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Find Transformations (Lorenz's and Einstein) of the Accelerating Motion (Jabr's Transformations)

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Abstract

Mickelson held in 1887 and Morley experiment to determine the speed of the earth for the supposed ether, But the classical theory failed to explain this experiment, After the effort was able to interpret the experience, that is design equations called the Lorenz's transformations, But rejected at the time because it did not conclude mathematically, Then Einstein in 1905 came And was able to interpret the experience as his theory of special relativity that depend entirely on the uniform rectilinear motion ,then Einstein put his transformations. But now we can find these transformations depending on the accelerated motion (Jabr's transformations)!

Keyword: Jabr's Transformations

1. Introduction

If we accept the example of the following hypothetical and we have the little patient. We will put our hands on the treasure of a new physical, Lead to a push toward new physics, and then we have our first step to unify physics into one theory, May be a general theory of physics.

Example: is our assumption (as in the figure below) that the soles of the full hemisphere of uranium, it contains only a thin crust inhabited by people and plants... The man wanted that fires a rocket into space to reach the speed of light, we assume that man was able to convert the uranium fully into energy, and somehow are constantly feeding the rocket from main source which it is the earth, until the rocket reaches to the speed of light, The mass of the rocket at the beginning and is(m) and the mass of the earth (uranium) i(s M) and we conclude the following:

- In the beginning is the consumption of energy to accelerate the rocket the speed is increasing, if approached the speed to the speed of light Most of the energy is spent on increasing the mass of the rocket.

Who lose land of Energy (mass) the rocket earned In the form of energy (mass) .

- Become the mass of rocket (M) A mass of the earth previously Remain from the earth only the crust its mass is shrinking.

-Suppose now that the sun continued feed the rocket by energy After consumption the mass of the earth Even ended its mass The mass of the rocket has become are the total mass of the earth and the sun As well as the galaxy And finally the rocket sucked all the masses of the universe, And finally the universe became is empty of the masses, Where the masses of the universe has been reduced in the rocket.....

- Conclude that the Move must lead to change the world We thank God that the speeds available to man is very slim it Does not lead to changes in the world possibly significantly.

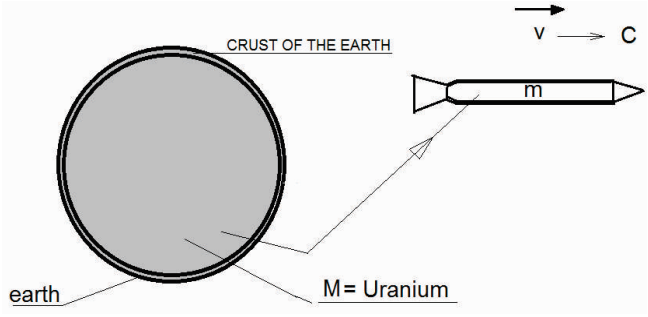

Figure 1

1. The study

The study conducted on the initial particle such as an electron or proton they are as follows:

We have clauses following coordinates

- The Accelerating system $\acute{O}$ and reference system O as in Figure

Study Back here to compared measurements the observer in reference system O with measurements of the observer of accelerating system $\acute{O}$ particle Fixed its does not move to relation to the reference system O it Moves with the

Accelerating system $\acute{O}$ Frame by accelerated motion relation to O frame

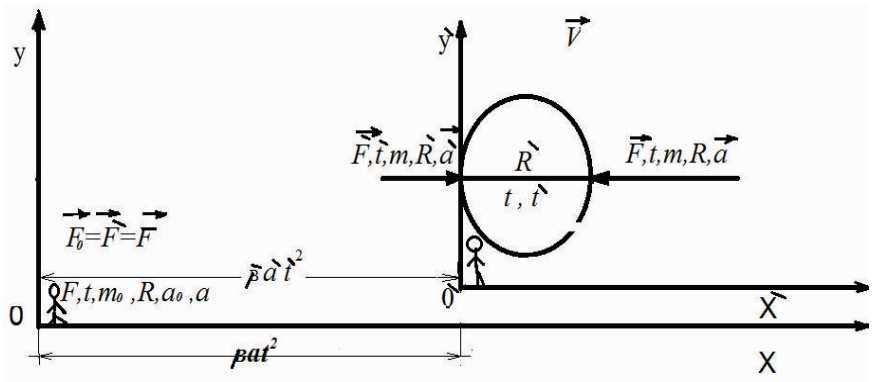

Figure 2

The particle starts from rest $\overrightarrow{V_0} = 0$ by accelerated motion under effect of the pushing force $\vec{F}$

And t the time interval in move state.

