, graviton,
gravitational field, law of the constant speed of light,

* **E-mail:** batangs@naver.com

I Introduction

As evidenced in the aberration effect by Bradley, space typically preserves the path of light waves. In addition, an observer of the movement goes through space. Therefore, the speed of $C+V$ should be detected in the position of an observer of the movement.

Michelson–Morley tried to conduct an interferometer test to detect the speed of $C+V$. However, the speed of $C+V$ was not found in the result of the experiment. The failure of the interferometer test has provided an opportunity for the special theory of relativity and the law of the constant speed of light to emerge.

Michelson–Morley and Einstein estimated that the foundation of space is extended to the ground of the earth. However, the gravitational field of the earth has its own independent spatial system and is not influenced by the effect of the earth's revolution. Therefore, the speed of the spread of light waves measured inside the gravitational field at the position of an observer at rest must always be invariant. In these conditions, the law of the constant speed of light in the special theory of relativity can be misunderstood as it is reasonable.

This paper will describe the spatial independence of the earth's gravitational field and give reasons on why the law of the constant speed of light in the special theory of relativity cannot be established.

II Body

1. The structure and spatial independence of the gravitational field

The structure of the gravitational field is not fully interpreted by the general theory of relativity. Therefore, a theory on gravity of a new paradigm is necessary. The study of the gravitational field is specifically introduced through the writer's writing (Title is the first and second volume of the theory of absoluteness). This also includes a brief explanation on the

structure of the gravitational field.^[3]

The causative function of gravity is called "**graviton**(gravity factor)" in this paper. The graviton is strictly distinguished from the gravity wave of quantum mechanics. All objects(elementary particles) in the earth indefinitely emit graviton which is composed of individual units like the quantum model of light waves. The graviton also has its own spatial volume and exclusively occupies a part of space.^[4] <<http://batangs9.com/E-1.pdf>>

The graviton is propagated to the final boundaries of space with elastic force at the speed of light and penetrates all objects in space with no resistance like a neutrino. Here, the graviton and the neutrino are configured with the same conditions, but the volume of partiality is only compared with a huge difference.

When the graviton is transmitted through other objects at the speed of light, the other objects' status is displaced with no resistance as much as the amount of penetration of the graviton. The displacement of the non-resistance refers to the motion of objects with respect to space. In other words, objects wherein graviton is transmitted obtain the kinetic energy of a free-fall.

A free-fall of gravity is generated with the same operating principle as the inertial motion of objects. This argument can be conveniently understood by the comparison process of the "**inertial mass**" and the "**gravitational mass**" of objects. In other words, if objects are accelerated in the spatial system of space, the objects' inertial force is expressed as the "**inertial mass**". However, if the spatial system of the gravitational field of the earth is continuously displaced for stationary objects, the inertial force of objects is expressed as "**gravitational mass**".

If the individual density of the graviton emitted from all objects in the earth is high enough, the volume of the graviton starts to fill the space

around the earth in consecutive order. Here, the overall volume of graviton which all objects in the earth emit becomes the scale that barely pushes out the earth's gravitational field at a uniform velocity of 9.8 m/sec .

The displacement speed of 9.8 m/sec is made by the process in which the volume of graviton is transmitted at the speed of light. Therefore, assuming that the propagation speed of graviton is $3 \times 10^8 \text{ m/sec}$, the spatial density of graviton is d , the displacement speed of the gravitational field is 9.8 m/sec , and the spatial density of the earth's gravitational field is D , their relationship can be expressed in the equation of $(3 \times 10^8 \times d) = (9.8 \times D)$.^[3]

Even if the earth's gravitational field has an independent spatial system, the light waves of the starlight can be refracted at the boundary of the earth's gravitational field like the aberration effect by Bradley. That is to say, the earth's revolution speed and the light waves' propagation speed at the boundary of the earth's gravitational field are synthesized to a single vector quantity, and the earth's revolution speed determines the light waves' reflection angle.^[3]

The spatial independence of the earth's gravitational field is gradually changed according to the height of the gravitational field. One example is the gravitational field of the surface of the earth assumed to have a partial spatial independence of 90 %. This is because 10 % of the estimate was found in the interferometer test by Michelson-Morley.^[3]

