Physics of ether in Vedic knowledge and technologies of Nikola Tesla
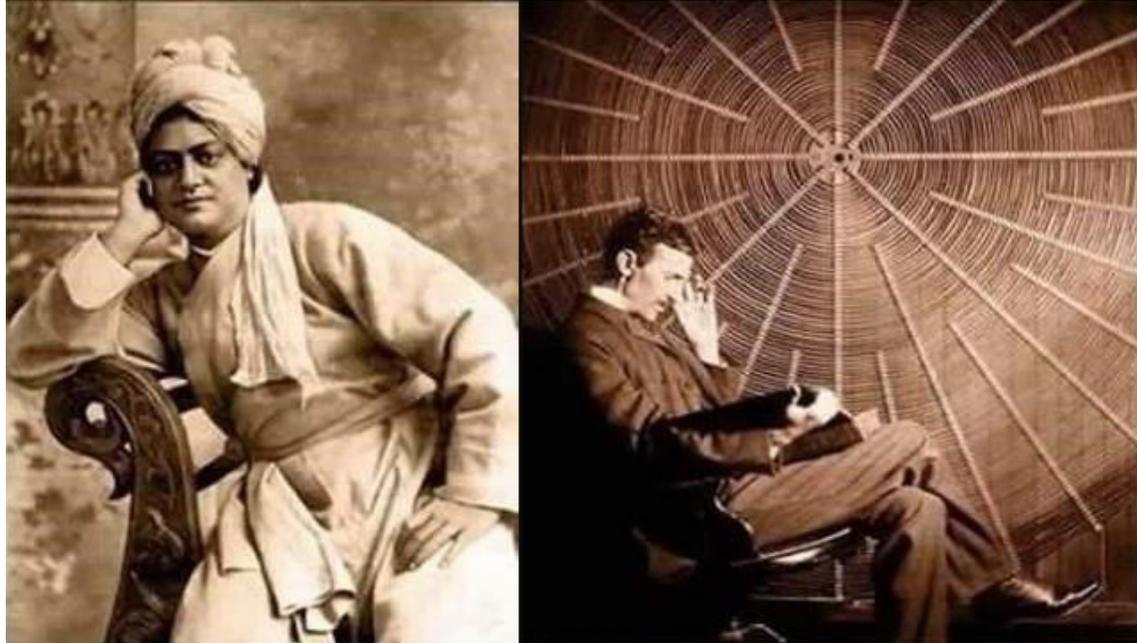

SWAMI VIVEKANANDA AND NIKOLA TESLA'S INTERNATIONAL FOUNDATION
NEW DELHI, INDIA

Swami Vivekananda and Nikola Tesla World Energy Conference 2024
India Habitat Center, New Delhi, November 30,2024, 9.00 AM to 06.00 PM

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Considering that the Energy problems are central topic of numerous discussions among energy experts around the world which is also the main topic of this conference - for the final session "Discussion on Nikola Tesla and Spirituality" I prepared the presentation "Physics of ether in Vedic knowledge and technologies of Nikola Tesla".

The energy problem refers to the generation, distribution, and consumption of energy, particularly in the context of sustainability, environmental impact, and meeting growing global demand. This problem encompasses a variety of issues, but essential are:

1. **Finite Resources**: Much of the world's energy comes from non-renewable resources such as fossil fuels (oil, coal, natural gas). These resources are finite and will eventually be depleted, leading to energy shortages.
2. **Environmental Impact**: The burning of fossil fuels contributes significantly to climate change through the release of carbon dioxide and other greenhouse gases. The energy sector is a major source of pollution, including air and water pollution, habitat destruction, and oil spills.

3. **Energy Inefficiency**: Many energy systems are inefficient, leading to waste and higher costs. Primarily these are transmission losses in power lines and inefficient appliances can contribute to significant energy waste.
4. **Geopolitical Tensions**: The global distribution of energy resources often leads to political conflicts, with countries fighting for control over energy sources. This can disrupt supply chains and create instability in energy prices.
5. **Access to Energy**: In some parts of the world, access to reliable and affordable energy is limited. More than a billion people, mostly in rural areas, live without the benefits of electricity.

Solving the energy problem is a global challenge that requires coordinated efforts across a wide range of actors, including governments, businesses, scientists, and individuals. Governments set the regulatory framework and policies; businesses develop and scale technologies; scientists create innovations; individuals reduce their own energy use; and international organizations organize global cooperation.

How contemporary Science Can Solve the Energy Problems:

1. **Renewable Energy Sources**: Transition to renewable energy sources such as solar, wind, hydro, and geothermal. These sources are abundant, sustainable, and produce little to no greenhouse gas emissions.
2. **Energy Storage Technologies**: Developing better energy storage systems, like advanced batteries, is crucial for managing of renewable energy sources and allow energy to be stored and used during periods of high demand or low production.
3. **Energy Efficiency**: Improving energy efficiency across industries, homes, and transportation can significantly reduce energy demand.
4. **Nuclear Energy**: While controversial, modern nuclear technology, such as small modular reactors, may provide safer and more efficient solutions.
5. **Decentralized Energy Systems**: Creation of local communities with small-scale energy systems (such as rooftop solar panels) reduces dependence on large, centralized power network and increase flexibility to disruptions.
6. **Carbon Capture and Storage (CCS)**: For industries reliant on fossil fuels, CCS technologies can capture carbon emissions before they enter the atmosphere, reducing the impact on climate change.
7. **Government Strategy Changes**: Governments can promote clean energy, reduce carbon emissions, and motivate energy efficiency. Public awareness and behavioral changes, like reducing energy consumption and adopting sustainable practices, are also important.
8. **Fusion Energy Research,**   Etc ...

The solution to the energy problem offered by Nikola Tesla:

is the application of incomparably more advanced technology based on the physics of ether.

Although the realization of all of Tesla's controversial ideas is not feasible from the perspective of official science - according to my theoretical and practical research - Tesla's ether technologies and **ideas about using sources of radiant energy and its wireless transmission are absolutely feasible.**

But - the main problem in understanding Nikola Tesla's extremely advanced ideas and their applications is great difference in his and scientifical interpretation of the structure of nature and the elementary mechanism of propagation of electromagnetic waves.
According to official science, EM waves propagate without the need for a material medium as their carrier and without any connection to the source of their origin.
According to Nikola Tesla, EM waves are complex vibrations of ether – "a material substance that is a perfect fluid of special qualities, which behaves like a solid body towards light and is transparent towards matter, and its effects can be felt through inertia".

"About Ether"

The word ether does not exist in Vedic texts because it appears just in the ancient Greeks. According to theirs teachings, ether or aether (also æther), is a substance that fills the universe above the terrestrial sphere.
The word αἰθήρ (aithēr) in Homeric Greek means "pure, fresh air" or "clear sky". In Greek mythology, it was considered a pure essence that filled the space in which the gods lived and which they breathed, analogous to the air that mortals breathed.

Original Mendeleev Periodic System, "Fundamentals of Chemistry", edition of 1906.

"Njutonij"
"Koronij"

Periods (rows) correspond to the energy levels of atoms which may contain electrons

Dmitri I. Mendeleev, "Try chemical understanding of the earth's ether", 1905, page 27, quote:

"Koronij" density is of about 0.2 relative to hydrogen; and it can not be in any way ether. It is an element the "Y", however, is necessary in order to mentally prepare for the most important and fastest element "X", which, in my opinion, can be considered as ether. I would like to call him in advance "Njutonij" - in honor of the immortal Newton ." End quote.

Elements of the group (column), which have similar physical and chemical characteristics

The significance of the most controversial, "zero" element from Dmitri Mendeleev's "Original Periodic Table" cannot be overemphasized. It is located in the zero column and zero row, which we don't learn about in school, he named "Newtonium" in honor of the immortal Newton, and represents "the most important and fastest element in nature: AETHER."

The existence of ether was widely accepted in science until the early 20th century, when the Michelson-Morley experiment was chosen as "proof" that such a fluid does not exist. Anyway, **ALL great scientists who set the foundations of modern physics used the concept of ether to explain natural phenomena:**

Isaac Newton, an English physicist, mathematician and astronomer, alchemist and natural philosopher, one of the most significant figures in the history of science, **used the idea of the ether** in the 1670s to explain his **theory of gravity.**

In his **wave theory** of light, **Christiaan Huygens** (1678) **called the carrier of light waves - ether**.
Johann II Bernoulli, (1736) in his **corpuscular theory** of light considered that the ether permeates the entire space filled with "extremely tiny vortices" that transmit vibrations of corpuscular packets of light.

In the "Dynamic Theory of the Electromagnetic Field", which **James Clerk Maxwell**, the creator of modern electromagnetism, presented to the Royal Society in 1864, one of **the essential parts of the theory was** that: "there is **an etheric medium** which fills space and permeates bodies, and is capable of setting in motion and **transmitting that motion from one part to another**...".

Albert Einstein, in his lecture at University of Leiden, Netherlands, May 5, 1920, "Aether and the Theory of Relativity": "We can say that according to the general theory of relativity, **space is endowed with physical qualities, so that in this sense there is also an ether** (...) and **space without an ether is inconceivable**"

Paul Dirac, the man who laid the foundations of quantum theory, said in 1951: "Knowledge in physics has advanced greatly since 1905, and the situation regarding the scientific credibility of the ether has changed again so that in the new electrodynamic theory, according to which the vacuum is filled with virtual particles, **we are quite forced to accept the existence of the ether".**

John Bell, a scientist whose contribution to the development of quantum physics is truly enormous, said in a 1986 interview with Paul Davies published in the book "The Ghost in the Atom" that **the theory of ether could be of great help in resolving the EPR paradox.**

Dr. Vladimir Bychkov, chief researcher of the Department of Physics, Lomonosov Moscow State University, head of the laboratory of the Moscow Radiotechnical Institute: **The EPR effect is direct evidence of the existence of the ether.**

Максвелловский случай

$$rot\,\overline{B} = \overline{J} + C\frac{\partial \overline{E}}{\partial t} \qquad\qquad -rot\,\overline{E} = \frac{\partial \overline{B}}{\partial t}$$

Возьмем rot $\quad rot\,rot\,\overline{B} = rot\,\overline{J} + C\frac{\partial rot\,\overline{E}}{\partial t}$

$$rot\,rot\,\overline{B} = rot\,\overline{J} + C\frac{\partial rot\,\overline{E}}{\partial t} = rot\,\overline{J} - C\frac{\partial^2 \overline{B}}{\partial t^2}$$

$$rot\,rot\,\overline{B} = grad(div\overline{B}) - \nabla^2 \overline{B}$$

полагают $\nabla \overline{B} = 0$ нет магнитных зарядов

И получают $\Delta \overline{B} = C\frac{\partial^2 \overline{B}}{\partial t^2}$ Волновое уравнение и такое же для $\overline{E}$

Однако из $\nabla \overline{B} = 0 \rightarrow \overline{B} = rot\overline{\phi} \quad \Delta \overline{B} = 0$

Но тогда $\quad 0 = rot\,\overline{J} - C\frac{\partial^2 \overline{B}}{\partial t^2}$ А не волновое уравнение

если $\quad rot\,\overline{B} = \overline{J}$ Также нет волнового уравнения

Пусть некоторый объем под действием силы перемещается, тогда работа по перемещению равна

$$\int_s ds\frac{m_e}{\rho}\frac{\partial \overline{v}_e}{\partial t} = -U \approx -\int_s ds\frac{m^2 \cdot \tau_s \cdot \tau_e}{\rho \cdot 4\cdot \pi r^2} = \frac{m^2 \cdot \tau_s \cdot \tau_e}{\rho \cdot 4\cdot \pi}\left(\frac{1}{r_1} - \frac{1}{r_2}\right) \qquad (8)$$

что аналогично потенциалу заряженного шара.
Введем потенциал источника

$$\Phi = \frac{m^2 \cdot \tau_s}{\rho \cdot 4\cdot \pi r} \qquad$$ Он аналогичен потенциалу заряженной сферы $\qquad \varphi = \frac{q_s}{\varepsilon \cdot 4\cdot \pi r}$

Предположив между ними аналогию, тогда получается следующая формула для подобия $\qquad \frac{q_s}{\varepsilon} \Longleftrightarrow \frac{m^2 \cdot \tau_s}{\rho}$

Уравнение (8) говорит об аналогии между напряженностью электрического поля и ускорением течения

$$\frac{\partial \overline{v}_e}{\partial t} + grad\,(\overline{V}^2/2) + \frac{1}{\rho}grad\,p = \frac{\partial \overline{v}_e}{\partial t} + grad\left(\frac{\overline{V}^2}{2} + \frac{1}{\rho}p + \psi\right) = \frac{\partial \overline{v}_e}{\partial t} + grad\,\Psi = \overline{E}$$

где ψ, Ψ можно назвать скалярными потенциалами

Dr Bychkov (Vladimir Ljvovič Bičkov), doctor of physico –mathematical sciences, academician of the Russian Academy of Sciences, in their scientific works show that Maxwell 's equations are special case of the equations of hydrodynamics (Nikolai Egorovich Zhukovsky), based on the dynamics of vortices, and that there is the possibility of establishing an analogy between electromagnetic and hidrodynamics fenomenons.

By rigorous mathematical analysis dr. V.Bičkov showed that for all known experimental data in the field of classical macroscopic electrodynamics can be obtained completely analogous results using the theory of hydrodynamics of viscous and non-viscous liquids.

"On Analogies between Hydrodynamics and Electrodynamics for Plasma Technologies"
Vladimir L. Bychkov, Andrey Yu. Mokin

HYDRODYNAMIC EQUATIONS (3): $\quad \dfrac{\partial V}{\partial t} - V \times rot\ (V) + grad\ (V^2/2) + \dfrac{1}{\rho}\ grad\ p = F \cdot$ (3)

Analogy for the Lorentz force
Let us introduce a formal <u>analogy between a vortex of the fluid</u> and a <u>magnetic induction</u>
by a formulae: $rotV \Leftrightarrow -B,$ (4a)
which follows from the Biot- Savart law, <u>and between an electric field strength</u> E (electric force) <u>and an acceleration</u> of the fluid $\partial V/\partial t$
$E \Leftrightarrow \partial V/\partial t ,$ (4b)
and use a formal identity $rotV = -B,$ (5)
$E = \partial V/\partial t$ (6)
Then from (3), (5) and (6) we obtain the following expression:
$\quad E + (V \times B) = F - (grad(V^2/2) + \dfrac{1}{\rho}\ grad\ p) \equiv F_L ,$ (7)

It is an analogue of the Lorentz force, which acts some liquid volume. It means that an introduction of the analogy (3) allows to describe the magnetic field as some vorticle fluid field and the analogy (5) as some acceleration of it.

The following trivial expressions can be obtained from (5) and (6)
$rot\ \dfrac{\partial V}{\partial t} = rot\ E$ (8) and $\quad rot\ \dfrac{\partial V}{\partial t} = \dfrac{\partial\ rotV}{\partial t} = -\dfrac{\partial B}{\partial t} = rot\ E \cdot$ (9)
They lead to an equation analogous to the first Maxwell's equation : $\quad \dfrac{\partial B}{\partial t} = -rot\ E \cdot$ (10)

Expression 8 indicates that if there is no electric field that is divergent and potential V exists = Rozen-Podolsky experiment $\Leftrightarrow$ it indicates that ether exists and this experiment confirms the existence of an ether.

