The Structure of gravitational field and Spatial Independence (15)

– The gravitational field has its own independent spatial zones. –

Young sik, Kim

Abstract

1. All elementary particles on earth produce and release an infinite number of gravity factors. In addition, gravity factors have volume of spatiality and are transmitted by the elastic force of light velocity. Therefore, the trajectory (propagation path) in which the gravity factor is propagated is pushed away by the elastic force of light velocity as much as the volume of the gravity factor. This gravity factor with the light velocity penetrates all objects (elementary particles) without any resistance, and provides the kinetic energy of free fall.

2. An independent spatial system of the gravity factor is formed at the earth's surface where the density (quantity) of the gravity factor is very high. Here, the total volume of the gravity factor which is released by all elementary particles on earth pushes the spatial zones of the gravity field at a velocity of only $9.8\ m/\sec$. Also, the spatial zones of the gravitational field preserves the displacement distance and propagation velocity (C) of light waves. Therefore, the propagation velocity of light waves must be expressed in the coordinate system of the gravitational field.

3. However, the relative spatial wind of $30\ Km/\sec$ of the space generated by the orbital motion of the earth potentially (internal) penetrates the spatial zones of the gravitational field and all elementary particles on the earth. Also, all elementary particles on earth individually possess a kinetic energy of $30\ Km/\sec$. This orbital motion of the earth must be expressed in the coordinate system of the space.

Sequence

Ⅰ. Introduction

As proven by Bradley's aberration effect phenomenally, space preserves the displacement distance and propagation velocity (C) of light waves. Also, the earth's orbital motion penetrates space at V velocity. Therefore, from the perspective of an observer on the earth, the summed velocity of $C+V$ must be detected.[6]

(http://batangs9.com/E-6.pdf)

However, the summed velocity of $C+V$ was never found in **"Michelson-Morley experiment"**. The failure of the experiment provided the basis for the principle of invariant light speed and the vacuum spatial model in the special theory of relativity to be released.

From the perspective of Michelson-Morley and Einstein, the base of the space is assumed to be extended (connected) to the earth's surface. However, unique spatial zones are created and spatial zones have spatial independence on the earth's surface. That is, the spatial zones in space and the spatial zones on the earth's surface are separated. These independent spatial zones on the earth's surface would be called as the **"gravitational field of the earth"** for convenience.

The **"gravitational field of the earth"** which has independent spatial zones preserves the propagation velocity of light waves. Therefore, the propagation velocity of light waves which is measured from the perspective of a stationary observer inside the earth's gravitational field is always invariable. From the perspective of a stationary observer, the principle of invariant light speed in the special theory of relativity and the vacuum spatial model can be misunderstood as valid.[2]

   (http://batangs9.com/E-2.pdf)

   The earth's gravitational field has its own independent spatial zones. However, the relative space wind of 30 Km/sec generated by the orbital motion of the earth potentially (internal) penetrates the spatial zones of the gravitational field and all elementary particles of the earth. Here, all elementary particles on earth maintain an inertial motion of 30 Km/sec, and individually have a kinetic energy of 30 Km/sec. The earth's orbital velocity must be expressed in the coordinate system of the outer space.

   At the high sky of the earth, the spatial zones 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 zones 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.[14]

   (http://batangs9.com/E-14.pdf)

   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.

   In the body of the paper, I will describe the process by which the

spatial zones of the earth's gravitational field is formed independently. I will also explain the situation in which the relative winds in space potentially penetrate the earth's gravitational field with the independent spatial zones. Also, I will elaborate the reason why the orbital motion of the earth must be expressed in the coordinate system of outer space.

Ⅱ. Body
1. Structure and Characteristics of Outer Space

As described in the previously introduced paper, "The components of space and the conditions for the existence of light waves", the outer space formally (controlled way) preserves the displacement distance and propagation velocity of light waves. Therefore, the outer space must have an absolute coordinate system, and introduce (accommodate) the medium of light waves in a favorable position. This medium of light waves is called "ether" in classical physics, but is called "batangs" in my paper for convenience.[6]   (http://batangs9.com/E-6.pdf)

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.[5]   (http://batangs9.com/E-5.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 light velocity. If batangs in space do

not have the reaction process of light 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. Therefore, all changes in physical phenomena which uses the elastic force 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.

