Lorentz-Einstein Physics: A Mathematical Oversight, Deception, or Blunder

(Lorentz Transform Cannot Transform Maxwell Equations)
(Propagation of Light is Not Relative)

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Abstract—The foundation of Modern Physics is the transformation of Maxwell equations onto inertial frames using the Lorentz Transform. It is this transformation that allowed Einstein to make the claim that light has momentum and the propagation of light is relative. Special Relativity is based on the transformation of Maxwell equations onto inertial frames using the Lorentz Transform. The validity of Special Relativity and Modern Physics relies on the validity of the Transformation of Maxwell equations onto inertial frames. The transformation of Maxwell equations onto inertial frames is invalid.

Lorentz's transformation of Maxwell equations onto an inertial frame is incorrect. Einstein's transformation of Maxwell equations onto inertial frames using the Lorentz Transform gave the false impression that light has momentum and the propagation of light is relative, which is the foundation of Modern Physics. Einstein's transformation of Maxwell equations onto inertial frames using the Lorentz Transform is incorrect. Maxwell equations are not transformable onto inertial frames. Lorentz Transform cannot transform Maxwell equations for propagation of light onto inertial frames.

The false claim that Maxwell equations are transformable onto inertial frames is a result of a mathematical oversight. Although it appears as if the Lorentz Transform can transform Maxwell equations for propagation of light onto an inertial frame, closer inspection reveals that the necessary conditions that emerge from the transformation preclude the transformation. Only the static electric and magnetic fields can satisfy the necessary conditions that emerge from the transform. Static electric and magnetic fields are not waves. Electromagnetic waves cannot satisfy the necessary conditions. Light is incompatible with the Lorentz Transform.

The foundation of Special Relativity is the claim that Maxwell equations are transformable onto an inertial frame and hence light has momentum and the propagation of light is relative; this claim is false. Maxwell equations are not transformable onto inertial frames and hence light has no momentum and the propagation of light is not relative. Special Relativity is a result of not taking the necessary conditions that emerge from the transform into account, a mathematical oversight. Both Lorentz and Einstein disregarded the necessary conditions. If Lorentz and Einstein had taken the necessary conditions into account, there would be no Lorentz Transform, no Special Relativity or General Relativity. Electromagnetic waves cannot satisfy the necessary conditions of the transformation.

Both Lorentz and Einstein failed to realize that the necessary conditions must be satisfied for the Lorentz Transform to be valid. As a result, they made the wrong conclusion that Maxwell equations are transformable onto inertial frames and hence light propagates relative to inertial frames. It was this mathematical oversight that allowed Einstein to force a hypothetical artificial momentum on light, where it does not belong. Light has no momentum.

Lorentz Transform, Special Relativity, General Relativity, and Modern Physics in general are results of ignoring the necessary conditions that emerged from the transform. Lorentz Transform cannot transform Maxwell equations onto inertial frames. Maxwell equations are not transformable. Light does not propagate relative to inertial frames. Propagation of light is not relative. The path of light cannot be altered relative to observers. The path of any moving entity cannot be altered relative to observers. Trains do not derail relative to observers. Maxwell equations are absolute. Time and mass are absolute. Lorentz Transform is invalid; it does not exist.

The genesis of spacetime is the Lorentz Transform. Spacetime function made its debut in the Lorentz Transform. Spacetime has no existence since the Lorentz Transform cannot transform Maxwell equations onto an inertial frame. Without spacetime function, both Special Relativity and General Relativity have no foundation, no existence; they fail in their inception. Time is independent of space and speed. There is no spacetime function since Lorentz Transform cannot transform Maxwell equations. Space and time are mutually independent.

Light does not propagate relative to inertial frames. Observers cannot bend light. A burst of

light is a moving arrow. An arrow does not tilt relative to observers (just try it). An arrow is displaced relative to moving observers while the path of the arrow is unaltered. The displacement of an arrow relative to moving observers does not alter the path of the arrow. Light has no momentum. The massless has no momentum. Propagation of light on its path is not relative. The motion of a light burst is relative. A light burst lags behind relative to moving frames since light has no momentum while the path of light is unaltered relative to all observers. Observers cannot derail trains. Observers cannot derail light.

Irrespective of whether it is a moving object of mass or a moving burst of light, the path of a moving entity cannot be altered relative to observers. The path of a moving entity is displaced against the motion of observers while the path remains unaltered; that is the essence of Relativity. A train does not derail relative to observers; the train track is displaced relative to moving observers. A vertically released arrow in a moving train does not tilt relative to any observer, both inside and outside; it is displaced relative to moving observers. Special Relativity is invalid both mathematically and conceptually.

The Lorentz Transform and Special Relativity are a result of a mathematical oversight, deception, or a blunder. Lorentz Transform does not exist. Special Relativity is invalid. Lorentz-Einstein physics is invalid. There is no spacetime function without the Lorentz Transform. The mass of an object is independent of the state of the object.

The mass of an object is the same irrespective of whether the object is stationary, moving at constant speed, accelerating, or decelerating. The dependence of a measuring device on the state of the device cannot be forced on to what is being measured. The false claim that the mass depends on speed is a result of misinterpretation of experimental observation, a common occurrence in experimental physics. Time and mass are absolute.

I. INTRODUCTION

When Maxwell formulated the theory of propagation of electromagnetic waves, it raised a question. Can any inertial frame be a stationary frame for light? To answer this question, Lorentz tried to transform Maxwell equations onto an inertial frame using the transform,

$$x'=x-vt \tag{1.1}$$
$$t'=t-vx/c^2 \tag{1.2}$$
$$y'=y \tag{1.3}$$
$$z'=z \tag{1.4}$$

Here, the inertial frame is moving at speed v in the direction of the x-axis. A beam of light is moving in the direction of the motion of the inertial frame. The path of light is observer independent in the Lorentz Transform whereas in Special Relativity the path of light is observer dependent by proclamation. The Lorentz Transform and Special Relativity are polar opposites [3].

This transform without a Transformation Factor cannot maintain the form of the Maxwell equations exactly [1]. The relative time axis **t′** and the relative distance axis **x′** of this transform is frame dependent, $t'=t/\gamma^2$ and $x'=x/\gamma^2$, and hence the form of the Maxwell equations cannot be maintained. Lorentz Transform without the proper Transformation Factor cannot maintain the form of the Maxwell equations uniquely [3]. Clocks and measuring sticks in the Lorentz Transform are frame dependent since the relative time axis **t′** and the relative distance axis **x′** are frame dependent, $t'=t/\gamma^2$ and $x'=x/\gamma^2$.

Einstein introduced his time dilation factor or the Relativity Factor ɣ, which he obtained by considering a vertical beam of light in a moving train under the false assumption that the propagation of light is relative, as the Transformation Factor into the transform to modify the transform, which is known as the Lorentz Transform,

$$x'=\gamma(x-vt) \tag{1.5}$$
$$t'=\gamma(t-vx/c^2) \tag{1.6}$$
$$y'=y \tag{1.7}$$
$$z'=z \tag{1.8}$$

where, the Relativity Factor ɣ is also known as the Lorentz Factor, $\gamma=1/(1-v^2/c^2)^{1/2}$, c is the speed of light. Einstein's use of the Relativity Factor ɣ as the Transformation Factor in the Lorentz Transform to show that the Propagation of light is relative and the Maxwell equations can be transformed onto an inertial frame is contradictory since the Relativity Factor ɣ has been derived under the assumption that the propagation of light is relative and the light propagates relative to a moving frame. The Lorentz Transform uses the assumption that light is relative in order to prove that light is relative, a self-contradiction.

