

Elements in Space and the Condition for the Existence of Light Waves (6)

- Light waves are transmitted with Batangs as a medium. -

Young sik, Kim *

Abstract

1. Space is composed of a physical element, Batangs and adopts Space Systems. The Batangs in space is classified into Taes and Pyeongs. Also, Pyeongs among the Batangs are used as a medium of transmitting light waves, electric forces, and magnetic forces. Taes among the Batangs are used as a medium of transmitting neutrino, nuclear power, and gravity.

2. In the process of transmitting light waves, a “**photocurrent**” in a linear direction and “**photomagnetic**” of vertically rotated direction (vertical vector) simultaneously occurs. Here, the photocurrent in a linear direction is changed into a vertically rotated photomagnetic current, and vice versa. Moreover, the interactive conversion of photocurrent and photomagnetic is permanent.

3. The unit of the light wave is formed by the interactive conversion of photocurrent and photomagnetic. When using the unit of photocurrent and photomagnetic, the mechanical principles of shadow effect, polarization, refraction, uncertainty principle, photoelectric effect, Compton effect, and many more can be explained logically.

PACS number: 02.30.Em, 03.30.+p, 03.50.De, 03.50.-Z, 03.65.-w, 04.20.Cv

Keywords: Space, Space Systems, Batangs, Taes, Pyeongs,
photocurrent, photomagnetic,

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

I. Introduction

As the aberration effect of Bradley states, space formally (controllably)

preserves the path of light waves. Moreover, the observer of the action passes through (penetrates) space. Therefore, from the perspective of an observer, the estimated propagation speed must have an arithmetic formula of $C + V$. However, to this day, the summation effect of $C + V$ has not been proven by any experiment. For instance, Michelson–Morley’s experiment on interferometer which aimed at assessing the summation effect, had failed.^[4]

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

The reason for the failure of Michelson–Morley interferometer experiment is that the space system of the gravitational field independently forms near the index. Here, the space system of the gravitational field revolves along with earth. Therefore, the gravitational field of the index is not affected by the revolution. The condition of formation of the space system of the earth’s gravitational field and its mechanical principles are explained further in the author’s books (Title: jeoldaeseangiron volume 1 and 2).

If the space system of the earth’s gravitational field is formed independently, the propagation speed of light waves measured from the perspective of a static observer inside the gravitational field is constant. From the perspective of a static observer, Einstein’s law of the constant speed of light might be misunderstood as valid. However, an independent space system does not form in the earth’s gravitational field at high altitudes. Therefore, when testing Michelson–Morley interferometer experiment on a satellite located at a high altitude, the summation effect of $C + V$ would be verified (detected).^[2] <<http://batangs9.com/E-2.pdf>>

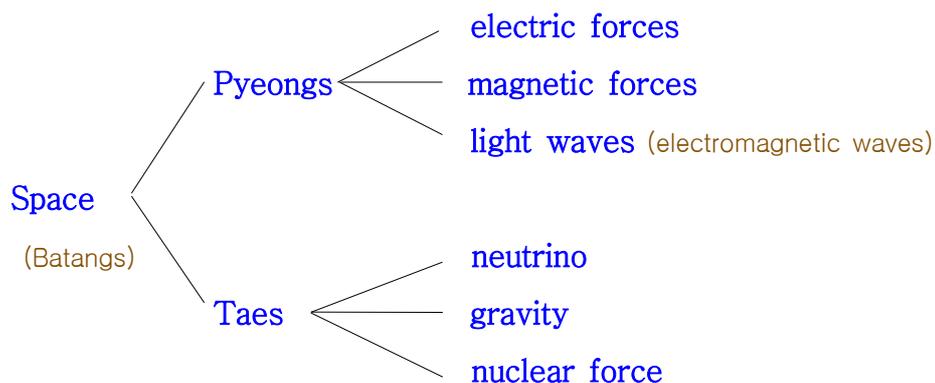
In the body of this paper, a new spatial model composed of substantial elements will be proposed. A process in which substantial elements in space are used as a medium of light waves will be explained. Here, the various effects of light waves are explained as a mechanical principle of substantial function.

II. Discussion

1. Substantial Elements in Space

As the author's books (Title: jeoldaeseangiron volume 1 and 2) discuss, space (or the gravitational field of the earth) has independent Space Systems. Therefore, one absolute coordinate system can be set in space and the medium of light waves is accepted as an advantageous condition. The medium of light waves is called an "Ether" in classical physics, but for the convenience of the discussion, it will be referred to as "Batangs" in the author's thesis. The reason for the differentiation of Ether and Batangs is that the two have a completely different condition for existence.