Time can be understood as a pure scalar which does not have any position and direction. Also, the time of the scalar must change into the progress of the current. 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.

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. 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 that do not exist in reality.[4]

   (http://batangs9.com/E-4.pdf)

   The spatial zones 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 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 (nine dimensions, 11 dimensions, etc.) are not recognized in the **"three-dimensional complex space model"**. That is, 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.[3]

   (http://batangs9.com/E-3.pdf)

2. Generation and functions of the gravity factor

   In space which consists of batangs, all types of elementary particles permanently maintain their **"autonomous vibration"** of contraction and expansion. Also, the vibrational energy of all elementary particles acts as the elastic force of light velocity, and has the current process.

These elementary particles of **"autonomous vibration"** instantaneously produce and release light waves at the speed of light, and absorb (accept) light waves at the speed of light.

During the vibration process of elementary particles, the expansion energy acts at a very high pressure. Also, when batangs in space resist the expansion energy of elementary particles, stress in batangs is generated and aggregated into individual units (1,2,3…). The structure of batangs produced here is expressed as the **"gravity factor"** which has causative functions of gravity.

Batangs in space are classified into **"taes"** and **"pyeongs"** which have completely different functional properties. Therefore, the energy which uses **"taes"** and **"pyeongs"** as the medium should be classified into two types. For example, electric force, magnetic force, and light waves use pyeongs in space as the medium but neutrino, nuclear force, and gravity factor use taes in space as the medium. Also, elementary particles of autonomous vibration are moved (displaced) by the replacement effect of the medium by using taes in space as the medium.[6]

(http://batangs9.com/E-6.pdf)

The gravity factor released by elementary particles of autonomous vibration is composed of taes of batangs. Also, pyeongs in space are displaced simultaneously during the process in which taes of the gravity factor are propagated. Pyeongs in space which are displaced here constitute the spatial zones of the earth's gravitational field, but taes of the gravity factor do not constitute the independent spatial zones.

Taes of the gravitational field possess the aggregated structure of units like the light wave (quantum model), and the aggregated structure of the gravity factor is permanently preserved. Therefore, the gravity factor can be propagated to the final boundary in space (end). The

reason why the gravity factor composed of taes has an aggregated structure of units will be explained in a separate paper.

Light waves (pyeongs) and gravity factors (taes) are produced by the expansion energy of elementary particles. In addition, a small fraction of the expansion energy could be lost during the production process of light waves and gravity factors. However, some of the expansion energy lost can be restored to its original state for the stable maintenance of autonomous vibration. Therefore, although elementary particles of autonomous vibration infinitely produce and release gravity factors and light waves, it does not violate the principle of the conservation of energy.

From the perspective of general physics, it is expected that heavier objects release greater gravity factors. However, it is estimated that the volume of the gravity factor produced by heavy protons is very small while that produced by light electrons is much bigger. This is because electrons have a higher expansion energy than protons. That is, the production function of the gravity factor is out of proportion to the reaction function with respect to the gravity factor.

On the other hand, gravity factors exist under the same conditions as the neutrino. In other words, the gravity factor and the neutrino are composed of taes of pyeongs, and use taes in space as the medium to propagate to the elastic force of the light velocity. The only difference between those is that the volume of taes is relatively very large. For example, the volume of the gravity factor can be one $(\frac{1}{10^{xx}})$ over 10 raised to hundreds of thousands of the volume of neutrino.

Gravity factors and neutrinos do not have an electric force (electric field), and do not react to other external electric forces. Also, an

electrically neutral gravity factor (neutrino) penetrates elementary particles of autonomous vibration without resistance. Therefore, there is no object that can interfere the progress of neutrinos and gravity factors in space.

3. The structure and process of formation of the gravitational field

The gravity factor is produced and released by the autonomous vibration of elementary particles. Also, the gravity factor is composed of batangs (taes), and has a volume of spatiality. Here, batangs of the gravity factor is propagated by the elastic force of light velocity by using batangs in space as the medium. Therefore, the space of the path (trajectory) where the gravity factor of light velocity is propagated is pushed away by the elastic force of light waves as much as the volume of the gravity factor.

