Quantum Identified Field Generated Energy and its Application to the Asymmetrical Nuclear Capacitor

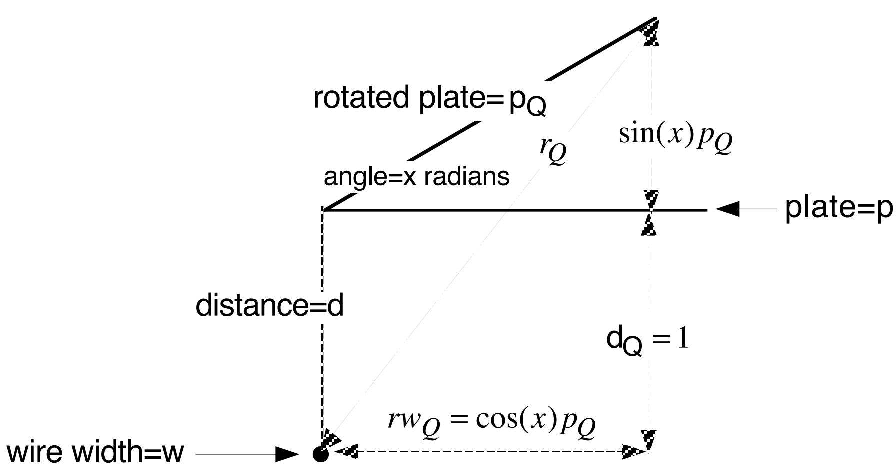
This set of equations were developed from Isaac Parrish's asymmetrical thrusting capacitor which was demonstrated on 12/ 09/ 2012. They identify that the capacitance field has now joined the gravitational field as a generator of new energy— as per quantum-dimensional mathematics. This capacity of fields to create new energy contradicts the dimensionally-restricted First and Second Laws of Thermodynamics and indicates that the concept of universal entropy built upon them (i.e. the running down of the universe) is not true in a four dimensional universe.

The Observation: The thrusting capacitor is a well known device by which a wire is set in capacitance opposition to a plate (making it asymmetrical). The plate is made of very light material such as tin foil. It is then rotated away from the wire (see illustration below). The greater the angle of rotation, the less surface area of the plate is presented to the wire. At great angle's of rotation, these plates create a jet thrust from the air causing correctly configured devices to swing against gravity.

The theoretical problem is that this jet thrust occurs at angles of rotation which present very little surface area to the wire. In standard capacitance science, the area of the plates partially determine the amount of energy which can be stored in the field. The asymmetrical capacitor appears to contradict this wisdom. At very great angles of rotation which presented restricted bands of area in opposition to the wire, the plates were still sufficiently charged to attract most of the particles of colored chalk which had been injected with the air and to eject air as a jet flow. Thrust was greater at great angles of rotation.

When the angle of the plate was readjusted downward to give more area of opposition to the wire, the device did not work as well. This is due to the fact that the plate determines the vector of field force, not the wire. A greater angle of rotation vectored the field of force— and its accompanying air jet— more directly in opposition to the capacitor an greater thrust (see illustration "2" below). The only way these apparent aberrations can be explained is with the new quantum mechanics; specifically, with the recently developed quantum open-energy equations.

Illus. 1: The Quantum Mechanics of the Asymmetrical Capacitor (in cross section)



Let distance "d"= the quantum = 1; $w_Q = \dfrac{w}{d}$

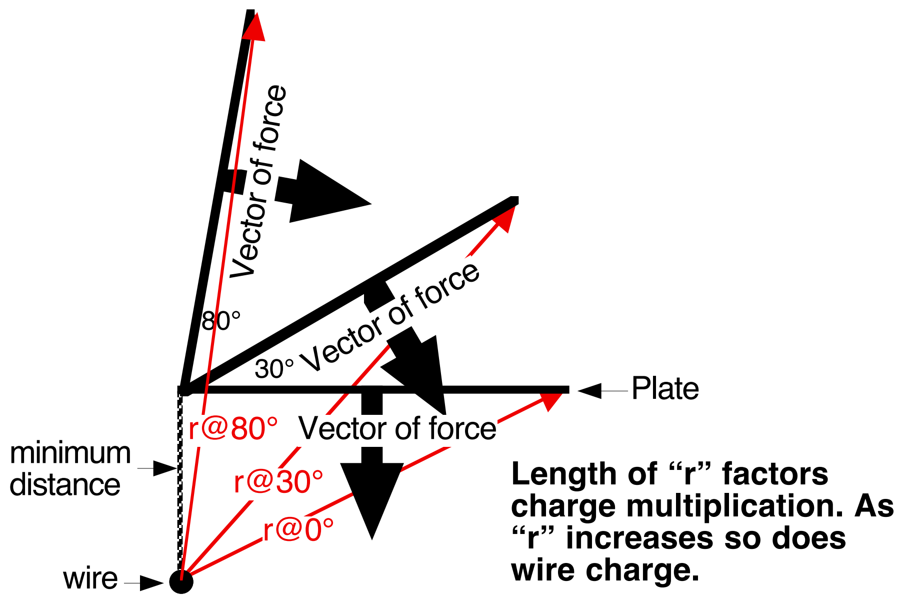
$d_Q = 1$; $p_Q = \dfrac{p}{d} =$ absolute width of plate in quantum units

