

**A Variant of Electricity Generator Based on the New Axioms and Laws**

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The Theory of new Axioms and Laws was created by the same author and contains 2 new Axioms and 8 Laws . This Theory describes accelerating or decelerating, transverse or longitudinal open vortices and structures by their combinations.

The new model of the electron is described as a decelerating from out to inward open vortex that generates a perpendicular accelerating longitudinal vortex in its Gravitational center. The center of the vortex is moved from the Geometric center in the center of Gravity in the second (II) quadrant. This eccentricity is the reason the electron, when pulsating in Time, to emit from the convex side an Electrical wave with a rather larger amplitude and to emit in the opposite direction from the flattened side -Electrical wave with a much smaller amplitude.

The one-way arrangement in Space and pulsating in Time of the eccentric electrons causes the flow of an Electric current. Maintaining such a one-way arrangement can be imitated if a dense network of Magnetic force lines is introduced inside internal of the so called Modified Conductor.

Then, in the process of pulsation (contraction and expansion) the electrons are struck to the Magnetic lines of force, turning , looking for and finding a position in the Space that is maximally stable for them This position is perpendicular to the lines of Magnetic force so that the convex part points to the Positive pole and the flattened part - to the Negative pole.

Therefore, without movement and rotation in the traditional process of Induction of Electricity Current it can achieve generation. Before this the Conductor has to charge by Electricity Current for a certain time interval. After then the Induction is maintained statically without movement and rotation -only by hitting by internal Magnetic lines and arrangement in one direction of electrons in so called Modified Conductor.

In this report is proposed one variant of the model of Modified Conductor with round cross section.

**1. The essence of Electric Induction**

It is known that the Classic Field Theory is based by Maxwell's Laws (1864) and on a single Classic Axiom . It states that the movement along closed loop is with constant speed [1].

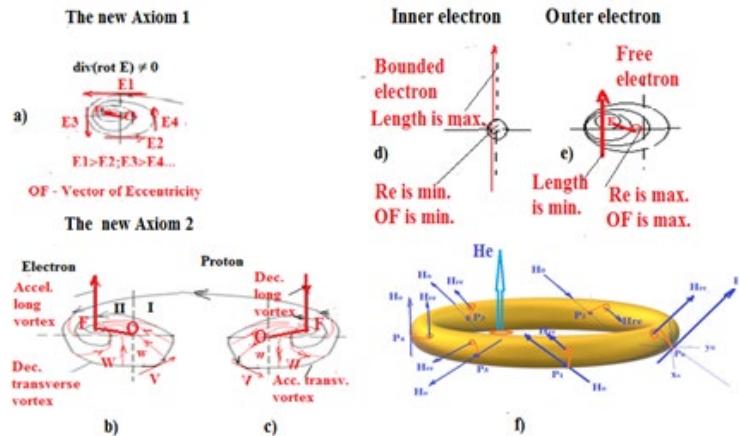
The previous studies expand the Classic Field Theory to a more general Theory of Extended Field (Gravitational Field ). The author change a little this axiom as the movement along an open vortex is with variable (monotonically accelerating or decelerating) velocity [2-4].

Let's recall that the electrons exist in the metal lattice as free electrons. Because electrons are in free mode they are bulged along a transverse component (in plane  $x_e, y_e$ ) and are shrunk along a longitudinal component ( $z_e$ ) (Figure 1e). According Axiom1 the

decelerating transverse vortex is the reason the electron to be a strong eccentric (Figure 1a) [4,5].

This means that during its pulsation, this eccentric body emits a transverse wave with a **greater amplitude from its convex side** than from its flattened side [6].

The electron is an eccentric, and the new center called the center of Gravity is located in the second quadrant. The distance between the Gravity center and the Geometric center determines the Eccentricity Vector (Figure 1b) .The magnitude of this Eccentricity vector is maximum for free electrons (Figure 1g). For bound electrons, the eccentricity vector decreases with decreasing the distance to the nucleus .It limites to minimum (Figure 1f) [7].



**Figure 1:** Model of electron (e-) according to new Axioms and Laws and reaction to outer hits (Ho).

Figure1a) Electron(e-) as eccentric (Axiom1), Figure1b) Gravity center of lectron (e-) is in second (II) qudrant, Figure 1c) Gravity center of proton (p +) is in first (I) quadrant, Figure1d) The inner electron(proton) has min. radius and max. perpendicular vectoe,Figure1e) The outer electron (proton) has max. radius and min. perpendicular vector, Figure1f) Electron generates a perpendicular vector (He) in its Gravity center (Law1) and was hit by external Magnetic Lines (Ho) to large number variable points: Po,P1,P2, P3,P4,...

