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Highlights

- The Turbulence in Astronomy
- Nonlinear Mathematical Model
- A Glimpse to Future Physics
- Alexander Friedman's Cosmology

Discovering Thoughts, Inventing Future

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Why Does the Hyperbolic Shape of the Black Holes Require Non-Euclidian Geometry? (The Turbulence in Astronomy)

By Prof. Maria Kuman
Holistic Research Institute

Editorial- When I wrote the article about the hyperbolic shape of the Black Hole [1], it was intuitive envision. (For how intuitive envision is done see [2]). But in this article I will provide a logical proof.

1. If you try to tile regular pentagons, they form a sphere (curvature > 0).
2. If you try to tile regular hexagons, they form a flat surface (curvature $= 0$).
3. If you try to tile regular heptagons, they form a hyperbolic surface (curvature < 0).

Since heptagons form hyperbolic surface and Black Holes with hyperbolic shape give birth to everything material, which is matter and nonlinear electromagnetic field (NEMF) [1] (including the human NEMF), maybe we should not be surprised that the human NEMF has 7 energy levels [3], the human material body has also 7 energy levels [4], and each level has seven sublevels.

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A hyperbolic surface cannot materialize in Euclidean space without distorting it [5]. Therefore, the hyperbolic Black Holes must be formed through distortion of the Euclidean space and be non-Euclidean. And the space is distorted when some of the matter is scooped out from the space matrix and anti-matter is left in the hole. This makes the Black Holes anti-matter, just like when an electron is knocked out of the space matrix, positron (anti-matter) is left in the hole.

The scooped matter has the shape of a sphere and the remaining shape of the hole of anti-matter is hyperboloid. The remaining matter presses against the hole and the hyperboloid curvature shifts in opposite direction from () to)(. Thus, the Black Holes have hyperboloid shape (as the recent photo of a Black Hole of April 10, 2019 shows) and they are anti-matter.

According to the rule of the folded fingers of the right hand, when the folded fingers show the direction of spinning, the vertical thumb shows the direction of the magnetic field induced by the spinning. If so, the counterclockwise spinning anti-vortices would induce magnetic field off the anti-vortex. This means that only anti-vortices could and would give birth to matter.

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According to the rule of the folded fingers of the right hand, when the folded fingers show the direction of spinning, the vertical thumb shows the direction of the magnetic field induced by the spinning. If so, the clockwise spinning vortices would induce magnetic field toward the vortex. This means that the vortices spinning clockwise induce sucking magnetic field. Both, spinning clockwise or counterclockwise, is called with the common name turbulence.

It is high time to acknowledge the important role turbulence plays in astronomy [6]. If two Black Holes merge (as it was recently observed with LEGO), the merging Black Holes must have opposite magnetic polarity because only then will they attract as two magnets with opposite polarity do. To have opposite magnetic polarity, the two Black Holes must spin in opposite direction. So, there must be Black Holes that spin counterclockwise and Black Holes that spin clockwise.

There should be a good reason why there is a Black Hole at the center of each galaxy. Is the Black Hole of each galaxy the creator of the galaxy? To create stars the Black Hole at the center of the galaxy must spin counterclockwise because only counterclockwise spinning anti-vortices can give birth to matter. Therefore, all Black Holes in the first half of their life, when they are young and give birth to stars [6], are supposed to spin counterclockwise as anti-vortices.

However, if Black Holes merge, there must be Black Holes spinning clockwise. Since vortices spin clockwise and suck in, these must be older Black Holes, which don't give birth to stars any more, but suck in the already starting to age stars. Until the stars reach the Black Hole, they will be old dwarf stars ready to be engulfed by the Black Hole and turned into anti-matter so that with time a new galaxy with new stars in perfect order can be created. If so, the merging of two Black Holes is actually young Black Hole engulfing old one.

It is also high time to acknowledge the important role turbulence played in the birth of our solar system [6]. During solar activity, our Sun has a lot of turbulence in the equatorial areas manifested as two chains of alternating vortices and anti-vortices running parallel to the equator and spinning in opposite directions in the northern and southern hemispheres.

The anti-vortices are throwing spinning light balls, which after loop trajectories, are caught by nearby vortices.

The author claims in another article that a passing-by from afar Black Hole sucked out from the solar anti-vortices huge light balls spinning counterclockwise, which gradually cool down and turn into planets [7]. If so, all the planets must spin counterclockwise. Indeed, all planets of our Solar System spin counterclockwise, except Venus and Uranus. (Planet Pluto also rotates clockwise like Venus and Uranus, but recently the astronomers crossed the name of Pluto from our solar system).

Presently, the planet Uranus roles aside on the plane of its orbiting as an egg on a tabletop with an axis of rotation almost fully horizontal, instead of spinning vertically like a top. Planet Venus is not tilted, but it barely spins making a full spin for 243 earth days. Dr. Bill Hartman of the Planetary Science Institute of Tucson, Arizona, believes that *"Venus was probably hit by near the equator so hard that the direction of rotation was reversed, note how slow Venus's rotation is, but the tilt was little affected. But Uranus got a tangential hit near the pole, which changed his tilt 97 degrees, but not its rotation."* [8]

The ancient Hindu astronomy Surya Siddhanta [9] explains that the planetary movement in our Solar System was not always tamed. From time to time the planets fight and their encounter is called 'yuddha', which in Sanskrit means 'fight' or 'conflict'. According to Surya Siddhanta, the fight always happens at Solstice time when the Earth, Sun, and Moon are on one line. Is fight of the planets possible? Should we believe this? Considering the dramatic changes in the spinning of Venus and Uranus, something very serious must have happened.

All recent studies reveal that the turbulence and the strong magnetic fields, which the turbulence creates, play essential role in astronomy and creation. Since Nonlinear Physics deals with turbulence, this points out to the necessity to introduce and use nonlinear physics in astronomy.

References Références Referencias

1. M. Kuman, How Was the Material World Created? Origin of Its NEMF, *Open Access Journal of Mathematical and Theoretical Physics*, 2 (2) 2019.
2. M. Kuman, The Power of Mind to See the Invisible, *Advances in Complimentary and Alternative Medicine*, 5 (1) 2019.
3. M. Kuman, Quantum Physics, Alternative Medicine, and Spirituality, *Global Journal of Medical Research,* 19 (3) 2019.
4. M. Kuman, The Vortices and Anti-vortices of the Human Nonlinear Electromagnetic Field (NEMF), *International Journal of Complimentary and Alternative Medicine*, 12 (2) 2019.
5. Physics Today, 72 (8): 68, 2019.
6. M. Kuman, Recent Findings in Astronomy Point to Turbulence, *Global Journal of Frontier Science Research,* 19 (4) 2019.
7. M. Kuman, How Are Planets Born, *Global Journal of Frontier Science Research* (submitted).
8. *Astronomy and Astrophysics*, **395**, 595 (2002).
9. *Surya Siddhanta*, 1860, translated by E. Burgess (reprint 1989).

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A Glimpse to Future Physics: Nonlinear Physics Explains why the Pyramids were Built

By Prof. Maria Kuman
Holistic Research Institute

Editorial- Our civilization continues to believe that pharaohs built the pyramids for burial purposes even after no pharaoh has ever been found in them. This article provides evidence that the pyramids were not built for burial purposes and the pharaohs were not the ones that built them. What can physics (and specifically nonlinear physics) tell us about the pyramids? Who and for what purpose built them?

The physicist Dr. Alvarez first tried to measure cosmic rays in the Cheops Pyramid and failed. The arrows of his instruments were dancing left and right and he gave up [1]. For a physicist acquainted with the earth magnetic field, this means that the Cheops pyramid was built on top of magnetic anomaly. Nonlinear physics teaches that magnetic anomaly means that the pyramid was built either on top of magnetic vortex spinning clockwise and sucking energy in, or anti-vortex spinning counterclockwise and emitting energy out.

Since the emitted earth energy would be released as earthquakes or volcanic activity, it seems that the pyramids were built on top of magnetic antivortices with the solemnly purpose to decrease the destructive power of the emitted earth energy. Thus, for a physicist acquaint with nonlinear physics, the earth magnetic anomaly means that the pyramid was probably built on top of anti-vortex emitting earth energy.

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Can I provide a proof for this? Yes, with dowsing. Dowsing is a search for underground water with dowsing sticks, which are two electrically conducting metal wires bent at 90^0. The dowser walks with hands next to one another holding loosely between the thumbs and pointing fingers the short side of the wire, so that the sticks can move. When there is underground water, the sticks start to move. The dowser will walk around trying to determine in which direction the underground water runs [2].

In Europe, more than 40 years ago, I followed with magnetometer dowsers looking for underground water. At the moment their dowsing sticks moved, the arrow of my magnetometer moved. The change in the earth magnetic field registered by the magnetometer was 3 to 5 milligauss. To find out the limit of dowsers' sensitivity, we ask dowsers to find magnets covered with a sheet of paper and found that some dowsers can find magnets as weak as 0.001 milligauss [2]. Measuring with dowsing sticks confirmed that the Cheops pyramids was built on top of magnetic anti-vortex [1].

Here is another proof. When the edges of the pyramid are oriented toward: east, west, north, and south, as the pyramids are, the cosmic rays entering the pyramid will spin downward helically clockwise along the sides of the pyramids like in a vortex. The vortex of the pyramid (with a funnel downward) will meet and annihilate the energy emitted from the earth anti-vortex (with a funnel upward), on which the pyramid was built. This proves that the pyramids were built on top of magnetic anti-vortices to reduce or eliminate the earth energy released from the earth anti-vortex.

Dr. Alvarez was able to measure cosmic rays in the smaller (satellite) pyramids next to the Cheops pyramid and determined that they do not have King and Queen's chambers as the Cheops Pyramid [3]. So, probably the two pyramids next to the Cheops pyramid were built to enhance the effect of the main Cheops pyramid that had King's chamber and Queen's chamber. Our science does not have knowledge how the fields of adjacent pyramids influence each other. Obviously, whoever built the pyramids had more knowledge than the knowledge we have now.

I my book: *Mounds and Pyramids – Who Built Them?* [4], I claim that the pharaohs didn't build the pyramids. The pharaohs, trying to imitate the Big Pyramids, might have built the puny half-ruined pyramids (next to the Big Pyramids), but the Big Pyramids are not pharaohs' work. They are work of Extra Terrestrials, who visited the Earth two million years ago when the volcanic and seismic activity on Earth was much stronger. They had to built the pyramids on top of the anti-vortices releasing earth energy to decrease the earth's seismic and volcanic activity and make the planet inhabitable.

This explains all the mysteries of the pyramid building. It explains:

1. Why the pyramids were built with such precision – the edges of the pyramids were built exactly in directions east, west, north, south with accuracy 1/15 of the degree;
2. Why the aperture in the Cheops pyramid was built with such precision and oriented toward constellation Orion. The Extraterrestrials came from

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the forth planet orbiting the double star Sirius of constellation Orion.

3. This also explains why the Egyptians knew that Sirius is a double star and the period of orbiting of the two stars is 52 years. Our science now found that this period of orbiting is about 50 years.

Seems fantastic? I have written four science fiction books, in which the fiction is about 2% and the rest is science. In them I revealed who these extra-terrestrials were, from which part of the Universe they came, what was the level of their knowledge and technology, etc. The books are very interesting to read and discuss in book discussion groups because different people will put the border between science and fiction at different places.

The four science-fiction books are:

1. The Crystal Skulls of the Gods [5],
2. Following the Trail of the Holly Grail [6],
3. Are We Martian or Atlantians? Going to the Past to Meet the Future [7], and
4. Earthly God from the Outer Space [8].

They are all listed in my webpage www.mariakuman.com, which offers table of content and a short description of each book.

But there was also another reason to build these pyramids. Why do I think so? Ancient Jewish Kabala texts, like Zohar [9], claim that the Creator God Yahwe was Tetragrammaton (Fig. 1) and God created everything in his image. The Tetragrammaton consists of two intersecting pyramids one with top up and the other with top down - inscribed in a sphere [9]. The topside-down pyramid intersects the upright pyramid at a distance 2/3 from the top [9].

This reveals that it is not by chance that the King's chamber was built on height 2/3 from the top of the pyramid. At 2/3 from the height of the pyramid, where the King's chamber was built, the emitted from the earth energy (the top of the upside-down pyramid) was maximal. If so, a person in the King's chamber would be maximally energized from the energy emitted from the earth. How would this earth energy influence the person?

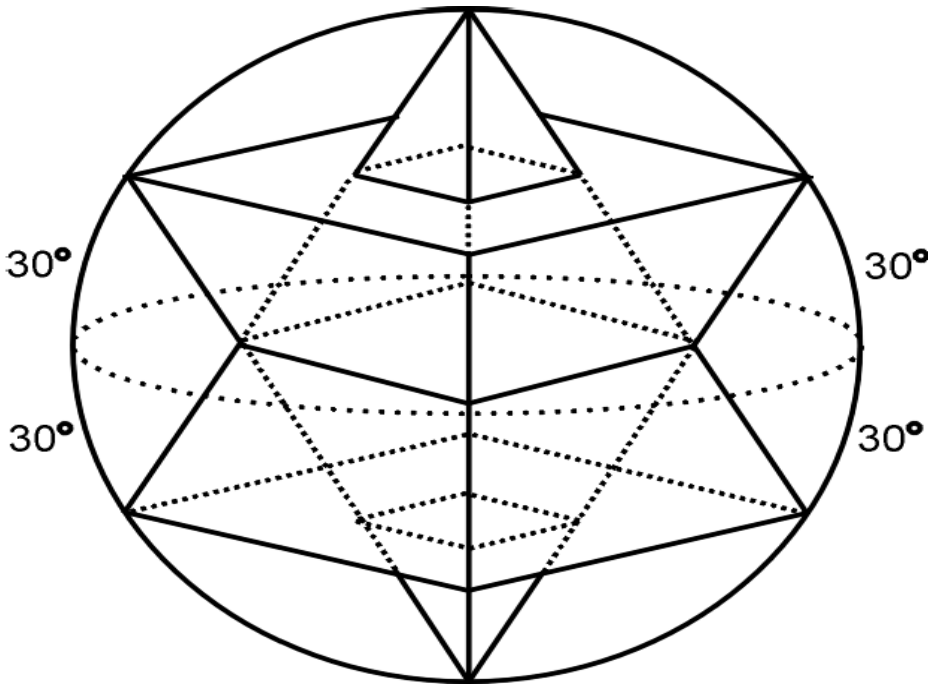

Fig. 1: Tetragrammaton – the image of the Creator God, who created everything in his image

Since the Creator God created every material object as a material body and Spirit (which turned out to be nonlinear electromagnetic field (NEMF) – result of my 40 years of study) [10], the above question means how the Earth's emitted energy (Earth's NEMF) would influence the NEMF of the person in the King's chamber. Both NEMFs (the Earth's and the person's in the King's chamber) were created in the image of the Creator God, and they have the same shapes (Tetragrammaton), and the same dynamics [9]. The NEMFs of the Sun, Earth, and humans have torus shape, which in the image of the Tetragramaton on Fig. 1 is the area secluded between the area of intersection of the two pyramids and the inscribed sphere.

The so-called 'Star of David' is two-dimensional image of God Yahwe, who in three-dimensions is Tetragrammaton. In the 'Star of David', the two intersecting pyramids of the Tetragramaton are represented as two intersecting triangles – the triangle with top down represents the light (electrical, which stimulates) pyramid, the triangle with top up – the dark (magnetic, which inhibits) pyramid. Both pyramids are in

dynamic equilibrium (and so are the triangles in the two-dimensional representation).

As said, the pyramids were built with precise orientation east, west, north and south because as the Earth spin west, the cosmic rays (electric flux) enter the pyramid and spin helically downward clockwise barely touching the walls. This annihilates the magnetic flux of earth energy, which spins counterclockwise because all anti-vortices, which emit energy, spin counterclockwise.

If the earth energy emitted from the anti-vortex is maximal at the King's chamber, it would influence maximally the NEMF of the person in the King's chamber. He would experience maximal increase of the vibrations of his NEMF. Since our NEMF is our Spirit [11], this means that the person in the King's chamber would experience spiritual uplift.

So, we came to the conclusion that the granite sarcophagus in the King's chamber was built not as a burial place of pharaohs, but as a place where one can achieve spiritual uplift. Is somewhere written that the pyramids were used as temples for spiritual uplift? In my book: *Mounds and Pyramids – Who Built Them?* [4], I have a citation from the Bible, which shows that the pyramids were indeed used as temples to connect with God.

References Références Referencias

1. Johnson Ken, *The Ancient Magic of the Pyramids*, Kangaroo Book, 1977.
2. Kuman M, *A Guide to the Mind's Secrets*, Health and Happiness Books, 1993.
3. Alvaretz L, Search for Hidden Chambers in the Pyramids, *Science*, 167: 832-839, 1970.
4. Kuman M, *Mounds and Pyramids – Who Built Them?*, Health and Happiness Books, 2000; second edition 2010.
5. Kuman M, *The Crystal Skulls of the Gods*, Health and Happiness Books, 2008.
6. Kuman M, *Following the Trail of the Holly Grail – the Holy Grail of the Gods*, Health and Happiness Books, 2008.
7. Kuman M, *Are We Martian or Atlantians? Going to the Past to Meet the Future*, Health and Happiness Books, 2009.
8. Kuman M, *Earthly God from the Outer Space*, Health and Happiness Books, 2010.
9. Zohar (23 volumes) Ed. Rabbi Shimon Bar Yochai, 2012.
10. Kuman M, How the Material World Was Created? Origin of Its NEMF, *Open Access Journal of Mathematics and Theoretical Physics*, 2 (2) 2019.
11. Kuman M, Quantum Physics, Alternative Medicine, and Spirituality, *Global Journal of Medical Research*, 19 (3) 2019.

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Why Solar Cycles? Modeling the Dynamics of Solar Activity

By Prof. Maria Kuman
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Abstract- Amazingly, helium nano-droplets and the heliumcontaining sun when active have the same torus-shaped fast spinning nonlinear electromagnetic fields (NEMFs) with the same dynamics. The fact that our Sun changes its magnetic polarity periodically and regularly (known as periodic flipping of the magnetic poles of the Sun) actually means periodic switches of the directions of spinning of the nonlinear electromagnetic field (NEMF) of the Sun. When the Sun spins clockwise like a vortex, it sucks energy in through both magnetic poles at the two ends of the axis of spinning. This speeds the sun's spinning, which bulges the Sun at the equator and increases the turbulent activity there, making the Sun more active. When the Sun spins counterclockwise as an anti-vortex, it loses energy out through its magnetic poles. This shapes it as a lemon, shrinks the equatorial area, and ceases the solar activity. This is the basis of the observed periodic switches of high and low activity of our Sun (and also of helium nano-droplets). The article offers a dynamic model, which explains the periodic changes of high and low solar activity.

Keywords: why solar cycles; modeling solar dynamics; reversal of sun's magnetic polarity; reversal of sun's direction of spinning.

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Keywords: why solar cycles; modeling solar dynamics; reversal of sun's magnetic polarity; reversal of sun's direction of spinning.

I. Introduction

Let us introduce some concepts of nonlinear physics, which we would need. The flux of running river-water would be linear, if the bottom of the river is smooth. However, if there is a big stone on the bottom of the river, the water needs to flow around the stone and the water flux becomes nonlinear. Behind the stones, turbulence would be observed manifested with a couple of: vortex spinning clockwise and anti-vortex spinning counterclockwise.

Following the law of the folded fingers of the right hand in physics, when the folded fingers show the direction of the currents (or the direction of spinning), the vertical thumb show the direction of the induced magnetic field. Following this law, the vortices (which spin clockwise) would induce magnetic field toward the surface. This would make the vortices to suck energy in. Following the same law, the anti-vortices (which spin counterclockwise) would induce magnetic field off the surface, which would make the anti-vortices to emit energy.

II. The Dynamics of Fast Spinning Liquid Helium Nano-Droplets

In the November's journal of Physics Today, 2014, p. 16, Ashley Smart wrote the article *Quantized Vortices in a Nanodroplet*,[1] in which she describes the unusual behavior observed in super-fluid fast-spinning helium nanodroplets at temperatures close to the absolute zero.

The cited by her authors[2] observed switching of the nanodroplets between two stages. First, stage a) in which a lattice of Bragg's peaks of neutron scattering were observed seen on Fig. 1 panel a) as dots. At this stage, the droplet had the shape of a torus spinning around axis passing through the hole of the torus. The spinning made the torus bulged at the equator and had an ordered array of quantized alternating vortices and anti-vortices in its equatorial area from which the neutron scattering originated.

However, at stage b) Bragg's peaks of neutron scattering were not observed, which means there were no vortices and anti-vortices any more. Not only this, the X-ray diffraction on Fig. 1 panel b) showed more widely spaced diffraction lines along the axis of spinning of the donut. This means that the droplet now emits energy through both ends of the axis of spinning.

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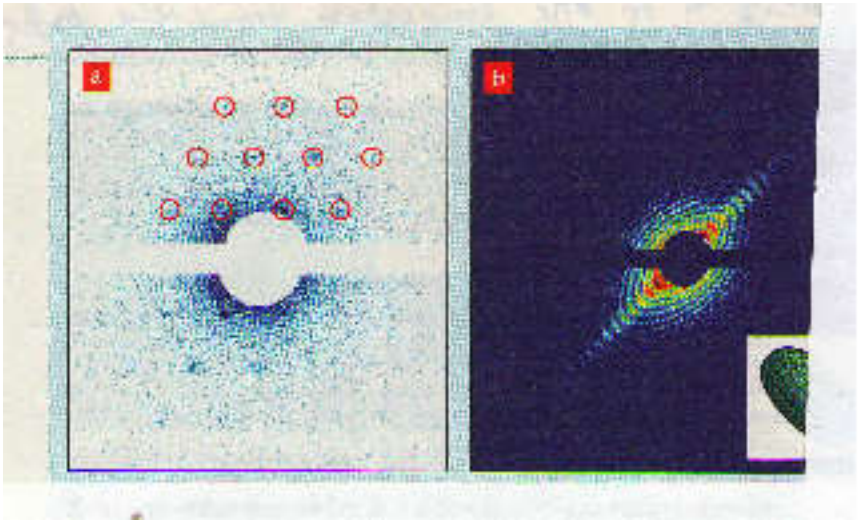

*Fig. 1**

Panel a: Brag's neutron scattering from a donut-shaped helium droplet bulged at the equator with quantized alternating vortices and anti-vortices in the equatorial area. Panel b: At later time the same droplet shows no Bragg's scattering, which means vortices and anti-vortices are not present; X-ray diffraction shows shrunk equatorial area and elongation along the poles with emission from the poles.[1,2]

The X-ray diffraction also shows more narrowly spaced diffraction lines at the equator of the donut, which means that the emitted energy through the poles shrunk the droplet at the equator and eliminated its turbulence. The X-ray diffraction shows that the nanodroplet in stage b) has the shape of an elongated lemon, which emits energy from both ends of the axis of spinning (magnetic poles).

