



Description Of Natural Events with Correct Reference Body

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Abstract

The beginning of life could not be described on Earth, yet. For this reason, natural phenomena have been described with the starting point uncertainty. Natural events could not be described by a single field. In H. Brown's study [1], the main lesson that emerges is described as the special theory of relativity is incomplete. For that reason, the aim of this study is to describe physical reality in a single field. In the light of this aim, first of all, coordinate systems which are under-established are defined. The reason for the deficiency is explained. The system of unified coordinates, which is based on the correct basis, is explained. Moreover, in this study, the coordinate systems which are defective with respect to each other are described. In addition, in this study, the theory describing the relation of these coordinates with the reference body with a single field is explained and proved by equations. Furthermore, the beginning of life is explained by Lorentz Transformation Equations and Gauss Coordinate Systems. At the end of the description, new interpretations, interpretations supporting previous interpretations of scientists, or equations stating that they are wrong are explained. As a result, in this study, the equivalent of the reference body in the natural system is explained

Keywords: Correct Reference Body, Undefined Starting Point, Reference Object

Doğal Olayların Gerçek Referans Cismi İle Tanımlanması

Öz

Hayatın başlangıcı henüz Dünya'da tarif edilemedi. Bu nedenle, doğal fenomenler başlangıç noktası belirsizliği ile tanımlanmıştır. Doğal olaylar tek bir alanla tarif edilemez. (Brown, 2005) ortaya çıkan ana ders, özel görelilik teorisi eksik olarak tanımlanmaktadır. Bu nedenle, bu çalışmanın amacı fiziksel gerçekliği tek bir alanda tanımlamaktır. Bu amaç ışığında, her şeyden önce, yetersiz kurulmuş koordinat sistemleri tanımlanmaktadır. Eksikliğin nedeni açıklanmaktadır. Doğru temele dayanan birleşik koordinatlar sistemi açıklanmaktadır. Ayrıca bu çalışmada, birbirlerine göre kusurlu olan koordinat sistemleri tanımlanmıştır. Ek olarak, bu çalışmada, bu koordinatların referans gövdeyle tek bir alanla ilişkisini tanımlayan teori, denklemlerle açıklanmış ve kanıtlanmıştır. Ayrıca, yaşamın başlangıcı Lorentz Dönüşüm Denklemleri ve Gauss Koordinat Sistemleri ile açıklanmaktadır. Tanımlamanın sonunda, yeni yorumlar, bilim adamlarının önceki yorumlarını destekleyen yorumlar veya yanlış olduklarını belirten denklemler açıklanmaktadır. Sonuç olarak, bu çalışmada, doğal sistemdeki referans cismin eşdeğeri açıklanmıştır.

Anahtar Kelimeler: Gerçek Referans Cismi, Tanımlanmamış Başlangıç Noktası, Referans Cismi

1. Introduction

There is a question that scientists have been working on for centuries. How did the life begin on Earth? The answer for this question has not been concluded yet. In order to define the onset of natural phenomena, studies have been conducted to understand the systems that seem to be complex. However, these studies have not been convincing, yet. Many scientists have tried to find a solution to this question. (Bronowski, 1975) time is absolute to Newton. Newton looks at the world through the eyes of God, wherever he may be, whatever observer makes, every observer sees the world in the same way. In contrast, Einstein looks at the world through the eyes of a human being, according to which, according to what you see, what I see depends on ourselves, briefly depends on where we are and the speed we go. (Einstein, 1905) in special theory of relativity, any coordinate system has been interpreted by assuming a reference body of any coordinate system and all coordinate systems can be considered as zero point. However, the definition of the communication between the coordinates and the reference system could not be made, and thus the origin of life could not be described. (Mach, 1883) mechanics should be placed on a new basis. Lincoln Barnett made the following assumption in his study. (Barnett, 1964) Einstein's work in the Unified Field Theory shows that gravity and electromagnetic power are not independent of each other and that they cannot be physically separated. (Einstein, 1905) the theory of special relativity could not be founded on a basis and that physical reality should be described in a purely field. In the third part of this study, a system of coordinates with no starting point is described. In the fourth chapter, the definition of natural phenomena with coordinate systems moving smoothly with

each other with correct reference body is explained. In this study, the relation of any coordinate system with the reference body is described. Afterwards, natural events are defined by all coordinate systems regardless of the motion state with the correct reference body. In the conclusion section, the definition of the correct reference body defined in the previous sections and the results and the equivalent of the reference body in the natural system are explained. Coordinate Systems and Reference body are described in 2D. In the last section, references are given.