Although the Lorentz transform with the Relativity Factor ɣ as the Transformation Factor maintains the form of the Maxwell equations, this transform is not unique [2]. The relative time axis **t′** and the relative distance axis **x′** of the transform is frame dependent, $t'=t/\gamma$ and $x'=x/\gamma$, and hence, although the form of the Maxwell equations are maintained by the Lorentz Transform, the transformation is not unique [2,3]. Relative electromagnetic fields depend on the motion of observers in the Lorentz Transform and they are not unique. There are infinitely many equally valid transformed relative electromagnetic fields for the Lorentz Transform when ɣ is used as the Transformation Factor [2]. Clocks and measuring sticks in the Lorentz Transform are frame dependent since the relative time axis **t′** and the relative distance axis **x′** are frame dependent, $t'=t/\gamma$ and $x'=x/\gamma$. If the transformation factor had been chosen so that the transformation is unique, the clocks and measuring sticks would have been frame independent [3].

For the transformation of the Maxwell equations to

uniquely maintain the form of the Maxwell equations, the relative time axis **t′** and relative distance axis **x′** must be universal, observer independent, or independent of the Transformation Factor, **t′**=**t** and **x′**=**x**. The purpose of having a Transformation Factor in the Lorentz Transform is to make the relative time axis **t′** and relative distance axis **x′** observer independent, **t′**=**t** and **x′**=**x**, so that the transformation maintains the forms of the Maxwell equations uniquely. When the Maxwell equations are transformed uniquely onto inertial frames, the clocks and measuring sticks are universal [3].

The relative axes in the Lorentz Transform are frame dependent. Einstein's use of the Relativity Factor ɣ as the Transformation Factor is not only self-contradictory but also falls short of achieving the frame independence of the relative axes. The transform with the Relativity Factor ɣ as the Transformation Factor, which is the Lorentz Transform, is not unique. The Relativity Factor ɣ does not belong in the Lorentz Transform since the goal of the Lorentz Transform is to transform the Maxwell equations uniquely onto an inertial frame [2,3].

Since the Lorentz Transform is not unique, the transformed electromagnetic fields depend on the Relativity Factor ɣ, and as a result, the relative electromagnetic fields in the Lorentz Transform are frame dependent; they are unbounded when the inertial frame reaches the speed of light. The relative electromagnetic fields must be bounded. The relative electromagnetic fields must be independent of the Lorentz Factor for the Proper Transformation of Maxwell equations. The relative electromagnetic fields of a propagating wave cannot be observer dependent. The intensity of light cannot be observer dependent. Observers cannot alter the intensity of light by running along a beam of light.

Relative electromagnetic fields of light cannot be observer dependent. If propagation of light is relative, it is not only the form of the Maxwell equations that the Transform must maintain, the Transform must also keep the relative electromagnetic fields independent of the transformation factor; the Lorentz Transform fails in achieving that.

The transformation can be made unique by using $ɣ^2$ as the Transformation Factor in the Lorentz Transform, which is the Proper Transform. The Transformation Factor $ɣ^2$ is the Proper Transformation Factor. With the Proper Transformation Factor $ɣ^2$, the relative time axis **t′** and relative distance axis **x′** are observer independent, **t′**=**t** and **x′**=**x** [3]. The Proper Transform, which is the Lorentz Transform with the Proper Transformation Factor $ɣ^2$ is universal, **t′**=**t** and **x′**=**x**. With the Proper Transform, the clocks and measuring sticks are universal since **t′**=**t** and **x′**=**x** [3].

Superficially, it appears as if the Lorentz Transform can transform the Maxwell equations onto an inertial frame. However, as we are going to see, it does not matter what Transformation Factor is used in the Transform, the Lorentz Transform cannot transform the Maxwell equations for propagation of light onto inertial frames. When the Maxwell equations for propagation of light are transformed onto inertial frames using the Lorentz Transform, it only provides the trivial solution where the electromagnetic fields are constant, time invariant. The transformed electric and magnetic fields in the Lorentz Transform do not represent the propagating electromagnetic waves. As we are going to show, the propagation of light does not satisfy the Lorentz Transform.

The Lorentz Transform and Special Relativity are not the same; they are polar opposites. In the Lorentz Transform, the path of light is observer independent whereas in Special Relativity, the path of light is observer dependent by assumption. Special Relativity makes the assumption that light has momentum whereas the Lorentz Transform does not require such an assumption since the direction of light is the same as the direction of motion of the frame in the Lorentz Transform.

Light cannot have momentum since light has no stand still existence. Any entity with momentum must have a standstill existence [3]. As we are going to show, the Lorentz Transform cannot transform Maxwell equations for propagation of light onto inertial frames and hence propagation of light cannot be relative. Light has no momentum. The massless has no momentum. Propagation of light is not relative. Every inertial frame is not a stationary frame for light.

The mass of an object cannot depend on its speed. The mass of an object cannot depend on the frame of reference. If the mass of an object depends on the frame of reference, the energy will not be real. In Special Relativity, the energy E is not real, $E=pc\pm jmc^2$ [4], where p is the relative momentum, m is the mass, and c is the speed of light. The so-called rest energy in Special Relativity is imaginary. A rest mass cannot have rest kinetic energy.

Lemma:

When the Lorentz Transform is used for the transformation of Maxwell equations for propagation of light onto an inertial frame, the transformed electric and magnetic fields are constant, time independent; they do not represent propagating waves.

Corollary:

Lorentz-Einstein transformation only holds for the trivial solution where electric and magnetic fields are constant.

To see why Maxwell equations cannot be transformed onto an inertial frame using the Lorentz Transform, let us consider the outcome of the Lorentz Transformation.

II. EINSTEIN'S TRANSFORMATION OF MAXWELL EQUATIONS ONTO AN INERTIAL FRAME USING THE LORENTZ TRANSFORM

Both Lorentz and Einstein considered an electromagnetic wave (**E**,**B**) propagating in its natural frame R(x,y,z,**E**,**B**), the stationary frame, in the direction of the x-axis. They tried to transform it onto an inertial frame R(x′,y′,z′,v,**E′**,**B′**) traveling in the

direction of the x-axis at speed v, where,

$$\mathbf{E}=(E_x,E_y,E_z), \quad \mathbf{B}=(B_x,B_y,B_z) \qquad (2.1)$$

$$\mathbf{E}'=(E_x',E_y',E_z'), \quad \mathbf{B}'=(B_x',B_y',B_z') \qquad (2.2)$$

The path of the light beam is unaltered relative to the inertial frame in the Lorentz Transform.

Einstein used the Lorentz Transform to transform the Maxwell equations for propagation of light from the natural frame $R(x,y,z,\mathbf{E},\mathbf{B})$, which is the stationary frame, onto an inertial frame $R(x',y',z',v,\mathbf{E}',\mathbf{B}')$ and obtained [1,2],

$$(1/c)\{\partial[E_x']/\partial t'\}=\partial[B_z']/\partial y'-\partial[B_y']/\partial z' \qquad (2.3)$$

$$(1/c)\{\partial[E_y']/\partial t'\}=\partial[B_x']/\partial z'-\partial[B_z']/\partial x' \qquad (2.4)$$

$$(1/c)\{\partial[E_z']/\partial t'\}=\partial[B_y']/\partial x'-\partial[B_x']/\partial y' \qquad (2.5)$$

$$B_x'=B_x \qquad (2.6)$$
$$B_y'=\gamma[B_y+(v/c)E_z] \qquad (2.7)$$
$$B_z'=\gamma[B_z-(v/c)E_y] \qquad (2.8)$$

$$(1/c)\{\partial[B_x']/\partial t'\}=\partial[E_y']/\partial z'-\partial[E_z']/\partial y' \qquad (2.9)$$

$$(1/c)\{\partial[B_y']/\partial t'\}=\partial[E_z']/\partial x'-\partial[E_x']/\partial z' \qquad (2.10)$$

$$(1/c)\{\partial[B_z']/\partial t'\}=\partial[E_x']/\partial y'-\partial[E_y']/\partial x' \qquad (2.11)$$

$$E_x'=E_x \qquad (2.12)$$
$$E_y'=\gamma[E_y-(v/c)B_z] \qquad (2.13)$$
$$E_z'=\gamma[E_z+(v/c)B_y] \qquad (2.14)$$

$$(-\gamma v/c^2)\partial[E_x]/\partial t'+\gamma\partial[E_x]/\partial x'+\partial[E_y]/\partial y'+\partial[E_z]/\partial z'=0 \quad (2.15)$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t'+\gamma\partial[B_x]/\partial x'+\partial[B_y]/\partial y'+\partial[B_z]/\partial z'=0 \quad (2.16)$$

where, $\gamma=1/(1-v^2/c^2)^{1/2}$.