Space is composed of the dispersion of Batangs. In other words, only the distribution area of Batangs can be called space. Batangs is further classified into "Pyeongs" and "Taes". Moreover, "Pyeongs" among the Batangs are used as a medium of transmitting light waves, electric forces, and magnetic forces. "Taes" among the Batangs are used as a medium of transmitting neutrino, nuclear force, and gravity. Therefore, the action of energy that exists in space can be classified into two types in the following conditions:



"Taes" and "Pyeongs" of Batangs have the elastic force of the speed of light. However, the elastic force of "Taes" and "Pyeongs" can be increased or reduced to a different size depending on the condition of the circumstances. For example, the elastic force of "Pyeongs" is affected by the electric field (electric force) while the elastic force of "Taes" is not affected. Therefore,

e, the propagation speed of light waves when using “Pyeongs” as a medium in a transparent glass (dielectric substance) is slower than the propagation speed of neutrino which uses “Taes” as a medium.

Pyeongs of Batangs is magnetic and the magnetic properties of Pyeongs apply in all directions equally. However, when the magnetic property of Pyeongs is affected by an external factor, it can be concentrated and biased as shown in Figure 1, situation map. In Figure 1, the letter *T* beside the line means Taes of Batangs, the letter *P* next to a dotted line means *P* of Pyeongs, and *N* and *S* refer to the direction of interaction between the magnetic forces. Here, *T* of Taes and *P* of Pyeongs have identical diameter sizes, but they are measured differently in the figure for easier understanding.

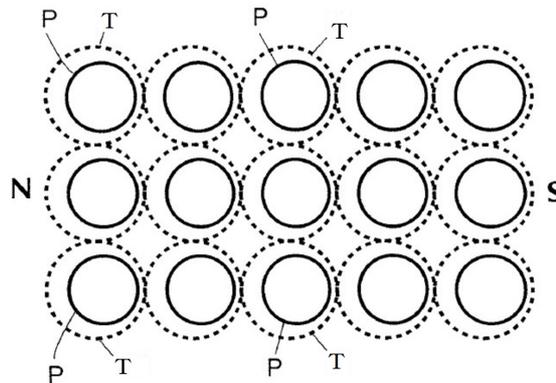


Figure 1. The process map of the appearance of unilaterally-oriented function of magnetic force at the interior of Batangs.

As shown in Figure 1, when the action of Pyeongs gets concentrated and biased within the Batangs, a unilaterally-oriented function forms. The unilateral function of Pyeongs is projected as a reaction of “magnetic forces”. As the concentration rate of magnetic force gets higher, the intensity of “magnetic force” increases. Therefore, all Batangs in space are capable of having unilaterally-oriented “magnetic force” individually.

The unilaterally-oriented “magnetic force” which majority of Batangs possess, is interactively connected. The interactive connection structure is

what triggers the “magnetic field” to form. Therefore, the “magnetic field” can be partitioned into units and the unit signifies the volume of Batangs. Conditions and mechanical principles of the appearance of magnetic field will be explained further in the next thesis (Title: The Structure and Appearance of the Magnetic Field).

Magnetic force occurs from Batangs (Pyeongs) in space and Batangs in space preserve the magnetic force. Therefore, the Batangs in space should be called "magnetic substance". On the other hand, a metallic magnet (or an electromagnet of the solenoid) produces the magnetic force. This metallic magnet should be called "source substance" of the magnetic field. Here, the "magnetic substance" of Batangs which preserves the magnetic force and the metallic magnet "source substance" which produces the magnetic force should be strictly distinguished.

A vertically-rotated (vertical vector) magnetic force occurs around active electrons as expressed in Fleming’s principles. The process of appearance of the magnetic force can be easily understood through the process map in Figure 2. In the illustration, S is space, e means electrons, the big arrow shows the direction of action of electrons, m stands for magnetic force, and the small arrow shows the direction of magnetic force.

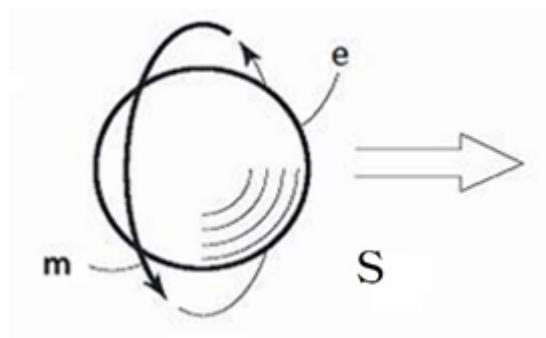


Figure 2. A process map of vertically-rotating magnetic force formation around an active electron.