Describing his ether technologies, Tesla, in his well-documented claims, clearly and unequivocally stated the following:

Tesla's well-documented statements:

1. Wireless transmission of electric energy, "Electrical World and Engineer", March, 1904:

"In essence, it is the circuit of very large self inductance and low resistance, for which construction and method of excitation could be said **to be DIAMETRICALLY OPPOSED to** those of **a typical transmitter** for telegraphy **using HERTZ or electromagnetic radiation.**"

2. "Nikola Tesla Patenti II", Zavod za udžbenike i nastavna sredstva, Beograd,1996.g.

"It is too noted that **the phenomenon here involved in the transmission of electrical energy is one of <u>TRUE CONDUCTION</u> AND IS NOT TO BE CONFOUNDED WITH THE PHENOMENA OF ELECTRICAL RADIATION** which have heretofore been observed and which from the very nature and mode of propagation would render **practically IMPOSSIBLE THE TRANSSMISION OF ANY APPRECIABLE AMOUNT OF ENERGY** TO SUCH DISTANCES as are of practical importance. ..."

3. Canadian Patent 142,352 – "Art of Transmitting Electrical Energy through the natural medium":
"… IT IS NECESSARY TO EMPLOY **OSCILLATIONS IN WHICH THE RATE OF RADIATION OF ENERGY INTO SPACE IN THE FORM OF HERTZIAN** OR ELECTROMAGNETIC **WAVES IS VERY SMALL** ...

No matter how controversial and contradictory these Tesla claims are to official science, they are confirmed by numerous scientific works of the Korum brothers:

- *"Tesla Coils and the Failure of Lumped-Element Circuit Theory", by Kenneth L. Corum and James F. Corum, Ph.D. © 1999;*
- *TCTUTOR, Corum, 1988, pp. 56-58;*
- *"Extra Coil as a Slow Wave Resonator," Proc. 1986 ITS Symposium, pp. 2:1-2:24;*
- *Industrial Electron Accelerators, by E.A. Abramyan, Hemisphere, 1988, p. 94.*

In this works it is proven that Tesla's famous "Extra Coil" has a maximum VSWR - which is really diametrically opposed to the efforts of modern emission engineers who strive for minimal reflection (minimum VSWR) in order to radiate as much energy from the system as possible. So **Tesla really RETAINS EM energy in his system - just as he claims.**
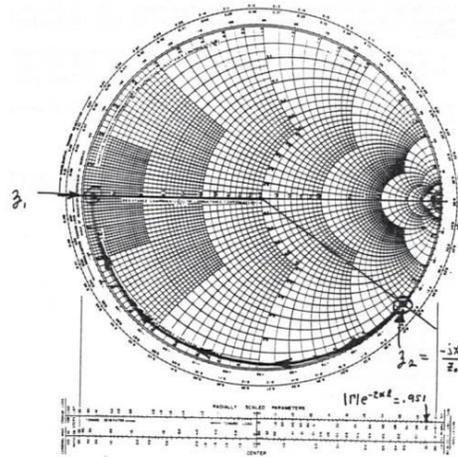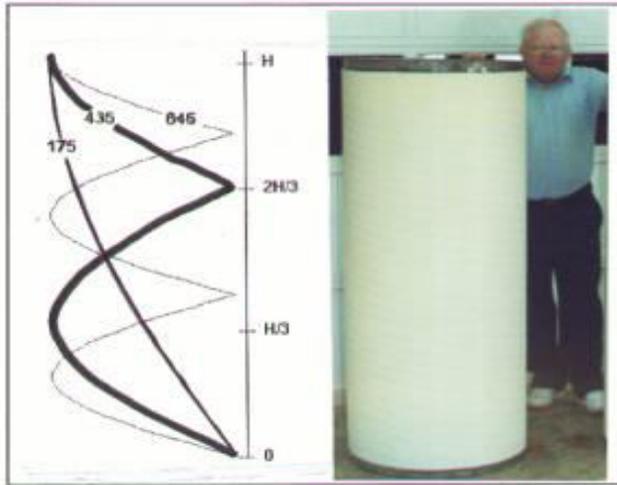

Figure 4. Smith Chart representation of Tesla's November 1, 1899 Extra Coil.

In document: "A Technical Analysis of the Extra Coil as a Slow Wave Helical Resonator", by Kenneth L. Corum and James F. Corum, Ph.D. one can find:

"The Voltage Standing Wave Ratio (VSWR) is then analyzed, including losses, and the voltage step-up of any distributed Tesla Coil resonator is obtained. The resulting model not only predicts the resonant behavior of the Extra Coil, but readily permits its representation on a Smith Chart. Several examples of Extra Coil **analyses** are presented numerically, and displayed on Smith Charts. Specifically, the November 1, 1899 and January 2, 1900 Extra Coils of Tesla's Diary are discussed in detail and **are shown to produce voltage step-ups on the order of 10 to 15 megavolts**.

In Tesla coil, voltage rise is not achieved neither by transformer action** $E_2 = N*E_1$ (N = number of windings) **nor by induction** $E_2 = M\, di/dt$, **nor by simple** (lumped-element) **coupled resonance** $V_2 = V_1 \times (L_2/L_1)^{\frac{1}{2}}$. (L = coil inductivity).

A true Tesla ("Extra") coil is a velocity inhibited slow-wave helical transmission line resonator** $V_{max} = S \times V_{min}$, **where voltage rise is proportional to the S**tanding **W**ave **R**atio.

Great difference in Teslas and scientifical interpretation of the elementary mechanism of electromagnetic waves propagation can be seen from his claim:

"Tesla Sees Evidence Radio and Light Are Sound", New York Times, Sec. X, P.9, c.1, April 8,1934

I consider thise xtremely important, said Mr.Tesla. "Light cannot be anything else but a longitudinal disturbance in the ether, involving alternate compressions and rarefactions. In other words, light can be nothing else than a sound wave in the ether..."

"Ether" tesla described[1] as: Tesla's aether is infact a medium."a perfect fluid" that wets everything in which are immersed "independent carriers". Itbehaves as a solid to light (high frequency) and is transparent to matter while it's effects can be felt through inertia.

On the basis of what was said, it becomes much clearer: **Why Tesla Matters ... And why ether is so important ...** which is confirmed by his following statements:

Nikola Tesla – Lecture at Columbia College, N.Y., May 20, 1891
"Nature has stored up in the universe infinite energy. The eternal recipient and transmitter of this infinite energy is the ether."

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[1] "Dynamic theory of gravity N.Tesla published a prepared statement on his 81st birthday (July10,1937) relativity.

PREPARED STATEMENT BY N.TESLA for interview with press on 81st birthday, July 10th, 1937
"I consider myself the original discoverer of this truth, which can be expressed by the statement: There is no energy in matter other than that received from the environment ..."

These highly controversial statements by Tesla are supported by his patents:

Patent No. US 685,957, Nov. 5, 1901, "Apparatus for the utilization of radiant energy"
Patent No. US1119732, Jan. 18, 1902 , "Apparatus for transmitting electrical energy".

... But how Nikola Tesla came to such deep insights into the structure of Reality ?

At the beginning of my thoughts, I thought that Tesla might have received some scriptures or texts of ancient Vedic knowledge from Vivekanada, for example, but no. He didn't.

Still, in my opinion, the meeting with Vivekananda, with the energy of his being and getting to know his great vedic knowledge - helped Tesla expand his birth-acquired qualities and achieve such extremely deep insights into Reality.

Swami Vivekananda, 12 January 1863 – 4 July 1902, born **Narendranath Datta**, was an Indian Hindu monk, a chief student of the 19th-century Indian mystic Ramakrishna. He was a key figure in the introduction of the Indian philosophies of Vedanta and Yoga to the Western world and is credited with raising interfaith awareness, bringing Hinduism to the status of a major world religion during the late 19th century.

Nikola Tesla, one of the most brilliant minds of mankind, was born on July 10, 1856, in the village of Smiljan, in Lika, in what was then the Austrian Empire, today the Republic of Croatia. Tesla is making groundbreaking breakthroughs in the fields of physics and electrical engineering: he finds alternating current, a rotating magnetic field, an induction motor, high-frequency currents, radio and telecommand, X-rays etc.

Tesla Died January 7, 1943 in a "New Yorker" hotel room.

Tesla **probably met Swami Vivekananda in 1893,**, at the Chicago World Fair (May 5 to October 31) held in connection with the World's Parliament of Religions which had been held at the Chicago World's Fair. As Tesla had been there at the same time - it is conceivable that he met the Swami **but no record exists of any conversation between them.**

What is well documented - Tesla met the Swami on February 13, 1896, at a dinner with the actress Sarah Bernhardt after one of her performances in the play Iziel, the French theater version of the life of the Buddha in which she played the main role. After the performance, she organized a reception for a select group, including Swami Vivekananda and Nikola Tesla. On that occasion, Vivekananda spoke to the Tesla about the Vedanta cosmogony which Tesla really liked... and then Tesla invited Swami Vivekananda and Sarah Bernhardt to visit his laboratory.

A well-known Indian philosopher Vivekananda, ... visited Tesla in his New York laboratory in 1896 and immediately sent a letter[2] to his Indian colleague Alasingh in which he described his meeting with Tesla:

„This man is different from other western people. He showed his experiments with electricity. His attitude to electricity looks like an attitude to a living being. He speaks with it and gives orders to it. **I speak about the highest degree of spiritual person.** It is no doubt that **he has a spirituality of the highest level and can call all our gods**. **In his electrical multicolored lights, I saw all our gods: Vishnu, Shiva… and I felt the presence of Brahma himself"**

After several conversations with Vivekananda Tesla was aware of ancient concepts and the correlation it had with the science he was working on which is evident from:

Tesla's article, "Man's greatest achievement" written on May 13th, 1907, published on July 13, 1930, in The Milwaukee Sentinel :

"... All perceptible matter comes from a primary substance, or tenuity beyond conception, filling all space, the akasha or luminiferous ether, which is acted upon by the life giving Prana or creative force, calling into existence, in never-ending cycles all things and phenomena. The primary substance, thrown into infinitesimal whirls of prodigious velocity, becomes gross matter; the force subsiding, the motion ceases and matter disappears, reverting to the primary substance.

Can Man control this grandest, most colossal of all processes in nature? Can he harness her inexhaustible energies to perform all their functions at his bidding, more still - can he so refine his means of control as to put them in operation simply by the force of his will?

If he could do this he would have powers almost unlimited and supernatural. ..."

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[2] http://www.slobodni-univerzitet-srbije.org/files/abramovic-tesla-rise-of-spiritual.pdf; *Dr. V.Abramović, "TESLA & THE RISE OF SPIRITUAL PHYSICS", p.129*

They did meet at the Corbins' house *(a mansion in Fifth Avenue, New York City)* for dinner on February 5, 1896 and Vivekananda asked Tesla questions about **mathematicall prove that force and matter are reducible to potential**, for we know of the letter from Tesla to Vivekananda dated February 8, 1896:

My dear Sir,

As it would be difficult to answer your questions by letter and as I wish to have the pleasure of meeting you again I would suggest a visit to my laboratory 45 East Houston Street any day next week you find convenient.

Faithfully yours, N. Tesla

They agreed to meet, for Vivekananda wrote in a *letter to E. T. Sturdy dated February 13, 1896:*

*"... I am going to see him next week, to get this new mathematical demonstration. **In that case, the Vedantic cosmology will be placed on the surest of foundations. ...**"*

In 1895, Swami Vivekananda shared with Tesla the idea of matter and energy to be one, and requested him to prove it through mathematics. However, Tesla failed to realize it theoretically ... but ... a few years later Tesla demonstrated it practically, even though almost no one understood him ...

The birth of the Scientific Prometheus of the new age ...

Nikola Tesla arrived in Colorado Springs on May 20, 1899, and on June 5, he was already making measurements and analyzing, based on which he concluded something very unusual and very important, which he wrote down in his diary:

Nikola Tesla, Colorado Springs Notes, 1899-1900 – June 5, 1899, Nolit, Beograd, Yugoslavia, 1978.

Colorado Springs

June 5, 1899

Induction method; results with apparatus to be used calculated from

$$M = \frac{p^2 \, s^4 \, W_p \, V_t^2}{32^2 \, D^6 \, S^2} \quad \text{(This formula is very problematical)}$$

M = Power in secondary or receiving circuit
p = $2\pi n$, estimated $40,000 = 4 \times 10^4$
s = length of side of square circuit $= 1200 = 12 \times 10^2$ cm.
W_p = power spent in primary $= 4 \times 10^{10}$ ergs assumed.
V_t = total volume of wire in both circuits $= 25 \times 10^3$ cu.cm.
D = distance from center to center of circuits (horizontal)
S = specific resistance of wires $= 1.7 \times 10^3$

Taking M to be the minimum 0.3 ergs to affect relay, it is found that with above circuits and under such conditions about 1 mile communications should be possible. With circuits 1000 meters square, about 30 miles. From this, the inferiority of the induction method would appear immense as compared with disturbed charge of ground and air method.

From this, the **inferiority of the induction method** would appear immense as compared with **DISTURBED CHARGE OF GROUND AND AIR METHOD.**

Shortly after, on July 4th, Tesla wrote about his greatest discovery:

*"I was very lucky to discover new and amazing phenomena, such as rotating magnetic field, glowing of wireless vacuum tubes and many other high frequency effects, which amazed the world, BUT **WHAT IMPRESSED ME AS MORE BEAUTIFUL THAN ANYTHING ELSE WAS THE DISCOVERY OF STATIONARY WAVES**, to which I came in 1899, and which showed that that the **whole planet** on which we live, despite its incomprehensible size, **is constantly contracting and expanding** and **could be made to response with vibration to the lowest whisper of human voice**. …".*
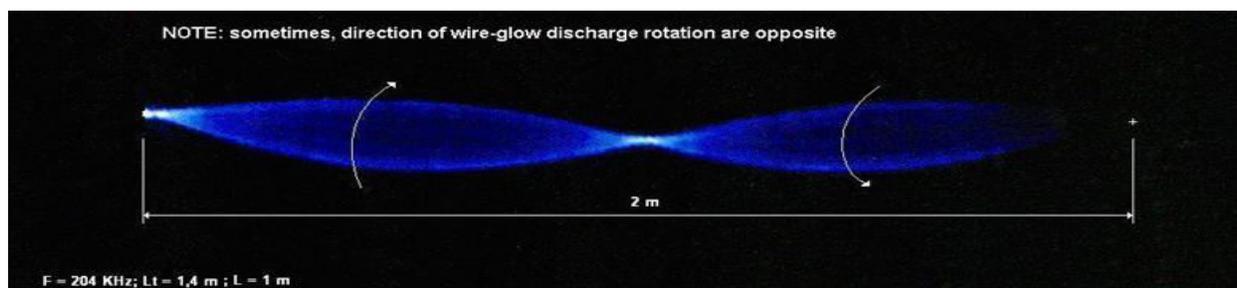
"Electro-Mechanical" standing wave created by Tesla transformer, G.Marjanovic, Tesla laboratory, Veliki Borak (near Belgrade), October, 2005.g.

