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Article

Quantum Relativity (Electron Ripple)

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Abstract

This research answers the knowledge gap regarding the explanation of the quantum jump of the electron. This scientific paper aims to complete Einstein's research regarding general relativity and attempt to link general relativity to quantum laws.

Keywords: special relativity; general relativity; bohr atomic model; the fine-structure constant; photon energy; energy of the total photon; electron wave by de broglie; gravity constant; quantum jump and cosmic constants of nature

1. Introduction

This research was created for the purpose of answering questions about physics phenomena that have not been answered. Such as explaining the phenomenon of the quantum jump of the electron and the phenomenon of cumulative entanglement. What happens in the phenomenon of the quantum jump of the electron is that when we give the electron energy, this energy causes the electron to move from the energy level that it occupies to the higher energy level without crossing the distance between the two orbits,

which leads to the occurrence of the phenomenon of the quantum jump of the electron.[1] (Svidzinsky et al., 2014)

The role of this scientific paper is to provide a scientific explanation of how the quantum leap occurs without crossing the distance between the orbits. The theory of quantum entanglement is a connection between two quantum entangled particles. If one particle is observed, the other particle is affected by it at the same moment. This is what Einstein objected to; because when the electron traveled this distance in the same period of time, this would lead to the existence of a speed faster than the speed of light. Einstein proved it in special relativity. The maximum speed in the universe is the speed of light. Therefore, the phenomenon of quantum entanglement does not agree with Einstein's laws. After the validity of quantum laws was proven. There has become a conflict between the laws of relativity that apply to the universe and the quantum laws that apply to atoms. This scientific paper aims to resolve this conflict between the laws of relativity and quantum laws. By establishing a law derived from the laws of relativity to apply to quantum laws. (Equation number 1)

This law in equation 1 is known as quantum relativity because it links the laws of relativity and quantum theory. This law is derived from general relativity. The law works to explain the phenomenon of the quantum leap and the phenomenon of quantum entanglement, as it explains that when energy is given to the atom, the atom does not gain energy, but rather space-time gains that energy. We will discuss the interpretation of this theory in detail later.

- The goal of this scientific research is to answer the explanation of the phenomenon of quantum leap and quantum entanglement and to add some modifications in the Bohr model.

2. Equations

These laws want to explain the results of the final derivation process of this research and what this research wants to prove.

$$\boldsymbol{E = F \times r}$$

$$\boldsymbol{E = k_c \frac{q_1 \times q_2}{r}}$$

$\boldsymbol{k_c}$ ***Coulomb's constant***
Where E represents the energy in special relativity

$$\boldsymbol{k_c \times q_1 \times q_2 = G \times M \times m}$$

Where $\boldsymbol{q}$ ***represents the electron charge***

$$\boldsymbol{k_c \frac{q_1 \times q_2}{r} = m \times C^2 + p \times C}$$

C is the speed of light

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$$C = \frac{4\pi \times k_c}{Z_o} \qquad (1)$$

$$F_{DE} = m \times \frac{(4\pi \times k_c)^2}{r \times (Z_o)^2} + p \times \frac{4\pi \times k_c}{r \times Z_o}$$

F_{DE} *is the David's Force and Energy Equivalence*
r *is the radius*

$$n \times \lambda = v \times T \qquad (2)$$

$$v = \frac{\alpha \times C \times Z}{n}$$

$$T = \frac{(n)^2}{\nu \times \alpha \times Z}$$

T *is the Periodic time*
ν *is the frequency.*

$$2kE = \frac{n \times h_p}{T} \qquad (3)$$

KE is the kinetic energy

$$F_c = \frac{2\pi \times p}{T} \qquad (4)$$

$$F_D = \frac{h_p \times \nu}{r_n}$$

F_D *is the David's Photon Force,* ν *is the frequency.*

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r} \qquad (5)$$

$$F_{DE} = m \times \frac{(v_{Dp})^2}{r} + p \times \frac{v_{Dp}}{r}$$

F_{DE} *is the David's Force and Energy Equivalence*

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$$\alpha = \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times C} \quad (6)$$
$$\alpha = \frac{\hbar}{m_e \times C \times r_n}$$
$$\boldsymbol{\alpha} = \frac{\boldsymbol{G} \times \boldsymbol{M} \times \boldsymbol{m}}{\hbar \times \boldsymbol{C}}$$

The fine structure constant determines the balance and interaction between two worlds: the world of particles and waves and the world of large objects, i.e., it is the separator.

$$E = m \times C^2 + P \times C \qquad (7)$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$E = m \times \left(\frac{4\pi \times k_c}{Z_o}\right)^2 + P \times \frac{4\pi \times k_c}{Z_o}$$

$$Z_0 \text{ it is } (\text{Impedance of free space})$$

$$E = \frac{n^2 \times h_{(a)}^2 \times 2KE}{(Z)^2} + n \times P \times \frac{v_{Dp}}{\alpha \times Z} \qquad (8)$$

$$p = m \times v$$
$$h_{(a)} = \frac{1}{\alpha} = \frac{C \times Z}{n \times v}$$

$$\boldsymbol{v_{Dp}} = \frac{\boldsymbol{4\pi} \times \boldsymbol{k_c}}{\boldsymbol{n} \times \boldsymbol{Z_o}}$$

, v_p is the Phase Velocity, n is the energy level, Z is the number of protons
v_{Dp} David's velocity of the stationary phase

$$E = m \times C^2 + P \times C \quad (9)$$

$$p = m \times C$$

$$E_{sqr} = m \times (v_p)^2 + p \times v_p$$

$$E_{sqr} = m \times (v_{Dp})^2 + p \times v_{Dp}$$

v_p is the Phase Velocity

$$E_{sqr} = E + E_{re}$$

- *Where E represents the energy in special relativity, E_{sqr} is the Special quantum relativity, E_{re} is the Released energy, $h_{(a)}$ is the atomic constant, p is the momentum, ω is the angular velocity, C is the speed of light, v_p is the Phase Velocity, and α is the fine-structure constant. This law explains the final result of the derivation. This law proves the creation of a relationship that links energy and kinetic energy. That the lost kinetic energy comes out in the form of radiant energy.*

$$E_{sqr} = E + E_{re}$$

- *This equation explains that if a mass moves faster than the speed of light through a certain medium, the portion that exceeds the speed of light is in the form of energy from radiation until the maximum speed in the universe becomes the speed of light.*

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4}{1} \frac{G}{(E_n)^4} T_{\mu\nu}$$

$$\boldsymbol{p} = \boldsymbol{m} \times \boldsymbol{v} = \hbar \times \boldsymbol{k}$$

$$\boldsymbol{v_{Dp}} = \frac{\boldsymbol{4\pi} \times \boldsymbol{k_c}}{\boldsymbol{n} \times \boldsymbol{Z_o}}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^6 \times 4 \times (\boldsymbol{m_{DQ}})^4}{(\lambda\, m)^5 \times (\mu_0 \times \varepsilon_0)^7} \frac{(\boldsymbol{t_{DQ}})^6}{(E_n)^5} T_{\mu\nu} \qquad (10)$$

$$(G)^3 = \frac{(2\pi)^4 \times 4 \times C^{15}}{(\lambda\, m)^3 \times 8\pi} \frac{\left(\boldsymbol{l_{DQ}} \times \boldsymbol{t_{DQ}}\right)^3}{(E_n)^3}$$

Where $G_{\mu\nu}$ represents the Einstein tensor, h_p is the Planck constant, G is the universal gravitational constant, $T_{\mu\nu}$ is the energy-momentum tensor, $\lambda\, m$ is the wavelength is (meter), E_n is the photon energy in joules, ε_0 Vacuum permittivity, μ_0 Vacuum permeability

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^2 \times 4}{\lambda\, m} \frac{\left(\boldsymbol{l_{DQ}}\right)^2}{E_n} T_{\mu\nu} \qquad (11)$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^4 \times 4 \times \left(\boldsymbol{m_{DQ}}\right)^2}{(\lambda\, m)^3 \times \left(\mu_0 \times \varepsilon_0\right)^3} \frac{\left(\boldsymbol{l_{DQ}} \times \boldsymbol{t_{DQ}}\right)^2}{(E_n)^3} T_{\mu\nu}$$

Where e represents the electron charge, t_{DQ} Quantum time of David, l_{DQ} Quantum length of David, m_{DQ} Quantum block of David. This law explains the final result of the derivation. This law proves the creation of a relationship that links the photon energy and curvature of space-time.

$$E_n = \frac{h_p \times \boldsymbol{v_{Dp}}}{\lambda\, m} \qquad (12)$$

E_n is the photon energy in joules, $\boldsymbol{v_{Dp}}$ David's velocity of the stationary phase.

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\mu_0 \times \varepsilon_0} \frac{1}{\boldsymbol{a_{DQ}} \times \boldsymbol{E_{DQ}}} T_{\mu\nu} \quad (13)$$

Where a_{DQ} represents the David's Quantum Acceleration, E_{DQ} David's Quantum Energy. This law explains the final result of the derivation. This law proves the creation of a relationship that links the Planck energy and curvature of space-time.

$$\left(\ \boldsymbol{Q_{(Dp)}}\ \right)^{\boldsymbol{2}} = \frac{(\boldsymbol{e})^{\boldsymbol{2}}}{\boldsymbol{\alpha}} \qquad (14)$$

Modified Planck charge by David

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{2\pi \times 4}{\hbar} \frac{\left(\ l_{(p)}\right)^2}{v_p} T_{\mu\nu} \quad (15)$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{2\pi \times 4}{\hbar} \frac{\left(\ \boldsymbol{l_{DQ}}\right)^2}{\boldsymbol{v_{Dp}}} T_{\mu\nu}$$

$$T_H = \frac{\hbar \times \left(v_p\ \right)^3}{8\pi \times G \times M \times k_B} = \frac{\hbar \times \left(\boldsymbol{v_{Dp}}\ \right)^3}{8\pi \times G \times M \times k_B} = \frac{\hbar \times (\boldsymbol{4\pi} \times \boldsymbol{k_c}\ )^3}{8\pi \times G \times M \times k_B \times (\boldsymbol{Z_o})^3}$$

Where $l_{(p)}$ is the Planck length, l_{DQ} Quantum length of David, T_H is the Hawking Temperature, $\hbar$ is the reduced Planck constant.

$$E_n = \left(\frac{2\pi \times \hbar \times C}{\lambda\, nm}\right) = \left(\frac{2\pi \times \hbar \times v_p}{\lambda\, nm}\right) = \left(\frac{2\pi \times \hbar \times \boldsymbol{v_{Dp}}}{\lambda\, nm}\right) = \left(\frac{2\pi \times \hbar \times \boldsymbol{4\pi} \times \boldsymbol{k_c}}{\lambda\, nm \times \boldsymbol{Z_o}}\right) \qquad (16)$$

$$(\Delta E_n)^4 = \frac{\left(h_p\right)^4 \times \boldsymbol{F_{DQ}} \times G}{(\lambda\, nm \times e)^4}$$

F_{DQ} David's Quantum Force

These equations represent the energy of a photon in joules.

