



A New Gravitational Model of the Solar System According the Theory of New Axioms and Laws

Valentina Markova Kirilova*

Bulgarian Academy of Sciences, Bulgaria

***Corresponding Author:** Valentina Markova Kirilova, Bulgarian Academy of Sciences, Bulgaria.

Received: February 17, 2023

Published: March 10, 2023

© All rights are reserved by **Valentina Markova Kirilova.**

Abstract

The current science of the Earth is a complex and unites almost all known basic sciences. But nowadays the modern requirements for this complex science become much higher than her ability to provide answers and solutions. The reason is that, because of due to insufficient practical basis, the science of the Earth can not show the causes and driving forces for the phenomena in it.

In this work, the author offers his Theory by new axioms and laws for explanation of these phenomena. This Theory introduces a new complex approach to motions in celestial mechanics.

It replaces Classical Field Theory, which is based on the Classical Axiom of motion in a closed circle at constant velocity, with an extended Field Theory that describes motion in an open vortex at variable velocity. Even more -this Theory introduce the transverse and longitudinal vortices which can be accelerating or decelerating.

On this new base the author describes a new algorithm for generating the planet Earth. For example: the decelerating primary transverse vortices form at periphery hot toroid, but accelerating longitudinal vortex forms in center cool core of Earth. It is also shown the links of Earth to inner and outer planets in the solar system, its internal composition, the forces that move it around its axis and in orbit around the Sun, the gravity, the magnetism, etc.

Finally as a result of this new approach, the author outlines the influence of changes in the Earth's structure and the anthropogenic factor on the Earth's climate.

Keywords: Earth; Climate; Sun; Gravity

Introduction

The classic axiom

The classic axiom in the Theory of the Electromagnetic Field certifies Maxwell's laws (1864). It postulates that the movement of an electric vector E in a closed loop is evenly:

$$\text{div}(\text{rot } E) = 0, \quad \text{-----} 1$$

Where (rot E) is the movement of the vector E in a closed loop; div (rot E) is the divergence (div) of the vector E during its movement in a closed loop (rot E); the movement of the vector E in a closed loop (rot E) with zero divergence (variation) of the vector E is equivalent to evenly movement or to movement with constant velocity (Figure 1a) [1].

The defect of the Classic axiom (1) is that it does not describe movements in an open loop or a vortex and movements with a non-constant or variable velocity V.

The New Axiom 1

The new axiom describes an open loop movement (Figure 1b).

Axiom 1. The movement of vector E along an open loop is unevenly $\text{div}(\text{rot } E) \neq 0$, or velocity is variable:
 $\text{div}(\text{rot } E) \neq 0, \quad \text{-----} 2$

The movement in open loop can be accelerating or decelerating movement in plane 2D or in volume 3D (Figure 1c, d): $\text{div}(\text{Vot}E) \neq 0$ in2D, $\text{div}(\text{Vot}H) \neq 0$ in3D; where H is perpendicular to E.

$$\text{div}(\text{VorE}) < 0, \text{div}(\text{VorE}) > 0; \text{div}(\text{VorH}) < 0; \text{div}(\text{VorH}) > 0$$

The new Axiom 2

The vector E is not a simple vector but it is a complex vector with real and imaginary part. This is the reason to form pair of complimentary objects in two mutual opposite directions.

Axiom 2. A pair of complementary vortices forms a System in plane (2D) or in volume (3D) ---- 3.

For example especially for 2D, the first pair is in straight direction: the amplitude (A) is reason and velocity (V) is result and the velocity (V) is reason and amplitude (A) is result:

$$(E_1 = A + iV, E_2 = V + iA).$$

They exist at the same time.

The second pair is in the opposite direction: amplitude (-A) is reason but the velocity (-V) is the result, and the velocity (-V) is reason and the amplitude (A) is the result:

$$(-E_1 = -A - iV, -E_2 = -V - iA).$$

They exists at the same time as well (Figure 1e, f).

Law 1

The open transverse vortex (E_{2D}) generates (inward or outward) an open longitudinal vortex (H_{3D}) in its center through a cross-longitudinal transformation Δ1:

$$\text{Vor}(E_{2D}) \Rightarrow -- \text{Vor}(H_{3D}), \text{-----}(4)$$

Where Vor (for Vortex, meaning an unevenly vortex) replaces rot (meaning closed loop). The cross vortex in 2D (E_{2D}) continues its development in 3D as a longitudinal vortex (H_{3D}) (Figure 1g).

As an analogy with the planets: more of the inner planets looks like electrons

Result

The first type of electron (acc (e-)): the electron is near the center and has accelerating input transverse vortex (E2D+) inward. It generates a decelerating very powerful longitudinal vortex (H3D-) upward. The inner electron look likes to a little toroid. As an analogy: the innermost planet. Mercury look likes to a dense electron

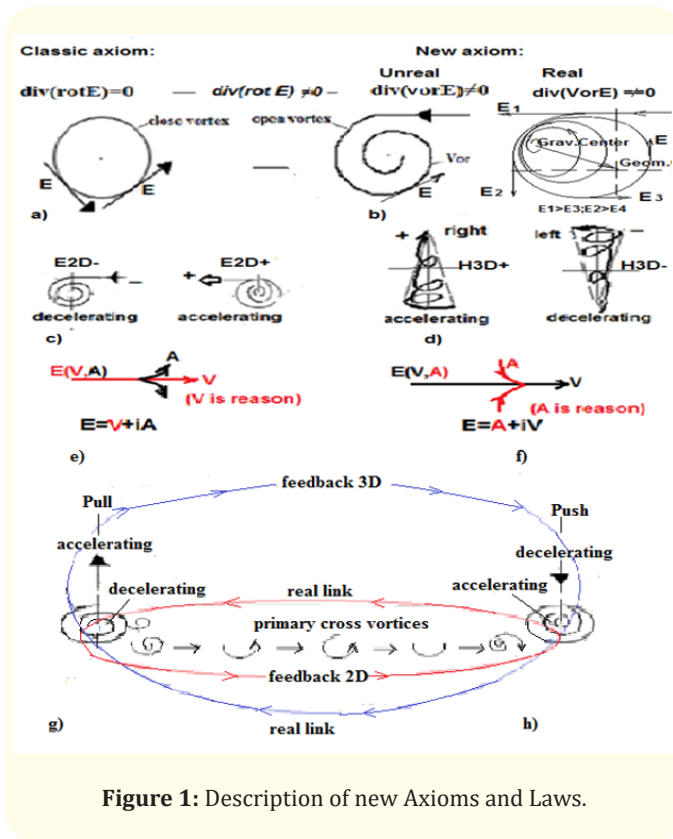


Figure 1: Description of new Axioms and Laws.

