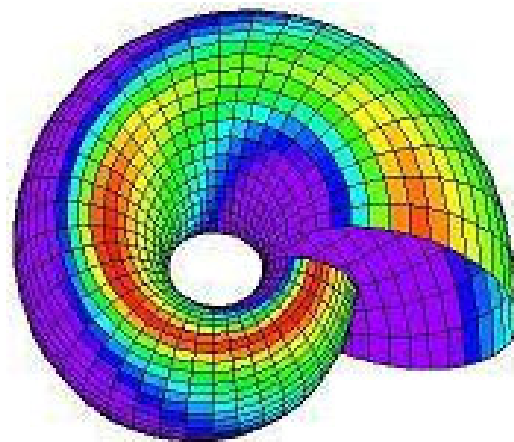


'Au Fond'
A NEW (Fundamental) PHYSICS

-by-

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A_NATURAL_CONSTRUCT.xmcd

There exist fundamental **frequencies** and **wavelengths** that establish reality. The combination of quantum acoustic frequencies and velocities in synchronization with key electromagnetic frequencies and velocities may allow for unlimited power to run an entire world. This is possibly the case for the ancient builders of the megalithic structures around the world that have been dated as being built 12000+ years ago.

A most fundamental constant is the electromagnetic wavelength associated with the hyperfine frequency of the hydrogen atom. Another fundamental is the quantum velocity associated with the design and operation of the Great Pyramid of Egypt. The hyperfine wavelength of hydrogen multiplied by the fundamental dimensionless constant known as the Golden Ratio can be applied as shown below to establish an acoustic frequency that creates an interconnection between unlimited power in the universe and what is accepted as reality.

A fundamental quantum cosmic velocity (which can be derived) is utilized in the dimensions of The Great Pyramid Of Egypt. This is shown below in equation 1.

$$v_{GP} := \lambda_{H1} \cdot 8 \cdot \alpha^{-1} \cdot \left(\frac{4}{\pi}\right)^2 \cdot \text{Hz} = 1.230660927072 \times 10^3 \cdot \text{ft} \cdot \text{s}^{-1} \quad 1)$$

Where:

$$\Phi_{GP} := \left(\frac{4}{\pi}\right)^2 = 1.621138938277 \quad \text{And:} \quad f_{\Phi_{GP}} := \Phi_{GP} \cdot \text{Hz} \quad 2)$$

which is the golden ratio associated with the construct of The Great Pyramid in units of frequency. Given the units of frequency, when divided into the cosmic velocity v_{GP} , one working side length of the Great Pyramid that incorporates the associated field structure around the physical structure is arrived at. (The two are likely very close to each other considering the missing outer limestone casing of the pyramid.)

$$\lambda_{GP_{side}} := v_{GP} \cdot f_{\Phi_{GP}}^{-1} = 759.133531379832 \cdot \text{ft} \quad 3)$$

Then the original working perimeter would be four times the above or:

$$4 \cdot \lambda_{GP_{side}} = 3.036534125519 \times 10^3 \cdot \text{ft} \quad 4)$$

Equation 1 above involves the hyperfine wavelength of hydrogen, λ_{H1} , the inverse of the atomic fine structure constant α and the Pyramidal Golden Ratio Φ_{GP} , all times 8 and the frequency Hz are used to derive herein what is set as the fundamental cosmic velocity. Now using four times the hyperfine wavelength of the hydrogen atom, the **Key Of David** frequency is calculated as shown below.

$$f_{KD} := \frac{v_{GP}}{4 \cdot \lambda_{H1}} = 444.308757026022 \cdot \text{Hz} \quad 5)$$

And 8 times the above λ_{H1} wavelength yields the distance between each of the 27 resonator stacks located along the Grand Gallery of the Great Pyramid.