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{G}{\left(\boldsymbol{v_p}\right)^4} T_{\mu\nu} \qquad (17)$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{G}{\left(\boldsymbol{v_{Dp}}\right)^4} T_{\mu\nu}$$

$$\boldsymbol{v_p} = \frac{C}{n}$$

$$\boldsymbol{G_{\mu\nu}} + \boldsymbol{\Lambda g_{\mu\nu}} = \frac{\boldsymbol{8\pi}}{\boldsymbol{1}} \frac{\boldsymbol{G} \times (\boldsymbol{Z_o})^{\boldsymbol{4}}}{(\boldsymbol{4\pi} \times \boldsymbol{k_c})^{\boldsymbol{4}}} \boldsymbol{T_{\mu\nu}}$$

$\boldsymbol{v_p}$ is the Phase Velocity

v_{Dp} David's velocity of the stationary phase

- *This equation explains these points:*

1) The speed of light varies depending on the medium through which it travels.

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2) This difference can be measured when measuring gravitational waves.

3) One of the following things is expected to happen when measuring gravitational waves:

1) Note that the speed of gravitational waves as they pass through a given medium differs from the speed of light.

2) Note that the speed of light will not be affected, meaning that gravitational waves travel at the speed of light as they pass through a given medium. However, the distance and time traveled between the wave's source and its arrival at Earth will vary, and they will not be consistent with the calculations provided by general relativity.

- ***Note: If the speed of light remains the same during the measurement, this is because the tube measuring the wave is empty of air, and the speed of light in a vacuum is constant.***
- ***Time travel is the process of turning matter into antimatter.***

$$G = \frac{(l_{(p)})^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (Z_o)^3}$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \sqrt{(\mu_0)^3 \times \varepsilon_0}}{8(\pi)^2 \times k_c}$$

k_c ***is the Coulomb constant***

$$C = \frac{4\pi \times k_c}{Z_o}$$

Z_0 ***it is (Impedance of free space)***

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

n is the refractive index

v_{Dp} *David's velocity of the stationary phase*

- ***Since the medium affects the speed, the medium itself is relative because it affects the speed of light. The speed of light is constant for each medium, but it varies from one medium to another.***
- ***If the universe allows the production of a refractive index that allows exceeding the speed of light in laboratories. This directly indicates that what is done in laboratories is actually being done in the universe but has not yet been observed.***
- *Time travel is the process of turning matter into antimatter.*

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar} \frac{(l_{(p)})^2 \times Z_o}{4\pi \times k_c} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar \times (Z_o)^3} \frac{(l_{(p)})^2 \times (4\pi)^3 \times (k_c)^3}{(C)^4} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar} \frac{(l_{(p)})^2 \times (n)^4 \times Z_o}{4\pi \times k_c} T_{\mu\nu}$$

Z_0 ***it is (Impedance of free space)***

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{G \times (Z_o)^4}}$$

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o} \times (Z_o)^4} = \frac{(m_p)^2 \times (4\pi \times k_c)^3}{\hbar \times (Z_o)^3}}$$

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{(4\pi \times k_c)^7}{\hbar \times a_{DQ} \times (Z_o)^7} \times (Z_o)^4} = \frac{\hbar \times a_p \times (Z_o)^3}{(4\pi \times k_c)^3}}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{\hbar \times (Z_o)^3}{(m_p)^2 \times (4\pi \times k_c)^3} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(4\pi \times k_c)^3}{\hbar \times a_p \times (Z_o)^3}T_{\mu\nu}$$

F_{DQ} *David's Quantum Force*

$$F_{(Dp)} = \frac{(v_{Dp})^3 \times k_c}{G} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{(4\pi \times k_c)^3 \times k_c}{G \times (Z_o)^3} \times \frac{(e)^2}{\hbar \times \alpha}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(4\pi)^4 \times (k_c)^3 \times \alpha}{a_p \times (Z_o)^4 \times (e)^2}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(Z_o)^2 \times (\hbar)^2 \times \alpha}{(4\pi)^2 \times (k_c)^3 \times (m_p)^2 \times (e)^2}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(v_{Dp})^7 \times (\hbar \times \alpha)^4}{(k_c \times (e)^2)^4 \times \hbar \times a_p}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(\hbar)^5 \times (4\pi) \times (\alpha)^4}{((e)^2)^4 \times (k_c)^3 \times (m_p)^2 \times Z_o}T_{\mu\nu}$$

Modified Planck Force by David

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{(v_p)^2}}}$$

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{\left(\frac{4\pi \times k_c}{Z_o}\right)^2}}}$$

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{(v_p)^2}}}$$

v_p *is the Phase Velocity*

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{\left(\frac{4\pi \times k_c}{Z_o}\right)^2}}}$$

$$E = G\frac{M \times m}{r}$$

$$F_{DE} = p \times \frac{v}{r}$$

v *is the Velocity*

Where E represents the energy in special relativity

$$l_{DQ} = \sqrt{\frac{\hbar \times G}{(v_{Dp})^3}} = \sqrt{\frac{\hbar \times G \times (Z_o)^3}{(4\pi \times k_c)^3}}$$

l_{DQ} *Quantum length of David*

$$m_{DQ} = \sqrt{\frac{\hbar \times (v_{Dp})}{G}} = \sqrt{\frac{\hbar \times (4\pi \times k_c)}{G \times Z_o}}$$

m_{DQ} *Quantum block of David*

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(F_{DQ})^4}T_{\mu\nu}$$

$$E_{DQ} = m_P \times (v_{Dp})^2 = m_P \times \left(\frac{4\pi \times k_c}{Z_o}\right)^2 = \sqrt{\frac{\hbar \times (v_{Dp})^5}{G}}$$

E_{DQ} *David's Quantum Energy*

$$F_{DE} = m \times a_{DE} + p \times \omega_{DE}$$

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$$a_{DE} = \frac{C^2}{r}$$

a_{DE} is the David's Acceleration and Energy Equivalence

$$\omega_{DE} = \frac{C}{r}$$

ω_{DE} is the David's Angular Velocity and Energy Equivalence

3. These Laws Have Been Modified from the Mix Planck Laws

……………………………………………

- *How quantum entanglement occurs?*

  What happens is that the electron connects to the other electron through space-time, as space-time acts like a quantum tunnel that connects the two electrons. In this way, the electron does not penetrate the speed of light, But in relation to large objects, you see that it has crossed the speed of light.
- *This hypothesis was based on scientific foundations, the most important of which is:*

  1) *the connection between relativity and quantum mechanics occurs via quantum entanglement and loop gravitational entanglement.*
  2) *quantum entanglement occurs by the contraction of space-time.*
  3) *space-time contraction occurs by space-time absorbing energy.*
  4) *the quantum jump of the electron occurs as a result of the contraction of space-time.*

4. Derivation of Equations

Completing the derivation of the laws resulting from quantum relativity (quantum world)

$$p = m \times v = \hbar \times k$$

$$C = \frac{n \times v}{\alpha \times Z}$$

$$v = \frac{\alpha \times C \times Z}{n} = \frac{\alpha \times v_p \times Z}{n} = \frac{\alpha \times v_g \times Z}{n}$$

$$p = m \times \frac{\alpha \times C \times Z}{n}$$

$$p = m \times C \times \frac{\alpha \times Z}{n}$$

$$E = p \times C$$

$$E_n = p \times C \times \frac{\alpha \times Z}{n}$$

$$p = m \times C$$

$$E_n = p \times C$$

$$p = m \times v = \hbar \times k$$

This is derivation number 1

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$$E = m \times C^2 + p \times C$$

$$F_{DE} = \frac{E}{r} + \frac{E}{r}$$

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$$\boldsymbol{E = F_{DE} \times r}$$

Where E represents the energy in special relativity

This is derivation number 2

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(C)^4}T_{\mu\nu}$$

$\boldsymbol{E_n = p \times C}$

$\boldsymbol{p = m \times v = \hbar \times k}$

$$C = \frac{E_n}{p}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4}{1}\frac{G}{(E_n)^4}T_{\mu\nu}$$

$\boldsymbol{p = m \times v = \hbar \times k}$

$$\boldsymbol{E_n = h_{(p)} \times v = \hbar \times C \times k = \hbar \times \omega = \frac{L \times \omega}{n}}$$

$\boldsymbol{L = m \times v \times r_n = n \times \hbar}$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (\hbar \times k)^4}{1}\frac{G}{(\hbar \times \omega)^4}T_{\mu\nu}$$

$$\boldsymbol{v_p = \frac{\omega}{k}}$$

$$\boldsymbol{v_{Dp} = \frac{C}{n_{Dp}}}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(v_p)^4}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(\boldsymbol{v_{Dp}})^4}T_{\mu\nu}$$

$\boldsymbol{v_p}$ *is the Phase Velocity*

$$\boldsymbol{n \times \hbar = m \times v \times r_n \quad \frac{v}{v}}$$

$$\boldsymbol{n \times \hbar \times v = m \times (v)^2 \times r_n}$$

$\boldsymbol{C = v}$

$$\boldsymbol{n \times \hbar \times C = m \times (C)^2 \times r_n}$$

$\boldsymbol{C = \lambda \times v}$

$$\boldsymbol{n \times \hbar \times \lambda \times v = m \times (C)^2 \times r_n}$$

$\boldsymbol{n \times \lambda = 2\pi \times r_n}$

$$\boldsymbol{\hbar \times 2\pi \times r_n \times v = m \times (C)^2 \times r_n}$$

$$\boldsymbol{a_{DE} = \frac{c^2}{r}}$$

a_{DE} *is the David's Acceleration and Energy Equivalence*

$$\boldsymbol{\hbar \times 2\pi \times v = m \times a_{DE} \times r_n}$$

$$\boldsymbol{\hbar = \frac{h_p}{2\pi}}$$

$$\boldsymbol{\frac{h_p}{2\pi} \times 2\pi \times v = m \times a_{DE} \times r_n}$$

$$\boldsymbol{h_p \times v = m \times a_{DE} \times r_n}$$

$$\boldsymbol{E_n = h_{(p)} \times v}$$

$$\boldsymbol{E_n = m \times a_{DE} \times r_n}$$

$\boldsymbol{a_{DE} = a_c}$

$$\boldsymbol{a_c = G\frac{m}{(r)^2}}$$

$$\boldsymbol{E_n = m \times G\frac{m}{(r)^2} \times r_n}$$

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$$E = G\frac{M \times m}{r}$$