(acc (e-) or to a little dense toroid. It has an accelerating (in speed), powerful (in amplitude) but short in time input vortex (E2D+) inward and generates a decelerating and very powerful longitudinal vortex (H3D-) upward.

Result

A second type of electron (dec (e-)): the electron is at periphery of the atom and has more powerful decelerating transverse vortex (E2D-) inward. It generates an accelerating longitudinal, very weak vortex upward (H3D+). Remark: when electron is free (out of atom) (dec (e-)), the transverse vortex (E2D-) is interrupted and the free electron is connected only by longitudinal vortex. The outer electron look likes to bloated toroid. As an analogy: more distant planet. Earth look likes to a bloated electron (dec (e-) or to a bloated toroid. Earth receive a more powerful (in amplitude) decelerating transverse vortex (E2D-) from the Sun. The powerful decelerating transverse vortex pushes from Sun to the center of Earth and generates very accelerating longitudinal (H3D+) vortex upward. The second analogy: the neighboring planet. Venus look likes to a

bloated positron (dec (p -) or to a strange bloated toroid. Sun pulls a decelerating transverse vortex (E2D-) from inward of Venus. It generates and pulls longitudinal accelerating (H3D+) vortex from outward to inward. Remark: the transverse decelerating vortex from Venus to Sun is the reason Venus to look like to an outer (gas) planet. but it rotates in inverse direction (clockwise).

Law 2

The open longitudinal vortex (H_{3D}) generates (inward or outward) an open transverse vortex (E_{2D}) in its center through a longitudinal-cross transformation Δ2:

$$\text{Vor (H}_{3D}) \Rightarrow -- \text{Vor (E}_{2D}) \quad \Delta 2 \quad \text{-----}(5)$$

As an analogy with the planets: more of outer planets looks like protons

Result

The first type of proton (acc (e-): the proton is near the center and receives accelerating input longitudinal vortex (H3D+) from up to inward. It generates a decelerating transverse vortex (E2D-) from in to outward. The inner proton look likes to a little sphere. As an analogy: the more outer planet (Figure 1h). Uranus look likes to a little proton (acc (e-) or to a less sphere. It receives an accelerating (in speed) input longitudinal vortex (H3D+) from space to downward and generates a decelerating but powerful (in amplitude) transverse vortex (E2D-) from in to outward.

Result

A second type of proton (dec (p+)): the proton is at periphery of the atom and receive very powerful decelerating longitudinal vortex (H3D-) from out to inward. It generates an accelerating transverse, vortex (E2D+) from in to outward. This proton looks like to a bloated sphere. As an analogy: more close from the outers planets. Planet Jupiter look likes to a bloated proton (dec (p+) or to a bloated sphere). Jupiter receive a very powerful (in amplitude) decelerating longitudinal vortex (H3D-) from the space up - inward. It generates transverse accelerating (in speed) (E2D+) vortex from in to outward. Remark: these transverse accelerating vortices outwards stops acceleration (due to the friction) and continues as transverse decelerating vortices. At the end they coil and generate toroids in the form of a satellite (electrons) of Jupiter (proton). The second analogy: the more distant neighboring planet. Saturn look likes to a bloated antiproton (acc (p -) or to a strange bloated sphere with rings. A very fast accelerating longitudinal vortex (H3D +) is

pulled from Saturn to the space in direction from inward to out. It generates and pulls transverse decelerating but very powerful (in amplitude) transverse (E2D-) vortices from outward to inward. Remark: this transverse decelerating vortices from out to in out-in form many ice rings around Saturn.

Law 3

Accelerating and decelerating vortex is going by internal logic as a nonparametric process through Positive Feedback.

Result

The velocity increases and decreases at the expense of redistribution of speed and mass. For example the accelerating vortex sucks the primary transverse vortices and their mass are added in portions (quanta) to the initial mass of the accelerating vortex. Thus the main accelerating vortex adds even more primary transverse vortices from outside. This is the reason to accelerate even more the main vortex and so on.

Result

Therefore the process is avalanched. The more the initial vortex accelerates, the more primary vortices it sucks in from the outside. This process ends with saturation. The level of saturation depends on the characteristics of the medium.

Result

The process of avalanche change of speed (accelerating or decelerating) occurs through Positive Feedback.

Result

The process is not managed from outside through input parameters (by man) but it is managed only by internal logic redistribution. This type internal logic describes so called Nonparametric process.

Law 4

For an uneven (accelerating or decelerating) vortex the product between current velocity (V_i) of uneven movement on one and the same current line and current amplitude (W_i) of its perpendicular cross vortices is a constant in every (i) step:

$$(V_i) \cdot (W_i) = \text{const. -----}6.$$

Where i = 0 ÷ ∞ is current point from step to step.

Result

The product $(V_{\downarrow}) \cdot (W_{\downarrow})$ is proportional to the current power (P_{\downarrow}) of the uneven vortex in current (i) step. The current power (P_{\downarrow}) of the uneven vortex is a constant in every (i) step.

Result

The product $(V_{-}) \cdot (W_{+})$ is proportional to the current power (P_{-}) of the decelerating vortex, product $(V_{+}) \cdot (W_{-})$ is proportional to the current power (P_{+}) of the accelerating vortex.

Result

When two accelerating vortices are close enough to each other they will attract and suck in. When two decelerating vortices are close enough they will repel each other.

Law 5

The deceleration vortex in 3D is described with a system of 4 equations in which: longitudinal velocity (V) decreases in (n) portions (ψ^n) times; the angular velocity (w) , the amplitude (W) and the number (N) of cross vortices increase in (n) portions (ψ^n) times: $I V^2 = V_0 (1 - V)$, 7.

$$I W^2 = W_0 (1 + W),$$

$$I w^2 = w_0 (1 + w)$$

$$I N^2 = N_0 (1 + N)$$

Where v_n, w_n are periodic roots with period n ; v_n, w_n are mutual orthogonal that fulfill the requirement for orthogonality: $v_n \cdot w_n = V_0 \cdot w_0, v_n \cdot \omega_n = V_0 \cdot W_0; n = 0 \div \infty$; the roots v_n, w_n and ω_n and n_n are expressed as: $v_n = (1/\psi^n) \cdot V_0, \omega_n = \psi^n \cdot W_0; w_n = \psi^n \cdot W_0, [n_n] = \psi^n \cdot N_0$; linear velocity V_0 is the starting value of V_n , amplitude of cross vortex W_0 is the starting value of ω_n , angular velocity w_0 is starting value of w_n , number N_0 is starting value of $n_n, [n_n]$ is the closest integer; ψ is a proportional that fulfills the requirement: $\psi - 1 / \psi = 1, \psi$ is known as golden ratio.