**a) Bonded electrons: peripherals and inernals**

The length of Eccentricity Vector (OF) is constant, but the angle to x-axis is variable.

For the **bonded peryphery electrons** this angle is minimum because the Eccentricity vector (OF) is closed to x-axis. That is why the projection of Eccentricity Vector (OF) to x-axis is long and the Force of attraction to nucleus has big size (Figure1b -Figure1c). But y-vector is short and the angular velocity is very small. Or bonded electrons in periphery rotates around its axis very slower [5].

**The bonded in peryphery electrons have big x-vectors and the Force of attraction to nucleus has big size, but they have short y-vector and angular velocity around nucleus is smaller.**

For the **bonded internal electrons** the angle to x-axis is large, the progection of Eccentricity Vector to x-axis is small or the Force of attraction to nucleus has small size. But the projection to y-axis is long and this is the reason the angular velocity of the nternal electrons to be bigger.

**The bonded internal electrons have short x-vector or the Force of attraction to nucleus has little size and have long y-vector or angular velocity around nucleus is bigger.**

We saw that the peripheral and internal electrons are held and controlled by their respective protons in the nucleus by the transverse vortices (Axiom2) This control makes a different behavior of peripheral and internal electrons.

**The bonded periphery electrons have a big Force of attraction to nucleus and a less valocity of rotation, but the bonded internal electrons have a smaller Force of attraction and a big speed of rotation.**

The state of the free electrons is very specific. They are not in an intermediate state between peripheral and internal electrons

[5,6].

**b) The free electron**

In the free electrons the angle of Eccentricity Vector (OF) to x-axis is minimal .When the Vectror of Eccentricity (OF) is decomposated, the length of its projection to x-axis is a maximum but the length of its projection to y-.axis is minimal. The result is that the free electrton has maximal radius [9,10].

**The free electrons are maximally inflated.**

The length of projection of Eccentricity Vector (OF) to x-axis is a maximal or the radius of free electrons is maximal. The length is reached to a critical point at which the transverse vortex stretching is maximal and finally this transverse links to the corresponding personal protons breaks (Axiom2).

**The free electrons break off the transverse link to their personal protons.**

The free electrons have broken their transverse bonds and behave and control from their respective master- protons only along bonds of longitudinal vortices.

**The free electron is driven only by the longitudinal vortex perpendicular to its body.**

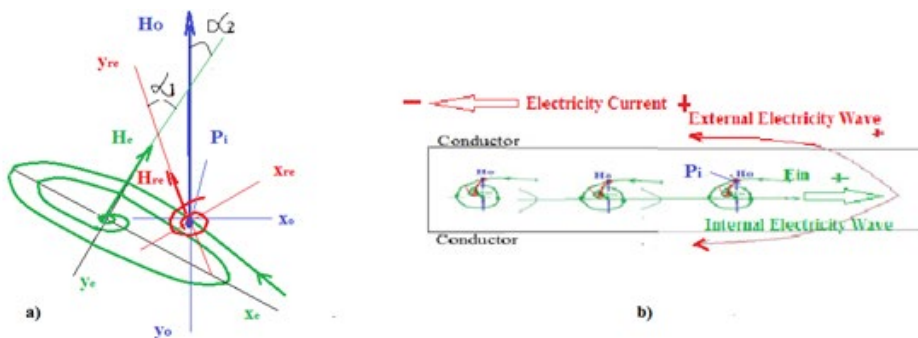
The free electrons have taken and have remembered the form (very eccentric and bulging) from the last orbit of the atom from which they flew out outside the atom. They are governed both in Space (place) and in Time (pulsation) only by the longitudinal vortex along the z-coordinate.

**The free electrons are governed at Space (place) and in Time (pulsation) only by their longitudinal vortices (perpendicular to their bodies) which links them to corresponding protons**

The bulged free electron has large transverse vortex with large radius and it generates a perpendicular longitudinal vector with small height in the Gravity center (Law1). This is how the body

of the free electron is formed to look like as an inflated toroid (Figure1e).

Free electron is generated by the decelerating vortex from outside to inside (Law1). Because it is decelerating vortex it emits transverse primary (w) decelerating vortices in direction from outside to inside (Law5) (Figure1b). They (w) fill the body of the toroid with heat vortices.