This is derivation number 3

$$E = m \times C^2 + p \times C$$

$C = \lambda \times \nu$

$$E = m \times (\lambda \times \nu)^2 + p \times (\lambda \times \nu)\ \frac{(2\pi)^2}{(2\pi)^2}$$

$k = \frac{2\pi}{\lambda}$

$\omega = 2\pi \times \nu$

$$E = m \times \frac{(\omega)^2}{(k)^2} + p \times \frac{\omega}{k}$$

$$v_p = \frac{\omega}{k}$$

$$v_{Dp} = \frac{C}{n_{Dp}}$$

$$E_{sqr} = m \times \left(v_p\right)^2 + p \times v_p$$

$$E_{sqr} = m \times \left(v_{Dp}\right)^2 + p \times v_{Dp}$$

v_p *is the Phase Velocity*

This is derivation number 4

$$T_H = \frac{\hbar \times C^3}{8\pi \times G \times M \times k_B}$$

$C = \lambda \times \nu$

$$T_H = \frac{\hbar \times (\lambda \times \nu)^3}{8\pi \times G \times M \times k_B}\ \frac{(2\pi)^3}{(2\pi)^3}$$

$k = \frac{2\pi}{\lambda}$

$\omega = 2\pi \times \nu$

$$T_H = \frac{\hbar}{8\pi \times G \times M \times k_B} \times \frac{(\omega)^3}{(k)^3}$$

$$v_p = \frac{\omega}{k}$$

$v_{Dp} = \frac{C}{n_{Dp}}$

$$T_H = \frac{\hbar \times \left(v_p\right)^3}{8\pi \times G \times M \times k_B}$$

$$T_H = \frac{\hbar \times \left(v_{Dp}\right)^3}{8\pi \times G \times M \times k_B}$$

v_p *is the Phase Velocity*

This is derivation number 5

$$n \times \lambda = v \times T$$

$$\lambda = \frac{h_p}{m \times v}$$

$$n \times \frac{h_p}{m \times v} = v \times T$$

$$T = n \times \frac{h_p}{m \times (v)^2}$$

$$2kE = m_e \times (v)^2$$

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$$T = n \times \frac{h_p}{2kE}$$

$$2kE = \frac{n \times h_p}{T}$$

This is derivation number 6

$$m \times v \times r_n = n \times \hbar$$

$$v = \frac{n \times \hbar}{m \times r_n}$$

$$a_c = \frac{v^2}{r}$$

$$a_c = \frac{\left(\frac{n \times \hbar}{m \times r_n}\right)^2}{r}$$

$$a_c = \frac{\left(n \times h_p\right)^2}{(2\pi \times m)^2 \times (r_n)^3}$$

This is derivation number 7

$$F_c = m \times a_c$$

$$a_c = \frac{\left(n \times h_p\right)^2}{(2\pi \times m)^2 \times (r_n)^3}$$

$$F_c = m \times \frac{\left(n \times h_p\right)^2}{(2\pi \times m)^2 \times (r_n)^3}$$

$$F_c = \frac{\left(n \times h_p\right)^2}{(2\pi)^2 \times m \times (r_n)^3} \quad \frac{v}{v}$$

$$m \times v \times r_n = n \times \frac{h_p}{2\pi}$$

$$F_c = \frac{n \times h_p \times v}{2\pi \times \ (r_n)^2}$$

$$v = \frac{\alpha \times C \times Z}{n}$$

$$F_c = \frac{n \times h_p \times \alpha \times C \times Z}{2\pi \times \ (r_n)^2 \times n}$$

$$C = \lambda \times \nu$$

$$F_c = \frac{n \times h_p \times \alpha \times \lambda \times \nu \times Z}{2\pi \times \ (r_n)^2 \times n}$$

$$n \times \lambda = 2\pi \times r_n$$

$$F_c = \frac{h_p \times \alpha \times r_n \times \nu \times Z}{(r_n)^2 \times n}$$

$$F_c = \frac{h_p \times \alpha \times \nu \times Z}{r_n \times n} \quad \frac{2\pi}{2\pi}$$

$$\omega = 2\pi \times \nu$$

$$F_c = \frac{h_p \times \alpha \times \omega \times Z}{2\pi \times \ r_n \times n}$$

$$n \times \lambda = 2\pi \times r_n$$

$$F_c = \frac{h_p \times \alpha \times \omega \times Z}{n^2 \times \lambda}$$

$$n \times \lambda = v \times T$$

$$F_c = \frac{h_p \times \alpha \times \omega \times Z}{n \times v \times T}$$

$$v = \frac{\alpha \times C \times Z}{n}$$

$$F_c = \frac{h_p \times \omega}{C \times T}$$

$$C = \lambda \times \nu$$

$\omega = 2\pi \times \nu$

$$F_c = \frac{h_p \times 2\pi \times \nu}{\lambda \times \nu \times T}$$

$$F_c = \frac{h_p \times 2\pi}{\lambda \times T}$$

$k = \frac{2\pi}{\lambda}$

$$F_c = \frac{h_p \times k}{T} \quad \frac{2\pi}{2\pi}$$

$$\hbar = \frac{h_p}{2\pi}$$

$p = \hbar \times k$

$$F_c = \frac{2\pi \times p}{T}$$

This is derivation number 8

$$F_c = m \times a_c$$

$$a_c = \frac{(n \times h_p)^2}{(2\pi \times m)^2 \times (r_n)^3}$$

$$F_c = m \times \frac{(n \times h_p)^2}{(2\pi \times m)^2 \times (r_n)^3}$$

$$F_c = \frac{(n \times h_p)^2}{(2\pi)^2 \times m \times (r_n)^3} \quad \frac{v}{v}$$

$m \times v \times r_n = n \times \hbar$

$$m \times v \times r_n = n \times \frac{h_p}{2\pi}$$

$$F_c = \frac{n \times h_p \times v}{2\pi \times (r_n)^2}$$

$C = v$

$$F_c = \frac{n \times h_p \times C}{2\pi \times (r_n)^2}$$

$C = \lambda \times \nu$

$$F_c = \frac{n \times h_p \times \lambda \times \nu}{2\pi \times (r_n)^2}$$

$n \times \lambda = 2\pi \times r_n$

$$F_D = \frac{h_p \times \nu}{r_n}$$

F_D is the David's Photon Force
This is derivation number 9

$$\boxed{(l_{DQ})^2 = \frac{\hbar \times G}{(v_{Dp})^3}}$$

l_{DQ} Quantum length of David

$$\boxed{(t_{DQ})^2 = \frac{\hbar \times G}{(v_{Dp})^5}}$$

t_{DQ} Quantum time of David

$$\boxed{(l_{DQ})^2 = (t_{DQ})^2 \times (v_{Dp})^2}$$

$$\boxed{l_{DQ} = t_{DQ} \times v_{Dp}}$$

This is derivation number 10

$$l_{DQ} = t_{DQ} \times v_{Dp}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

$$l_{DQ} = t_{DQ} \times \frac{4\pi \times k_c}{n \times Z_o}$$

This is derivation number 11

$$E_{DQ} = m_P \times (v_{Dp})^2$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

$$E_{DQ} = m_P \times \left(\frac{4\pi \times k_c}{n \times Z_o}\right)^2$$

This is derivation number 12

$$v_p = \frac{C}{n}$$

v_p *is the Phase Velocity*

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

v_{Dp} *David's velocity of the stationary phase*

$$\boxed{m_{DQ} = \sqrt{\frac{\hbar \times (v_{Dp})}{G}} = \sqrt{\frac{\hbar \times (4\pi \times k_c)}{G \times Z_o}}}$$

m_{DQ} *Quantum block of David*

$$\boxed{l_{DQ} = \sqrt{\frac{\hbar \times G}{(v_{Dp})^3}} = \sqrt{\frac{\hbar \times G \times (Z_o)^3}{(4\pi \times k_c)^3}}}$$

l_{DQ} *Quantum length of David*

$$\boxed{t_{DQ} = \sqrt{\frac{\hbar \times G}{(v_{Dp})^5}} = \sqrt{\frac{\hbar \times G \times (Z_o)^5}{(4\pi \times k_c)^5}}}$$

t_{DQ} *Quantum time of David*

$$\boxed{E_{DQ} = m_P \times (v_{Dp})^2 = m_P \times \left(\frac{4\pi \times k_c}{Z_o}\right)^2 = \sqrt{\frac{\hbar \times (v_{Dp})^5}{G}}}$$

E_{DQ} *David's Quantum Energy*

$$\boxed{T_{DQ} = \frac{E_P}{k_B} = \frac{m_P \times (v_{Dp})^2}{k_B} = \frac{m_P \times (4\pi \times k_c)^2}{k_B \times (Z_o)^2} = \sqrt{\frac{\hbar \times (v_{Dp})^5}{G \times k_B^2}}}$$

T_{DQ} *David's quantum temperature*

$$\boxed{Q_{DQ} = \sqrt{4\pi \times \varepsilon_0 \times \hbar \times (v_{Dp})} = \sqrt{4\pi \times \varepsilon_0 \times \hbar \times \left(\frac{4\pi \times k_c}{Z_o}\right)}}$$

Q_{DQ} *David's quantum charge*

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{G \times (Z_o)^4}}$$

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{G \times (Z_o)^4}}$$

$$G = \frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o}$$

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$$F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o} \times (Z_o)^4} = \frac{(m_p)^2 \times (4\pi \times k_c)^3}{\hbar \times (Z_o)^3}$$

$$F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{G \times (Z_o)^4}$$

$$G = \frac{(4\pi \times k_c)^7}{\hbar \times a_{DQ} \times (Z_o)^7}$$

$$F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{(4\pi \times k_c)^7}{\hbar \times a_{DQ} \times (Z_o)^7} \times (Z_o)^4} = \frac{\hbar \times a_p \times (Z_o)^3}{(4\pi \times k_c)^3}$$

F_{DQ} *David's Quantum Force*

$$a_{DQ} = \frac{F_P}{m_P} = \frac{(v_{Dp})^7}{\hbar \times G} = \frac{(4\pi \times k_c)^7}{\hbar \times G \times (Z_o)^7}$$

a_{DQ} *David's Quantum Acceleration*

$$\rho_{DQ} = \frac{m_P}{l_P^3} = \frac{(v_{Dp})^5}{\hbar \times G^2} = \frac{(4\pi \times k_c)^5}{\hbar \times G^2 \times (Z_o)^5}$$