Result

A longitudinal decelerating vortex is invisible (because light wave diffracts around the thread of the vortex) and it transports energy more than matter.

Result

A decelerating vortex with a velocity (V) emits to the environment decelerating primary vortices with increasing amplitude (W) (because of sign + in second equation of system 7).

Result

In decelerating vortex, the amplitude (W) (radius of wheel) of emitted primary vortices increases in perpendicular direction and it is directed from the inside to the outside.

Result

Due to Rule of the Right Hand, the decelerating cross vortex forms left rotating wheels in every point. The wheel is perpendicular to the velocity (V) (left- counterclockwise when observer watches against the movement).

Result

Because of increasing of the angular velocity (w) and the number of primary cross vortices (N) in current time, the decelerating vortex in 3D forms right rotating spiral (right - clockwise when observer watches against the movement).

Result

Because of increasing of the amplitude (W) , the angular velocity (w) and the number of cross vortices (N) it forms decelerating, thickening and expanding right rotating Funnel in which: $W_{max}; w_{max}; N_{max}$.

Result

Two or more decelerating longitudinal Funnels repel each other and the reason is due to the emission of cross vortices from center to outside.

Law 6

The acceleration vortex in 3D is described with a system of 4 equations in which: longitudinal velocity (V) increases in (n) portions (ψ^n) times, the angular velocity (w) , the amplitude (W) and the number (N) of cross vortices decrease in (n) portions (ψ^n) times:

$$I V^2 = V_0 (1 + V), 8.$$

$$I W^2 = W_0 (1 - W),$$

$$I w^2 = w_0 (1 + w)$$

$$I N^2 = N_0 (1 + N)$$

Where v_n, w_n are periodic roots with period n ; v_n, w_n are mutual orthogonal that fulfill the requirement for orthogonality: $v_n \cdot w_n = V_0 \cdot w_0, v_n \cdot \omega_n = V_0 \cdot W_0; n = 0 \div \infty$; the roots v_n, w_n and ω_n and n_n are expressed as: $v_n = (\psi^n) \cdot V_0, \omega_n = (1/\psi^n) \cdot W_0, w_n = (1/\psi^n) \cdot W_0, n_n = (1/\psi^n) \cdot N_0$; linear velocity V_0 is the starting value of V_n , amplitude of cross

vortex W_0 is the starting value of ω_n , angular velocity w_0 is starting value of w_n , number N_0 is starting value of n_n ; ψ is a proportional that fulfills the requirement: $\psi - 1 / \psi = 1$, where ψ is golden ratio.

Result

The first positive root of the first equation is: $v_1 = \psi \cdot V_0 = 1,62 \cdot V_0$. The periodic roots of the first equation are obtained from the expression: $v^n = V_0 \cdot (v^{n-1} + v^{n-2})$. The first positive root of the second equation is: $w_1 = (1/\psi) \cdot W_0 = 0,62 \cdot W_0$. The periodic roots of the second equation are obtained from the expression: $w^{n-2} = W_0 \cdot (w^{n-1} - w^{n-1})$.

Result

A longitudinal accelerating vortex is invisible (because light wave diffracts around the thread of the vortex) and it transports energy more than matter.

Result

An accelerating vortex ($E_{2D}+$) with a velocity vector (V) sucks in accelerating vortices with decreasing amplitude (W) in perpendicular direction and inside -out (because of sign - in second equation of system 8).

Result

When velocity (V) increases, the amplitude (W) decreases so that at each step (n) the product: $P = (V +) \cdot (W -)$, or current power is a constant.

Result

The wheels of accelerating longitudinal vortices wind clockwise (+), but spiral of accelerating vortex wind counterclockwise (-).

Result

Because of the amplitude (W), angular velocity (w) and the number of cross vortices (N) decreases, is formed the accelerating, stretching, narrowing, left rotating Funnel in which: $W_{min}, w_{min}, N_{min}$.

Result

Accelerating longitudinal vortices form a Gravity Funnel like: the speediest vortex is inserted at the center (with the maximum lineal speed, the minimum number of coils and the maximum distance between wheels) the slower vortex with the more coils, longer way between wheels) is winding outside of the first and the slowest (with a minimum lineal speed, maximum number of coils

and a min. path between wheels) is winding at periphery of Funnel) [8].

Result

Two or several accelerating Gravity Funnels attract each other, due to the suction of cross vortices.

Law 7

A pair of open transverse vortices forms a resonant closed loop in 2D through: the real connection in one direction and through feedback link in opposite direction.

Result

This resonant pair conducts energy through the real connection and conducts matter through the feedback link by primary transverse vortices in 2D.

Law 8

A pair of open longitudinal vortices forms a resonant closed loop in 2D through: the real connection in one direction and through feedback link in opposite direction.

We know that in the plane of transverse vortices, which form orthogonal pair, are generated perpendicular longitudinal vortices (Law1). This perpendicular longitudinal vortices can form in perpendicular plane (2D) resonant closed circle.

Result

This perpendicular resonant circle is conducted energy through the real connection and matter through the feedback link by primary longitudinal vortices in 2D.

Consequence of Law 7 and Law 8

The resonant circle of transverse vortices in plane (2D) is perpendicular to resonant circle of longitudinal vortices in perpendicular plane (2D) and both of them together form volumetric resonance in volume (3D).

According the Classical Theory: The reason for Gravitation are distorted lines of force and deformed time-space

Classical theory of Field is based on a single Classical axiom. It states that the field moves at a constant speed and forms closed circles. At the basis of the Classical field theory is built the Classical

theory of Gravitation. It explain the Gravitation as the distortion of space [2,3].

This means that on the one side the larger bodies distort the space around them more, and smaller ones - less. On the other hand, it should be noted that the Space around the bodies is distorted namely in the form of a closed line. For example, Sun so maximum strong distorts the closed lines of force, that it attracts all the smaller bodies into orbits around it (including Earth) (Figure 1a). For its part, the Earth so stronger distorts the closed lines of force, that it attracts the Moon and keeps it in orbit around itself.

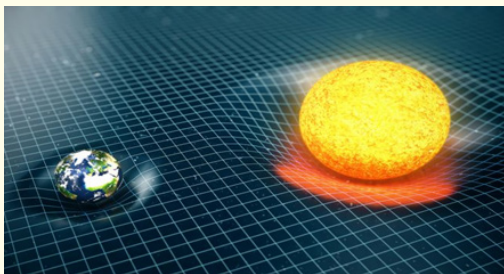


Figure 2: Gravitation as distortion of Space-Time.