An interesting energy/power building process can be shown below. Utilizing the hydrogen hyperfine wavelength and the golden ratio as a product for amplification, it is possible to increase the frequency.

$$f_{rise} := (\Phi_{GP}) \cdot (\lambda_{H1})^{-1} \cdot v_{GP} = 2.88114490653 \times 10^3 \cdot \text{Hz} \quad 6)$$

Then multiplying the new frequency by the hyperfine wavelength of hydrogen yet another new velocity can be generated. Raising the velocity will proportionally raise the frequency and that is a proportional rise in energy (yielding a squared rise in the power) since the inverse of frequency is time and power equals energy divided by time. The Great Pyramid of Bosnia has a measured beam of energy that increases in energy level as it rises in height at a beginning frequency of 28,000 Hz. Multiplying the f_{rise} above by the pyramidal golden ratio and the whole number 6 we arrive at the Bosnia pyramid frequency very near 28,000 Hz.

$$f_{Bosnia} := 6 \cdot (\Phi_{GP}) \cdot f_{rise} = 2.802441716877 \times 10^4 \cdot \text{Hz} \quad 7)$$

The calculated result above is very close to the carefully and repeatedly measured frequency rising out of the top of the pyramid of Bosnia that grows stronger in intensity with height.

In my published work "**Electrogravitation As A Unified Field Theory**", which is on my web site at <https://www.electrogravity.com>, the fundamental angular momentum related group quantum velocity of the **electrogravitational action** is presented below.

$$v_{LM} := \sqrt{\alpha \cdot m \cdot s^{-1}} = 0.085424546121 \text{ m} \cdot \text{s}^{-1} \quad 8)$$

The related action is that of entanglement that is instantaneous and interaction distance in quantum space is essentially zero as time does not exist either. Thus there is no associated inertia in quantum energy space such as inside of a quantum boundary. A quantum boundary is defined herein as bordering and enclosing non-local space separating it from local space.

Also:
$$v^1_{LM} := \frac{v_{GP} \cdot \alpha}{(32)} = 0.085539903595 \text{ m} \cdot \text{s}^{-1} \quad 9)$$

It is apparent that the first and second v_{LM} results are slightly different. The difference results in a quantum wavelength that is very close to the wavelength associated with the acoustic pyramidal velocity v_{GP} and what I have previously proposed on my web site as the fundamental refresh rate very close to 60 Hz. First a small difference velocity is derived from the two different velocities above and this is used in Heisenberg's quantum equation as shown below.

$$\Delta v_{LM} := v^1_{LM} - v_{LM} = 1.153574742757 \times 10^{-4} \text{ m} \cdot \text{s}^{-1} \quad 10)$$

Then by the Heisenberg so-called *uncertainty* equation:

$$\Delta \lambda_Q := \frac{h}{m_e \cdot \Delta v_{LM}} = 20.687423117254 \cdot \text{ft} \quad 11)$$

Where:
$$\lambda_{60\text{Hz}} := \frac{v_{GP}}{60.02385222 \cdot \text{Hz}} = 20.502864803832 \cdot \text{ft} \quad 12)$$

The two results are very close to each other. This suggests that the refresh rate of reality (60.02385222 Hz) is closely connected to quantum electrogravitational action space as well as the acoustic quantum velocity used in the Great Pyramid of Egypt.

The least quantum energy of the electrogravitational action can be related to least quantum force and this least quantum force can then be related to the very high energy it is generated from. The high energy is directly related to the fast rise time that is the beginning of the synchronizing refresh pulse ahead of the much longer time related to the least quantum electrogravitational energy. Think of an extremely narrow rise-time at the front of a very wide time associated pulse also related to the refresh rate near 60Hz. The narrow high energy pulse is also part of the Heisenberg formula where the very narrow time width yields a very high energy where the product yields Planks constant h.

First, the least quantum electrogravitational force is derived for the n1 radius of the Bohr hydrogen atom as:

$$F_{LM} := \frac{m_e \cdot v_{LM}^2}{a_0} = 1.256184635863 \times 10^{-22} \text{ N} \quad (13)$$

Then is presented the equation involving the motion of the electron charge and velocity that yields the magnetic flux density **B** in Tesla related to the force above.

$$B_{LM} := \frac{F_{LM}}{q_0 \cdot v_{LM}} = 9.178257016249 \times 10^{-3} \text{ T} \quad (14)$$

B also is equal to the magnetic permeability of free space times current per unit length **H**.

$$\text{Then: } H_{LM} := (q_0 \cdot f_{LM}) \cdot \lambda_{LM}^{-1} = 1.887662836787 \times 10^{-16} \frac{\text{A}}{\text{m}} \quad (15)$$

$$\text{Where also: } \text{dia}_{LM} := \frac{\lambda_{LM}}{\pi} = 2.710407220449 \times 10^{-3} \text{ m} \quad (16)$$

$$\text{Finally, } f_{BLM} := \frac{B_{LM} \cdot \text{dia}_{LM}}{\mu_0 \cdot q_0} = 1.235589799064 \times 10^{20} \cdot \text{Hz} \quad (17)$$

which is also the Plank rest mass frequency of the energy of the electron.

