Spatial structure of the Earth's Gravitational Field and Misunderstanding of the Law of the Constant Speed of Light(27)

– 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 system and coordinate system independently separated in space. Also, When light waves in space enter the interior of the earth's gravitational field, the incoming light waves maintains a new light velocity at $3 \times 10^8\ m/\sec$ in the spatial system of the earth's gravitational field. Therefore, the light waves observed from the perspective of a stationary observer within the earth's gravitational field always has the light velocity of $3 \times 10^8\ m/\sec$. From this perspective, it can be misinterpreted that the principal of invariant light speed in the special theory of relativity is valid.

2. Inside the Earth's gravitational field, the propagation path(Position, direction, distance, trajectory) and propagation velocity of the light wave are not influenced by orbital motion. In other words, The gravitational field of the earth typically preserves the propagation path and propagation velocity of the light wave. However, the movement observer penetrates the interior of the Earth's gravitational field in the form of transmission. 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 view of this logic, the law of the

constant speed of light in the special theory of relativity cannot be established for an observer of the movement.

3. All areas in outer space are filled with "Batangs"(medium of light waves). Here, Space filled with Batangs have a unique space system and an absolute coordinate system. In addition to this, the space system in space preserves all physical phenomena. Therefore, all reactions of physical phenomena can be expressed in an absolute value with regards to the coordinate system in space. In other words, the observer does not have an independent coordinate system. In this logical perspective, the special theory of relativity which expresses the reaction to the physical phenomena in a relation to the observer, must be abolished.

Sequence

※ **For your reference –** This paper denies some arguments of relative theory, and suggests a new alternative. It is hoped the relative theory of the abolition target will be excluded from the judgment standard.

Ⅰ Introduction
As evidenced in the aberration effect by Bradley, space typically preserves the Progress path(Position, direction, distance, trajectory, track) and propagation velocity of light waves. That is, the propagation path and the propagation path of the light wave can be expressed with respect to the

coordinate system of the space. 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.[3], [6], [17]

<http://batangs9.com/E-3.pdf>, <http://batangs9.com/E-6.pdf>,
<http://batangs9.com/E-17.pdf>

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, If the Michelson – Morley experiment is performed in a high-altitude satellite, the summed velocity ($C+V$) of light waves is expected to be detected. In this experiment, the orbital velocity of the earth and the revolution velocity of the galaxy should be reflected simultaneously.

The earth's gravitational field has its own independent spatial system (spatial zones). Also, The "gravitational field of the earth" which has independent spatial system preserves the propagation path and propagation velocity of light waves. 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.[4], [5] <http://batangs9.com/E-4.pdf>,
<http://batangs9.com/E-5.pdf>

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. Structure and Characteristics of Outer Space

The outer space formally(controlled way) preserves the displacement distance(Or propagation path, locus) and propagation velocity of light waves. Under this condition, only one absolute coordinate system is set, and the propagation velocity of light waves must be expressed as an absolute value. Therefore, the outer space must have an absolute coordinate system, and introduce(accommodate) the medium of light waves in a favorable position. In other words, there is no way to deny the existence of the medium.[5]

  <http://batangs9.com/E-5.pdf>

This medium of light waves is called "ether" in classical physics, but is called "batangs" in my paper for convenience. The reason why they are distinguished from each other is that their characteristics are totally different. Batangs in space is distributed in a three-dimensional form(space frame construction). This distribution system of batangs is used as the comparison target of spatial distance. As a result, the space coordinate axes of X, Y, and Z can be set in a three-dimensional form. In other words, the outer space has a three-dimensional spatial coordinate system (X, Y, Z), and the bases and the structure of the spatial coordinate system are maintained by the distribution system of batangs.[6]

 <http://batangs9.com/E-6.pdf>

Time t is defined as the amount of change in time, but it can also be defined as the amount of change in events. The reason behind the occurrence of time t is that all physical phenomenon work by using batangs in space, and have a reaction process in which batangs in space react to

the elastic force of Constant velocity. If batangs in space do not have the reaction process of Constant velocity(time t), the distances of $10\,Km$ and $100\,Km$ can be observed simultaneously.

Batangs in space react to external stimuli as the elastic force of light velocity which has the fastest change in all natural physical phenomena. Such light velocity can be used as the basic standard of time(t). Therefore, all changes in physical phenomena which uses the elastic force(light velocit) of batangs can be expressed as the time(t) of the same value.

In space which consists of batangs, all types of energy are propagated at the speed of light C. In addition, the vibrational energy of light velocity acts inside all elementary particles. Here, the displacement of light velocity moves gradually. The sequential progress of light velocity is expressed in terms of time t which reflects the sequential progress of light velocity.[6], [7] <http://batangs9.com/E-6.pdf>, <http://batangs9.com/E-7.pdf>

Time can be understood as a pure scalar which does not have any position and direction. Also, the time in Scala must change to the current progressive type. Likewise, the characteristics of time which is changed into the progress of the present are not expressed in a formula. That is, time has an ideological image(ideal models of non-existent fictions).

It is extremely difficult for one to clearly understand the characteristics of time which cannot be expressed in a formula, and it has a high risk of being misused. The most seriously distorted part of the ambiguous subject, time, is Einstein's special theory of relativity. This is because the scalar's time was used as the time axis of T during the implementation process of the special theory of relativity. ^^

The outer space consists of batangs, and the elastic force of batangs is

expressed as the time of t. Therefore, the time of t should be included in the properties of space(batangs). The time of these conditions can be expressed in one dimension and two dimensions. Also, scalar time does not have any substantive components. Therefore, it is impossible for one to use scalar time(t) as the time axis of T. That is, the time axis of T which Einstein implemented and the four-dimensional space-time model are fictitious phases(ideal model) that do not exist in reality.