**Figure 2:** Electron Induction as separation and targeting equals of separation of the Figure 2a) In 3D the angle between outer Magnetic line  $H_o$  and vector of reaction  $H_{re}$  is  $\alpha_1$ , the angle between magnetic line  $H_o$  and vector of electron is  $\alpha_2$  and so on.

Figure 2b) Electrons are arranged with convex part to positive potential of electricity Conductor.

Inside is moved internal Electricity Wave to positive Pole, outside is moved outer Electricity Wave in inverse direction to negative Pole called Electricity Current.

It is known that the decelerating transverse vortex generates in its own electron plane ( $x_e, y_e$ ) the perpendicular vortex of electron ( $H_e$ ) (Law1). Magnetic field ( $H_o$ ) hits the tilted electron from outside-in that has own plane ( $x_e, y_e$ ) and own perpendicular vector ( $H_o$ ) It is obviously that Magnetic line ( $H_o$ ) is not parallel to perpendicular vector of electron ( $H_e$ ) These vectors form an angle between them.

When magnetic line ( $H_o$ ) hits the tilted electron with own plane ( $x_e, y_e$ ) it causes transverse vortex in a plane of reaction ( $x_{re}, y_{re}$ ) in body of electron. This transverse vortex in plane reaction ( $x_{re}, y_{re}$ ) generates perpendicular vector of reaction ( $H_{re}$ ) (Law1). Therefore this plane of reaction ( $x_{re}, y_{re}$ ) is always perpendicular to the external hit ( $H_o$ ) and the vector of reaction ( $H_{re}$ ) is always unidirectional and parallel to external hit ( $H_o$ ) [10].

The vector of reaction ( $H_{re}$ ) turns out to be at any angle in 3D ( $\alpha_1$ ) relative to the own vector ( $H_e$ ) of the accelerating longitudinal vortex of the electron itself (Figure2a).

The geometric sum of the two vectors ( $H_{re} + H_e$ ) gives a sum vector ( $H_{sum}$ ) which becomes to rotate the electron. The electron twists and rotates to this position where the external hit of fixed Magnetic line ( $H_o$ ) to become unidirectional and parallel to sum ( $H_{sum}$ ) of movable vectors ( $H_e + H_{re}$ ) or until all 3 vectors to become unidirectional and parallel.

**Result:** The electron rotates and finds the position in 3D where

## The free electron forms of maximum eccentric, inflated toroid full of heat.

This model of the electron described by new Axioms and Laws will help us to understand the secrets of the phenomenon of Electricity Induction using motion and rotation. Furthermore, we will be able to simplify it by mimicking the Induction action but without using motion and rotation.

the sum ( $H_{sum}$ ) of movable vectors ( $H_e + H_{re}$ ) becomes unidirectional and parallel to the external fixed Magnetic line ( $H_o$ ) or while the three vectors ( $H_o, H_e, H_{re}$ ) become unidirectional and parallel.

The difference between rotating whipping -top and rotating electron is that the whipping-top is not eccentric, but electron is extremely eccentric body. Because electron is an eccentric it has one point (min. potential energy) where the transverse lines are in minimal distance between each other. But it has an other (opposite) point (max. potential energy) where the transverse lines are in maximal distance between each other (Figure2a). The electron gets seeks and finds this point ( $P_4$ ) where the external impact ( $H_o$ ) to become from the most compressed spring of the spiral. In this point ( $P_4$ ) the distances between lines of spiral are minimal. This matches at the point of the minimal potential energy of electron as an eccentric (Figure1f) Therefore the electron rotates as in 3D, until it finds the point where the turns of the eccentric spiral are maximally closely spaced between each other and to Gravity center (Figure1f,  $P_4$ ) [9,10].

**Result:** The electron finds the point of most compressed spring of the eccentric spiral where the potential energy is minimum.

After this rotation the electron cannot stand in any other way than with its opened tail end to one end, according to the Right Hand Law (Figure 2a).

## 2. Conditions for Electricity current

**a) A necessary conditions for active Conductor by moving and rotation with round cross external Magnetic lines.**

For the phenomenon of Induction of electrons by moving is a necessary condition is to have an outer Magnetic field ( $H_o$ ). The sufficient condition is that there is another movement and the Conductor crosses and hit perpendicularly the lines of the outer Magnetic field ( $H_o$ ) (Figure 2a).