$rw_Q = \cos(x)p_Q =$ relative width of plate in quantum units

Maximum distance from wire to plate in quantum units $= r_Q$

$$r_Q = \sqrt{\left(\cos(x)p_Q\right)^2 + \left(\sin(x)p_Q + 1\right)^2}$$

Illus. 2: The *Vector of Thrusting Force* opposes the plate/wire configuration at greater angles of rotation



The charge forces between the terminals of a normal capacitor is determined by a standard formula :

$$F = \frac{\left(q^{(+)}q^{(-)}\right)}{r^2} = \frac{q^2}{r^2}$$ "q" is the charge of the plates; "r" is the distance of separation.

"Charge" exists in capacitor plates when the plates are connected to battery terminals even if a current is not flowing. This is true because the atoms in the plates are subject to the "elementary charges" of the electrons in orbitals. Atoms in the negative plate are given an excessive number of electrons by the negative terminal of the battery. Each one of these electrons has an elementary charge of a known coulombs (charge value); "*elementary charge =e* =1.60217733e-19 coulombs." In turn, the atoms in the positive plate present an absence of electrons relative to the negative plate which gives it a similar charge value.

For the asymmetrical capacitor, notice that the distances between the wire and points along the plate vary between the beginning of the plate (d_Q) and the end of the plate (r_Q). Also as the plate is rotated, the variance in distance between "d_Q" and "r_Q" increases even further. There is no constant charge force across the plate with the asymmetrical capacitor because there is no constant "r" value as there is with the standard facing-plate capacitors.

The Quantum Open-Energy Integral Applied to the Asymmetrical Capacitance Field

The quantum open-energy integral is most easily visualized in its application to the gravitational field. Therefore, I will begin with the integral's application to the gravitational field and then extended it to the asymmetrical capacitance field. The standard force equation for a smaller object falling by the gravitation of a large body is the following. For sake of clarity we will use the earth as the case in point:

$x = distance\ between\ gravity\ centers\ of\ objects$; $M = mass$

$$Force = \frac{\left(M_{obj.}\right)\left(M_{earth}\right)}{x^2} = \left(M_{obj.}\right)\left(Acceleration\right)$$

$$Acceleration = \frac{M_{earth}}{x^2};$$ Standard Newtonian gravitational equations

The Quantum Modification of the Standard Newtonian Gravitational Equations

$Let\ distance\ "x"\ be\ measured\ in\ quantum\ units;\quad r = earth's\ radius\ (meters);\quad x_r = 1 = "r"\ in\ quantum\ units$

$d = distance\ of\ fall\ to\ earth's\ surface\ in\ meters;\quad x_d = \frac{d}{r} = distance\ of\ fall\ in\ quantum\ units;$

$g = gravitational\ acceleration\ rate\ at\ surface\ of\ earth$

$g = \frac{M_{earth}}{1^2};\quad Acceleration\ at\ distance\ "x" = \frac{M_{earth}}{x^2} = \frac{g(1^2)}{x^2} = \frac{g}{x^2};$ math proof provided elsewhere

The Quantum Formula for Gain in Acceleration over Fall[1]

$$(Gain\ in\ acceleration\ over\ fall) = \int_1^x \frac{g}{x^2}\, d(x)$$

$$D\left(\left[1 - \frac{1}{x}\right]g\right) = \frac{g}{x^2};$$ (The derivative of the *negation of subdivison by "x"* equals *the gravitational acceleration formula.*)

$$\left(1 - \frac{1}{x}\right) g = \frac{x-1}{x}\ g = \int_1^x \frac{g}{x^2}\, d(x);$$ (The *quantum negation of subdivision* by distance "x" provides the *derivative* which is required for the *integration of acceleration rates* over the distance of fall.)