The particle undergo to $\vec{F}$ this resistance force (universal inertia force) all the universal except the particle frame Which is trying to block the accelerated particle toward of movement (Assuming that no friction forces) And closer cosmic impact on the particle it Reference system (Fixed=earth) which Particle launched from it, So the reference frame affect on the particle by inertia Force $\vec{F}$ and its time interval is t we have the following assumption:

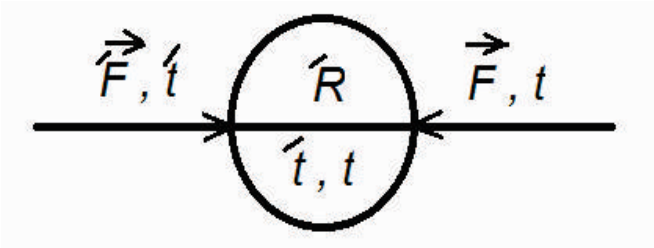

Figure 3

1 - The $\vec{F}$ driving force acting on the particle And its impact toward of the movement it need to amount of time t even the entire Dimension of the particle affected in direction of motion this direction is $\acute{R}$. The energy needed to generate $\vec{F}$ ((Is taken originally from the reference system **O**)).

2-the cosmic inertia force $\vec{F}$ And originally attributable to the reference system O , Even the entire Dimension of the particle affected in direction of motion this direction is $\acute{R}$ need to time t attributable to the reference system O .

3- $\acute{t}$ And t are the time intervals or time interval resulting from the accumulation of time.

4- The Particle diameter in rest case R and the diameter at movement is $\acute{R}$.

which is the reference In addition to this example, which shows the change in the mobile frame Ó and fixed system O.

-The Accelerating system $\acute{O}$ In relation to the reference system O Does not accept absolutely the opposite .i.e. Accelerating system $\acute{O}$ cannot be considered the reference system O is accelerated , Because that is exposed and Which is observed by the observer of reference affected by the cosmic inertia is Accelerating system $\acute{O}$ system O .

- The observer of Accelerating system $\acute{O}$ is affected by the presence of inertia force $\vec{F}$ resulting from the cosmic forces. (Figure4).

- The observer reference system O is observed cosmic inertia force F affecting the accelerated particle mass which moppets the movement direction which tends comment thread with angle α as in (Figure 4).

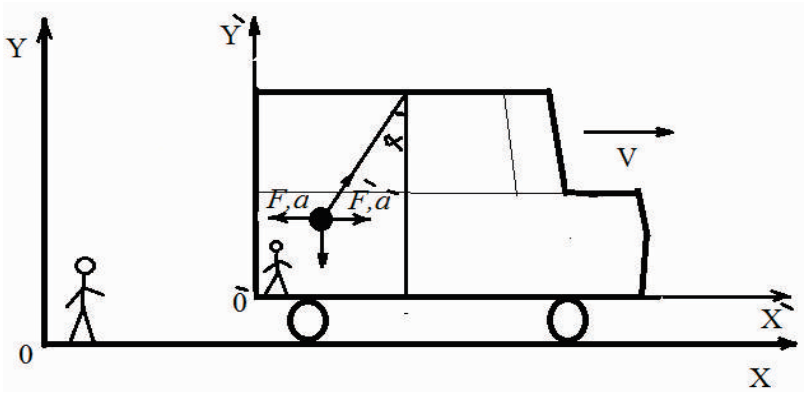

Figure 4

-This research depends on the fixed facts Especially in the late nineteenth century and the recent decade validated experimentally over several centuries, where the means of measurement has evolved quite dramatically.

1.1 established facts

1-momentum law to tow frames accelerated frame and reference frame constant doesn't change whatever the type of motion**.**

- The Accelerating system $\acute{O}$ e reference system O and the universe caused the emergence the force of inertia, and the Accelerating system $\acute{O}$ it is mobile frame, because the effect of the two forces on the same mass (particle). This means that the momentum generated by the impact of the driving force $\vec{F}$ during its time $\acute{t}$ (temporal interval) is equal to the momentum adverse effect on the inertia Force $\vec{F}$ (attributed to the reference system O) through its t i.e:

$$\vec{P} = \vec{P}$$

$$\vec{F}.t = \vec{F}.\acute{t} \rightarrow \frac{\vec{F}}{\vec{F}} = \frac{\acute{t}}{t} \quad .. \quad 1$$

2 - Conservation law of energy:

The conservation law of energy consistently and correctly no matter what kind of movement, this means that the amount of energy or work output for the driving force $\vec{F}$ earned by the particle during motivation $\acute{E}$ is equal to the work that lose E, Accelerating system $\acute{O}$ resulting from the inertia Force $\vec{F}$.

$$\acute{E} = E \quad \rightarrow \quad \because \frac{F}{\acute{F}} = \frac{\acute{R}}{R} \rightarrow \acute{F}.\acute{R} = F.R \quad \ldots \quad 2$$

The R: is the diameter of the particle as if it were a static in the reference system O

- This work $\acute{E} = \acute{F}.\acute{R}$ represents the work that increases the internal energy of the particle, assuming the absence of loss of energy, such as that caused by friction or braking which generates radiation, This work is the same instantaneous kinetic energy gained by the particle itself, a kinetic energy that is losing the reference system O, This energy is the biggest what the particle could be earned at the beginning of motivation where to be able to absorb the energy and convert it into energy internal, And decreasing the energy (instantaneous) when the particle closer to the speed of light, for example: when the particle starts motivation the diameter is $R = \acute{R}$ the largest possible, But when they reach the speed of light becomes nil and cannot be a particle that absorbs energy again.

