# EMPIRICAL PROOF OF LEAST QUANTUM ELECTROGRAVITATIONAL VELOCITY

- By -

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## Introduction:

Recent empirical tests by myself show that there exists an asymmetry of the rate of rotation (depending on the direction), of what I call the Faraday-style magnetic/quantum field motor.

For the test results video see: https://youtu.be/IwNy9BVpCQI

I was initially impressed by a video which replicated the original test done by Michael Faraday shown on a PBS television program wherein the most impressive thing that I noticed was that the current carrying wire was parallel to the magnetic field and further, that the wire did not speed up over time but rotated at a slow and constant rate. This does not follow the rule of motor force which demands that a zero angle between the current and magnetic field should produce zero force of rotation. Yet, it was obvious that the wire did indeed rotate and also that Faraday discovered much more than ordinary direct current motor action. He actually demonstrated a magnetic least quantum energy.

See: http://www.electrogravity.com/FARVIDVLM/FaradayProofVLM.wmv

Since my theory of "Electrogravity As A Unified Field Theory" is based on the idea of there being a least quantum energy (that is bedrock as far as energy can be lowered), the slow rotation of the wire suggested to me that it was very close to the square root of the fine structure constant in meter per second units. I have termed this the least quantum velocity $v_{LM}$. This velocity is fundamental to electrogravitational action in my theory. It corresponds to group velocity which is outside of the Compton wavelength boundary of quantum particles, while the phase velocity is inside and this corresponds to waveguide action. Thus, all particles are connected through waveguide action through their centers non-locally at a velocity equal to the square of the speed of light divided by the least quantum velocity.

See: http://www.electrogravity.com

The rule for maximum motor force in a magnetic field states that the magnetic field **B** and the current **I** vectors are 90 degrees to each other and then a third force vector 90 degree to the current and magnetic field is generated as a result. It is shown below that zero force is calculated when an angle of zero degrees is set between the current and magnetic field vectors.

Let the constants related to calculation be stated as:

$$Q := 1 \cdot coul \qquad t := sec \qquad B := \frac{volt \cdot t}{m^2} \qquad \theta := 0 \cdot deg \qquad Lng := m$$

$$Amp := \frac{Q}{t} \qquad \alpha := 7.297353080 \cdot 10^{-03} \qquad AmpMeter \equiv Amp \cdot Lng$$

$$h := joule \cdot sec \qquad v_{LM} := \sqrt{\alpha} \cdot \frac{m}{sec} \qquad Force \equiv Amp \cdot Lng \times B \cdot sin(\theta)$$

Then:

$$AmpMeter_{vec} := \begin{pmatrix} \dfrac{Q}{t} \cdot m \\ 0 \cdot amp \cdot m \\ 0 \cdot amp \cdot m \end{pmatrix} \qquad AmpMeter_{vec} = \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix} m \cdot A$$

$$B_{vec} := \begin{pmatrix} 0 \cdot B \\ \dfrac{volt \cdot t}{m^2} \\ 0 \cdot B \end{pmatrix} \qquad B_{vec} = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix} \cdot tesla$$

Finally:        $Force := \left( AmpMeter_{vec} \times B_{vec} \right) \cdot sin(\theta)$

$$Force = \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix} \cdot newton \qquad \text{ALSO:} \qquad Force_{Quantum} := \frac{h}{m \cdot sec}$$

RESULT: The motor should not run at all. Of related fundamental importance is the Vector Magnetic Potential, (also known as the A-vector), which connects the macro field to the quantum realm. It exists 90 degrees to the magnetic B field.

Another form of magnetic force action acting on a moving charge in a magnetic field is:

$$\text{Force}_Q := Q \cdot \frac{m}{\sec} \cdot B \qquad\qquad \text{Force}_Q = 1\,N$$

The A-vector units are stated as: $\qquad\qquad A_{vec} := \dfrac{volt \cdot sec}{m}$

This is very close to the magnetic B field where B has one more unit of length in the denominator as shown on page 1 above. Again however, the A-vector is 90 degrees to the B vector.

Charge times volt equals energy and times time may be considered as having the same units as plank's constant, h.

$$Q \cdot volt \cdot sec = 1 \cdot joule \cdot sec$$

Divided by the remaining terms,

$$\text{Force}_{QA} := \frac{h}{m \cdot t} \qquad\qquad \text{Force}_{QA} = 1\,N$$

**This result may be considered to be a scalar since h is not usually shown as a vector.**

Next, the expression for an atom's quantum angular momentum is:

$$\text{mass} \cdot \text{velocity} \cdot \text{radius} = \frac{i \cdot n \cdot h}{2 \cdot \pi} \qquad \text{(n corresponds to atomic level of atoms electrons.)}$$

(Let n = 1 for the below calculation.)