In this transform, the relative electromagnetic fields are frame dependent; the intensity of the light beam is frame dependent. The intensity of a beam of light cannot be observer dependent. Observers cannot alter the intensity of light by running. This is an indication that this transformation cannot be right. As we are going to see, this transformation is indeed not correct. This transformation is not possible. The electric and magnetic fields in this transformation do not represent electromagnetic waves.

Einstein's transformation of Maxwell equations using the Lorentz Transform appears to retain the form of the Maxwell equations on the inertial frame. It appears as if the Lorentz Transform with Einstein's Relativity Factor γ as the Transformation Factor can transform the Maxwell equations onto an inertial frame while maintaining the form of the Maxwell equations. We have to use the term 'appears' since we still do not know if the electromagnetic fields after the transform still represent electromagnetic waves since there is also a trivial solution to Maxwell equations that does not represent waves. Trivial solution to the Maxwell equations is the fields that are static, time independent. To make a definite claim that Maxwell equations are transformable onto inertial frames using the Lorentz Transform, we have to make sure that the relative fields in the transform are not the trivial solution. Lorentz and Einstein failed to do this.

Solely, based on the appearance of the transform, Einstein concluded that light propagates relative to inertial frames, and Special Relativity was born. It also gave birth to the concepts of relative time, relative mass, rest energy, and spacetime. Spacetime function

originated from the Lorentz Transform. Light does not bend relative to observers in the Lorentz Transform. Yet, there is no Special Relativity without light being relative, without the bending of light relative to observer motion. Special Relativity and the Lorentz Transform are polar opposites even though the Lorentz Transform is the foundation of Special Relativity.

The bending of light relative to observer motion originated with Einstein's conclusion from the transform that light is relative even though the path of light is unaltered in the Lorentz Transform. There is no spacetime function without the Lorentz Transform. Without the spacetime function there is no General Relativity. As we are going to see, Einstein's conclusion from the transform that light is relative and hence the birth of Special Relativity is a result of a mathematical oversight. Einstein has made a hasty conclusion that Maxwell equations can be transformed onto inertial frames without fully analyzing all the equations that resulted from the transformation of Maxwell equations onto an inertial frame using the Lorentz Transform.

The appearance can be deceiving as it is the case with Einstein's transformation of Maxwell equations onto an inertial frame using the Lorentz Transform. Just because Lorentz Transform has given the relative electromagnetic field pair ($\mathbf{E}',\mathbf{B}'$) that satisfies Maxwell equations does not mean these fields represent waves since the relative electromagnetic fields are not the only outcome from the transformation. The transformation of Maxwell equations using the Lorentz Transform also generates two necessary conditions. The necessary conditions indicate that the transformation only holds for the trivial solution where electromagnetic fields are constant or time invariant, not for propagation of light.

III. THE NECESSARY CONDITIONS THAT EMERGE FROM THE TRANSFORMATION FOR THE TRANSFORMATION TO BE VALID

A careful observation of the transformation of Maxwell equations onto an inertial frame reveals that it is not just the transformed relative electromagnetic fields $\mathbf{E}'$ and $\mathbf{B}'$ transformation generates. The transformation also generates two conditions that must be satisfied by $\mathbf{E}$ and $\mathbf{B}$ for the transformation to hold, which are the necessary conditions,

$$(-\gamma v/c^2)\partial[E_x]/\partial t'+\gamma\partial[E_x]/\partial x'+\partial[E_y]/\partial y'+\partial[E_z]/\partial z'=0 \quad (3.1)$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t'+\gamma\partial[B_x]/\partial x'+\partial[B_y]/\partial y'+\partial[B_z]/\partial z'=0 \quad (3.2)$$

where, $\gamma=1/(1-v^2/c^2)^{1/2}$.

Only the electromagnetic fields $\mathbf{E}$ and $\mathbf{B}$ that satisfy the conditions given in equations (3.1) and (3.2) can generate the relative electromagnetic fields $\mathbf{E}'$ and $\mathbf{B}'$.

The Decisive Question:

Do the electromagnetic fields $\mathbf{E}$ and $\mathbf{B}$ that satisfy the necessary conditions represent electromagnetic waves?

That is the question Lorentz, Einstein and others

failed to ask. Even though we started with **E** and **B** representing light waves for the Lorentz Transform, the fields **E** and **B** that satisfy the necessary conditions are not guaranteed to represent light waves since Maxwell equations also have a trivial solution that does not represent waves. The existence of the Lorentz Transform and the transformability of light onto an inertial frame is determined by the necessary conditions.

The necessary conditions can be written as,

$$(-\gamma v/c^2)\partial[E_x]/\partial t' + \nabla_\gamma' \ \mathbf{E} = 0 \tag{3.3}$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t' + \nabla_\gamma' \ \mathbf{B} = 0 \tag{3.4}$$

$$\nabla_\gamma' = (\gamma\partial/\partial x', \partial/\partial y', \partial/\partial z') \tag{3.5}$$
$$\mathbf{E} = (E_x, E_y, E_z), \ \mathbf{B} = (B_x, B_y, B_z) \tag{3.6}$$
$$\mathbf{E}' = (E_x', E_y', E_z'), \ \mathbf{B}' = (B_x', B_y', B_z') \tag{3.7}$$

When Lorentz transformed the Maxwell equations onto an inertial frame without a Transformation Factor ($\gamma=1$), Lorentz also had these necessary conditions in his transform. Einstein had these necessary conditions in his transformation. Yet, both Lorentz and Einstein totally ignored these necessary conditions. They paid no attention to the necessary conditions even though the necessary conditions determine if **E** and **B** represent light waves and hence the transformability of Maxwell equations. Maintaining the form of the Maxwell equations for light by the Lorentz Transform says nothing about the transformability of Maxwell equations onto inertial frames unless the fields **E** and **B** that satisfy the necessary conditions represent light waves.

Question:

Can the fields that satisfy the necessary conditions emerge from the transform represent electromagnetic waves?

Answer: Absolutely Not! The necessary conditions preclude relative electric and magnetic fields from being electromagnetic waves.

