# Sun-Earth System and HF Sun's Impulses According to New Axioms and Laws 

Valentina Markova*<br>Bulgarian Academy of Sciences

*Corresponding Author
Bulgarian Academy of Sciences

Submitted: 2024, Feb 05; Accepted: 2024, Mar 20; Published: 2024, Apr 02

Citation: Markova, V. (2024). Sun-Earth System and HF Sun's Impulses According to New Axioms and Laws. Adv Theo Comp Phy, 7(2), 01-12.


#### Abstract

It is well known that the Classical field theory is based on 1 basic Axiom set by Maxwell (1864). This basic axiom describes such a field whose motion along a closed loop is at constant speed. It is an ideal foundation for describing an Electromagnetic Field, but it is not suitable for other more complex fields with variable speed and different accelerations.

The author has proposed a more general Theory named Extended Field, which consists of 2 Axioms and 8 Laws. New Axiom1 describes a structure of field with movement along open loop or open vortex with variable speed. New Axiom 2 describes two mutual orthogonal structures of fields, which work in resonance. Further on ,the 8 Laws of this new Theory leads to the following results: evenly movement is replaced with unevenly movement -decelerating movement or accelerating movement ; during its movement decelerating vortex emits primary free cross vortices, while accelerating vortices suck in of this same primary free cross vortices ; a transverse vortex in $2 D$ generates a longitudinal vortex in $3 D$ through a special transformation and vice versa-a longitudinal vortex in 3D through another special transformation generates the cross vortex in $2 D$ and so on.

According new Theory the Sun is generated by a longitudinal acceleration vortex from up to down (in3D) that forms an accelerating transverse vortex from center to periphery (in 2D) (Law2). The Earth is generated by a transverse decelerating vortex from periphery to center (in $2 D$ ) that forms an accelerating longitudinal vortex from center to upward (in3D) (Law1). According Axiom2 Sun and Earth are formed by mutual orthogonal structures (Law 1, Law2) of open vortices. According Law 8 the links between Sun and Earth are formed by two mutual orthogonal circles.

In previous articles by the same author, it was described how an accelerating (low frequency) LF Funnel is emitted from the Sun (Law2). When it begins to be delayed (due to the friction) in the form of a decelerating LF spiral, it winds up in a transverse spiral that generates the toroid of the Earth (Law1). The connection between the Sun and the Earth is made through LF frequency accelerating-delaying Funnel. It is noteworthy that an (high frequency) HF component in the form of an amplitude modulator is added to this LF spiral. Therefore, the Sun emits these HF pulses added to the LF spiral. These HF pulses form the gravitational envelope around the Earth. The reason is that HF pulses generate contracting and expanding arcs with a central axis equal to the axis of the Earth. These pulsating arcs create the individual gravitational field around the Earth

The purpose of this article is to describe another type of HF pulsations that are emitted not by generation of Earth (Lawl) but during the generation of the Sun (Law 2). The longitudinal Funnel coming from space contains an LF decelerating spiral and amplitude modulated HF pulses. This decelerating spiral (due to resistance) starts to wind transversely and starts to generate the sphere of the Sun. During this action, the HF pulses from the transverse spiral are emitted at high speed outwards. It is these HF pulses and rays that are the subject of research in this article.


## 1. Introduction

1.1. According new Axioms and Laws
a) A Classic Axiom

It is known that the Classic Field Theory is based by Maxwell's Laws (1864) and on a single Classic Axiom (Figure 1a) [1]. It states that: $\operatorname{div} \operatorname{rot} \mathrm{E}=0$, or $\Delta .(\Delta \mathrm{xE})=0$
1.

The previous studies attempt to expand the Classic Field Theory to a more general Theory of Extended Field. The author change this.

The Classic Axiom states that the movement of a vector E in an closed loop (div rot $\mathrm{E}=0$ ) is evenly (velocity is constant)
(Figure1a). The author change this Classic Axiom.
The new Axiom will state that the movement of a vector E in an open loop ( $\operatorname{div} \operatorname{rot} \mathrm{E} \neq 0$ ) or in an open vortex ( $\operatorname{div} \operatorname{Vor} \mathrm{E} \neq 0$ ) is unevenly (velocity is variable) ( Figure 1b,c,e).

## b) A New Axiom 1

Axiom 1: The motion of vector E with monotone-decreasing or monotone-increasing velocity is performed in an open loop (open vortex): 2.
$\operatorname{div}(\operatorname{Vot} \mathrm{E}) \neq 0$ for vector E in 2 D or $\operatorname{div}(\operatorname{Vot} \mathrm{H}) \neq 0$ for vector H in 3D.
$\operatorname{div}(\operatorname{Vor} \mathrm{E})>0$ or $\operatorname{div}(\operatorname{Vor} \mathrm{E})<0$ in 2 D , div $($ Vor H$)>0$ or div (Vor H) $<0$ for 3D.

The main result of Axiom 1 is that there have been 4 types of vortices : a cross vortex in 2D $\left(\mathrm{E}_{2 \mathrm{D}}\right)$ that can be accelerated $\left(\mathrm{E}_{2 \mathrm{D}}\right.$ + ) or decelerated ( $\mathrm{E}_{2 \mathrm{D}}-$ ) and a longitudinal vortex in 3D $\left(\mathrm{H}_{3 \mathrm{D}}\right)$ that can also be accelerated $\left(\mathrm{H}_{3 \mathrm{D}}+\right)$ or decelerated $\left(\mathrm{H}_{3 \mathrm{D}}-\right)$ [2,3].

We are accustomed to the wrong image of a spiral with a constant distance between the turns (Figure1a). But it is "unreal" spiral. Because if it is a spiral, it must be opened and eccentric. If there is no opened, then it is not a spiral, but it is a closed loop. The reason is in the acceleration (Figure1b).

Result: The Open Monotonically Varying Vortex Always Is Eccentric
For example, in "real" decelerating vortex E1> E3 and the

Geometric Center will aim to move to the larger vector E1 (up). In the same vortex E3>E4 and at the same time the Geometric Center will aim to move to the larger vector E3 (to the left). Therefore, the Geometric Center will move to a second quadrant or to the Gravity Center (Figure 1b) [3].

Result: There are Two Simultaneous Movements in Every Point of Open Vortex
At every (i) point $\mathrm{p}(\mathrm{i})$ of a decelerating cross vortex E there are two simultaneous movements: velocity vector ( -V ) and amplitude of the cross vortex (-W). The two simultaneous movements (V and W ) also exist at all points of the vortex. The cross-vortex $\left(\mathrm{E}_{2 \mathrm{D}}-\right.$ ) is transformed into a longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}+\right)$. This is accomplished through a specific operator $(\Delta 1)$ for cross-longitudinal transformation (Figure 1c).

## c) New Axiom 2

Axiom 2 : Two vortices of one complementary pair in one direction : $\mathrm{E}=+\mathrm{A}+\mathrm{iV} ; \mathrm{E}=+\mathrm{V}+\mathrm{iA}$, or two vortices of complementary pair in opposite direction : $\mathrm{E}=-\mathrm{A}-\mathrm{iV} ; \mathrm{E}=-\mathrm{V}$ - iA, exist simultaneously in Time and Space .

Result: Two Vortices (Objects) In One System Are Not Symmetrical But They Are Mutual Orthogonal
This means that if first generates transverse vortex as potential energy and consumes longitudinal vortex as kinetic energy(Figure2b), the second -consumes transverse vortex as potential energy and generates longitudinal vortex as kinetic energy (Figure2a) [ 3-5]

## Figure 1. The Classical Axiom is replaced by a New Axiom 1

Figure 1a) Classic Axiom as closed loop; Figure 1b) New Axiom as opened loop(vortex);
Figure 1c) Transverse vortices (decelerating and accelerating);
Figure1d) Longitudinal vortices (accelerating and decelerating);
Figure1e) Decelerating main vortex emits(Law5) decelerating primary vortices(to out);
Figure1f) Accelerating main vortex sucks (Law6)accelerating primary vortices (to in).


