

# The Necessity of the Absolute Coordinate System and the Verification Method<sup>(5)</sup>

- The universe has one absolute coordinate system. -

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## Abstract

1. A spatial gravitational field is formed in the surroundings of the Earth, and this gravitational field revolves with the Earth at the same time. Therefore, the Earth's gravitational field and the outer space will individually have independent coordinate systems. If the Earth's gravitational field holds an individual spatial zone, it clearly shows the reasons for the failure of Michelson-Morley's interferometer experiment.

2. The passive electrons and active electrons are clearly distinguishable on the Earth's gravitational field. For example, active electrons generate a magnetic force(Magnetic wave), and passive electrons do not. In addition, the speed of an electron can be expressed as an absolute value of the magnetic force. The observer's role in the process of generating magnetic force is clearly eliminated. Therefore, the specific theory of relativity that are centered on the observer should be discarded.

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## I. Introduction

Einstein's theory of relativity indicates the motion of a train as a simple inertial frame, and introduced the concept of relative coordinates ( $S \leftrightarrow S'$ ). The concept of relative coordinates was introduced because ether (the substantial element in outer space) was rejected and the spatial model of physical vacuum was selected.

However, the theory of inertial frame and the relative structure of the coordinate system is like Galileo's classical physics wherein the quantitative effects of a moving object (train) is shown but not its qualitative features. Therefore, describing the operating principle of a moving object using the theory of inertial frames is very simple, and has a limitation in not improving to a higher level.

The inertial frame of a moving train is composed of the distribution of very small elementary particles, and elementary particles holds the smallest unit. However, when the theory of relativity was proposed (1905), the existence of the elementary particle was not yet recognized. Therefore, the inertial frame in the theory of relativity holds an advantageous position. This theory of inertial frame should be distinguished as classical physics.

The elementary particles of a moving train individually pass through outer space like a bullet in motion. Additionally, the train's overall kinetic energy is evenly distributed among all elementary particles of the train. Hence, all elementary particles have their individual inertial force and kinetic energy. Therefore, the operating principle of inertial force and kinetic energy of the train should be interpreted in the perspective of elementary particle units as the application of the characteristics of elementary particles.

If the train's kinetic effect is to be interpreted in the perspective of elementary particle units, the theory of inertial frames is not necessary.

Hence, the role of elementary particles holds a more fundamental meaning than the inertial frame. If Einstein recognized the existence of elementary particles, the theory of inertial frames and the relative coordinate system would not be needed.

In the author's new theory of gravity, the operating principles of gravity(or inertial force) is interpreted in the perspective of elementary particle units. For example, the Earth's gravitational field is formed by the properties of elementary particles and the properties of elementary particles respond to the function of the gravitational field as a free fall kinetic effect. This new theory of gravity is specifically introduced in the author's book(title: jeoldaeseangiron volume 1 and 2).

The outer space is regarded as a huge inertial frame, and it maintains its original place unchangeably. Meanwhile, the Earth's gravitational field has its distinct spatial zone, and the gravitational field's spatial zone co-revolves with the Earth. Therefore, the outer space and the Earth's gravitational field can have an individual system of coordinates.

All elementary particles in the moving train individually pass through the outer space(or Earth's gravitational field) spatial zone. Therefore, the inertial frame of the moving train cannot exclusively have a substantial field. The inertial frame of the moving train is like an invisible ghost that can only be understood through an idealistic image. Hence, the moving train's inertial frame is fictional like the shadows. Of course, the coordinate system of the inertial frame of the moving train is also fictional.

The body of the paper will look into the Lorentz transformation equation and propose an anomalous process of induction and suggest that the rationale in the coordinate system( $S \leftrightarrow S'$ ) is a false idea. Additionally, it will also explain why an absolute coordinate system must be set on outer

space and the Earth's gravitational field's spatial zone, and discuss the verification method for the absolute coordinate system.

## II. Body

### 1. The necessity and existence qualifications of the absolute coordinate system

As explained through other dissertations, if we take  $\frac{1}{\sqrt{1-\frac{V^2}{C^2}}}$  of the

Lorentz transformation equation in an inverse order to interpret it, the

disassembled final result  $\frac{1}{\sqrt{\frac{C^2-V^2}{C^2}}}$  through the conversion process

$C+V$ (or  $C^2-V^2$ ) summation structure is derived. Hence, the Lorentz transformation mathematical base has the summation structure of  $C+V$ . If one denies the existence of  $C+V$ , deriving the Lorentz transformation is absolutely impossible.