As a check: The rest mass energy of the electron has an equivalent frequency of:

$$f_e := \frac{m_e \cdot c_{\text{vel}}^2}{h} = 1.235589779804 \times 10^{20} \cdot \text{Hz} \quad 18)$$

Then a pulse rise-time equal to the inverse of the electron rest mass energy related frequency at the very beginning of the electrogravitational time width related to 60 Hz forms up the structure that defines reality of refreshed energy space as is observed. Inside of that total time bracket are all of the frequencies that I have derived previously related to the Great Pyramid of Giza in Egypt as well as the Hydrogen Hyperfine Frequency f_{H1} , the Key of David and the 60 Hz refresh of reality. All of this could be considered to be part of a cosmic-spanning quantum computer program.

Returning to equation 9 previous, it is of interest that the binary computer number 32 appears in the denominator of the equation. This binary association has appeared in numerous papers that I have previously posted online at my web site above. In fact, equation 6 above involving the f_{rise} result, the binary number approach yields the universal refresh rate (frequency) exactly as:

$$f_{\text{Ref}} := \frac{f_{\text{rise}}}{(12) \cdot 2^2} = 60.023852219376 \cdot \text{Hz} \quad 19)$$

where the quantum acoustic wavelength length in feet that supports f_{Ref} is:

$$\lambda_{\text{Ref}} := \frac{\lambda_{\text{H1}} \cdot (12) \cdot 2^2}{(\Phi_{\text{GP}})} = 20.502864804045 \cdot \text{ft} \quad 20)$$

Finally,

$$\frac{v_{\text{GP}}}{\lambda_{\text{Ref}}} = 60.023852219376 \cdot \text{Hz} \quad 21)$$

which exactly agrees with f_{Ref} above and ties together the Great Pyramid of Egypt and the Bosnian Pyramid to the universal cosmic refresh rate of **60.023852219376 Hz** exactly.

The fundamentally important number 12 as well as the binary number 2 squared appear in equations 19 and 20 above. In a recent paper "**Ancient Energy Geometry**" online at <http://www.electrogravity.com/files/ancientenergygeometry.pdf>. On my web site electrogravity.com, the above short analysis is greatly expanded upon and connects the geometry above to the Ark Of The Covenant as well as the long cubit of the bible and the "New Temple" yet to be built. I suspect the Holy Christian Bible presents the universal quantum geometry in a coded form that reveals the structure necessary to tap into the energy of the universe.

The analysis above presents a numerical structure that ranges from the lowest possible quantum energy to the rest mass energy of the electron and all of the resonant parts in various energy levels that establish reality as humans perceive it to be. It may be possible to establish that same structure anew using a method of pumping the free electron with a higher energy much like a laser action. I propose Cobalt 60 which has two gamma ray energy radiation energies at 1.17 and 1.33 MeV. It is interesting that the rest mass energy of the electron in volts is:

$$V_e := \frac{m_e \cdot c_{vel}^2}{q_0} = 5.109990645047 \times 10^5 \text{ V} \quad 22)$$

The rest mass energy ratio of the two radiation energies of cobalt 60 to the electron are as follows:

$$\left[\frac{(1.17 \cdot 10^6 \cdot \text{V})}{V_e} \right] \cdot \left(\frac{1}{\Phi_{GP} \cdot \sqrt{2}} \right) = 0.998689586826 \quad 23)$$

$$\left[\frac{(1.33 \cdot 10^6 \cdot \text{V})}{V_e} \right] \cdot \left(\frac{1}{\Phi_{GP}^2} \right) = 0.990355371302 \quad 24)$$

In both cases the higher radiation pump energy is based on the Pyramidal Golden Ratio from above in equation 2 and in the first case also the square root of 2 which is ubiquitous in calculations involving quantum mechanics.

Then the reports of persons being made sick or even dying from what appeared to be radiation poisoning from the Ark Of The Covenant as well as crashed 'flying saucers' is more easily understood. Gamma rays produce secondary radiation and cancer and depending on the exposure density and time involved can be deadly.