We can try to make visual and logical sense of this object falling from “quantum distance x” to the surface of the earth, that is, free falling to “quantum distance 1.” At distance “x” any object in free fall has an acceleration rate of “g/ x^2.” To this acceleration rate will be added new acceleration rates as the free-falling object approaches the surface of the earth. At each new position the free falling object acquires a new and greater acceleration rate. However, it does not acquire this new and greater rate devoid of acceleration. It carries with it the lesser acceleration rate from its former position. To this former rate is added the new and greater rate. That is, acceleration is, itself, accelerating. Each new position adds acceleration to the former acceleration rate. The sum of these accelerations is found by integrating the acceleration equation from “x=1” to “x=x.”

It is the derivative of the negation of subdivision for the gravitational constant which provides this integral. As “x” gets larger (the fall starting a further quantum distances) the negation of subdivision approaches “(1)g” because “-1/ x” is getting smaller and is approaching “0.” That is, the summation of all the acceleration rates across the distance of free fall begins to approach the maximum acceleration rate at the surface of the earth which is “g.”

It is no mere accident of mathematics by which the quantum negation of subdivision for maximum gravitational force provides the needed integral. Quantum space cannot be subdivided. It can only be made smaller by the negation of subdivision. The distance across which the object is falling is space void of matter (ignoring gas for the moment). Mathematics is showing us that this space is quantum; that it can only be divided, as the gravitational force equation requires, as a calculus derivative of the quantum. The gravitational force equation is only possible as a function of the quantum. Only the quantum can provide the “acceleration of acceleration” equality which is required to adequately describe objects free falling in a gravitational field.

Science Blinded to Gravity Energy Gains over a Falling Object’s Potential Energy

Without recognizing the quantum dimension, an adequate mathematical description of space and matter is not possible. This is especially true of a mathematically accurate field equation for gravity, as the above equalities illustrate. Void of correct quantum mathematics, science has postulated a direct exchange between potential and kinetic energy for a falling object. This follows the first Law of Thermodynamics[2]

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[1] See “http://paradigmphysics.com/gravity_open_energy.pdf” for the mathematical proofs of the integral.

[2] http://www.emc.maricopa.edu/faculty/farabee/biobk/biobookener1.html

which postulates that energy is neither created nor destroyed but only changes form. That "Law," however, is actually only a belief system which cannot completely survive[3] the quantum open-energy field integral. Below is the mathematical test of the First Law as applied to the exchange between potential and kinetic energy of a falling body:

Testing the First Law of Thermodynamics for an Orbiting Body (hypothesis: the potential energy of the body is exchanged for the kinetic energy of fall)

$$v_{orbit} = velocity\ of\ orbit; \qquad PE = potential\ energy\ possessed\ by\ orbiting\ object = M_{obj.}\frac{v_{orbit}^2}{2}$$

$$centripetal\ force = centrifugal\ force$$

$$centripetal\ force = M_{obj.}\frac{v_{orbit}^2}{x_r}; \qquad centrifugal\ force = M_{obj.}\frac{g}{x_r^2};$$

$$M_{obj.}\frac{v_{orbit}^2}{x_r} = M_{obj.}\frac{g}{x_r^2}; \qquad M_{obj.}\left(v_{orbit}^2\right) = M_{obj.}\frac{g}{x_r}$$

$$PE = M_{obj.}\frac{v_{orbit}^2}{2} = M_{obj.}\frac{g}{2x_r}$$

$$Energy\ from\ fall = \Delta E = M_{obj.}\frac{\left(x_r - 1\right)^2}{x_r}g;$$ *Math proof given elsewhere*