3 - When the force to affect the objects they are affected by force of close to the nearest, whole body or particle are not affected by the force immediately or instantly And that the biggest speed the particle is affected by is the speed of light, And we can write The speed of the impact force in the particle are:

$$V_{\acute{r}} = \frac{\acute{R}}{t} \quad ..3$$

If we called this speed: recovery speed of energy, the energy Lost by the medium (medium = the reference system O + universe).

4- Determine the type of movement: three equations are determined the type of movement of the particle Assume the following:

$V_{\acute{r}} = C$ ... A And $V_{\acute{r}} < C$ ... *B*

C: the speed of light

If $V_{\acute{r}} = C$ و $\vec{F} = \vec{F}$ this mean the motion is: uniform rectilinear motion.

If $V_{\acute{r}} < C$ و $\vec{F} < \vec{F}$ this mean the motion is: accelerated.

In uniform rectilinear motion is:

$\vec{F} = \acute{F}$ and $V_r = C$

From equations 1 and 3

$$\frac{\vec{F}}{\acute{F}} = \frac{\acute{t}}{t} \quad \rightarrow \quad t = \frac{\acute{F}.\acute{t}}{\vec{F}}$$

$V_r = \frac{R}{t} \cdot \frac{\acute{F}}{\vec{F}} = C$ ....5.

This equation means that the particle is affected by force a maximum speed of light.

Accelerated movement:

Depending on the foregoing, we have got the following:

Accelerated movement in the $\vec{F} < \vec{F}$ and affect on the same mass m (kinetic mass).

$\vec{F} < \vec{F} \quad \rightarrow \quad m.a < \acute{m}.\acute{a}$

a: acceleration of inertia force (acceleration attributed to the reference system **O**)

***a*:** acceleration of driving force for the particle attributed to the O frame.

As well as the time interval : $t > \acute{t}$

As well as the spatial interval

$R > \acute{R}$

or distances: $X > \acute{X}$

Now the tow observes in the two the reference system **O** and the Accelerating system **Ó** have aware that each frame has acceleration as well as its own time intervals and spatial intervals specific to each of them and the special acceleration.

-Now, we ask each observer to calculate dimension of his coordinate's center to the coordinate's center of the other.

the Accelerating system **Ó** : start from rest (no initial velocity) $V_0 = 0$

X: coordinates center dimension of Ó (observer 1) from the center of coordinates (the reference system **O**)

X: coordinates center dimension of the reference system **O** (Observer 2) from the center of coordinates (Accelerating system **Ó**)

The reference system **O** is moving accelerated motion relation to the reference system **O** and its speed ***V*** and Accelerating system **Ó** Observer is fully aware of that acceleration of his frame is **Ó** and his time interval is **Ó** . He calculates his distance from the reference system **O** as follows:

$\acute{X} = \beta \acute{a} \acute{t}^2$ ... *6*

The observer reference system **O** sees that the Accelerating system **Ó** is acceleration moving and time interval ***t*** he calculated (Accelerating system **Ó**) dimension at coordinate center as following:

$X = \beta a t^2$ ... 7

And dividing 6 and 7 we find:

$\frac{\acute{X}}{X} = \frac{\beta \acute{a} \acute{t}^2}{\beta a t^2}$ ... 8

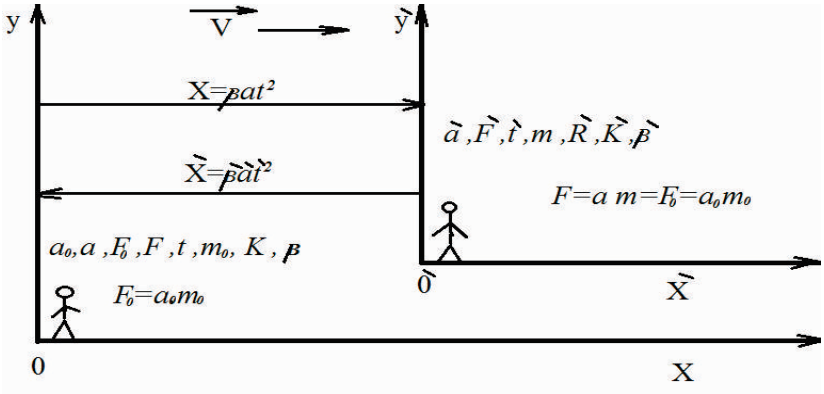

Figure 5

The Speed it is the same and the two observers don't different on it.