In this article the author uses Extended field theory and applies 2 new Axioms and 8 new Laws. The first Extended axiom (new Axiom1) is an extension of the Classical axiom. It states that it exists such a field that moves with variable speed and therefore describes an open circle as open vortex. Even more - the Extended theory proves that the open vortices are reason and the closed circle as result [4-7].

However many questions remain, for example:

Whether the Space distortion phenomenon is a reason or is a result of another phenomenon. Which phenomenon exactly is the reason of the distortion of Space. Why planets at the same time rotate around the Sun and around their axes. Why the inner planets are solid and the outer ones are gaseous. Why the closest to the Sun planet (Mercury) has the minimum mass, maximum orbital velocity and minimum angular velocity but the more distant planet (Earth) has the maximum mass, minimum orbital velocity, maximum angular velocity and etc.

According the new Axioms and Laws: The Volume Resonator is a reason for Gravitation

Gravitation according new axioms and laws

It is well known the Classic scenario for the generation of the Earth from rock fragments. Her gravity is caused by the distortion of the space around (Figure 1).

In this work the author proposes a much more complex structure and system with new Laws. Here it will be shown that the planet Earth is part of a resonant system. On the one hand, as an inner planet, Earth forms a resonant system with the Sun. On the second hand Earth forms a resonant system with the third of the outer planets Uranium. In third hand the Earth forms resonant system with the Moon as its only satellite.

We will now trace the system of functions

The main signal arrives toward the Sun from Space (1). It is a complex twisted vortex, containing an wide range of frequencies with different floating phases and different floating amplitudes. In the Sun (2) this complex vortex falls into different volumetric resonators. Each volume resonator has specific diameter, height and volume. The Earth is the third planet after Mercury and Venus among the inner planets (Figure 3).

Therefore, for Earth, the signal resonates in the third resonator (3). Fortunately for Earth, this third resonator (3) has a maximum volume compared to the previous two and the next one (Mars). In this third resonator (3) resonates the widest band of low-frequency and high-frequency signal with maximum amplitude and maximum power. The third resonator in Sun emits transverse flow to Earth (Low2). The Earth occupies a privileged position among the inner planets in terms of mximum the quantity and quality of the generating (4) flow received from the Sun (Figure 3).

The Sun shoots the accelerating flow of vortices to Earth (not Figure). Due to friction, this flow of vortices stops and continues to move like decelerating (4). In its final phase of delay, this complex flow (4) stops and begins to wind into place forming the body of Earth (6) (Figure 3).

Because this vortex is decelerating, it emits primary vortices (9) from Earth to the inverse direction, or to Sun. In this way this primary transverse vortices can to close the circle.

Result

Without having real accelerating motion the so called Back wave demonstrates positive acceleration and rotates to left (Figure 3c).

The reason for this imaginary accelerating rotation is that the distance between (t_2-t_1) is less than (t_3-t_2) , which is much less than (t_4-t_3) (Figure 3c), etc.

$$(t_2-t_1) < (t_3-t_2) < (t_4-t_3) < \dots$$

Result

The latest wheel of input decelerating longitudinal funnel rotates to right but it generates accelerating transverse vortex to left or Back wave (if observer is opposite the axis).

The generating input transverse funnel to the planet Earth

The decelerating longitudinal funnel coming from space (1) generates in the third cylindrical resonator (2) inside the sphere of the Sun (3) accelerating transverse funnel (Law 2). This funnel radiates from the Sun and shoots transversely towards the direction of the Earth. Since it is a transverse funnel, it experiences resistance from the environment (Figure 4a) [8].

It was known that a longitudinal vortex don, t experience resistance from the middle of space [8].

The accelerating Funnel after a certain distance between Sun and Earth stops and continues as decelerating Funnel. This movement describes something like a parabola with a distance between the ends equal to D. This distance is equal to the distance of the Earth from the Sun [9].

Result**The distance between Sun and Earth is measured by distance D between beginning and end of parabola between Sun and Earth.**

The velocity of decelerating Funnel becomes zero at the place where the Earth is located. At this place the decelerating funnel (4) begins to wind up, to emit primary decelerating transverse vortices (emit hot) or to model the hot body of the Earth in the form of a toroid (5) (Figure 4a).

Result

The decelerating funnel (4), generates the inner body of the Earth as hot toroid.

Result

In center of toroid of Earth is generated an accelerating longitudinal vortex perpendicular to the toroid of body (Law 1).

The eccentricity in 2D and 3D

The toroid in this case is generated as eccentric, not as centric. This means that the toroid gets a new center called Gravitational center (2), which is different from its Geometric center (3) (Figure 3b).

Result

The toroid gets a new center Gravity center, which is shifted compared to the old one Geometric center.

The reason for this phenomenon is that the input vortex (1) has a decelerating movement. Since the input vortex is decelerating, the input vector of tangent velocity V_1 is much longer than its opposite vector V_3 . Therefore the whole spiral (1) is sucked towards the larger velocity V_1 i.e. upwards. The same phenomenon is observed for the other 2 opposite vectors: vector V_2 is larger than its opposite vector V_4 (Figure 3b). Therefore the delay spiral (1) is sucked towards the larger vector V_2 i.e. to the left: $V_1 > V_3$ (go to up); $V_2 > V_4$ (go to left) - (second quadrant).

Result

For decelerating vortex the Gravity center is displaced to second quadrant.

An open spiral in 2D can be a decelerating outside-in vortex but it can be a decelerating inside-out vortex. We saw that if the spiral is decelerating outside-in the Gravity center is in second quadrant and spiral forms body of toroid (Figure 4b).

An open spiral can be a decelerating or accelerating from outside-in or inside-out.

A non-uniform open vortex always moves its previous center to a new position or to a new center- Gravity center. An uneven open

vortex always moves its previous center to a new center: Gravity center Therefore the Geometric center (3) is moved to a new location called the Gravitational center (2) (Figure 4b).

Result

The Geometric center always moves to Gravity center.

It is important that the type of body that is generated also depends on the direction and dynamics of the input transverse vortex.

For example

If the vortex is decelerating outside-in the Gravity center will be in second quadrant and spiral will form some kind of toroid (electron, Earth). If the spiral is accelerating from the inside-out, the Center of Gravity will be in the first quadrant and the spiral forms very dense sphere (proton, Sun). If the spiral is accelerating from the outside-in the Center of Gravity will be in the third quadrant (antiproton, Moon). If the spiral is decelerating from the inside -outside the Center of Gravity will be in the fourth quadrant (positron, Venus).

Result

All variants of the movement of the vortex (decelerating accelerating, from inside to outside, from outside to inside) create specific bodies (toroid, sphere collapsed or inflated etc.).