Then: $\qquad \text{mass} \cdot \text{velocity} \cdot \text{radius} = \dfrac{i \cdot n \cdot \left( \text{Force}_{QA} \cdot m \cdot t \right)}{2 \cdot \pi}$

**The resulting calculation solving for force yields a negative and imaginary result.**

$$\text{Force}_{QA} := 2 \cdot \pi \cdot m \cdot \left( \frac{kg \cdot v_{LM}}{i \cdot m \cdot t} \right) \qquad \text{Force}_{QA} = -0.536738253061\,i\,N$$

Then there must exist a force apart from the classical force due to magnetic motor action in the quantum realm. The least quantum velocity is quantum rotational velocity and therefore the copper cylinder in the experiment rotates in spite of the classical understanding that it should not.

The expression for the gravitational constant G has the following units:

$$G_{const} := N \cdot m^2 \cdot kg^{-2}$$

As for the K constant in Einstein's General Theory Field Equation, Guv = K*Tuv, we can divide G by the fourth power of velocity and arrive at the inverse of force to arrive at a K constant applied to electrogravitation as follows:

$$K_{EG} := \frac{G_{const} \cdot \alpha^2}{v_{LM}^4} \qquad K_{EG} = 1\frac{1}{N}$$

Since the **Force$_{QA}$** above is for a single system, we can postulate a non-local conjugate connection in the quantum realm between two such systems that is effectively instantaneous as follows:

$$Force_{EG} := \left[2 \cdot \pi \cdot m \cdot \left(\frac{kg \cdot v_{LM}}{i \cdot m \cdot t}\right)\right] \cdot K_{EG} \cdot \left[-2 \cdot \pi \cdot m \cdot \left(\frac{kg \cdot v_{LM}}{i \cdot m \cdot t}\right)\right]$$

$$Force_{EG} = 0.288087952299\,N \qquad \text{Positive and real result.}$$

The constants are rationalized and are for units analysis only.

What this shows is that two or more such quantum field motors should interact with generated gravitational force between them depending on the scalar product their individual force of rotation. Further, the conjugate action between them is generated by the quantum rule that entanglement will occur when the direction of polarization between the quantum particles is 180 degrees apart.(This will occur naturally.) The suggestion can also be made that instantaneous communication between the motors may be achieved by changing the rate of rotation in one of the motors and the other motor should respond in the same degree of change in the rate of rotation. This may explain why UFO saucers have been observed trying to aid another saucer that was falling by sharing their field energy to bring the falling saucer back to proper energy phase. Suddenly changing the phase of rotation would cause the saucer to lose energy and thus also lose its lifting field.

Saucers may not utilize what has been called antigravity since gravity must be one of attraction by the very nature of conjugation between particles ensures that attraction is always the result. Rather, force-field propulsion is more likely. There is a vector force field possible in the quantum magnetic motor that may exist and this will be presented on the next page.

Visualize the quantum magnetic motor for a moment as having the A-vector field radial while the magnetic field B is vertical. Now consider that there may be realized a 'virtual quantum current' circulating around the vertical copper cylinder that arises from the quantum atom electron alignments in the NdFeB vertical magnet at the center of the motor. Heisenberg's uncertainty principle states that we can never know either the exact momentum or position of a quantum particle and therefore this is a variableness in the electron current in the atom that generates the 'virtual current' 90 degrees to the external B field. This quantum 'virtual current' is also at 90 degrees to the fundamental A-vector which is radial. The resulting force vector is quantum and it is vertical. Viola! We have force-field lift or propulsion depending on how you look at it.

Let quantum current be stated as:
$$I_Q := \frac{Force_{QA}}{m \cdot B} \qquad I_Q = -0.536738253061 i\, A$$

Then the vertical force field is:

$$Force_{Vert} := \begin{pmatrix} 0 \cdot \dfrac{volt \cdot sec}{m} \\ A_{vec} \\ 0 \cdot \dfrac{volt \cdot sec}{m} \end{pmatrix} \times \begin{pmatrix} I_Q \\ 0 \cdot amp \\ 0 \cdot amp \end{pmatrix} \qquad Force_{Vert} = \begin{pmatrix} 0 \\ 0 \\ 0.536738253061 i \end{pmatrix} N$$

The result is positive and imaginary. Thus has yet to be tested for since I am assembling the apparatus to do so as I write this paper.

In conclusion, Michael Faraday could not have known about quantum field theory in his day but he did unknowingly demonstrate a fundamental quantum action. Someone remarked that Newton could not explain how his theory of gravitation worked at a distance but then He also did not know about quantum field theory. The argument goes on about the speed of gravitational action in the academic realm but for me the matter is settled. Gravitational action is non-local and effectively instantaneous.

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