And finally - according to all my theoretical and practical research into Tesla's legacy, **on July 7, 1899**, **Nikola Tesla made his most significant decision** and that was the moment **when he made the Copernican revolution,** that was the moment when the New Tesla was born, who significantly **improved his technologies and definitely redirected them to scalar wave technologies:**

Colorado Springs Notes, 1899–1900, Nolit Beograd, 1978, p. 76, July 7, 1899:

*"There are two ways to achieve voltage through resonant overvoltage: either the secondary is placed in a very loose coupling (k <0.2) with the primary to allow free oscillations of the secondary (G.M: classic version[3]) or the secondary must be firmly fixed (k> 0.5) with the primary and then raise the voltage with an additional coil - an "Extra Coil" – that is not inductively coupled to the primary.*
The seccond method I have found preferable when high E.M.F. is desired .,,

The favor of **E**lectro**M**otive **F**orce at the very beginning of his research, and the **CHOICE OF PURE POTENTIAL (EMF) INSTEAD OF VOLTAGE**, is a very important decision of Nikola Tesla, which, I am sure, **was crucial for his success** and for achieving the efficiency of the machine with which Tesla was pleased (Tesla's final measurements on December 14, 1899).

 A potential is a scalar field, a term perfectly suited to the term "ether" **while the voltage is a vector quantity** and in fact the work done required to move the electric charge between two points in the electric field.

In order to distinguish his new device, whose operation is based on completely different principles from the previous version, Tesla called it the "Magnifying Transmitter". This Tesla's masterpiece, " is an advanced version of Tesla coil transmitter he patended in 1891. It is a special high power harmonic oscillator that Tesla constructed for experiments in wireless transmission of electrical energy. The Magnifying Transmitter is an air-core, multiple-resonant transformer that can generate very high potentials or voltages – depending of what is wanted to be achieved. In his autobiography, Tesla stated that ". . . I feel certain that of all my inventions, the Magnifying Transmitter will prove most important and valuable to future generations." Measuring about 15 m in diameter, it developed a working potential estimated at 12 million million volts and was capable of producing electrical discharges exceeding 40 m in length.
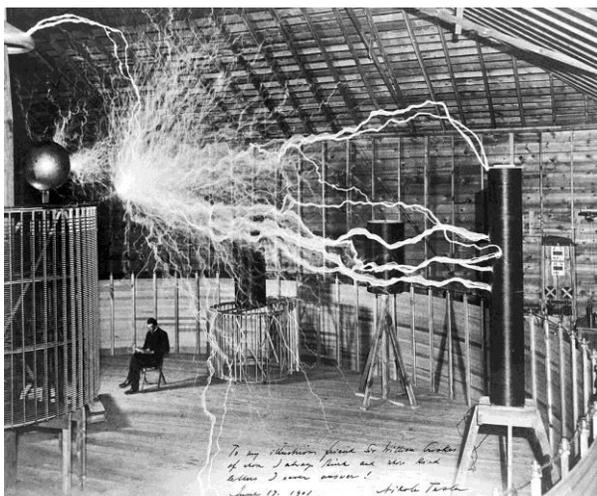
Magnifying Transmitter (1899-1900)   Wardenclyffe Tower (1901–1917)

Upon returning to New York in January 1900, Tesla made a statement to reporters: N.Tesla: "I solved all my dilemmas in Colorado Springs" (G.M. related to wireless energy transmission) and began construction of the Wardencliffe Tower also known as the Tesla Tower. That was an early wireless transmission station designed and built by Nikola Tesla in Shoreham, New York in 1901-1902 with which Tesla wanted to transmit sound, messages and even images across the world but also a energy using the Earth as a resonator ... but ...

 Primary financier of this project was J. P. Morgan and after his decision to support Guglielmo Marconi's radio based telegraph system **this project was abandoned in 1906 and never became operational**. That's the official explanation, **but the real reason - in my opinion - could be Tesla's** deep insights into the structure of Reality and his **idea to transmit free energy wirelesly**.

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[3] *The classic version of Tesla's transformer Tesla rejected in his considerations on July 7, 1899 is significantly different from the variant that Tesla chose that day and called "Magnifying Transformer. The first version of a high voltage, high frequency, transformer with an air core Tesla patented June 23, 1891, U.S. Patent 454,622 - "Electrical Lighting System"*

Namely, **The key problem in accepting Tesla's ideas based on ether technologies was arising of "Albert Einstein's" theory of relativity** whose key postulate is the limited velocity of light according to which no object with a real rest mass can reach the speed of light...

On the other hand, an analysis of J.C. Maxwell's theory of electromagnetism, which he published in its original, quaternion form in 1865, showed that the speed of scalar waves predicted by this version of the theory could reach an arbitrary value - which was in contradiction with Einstein's "future" theory.

Nikola Tesla je bio svestan ovog problema:

New York Times, Sec. X, P. 9, c. 1, April 8, 1934

It is true," said Mr. Tesla, "that **many scientific minds support the theory of a gaseous ether, but it was rejected again and again because in such a medium longitudinal waves would be propagated with arbitral** – including infinite - **velocity.** Lord Kelvin conceived the so-called contractile ether, possessing properties which would result in a finite velocity of longitudinal waves.

The quaternions are a set of symbols of the form

$$\underbrace{a}_{\substack{\text{scalar} \\ \text{part}}} + \underbrace{bi + cj + dk}_{\text{vector part}}, \text{ where } a, b, c, d \text{ are real numbers.}$$

They multiply using the rules $i^2 = j^2 = k^2 = -1$; $ij = k$.

Mathematical physicist James Clerk Maxwell, in his original mathematical equations given in form of quaternions (a hypercomplex number that represents the "sum" of a scalar and vector part) **established the theoretical existence of scalar waves** which can propagate faster than light...

• Maxwell's equations in quaterionic form (Treatise, 2nd edition, 1881, Vol. II, p. 239–240; S = scalar and V vector part of quaternion) $\mathfrak{G}$ = velocity, ψ, Ω = scalar el./mg. pot., eq. numbers 1st column from 1865, 2nd one from 1881

(B_1) (A)	$\mathfrak{B} = V\nabla\mathfrak{A}$	$(S\nabla\mathfrak{A} = 0 \Rightarrow \mathfrak{B} = \nabla\mathfrak{A})$	eq. of mg. induction
(D) (B)	$\mathfrak{E} = V\mathfrak{G}\mathfrak{B} - \dot{\mathfrak{A}} - \nabla\psi$		eq. of el.*motive* force
(C)	$\mathfrak{F} = V\mathfrak{C}\mathfrak{B} - e\nabla\psi - m\nabla\Omega$		eq. of el.magn. force
(D)	$\mathfrak{B} = \mathfrak{H} + 4\pi\mathfrak{J}$		eq. of magnetization
(C) (E)	$4\pi\mathfrak{C} = V\nabla\mathfrak{H}$		eq. of el. currents
(F) [G]	$\mathfrak{K} = C\mathfrak{E}$		eq. of conductiv. (Ohm)
(E) [F]	$\mathfrak{D} = \dfrac{1}{4\pi}K\mathfrak{E}$		eq. of el. displacement
(A) [H]	$\mathfrak{C} = \mathfrak{K} + \dot{\mathfrak{D}}$		eq. of true currents
(B_2) [L]	$\mathfrak{B} = \mu\mathfrak{H}$		eq. of ind. magnetiz.
(G) [J]	$e = S\nabla\mathfrak{D}$		[Coulomb-Gauss law]
	$m = S\nabla\mathfrak{J}$		
	$\mathfrak{H} = -\nabla\Omega$		

Unfortunately, the problem was solved in the wrong way, so that science tripped itself up and lost the possibility of a much more comprehensive and better description of electromagnetic phenomenology.

After J.C. Maxwell death, considering that this mathematical form is "unnecessarily complicated" ..., Oliver **Heaviside**, Josiah Willard **Gibbs** and Heinrich **Hertz**, "**simplified**" his **twenty quaternion equations into a set of only four, vectorial equations.**

Name	Differential form	Integral form
Gauss's law	$\nabla \cdot \mathbf{E} = \dfrac{\rho}{\varepsilon_0}$	$\oiint_{\partial V} \mathbf{E} \cdot d\mathbf{A} = \dfrac{Q(V)}{\varepsilon_0}$
Gauss's law for magnetism	$\nabla \cdot \mathbf{B} = 0$	$\oiint_{\partial V} \mathbf{B} \cdot d\mathbf{A} = 0$
Maxwell–Faraday equation (Faraday's law of induction)	$\nabla \times \mathbf{E} = -\dfrac{\partial \mathbf{B}}{\partial t}$	$\oint_{\partial S} \mathbf{E} \cdot d\mathbf{l} = -\dfrac{\partial \Phi_{B,S}}{\partial t}$
Ampère's circuital law (with Maxwell's correction)	$\nabla \times \mathbf{B} = \mu_0 \mathbf{J} + \mu_0\varepsilon_0\dfrac{\partial \mathbf{E}}{\partial t}$	$\oint_{\partial S} \mathbf{B} \cdot d\mathbf{l} = \mu_0 I_S + \mu_0\varepsilon_0\dfrac{\partial \Phi_{E,S}}{\partial t}$

This group of four equations was primarily known as the Hertz–Heaviside equations but are now universally known as *Maxwell's equations – but this is not.*

Heaviside's equations, which are taught in textbooks and universities as Maxwell's equations are not the same as the ones Maxwell published 1865.

You may see them in the picture on the left in differential or integral form.

Since Maxwell's original theory was based on the concepts of the ether, as were all other theories of all the greatest scientists of that time, the ether had to be somehow eliminated as a potential medium for the propagation of scalar waves.

So - for this purpose, The Michelson–Morley experiment was chosen as an attempt (April and July 1887) to detect the existence of the luminiferous aether - a supposed medium permeating space that was thought to be the carrier of light waves. **Altough no "zero" result was ever reported by Michelson-Morley in their original publications - the ether was declared non-existent and expelled from science**.

However, **Many others replicated that same experiment** using far better and more sensitive interferometer devices than MM used, such as Dayton Miller, and in other team efforts by Morley-Miller, Michelson-Pease-Pearson and Michelson-Gale (Astrophisical Journal: Michelson, 1925; Michelson & Gale, 1925) **and proved that ether exists.** Also others have done so in more recent times, such as Yuri Galaev, Reginald Cahill and Hector Munera. **ALL have been ignored, censored or simply erased by both mainstream "science" journals, and by their academic colleagues** ...

By eliminating the ether as a ponderable medium (a special fluid with special properties - as defined by Tesla) **and giving material attributes to the electromagnetic field**[4] - according to the interpretations of official science - **transverse vector (Hertzian) waves become the only possible existing form of EM waves** where the electric field oscillates in one plane and the magnetic field in the plane perpendicular to this, while the wave propagates in the direction perpendicular to both of these vectors...

Considering this - according to official science - no special "Tesla (Non-Hertzian) waves" exist. Tesla's scalar waves are just a "modification" of conventional EM waves in the form of "surface waves" in the near zone of the transmitter (Norton waves, Zenneck waves ...).
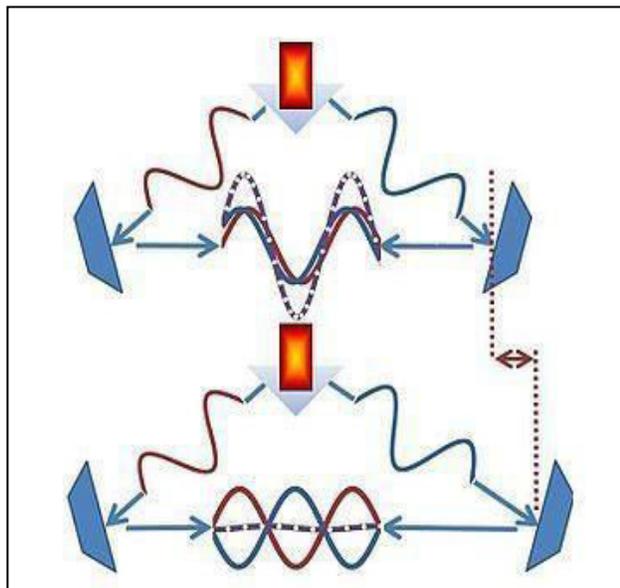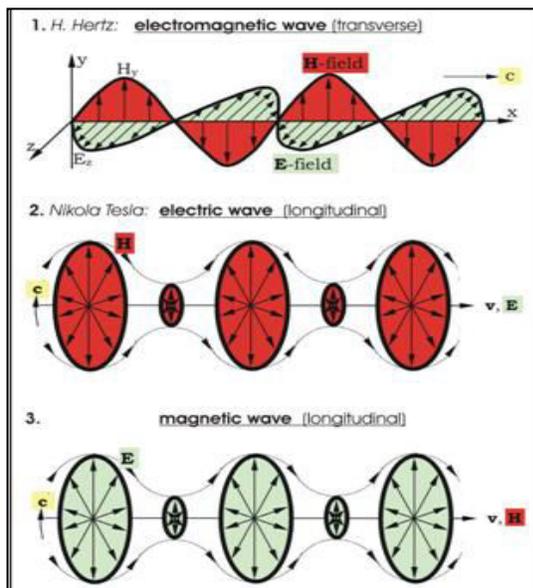
Scalar waves can be generated by mutual action of two coherent electromagnetic waves ofthe same frequency and opposite phase. Resulting energy field - created by integration of opposing electromagnetic fields, is not their complete annulment, as is commonly thought, but energy transformation into the vacuum region, in a state of pure potential and Scalar field creation !

However, for Tesla, "light is sound in the ether" - and as incredible as it may seem, the latest scientific insights confirm Tesla's thoughts.

The latest scientific insights - speak in favor of Tesla's ideas

From the perspective of quantum theory, the field is interpreted as a quantized phenomenon originating from quantum fluctuations in vacuum - an infinite set of infinitesimal harmonic oscillators - a turbulent sea of excited energy states, virtual-real particles - so, from the perspective of quantum theory, the field phenomenon is more fundamental than elementary particles.

Moreover, contemporary science experimentally prove - that not only are electromagnetic FIELDS physical, but that POTENTIALS are not pure mathematical construction - but on the contrary - that **potentials are physical also and are more basic physical subjects than fields !!!**

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[4] The electromagnetic field meets all the criteria of both matter and substance definitions - so it can be said that electromagnetic fields are the medium for EM waves, https://physics.stackexchange.com/questions/441466/

Namely, the **Aharonov-Bohm experiment[6], performed in multiple laboratories in the world, PROVED** that the **ELECTROMAGNETIC POTENTIAL IS EXISTING AND INFLUENCE ON CHARGED PARTICLE IN A PART OF A SPACE IN WHICH THE MAGNETIC AND ELECTRICAL FIELDS ARE ZERO.**

In this way - by **"Aharonov-Bohm" experiment confirmed that electromagnetic interaction can take place in areas where there is no EM field !!!**

So - the experimental reality of **modern physics points** to the fact that the **"electric potential" scalar field, is a more fundamental level of reality than the vector electric field** that appears in Heaviside's (simplified) version of Maxwell's equations - so in line with that a potential is a scalar field a term perfectly suited to the term "ether" !