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**The first result of the hit is to deformate the electron body.**

Because of an impact at an outer point to the eccentric electron body, it additionally strongly deforms the body of the electron. This abrupt hit causes a primary transverse decelerating vortex in plane(xre,yre) in direction from out to in so that this plane(xre,yre) to be perpendicular to Ho (Law5). This primary decelerating vortex generates a longitudinal acceleration vortex of the reaction (Hre) from its center upwards perpendicular to the plane of the transverse decelerating vortex (xre,yre) (Law1). This too significant accelerating longitudinal vortex (Hre) is an internal reaction of body to outer impact (Ho). But the plane of reaction (xre,yre) do not match with the electron plane (xe,ye). The plane of reaction(xre,yre) makes an angle to plane of electron(xe,ye) Therefore the perpendicular longitudinal vector of reaction (Hre ) will make an angle in 3D space (alfa1) relative to the electron's own perpendicular longitudinal vector (He).

**The second result of the outer strike is to rotate the electron body.**

The electron body will rotate so that the two vectors (He,Hre) to become parallel (in phase) with each other. As a result the angle (alfa1) between Hre and He will tend to zero (Figure 2a). In this way electron will rotate to this position where Hre to become parallel to He. In this way these 2 vectors (He,Hre) will aim to become parallel (in phase) and unidirectional with the external magnetic field (Ho). Such the angle between Hre,He, Ho in 3D also will tend to zero. In this way the three vectors will become parallel and unidirectional between each other.

**Result:** A nessecary condition for Electricity current to flow by moving and rotating Conductor is the three vectors (He,Ho,Hre) to be mutual parallel and unidirectional. Vector of reaction (Hre) will aim to be minimal, Ho (outer Magnetic field) perpendicular in plane (xo,yo), He ( inner own longitudinal vortex of the electron, Law1) perpendicular in plane (xe,ye), and Hre (reaction of local longitudinal vortex of local transverse vortex, Law1) also perpendicular in plane (xre,yre) (Figure 2a).

The point of maximum sustainability of the electron coincides with the point where the electron has minimum potential energy. This point is located where the distance between the three vectors (He,Ho,Hre) is minimum. Therefore the three vectors will aim to be parallel or in phase (He, Ho, Hre) and at the same time aim to stand at minimum distance between each other.

**Result:** A nessecary condition for Electricity current to flow by moving and rotating Conductor is be the minimum distance between the three vectors (He,Ho,Hre).

The electron moves in such kind that phase the three longitudinal axes (He,Ho,Hre) in a maximum stable point (P4) of spiral. In this point has minimum potential energy because the transverse lines of the spiral or the longitudinal vectors (He,Ho,Hre) are in minimal distance between each other, where reaction of electron (Hre) tends to minimum (Figure 1f).

But (because of eccentricity) it will be sufficient to flow Electricity current large percentage of the electrons to be phased and directed with their active tails to one end of Conductor. This

requires that their body will be perpendicular to radial Magnetic field (Ho) (Figure 2b, Figure 3).

**Result:** A sufficient condition for Electricity current to flow by static way of Conductor is the electrons to arrange in Space their active (open) tails to one and the same end of Conductor ( with + potential). Thus electrons automatically turn their more powerful and convex part toward plus (+) potential of Conductor.

**Result:** A sufficient condition to flow Electricity Current is the bodies of electrons to be perpendicular to lines of Magnetic field (Ho).

Therefore the movement of electrons along a conductor included between 2 electric potentials requires phasing only along 1 axis (x-axis). But Electron induction in a Conductor crossing a perpendicular constant Magnetic field requires 3 axes phasing.

Therefore the simple directional movement of pulsating eccentric dipoles, known as Electric Current requires phasing on only 1 axis and does not require phasing on 3 axes.

**b) A sufficient condition for passive Modified Conductor with round cross section and radial internal Magnetic lines.**

If Modified Conductor has round cross section and in its center is posed one pole of Magnetic field then along plane of surface has to pose the other pole of Magnetic lines Therefore the Magnetic lines(Ho) are radial and internal. Thus the electrons will arrange their bodies perpendicular to these lines ,but with convex part (opened tails) to positive pole (+).

**Result:** A sufficient condition in Modified Conductor with round cross section to flow Electricity current is the electrons to pulsate in Time. Such construction means that the convex part of the eccentric will always be turned towards one positive end and during pulsation will emit a greater amplitude to the plus end than to the minus end of the conductor. It is enough that the plains of electrons to be oriented perpendicular to the conductor section (Figure3).