Distance between the new Gravity center (3) and previous Geometric center (2) is called vector of eccentricity. This eccentricity vector determines the force of eccentricity F_{ecc} , which turns the ordinary centric toroid into an eccentric toroid or eccentric body (Figure 4b).

Result

Each non-uniform open vortex in 2D is transformed from a symmetric vortex (as wrong depicted) to an eccentric vortex through the force of eccentricity (F_{ecc}).

It is wrong to depict the spiral as a symmetrical body, i.e. as a centered spiral. We saw that an open vortex is always uneven and therefore eccentric (Law1) [4,5].

Result

An open vortex in 2D is always eccentric vortex.

An open spiral in 3D also shifts the axis of symmetry to a new location called the Gravitational Axis. The process is much more complicated but the result is the same. An unevenly spiral in 3D turns from a cylinder into a funnel. In this way the Gravitational Axis passes successively through all quadrants and secondarily describes a spiral, as the initial 3D funnel is rewound into a new funnel, and so on.

Result

An open vortex in 3D funnel is always eccentric funnel.

For example, if there is a standing wave of sequentially connected accelerating and decelerating 3D funnels, then with the accelerating funnel the Gravitational axis will pass through different points of the first quadrants of all turns of the spiral, and with the decelerating funnel - through the second quadrants. Therefore the Gravitational axes of the accelerating and decelerating funnel will make some angle and the standing wave will bend. That is way they will describe something like an arc twisted in 3D.

Result

A standing wave of two sequentially connected funnels with different accelerations (positively and negatively) describes an arc in space, twisted in 3D.

For example, in the case of successively connected accelerating and decelerating (4) funnels in the distance between the Sun and the Earth (D), the gravitational axes of these funnels will describe something like a parabola. The distance between the beginning and the end will be equal to D i.e. of the distance between the Sun and the Earth. Therefore the Gravitational axes of many accelerating and decelerating funnels will make some kind of spiral and the standing wave will rotate - it will describe something like an secondary spiral twisted in 3D (Figure 4a).

Result

A standing wave of several sequentially connected funnels with different accelerations (accelerating and decelerating) describes in space a secondary spiral, twisted in 3D.

The complex 3D structures

In this mosaic is important and the perpendicular vector according direction and dynamic. It is generated in the focus of the

Gravitational Center called Eye. There are many number of combinations in 3D of different types of movements and they create the complex of 3D structures (Figure 3b).

A wide variety of structures is created

For example Sun (proton) is generated as dense hot sphere with a cold hole in the middle. The sphere is hot, because there rotates the accelerating transverse vortex which emits big acceleration as heat. The hole is cold because through center itself passes the accelerating longitudinal vortex as a part of the longitudinal funnel. It sucks the heat inward towards itself and cools the center.

The longitudinal funnel coming from space outside-in, contain in center accelerating vortex and at periphery-decelerating vortex. The center of Sun is formed by the accelerating longitudinal vortex. The sphere of Sun is generated by the decelerating longitudinal vortex in 3D from outside-in. It pushes in 2D accelerating transverse vortex from inside-out (Law2).

Result

Sun (proton) is generated by the longitudinal funnel coming perpendicular from Space. It generates in form as dense hot sphere with a cold hole in the middle.

For example Mercury (electron) is generated as a little and very dense toroid. The toroid is generated by an accelerating transverse vortex in 2D coming from the first cylindrical resonator in Sun. This transverse vortex in direction.

Outside-in very fast rolls up and forms the toroid of body. After that the toroid generates and shoots a very power perpendicular decelerating longitudinal vortex in 3D inside-out (Law1). Because Mercury has tight toroid with minimum eccentricity, almost perpendicular and very powerful longitudinal axis, it moves along orbit very fast and rotates around axis very slowly.

Result

Mercury (electron) is generated as a little and very dense toroid with minimum eccentricity by an accelerating transverse vortex in 2D, coming from Sun.

For example Jupiter (proton) is generated as non-dense, gas sphere with a hole in the middle. The coming from Mercury perpendicular, very powerful longitudinal deceleration funnel in 3D

forms the sphere of Jupiter. The direction in 3D is from outside to center and it generates in 2D very powerful accelerating transverse vortices from inside-out (Law2). These powerful accelerating transverse vortices inside-out after some distance stops and turns to a decelerating transverse vortices. Thus they form big number satellites in different sizes around.

Result

Jupiter (proton) is generated as non-dense, gas sphere by powerful longitudinal decelerating funnel in 3D, coming from Mercury.

For example Earth (electron) is generated as biggest and dense toroid. From third resonator of Sun (which has maximum volume) comes a decelerating transverse vortex in 2D to Earth outside-in. It pushes in and rotates a decelerating vortex in body of toroid from periphery to center. Then is generated a longitudinal funnel perpendicular in 3D inside-out (Law1). The longitudinal accelerating vortex that passes through the center of the Earth forms the Earth's core as a cool core because it absorbs inward heat from the toroid of Earth. Passing through the core of Earth, the longitudinal accelerating vortex magnetizes it from the inside, creating poles North (below) and South (above) and form internal Magnetic field. The external lines of force are outside the Earth in the same direction and form external Magnetic field -North (below) and South (above). Longitudinal acceleration vortices that pass inside the 3D and generate the body toroid in 2D create the internal Gravitational field. Longitudinal decelerating vortices that fold and go back in the opposite direction (due to lack of acceleration) pass outside the toroid body. They create the external Gravitational field.

Attention: The internal and external Gravitational force lines are attached like the bow and string of a bow. When the string is shortened, the arc of the bow bends, when the string is lengthened, the arc of the bow straightens. Generally speaking, this is the high-frequency process of the Gravitational attraction of bodies to the Earth [10].

Result

Earth (electron) is generated as big and dense toroid from decelerating transverse vortex in 2D and coming from the third with maximum volume resonator of Sun outside-in.

For example Moon (proton) is formed as less dense sphere. Earth shoots inside-out in 3D a longitudinal decelerating vortex

that is part from periphery of the perpendicular longitudinal funnel (Law2). This decelerating longitudinal vortex strive to inter in perpendicular outside-inward the sphere of Moon in 3D. It pressing and rotating of this longitudinal vortex, it generates in 2D transverse acceleration vortex from inside-out (Law2). This is the reason why Moon appears a non-dense cool sphere.

Result

Moon (proton) is formed as little sphere by the longitudinal decelerating vortex, which is shot out from Earth, presses and penetrates in it body outside-in (Law2).