Having the Cobalt 60 embedded in the skin of a 'flying saucer' type of craft would energize the surface electrons into the energies of equation 23 and 24 above and the decay would establish the container geometry that establishes the geometry of the reality that fits the timing of the refresh rate so that the craft would essentially create its own reality. If that reality were synchronized with our own reality refresh rate then that craft would be visible in our own space. By simply shifting the phase or frequency of the craft refresh rate it would disappear from our space into its newly formed dimension in time.

The formation of the new time slice of reality could be viewed as forming its own quantum waveguide where radially would exist a changing voltage field (E) and circumferentially would exist the changing magnetic field (B) in the same plane. Then axially would exist the vector magnetic potential (A) vector field. All 3 fields would then exist 90 degrees to each other with the (A) vector in line with the direction of the waveguide and the (E) and (B) fields forming the circular plane 90 degrees to the (A) vector field. **Thus, the quantum action of electrogravitation forms its own non-local waveguide.**

The units of the (A) vector are the product of volts by time all divided by length.

$$A_{\text{vec}} := \frac{\Phi_Q}{\lambda_{LM}} \quad \text{where} \quad \Phi_Q = 2.06783461 \times 10^{-15} \cdot \text{V} \cdot \text{s} \quad [\text{S.I. Defined}] \quad 25)$$

$$P_{\text{mom}} := A_{\text{vec}} \cdot q_0 \quad \text{where} \quad \frac{h}{(2) \cdot P_{\text{mom}}} = 8.514995452271 \times 10^{-3} \text{ m} \quad 26)$$

which is equal to λ_{LM} from above in the fundamental definition of electrogravitational standing wave wavelength.

$$\lambda_{LM} = 8.514995412 \times 10^{-3} \text{ m} \quad 27)$$

This would fit the group velocity portion of the quantum waveguide dynamics and the (A) vector would form the nearly infinite velocity phase wave vector in the vertical.

In equation 26 previous, momentum is derived from the product of the (A) vector and the charge of the electron q_e . Having energetically pumped up electrons coupled vertically to the vertical (A) vector would create a vertical momentum upwards and provide lift especially if the electrons were embedded into the surface skin of the craft.

It is known by many quantum tests that the (A) vector affects the momentum of the electron apart from the magnetic field that created the (A) vector itself. (Then the (A) vector is physically decoupled in the local space sense from the magnetic field that created it in the beginning.)

Citation Source: The Aharonov-Bohm effect is described in Scientific American, Yoseph Imry and Richard A. Webb, pp 56-62, April 1989.

The (E) and (B) fields are in the circular plane while the (A) vector is axial along the length of the waveguide created by the fast rise time step function as described above. The circular geometry of most UFO 'flying disks' would generate the beginning of a circular waveguide where the end section would contain the group velocity and the inline vertical section would contain the phase velocity. The phase velocity would be many orders of magnitude above the group velocity as the equation below shows.

$$v_{LM} = 0.085424546121 \frac{m}{s} \quad \rightarrow \quad v_p := \frac{c_{vel}^2}{v_{LM}} = 1.052104131127 \times 10^{18} \frac{m}{s} \quad 28)$$

Then a UFO style disk could suddenly vanish before a human observers eyes by shifting the phase of the group velocity v_{LM} and reappear at points distant as the recent video's of the 'Tic Tac' UFO's demonstrate with ease. The direction in normal space would correspond to the amount of phase shift in the group velocity and the distance would depend on the number of refresh events. Then the beings that pilot such craft are not *normal space* beings like humans. I doubt that ordinary humans could survive such changes in the structure of '*reality*'. The term 'continuous' space-time has no application to the actions of UFO style craft just described. Quantum "spooky action at a distance" appears to be the mode of operation of flying saucers. Perhaps some means of remote control or artificial intelligence could be used to pilot the craft instead of actual human beings but what is to prevent an alien mind from taking control of the onboard quantum computer? I personally would **not** want to combat the alien craft.

The ability to shift out of a particular 'time-box' reality into a newly created 'time-box' reality would be an extremely powerful action. This would by far exceed simple cloaking methodology since shifting into a new totally separate reality would protect against harm from the old divorced reality. Simple cloaking cannot bend a bullet around a target but actually leaving the old reality allows the bullet to pass through a space where the target no longer exists. By extension, creating a new reality would allow aliens with powerful quantum brains to create at a distance a new reality that would allow for switches in an ICBM complex to be activated physically with their mind and where also the quantum mind quite possibly could transverse many realities. This would apply to controlling all forms of human weaponry.