The observer of reference system $\mathbf{0}$) calculates his speed of Accelerating system $\acute{\mathbf{O}}$ as follows:

$V = a.t$ 9

(Observer calculates his speed of reference system $\mathbf{0}$) as following : $\acute{\mathbf{O}}$)

$\acute{V} = \acute{a}.\acute{t}$ 10

The speed is the same for any observers:

$V = \acute{V} \rightarrow a.t = \acute{a}.\acute{t} \rightarrow \frac{a}{\acute{a}} = \frac{\acute{t}}{t}$ 11

And compensation 9 and 10 in the 8 we find:

$\frac{\acute{X}}{X} = \frac{\beta \acute{a} \acute{t}^2}{\beta a t^2} = \frac{\acute{a}.\acute{t}.\acute{t}}{a.t.t} = \frac{\acute{V}.\acute{t}}{V.t} = \frac{\acute{t}}{t}$ 12

Suppose that $K = \frac{\acute{t}}{t}$

From equations 1 , 2, 11 and 12, we find:

$\frac{F}{\acute{F}} = \frac{a}{\acute{a}} = \frac{t}{\acute{t}} = \frac{R}{\acute{R}}$

We assume that these percentages equal to $\frac{1}{k}$

$\frac{F}{\acute{F}} = \frac{a}{\acute{a}} = \frac{t}{\acute{t}} = \frac{R}{\acute{R}} = \frac{1}{k}$ ...13

Note: The Accelerating system $\acute{\mathbf{O}}$ speed is very high more than 10% C Therefore, classical theory of motion are not suitable for here, so we assume $\boldsymbol{\beta}$ factor instead of $\frac{1}{2}$ and will be looking for value of $\boldsymbol{\beta}$ factor.

1.2 Find β Factor And K Factor

From equation speed of effectiveness 3, we find:

$V_r = \frac{R}{t} < C$

The reference system **0** cannot recover energy which lost, Which the particle won it and remaining accelerated movement the condition that the longer the resistance forces are only the forces of inertia where the energy gained working on increasing the internal energy of the particle and change its internal structure.,

$$V_r = \frac{R}{t} < C$$

$$V_r = \frac{R}{t}\frac{F}{\acute{F}} < C \quad .....13$$

Because the movement is accelerating $\frac{R}{t} < C$ because $F < \acute{F}$

Multiply both sides of the equation 13 momentum $\vec{P} = m.\vec{C}$

$$V_r.m.C = \frac{R}{t}\frac{F}{\acute{F}}.C.m < mC^2$$

$$V_r.m.C = \frac{F}{\acute{F}}.C^2.m < mC^2 \quad ....14$$

$E_1 = V_r.m.C = \frac{F}{\acute{F}}.C^2.m$ Represents the primary energy of the particle

Represents the final energy of the particle $E = mC^2$

Since the particle is accelerated motion it owns a kinetic Energy its speed V and have acquired kinetic energy, and the amount of this energy is: $\Delta E = \beta m V^2$

: is the kinetic mass of the particle (mass of the particle in the case of the movement m)

: The speed of the particle V

: Factor looking for its value β

To Balancing the equation 14 should be added change of kinetic energy ΔE shall be:

$$E_1 + \Delta E = E$$

$$\frac{F}{\acute{F}}.C^2.m + \beta m V^2 = mC^2 \quad .. 15$$

If we divide both sides of the 15 mC^2 we find:

$$1 = \frac{F}{\acute{F}} + \beta\frac{V^2}{C^2}$$

$$1 - \frac{F}{\acute{F}} = \beta\frac{V^2}{C^2}$$

Reform we find: $\frac{1}{\beta}\left(1 - \frac{F}{\acute{F}}\right) = \frac{V^2}{C^2}$ ... (16

And multiplying both sides by **-1** Then add **+1** to both sides:

$$1 - \frac{1}{\beta}\left(1 - \frac{F}{\acute{F}}\right) = 1 - \frac{V^2}{C^2} \quad ... \quad 17$$

The root of both sides we find: $\sqrt{1 - \frac{1}{\beta}\left(1 - \frac{F}{\acute{F}}\right)} = \sqrt{1 - \frac{V^2}{C^2}}$

But it could be the first party equal to: $\frac{F}{\acute{F}}$? if the well will be equal to the second party, provided that it is and the value of β within the values that are ($\beta m V^2$)consistent with the formula of change in kinetic energy consistent with their values in the theories (Newton and Einstein).

And thus be : $\frac{K}{k} = \sqrt{1-\frac{V^2}{C^2}} = \frac{1}{k}$

We will see:

$$\sqrt{1-\frac{1}{\beta}\left(1-\frac{K}{k}\right)} = \frac{K}{k}$$

Squaring both sides, we find :

$$1-\frac{1}{\beta}\left(1-\frac{K}{k}\right) = \frac{1}{\beta}\left(1-\frac{K}{k}\right) = 1-\frac{K^2}{k^2} = \left(1-\frac{K}{k}\right)\left(1+\frac{K}{k}\right)$$

And delete $\left(1-\frac{K}{k}\right)$ from the two sides, we find:

$$\frac{1}{\beta} = 1+\frac{K}{k} \quad \rightarrow \quad \beta = \frac{1}{1+\frac{K}{k}} = \frac{1}{1+\frac{1}{k}} = \frac{k}{1+k}$$

$$\beta = \frac{k}{1+k} \qquad ..(18$$

The values of $\boldsymbol{\beta}$ should be limited ($\mathbf{1} \succ \boldsymbol{\beta} \geq \frac{1}{2}$) if They were:

$$V \ll C \rightarrow K \approx 1 \rightarrow \beta \approx \frac{1}{2}$$

$$V \approx C \rightarrow K \approx 0 \rightarrow \beta \approx 1$$

We know that the speed of particle cannot reach to the light speed; it is less than or near to the light speed. The value $\boldsymbol{\beta}$, Therefore, cannot reach to one but near to it. Thus, the previous assumption is correct.