However, the authors of the article on helium nanodroplets[2] still wanted to see the droplets in stage b) shaped as a donut flattened at the poles and bulged at the equator. But the fact that Bragg's neutron scattering was not observed means that vortices and anti-vortices were not present, which should tell them that something dramatic had happened. Indeed, the X-ray diffraction on panel b) shows that the droplet has emitted energy through the poles, and its turbulence (vortices and anti-vortices) has disappeared.

At the end of her article, when Ashley Smart tries to explain the lack of neutron-scattering peaks for the droplet on panel b) (which means lack of vortices and anti-vortices), she cites the authors' opinion that this could be a sign of new physics.[2] Yes, this new physics is already developed - it is nonlinear physics – the physics of dynamic systems.

III. Nanodroplets, Stars, and Humans Have the Same Torus (Donut) Shape NEMFs

Amazingly, just as the helium nanodroplets, the helium containing stars exhibit similar dynamics of sucking or emitting energy through both ends of the axis of spinning of their donut shaped NEMF. In double stars, it was observed how the dimmer star was sucking energy from the brighter star through the hole of its donut-shaped NEMF, while the brighter star was loosing energy also through the hole of its donut. This was continuing until the energies of both stars became equal.[3,4,5]

Recently, Sarafina Nance of the University of Texas at Austin claimed in an article published in *Monthly Notices of the Royal Astronomical Society* that the rapid spinning of the famous star Betelgeuse was probably a result of swallowing another star.[3] Since in double stars the old dimmer star sucks energy from the younger brighter star through its donut hole the swallowed star was probably sucked through the hole of the donut shaped NEMF of Betelgeuse.[4,5]

Periodic emission of energy from the magnetic poles of a neutron star was first observed in 1967 and later these neutron stars were called pulsars. Presently, there are about 2,000 known radio-pulsars emitting radio waves from their magnetic poles. The X-ray pulsars, which emit X-rays from their magnetic poles, are called magnetars because of their extremely strong magnetic fields $10^{14} – 10^{15}$ G.[6]

First, scientists thought that the emission is powered by the energy of the pulsars' spinning, but recent theories based on computer simulations claim that magnetars' emissions are powered by gradients and instabilities of the star's magnetic field.[1] However, we should not forget that the spinning of NEMF cranks the magnetic field.

Also, observations of the solar dynamic observatory (SDO) revealed that magnetic fields rule the solar activity, which agree with the computer simulations of magnetars revealing that magnetic gradients and instabilities of the star's magnetic field rule the magnetars' periodic emission from their magnetic poles. However, we should never forget that the spinning of NEMF cranks the magnetic field.

Measurements with our patented high-sensitivity energy meter of the electric component of the human spinning donut-shaped NEMF (Fig. 2* - 5*) showed that Reiki healers, just like the stars, suck energy through the top of their head, where the hole of their donut shaped NEMF is (Fig. 6*).[7] Russian measurements of the spinning of the human NEMF with their patented 'torsemeter' showed that happy (positive) emotions (or just positive thinking) make the donut shaped NEMF spin faster clockwise[7] and according to nonlinear physics and our measurements suck more energy.[8]

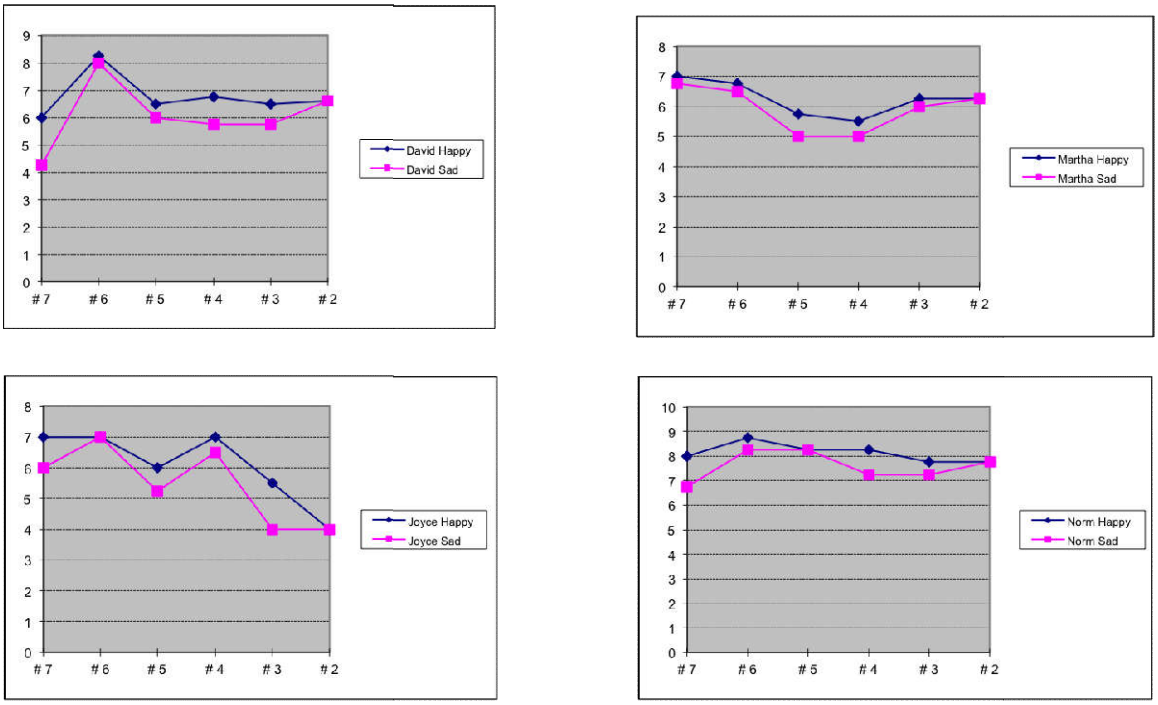

Fig. 2 - 5**

Our electrical measurements at the points with alternating spinning #2 to #7 on Fig. 6* of the human torus-shaped NEMF at positive thinking (blue curves) and negative thinking (pink curves).

The Figs. explain the energy uplift we feel at positive thinking. Our electrical measurements at the points #2 to #7 on Fig. 6* of the human NEMF showed that at positive thinking the whole NEMF spins clockwise (Russian measurements) and electric energy is sucked from the atmosphere through the top of the head (point 7 in our measurements).[8] (This is even more visible in measurements of Reiki Healers).[9] The sucked energy increases the energy of the whole body and makes it more balanced. For this reason, positive thinking makes us healthier.

Opposite to this, at negative thinking, the whole NEMF spins counterclockwise and looses energy, which explains why negative thinking make us feel miserable. Not only is the energy of the whole body lower, it is more unbalanced, which means negative thinking lead to a disease. Since the energy of the genetically inherited weak organ drops in energy maximum, negative thinking leads to a disease of genetically inherited weak organ.

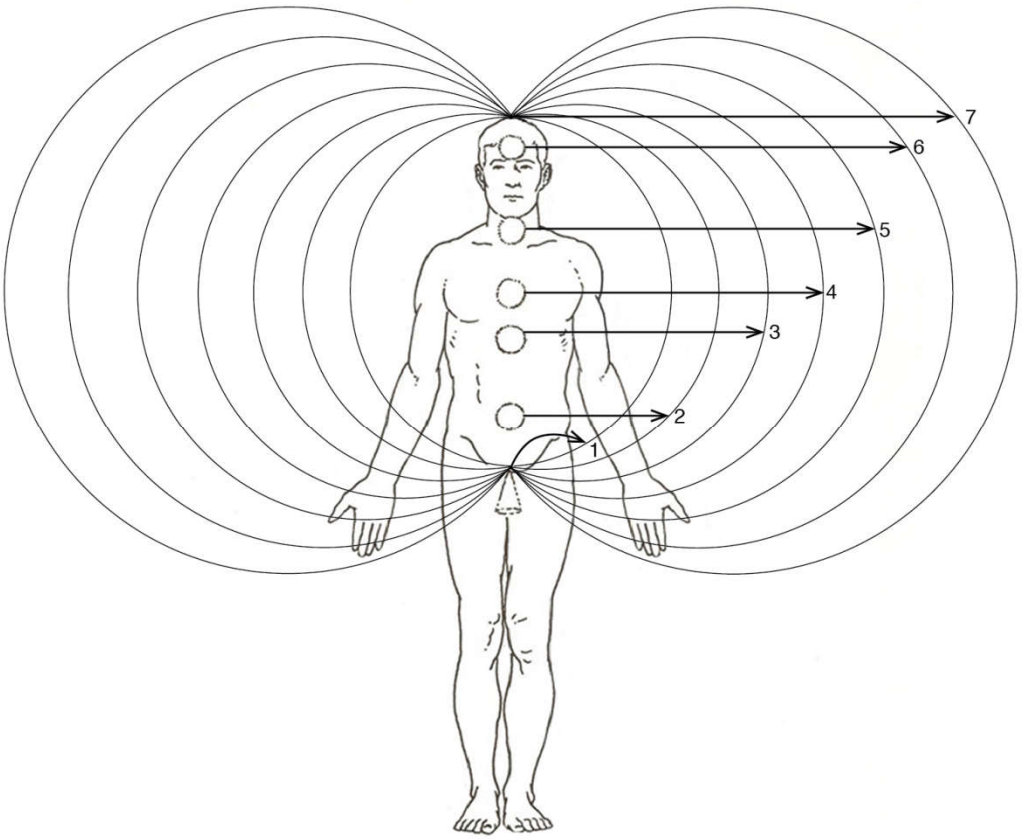

*Fig. 6**

Pictured is the vertical cross-section of male's torus-shaped NEMF with alternating vortices and anti-vortices along the backbone and its discrete (quantum) energy levels. Let us compare the male torus-shaped NEMF with the torus-shaped NEMF of the Sun. The androgynous solar NEMF has two chains of alternating vortices and anti-vortices running along the equator and spinning in the opposite directions in the northern and southern hemispheres. Each of the genders has only one chain of alternating vortices and anti-vortices, which are along the axis of spinning of their NEMF, and they spin in opposite directions in males and females.

It seems that the androgynous NEMF of the Sun has been split through the equator to get gender specific male and female NEMF. From the northern hemisphere of the Solar NEMF, the female NEMF was created. From the southern hemisphere the male NEMF was created. Since the NEMF is self-organized field, it reshaped after the split into two torus-shaped NEMFs, but now each gender has only one chain of alternating vortices and anti-vortices, which is along the axis of spinning of the male and female NEMF, and they spin in opposite directions in males and females.

IV. As Above, So Below

Our Sun and the rest of the stars, which are mostly helium and spinning, seem to exhibit behavior similar to the helium nano-droplets. During solar activity, the observed numerous solar spots in the equatorial area are the openings of two chains of alternating vortices and anti-vortices running along the equator. The activity in the equatorial area results from fast spinning of the Sun in clockwise direction like a vortex, at which energy is sucked in.

Similar is the active state of the nano-droplets when they have a system of quantized vortices and anti-vortices (in the equatorial area) observed with Bragg's neutron scattering (Fig. 1*, panel a). During its active period, the nano-droplets spin fast clockwise like a vortex, suck energy in, are bulged at the equator, and exhibit turbulence in the equatorial area manifested as vortices and anti-vortices, which are seen as peaks with Bragg's neutron scattering.

Similar to the state of low solar activity when solar spots are not observed on the surface of the sun, the nano-droplets have a state when Bragg's neutron scattering was not observed because vortices and anti-vortices were not present (Fig. 1*, panel b). X-ray

diffraction from nano-droplets (Fig. 1*, panel b) shows emission of energy through both ends of the axis of spinning of NEMF, which leads to shrinking of the equatorial area and disappearing of its turbulent activity.

All this means that: 1/ our sun breathes energy in and out and this sustains its life just like we breathe air in and out to sustain our life. 2/ This also means that the solar energy comes from outside the sun, not from its core, as we presently chose to believe.[10]

Also, the whole material world (including the electron itself) is a material body and torus-shaped NEMF.[11] It is known that the electron emits virtual photons and sucks them back in. If so, we can expect this to happen during the cycle of electron's activity when it sucks energy in, spin faster clockwise, and exhibit turbulence. However, this cycle of high activity is expected to alternate with a cycle of low activity when the electron spins counterclockwise, looses energy through both ends of the axis of spinning, which makes it elongated in this direction, and has shrunk equatorial area without turbulent activity.

In other words, we can expect the magnetic dipole moment of the electron, induced by the electrons spinning, to alternatively shrink and expand. This is exactly the conclusion, which Dr. Andrew Steiner reached.[12] He is a neutron-star specialist and to explain the observed behavior of neutron stars, he needed to assume that their dipole moment alternatively shrink and expand. In our understanding, this means that the spinning of the neutron stars alternatively switches between clockwise (when the neutron star is shrinking) and counterclockwise (when the neutron star is expanding).

So it is - as above, so below. Unfortunately, being specialized only in neutron stars and not knowing nonlinear physics (I spoke with him), he could not see that this is a global feature of all self-organized systems with torus-shaped NEMF.

V. Dynamic Model Explains the Dynamic of Solar Activity

When creating a dynamic model, let us first consider the fact that the solar wind looks like a four-leaf clove.[10] The first satellites detecting solar wind (a fast running flux of electrically charged particles) found that as the Sun spins once around its axis for 27-28 days, the solar wind that strikes the earth reverses its polarity 4 times. In the boundary between two 'leaves' of the solar wind, called sectors, there is a brief lull for two days.[10] This gives us the right to assume that the electromagnetic field of the Sun should be simulated with pyramids, as if the leaves of the four-leaf clover of the solar wind have originated from the edges of a pyramid.

The dynamic of stars explained in section 3 gives us the right to assume that the torus-shaped field of the Sun results from the dynamic interaction of two intersecting pyramids – one with top up, which simulates vortex, and the other with top down, which simulates anti-vortex.[11] Both pyramids are inscribed in a sphere (Fig. 7*).

Since the activity of the sun is maximal in the equatorial area, which is 30^0 north and south of the equator, we must assume that the pyramid with top down intersects the pyramid with top up at a distance 30^0 from the equator. Then the area secluded between the sphere and the zone of intersection of the two pyramids approximates roughly the shape of a torus, which is the shape of the electromagnetic field of the Sun (Fig. 7*).

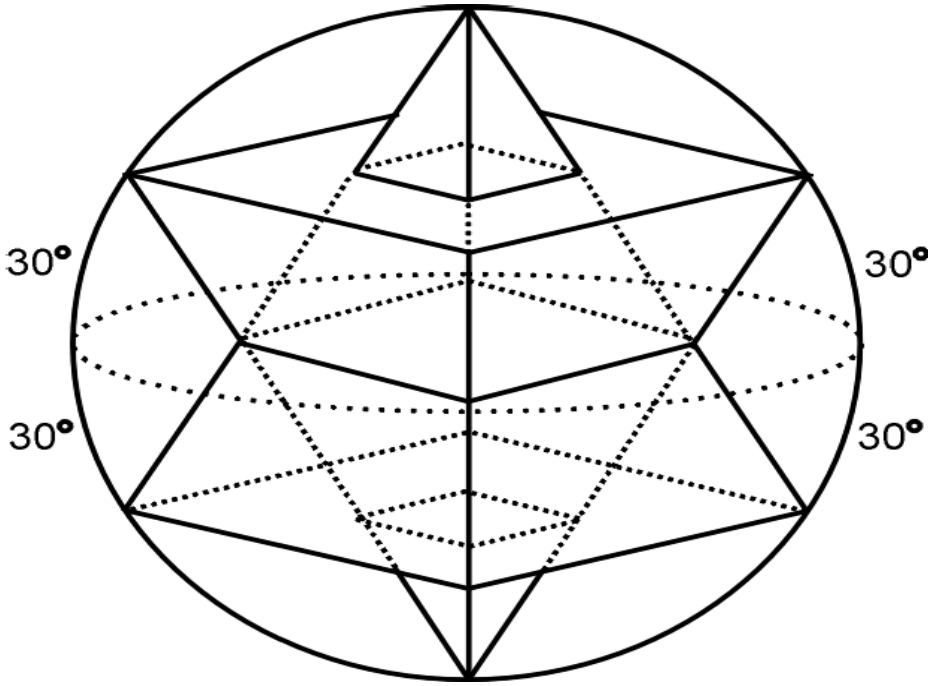

*Fig. 7**

This geometric figure explains the origin of the torus-shaped electromagnetic field of the Sun and the origin of its dynamic.

To explain the periodic changes in solar activity, we must assume that the two pyramids are in dynamic equilibrium. But what could trigger this dynamic? Since the field of the sun is electromagnetic, electric or magnetic external influences could trigger its dynamic. Recent studies of the Sun found that its activity relates to magnetic changes. What could influence the sun magnetically?

All planets orbiting the sun have magnetic moments except Mars, which is an old and cold planet without liquid core and magnetic field (or magnetic moment). Then at symmetric alignments of the planets on both sides of the Sun when the magnetic moments of the planets sum up, we can expect strong symmetric magnetic influence on the sun, which can change the solar dynamic.

When the planets orbiting the sun are aligned on both sides of the sun (inferior conjunction), the strong symmetric magnetic influence of the planetary magnetic moments on the electromagnetic field of the Sun would make the Sun spin faster clockwise. Now the two holes of the donut-shaped field are two clockwise spinning vortices, which suck energy in. The influx of energy and the increased spinning would bulge more the Sun at the equatorial zone of 30^0 up and down the equator. This would increase the turbulent activity at the equator of the Sun, which will be observed as increased number of solar spots or increased solar activity.

In our two-pyramid model, at inferior conjunction (alignment) of the planets at both sides of the Sun, the symmetrical magnetic perturbation (from the sum-up magnetic moments of the planets) makes the two pyramids to go deep into each other, at which the solar equator bulges and the activity of the Sun increases. The last inferior conjunction took place in the year 2005. It was a great planetary alignment including the big planets Jupiter and Saturn. Jupiter, Saturn, and five distant planets were aligned on one side of the Sun, while the Earth and Moon were on the other side.

This made the two pyramids go deep into each other, which increased the solar activity and the temperature on the planets orbiting the sun. On the Earth we called it global warming. Thus, the global warming started in 2005 caused by inferior conjunction of planets and in this article we are going to tell you when it will end – it will end at superior conjunction of the planets. (Fig. 8* presents all the warming (the temperature maximums) in the last 10,000 years).[13]

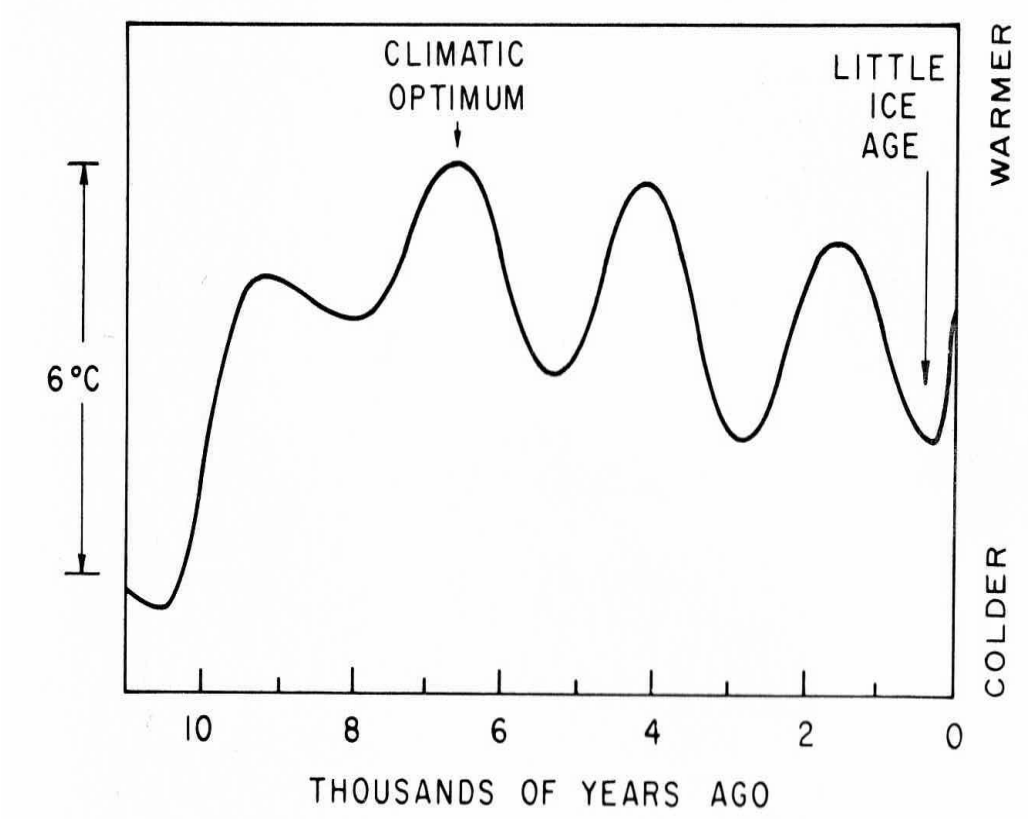

*Fig. 8**

Temperature changes on Earth in the last 11,000 years taken from study of the glaciers[13].

When all seven planets orbiting the sun are aligned at one side of the Sun (superior conjunction) and their magnetic moments sum up, the asymmetric magnetic influence of the planets on the electromagnetic field of the Sun would flip the magnetic poles. This means that the Sun would start spinning in opposite (counterclockwise) direction and emitting energy from its magnetic poles, which would elongate the sun toward the poles. In our model, this would correspond to distancing of the two pyramids.

The distancing of the two pyramids will be observed as pole-to-pole elongation of the Sun and energy emission through both magnetic poles at the two ends of the axis of spinning. This energy emission will end the increased solar activity, the turbulence at the equator will seize, and a period of very low solar activity will start. The periods of low or no solar activity will bring periods of low temperature (Ice Ages) on the planets orbiting the Sun (Fig.8*). [13]

Such superior conjunction is expected to take place in 2020 (astronomical prediction of NASA). Also, the NASA's Solar Dynamic Observatory (SDO) launched in orbit in 2010 to measure the shape of the Sun during one full cycle of solar activity (2010 – 2022) would have the opportunity to record the changes in the shape of our sun caused by this superior conjunction, which will elongate the Sun toward its poles and seize the solar activity.