Result: Straight and inverse systems exist simultaneously in time as resonance system
Example for elementary particles -in figure 2 are described system proton (figure 2b) electron (figure 2a) and system antiproton (figure2d) and positron (figure2c). They exist simultaneously that ex changing energy and matter between them in resonance.

Example for Sun and planets: In Figure2 are described system of third resonator inside Sun (corresponding to Earth) (Figure 2b) and third planet Earth (Figure 2a) and system of second resonator inside Sun (corresponding to Venus) (Figure 2d) and second planet Venus (Figure 2c).

Result: The system of third resonator inside Sun (corresponding to Earth) and third planet Earth exists simultaneously with the system of second resonator inside Sun (corresponding to Venus) and second planet Venus.

The planet system demonstrates existing of these two mutual inverse links of the these mutual orthogonal objects. The planet system explains Axiom2 more clearly than the system of elementary particles.

## d) Law 1

Law 1: The open cross vortex (E2D) generates (inward or outward) an open longitudinal vortex (H3D) in its Gravity center through a cross-longitudinal transformation $\Delta 1$ :

$$
\operatorname{Vor}\left(\mathrm{E}_{2 \mathrm{D}}\right) \Rightarrow-\operatorname{Vor}\left(\mathrm{H}_{3 \mathrm{D}}\right),
$$

Where Vor (means an unevenly vortex) replaces rot (means a closed loop). The cross vortex in $2 \mathrm{D}\left(\mathrm{E}_{2 \mathrm{D}}\right)$ continues its development in 3D as a longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}\right)$ (Figure 2a), [4-6].

## Definitions

A decelerating transverse (cross) vortex ( $\mathrm{E}_{2 \mathrm{D}}{ }^{-}$) is a cross open $\operatorname{vortex}\left(\mathrm{E}_{2 \mathrm{D}}\right)$ for which $\operatorname{div}\left(\operatorname{Vor} \mathrm{E}_{2 \mathrm{D}}\right)<0$. A decelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}^{-}\right)$is a longitudinal open vortex (H3D) for which div $\left(\operatorname{Vor} \mathrm{H}_{3 \mathrm{D}}\right)<0$. Figure 2 b shows a decelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}-\right.$ ) inward.

An accelerating transverse vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right.$ )is a cross open vortex $(\mathrm{E}$ $2 \mathrm{D})$ for which $\operatorname{div}\left(\right.$ Vor $\left.\mathrm{E}_{2 \mathrm{D}}\right)>0$.An accelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}+\right)$ is a longitudinal open vortex $\left(\mathrm{H}_{3 \mathrm{D}}\right)$ for which div $\left(\right.$ Vor $\left.\mathrm{H}_{3 \mathrm{D}}\right)>0$.

Lawl a): An open decelerating cross-vortex ( $\mathrm{E}_{2 \mathrm{D}}{ }^{-}$) inward generates an open accelerating longitudinal vortex ( $\mathrm{H}_{3 \mathrm{D}}{ }^{+}$) outward. This action $\left(\mathrm{H}_{3 \mathrm{D}}{ }^{+}\right)$takes place from the center of
decelerating cross-vortex ( $\mathrm{E}_{2 \mathrm{D}}$ ) through a particular crosslongitudinal transformation $\Delta 1$-:

## $\Delta 1$ -

$$
\operatorname{Vor}\left(\mathrm{E}_{2 \mathrm{D}^{-}}\right)=>\operatorname{Vor}\left(\mathrm{H}_{3 \mathrm{D}}+\right) .
$$

The Law1 corresponds only to inside Gravity center (Figure 2a).
Results: (The Model of Periphery (Free) Electron)
It describes in 2D the model of electron as the decelerating inward vortex (dec (e-)) (Figure2e) in periphery of the chain of proton-electron (Figure 2b - Figure 2a). Every electron (dec(e-)) of this type is " expanded transverse vortex " that pulsates in time in 3D in two modes of - in and out. Surely, this type of electron rotates at outside orbits (orbitals). The free electrons have similar structure as well.

This type of electron $(\operatorname{dec}(\mathrm{e}-))$ is in periphery of a proton-electron system. It has decelerating transverse vortex $\left(\mathrm{E}_{2 \mathrm{D}}-\right)$ inward with big radius. In 3D electron generates an accelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}+\right)$ upward with less amplitude (Figure 2e).

## Result: (The Model of Periphery Planet)

It describes in 2D the model of planet as the decelerating inward vortex (dec (e-)) (Figure2e) in the chain of Sun-planet (Figure 2 b - Figure 2a). Every planet (dec(e-)) of this type is "expanded transverse vortex " that pulsates in time in 3D in two modes of - in and out. Surely this type of planet rotates at outside orbits (orbitals).

## Result: (The Model of Planet Earth)

In periphery of a Sun system is a planet Earth. It has decelerating transverse vortex ( $\mathrm{E}_{2 \mathrm{D}}{ }^{-}$) inward with big radius. In 3D planet generates an accelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}+\right.$ ) upward with less amplitude (Figure 2e).

Law 1b): An open accelerating cross vortex ( $\mathrm{E}_{2 \mathrm{D}}+$ ) inward generates an open decelerating longitudinal vortex ( $\mathrm{H}_{3 \mathrm{D}}{ }^{-}$) outward. This action $\left(\mathrm{H}_{3 \mathrm{D}}{ }^{-}\right)$takes place from the Gravity center of accelerating cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}{ }^{+}\right)$through a particular crosslongitudinal transformation $\Delta 1+$ :

$$
\Delta 1+
$$

$\operatorname{Vor}(\mathrm{E} 2 \mathrm{D}+)=>\operatorname{Vor}(\mathrm{H} 3 \mathrm{D}-)$.
$3 b$.

## Results: (An Electron in Inner Orbits)

The type of electron $(\operatorname{acc}(\mathrm{e}-))$ : when the electron is inside a proton-electron system(connected in the atom) has accelerating transverse vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right.$ ) inward with less radius .In 3D electron generates a decelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}-\right)$ upward with longer amplitude (Figure 2f).Therefore , because of accelerating inward transverse vortex this type of electron rotates in inner orbits [4].

Figure 2. Two Transformation Law1 and Law 2.
Options in Two Complementary Complex Objects: (e-;p+) and ( $\mathbf{e}+; \mathbf{p}-)$
Figure 2a) Model of electron; Figure 2b) Model of proton; Figure 2c) Model of positron; Figure 2d) Model of antiproton; Figure 2e) Model of periphery electrons or planets; Figure2f)Model of inner electrons or planets.


## Results: (A Planet in Inner Orbits)

The type of planet ( $\operatorname{acc}(\mathrm{e}-)$ ) is inside a Sun-planet system has accelerating transverse vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right.$ ) inward with less radius .In 3D the planet generates a decelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}-\right)$ upward with longer amplitude (Figure 2f).

## Result: (The Model of Planet Mercury)

Because of accelerating inward transverse vortex, the planet Mercury rotates in inner orbits. It has longer longitudinal vortex and very little transverse vortex as radius [4].

## e)Law2

Law 2: The open longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}\right)$ (inward or outward) generates an open cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}\right)$ in its Gravity center through a longitudinal-cross transformation $\Delta 2$ [4-6]:

$$
\stackrel{\Delta 2}{\text { Vor (H 3D) }} \stackrel{\text { P }}{ } \text {-- Vor (E 2D) }
$$

4. 