The Lorentz transformation's mathematical  $C+V$ 's summation structure can be applied only when one vector quantity is established when  $C$  and  $V$  has a linear structure coordinate axis( $X$ ). Therefore, the Lorentz transformation is completed using one coordinate system( $S$ ).

In the process of deriving the Lorentz transformation, the  $C+V$  effect  $X \rightarrow X'$  is disguised as a displacement behavior. For example, in  $X'$ 's coordinate, the value of  $C$  is included. The displacement behavior of  $X \rightarrow X'$  of  $V$ 's speed in motion to  $X'$ 's coordinate can have the effect of  $C+V$ . Hence, the  $C+V$  effect is hidden in the displacement behavior of  $X \rightarrow X'$ . Therefore, during the process of deriving the Lorentz transformation, the ambiguity and resistance to  $C+V$  is exposed to the outside.

The Lorentz transformation that was derived from the  $C+V$  effect portrays the validity of an object's motion. Therefore, all objects in

motion's inner substance holds the effect of  $C+V$ . Hence, inside the elementary particles, the effect of  $C+V$  is valid, but if the secret of  $C+V$  is not revealed, the same chaos such as in the theory of relativity will continue.<sup>[4]</sup> <<http://batangs9.com/E-4.pdf>>

The Lorentz transformation that uses one coordinate system is effective within the Earth's gravitational field. Therefore, the Earth's gravitational field has its own spatial zone and one coordinate system. If the Earth holds its own individual spatial zone, this explains why the interferometer experiment done by Michelson–Morley went wrong.

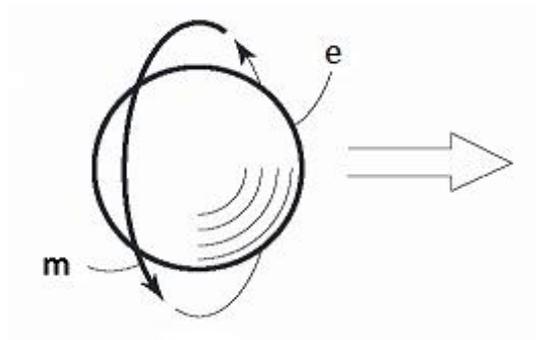
In the Earth's gravitational field that has its own spatial zone(coordinate), Bradley's aberration effect could take place. That is when the light waves in outer space enter the Earth's gravitational field, the propagation speed of light waves and the Earth's orbital speed combines as one vector force, the aberration forms an angle of inclination in this process.<sup>[3]</sup>

The Earth's gravitational field does not have a distinct spatial boundary, and changes follow the altitude of the gravitational field. For example, the gravitational field near the surface has a 90% independence. This is because in the interferometer experiment done by Michelson and Morley,10% of the expected effect(a range of  $\frac{1}{25}$  with regards to the impact) was proven, and in Miller's deliberate interferometer experiment, the movement effect of interference fringes(a range of  $\frac{1}{30}$  with regardsto the impact) was also found.

In places beyond the Earth's gravitational field with high altitude, the inertial frame of a satellite(elementary particle's range) pass through the spatial zone of the outer space like an invisible ghost. Therefore, if we are to experiment on the Michelson–Morley interferometer, the effect of  $C+V$  can be visible. This satellite's interferometer experiment does not require dust–proof mechanism.

## 2. The verification method of the absolute coordinate system

If the Earth's gravitational field(or outer space) spatial zone has one absolute coordinate system, the observer's kinetic speed and the object's kinetic speed shall be represented as an absolute value. This claim can be verified through Figure 1.



**Figure 1.** Generation of magnetic force around active electrons

In Figure 1, ( $e$ ) stands for electrons, the big arrow stands for the direction the electrons ( $e$ ) are moving, and ( $m$ ) represents the magnetic force. If electrons ( $e$ ) move to the big arrow's direction, the electrons are surrounded by a magnetic force ( $m$ ). However, if electrons ( $e$ ) are stopped, magnetic force ( $m$ ) does not occur.