The total volume of the gravity factor released by all elementary particles on the earth possesses the efficiency which it pushes away the bases (distribution system of batangs) of the space at the velocity of 9.8 m/sec. That is, the individual density (quantity) of the gravity factor around the earth is very high. Therefore, the spatial displacement velocity of 9.8 m/sec is formed during the process in which the bases of the space are pushed away gradually as much as the volume of the gravity factor. The foundation of space which is displaced at the velocity of 9.8 m/sec is called the **"gravitational field of the earth"** for convenience.[14]   (http://batangs9.com/E-14.pdf)

In space composed of batangs, the earth revolves at the speed of 30 Km/sec. Therefore, the relative space wind (flow of batangs) at 30 Km/sec is formed with respect to the earth on orbital process, and the space wind of 30 Km/sec penetrates all elementary particles in the earth. This orbital process of the earth can be easily understood
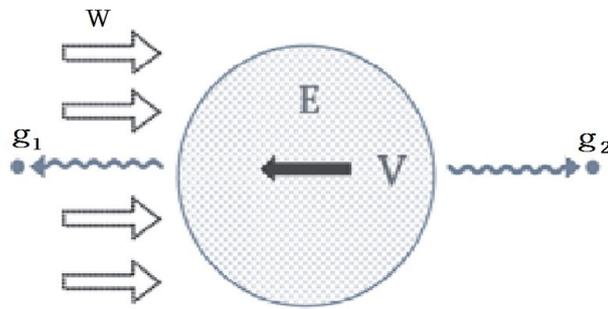
through the diagram in Figure 1.

Figure 1. Diagram showing the process in which the earth on orbital motion releases gravity factors of light velocity.

In Figure 1, E refers to the earth itself, V is the orbital velocity at $30\,Km/\sec$, W is the relative wind in space, g_1 is the gravity factor of light velocity which is released towards the front of the earth, and g_2 represents the gravity factor of the light velocity which is released towards the back of the earth. In here, the gravity factor of the light velocity is propagated by using the space wind of $30\,Km/\sec$ as the medium. This effect can be compared with the same conditions of the effect in which the waves of the surface wave are propagated by using a running river as the medium.

When the gravity factor of the light velocity is propagated by using the space wind of $30\,Km/\sec$ as the medium, the gravity factor of g_1 which is released towards the front of the earth has the propagation velocity of $29{,}970\,Km/\sec$. However, the gravity factor of g_2 which is released toward the back of the earth has the propagation velocity of $30{,}030\,Km/\sec$. In other words, the propagation velocity of the released gravity factors $(g_1,\ g_2)$ toward the front and the back of the earth is increased by the ratio of $\dfrac{1}{10^4}$.

As shown in Figure 1, the distribution range (volume) and the density

(height of longitudinal wave model) of the gravitational field is transformed in inverse proportion during the process in which the propagation velocity of g_2 is increased. For example, when the gravity factor of g_2 has the propagation velocity of $30{,}030 \, Km/\sec$, the distribution range (a) of the gravity factor is widened at the rate of $\dfrac{1}{10^4}$, and the density (b) of the gravity factor is lowered at the rate of $\dfrac{1}{10^4}$. Also, the spatial displacement efficiency $(a \times b)$ is determined by the distribution range (a) and the density (b) of the gravity factor. Therefore, the two gravity factors of g_1 and g_2 have the spatial displacement efficiency of the same values. That is, the spatial displacement efficiency of g_1 and g_2 are not influenced by the orbital motion.

The earth's gravitational field simultaneously has the displacement velocity of $9.8 \, m/\sec$ and the light velocity of $3 \times 10^8 \, m/\sec$. For example, when one inserts new water into the water pipe, the water inside the water pipe is displaced as much as the volume of the new water at the velocity of v, and the displacement of v is transmitted as the elastic force of $1{,}460 \, m/\sec$. Therefore, the displacement velocity of v and the propagation velocity of $1{,}460 \, m/\sec$ act simultaneously.