$$\frac{\Delta E}{PE} = 2\left(x_r - 1\right)^2$$ ***Hypothesis disproved***

The only potential energy which an orbiting body possess is the potential energy in its velocity of orbit. Velocity energy is converted to centrifugal force by the centripetal force of gravitation. Gravitation impacts the vector of orbital motion, but without affecting the momentum of orbital motion. That is, the "speed" of motion is not affected and, therefore, no energy is surrendered in the orbital process. There are mathematical reasons why the energy of orbital motion can be influenced in vector or "direction" by gravitational force without affecting momentum or energy. The gravitational force is a function of the "square of distance." In contrast, the counter force supplied by orbital energy is a function of the "single value of distance." The gravitational constant divided by the square of distance is equal to an orbital energy value divided by distance alone (not squared). Orbital energy is possessed by the orbiting object alone and not shared with the central body, while gravitational force is possessed by both the orbiting object and the larger central body. Gravitational force cannot "possess" orbital energy because orbital energy is not a function of or "manufactured by" the gravitational system. The potential energy possessed by the orbiting object exists outside the gravitational system and is possessed by the orbiting object alone. **Orbital potential energy cannot be exchanged for gravitational energy increases during a fall because the potential energy is not part of the gravitational system.**

However, when the quantum mechanical formulation (using the earth's radius as the quantum) is applied to the gravitational mechanics of centripetal and centrifugal forces, it can be demonstrated that there is a clear mathematical relationship between orbital potential energy and gravitational energy gains when all the potential energy is given up to initiate a fall. Because the gravitational constant as modified by the square of distance is equal to orbital energy as modified by the single value of distance, orbital energy can be made a function of the gravitational constant (see above equality). This is not to say that the gravitational constant produces orbital energy. It only proposes that the independent orbital energy required to establish a permanent orbit is limited by the gravitational system. If the object has greater energy than this, it will escape orbit. If it has less, it will enter an elliptical orbital pattern (see Newton's *Principia Mathematica*).

For any object in stable orbit which must possess the potential energy of that orbit: If that potential energy is completely surrendered to initiate a fall, the object will gain energy equal to twice the factor of the "quantum distance minus one," the whole factor being squared. The amount of energy gained

[3]Quantum math does not void the Laws of Thermodynamics. They are, however, shown to be restricted and not universal.

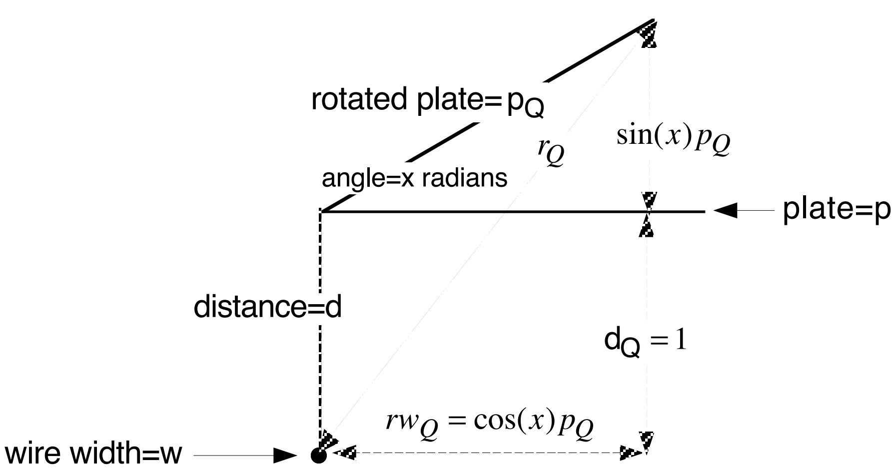
in the fall will increase exponentially as the quantum distance of fall increases. The potential energy surrendered by the object will not be directly exchanged with the energy gained in the fall. The field will have created energy in excess of that surrendered by the orbital object. The First Law of Thermodynamics does not apply to this exchange since potential energy is not directly exchanged for kinetic energy. Proof that gravitational fields create energy in contradiction of the First Law of Thermodynamics is given by the CHANDRA J1550-564 black-hole jet data (see videos and accompanying text on the public access web site www.srnrl.com).

Field-Energy Gain via the Quantum Open-Energy Integral Applies to the Asymmetrical Capacitance Field

We have demonstrated that a gravitational system can be provided a quantum value of distance by setting the radius of the larger body equal to the quantum and that this quantum value is a more realistic description of actual gravitational mechanics. A quantum integral which results from this conversion of distances to quantum values mathematically describes the gain in acceleration across the distance of a fall within the system. The quantum integral is mathematically correct because it describes the summations of increasing accelerations as the object falls to the surface of the larger body. This integral is not available to non quantum-dimensional physics which have substituted a belief in the First Law of Thermodynamics for adequate mathematical description. It is proposed that the potential energy of the falling object is simply exchanged for the kinetic energy of the fall. An analysis of actual orbital mechanics using the quantum formulation shows this belief to be unsubstantiated. The energy created in the fall is exponentially greater than the potential energy given up.