**Result:** A sufficient condition is the electrons to strike the internal radial Magnetic lines (Ho).

We saw already that In order for an Electric Current to flow along a Conductor it is necessary: the electrons to pulsate in Time, and (due to the eccentricity of their dipoles) the electrons to radiate in one direction a greater amplitude than in the opposite direction. At the same time (thanks to shocks in the lines of force of an Magnetic Field) the opened ends of the electrons to phase along the axis of the Conductor, and the planes of their bodies of transverse vortices to stand perpendicular to the radial Magnetic lines .At the same time they stand perpendicular to the round cross-section of Conductor [10].

If Modified Conductor contains radial Magnetic lines Ho then electrons will arrange their bodies perpendicular to these lines, but with convex part (opened tails) to positive pole (+) Such construction means that the convex part of the eccentric will always be turned towards one positive end and during pulsation

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will emit a greater amplitude to the plus end than to the minus end of the conductor. It is enough that the plains of electrons to be oriented perpendicular to the conductor section [10].

### 3. The behaviour of electron looks like of behaviour of reasonable particle

#### a) Review

It is well known that if a rotating body is struck from outside (depending on the direction of rotation) then the body bounces on its axis (up or down) according to Right Hand Rule [5]. In case of electron in electric Conductor - the electron in the Conductor is hit by the force line of an outer permanent Magnetic field ( $H_o$ ) [10].

**Let us repeat the participants:**  $H_o$  (outer permanent Magnetic field) and its perpendicular plane ( $x_o,y_o$ );  $H_e$  (inner own longitudinal vortex of the electron, Law1) and its perpendicular plane ( $x_e,y_e$ ); and reaction of electron  $H_{re}$  (local longitudinal vortex, Law1) and its perpendicular in plane of reaction ( $x_{re},y_{re}$ ) (Figure2a) [10].

**The action is as follows:** The electron is situated in plane ( $x_e,y_e$ ) with perpendicular vector ( $H_e$ ) (Law1). The Manetic force line ( $H_o$ ) hit electron perpendicular and generates a decelerating transverse vortex of reaction (Law 5) from outside-in, which forms the plane of the electron reaction ( $x_{re},y_{re}$ ). This plane of reaction ( $x_{re},y_{re}$ ) generates perpendicular vector of reaction ( $H_{re}$ ) (Law1). It ( $H_e$ ) makes an angle in 3D ( $\alpha_1$ ) to own vector of of electron ( $H_e$ ). This vector of reaction ( $H_{re}$ ) is sumed ( $H_{sum}$ ) as vector to own vector of of electron ( $H_e$ ) ( $H_{sum} = H_{re} + H_e$ ). The vector  $H_{sum}$  rotaitis the electron that it to get stand perpendicular to  $H_o$  (Figure 2a). This continue until this outer line ( $H_o$ ) becomes unidirectional and parallel to vector of reaction ( $H_{re}$ ) and becomes unidirectional and parallel to own perpendicular vector of electron ( $H_e$ ) ( $H_{re} \parallel H_e \parallel H_o$ ) (Figure 1f). This means that in this position vector of reaction ( $H_{re}$ ) will aim to minimum.

At the same time the electron rotates and searches the this point of contact ( $P_4$ ) where the distance between ( $H_o$ ) and ( $H_{re}$ ) is minimal (Figure1f, $P_4$ ). In this point the Potential energy is minimal.

#### Let us repeat the conditions:

**The necessary condition in Induction by moving** and rotation is the electrons to phase 3 vectors ( $H_{re} \parallel H_e \parallel H_o$ ) and to find the point ( $P_4$ ) with min distance, and min potential energy (Figure1f, $P_4$ ). So we convince ourselves that this necessary condition of Induction by moving and rotation of Conductor is very heavy and strict [10].

**The necessary condition in Induction by statically mode** is the electrons to phase their convex parts to one and the same end along 1 coordinate (x-axis of Conductor) (Figure 2b). There is not a condition for unidirectionality and parallelity of 3 vectors ( $H_o, H_e, H_{re}$ ), but condition to phase only along 1 vector. Thus own perpendicular vector of electrons ( $H_e$ ) can point to different directions while the electron planes ( $x_e, y_e$ ) are perpendicular to cross section of Conductor [10].