The effect in which the spatial zones (distribution system of batangs) of the earth's gravitational field are displayed at the velocity of 9.8 m/sec and another effect in which the volume (batangs) of the gravity factor is propagated at the light velocity of $3 \times 10^8 \, m/\sec$ have the same spatial displacement efficiency value. Therefore, if the propagation velocity of the gravity factor is $3 \times 10^8 \, m/\sec$, spatial density is d, displacement velocity is $9.8 \, m/\sec$, and spatial density of the gravity field is D, then their relationship can be expressed as the following.

$$(d \times 3 \times 10^8) = (D \times 9.8) \quad \text{-------} \quad (1)$$

The spatial zones of the earth's gravitational field are displaced at the velocity of 9.8 m/sec. This displacement effect of the gravitational field can be easily understood in Figure 2. In Figure 2, E refers to the earth itself, V is the orbital velocity at 30 Km/sec and G are the spatial zones of the earth's gravitational field.
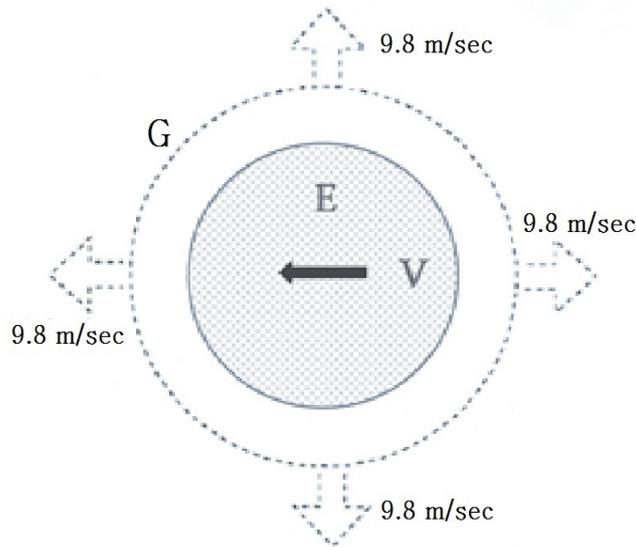

Figure 2. Figure showing the gravitational field of G is displaced at the velocity of 9.8 m/sec around the earth.

In the earth's gravitational field, the relative wind (30 Km/sec) in space and the displacement (9.8 m/sec) of the gravitational field act simultaneously. Here, the relative space wind of 30 Km/sec determines the orbital velocity of the earth, and the spatial displacement of the gravitational field determines the acceleration of the free fall. Therefore, all elementary particles on the earth both have an orbital velocity of 30 Km/sec and acceleration of 9.8 m/sec^2 simultaneously.[14]
(http://batangs9.com/E-14.pdf)

4. The Earth's orbital motion
The relative wind in space is generated during the Earth's orbital process. Also, the relative wind in space is composed of taes of batangs and potentially penetrates all objects of the earth. Thus, the

relative wind in space composed of taes of batangs cannot be detected by the experimental tools of an interferometer. Therefore, the relative wind in space due to the orbital motion of the earth can be misunderstood (illusion) as non-existent.

My opinion in which the relative wind in space penetrates all objects in the earth can be easily understood through the Foucault's pendulum. In other words, Foucault's pendulum is separated from the earth, and it does not get along with the orbital motion of the earth. Also, the relative wind in space penetrates the Foucault's pendulum which maintains an initial motion velocity and initial motion direction. These velocity and direction of the pendulum should be expressed in the coordinate system in space.

The body of the earth makes a revolution at the velocity of 30,000 m/sec. Therefore, when a satellite launched at the velocity of 11 m/sec from the earth of the orbital motion escapes into space, the satellite would have an additional velocity of 30,000 m/sec. This velocity of the satellite should be expressed as 30,011 m/sec with respect to the spatial zones (coordinate system) in space.

The independent spatial zones of pyeongs are formed in the earth's gravitational field. Also, they revolve together with the body of the earth. However, the spatial zones of the earth's gravitational field and those of in space cannot be distinguished clearly by one boundary. In other words, the farther the distance from the earth, the lower the spatial independent ratio of the gravitational field is.

The individual density of the gravity factor released by all objects on earth is inversely proportional ($\frac{1}{r^2}$) to the square of the distance (height of the gravitational field). Also, at the earth's surface where the individual

density of the gravity factor is high, the independent spatial zones of the gravitational field are formed. However, in regions far from the earth, the individual density of the gravity factor is low and the independent spatial zones of the gravitational field are not formed. Thus, in regions where the individual density of the gravity factor is low, there is no way to have the name (word) of "gravitational field".