IV. **THE NECESSARY CONDITIONS PREVENTS TRANSFORMATION OF MAXWELL EQUATIONS ONTO AN INERTIAL FRAME**

Let us consider the Lorentz Transform,
$$x' = \gamma(x - vt) \tag{4.1}$$
$$t' = \gamma(t - vx/c^2) \tag{4.2}$$
$$y' = y \tag{4.3}$$
$$z' = z \tag{4.4}$$
The transformation of Maxwell equations onto an inertial frame must satisfy the conditions,

$$(-\gamma v/c^2)\partial[E_x]/\partial t' + \nabla_\gamma' \ \mathbf{E} = 0 \tag{4.5}$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t' + \nabla_\gamma' \ \mathbf{B} = 0 \tag{3.6}$$

where,

$$\nabla_\gamma' = (\gamma\partial/\partial x', \partial/\partial y', \partial/\partial z') \tag{4.7}$$

$$\nabla = (\partial/\partial x, \partial/\partial y, \partial/\partial z) \tag{4.8}$$

$$\nabla' = (\partial/\partial x', \partial/\partial y', \partial/\partial z') \tag{4.9}$$

These are the necessary conditions that emerge from the transformation of the Maxwell equations onto an

inertial frame. They must be satisfied for the transformation to hold.

Anybody who has transformed Maxwell equations onto an inertial frame using the Lorentz Transform have come across these necessary conditions irrespective of the transformation factor used. Lorentz had them. Lorentz ignored them. Einstein had them. Einstein ignored them. People who teach Special Relativity have seen them. They ignored them. Researchers have seen them. They ignored them. Textbook writers have seen them. They ignored them. They acted as if these conditions did not exist. That was a major mistake of Lorentz, Einstein, as well as of anybody else who transformed Maxwell equations onto inertial frames, and those who teach the subject and do research. That was the major mistake of those who claim what a genius Einstein should be to develop Special Relativity. They are yet to realize that Special Relativity or Lorentz-Einstein physics in general is a result of a mathematical oversight, mathematical deception, or a downright mathematical blunder.

Lemma:

$$\nabla_\gamma' = \nabla. \tag{4.10}$$

Proof is straightforward. From the Lorentz Transform, we have,

$$\partial x'/\partial x = \gamma, \ \partial y'/\partial y = 1, \ \partial z'/\partial z = 1 \tag{4.11}$$
From the definition of ∇_η', we have,

$$\nabla_\gamma' = (\gamma\partial/\partial x', \partial/\partial y', \partial/\partial z') \tag{4.12}$$

$$\nabla_\gamma' = (\gamma(\partial x/\partial x')(\partial/\partial x), (\partial y/\partial y')(\partial/\partial y), (\partial z/\partial z')(\partial/\partial z)) \tag{4.13}$$
Since $\partial x'/\partial x = \gamma, \ \partial y'/\partial y = 1, \ \partial z'/\partial z = 1$, we have,

$$\nabla_\gamma' = (\partial/\partial x, \partial/\partial y, \partial/\partial z) \tag{4.14}$$

$$\nabla_\gamma' = \nabla \tag{4.15}$$

$$\nabla = (\partial/\partial x, \partial/\partial y, \partial/\partial z) \tag{4.16}$$

Corollary:

$$\nabla_\gamma' \ \mathbf{E} = \nabla\mathbf{E} \tag{4.17}$$
$$\nabla_\gamma' \ \mathbf{B} = \nabla\mathbf{B} \tag{4.18}$$

Proof is straightforward since $\nabla_\gamma' = \nabla$.

Lemma:

$$\nabla_\gamma' \ \mathbf{E} = 0 \tag{4.19}$$
$$\nabla_\gamma' \ \mathbf{B} = 0 \tag{4.20}$$

This is a straight outcome of $\nabla_\gamma'\mathbf{E} = \nabla\mathbf{E}$, $\nabla_\gamma'\mathbf{B} = \nabla\mathbf{B}$. For propagation of light, there is no source or sink and hence, $\nabla\mathbf{E} = 0$ and $\nabla\mathbf{B} = 0$. As a result,

$$\nabla_\gamma' \ \mathbf{E} = 0, \ \nabla_\gamma' \ \mathbf{B} = 0.$$

Question:

What does the necessary conditions reveal if,

∇_γ' **E**=0, ∇_γ' **B**=0.

Answer: Quite a lot. It reveals that the fields **E** and **B** cannot represent electromagnetic waves.

V. MAXWELL EQUATIONS FOR PROPAGATION OF LIGHT ARE NOT TRANSFORMABLE
Theorem:

Maxwell equations for propagation of light are absolute. Maxwell equations cannot be transformed onto inertial frames. Light does not propagate relative to inertial frames. Light has no momentum. Light is not relative.

Proof: The necessary conditions that emerge from the transformation of Maxwell equations onto an inertial frame using the Lorentz Transform are given by,

$$(-\gamma v/c^2)\partial[E_x]/\partial t'+\nabla_\gamma' \textbf{E}=0 \qquad (5.1)$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t'+\nabla_\gamma' \textbf{B}=0 \qquad (5.2)$$

$$\nabla_\gamma'=(\gamma\partial/\partial x',\partial/\partial y',\partial/\partial z') \qquad (5.3)$$

We already have shown that,

$$\nabla_\gamma' \textbf{E}=0 \qquad (5.4)$$

$$\nabla_\gamma' \textbf{B}=0. \qquad (5.5)$$

Substituting for $\nabla_\gamma'\textbf{E}$ and $\nabla_\gamma'\textbf{B}$ in the necessary conditions given in equations (5.1) and (5.2),

$$(-\gamma v/c^2)\partial[E_x]/\partial t'=0 \qquad (5.6)$$

$$(-\gamma v/c^2)\partial[B_x]/\partial t'=0 \qquad (5.7)$$

From the Lorentz Transform, $\partial t'/\partial t=\gamma$, and hence,

$$(-v/c^2)\partial[E_x]/\partial t=0 \qquad (5.8)$$

$$(-v/c^2)\partial[B_x]/\partial t=0 \qquad (5.9)$$

Since $\eta\neq0$ and $v\neq0$, we have,

$$\partial[E_x]/\partial t'=0, \; \partial[E_x]/\partial t=0 \qquad (5.10)$$

$$\partial[B_x]/\partial t'=0, \; \partial[B_x]/\partial t=0 \qquad (5.11)$$

As a result, we have,

$$E_x=\text{constant (time independent)} \qquad (5.12)$$
$$B_x=\text{constant (time independent)} \qquad (5.13)$$

When Maxwell equations are transformed onto a moving frame using the Lorentz Transform, for that transformation to be valid, electric and magnetic fields must be constant or time independent, which is the trivial solution. If Maxwell equations are transformed onto an inertial frame, the transformed electric and magnetic fields no longer represent electromagnetic waves. Einstein's transformation of Maxwell equations onto inertial frames using the Lorentz Transform is only valid for the trivial solution where electric and magnetic fields are constant; it does not hold for waves.

When the Maxwell equations are transformed onto an inertial frame using the Lorentz Transform, the electromagnetic fields that hold the form of the Maxwell equations represent the trivial solution to the Maxwell equations, not the wave solution. The trivial solution to the Maxwell equations is static fields, the fields that are time independents.

Electromagnetic fields of a propagating wave cannot be constant or time independent. Electromagnetic fields of light cannot be constant or time independent. Propagating electromagnetic fields cannot be constant or time independent. Maxwell equations for propagation of light cannot be transformed onto inertial frames. The necessary conditions that emerged from the transform preempt light from being relative. Special Relativity has no existence without light being relative since Special Relativity is based on the assumption that light is relative and has momentum.

Lorentz Transform does not exist. Without the Lorentz Transform, there will be no Special Relativity, General Relativity, relative time, relative mass, spacetime function, or rest energy; Lorentz-Einstein physics is invalid. $E\neq mc^2$.

Lemma:

Propagation of light cannot satisfy the conditions,

$(-\gamma v/c^2)\partial[E_x]/\partial t'+\nabla_\gamma'\textbf{E}=0$

$(-\gamma v/c^2)\partial[B_x]/\partial t'+\nabla_\gamma'\textbf{B}=0$

where, $\nabla_\gamma'=(\gamma\partial/\partial x',\partial/\partial y',\partial/\partial z')$.