In the case of an electron of e that penetrates space (or the earth’s gravitational field) of S , as shown in the situation map at Figure 2, a magnetic

force of m forms in space. However, after the electron has penetrated space, the magnetic force ceases to exist on the spot. In other words, the magnetic force and electron do not form a compound substance and magnetic force does not follow the movement of the electron.

Although a magnetic force of m has been produced as a result of the action of electrons, magnetic force of m belongs to the Batangs in space. Therefore, space will have a magnetic force of m . In short, electrons are used only as a catalyst in the process of magnetic force formation. The action of electrons and the formation of magnetic force have independent processes, and they should be dealt with as separate entities.

On the other hand, elementary particles produce an electric field, nuclear field, and gravitational field; and the elementary particles react to the electric field, nuclear field, and gravitational field. This is to say that elementary particles have a simultaneous function to produce an energy field and react to it. However, static electrons do not produce a magnetic field and the magnetic field is not affected by a static electron. In this point of view, pure magnetic field cannot be included in the “**basic interaction**” of elementary particles.

2. The structure of light waves and mechanical principles of different effects

The quantum mechanics of modern physics simultaneously approved the wave model and particle model of light waves (electromagnetic waves). However, the wave model and particle model which are of contrasting concepts are not connected structurally, and they do not have a common form of expression. In line with this, there should be an alternative model that transcends the wave model and particle model.

Like in the argument of the author, light waves can use the Batangs in space as a medium when all domain in space is completely filled with substantial elements of Batangs. Here, the substantiality of Batangs

dominates the space domain exclusively. Otherwise stated, light waves have the volume of Batangs independently. Also, the Batangs in space which is used as a medium of light waves are displaced with the elastic push at the speed of light that is tantamount to the volume of light waves.

The propagation of light waves which is composed of Batangs has a vertically-rotating (vertical vector) electric effect. The electric effect of light waves is herein referred to as “**photocurrent**” for convenience. In the interior of Batangs used as a medium of “**photocurrent**”, a vertically-rotating magnetic force is formed like the Flemming’s principles. Magnetic force is herein referred to as “**photomagnetic**”. Also, the permanent interactive change between the photocurrent and photomagnetic forms the system of units.

So long as it is retained through the interactive change between photocurrent and photomagnetic, light wave energy is not dispersed (distributed) into all domains. Therefore, the unit of light waves can be transmitted for billions of years to billions of light years like the waves of Soliton. The unit of light waves had been mistaken for the photon of a particle model in quantum physics. However, those that do not comprise the unit, such as the density of energy of surface waves and sound waves, are reduced in an inversely proportional behavior to the square of the distance.

In space where photocurrent penetrates, a vertically-rotated photomagnetic is formed. However, after the photocurrent has penetrated, the photomagnetic in space ceases to exist. In other words, the photocurrent of light waves is transmitted through the elastic force in light speed, and the photomagnetic of light waves is not transferred to a different location. Therefore, photomagnetic retains the static state (speed 0) and goes through a process of formation and destruction on the spot. The photocurrent and photomagnetic have different conditions for existence, but the functional connection between the two is permanent.

The functional connection between photocurrent and photomagnetic can easily be understood through the process map in Figure 1. In the illustration, Pe refers to the photocurrent that spreads through the elastic force at the speed of light, the big arrow \Rightarrow refers to the direction of photocurrent (Pe), M_f is the spatial photomagnetic that is vertically-rotated from the photocurrent, Mr stands for the photomagnetic that transformed from the photocurrent, and the small arrows \downarrow and \uparrow refers to the respective directions of the magnetic fields (M_f, Mr).

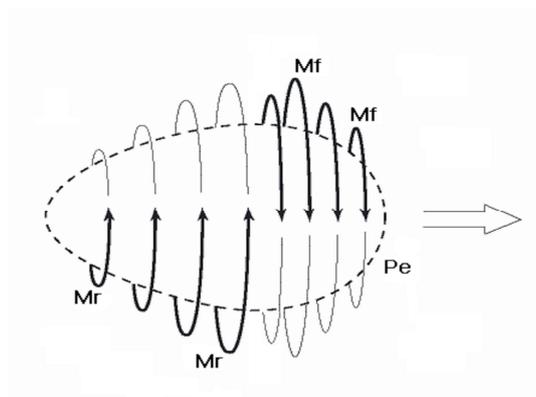


Figure 3. The process map of photocurrent and photomagnetic of light waves transforming into each other.