5. Spatial independence of the gravitational field

The spatial zones of the earth's gravitational field is composed of pyeongs of batangs, and pyeongs of the gravitational field are displaced towards the sky at the speed of $9.8\ m/\sec$. Here, the displacement of $9.8\ m/\sec$ which pyeongs of the gravitational field have is propagated by the strong rush of $3\times10^8\ m/\sec$. Also, the spatial zones (distribution system of pyeongs) of the gravitational field which are propagated by the strong rush of $3\times10^8\ m/\sec$ are not interfered by external action (impact of the orbital motion). In other words, the earth's gravitational field independently has its own spatial zones and coordinate systems.

When light waves in space enter the interior of the earth's gravitational field, the incoming light waves maintains a new light velocity at $3\times10^8\ m/\sec$ in the spatial zones of the gravitational field. Therefore, the light waves observed from the perspective of a stationary observer within the gravitational field always has the light velocity of $3\times10^8\ m/\sec$. From this perspective, it can be misinterpreted that the principal of invariant light speed in the special theory of relativity is valid.[6] (http://batangs9.com/E-6.pdf)

The spatial independence of the earth's gravitational field does not have clear boundaries but gradually changes in accordance with the height of the gravitational field. For example, the gravitational field of the earth surface is assumed to have 90% of independence against the outer space. In the interferometer experiment done by Michelson and

Morley, only 10 % ($\frac{1}{25}$ of the wavelength displacement) of the expected effect has been detected. Also, in Miller's precise interferometer experiment, the transfer effect ($\frac{1}{30}$ of the wavelength displacement) of the interference fringe was found.[3] <http://batangs9.com/E-3.pdf>

The earth's gravitational field has spatial independence and revolves at the speed of $30 \, Km/\text{sec}$. Therefore, when light waves in space perpendicularly enter the earth's gravitational field, the propagation velocity of light waves (C) and the orbital velocity (V) of the earth should be synthesized into a single vector at the boundary of the gravitational field. This synthesized process of the two velocities $(C + V)$ can be easily understood in the diagram in Figure 3.
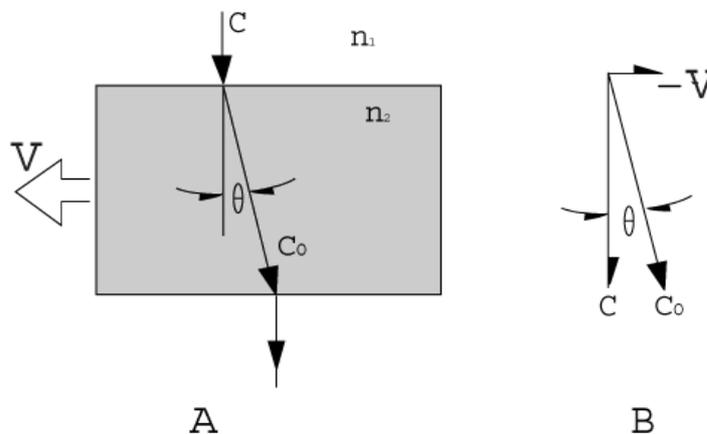

Figure 3. Process by which the path of light waves refracts at the boundary of the gravitational field

In Figure 3, n_1 refers to the spatial zones in space, n_2 are the independent spatial zones of the earth gravity field, C is the path of light waves, Co is the path of light waves which entered the interior of the gravitational field, V is the orbital velocity of the gravitational field, and θ is the angle of refraction of light waves.

As shown in A of Figure 3, when light waves in space

perpendicularly enter the boundary of the earth's gravitational field which has an orbital velocity of V, the spatial zones of the earth's gravitational field react counteractively. In this reaction process of the gravitational field, the propagation velocity of light waves (C) and the orbital velocity ($-V$) of the earth are synthesized into a single vector like B in Figure 3. Therefore, the path of light waves at the boundary of the gravitational field refracts at the angle of $\dfrac{-V}{C} = \tan\theta$. In other words, the orbital velocity of V determines the angle of refraction of θ.