For example Uranus (proton) is formed as non-dense, gas sphere. The longitudinal accelerating vortex in 3D comes from center of Earth and enters outside-inward Uranium. It presses perpendicular in 3D the sphere in direction outside-in and rotating it generates in 2D decelerating transverse vortex from inside-out (Law2).

Result

Uranus (proton) is formed as gas sphere by the longitudinal accelerating vortex coming from Earth, which penetrates his body outside-in in 3D.

For example Venus (positron) is generated as rarefied, gas toroid. The Sun pulls the transverse decelerating vortex in 2D from inside-out of body of Venus. This transverse decelerating vortex causes pulling out an accelerating longitudinal vortex in 3D perpendicular from outside-in to body of Venus (Law1). It occurs that the accelerating longitudinal vortex in 3D is a generating vortex for the outer planet Saturn.

The accelerating longitudinal vortex is perpendicular to the body of Saturn in 3D and sucks it out inside-out as generates sucking the transverse decelerating vortices outside-in (Law2). This suction out in 3D an accelerating longitudinal vortex from output of Saturn (the second of outer planets) occurs from the center of Venus (the second of inner planets). Because of Venus is generated by the decelerating transverse vortex inside-out in 2D, the center of Eccentricity of Venus to be in her forth quadrant. This is the reason Venus has form as non-dense toroid and to look like gas planet. The projection of the force of eccentricity Fecc. in forth quadrant to y-axis has direction to right. That is why Venus rotates clockwise (to right) or in inverse direction the Earth.

Result

Venus (positron) is generated as gas toroid by transverse decelerating vortex which the Sun pulls in 2D from inside-out of Venus.

For example Saturn (antiproton) is generated as rarefied, gas sphere with rings around. As it was explained above The center of Venus (second inner planet) pulls in 3D from center of Saturn (second outer planet) a longitudinal accelerating vortex in perpendicular from inside-out (Law2). It generates in 2D decelerating transverse vortex which sucks from outside to the center. This is the reason why Saturn has many and various icy rings around him which are sucked in direction from out to in.

Result

Saturn (antiproton) is generated as gas sphere with rings around by the longitudinal accelerating vortex which Venus pulls in 3D from inside-out of Saturn.

Therefore a very large number of structures are obtained by combinations of different dynamics of different vortices in 2D and 3D. These structures become prototypes of known or still unknown objects. For example –some of the known objects are elementary particles, inner and outer planets.

Result

Based on the different dynamics, a very large number of prototype structures are obtained.

Many number of structures, but not all structures form orthogonal pairs.

Orthogonal pairs

For example, the Sun (first resonator) and Mercury form first orthogonal pair like a proton-electron. But decelerating longitudinal vortex shooting in 3D from Mercury (Low1) enters in first cylindrical resonator of Jupiter outside - inside in 3D. This decelerating longitudinal vortex generates the transverse vortices in 2D from inside to outside (Low2). This transverse vortices in 2D form many and various satellites (electrons) of Jupiter (proton) in form of toroid.

Therefore is formed a second orthogonal pair Mercury-Jupiter as electron-proton.. The third orthogonal pair is first resonator in-

side Jupiter and the first consecutive satellite around Jupiter. They form the third orthogonal pair.

Result

The first orthogonal pair is first resonator in Sun (proton) and Mercury (electron). The second orthogonal pair is Mercury (electron) and Jupiter (proton). The third orthogonal pair is first resonator in Jupiter and first satellite and so on.

Result

Jupiter (proton) looks like a gas sphere that emits vortices in 2D inside-out, just like Sun (proton).

For example, the Sun (second resonator)-Venus form the first orthogonal pair like an antiproton-positron. But on other hand the Venus generates Saturn. Sun suck in transverse decelerating vortex in 2D from inside of Venus. In turn a longitudinal accelerating perpendicular vortex in 3D sucks to the center of Venus (Low1). The longitudinal vortex which is sucked in by Venus sucks inside-out and Saturn in 3D. This accelerating longitudinal vortex in 3D is the reason to suck in from outside-in transverse decelerating vortices in 2D (Low2). These transverse decelerating vortices in direction from outside-in is the reason to suck in many ice rings around Saturn. The rings are icy because the acceleration is very big, but they are formed because the movement is the decelerating and leads to stopping and winding. Therefore Venus (positron) –Saturn (antiproton) form second orthogonal pair. But Saturn (antiproton) and satellites of Saturn (positrons) form third orthogonal pair.

Result

The first orthogonal pair is second resonator in Sun (antiproton) and Venus (positron). The second orthogonal pair is Venus (positron) and Saturn (antiproton). The third orthogonal pair is Saturn (antiproton) and satellites of Saturn (positrons).

Result

Satellites (electrons) of Jupiter (proton) have form of hard and hot toroid and they are similar to Earth (electron). But satellites (positrons) of Saturn (antiproton) should have form of gas and cool toroid and are not similar to Earth (electron).

Summary

For example, the Sun (third resonator)-Earth form an orthogonal pair like a proton-electron. But the Earth generates Uranus

by an accelerating longitudinal component from the longitudinal funnel which is shoot perpendicular in 3D from Earth to Uranus. Therefore they form a second orthogonal pair Earth-Uranus. On the other hand, the Earth (electron) generates and the Moon (proton). It occurs by a decelerating longitudinal component from longitudinal funnel which is shoot perpendicular in 3D from Earth to Moon. Therefore they form the third orthogonal pair Earth-Moon. That is why Moon looks like outer planet. According Axiom2 are described the following results.

Result

The corresponding resonators in Sun and internal planets form first orthogonal pair.

Result

The internal planets and corresponding external planets form the second orthogonal pair.

Result

The all planets and their corresponding satellites forms the third orthogonal pair.

Final results for Powers that rule the movement of the Earth Earth take part in 3 resonant circle

We saw above that the typical orthogonal structures are sphere (Sun) and toroid (Earth). For example in the Sun is created by a decelerating longitudinal outside-in funnel (1) that generates an accelerating transverse funnel inside-out (Low2). That is way the structure of the body is a gas sphere (3) with a hollow center. Due to friction, this accelerating transverse funnel begins to lag and turns to a decelerating funnel (4). Thus decelerating vortex of this generating funnel, gradually stops in place of Earth as winding up in the form of a toroid (5) and shoots from the center an accelerating longitudinal vortex (Law1). It is this the process that generates and forms the body of the Earth (5) (Figure 4b).

Therefore the third cylindrical resonator in Sun and the sphere of Earth form orthogonal pair (Axiom2). Because this orthogonal pair exchange matter and energy with each other at the same time then it forms a resonant system (Law7, Law8).

Result

The Sun and the Earth form first resonant circle.