2. System Of Coordinates With Undefined Starting Point

(Celik, 2019) described Einstein's work on the special theory of relativity in detail. In the light of these studies, Einstein stated that the velocity of light should be the same in all coordinate systems. In this study, c (speed of light) was accepted as dimensionless. Therefore, Lorentz transformation equations with the following formulas are shown;

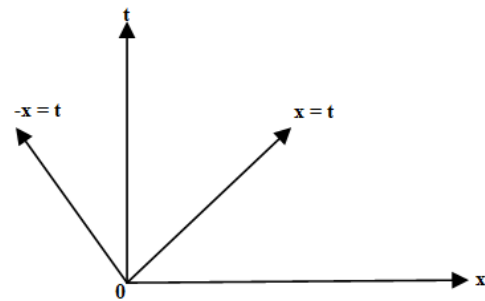


Figure 1. Description of the speed of light for all coordinate systems.

$$x = t \quad (1)$$

$$x = -t \quad (2)$$

$$x^2 = t^2 \quad (3)$$

$$x^2 - t^2 = 0 \quad (4)$$

The equation number (4) states that the speed of light is constant for x, t coordinate

$$x'^2 - t'^2 = 0 \quad (5)$$

The equation number (5) states that the speed of light is constant for the coordinate of x', t'

$$x'^2 - t'^2 = x^2 - t^2 \quad (6)$$

The equation number (6) states that condition must be provided in the transformation of all coordinate systems. Figure 2. shows the coordinate system that forms the lorentz transformation equations that define the special theory of relativity.

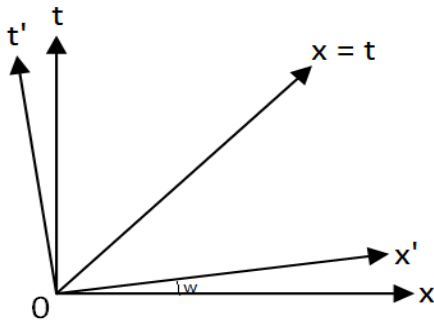


Figure 2. Coordinate System Of Unspecified Starting Point

The transformation of coordinate systems is described by hyperbolic functions since the speed of light must be the same in all reference systems in the unspecified coordinate system.

$$x' = x.\cosh w - t.\sinh w \quad (7)$$

$$t' = -x.\sinh w + t.\cosh w \quad (8)$$

When the squares of these two equations (7) and (8) are taken and subtracted from each other, the requirement of the speed of light to be the same for all coordinate systems described in Figure-1 is provided for the condition of equation number (6).

Therefore, in finding the relative velocity between two coordinates, the

stationary x' coordinate is equal to zero, because the coordinate system with no starting point makes the following assumption. Any coordinate system will see itself as not moving because the reference point is itself, regardless of the motion state. The explanatory equation (9) is represented by the number.

If $x' = 0$, the result of $x.\cosh w = t.\sinh w$ is obtained using equation (7). (9)

Therefore, $x / t = \sinh w / \cosh w$ is defined as relative speed. This relative velocity is described as v. The description of $\sinh w$ and $\cosh w$ in terms of the relative velocity v is shown by equation number (15).

$$\text{Since } \cosh^2 w - \sinh^2 w = 1 \quad (10)$$

$$v^2 = \sinh^2 w / \cosh^2 w \quad (11)$$

$$\text{That is, } v^2 = \cosh^2 w - 1 / \cosh^2 w \quad (12)$$

When the product of inside and outside is made, $v^2.\cosh^2 w = \cosh^2 w - 1$ (13)

$$\text{Therefore, } \cosh^2 w.(1 - v^2) = 1 \quad (14)$$

$$\sinh w = v / \sqrt{(1 - v^2)}, \text{ and } \cosh w = 1 / \sqrt{(1 - v^2)}. \quad (15)$$