**For example:** At point  $P_o$  the external shock is  $H_o$  and the reaction  $H_{re}$  not parallel to  $H_o$  and makes an angle to  $H_e$ . Therefore  $H_{re}$  will rotate the electron from down to up. At point  $P_5$  the external shock is  $H_o$  and the reaction  $H_{re}$  not parallel to  $H_o$  and makes an angle to  $H_e$ . Thus  $H_{re}$  will rotate the electron from up to down. At point  $P_4$ , the magnetic line is  $H_o$ , reaction  $H_{re}$  and the axis of electron  $H_e$  are parallel each other and stand at minimal distance from each other. So electron is in stable point and it will not rotate to nowhere (Figure1f) [10].

#### b) The reason the electron to react like resonable subject

The reason the electron to react in this way is that it represents an open eccentric vortex with decelerating transverce vortex moving from out to inside. Electron react to the external shocks of the external Magnetic field ( $H_o$ ) by searching the most stable position in Space with lowest Potential Energy. It finds the stable position in 3D by rotating its body to this place where Point of hit ( $P_4$ ) is closest to Gravity center where the coils of spiral are closest to each other. Thus Point of hit ( $P_i$ ) coincides with the point of minimum potential energy ( $P_4$ ) (Figure 1f, $P_4$ ).

**Conclusion: Reflex reaction.** This reaction of electron get closer to response of the the living thing and any outside observer would think that this elementary particle has some kind of primary intelligence.

Finally, in order, but not in importance, the phenomenon of Induction would not be possible if the internal structure of electron were not exactly such an open vortex body, which is described by the new axioms and laws. Therefore, exactly the presence of the phenomenon of induction is evidence of precisely this internal structure of the electron.

**Conclusion: Proof of the truth.** The existence of the phenomenon of Induction is proof of the truth for internal structure of electron, explained by the new Axioms and Laws.

### 4. More detailed about the Modified Conductor with round cross-section

#### a) Review

For engineers is need for them use the secret of Induction, according new Axioms and Laws. The reason is that the necesity conditions by New Axioms and Laws are uch more weakly in comparison of the same by the Classic Theory.

**For comparison:** The Classic Theory requires moving and rotating to cross the Conductor by outer Magnetic lines ( $H_o$ ) (in Space). But Theory of new Axioms and Laws requires only to cross internal Magnetic lines ( $H_o$ ) only by natural pulsating of electrons (in Time). That is why the constructors are forced to invent a variant of Modified Conductor.

**Conclusion:** The necesity conditions by New Axioms and Laws are much more weakly in comparison of the same by the Classic Theory.

This weakly conditions permit the constructors to simlify the generator. This happens as make a variant of Modified Conductor.

### b) Modified Conductor with round cross section

A variant of Modified Conductor is a Conductor with round cross section. It has very specially installed dense grid of internal lines of a permanent internal Magnetic field ( $H_0$ ). For example the North Pole can be in center along the x-axis of Conductor but the South Pole has to be along the plane of periphery of Conductor. This construction makes Magnetic lines radial from center to periphery.

As a result the free electrons (due to the fact that they are connected with their respective pulsating protons, Axiom 2) will pulsate and will hit these lines from inside.

Thus the pulsating electrons (due to the fact that their bodies are eccentric dipoles, Axiom 1) will emit Electricity wave to one direction (to (+) potential) with bigger amplitude than to the opposite direction (to (-) potential). At the same time the

plane of electrons will stay perpendicular to the cross section of Modified Conductor [10].

**Conclusion:** The pulsating in Time and the eccentricity of electrons are more than enough to get an Electricity Voltage between the two ends of the Modified Conductor with radial internal Magnetic lines.

Designers have to create a Modified Conductor with two parts. The modified conductor with round cross-section is described in Figure 3. The North pole of Magnetic field is placed in the center of the Modified Conductor along its axis. Thus all the Magnetic lines ( $H_0$ ) will come out radially from there. On the surface of the Conductor, there will be a dense network of lines. On the surface the dense network will form the South pole of Magnetic field ( $H_0$ ), where the radial Magnetic lines enter.