On the other hand the toroid of Earth and the sphere of Moon form another orthogonal pair (Axiom2) that exchanges matter and energy and form resonant circle (Law7, Law8) as well.

Result

The Earth (electron) and Moon (proton) form second resonant circle.

The toroid of Earth (electron) forms an orthogonal pair with sphere of Uranus (proton). Both of them exchange matter and energy. Therefore the orthogonal pair that exchange matter and energy form and resonant circle.

Result

The Earth (electron) and Uranus (proton) form third resonant circle.

The eccentric Force (Fecc.) in Earth

In Figure 4b is shown the new center of Gravity (2) in second quadrant. It is drawn the vector of eccentricity force Fecc. from previous Geometric center to the new Gravity center.

This vector Fecc. is decomposed into a component by the x- coordinate F_x (4) and a component by the y-coordinate F_y (5). The eccentricity vector Fecc. is equal to the geometric sum of its x-axis projection and its y -axis projection: $Fecc = F_x + F_y$.

Its natural that the position of the new of Gravitation center (2) is floating and depends on the rotation of the Earth. This new Gravitation center (2) describes something similar an ellipse for time of one day.

Earth attracts Sun but Sun repels Earth

From Figure 4b is clear that the component over x -coordinate (4) is directed from the Earth towards the Sun and it pulls the Earth towards the Sun. It is equivalent of Gravitational attraction of the Earth is attracted to the Sun.

Result

F_x (the x-coordinate of Fecc.) is directed from the Earth towards the Sun and thus Earth is attracted to the Sun.

On other hand it is already well known the Sun generates the Earth by the accelerating longitudinal funnel and the decelerating

longitudinal funnel. The total double funnel has length D in direction from Sun to Earth and thus Sun repels Earth on distance D.

Result

Sun repels Earth on distance D equal to length of accelerating -decelerating funnel.

Rotation of earth around the sun to left

On the other hand, component (5) on the y-coordinate F_y is directed to the left and rotates the Earth in a left-handed orbit, if observer observes in opposite the axis of Earth (Figure 3b).

Result

F_y (the y-coordinate of Fecc.) is directed to left and it rotates the Earth in left orbit around Sun.

Because F_x is directed from the Earth to Sun then Earth attracts to the Sun. Simultaneously the Sun repels the Earth through the accelerator-deceleration funnel. And somewhere where this forces are balanced is positioned the orbit of Earth.

Result

The orbit of Earth is positioned in an ellipse where are balanced of this two forces: F_x from Earth to Sun and double funnel with length D from Sun to Earth.

Result

The Gravity between the Sun and the Earth includes both an attractive force and a repulsive force.

Rotation of earth around its axis to left

The decelerating vortex (4) generates the toroid (5) of Earth. The reason is that the decelerating vortex is wound from the outside-inside of the toroid and emits decelerating primary vortices (Law5) (Figure 4a).

The direction of these primary vortices (6) is also from outside-in. The most important thing is that these emitted primary vortices are curved to the left in direction from periphery to center of body of Earth. This is the reason that their Total Force to rotate the Earth around its axis to the left (if the observer is standing against the axis of the Earth)) [8,9] (Figure 4b).

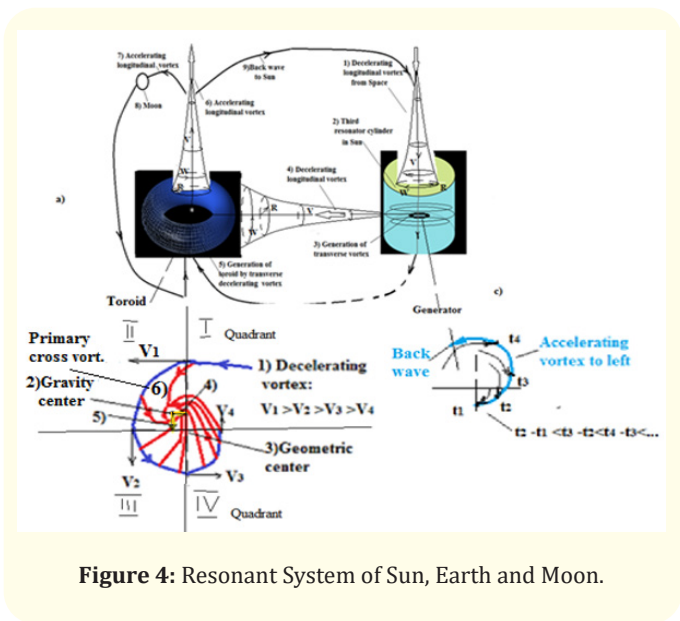


Figure 4: Resonant System of Sun, Earth and Moon.

Result

The reason the Earth to rotate around its axis to the left is that the decelerating input vortex emits (according Law5) the primary vortices that are curved to left in direction from periphery to center.

Amplitude of input funnel floats in a low frequency

According the author, the amplitude of the accelerating-decelerating input funnel floats (breathes) at a low frequency (LF) in time. Exactly this (LF) is the reason the Earth to move not in circle orbit, but in ellipse orbit [9].

Result

The low frequency (LF) floating of amplitude of the input signal in time is the reason the Earth’s orbit is not a circle, but an ellipse.

Kepler’s Law

Motion in an orbit is not uniform because the Earth must move in an ellipse, not in a circle. According Law3 and Law4 the movement along the ellipse is the reason the Earth to move with more velocity in straight part of the ellipse and to move with less velocity in curve part of this ellipse. Therefore Law3 and Law4 together confirm Kepler’s Law.

Result

The Earth moves with more velocity in straight part of the ellipse and moves with less velocity in curve part of this ellipse and it confirms Kepler’s Law.

Conclusions

Relationships

As it was shown an accelerating-decelerating funnel is emitted from the transverse plane of the third resonator of the Sun. It is a standing wave in form of parabola transversely between the Sun and the Earth, determining their location in space. It sets the distance between them equal to D. The nodes of standing wave are the Sun and the Earth, and the top is located between them. The top is not in the middle of the distance D but is closer to the Earth.

The Sun repels the Earth from itself, and does not attract it. Notice - it is not a question of attraction, but of repulsion. For comparison - only Venus is attracted by the Sun. On other hand an acceleration funnel is emitted through the axis of the Earth’s toroid to Uranus (Low1).

The funnel connects longitudinally the axes of Earth and Uranus. This funnel determines their location in space: the Earth is the third inner planet, and Uranus is the third outer planet. The distance between the heels of this parabola determines the distance between Earth and Uranus.