Thus, the global warming will end in 2020 and our temperatures will start gradually dropping down and moving us to the next Mini Ice Age. Fig. 8* from study of the glaciers[11] shows that in the last 10,000 years the Earth had been through one Big Ice Age represented by the first deep temperature minimum and four Mini Ice Ages represented by four shallower minimums. The periodicity of Ice Ages is 2,562.5 years.[13]

We can also determine the time when the global warming will end from Fig. 8*. Let us extrapolate the curve[11] of the last global warming and determine the time when the global warming, would end. We are getting for the end of the global warming the same year 2020, which was the year when all seven planets will align on one side of the Sun. When the global warming ends, the temperatures will start gradually rolling down shifting us to the next Mini Ice Age.

As said, the magnetic disturbance from the summed-up magnetic moments of all planets aligned at one side of the sun would flip up the magnetic poles of the Sun. As a result, the Sun would start spinning in opposite direction, become elongated toward the poles, emit some energy through them, and its activity would drop down to almost zero. The earth will start cooling drifting to the next Mini Ice Age.

The zigzag temperature curve on Fig. 8* means that at every temperature maximum (global warming),

the Sun is active because it spins clockwise, sucks energy through both magnetic poles, bulges at the equator, and exhibits turbulence manifested with a set of vortices and anti-vortices, whose openings are observed as solar spots. At every temperature minimum (Ice Age), the solar activity is very low (close to zero) because the Sun spins counterclockwise, emits energy through both poles, and is pole-to-pole elongated.

We truly believe that NASA's Solar Dynamic Observatory (SDO)[14] will confirm our predictions that during warming periods (global warming) the solar activity is high because our Sun spins fast clockwise and sucks energy in through both magnetic poles. The fast spinning makes it bulged at the equator and increases its turbulence. During the cold periods (Ice Ages), the solar activity is low or zero because our Sun spins counterclockwise and emits energy through both magnetic poles, which makes it elongated toward the poles.

VI. Conclusions

In this article, we showed that at great planetary alignments (which include the big planets Jupiter and Saturn), when five distant planets are aligned on one side of the Sun and the Earth and Moon are on the other side, the summed-up magnetic moments of the planets perturbs the Sun symmetrically on both sides. In our two-pyramid model, the two pyramids go deeper into each other, the Sun spins faster, bulges at the equator, its turbulence increases, i.e. the solar activity increases, and this leads to global warming on the planets orbiting the Sun. Such inferior conjunction of the planets took place in the year 2005 and this is what started the global warming, which we experience now.

At great alignment, when all seven planets including the Moon are aligned on one side of the Sun in superior conjunction (year 2020 during solstice), the strong asymmetric perturbation could be expected to flip the magnetic poles of the Sun and the two pyramids would distance each other. This would elongate the shape of the Sun toward the poles, some energy would be emitted through them, and the solar activity would drop down to almost zero. Thus, the global warming we experience now will end on December 21, 2020 when all the planets orbiting the Sun will align on one side of the Sun (NASA prediction). The temperatures will start gradually dropping shifting us to the next Mini Ice Age (this will be the subject of another article offering a mathematical model of it).

Only a scenario like this could explain the zigzag periodic temperature changes observed on Earth through study of the glaciers (Fig. 8*).[13] Fig. 8* can also be used to predict through extrapolation the year in which the global warming will end and we will start gradually shifting from global worming to cooling, which will lead us to the next Mini Ice Age. The result of this extrapolation is - the year 2020 will be the year of the dramatic change from warming to cooling.

We are certain that the NASA's Solar Dynamic Observatory (SDO), launched in space in 2010 to measure the shape of the Sun during one full cycle of solar activity[14], will confirm the predicted here bulging at the solar equator during solar activity and pole-to-pole elongation during the period of low or no solar activity. This was already confirmed in the experiments with super-fluid fast-spinning Helium nanodroplets.[2] Another article will present a mathematical model describing the solar dynamics.

References Références Referencias

1. A. Smart, Quantized Vortices in a Nanodroplet, *Physics Today*, **67**, #11, 16 (2014).
2. L. F. Gomez et al., Shapes and Vorticities of Superfluid Helium Nanodroplets, *Science*, **345**, 906 (2014).
3. S. Nance et al., *Monthly Notices of the Royal Astronomical Society*, 453(3), 2654-2661 (2017).
4. M. Burgay et al., An Increased Estimate of the Merger Rate of Double Neutron Stars…, *Nature*, **426**, 531-533 (2003).
5. A. G. Lyne et al., *Science*, doi:101126/science. 1094645 (2004).
6. N. Rea, Neutron Stars Hidden Nuclear Pasta, *Physics Today*, **68**, #10, 62 (2015).
7. V. Tihoplav, T. Tihoplav, The New Physics of Faith, Krilov, 2007 (Russ.).
8. M. Kuman, The Key to Health and Happiness – Measurements Show that It Is Not Only Important what You Eat and Drink, It Is Equally Important what You Think, *Current Trends in Biochemical Engineering and Biosciences*, 18 (1) 2019.
9. M. Kuman, Measuring Energy Healing – Mystery, Placebo, or Real Energy Healing, *Acupuncture and Electro-therapeutic Research*, 42 (3-4) 163-173 (2017).
10. J. Weiner, *Planet Earth,* Bantam Books, Toronto-New York-London-Sydney-Auckland, 1986.
11. M. Kuman, How the Material World Was Created? Origin of its NEMF, *Open Access Journal of Mathematics and Theoretical Physics,* **2** (2) (2019).
12. A.W. Steiner, Using Neutron Star Observations to Determine Crust Thickness, Moments of Inertia, and Tidal Deformations, *Physical Review C*, **91**, 015804 (2015).
13. J. Imbri and K. Imbri, *Ice Ages – Solving the Mystery,* Enslow Publishers, Hillside, New Jersey, 1979.
14. J.-P. Roselot, and C. Damiani, *Eur. Phys. J.,* **H36**, 407 (2011).

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Nonlinear Mathematical Model in Torus Representation Explains the Elliptical Planetary Orbits and the Cycle of Precession of Our Sun

By Prof. Maria Kuman
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Abstract- The whole material world is a material body and a torus-shaped nonlinear electromagnetic field (NEMF). This explains why the torus in the nonequilibrium theory is the tridimensional attractor to which the NEMF of the whole material world (alive and not alive) adhere. Torus-shaped is the NEMF of: our Sun (as well as all stars), our Earth, man, plants, etc. For this reason, nonlinear mathematical model was used in torus representation, in which the equations have simplest form, and which has geometrical presentation. This geometrical presentation shows clearly that only external perturbation can elongate the circular orbits of the planets into ellipses. Since in the search of other inhabited planets it was found that all planetary orbits in our galaxy were ellipses, the disturber must be of galactic origin. Astronomical observations found that an intruder galaxy, which our galaxy swallowed long time ago, still orbits (the Black Hole weighing millions of solar masses and the leftover stars) around the center of our galaxy: 1/ This disturbs all the stars and planets in the galaxy. 2/ This makes the axis of spinning of all the stars in the galaxy, including our Sun, to wobble (called cycle of precession) in synchrony with the orbiting of this intruder galaxy around the center of our galaxy.

Keywords: why elliptical orbits; nonlinear mathematical model; torus representation; powerful external perturbation; sagittarius dwarf galaxy.

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I. Introduction

Four centuries ago, Kepler described mathematically the planetary orbits of our solar system as ellipses. He did this on the basis of long-term astronomical observations of Tiho de Brache. However, Kepler couldn't explain why the orbits are ellipses. Four centuries later, in this article we will try to explain why the orbits of the planets are ellipses. Many years after Kepler, Isaac Newton found that the gravitational force decreases with the square of the distance.[1]

Since the electromagnetic field of the Sun has the shape of a torus, the nonlinear mathematical model offered here is in torus representation. This makes the evolution equations maximally simple and elegant and its graphical presentation allows us to see that without disturbance the orbits of the planets would be circles winding around the hole of the torus-shaped NEMF of the Sun (Fig. 1).

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Only when perturbing force is present, the orbits become elongated to ellipses winding at an angle around the torus (Fig. 1). Since only a perturbing force could create such an angle, only a perturbing force could have elongated the circular orbits of our planets to ellipses. Details about the perturbing force in our galaxy will be given in section 4 of this article.

II. Nonlinear Mathematical Model

We are trying to describe mathematically the orbits of the planets,[2] which are periodic functions. They will be solutions of our equation of evolution. According to the nonlinear theory in the non-autonomous case, when the function F describing the evolution will depend directly on the time t, the equation of evolution is:[3]

$$dU/dt = F(t, \mu, U) = F(t+nT, \mu, U). \qquad (2.1)$$

The non-autonomous periodic solution of equation (2.1) is $U(t) = U(t+nT)$.

In the autonomous case, when the function f describing the evolution does not depend directly on the time t, the equation of evolution is:

$$du/dt = f(\mu, u(\mu, t)), \qquad (2.1)$$

where $u(\mu, t) = u(\mu, t + T')$ is the periodic autonomic solution of eqn. (2.1'); μ is a real number.

If perturbation v is present, the evolution equation will be

$$d(u+v)/dt = f(\mu, u(\mu, t) + v(t)), \qquad (2.2)$$

where $u(\mu, t) + v(t)) = u(\mu, t + nT') + v(t + nT'))$ is the new equilibrium solution of eqn. (2.2).

Let expand the function u in a series around the initial point u=0.

$$du/dt = f(\mu, u) = f_u(\mu|u) + \tfrac{1}{2} f_{uu}(\mu|u) + 1/3!\, f_{uuu}(\mu|u) + \ldots \qquad (2.3)$$

Let us write this as

$$du/dt = f_u(\mu|u) + N(\mu,u) \qquad (2.4)$$

where $N(\mu,u)$ includes all nonlinear terms.

$$N(\mu,u) = f(\mu,u) - f_u(\mu|u) \qquad (2.5)$$

III. The Evolution Equation in Polar Coordinates – Torus Representation

The donut has a torus shape, which can be generated by rotating a circle with radius ρ at angle $0^0 < \varphi < 360^0$ in a plane perpendicular to the circle and passing through its center. Let θ is the angle ascribing this circle when it varies between 0 and 2π.

The polar coordinates of torus representation ρ, φ, and θ relate to the Decart coordinates x and y in the following way

$$y = e^{i\omega t}x; \qquad x = \rho(\theta)\, e^{i\theta}; \qquad (3.1)$$

Then

$$y = \rho(\theta)\, e^{i(\omega t + \theta)} \qquad (3.1')$$

where $\omega = 2\pi\varphi$. In torus coordinates, the evolution equation is

$$y' = [\rho'(\theta) + i\omega\rho(\theta) + i\theta'(t)\rho(\theta)]\, e^{i(\omega t + \theta)} \qquad (3.2)$$

When there is no perturbation, the solution of this equation will be a circle in n+1-dimensional phase space, which corresponds to the solution U=0 in R^n of equation (2.1). It is the limit of the nontrivial periodical problem, which is a circle with any radius (any horizontal circle on Fig. 1) with angle $\varphi = 2\pi t/T$ (φ [0, 2π] and $\varphi = \varphi + 2\pi n$ because U(t) = U(t+nT)). *The representation is called one-dimensional torus* T^1.

When perturbation is present, a new solution branches from T^1, *which represents trajectories winding around the torus at a certain angle. These trajectories* are described by the equations:

$$\theta = \theta(t),\ \rho = \rho(\theta(t)),\ \varphi = 2\pi t/T \qquad (3.3)$$

They go around the torus when actively involving $\rho = \rho(\theta)$ and $\theta = \theta(t)$. *When t increases at one period T, the angle* φ increases at 2π. *These trajectories are ellipses (see Fig. 1). The representation is called two-dimensional torus* T^2. *The solutions on the torus* T^2 *are periodic*

$$\theta(t) = \theta(t + nT).$$

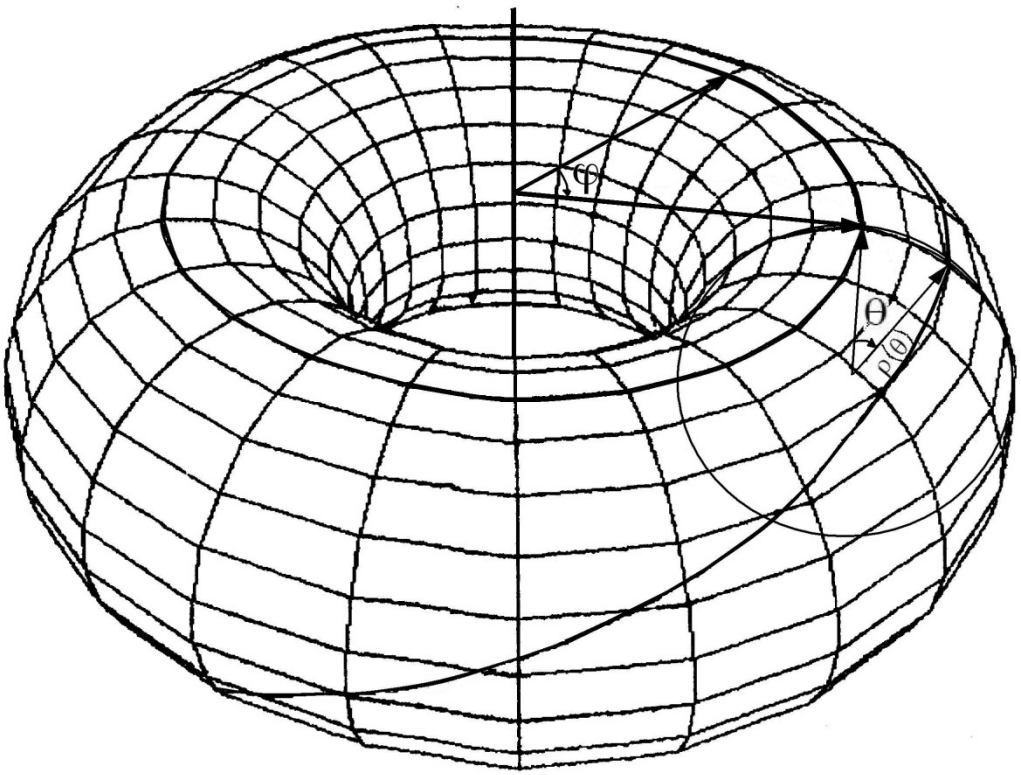

Fig. 1

This torus represents the shape of the electromagnetic field of the Sun. Without perturbation, the planetary orbits would be circles winding around the hole of the torus-shaped NEMF of the Sun. Only when perturbation is present, the circular orbits would elongate to winding-around ellipses.

IV. The Perturbing Force in our Galaxy

Astronomical observations showed that not only are the trajectories of all planets of our sun ellipses, the trajectories of planets orbiting other stars of our galaxy are also ellipses.[2] As of April 6, 2015, 1,906 extra-solar planets were observed orbiting other stars of the Milky

Way. The elliptic orbits of 55% of them were with eccentricity < 0.2, and 17% had eccentricity > 0.5.

The geometrical representation of our nonlinear mathematical model shows that the planetary orbits could be ellipses only and only if a perturbing force is present. There must be a powerful disturbing force in our galaxy to elongate the circular trajectories of all planets in the galaxy into ellipses.

Data collected by the Hubble telescope show that more than 50% of the middle-age galaxies like ours are warped because they have swallowed smaller galaxies in the past. Our Galaxy is also warped,[4] which means that it had swallowed a smaller galaxy (or galaxies) in the past.

Jeremy Bailin[4] calculated the moments of our galaxy and the smaller Sagittarius Dwarf Galaxy and proved that there has been interaction between them in the past. The name Sagittarius comes from the fact that it projects onto the Sagittarius constellation; Dwarf Galaxy means it consists of old (dwarf) stars that barely shine.

The presence of this smaller galaxy in our galaxy is not questionable. We can still see with our telescopes its Black Hole with the remaining stars orbiting around the central Black Hole of our galaxy while being gradually assimilated.

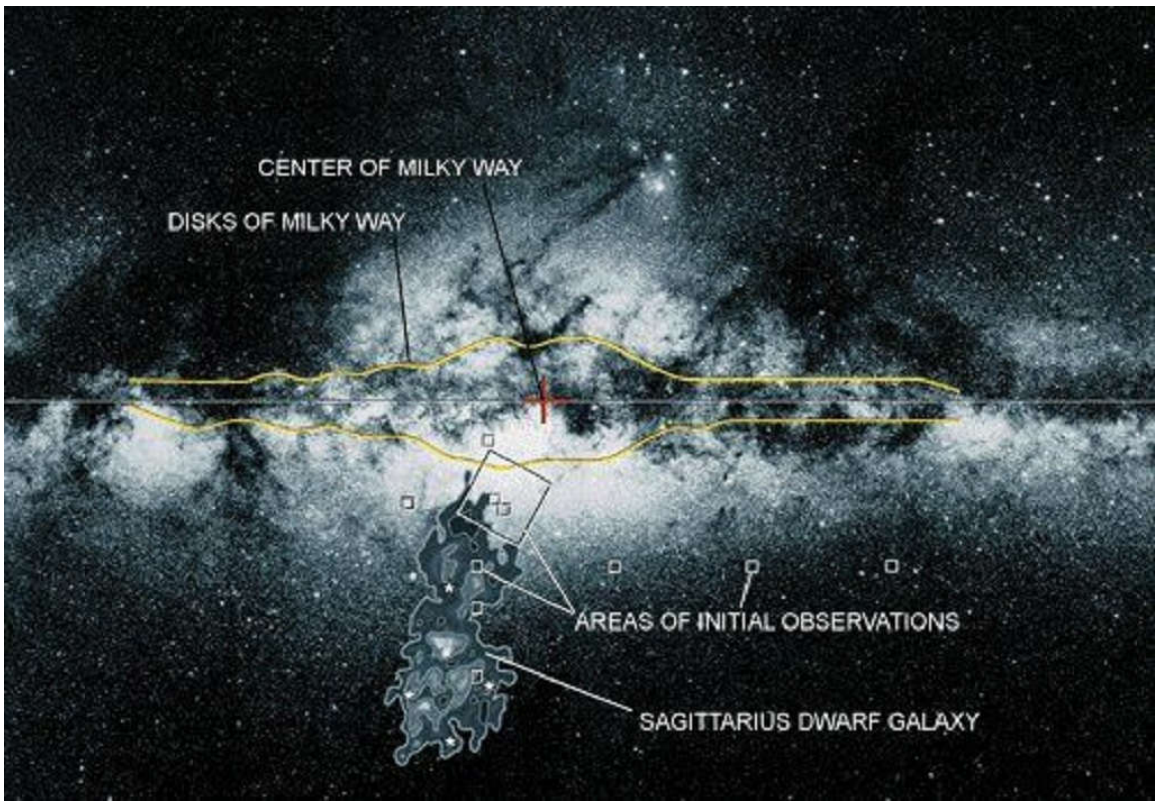

Fig. 2: Photo of the Milky Way and the orbiting around it Sagittarius Dwarf Galaxy

The Black Hole of our galaxy weighs 3.6 million solar masses. The Black Hole of the Sagittarius Dwarf Galaxy is smaller than ours, but it is still millions of solar masses. Therefore, its presence in our galaxy must seriously perturb our galaxy. It is probably the factor that elongated the circular orbits of all planets in the galaxy into ellipses.

It also made the axes of all stars wobble in synchrony with the orbiting of this galaxy around the Center of our galaxy. Thus, the cycle of precession (wobbling of the axis of spinning) of our Sun, which according to latest data is 25,720 years, is determined by the cycle of orbiting of this smaller galaxy (what is left over) around the center of our galaxy.

Not only is the geometric representation of our model showing that the orbits of our planets would be circles without perturbation, the ancient Hindu astronomy Surya Siddhanta claims that:

1. When the Earth's orbit was a circle, our Earth orbited the Sun for 360 days (from here came the division of the circle into 360 degrees).[5]
2. When the Sagittarius Dwarf Galaxy merged to our Galaxy more than 2 million years ago,[5] the Earth's orbit became elliptical and the Earth started orbiting the Sun for 365 days, 6 hours, and 42 min.

The five additional days added to the year, when the orbits changed from circles (360 days) to ellipses (365 days), were called by Aztecs and Mayans 'unlucky days'. This is because the presence of this

smaller galaxy into our galaxy destabilized the whole galaxy. It tilted the axes of spinning of all stars and made them wobble in synchrony with the orbiting of this smaller galaxy around our galaxy.

Is the presence of the Sagittarius Dwarf Galaxy into our galaxy the factor that made our Sun sensitive to planetary alignment? The answer is no. At planetary alignment, the summed up magnetic moments of the aligned stars cause tidal deformations in the Sun.[6] Each time all the planets align on one side of the Sun and their magnetic moments sum up, the asymmetric magnetic disturbance flips the magnetic poles of the Sun. The Sun starts spinning in opposite direction and emitting energy through the poles (instead of sucking energy), which makes it elongated toward the poles (instead of being torus shaped).[7]

The energy emission through the poles decreases the activity in the equatorial area of the Sun down to zero. This brings periodic Ice Ages on the planets orbiting the Sun and periodic extinctions, which explains why Aztecs and Mayans called the 5 additional days in the year 'unlucky days'. Such reshaping and emission through the poles was observed in stars called magnetars (with very strong magnetic fields).[8] Steiner postulated neutron stars must experience such reshaping – this was the only way to explain the observations.[9]

V. Conclusion

The whole material world is a material body and a torus-shaped nonlinear electromagnetic field (NEMF)[10]. This explains why the torus in the nonequilibrium theory is the tri-dimensional attractor to which the NEMF of the whole material world (alive and not alive) adhere.[11] Torus-shaped is the NEMF of: our Sun (as well as all stars), our Earth, man, plants, etc. For this reason, nonlinear mathematical model was used in torus representation, in which the equations have simplest form, and which has geometrical presentation.

The nonlinear mathematical model in torus representation, which allows graphic presentation (Fig. 1), made it obvious that the orbits of our planets cannot become ellipses without external perturbation. Since all presently registered planets in our galaxies were found to have elliptic orbits, the source of this external perturbation must be of galactic origin. A candidate for this galactic perturbation is the smaller Sagittarius Dwarf Galaxy, which our galaxy had swallowed in the past and which still orbits around our galaxy (the Black Hole, which is millions of solar masses and the leftover stars) when being gradually assimilated (Fig. 2).