As Bradley claims, the aberration effect can be realized in a vacuum space model. However, it is also expressed at the boundary of the gravitational field which has a spatial independence in Figure 3. That is, the validity of the independence of the gravitational field is not important during the process of the aberration effect. This logic means that the vacuum space model cannot be proven via the aberration effect of Bradley.

My opinion in which the spatial zones of the earth's gravitational field is separated from the spatial zones in space is decisively proven by the interferometer experiment of Michelson and Morley. That is, the consistent wave of light waves in the interferometer experiment means that the experimental tools of the interferometer stop with respect to the spatial zones of the gravitational field.

Even though the independent spatial zones of the gravitational field are not formed in regions far from the earth, the gravity factor individually penetrates all elementary particles in space. In addition, when the gravity factor penetrates elementary particles in space, the inertial force of the elementary particles acts tendentiously, and produces the kinetic energy of free fall. This free fall of gravity and the spatial independence of the gravitational field should be treated in

different perspectives.[14]   (http://batangs9.com/E-14.pdf)

Ⅲ. Conclusion

All elementary particles on earth infinitely produce and release gravity factors. Here, the gravity factor possesses the volume of spatiality and is propagated by the elastic force of the light velocity. Therefore, the trajectory (path) in which the gravity factor is propagated is pushed away by the elastic force of the light velocity as much as the volume of the gravity factor. Also, at the earth's surface where the individual density (quantity) of the gravity factor is very high, independent spatial zones of the gravitational field are formed.

The spatial zones of the earth's gravitational field are composed of pyeongs of batangs which are used as the medium of light waves. Also, these formally preserves the displacement distance and propagation velocity of light waves. Therefore, the propagation velocity of light waves which is measured from the perspective of a stationary observer within the earth's gravitational field is always invariant. However, light waves measured from the perspective of a moving observer should have the summed velocity of $C + V$.

The relative space wind of $30\ Km/\mathrm{sec}$ caused by the earth's revolution is composed of taes of batangs, and it potentially (internal) penetrates all elementary particles on earth and the spatial zones of the earth's gravitational field. Here, all elementary particles on earth individually have a kinetic energy of $30\ Km/\mathrm{sec}$. This orbital motion of the earth should be expressed in the coordinate system in space.

Ⅳ. References of the Cyber site

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

[2] young sik, kim. <The Defect in the Special Theory of Relativity and the

Formulation of the Absoluteness Theory>. 2016.
<http://batangs9.com/E-2.pdf>

[3] young sik, kim. <Spatial Independence of the Earth's Gravitational Field and Fabrication of the Law of the Constant Speed of Light>. 2016.
<http://batangs9.com/E-3.pdf>

[4] young sik, kim. <The Fictional Coordinate Concept in the Special Theory of Relativity and the Search for Another Alternative>. 2016.
<http://batangs9.com/E-4.pdf>

[5] young sik, kim. <The Necessity of the Absolute Coordinate System and the Verification Method>. 2016. <http://batangs9.com/E-5.pdf>

[6] young sik, kim. <Elements in Space and the Condition for the Existence of Light Waves>. 2016. <http://batangs9.com/E-6.pdf>

[7] young sik, kim. <The Structure and Active Functions of Elementary Particles>. 2016. <http://batangs9.com/E-7.pdf>

[8] young sik, kim. <Interaction between the Active Functions and Electric Forces of Elementary Particles>. 2016.
<http://batangs9.com/E-8.pdf>

[9] young sik, kim. <The formation of atomic structure and mathematical expression>. 2016. <http://batangs9.com/E-9.pdf>

[10] young sik, kim. <Active functions of elementary particles and interactions of nuclear force>. 2017. <http://batangs9.com/E-10.pdf>

[11] young sik, kim. <Fictional Perception of Mass and Inertial Force>. 2017. <http://batangs9.com/E-11.pdf>

[12] young sik, kim. <The Deficiency in the Principle of Equivalence and the Need for Alternatives>. 2017. <http://batangs9.com/E-12.pdf>

[13] young sik, kim. <The Active Functions of Elementary Particles and the Principle of Motion>. 2017. <http://batangs9.com/E-13.pdf>

[14] young sik, kim. <The Action of Gravity and Controlled Domination in Outer Space>. 2017. <http://batangs9.com/E-14.pdf>

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

2017. 7. 31