Law2 a): The open decelerating longitudinal vortex ( $\mathrm{H}_{3 \mathrm{D}}-$ ) downward generates an open accelerating cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right.$ ) outward .This action takes place in the center of accelerating cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right)$ through a particular longitudinal-cross transformation $\Delta 2-:$. $\Delta 2$ -

$$
\begin{equation*}
\operatorname{Vor}\left(\mathrm{H}_{3 \mathrm{D}}-\right)=>\operatorname{Vor}\left(\mathrm{E}_{2 \mathrm{D}}+\right) . \tag{4a.}
\end{equation*}
$$

## Results: (The Model of Periphery Proton)

This Consequence (4a) describes in 3D the model of proton in 2D.This means that the decelerating longitudinal vortex in 3D generates accelerating cross vortex in 2D (Figure2b) in the chain of periphery proton- periphery electron .Therefore the decelerating longitudinal vortex with less vector( in height ) in 3D generates accelerating cross vortex with big radius (in width)
in 2D (Figure2b) in the chain of periphery electron-periphery proton (Figure 2b - Figure 2a).
Results: (The Model of Outer Resonator in Sun)
According the description of periphery and outer proton, the outer resonator will have less vector in height and big vector in width (in radius).

Result: (The Model of Resonator of Earth as Periphery Planet)
The third resonator corresponding to the third planet Earth will has less size in height and bigger size in width.

What's more - it turns out that the width and height of the resonator on Earth are almost the same. In 3D, this third resonator has the appearance of a cube with maximum volume. For comparison - the resonator of Mercury has the appearance of an upright parallelepiped, and the resonator of Mars has the appearance of a lying parallelepiped (matchbox type). Both resonators have almost the same volume they have but very different energies in quality,

Result: (The Third Resonator Corresponding the Third Planet Earth Has Maximum Volume)
The fact that the third resonator inside the Sun, corresponding to the third planet Earth, has the maximum volume compared to the other resonator. This determines the privileged position of the Earth compared to the other planets.

## Result: (The Privileged Position of Planet Earth)

The maximum volume of resonator inside the Sun determines the privileged position of the Earth compared to the other planets. This means that the Earth receives from the Sun the maximum potential energy in the form of transverse vortices and maximum kinetic energy in the form of a longitudinal bundle of vortices

Law 2b): The open accelerating longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}+\right)$ downward generates an open decelerating cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}{ }^{-}\right.$ ) outward in its center through a special longitudinal-cross transformation $\Delta 2+$ : $\Delta 2+$

$$
\begin{equation*}
\operatorname{Vor}\left(\mathrm{H}_{3 \mathrm{D}}^{+}\right)=>\operatorname{Vor}\left(\mathrm{E}_{2 \mathrm{D}}^{-}\right) . \tag{4b.}
\end{equation*}
$$

Results: (The Model of Inner Proton)
The decelerating longitudinal vortex with longer vector (in height) in 3D generates accelerating cross vortex with less radius (in width) in 2D (Figure2b) in the chain of electronproton (Figure 2b - Figure 2a).

## Result: (The Model of Inner Resonator in Sun)

The inner resonator will have less vector in width (in radius) and big vector in height.

## Result: (The Model of Inner Resonator of Mercury)

The first (the innermost) resonator corresponding to the first (innermost) planet Mercury has a big size in height and less size in width. For comparison -the resonator of Mercury similar to an upright parallelepiped, and the resonator of Mars has the appearance of a lying parallelepiped (matchbox type). Both resonators have almost the same volume but they have very different energies in quality.

## f) Law5

Law 5 in 3D: The deceleration vortex in 3D is described with a system of 4 equations in which: longitudinal velocity (V) decreases in (n) portions ( $\psi^{\mathrm{n}}$ ) times; the angular velocity (w), the amplitude $(\mathrm{W})$ and the number $(\mathrm{N})$ of cross vortices increase in ( n ) portions ( $\psi^{\mathrm{n}}$ ) times:
$\operatorname{IV}(\mathrm{t})^{2}=\mathrm{V}_{0}(\mathrm{Vo}-\mathrm{V}(\mathrm{t}))$,
$\operatorname{IW}(\mathrm{t})^{2}=\mathrm{W}_{0}(\mathrm{Wo}+\mathrm{W}(\mathrm{t})), 5 \mathrm{a}$.
$\mathrm{I} w(\mathrm{t})^{2}=\mathrm{w}_{0}(\mathrm{wo}+\mathrm{w}(\mathrm{t}))$
I N ${ }^{2}=N_{0}\left(\mathrm{No}^{+} \mathrm{N}\right)$,
where the roots $\mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}}$ and $\omega_{\mathrm{n}}$ and $\mathrm{n}_{\mathrm{n}}$ are expressed as: $\mathrm{v}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right.$ ). $\mathrm{V}_{0}, \omega_{\mathrm{n}}=\psi^{\mathrm{n}} . \mathrm{W}_{0} ; \mathrm{w}_{\mathrm{n}}=\psi^{\mathrm{n}} . \mathrm{W}_{0},\left[\mathrm{n}_{\mathrm{n}}\right]=\psi^{\mathrm{n}} . \mathrm{N}_{0}$; linear velocity $\mathrm{V}_{0}$ is the starting value of $\mathrm{V}_{\mathrm{n}}$, amplitude of cross vortex $\mathrm{W}_{0}$ is the starting value of $\omega_{n}$, angular velocity $\mathrm{w}_{0}$ is starting value of $\mathrm{w}_{\mathrm{n}}$ , number $\mathrm{N}_{0}$ is starting value of $\mathrm{n}_{\mathrm{n}},\left[\mathrm{n}_{\mathrm{n}}\right]$ is the closest integer ; $\psi$ is a proportional that fulfills the requirement: $\psi-1 / \psi=1$ ) : $\mathrm{v}_{\mathrm{n}}$ , $\mathrm{w}_{\mathrm{n}}$ are periodic roots with period $\mathrm{n} ; \mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}}$ are mutual orthogonal that fulfill the requirement for orthogonality : $\mathrm{V}_{\mathrm{n}} \cdot \mathrm{w}_{\mathrm{n}}=\mathrm{V}_{0} \cdot \mathrm{w}_{0}$, $\mathrm{v}_{\mathrm{n}} . \omega_{\mathrm{n}}=\mathrm{V}_{0} . \mathrm{W}_{0} ; \mathrm{n}=0 \div \infty$; the roots $\mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}}$ and $\omega_{\mathrm{n}}$ and $\mathrm{n}_{\mathrm{n}}$ are expressed as: $\mathrm{v}_{\mathrm{n}}=\left(1 / \psi_{\mathrm{n}}\right) . \mathrm{V}_{0}, \omega_{\mathrm{n}}=\psi_{\mathrm{n}} \cdot \mathrm{W}_{0} ; \mathrm{w}_{\mathrm{n}}=\psi_{\mathrm{n}} \cdot \mathrm{W}_{0},\left[\mathrm{n}_{\mathrm{n}}\right] \stackrel{n}{=} \psi_{\mathrm{n}}$. $\mathrm{N}_{0}$; linear velocity $\mathrm{V}_{0}$ is the starting value of $\mathrm{V}_{\mathrm{n}}$, amplitude of cross vortex $\mathrm{W}_{0}$ is the starting value of $\omega_{\mathrm{n}}$, angular velocity $\mathrm{w}_{0}$ is starting value of $\mathrm{w}_{\mathrm{n}}$, number $\mathrm{N}_{0}$ is starting value of $\mathrm{n}_{\mathrm{n}}$, [ $\left.\mathrm{n}_{\mathrm{n}}\right]$ is the closest integer ; $\psi$ is a Golden proportional that fulfills the requirement: $\psi-1 / \psi=1[4,5,6]$.

Result: (A Decelerating Vortex Emits Primary CrossVortices)
A decelerating vortex ( $\mathrm{E}_{2 \mathrm{D}}-$ ) with a velocity vector $(\mathrm{V})$ emits to the environment decelerating vortices with increasing amplitude
(W) (because of positive sign + in second equation of system 5 (5a).