The presence of this smaller galaxy in our galaxy had not only elongated the orbits of all planets in the galaxy into ellipses. It destabilized all the stars in the galaxy making their axes of spinning to wobble in synchrony with the orbiting of this smaller galaxy around our galaxy. This explains the cycle of precession of our Sun, which according to latest data is with periodicity 25,720 years.

If the period of orbiting of the Sagittarius Dwarf Galaxy around the center of our galaxy makes the axis of our Sun to presses (with periodicity 25,720 years) and the same factor elongated the orbits of our planets to ellipses, we can expect the planetary ellipses to form a rosette (with the same periodicity).

References Références Referencias

1. I. Newton, *Philosophie Naturalis Principia Mathematica* (1687).
2. J. Schneider, *Interactive Extrasolar Planets Catalog,* in: *Extrasolar Planets Encyclopedia*
3. G. Ioss and D. Joseph, *Elementary Stability and Bifurcation Theory* (Springer-Verlag, New York-Heidelberg-Berlin, 1980);
4. J. Bailin, Evidence for Coupling between the Sagittarius Dwarf Galaxy and the Milky Way Warp, *Astrophysical Journal,* **583,** L79 (2003).
5. E. Burgess (transl.), *Surya Siddhanta* (Delhi, 1860 (reprint 1989)).
6. M. Kuman, Nonlinear Mathematical Model Explains the Global Warming on Earth, *Open Access Journal of Mathematical and Theoretical Physics* (submitted).
7. M. Kuman, Why Solar Cycles? Modeling the Solar Dynamic, *Open Access Journal of Mathematical and Theoretical Physics* (submitted).
8. S.B. Popov, M.E. Prokhorov, Progenitors with Enhanced Rotation and the Origin of Magnetars, *Monthly Notices of the Royal Astronomical Society*, **367** (2), 732-736 (2006).
9. A. Steiner, Using Neutron Star Observations to Determine the Crust Thickness, Moments of Inertia, and Tidal Deformations, *Physical Review C,* **91,** 015804 (2015).
10. M. Kuman, How Was the Material World Created? Origin of its NEMF, *Open Access Journal of Mathematical and Theoretical Physics*, **2** (2) 2019.
11. M. Kuman, New Light on the Attractors Creating Order out of the Chaos, *International Journal of Complimentary and Alternative Medicine*, **11** (6) 2019.

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Nonlinear Mathematical Model Explains the Global Warming on Earth

By Prof. Maria Kuman
Holistic Research Institute

Abstract- The recent collaboration LEGO–Virgo, when studding the merging of two neutron stars, revealed that the stars deform when approaching another star. It is called tidal deformation. Similar reshaping was observed in magnetars (stars with very strong magnetic field) - at magnetic perturbations, they periodically emit energy from their magnetic poles and reshape. It is time to acknowledge that our Sun would experience tidal deformation under the influence of aligned planets when their magnetic moments sum up. Nonlinear mathematical model is used to describe the solar dynamic at external magnetic perturbation. Since the sun's nonlinear electromagnetic field (NEMF) has a torus shape, the evolution equation is maximally simple in torus representation, which has graphic presentation. At inferior conjunction, when the planets are aligned on both sides of the Sun and their magnetic moments summed up, the symmetric magnetic perturbation bulges the Sun at the equator and its activity increases, which leads to global warming on Earth. At superior conjunction, when all planets are aligned at one side of the Sun and their magnetic moments summed up, the asymmetric magnetic perturbation will flip the magnetic poles of the Sun. The Sun will start spinning in opposite direction and emitting energy through the poles (instead of sucking energy through them).

Keywords: *solar activity and magnetic fields; mathematical model in torus representation; what started the global warming; what will end the global warming; solar activity and solar shape.*

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Keywords: solar activity and magnetic fields; mathematical model in torus representation; what started the global warming; what will end the global warming; solar activity and solar shape.

I. Introduction

Let us introduce some concepts of nonlinear physics, which we would need. The flux of running river-water would be linear, if the bottom of the river is smooth. However, if there is a big stone on the bottom of the river, the water needs to flow around the stone and the water flux becomes nonlinear. Behind the stones, turbulence would be observed manifested with a couple of: vortex spinning clockwise and anti-vortex spinning counterclockwise.

Following the law of the folded fingers of the right hand in physics, when the folded fingers show the direction of the currents (or direction of spinning), the vertical thumb show the direction of the induced magnetic field. Following this law, the vortices (which spin clockwise) would induce magnetic field toward the surface. This would make the vortices to suck energy in. Following the same law, the anti-vortices (which spin counterclockwise) would induce magnetic field off the surface, which would make the anti-vortices to emit energy.

In nonlinear physics, four attractors create the order out of the chaos. In article [1] we added fifth attractor to complete the theory. The tri-dimensional attractor has the shape of a torus.[1] This means that all material creations in our three-dimensional world, which come to this world with their nonlinear electromagnetic field (NEMF),[2] would have torus-shape NEMF. All these fields will be best described with nonlinear mathematical models in torus representation.

II. Nonlinear Mathematical Model

The orbits of the planets, which are periodic functions, will be solutions of our equation of evolution. According to the nonlinear theory in the non-autonomous case, when the function F describing the evolution will depend directly on the time t, the equation of evolution is:[3]

$$dU/dt = F(t, \mu, U) = F(t+nT, \mu, U). \qquad (2.1)$$

The non-autonomous periodic solution of equation (2.1) is U(t) = U(t+nT).

In the autonomous case, when the function f describing the evolution does not depend directly on the time t, the equation of evolution is:

$$du/dt = f(\mu, u(\mu, t)), \qquad (2.1)$$

where u (μ, t) = u (μ, t + T') is the periodic autonomic solution of eqn. (2.1'); μ is a real number.

If perturbation v is present, the evolution equation will be

$$d(u+v)/dt = f(\mu, u(\mu, t) + v(t)), \qquad (2.2)$$

where u (μ, t) + v (t)) = u (μ, t + nT') + v (t + nT')) is the new equilibrium solution of eqn. (2.2).

Let expand the function u in a series around the initial point u=0,

$$du/dt = f(\mu, u) = f_u(\mu | u) + \tfrac{1}{2} f_{uu}(\mu | u) + 1/3!\, f_{uuu}(\mu | u) + \ldots \qquad (2.3)$$

and let us write this as

$$du/dt = f_u(\mu | u) + N(\mu, u \qquad (2.4)$$

where N(μ,u) includes all nonlinear terms.

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$$N(\mu,u) = f(\mu,u) - f_u(\mu \mid u) \qquad (2.5)$$

III. The Evolution Equation in Polar Coordinates – Torus Representation

The donut has a torus shape, which can be generated by rotating a circle with radius ρ at angle $0^0 < \varphi < 360^0$ in a plane perpendicular to the circle and passing through its center. Let θ is the angle ascribing this circle when it varies between 0 and 2π.

The polar coordinates of torus representation ρ, φ, and θ relate to the Decart coordinates x and y in the following way

$$y = e^{i\omega t}x; \qquad x = \rho(\theta)\, e^{i\theta}; \qquad (3.1)$$

Then

$$y = \rho(\theta)\, e^{i(\omega t + \theta)} \qquad (3.1')$$

where $\omega = 2\pi\varphi$. In torus coordinates, the evolution equation is

$$y' = [\rho'(\theta) + i\omega\rho(\theta) + i\theta'(t)\rho(\theta)]\; e^{i(\omega t + \theta)} \qquad (3.2)$$

When there is no perturbation, the solution of this equation will be a circle in n+1-dimensional phase space, which corresponds to the solution U=0 in R^n of equation (2.1). It is the limit of the nontrivial periodical problem, which is a circle with any radius (any horizontal circle on Fig. 1) with angle $\varphi = 2\pi t/T$ (φ [0, 2 π] and $\varphi = \varphi + 2\pi n$ because U(t) = U(t+nT)). *The representation is called one-dimensional torus* T^1.

When perturbation is present, a new solution branches from T^1, *which represents trajectories winding around the torus at a certain angle. These trajectories* are described by the equations:

$$\theta = \theta(t), \quad \rho = \rho(\theta(t)), \quad \varphi = 2\pi t/T \qquad (3.3)$$

They go around the torus when actively involving $\rho = \rho(\theta)$ and $\theta = \theta(t)$. *When t increases at one period T, the angle* φ increases at 2π. *These trajectories are ellipses (see Fig. 1). The representation is called two-dimensional torus* T^2. *The solutions on the torus* T^2 *are periodic*

$$\theta(t) = \theta(t + nT).$$

When the already perturbed system is additionally perturbed, it increases the new phase θ. *Even when small, this additional perturbation can make the new phase* θ *equal to the old phase* φ. This is graphically represented as looping through the hole of the torus (see Fig. 2).[4] It is called resetting and as said even weak stimuli could reset an already perturbed system.

The looping through the hole of the torus is called *type 1,* when it loops once through the hole. It is also called *weak resetting* because it results from weak stimuli causing small phase shifts.

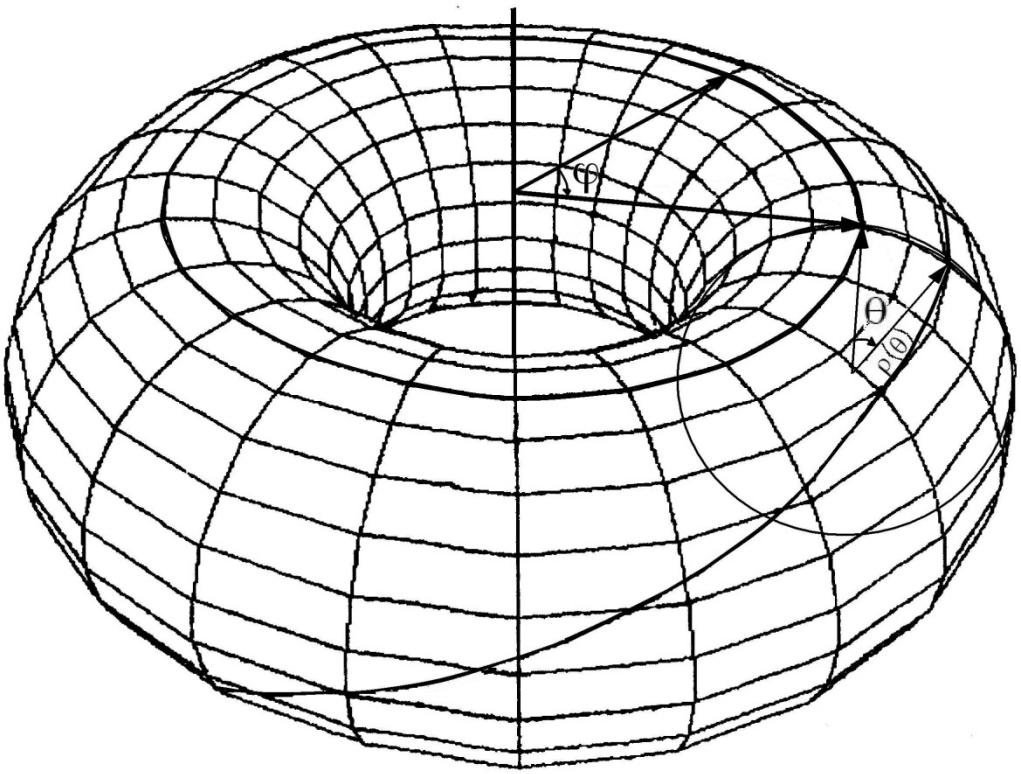

Fig. 1

This torus represents the shape of the electromagnetic field of the Sun. Without perturbation, the planetary orbits would be horizontal circles. Only when perturbation is present, are the orbits elongated to winding-around ellipses.

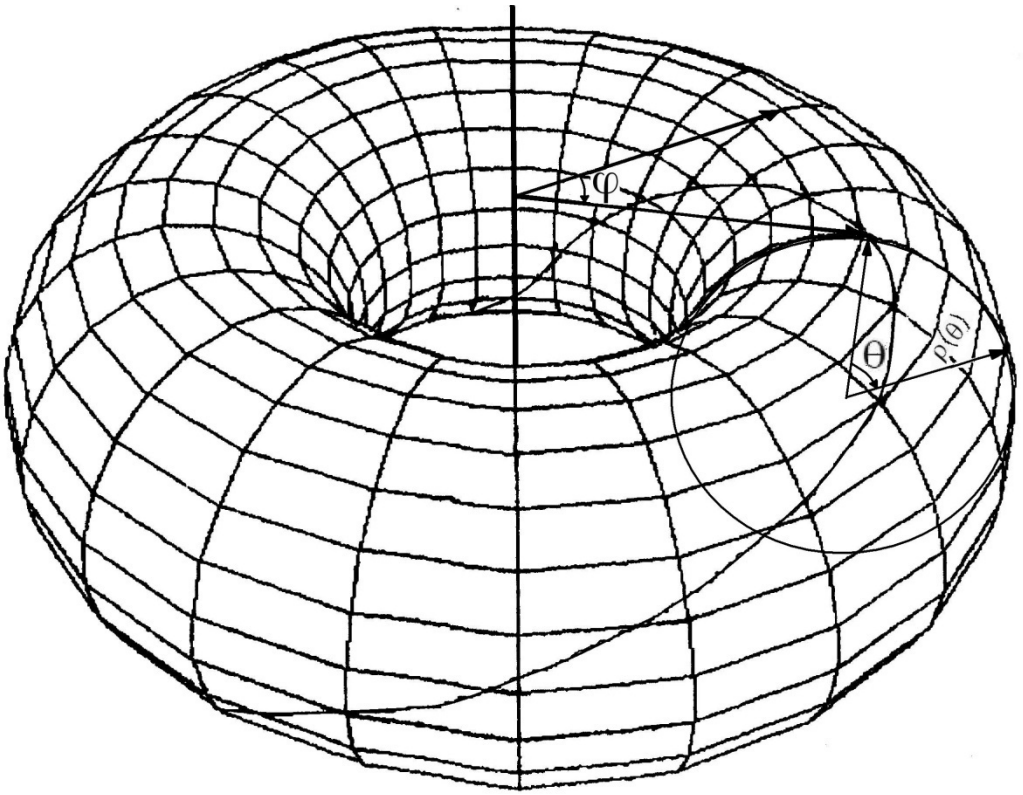

Fig. 2

This graphic shows that when a planetary system is disturbed (Fig. 1), asymmetric magnetic perturbations could reset the torus (or cause looping through its hole), which is adequate to reversal of the magnetic polarity of the Sun.

IV. How Could Planetary Alignment Change the Solar Activity?

Recent studies showed that magnetic fields rule the solar activity. At great planetary alignments (which include the big planets Jupiter and Saturn), when five distant planets align on one side of the Sun, while the Earth and Moon are on the other side (inferior conjunction) the summed-up magnetic moments of the planets would perturb the Sun symmetrically on both sides. At such magnetic perturbation on both sides of the solar equator, the Sun bulges at the equator and its activity increases.

At this bulging at the equator, the Sun starts sucking energy in. The two holes of its donut-shaped NEMF become vortices sucking energy in, which makes the Sun to spin faster clockwise. The turbulence increases, the solar activity increases and this leads to global warming on the planets orbiting the Sun. Such inferior alignment of planets took place in the year 2005 and caused the global warming, which our earth now experiences. In our two-pyramid model,[5] which simulates the torus-shaped electromagnetic field of the Sun, the two pyramids go deeper into each other, at which energy is sucked in.

When all seven planets (including the Moon) are aligned on one side of the Sun in superior conjunction, the strong magnetic perturbation from the sum-up magnetic moments of all seven planets only on one side of the solar equator would flip the magnetic poles of the Sun. Such great superior conjunction is astronomically predicted to take place during the winter solstice in year 2020.

Flipping of the magnetic poles of the Sun means that the Sun will start spinning in opposite direction, i.e. counterclockwise. Since the Sun is vortex on top of anti-vortex,[2] the two ends of the axis of spinning become anti-vortices emitting energy. The Sun becomes elongated toward the poles like a lemon - its equatorial area shrinks and its turbulence disappear.

The solar activity will drop down to almost zero. Then the planets orbiting the Sun would experience the next Mini Ice Age. In our two pyramids model, the two pyramids would distance each other, which would make the Sun elongated toward the axis of spinning.[5] Study of the glaciers found that our Earth has been through one Big Ice Age and four Mini Ice Ages (Fig. 3). After

December 21, 2020 we will start shifting to the next fifth Mini Ice Age.

Thus, the superior conjunction, which is astronomically predicted to take place at the winter solstice in the year 2020 will end the global warming on earth. Also, extrapolation in time of Fig. 3 (from study of the glaciers) gives the year 2020 as a year of dramatic change from warming to cooling,[5] i.e. after year 2020, our temperatures will start dropping, shifting us to the next Mini Ice Age.

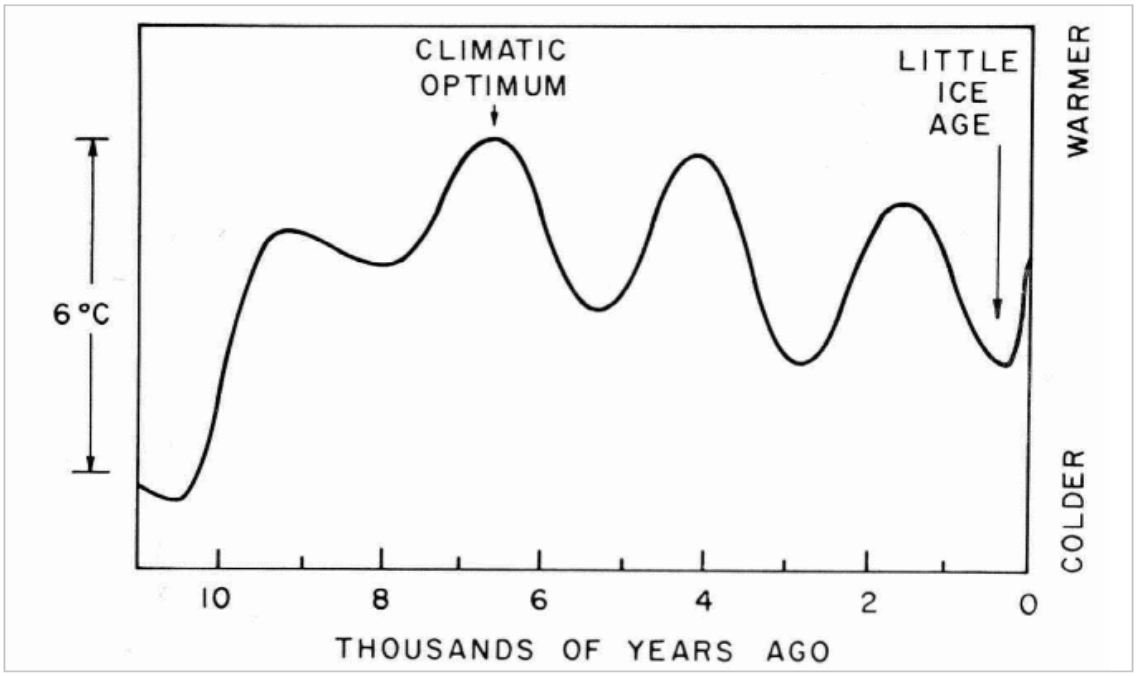

Fig. 3: Temperature variations during the last 11,000 years according the study of the glaciers.[6]

V. Conclusion

Thus, the recent collaboration LEGO–Virgo, when studding the merging of two neutron stars, revealed that the stars deform when approaching another star.[7] It is called tidal deformation. Similar reshaping was observed in magnetars (stars with very strong magnetic field) - at magnetic perturbations, they periodically emit energy from their magnetic poles and reshape.[8] It is time to acknowledge that our Sun would experience tidal deformation under the influence of aligned planets when their magnetic moments sum up.

The used here nonlinear mathematical model in torus representation allows geometrical presentation and visualization of what is going on on the Sun. The model predicts that at symmetric magnetic disturbances (caused by inferior conjunctions of planets aligned at both sides of the Sun), the Sun will bulge at the equator, will start sucking energy in, and its activity will increase. Such inferior conjunction took place in the year 2005, which initiated the global warming, which we experience now.

The model also predicts periodic *resetting* of the torus-shaped electromagnetic field of the Sun at asymmetric magnetic perturbation, which is graphically presented in the model as looping through the hole of the torus (Fig. 2). It means that at asymmetric magnetic perturbations, which take place when all 7 planets are aligned on one side of the Sun, their sum-up magnetic moments will flip the magnetic poles of the Sun.

Flipping of the magnetic poles means that the Sun starts spinning in opposite direction and losing energy, at which the solar activity will seize. Such great alignment of seven planets on one side of the Sun is astronomically predicted to take place in the year 2020 during winter solstice, which will end the global warming on Earth. The temperatures will start decreasing gradually, shifting us to the next Mini Ice Age. Thus, our mathematical model in torus representation predicted that the global warming would end on December 21, 2020.

We are certain that NASA's Solar Dynamic Observatory (SDO), launched in space in 2010 to measure the shape of the Sun during one full cycle of solar activity, will confirm the predicted here bulging at the solar equator during solar activity and pole-to-pole elongation during the period of low or no solar activity. This was already observed in experiments with super-fluid fast-spinning Helium nanodroplets.[9]

References Références Referencias

1. M. Kuman, New Light on the Attractors Creating Order out of the Chaos, *International Journal of Complimentary and Alternative Medicine*, 11 (6) 2018.

2. M. Kuman, How Was the Material World Created? Origin of its NEMF, *Open Access Journal of Mathematics and Theoretical Physics*, 2 (2) 2019.
3. G. Ioss and D. Joseph, *Elementary Stability and Bifurcation Theory* (Springer-Verlag, New York-Heidelberg-Berlin, 1980);
4. A.T. Winfree, *The Timing of the Biological Clocks* (Scientific American Books, New York Hillside, New Jersey, 1987).
5. M. Kuman, Modeling the Solar Dynamic, *Physical Review Research,* 2019 (submitted).
6. J. Imbri, K. Imbri, *Ice Ages - Solving the Mystery*, 1979.
7. J. Piekarevicz, F. Fattoev, Neutron Rich Matter in Heaven and on Earth, *Physics Today,* **72** (7) 30 (2019).
8. N. Rea, Neutron Stars Hidden Nuclear Pasta, *Physics Today*, **68** (10) 62 (2015).
9. A. Smart, Helioseismology Plums New Depth, *Physics Today*, **66** (11) 12 (2013).