Corollary:

Electric and magnetic fields (**E**,**B**) that satisfy the equations,

$(-\gamma v/c^2)\partial[E_x]/\partial t'+\nabla_\gamma'\textbf{E}=0$

$(-\gamma v/c^2)\partial[B_x]/\partial t'+\nabla_\gamma'\textbf{B}=0$

cannot represent electromagnetic waves or propagation of light.

Lemma:

Lorentz Transform cannot transform Maxwell equations for propagation of light onto inertial frames. Electromagnetic waves that satisfy the Lorentz Transform cannot exist.

Lemma:

Light is not relative. Light has no momentum. The path of light cannot be altered relative to observer motion. Observer motion cannot derail light. A light arrow cannot tilt relative to observers.

Lemma:

There is no Lorentz Field or Lorentz Force. Propagating electromagnetic fields do not depend on the frame of reference. Intensity of light does not depend on the frame of reference. Lorentz-Einstein field relationships,

$B_y'=\gamma[B_y+(v/c)E_z]$, $B_z'=\gamma[B_z-(v/c)E_y]$
$E_y'=\gamma[E_y-(v/c)B_z]$, $E_z'=\gamma[E_z+(v/c)B_y]$
do not hold for propagating electromagnetic waves or light relative to an inertial frame of speed v,

$B_y'\doteq\gamma[B_y+(v/c)E_z]$, $B_z'\doteq\gamma[B_z-(v/c)E_y]$

$E_y'\doteq\gamma[E_y-(v/c)B_z]$, $E_z'\doteq\gamma[E_z+(v/c)B_y]$.

Lemma:

Maxwell equations for propagation of light are not transformable onto inertial frames and propagation of light is not relative. Propagating electromagnetic fields are frame independent,

E′=E, **B′=B**.

Proof of these follows directly from the fact that the Maxwell equations for propagation of light are not transformable onto inertial frames and hence propagation of light is not relative.

VI. **SPECIAL RELATIVITY IS A RESULT OF A MATHEMATICAL OVERSIGHT**

When Maxwell equations for propagation of light are transformed onto an inertial frame using the Lorentz Transform, there are two emerging necessary conditions,

$(-\gamma v/c^2)\partial[E_x]/\partial t'+\gamma\partial[E_x]/\partial x'+\partial[E_y]/\partial y'+\partial[E_z]/\partial z'=0$ (6.1)

$(-\gamma v/c^2)\partial[B_x]/\partial t'+\gamma\partial[B_x]/\partial x'+\partial[B_y]/\partial y'+\partial[B_z]/\partial z'=0$ (6.2)

Both Lorentz and Einstein ignored these two conditions either unknowingly or knowingly. These two conditions must be satisfied for the transformation to hold.

Maxwell equations for propagation of light appears to be transformable onto an inertial frame if these necessary conditions are ignored as both Lorentz and Einstein did. It is the ignoring of these necessary conditions that led to the false claim that light is relative, and as a result, the birth of Special Relativity and Lorentz-Einstein Physics. Without this mathematical faux pas, there would be no Lorentz Transform, Special Relativity, General Relativity, relative time, relative mass, spacetime, or rest energy.

When Einstein Transformed Maxwell equations for propagation of light onto an inertial frame with the Relativity Factor ɣ as the Transformation Factor, he had these necessary conditions in his transform. When Lorentz transformed Maxwell equations for propagation of light onto an inertial frame without a Transformation Factor, or equivalently with ɣ=1, Lorentz had the necessary conditions in his transform. Both Lorentz and Einstein ignored the necessary conditions.

The necessary conditions indicate that the transformation only holds for constant or time independent electric and magnetic fields. Constant or time independent electric and magnetic fields are not waves; they do not propagate. The transformation of Maxwell equations for propagation of light onto an inertial frame is not possible. The transformation only holds for the trivial solution to the Maxwell equations where electric and magnetic fields are constant. Lorentz and Einstein transformations of Maxwell equations do not hold for the non-trivial solution where electric and magnetic fields represent electromagnetic waves.

Lorentz Transform cannot transform Maxwell equations for propagation of light onto an inertial frame. Lorentz Transform has no existence. The Lorentz Transform is a result of mathematical oversight. Maxwell equations for propagation of light cannot be transformed onto inertial frames. Light does not propagate relative to inertial frames. Maxwell equations for propagation of light do not apply relative to inertial frames. Special Relativity is invalid in its very foundation. Lorentz Transform has no existence.

If Lorentz had taken the necessary conditions into account, he would have abandoned the transformation of Maxwell equations onto an inertial frame as not doable. If Einstein had taken the necessary conditions into account, he would have abandoned both the Lorentz Transform and Special Relativity as nonsense. If Einstein exercised the due diligence in transforming Maxwell equations onto an inertial frame using the Lorentz Transform, Special Relativity would not have been born. Special Relativity would not have seen the light. Because the propagation of light cannot satisfy the equations (6.1) and (6.2) that emerged from the transform. We would have never come across the Lorentz Transform and Special Relativity if Lorentz and Einstein had been mathematically vigilant and taken the necessary conditions into account.

Lemma:

Every inertial frame is not a stationary frame for light. Maxwell equations for propagation of light are absolute, not relative.

VII. **RELATIVITY OF LIGHT DOES NOT REQUIRE SPECIAL TREATMENT**

Propagation of light is not relative. The motion of a light burst is relative. The propagation of light is governed by the Maxwell equations. The motion of light bursts is not governed by the Maxwell equations. The motion of a light burst is the same as the motion of an arrow except that a light burst has no mass and no momentum. A moving arrow does not tilt relative to observers.

A burst of light is a massless and momentumless arrow. A vertically moving arrow in a train cannot tilt relative to external observers. A massless moving arrow or a light burst in a train is displaced against the motion of the train relative to the passengers on the train while the direction of motion of the light burst is unaltered relative to both passengers as well as external observers [3]. The displacement of a light burst or an arrow relative to observers does not alter the path of the light burst or the arrow, and that is the essence of Relativity. Trains do not derail relative to observers. Train tracks do not bend relative to observers.

The Essence of Relativity [3]:

The path of a moving entity is unaltered relative to all observers, both inside and outside, irrespective of whether the moving entity is an object of mass or a burst of light. The path of a moving entity is displaced

relative to moving observers while the path remains unaltered. Displacement of a path relative to moving observers does not alter the path. Trains do not derail relative to observers. A moving arrow does not tilt relative to moving observers.

Gravity cannot bend light. Gravity has no effect on the massless. The effect of gravity on light is solely through a medium. Gravity generates a density gradient in the medium. The density gradient in the medium refracts light. There is no refraction of light near a gravitational object in a vacuum.

There is no spacetime function without the Lorentz Transform. The Lorentz Transform cannot transform Maxwell equations onto an inertial frame. When the Lorentz Transform cannot transform Maxwell equations, spacetime has no existence. General Relativity has no existence. Special Relativity has no existence.

Any entity that has no standstill existence cannot be relative. Light has no standstill existence. Propagation of light cannot be relative. Propagation of light is not relative. Light does not propagate relative to observers. Speed of a moving entity on its path cannot depend on observers. The path and the speed of light on its path can only be altered by the change of the medium and hence the path and the speed of light cannot be observer dependent.

Any entity with momentum must be able to be brought to a halt by applying equal and opposite momentum. If light has momentum, light must be able to be brought to a halt by applying equal and opposite momentum. Light cannot be brought to a halt since light has no standstill existence. A force cannot be applied to light. Momentum cannot be applied to light. Light cannot carry momentum. Light cannot be forced upon a momentum even hypothetically. Einstein's forcing of an artificial momentum on light is invalid.