ρ_{DQ} *David's quantum density*

$$P_{DQ} = \frac{(v_{Dp})^7}{\hbar \times G^2} = \frac{(4\pi \times k_c)^7}{\hbar \times G^2 \times (Z_o)^7}$$

P_{DQ} *David's Quantum Pressure*

$$w_{DQ} = \frac{E_P}{t_P} = \frac{(v_{Dp})^5}{G} = \frac{(4\pi \times k_c)^5}{G \times (Z_o)^5}$$

w_{DQ} *David's Quantitative Ability*

$$p_{DQ} = m_P \times (v_{Dp}) = m_P \times \left(\frac{4\pi \times k_c}{Z_o}\right) = \sqrt{\frac{\hbar \times (v_{Dp})^3}{G}}$$

p_{DQ} *David's Momentum Quantity*

This is derivation number 13

$$v_p = \frac{C}{n}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

This is derivation number 14

$$\alpha = \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times C}$$

$$(m_{(p)})^2 = \frac{\hbar \times C}{G}$$

$$(m_{(p)})^2 \times G = \hbar \times C$$

$$\alpha = \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{(m_{(p)})^2 \times G}$$

$$k_c = \frac{1}{4\pi \times \varepsilon_0}$$

$$\frac{G}{k_c} = \frac{(e)^2}{(m_{(p)})^2 \times \alpha}$$

This is derivation number 15

$$\alpha = \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times C}$$

$$C = \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times \alpha}$$

$$k_c = \frac{1}{4\pi \times \varepsilon_0}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

This is derivation number 16

$$\left(m_{(p)}\right)^2 = \frac{\hbar \times C}{G}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(m_{(Dp)}\right)^2 = \frac{(e)^2 \times k_c}{G \times \alpha}$$

Modified Planck mass by David
This is derivation number 17

$$\left(l_{(p)}\right)^2 = \frac{\hbar \times G}{(C)^3}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(l_{(Dp)}\right)^2 = \frac{\hbar \times G}{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^3}$$

Modified Planck length by David
This is derivation number 18

$$\left(t_{(p)}\right)^2 = \frac{\hbar \times G}{(C)^5}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(t_{(Dp)}\right)^2 = \frac{\hbar \times G}{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^5}$$

Modified Planck time by David
This is derivation number 19

$$\left(E_{(p)}\right)^2 = \frac{\hbar \times (c)^5}{G}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(E_{(Dp)}\right)^2 = \frac{\hbar \times \left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^5}{G}$$

Modified Planck energy by David
This is derivation number 20

$$\left(T_{(p)}\right)^2 = \frac{\hbar \times (C)^5}{G \times k_B^2}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(T_{(Dp)}\right)^2 = \frac{\hbar \times \left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^5}{G \times k_B^2}$$

Modified Planck temperature by David

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This is derivation number 21

$$\left(Q_{(p)} \right)^2 = 4\pi \times \varepsilon_0 \times \hbar \times C$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(Q_{(Dp)} \right)^2 = 4\pi \times \varepsilon_0 \times \hbar \times k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\left(Q_{(Dp)} \right)^2 = \frac{(e)^2}{\alpha}$$

Modified Planck charge by David

This is derivation number 22

$$F_{(p)} = \frac{(C)^4}{G} \times 1$$

$$\frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times \alpha \times C} = 1$$

$$F_{(Dp)} = \frac{(C)^4}{G} \times \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times \alpha \times C}$$

$$F_{(Dp)} = \frac{\left(v_{Dp}\right)^3 \times k_c}{G} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{(4\pi \times k_c)^3 \times k_c}{G \times (Z_o)^3} \times \frac{(e)^2}{\hbar \times \alpha}$$

$$G = \frac{\left(v_{Dp}\right)^7}{\hbar \times a_{DQ}}$$

$$F_{(Dp)} = \frac{\left(v_{Dp}\right)^3 \times k_c}{\frac{\left(v_{Dp}\right)^7}{\hbar \times a_{DQ}}} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{\hbar \times a_{DQ} \times k_c}{\left(v_{Dp}\right)^4} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{\hbar \times a_p \times (Z_o)^4}{(4\pi)^4 \times (k_c)^3} \times \frac{(e)^2}{\hbar \times \alpha}$$

$$F_{(Dp)} = \frac{\left(v_{Dp}\right)^3 \times k_c}{G} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{(4\pi \times k_c)^3 \times k_c}{G \times (Z_o)^3} \times \frac{(e)^2}{\hbar \times \alpha}$$

$$G = \frac{\hbar \times (4\pi \times k_c)}{\left(m_{DQ}\right)^2 \times Z_o}$$

$$F_{(Dp)} = \frac{\left(v_{Dp}\right)^3 \times k_c}{\frac{\hbar \times (4\pi \times k_c)}{\left(m_{DQ}\right)^2 \times Z_o}} \times \frac{(e)^2}{\hbar \times \alpha} = \frac{(4\pi)^2 \times (k_c)^3 \times \left(m_p\right)^2}{(Z_o)^2} \times \frac{(e)^2}{(\hbar)^2 \times \alpha}$$

$$F_{(p)} = \frac{(C)^4}{G}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$F_{(p)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{G}$$

$$G = \frac{\left(v_{Dp}\right)^7}{\hbar \times a_{DQ}}$$

$$F_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{\frac{\left(v_{Dp}\right)^7}{\hbar \times a_{DQ}}}$$

$$F_{(p)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{G}$$

$$G = \frac{\hbar \times (4\pi \times k_c)}{\left(m_{DQ}\right)^2 \times Z_o}$$

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$$F_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{\frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o}}$$

Modified Planck Force by David
This is derivation number 23

$$a_{(p)} = \frac{(C)^7}{\hbar \times G} \times 1$$

$$\frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times \alpha \times C} = 1$$

$$a_{(Dp)} = \frac{(C)^7}{\hbar \times G} \times \frac{1}{4\pi \times \varepsilon_0} \frac{(e)^2}{\hbar \times \alpha \times C}$$

$$a_{(Dp)} = \frac{(v_{Dp})^6 \times k_c}{(\hbar)^2 \times G} \times \frac{(e)^2}{\alpha} = \frac{(4\pi \times k_c)^6 \times k_c}{(\hbar)^2 \times G \times (Z_o)^6} \times \frac{(e)^2}{\alpha}$$

$$a_{(p)} = \frac{(C)^7}{\hbar \times G}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$a_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^7}{\hbar \times G}$$

Modified Planck acceleration by David
This is derivation number 24

$$\rho_{(p)} = \frac{(C)^5}{\hbar \times G^2}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$\rho_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^5}{\hbar \times G^2}$$

Modified Planck density by David
This is derivation number 25

$$P_{(p)} = \frac{(C)^7}{\hbar \times G^2}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$P_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^7}{\hbar \times G^2}$$

Modified Planck pressure by David
This is derivation number 26

$$w_{(Dp)} = \frac{(C)^5}{G}$$

$$C = k_c \times \frac{(e)^2}{\hbar \times \alpha}$$

$$w_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^5}{G}$$

Planck's power modified by David
This is derivation number 27

$$(l_{(p)})^2 = \frac{\hbar \times G}{(C)^3}$$

$$C = \frac{1}{\sqrt{\mu_0 \times \varepsilon_0}}$$

$$(l_{(p)})^2 = \frac{\hbar \times G}{\left(\frac{1}{\sqrt{\mu_0 \times \varepsilon_0}}\right)^3}$$

$$(l_{(p)})^2 = \hbar \times G \times (\sqrt{\mu_0 \times \varepsilon_0})^3$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}{2\pi}$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \varepsilon_0 \times \sqrt{(\mu_0)^3 \times \varepsilon_0}}{2\pi} \quad \frac{4\pi}{4\pi}$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \varepsilon_0 \times \sqrt{(\mu_0)^3 \times \varepsilon_0}}{2\pi} \quad \frac{4\pi}{4\pi}$$

$$k_c = \frac{1}{4\pi \times \varepsilon_0}$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \sqrt{(\mu_0)^3 \times \varepsilon_0}}{2\pi \times k_c \times 4\pi}$$

$$(l_{(p)})^2 = \frac{h_p \times G \times \sqrt{(\mu_0)^3 \times \varepsilon_0}}{8(\pi)^2 \times k_c}$$

This is derivation number 28

$$(l_{(p)})^2 = \frac{h_p \times G \times \sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}{2\pi}$$

$$G = \frac{(l_{(p)})^2 \times 2\pi}{h_p \times \sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}} \quad \frac{(4\pi)^3\sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}{(4\pi)^3\sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}$$

$$G = \frac{(l_{(p)})^2 \times 2\pi \times (4\pi)^3\sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}{h_p \times (4\pi)^3 \times (\mu_0)^3 \times (\varepsilon_0)^3}$$

$$\hbar = \frac{h_p}{2\pi}$$

$$k_c = \frac{1}{4\pi \times \varepsilon_0}$$

$$G = \frac{(l_{(p)})^2 \times (4\pi)^3 \times (k_c)^3\sqrt{(\mu_0)^3 \times (\varepsilon_0)^3}}{\hbar \times (\mu_0)^3}$$

$$C = \frac{1}{\sqrt{\mu_0 \times \varepsilon_0}}$$

$$G = \frac{(l_{(p)})^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (\mu_0)^3 \times (C)^3}$$

$$Z_o = \mu_0 \times C$$

$$G = \frac{(l_{(p)})^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (Z_o)^3}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

Z_0 ***it is (Impedance of free space)***

This is derivation number 29

$$(m_{(p)})^2 = \frac{\hbar \times C}{G}$$

$$\frac{1}{(m_{(p)})^2} = \frac{G}{\hbar \times C} \quad \frac{(m_e)^2}{(m_e)^2}$$

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$$\frac{(m_e)^2}{(m_{(p)})^2} = \frac{G \times (m_e)^2}{\hbar \times C}$$

$m \times v \times r_n = n \times \hbar$

$$\frac{(m_e)^2}{(m_{(p)})^2} = \frac{G \times (m_e)^2}{m \times v \times r_n \times C}$$

$$(m_e)^2 = \frac{(m_{(p)})^2 \times G \times (m_e)^2}{m \times v \times r_n \times C}$$

$$(m_{(p)})^2 = \frac{\hbar \times C}{G}$$

$$(m_e)^2 = \frac{\hbar \times C \times (m_e)^2}{m \times v \times r_n \times C}$$

$$v = \frac{\alpha \times C \times Z}{n}$$

$$m_e = \frac{\hbar}{\alpha \times C \times r_n}$$

$$\alpha = \frac{\hbar}{m_e \times C \times r_n}$$

This is derivation number 30

$$v_p = \frac{C}{n}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

This is derivation number 31

$$F_c = m \times a_c$$

$a_c = \frac{v^2}{r}$

$$F_c = m \times \frac{v^2}{r} + m \times \frac{v^2}{r}$$

$p = m \times v$

$$F_c = m \times \frac{v^2}{r} + p \times \frac{v}{r}$$

$v^2 = C^2$

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

F_{DE} is the David's Force and Energy Equivalence

This is derivation number 32

$$v_p = \frac{C}{n}$$

$$v_p = f_P \times \lambda_P = \frac{l_{(p)}}{t_P} = C$$

$$f_P = \frac{1}{t_P}$$

$$\lambda_P = c \cdot t_P$$

$$n = \frac{C}{v_p} = \frac{C}{C} = 1$$

This is derivation number 33

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

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$$\left(v_{Dp}\right)^2 = C^2$$

$$F_{DE} = m \times \frac{\left(v_{Dp}\right)^2}{r} + p \times \frac{v_{Dp}}{r}$$