Compensate 18 in 17, we find:

$$1-\frac{1}{\beta}\left(1-\frac{K}{k}\right) = 1-\frac{V^2}{C^2}$$

$$1-\left(1-\frac{K}{k}\right)\left(1+\frac{K}{k}\right) = 1-\frac{V^2}{C^2}$$

$$1-1+\frac{K^2}{k^2} = 1-\frac{V^2}{C^2}$$

$$\frac{K^2}{k^2} = 1-\frac{V^2}{C^2}$$

Thus :

$$\frac{K}{k} = \sqrt{1-\frac{V^2}{C^2}} = \frac{1}{k}$$

$$\sqrt{1-\frac{V^2}{C^2}} = \frac{1}{k} \quad \rightarrow \qquad K = \frac{1}{\sqrt{1-\frac{V^2}{C^2}}} \qquad ...19$$

So:

$$\frac{K}{k} = \frac{a}{\acute{a}} = \frac{t}{t} = \frac{R}{R} = \frac{1}{k} = \sqrt{1-\frac{V^2}{C^2}} \qquad ...20$$

Going back to the equation 12

$$\frac{X}{X} = \frac{\beta \acute{a} t^2}{\beta a t^2} = \frac{\acute{a}.t.t}{a.t.t} = \frac{t}{t} \quad .....12$$

$$\frac{X}{X} = \frac{t}{t} = \frac{1}{k} = \sqrt{1 - \frac{v^2}{c^2}} \quad .....21$$

-The moment of take-off mass was m_0 and particle acceleration a_0 The driving force is:

$$\overrightarrow{F_0} = \overrightarrow{a_0}.m_0 \quad ...22$$

-According to the principle of constant forcer must be equal to the take-off force when no movement:

$$\vec{F} = m.\vec{\acute{a}} \quad ... \ 23$$

And the equality of equations 22 and 23 we find:

$$\overrightarrow{F_0} = \vec{F} \rightarrow \overrightarrow{a_0}.m_0 = \vec{\acute{a}}.m. \rightarrow \quad \frac{m_0}{m} = \frac{\acute{a}}{a_0} \quad ...24$$

: is the static force or reaction force or inertia $\vec{F}$.

: is the external force acting on the particle. $\vec{F}$

: They increase on the force of inertia. $\overrightarrow{\Delta F}$

-If mass at rest m_0 or in the reference system 0) or by Newton, and as the mass is affected by force $\vec{F}$ are subject to acceleration is the acceleration ($\acute{a}$) Since the $\vec{F} \neq \vec{F}$ and have the same acceleration, the moving mass is different from the static i.e. $m \neq m_0$ Where m the kinetic mass, including the $\vec{F} < \vec{F}$

This means that $m > m_0$ there is an increase in mass Δm

$$\vec{F} = \vec{F} + \overrightarrow{\Delta F}. \ ..25$$

$$m.\acute{a} = m_0.\acute{a} + \acute{a}\Delta m$$

Short $\acute{a}$ we get:

$$m = m_0 + \Delta m \quad ....26$$

$$\frac{m_0}{m}\frac{\acute{a}}{\acute{a}} = \frac{t}{t} \quad \rightarrow \quad \frac{m_0}{m} = \frac{t}{t} \quad ..... (27$$

of 26 and 27, we find

$$\frac{F}{F} = \frac{m_0}{m} = \frac{t}{t} = \frac{1}{k} \quad ..28$$

$$\frac{F}{F} = \frac{a}{\acute{a}} = \frac{t}{t} = \frac{R}{R} = \frac{m_0}{m} = \frac{1}{k} = \sqrt{1 - \frac{v^2}{c^2}} \quad ..... \ 29$$

It is the general equation for transfers from fixed frame to accelerated frame and accelerated system to a reference system.

1.3 Derivation transfers in another way (similar to derivatives of Einstein)

Go back to the observers of reference system **O**) and O' frames and ask the observer in the Accelerating system **Ó** to return to the observer of reference system **O** again. At the moment becomes the Accelerating system **Ó** juxtaposed to reference system **O** ignite lamp of the camera.

At the moment $t = 0$ have all of the observers at the source of the waves of spherical light

-It is impossible to be spread or effected instantaneous actions in the universe. And any effect no matter how small needs time to completion.