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Why are the Earth's Magnetic Poles Flipping Irregularly?

By Prof. Maria Kuman
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Abstract- The spinning of sun and earth induces their magnetism and determines their magnetic poles. The magnetic poles of the sun are periodically flipping like a clock, which means the direction of spinning of the sun changes periodically from clockwise spinning when the sun is active (warm periods on Earth) to counterclockwise spinning when it is not active (Ice Ages on Earth). Simulating theoretical mathematical models predicted periodic reversal of the magnetic polarity of both the sun and earth. However, the magnetic poles of the earth flip rarely and irregularly, which means the direction of spinning of the earth change rarely and irregularly. Earth satellites found that our Earth is cleft and its center of mass is not in the center. This is probably what causes the direction of spinning of the Earth to change rarely and irregularly. Based on ancient texts, explanation is offered of why our earth is cleft.

Keywords: solar dynamo; earth dynamo; geodynamo; periodic flipping of sun's magnetic poles; periodic reversal of sun's spinning; aperiodic reversal of earth's spinning; cleft earth; simulating mathematical models.

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I. Reversal of the Solar and Earth Magnetism Predicted by Simulating Mathematical Models

Gary Glatzmeier of the University of California in Santa Cruz developed global three-dimensional time-dependent models to study the structure and dynamic of the interiors of stars and planets. The first of these models was written in 1980s to study the solar dynamo.[1] A modified version of this model was later created to study the earth dynamo called geodynamo.[2] Both models predicted periodic reversal of magnetic polarity.

In the geodynamic model, Glatzmeier simulated the processes in the Earth's core to explain how the Earth's spinning cranks its magnetic field. Dozens of equations were used (some of them nonlinear) to describe the Earth's molten core – its dimension, temperature, viscosity, etc.[2]

The most interesting result of this mathematical modeling was that the geomagnetic field must reverse its polarity spontaneously and periodically. Therefore, through certain intervals of time, the magnetic poles of the Earth flip - the northern magnetic pole becomes southern, the southern northern[2]. Since the earth's spinning induces its magnetic field, this means that the earth's spinning changes to the opposite periodically.

It was an exciting and unexpected result. The mathematical model showed that before the poles would flip, the intensity of the magnetic field dropped dramatically by 80%. After the flipping, the field strength gradually recovered. In the last 300 years the magnetic field of Earth has been steadily decreasing and had already decreased by 30%. It is continuing to decrease. Are we facing flipping of the poles?

Another interesting result of this simulating mathematical modeling was the prediction that when the magnetic field of the Earth starts decreasing patches with reversed magnetic polarity must appear on the Earth's surface.[2]

II. Possible oncoming Reversal of the Earth's Magnetic Polarity?

Patches with reversed polarity already exist on Earth and they are called South Atlantic Anomaly and South Pole anomaly.[2] These areas in the Southern Hemisphere have already northern magnetic polarity instead of southern. Glatzmeier's model predicts that with time the size and number of the areas with reverse magnetic polarity will gradually increase.[2] When the reversed magnetic polarity becomes dominant, the poles would flip – the southern magnetic pole will become northern.

Presently, there are huge ozone holes over the places with reverse magnetic polarity in the Southern Hemisphere - the South Pole and the South Atlantic. This allows huge amount of ultraviolet light to reach these areas, which melts not only the glaciers of the Antarctic in the South Pole, but also the glaciers of the Kilimanjaro in Africa and the Andes Mountain in Chile. Such ozone holes could be expected over all places with reverse magnetic polarity that would appear in the future. Why?

If the magnetic field of the Earth, by trapping ions of the solar wind, created the ionosphere, changes in the magnetic field of Earth could be expected to bring changes in the ionosphere. Indeed, over the South Atlantic Magnetic Anomaly the ionosphere was first found to be much closer to the earth's surface and now it is torn – there is an ozone hole on the top of it.[3]

However, I started writing as early as the year 2000 that ozone holes must always be expected over

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zones of reverse magnetic polarity on Earth. (See my book *New Apocalypse? What the Ancient Knew that We Don't Know*, 2000).[4]

III. The Real Geomagnetic Dynamo

Peter Olson[5], in his article *The Geodynamo's Unique Logevity* published in Physics Today, volume 66, of November 2013, on p. 33, said: "Polarity reversals of the solar dynamo occur every 11 years almost like a clockwork. In contrast, the reversal of the geodynamo are more widely spaced in time and occur far less regularly". Reason for this lack of regularity is the anisotropy of the earth core – the earth is cleft and its center of mass is not in the center. Satellites registered this in recent years and some scientists think it "may record past events in geodynamo history" (Olson, p.35),[5] (see also Buffett).[6]

Interestingly, the ancient Hindu astronomy Surya Siddhanta claims that in the past (about two million years ago) when the Gagittarius Dwarf Galaxy, while merging to our galaxy, was drifting through our solar system, our Earth was swallowed by the Black Hole of this galaxy. We can still see the Sagittarius Dwarf Galaxy in our telescopes – its Black Hole and the remaining stars are still orbiting around the center of our galaxy (Fig. 1).

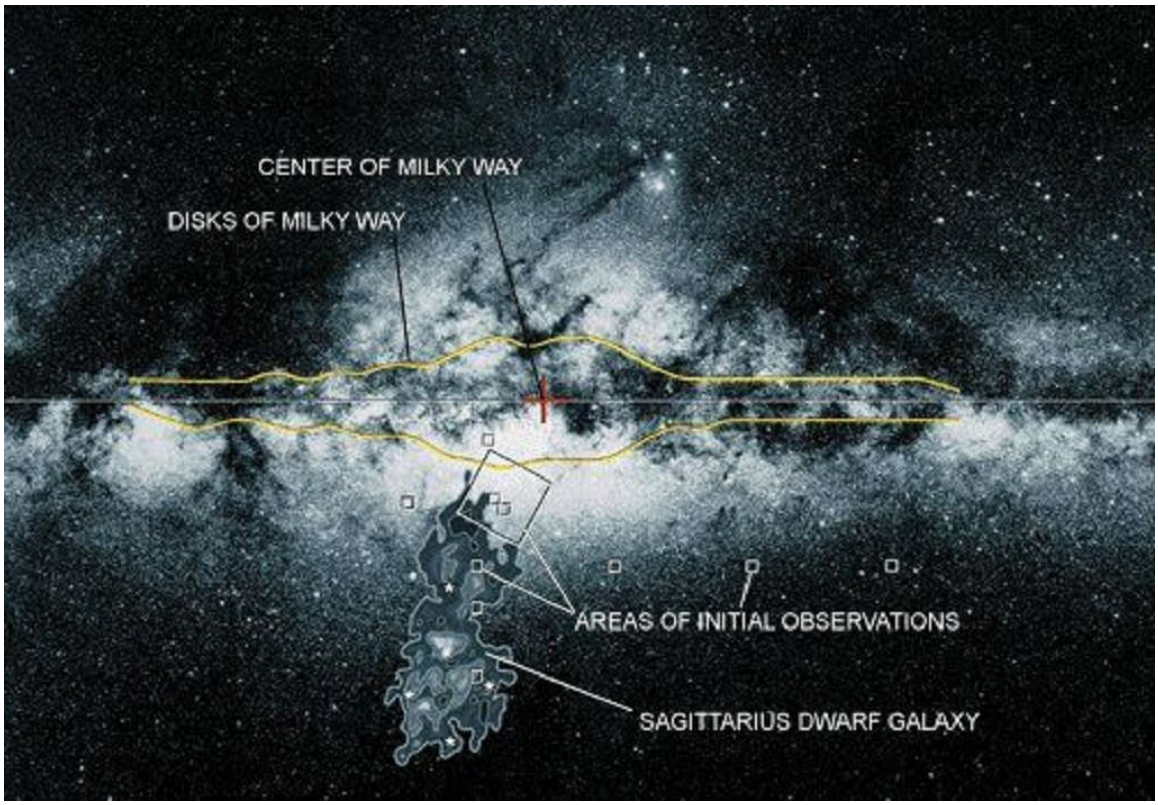

Fig. 1: The Sagittarius Dwarf Galaxy orbiting around the canter of our galaxy

The Earth was sucked in, spun around, overheated (at which most of the Earth's crust melted), and spat out because it somehow went to the center of the Black Hole. This left our Earth cleft and this makes the Earth reverse its magnetic polarity rarely and irregularly. What was left of the old crust was called 'Asa', which means 'old' in Sanskrit. From here came the name 'Asia'. Maybe we should believe this Surya Siddhanta's story because:

1) Our satellites found strong anisotropy of the earth's mass distribution, which Olson thinks probably "record past events in geodynamo history" [5], and
2) We can still see in our telescopes the Black Hole of the Sagittarius Dwarf Galaxy with the leftover stars orbiting around the Black Hole of our galaxy.

IV. Russians Finding about Uneven Deposits on Earth

Russian scientists found that the diameter of earth has increased 1.5 times in the last 300 million years.[7] This requires revision of our present believe that the size of earth grows from the deposit of cosmic dust because every year about 40 tons of cosmic dust is deposited on Earth.[7] The observed growth of earth's diameter is way beyond what the deposit of cosmic dust could explain.

Beside this, the Russian scientists found that the cosmic dust is deposited on earth very unevenly. They found bulging at the northern pole from cosmic dust deposits and denting at the southern pole.[7] They

offered no explanation why it is so. Here is our simple explanation to it based on nonlinear physics.

If the cosmic dust is deposited on the northern pole, the northern pole must be a vortex spinning clockwise and sucking energy in. Following the rule of the folded fingers of the right hand, when our folded fingers show the direction of electric currents (or direction of spinning), our thumb shows the direction of the induced magnetic field. Let us apply this to vortex spinning clockwise. When our folded fingers are in the clockwise direction of the vortex spinning, the thumb shows inward direction of the magnetic field.

Thus, if the comic dust is deposited at the northern pole, the northern pole must be a vortex spinning clockwise and sucking energy and dust. If the earth is dented at the southern pole, this means that the southern pole is an anti-vortex spinning counterclockwise and loosing energy (and matter). Only counterclockwise spinning anti-vortex could induce magnetic force off the southern pole, which would explain the denting.

From the fact that the comic dust is mostly deposited on the northern pole, while the southern pole is losing dust, it follows that our earth is vortex on top of anti-vortex. From the fact that the diameter of earth has evenly grown 1.5 times in the last 300 million years, it follows that our earth is continuing to grow as it spins by continuing to turn the environmental space matrix into matter.

When the earth reverses its direction of spinning and the magnetic poles of the earth change to opposite, the dented southern pole will become northern pole and start accumulating cosmic dust. Thus, periodic flipping of the magnetic poles of the earth or periodic reversal of the direction of earth's spinning would take care the cosmic dust to be evenly distributed. If the magnetic poles of the cleft earth are not flipping periodically, the uneven deposit (growth) could make our earth even more cleft.

V. Conclusion

Simulating mathematical models predict periodic reversal of magnetic polarity of our sun and earth. Unfortunately, the simulating models didn't consider the cleft shape of our earth. Since the earth is cleft (earth satellite found this), the reversal of the magnetic polarity of the earth is rare and irregular. Ancient texts were cited in the article, which explain why the earth is cleft.

The observed uneven distribution of cosmic dust was explained. The substantial increase of the earth diameter in the last 300 million years could be explain only if environmental space matrix exists and is continuously transferred into matter as the earth spins (just as the energy of the Sun increases as the Sun spins).[8]

References Références Referencias

1. G. A. Glatzmeier, Numerical Simulation of Stellar Convective Dynamos, *J. Comp. Phys.,* **55**, 461 (1984).
2. G. A. Glatzmeier and P.H. Roberts, Simulating the Geodynamo, *Nature*, **377**, 203 (1995).
3. M. Barttos, Has the Magnetic Pole Reversal Already Begun? *Internet* (2005).
4. M. Kuman, *New Apocalypse? What the Ancient Knew that We Don't Know*, Health and Happiness Books, 2000.
5. P. Olson, The Geodynamo Unique Longevity, *Physics Today*, **66** (11) 30 (2013).
6. B. Buffett, Earth's Enigmatic Inner Core, *Physics Today*, **66** (11) 37 (2013).
7. V. Tohoplav, T. Tihoplav, The Conscious of the Universe, Krilov, 2007 (Russ.).
8. M. Kuman, Solar Energy and Dynamic, *Open Access Journal of Mathematics and Theoretical Physics*, 2 (2) 2019.

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Alexander Friedman's Cosmology of Expanding and Contracting Universe

By Prof. Maria Kuman
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Abstract- Einstein's theory of general relativity describes a static Universe. However, Alexander Friedman found periodic solutions of the Einstein's equations of general relativity, which describe periodically expanding and contracting Universe. It took Einstein 8 years to accept the Freidman's dynamic concept, but even 90 years later we still haven't embraced it. This article compares the Friedman's dynamic concept of expanding and contracting universe with the ancient cosmology of periodically expanding and contracting Universe described in the ancient Hindu astronomy Surya Siddhanta. The modern cosmology of Alexander Friedman is in full agreement with the ancient astronomy. Even Friedman's rough estimate of the time of one full cycle of expansion and contraction of the Universe (10 billion years) is astonishingly similar to the ancient exact number 8.64 billion years.

Keywords: alexander friedman's cosmology, periodically expanding and contracting Universe, ancient cosmology of expanding and contracting universe, modern cosmology.

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I. Introduction

Einstein published his relativistic theory in 1917. The fundamental equations of the general relativistic theory of Einstein,[1] which were based on the mathematics of the Rieman's spherical geometry, were:

$$R_{ij} - g_{ij}\ R/2 - \lambda\, g_{ij} = - kT_{ij}, \qquad (1)$$

where λ, according to Einstein, is a cosmological constant (which meant that the world is static, i.e. frozen in time),[1] the constant $k = 8\pi G/c^2$, T is the energy momentum tensor, R – Ricci tensor, g - metric tensor. De Sitter found another solution of the Einstein equations representing static universe with zero mass density and negative curvature of the space.[2] Einstein protested that zero mass means no inertia and the solution has no physical meaning.

Five years later, Alexander Friedman published the basic concepts of his theory in two consequent articles published in Zeitschrift fur Physik in 1922 and Zeitschrift fur Physik in 1924.[3,4] He also wrote and published in 1924 the book: "The World as a Space and Time" (in Russian),[5] but died of typhus in 1925.

Grounded in Riemann's geometry, Friedman found in addition to the static solutions of Einstein and de Sitter, a new class of non-static periodic solutions. He showed that the cosmic constant λ in the relativistic theory of Einstein (assuming a static universe) might not be a constant. Then the equation (1) would describe a Universe that expands, and then contracts and collapses, to restart again from the same singularity point.

II. Alexander Friedman Theory Compared to Ancient Astronomy

Friedman's solutions feature the space as a 3D hyper sphere with radius r, but its curvature changes in time r(t). Then the field equation (1) is transformed into a set of two ordinary differential equations for r(t):

$$(r(t)/c^2)(dr/dt)^2 = A - r(t) + \lambda r(t)^3/3c^2. \qquad (2)$$

This equation has a periodic solution in the interval $0 < r < r_1$, which means that the Universe starts from a singularity point r = 0, expand to a maximum radius r_1 and then begins contracting back to the initial zero point. This means that the life of our Universe is finite – first it expands to radius r_1, then it starts to contract and ends with a crunch in the Black Hole that created it.

The Hubble telescope shows that more than 60% of the galaxies in our Universe are warped. A natural question arises: What will happen when all the galaxies are warped? The universe will stop expanding and start contracting to be recycled in the Black Hole that created it, so that with time a new Universe in perfect order can be created.

Surprisingly, the author of this article found the scenario of expanding and contracting Universe already described in the ancient Hindu astronomy Surya Siddhanta, which claims that the Universe is a dynamic system with endless number of alternating periodic creations and destructions.[6] The creation and expansion of the material world is one day of God Brahma and last 4.32 billion years.[6]

The material world is created in perfect order, but with time (following the entropy law) it becomes more and more disordered. This disordered world needs to be destroyed so that a new Universe with perfect order can be created. The contraction and destruction of the disordered material world is a period of darkness and it is called one night of God Brahma; it last another 4.32 billion years[6].

In ancient Indian drawings, the Creator of the Universe, God Brahma, is pictured sitting on a lotus,

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which symbolizes vortex or anti-vortex. Anti-vortex must have created the Universe because only spinning counterclockwise anti-vortices emit energy. This is what the latest branch of modern physics - nonlinear physics – teaches - anti-vortices are singularity points, which rotate counterclockwise and emit energy. Thus, a Black Hole spinning counterclockwise, like an anti-vortex, and emitting energy, must have created the Universe.

Since following the entropy law with time the Universe becomes more and more disordered, the period of creation and expansion must be followed by a dark period of contraction and destruction because the disordered universe needs to be sucked back in, crushed, and dismantled, so that with time a new universe in perfect order can be created. Thus, during the dark period of destruction the Black Hole must spin clockwise, like a vortex, and suck energy in, to suck in and destroy the already disordered Universe.

When we say that the old disordered universe is sucked in, cracked into pieces and dismantled, this means the universe was transformed back into anti-matter. Only a scenario like this could explain why dark matter seems to dominate our Universe.[7] If dark matter dominates, our Universe is more than middle age and the fact that 60% of the middle age galaxies are warped means exactly this.

Alexander Friedman assumed that the total mass of the Universe is $5x10^{21}$ solar masses. Based on this, he estimated that the full period of expansion and contraction of his periodic Universe would be 10^{10} years, which means 10 billion years. Let us compare now this number with the numbers in the ancient Hindu astronomy Surya Siddhanta.[6]

According to Surya Siddhanta, the period of creation and expansion of the Universe (called one day of God Brahma) lasts 4.32 billion years.[6] The period of contraction and destruction of the disordered Universe (called one night of Brahma) lasts another 4.32 billion years. The whole cycle would be 8.64 billion years according to the ancient astronomy, which agrees well with the rough estimate of Alexander Friedman of 10 billion years.

As you can see, not only the concepts of expanding and contracting Universe are the same in the ancient texts and the theory of Friedman, the rough Friedman's estimate of the lifetime of the Universe is close to the exact number of the ancients. It took Einstein 8 years to accept the Friedman's concept of periodically expanding and contracting Universe. There is a proverb saying: *"Even the wisest one could be a little bit slow in accepting new concepts."*

III. The Impact of the Freidman's Theory on our Concept for the Universe

It took Einstein 8 years to accept the concept of expanding and contracting Universe, but we have still not accepted the Freidman's dynamic concept of periodically expanding and contracting Universe more than 90 years after Freiedman's genius work. This leaves unanswered the question why we have so much dark matter in our Universe.

Opposite to any logic, most of our scientists still believe that a Big Bang created the Universe and our Universe is immortal and ever expanding. The Big Bang nonsense[8] started in 1927, just two years after the death of Alexander Friedman. The Catholic Belgian priest George Lemaitre started it. Ironically, in Physics Today of 2012, Ari Belenkiy still claimed that the Friedman's cosmology "provides the basis for our current view of the Big Bang"[9], which is not true.

IV. Conclusions

Our modern cosmology chose to believe that our Universe was created through explosion called Big Bang.[8] I, personally, have troubles understanding how explosion could create a Universe in perfect order. Explosion is something fast and uncontrollable, and if our Universe was created in perfect order, explosion couldn't have created it.

Since observations with the Hubble telescope show that 60% of the middle-age galaxies like ours are warped, and our galaxy is also warped, this means that our Universe is more than middle age and becomes more and more disordered as it ages.[10]

What will happen as more and more galaxies get warped with time? The answer comes automatically: when the disorder reaches a critical value, and the expansion of our Universe reaches the critical radius r_1, our Universe needs to stop expanding and start retrieving back to be destroyed in the singularity point that created it.

Anti-vortex created our expanding material Universe in perfect order - it was a singularity whirlpool of dark antimatter rotating counterclockwise and producing light matter in perfect order, which was expanding. The light period of creation and expansion lasts 4.32 billion years.

As our material world ages and becomes more and more disordered, the expansion will stop at radius r_1, where a dark ring of anti-matter at the periphery of our Universe would change the time t to –t, and the Universe would start spinning in opposite direction, i.e. spinning clockwise and retrieving.

The created spinning clockwise vortex would start sucking back the disordered material Universe to bring it back to the singularity point – the Black Hole that created it, engulf it, crush it, and destroy it by turning it back into dark antimatter. This takes another 4.32 billion years. When the pressure on the light matter at the center of the Black Hole reaches a critical value, the contraction will stop.[11]

The vortex that was spinning clockwise and sucking will now turn into anti-vortex that spin counterclockwise and create a new expanding material Universe in perfect order. Since the energy of the transfer of matter into anti-matter and vise-versa is now considered to be 100%, the cycles of creation and destruction would last forever.

References Références Referencias

1. Albert Einstein, T*he Collected Papers of Albert Einstein*, v. **6**, doc. 30, p.146, Princeton University Press (1997).
2. Willem de Sitter, On Einstein's Theory of Gravitation and Its Astronomical Consequences, *Monthly Notices of the Royal Astronomical Society* **78**, 3 (1917).
3. Alexander Friedman, *Zeitschrift fur Phys.* **10**, 377 (1922).
4. Alexander Friedman, *Zeitschrift fur Phys.* **21**, 326 (1924).
5. Alexander Friedman, *Mir kak prostranstvo i vremia*, Academia, Petrograd (1923) (Russ.).
6. *Surya Siddhanta*, translated by Ebenezer Burgess (1860); reprint:

a. University of Calcuta (1935).

7. P.A.R. Ade, et al., *Astronomy and Astrophysics*, ArXiv: 1303.5062 (2013).
8. George Lemaitre, Homogeneous Universe with Constant Mass and Increasing Radius Accounting for the Radial Velocity of Extra-galactic Nebula, *Annal de Societe Scientifique de Brussels*, **47A**, 41 (1927).
9. Ari Belenkiy, Alexander Friedman and the Origins of New Cosmology, *Physics Today*, **65**, #10, 38 (2012).
10. H. B. Ann, J.C. Park, Warped Disks in Spiral Galaxies, *New Astronomy*, **11**, #4, 294-305 (2006).
11. Maria Kuman, How Was the Material World Created? Origin of Its Nonlinear Electromagnetic Field (NEMF), *Open Access Journal of Mathematics and Theoretical Physics*, **2** (2) 2019.

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How are Planets Born?