The amplitude (W) increases in perpendicular direction to the velocity vector (V). In decelerating longitudinal vortex, the amplitude (W) increases only if it is directed from the inside to the outside, ie. if the decelerating vortex emits outward cross vortices with increasing amplitude (W)(Figure 3b).

Result: (The Law 5 Describes Nonparametric Process by the Golden Proportion $\psi^{\mathrm{n}}$ )
At a decelerating vortex vector velocity (V) is transformed according to internal law as Law $5\left(\mathrm{v}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) \cdot \mathrm{V}_{0}, \omega_{\mathrm{n}}=\psi^{\mathrm{n}} \cdot \mathrm{W}_{0}\right)$ into the amplitude of the cross vortex (W) (Figure 3b).

Results: (The Decelerating Vortex Forms In Space an Accelerating Left Rotating Wheels)
The emitting of decelerating cross vortices to environment in perpendicular direction forms so called " quanta " and this process is called "quantum".

According to the Law 1 and Rule of the Right Hand, the decelerating cross-vortex (E) generates at the center to outside (to left) a longitudinal vortex (H). So at every $n_{i}$ point forms left rotating wheel perpendicular to the velocity (V). Therefore, the decelerating longitudinal vortex in 3D forms left rotating spiral (left- counterclockwise when observer watches against the movement) .Decelerating longitudinal vortices rotate counterclockwise ( - ), watched against the movement (Figure $3 b)$.

## Result: (The Angular Velocity of Last Wheel of Decelerating Vortex)

The last in Space wheel of decelerating vortex rotates with maximum angular velocity. Because of increasing of the amplitude (W) the angular velocity (w) and the number of cross vortices $(\mathrm{N})$ it forms decelerating, thickening and expanding left rotating Funnel in which : $\mathrm{W}_{\text {max }} ; \mathrm{w}_{\text {max }} ; \mathrm{N}_{\text {max }}$.

Result: (The Decelerating Vortex Forms in Time a RightRotating Spiral)
The increasing the angular velocity (w) and the number of crossvortices ( N ) are in every next wheel. When the observer look against the direction of moving, he will percept the whole spiral as rotating to right spiral.

Two or more decelerating longitudinal vortices repel each other .The reason is due to the emission of cross-vortices from center to outside (Figure 4c).

## Figure 3: Decelerating vortex in Law5, Accelerating Vortex in Law6.

Figure 3a) Decelerating vortex in Law5- when velocity V decreases the amplitude W increases so that: $\mathrm{W}_{\mathrm{i}} . \mathrm{V}_{\mathrm{i}}=$ const.; Figure 3b) Free cross vortices;Figure3c) Accelerating vortex in Law6-when velocity V increases the amplitude W decreases so that : $\mathrm{W}_{\mathrm{i}} \cdot \mathrm{V}_{\mathrm{i}}=$ const.;


## g) Law6

## Law 6 for 3D:

The acceleration vortex (accelerating Funnel in center) in 3D is described with a system of 4 equations in which: longitudinal velocity (V) increases in ( n ) portions ( $\psi^{\mathrm{n}}$ ) times, the angular velocity (w), the amplitude (W) and the number $\left(\mathrm{N}_{\mathrm{n}}\right)$ of cross vortices decrease to zero in (n) portions ( $\psi^{\mathrm{n}}$ ) times:
$\operatorname{IV}(\mathrm{t})^{2}=\mathrm{V}_{0}(\mathrm{Vo}+\mathrm{V}(\mathrm{t})), 6 \mathrm{a}$.
I W $(\mathrm{t})^{2}=\mathrm{W}_{0}\left(\mathrm{~W}_{0}-\mathrm{W}(\mathrm{t})\right)$,
$\operatorname{Im}(\mathrm{t})^{2}=\mathrm{w}_{0}\left(\mathrm{w}_{0}-\mathrm{w}(\mathrm{t})\right)$
I $\mathrm{N}^{2}=\mathrm{N}_{0}\left(\mathrm{~N}_{0}-\mathrm{N}_{\mathrm{n}}\right)$,
where the roots $\mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}}$ and $\omega_{\mathrm{n}}$ and $\mathrm{n}_{\mathrm{n}}$ are expressed as: $\mathrm{v}_{\mathrm{n}}=\left(\psi_{\mathrm{n}}\right)$. $\mathrm{V}_{0}, \omega_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) \cdot \mathrm{W}_{0}, \mathrm{w}^{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) \cdot \mathrm{W}_{0}, \mathrm{n}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) . \mathrm{N}_{0}$; linear velocity $\mathrm{V}_{0}$ is the starting value of $\mathrm{V}_{\mathrm{n}}$, amplitude of cross vortex W0 is the starting value of $\omega_{n}$, angular velocity $\mathrm{w}_{0}$ is starting value of $\mathrm{w}_{\mathrm{n}}$, number $\mathrm{N}_{0}$ is starting value of $\mathrm{n}_{\mathrm{n}} ; \psi$ is a Golden proportion that fulfills the requirement: $\psi-1 / \psi=1: \mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}} \mathrm{n}$ are periodic roots with period $\mathrm{n} ; \mathrm{v}_{\mathrm{n}}, \mathrm{w}_{\mathrm{n}}$ are mutual orthogonal that fulfill the requirement for orthogonality: $\mathrm{v}_{\mathrm{n}} \cdot \mathrm{w}_{\mathrm{n}}=\mathrm{V}_{0} \cdot \mathrm{w}_{0}, \mathrm{v}_{\mathrm{n}} \cdot \omega_{\mathrm{n}}=$ $\mathrm{V}_{0} . \mathrm{W}_{0} ; \mathrm{n}=0 \div \infty$; the roots $\mathrm{v}_{\mathrm{n}}, \mathrm{W}_{\mathrm{n}}$ and $\omega_{\mathrm{n}}$ and $\mathrm{n}_{\mathrm{n}}$ are expressed as: $\mathrm{v}_{\mathrm{n}}=\left(\psi^{\mathrm{n}}\right) . \mathrm{V}_{0}, \omega_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) \cdot \mathrm{W}_{0}, \mathrm{~W}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) . \mathrm{W}_{0}, \mathrm{n}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right)$. $\mathrm{N}_{0}$ [4,5,6];

The first positive root of the first equation is: $\mathrm{v}_{1}=\psi \cdot \mathrm{V}_{0}=1,62$. $\mathrm{V}_{0}$. The periodic roots of the first equation are obtained from the expression: $\mathrm{v}^{\mathrm{n}}=\mathrm{V}_{0} .\left(\mathrm{v}^{\mathrm{n}-1}+\mathrm{v}^{\mathrm{n}-2}\right)$.

The first positive root of the second equation is: $\mathrm{W}_{1}=(1 / \psi.) \mathrm{W}_{0}=$ $0,62 . \mathrm{W}_{0}$. The periodic roots of the second equation are obtained from the expression: $\mathrm{w}^{\mathrm{n}-2}=\mathrm{W}_{0} .\left(\mathrm{w}^{\mathrm{n}}-\mathrm{w}^{\mathrm{n}-1}\right)$.

Therefore when velocity ( V ) increases, the amplitude (W) decreases so that at each step $\left(\mathrm{n}_{\mathrm{i}}\right)$ (according to Consequence of Law 4) the product $\left(\mathrm{V}_{\mathrm{i}}\right) .\left(\mathrm{W}_{\mathrm{i}}\right)$ is a constant (Figure 4a). For an accelerating longitudinal vortex, the amplitude (W) decreases only if it is directed from the outside to inside, ie. if the accelerating vortex sucks in cross vortices with decreasing amplitude (W)(Figure 4c).