In view of this, Tesla's scalar waves as longitudinal wave of potentials make full scientific sense!

Scalar field

In mathematics and physics, a scalar field associates a scalar value to every point in a space so a scalar field has only intensity and no direction as vector field such as temperature or pressure, where intensity of the field is/can be represented by different colors.

"Scalar waves" are just another name for the "Longitudinal waves" (require ponderable medium), that is for the waves which, in contrast to the 'transverse -vectorial" waves, oscillate in the direction of theirs propagation. An example of this kind of waves, is sound where air molecules vibrate in the direction of waves propagation.

The same kind of vibration as sound wave, but of an "electric" medium, is the Electrodynamics Longitudinal wave, or Scalar Wave. These, depending on the propagating medium, its geometry and structure, due to affirmative / destructive interference mechanisms action a Standing (or slowly moving) waves can be created. The "Stationary waves"or ""Standing waves" was energy form noticed by Nikola Tesla on July 4, 1900 in Colorado Springs, which were his greatest inspiration for future work ...

"Standing waves" are the basic constituent elements of the scalar field which, when they are manifested in the vortex shape, form a torsional field or torsion wave.

"Torsion waves" are Longitudinal Electrodynamic vibrations with circular or elliptical polarization of field, that rotate (clockwise or counterclockwise) at a constant or changeable rate and intensity (static or dynamic torsion field) .
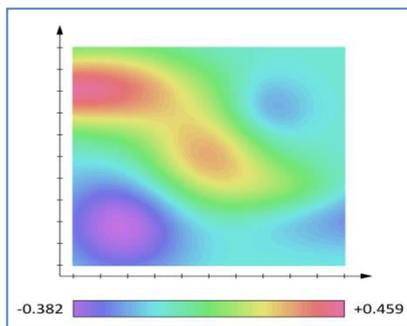
Torsion field also called axion field, spin field, spinor field, and microlepton field is a scientific concept loosely based on Einstein-Cartan theory and some unorthodox solutions of Maxwell'sequations.

The torsion field concept was developed in the Soviet Union by a group of great physicists in the 1980s. The group, led by Dr Anatoly Akimov and Dr Gennady Shipov, began the research as the state-sponsored Center for Nontraditional Technologies.

Torsion fields also have the important characteristic of being affected by the specific topology/geometry of macroscopic objects and biological fields.

Torsion field emanations can travel at velocities at least as high as 10^9 times the speed of light. They can interact with laser beams (change frequency); affect biological processes; are generated by melting or solidifying some materials; affect quartz crystals; affect some electronic components; can favorably change some beverages; and have been noted to affect gravity. They are 10^{-70} times weaker than electromagnetic interaction ... but they shape the world at all levels ...
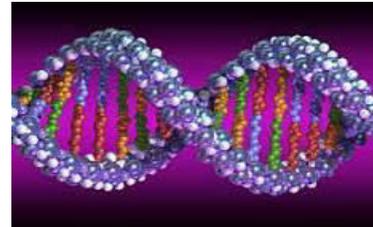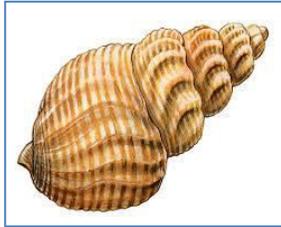
The latest discovery by Hungarian physicists - the unusual particle X17 - is another confirmation of the validity of Tesla's far-sighted insights.

Recent **Hungarian Nuclear Research Institute** experiments in 0ctober 23, 2019 have detected the **"X17 particle"** that could be the **force carrier** for a postulated **fifth fundamental force,** possibly **connected with dark matter.** This particle has been described as a protophobic X boson with a mass near 17 MeV (~30 e) and has been proposed to explain wide angles observed in the trajectory paths of particles produced during a nuclear transition of beryllium-8 atoms and in stable helium atoms. But - its existence cannot be explained on the basis of the existing four interactions: Electromagnetic, weak, strong and gravitational so science is forced to call on the fifth force for help. That **"fifth fundamental force"** in nature postulated as an explanation of the observation of an accelerating rate of expansion of the universe, named **quintessence,** is a hypothetical form of dark energy, scalar field, whose force carrier is the X17 particle, indicates indicates a direct correlation between quintessence - a hypothetical form of dark energy, a scalar field, with Nikola Tesla's scalar waves !

As confirmation of the possible feasibility of Tesla's ideas, we also cite
US Patent No 5845220, 01.10.1998; Harold E. Puthoff – **Communication method and apparatus with signals that consist of scalar and vector potentials without electromagnetic fields**
Abstract: Information that changes as a function of time is communicated from a transmitting site to a receiving site by transmitting a signal comprising scalar and vector potentials without including any electromagnetic field. The potentials vary as a function of time in accordance with the information.
Type: Grant
Assignee: EarthTech International, Inc.

… seems that INSTANT INTERGALACTIC COMMUNICATION is achievable …

A significant document that also affirms scalar phenomenology
"The Bohm-Aharonov Effect, Scalar Interferometry and Soviet Weaponization", T.E.Bearden, April 24, 1984.
(Approved For Release 2003/09/09 : CIA-RDP96-00788R001900680014-4)[5]

Conclusion: … the new scalar electromagnetics is a reality, as evidenced by the Bohm-Aharonov work (1959)[6] and its direct experimental proof by Robert G. Chambers (1960)[7].
From Aharonov and Bohm's groundbreaking paper, it became crystal clear that potentials are real entities, and they can directly affect and control charged particle systems even in a region in which there is neither an electric nor a magnetic field !.
... This showed and proved that potentials - a scalar phenomenon - are more fundamental than fields (a vector quantity) and are currently the most fundamental phenomenon of scientific reality.
... Pure potential stress waves - scalar waves - without ever creating external electric and magnetic fields – are properly represented as longitudinal waves rather than transverse waves. Thus they are NonHertzian in nature. Among other things, **they may be used to generate/destroy mass and inertial field directly** … but that is beyond the scope of this paper.
Some Characteristics of a Scalar Wave Beam:
... **Such a beam is totally undetectable** by a normal E~H detector
... **may extract electromagnetic energy from a distance target or region, as well as produce energy at a distance;**
... **There is no square-law loss**;
... Relativistic effects such as a change in the rate of flow of time, in the inertia of an object, and in the mass of an object can also be obtained, at least in theory.
... The speed of light in vacuuo can also be changed, and there is already experimental evidence of this effect.[8]
… **the energy extracted or produced is not transported through space as normal electromagnetic energy, but as pure scalar potential**.
... That **POTENTIAL**, which is simply massless charge, **can directly affect a distant system** and can even do that **instantaneously**.[9]
… **can also be used to accomplish weather and climate control on a worldwide scale, as well as to cause earthquakes.**

[5] https://www.cia.gov/readingroom/docs/CIA-RDP96-00788R001900680014-4.pdf:

[6] *Aharonov, Y; Bohm, 1959, "Significance of electromagnetic potentials in quantum theory". Physical Review* 115.

[7] R.G. Chambers, 1960, *"Shift of an Electron Interference Pattern by Enclosed Magnetic Flux"*, Phys. Rev. Lett. 5

[8] B.N. Belyaev, "On Random Fluctuations of the Velocity of light in Vacuum", Fizika, No.11, Nov.1980, pp.37-42.

[9] John David Jackson, "Classical Electrodynamics", Second Edition, Wiley, New York, 1975, p. 223.

Maesurings in G.Marjanovic laboratory for Tesla technologies
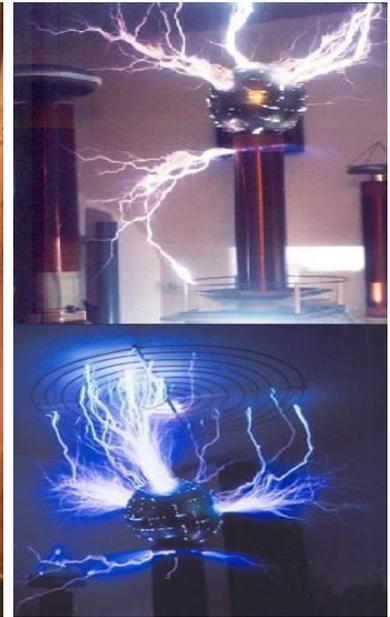
Tesla Transformer - conventional version

Magnifying Transmitter
"... preferable when high E.M.F. is desired"

The left image shows the classic version where energy transfer occurs inductively. The frequency spectrum (FFT) image clearly shows a "frequency split" proportional to the coupling strength.

The right picture shows an experimental setup in the "Magnifying Transmitter" version where the connection of the "Extra Coil" with the "oscillator" primary-secondary is galvanic. The frequency spectrum (FFT) image clea rly shows a signal that is significantly different from the classic version.

The difference in the structure of the energy fields generated by the classic setup of Tesla's HF/HV transformer (left) and the "Magnifying Transmitter" version (right) is clearly visible in Polycontrast interference photography, patented by Dr. Harry Oldfield, recorded by Dr. Ljubo Ristovski with original H. Oldefield system:

After a detailed analysis of Dr. Lj. Ristovski's images, Dr. Harry Oldfield, the inventor of polycontrast interference photography, sent his comment /quote/:

"**This coil definitely create a standing wave, possibly scalar in nature, and is columnate a flare of energy, green in colour,** which is often associated with healing radiation in connection with balance and well-being". ...

Ancien knowledge: Analogies - Harmony and Coherence

The indisputable fact that experimental reality surpasses contemporary theories in many ways can be overcome by a synthesis of modern science and ancient knowledge which - according to my research - surpasses current scientific knowledge.

Hermes Trismegistus, "the thrice greatest Hermes"; the author of the Hermetic Corpus, a series of sacred texts that are the basis of Hermeticism, known for his famous sentence: "as above, so below, as without, so within. Hermes Trismegistus, "thrice-greatest Hermes"; author of the Hermetic Corpus, a series of sacred texts that are the basis of Hermeticism, known for his famous sentence: "as above, so below, as without, so within". He left a series of deeply intellectual messages whose understanding requires enormous esoteric knowledge.

The Emerald Tablet, also known as the Smaragdine Tablet is a compact and cryptic piece of the Hermetica reputed to contain the secret of the prima materia and its transmutation. The texts discuss the divine, the cosmos, mind, and nature. Some touch upon alchemy, astrology, and related concepts.

According to Vedic grammarian Pingala in his Art of Prosody (400-200 BC), Mount Meru was actually a symbol for the **Fibonacci series** converging to the **golden ratio**. Meru was seen as a pyramidal cadence of numbers reaching toward a central axis of gold.

Mount Meru — Egyptian Triangle and Pyramid

Fibonacci Series — Cadence toward the Golden Ratio

π in ancient writings - Our ancestor Sage Aryabhatta gave the factor to the approximation of 3.1416 centuries back. Let us look at what he said about this equation and how it is understood now.

chaturadhikam śatamaśṭaguṇam dvāśaśṭistathā sahasrāṇām
Ayutadvayaviśkambhasyāsanno vrîttapariṇahaḥ.

చతురధికం శతమష్టగుణం ద్వాషష్టిస్తథా సహస్రాణాం
అయుతద్వయవిష్కంభస్యాసస్స్నో వృత్తపరిణాహః

Translation: **"**Add four to 100, multiply it by eight and then add 62,000. By this rule the circumference of a circle of diameter 20,000 can be approached." $((100+4)*8+62000)/20000 = 3.1416$)

However, I found the deepest insights into the structure of absolute reality in the book "Secret of Sankhya - Acme Of Scientific Unification" by Gopala Srinivasan, transliterated from "The Sankhya Karika" by Ishvara Krishna.

The **Samkhyakarika** (Sanskrit: सांख्यकारिका, *Sāṁkhyakārikā*) is the earliest surviving text of the Samkhya school of Indian philosophy. It is atributed to Ishvara Krishna (350 CE), a succesor of the disciplines from the great sage Kapila, consist of 72 slokas written in the Arya metre.

- Sankhya is one of the philosophical trends of ancient India based on the Vedas, whose age is estimated at about 33 000 years ago. It was transmitted orally until the emergence of Sanskrit (~ 3500 years ago) when It was written in Sanskrit.
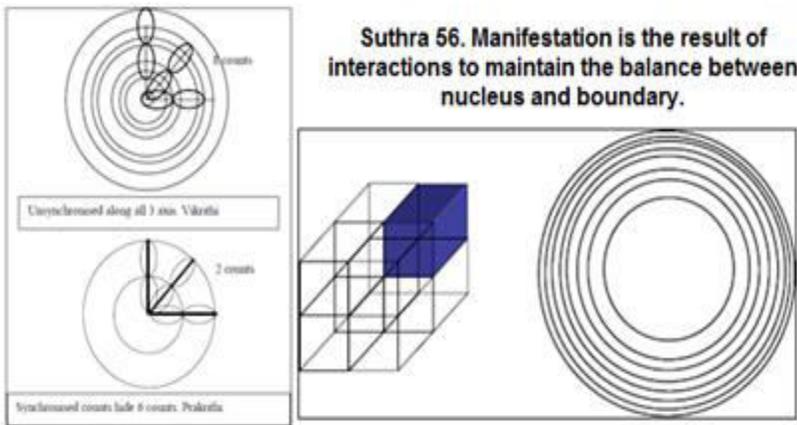
- In Sankhya, all values are calculated from axiomatic variations of the number two and this principle was developed over 12,000 years ago as the concept of the ingenious Maharishi Kapilla, the true Indian intellectual colossus.

- Sankhia **is the unified field theory based on eternal, harmonious, oscillatory state** (Eternal Harmonic Oscillator) **that makes a dynamic basis for all events, manifested and non-manifested phenomena.**

- When in a coherent system of two or more related parameters are changing at the same time then only one ratio should characterize all operating modes. - Such a variable should be a scale invariant, self-similar and must have axiomatic relationship to the whole.

- Kapilla showed that the act of expansion, compression and resonance must all be defined by one ratio, and be expressed by a single variable that describes the proportionality of three types of forces acting simultaneously. His mathematical analysis provides a uniquely solution: the proportion must have the value of the golden mean (golden section).

All phenomena of Reality are explained in Sankhya by **volumetric vibrations** of the primordial substrate and by the modification of three-dimensional stationary waves - **Spatial standing waves -** and their alignment along the axes.

Suthra 56. Manifestation is the result of interactions to maintain the balance between nucleus and boundary.

... The **volumetric expansion** (or contraction) caused **by the radius doubling** (or division in half ...) **is 8** (2^3) whereas an **increase of surface area is 4** (2^2). So, spatial (3D) density change is 8 - but change of the surface flux density is only 4 and **difference creates inequality that initiate an accelerated changes**.

… Here the vibrations or **oscillations take place in the breathing mode** and **only the stresses transmigrate as internal phase changes** hence C^2 is hidden as superposed counts. ...

... It can be visualised as twisting and untwisting type of oscillatory interactions ...

It is more than interesting that Nikola Tesla also gave completely analogous explanations of the structural mechanism of the phenomenon of light.