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Abstract- Modern studies found that our sun has maximal activity in the equatorial areas, where anti-vortices throw spinning energy balls and after a loop trajectory nearby vortices catch them back. Modern studies also found that when a Black Hole weighting millions of solar masses passes at certain distance from a star, it causes tidal waves in it. If the star is active, a passing near-by heavy Black Hole would pull a lot of mass from the active solar anti-vortices throwing energy out. The tidal waves created by the Black Hole would, disconnect the spinning energy balls from the star and the Black Hole would pull them in the direction of its moving. However, since the Black Hole is distant and moving fast, it wouldn't engulf the sucked out energy balls. Left behind, they would start orbiting the star, while gradually cooling down until they turn into planets. This scenario fully agrees with ancient Hindu sources, which claim that all the planets orbiting a star were born by the star and fathered by a Black Hole. Considering our latest knowledge on stars' activity and the way Black Holes influence stars, such planetary creation makes full sense.

Keywords: *astronomy, astrophysics, stars, planets born by stars, black holes fathering the birth of planets.*

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I. Introduction

In article[1] of the author, it was explained how the spinning counterclockwise anti-vortex of the nonlinear electromagnetic field (NEMF) of the Black Hole at the center of each galaxy give birth to the stars of the galaxy. This article explains how the counterclockwise spinning anti-vortices of the nonlinear electromagnetic field (NEMF) of the stars give birth of the planets orbiting them.

II. Solar Activities and Electromagnetic Field

Our Sun is more active or even violent every 7 to 17 years, which average to a periodicity of 11 to 12 years. During solar activity, in the equatorial area of 30^0 north and south of the equator, dark spots are observed on the surface of the Sun, called solar spots. They are the openings of two chains of alternating vortices (spinning clockwise) and anti-vortices (spinning counterclockwise) running parallel to the equator (one in each hemisphere).[2] The two chains spin in opposite directions in the northern and southern hemispheres.

The solar vortices spin clockwise. According to the rule of the folded fingers of the right hand, if the folded fingers are in the direction of spinning plasma, the upright thumb shows the direction of the induced magnetic field. If so, the clockwise movement of the highly ionized solar plasma would create magnetic field oriented toward the Sun. As a result, all spinning clockwise vortices suck energy from the outer space and add it to the Sun.

The solar anti-vortices spin counter-clockwise. According to the rule of the folded fingers of the right hand, if the folded fingers are in the direction of spinning plasma, the upright thumb shows the direction of the induced magnetic field. If so, the counter-clockwise movement of the solar highly ionized plasma would create magnetic field off the Sun. As a result, all solar anti-vortices throw solar energy in the outer space. This thrown out energy is seen as protuberances during solar eclipse, when the shadow of the Moon covers the bright disk of the Sun.

Thus, through its vortices the Sun breathes energy in and through its anti-vortices breathes energy out. The energy thrown out by the anti-vortices (spinning counter-clockwise) has the shape of energy balls spinning counter-clockwise. Since vortices and anti-vortices alternate, usually the spinning energy balls thrown by anti-vortices after a loop trajectory are sucked back by nearby vortices.

The vortices sucking energy in and anti-vortices throwing energy out are called turbulence.[3] Since only nonlinear fields have turbulence, the electromagnetic field of our Sun is nonlinear and has the shape of a torus (donut) with axis of spinning passing through the hole of the torus (donut). Through the solar activity in its equatorial area, the Sun continues to gradually cool down.

All planets have the same torus-shape electromagnetic fields as the Sun and their dynamic (volcanic and seismic activities) are also maximal in their equatorial areas of 30^0 north and south of the equator. Such are: *on Earth - the volcanoes of: Etna, Hawaii, Fiji Islands, etc.; on Jupiter - the Red Spot; on Neptune - the Red Spot; etc.*[4] The planets still have a hot liquid core of magma and they continue to cool down through their volcanic activity.

III. How are Planetary Systems Born?

It is a fact that the Sun throws spinning energy balls and catches them back. Are the planets energy balls of the Sun that had cooled down? Also, it is a fact that the planet Neptune still radiates more energy than it receives from the Sun. Shouldn't this be considered a proof that Neptune was born by the Sun, and being larger it hasn't cooled yet? Considering these facts, it

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seems natural to assume that the Sun gave birth to the planets.

To answer the question: "Are the planets energy balls of the Sun that had cooled down?" let us look at other stars in the Milky Way, which actively (from their equatorial areas) throw energy balls out and suck them in. I found a photo of such newly born planet just released from the equatorial area of the star and still connected to it with a stream of light-magnetic energy like an umbilical cord (Fig. 1).

In the year 2003, scientists E. Shkolnik and G. Walker from the University of British Columbia in Vancouver, Canada, observed a planet the size of Jupiter orbiting the Sun-like star HD179949.[5] It was a planet with atmosphere and magnetic field and it was still connected to the equatorial area of the star with something like umbilical cord. I think that this is evidence that the star gave birth to the planet (and it is still energetically connected to it).

Fig. 1: A newly born planet (right) still connected to the star (left) that gave birth to it.[5]

Presently, if the planets of our Solar System do not have the brightness of the Sun they orbit, it is because they have cooled down. However, the planets still have a liquid core of hot magma, in which the planetary spinning induces ring currents (vortices and anti-vortices), which crank the planetary magnetic fields. The planetary hot liquid core is also the basis of the planetary volcanic activity.

If Venus has volcanic activity and liquid core, but does not have magnetic moment or magnetic field, it is because it spins very slowly - it spins once in 243 earth days. Usually, the spinning of the planets cranks their magnetic field, through the ring currents (vortices and anti-vortices), which the spinning induces in their ionized liquid magma. Obviously, Venus does not spin fast enough to crank magnetic field.

The planet Mars is different. It spins almost as fast as the Earth, but does not have magnetic field or magnetic moment. Since it does not have volcanic activity any more, it must be a planet that does not have a liquid core of hot magma any more. It has completely cooled down (for Mars, see our article: Why Is the Planet Mars Old and Cold?).

IV. Shouldn't all our Planets Spin in the same Direction?

If the planets orbiting our Sun are cooled-down energy balls released from solar anti-vortices spinning counterclockwise, all the planets must spin counterclockwise. Indeed, all planets of our Solar System spin counterclockwise, except Venus and Uranus. Planet Pluto also rotates clockwise like Venus and Uranus, but recently the astronomers crossed the name of Pluto from our solar system.

Presently, planet Uranus roles aside on the plane of its orbiting as an egg on a tabletop with an axis of rotation almost fully horizontal, instead of spinning vertically like a top. Planet Venus is not so strongly tilted, but it barely spins making a full spin for 243 earth days.

Dr. Bill Hartman of the Planetary Science Institute of Tucson, Arizona, believes that *"Venus was probably hit by near the equator so hard that the direction of rotation was reversed, note how slow Venus's rotation is, but the tilt was little affected. But Uranus got a tangential hit near the pole, which changed his tilt 97 degrees, but not its rotation."* [6]

I. Velikovski[7] in his book *Worlds in Collision* of 1950 (Part I: Venus) writes that Venus was originally a comet, which after brushing along the Earth and around Jupiter went back to the Sun and was caught to its present orbit. This statement raises a question: Isn't planet Venus too big to have been a comet? Now, after the year 2000, when we know more about comets and the planet Venus itself, such a scenario seams hard to believe.

What seems more plausible is: a big comet when swirling fast around the Sun struck Venus and knocked it out of orbit. Venus brushed close to the Earth (causing many disasters), orbited around Uranus, reversed the direction of its spinning, tilted its axis at almost 90^0, turned back, and got caught at its present orbit. This could explain why Venus and Uranus are now spinning in direction opposite to the spinning of the other planets. When all this happened?

If Venus brushed close to the Earth, probably it caused a lot of disasters on Earth, such as severe tidal waves, earthquakes, volcanoes, etc. Such were happening on Earth in a massive scale around 1500 B.C. This was the time when the Minoan Palace on the

Island of Crete was leveled to the ground by a series of severe earthquakes and volcanic eruptions (Roy Burrell, *Oxford First Ancient History*, 1997, p. 115).[8] This also explains why in the Pamir Mountains of Middle Asia the planet Venus was worshiped as Goddess Mitra up to the 5th century B.C. (for full 1,000 years).[9]

This was also the time of the Exodus, described in the Bible, when the Israeli left Egypt. The unusual things the Israeli experienced during their journey south to Palestine, such as walking on the bottom of the Red Sea, hearing thundering sounds, experiencing 'rain' of red ash that made the water of Nile look like blood, and rain of crud oil (there and over all countries that had oil deposits), might have been caused by Venus brushing too close to the Earth.

When the water of the Red Sea was brushed away allowing people to walk on the bottom, China was attacked by tidal waves as tall as the mountains, which reached as far as the mountains. It took more than 10 years to get the salty water out of the valleys, where it was trapped, to be able to saw seeds and gather crop (Velikovski, 1950).[7]

V. Fight of Planets Described in Ancient Texts. did it Really Happen?

The ancient Hindu astronomy Surya Siddhanta[10] explains that the planetary movement in our Solar System was not always tamed. From time to time the planets fight and their encounter is called 'yuddha', which in Sanskrit means 'fight' or 'conflict'. According to Surya Siddhanta, the fight always happens at Solstice time when Earth, Sun, and Moon are on one line. Is fight of the planets possible? Should we believe this? Considering the dramatic changes in the spinning of Venus and Uranus, something very serious must have happened.

VI. Who Fathered the Planets?

Thus, it seems that the planets orbiting a star were born from the anti-vortices (in the equatorial turbulent area of the star), which throw energy out. The next natural question is: What pulled away from the Sun such tremendous amount of energy, which cooled down and solidified as planets? In other words, the planets were born from the star they orbit, but who fathered them?

The ancient Hindu astronomy *Surya Siddhanta*[10] says that God first created the stars, and it took Him some time to figure out how to make the planets out of the stars. The planets were born by the stars they orbit, *Surya Siddhanta*[10] says, and Dark Evil Bodies called 'Dark Asuras' provoked the delivery of the planets, i.e. fathered them.

While 'Light Asura' is 'matter', 'Dark Asura' is 'dark matter' or 'antimatter' [10]*. The Black Holes are black because they are antimatter. Then 'Dark Asura' must be a 'Black Hole'.* The Black Holes are very heavy – millions of solar masses. What would have happen if a Black Hole, with its heavy gravitational mass, brushed close enough to the Sun to perturb it, but not too close to engulf it?

Astrophysical Journal reported in 2001 that Black Holes create tidal waves in stars when passing by from a distance.[6] Such tidal waves would be able cut the cords, which connect the spinning energy balls to the Sun and set them free (see Fig. 1). Let's assume that a huge gravitational mass (Black Hole) passed by our Sun, sucked huge spinning energy balls from its equatorial anti-vortices, and disappeared before swallowing the released energy.

The energy balls were pulled far from the Sun and the Sun couldn't suck them back, but the Black Hole couldn't sucked them either because it brushed too fast and from a distance. The energy balls, which the Black hole pulled and left behind, continued to orbit around the Sun and with time they cooled down and turn into planets.

Regardless of the fact that contemporary astronomical evidence (Fig. 1) supports the claim in ancient texts that the planets were born by the stars they orbit and fathered by Black Holes, our schoolbooks still teach that the planets are made out of cosmic dust. Even the stars are believed to be heated dust. Aren't we having too much dust in our eyes, which does not allow us to see the real picture?

The ancient Hindu source Mahabharata[11] (also [10]) says that the planets of our solar system were born when our Sun was at the periphery of the Galaxy, or in other words when our Sun was already a yellow star. If so, we need to look for Black Holes that passed through the periphery of our Galaxy as possible fathers of our planets.

Our astronomers have found so far two Black Holes orbiting around the Milky Way and passing by where our Solar System is. They are known as Rogue Black Hole XTE J1118+480 discovered on March 29, 2000 and the Black Hole GRO J1655-40 discovered on November 18, 2002.[12]

Maybe one of these Black Holes caused the birth of our planets. The trajectory of at least one of them passed close enough by the equatorial turbulent area when our Sun was active and caused the birth of the planets of our Solar System. The plane, in which the planets orbit the Sun, marks the trajectory of the passing-by Black Hole.

VII. As Above So Below

Amazingly, in the micro-cosmos the particles have the same torus shaped electromagnetic field with the same dynamic as those of the Sun and Earth. When elementary particles interact, virtual photons are released from their turbulent equatorial area and then

sucked back, probably thrown out from miniature anti-vortices and sucked in by miniature vortices.

Torus-shaped nonlinear electromagnetic field with maximal activity in the equatorial area seems to be specific for all self-sustained self-organized systems regardless at micro or macro level. They all have the same nonlinear dynamic, which could be described only with nonlinear equations.

It seems that the world is structured in the same way as above, so below, and therefore it should be described mathematically in the same way. Torus coordinates would be the best and simplest way to describe mathematically torus-shaped nonlinear self-sustained self-organized electromagnetic fields.

VIII. Conclusion

Nonlinear Physics combined with astronomical facts seems to point out in one direction: while the stars orbiting the Black Hole were born from the anti-vortex of the Black Hole,[1] the planets orbiting the star were born from anti-vortices of the star. This is supported by ancient claims. The Hindu source Rig Veda says that our Sun gave birth to the planets orbiting it.[13] The Sun gave birth of eight planets, which included our Moon. Indeed, recent studies of the ratio of oxygen isotopes found the same ratio on both Earth and the Moon,[14] which support the Rig Veda statements that both the Earth and the Moon were born by the Sun.

Recent studies of the ratio of oxygen isotopes found different ratio on Mars[14], which supports other Hindu claims that the planet Mars was sucked into our Solar System from the Sagittarius Dwarf Galaxy when the last was merging to the center of our galaxy. The presence of this Dwarf Galaxy is real – its Black Hole with the leftover stars can still be seen in our telescopes orbiting around the center of our galaxy. Also, all our recent finding that Mars is a very old and cold planet support the Hindu claims that Mars originally belonged to the old Sagittarius Dwarf Galaxy consisting of old Dwarf Stars orbited by old and cold planets, but this will be subject of another article.[15]

References Références Referencias

1. M. Kuman, How Was the Material World Created? Origin of Its Nonlinear Electromagnetic Field (NEMF), *Open Access Journal of Mathematics and Theoretical Physics*, 2 (2) 2019.
2. G. Hale, F. Ellerman, S.B. Nicholson, A.H. Joy, The Magnetic Polarity of the Sun Spots, *The Astrophysical Journal*, **49,** 153 (1919).
3. R. Burrel R, *First Oxford Ancient History*, Oxford, 1997.
4. M. Kuman, *Entertaining Astronomy*, Health and Happiness Books, 2003.
5. E. Shkolnik and DA Walker, The On/Off Nature of Star-Planet Interaction, *The Astrophysical Journal*, **676**, 628 (2008).
6. NASA/Marshall Space Flight Center/Solar Physics, June 1, 2011. *National Radio-Astronomical Observatory*, September 12, 2 p.m., 2001; *Astronomy and Astrophysics*, **395**, 595 (2002).
7. I. Velikovski, *World in Collision*, 1950.
8. R. Russel, *Oxford First Ancient History*, Oxford, 1997.
9. M. Kuman, *Ancient History since Noah's Flood – How Modern Science Shapes It*, Health and Happiness Books, 2009.
10. *Surya Siddhanta*, 1860, translated by E. Burgess, (reprint 1989).
11. *Mahabharata*, translated by J.A.B. van Buitenen, v.1, 1975; v. 2&3, 1973.
12. NASA Bulletin of November 18, 2002.
13. Rig Veda, translated by Sri Aurobindo, 1946.
14. D. Stevenson, Making The Moon, *Physics Today*, **67** (11) 32 (2014).
15. M. Kuman, Why Is the Planet Mars Old and Cold? *Physical Review Research* (submitted).

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How Planets Die at the End of the Stars' Lifetime?

By Prof. Maria Kuman
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Editorial- Let us first explain what the end of stars' lifetime means. All newly created stars are very bright. They fuse hydrogen into helium and this is the source of their light energy. However, with time as more and more hydrogen is turned into helium their brightness decreases. The middle age stars are yellow in color, like our Sun, and for them more than half of the hydrogen has been already transformed into helium.

As the stars continue to age gradually they run out of hydrogen fuel. When this happen, they turn into red stars.[1] When a medium size red star (up to eight solar masses) runs out of hydrogen, it starts to collapse. The contracting star now generates heat by fusing helium into carbon and oxygen.[1] The next stage is fusing carbon and oxygen for energy (heat) production.[1] When this happen, the contracting red stars to sustain their heat production start attracting closer and closer the nearby planets containing carbon and oxygen, peal them layer by layer, and engulf the layers for fuel.

In the final stage of star evolution, the stars are white dwarfs that barely shine. Thus, observing white dwarfs and what is left from the planets orbiting them is the end of stars lifetime. The dwarf stars with carbon and oxygen cores continue to cool down for millions of years. Until recently, we didn't know much about the white dwarfs because they barely shine and they are difficult to observe. Even more difficult is to observe the remnants of planets orbiting them.[1]

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Prof. Maria Kuman

Editorial

Let us first explain what the end of stars' lifetime means. All newly created stars are very bright. They fuse hydrogen into helium and this is the source of their light energy. However, with time as more and more hydrogen is turned into helium their brightness decreases. The middle age stars are yellow in color, like our Sun, and for them more than half of the hydrogen has been already transformed into helium.

As the stars continue to age gradually they run out of hydrogen fuel. When this happen, they turn into red stars.[1] When a medium size red star (up to eight solar masses) runs out of hydrogen, it starts to collapse. The contracting star now generates heat by fusing helium into carbon and oxygen.[1] The next stage is fusing carbon and oxygen for energy (heat) production.[1] When this happen, the contracting red stars to sustain their heat production start attracting closer and closer the nearby planets containing carbon and oxygen, peal them layer by layer, and engulf the layers for fuel.

In the final stage of star evolution, the stars are white dwarfs that barely shine. Thus, observing white dwarfs and what is left from the planets orbiting them is the end of stars lifetime. The dwarf stars with carbon and oxygen cores continue to cool down for millions of years. Until recently, we didn't know much about the white dwarfs because they barely shine and they are difficult to observe. Even more difficult is to observe the remnants of planets orbiting them.[1]

The planets orbiting stars are observed with the so-called transit method. Andrew Vanderburg and coworkers from Harvard University first uncovered in 2015 that the light from a white dwarf in constellation Virgo dipped and recovered in a complex pattern as if occulted by several small objects.[2] They concluded that planetary remnants orbit the white dwarf with a period 4.5 hours.

Since dwarfs are faint, the observations are limited to those parts of the sky, in which stars are scars and dim, and also the orbital plane around the dwarf needs to lie on the earth's line of sight to be observed. For that reason, the second reported observation of a planetary remnant orbiting a white dwarf was in 2019.[1]

In the already cited recent journal of Physics Today[1], a recent observation on a white dwarf 400 light years away was reported. Christopher Manser and Boris Gansicke, from the University of Warwick in the UK, have now developed a spectroscopic approach, which allowed them to identify a body orbiting the white dwarf.[3] They determined from the oscillation of the light in the spectral line of calcium that a remnant of a planet was orbiting around the white dwarf with a period of 2 hours.

Judging by the spectrum, this was metallic planetary core rich of iron. Manser considered two possibilities for the structure of the orbiting object: either a spherical body as small as tens of kilometers across consisting mostly of metal iron with density 8 g/cm^3 or higher or an iron-dominated larger body, hundred of kilometers across, with layered internal structure like the dwarf planet Ceres.

The remnants of planetary body orbiting the dwarf star could be the iron core of a former planet that once orbited much farther away from the star. When the star became a red star and started to collapse, it drew the planets orbiting it closer and closer, pealed them layer by layer, and used the pealed layers for fuel. As the remnants of planets became smaller and smaller, they orbited faster, which explains the observed short (hours) periods of orbiting around the dwarf star.

Thus, the stars at younger age gave birth of the planets orbiting them.[4] However, when the aging stars became low-energy red stars (toward the end of their lifetime), which fuse carbon and oxygen for energy production, they started drawing the planets orbiting them closer and closer. Pealing them layer by layer, the stars used the planetary pealed carbon and oxygen material for fuel to sustain their life. This is recycling of the planets at the end of stars' lifetime before the star would collapse into a white dwarf and then into a neutron star.

For that reason, when white dwarf are observed, which barely shine and are the last stage of star evolution, the observed periodic decreases of the dwarf's shining is caused by the passage of remnants of planets, which once orbited the star. These remnants of planets orbit close to the dwarf stars with higher speed and smaller periods (hours) obviously ready to be engulfed by the dwarf stars before the end of their lifetime.

When the last source of energy, the material of the planets orbiting the star has been used, the dwarf star will collapse into neutron star. The neutron stars merge and when the number of the collapsing together

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neutron stars reaches a critical mass, they will turn into a Black Hole. (Recent measurement of the neutron lifetime found that only a small percentage of the decaying neutrons turn into dark matter[5], which explains why the merging neutron stars need to reach a critical mass before to collapse into a Black Hole.) Then the Black Holes merge until they merge into the primary Black Hole that created the whole Universe.

Thus, a primary Black Hole created the Universe in perfect order.[6] According to ancient Hindu texts the cycle of creation lasts 4.32 billion years.[7] However, with time the Universe ages and following the entropy law, it becomes more and more disordered. This disordered Universe need to be recycled so that with time a new Universe in perfect order can be created. For this reason, the aged red stars start sucking back the planets they gave birth to and this continues then they are dwarf stars.

When all the planets are sucked back, the dwarf stars collapse into neutron stars. The neutron stars merge until the critical mass is reached which will allow them to collapse into a Black Hole. Then the Black Holes merge until they merge into the one single Black Hole that created the Universe. It is a recycling in the full sense of the word and it lasts another 4.32 billion years.[7]

When all the Black Holes have merged into the one primary Black Hole, the Black Hole is ready to create a new Universe in perfect order.[7] The Black Hole will create new stars forming Galaxies in perfect order, the stars will give birth to planets, etc. This cycle of creation will lasts 4.32 billion years and will be followed by a cycle of destruction of the already disordered Universe, which lasts another 4.32 billion years, etc. – the cycle repeats over and over again.

References Références Referencias

1. R. Berkovitz, Iron-rich Object Closely Orbits a White Dwarf, *Physics Today*, **72** (6) 14 (2019).
2. A. Vanderburg et al., *Nature*, **526**, 546 (2015).
3. C.J. Manser, et al., *Science* **364**, 66 (2019).
4. M. Kuman, How Were the Planets Born? *Physical Review Research*, 2019 (submitted).
5. S. Chen, Sorting Out the Neutron Lifetime, *APS News*, July, 2019.
6. M. Kuman, How the Material World Was Created? Origin of its Nonlinear Electromagnetic Field, *Open Access Journal of Mathematics and Theoretical Physics,* **2** (2) (2019).
7. M. Kuman, Alexander Freidman Cosmology of Expanding and contracting Universe, *Physical Review Research,* 2019 (submitted).