Then the stories of such events as the "Philadelphia Experiment" are better understood in terms of sailors having portions of their bodies embedded into the metal hull. If the sailors refresh rate was different than the ships, they would tend to integrate or meld into a mixed field condition and when both were synchronized into normal reality, the poor sailor was then an actual fixed and real part of the ships structure.

A story exists of the sudden disappearance of a farmer walking away from his wife on an open field never to be seen again. Sometimes, his voice was heard off and on over the years but he was not seen. He was in a very near but alternate time-box reality.

There are literally thousands of cases of human beings disappearing in our national parks and in one case a rare survivor reported that he suddenly found himself inside of what was a large solid rock and then later he was back outside and understandably confused and disoriented.

The stories of Bigfoot suddenly disappearing in front of witnesses are quite possible in the context of alternate time-box realities. Then the creature Bigfoot has a quantum-type hybrid mind that can sense electronic and brain impulses in general. Then it can use its well trained quantum mind to shift into another time-box reality. Further, the creature may be an extension of creatures in UFO style craft and even past and future events can be created or even erased from the history of creation.

I suspect that we humans are being genetically modified to suit the purpose of the higher order beings by DNA manipulation and the end goal is unknown. Finally, we may suspect that perhaps human beings are not at the top of the cosmic food chain.

With the time-box or time-slice approach many so-called 'dimensions' could exist in the same power of 3 'distances' and one of time. That would allow for a practically unlimited number of four-space time-boxes. All of this idea is what can be called quantum action space and is non-local and effectively instantaneous. What we observed is local reaction space and is local and relativistic as a result. The two can be thought of as similar to the duality of the particle-wave situation where electrogravitation arises from the quantum action instantaneously while the reaction is observed in relativistic local space at an action always less than the speed of light. Both play their respective part and neither exists apart from the other. Unfortunately, only half of the picture is allowed by contemporary physics. Physicists must embrace the possibility that there is a much better reality by understanding the fundamentals of quantum gravitation as well as time-box creation space. **There is a French adverb 'au fond' which means "at bottom or to the bottom; thoroughly; in reality; fundamentally" and that is what quantum electrogravitation and the time-box approach to reality as described above is.**

There is a 6-1/2 minute video on youtube.com that is an excellent demonstration of the electric and magnetic fields generated near and around a half wavelength dipole antenna. Near the end of the video a very important effect concerning a diminished magnetic field direction is shown to be aligned in a direction not encircling the length of the antenna but 90 degrees away from its length. What this actually is is not touched on by the person doing the demonstration but I immediately saw this for what it was. It is the magnetic vector potential which is also known as the A-vector in studies of the electromagnetic field. This A-vector is 90 degrees to the normal magnetic B-vector that encircles the antenna and both are 90 degrees to the electric field that exists from end to end.

<https://www.youtube.com/watch?v=wUpOlqbHcij>

The A-vector affects the momentum of the electron even though the A-vector is totally separated from the magnetic field that creates it. Then electrons in a fluorescent tube inline with the A-vector would experience directional thrust if the tube had a diode connected end to end. The electrons would impart pulses of mono directional thrust along the axis of the tube. This is directly related to the means of lift that flying saucers may utilize. In the radiation of electromagnetic waves from the dipole antenna, the A-vector points in the direction of the propagation and momentum associated with that electromagnetic wave. Light has momentum whether in packets or waves.

The A-vector is fundamental to the generation of the electric E field as well as the magnetic B field and it exists **before** either the E or B field as a quantum potential everywhere.

From equation 25 on page 7 previous: $A_{\text{vec}} = 2.428462388935 \times 10^{-13} \cdot \frac{\text{V} \cdot \text{s}}{\text{m}}$ 29)

Based on normalized time of $s = 1$ second, first the **E** potential can be derived from the derivative of the A-vector with respect to time as:

$$E_{\text{Avec}} := \frac{d}{ds} \left(2.428462388935 \times 10^{-13} \frac{\text{V} \cdot \text{s}}{\text{m}} \right) = 2.428462388935 \times 10^{-13} \cdot \frac{\text{V}}{\text{m}} \quad 30)$$

Based on normalized distance of $m = 1$ meter, the **B** in (volt*seconds)/meter² (or Tesla) is derived also from the A-vector by taking the derivative with respect to distance (m) as shown below and then the Poynting vector power per unit cross-sectional area (S_{Avec}) is the final result. It is orthogonal to both the E and B fields that are also co-orthogonal.