The way to distinguish active electrons and passive electrons in the Earth's gravitational field(or outer space) is to check whether magnetic force( $m$ ) occurs or not. For example, magnetic force is generated in active electrons, and passive electrons do not generate magnetic force. Additionally, the operating principle of magnetic force can be understood through Fleming's right-hand rule.

If the observer starts moving to the passive electron, magnetic force is still not generated. However, if the electrons start moving towards a

stationary observer, a magnetic force is generated. Hence, the effect of magnetic force of an electron is determined by the mutual relationship(relative motion) between the outer space and electrons. In addition, the generation of magnetic force in the position of the observer does not hold the connection of cause and effect. Therefore, in the process of generating magnetic force for active electrons, the role of the observer is excluded. This logic means that the theory of relativity should be discarded.

Magnetic force is generated from active electrons because the target object of magnetic force exists, and active electrons pass through the magnetic force's target object. For example, the Earth's gravitational field(or outer space) spatial zone has a unique isomeric, and the Earth's gravitational field's isomeric reacts to active electrons. Hence, magnetic force is generated during the reaction process between the Earth's gravitational field's quality and electrons.

The Earth's gravitational field's preserves the path and propagation speed of light waves. Therefore, in the perspective of a stationary observer, the propagation speed of light waves measured on the Earth's gravitational field must be unchangeable. This condition can be misunderstood in a way that the constant velocity law in the theory of relativity is valid. However, in the perspective of an observer in motion that passes through the Earth's gravitational field, the  $C + V$ 's effect must be shown.

When both the electrons and the observer are in motion, the electron and observer have the same inertial frames. In addition, even if the electron and observer have the same inertial frame, the magnetic force(Magnetic wave) generated around the electron, and the magnetic force the electron is delivered to the observer. The reason why electrons generate a magnetic force is that electrons pass through outer space(or gravitational field). Hence, the inertial frame of the outer space

embraces the movement of the electrons, and based on active electrons, the inertial frame of the outer space exists.

The role of the outer space is essential in the process of generating the Doppler effect in light waves. For example, in the process of generating a Doppler effect, the spatial zone of the outer space preserves the progress path and propagation speed of light waves. If the spatial zone of the outer space did not preserve the progress path and propagation speed of light waves, then the Doppler effect in light waves could not occur.

In the spatial zone of the outer space, the three dimensions of the coordinate system are set, and the three-dimensional space has a unique isomeric. Hence, the outer space has both isomeric and a 3-dimensional coordinate system. Additionally, the outer space's quality can be applied to all energy which reacts to the velocity of light elastic force. The reaction process of the speed of light is portrayed as the effect of time.<sup>[3]</sup> <<http://batangs9.com/E-3.pdf>>

The outer space has both a three-dimensional coordinate system and an isomeric(elasticity of velocity of light, time) will be called the "Three-dimensional complex spatial model". This "Three-dimensional complex spatial model" replaces the four-dimensional space-time model. Additionally, in the "Three-dimensional complex spatial model" all physical phenomena is applied and the outer space's isomeric is connected as cause and effect. Therefore, all operating principles of physical phenomenon can be interpreted in terms of substantial features.

The "three-dimensional complex spatial model" of all applied physical phenomenal exists due to the outer space's isomeric(elasticity of velocity of light). Therefore, an absolute coordinate system should be set for the

outer space. This explanation can be easily understood through the situation map in Figure 2.

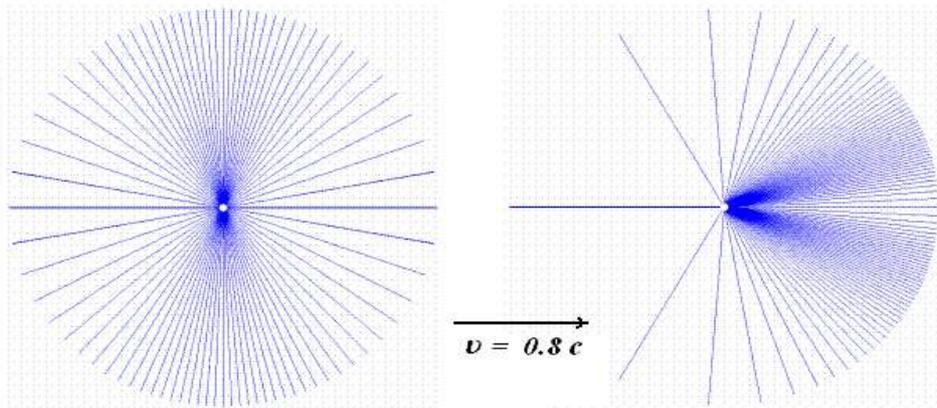
<https://sites.google.com/site/testsofphysicaltheories/English/lorentz-einstein>.