This is derivation number 34

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(C)^4}T_{\mu\nu}$$

$$G = \frac{\left(l_{(p)}\right)^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (Z_o)^3}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar \times (Z_o)^3}\frac{\left(l_{(p)}\right)^2 \times (4\pi)^3 \times (k_c)^3}{(C)^4}T_{\mu\nu}$$

This is derivation number 35

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{\left(v_{Dp}\right)^4}T_{\mu\nu}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G \times (n \times Z_o)^4}{(4\pi \times k_c)^4}T_{\mu\nu}$$

$$G = \frac{\left(l_{(p)}\right)^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (Z_o)^3}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar}\frac{\left(l_{(p)}\right)^2 \times (n)^4 \times Z_o}{4\pi \times k_c}T_{\mu\nu}$$

This is derivation number 36

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G}{(C)^4}T_{\mu\nu}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{G \times (Z_o)^4}{(4\pi \times k_c)^4}T_{\mu\nu}$$

$$G = \frac{\left(l_{(p)}\right)^2 \times (4\pi)^3 \times (k_c)^3}{\hbar \times (Z_o)^3}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{\hbar}\frac{\left(l_{(p)}\right)^2 \times Z_o}{4\pi \times k_c}T_{\mu\nu}$$

This is derivation number 37

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Relativistic Mass Formula

$$v_p = \frac{C}{n}$$

v_p *is the Phase Velocity*

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{\left(v_p\right)^2}}}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

v_{Dp} *David's velocity of the stationary phase*

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$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{(v_{Dp})^2}}}$$

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Relativistic Mass Formula

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{\left(\frac{4\pi \times k_c}{Z_o}\right)^2}}}$$

This is derivation number 38

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Time Dilation Formula

$$v_p = \frac{C}{n}$$

v_p *is the Phase Velocity*

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{(v_p)^2}}}$$

$$v_{Dp} = \frac{4\pi \times k_c}{n \times Z_o}$$

v_{Dp} *David's velocity of the stationary phase*

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Time Dilation Formula

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{\left(\frac{4\pi \times k_c}{Z_o}\right)^2}}}$$

This is derivation number 39

$$F = G\frac{M \times m}{(r)^2}$$

$$E = F \times r$$

Where E represents the energy in special relativity

$$E = G\frac{M \times m}{r}$$

This is derivation number 40

$$F = k_c\frac{q_1 \times q_2}{(r)^2}$$

k_c *Coulomb's constant*

$$E = F \times r$$

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$$E = k_c \frac{q_1 \times q_2}{r}$$

This is derivation number 41

$$E = G\frac{M \times m}{r}$$

$$E = k_c \frac{q_1 \times q_2}{r}$$

$$k_c \frac{q_1 \times q_2}{r} = G\frac{M \times m}{r}$$

$$k_c \times q_1 \times q_2 = G \times M \times m$$

This is derivation number 42

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$$F = k_c \frac{q_1 \times q_2}{(r)^2}$$

$$k_c \frac{q_1 \times q_2}{(r)^2} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$$k_c \frac{q_1 \times q_2}{r} = m \times C^2 + p \times C$$

This is derivation number 43

$$F = G\frac{M \times m}{(r)^2}$$

$$F = k_c \frac{q_1 \times q_2}{(r)^2}$$

$$k_c \frac{q_1 \times q_2}{(r)^2} = G\frac{M \times m}{(r)^2}$$

$$k_c \times q_1 \times q_2 = G \times M \times m$$

This is derivation number 44

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{DQ}}T_{\mu\nu}$$

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o} \times (Z_o)^4} = \frac{(m_p)^2 \times (4\pi \times k_c)^3}{\hbar \times (Z_o)^3}}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{\frac{(m_p)^2 \times (4\pi \times k_c)^3}{\hbar \times (Z_o)^3}}T_{\mu\nu}$$

$$\boxed{F_{DQ} = \frac{(v_{Dp})^4}{G} = \frac{(4\pi \times k_c)^4}{\frac{(4\pi \times k_c)^7}{\hbar \times a_{DQ} \times (Z_o)^7} \times (Z_o)^4} = \frac{\hbar \times a_p \times (Z_o)^3}{(4\pi \times k_c)^3}}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{\frac{\hbar \times a_p \times (Z_o)^3}{(4\pi \times k_c)^3}}T_{\mu\nu}$$

This is derivation number 45

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{(Dp)}}T_{\mu\nu}$$

$$F_{(Dp)} = \frac{a_p \times (Z_o)^4}{(4\pi)^4 \times (k_c)^3} \times \frac{(e)^2}{\alpha}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(4\pi)^4 \times (k_c)^3 \times \alpha}{a_p \times (Z_o)^4 \times (e)^2}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{(Dp)}}T_{\mu\nu}$$

$$F_{(Dp)} = \frac{(4\pi)^2 \times (k_c)^3 \times (m_p)^2}{(Z_o)^2} \times \frac{(e)^2}{(\hbar)^2 \times \alpha}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{(Z_o)^2 \times (\hbar)^2 \times \alpha}{(4\pi)^2 \times (k_c)^3 \times (m_p)^2 \times (e)^2} T_{\mu\nu}$$

This is derivation number 46

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{1}{F_{(Dp)}} T_{\mu\nu}$$

$$F_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{\frac{(v_{Dp})^7}{\hbar \times a_{DQ}}} = \frac{(k_c \times (e)^2)^4 \times \hbar \times a_{DQ}}{(v_{Dp})^7 \times (\hbar \times \alpha)^4}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{(v_{Dp})^7 \times (\hbar \times \alpha)^4}{(k_c \times (e)^2)^4 \times \hbar \times a_{DQ}} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{1}{F_{(Dp)}} T_{\mu\nu}$$

$$F_{(Dp)} = \frac{\left(k_c \times \frac{(e)^2}{\hbar \times \alpha}\right)^4}{\frac{\hbar \times (4\pi \times k_c)}{(m_{DQ})^2 \times Z_o}} = \frac{(k_c \times (e)^2)^4 \times (m_{DQ})^2 \times Z_o}{\hbar \times (4\pi \times k_c) \times (\hbar \times \alpha)^4}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1} \frac{\hbar \times (4\pi \times k_c) \times (\hbar \times \alpha)^4}{(k_c \times (e)^2)^4 \times (m_{DQ})^2 \times Z_o} T_{\mu\nu}$$

This is derivation number 47

$$F_{DE} = m \times \frac{C^2}{r} + p \times \frac{C}{r}$$

$a_{DE} = \frac{C^2}{r}$

a_{DE} *is the David's Acceleration and Energy Equivalence*

$\omega_{DE} = \frac{C}{r}$

ω_{DE} *is the David's Angular Velocity and Energy Equivalence*

$$F_{DE} = m \times a_{DE} + p \times \omega_{DE}$$

This is derivation number 48

$$kE_{DE} = \frac{E}{2} = \frac{m \times (C)^2}{2}$$

Where E represents the energy in special relativity

kE_{DE} *is the David's* ***Kinetic Energy*** *and Energy Equivalence*

This is derivation number 49

$$\alpha = \frac{k_c \times (e)^2}{\hbar \times C}$$

$$k_c \times (e)^2 = G \times M \times m$$

$$\alpha = \frac{G \times M \times m}{\hbar \times C}$$

This is derivation number 50

$$F_{(p)} = \frac{(C)^4}{G}$$

$$G = \frac{k_c \times q_1 \times q_2}{M \times m}$$

$$F_{(p)} = \frac{(C)^4 \times M \times m}{k_c \times q_1 \times q_2}$$

$$(E)^2 = (C)^4 \times M \times m$$

$$F_{(p)} = \frac{(E)^2}{k_c \times q_1 \times q_2}$$

$$F_{(p)} = \frac{(C)^4 \times M \times m}{k_c \times q_1 \times q_2}$$

$$C = \frac{4\pi \times k_c}{Z_o}$$

$$F_{(p)} = \frac{(4\pi)^4 \times (k_c)^3 \times M \times m}{(Z_o)^4 \times q_1 \times q_2}$$

This is derivation number 51

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{(Dp)}}T_{\mu\nu}$$

$$F_{(p)} = \frac{(C)^4 \times M \times m}{k_c \times q_1 \times q_2}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{k_c \times q_1 \times q_2}{(C)^4 \times M \times m}T_{\mu\nu}$$

This is derivation number 52

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{(Dp)}}T_{\mu\nu}$$

$$F_{(p)} = \frac{(E)^2}{k_c \times q_1 \times q_2}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{k_c \times q_1 \times q_2}{(E)^2}T_{\mu\nu}$$

This is derivation number 53

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{1}{F_{(Dp)}}T_{\mu\nu}$$

$$F_{(p)} = \frac{(4\pi)^4 \times (k_c)^3 \times M \times m}{(Z_o)^4 \times q_1 \times q_2}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi}{1}\frac{(Z_o)^4 \times q_1 \times q_2}{(4\pi)^4 \times (k_c)^3 \times M \times m}T_{\mu\nu}$$

This is derivation number 54

These are some equations after removing the speed of light and putting in the phase speed. The phase velocity was included because it became clear from the derivation, I made that from Einstein's perspecve on the speed of light he was focusing on the speed of light in a vacuum and did not consider other media such as water which affect the speed of light as Christian Huygens explained it and therefore this had to be into account in the calculations.

- This will enable us to add the group velocity as a result of adding the phase velocity when the speed of light is constant.