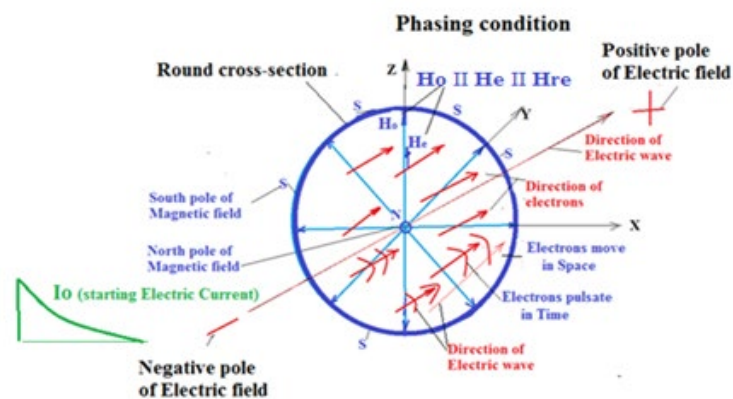


Figure 3: A Modified Conductor with installed inside of the round cross-section the Magnetic lines ( $H_0$ ).

### c) Mode of operation of Modified Conductor with round cross section.

**First action:** At first, is applied a starting impulse of Electric Current ( $I_0$ ). Its magnitude and duration are specified by the material composition and electrical resistance. It is better its first front of impulse to be steep, with maximum acceleration and amplitude. But the its back front - to be sloping and with longer duration (or exponential). As a result, after the Electric Current ( $I_0$ ) is started, then the majority of the electrons are phased in the direction of positive (+) potential of the Conductor. In more detail, this means that the dipoles of the electrons get stand perpendicular to the round cross-section of the Conductor. The free inputs (tails) of electrons point to the Positive Pole (+) and is powered by it. In this way electrons stand so, that during their pulsating in Time, their most part of their eccentric (convex part) point to the Positive Pole, but the less part of their eccentric (flattened part) point to the Negative pole. Therefore when the electrons pulse, they emit a pulse with a higher amplitude towards the Positive Pole than the Negative Pole (Figure 2b, Figure 3).

#### The reason is the eccentricity of pulsating in Time electron.

The bigger and convex part of the eccentric electron emits towards the Positive Pole a pulse with a bigger amplitude, the smaller and flattened part of the eccentric electron to emit towards the Negative Pole a pulse with a smaller amplitude. Therefore

when pulsating, the electrons emit an internal Electricity wave towards the Positive Pole of the Conductor's power supply. This internal Wave is result from difference of amplitudes to positive (+) and negative (-) ends. Or the internal Electric wave is a result of subtraction of the less wave (to negative pole) from the bigger wave (to positive pole) [10].

And the opposite wave, called outer Electricity Current, moves along the surface of the Conductor in the opposite direction - from the Positive to the Negative Pole of the Conductor's power supply.

During some Time interval a charging Electric Current ( $I_0$ ) flows. The length of Time required to initially charge the Electric Current ( $I_0$ ) depends on material of Conductor and the amplitude of starting impulse (Figure 3). Thus majority of the electrons phase in the direction of length the Modified Conductor (by 1x - dimensionality).

**Second action:** Then the charging current can be stopped. Because the electrons ever have been arranged in Space, the electrons continue pulsation in Time. During pulsation (shrinking to minimum radius and expanding to a maximum radius) the electrons hit the Magnetic Lines and are self-phased. Thus they maintain the magnitude of internal the Electric wave and also the magnitude of external Electricity Current.

In more detail, this happens as follows :The first phase is the phase of contraction, in which own Magnetic vector (He) in the center of the electron is maximum (Law 1). And this own vector (He) stay phased (stay parallel and unidirectional ) with the Magnetic vector (Ho) of the external magnetic field (He II Ho). The second phase is the phase of maximum expansion in which the electron strike from the outside the Magnetic line and rotates its body (because Hre) so that the distance (D) from the outer point of impact to the Gravity Center of the electron to be a minimal ( $D(Ho - Hre) = \min$ ) (Figure 1f, Figure 3).

Because the internal Magnetic field (Ho) consists of radial lines, then the surface of Conductor (for example) is the South Pole, and the central line - it is the North Pole (Figure 3). Thus the direction of the force lines (Ho) (for example) is from center to surface of Conductor. After Electrons are arranged in Space, electrons continue to pulsate in Time. During pulsation (shrinking to minimum and expanding to a maximum diameter) the electrons hit the Magnetic Lines and are self- phased (He II Ho while  $Hre=0$ ). The electrons are phased by standing perpendicular to the lines (Ho). And at the same they get perpendicular also to the cross-section of the round Modified Conductor (Figure 3).

**Conclusion:** Because of hits to internal Magnetic lines (Ho) the pulsating in Time electrons maintain for a very long Time the magnitude of internal the Electric wave and also the magnitude of external Electricity Current.