Tesla's well-documented statement: „Tesla Sees Evidence Radio and Light Are Sound", New York Times, Sec. X, P. 9, c. 1, April 8, 1934:

"I consider this extremely important, said Mr. Tesla. "Light cannot be anything else but a longitudinal disturbance in the ether, involving **alternate compressions and rarefactions**. In other words, liqht can be nothing else than a sound wave in the ether ...".
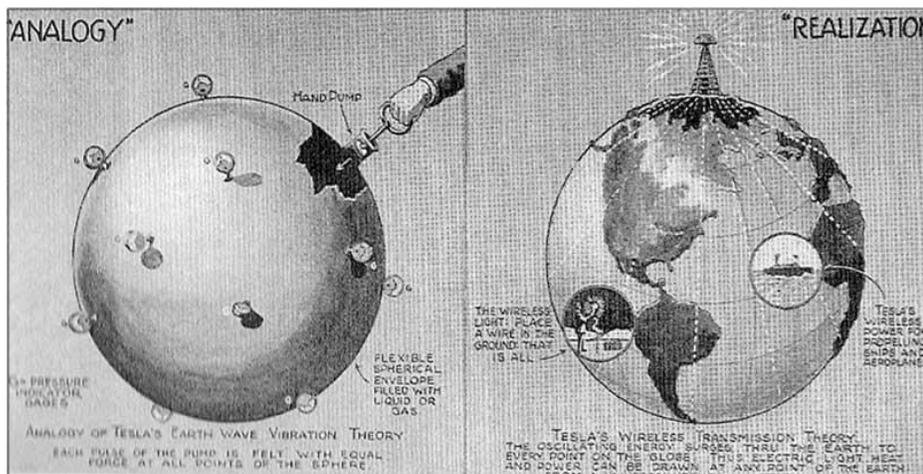
Tesla explains the principle of operation of his World Radio Station, the Wardencliffe Tower, with a mechanical analogy where pressure on the pump piston causes an instantaneous, simultaneous deflection of all manometers across the globe...

The truly fascinating agreement between Tesla's insights into the structure of Absolute Reality and Vedic interpretations is clearly seen from the contents of the first and thirteenth sutras of Sankhya, which describe the Holistic 3D or "Volumetric standing wave", and Tesla's descriptions of the mechanism of origin and functioning of ball lightning that occasionally appeared in the laboratory.

"Secret Of Sankhya: Acme Of Scientific Unification"., G. Srinivasan, Suthra 1 & 13:

(Suthra 1) "… It is similar to a linear harmonic standing wave but in a 3 dimensional substratum. It is a cubical or spherical 3 dimensional harmonic wave functioning in an internal breathing mode where only the logarithmic index of the potential, changes or flips one up or one down to maintain a null difference between any adjacent state, periodically. …"

(Suthra 13) "… The concentration of forces at a colliding point forming the crest of a holistic 3 dimensional or volumetric wave in the nuclear region with the qualities of inertia or mass being displayed in each cycle along with the associated quality of thaama or strong force. At the trough of such a wave the equalising quality of sathwa or the orbital balancing electromagnetic force exists in each cycle. Both Thaama (compression) and Sathwa (expansion) have the quality of time permanence in each cycle as these form the turning points or nodes of the cycle …"

Nikola Tesla, Colorado Springs Notes, 1899-1900, Nolit, Beograd, 978, p.368-372.

"... When sudden and very powerful discharges pass through the air, the tremendous expansion of some portions of the latter and subsequent rapid cooling and condensation gives rise to the creation of partial vacua in the places of greatest development of heat. These vacuous spaces, owing to the properties of the gas, are most likely to assume the shape of hollow spheres when, upon cooling, the air from all around rushes in to fill the "cavity" created by the explosive dilatation and subsequent contraction. …"

"... It is therefore reasonable to expect that, despite the high incandescence of the rarefied air, the space filled with the same will continue to contract … On the contrary, despite the high temperature, it is compelled to confinement in a limited space which is continuously shrinking instead of expanding. … it is that the phenomenon of the "ball".

Larger number of interactive components (sequential) or relatively higher intensity of action (simultaneously) as a single unit. will always strive to value of e = 2.718.

$$e = \left[\left(\frac{N}{N-1}\right)^{N-1}\right] = \left(1 + \frac{1}{N-1}\right)^{N-1} = 2.7182818285$$

Speed of light:

$$c = 10^{\frac{1}{\varphi - 1/2}} = 10^{8.47214} = 296\ 575\ 966$$

The ratio of e/π represents Thaamasic coherent state of simultaneity, where all interactions act as one unit.

$\pi = 3.1415926536$ $RS = 1.0204081633$

$e = 2.7182818285$

$$\frac{\pi}{e} \times \frac{10}{RS} \times \frac{10}{7} = 1$$

$x = 0.6180339887$

The gravitational constant $: G = 2 / (c^{\varphi})^2 = 6.75 * 10^{-11}$

The simplicity of the process and the logic with which Sankhya explains all the phenomena of Reality is truly fascinating. With simple theoretical considerations but with correct logic, it defines all the parameters thousands of years before official science - the base of the natural logarithm, the number pi, the golden ratio, Planck's constant ... It determines the speed of light based on the golden ratio and then the gravitational constant via the speed of light and the golden ratio ... the mass and diameter of the universe, ..., the mass and diameter of all nuclear particles ...

Stable Mass particles compared to Planck's constant as energy value.					
	Sankhya Mass Count	Physics kgs	Sankhya kgs	Sankhya GEV	Physics (name)
Purusha	10e+50	None	0.9149 kgs	5.133e+26 GEV	None
Prakriti Mahat	50-8 =10e+42	2.177e-8 kgs	2.203e-8 kgs	1.236e+19 GEV	Planckmass
Prakriti Sapta	50-25=10e+25	1.672e-27 kgs	1.675e-27 kgs	0.93927 GEV	Proton
Vikriti Mahat	50-28=10e+22	9.109e-31 kgs	9.11 e-31 kgs	0.511 MEV	Electron
Vikriti Spectra	2π 10e+17	6.626e-34 (Joules/sec)	6.7e-34 counts/sec)	53.45 EV x 7 (7 neutrinos)	Planksconstant. As energy unit.
Vikriti Sapta	50-33=10e+17	None	9.53e-35 kgs	53.45 EV	Neutrino
Moolaprakriti	1 count	None	1.344e-51 kgs	7.543 e-16 EV	None

Comparison of axiomatic Sankhya and Einstein's cosmic concepts.		
Observations in Universe	Sankhya-derived	Einstein -Estimated
Radius Maximum	19.26 B. L. Y always	18.84 B. L. Y
Time cycle	30.64 B. Y always	29.76 B. Y
Radius Today	12.8 B. L. Y always	13.19 B. L. Y
Hubble expansion rate (conceptual error)	6.283e+17 Change in Entropy of space	Megaparsec / 49000 = 6.23e+17
Critical Closure Density	3.63e-25 kgs/m³ always	1.48e-26 kgs/m³
Expanded Envelope	1.5e78 m³ always	3.83e+79 m³
Mass of Universe	7.8e +52 kgs.	5.68e+53 kgs
Radius of Universe	5.99e +25m	1.236e +26m

Acc. To Sankhya: "… All manifested phenomena, from the the omnipresent gravity and onwards, appear only due to changes in the oscillatory holographic condition rate - trying to restore its equilibrium, axiomatic cyclical transmigration of stresses (preasure, voltage, potential, ...) position by changing a state from a larger to a smaller number of counts …

One of today's biggest problems is energy, and the most controversial solution is related to vacuum energy, or "zero point energy".

Vacuum energy is a special case of zero-point energy that relates to the quantum vacuum is an underlying background energy that exists in space throughout the entire Universe. ... Using the upper limit of the cosmological constant, the **vacuum energy of free space has been estimated to be 10^{-9} J/m^3** (10^{-2} ergs), or ~5 GeV.

However, quantum electrodynamics, based on consistency with the principle of Lorentz covariance and with the magnitude of the Planck constant **suggests a much larger value of 10^{*113} J/m^3.** This huge discrepancy is known as the cosmological constant problem or, colloquially, **the "vacuum catastrophe"**.

However – the ancient knowledge of Sankhya says that zero-point energy is still available.

SUTRA 37.

37. Extraction of potential energy from the Purusha domain.

सर्वं प्रत्यपभोग यस्मात् पुरुषस्य साधयति बुद्धिः |

सैव च विशिन् इष्टि पुनः प्रधान पुरुषान्तरं सूक्ष्मं || ३७ ||

सर्वं	प्रत्यप	भोग	यस्मात्	पुरुषस्य	साधयति	बुद्धिः
sarvam	pratyapa	bhoga	yasmāt	purushasya	sādhayati	buddhih
Comprehensive	extraordinary	extract	in this way	Purushapotential	attainable	coherent potential

सैव	च	विशिन्	इष्टि	पुनः	प्रधान	पुरुषान्तरं	सूक्ष्मं
saiva	ca	viśin	ishti	punah	pradhān	purushāntaram	sūkshamam
With exact	and	precise	trigger input	repeated	primary interactions	Inside the Purusha	minute

Meaning:

The potential of the Purusha can be attained from the minute coherent state hidden inside the Purusha **by repeated precisely triggered inputs** to initiate the primary interactions.

Notes:

This theorem is an extraordinary derivation that *describes the process of extracting energy from space* by triggering input of energy to create primary or large scale interactions that would yield a large amount of energy that could be used. It is a process that is similar to nuclear fission but this is applies to unrestrained space.

The Rigveda first sloka contains this theorem with 26 digit numerical proof.

Ratnadhatam, gift of the highest order, Free energy

"By triggering the expansive qualities of the fundamental substratum abundant free energy can be obtained".

The 26 digit number value decoded from the original Sanskrit code (Ag ni mi le pu ro hi th'm ya jna ...) is: 35 531 286 185 184 564 886 226 965). It represents the numerical value of the volumetric rate of interactive stresses radiated as light in cubic yards per unit time of one cycle. The numbers are given below based on rules of pronunciation and emphasis:

Ag	ni	mi	le	pu	ro	hi	th'm	ya	jna	as	ya	dhe	va	mri	th	va	j'm	ho	tha	ram	ra	thna	dha	th	ma'm
3	5	5	3	1	2	8	6	1	8	5	1	8	4	5	6	4	8	8	6	2	2	6	9	6	5

The radial value (volumetric rate) in metres (1 yard =0.9144 meters) is:

$(3553128618518456488622 6965)^{1/3}$ x 0.9144 = **3.00621248 x 10⁸** metres/cycle.

GM: this **VALUE of stress transmigration –> theoretic value of Maxwell constant**

Definition of the theoretical value of stress transmigration in the terminology of Sankhya, in my opinion, represents a full analogy of the real theoretical value of Maxwell's constant, which is an extremely valid confirmation of the value I came to in my analysis far back in 1993[10].

Namely, science, having measured the speed of light, made a procedural error and equated the measured value of the speed of photon movement or light propagation c with Maxwell's constant β and then calculated the

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value of the dielectric constant ε_o from that equality and based on that value corrected the value of the constant K in Coulomb's law - which is extremely illogical and incorrect because Coulomb's law applies exclusively to stationary charges.

CONTEMPORARY INTERPRETATION OF MAXWELL'S CONSTANT

Regarding adopted "Measuring system of units" $\mu_0 = 4\,\pi * 10^{-7}$ [Henry/meter]

Now, in modern version, Maxwell‚s constant is completely and absolutely equaled with the measured light speed velocity:

$\Rightarrow$ $\beta = c = $ sqrt $1/(\mu_0 * \varepsilon_0) = $ **299 792 458** [meter/sec.]

$\varepsilon_0 = 1 / (\mu_0 * c^2)$, $\Rightarrow$ $\varepsilon_0 = 1/(\mu_0 * c^2) = 8.854171 * 10^{-12}$ [farad/meter],

$K = 1/(4\pi * \varepsilon_0) = 8.987569 * 10^9$ [Nm²/ Coulomb²]. $\Leftarrow$ Absolutely ILLOGICAL

Given this, I did what the logic and meaning of the constant defined by Maxwell himself imposes. His constant β represents the theoretical value of the propagation speed of EM waves in a "medium" characterized by the parameters of magnetic permeability μ_0 and electric permittivity ε_0. The value of magnetic permeability μ_0 derives directly from the adopted measurement system of units and the value of electric permittivity ε_0 from the original value of Coulomb's constant K as is originally defined.

ORIGINAL VALUE OF MAXWELL'S CONSTANT

Regarding adopted "Measuring system of units" $\mu_0 = 4\,\pi * 10^{-7}$ [Henry/meter]
Acc. to the Coulomb's law definition, Coulomb const is: $K = 9 * 10^9$ [Nm²/ Coulomb²]
and the electric permitivity has a value:

$\varepsilon_0 = 1/(4\pi * K)$, $\Rightarrow$ $\varepsilon_0 = 1/36\pi * 10^9 = 8.841941 * 10^{-12}$ [Coulomb/Volt*m].

So, in accordance with the original interpretation, Maxwell's constant had a value:

$\Rightarrow$ $\beta = $ sqrt $1/(\mu_0 * \varepsilon_0) = $ sqrt $(36\pi * 10^9 / 4\pi * 10^{-7}) = $ **300 000 000** [meter/sec.]