Light is subject to this imposed rule by nature, there is no spread of light or instantaneous generated. Whatever body that generates light from the light may be launched from rest $V = 0$ then arrived at the fixed speed $C = 3.10^8$ **m / s**, if the light at the beginning of the acceleration of rest to fixed speed $C = 3.10^8$ **m / s** and this is not denied by any sane person. This is the take-off phase of the light. And from the moment of take-off and even the stability of the optical photon has passed all speeds in nature, we conclude the following:

Photon acceleration symbolized to it: J_{max} greatest acceleration at moment of take-off

-Not subject to the equation of Newton's motion for the accelerated motion namely:

but the following equation: $X = \frac{1}{2} J.t^2$

$$X = \beta.J.t^2 = \beta.J.t.t = \beta.C.t$$

Where β factor related to speed.

$$\acute{X} = \acute{\beta}.\acute{J}.\acute{t}^2 = \acute{\beta}.\acute{J}.\acute{t}.\acute{t} = \acute{\beta}.\acute{C}.\acute{t}$$

The speed of light constant for all observers: $\acute{C} = C$

-Speed in the take-off phase $3.10^8 \frac{m}{s} \leq C = J.t \geq 0$

Einstein says: if giving both observers **Ó** And reference system **O** uncanny ability enables them to (see) the)) spread of light through space; both the observers will feel in the center of a ball of developing light)).

And we can say: if gave both observers **Ó** and **O** uncanny ability enables them to see the take-off of light from)) its source sees both of them that the photon light when take-off of upstream material it moves accelerated movement until its speed snaps when

$C = 3.10^8$ m / s and acceleration decreases from the moment of take-off and even cease to exist the moment the stability of speed when $C = 3.10^8$ m / s)).

The equation of ball light diffused which observer sees it stationed in the reference system **O** Is:

$$X^2 + Y^2 + Z^2 = \beta^2 J^2 t^4$$

$$X^2 + Y^2 + Z^2 = \beta^2 C^2 t^2 \quad .. \quad 30$$

Similarly, the observer of reference system **O** writes equation for the ball as follows:

$$\acute{X}^2 + \acute{Y}^2 + \acute{Z}^2 = \acute{\beta}^2 C^2 \acute{t}^2 \quad ....31$$

2. Conversion the classical equations of two systems moving In relation to the another

$\acute{X} = X - Vt$ ... 32

$X = \acute{X} + Vt$ 33

But here in the accelerated movement of a very high speed of more than 10% C assume equations of the following transformation

$\acute{X} = K(X - \beta a t^2) \rightarrow \acute{X} = K(X - \beta.V.t)$ .. 34

$X = \acute{K}(\acute{X} + \acute{\beta} a \acute{t}^2) \rightarrow X = \acute{K}(\acute{X} + \acute{\beta}.V.\acute{t})$ ... 35

because they relate to the same speed, which must be identified. $k = \acute{k}$

because they relate to the same speed. $\beta = \acute{\beta}$

We are now trying to convert the equation 31 so that the Accelerating system $\acute{O}$ observer sees what the observer of reference system O will see; this requires mathematically deleting $\acute{t}, \acute{Z}, \acute{Y}, \acute{X}$ by using imposed of the equations of transformation. The $Y, \acute{Y}$ and $Z, \acute{Z}$ perpendicular on the relative velocity between the two observers and this means that: $Y, \acute{Y}$ and $Z = \acute{Z}$ and we assume that the equation for converting $\acute{X}$ and we need some account to delete $\acute{t}$ from 31 equation.

To obtain $\acute{t}$ by Indication of magnitudes non-dash, we will use transformation's equations 34 and 35 finally, we find:

$$\acute{t} = k\left[\frac{X}{\beta V}\left(\frac{1}{k^2} - 1\right) + t\right] \quad .....36$$

Now we compensate the equation 36 and 34 in 31 equation:

$$k^2(X - \beta a t^2)^2 + Y^2 + Z^2 = \beta^2.C^2.\acute{t}^2$$

$$k^2(X - \beta a t^2)^2 + Y^2 + Z^2 = \beta^2.C^2.k^2\left[\frac{X}{\beta V}\left(\frac{1}{k^2} - 1\right) + t\right]^2$$

Unzip the brackets and assemble the borders and shortcuts we find Equation 37 :

$$\left[K^2 - \frac{\beta^2 C^2 K^2}{\beta^2 V^2}\left(\frac{1}{K^2} - 1\right)^2\right]X^2 - \left[2\beta V K^2 + \frac{2\beta C^2 K^2}{V}\left(\frac{1}{K^2} - 1\right)\right]X.t + Y^2 + Z^2 = (\beta^2 C^2 K^2 - \beta^2 V^2 K^2)\,t^2 \quad ..... 37$$

This equation represents the ball of diffused light as seen by the observer $\acute{O}$, which has been interpreted by the observer of reference system O and must be this equation identical to the equation of the ball that we observe from reference system O for check it must be the quantities placed within brackets in equation 37 must be equal to, respectively **(1 , 0, C^2)** .