Result: (The Law 6 Describes a Nonparametric Process by Golden Proportion ( $1 / \psi^{\text {" }}$ )
At an accelerating vortex vector velocity (V) (first equation of 7a) is transformed according to internal Law6 into the amplitude of the cross vortex (W)( second equation of 7a) (Figure 3a). For comparison- in the previous point we saw that at a decelerating vortex vector velocity $(\mathrm{V})$ is transformed according to internal Law5 into the amplitude of the cross vortex (W.) More precisely- the increasing in speed $(\mathrm{V})\left(\psi^{\mathrm{n}} . \mathrm{V}_{0}\right)$ is transformed into an decrease in the amplitude $(\mathrm{W})\left(1 / \psi^{\mathrm{n}} . \mathrm{W}_{0}\right)$ of cross vortices (Figure 3a).

Results: (The Accelerating Vortex Suck In Free Primary Cross -Vortices)
When an outer accelerating vortex passes through these passive dipoles composed of free cross-vortices, according Law5 it will suck in them. As a result, the accelerating vortex will increase its positive acceleration, mass and Power because it will add the mass and energy of the passive dipoles. Said more detailedan accelerating vortex $\left(\mathrm{E}_{2 \mathrm{D}}+\right)$ with a velocity vector $(\mathrm{V})$ sucks in accelerating vortices with decreasing amplitude (W) in perpendicular direction (because of sign - in second equation of system 6a).The sucking of accelerating cross vortices from environment in perpendicular direction forms so called " quanta " and this process is called "quantum".

Result: (Accelerating Vortex Forms Decelerating Right Rotating Wheels)
According to the Lawl the accelerated cross vortex $\left(\mathrm{E}_{2 \mathrm{D}}{ }^{+}\right)$ generates (sucking) inward to its Gravity center a longitudinal vortex $\left(\mathrm{H}_{3 \mathrm{D}}\right)$ from the outside to inside. At each point (i) a right rotating wheel is formed. But in time the spiral in 3D is formed as a left rotating spiral in Funnel. Therefore, the wheel of accelerating vortex will twist to the right (clockwise ( + ), viewed against the movement (Figure 3c).

## Result: (The Angular Velocity of Last Wheel of Accelerating Vortex)

The last in Space wheel of accelerating vortex rotates with minimum angular velocity. Therefore the last in Space wheel of accelerating vortex rotates with almost zero angular velocity .Or it has no transverse rotation, only longitudinal rotation.

Result: (The Accelerating Vortices Form Stretching Narrowing and Left Rotating Spiral)
Because of the amplitude(W), angular velocity (w) and the number of cross vortices ( N ) decreases it forms accelerating, stretching, narrowing, left rotating spirals in which: $\mathrm{W}_{\text {min }}$, $\mathrm{w}_{\text {min }}$ , $\mathrm{N}_{\text {min }}$ (Figure 3b).

Result: (The Accelerating Vortices Form Attracting Funnel) The reason is that two or several accelerating longitudinal vortices, due to the suction of cross vortices, attract each other, insert one in another and form an accelerating Funnel. In center inserts the fastest vortex, outside rotates vortex with less velocity and at periphery rotates vortex with the smallest speed. The reason for attraction is increasing the velocity with positive acceleration and decreasing the amplitude of transverse vortices with positive acceleration as well (Figure4a).

## 2. Sun-Earth system

## Based on New Axioms and Laws

## a) The Sun Emits Funnel to Earth, Rolled Up By Low Frequency (Lf) Spiral

According Law2 the Sun is generated by a decelerating Funnel coming from Space perpendicular to its section. It contains at its center an accelerating longitudinal vortex. The entire decelerating Funnel contains decelerating vortices included each other and an accelerating vortex in the center. It enters the fluid mass of the Sun (Figure4c).

The entrance Funnel has such a large amplitude and speed that it begins to swirl the matter of the Sun as well. Since the entrance Funnel contains several (four) decelerating longitudinal vortices with different (four) frequencies, each of these longitudinal decelerating vortices resonates in different (four) Volume Resonators. Therefore, the third decelerating longitudinal vortex resonates in a third Volume Resonator which corresponds to the Earth (as the third planet in order of the series of inner planets) (Figure4c).
-Just for reference, the first innermost Volume Resonator rules Mercury, the second Volume Resonator rules Venus, the third Volume Resonator rules Earth and the fourth - Mars.

In the center of the third Volume Resonator, an accelerating transverse vortex is generated. It develops with increasing acceleration from the inside - out and towards the periphery already reaches a significant acceleration (Figure 4c).

Please notice how the accelerating transverse vortex moves It was clear that the transverse vortex is accelerating from insideout (Figure 4c).

This is why the velocity vector at the top of the same helix is greater than the velocity vector at the bottom of the same helix. This causes the spiral to shift to the larger vector ie. to up. Also, the in-out acceleration is the reason why the velocity vector to the left of the same helix is greater than the velocity vector to the right of the same helix. This causes the spiral to shift to the larger vector ie. to the right. In this way, the entire transverse vortex will shift to up and to the right at the same
time. Therefore, the center of the accelerating transverse vortex shifts from the geometric center (O1) to a new center (G1). This new center (G1) is called the Gravity center and is located in the first quadrant (I) quadrant of the helix. This shift turns the centric helix into an eccentric helix and the centric transverse vortex with center (O1) in an eccentric transverse vortex with a displaced new center (G1). Even more - an Eccentricity Vector is formed with direction from geometric center (O1) to the Gravity center (G1) and magnitude equal to the distance O1-G1 (Figure $4 c)$.

This Eccentricity Vector is decomposed along the x-coordinate and a vector should be obtained that will pull the body of the Sun to the right (to outward). Preceding the description, we must emphasize that this vector points in the opposite direction to the similar vector for the Earth. Therefore, the Sun repels the Earth through the projections on the x -coordinate of the corresponding Eccentricity Vectors (not reflected in the Figures).

Also, this Eccentricity Vector is decomposed along the ycoordinate and should obtain an upward vector that will rotate the body of the Sun to the left. Preceding the description, we should emphasize that this vector for the Sun points to a left rotation, which is the same direction of rotation as the Earth. Consequently, the Sun and the Earth rotate in the same direction - to the left, due to similar projections on the $y$-coordinate of the corresponding Eccentricity Vectors (not reflected in the Figures).

We saw that the decelerating longitudinal Funnel coming from Space to Sun includes in its center an accelerating longitudinal vortex. This central accelerating longitudinal vortex sucks in (Law 6) free vortices from the center of the Sun and cools the core of Sun. Therefore, the central core of the Sun will be very cold (Figure 4b).

The transverse vortices that are generated in the sphere of the Sun are also accelerating and they also suck in (Law6) the free vortices from the body of the Sun. But due to the bigger inertia of the large volume of the sphere of the Sun, the suction from the accelerating transverse vortex has a significantly lower acceleration than the suction from the accelerating longitudinal vortex in the center of the Sun (Figure 4f). Therefore, the cooling in of the transverse vortices around the core is not as great as the core itself. Thus, the shell around the core of the Sun is also cold, but less than the core of Sun (Figure 4f).

Figure 4. The system Sun (1) -Earth (2)
Figure 4a) Model of Earth as toroid; Figure 4b) Model of longitudinal link between Sun and Earth;Figure4c)Model of Sun as ball with Volume Resonators inside; Figure 4d) Model of Earth as decelerating transverse vortex (LF) from out to in ; Figure 4e) Model of (LF) accelerating -decelerating Funnel between Sun and Earth .Funnel is composed from inserted one in other longitudinal vortices: Figure 4f) Model of Sun as (LF) accelerating transverse vortex from in to out;

Figure 4 g ) The HF accelerating pulsating beams emit heat energy (they absorb a few elements and generate the other element radiating heat).


Circle of longitudinal vortes : imput of Funnel to Sun (3), output of Sun (4), input of Barth (5), output of Earth(6), input of Sun (3).