From the relations of quantities thus established, **the value of Maxwell's constant is obtained, become identical to the definition in the first sloka of the Rigveda**, which has a meaning completely analogous to the meaning of the original Maxwell definition of the coefficient b - as the theoretical value of the maximum possible propagation speed of EM phenomena in vacuum. This value is quantitatively slightly greater than the measured value of the speed of light, but the qualitative difference is enormous[11].
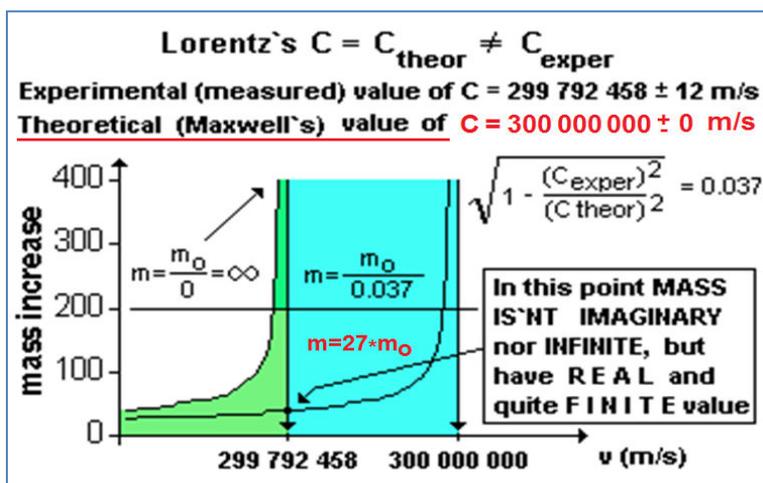
For values defined in this way, the Lorentz transformation for the actually measured photon propagation speed of 299792458+-12 m/s gives a value for **the photon mass** that **is only 27 times greater than its rest mass!**

So **the mass of a photon does not have to be imaginary**, as science is now forced to claim due to its inconsistency. Following logic and respecting ancient Vedic knowledge, the mass of a photon is not imaginary **nor does it have an infinite value**, although its speed of movement is equal to the speed of propagation of light in a vacuum, **but rather it has a completely real and finite value, which means that the energies of its particle**
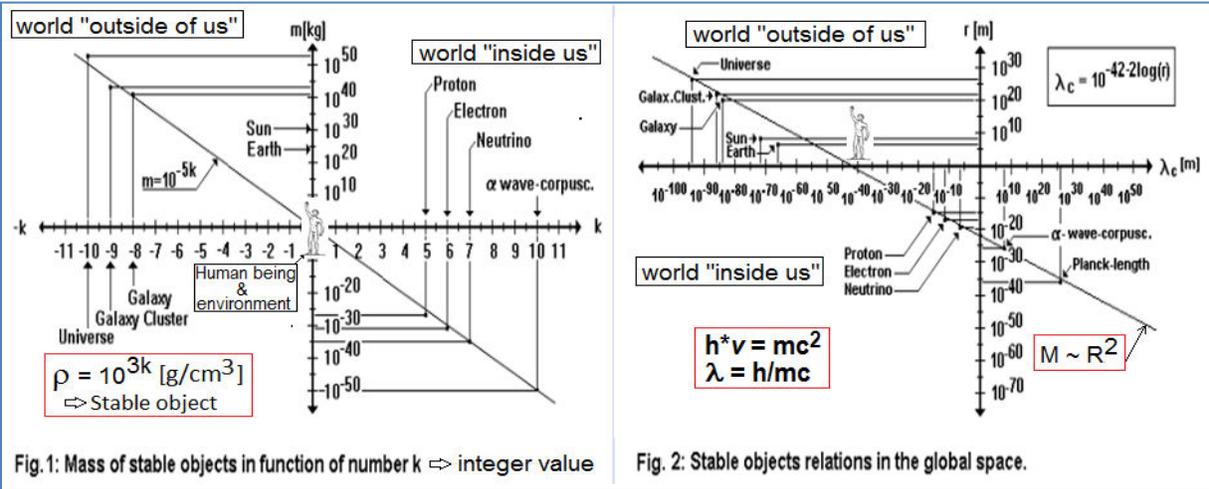
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[11] "Speed of light and Maxwell's constant", http://users.beotel.net/gmarjanovic/G_Rel_Relativnost.pdf

and wave manifestations are identical: h*n = mc2 , which can be generalized for all wave-particle phenomena.

This fact was confirmed long ago by the Compton effect, for example, but it was interpreted in the complicated terminology of quantum physics. Now everything becomes much simpler, more logical and understandable.

These insights have enabled me to treat the phenomena of the macro and micro segments of Reality regardless of whether they are of a wave or particle nature.

In my considerations on **the possible connection between the "part of Reality" "outside us", the world in which we live and the "part of Reality" "inside us" which would be expressed by some common rule or law which would indicate an identical structural matrix of existence, I came to the idea that it could be energy density.** The fact that wave-particle forms of existence can be treated quite equally from an energetic aspect allowed me to calculate energy densities for a number of phenomena from the macro and micro structure of Reality.

Fig. 1: Mass of stable objects in function of number k ⇨ integer value

Fig. 2: Stable objects relations in the global space.

P1: The stable objects density is defined as: $p_k = 10^{3k}$
P2: The stable objects mass is approximately equal to the square of its radius: $m \sim r^2$.
P3: The theoretical value of the highest possible speed in nature has the value of the original Maxwell's constant (=> photon mass can have real and finite value...).

Diagrams of the arrangement of several macro and micro phenomena in relation to their mass (picture on the left) and/or energy-volume (picture on the right) have shown an exceptional regularity and a clearly expressed law - that mass (energy) and the part of space (volume) it fills are ALWAYS in a clearly defined relationship where the mass is approximately proportional to the square of the diameter of the part of space it fills (for the first level of quantization). In this case, mass and diameter are fictitious categories for wave phenomena, such as frequency and wavelength for particle phenomena. In addition, for both forms of existence, their "quantization" is clearly expressed by the number k, where $\rho_k = 10^{3k}$, (ρ_k energy density for quantum level k) which indicates a kind of "resonance" of the space-time-matter structure and an absolutely identical matrix of evolution and involution. The observed laws are formulated in the "Energy Density Quantization Model".[12]

With further analysis, the Energy - Space diagram (picture below) was filled with a larger number of phenomena based on valid information from the Institute of Physics, the Faculty of Science and Mathematics and the Observatory. All initial assumptions were confirmed, which enabled further analysis of the structure of "Absolute Reality". Symmetry is certainly one of the basic properties of "God's creation" and the diagram clearly shows that macrostructure objects are arranged in the second quadrant, microstructure objects in the third, with the last detectable phenomenon of the material world - the photon. All "subtler" phenomena such as quarks are hypothetical objects currently inaccessible to experimental physics.

It is clearly visible from the diagram that the fourth quadrant belongs to phenomena of extremely small dimensions, long wavelengths - and, amazingly, to phenomena of ever-increasing energy density...

Long wavelengths, or very low frequencies, are characteristic of the so-called "Schumann spectrum" but also of the brain waves (Alpha, beta, gamma...) that characterize human thought - which indicated the possibility that the fourth quadrant belongs to the spiritual aspect of Reality.

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[12] "Energy Density Quantization model", http://users.beotel.net/~gmarjanovic/

Since science is currently unable to explain this "sub-photon" aspect of Absolute Reality, I have sought possible explanations and descriptions of that "Hyperspace Area" in ancient and esoteric-theosophical writings.[13]
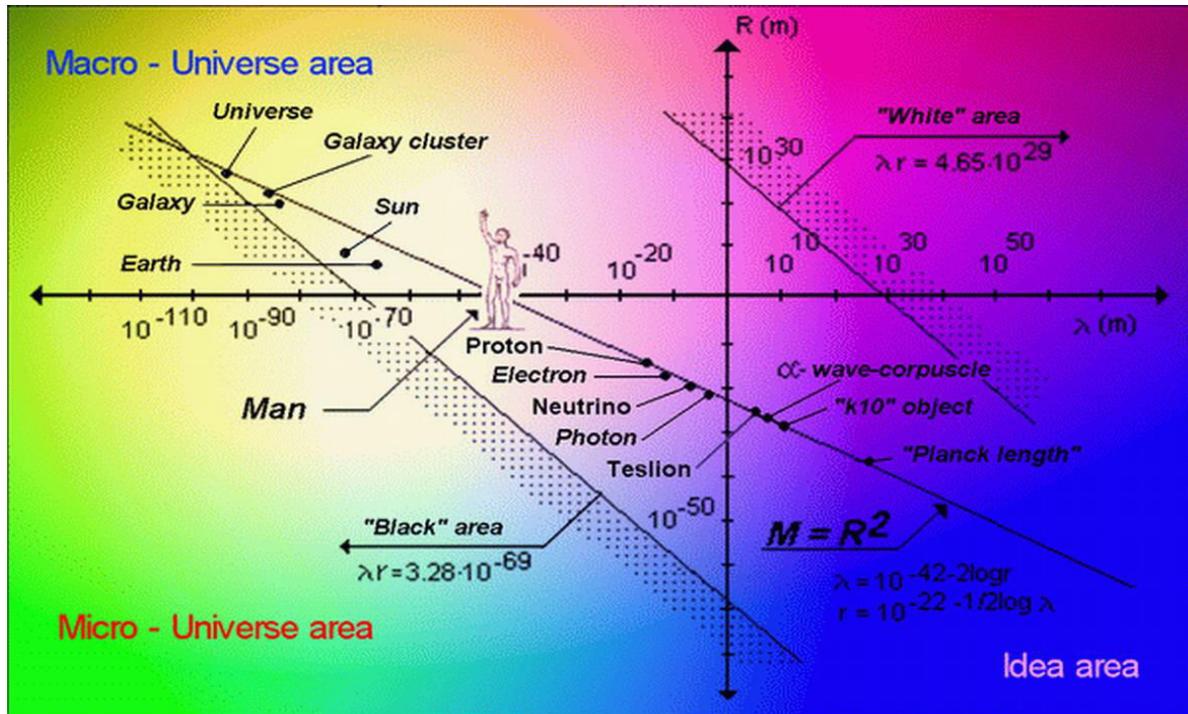

The fact that the descriptions of various sources (Theosophy of H.P. Blavatsky, Upanishad Cosmogony, Christian (Daskalos) Cosmogony) were meaningfully and structurally almost identical, although different terminology was used - enabled a very detailed and clear insight into individual segments (Planes /H.P.B./, Lokas /Upanishad/, Heavens /Daskalos/) of that extremely subtle world. By "mapping" them in EDQM, we gained the possibility of describing those spiritual phenomena that actually belong to different levels of consciousness (basically energy density) with the same parameters with which modern physics describes the material segment of reality.
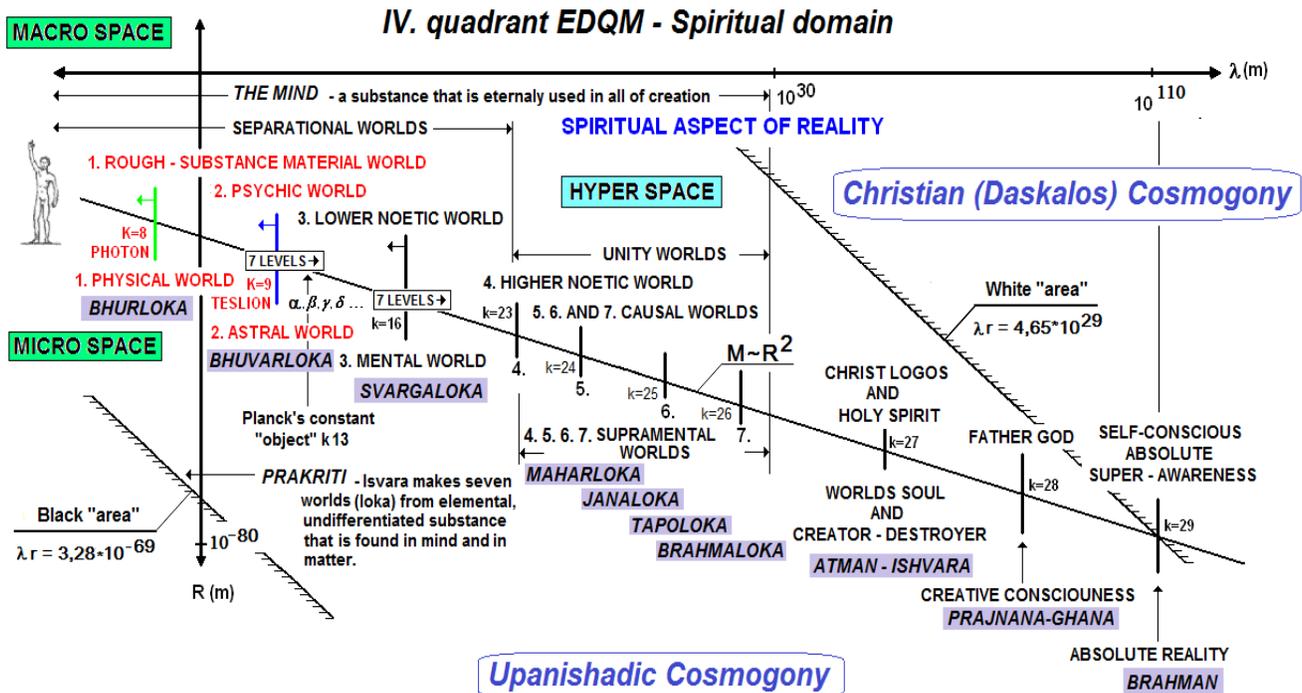
[13] - P.Vujičin, "States of consciousness in esoteric practice", D.Raković and Dj.Koruga, eds., Consciousness: Scientific Challenge of 21st Century (ECPD, Belgrade, 1995), pp. 89-136.
- Secret Of Sankhya: Acme Of Scientific Unification, G. Shrinivansan, https://www.ivantic.info/Moje_knjige/

Of course - all these parameters are virtual-fictitious, but they still - at least to some extent - clarify their "position" in relation to us and our world.
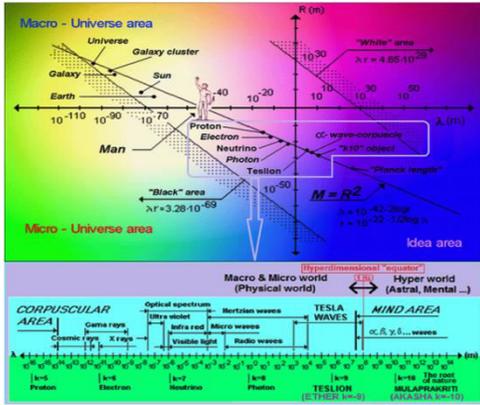
The segment of that "Hyper-Reality" that is "closest" to us and therefore the most interesting is the part "below" the photon and the domain of classical EM (Hertzian) waves, whose photon is the quantum carrier and which physically corresponds to the domain of brain waves and gradually transitions into more subtle thought-spiritual forms.

It is segment of extremely low frequencies "below" conventional EM waves and "above" the domain of brain waves - that I could not connect to any phenomenon from the world of science for a long time until I came across Nikola Tesla's patent (Canadian Patent 142352) in which he says that he does not use "Hertz waves" in his work... According to the EDQM, this meant that he did not use the phenomenology of quantum level k+8 (photon) and "lower" levels (k<8).