$$K^2 - \frac{\beta^2 C^2 K^2}{\beta^2 V^2}\left(\frac{1}{K^2} - 1\right)^2 = 1 \quad .... 38 \quad \rightarrow K = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$$

$$2\beta V K^2 + \frac{2\beta C^2 K^2}{V}\left(\frac{1}{K^2} - 1\right) = 0 \quad .... 39 \quad \rightarrow K = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$$

$$\beta^2 C^2 K^2 - \beta^2 V^2 K^2 = \beta^2 C^2 \quad ..... 40 \quad \rightarrow K = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$$

It can simplify the equation 36 to :

$$t = k[t - \frac{V X}{\beta c^2}] \quad .. 41$$

3. Status of uniform rectilinear motion

3.1 The study

If **V** the relative speed fixed between the two systems **O** and the Accelerating system **Ó** we have the following:

The driving force $\acute{F}$ is equal to a force of resistance ***F***:

... 42 According the equation **A** the speed of (recovery energy) or the speed of influence: $\vec{\acute{F}}.\acute{t} = \vec{F}.t$

$$\vec{V}_r = \frac{R}{t} \quad .. \mathbf{A}$$

Compensation 42 in **A** the equation after replacing ***t*** :

$$\frac{\vec{R}}{\vec{F}} = \frac{\acute{t}}{t} \quad \rightarrow \quad t = \acute{t}.\frac{\vec{F}}{\vec{R}}$$

We get the equation 5

$$\vec{V}_r = \frac{R}{t}.\frac{\vec{F}}{\vec{R}} = \vec{C} \quad .... 5$$

-Multiply both sides of the equation 5 final Momentum

$$\vec{P} = m.\vec{C}$$

$$\vec{V}_r.\vec{P} = \frac{R}{t}.\frac{\vec{F}}{\vec{R}}\vec{P} = \vec{F}\vec{C}$$

$$\vec{V}_r.m.\vec{C} = \frac{R}{t}.\frac{\vec{F}}{\vec{R}}.m.\vec{C} = m.\vec{C}.\vec{C}$$

$$E_r = \vec{V}_r.m.\vec{C} = mC^2 \quad .. 43$$

: Energy of reference system **0** that is recovered or universe from the Accelerating system **Ó** moving frame by E_r uniform rectilinear motion.

If we compare equation 43 uniform rectilinear motion with accelerated movement equation.

$$E_1 + \Delta E = E$$

$$\frac{F}{R}.C^2.m + \beta m V^2 = mC^2 \quad .. 15$$

$$E_r = \vec{V}_r.m.\vec{C} + 0 = mC^2 \quad ..$$

$$E_r = E_1 + 0 = mC^2 = E \quad .. 43$$

From equation 43 we did not find any change of kinetic energy, and that primary energy is the same final energy, and that energy recovered by the universe are directly with speed of light, regardless of the kind transformed to it, Not note the presence of speed in this equation at all,

We do not know whether the frame is static or moving. Who lives on this frame did not feel it moving and thought it was static. As a result, the fact that human resident, such as this frame (the ground, for example) does

not change the kinetic energy due to either static or it is moving with uniform rectilinear motion, mechanical experiments cannot stand the fact that the movement of this frame whether static or moving, the frame cannot be moving by uniform rectilinear motion only after accelerated motion. Uniform rectilinear motion is that maintain the gains of the accelerated movement, such as increase in mass or increasing kinetic energy or time interval change toward the shrinking and shrinking of distances and lengths, So the uniform rectilinear motion takes transfers of the same accelerated movement at last speed accelerated motion take it and to be stable.

3.2 back to the basic issue:

The resulting change from the accelerated movement caused by the change and decreasing of cosmic forces which leads to a decrease in the Forces Acceleration of cosmic inertia, In contrast the acceleration the driving force will be decreasing because of its persistence and increasing the moving mass, if the speed of the moving mass reached the speed of light, the acceleration will it go to zero for going at a constant speed without acceleration, But all this are not only if the acceleration was very large From rank the light's acceleration or close to it, Certainly this is are not taken to only the primary particles which, when Accelerating gets mergers of substance because injection the energy in the mass of the accelerated particle who the medium(of the universe) is unable to recover the energy that gave to accelerating mass.

4. Results

4.1 primary results

We are now briefing- classic, special relativity and accelerating motion- transformations equations relative to two observes to a relative speed **V** parallel to the **X** axis, including the following:

Table (1) shows the transformations between the frames depending on the type of movement.

-Transfers of (Galileo - Newton) for uniform rectilinear motion.

-Transfers Einstein's system for uniform rectilinear motion.