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{(v_p)^4}T_{\mu\nu}$$

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{(v_{Dp})^4}T_{\mu\nu}$$

1. (General quantitative relativity)

$$ds^2 = -\left(1 - \frac{2GM}{(v_p)^2 r}\right)(v_p)^2 dt^2 + \left(1 - \frac{2GM}{(v_p)^2 r}\right)^{-1} dr^2 + r^2 d\Omega^2$$

$$ds^2 = -\left(1 - \frac{2GM}{\left(\mathbf{v_{Dp}}\right)^2 r}\right)\left(\mathbf{v_{Dp}}\right)^2 dt^2 + \left(1 - \frac{2GM}{\left(\mathbf{v_{Dp}}\right)^2 r}\right)^{-1} dr^2 + r^2 d\Omega^2$$

2. $(Schwarzschild\ Metric)$

$$ds^2 = -\left(1 - \frac{2GMr}{\rho^2\left(\boldsymbol{v}_p\right)^2}\right)\left(\boldsymbol{v}_p\right)^2 dt^2 - \frac{4GMar}{\rho^2\left(\boldsymbol{v}_p\right)^2}\sin^2\theta\, dt d\phi + \frac{\rho^2}{\Delta}dr^2 + \rho^2 d\theta^2 + \left(r^2 + a^2 + \frac{2GMa^2}{\rho^2\left(\boldsymbol{v}_p\right)^2}\sin^2\theta\right)\sin^2\theta\, d\phi^2$$

$$ds^2 = -\left(1 - \frac{2GMr}{\rho^2\left(\boldsymbol{v}_{\mathbf{Dp}}\right)^2}\right)\left(\boldsymbol{v}_{\mathbf{Dp}}\right)^2 dt^2 - \frac{4GMar}{\rho^2\left(\boldsymbol{v}_{\mathbf{Dp}}\right)^2}\sin^2\theta\, dt d\phi + \frac{\rho^2}{\Delta}dr^2 + \rho^2 d\theta^2 + \left(r^2 + a^2 + \frac{2GMa^2}{\rho^2\left(\mathbf{v_{Dp}}\right)^2}\sin^2\theta\right)\sin^2\theta\, d\phi^2$$

$$\rho^2 = r^2 + a^2\cos^2\theta$$

$$\Delta = r^2 - \frac{2GMr}{\left(\boldsymbol{v}_p\right)^2} + a^2$$

$$\Delta = r^2 - \frac{2GMr}{\left(\mathbf{v_{Dp}}\right)^2} + a^2$$

3. $(Kerr\ Metric)$

$$ds^2 = -\left(1 - \frac{2GMr - Q^2}{\rho^2\left(\boldsymbol{v}_p\right)^2}\right)\left(\boldsymbol{v}_p\right)^2 dt^2 - \frac{4GMar}{\rho^2\left(\boldsymbol{v}_p\right)^2}\sin^2\theta\, dt d\phi + \frac{\rho^2}{\Delta}dr^2 + \rho^2 d\theta^2 + \left(r^2 + a^2 + \frac{(2GMr - Q^2)a^2}{\rho^2\left(\boldsymbol{v}_p\right)^2}\sin^2\theta\right)\sin^2\theta\, d\phi^2$$

$$ds^2 = -\left(1 - \frac{2GMr - Q^2}{\rho^2\left(\mathbf{v_{Dp}}\right)^2}\right)\left(\mathbf{v_{Dp}}\right)^2 dt^2 - \frac{4GMar}{\rho^2\left(\mathbf{v_{Dp}}\right)^2}\sin^2\theta\, dt d\phi + \frac{\rho^2}{\Delta}dr^2 + \rho^2 d\theta^2 + \left(r^2 + a^2 + \frac{(2GMr - Q^2)a^2}{\rho^2\left(\mathbf{v_{Dp}}\right)^2}\sin^2\theta\right)\sin^2\theta\, d\phi^2$$

4. $(Kerr - Newman\ Metric)$

$$R_s = \frac{2GM}{\left(\boldsymbol{v}_p\right)^2}$$

$$R_s = \frac{2GM}{\left(\mathbf{v_{Dp}}\right)^2}$$

5. $(Schwarzschild\ Radius)$

$$\Delta t' = \frac{\Delta t}{\sqrt{1 - \frac{2GM}{\left(\boldsymbol{v}_p\right)^2 r}}}$$

$$\Delta t' = \gamma\,\Delta t = \frac{\Delta t}{\sqrt{1 - \frac{v^2}{\left(\mathbf{v_{Dp}}\right)^2}}}$$

6. $(Gravitational\ Time\ Dilation)$

$$z = \frac{1}{\sqrt{1 - \frac{2GM}{\left(\boldsymbol{v}_p\right)^2 r}}} - 1$$

$$z = \frac{1}{\sqrt{1 - \frac{2GM}{(\mathbf{v_{Dp}})^2 r}}} - 1$$

7. $(Gravitational\ Redshift)$

$$\theta_E = \sqrt{\frac{4GM}{(\boldsymbol{v}_p)^2} \frac{D_{LS}}{D_L D_S}}$$

$$\theta_E = \sqrt{\frac{4GM}{(\mathbf{v_{Dp}})^2} \frac{D_{LS}}{D_L D_S}}$$

8. $(Einstein\ Ring\ or\ Gravitational\ Lensing\ Angle)$

$$\left(\frac{\dot{a}}{a}\right)^2 = \frac{8\pi G}{3}\rho - \frac{k}{a^2} + \frac{\Lambda}{3}$$

9. $(Friedmann\ Equation)$

$$\Delta\omega = \frac{6\pi GM}{(\boldsymbol{v}_p)^2 a(1 - e^2)}$$

$$\Delta\omega = \frac{6\pi GM}{(\mathbf{v_{Dp}})^2 a(1 - e^2)}$$

$$\Delta\varphi = \frac{6\pi \mathrm{GM}}{(\boldsymbol{v}_p)^2 a(1 - e^2)}$$

$$\Delta\varphi = \frac{6\pi \mathrm{GM}}{(\mathbf{v_{Dp}})^2 a(1 - e^2)}$$

$\Delta\varphi$ is the additional precession per orbit.

10. $(Perihelion\ Precession\ of\ Mercury)$

- ***The electron generates a constant field while rotating around the nucleus, but when it gains energy, it generates a changing field. This explains why it has a torque resulting from the energy during the experiment. Therefore, if the electron is observed in its normal state without being excited, the electron will behave as a particle, and if it is excited, it will behave as a wave.***
- ***The Mössbauer effect proved that general relativity is true. Relativity explains that the fastest speed is the speed of light. However, if the Mössbauer effect differs depending on the medium it is in, due to the refractive index, then relativity will differ.***

5. Method

My name is Ahmed. I have made a theoretical derivation of the equation of general relativity as explained in this research for the purpose of obtaining an equation that can be applied within the quantum world so that it describes the movement of the electron during the quantum jump in the Bohr model. After that, the researcher Samira reviewed the research and verified it, and then she worked on applying this theory to the movement of the electron during the occurrence of the quantum leap, using previous research and matching it with the results of this equation to determine its validity.

- This part of the research will explain the spectrum of the hydrogen atom in a new way, as the results presented in these tables from previous research match the results extracted from the equation, and this is consistent with the validity of this equation. Because the new equation is consistent with the photon energy equation. We will discuss that part of the research in the results and discussion.
- **Table 5** shows the measurement results tested.[3] (Nanni, 2015)

$$\Delta E = E_{n'} - E_n = h\frac{c}{\lambda} \quad \rightarrow \quad \frac{1}{\lambda} = \frac{4}{B}\left(\frac{1}{n'^2} - \frac{1}{n^2}\right)$$

The way toward the quantum mechanics was definitely opened! The calculated wavelength values vs the experimental ones are listed in table

Spectral Line	*Experimental Value*	*Theoretical Value*
-----	(nm)	(nm)
λ(n'=2, n=1)	121.5	122.0
λ(n'=3, n=1)	102.5	103.0
λ(n'=4, n=1)	97.2	97.3
λ(n'=2, n=3)	656.1	656.3
λ(n'=2, n=4)	486.0	486.1
λ(n'=3, n=4)	1874.6	1875.0

- **Table 5** it represents the theoretical and experimental value of the hydrogen atom. Using the photon energy law mentioned above, this table.

My scientific research explains how the universe initially expanded so quickly that the change in phase velocity from the speed of light led to this expansion in spacetime. Since I put the phase velocity in place of the speed of light in general relativity because of the derivative I did, and this equation will be known as general quantum relativity, then this means that the speed of light was moving differently, and this will lead to spacetime being affected by different media, as my equations show, so the universe was initially expanding, and then inflation occurred as a result of the phase velocity differing from the speed of light, which led to the expansion of spacetime faster than light, and this led to homogeneity in the cosmic background.

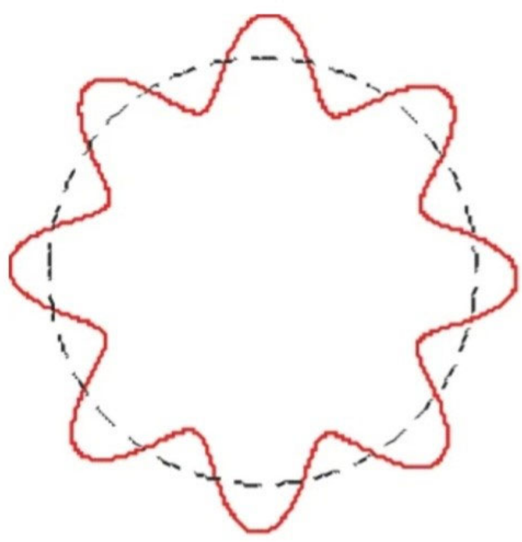

Figure 1. Bohr hydrogen atomic model incorporating de Broglie's .[4] (Jordan, 2024).

This drawing, taken from previous research, shows how the quantum leap occurs through interference, as my equation showed. When interference occurs between the orbit occupied by the electron and the energy level higher than the electron's orbit, it occurs in the form of wave interference of this type as a result of a contraction in the fabric of space-time. The black circle represents the orbit occupied by the electron, while the red color represents how interference occurs from the orbit higher to the orbit occupied by the *electron in the form of wave interference. In other words, the upper level works to contract, forming a wave equal to the same wave as the level occupied by the electron through the de Broglie equation.* $n \times \lambda = 2\pi \times r$

- *If we make the electron quantum entangled in particle accelerators, then if we make one of these electrons be in a short line and the other be in a long line, when one approaches the speed of light, the other must exceed the speed of light. In other words, the two entangled bodies are in two dimensions, that is, different dimensions, and this happens as a result, a distortion of space-time, which makes during the measurement that the speed is breached, but in reality it does not exceed the speed. This is the same idea as the distortion of the orbits that I explained. Because it is assumed that the electron does not move from its position, however, a distortion occurs in the orbit with the highest energy, and it forms a wave similar to the orbit occupied by the electron, according to De Broglie's laws. This occurs through the distortion of space-time as a result of the increase in energy.*

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^2 \times 4}{\lambda\, nm \times \boldsymbol{e}} \frac{\left(l_{(p)}\right)^2}{\boldsymbol{\Delta E_n}} T_{\mu\nu}$$

Because the equation connects more than one equation into a single equation. As

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times G}{C^4} T_{\mu\nu}$$

$$\Delta E_n = \frac{h_p \times C}{\lambda\, nm \times e}$$

$$n \times \lambda = 2\pi \times r_n$$

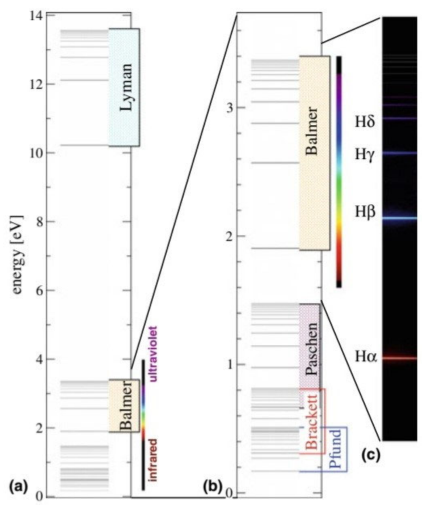

Figure 2. The observed emission line spectrum of atomic hydrogen in chapter 2 atoms.[5] (Manini, 2020).