On the enlarged part of the energy space diagram belonging to that segment (pic. below), it is clearly visible the correlation of the corresponding corpuscular phenomena and ("energetically") corresponding parts of the EM spectrum. For the part of the EM spectrum "below" ~30 kHz and "above" ~1 Hz for which I could not find an adequate scientific description for many years - a very precise interpretation was given by Nikola Tesla. In his patent: Canadian patent 142352 – "Art of Transmitting Electrical Energy Through the Natural Medims", Nikola Tesla clearly states that he does not use Heretz waves in his work (Magnifying Transmitter, Wardenclyffe Tower etc) and that he recommends frequencies from 6 Hz to 20,000 Hz for work - which in EDQM exactly corresponds to the phenomenon at the quantum level k+9. This was the reason why I called the "corpuscular" manifestation of that object "Teslion" and its "waveform" "Tesla Waves".
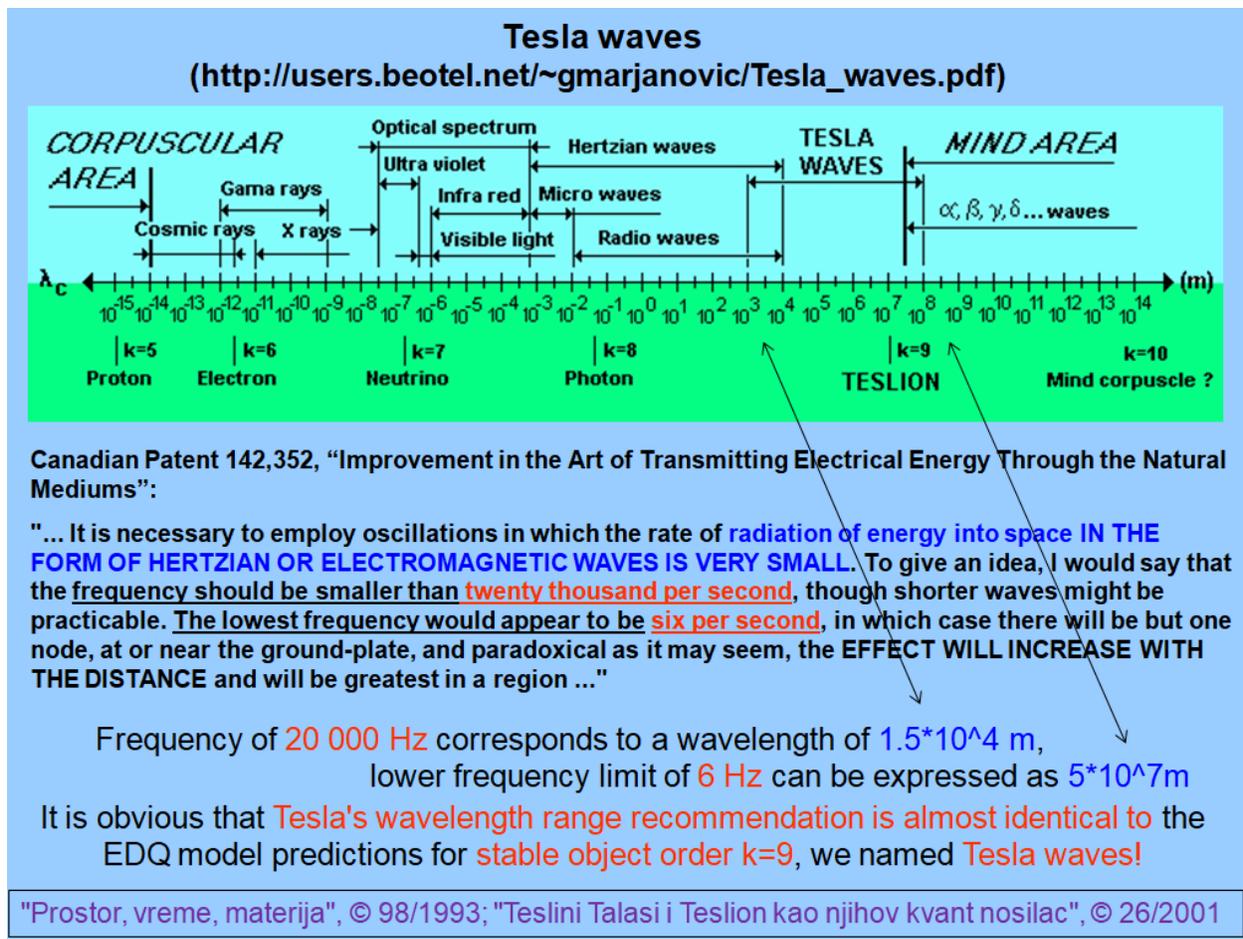

According to the EDQM settings, all the corresponding physical parameters of the "Stable object k+9" have been determined. In the same way, it is possible to define all the corresponding (real or virtual) parameters of these objects for the corresponding quantum levels: $m \sim 10^{-5.2\,k}$; $r \sim m^{0.52}$; $\lambda \sim h/mc$; $f=c/\lambda$ (m – mass, real or E/c^2; k - quantization level; r – radius real or fictious; h – planck constant; λ – wavelength; f - frequency)

Specifically, for illustration purposes, we list the parameters of several phenomena from the material, "transient" and spiritual aspects of Reality:

Foton, k=+8 (Hertz Wave – ether, transverzal)
  $m \sim 2.5 \cdot 10^{-42}$ kg; $r \sim 1.07 \cdot 10^{-21}$ m; $l \sim 8.79 \cdot 10^{-1}$ m; $f \sim 3.41 \cdot 10^{8}$ Hz.

Teslion, k=+9 (Tesla Wave – **ether (k=-9 / Galaxy Cluster)** longitudinal)
  $m \sim 1.6 \cdot 10^{-47}$ kg; $r \sim 1.88 \cdot 10^{-24}$ m; $l \sim 1.39 \cdot 10^{5}$ m; $f \sim 2.15 \cdot 10^{3}$ Hz.

Mulaprakrithi, k=+10 (**akasha** (subtle ether, **k=-10 / Universe**) volumetric)
  $m \sim 10^{-52}$ kg; $r \sim 3.29 \cdot 10^{-27}$ m; $l \sim 2.21 \cdot 10^{10}$ m; $f \sim 9.11 \cdot 10^{-2}$ Hz.

By the same principle, it is possible to determine the corresponding parameters according to the position (corresponding quantum level) of a phenomenon in the Space-Time structure or vice versa - to define the corresponding quantum level based on any physical parameter of a phenomenon regardless of the form and level of its existence of wave, particle or spiritual nature. The analysis of phenomena from the "super-photon" area that are well described in official science and those from the "sub-photon" area described in theosophical/cosmogonic sources is shown graphically in the figure below, where the position, arrangement and hierarchy of the corresponding material-spiritual phenomena are clearly visible:
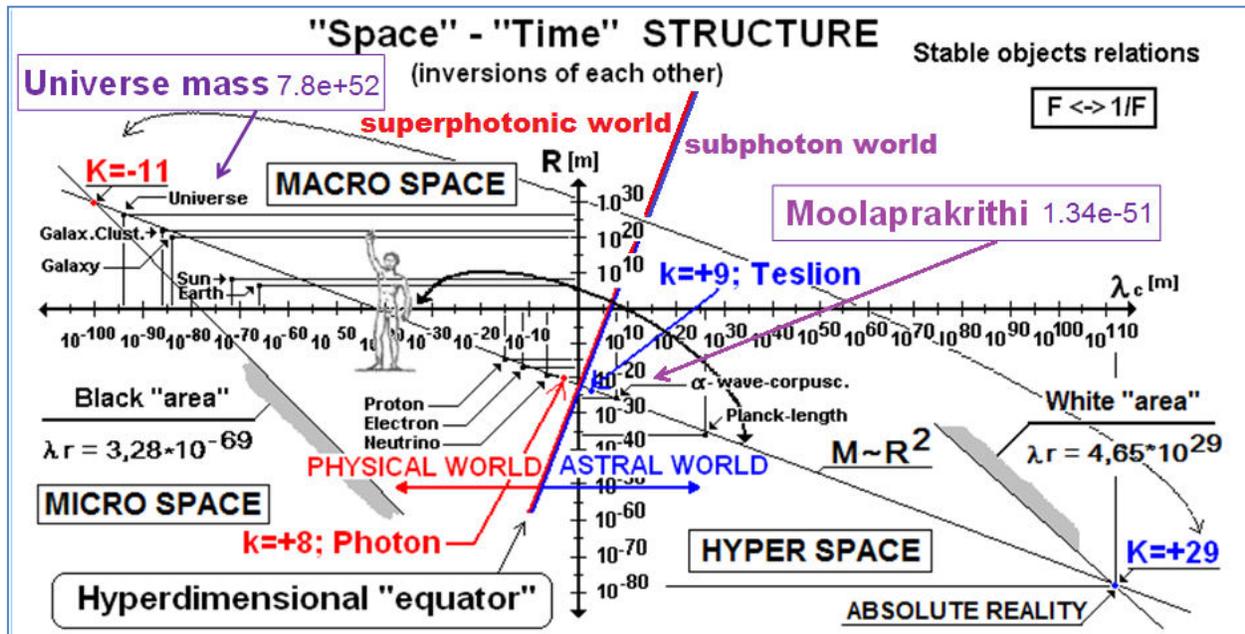
It is more than interesting that "Man" as a physical being is "located" at the quantum level zero in exactly the point of the golden section of the line of growth and development (evolution/involution=breathing of Brahma) and abscissa (energy), in the transitional area from the macro to the micro aspect of Reality, which could mean that the Creator intended for Man a role more significant than any other phenomenon of His creation.

Even more interesting is that the transition area of the material and spiritual aspect that I have named the "Hyperdimensional Equator" - the position where matter and spirit meet and entangle - in energetic terms corresponds to a frequency of 1 Hz - which is the rhythm of the human heartbeat. Amazingly - it is also the position exactly in the middle between the physical body of a person and his soul (Jiva)...
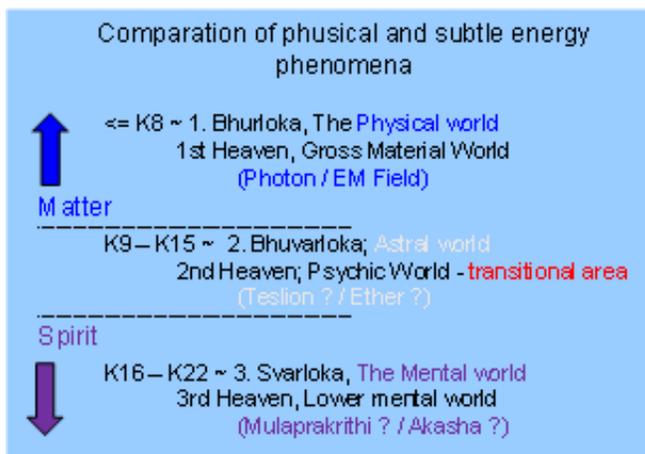
A more detailed analysis from the EDQM aspect shows the corresponding quantum levels in the area of the hyperdimensional equator. The Physical World (Bhurloka - Upanishadic) or the Material World (1st Heaven - Daskalos) begins (ends) from the quantum level k+8 whose corpuscular manifestation is the photon, a quantum of EM interaction. Quantum levels k+9 to k+15 are the Astral World (Bhuvarlaloka - Upanishadic) or the Psychic World (2nd Heaven - Daskalos). This is the transitional area of the physical-spiritual aspect in which the elementary substrate is the ether whose elementary quantum is the Teslion (Etheron, Microlepton ...). The area of quantum levels above k+16, or "higher levels of consciousness" or "energy density" above

10^{48} g/cm^3 is the spiritual area, and quantum levels k+16 to k+22 correspond to the domain of the Mental World (Svarloka – Upanishad) or the Lower Mental World (3rd Heaven – Daskalos) where the elementary substrate is Akasha whose elementary quantum is "Mulaprakrithi".

The phenomena of the Spiritual Domain of Absolute Reality have no corresponding counterparts in modern physics, but based on their description in ancient Vedic scriptures (Secret of Sankhya), H.P. Blavatsky's Theosophy, Upanishadic and Christian cosmogony, they can be assigned corresponding quantum levels that are completely analogous to the level of consciousness in the process of transformation of spirit into matter, or Purusha into Prakriti in the original Upanishadic terminology.

"The Relationship of Light, Ether and Akasha"[14]

The established correlations of scientific and spiritual knowledge allow us to finally form a proper hierarchy of phenomena that elude the possibilities of their interpretation by existing scientific theories, because in practice we find a number of incorrect translations and even equating the concepts of ether and akasha - which are essentially different forms of (primordial) substrate.

Phenomenon k+9 and k-9 definition

Based on Tesla's recommendations (Patent No. 142352) EDQM offers us a phenomenon **Stable object k=+9** named "Teslion" whose mass is 10^{-47} - 10^{-49} kg, radius ~ $5*10^{-25}$ m, energy density of the order of 10^{27} g/cm^3. Its wave form - "Tesla waves" - have Compton wavelength of λ_c =$2*10^7$ [m], i.e. frequency of 14.8 Hz.
Through a mathematical analysis of the density of the ether performed by analogy with the speed of sound waves in air and the ratio of elasticity and density of air and ether as a medium, Nikola Tesla obtained the **theoretical value of the density of the ether**: $r_{eth,Tesla,theor}$ = $1.9*10^{-27}$ g/cm^3. According to the **experimental measurements** of Nikola Tesla, the density of ethereal gaseous medium is: $r_{exp,Tesla}$ = $2*10^{-26}$ g/cm^3 - which is very close to his theoretical prediction and **acc. To EDQM this values correpond to quantum level k-9** that is inverse value of corpuscular form of Stable object k+9.
Specifically, according to EDQM, Tesla's "gaseous medium", whose parameters he calculated and measured are an object k=-9 (acc. to EDQM), whose energy density corresponds to the density of galactic clusters. So we can conclude that (Tesla's) "ETHER FLUID" (k-9) is made up of ELEMENTARY QUANTUMS OF ETHER (k=+9) - "quantum carrier" of Tesla Waves – longitudinal, compressive-expansive disturbances of the etheric fluid (k-9). ☺

> Tesla's recommendations (Can.Patent No. 142352) => k+9 -> elementary quantum
> Tesla's "gaseous medium" (Theoretical/experimental) => k-9 -> Ether fluid

Phenomenon k+10 and k-10 definition

According to the Sankhya teachings the most fundamental phenomenon of our reality is "**Mulaprakrithi**" - the root of the nature or root of the substance.
It is the Precosmic root-substance, main cause of material nature, the original root of matter that makes a initial homogeneous substrate from which the cosmos was created.
Acc. to Vedic axiomatic principles[15], the mass of Mulaprakrithi[16] is 1.3e-51 kg which (acc. to the EDQM postulates) - corresponds to a stable object:

k = (log 1.34e-51)/(-5.2) = +9.78 => **k = +10**

Akasha in Sanskrit arise from the root "kas" which means "to be" with the generic meaning of "open space, emptiness". In the classic Sanskrit, this word may express the concept of "heaven; the atmosphere and essential fluid" that permeates the cosmos. So - the term "akasha" perfectly corresponds to the phenomenon at the quantum level **k=-10** – which is "Universe" (EDQM).