The Lorentz Transformation Equations showing that all reference systems, the speed of light is calculated as unitless, indicating that the speed of light is the same (7) and (8) and (15) are solved as follows:

$$x' = x - v.t / \sqrt{(1 - v^2)} \quad (16)$$

$$t' = t - v.x / \sqrt{(1 - v^2)} \quad (17)$$

If we want to add the speed of light c to the equations (16) and (17), the transformation equations in the dimensional analysis are as follows;

$$x' = x - v.t / \sqrt{(1 - v^2/c^2)} \quad (18)$$

$$t' = t - (v/c^2).x / \sqrt{(1 - v^2/c^2)} \quad (19)$$

As a result, if a reference object is selected from any coordinate system, the state of the natural events relative to each other is defined. In his study, Einstein made the following assumption: (17) The selection of any coordinate as a reference object among the coordinate systems moving relative to each other defines the other coordinates by this selected coordinate. Lorentz transformation equations (16), (17), (18), (19) describe this description. However, accepting any coordinate as a reference body does not describe the beginning of life. Explain the relationship of coordinates with each other. Thus, the relationship of natural phenomena with each other is defined. However, the onset of natural events could not be defined. Therefore, the coordinate systems used in Lorentz transformation equations can be examined in relation to each other. However, the relationship of any coordinate system with the reference body describing the onset of life cannot be defined. That is, the beginning of natural phenomena cannot be defined by this insufficient state of Lorentz transformation equations. (Hawking, 1990) stated that the general theory of relativity together with Penrose is an incomplete theory and the starting point cannot be described, so that the system cannot explain how it starts with this definition. Einstein described the deficiency in his study as follows: "I'm desperately looking for something real that I can attribute to the different motions of objects handled according to two different reference systems". In this study, the origin of natural phenomena with the correct reference body is defined and explained using Lorentz transformation equations. The starting point is described with the correct reference body and any coordinate system from both the reference body and another coordinate system. That is, the description of the

communication of the reference body with any coordinate system is realized. In the definition of natural phenomena with coordinate systems that move smoothly with the correct reference body, the reference body is added to the coordinate system and how natural phenomena begin.

3. Definition Of Natural Events By Regular Coordinate Systems With Accurate Reference Object

In order to explain the onset of natural phenomena, it is necessary to define the correct reference and analyze the natural phenomena in terms of the correct reference. The coordinate systems representing the correct reference body and living things on earth, the connection of the coordinate systems with each other and the connection of the coordinate systems with the correct reference body are described in this section.

In order to identify the onset of natural phenomena, it is very important to determine the correct reference body, ie to include the reference body in any coordinate system. In this study, the most accurate information is reached about the states of the coordinate systems which move smoothly according to each other and according to the reference body and their status according to different coordinate systems, so the most accurate physical interpretation is made. This definition was made using Lorentz Transformation Systems.

The reference body must meet the dimension and motion conditions of the coordinate system in order to identify natural phenomena, and also have an autonomous reference coordinate system that has the same physical effect on all coordinates. Therefore, if the state of the coordinates described by hyperbolic functions is described with respect to each other and each coordinate is described according to the reference

body, that is, it is inevitable to describe the combined coordinate system shown in Figure-3 when comparing two coordinates, one coordinate system and the other reference body, according to a third coordinate point. (Einstein, 1905) the reference body is defined as the Sun. This study proves with Figure 3 and explanation of it with equations, and Figure 4. and explanation of it with equations that the reference object is not the Sun, and that the reference object should be Moon. Therefore, the zero point is the Sun, the reference object is the Moon and the start of each coordinate system must be over the Moon.