This conversion of distance to a quantum value and use of the resultant quantum open-energy integral can also be applied to the asymmetrical capacitance field. To review the quantum description of the asymmetrical capacitance field, illustration 1 is again shown below:

Illus. 1: The Quantum Mechanics of the Asymmetrical Capacitor (in cross section)



Let distance "d"= the quantum = 1; $w_Q = \frac{w}{d}$

$d_Q = 1$; $p_Q = \frac{p}{d}$ = absolute width of plate in quantum units

$rw_Q = \cos(x) p_Q$ = relative width of plate in quantum units

Maximum distance from wire to plate in quantum units $= r_Q$

$$r_Q = \sqrt{\left(\cos(x) p_Q\right)^2 + \left(\sin(x) p_Q + 1\right)^2}$$

Like the gravitational field, the distances from the wire to points along the plate "fall" from "d=r_Q" to "d=1" (i.e. the shortest distance has been made the quantum).

Now the charge contained in the wire must tend toward the charge contained in the plate (true by electronics theory). The charge-force equation for standard capacitors of equal plate area and equal distance of separation is:

$$F = \frac{q^2}{r_Q}; \qquad q^2 = (\textit{positive terminal charge})(\textit{negative terminal charge})$$

For the asymmetrical capacitor, the charge force between the wire and all points along the plate vary by the square of the distance. In this, asymmetrical capacitance charge force is similar to the force of gravity during a fall which also varies by the square of the distance from the surface over the fall. The charge force being applied to the plate by the wire must also be the summation of these charge forces over the width of the plate. A weaker charge force is added to a slightly stronger charge force across the width of the plate and these charge forces increase by divisions of the square of decreasing distances— just as gravitational force increases by divisions of the square of decreasing distances. Since the points along the plate compose a continuum of points (an infinite number of points), this summation can only be found by the integration of the charge force equation across the distances. This is integral is provided by the quantum open-energy integral which we have now discovered applies to a second field. The integral can, therefore, be considered as mathematically descriptive of all field forces which vary across the field.

The Universal Quantum Open-Energy Integral for Field Force

1=minimum quantum distance which defines the maximum force to which the field is tending.

x= maximum distance (in quantum units); F_m=maximum force of field $\left(1-\frac{1}{x}\right)F_m = \int_1^x \frac{F_m}{x^2}\, d(x)$

Quantum dimensional integration of the charge force can be achieved by setting the minimum distance between the wire and the plate as the quantum. This minimum distance is “d” in the above illustration. The variance in charge force is then integrated between the maximum separation “x” and the minimum d=1.

The Open-Energy Integral as Applied to the Asymmetrical Thrusting Capacitor

$d_Q = 1;\quad p_Q = \frac{p}{d};$ Maximum radius $= r_Q;\quad \textit{quantum charge} = q_Q^2 = \frac{q^2}{d}$

$$r_Q = \sqrt{\left(\cos(x)p_Q\right)^2 + \left(\sin(x)p_Q + 1\right)^2}$$

$$F = \left(1 - \frac{1}{r_Q}\right) q_Q^2 = \left(1 - \frac{1}{\sqrt{\left(\cos(x)p_Q\right)^2 + \left(\sin(x)p_Q + 1\right)^2}}\right) q_Q^2 = \int_1^{r_Q} \frac{q_Q^2}{r_Q^2}\, d(r)$$

— math proof provided elsewhere

Charge Gain for Asymmetrical Capacitor

$\textit{let}\ rw_Q = w_Q;$ The relative width of plate is made equal to wire width.

$$\cos(x) = \frac{w_Q}{p_Q}; \qquad \cos^{-1}\left(\frac{w_Q}{p_Q}\right) = x; \qquad (\textit{Natural charge value of wire}) = \left(1 - \frac{1}{\sqrt{w_Q^2 + 1^2}}\right) q_Q^2$$

$$(\textit{Asymmetrical charge value}) = \left(1 - \frac{1}{\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2}}\right) q_Q^2$$

$$(\textit{Charge gain}) = \Delta q_Q^2 = \left[\left(1 - \frac{1}{\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2}}\right) q_Q^2\right] \textit{divided by} \left[\left(1 - \frac{1}{\sqrt{w_Q^2 + 1^2}}\right) q_Q^2\right]$$

$$\Delta q_Q^2 = \frac{\left(\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2} - 1\right)\left(\sqrt{w_Q^2 + 1^2}\right)}{\left(\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2}\right)\left(\sqrt{w_Q^2 + 1^2} - 1\right)}; \qquad x = \cos^{-1}\left(\frac{w_Q}{p_Q}\right) = \textit{angle of rotation}$$