As shown in Figure 1, a compression effect of + and a photomagnetic (M_f) rotated to the right occurs in the first half of photocurrent (Pe). Thus, the first half has a higher density energy and is distributed to a smaller area. On the other hand, a vacuum effect and photomagnetic (Mr) rotated to the left occurs in the latter half of photocurrent (Pe). Here, the latter half of the photomagnetic has a lower energy density and is distributed to a larger domain.

The photomagnetic of M_f which is derived from the first half of photocurrent is dominant and the photomagnetic of Mr which derived from the latter half of photocurrent is recessive. In this condition, it may be mistaken that only the photomagnetic (M_f) of the first half is formed and the photomagnetic (Mr) of the latter half does not exist. The mechanical effect of the different effects of light waves will be explained below.

Shadow effect – Units of light waves in space have irregular intervals. However, when several light waves pass through a small and thin membrane, the interval between the light waves become orderly arranged through an interactive reaction. The regular interval of light waves can be mistaken as the wavelength of light waves. The interval of photomagnetic is inversely proportional to the density of energy (light pressure, wave height). For example, the higher the density of photomagnetic, the higher is the interval between light waves. This is because the regular interval formed by the photomagnetic of light waves acts as a causal function of the shadow effect.

Polarization – The photocurrent and photomagnetic of light waves have a circular cross-section. However, when the two are affected by reflection, diffraction, refraction, and others, the cross-section may turn oval. A transformed light wave becomes polarized.

Refraction – The path of light waves (visible ray, x-ray, etc) on the inclined surface of a transparent glass (dielectric substance) can be refracted in several spectrums. The higher the light pressure of light waves (wave height, frequency), the smaller is the refraction angle. In the process of forming this wave of refraction, the light pressure of light waves and the stress of the transparent glass apply. One example is that a transparent glass reacts at different magnitudes depending on the light pressure, and the magnitude determines the refraction angle of light waves. If instead, the velocity of light determines the refraction angle of light waves like in Snell's law, then all propagation speed would have decreased to a uniform rate and would have had identical refraction angles.

The Uncertainty Principle – In the process of interactive switches between photocurrent and photomagnetic, the photocurrent attains a very narrow cross-section. One example is that an electron with a very small diameter can freely release and absorb photocurrent. The cross-section of

the photocurrent is estimated to be of equal size to the diameter of an electron or even smaller. On the other hand, photomagnetic has a very wide cross-section. Therefore, the photomagnetic of light waves cannot pass through a wide tunnel that is a thousand times wider than the diameter of an electron. Here, the wide cross-section of a photomagnetic applies as the causal function of the uncertainty principle.

Photoelectric Effect – The photocurrent of light waves has an electric force function. Therefore, when the photocurrent of light waves enters into an atom, the photocurrent and the electric energy of a neutron may function temporarily. Thus, the binding of an electron with neutron is lost. Also, the orbital radius of a lost electron is released to the outside of the atom. Here, the action of an electron that is released out of the atom acts as a causal function of the photoelectric effect.

A photoelectric effect occurs from the liberation of an electron from a neutron, and the kinetic energy of the liberation signifies the bonding of electron to the neutron. Therefore, a released electron in a photoelectric effect may have a different magnitude of kinetic energy depending on the type of metal. In addition, even though the photocurrent of light waves obtain a slanted slope on a metal surface, an electron in the photoelectric effect is released vertically on the metal surface.

Compton Effect – The photocurrent of light waves has its own light pressure, and the light pressure of a photocurrent signifies the wave height (density of energy). Also, when the photocurrent of light waves collides with elementary particles, the light pressure of the photocurrent can be reduced due to the buffering effect of elementary particles. The reduction effect of the light pressure can cause an increase in wavelength or a decrease in the frequency. One example is the increase in the interval between light waves which has low light pressure. Here, the reduction of the wave pressure acts as the causal function of the Compton Effect.

A connection between the photocurrent and the photomagnetic forms in the propagation process of light waves. When this connection is applied, different effects of light waves can be explained in rational logic. Therefore, quantum physics (Niels Bohr's theory) which is based on the quantum model of light waves should be abolished. The electromagnetic theory (Maxwell's theory) based on the accompanying transmission of electric waves and magnetic waves must also be abolished.

III. Conclusion

True physics must deal with the true elements of substances. The object of physics expression must be composed of substantial elements as well. For example, all physical phenomena are brought about using the Batangs in space as a medium, and they are controllably dominated at the speed of light.

All physical phenomena possess a cause and effect relation to Batangs in space. Therefore, an explanation that does not reflect the property of the Batangs cannot be included in true physics. In line with this logical perspective, the theory of relativity and quantum mechanics which do not consider the properties, should be deemed outside the scope of physics.

Space filled with Batangs of substantial elements 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.

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>>

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

2017. 10. 30