## 5. Advantages of the Modified Conductor with Round Cross Section

### a) The longest length of Time of storage in Modified Conductor with round cross section

The length of Time in which the Modified Conductor will maintain the magnitude of the initial Electric Current depends primarily on the thickness and density of the internal Magnetic lines (Ho). But due to the fact that in the center the radial lines are closer to each other and their density is bigger the number of pulsating electrons in the center will be greater than in the periphery. The internal Electric wave in the center has a greater density and amplitude than towards the periphery (below the surface) of the Modified Conductor.

### Result: The internal Electric wave in the center has maximal density.

From this fact, it can be expected that right (under the surface of the Modified Conductor) at periphery the internal Electric wave will tend to zero. Consequently, in the opposite direction (above the upper surface) of the Modified Conductor the outer Electric current will also tend to zero.

**Result:** The outer Electric current to opposite direction has minimal density and tends to zero.

**For comparison:** In an ordinary Conductor, the amount of electrons moving along all the longitudinal lines of the Conductor is the same .But those in the center experience less frictional resistance in the surface of the wire than those in the periphery. Therefore, the layers in the periphery will emit the transverse vortices (Law 5) swirl in the direction opposite to the

original movement. Thus they form an external Electric wave in the opposite direction called Electric Current.

**Conclusion:** For very long time the pulsating electrons which hit toward radial internal Magnetic lines (Ho) maintain in center a maximal internal Electric wave and a minimal external Electricity Current in opposite direction.

### b) The Modified Conductor with round cross section plays a role of Superconductor.

In the version of a Modified Conductor with a round cross-section, there are a radial arrangement of the internal Magnetic lines. Therefore, towards the center, the density of the Magnetic lines is much greater and the distance between them is much smaller than towards the periphery. This is the reason that in the center more numbers of electrons have a chance to hit the Magnetic lines than in the periphery. Thus in the center the Electric wave is more powerful than in the periphery. Because of more density, in the center the electrons will experience greater resistance than in the periphery. Therefore in the center the Electric wave will have lower speed than in the periphery. This means that in the periphery the Electric wave is weak but faster and arrives in time first ( $t_1$ ). Towards the center the Electric wave is much powerful but slower and arrives in time last ( $t_n$ ). This is the reason, to appear a Reverse wave (Back wave) from the periphery ( $t_1$ ) to the center ( $t_n$ ) in the opposite direction of the Electric wave which is named an Electric Current.

**Result:** A Reverse wave (Back wave) appears from the periphery (in first time  $t_1$ ) to the center (in last time  $t_n$ ) in the opposite direction of the Electric wave which is named an Electric Current The reason is that in the difference in the density of the radial Magnetic lines (Ho) of force. In the center they are much denser, and in the periphery they are much more dispersed.

**Conclusion:** The Modified Conductor with a round cross-section plays the role of a Superconductor. This option permit this Modified Conductor not only to generate and store the Electricity Current, but also accumulate it.

### c) Energy losses tends to zero.

Energy losses by Electricity Current along external surface of the Modified Conductor tends to zero. We saw that the current density in the center is greater than the current density in the periphery. The reason is that the Magnetic field lines are radial and in the center their density is greater than in the periphery. This fact directly affects the number of strokes of prearranged in Space and continuously pulsating electrons in Time. This means that in the center of the Modified Conductor the number of hits on continuously pulsating electrons will be greater than in the periphery.

We make sure before that the internal Electrical Wave has maximal amplitude in the center of Conductor (point 5a) Thus, an internal Electric wave with maximum amplitude is obtained in the center. In the periphery an internal Electric wave (under the surface of the Conductor) is obtained with a minimum amplitude tending to zero. Therefore, in the opposite direction, the Electric wave (above the surface of the Conductor) called

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Electric Current, will also tend to zero.

We make sure before that the external Electrical Wave called Electricity Current has almost zero amplitude in opposite direction (point 5a). This is a great advantage, because the energy losses outside the Modified Conductor will also tend to zero. This fact will help to preserve the initial arrangement of the electrons and, accordingly, to preserve the Electric Current for a longer time.

**Conclusion:** The Modified Conductor with round cross section mimics a lossless battery.

**Summary:** The Modified Conductor with round cross section imitates a generator of Electricity Current and Voltage and imitates an Electric battery with minimal losses that can store energy for a very long period of time on the principle of a Superconductivity.

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