$$B_{\text{Avec}} := \frac{d}{dm} \left(2.428462388935 \times 10^{-13} \frac{\text{V} \cdot \text{s}}{\text{m}} \right) = -2.428462388935 \times 10^{-13} \text{T} \quad 31)$$

$$S_{\text{Avec}} := \left[\begin{pmatrix} E_{\text{Avec}} \\ 0 \\ 0 \end{pmatrix} \times \begin{pmatrix} 0 \\ B_{\text{Avec}} \\ 0 \end{pmatrix} \right] \cdot \frac{1}{2 \cdot \mu_0} = \begin{pmatrix} 0 \\ 0 \\ -2.346512670784 \times 10^{-20} \end{pmatrix} \cdot \frac{\text{W}}{\text{m}^2} \quad 32)$$

Dividing the Poynting vector S_{Avec} by the speed of light as for the case of ordinary electromagnetic waves we arrive at the **rate of flow of momentum per unit of cross-sectional area of:**

$$P_{\text{SAvec}} := \frac{S_{\text{Avec}}}{c_{\text{vel}}} = \begin{pmatrix} 0 \\ 0 \\ -7.82712375901 \times 10^{-29} \end{pmatrix} \cdot \text{Pa} \quad (\text{Result is negative}) \quad 33)$$

Instead of dividing by the speed of light to obtain pressure, the power per meter squared is divided by the quantum electrogravitational least quantum group velocity, then it is seen that a much greater pressure is the result and this is shown next.

$$P_{QSAvec} := \frac{S_{Avec}}{v_{LM}} = \begin{pmatrix} 0 \\ 0 \\ -2.746883392809 \times 10^{-19} \end{pmatrix} \text{Pa} \quad (\text{Result is negative}) \quad 34)$$

The least quantum electrogravitational group velocity has an increase of 10 orders of magnitude effect on the pressure of the wave. The lower the quantum group velocity in a rotational sense around the craft then the greater is the beam pressure and also the greater will be the pressure on a target if the pressure beam is focused on it at some point distant. This explains how crop circles can be made so quickly and with such precision by the reason that the beam is generated in the realm involving quantum angular momentum converted to forward quantum momentum pressure. It is also of note that many actual videos of saucer type UFOs appear to be slowly rotating. Also, it is possible that naturally occurring tornados and hurricanes utilize much the same quantum field mechanics. If the quantum phase is shifted between the real and imaginary vectors, it may allow for extremely precise focus of the pressure wave which would greatly increase the pressure per unit area. Stone cutting would be very easy as well as use as weapon of very effective power. Either a force of compression or of attraction would be achieved by adjusting the phase between the real and imaginary parts of the quantum wave. The the speed of light c_{vel} is used for electromagnetic pressure wave action while quantum rotating angular velocity v_{LM} is connected to quantum wave action as shown in equations 33 and 34 above.

Formal A-vector Postulate:

It is now postulated that the Quantum Vector Magnetic Potential, also known as the A-Vector, is fundamental to the structure of the geometry of creation and exists to support the creation of mass as well as electrogravitational and electromagnetic fields by the entanglement of two P_{mom} as shown below. (Entanglement time is independent of distance between the P_{mom} points.)

Equation 26 result from page 7 previous is repeated below to further demonstrate the postulate stated on the bottom of page 12.

$$\mathbf{P}_{\text{mom}} := (\mathbf{A}_{\text{vec}} \cdot \mathbf{q}_0) = 3.89082738631 \times 10^{-32} \frac{\text{m} \cdot \text{kg}}{\text{s}} \quad (35)$$

Then mass is created from action of entanglement of two fundamental quantum momenta, each involving the A-vector multiplied by charge. This is shown below. (In order for momentum to exist it must include mass.)

$$m_{\text{derived}} := \frac{(\mathbf{P}_{\text{mom}} + \mathbf{P}_{\text{mom}})}{v_{\text{LM}}} = 9.109389661359 \times 10^{-31} \text{ kg} \quad (36)$$

There also exists a fundamental expression for mass of the electron as:

$$m_{\text{electron}} := \frac{\mu_0 \cdot q_0 \cdot q_0}{4 \cdot \pi \cdot l_q} = 9.109389691413 \times 10^{-31} \text{ kg} \quad (37)$$