If time is relative, time is directional. Directional motion cannot generate non-directional time. Einstein's Relativity Factor γ cannot be the Relativity Factor of the entire inertial frame. The Relativity Factor in Special Relativity is directional. The Relativity Factor or the time dilation Factor at an angle θ to the direction of motion of the frame is a function of θ, $\eta(\theta)$, not γ. The Relativity Factor γ is only for the direction orthogonal to the direction of motion of the frame.

Theorem: General Relativity Factor In Special Relativity [3]

In a moving frame in Special Relativity, the relative time t′ at an angle θ to the direction of motion of the frame is given by,

$t'=\eta(\theta)t$

where,

$\eta(\theta)=[1/(1-v^2/c^2)][(v/c)\cos(\theta)+(1-(v^2/c^2)\sin^2\theta)^{1/2}]$,

$-\pi\leq\theta\leq\pi$.

For $\theta=\pi/2$, $\gamma=1/(1-v^2/c^2)^{1/2}$. Einstein's Relativity Factor γ is only for $\theta=\pm\pi/2$; it does not apply for any

other direction, $\eta(\theta)\neq\gamma$ for $\theta\neq\pm\pi/2$. You cannot make the Relativity Factor γ to be the Relativity Factor for the entire frame just by forcing it in the direction of motion of the frame for $\theta=0$ as Einstein did in Special Relativity.

Special Relativity originated from a mathematical oversight and went on making a series of outrageous claims, one after another, and used experimental misinterpretations to justify them with the help of propaganda Journals that reject any paper that questions its validity or points out the mathematical and experimental mistakes. Propaganda Journals in science serve the same purpose and mandate as the Journals of Religious Affiliations. You won't find a publication that questions the validity of the concept of a creator in a Vatican Journal or any other Journals of religious doctrines. Shouldn't we question the validity of what is in ancient texts instead of following blindly? Can the truth be found in an ancient text from an era where the earth was considered to be flat or the sun was considered to go around the earth?

Shouldn't we question the validity of the content of textbooks instead of memorizing what is in the text blindly? In religious Journals, you can only find the publications that hallelujah the God. Physics Journals are no different. You will not find any publication that questions the validity of Special relativity in a Physics/Science Journal. Editors of these propaganda Journals reject any paper that questions the validity of Einstein's theories and Modern Physics without even giving any reason for doing so, except to say that "it is not suitable for our journal". The real irony is that they call these Propaganda Journals that are anathema to science "Science Journals".

Einstein derived the Relativity Factor γ under the assumption that the propagation of light is relative. The purpose of transforming Maxwell equations onto an inertial frame is to show that the propagation of light is relative. You cannot use the Relativity Factor γ that is derived under the assumption that light is relative in the Lorentz Transform to prove that light is relative; it is self-contradictory; a sham.

It does not matter what the transformation factor is in the Lorentz Transform; you can use $\gamma=1$ as Lorentz did or $\gamma=1/(1-v^2/c^2)^{1/2}$ as Einstein did, it does not matter, the Lorentz Transform cannot transform Maxwell equations onto an inertial frame. The necessary conditions that emerge from the transform prevents the electromagnetic fields from being electromagnetic waves. Electromagnetic waves cannot satisfy the Lorentz Transform for any Transformation Factor.

It is the trivial solution to the Maxwell equations that maintains the form of the Maxwell equations in the Lorentz Transform. The trivial solution to the Maxwell equations is not waves. Trivial solution is static electric and magnetic fields, time independent fields. The electric and magnetic fields in Einstein's transformation of Maxwell equations onto an inertial frame are static fields, time independent fields, not

waves. Static fields or time independent fields are not waves. Maxwell equations are not transformable onto inertial frames. Maxwell equations are absolute.

Observers cannot derail a train. Galileo Relativity is incorrect [3]. Observers cannot derail light. Einstein's Special Relativity is incorrect. A vertically traveling arrow in a moving train does not tilt at an angle relative to observers. A light burst is a massless arrow. A light arrow does not tilt relative to observers. All that can take place relative to observer motion is the displacement of a moving arrow against the motion of the observers. The displacement of a moving arrow relative to moving observers does not alter the path of the arrow. The path of a moving entity is unaltered relative to observers. The time taken for an arrow or light burst to hit the ceiling in a train is the same relative to all the observers, relative to passengers on the train as well as relative to external observers. Time is not relative [3,2]. No Special Relativity is required.

The Lorentz Transform does not exist. There is no transform that can transform Maxwell equations onto inertial frames. There is no spacetime function when the Lorentz Transform cannot transform Maxwell equations onto an inertial frame. Special Relativity is invalid. General Relativity is invalid. They do not exist. They cannot exist even hypothetically. They are a result of mathematical oversight or mathematical blindness.

Superficially, even though the Lorentz Transform appears to maintain the form of the Maxwell equations on an inertial frame, the transformation only holds for the trivial solution of the Maxwell equations where electric and magnetic fields are constant or time independent. The transform does not hold the form of the Maxwell equations for electromagnetic waves. The transformation of Maxwell equations using the Lorentz Transform is not unique [2]; the non-uniqueness is an inherent property of the Lorentz Transform resulting from the use of Einstein's Relativity Factor ɣ as the Transformation Factor where it does not belong.

Einstein's Relativity Factor derived for a beam of light orthogonal to the motion of the frame, under the assumption that light is relative, does not belong in the Lorentz Transform where light is not assumed to be relative and not assumed to have momentum. In the Lorentz Transform a beam of light is in line with the motion of the frame and the path of light is observer independent, not relative.

Relative electromagnetic fields in the Lorentz Transform are not unique. Relative electromagnetic fields in the Lorentz Transform are also unbounded when the speed of the inertial frame approaches the speed of light. Lorentz Transform cannot transform Maxwell equations. Einstein's Relativity Factor ɣ cannot be the Transformation Factor in the Lorentz Transform. Irrespective of what the transformation factor in the Lorentz Transform is, the Lorentz Transform cannot transform Maxwell equations onto inertial frames. Maxwell equations for propagation of light are not transformable onto inertial frames.

Time delay of an event is not time. The distance to an event is not space. Time delay and distance are independent of the space coordinates and the instances of time. Delay-distance in the Lorentz Transform is not space-time. Space and time cannot be brought into the equation. There is no spacetime function when the Lorentz Transform cannot transform Maxwell equations onto inertial frames. Space and time are mutually independent.

The mass of an object is independent of the state of the object. Acceleration does not alter the mass. The motion does not alter the mass. The mass of an object is independent of the speed of the object. There is no gravitational mass. There is no kinetic mass. The mass of an object determines the gravitational force, not the other way around. Gravitational force does not determine the mass. The interaction between two masses determines the gravitational force. There is no gravitational force unless there are two interacting masses. A single mass has no gravity, no gravitational force. The mass of an object determines the momentum, not the other way around. The momentum of an object does not determine the mass.

The mass of an object cannot be relative. The mass of an object cannot depend on its speed. If the mass depends on its speed by the Relativity Factor ɣ, $m'=ɣm$, then, the energy will not be real [4]. The energy of an object in Special Relativity is not real. The rest energy in Special Relativity is imaginary. A mass at rest has no kinetic energy. There is no rest kinetic energy. In Special Relativity, the energy E of an object of mass m and relative momentum $p=ɣmv$ is given by $E=pc\pm jmc^2$ [4].

The mass of an object is not relative. The mass of an object is observer independent. Experimental observation that the measured mass varies with speed cannot be used to claim that the mass varies with the speed since the measuring device used to measure the mass is not independent of the speed. The false claim in Physics that the mass depends on speed is a result of an experimental misinterpretation.