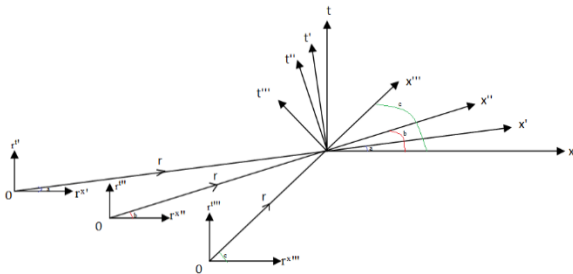


Figure 3. System Of Unified Coordinates

Description of x', t' coordinate with x, t coordinate;

$$x' = x \cdot \cosh w - t \cdot \sinh w \quad (20)$$

$$t' = -x \cdot \sinh w + t \cdot \cosh w \quad (21)$$

$x, t; x', t'; x'', t''; x''', t'''$ coordinates must have a starting point, which is not a point, but a coordinate system, because the motion states of all coordinate systems moving smoothly with respect to each other have identical properties with each other only at the starting points of those coordinate systems. Therefore, the start should be a coordinate system, not a point. The initial coordinate of any x', t' coordinate is r and r is defined by the coordinate r^x, r^t ;

Description of the coordinate x', t' with the starting point;

$$r = r^x \cdot \cosh w - r^t \cdot \sinh w = x \cdot \cosh w - t \cdot \sinh w \quad (22)$$

$$r = -r^x \cdot \sinh w + r^t \cdot \cosh w = -x \cdot \sinh w + t \cdot \cosh w \quad (23)$$

($\sinh w / \cosh w =$ relative velocity of two coordinate systems relative to each other = v). Due to,

Description of x, t coordinate in coordinates r in r^x, r^t ;

As mentioned above, the description of any coordinate with both the reference system and the coordinate system describes the communication of that coordinate with the reference body. That is, although a coordinate system with accelerated motion sees itself as not moving, it moves relative to the reference body. This interpretation is explained by the following equations.

$$x \cdot \cosh w = r^x \cdot \cosh w - r^t \cdot \sinh w + t \cdot \sinh w \quad (24)$$

$$t \cdot \cosh w = -r^x \cdot \sinh w + r^t \cdot \cosh w + x \cdot \sinh w \quad (25)$$

$$x = r^x - r^t \cdot (\sinh w / \cosh w) + t \cdot (\sinh w / \cosh w) \quad (26)$$

$$t = -r^x \cdot (\sinh w / \cosh w) + r^t + x \cdot (\sinh w / \cosh w) \quad (27)$$

So,

$$x = (\sinh w / \cosh w) \cdot (t - r^t) + r^x \quad (28)$$

$$t = (\sinh w / \cosh w) \cdot (x - r^x) + r^t \quad (29)$$

That is, in this study, the communication of any coordinate system with the reference body and the starting point is described. Therefore, the description of the x, t coordinate with the correct reference

body in Figure-3 is shown in Figure-4 with the joint coordinate description.

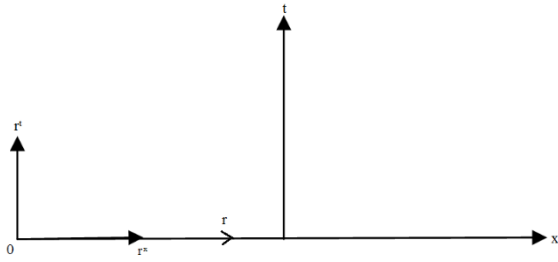


Figure 4. Description of Joint Coordinate

$$x = v. (t - r^t) + r^x \quad (30)$$

$$t = v.(x - r^x) + r^t \quad (31)$$

$$x' = v. (t' - r^{t'}) + r^{x'} \quad (32)$$

$$x-x' = v. (t-t' + r^{t'} - r^t) + r^{x'} - r^x, \quad r^{t'} = r^t, \quad r^{x'} = r^x \quad (33)$$

$$\text{Due to, } x-x' = v.(t-t') \quad (34)$$

The time and event interval between the two events are independent of the time and event of the reference body.