Three volumetric resonators

First volumetric resonator:

We saw that the accelerating-decelerating funnel emits from Sun to Earth. The accelerating part of funnel is radiated from the cross-section in 2D of the third resonator inside Sun. But namely the decelerating part of funnel generates the Earth’s toroid. The reason is that it emits decelerating primary vortices (Low5). On other hand this primary decelerating vortices are sucked in in inverse direction - from Earth to Sun. It forms so called Back wave transporting a matter in inverse direction in 2D. Thus if formed closed circle: from Sun to Earth (energy) and from Earth to Sun (matter). Both directions form a closed circle that transports energy and matter in Full resonance in 2D.

A decelerating –accelerating funnel returns matter from the Earth’s axis in 3D longitudinally to the Sun’s axis. At the same time, accelerating longitudinal primary vortices transfer energy from the Sun longitudinally to the Earth. The two directions form a closed circle that transports energy and matter in Full resonance in 3D.

Result

Between Sun and Earth forms the resonance circle in 2D which is perpendicular to the resonance circle in 3D. Between Sun and Earth two resonance circles (in 2D and in 3D) form First Full volumetric resonator.

Second volumetric resonator:

The acceleration funnel radiates matter and energy from Earth (electron) longitudinally to Uranus (proton).

At the input of the axis of Uranus the funnel enter as accelerating but at the exit of axis of Uranus the funnel comes out as decelerating. This decelerating longitudinal funnel emits the decelerating primary longitudinal vortices that transport energy inverse -from Uranus longitudinally in 3D to Earth. The two directions form a closed circle in 3D that transports energy and matter in full resonance.

Caution: Uranus emits in 2D transverse vortices, but they do not reach Earth due to the great distance. This is why Uranus does not form a closed circle in 2D. Therefore, Earth and Uranus form a resonant circle in 3D only (only Law8). This is the reason why Earth and Uranus do not form a Full resonance.

Result

Earth and Uranus does not form a resonant circle in 2D but they form a resonant circle in 3D only. Therefore Earth and Uranus do not form a Full resonance - only in 3D.

Third volumetric resonator

The Third volumetric resonator between the Earth (electron) and the Moon (proton) is obtained. The Earth generates Moon by longitudinal decelerating vortex. Earth transports energy in 3D to Moon. The Moon emits primary decelerating longitudinal vortices to Earth. The Earth suck these longitudinal vortices in 3D by output of her axis (South pole). Therefore Earth and Moon form closed circle in 3D which work in resonance (Law8).

On other hand Moon emits accelerating transverse vortices (Law2) to Earth in 2D. It is equivalent of emitting of energy from Moon to Earth. In turn, the Earth radiates decelerating primary vortices to Moon. It is equivalent of emitting of matter in 2D from Earth to Moon.

-Therefore Earth and Moon form closed circle in 2D which work in resonance (Law7). The closed loop in 2D is perpendicular to closed loop in 3D. Thus resonant circle in 2D is perpendicular to resonant circle in 3D. They both form volumetric resonator which work in Full resonance.

Result

Moon is formed as little sphere so it looks like to outer planet. Moon forms volumetric resonator with Earth and works in Full resonance (Law7, Law8).

Result

Sun (third resonator)-Earth form Full resonator, Earth-Uranus form Half resonator only in 3D, Earth-Moon form Full resonator as well.

The volumetric resonators are the reason, the distortion is result

The accelerating funnel that Sun shoots to the Earth is invisible funnel to the light’s rays. This funnel gradually becomes to decelerating funnel (due to friction) and at the place of Earth it starts to wind (roll up). The both phases of this funnel (accelerating and decelerating) are invisible. The reason, as explained above, is that solar (light) waves are transverse, but the vortex in the funnels is longitudinal. Thus, the solar waves diffract around the thread of the longitudinal vortex (involved in the longitudinal funnel), bypass and they continue in the same direction.

Result

An external observer or a conventional optical device cannot see these longitudinal funnels, which represent a connection between the Sun and the Earth and between Sun and the rest of the planets (inner and outer).

Since the Sun shoots an accelerating longitudinal funnel, the distance between the wheels is less around Sun (Law5). The distance between rings increases rapidly and the distance becomes

longer and longer the further from the Sun. Thus, the impression is created that the lines of force around Sun are closer together, or the Sun is located in a pit of lines of force.

Result

The impression that the Space around the Sun shrinks is a fact or this impression of Space distortion is true.

It is the result of a uneven longitudinal and transverse vortices which form accelerating and decelerating funnels. They take part in complex volume resonance between two active objects with orthogonal structures. They form Gravitational forces of attracting and repelling and exchange the energy and matter between these two active Gravitational bodies. Therefore this is the cause of Gravity but Space distortion is only result. On other hand the acceleration funnel launched by the Sun (due to friction) gradually begins to stop and continues to move towards the Earth, but it is as decelerating funnel. In the decelerating vortex (involved in the decelerating funnel) the distance between the wheels decreases with deceleration in the direction from the Sun to the Earth.

Result

The impression is that the Force lines become closer and more closer around the Earth and Earth is located in a Potential Pit of Force lines.

This is what creates the impression that Space is distorted around the Earth. Thus this impression of Space distortion is true.

Result

The Space distortion is only a result of a complex Volumetric resonance of Gravitational Forces between two gravitational bodies, but it is not the reason of Gravity.

Bibliography

1. Landau LD and EM Lifshitz. "The Classical Theory of Fields (Volume 2 of a Course of Theoretical Physics)". 4 Edition., Butterworth-Heinemann (1975).
2. Warren G Anderson. "Gravitational-Wave Physics and Astronomy: An Introduction to Theory, Experiment and Data Analysis". 1st Edition.
3. Sean Carroll. Something Deeply Hidden: Quantum Worlds and the Emergence of Spacetime Kindle Edition.

4. Markova V. "The other axioms (Monograph, Book 1)". Nautilus, Sofia, (2003).
5. Markova V. "The other axioms (Monograph, Book 2)". Nautilus, Sofia, (2005).
6. Markova V. "About the new axioms and laws". 5th International Conference on Theoretical and Applied Physics, Vienna, Austria, July 02-03 (2018).
7. Markova V. "New Axioms and Laws". *Advances in Theoretical and Computational Physics* 3.4 (2020): 254-258.
8. Markova V. "The Gravity Funnels, formed by the longitudinal vortices, according to the new Axioms and Laws". *Advances in Theoretical and Computational Physics* 4.1 (2022): 66-75.
9. Markova V. "Gravity Field (LF) in inner planets of Sun system described by theory of new axioms and laws". *Journal of Theoretical and Computational Physics* 1.2 (2022): 01-12.
10. Markova V. "Gravity Force (HF) on Planet Earth Described by Theory of New Axioms and Laws". *Journal of Theoretical and Computational Physics* 1.1 (2022): 01-07.