Because the input decelerating Funnel is twisted to the right (if the observer is facing the motion), the primary transverse vortices also rotate to the right (Figure5c). But due to insufficient viscosity of the plasma medium, the outermost layer slips (slides) relative to the innermost layer. If the medium were solid (with high viscosity adhesion between the layers), these layers would not lag behind each other and the inner vortex would rotate monolithically and would not layers (Figure5c) [7].

Thus we observe that if the first internal layer moves in t 1 ,the second outer layer will lag behind and moves in time t 2 , and the third outer layer lags even more and moves with time $t 3$, and the fourth layer - with time t 4 , etc. (Figure5c). If we connect t 1 , t 2 , $\mathrm{t} 3, \mathrm{t} 4$ etc. we will get a movement in the opposite direction or we will obtain a reverse wave. Ever more-the distance (t2-t1) is smaller than the distance ( $\mathrm{t} 3-\mathrm{t} 2$ ), the distance ( $\mathrm{t} 4-\mathrm{t} 3$ ) is smaller than the distance ( $\mathrm{t} 3-\mathrm{t} 2$ ), and etc. Thus, the movement of reverse wave is conditionally accelerating. It is conditional because there is no actual accelerated movement, but only an increasing difference between the layers. Therefore, it is obtained the reverse accelerating transverse wave (Figure5c) [8].

## b) The connection between Sun and Earth

It was clear that from the third resonator inside the Sun, an accelerating vortex of LF spiral is fired along the link in the direction of Earth (Figure 4b). At first the vortex has less positive acceleration. After then the positive acceleration increases and limits to maximum ( $\mathrm{a}_{\text {max }}$ ). Thus it reaches an point called inflection point $\left(\mathrm{a}_{\text {max }}\right)$.Before inflection point, when the vortex is
accelerating, it is twisted to the left (if the observer is against the movement). After inflection point $\left(\mathrm{a}_{\text {max }}\right)$ because of resistance of middle, the vortex becomes decelerating .Finally it starts to twist to the right if the observer is against the movement). Therefore, the inflection point is point (place) where the accelerating vortex is completely untwisted .Thus after inflection point the vortex begins to reverse its direction of twist (Figure5b).

Therefore in the distance where acceleration is greater than zero ( $a>0$ ), the spiral is accelerating and winds to the left (if the observer stands against the movement). At point where acceleration is maximum ( $\mathrm{a}_{\text {max }}$ ) the LF spiral of the Funnel is completely unwound. After this point ( $\mathrm{a}_{\max }$ ), the Funnel begins to twist in the opposite direction - to the right (if the observer stands against the movement). Simultaneously with the twisting, the decelerating Funnel from point $\left(a_{\max }\right)$ to point $(a=0)$ begins to emit decelerating vortices outside (Law 5), ( Figure 5b).

After inflection point $\left(\mathrm{a}_{\max }\right)$ the decelerating Funnel is twist is to the right (when observer is against the direction of motion).Then on the outside (left- against the motion ) the twist vector will add to the own perpendicular vector and increase it. This means that the friction on the outside will increase. At the same time on the inside (right- against the motion) the twist vector will subtract from the own perpendicular vector and will decrease it. This means that the friction on the inside will be reduced.

A reduction in friction on the inside causes the decelerating Funnel to bend secondary into an arc (Figure 4 e) [9,10].

## Figure5. More detail about the internal processes on generation of Sun and Earth


c) The decelerating Funnel generates Earth by winding as a Low Frequency spiral
In the distance where acceleration is greater than zero ( $a>0$ ), the spiral is accelerating and winds to the left (if the observer stands against the movement). At point where acceleration is maximum $\left(\mathrm{a}_{\max }\right)$ the spiral of the Funnel is completely unwound. After this point $\left(\mathrm{a}_{\max }\right)$, the Funnel begins to twist in the opposite direction - to the right (if the observer stands against the movement) .The decelerating Funnel has negative acceleration ( $a<0$ ). Simultaneously with the twisting, the decelerating Funnel after the point $\left(\mathrm{a}_{\max }\right)$ begins to emit decelerating vortices outside (Law 5), (Figure 5b).

The longitudinal decelerating vortex generate toward out the perpendicular decelerating primary vortices (Law5). The direction of twist is to the right (when observer is against the direction of motion). On the outside of Funnel (from left- against the motion) the twist vector make sharp angle ( $<90$ degree) to the vector of decelerating primary vortex emitted perpendicular. This means that in geometric addition of the two vectors will obtained as a result a longer vector of primary decelerating vortices in left of Funnel. This means that the friction on the left will increase (Figure 4e).

At the same time on the inside of Funnel (from right- against the motion) the twist vector will make obtuse angle ( $>90$ degree) to the vector of decelerating primary vortex emitted perpendicular. This means that in geometric addition of the two vectors will obtain as a result a less vector of primary decelerating vortices in left of Funnel .This means that the friction on the left will decrease (Figure 4e).

Therefore a reduction in friction on the inside in comparison of increases of friction on the outside is the reason the decelerating Funnel to bend secondary into an arc.

Earth is generated by the decelerating Funnel (the reason of Law1).This happens at the point (place) where the negative acceleration $(\mathrm{a}<0)$ becomes so small that it cannot overcome the friction of the medium. Then the Funnel begins to roll transversely
from the outside -inward until the acceleration becomes zero $(a=0)$. Thus, this decelerating Funnel forms the body of the Earth (transversely) in a toroid-like shape (Figure5a). Simultaneously, the decelerating transverse vortex emits primary decelerating transverse vortices. (Law5). These primary vortices are directed towards the center of the transverse spiral (Figure5a). But because the spiral is decelerating, it changes from a centric to an eccentric spiral (result of Axiom1). Accordingly, the primary vortices are co-centered not in the Geometric center (O2), but in the Gravity center (G2) (Figure5a). It is in the center of Gravity that the primary vortices phase (in place) in Space and in Time (simultaneously). They generate an upward accelerating vortex, perpendicular to the toroid of the body of the Earth (the result of Law 1).
-Since the transverse vortex is decelerating, the velocity vector (E1) at the top is greater than the velocity vector (E3) at the opposite end :E1>E3.Thus, the spiral moves to the larger vector, i.e. to E1. By the same reason, the vector on the left (E2) is greater than the vector (E4) on the right: E2> E4. This is the reason that the spiral shifts to the larger vectors simultaneously - to up (E1) and to the left (E4). As a result, the center of the spiral shifts from a point on the Geometric center (O2) to a point of the Gravitational Center (G2) which is in the second quadrant (Figure 1b).
-Between the two centers (O2, G2), the so-called Eccentricity vector (OG2) is obtained. Its direction is from O2 to G2. Projection of this Eccentricity vector on the x-coordinate pushes the Earth away from the Sun. Projection of the Eccentricity vector on the y-coordinate rotates the Earth to the left (if the observer is against the perpendicular axis of Earth) (Not pictures).

According to Law 8, it exists (between the Sun and the Earth) two mutual perpendicular circles: One circle of transverse connections and the other circle of longitudinal connections. The circle of longitudinal connections is describe by a chain: (6-3-4-5-6) from (Figure 4a, Figure 4c). The longitudinal accelerating vortex (perpendicular to the toroid of the Earth) comes out of the exit (6) and is sucked in by entrance (3) of the Sun. As the
accelerating part of this vortex comes out at exit (4) of the Sun and is sucked in by entrance (5) of the Earth. It is this circle that attracts the Earth towards the Sun [10].The circle of transverse connections is described by a chain: (Figure 4d, reverse wave, Figure4f, straight wave, Figure 4d) The circle of transverse vortices comes out of exit of the third Volume Resonator (Figure 4f ) and emits to Earth (Figure 4e), it rolled in by entrance of Earth (Figure 4d) and finally closes the circle by emitted by Earth and sucked by Sun free cross-vortices (Figure 4f). It is this circle that repels the Earth towards the Sun [11].

Therefore, the circle of longitudinal vortices attracts the Earth towards the Sun and keeps the Earth at a precise distance and orbit around the Sun. The circle of transverse vortices repels the Earth from the Sun and keeps the Earth at a precise distance and orbit from the Sun.