Generally;

$$x' = v. (t' - r^t) + r^{x'} \text{ so, } x' - v.t' = r^{x'} - v. r^t \quad (35)$$

$$x'' = v. (t'' - r^t) + r^{x''} \text{ so, } x'' - v.t'' = r^{x''} - v. r^t \quad (36)$$

$$x''' = v. (t''' - r^t) + r^{x'''} \text{ so, } x''' - v.t''' = r^{x'''} - v. r^t \quad (37)$$

With the description of the correct reference body, the two coordinate systems which move smoothly relative to each other are only equal to each other in the reference

coordinate. We can describe any coordinate system with the reference object. The time interval between the two events is independent of the motion state of the reference body. If the time interval between any coordinate system and the coordinate of the reference object is equal to zero, the coordinate system is equivalent to the reference object. (Einstein, 1905) the reason for the desperately searched steam ing Chapter 21 of the Theory of Relativity is due to the effect of the reference object (r^t, r^x) on any coordinate as described by equations of (30) and (31). In this study, the previously missing basis of the special relativity principle is now based on the deficient basis and the effect of the reference body which is the starting point on the coordinate systems in defining natural phenomena is clearly described in equations of (30) and (31).

If $x = r^x$, that is, any coordinate of the reference object is equal to any coordinate of the coordinate system, $r^t = t'$. At the same time, if $t = r^t$, that is, the time of the coordinate system equals the time of the reference object, then $x = r^x$. That is, the reference object is equivalent to the coordinate system. These equations describe a coordinate system with the reference body and it is clearly proved that the coordinate system cannot be considered independently of the reference body.

A. Description of the reference body and communication with coordinate systems

(Einstein, 1905) the Sun bends space time. As a result of this bending, the reference body and any coordinate system are in the same plane in space time. That is, two separate coordinates are defined in a single plane by the combined coordinate. When the x, t coordinate described by the reference body in equation (30) is solved

together with the equations (18) and (19), the definition of the coordinate x', t' with the correct reference body is provided by Lorentz transformation equations. Thus, the description of the coordinate systems with the reference object is realized. Any coordinate system is not independent of the reference system. That is, the coordinate system can assume itself in the reference body, or it can assume its own system.

$$x' = \gamma (x - vt) \quad (38)$$

$$t' = \gamma (t - vx/c^2) \quad (39)$$

4. Definition Of Natural Events By Irregular Coordinate Systems With Accurate Reference Object

Since the same system must be defined on curved and complex surfaces, Gaussian coordinate systems should be defined because Gaussian coordinate systems are designed to physically explain and solve systems on curved surfaces.

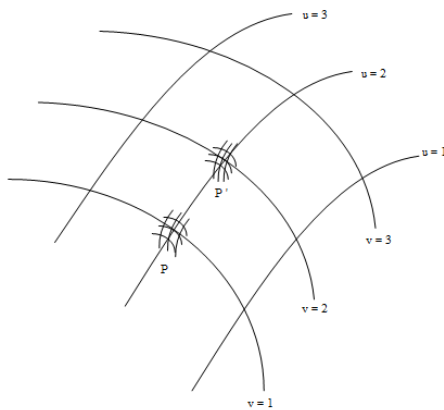


Figure 5. Unified Gaussian Coordinates

Gaussian coordinates shown in Figure-5 describe the following. The P coordinate is a coordinate that exists in the space-time plane that the sun bends. Furthermore, the P' coordinate is defined as the combined

coordinate obtained by adding the reference body to the coordinate system. In this study, the P coordinate is called Unified Coordinate because it is the result of the combination of the reference body and the coordinate system. Therefore, when defining any coordinate in deficient general relativity, the reference body and the coordinate system must be combined and defined as a combined coordinate. The combined coordinate P describes life on Earth. The unified coordinate P describes another creature on Earth. Thus, these two P and P' combined coordinates describe the lack of general relativity, while the reference point, which is the starting point, must show equivalent properties. This definition is described by equations (40) and (41). Therefore, regardless of the motion state, all combined coordinate systems are equal in the reference body. Furthermore, in the definition of natural phenomena, the superiority of all combined coordinate systems in the world, regardless of the motion state, is defined by the differences of the coordinate systems of the combined coordinates.

$$P ; R + D \quad (40)$$

$$P' ; R + D' \quad (41)$$

Since the Cartesian coordinate systems form the basis of the Gauss coordinate system, the positions of these two closely related P and P' coordinate systems relative to each other will give us a physical result.