Setting m_{electron} equal to m_{derived} we can solve for A_{vec} as follows:

$$\frac{2 \cdot (\mathbf{A}_{\text{vec}} \cdot \mathbf{q}_0)}{v_{\text{LM}}} = \frac{\mu_0 \cdot q_0 \cdot q_0}{4 \cdot \pi \cdot l_q} \quad \text{Solving for } A_{\text{vec}} \text{ as } A_{\text{vec}}: \quad (38)$$

$$A_{\text{vec}} := \frac{q_0 \cdot v_{\text{LM}} \cdot \mu_0}{8 \cdot \pi \cdot l_q} = 2.428462396948 \times 10^{-13} \cdot \frac{\text{V} \cdot \text{s}}{\text{m}} \quad (40)$$

$$\text{Where: } \mathbf{A}_{\text{vec}} = 2.428462388935 \times 10^{-13} \cdot \frac{\text{V} \cdot \text{s}}{\text{m}} \quad (41)$$

Then **both** forms of deriving mass must use the momentum involving $A_{\text{vec}} \cdot q_0$.

From the "**Formal A-vector Postulate**", presented on the bottom of page 12, it is required that **two** P_{mom} momenta is required to form an electron mass. This explains why the quantum fluxoid must be multiplied by two when deriving the Quantum Hall Ohm as shown below.

$$R_{\text{Hderived}} := \frac{\Phi_{\text{Q}} \cdot (2)}{q_0} = 2.581280575228 \times 10^4 \Omega \quad (42)$$

Where: $R_{\text{H}} = 2.58128056 \times 10^4 \Omega$ = S.I. constant.

Also Planks constant h is derived as shown below:

$$h_{\text{derived}} := \Phi_{\text{Q}} \cdot (2) \cdot q_0 = 6.626075468663 \times 10^{-34} \cdot \text{J} \cdot \text{s} \quad (43)$$

Where: $h = 6.6260755 \times 10^{-34} \cdot \text{J} \cdot \text{s}$ = S.I. constant.

This establishes the "**Formal A-vector Postulate**" as correct.

Multiplying by 2 is a clue to yielding the proper result if the Quantum Fluxoid is considered as changing by a function of time since differentiating seconds squared in the numerator of Volts times seconds squared yields the multiplier of 2 automatically. First, the relevant constants are repeated as:

$$A_{\text{vec}} = 2.428462388935 \times 10^{-13} \cdot \frac{\text{V} \cdot \text{s}}{\text{m}} \quad \Phi_{\text{Q}} = 2.06783461 \times 10^{-15} \cdot \text{V} \cdot \text{s} \quad (44)$$

Next, the electrogravitational quantum standing wave frequency f_{LM} is required from the fluxoid quantum Φ_{Q} if Φ_{Q} is considered as changing by or in proportion to time.

$$F_{\text{Avec}} := \frac{d}{ds} \left[q_0 \cdot \frac{[2.06783461 \cdot 10^{-15} \cdot \text{V} \cdot (\text{s})^2]}{a_0} \cdot (f_{\text{LM}}) \right] = 1.256184630486 \times 10^{-22} \cdot \text{N} \quad (45)$$

In equation 45 above the quantum electrogravitational standing wave angular momentum frequency f_{LM} is a required addition to the overall equation as the equation is equal to Planks constant h times frequency divided all by distance and that is equal to force. The force is also equal to the least quantum magnetic force as shown below.

$$F_M := \frac{m_e \cdot (v_{LM})^2}{a_0} = 1.256184635863 \times 10^{-22} \text{ N} \quad (46)$$

This is a quantum force **entangled magnetic force couplet** that exists by equation 36 above and by the aforementioned **Formal A-vector Postulate**, also above on the bottom of page 12. It is fundamental in that it cannot be reduced or electromagnetically radiated. From the least quantum magnetic force couplet is the following equation that establishes the **electrogravitational force** between two electrons separated by the Bohr n1 radius a_0 .

$$F_{EG} := F_{Avec} \cdot \frac{G_{grav}}{v_{LM}^4} \cdot F_{Avec} = 1.977291372039 \times 10^{-50} \text{ N} \quad (47)$$

The standard Newton force equation is below and yields the same result as above.

$$F_N := \frac{m_e \cdot G_{grav} \cdot m_e}{a_0^2} = 1.977291388969 \times 10^{-50} \text{ N} \quad (48)$$

Equation 45 above can be restated for the form involving Plank's constant.