Application of the Formula for Field Charge Increase to Engineering

Even though the asymmetrical capacitor formula for the increase in field charge (and therefore field energy) is more complex than the formula for gravitational field energy increase, the asymmetrical capacitor formula has application to practical engineering whereas the gravitational formula has no foreseeable technical application. Its design advantages can be seen by applying the formula to the proposed Th-234 nuclear capacitor to be integrated into the Project Prometheus accelerator.

The distance "d" or the minimum distance between the wire and the plate must be chosen as the minimum which can sustain a "25,000 + 2%" voltage field without breaking down from cross sparking. This minimum distance "d" becomes the quantum and establishes the quantum charge value. The field charge at a 2" separation is four times as weak as the field charge at 1" of separation. Whatever value we determine for "d" will determine the quantum charge value for the quantum open-energy integral.

From past experience we have determined that an inch and a half is the minimum permissible distance for the value of "d." To this "1.5 inches" we must add the radius value of the radioactive pellet used as the wire terminal to arrive at a final "1.625 inch" value for the quantum "d." From the above equation we know that the radius of the pellet cannot be too great because, according to the formula, larger wire diameters will restrict angle of rotation and suppress the amount of charge increase. I have chosen a quarter of an inch as the smallest practical diameter for the radioactive pellet. The width of the plate in quantum units determines the charge increase, but increasing plate width gives diminishing returns in charge increase while spreading the field across greater area. A graph gives the relationship between charge increase and "field thinning" for various plate widths. From this graph, I have chosen a quantum plate width of five times the quantum distance "d." The quantum values for wire width and plate width determines the maximum angle of rotation, in this case, being 88.237°. With these specs for the asymmetrical nuclear capacitor, we can calculate the charge increase by the following:

$$d = 1.5" + 1/8" = 1.625"; \qquad w = 1/4" = 0.25"; \qquad p = 8.125"$$

$$d_Q = 1; \qquad w_Q = \frac{w}{d} = 0.1538461538 \qquad p_Q = \frac{p}{d} = 5$$

$$\textit{Angle of rotation } "x" = \cos^{-1}\left(\frac{w_Q}{p_Q}\right) = \cos^{-1}(0.0307692308) = 88.237°$$

$$\Delta q_Q^2 = \frac{\left(\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2} - 1\right)\left(\sqrt{w_Q^2 + 1^2}\right)}{\left(\sqrt{w_Q^2 + \left(\sin(x)p_Q + 1\right)^2}\right)\left(\sqrt{w_Q^2 + 1^2} - 1\right)}$$

$$= \frac{\left(\sqrt{0.023668639 + [(0.9995265151)(5)]^2} - 1\right)\left(\sqrt{0.023668639 + 1^2}\right)}{\left(\sqrt{0.023668639 + [(0.9995265151)(5)]^2}\right)\left(\sqrt{0.023668639 + 1^2} - 1\right)}$$

$$\Delta q_Q^2 = \frac{4(1.0117651106)}{5(0.0117651106)} = 68.798 \textit{ times}$$

A Brief Summary

When Isaac Parrish demonstrated his asymmetrical capacitor, the device swung on a string several inches against gravity when he applied charge to the terminals. It swung because an air jet was expelled by the device. We now know that this kinetic energy was not being exchanged with an electrical current because there was no current flow. The motion was newly generated energy produced by the field itself. The quantum open-energy integral identifies the source of this new energy.

When the mathematical discovery is applied to the proposed nuclear capacitor using engineering specifications developed for the device, it is proven that the charge of the nuclear pellet in the negative wire terminal will be increased by a factor of 68.798. This is a passive increase in charge and field energy which will multiply the active charge increase produced by suppressed beta decay through the application of the field. No further conclusions can be drawn without actual experimentation. But a hypothesis to be tested can be developed. It is hypothesized that the passive increase in energy from the asymmetrical capacitance field could multiply the suppressed beta-decay energy to beyond the giga electron volts per meter produced by the major CERN and Fermi accelerators.

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