The 4 lowest-energy series of spectral lines of atomic hydrogen

name	lower *n*	lowest energy [eV]	max energy [eV]	spectral region
Lyman series	1	10.2	13.6	UV
Balmer series	2	1.89	3.40	Visible-UV
Paschen series	3	0.66	1.51	IR
Brackett series	4	0.31	0.85	IR

- **Table (6)** shows the measurement results of one of the previous researches related to the spectrum of the hydrogen atom in chapter 2 atoms.[5] (Manini, 2020)
- *This shape is a result of the fact that the electron, after a quantum leap occurred as a result of an interference between the orbital that it occupies and the energy level above it, was in an unstable state. Therefore, when the highest level of energy returns to its position, it releases energy in the form of spectral lines. These lines are determined according to the amount of energy, as shown in the picture.*

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6. Results Obtained

This scientific research aims to prove a theory by comparing the practical results of this theory with the original results and making the comparison in a table. We will discuss that here .

My theory is based on introducing the curvature of spacetime into the equation, but quantum mechanics shows that it is not affected by gravity. How to interact with the curvature of spacetime has not yet been proven. As a result, my equations show a way to conduct an experiment that enables direct interaction with the curvature of spacetime. Therefore, this experiment practically proves that quantum mechanics made a mistake in its concept when it showed gravity does not interact with it. How to conduct an experimental experiment to prove the validity of my equations

Steps to conduct the experiment

1) The place where the experiment will take place must be chosen, and it must be at a high altitude, such as Mount Everest because the higher the altitude, the less gravity.

2) The experiment is about creating a quantum leap for the electron so that we can know the emission lines that represent the fingerprint of the element and compare them at different heights. Let us take the example of the hydrogen atom. After knowing the choice of the element, the device that will measure the spectral lines of the element must be taken to Mount Everest, where the experiment will be conducted.

3) We will excite the element keeping all elements constant as energy and the comparison will be between wavelength and curvature of spacetime. The first measurement is at the bottom of the mountain, that is, before climbing the mountain first. Then we measure in the middle of the mountain, then we test at the top of the mountain and compare the atomic spectra. If my theoretical results are correct, there will be skewing of the spectral lines at different heights due to distortion of the fabric of space-time.

4) If we measure atomic spectra, we also measure the Zeeman, Stark, and magneto-stark effects separately.

- The reason they were not previously able to measure the curvature of space-time is because my equations show that the effect of energy and wavelength when measured as two variables will cancel each other out, so space-time will not be affected.
- Gravitational Effect on Atomic Energy Levels

  Objective: Measure the effect of gravity on atomic energy levels
  Equipment:

- A gas sample (e.g., hydrogen or cesium) in a vacuum chamber.
- A laser to excite electrons at specific energy levels.
- A high-precision spectrometer.
- A variable gravitational field (e.g., using aircraft simulating microgravity).

  Procedure:
  .1 Measure the atomic spectrum in a normal gravitational environment.
  .2 Measure the spectrum in a reduced-gravity environment (e.g., during parabolic flights).
  .3 Compare the energy levels and emission lines.
  Expected Outcome:

- If the spectrum shifts at different gravitational strengths, it indicates that gravity affects atomic energy levels
- My equations clearly show that if proven in practical experiments, it indicates that the gravitational constant G is not a cosmic constant in quantum mechanics, but is affected by the wavelength and the energy difference, that is, it is variable. In other words, gravity is not an absolute quantity, but rather the quantum state is influenced by me. For this reason, quantum mechanics is not related to general relativity.
- My equations explain the effect (magnetic attraction) and Bayfield-Brown effect My equations confirm the effect of electromagnetism on gravity.

- Well, with these experiments, the Pound-Rebecca experiments, also known as gravitational redshift, will prove what the equation tells you.

$$G_{\mu\nu} + \Lambda g_{\mu\nu} - T_{\mu\nu} = \frac{8\pi \times G}{C^4} = 2.0766474428 \times 10^{-43} \quad (16)$$

$$E_n = E_2 - E_1$$

$$\Delta E_n = \frac{-13.605693099\ eV}{1} \times \left(\frac{(Z)^2}{(n_2)^2} - \frac{(Z)^2}{(n_1)^2}\right)$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^6 \times (\hbar)^4 \times 4}{(\lambda\ nm \times e)^5 \times (\mu_0 \times \varepsilon_0)^2} \frac{\left(l_{(p)}\right)^2}{(\Delta E_n)^5} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^6 \times (1.0545718 \times 10^{-34})^4 \times 4}{(\lambda\ nm \times e)^5 \times (4\pi \times 10^{-7} \times 8.854187813 \times 10^{-12})^2} \frac{(1.616255011 \times 10^{-35})^2}{(\Delta E_n)^5} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{6.4231253544 \times 10^{-167}}{(\lambda\ nm \times e)^5} \frac{1}{(\Delta E_n)^5} T_{\mu\nu}$$

$$(\Delta E_n)^5 = \frac{6.4231253544 \times 10^{-167}}{(\lambda\ nm \times e)^5} \frac{1}{G_{\mu\nu} + \Lambda g_{\mu\nu} - T_{\mu\nu}}$$

$$(\Delta E_n)^5 = \frac{6.4231253544 \times 10^{-167}}{(\lambda\ nm \times e)^5} \frac{1}{2.0766474428 \times 10^{-43}}$$

$$(\lambda\ nm)^5 = \frac{3.0930261448 \times 10^{-124}}{(\Delta E_n \times e)^5}$$

$$(\lambda\ nm)^5 = \frac{3.0930261448 \times 10^{-124}}{\left(\frac{-13.605693099\ eV}{1} \times \left(\frac{(Z)^2}{(n_2)^2} - \frac{(Z)^2}{(n_1)^2}\right) \times e\right)^5}$$

$$\lambda\ nm = 5\sqrt{\frac{3.0930261448 \times 10^{-124}}{\left(\frac{-13.605693099\ eV}{1} \times \left(\frac{(Z)^2}{(n_2)^2} - \frac{(Z)^2}{(n_1)^2}\right) \times 1.60217662 \times 10^{-19}\right)^5}}$$

$$\lambda = 656.11227252\ nm$$

- *This example of a hydrogen atom in the Balmer series.*

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{4 \times (\hbar)^8 \times (2\pi)^{10}}{(\mu_0 \times \varepsilon_0)^4 \times (\lambda\ nm)^9 \times (e)^9} \frac{\left(l_{(p)}\right)^2}{(\Delta E_n)^9} T_{\mu\nu}$$

$$\Delta E_n = \frac{h_p \times C}{\lambda} = \frac{1239.8419637\ eVnm}{\lambda}$$

Photon energy equation.

$$(\Delta E_n)^9 = \frac{4 \times (\hbar)^8 \times (2\pi)^{10}}{(\mu_0 \times \varepsilon_0)^4 \times (\lambda\ nm)^9 \times (e)^9} \frac{\left(l_{(p)}\right)^2}{G_{\mu\nu} + \Lambda g_{\mu\nu}} T_{\mu\nu}$$

Example of a hydrogen atom.

$$\Delta E_n = 9\sqrt{\frac{4 \times (\hbar)^8 \times (2\pi)^{10}}{(\mu_0 \times \varepsilon_0)^4 \times (\lambda\ nm)^9 \times (e)^9} \frac{\left(l_{(p)}\right)^2}{G_{\mu\nu} + \Lambda g_{\mu\nu} - T_{\mu\nu}}}$$

- *Example of a hydrogen atom in the Balmer series.*

We remove the energy level (n)

$$\Delta E_n = 9\sqrt{\frac{4.8160445107 \times 10^{-223}}{(\lambda\ nm)^9 \times (e)^9}}$$

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$$\boldsymbol{\Delta E_n} = 9\sqrt{\frac{4.8160445107 \times 10^{-223}}{(656.11227252)^9 \times (1.60217662 \times 10^{-19})^9}}$$

$$\Delta E_n = 1.8896795971$$

The unit of measurement for photon energy is electron volt (eV), the wavelength is (nm)

$$\lambda\, nm = \frac{1}{R_\infty \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)}$$

$$R_\infty = 1.0973731731 \times 10^7\ m^{-1}$$

$$\boldsymbol{\Delta E_n} = \frac{\boldsymbol{h_p} \times \boldsymbol{C}}{\boldsymbol{\lambda}}$$

$$\boldsymbol{\Delta E_n} = -\frac{\boldsymbol{h_p} \times \boldsymbol{C} \times \alpha}{\boldsymbol{2e} \times \boldsymbol{\lambda}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\lambda = \frac{2\pi \times r_n}{n}$$

$$\boldsymbol{\Delta E_n} = -\frac{\boldsymbol{h_p} \times \boldsymbol{C} \times \alpha}{\boldsymbol{2e} \times \frac{2\pi \times r_n}{n}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\lambda = \frac{2\pi \times r_n}{n} = \frac{2\pi \times 5.29177202590 \times 10^{-11} \times (\boldsymbol{n})^2}{n}$$

$$\lambda = \frac{2\pi \times r_n}{n} = 2\pi \times 5.29177202590 \times 10^{-11} \times \boldsymbol{n}$$

$$\boldsymbol{\Delta E_n} = -\frac{6.62607004 \times 10^{-34} \times \mathbf{299792458} \times 7.297352563 \times 10^{-3}}{\mathbf{2} \times 1.60217662 \times 10^{-19} \times 2\pi \times 5.29177202590 \times 10^{-11}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = \frac{\mathbf{-13.605693099}\ \boldsymbol{eV}}{\mathbf{1}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = -\frac{\boldsymbol{h_p} \times \boldsymbol{C} \times \alpha}{\boldsymbol{2e} \times \boldsymbol{\lambda}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = -\frac{6.62607004 \times 10^{-34} \times \mathbf{299792458} \times 7.297352563 \times 10^{-3}}{\mathbf{2} \times 1.60217662 \times 10^{-19} \times \mathbf{3.324918425} \times 10^{-10}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = \frac{\mathbf{-13.605693099}\ \boldsymbol{eV}}{\mathbf{1}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = -\frac{\boldsymbol{h_p} \times \nu \times \alpha}{\boldsymbol{2e}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = -\frac{6.62607004 \times 10^{-34} \times \mathbf{9.016535737} \times 10^{17} \times 7.297352563 \times 10^{-3}}{\mathbf{2} \times 1.60217662 \times 10^{-19}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta E_n} = \frac{\mathbf{-13.605693099}\ \boldsymbol{eV}}{\mathbf{1}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