## TESTS OF PHYSICAL THEORIES

Walter Orlov, 2011 - 2012

### Failure of the Lorentz-Einstein Electrodynamics

Lienard and Wiechert in 1898 and 1900 calculated independently electric and magnetic fields of moving charge. But the structure of Lienard-Wiechert fields is different from the fields with Lorentz contraction: the Lorentz fields are flattened perpendicular to the movement (figure below, left); the Lienard-Wiechert fields are concentrated in the direction of movement (figure, right).



Of course, mathematical expressions for these fields see also different. The Lorentz contraction e.g. the electric field is given by the following formula:

$$\vec{E} = \frac{q}{4\pi\epsilon_0 r^2} \frac{1 - \frac{v^2}{c^2}}{\left(1 - \frac{v^2}{c^2} \sin^2 \theta\right)^{\frac{3}{2}}}$$

the electric field by Lienard and Wiechert corresponds to the equation

$$\vec{E} = \frac{q}{4\pi\epsilon_0} \frac{1 - \frac{v^2}{c^2}}{\left(r - \vec{v} \frac{\vec{r}}{c}\right)^3} \left(\vec{r} - \vec{v} \frac{r}{c}\right)$$

Figure 2. The magnetic field of active electrons is focused on the front

In the right side of Figure 2, a magnetic field of active electrons at the speed of  $0.8 C$  can be found, and one can see that it is

concentrated at the speed of  $0.8 C$ . Hence, applying  $0.8 C$  shown through the effect of  $0.8 C$ , the effect and application of  $0.8 C$  is proportional. This logic embraces the fact that electrons in motion with magnetic field of the target object exists, and the electron passes through the magnetic field of the target object at the speed of  $0.8 C$ .

Figure 2 explains that if this is to occur in the Earth's gravitational field, it can be deduced that the Earth's gravitational field holds a target object in the magnetic field. Hence, the Earth's gravitational field isomeric speed of  $0.8 C$  has reacted to active electrons at the rate of  $0.8 C$ . The target object of the magnetic field is a substantive function to the isomer. Therefore, the right side of Figure 2 shows the spatial independence of the Earth's gravitational field.

An electron moving at  $0.8 C$  and the same amount concentrated in the forward direction is because  $0.8 C$  movement speed does not include the solar system and galaxy's speed of revolution. Hence, the Earth's gravitational field holds an isolated spatial zone and is not influenced by the solar system(or galaxy). If the speed of revolution for the solar system is to be applied to the electric field of an electron, the electric field of on electron would be more densely concentrated than the one shown in Figure 2.

### III. Conclusion

Einstein's Lorentz transformation equation holds the meaning to have one absolute coordinate system. In addition, the Lorentz coordinate transformation is effectively applied on the Earth's gravitational field. Therefore, the Earth's gravitational field has one absolute coordinate system. Hence, a spatial zone of gravitational field is formed around the Earth, and the spatial zone of gravitational field co-revolves with the Earth

Passive electrons and active electrons can be clearly distinguished on the Earth's gravitational field. For example, passive electrons do not generate a magnetic force while active electrons do. So, it is possible to set one absolute coordinate system on the Earth's gravitational field, and the movement speed of electrons should be expressed as an absolute value. Therefore, the observer's role should be excluded in the process of explaining the movement speed of electrons.

The Earth's gravitational field has a unique isomer(elasticity of velocity of speed) and all physical phenomena applied has a connected cause and effect. The logic of the Earth's gravitational field centered around the observer cannot be applied, and the coordinate concept in the theory of relativity should be discarded. If the coordinate concept in the theory of relativity is not discarded, the field of physics cannot develop further.

#### 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>)

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