A 3-dimensional baseball and 11-dimensional space cannot mutually act upon each other as if a 2-dimensional paper cannot draw a 3-dimensional baseball. That is, each object which has its own dimension cannot be connected to one another. Therefore, we need to discard the spatial model of higher dimensions(nine dimensions and 11 dimensions) and come up with an alternative gravity theory.

The spatial system in space have batangs' property of matter(elastic force of the light velocity) and the three-dimensional spatial coordinate system(X, Y, Z). The space of these conditions is called "three-dimensional complex space model." Also, the "three-dimensional complex space model" and the "four-dimensional space-time model" are compared contrastingly. Here, the elastic force of batangs(elastic force of the light velocity) and the time axis of T have a corresponding relation, and the time axis of T reflects the elastic force of batangs. Consequently, the four-dimensional space-time model should be replaced by the "three-dimensional complex space model."

In the "three-dimensional complex space model" which includes the elastic force of batangs, the role of time axis(T) is unnecessary. In addition, higher dimensions than four dimensions are not recognized in the "three-dimensional complex space model." In other words, nine dimensions and 11 dimensions are ideal models of non-existent fictions. Therefore, the operating principle of all physical phenomena should be analyzed as the

logic which directly uses the elastic force of batangs and the three-dimensional space coordinate system.[5]
 <http://batangs9.com/E-5.pdf>

   In the "three-dimensional complex space model", all elementary particles are not made up of hard solids, but repeat the "autonomous vibration" of contraction and expansion in perpetuity. In addition, the elementary particles of autonomous vibration simultaneously have a function of producing field energy(nuclear field, electric field, gravity field) and an additional function of reacting to that field energy. All movements of these elementary particles are made by the process of autonomous displacement. Therefore, the charge, the quark, and the mass, which are perceived from the viewpoint of modern physics, can be regarded as nonexistent. In other words, the charge, the quark, and the mass are only ideal models of fictitious things, and do not have a functional role in the necessity of existence.

   The field energy of space has a pure spatial function, and the field energy of that spatial function allows for the conditions under which the elementary particles of autonomous vibration can autonomously move. In addition, the preparation and the process for the autonomous motion of the elementary particles of autonomous vibration are determined inside the elementary particle. Therefore, mediators such as gluons, gauges, bosons, mesons, and gravity are unnecessary in the process of basic interaction. Of course, there is no need for space-time curve model(4 dimensions) and multidimensional logic(11 dimensions).[25], [26] <http://batangs9.com/E-25.pdf>
 <http://batangs9.com/E-26.pdf>

   Fundamental interaction of an elementary particle results from autonomous motion of an elementary particle. In other words, in the process of the basic interaction, the elementary particles are not displaced (moved) by external interference or influences.

2. The spatial independence of the earth's gravitational field

The structure of the earth's gravitational field is not fully interpreted by the aspect of general theory of relativity. Therefore, a theory on gravity of a new paradigm is necessary. The causative function of gravity is called **"graviton or gravity factor"** in this paper. The graviton(gravity factor) 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.[14], [15]<http://batangs9.com/E-14.pdf>. <http://batangs9.com/E-15.pdf>

The graviton(gravity factor) of an object unitis 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(location) 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, The spatial background of elementary particles are displaced without resistance as much as the amount of penetration of the gravity factor. Therefore, the inertial force of elementary particles acts tendentiously, and the biased action of the inertial force is expressed as the inertial motion of the free fall. Here, 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"**. The free fall of gravity will be explained in detail through the Other article(Title: The Action of Gravity and Controlled Domination in Outer Space).[14] <http://batangs9.com/E-14.pdf>

In regions where the individual distribution density of the gravity factor is high, the independent space system of the earth's gravitational field is formed. Also, 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 C. Therefore, assuming that the propagation speed of graviton is $3 \times 10^8\ m/\sec$, the spatial density of graviton is d, the displacement speed of the gravitational field is $9.8\ m/\sec$, and the spatial density(Density of space) 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] <http://batangs9.com/E-3.pdf>

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] <http://batangs9.com/E-3.pdf>

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 $10\%(\frac{1}{25}$ of the wavelength displacement) of the estimate was found in the interferometer test by Michelson-Morley. Also, in Miller's precise interferometer experiment, the transfer effect($\frac{1}{30}$ of the wavelength displacement) of the interference fringe was found.[15] <http://batangs9.com/E-15.pdf>

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.

At the high sky of the earth, the spatial system of the gravitational field cannot be formed. However, an object at high altitude has the kinetic energy of free fall due to the action of gravity. For example, although a satellite got out of the independent spatial system of the earth's gravitational field, it is still controlled by gravity. Therefore, the independence of the gravitational field and the free fall of gravity must be separated and treated from respectively different conditions.

If the Michelson - Morley experiment is performed in a high-altitude satellite, the summed velocity($C+V$) of light waves is expected to be

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3. 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.[4] <http://batangs9.com/E-4.pdf>

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(ideal models of non-existent fictions).

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 $\dfrac{L}{t}$, and which is time of t changed in progress was included in $\dfrac{L}{t}$. 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.[3]

<http://batangs9.com/E-3.pdf>

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

$\dfrac{L_1}{t}+\dfrac{L_2}{t}=C+V$. 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 ($C+V$) 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 (Train, artificial satellite)of the movement should be attempted for a sound development in Physics.

※ Words of Request - If there is any possibility or if anyone has a positive interest in the experimental method above, please try it. The author does not have any quantitative(Observation of $C+V$) data related to the experiment above.

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

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