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Why is the Planet Mars Old and Cold?

By Prof. Maria Kuman
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Abstract- Recent study found that the ratio of oxygen isotopes on Mars is different from that on the Earth and the Moon. Study of Martian rocks also showed that Mars does not have magnetic field. Since the ring currents, which the planetary spinning induces in the liquid magma, crank the magnetic field of each planet, the lack of magnetic field on Mars means that Mars does not have liquid magma. Indeed, the lack of volcanic activity on Mars and the abundant ice found under its surface mean exactly this. Why is Mars an old and cold planet, while all other planets of our solar system have hot liquid magma? Also, as far back as in 1619 Kepler wrote in his book *Harmonicis Mundi* that the ratio of diverging and converging motion of Mars and Jupiter is the only dissonant ratio 18:19 in our Solar System. Maybe, we should believe the claims of the ancient Hindu texts that the planet Mars was sucked into our solar system from the old Sagittarius Dwarf Galaxy, when the last was merging through it. We can still see in our telescopes the Black Hole of this Dwarf Galaxy with the remaining stars orbiting around the center of our galaxy (Fig. 1). Since this Dwarf Galaxy consists of old (dwarf) stars that barely shine orbited by old and cold planets and Mars was found to be an old and cold planet, it was probably sucked from the old Dwarf Galaxy as the ancient Hindu texts said.

Keywords: oxygen-isotopes ratio on mars; cold mars; old mars; adopted mars; sagittarius dwarf galaxy; ancient / contemporary retrospection.

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I. Introduction

Johannes Kepler wrote in his book *Harmonicis Mundi* published in 1619,[1] exactly 400 years ago, that the ratio of the diverging to converging motions of Mars and Jupiter was the only inharmonic ratio in the whole solar system. He found this ratio to be dissonant 18:19. There was no explanation why this ratio is dissonant. Now, 400 years later, it is about time to ask the question: Why?

II. Evidence that mars didn't Originally belong to our Solar System

1. Mars is different from the rest of the planets of our Solar System - it is the only red planet and it is the only planet without volcanic activity and liquid core.
2. On Mars the ratio of oxygen isotopes is very different from that of the Earth[2], which points out to different origin.
3. The ratio of the oxygen isotopes on the Moon is like that of the Earth,[2] which means that the Earth and Moon were probably born together. Interestingly, the ancient Hindu text Rig Veda claims that our Sun (Adytia) gave birth to eight planets, one of which was the Moon orbiting the Earth.[3]
4. If the Sun gave birth to eight planets and the moon was one of them, the planets orbiting the Sun would be seven. But the planets of our Solar System are eight (because the ninth planet Pluto is no longer considered planet of our Solar System). It seems that Mars indeed didn't originally belong to our Solar System.
5. Ancient Hindu texts explain that Mars was sucked into our solar system during conjunction of the planets from the Sagittarius Dwarf Galaxy, when the last was drifting to the center of our galaxy.[4,5] We can still see in our telescopes the Sagittarius Dwarf Galaxy (its Black Hole and leftover stars) orbiting around the center of our galaxy, while being gradually assimilated (Fig. 1).
6. A good reason to believe that Mars was indeed sucked into our Solar System is the fact that Mars is stuck between two much bigger planets: the Earth which is 10 times heavier than Mars, and Jupiter which is 318 times heavier than the Earth.
7. The planet Mars spins around its axis for 24.6 hours, while the Earth spins for 23.9 hours. Since the planetary spinning cranks the magnetic field of the planets, the similar spinning of Mars and the Earth would crank similar magnetic moments and magnetic field. However, while the Earth has a magnetic dipole moment taken as a unit measure 1.000, Mars has none. This is another proof that Mars does not have liquid core - it has completely cooled down.
8. Dr. Mario Acuna, magnetic field specialist of the NASA's Goddard Space Flight Center, investigated with his team the magnetism of Martian rock samples.[6] They found that Mars did not have magnetic dipole moment or magnetic field; the observed miniscule magnetic dipole moment (10^{-5}) was induced by the solar wind.[7] As said, the lack of magnetic field on Mars means that Mars does not have liquid magma any more and the lack of volcanic activity on Mars confirms it.

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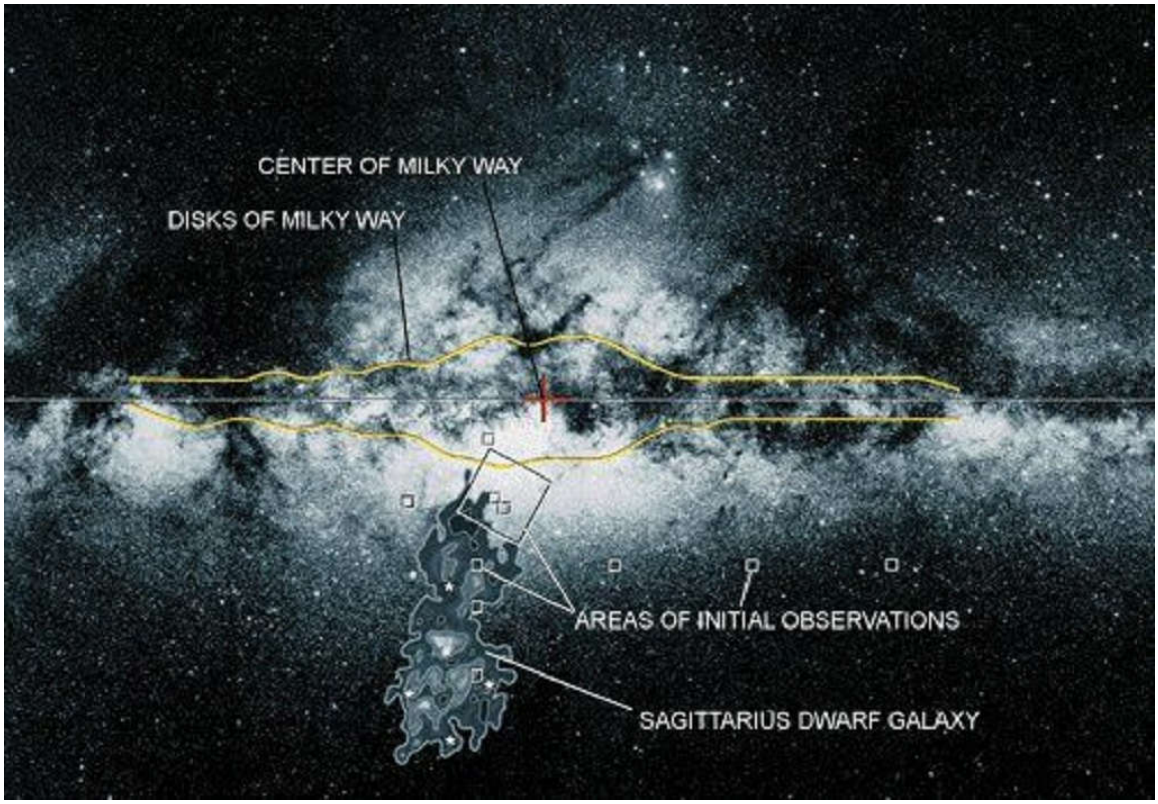

Fig. 1: The Sagittarius Dwarf Galaxy orbiting around the center of our galaxy

The table below presents the dipole moments of the planets of our Solar System and their tilts.[8]

Table 1

Planets	Mercury	Venus	Earth
Magnetic Dipole	$4.7.10^{-4}$	10^{-5}	1.000
Dipole tilt	10°	-	11.5°

Mars	Jupiter	Saturn	Uranus	Neptune
10^{-5}	20,000	540	48	26
-	9.6°	0.7°	59°	47°

9. Dr. Mario Acuna and his team, when investigating samples of different layers of lava from Mars, found different magnetism ranging from a few nano Tesla to as many as 220 nano Tesla.[7] Since lava records the magnetic field when solidifies (because some of its particles become oriented toward the magnetic field), volcanic lava with different magnetism found on Mars means that the magnetic field on Mars was dying gradually and the solidifying lava recorded this.
10. When Mars lost its magnetic field, it lost its ionosphere and there was nothing to shield and protect the planet from the harmful solar radiation.
11. When Mars lost its ionosphere, it lost its atmosphere because the solar wind consisting of ions *"gusting to one million miles per hour"* blew away the atmosphere[9]. Lack of atmosphere on Mars means lack of favorable conditions for life. (See also the author's book *Science Speaks to God*, Chapter 3.3.6: *Life Is Possible Only on Planets with Liquid Core*.[10]

Dr. Mario Acuna and his team investigated two very large meteorite-impact basins in the southern hemisphere of Mars and didn't find any magnetization in them. This means that the two meteorites hit Mars when the planet didn't have magnetic field any more.[7] Dr. Mario Acuna did some calculations, which indicated that the meteorite impact took place more than 4,000,000,000 years ago. If Mars was already a dead planet 4 billion years ago, Mars is a very old planet – much older than our earth, which is 4,300,000,000 years old.[7]

13. Some scientists argue that Mars has lost its liquid core because it is 10 times smaller than the Earth. But measurements on Earth show that our Earth cools very slowly - about 100 degrees per billion years. If so, a simple calculation shows that Mars couldn't have lost the heat of its core, if it were the same age as the Earth.[11]
14. Since the age of our Earth is 4,300,000,000 years, and Dr. Mario Acuna claimed that Mars lost its liquid core and magnetic field more than 4,000,000,000 years ago[7], Mars couldn't have lost its molten core and magnetic field for 300 million years. Therefore, Mars couldn't have originally belonged to our Solar System. This means that Mars was a cold planet

without liquid core long before it was adopted by our Solar System.

Astronomical data collected by Odyssey's Gamma Ray Spectrometer, with Principal Investigator William Boynton of the University of Arizona, brought evidence of lots of ice on Mars, most of it under the surface.[12] This indicates that Mars is an old and cold planet without hot liquid core.

Yes! The Red Planet does not have any more a core of hot red magma because it has completely cooled down. Therefore, Mars is an old and cold planet, probably much older than the rest of the planets of our Solar System, which proves that it didn't originally belong to it.

16. Thermal Emission Imaging System (THEMIS) mounted on spacecraft found that *"Mars has experienced a series of environmental changes during previous active geological periods"*. Dr. Philip Christensen of Arizona State University, Principal Investigator of THEMIS claims: *"We knew from Mars Global Surveyor that Mars was layered, but these data are the first direct evidence that the physical properties of the layers are different."* He concluded: *"The history of Mars is staring us in the face in these different layers, and we are still trying to figure it all out"*.[13]

I think, I have an answer for Dr. Philip Christensen: all recent findings on Mars indicate that Mars is an old planet that had in the past, but it does not have any more magnetic field. The magnetic field on Mars ceased to exist more than 4,000,000,000 years ago, as Dr. Mario Acuna said. This was long before the planet was sucked into our solar system.

III. The Merging of the Sagittarius Dwarf Galaxy to our Galaxy

Our galaxy is warped and this was known before the Hubble telescope was launched into space. Now, with the Hubble telescope in orbit, we have observed numerous interactions of Galaxies. A larger Galaxy will attract a smaller one and will gradually assimilate it. This will leave the larger galaxy warped.

Through the Hubble telescope we know that more than one-half of the Middle-age Spiral Galaxies (like our Milky Way) are warped. Therefore, if our Galaxy is warped, it had swallowed a smaller galaxy in the past.

Jeremy Bailin[14] calculated and compared the moments of our galaxy and the Sagittarius Dwarf Galaxy and proved that there has been interaction between the two in the past. (See also the author's book *Science Speaks to God*, Chapter 4.1: *Our Warped Galaxy and the Disasters Caused on Earth).*[10]

The finding of Jeremy Bailin[14] is in full agreement with the ancient Hindu texts, which claim that in the past our galaxy had swallowed the old smaller galaxy called Sagittarius Dwarf.[4,5] It is called Sagittarius Galaxy because it projects onto the constellation Sagittarius. The name *Dwarf Galaxy* means that it consists of dwarf (old) stars that barely shine orbited by old and cold planets (like Mars).

If there was interaction between the two galaxies, and we are now finding that Mars is an old and cold planet, probably Mars was indeed sucked into our Solar System from the Sagittarius Dwarf Galaxy, as the ancient texts[4,5] said. Since we can see in our telescopes (Fig. 1) the Dwarf Galaxy's Black Hole with the leftover stars still orbiting around the Black Hole of our galaxy when being gradually assimilated,[8] there is no doubt that this was the smaller Galaxy engulfed by our galaxy, which left it warped.

Inca's mythical stories worn us: we need to watch very closely what is going on between the two Black Holes (the Black Hole of our Galaxy and the Black Hole of the Sagittarius Dwarf Galaxy, astronomically known as Sagittarius A and Sagittarius B) because if they merge the life forms in our galaxy may not survive the powerful radiation of the merge. (See the author's book *Science Speaks to God*, Chapter 2.3: *Aren't We Like a Man Discovering at Age 50 He Has a Belly Button? The Mystery of the Second Belly Button*).[10]

IV. Ancient Hindu Texts Claim that Mars was Sucked from the Sagittarius Dwarf Galaxy

The ancient Hindu astronomy *Surya Siddhanta* claims that when the smaller Sagittarius Dwarf Galaxy was merging to the center of our galaxy, it passed first through its periphery where our Solar System is and during this passage, at conjunction of the planets, the planet Mars was sucked from the Sagittarius Dwarf Galaxy into our Solar system.[5]

The Hindu source *Mahabharata* says the same - the red planet Mars was sucked into our Solar System from the old Dwarf Galaxy.[4] It was *'installed'* during a more or less close conjunction of all planets. The planet Mars was called *'Skanda' ('Scanda'),* which in the Sanskrit language means 'the popped out' planet.[15]

Mahabharata specifies that our local Gods, the Pleiadian Gods, orchestrated the merging of the Sagittarius Dwarf Galaxy to the Milky Way.[4] If so, the Sagittarius Dwarf Galaxy was a Pleiadian (Krittika's) buddy. For this reason, in *Mahabharata* the planet Mars, which was adopted from the Sagittarius Dwarf Galaxy, was called Krittikeya because it was a buddy of Krittika (the Pleiades).

Since the Sagittarius Dwarf Galaxy is a small and old galaxy consisting of old (dwarf) stars that barely shine orbited by old and cold planets without liquid core, it was pictured in ancient myths as a puny old man with a long beard.[15] So, it seems that the old and cold Mars initially belonged to the old Sagittarius Dwarf

Galaxy and was adopted by our Sun as the ancient Hindu texts say.

V. When was the Planet Mars Adopted by our Sun?

According to the ancient Hindu astronomy, *Surya Siddhanta*,[5] the planet Mars was adopted by our Solar System 2,164,960 years before year 1860 (when the Hindu astronomy was published) or 2,165,100 years before year 2000. According to estimates of Dr. Mario Acuna based on his magnetic calculations, the planet Mars has been dead since 4,000,000,000 years ago. Therefore, Mars was a dead planet long before it was adopted by our Solar System.

VI. Conclusion

Since the spinning of each planet creates ring currents in its liquid magma, which cranks the magnetic field of the planet, the fact that Mars does not have magnetic field means that the planet does not have a core of liquid magma any more. Indeed, Mars does not have volcanic activity and the spacecraft's survey found lots of ice under the surface. This indicates that Mars is an old and cold planet. The fact that the ratio of oxygen isotopes on Mars is very different from those of the earth and Moon[2] is another proof that they have different origin.

Ancient Hindu texts[4,5] claim that Mars was sucked into our Solar System during conjunction of planets from the Sagittarius Dwarf Galaxy, when the last was drifting through the periphery of our galaxy, where our Solar System is. The Black Hole of this galaxy with the leftover stars is still orbiting around the center of our galaxy while being gradually assimilated. All this indicates that Mars has been sucked into our solar system from the old Sagittarius Dwarf Galaxy.

References Références Referencias

1. J. Kepler, *Harmonicis Mundi*, 1619.
2. D. Stevenson, Making the Moon, *Physics Today*, **67,** 35 (2014).
3. Rig Veda, translated in English by Sri Aurobindo, 1946.
4. *Mahabharata*, translated in English by K.M. Ganguli, Aishvar, 2000.
5. *Surya Siddhanta*, translated in English by Ebenezer Burgess, Delhi, 1860.
6. Mario Acuna, Mars Global Surveyor MAG/ER, internet.
7. D. Winterhalter, M. Acuna, and A. Zakharov, *Mars' Magnetism and Its Interaction with the Solar Wind*, 2003.
8. C.T. Russel, Planetary Magnetospheres, *Science Progress*, **75**, 93-105 (1991).
9. J. Weiner, *Planet Earth*, Bantam Books, New York, 1969.
10. M. Kuman, *Science Speaks to God*, Health and Happiness Books, 2005.
11. L. Bergreen, *Voyage to Mars*, Riverhead Books, New York, 2001.
12. N.E. Demidov, W. Boynton, et al., Water Distribution in Martian Permafrost Regions from Joined Analysis of HEND and MOLA, *Astronomy Letters*, **34**, 713-723 (2008).
13. P. Christensen, *Astronomy*, **9**, 24 (2002).
14. J. Bailin, Evidence for Coupling between the Sagittarius Dwarf Galaxy and the Milky Way Warp, *Astrophysical Journal*, **583**, L79 (2003).
15. Giorgio de Santillana, *Hamlet's Mill*, Boston, 1986.
16. Vera Rubin, *Scientific American*, May 31, 108-109 (1998).

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Unification of the Gravitational and Electromagnetic Fields through Nonlinear Physics

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Abstract- The article reveals the similarities of the electromagnetic and gravitational fields and provides farther evidence that the gravitational field is a special type of weak torus-shaped nonlinear electromagnetic field (NEMF), which in the nonlinear theory is a three-dimensional attractor. Read the article to learn about the type, structure, and dynamics of this nonlinear electromagnetic field, which manifests itself as gravitational field. Recently, classical general relativity was used to describe holographic quantum matter, which is another proof of the common roots of the gravitational and electromagnetic fields. This also means that the gravitational field can be modeled as a quantum matter, which indicates that the gravitational field is a quantum field. If so, quantum behavior is a universal characteristic of all torus-shaped dynamic nonlinear electromagnetic fields (NEMF) (starting with the stars and finishing with the elementary particles and everything in between).

Keywords: nonlinear electromagnetic fields; gravitational field; similarity of electromagnetic and gravitational; gravitational - specific type of electromagnetic; explaining coriolis forces; explaining tornados spinning.

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I. Similarity of the Electromagnetic and Gravitational Fields

The electromagnetic radiation of a source, moving with a speed much less than the speed of light, is described by the vector potential **A**, which originate from the time-changing electric dipole moment **p** of the source.

$$A_j = (\mu_0/4\pi D)\, dp_j/dt \qquad (1)$$

Where D is the distance from the source, μ_0 = the permeability of the space, index j labels one of the three space coordinates. The dipole moment **p** is the integral of the charge density of the source taken over its volume

$$\mathbf{p} = \int \rho_c\, \mathbf{r}\, dV \qquad (2)$$

In 1918, Albert Einstein introduced a tensor h_{jk} to describe the gravitational dynamic in general relativity, where the indexes vary over four coordinates – three of space and one of time. Many of the properties of the tensor h_{jk} describing gravitation are analogous to the vector potential A_j, which characterizes electromagnetic radiation[1].

Also, both electromagnetic and gravitational waves have two polarizations in the plane perpendicular to their direction of propagation. One polarization stretches and squeezes along the x- and y-directions (conventionally labeled h_+) and the other stretches and squeezes along axes rotated at 45^0 from the x- and y-axes (conventionally named h_x).[1]

Are the similarities between the electromagnetic and gravitational fields accidental or they point to something the fields have in common? Einstein intuitively felt that they belong together and spent the second half of his life (1920 – 1955) trying the unite electromagnetism and gravitation into one united field theory with common geometrical representation for them. However, his project remained unfinished.[2]

Meanwhile, the superstring theory came to the realization that the collective description of strongly interacting quantum matter can be modeled in terms of a higher dimension gravitational physics. This approach is referred to as gauge/gravity duality, holography, or holographic duality.[3] It means that holographic quantum matter can be modeled as gravitational physics.[3]

It also means that the gravitational field can be modeled as a quantum matter or that the gravitational field is a quantum field (see the article of the author[8]). We are going to show in this article that the gravitational field is a special type of nonlinear torus-shaped electromagnetic field. But let us first introduce some terminology of nonlinear physics, which will help the reader understand better the subject.

II. Terminology of Nonlinear Physics

Let us introduce some concepts of nonlinear physics, which we would need. The flux of running-river water would be linear, if the bottom of the river is smooth. However, if there is a big stone on the bottom of the river, the water needs to flow around the stone and the water flux becomes nonlinear. Behind the stone, turbulence would be observed manifested with a couple of: vortex spinning clockwise and anti-vortex spinning counterclockwise.

Following the law of the folded fingers of the right hand in physics, when the folded fingers show the

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direction of the electric currents (or direction of spinning), the vertical thumb show the direction of the induced magnetic field. Following this law, the vortices (which spin clockwise) would induce magnetic field inward, which would make the vortices to suck energy in. Following the same law, the anti-vortices (which spin counterclockwise) would induce magnetic field outward, which would make the anti-vortices to emit energy.

III. The Torus-Shaped Nonlinear Electromagnetic Field

Let us consider the electromagnetic field of the Sun. Our Sun and the other stars of our galaxy were born from the Black Hole at the center of the galaxy[4]. However, to create the stars the light energy flux, which exits the anti-vortex of the Black Hole creating matter, needed to be cut off with a vortex. This made all stars to be a vortex on top of anti-vortex, which resulted in their torus-shaped NEMFs (details presented in our article[4]).

In our article[5], which explains the cycle of solar activity, the Sun is active when it spins clockwise because the induced magnetic field is inward and the Sun sucks energy in through both ends of the axis of spinning passing through the hole of the donut-shaped NEMF. This increases the energy of the Sun, which starts spinning faster. Its turbulence increases manifested as two chains of alternating vortices and anti-vortices running on both sides of the equator, seen as solar spots.

When the vortex and anti-vortex spin faster, they create more powerful magnetic fields and they attract each other stronger. This is the basis of their torus-shaped NEMF when the Sun is active. Thus, the sun is active when it spins fast clockwise, sucks energy in through both ends of the axis of spinning, and becomes more and more bulged at the equator.