The graviton's individual density is very low, and the independent spatial system of the gravitational field cannot be formed in an area far from the earth. However, the graviton individually penetrates all objects in space, and objects that the graviton penetrates get to fall autonomously. The autonomous fall of such objects is not related to the

spatial independence of the gravitational field.^[4]

<http://batangs9.com/E-1.pdf>

2. The error of the constant speed of light and the physical meaning of speed

Einstein recognized that the nature of time has the function of the coordinate axis and claimed the space-time model of four dimensions including T , the coordinate axis of time. However, the nature of time is defined as a pure scalar quantity which does not have position and orientation, and the time of scalar cannot have the function of the coordinate axis.

The time of scalar only occurs through a change in an event. In other words, it cannot be distinguished from the fact about which one comes first between the chicken and the egg, but the case is proactively present than time. Also, the position and orientation of the case are not reflected in the time of scalar. If the development of an event is switched in the reverse direction, the case of the reverse direction has a normal time.

The time of scalar does not lead to a change of an event. One example is the clock produced at the time of scalar, but the clock is not operated by the time of scalar. Also, the time of scalar does not have a reference point (zero point of the coordinate axis) at the coordinate axis. This logic means T , the coordinate axis of time, and the space-time model of four dimensions are fictional.

It is very difficult to clearly recognize speed of V in the process of the objects' movement at the speed of V . This is because speed of V is composed of $\frac{L}{t}$, and which is time of t changed in progress was included in $\frac{L}{t}$. Here, time of t and speed of V are not represented schematically without having comparative objects. Therefore, time of t

and speed of V should be understood as abstract images.

It is more difficult to understand the very fast speed of light with an abstract image. Therefore, an abstract image of the speed of light has the risk of being distorted and abused. A part of an abstract image of the speed of light that is seriously distorted is the law of the constant speed of light in the special theory of relativity. Expressing the speed of light in the perspective of distance(L) can be one of the ways to get out of the ambiguity of the speed of light.

X, Y, Z of the spatial coordinate axes typically preserve the distance of L . The distance of L is represented schematically, so that it is possible to be clearly understood. In addition, an observer of the movement can simultaneously check the propagation distance of light waves (L_1) and the observer's own exercise distance of L_2 . This is because two distances L_1 and L_2 were simultaneously formed at the same time of t . Therefore, the final displacement distance of light waves should be expressed as $L_1 + L_2$, and the propagation speed of light waves should be expressed as $\frac{L_1}{t} + \frac{L_2}{t} = C + V$. The law of the constant speed of light cannot be established for an observer of the movement.

However, if the body of the light source is moved, and an observer is stationary, the speed of light(C) measured at the position of a stationary observer cannot be changeable. In these conditions, the law of the constant speed of light in the special theory of relativity can be misunderstood as it is reasonable.

III Conclusion

The gravitational field of the earth has its own spatial and coordinate system independently separated in space. Thus, the propagation speed of

light waves manifested in the gravitational field of the earth is not influenced by the effect of the earth's revolution. However, the propagation speed of light waves measured at the position of an observer of the movement in the earth's gravitational field should be added-up as $C + V$. This is because the gravitational field preserves the displacement distance of light waves, and an observer of the movement enters the gravitational field.

There have been no experiments correctly conducted to verify a change in the speed of light from the position of an observer of the movement in the historical evolution process of Physics. Therefore, experiments to measure the speed of light from the position of an observer of the movement should be attempted for a sound development in Physics.

IV. References

- [1] Jong o, Kim. Mullihak Chongnon 1 bu, 2 bu. (Gyohaksa. Seoul. 1984).
- [2] young sik, kim. Jungryeokiran Mueosinga. (Jeon Gwang. Seoul. 2001).
- [3] young sik, kim. Jeoldaeseangiron 1 gwon, 2 gwon. (Ujuwa Gwahak. Gyeonggido. 2012).

V. References of the Cyber site

- [4] young sik, kim. <Flaws of Newton's Mechanics and Distorted Concepts Adopted by Modern Physics>. 2016.
(<http://batangs9.com/E-1.pdf>).

*** Difference becomes specialty, Ideal becomes reality,
at the center of world in the name of center.**