The unit of measurement for $\boldsymbol{\Delta E_n}$ *photon energy is electron volt (eV)*

$$\boldsymbol{E_n} = \frac{\boldsymbol{h_p} \times \boldsymbol{C}}{\boldsymbol{\lambda}}$$

$$\lambda = \frac{2\pi \times r_n}{n}$$

$$\boldsymbol{E_n} = \frac{n \times \boldsymbol{h_p} \times \boldsymbol{C}}{2\pi \times r_n} = \frac{\boldsymbol{n} \times 6.62607004 \times 10^{-34} \times \mathbf{299792458}}{2\pi \times 5.29177202590 \times 10^{-11} \times (\boldsymbol{n})^2}$$

$$\boldsymbol{E_n} = \frac{5.9744197314 \times 10^{-16}\ \boldsymbol{J}}{\boldsymbol{n}}$$

$$\boldsymbol{\Delta E_n} = -\frac{\boldsymbol{h_p} \times \nu \times \alpha}{\boldsymbol{2e}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{E_n} = \frac{\boldsymbol{h_p} \times \boldsymbol{C}}{\boldsymbol{\lambda}}$$

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$$\boldsymbol{\Delta}\, \boldsymbol{h_p} \times \nu = -\frac{\boldsymbol{h_p} \times \nu \times \alpha}{\boldsymbol{2e}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta}\nu = -\frac{\nu \times \alpha}{\boldsymbol{2}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\nu = \frac{v \times (n)^2}{2\pi \times r_n \times \alpha \times Z}$$

$$\boldsymbol{\Delta}\nu = -\frac{\frac{v \times (n)^2}{2\pi \times r_n \times \alpha} \times \alpha}{\boldsymbol{2}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta}\nu = -\frac{v \times (n)^2}{4\pi \times r_n} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta}\nu = -\frac{2187691.261}{4\pi \times 5.29177202590 \times 10^{-11}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$\boldsymbol{\Delta\nu} = \frac{\boldsymbol{-3.289842008} \times \boldsymbol{10^{15}}\ \boldsymbol{eV}}{\boldsymbol{1}} \times \left(\frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_2})^2} - \frac{(\boldsymbol{Z})^2}{(\boldsymbol{n_1})^2}\right)$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4 \times Z^4}{(n)^4} \frac{(\alpha)^4 \times G}{\left(h_{(p)} \times \frac{\Delta\nu \times 2\ eV}{\alpha} \times \frac{1}{\left(\frac{(Z)^2}{(n_1)^2} - \frac{(Z)^2}{(n_2)^2}\right)}\right)^4} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4 \times Z^4}{(n)^4} \frac{(\alpha)^8 \times G}{\left(h_{(p)} \times \Delta\nu \times 2 \times e\right)^4} \times \left(\frac{(Z)^2}{(n_1)^2} - \frac{(Z)^2}{(n_2)^2}\right) T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4 \times Z^4}{(n)^4} \frac{(\alpha)^8 \times G}{(\Delta E_n \times 2 \times e)^4} \times \left(\frac{(Z)^2}{(n_1)^2} - \frac{(Z)^2}{(n_2)^2}\right) T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4 \times Z^4}{(n)^4} \frac{(\alpha)^8 \times G}{\left(\frac{-13.605693099\ eV}{1} \times \left(\frac{(Z)^2}{(n_2)^2} - \frac{(Z)^2}{(n_1)^2}\right) \times 2 \times e\right)^4} \times \left(\frac{(Z)^2}{(n_1)^2} - \frac{(Z)^2}{(n_2)^2}\right) T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi \times (p)^4 \times Z^4}{(n)^4} \frac{(\alpha)^8 \times G}{\left(\frac{-13.605693099\ eV}{1} \times 2 \times e\right)^4} T_{\mu\nu}$$

$$\boldsymbol{h_p} = m_e \times \boldsymbol{C} \times \alpha \times \boldsymbol{2\pi} \times \boldsymbol{r_n}$$

$\boldsymbol{C} = \boldsymbol{\lambda} \times \boldsymbol{\nu}$

$$\boldsymbol{h_p} = m_e \times \boldsymbol{\lambda} \times \boldsymbol{\nu} \times \alpha \times \boldsymbol{2\pi} \times \boldsymbol{r_n}$$

Space-time represents in the equation the force of attraction of the nucleus for the electron. Where we take the hydrogen atom compared to the sodium atom. We find after comparison that the undulations that occur in the sodium atom are higher than those that occur in the hydrogen atom. That is, during the occurrence of the quantum jump of the electron, the higher energy level than the level occupied by the electron undulates. So the number of ripples (ripple amplitude) is higher than that of the hydrogen atom during the occurrence of the quantum jump, and this is consistent with the de Broglie equation. $n \times \lambda$ is represented by a ratio to space-time. It is the number of ripples that occur in the energy level higher than the level occupied by the electron until interference occurs between the two levels, the higher energy level and the level occupied by the electron. In other words, as the number of orbitals occupied by the electron increases, the number of ripples that occur at the higher energy levels increases, causing the curvature (contraction) of the fabric of space-time. The interference between the two levels occurs in a wave form so that the quantum jump of the electron occurs. The photon's energy is represented by a ratio to the fabric of space-time, the force that causes the fabric of space-time to bend (contract). The more energy increases, the more space-time contracts through the occurrence of quantum disturbances at the highest energy level, which makes the highest

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energy level generate waves similar to the orbital number occupied by the electron. Because of these disturbances that occur at the highest energy level, the two levels interfere with each other, the highest energy level, and the level occupied by the electron. A quantum leap occurs, and this is consistent with the quantum Zeno effect, where the electron will remain fixed in its position. This is what my equation indicates, as I explain that these quantum fluctuations occur through a contraction in the fabric of space-time. This contraction occurs as a result of this tissue absorbing energy. Because of this, contraction affects the energy levels in the atom. This contraction works to contract the energy level higher than the level occupied by the electron. Wave interference occurs between the highest energy level and the level occupied by the electron, and a quantum jump occurs from the observer's perspective. But from the electron's perspective, it remains fixed in its position.

The Casimir effect is according to a law that states that after all the objects acting on the plates disappear until imaginary particles are detected. My equation proves that there is one thing that was not included in the calculations, which is the effect of space-time. Since the plates have a static mass that works to curve space-time, and the presence of imaginary particles works when they collide with each other, they disappear. But according to the law of conservation of energy, the energy will not disappear and will affect the fabric of space-time, making it turbulent like a water wave, and these disturbances that occur on it form waves. This wave works to impact the panels from moving in and out, and because the external disturbances are higher than the internal ones, they cause the panels to move towards each other.

This relationship shows that although we cannot measure what happens when an electronic quantum jump occurs. This law also shows that there is a relationship between the energy of the photon and the fabric of space-time, even if it is not measured by measuring devices. Because measuring devices are considered primitive devices when making the process of measuring the quantitative world. What is being measured are the spectra of the elements being measured, not what happens to the electron when the quantum jump of the electron to the higher level. Second, Maxwell told Rutherford that the electron changes direction as it orbits the nucleus, so it must lose energy to cause a collision with the nucleus, which it does not. My equation tells me the electron moves in a large circle around the nucleus. A body moving in a large circle whose direction of motion is in a straight line. Thus, the electron moves in a straight line. Newton's law states that an object at rest remains at rest unless acted upon by an external or internal force. Likewise, an object in motion stays in motion unless an external or internal force affects its movement, the electron does not lose energy.

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^5 \times (\hbar)^4 \times 4}{(\lambda\, nm \times e)^4} \frac{G}{(\Delta E_n)^4} T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{(2\pi)^6 \times (\hbar)^4 \times 4}{(\lambda\, nm \times e)^5 \times (\mu_0 \times \varepsilon_0)^2} \frac{\left(l_{(p)}\right)^2}{(\Delta E_n)^5} T_{\mu\nu}$$

Table 7. Comparing my theoretical results through my equation with previous results.

	Theoretical value (My work)	----------	Experimental value
Spectral Line	Energy	λ	λ
λ(n′=2, n=1)	10.204269824 eV	121.50227268 nm	121.5 nm
λ(n′=3, n=1)	12.093949421 eV	102.51754257 nm	102.5 nm
λ(n′=4, n=1)	12.75533728 eV	97.20181814 nm	97.20 nm
λ(n′=3, n=2)	1.8896795971 eV	656.11227245 nm	656.1 nm
λ(n′=4, n=2)	2.5510674561 eV	486.0090907 nm	486.0 nm
λ(n′=4, n=3)	0.66138785898 eV	1874.6064927 nm	1874.6 nm

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The results of the experimental value were obtained by using the results of previous research on the hydrogen atom. I prove in Table 7 that the results of the equations are identical to their original results in Table 5, which indicates the validity of this law

$$\Delta E_n = E_2 - E_1$$

$$\Delta E_n = \frac{h_p \times C}{\lambda} = \frac{1239.8419637\ eVnm}{\lambda}$$

Photon energy equation.

$$\Delta E_n = \frac{-13.605693099\ eV}{1} \times \left(\frac{(Z)^2}{(n_2)^2} - \frac{(Z)^2}{(n_1)^2}\right)$$

- These are the results of a relationship between energy and wavelength. The observed results show that whenever the energy increases, the wavelength decreases, as shown by this equation in the hydrogen atom.

7. Conclusions

After the idea of research has been clarified using theoretical and practical scientific evidence to explain the phenomenon of the quantum leap and quantum entanglement from a new perspective, these equations would be used in the following:

1) serving humanity in the advancement of scientific research.
2) using these equations to explore space and quantum world.
3) using these equations in developing communications machines .

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