It is not the mass of an object that depends on the state of the object, it is the mechanism of the measuring device that depends on the state of the measuring device. It is the measuring device that depends on its speed and the environment the measuring device is in, not what is being measured. It is not the mass of an object itself that depends on the speed of the object, it is the measuring device that is used to measure the mass that depends on the speed. It is not the time itself that depends on the speed, it is the mechanism of the clock that depends on the speed.

If time and mass are relative, relative time and relative mass will be directional. The motion is directional. Directional motion cannot generate non-directional relative time and non-directional relative mass. Time and Mass are absolute, not relative. Special Relativity based on the average forward and return time of a beam of light cannot be used to describe real time systems that run on the instantaneous time. Special Relativity is meaningless

for instantaneous time [3].

There is no acceleration without motion. A force without motion does not have an acceleration. Newton's relationship m=F/a applies for a≠0. Irrespective of the force F on a stationary object, for a stationary object ∂x=0 and hence a=0 since a=∂^2x/∂^2t. An apple on a tree has a force, but no acceleration. A falling apple has an acceleration. A cabin sitting on earth has no acceleration. A moving cabin at acceleration is not equivalent to a cabin sitting on earth since the cabin sitting on earth has no motion and hence no acceleration. There is no acceleration without motion. The relationship F=ma applies only for moving bodies, for ∂x≠0. The relationship F=ma does not apply for stationary objects, for ∂x=0. Acceleration and gravity are not the same.

Gravity cannot bend light. Gravity has no effect on the massless. Einstein's equivalence principle is invalid. A horizontal light burst in a stationary cabin sitting on earth travels horizontally relative to passengers in the cabin. In a cabin that is moving at an acceleration, a horizontal light burst traveling orthogonal to the direction of motion of the cabin travels horizontally while it is displaced on a downward parabolic path relative to passengers in the accelerating cabin. The passengers in a cabin can determine not only if the cabin is moving or not, but also the speed and the acceleration of the cabin using a burst of light [3].

Galileo made the claim that it is not possible for the passengers in a cabin moving at constant speed to determine if the cabin is moving. When Galileo made that claim, he was claiming that it is not possible for the passengers on an inertial frame to determine if the frame is moving by using objects of mass; he was not referring to light. When Galileo made that claim, the theory of propagation of light was not known. Even though it is not possible for a passenger in a closed cabin to determine if the cabin is moving at constant speed or stationary using objects of mass, a passenger can determine if the cabin is moving at constant speed or stationary using a burst of light. In fact, a passenger can determine the speed of the cabin if the cabin is moving at constant speed as well as the acceleration of the cabin if the cabin is accelerating.

Propagation of light is not relative. The motion of light bursts is relative; a vertically traveling burst of light lags behind relative to passengers in the cabin since light has no momentum. The path of the light burst is unaltered relative to all observers, both in the cabin and outside the cabin. A passenger can determine the speed of the inertial frame the passenger is on using a burst of light.

The spacetime function originated from the Lorentz Transform, from the transformation of the Maxwell equations onto an inertial frame. As we have seen, Einstein's transformation of Maxwell equations onto an inertial frame using the Lorentz Transform is a result of a mathematical oversight. it is not possible to transform Maxwell equations onto an inertial frame. As a result, the Lorentz Transform has no existence. When the Lorentz Transform has no existence, the spacetime function has no existence. When the spacetime function has no existence, both Special Relativity and General Relativity have no existence.

If spacetime exists and spacetime is warpable as it is claimed in Special Relativity, it is not the mass that warps space, it is the volume that warps space. It is the volume of an object that takes up the space, not the mass of an object. If spacetime is warpable as it is claimed by Einstein, and the curvature of the spacetime determines the gravity, then it is the volume of an object that determines the gravity not the mass of an object since the curvature is determined by the volume, not by the mass.

The curvature of spacetime is meaningless. There is no spacetime function since Lorentz Transform cannot transform Maxwell equations onto inertial frames. Time is independent of space. Space and time are mutually independent. Space and time are not warpable. Space, time, and mass are absolute. Space and time cannot be brought to the equation. The distance-delay is not space-time [3]. The distance and time delay to travel the distance are independent of the space coordinates and instances of time.

Galileo Relativity is incorrect. If a train travels at velocity **u** and observer travels at velocity **v**, the relative velocity **w** of the train relative to the observer cannot be given by **w**=**u**-**v**. There is no rail track in the direction of **w**. The train must be on the track relative to any observer, **w**≠**u**-**v**. Observers cannot derail trains. The speed of a train on its track does not change relative to observers. The speed of the train on its track is unaltered relative to any observer irrespective of the observer motion.

It is the train track that is displaced relative to an observer against the observer motion, not the train on the track. It is the path of light that is displaced relative to an observer, not the propagation of light. The speed of a train on its track is independent of observers. The speed of propagation of light on its path is independent of observers naturally. Observers cannot derail trains. Observers cannot tilt moving arrows. Observers cannot tilt a light burst. Propagation of light is not relative.

If time is relative, time will be directional. Einstein's Time Dilation Factor or Relativity Factor is directional. There is no unique Relativity Factor that is valid for every direction on an entire inertial frame. The distance traveled is not space. Time delay or time taken to travel a distance is not time. Distance-delay is not space-time. Space and time cannot be brought to the equation. Space and time are mutually independent. The distance traveled and time taken to travel the distance are independent of space

coordinates and instances of time. There is no spacetime function. Time is independent of position and speed. Time is not relative. Clocks do not determine time. Every inertial frame is not a stationary frame for light.

Lorentz Transform is self-contradictory. The purpose of the Lorentz Transform is to show that the propagation of light is relative. The Lorentz Transform, which is supposed to prove that light is relative, employs Einstein's Relativity Factor, which is derived under the assumption that light is relative, as the Transformation Factor; a self-contradiction, pure deception. Maxwell equations are absolute. Light does not propagate relative to observers. Observers cannot derail trains. The path of light is observer independent. A moving arrow cannot tilt relative to observers. A moving light burst cannot tilt relative to observers. A light burst is a massless and momentumless moving arrow.

It is the propagation of light waves that is governed by Maxwell equations, not the motion of light bursts. Propagation of light is not relative. Observers do not deal with propagation of light. Observers deal with motion of light bursts. The motion of a light burst is relative. A light burst lags behind relative to moving observers. Passengers in a moving cabin can determine the speed of the cabin using a burst of light since a light burst lags behind relative to moving observers while the path of light burst remains unaltered.

An arrow is displaced against the motion of observers while the path of the arrow remains unaltered. An arrow does not tilt relative to moving observers. The displacement of an arrow relative to observer motion does not alter the path of the arrow. The speed of light on its path is naturally observer independent since observers cannot derail light. The path of light is unaltered relative to all observers.

The reading of a measuring device depends on the state of the measuring device. The reading of a measuring device depends on its speed, acceleration or deceleration, as well as the environment it is in. The dependence of a measuring device on the state of the device and its environment cannot be forced on to what is being measured. What is being measured is observer independent. Time and mass are absolute, observer independent.

VII. **CONCLUSIONS**

Lorentz-Einstein Physics is mathematically invalid. Lorentz Transform, Special and General Relativity are invalid. Lorentz Transform cannot transform Maxwell equations for propagation of light onto an inertial frame. Maxwell equations do not apply relative to inertial frames. Light does not propagate relative to inertial frames. Light has no momentum. Light does not propagate relative to observers. Propagation of light is not relative. The path of light is unaltered relative to observers. Observers cannot bend light. Observers cannot derail trains. The speed of any entity on its fixed path is observer independent. Trains do not derail relative to observers.