$$F_h := \frac{h \cdot f_{LM}}{a_0} \cdot \frac{G_{grav}}{v_{LM}^4} \cdot \frac{h \cdot f_{LM}}{a_0} = 1.977291390742 \times 10^{-50} \text{ N} \quad (49)$$

Finally the magnetic form in equation 46 for the electrogravitational case.

$$\frac{m_e \cdot (v_{LM})^2}{a_0} \cdot \frac{G_{grav}}{v_{LM}^4} \cdot \frac{m_e \cdot (v_{LM})^2}{a_0} = 1.977291388969 \times 10^{-50} \text{ N} \quad (50)$$

The entangled quantum magnetic couplets have instantaneous action between them since distance and time do not apply in non-local case.

ENTROPY AND GRAVITY POSTULATE:

In equations 31-34 above the results have the negative sign and this imply's negative energy. That is energy that subtracts from positive energy. It is a natural outcome of electrogravitation (gravitational) action that entropy must increase with the loss of energy in quantum electrogravitational action. The below link is an excellent presentation concerning entropy being directly related to quantum entanglement.

Quantum entanglement generates entropy and entropy is fundamentally connected to the action of electrogravitation, or gravity for short.

<http://www.youtube.com/watch?v=vgYQglmYU-8&t=844s>

The above postulate also apply's via the uncertainty principle where energy can leak out of a boundary such as the event horizon of a so called Black Hole.

Entropy must cause loss of energy and/or information over time to every form of matter. That must include photons or electromagnetic waves in free space.

Then the assumption that red shift in the light from distant stars is the result of an expanding universe may not be in part, or in the whole, the case. This also may not be a linear process with distance which has been attributed to an acceleration of the expansion which would also be incorrect. That would alter the accepted scale of the universe by making it more compact than is presently accepted. The fact that galaxies rotate much faster than can be supported by the mass in the spiral indicates to me that the distance in the radius may be less than has been assumed.

Excelsior!

Jerry E. Bayles

July 24, 2021

CONSTANTS OF CALCULATION

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$\alpha \equiv 7.297353080 \cdot 10^{-03}$	Atomic fine structure constant.
$c_{\text{vel}} \equiv 2.997924580 \cdot 10^{08} \cdot \text{m} \cdot \text{s}^{-1}$	Speed of light in free space.
$f_{\text{HI}} \equiv 1.420405 \cdot 10^{09} \cdot \text{Hz}$	Hyperfine frequency of the hydrogen atom.
$\lambda_{\text{HI}} \equiv c_{\text{vel}} \cdot f_{\text{HI}}^{-1}$	Hyperfine wavelength of the hydrogen atom.

Where: $\lambda_{\text{HI}} = 0.211061252248 \text{ m}$ or: $\lambda_{\text{HI}} = 8.309498120019 \cdot \text{in}$

$m_e \equiv 9.109389700 \cdot 10^{-31} \cdot \text{kg}$	Electron rest mass
$h \equiv 6.626075500 \cdot 10^{-34} \cdot \text{J} \cdot \text{s}$	Plank constant
$a_0 \equiv 5.291772490 \cdot 10^{-11} \cdot \text{m}$	Bohr radius of the hydrogen atom
$q_0 \equiv 1.602177330 \cdot 10^{-19} \cdot \text{C}$	Electron charge
$\mu_0 \equiv 4 \cdot \pi \cdot 1 \cdot 10^{-07} \cdot \text{H} \cdot \text{m}^{-1}$	Magnetic permeability of free space
$f_{\text{LM}} \equiv 1.003224805 \cdot 10^{01} \cdot \text{Hz}$	Quantum Standing wave frequency of gravity
$\lambda_{\text{LM}} \equiv 8.514995412 \cdot 10^{-03} \cdot \text{m}$	Quantum standing wavelength of gravity
$\Phi_Q \equiv 2.067834610 \cdot 10^{-15} \cdot \text{V} \cdot \text{s}$	Fluxoid quantum
$l_q \equiv 2.817940920 \cdot 10^{-15} \cdot \text{m}$	Classic electron radius
$R_H \equiv 2.581280560 \cdot 10^{04} \cdot \Omega$	Quantum Hall Ohm
$G_{\text{grav}} \equiv 6.67259 \cdot 10^{-11} \cdot \text{N} \cdot \text{m}^2 \cdot \text{kg}^{-2}$	Gravitational Constant