> Mulaprakrithi, root of matter (Sankhya aksiomatic principle) => k+10 elementary quantum
> Akasha, open space, emptiness (Sanskrit: atmosphere and essential fluid) => k-10 Subtle fluid

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[14] http://users.beotel.net/~gmarjanovic/LightEtAk_e.pdf
[15] http://users.beotel.net/~gmarjanovic/VedPrTePir.pdf
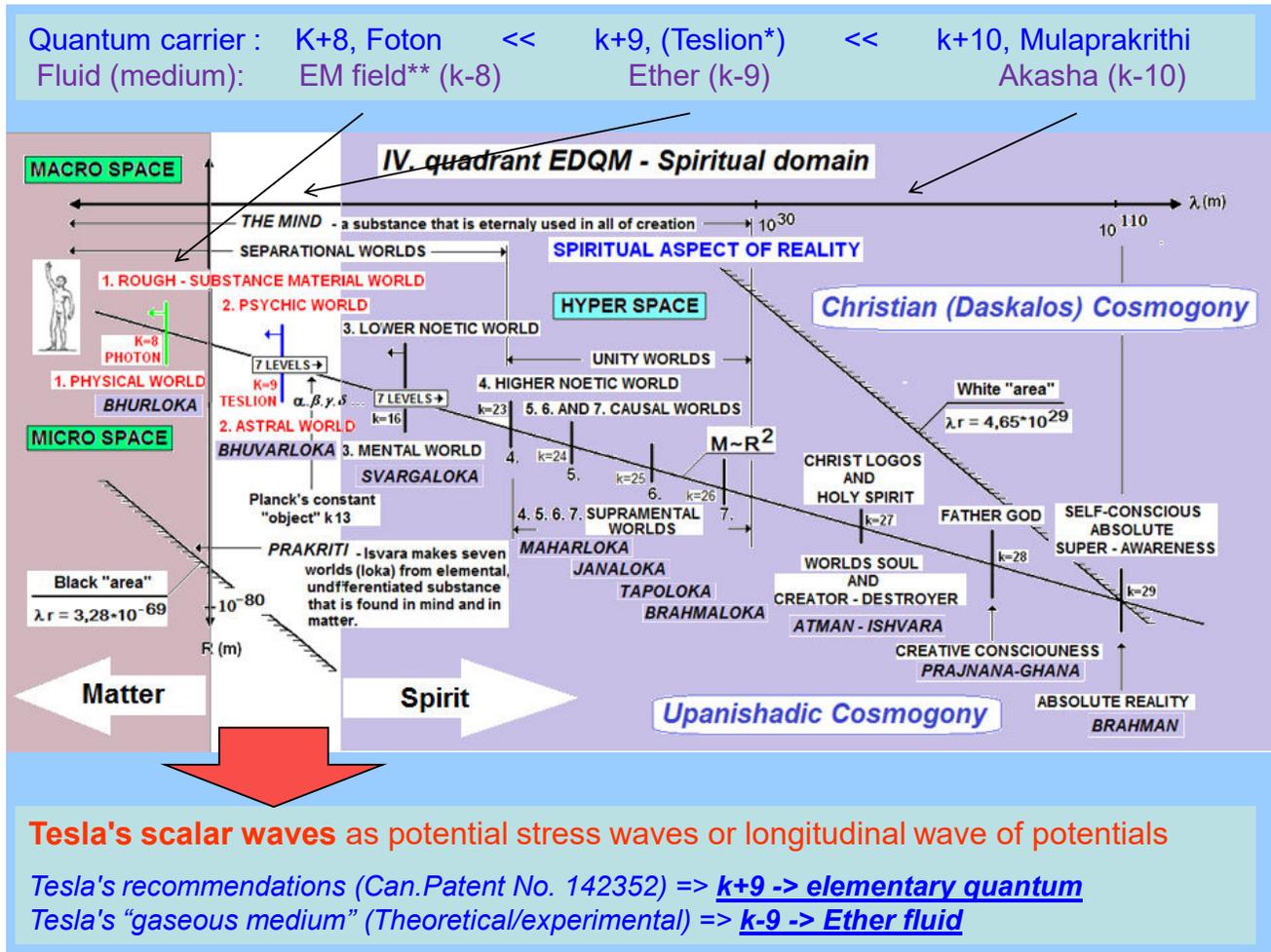[16] "Secret Of Sankhya: Acme Of Scientific Unification", G. Shrinivansan.

Based on the defined physical parameters and corresponding quantum levels, now we can form real:

Hierarchy of sub-photonic phenomena:

So, we can definitely say that the ether and akasha are not the same phenomenon. Akasha is an ether's proto element, a phenomenon that is more subtle than ether and represents an even more primary substance or an forerunner of ether !

Ether is a proto element of electromagnetic fields, a phenomenon that is more primary substance, more subtle form, forerunner of EM field - so we can say that EM field ("medium"[17]) is rougher form of ether.

Based on the same analogies we can say that "Mulaprakrithi" it is the forerunner of the "Stable object k+9", I named "Teslion"[18] that is a quantum carrier of Tesla waves - longitudinal disturbance in the ether.

Quantum carrier :   K+8, Foton   <<   k+9, (Teslion*)   <<   k+10, Mulaprakrithi
Fluid (medium):   EM field** (k-8)   Ether (k-9)   Akasha (k-10)

Tesla's scalar waves as potential stress waves or longitudinal wave of potentials

Tesla's recommendations (Can.Patent No. 142352) => k+9 -> elementary quantum
Tesla's "gaseous medium" (Theoretical/experimental) => k-9 -> Ether fluid

And finally, now we can see the true greatness of the Scientific Prometheus of the New Age, Nikola Tesla - who intuitively, a hundred years ago, rejected the inductive method as more suitable for achieving high voltages (vector quantity - work done) and favored the most fundamental phenomenon of this reality - potential, a scalar phenomenon - as is confirmed by both modern physics and ancient Vedic knowledge, and "ether as a special fluid with special properties".[19]

From the presented considerations, it is now quite clear why Tesla is important and why his ether technologies are of crucial importance for the further progress of civilization.

Ether, is a universal, dynamic medium that connects and bridges the material and spiritual reality. It is a building and an adaptable, modifiable and transformative substance that serves as the basic substrate for the transfer of vortexial-volumetric cyclic oscillations in the breathing regime, which form the basis of all manifested

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[17] The electromagnetic field meets all the criteria of both matter and substance definitions. Since the "medium" is the substance that carries the wave, it can be said that electromagnetic fields are the medium for EM waves, https://physics.stackexchange.com/questions/441466/

[18] In the terminology of other researchers, "K9" phenomenon I named "Teslion" corresponds to the term "Microlepton" (Dr. A.F. Okhatrin) or "Etheron" (Prof. I.L. Popescu), etc.

[19] "Tesla Sees Evidence Radio and Light Are Sound", New York Times, Sec. X, P.9, c.1, April 8,1934

forms of matter and energy by the modification of three-dimensional stationary waves - Spatial standing waves - and their alignment along the axes. Ether does not have a unique structure (density) but encompasses a wider spectrum of densities (and internal dynamics), ranging from the grossest forms that in an "evolutionary direction" transform into electromagnetic phenomenology to its most subtle forms that in an involutionary direction change into akasha, the elementary primordial substrate that forms a series of spiritual states and forms. Ether is therefore the "connective tissue of the universe", which enables "stress transmigration" (original term from Sankhya), i.e. the transfer of information and energy, the creation of matter and **instantaneous propagation on a cosmic scale**.

Here is what Sakhya says[16]:

There is no limiting velocity value for stress propagation in a medium.
The local 'perpetual oscillators' in space are triggered by quantum level tunneling signals to sustain a three dimensional holographic reality of a particle. Except for one difference, the electromagnetic signals hop externally across the local oscillators in space, at the velocity of light. Whereas the phase-changes in the three modes of stress tunnel internally across the perpetual oscillators in space as transmigratory phase-velocities that has no limit.

The components in space act like a solid when accelerated suddenly, like the rigid rod. The components can never be detected directly for they do not 'radiate'.

*Sankhya proves that relative to all the vibratory signals man is or can be aware of, the components of the Substratum form an extremely rigid plenum that rises by 86 orders to reach a **super-positioning density level** of 96 orders at the moment of a colliding interaction.*

The fact that a Galactic ensemble can remain together for millions of years demands through logical rigour, the concept of an internal physical connection, for axiomatic mathematics has demolished once and for all the principle of action at a distance or oscillatory activity without a medium. (G.M. Ether).

The Abhiman / Ahankar factor indicates that distant gravitational potential changes can be detected, only as a local phase change, at an approximate phase related velocity between the 4th. and 6th. power of light velocity, identified as MohaThaama to AndhaThaama states covering 10^{18} (c^2)modes of stress-phasechanges and not as a wave in the classical sense. ..."

And here's what science says:

Einstein Podolsky Rosen paradoks is a thought experiment that points to a conflict between the predictions of quantum mechanics and the concept of local realism. To explain it, it is necessary to consider the concepts of quantum entanglement and non-locality.

Quantum entanglement implies that the quantum states of two particles are connected regardless of the distance between them, thus violating the principle of locality, according to which an event at one point cannot be caused by a simultaneous action at another point.

*However, it has been experimentally confirmed that if the spin of one of the quantum correlated particles (EPR pair) changes, the spin of the other particle will change INSTANTLY regardless of the distance between them. **This implies that information about the outcome of the measurement is transmitted faster than the speed of light**, which contradicts the principles of the Theory of Relativity.*

*The solution to the EPR paradox implies accepting the concept of local realism, according to which Einstein's key proposition about the limitation of the speed of light is not valid at the quantum level, i.e. **accepting the nonlocal nature of quantum entanglement, which suggests that at the quantum level information can be transmitted faster than the speed of light.***

Vacuum density predicted by quantum mechanics (quantum field theory) is 10^{96} kg/m^3 that is 122 orders of magnitude bigger than that found by cosmologists (10^{-26} kg/m^3).

And Definitely - by unifying science and spirituality, ancient Vedic and contemporary scientific knowledge we get physical parameters and mutual relations of the subphotonic phenomena and in this way to describe all phenomena of absolute reality with the same physical parameters regardless of whether they are of a material or spiritual nature. The fact that the material and spiritual aspects of Reality are mirror images of each other, i.e.

space-time inverse-opposite phenomena - while having an IDENTICAL MATRIX of creation (EDQM), growth and development, evolution and involution - gives us the opportunity to better understand the structure of both the material and spiritual aspects of the SAME ABSOLUTE REALITY - THE UNIVERSAL ONE![20]
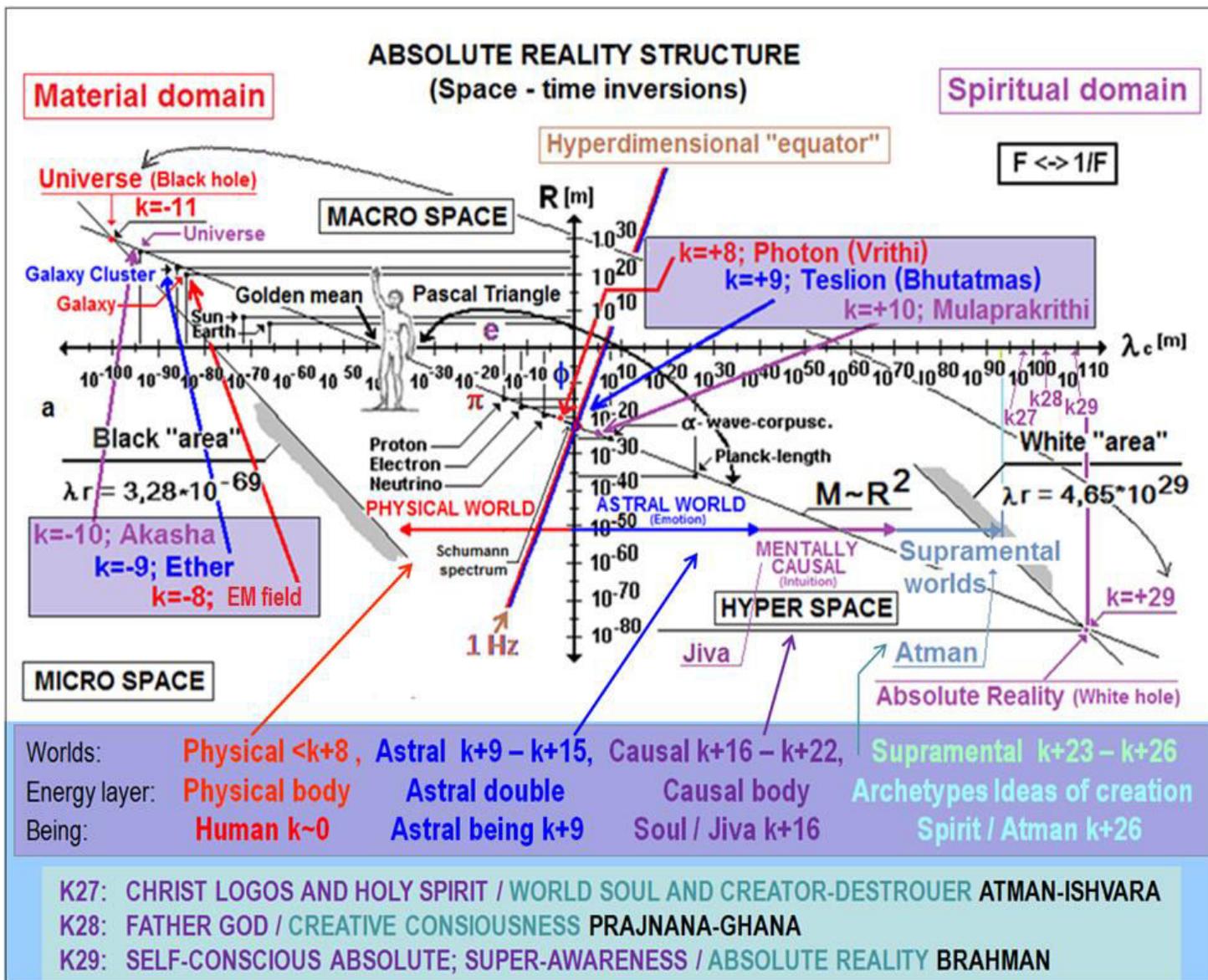
Conclusion

Ether, is a universal, dynamic medium that connects and bridges the material and spiritual reality. It is a building and an adaptable, modifiable and transformative substance that serves as the basic substrate for the transfer of vortexial-volumetric cyclic oscillations in the breathing regime, which form the basis of all manifested and unmanifested forms of matter and energy by the modification of three-dimensional stationary waves - Spatial standing waves - and their alignment along the axes. His elemental quantum is Teslion[21] - Stable object of order k+9 (EDQM[12]).

Ether is "connective tissue of the universe", which enables "stress transmigration" (Sankhya[16]), i.e. **the transfer of information and energy, the creation of matter and instantaneous propagation on a cosmic scale.**

Although the realization of all of Tesla's controversial ideas is not feasible from the perspective of official science - according to my theoretical and practical research - Tesla's ether technologies and **ideas about using sources of radiant energy and its wireless transmission are absolutely feasible.**

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[20] The Universal One is Walter Russell's first expression of his new Cosmogony explaining the Mind-centered electromagnetic universe.
[21] Teslion as Tesla's waves quant carrier, http://users.beotel.net/~gmarjanovic/gwmm.html

This claim is not without foundation, as cosmologists has estimated the vacuum energy of free space at a fantastic value of 10^{-9} J/m^3, but quantum electrodynamics suggests a much higher value of 10^{113} J/m^3 (known in science as cosmological constant problem or "vacuum catastrophe").

Quote[5] *: **The new scalar electromagnetics is a reality**, as evidenced by the Bohm-Aharonov work (1959)[6] and its direct experimental proof by Robert G. Chambers (1960)[7].*

*… **Scalar waves as longitudinal wave of potentials make full scientific sense!***

… Pure potential stress waves - scalar waves - without ever creating external electric and magnetic fields – are properly represented as longitudinal waves rather than transverse waves. Thus they are NonHertzian in nature and there is no square-law loss... End of quote.

latest findings of modern science are in complete agreement with the INTUITIVE insights of the ingenious Nikola Tesla who, even centuries ago, favored potential (EMF) rather than "voltage" (potential difference = work) and the principles of operation of his **"Magnifying Transmitter"** developed in the direction of the **utilization** of Scalar waves that are **longitudinal waves of potentials** which modern science considers to be the most fundamental level of Reality. **Striving for the maximum efficiency** of his apparatus, he achieved the **properties of that machine consistent with ancient Vedic knowledge, so a qualities that are woven into all God's creations.**

By **unifying science and spirituality, ancient Vedic and contemporary knowledge** we get physical parameters and mutual relations of the subphotonic phenomena, which allow us to design experimental setups in which the interaction with the "subtle-energy" (sub-photon) phenomenology of our Reality could become much more effective, which **would significantly improve our knowledge and enable us a further technological progress in all aspects of life –without any space-time or mechanical-energy limitations.**

In Belgrade, December 11, 2024

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