-Transfers Jabr's system for the accelerated motion and uniform rectilinear motion.

transformations Galileo - Newton $V \prec 10\%C$	Type of motion	transformations Einstein $V \succ 10\%C$	Type of motion	transformations Jabr $V \succ 10\%C$	Type of motion
$\acute{X} = X - Vt$	uniform rectilinear	$\acute{X} = k(X - Vt)$	uniform rectilinear	$\acute{X} = K(X - \beta at^2)$	Accelerated motion
$\acute{Y} = Y$		$\acute{Y} = Y$		$\acute{Y} = Y$	
$\acute{Z} = Z$		$\acute{Z} = Z$		$\acute{Z} = Z$	
$\acute{t} = t$		$\acute{t} = k[t - \frac{V X}{C^2}]$		$\acute{t} = k[t - \frac{V X}{\beta C^2}]$	
$\acute{k} = k = 1$		$\acute{k} = k = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$		$\acute{k} = k = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$	
-	-	-	-	$\acute{X} = k(X - Vt)$	uniform rectilinear
-	-	-	-	$\acute{Y} = Y$	
-	-	-	-	$\acute{Z} = Z$	
-	-	-	-	$\acute{t} = k[t - \frac{V X}{C^2}]$	
-	-	-	-	$\acute{k} = \frac{1}{\sqrt{1 - \frac{V^2}{C^2}}}$	

Table (2) shows transfers of the masses, the kinetic energy, the forces and Accelerations

Transfers Galileo - Newton $V < 10\%C$	Type of motion	transferss Einstein $V > 10\%C$	Type of motion	transfers Jabr $V > 10\%C$	Transformed	Type of motion
$m = m_0$	uniform rectilinear motion	$m = km_0$	uniform rectilinear motion	$m = km_0$	mass	Accelerated and uniform rectilinear motion
$E = E_0$	=	$E = kE_0$	=	$E = kE_0$	Kinetic energy	=
-	=	-	=	$\acute{F} = \acute{a}m$	Inertia force	=
-	=	-	=	$F = am$	Primary force	=
-	=	-	=	$F_0 = a_0 m_0$	Primary force	=
-	=	-	=	$a_0 = k\acute{a}$	Driving force	=
-	=	-	=	$\acute{a} = ka$	Acceleration of driving force	=
-	=	-	=	a	Acceleration of inertia force	=

1-The Force is responsible about mechanism for the change of time or time interval, kinetic energy, masses and the dimensions.

2-The driving force responsible for a changing forces of inertia (cosmic force) and thus is responsible for changing the world that this force was sufficient.

3- Uniform rectilinear motion is the end of the accelerated motion after the starting from rest. And it is responsible for installing gained of particle from accelerated movement, such as the increase in mass, shrinking time , lengths and conservation of kinetic energy.

4-The generating force of accelerated movement is responsible for the injection of energy in mass and therefore similar the process of fusion that lead to changing the structure of the particle and increase its mass and dimensions and the generation of substance.

5- Uniform rectilinear motion express the beginning of an understanding of the nature of matter and know its characteristics that go back to knowledge of the dimensions of elementary particles and the knowledge of the Supreme density of matter in the universe.

6-Accelerated movement will leads us to find a new universal law of gravity. As well as determine the degree of deviation of light toward the gravitational fields, and find diameter and the laws of black holes.

7- Find the equations of accelerated motion at very high speeds.

8-The results of this study are countless and every single result will be needs to detailed publications.

4.2 secondary Results

If we had been a little patience, we will find that we are already above on the road to facilitate understanding of the physics and we are toward unification the physics in single theory and derive from it all previous theories as well as new theories lead to the discovery of more secrets of Physics, Which starts from the basic particle that the universe is built from , the atom , the end of the universe itself and what contains such as the suns white dwarfs and black holes ... It has been shown that this study will lead to the same results of general relativity The difference with this study is much easier than the theory of general relativity, The following are some of the results of this study and in the form of publications more than 24 publication, Will be issued consecutively by the end of 2014 to be a whole constitutes a **((The General Theory of Physics)).,**

1-The study confirms the authenticity the theory of general relativity (Gravitational red-shift).
2- The study confirms the authenticity the theory of general relativity and finds other law similar (Schwarzschild radius).

3- The study confirms the authenticity the theory of general relativity about the principle of equivalence (gravitational mass equivalent inertial mass).
4-The study confirms the authenticity the theory of general relativity about Attraction the light towards the gravity fields .
5- The study finds new gravity law more than accuracy of Newton's law.
6- The study finds highest density of matter in the universe.
7- The study finds law to determined diameter of atoms.
8- The study finds diameter of neutrino.
9- The study finds the diameter of electron.
10- The study finds the diameter of proton.
11- The study finds three syndromes of energy.
12- The study finds new theory about the sudden shock.
13- The study finds fission law.
14- The study determines the highest value to transform matter into energy.
15- The study finds laws to transform rays into matter.
16- The study confirms the quantum theory.
16- The study confirms quantum for max plank about body black radiation.
17- The study confirms hypothesis's Boher about determined atoms diameter.
18- The study confirms Louis de proy's law.
19- The study finds general thermal Constance.
20- The study confirms the principle of equivalence (gravitational mass Equivalent inertial mass).
21- The study announces the formula of "The General Theory of Physics".

5. Conclusions

We were able to find the equations of transformations for accelerated motion which derive from it Einstein's (Lorentz - Fitzgerald) transformations or Newton's transformations at low speeds.

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