What's more- from outlet (6), a weaker longitudinal vortex is launched from the Earth. It is sucked in by the entrance of the satellite of the Earth - the Moon It keeps the Moon at a certain distance and controls it along its orbit around the Earth.

According to Axiom 1, the open vortex, in particular the decelerating vortex, forms an eccentric spiral with center in the second (II) quadrant at plane in coordinates ( $\mathrm{x}, \mathrm{y}$ ). It is known that the decelerating vortex of the spiral is twisted to the right (Low5). The spiral starts from the lower surface in ( $\mathrm{x}, \mathrm{y}$ ), where (Law 5) at the beginning of the spiral the negative acceleration is less.The Gravitational center is in the second (II) quadrant, but it is closer to the Geometric center ( Figure 5a). The spiral continues up to (z) in the plane ( $\mathrm{x}, \mathrm{z}$ ), where ( Law 5) towards the end of the spiral the negative acceleration is more. The center of Gravity moves to the second (II) quadrant, but further from the Geometric center (Not Figure).In this way, by connecting the centers of Gravity of the lowest in ( z ) plane ( $\mathrm{x}, \mathrm{y}$ ) with the center of Gravity of the highest in $(\mathrm{z})$ plane ( $\mathrm{x}, \mathrm{y}$ ) , a straight axes - strongly inclined to the left is obtained. It connects the centers of Gravity of all sections ( $\mathrm{x}, \mathrm{y}$ ) by height ( z ) and is called the Axis of Eccentricity. Thus, the toroid of the Earth turns out to be highly eccentric not only in the sections ( $\mathrm{x}, \mathrm{y}$ ) but and in height (z) . This Earth axis is tilted at $23^{\circ}$ ( 23 degrees).

According to Law 5, the decelerating vortex (that generates the Earth toroid) emits primary decelerating vortices from itself (from the periphery) inwards ( towards the center ).Because they are decelerating, they are folded to the left (Figure 5a). Therefore the whole eccentric Earth toroid rotates to the left around the Axis of Eccentricity, which is a tilt of $23^{\circ}$ (23 degrees) [10].

We have seen that the LF spiral of the decelerating Funnel generates the highly eccentric toroid of the Earth body (Low 1). But much more interesting is the HF pulsation of the same decelerating Funnel that generates the Earth. This pulsation creates the Gravity Force of the gravitational envelope of the Earth [11].
e) Gravity Force in (HF) Gravitational Envelope around Earth
The pulsations of very High Frequency (HF) (more than 1.1012 Hz ) has very low amplitude. This pulsation are added on surface of base Funnel as amplitude modulation. For this HF impulses,
the toroid of body of Earth appears as a huge and dense body .Therefore they will flow up along the Axis of Eccentricity and also will flow down along the Axis of Eccentricity. We saw before that the decelerating spiral is twisted to the right (Law 5).But reaching the body of the Earth, the decelerating Funnel splits. One part slides up along the Axis of Eccentricity and the other part slides down (in opposite direction) along the Axis of Eccentricity.

Flowing up, the decelerating spiral slides up along the Axis of Eccentricity and preserves the direction of rotation. Due to the reduction of the radius of rotation, this spiral accelerates upwards along the Axis of Eccentricity and it turns into an accelerating spiral. Flowing down, this spiral slides down and reverses the direction of rotation - to the left. Due to a decrease in the radius of rotation, this spiral accelerates and radiates along the Axis of Eccentricity down also like an accelerating spiral.

These accelerating up-axis and down-axis spirals pulsate at a very high frequency (more than 1.1010 Hz ). This is the reason they simultaneously contract inward toward the Earth and extend outward along the Earth's axis. This is how accelerating spirals are shrink and stretched, pulsating simultaneously up and down along the Axis of Eccentricity. They pulsate simultaneously - in the first time, they simultaneously shrink inward, and in the next time, they simultaneously expand outward.

When they contract inward simultaneously, they emit (Law 5) decelerating transverse vortices against each other .They form a highly curved arc of two opposite halves. These vortices have mutually opposite directions -from poles of Earth toward equator of Earth. These vortices continue towards the surface of of Earth as decelerating transverse spirals .And by folding in opposite directions they hit the bodies toward the surface of Earth with a constant force .Therefore these bodies will fly towards the surface of Earth with a constant acceleration named Acceleration of Earth (g). Because the decelerating vortices are much more inertial this first phase last a much longer time than the second phase.

When they stretched lengthwise simultaneously in opposite directions, they lengthen them self from equator to both of poles. They form a highly upright arc. Because that they are strong accelerated, they suck up (Law 6) accelerating transverse vortices from surface of Earth. These sucked vortices are also folded into opposite directions. These vortices suck in from the surface of the Earth and they are the reason the plants to grow up. Because the accelerating vortices are much less inertial this second, phase last a much less time than the first phase [10].

The first phase is longer than the second is because the presence of a hit. The reason is that the decelerating process has greater inertia than the accelerating one. As a result, the emitting and hitting of the bodies toward the surface of Earth have large amplitudes and a constant negative acceleration: $\mathrm{v}_{\mathrm{n}}=\left(1 / \psi^{\mathrm{n}}\right) . \mathrm{V}_{0}$, (Law 5).

The second phase is shorter than the first because the lack of an impact. The accelerating process has less inertia than the decelerating one. As a result, the suction from the outside-in to
surface of Earth have a much smaller amplitudes and a constant positive acceleration: $\mathrm{v}_{\mathrm{n}}=\left(\psi^{\mathrm{n}}\right) \cdot \mathrm{V}_{0}$, (Law 6).

Therefore, the attraction of the bodies from the Earth is primarily due to the shocks of the decelerating vortices from above to the surface of Earth. Or it is not the Earth that attracts the bodies, but the lines of force of the Gravitational field hit the bodies toward the surface of Earth. This only happens in the first phase.
-In first phase the lines of force from the longitudinal vortex shrink from the North pole to equator and from South pole to equator. So that the lines of force from the transverse vortices move against each other from the North pole to the Equator and from the South pole to the Equator. The figure looks like a hunting bow. Moving against each other, they move decelerated (Law5). This is the reason they to continue by bending from the arch of hunting bow to the surface of the Earth. In this way, they hit in a pulse all bodies in the direction towards the Earth. This is the reason to hit the body by the decelerating vortices from up toward surface of Earth [10].
-In second phase (in the reverse course of the pulse) the reverse process occurs The bow move is from equator to north pole and from equator to south pole Thus both part move in opposite direction to both poles .Moving in opposite direction from equator to both poles cause accelerated movement (Law6). This is the reason to suck from surface of Earth to up the accelerating vortices [10].
3. Cause the Sun to radiate high frequency (HF) pulsating rays according new Axioms and Laws.

## a)The Essence of HF rays,

The purpose of this article is to describe the essence of high frequency (HF) beams emitting from Sun. Above it can be seen that in all volumetric resonators in the Sun's plasma is emitted from the inside-out the lower frequency (LF) in spiral Funnel simultaneously and high frequency (HF) impulses to its surrounding Space. We saw that the decelerating Funnel is rolled up in Space as low frequency (LF) spiral (Figure 4b, Figure 4e) .Even more this decelerating Funnel, that is come from Space, pulsates and in Time with very High Frequency (HF). This HF impulsions are added to the carry LF spiral in process of amplitude modulation. The pulsation includes phase of contraction and phase of stretching.