Both Lorentz Transform and Special Relativity have no existence; they are a result of a mathematical oversight. Time is not relative. Time is a definition. We define a time interval, a day or a year, and engineer clocks to break the interval down into finer intervals. Clocks we engineer do not determine the time. How fast we age cannot be determined by the clocks we engineer. We cannot engineer how fast we age. What is displayed on a clock is meaningless unless the clock is in synchrony with the definition of the time interval, a day or a year.

The mass of an object is not relative. The mass of an object does not depend on its speed. Momentum does not determine the mass of an object. Gravity does not determine the mass of an object. Light has no momentum. A burst of light lags behind relative to observer motion since light has no momentum while the path of light remains unaltered. Special Relativity, General Relativity, and its offshoots are invalid in their foundation.

The Lorentz transform is the foundation of spacetime function. When the Lorentz Transform has no existence, the spacetime function has no existence. There is no interdependent entity called spacetime. Space and time are mutually independent. Space and time cannot be brought to the equation. What we measure is distance and time delay to travel the distance. Distance-delay is not space-time. Distance and delay are independent of the space coordinates and instances of time.

The motion of light bursts is not governed by Maxwell equations. It is the propagation of light waves that is governed by Maxwell equations. Unlike an object of mass, a burst of light lags behind relative to moving observers since light has no momentum. Although an object of mass in a moving train is stationary relative to the train, a burst of light in a moving train is not stationary relative to the train. Although passengers in a moving cabin cannot determine its speed by throwing golf balls as Galileo claimed correctly, the passengers in a cabin can determine the speed of the cabin using a burst of light, which Galileo had no way of knowing. The lagging behind of a light burst relative to passengers can be used by the passengers to determine the speed of the cabin they are in.

Passengers in a closed cabin can determine the speed of the cabin using a burst of light since the motion of light bursts is relative. Galileo's claim was made exclusively for the motion objects of mass. Light does not have to be in compliance with Galileo's claim. Einstein forced the light to be in compliance with Galileo's claim by forcing an artificial momentum on light. Einstein's justification for giving light momentum is a result of a mathematical oversight.

If Einstein had not ignored the necessary conditions in transforming the Maxwell equations onto inertial frames using the Lorentz Transform, he should have realized that the transformation is not possible and hence the propagation of light is not relative and light has no momentum. Light, the massless, cannot be in compliance with Galileo's claim. Galileo made

that claim in a time when the theory of propagation of light was not yet known. If the theory of propagation of light had been known at the time of Galileo, he should have realized that it is possible for the passengers in a moving cabin to determine the speed of the cabin by using a burst of light.

"Propagation of light is frame independent. The motion of a light burst is frame dependent. A light burst lags behind relative to a moving frame while the path of the light burst is unaltered relative to all observers."

Laws of physics governing the motion of objects of mass (the motion mechanics) are frame independent since the motion of objects of mass is relative. Laws of physics governing the propagation of electromagnetic waves are frame independent since the propagation of light is not relative. Motion of a mass and the propagation of light are not the same. Motion and propagation cannot be unified.

Light cannot be forced upon a momentum by proclamation. An entity with momentum cannot propagate. The massless cannot have momentum. Light does not propagate relative to observers. Observers cannot tilt a moving arrow. Observers cannot derail a train. Observers cannot derail light. Observers cannot alter the intensity of light by running. Einstein derailed light. Galileo derailed trains. The path of any moving entity, whether it is an object of mass or a burst of light, is observer independent. Both Galileo Relativity and Einstein Relativity are incorrect. Galileo Relativity can be amended. Einstein's Relativity and Lorentz-Einstein physics in general must be discarded since they are a result of a mathematical blunder.

Lorentz Transform, Special Relativity, and General Relativity are results of Mathematical oversights in collusion with experimental misinterpretations. Light has no momentum. The massless has no momentum. Light cannot be given momentum by proclamation. The path of a moving entity is unaltered relative to observer motion irrespective of whether the entity is a burst of light or an object of mass.

The essence of Relativity is that the trains do not derail relative to observers. Special Relativity is a result of a mathematical blunder. There is no Lorentz Transform. There is no spacetime function. Space and time are mutually independent. Space and time cannot be brought to the equation. Light does not propagate relative to observers. A light burst does not tilt relative to observers. Time and mass are absolute.

Gravity cannot bend light in a vacuum. Gravity has no effect on the massless. Gravity has no effect on light. The effect of gravity on light is always through a medium. It is the medium that mediates an effect between gravity and light. Without a medium, gravity has no effect on light. Time and mass are absolute. Lorentz Transform and Special Relativity that turned physics into voodoo physics is a result of mathematical oversight, a mathematical blindness, a mathematical deception, or a downright mathematical

blunder; most probably a mathematical oversight due to over-inflated over-confidence.

Motion is relative. Propagation is not relative. Light does not propagate relative to observers. Observers do not see the propagation of light. Observers do not deal with propagation of light. Observers see the motion of light bursts. Observers deal with the motion of light bursts. Maxwell equations play no part in what observers see, the motion of light bursts. The motion of light bursts is not governed by Maxwell equations. Maxwell equations play no part in Relativity. Propagation of light plays no part in Relativity. It is the motion of light bursts that is involved in Relativity. The motion of a light burst is relative. Light bursts lag behind relative to moving observers while the path and the speed of the light burst on its path remain unaltered. Observers cannot alter the path of a moving entity. Observers cannot alter the speed of a moving entity on its path.

Lorentz Transform is a mathematical oversight, deception, or a downright blunder. Lorentz Transform cannot transform Maxwell equations onto inertial frames. Special Relativity is a result of mathematical and conceptual oversight or a downright deception. Light cannot propagate relative to observers. Light is not relative. Every aspect of Lorentz-Einstein physics is invalid since the foundation of Lorentz-Einstein physics based on the transformation of Maxwell equations for propagation of light onto inertial frames using the Lorentz transform is invalid. Maxwell equations for propagation of light are absolute, not transformable onto inertial frames.

Observers cannot alter the Electromagnetic fields of propagating waves. Observers cannot alter the intensity of a light beam by running. Electromagnetic fields of light cannot depend on observers. No physical change can take place relative to observers. The speed of light, the path of light, field strength of light, the direction of light are all unaltered relative to observers.

"Propagation of light is unaffected relative to inertial frames, $\mathbf{E'}=\mathbf{E}$, $\mathbf{B'}=\mathbf{B}$. Light does not propagate relative to inertial frames."

In Einstein's transformation of electromagnetic waves onto inertial frames, the field strength increases with the speed of the frame. In fact, the electromagnetic fields reach infinity when the speed of the frame approaches the speed of light. In other words, according to Special Relativity, the strength of light can be increased by running with a beam of light. This is a good indication of the invalidity of Special Relativity. We cannot alter the field strength of light by running with a beam of light. We cannot alter the intensity of light by running. Observers cannot alter the physical quantities. Motion of an observer can only alter the distance to the path of a moving entity. The path of a moving entity is displaced against the motion of an observer while the motion of the moving entity on its path is unaffected by the motion of the observer.

Lorentz-Einstein physics is a result of a

mathematical oversight, a deception, or a downright blunder. Maxwell equations for propagation of light cannot be transformed onto inertial frames. Propagation of light is not relative. Maxwell equations are not relative. Modern Physics is in desperate need of a complete theoretical experimental overhaul. Physics needs a restart with the new understanding that Maxwell equations for propagation of light are not transformable onto inertial frames. Lorentz-Einstein physics does not belong in science. The proper resting place for the Lorentz-Einstein Physics is a dustbin or a garbage dump.

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