In that case;

$$P' - P = (R + D') - (R + D) \quad (42)$$

Therefore, the differences between two unified Gaussian coordinate systems, P and P' are calculated and shown in equation number (42) as $D - D'$. If each combined coordinate

is defined by the u and v coordinates as shown in Figure 5, the distances between these too close coordinates are shown as equation number (43) instead of $D - D'$.

$$(Du + Dv) - (Du' + Dv') \quad (43)$$

Consequently, that all unified gaussian coordinate systems, regardless of the motion state, are equal to each other in the reference body is explained in equation number of (44).

(R: reference body, D: each autonomous coordinate on earth)

$$P - D = P' - D' = \dots = R \quad (44)$$

Since the deficient combined gauss coordinates are on two separate ground, although the two coordinate systems are explained by two separate coordinates, the two coordinate systems are essentially connected to each other in the reference body, or in the reference coordinate.

Now the general relativity principle, based on the lack of special relativity principle, defines all coordinate systems with each other and with reference body, regardless of the state of motion for the identification of natural phenomena

5. Conclusion

As a result, while the definition of coordinate systems representing the living things and the starting point of living things has not been made yet, the link between the correct reference body and the coordinate systems and the link between the coordinate systems has been redefined and resolved by means of the Lorentz Transformation Equations and Gauss Coordinates.

While the coordinates initiated from the reference body define the viability, he also confirmed Newton's hypothesis that the time interval between events is independent of the motion state of the reference body (34).

Einstein said that special theory of relativity could not be grounded and that there was a lack of definition of the onset of natural phenomena. In this study, special relativity theory is established on the basis of adding the reference body to coordinate systems, and the deficiency is solved by the equation (22).

At the same time, Ernst Mach said that mechanics should be based on a new basis. In this study, mechanics is based on a new basis and calculated by the equations of (30) and (31).

In 1970, Penrose and Hawking stated that the general theory of relativity was incomplete and that the system had no starting point. The system of combined coordinates in Figure -3- provides a starting point for the general theory of relativity.

The co-design of the reference body and the coordinates, the system of combined coordinates, has led to electromagnetism. In the Lincoln Barnet study, when Einstein's unified field theory is completed, it is inseparable from the actual physical sense that gravity and electromagnetic force are not independent. This study is confirmed by equations of (30) and (31).

With this study, the difficulties faced by scientists who have been trying to define life for centuries to define the onset of natural phenomena have been overcome.

The reference coordinate, which is theoretically the coordinate starting point for

defining natural phenomena, is the Moon in the natural system, because it provides all the equations described in this study.

6. References

Brown, H. R. (2005) "Physical Relativity", *Oxford University Press Inc.*

Bronowski S. (1975) "The exaltation of man, series of great works", *ONK AGENCY Milliyet Publishing Inc.Co.* 249

Einstein A. (1905) "The Special Theory Of Relativity", *Say Publishing* 22

Mach E. (1883) "Die Mechanik in ihrer Entwicklung", *Say Publishing*

Barnett L. (1964) "The Universe and Dr.Einstein", *ISBN-13: 978-0486445199, ISBN-10: 0486445194*

Einstein A. (1905) "The Special Theory Of Relativity", *Say Publishing* 66, 141

Celik,N., (2019) Einstein's Special Theory of Relativity Lecture 2 Lorentz Transformations Section 2, , https://www.youtube.com/watch?v=Ch0ELe4I_Ko&t=1036s, October 25

Hawking, S. W (1990) 4th Ed. "A Brief History Of Time", *Cut Copyright Agency, Milliyet Publishing Inc.Co* (88) 77

Einstein A. (1905) "The Special Theory Of Relativity", *Say Publishing* 22

Einstein A. (1905) "The Special Theory Of Relativity", *Say Publishing* 67

Einstein A. (1905) "The Special Theory Of Relativity", *Say Publishing* 115