When the horizontal pressure on the plasma at the equator reaches the critical point, which the solar plasma can tolerate, the Sun starts spinning counterclockwise to release the pressure and starts emitting energy through both ends of the axes of spinning. The energy of the Sun decreases, and its spinning slows down. The turbulence in the equatorial area disappears and the solar activity drops down to zero.

The period of low or no solar activity continues until the shrinking at the equator reaches the critical point of vertical pressure, which the solar plasma can tolerate. To release the pressure the Sun starts spinning in opposite (clockwise) direction and sucking energy in through both ends of the axis of spinning, which results in increased solar activity. And this switching between high and low activity goes on and on.

To be able to suck energy through both ends of the axis of spinning during solar activity and to release energy through both ends of the axis of spinning during low solar activity, the Sun must be a vortex on top of anti-vortex. When the Sun spins clockwise, it sucks energy in through both ends of the axis of spinning, it spins faster and becomes more active. The vortex and anti-vortex go deeper into each other, which leads to the torus shape of the Sun's NEMF.

When the Sun spins counterclockwise, both ends of its axis of spinning emit energy, which makes the Sun elongated toward the axis of spinning. The lost energy decreases the Sun's spinning, which decreases the attraction between the vortex and anti-vortex and they distance each other. This makes the stars (including our Sun) elongated toward the poles during the period of their low activity. The Solar Dynamic Observatory (SDO) launched in space in 2010 can confirm this.

As said in our article[4], when the Black Hole of the galaxy was creating the stars of the galaxy, anti-vortex of the Black hole initiated the flux of light matter (because only anti-vortices emit energy) and vortex (spinning in opposite direction) was necessary to end the flux of light matter, so that the star can be born. This makes the NEMF of all stars vortex on top of anti-vortex.

As we will show in another article, the planets orbiting the Sun were born from anti-vortices of the Sun, which spin counterclockwise and emit energy. To cut the spinning counterclockwise plasma flux, spinning in opposite direction (vortex-like) was necessary, which made the NEMF of all the planets to be also vortex on top of anti-vortex and to have a torus shape (Fig. 2).

Prigogine, who created the nonlinear theory, defined attractor as the final state of the evolution of dissipative systems, which loose energy as dissipating heat. In the Prigogine's theory, the torus-shaped NEMF is the tri-dimensional attractor.[6] This is a shape with maximal energy in storage and maximal stability, to which all self-organized systems adhere.[6] For this reason, all self-organized systems have torus-shaped NEMF. And this peculiar torus-shape form of NEMF of stars and planets is what we know as gravitational field.

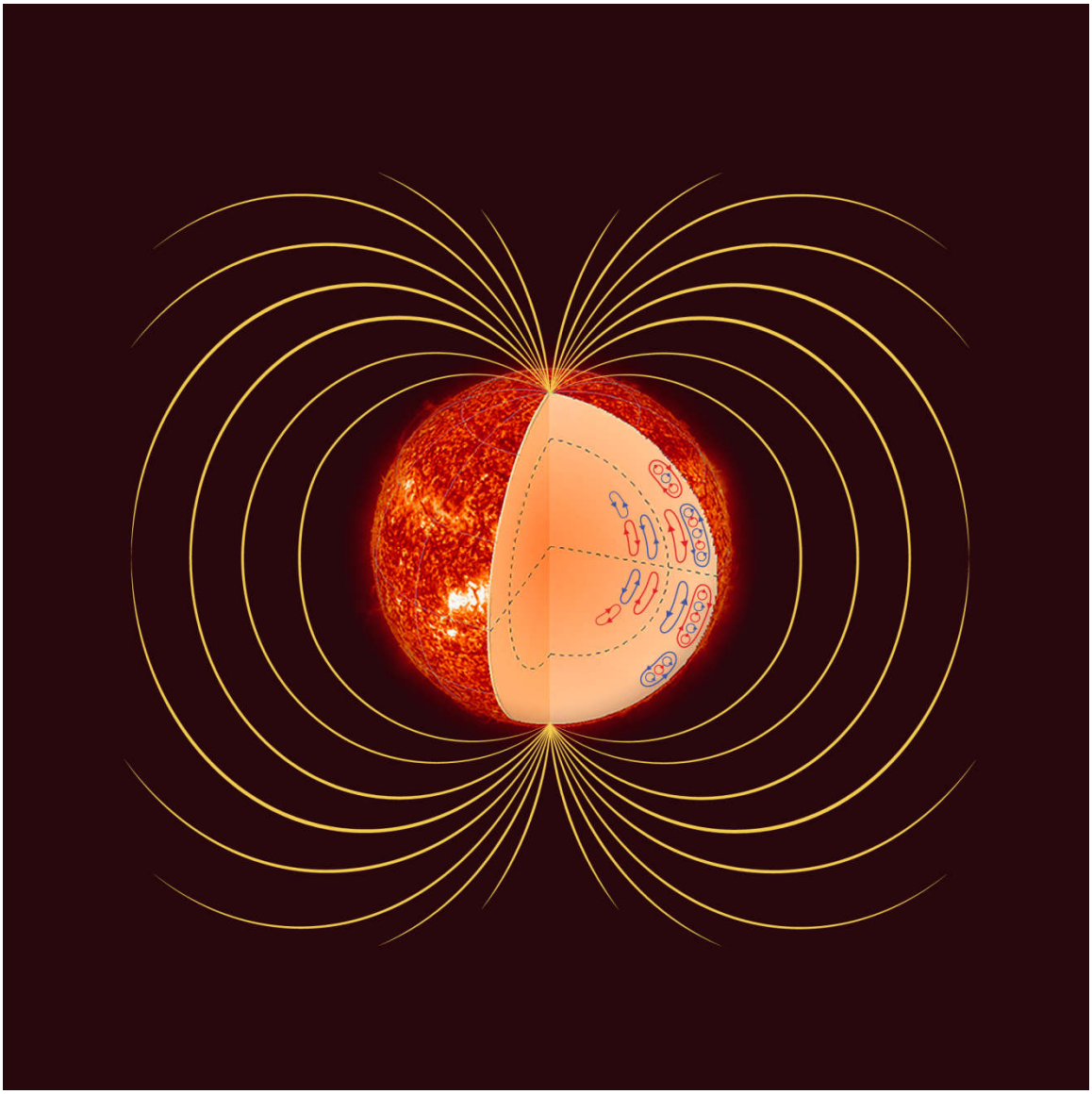

Fig. 1: The torus shaped nonlinear electromagnetic field (NEMF) of the Sun

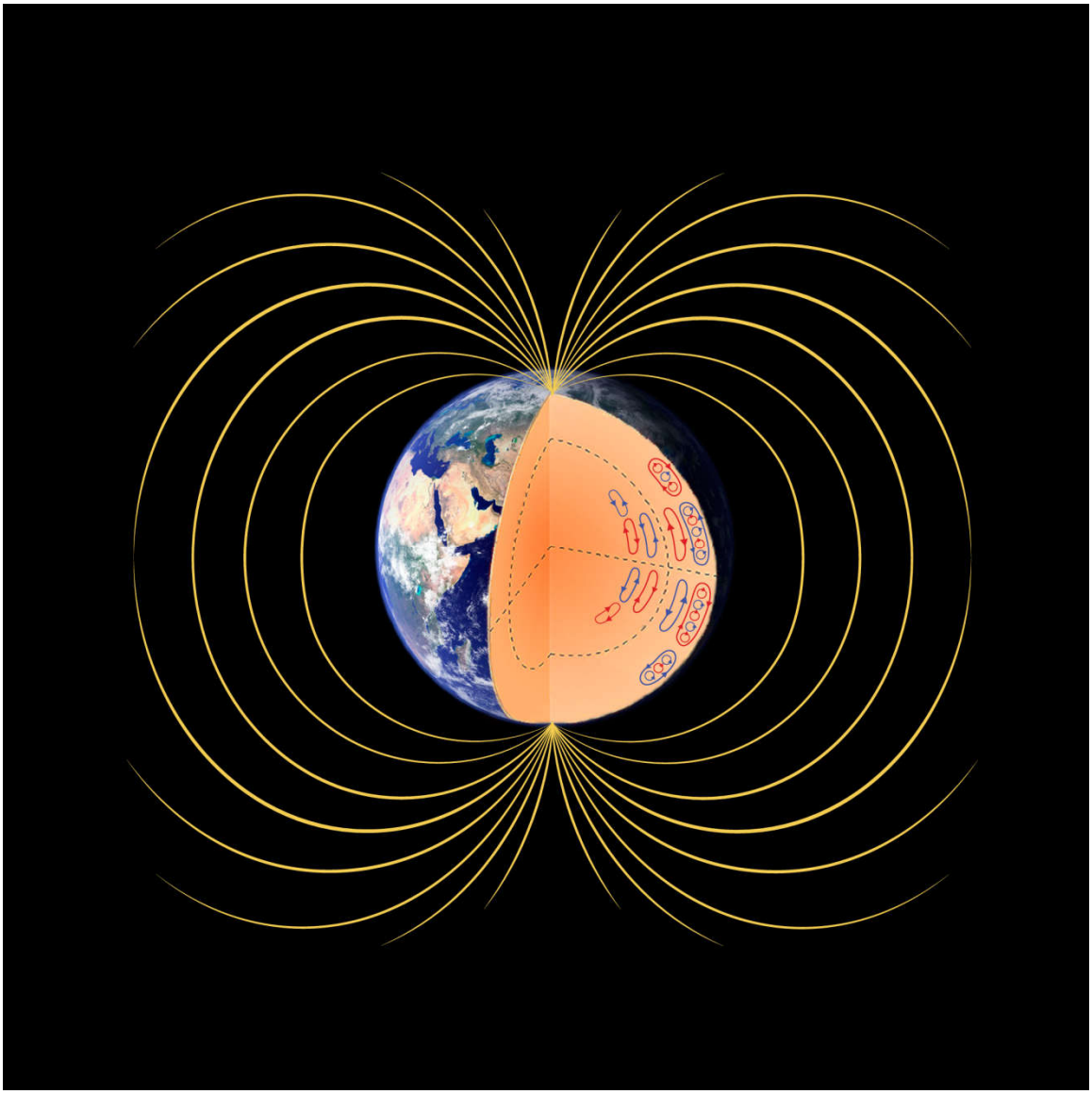

Fig. 2: The torus shaped nonlinear electromagnetic field (NEMF) of the Earth

IV. Conclusion

Thus, the gravitational field is a peculiar torus-shaped nonlinear electromagnetic field (NEMF). The torus shape results from stacking a vortex on top of anti-vortex with axes of spinning on one line. They are in dynamic equilibrium. Since this type of stacking annihilates most of the energy of the electromagnetic field, the gravitational field is much weaker than the electromagnetic.

But let us explain the dynamic equilibrium in more details. The vortex and the anti-vortex, which spin in opposite direction, create magnetic fields with opposite polarity. As a result the vortex and anti-vortex would attract each other stronger when the star spins faster clockwise and sucks energy in. This stronger attraction leads to a star more bulged at the equator with increased turbulent activity and pronounced torus (donut) shape NEMF.

When the bulging at the equator reaches the critical point, which the solar plasma can tolerate, the vortex and anti-vortex will start spinning in opposite (counterclockwise) direction and moving away from each other to release the pressure. They now throw energy out through the holes of the donut, which are at the ends of the axis of spinning of the donut.

This will elongate the shape of NEMF toward the poles and will shrink the NEMF at the equator.[7] It will continue until the shrinking at the equator reaches the critical pressure, which the solar plasma can tolerate. To release the pressure the vortex and anti-vortex will start spinning in opposite (clockwise) direction, suck energy in, spin faster and attract each other stronger. And this goes on and on.

Thus, the gravitational field is a specific type of electromagnetic field; it is much weaker than the electromagnetic because the strong electromagnetic force is to a large degree compensated by the stacking

of vortex on top of anti-vortex. However, this stacking is what makes objects to be attracted to the surface of this sandwich of vortex and anti-vortex.

Since the earth's NEMF is a vortex in the northern hemisphere on top of anti-vortex in the southern hemisphere, it influences differently the atmosphere circulation in the northern and southern hemisphere. The tornadoes in the northern hemisphere spin clockwise like the vortex NEMF of the northern hemisphere and the tornadoes in the southern hemisphere spin counterclockwise like the anti-vortex NEMF of the southern hemisphere.

Also, in the earth's northern hemisphere all thrown objects deflect to the right or clockwise like the spinning clockwise vortex of the earth's NEMF. In the southern hemisphere, all thrown objects deflect to the left or counterclockwise like the spinning counterclockwise anti-vortex of the earth's NEMF. Thus, the so-called Coriolis forces (formulated in 1835) reflect the fact that the earth's NEMF is a vortex in the northern hemisphere on top of anti-vortex in the southern hemisphere.[7]

Each object (as everything material) has its NEMF[4] and this NEMF reacts with the NEMF of the earth. Since the vortex of the northern hemisphere spins clockwise, the earth's NEMF defects the thrown object clockwise (to the right). Since the anti-vortex of the southern hemisphere spins counterclockwise, the earth's NEMF deflects the thrown object counter-clockwise (to the left).[7]

Recently, the classical general relativity theory was successfully used to describe holographic quantum matter,[3] which is an additional proof of the common roots of the gravitational and electromagnetic fields. The opposite is also true - gravitational field can be modeled as quantum matter, which means that the gravitational field is quantum field.[8]

References Références Referencias

1. D. Holtz, S. Hughes, B. Schutz, Measuring Cosmic Distances with Standard Sirens, *Physics Today*, **71** (12) 35-40 (2018).
2. I. Halpern, A. Einstein - Celebrity Physicist, *Physics Today*, **72** (4) 38-45 (2019).
3. S. Hartnoll, A. Lucas, S. Sachdev, *Holographic Quantum Matter*, MIT Press, 2018.
4. M. Kuman, How Was the Material World Created? Origin of Its Nonlinear Electromagnetic Field, *Open Access Journal of Mathematical and Theoretical Physics,* **2** (2) (2019).
5. M. Kuman, Solar Energy and Dynamic, *Open Access Journal of Mathematical and Theoretical Physics,* **2** (2) (2019).
6. M. Kuman, New Light on the Attractors Creating Order out of the Chaos, *International Journal of Complimentary and Alternative Medicine*, **11** (6) (2018).
7. Kuman M, Coriolis Forces, Earth Magnetic Field, and Nonlinear Physics, *Open Access Journal of Mathematical and Theoretical Physics,* **2** (2) (2019).
8. Kuman M, On the Universality of the Quantum Approach, *Research in Medical and Engineering Sciences*, **7** (4) (2019).

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Gravitational Waves or Electromagnetic Waves? How they Influence us?

By Prof. Maria Kuman
Holistic Research Institute

Editorial- Our science became too much differentiated and the different branches of science do not communicate with each other. It is like each organ of the body functioning on its own. If we want to see how the body functions, we need to see the global picture – how the different organs are internally dependent in their functioning. Analogically, if we want to see the global picture of how the Universe was created and functions, we need to start integrating the different branches of science.

For example, the turbulence studied in oceanology[1,2] might be very useful to see what is going on in the Universe. The observed turbulence is the same, only the density of the media is different. The socalled double eddies recently studied in oceanography, are nothing else but a vortex next to an anti-vortex. Why are double eddies formed? Let us recall the rule of the folded fingers of the right hand in physics, which states that if the folded fingers are in the direction of the electric currents (or spinning), the vertical thumb shows the direction of the induced magnetic field.

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Editorial

Our science became too much differentiated and the different branches of science do not communicate with each other. It is like each organ of the body functioning on its own. If we want to see how the body functions, we need to see the global picture – how the different organs are internally dependent in their functioning. Analogically, if we want to see the global picture of how the Universe was created and functions, we need to start integrating the different branches of science.

For example, the turbulence studied in oceanology[1,2] might be very useful to see what is going on in the Universe. The observed turbulence is the same, only the density of the media is different. The so-called double eddies recently studied in oceanography, are nothing else but a vortex next to an anti-vortex. Why are double eddies formed? Let us recall the rule of the folded fingers of the right hand in physics, which states that if the folded fingers are in the direction of the electric currents (or spinning), the vertical thumb shows the direction of the induced magnetic field.

The vortex spins clockwise and according to the above rule a vortex in a horizontal plane would induce magnetic field downward. An anti-vortex spins counterclockwise and according to the above rule anti-vortex in the same horizontal plane would induce magnetic field upward. If vortices and anti-vortices induce magnetic fields with opposite polarity, they would attract each other. They would create a magnetic dipole called a horizontal double eddy (↑↓).

The oceanographic scientists claim that the horizontal double eddies can collapse spontaneously, at which their balanced energy flows transforms into unbalanced waves.[1] Usually such spontaneous collapse happens near the ocean surface because the surface tension decreases the spinning, which decreases the magnetic attraction between the coupled vortex – anti-vortex. As a result, the eddies collapse and their energy dissipates into waves. The oceanographic scientists also claim that eddies can collapse when influenced by powerful waves (induced emission) and then they themselves become a source of powerful waves.[2]

Let us now see how we can apply to astronomy what was learned in oceanography. Each star is a vertical double eddy – a vortex on top of anti-vortex.[3] When the vortex spins clockwise, according to the above rule it would induce magnetic field downward. When the anti-vortex spins counterclockwise, according to the above rule it would induce magnetic field upward. If vortices and anti-vortices induce magnetic fields with opposite polarity, they would attract each other as two magnets with opposite polarity attract each other. They would create a vertical magnetic dipole called a vertical double eddy (↑).
↓

The author showed in another article that the nonlinear electromagnetic field (NEMF) of all stars and planets is a vortex on top of anti-vortex, which is the basis of their torus (donut) shape NEMF.[3] Interestingly, astronomical observations show that the coupling vortex - anti-vortex in stars last very long, but when it finally collapses (spontaneously or under the influence of waves) its energy dissipates into waves just like in the case of the horizontal double eddies in oceanography. Let see when we can expect the vertical double eddies of the stars to collapse and their energy to dissipate into waves.

1. We can expect this to happen at the end of life of a shining star. The dwarf stars are the last stage of stars' development – they barely shine. When a dwarf star collapses into a neutron star, decoupling of the vortex and anti-vortex takes place, and this is the time when a spontaneous waves' emission could be expected. The LEGO in the US and the Virgo in Italy, which registered signal from merging of two neutron stars,[4] could also detect a spontaneous wave emission at the collapsing of a dwarf star into neutron star, but the signal would be weaker.

Thus, waves' emission is observed each time a horizontal double eddy collapses (in oceanographic studies) or each time the vertical double eddy (the torus-shaped nonlinear electromagnetic field (NEMF) of a star) collapses, which happen when a dwarf star collapses into a neutron star. The interaction between the vortex and anti-vortex in a horizontal double eddy (studied in oceanography) is electromagnetic (and nonlinear) and so is the interaction vortex - anti-vortex in the vertical eddies in stars, which is the basis of their torus-shaped nonlinear electromagnetic fields (NEMF).[3]

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If the coupling of the vortex and anti-vortex in horizontal double eddies (in oceanography) and in the vertical double eddies of the stars is electromagnetic in origin, the waves our scientists measure with LEGO must be electromagnetic waves, not gravitational waves. And these waves must be nonlinear electromagnetic waves not to dissipate when traveling billions of light years to come to us. Also space matrix must exist for these waves to travel.

2. Astronomical observations also show that neutron stars merge. They circle around each other with smaller and smaller radius and higher and higher speed until they collapse into one twice-bigger neutron star. As this dance is observed with LEGO, a specific chirp is heard. In 2017, LEGO in the US and Virgo in Italy registered the waves released at the merging of two neutron stars in a galaxy in constellation Hydra (millions of light years away).[4] In 2019, Chandra X-Ray Observatory observed X-ray emission from the merging of two neutron stars 6.6 billions light years away.

The neutron stars merge until a critical mass is reached, after which the sum of neutron stars collapses into a Black Hole. Astronomical observations with LEGO show that when Black Holes merge, powerful waves' emission is also released. The waves are emitted when the NEMFs of the Black Holes collapse.[3] In 2016, LEGO in the US and Virgo in Italy registered waves released at the merging of two Black Holes.[5]

Before LEGO and Virgo offered direct observations of the waves released at merging of Black Holes and neutron stars, the waves have only been inferred indirectly via their effect on the timing of pulsars and binary star systems.[6,7] This indirect way of detection corresponds to the stimulated emission of waves studied in oceanography.

If the emitted electromagnetic waves (misnamed gravitational waves) influence the timing of pulsars and binary star systems, they for sure would influence our own NEMF. Especially considering the fact that our NEMF is weak (1,000 times weaker than the biocurrents of the body) and very sensitive to external influences.

The next step would be to study the influence of these nonlinear electromagnetic waves (called gravitational waves) on our own Nonlinear Electromagnetic Field (NEMF), which would provide a proof that we are part of this Universe and we resonate to all its changes. The sick people, who are out of balance, are expected to be more sensitive to external influences including the electromagnetic waves (called gravitational waves) from merging neutron stars or merging Black Holes.

References Références Referencias

1. C.G. Shakespeare, A. Hogg, The Life Cycle of Spontaneously Generated Internal Waves, *J. Phys. Oceanogr.* **48**, 343 (2018).
2. C.B. Rocha, G.L. Wagner, W.R. Young, Stimulated Generation: Extraction of Energy from a Balanced Flow by Near-inertial Waves, *J. Fluid Mechanics*, **847**, 417 (2018).
3. M. Kuman, *Open Access Journal of Mathematics and Theoretical Physics,* **2** (2) (2019).
4. B.P. Abbott et al, Multi-messenger observations of a Binary Neutron Star Merger, Astro*physical Journal*, **848**, Oct. 2017.
5. B.P. Abbott, Observation of Gravitational Waves from a Binary Black Holes Merger, *Phys. Rev. Lett.* **116** (6) (2016).
6. I. Stairs, Testing General Relativity with Pulsar Timing, *Living Reviews of Relativity*, **6** (1) (2003).
7. M. Kramer, et al, Test of General Relativity from Timing Double Pulsars, *Science*, **314**, 97-102 (2006).

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Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.

Format Structure

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

Title

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, “What words would a source have to include to be truly valuable in a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

Tips for Writing a Good Quality Science Frontier Research Paper

Techniques for writing a good quality Science Frontier Research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of science frontier then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.

6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.

Criterion for Grading a Research Paper (Compilation) by Global Journals

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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