This HF pulsation in phase of contraction is the reason for emitting of very fast rays. Or during the contraction phase of the input decelerating Funnel, the Sun will emit high-frequency rays in all directions around it (Figure 4g). Therefore, these accelerating vortices generate light emission from the Sun's corona. Since the pulsation amplitude of the input Funnel is constant and the frequency is high, the front of the pulses is steep. So these rays have a constant launch pulse, which determines an accelerating movement of the rays.
Result: The cause is the acceleration in the longitudinal direction of the HF pulses emitted by the sun and the result is the light emitted by them

Conclusion: The accelerating HF pulsating vortices generated and emitted by the Sun (Figure 4 g ) to the surrounding Space
play the role of a generator of Light
The accelerating longitudinal vortices of light rays suck (Law6) some elements from Sun plasma. As a result is synthesized a new element. This action is a highly exothermic reaction, accompanied by the release of a large amount of heat Therefore, the emitting of these pulsating rays causes an exothermic reaction and release of heat from the Sun's corona (Figure 5g).

Result: The cause is the acceleration in the transverse direction of the HF pulses emitted by the sun and the result is the heat emitted by them.

## Conclusion

A HF pulsating rays generated and emitted by the Sun (Figure 4 g ) to the surrounding Space play the role of a generator of Heat.

The whole picture of connections and interactions is too complex to describe in one article, but a few details stand out from this description.

## b) New information for the Sun

According to Law2, the Sun is generated by a longitudinal decelerating Funnel from up to down and emits an accelerating transverse vortex with an inside-out direction (Figure 4c). There are many details and subtleties in this transformation, but for now we will not deal with it. For example, the generating longitudinal Funnel rotates to the right, viewed against the motion and it creates a right transverse wave in core. But transverse rotating to right the core generates a left transverse vortex in the form of a reverse wave (Figure 4f).

It is logical that the longitudinal vortex and the longitudinal funnel are invisible for Sun light. The reason is that the light waves are not reflected by the threads of the longitudinal vortices and an outside observer cannot perceive them. And more precisely - light waves propagate as transverse vortices and when they cross the thread of the longitudinal vortex, they form diffraction by bypassing it and continuing their journey with the same speed and direction [3-5]. Therefore, the input Funnel to the Sun and the output Funnel from the Sun to the Earth are invisible to an observer.

## Result: The Input Decelerating Funnel From Space Down To The Sun, The Accelerating-Decelerating Funnels Between Sun And Earth And The Output Accelerating Funnel From Earth To Up Are Invisible To An Outer Observer Because Of Diffraction Between Cross Sun Light Wave And Longitudinal Threads Of Funnels.

The structure of the longitudinal Funnel is the in center of Funnel moves longitudinal vortex with maximum linear velocity and zero angular velocity. And outside rotates an adjacent vortex with less linear velocity and maximum angular velocity .Thus the central vortex is an accelerating vortex but every outer adjacent vortex becomes more and more slow (Figure 4c) [5,6].

The longitudinal accelerating vortex passes through the plasma (3-4) without friction (Figure 4c). The reason is that it suck to itself free vortices (Law6) [2,3]. Thus in center of the Sun passes
perpendicular accelerating longitudinal vortex and it cools the core.

## Result: The Core Of Sun Is Cold, Because The Longitudinal Vortex Passing Through The Center Of Longitudinal Funnel (In 3d) Has Positive Acceleration.

The free transverse vortices are sucked in and thus the vortex accelerates more and more (Law6) (Figure 4c).

The driving force comes from the initial speed of the main transverse vortex, and the free vortices sticking together turn the initial velocity into positive acceleration. The initial velocity of the transverse vortex is generated by the last wheel of the decelerating longitudinal Funnel because it has maximum angular velocity (Figure 4f) [2,3].

According to Law5 the last wheel of decelerating longitudinal vortex moves with a zero linear velocity and a maximum angular velocity as the last wheel of longitudinal vortex has a maximum radius (Figure 4c) [4,5]. According to Law 6, the transverse accelerating vortex in the center has a small linear velocity, and to periphery becomes maximum (Figure 4f) [6].

## Result: The Core of Sun Rotates Much Slower Than the Periphery, Because Transverse Generating Vortex Starts From Center and Its Velocity Increases to Periphery

Towards the periphery, the linear velocity increases every point by ( $\psi^{\mathrm{n}}$ ) times [2-4]. And finally the rotation speed reaches large values. Each of resonator inside the Sun spins inside itself a precisely defined transverse vortex with a precisely defined frequency and speed. Finally, it takes off accelerated and centrifugally from each resonator almost perpendicularly from it (Figure 4e).The velocity of this exit Funnel is maximum equal to light speed. The energy of this exit Funnel is with lowerfrequency, heavier and denser. It plays a role of real LF spiral in the exit Funnel [9].

Result: The Linear Velocity Of Lf Accelerating -Decelerating Funnel (Shooting From Sun To One Specific Direction Of Earth) Is Commensurate To Light Speed.

Each of resonator inside the Sun generates HF pulsating light beams. This HF beams modulate the amplitude of LF spiral. Finally, they takes off accelerated from all resonators in Sun almost perpendicularly from it to environment into all directions (Figure 4 g ). According Law6 the starting velocity $\left(\mathrm{V}_{0}\right)$ of this accelerating beams increase to current velocity (V) with parameter ( $\psi$ ) in (n) degree in every second or every step , or:
$\mathrm{V}=\mathrm{V} 0 .\left(\psi^{\mathrm{n}}\right)$. Therefore the velocity of accelerating and pulsating beams (Figure 4 g ) emitting of Sun reach a size that is much more than light speed (Law6) [11].

Result: The linear velocity of HF pulsating beams (shooting from Sun to environment in all directions) reach a size more than light speed. The longitudinal accelerated beams inside body of Sun, which reaches enormous speed and energy emit light [12]. Result: The HF Pulsating Rays Emit Light, Because They Accelerate Their Linear Velocity And Reach Maximum Size (The Reason Of Law6).

The HF pulsating beams suck in matter and energy from the surrounding space Therefore the accelerating beams from Sun should cool the space around [10]. But we know that instead of cooling these rays radiate heat.This fact is again due to the positive acceleration .Instead of positive acceleration to cool the medium it causes a strong exothermic reaction releasing energy in the form of heat and light [11].

Result: The HF Pulsating Rays Emit Heat, Because They Suck To Itself Accelerating Cross-Vortices And Cause Exothermic Reaction (The Result Of Law6).

## References

1. Landau, L. D., \& Lifshitz, E. M. (1971). The Classical Theory of Fields (Volume 2 of A Course of Theoretical Physics) Pergamon Press. Ch, 11, 284.
2. Markova, V. (2003). The other axioms (Monograph, Book 1), Nautilus, Sofia.
3. Markova, V. (2005). the other axioms (Monograph, Book 2). Nautilus, Sofia.
4. Markova, V. (2015). New axioms and structures, Fund. Jour. of Modern Pysics, 8, 5-24.
5. Markova, V. (2019). Selected as Book Chapter "Expanded Field Theory. New Axioms, Laws and Consequences". $A d v$. Theo. Comp. Phy, 2(1), 1-10.
6. Markova, V. (2020). New Axioms and Laws, Adv. Theo. Comp. Phy. ISSN: 3(4), 254-258.
7. Markova, V. (2022). System Electron - Proton , Journal Of Theoretical And Computational Physics, 1(1), 01-10.
8. Markova, V. (2023). A New Gravitational Model of the Solar System According the Theory of New Axioms and Laws, ASAP, Applied Physics, 3 (4), 09-24.
9. Markova, V. (2020). Modeling of Antigravity Force on the base of Expanded Field Theory, American Journal of Engineering Research (AJER) 9(6), 151-159.
10. Markova, V. (2022). 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), 1-12.
11. Markova, V. (2022). Gravity Force (HF) on Planet Earth Described by Theory of New Axioms and Laws, Journal of Theoretical and Computational Physics, 1(2), 01-07.
12. Markova, V. (2023). A New Gravitational Model of the Solar System According the Theory of New Axioms and Laws, ASAP, Applied Physics, 3(4), 09-24.

Copyright: ©2024 Valentina Markova. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

