

"Tesla and the Ether: A Bridge Between Science and Spirituality"

In the text "Akasha – the source of time, space and matter"¹, we presented the elementary matrix of creation which, if formulated into the "Shortest formula of transition" (of the state of the "etheric primal substrate"), would look like this:

Akasha (silence) an infinitely still field, a still "etheric field", unmanifested potentiality, "the condition of possibility of appearance" - not an active medium, "the possibility of everything =>

=> *The appearance of the first difference (the first asymmetry, flicker, change without rhythm; the smallest "flicker" which is not a vibration in space but a difference in symmetry - or - in other words when nothing moves but "something "stands out", arises =>*

Vayu (noise) (difference without memory) first symmetry break, without rhythm =>

=> When a rhythm appears, a rhythm that remembers itself, when the same "blink" is repeated and recognized as the same, a "sequence" arises =>

Kala (tone) = *Rhythmic change* = Vāyu + self-reference) - there is order but no dynamics yet ("before" and "after" without flow = **Eternal Now**) =>

=> Repetition of rhythm, a leap from a local difference to a series of differences, a self-sustaining and replicating rhythm; rhythm transmission guided by the internal law of harmony (φ) occurs =>

Time (chord) (time is not movement but an "order of repetition". Essentially it is a "transformation" of simultaneous into sequential "processes".) =>

=> when rhythm becomes a cycle (a recurring, periodic process or series of events that return to the same point) - a chord progression = is a progression or harmonic sequence, that is, a series of chords that alternate in melody and harmony, creating a harmonic basis for a song, making it dynamic and emotionally colored. A harmonic sequence (or musical sequence) is the repetition of the same musical motif, or chord sequence, at different pitches, most often shifted by a second (second sequence) or a third, which creates a sense of progression and development), the cycle becomes a relationship – then dynamics arise =>

Prāna (musical /harmonic/ sequence) = Expansion (multiplication of instances), or, cycle =>

=> when phase differences appear between cycles that may be simultaneous but different, a phase relationship of a stable rhythm appears, a "here" and "there" with a relational difference appears =>

Space (melody, composition) (network of phase relations of stable rhythm /between prānic patterns/) =>

=> when the spiral movement of time loses its freedom and locks into stable vortices =>

Matter (aria - an independent, lyrical vocal composition for a solo voice) a stabilized spiral, a routine of established relationships (a tendency towards an activity acquired through repetition).

If the law of these changes, i.e. (proto)movements, is in the ratio φ => we get the rhythm of Creation.

According to Vedic insights², all phenomena of this reality arise from volumetric vibrations of the primordial substrate in the breathing regime, by forming three-dimensional stationary waves along the axes and their interrelationships.

The process of obtaining mass (ponderable matter) is an effect that occurs by superposing interactive vortices, as basic wave forms, and transforming them into gradually decreasing cyclic interactions that - in stable regimes - reach a synchronized and coherent state of equilibrium.

This is true for photons, gluons, W/Z bosons – but as the **Energy Density Quantization Model**³ shows – also for the complete spiritual aspect of Absolute Reality.

The closest modern scientific term that would correspond to the "Kala–Prana" transition from the aspect of modern physics is "spontaneous symmetry breaking". This is the "Higgs field", a phase transition or vacuum condensation.

The appearance of Prana in physics would correspond to the moment when a chosen state can be repeated in adjacent degrees of freedom. In other words, when the pattern becomes coherent and the phase becomes aligned. This is phase coherence. Examples are laser light, superconductivity and Bose–Einstein condensate.

¹ http://users.beotel.net/~gmarjanovic/Vedic_Space_Time.pdf

² Secret Of Sankhya: Acme Of Scientific Unification, <https://share.google/B6q9fc2Q15nZWDy4J>

³ <http://users.beotel.net/~gmarjanovic/>

In the terminology of modern science, ether is a "superfluid quantum vacuum" and according to the EDQ Model, whose elementary quantum is "Stable object $k = +9 \rightarrow$ "Teslion"⁴ whose "position (on the line of evolution of spirit into matter $M \sim R^2$) is "below" Photon ($k = +8$) but "above" *Mulaprakrithi* ($k = +10$) - the elementary quantum of Akash⁵. So everything agrees – both quantitatively and qualitatively and logically.

In the text "Akasha – the source of time, space and matter"¹ the four basic interactions: EM, Strong, Weak, Gravity – are mapped according to coherence: phase of the field, identity, continuity of process and rhythm of time – respectively.

Given that the position of the "Stable object $k=+9$ is "below" the photon ($k8$) - it would have to be an "elementary quantum" of some "deeper" interaction, which cannot be a new form of coherence in space, nor a new particle, nor a new type of charge because that would already be covered by existing interactions and theories. Therefore, it must be below the metric of time as is known to experimental physics.

In a formal sense, it would be an oscillation of potential, not a field, an oscillation of conditions and not states. So it would not be visible locally because it acts on the scale of the cosmological horizon, it has no gradients that particles would "feel" so it does not produce forces in the classical sense. Therefore, it does not bend trajectories, does not change frequencies but changes the "history of expansion". Similar to Akash which "exists everywhere", but does not "push" or "pull" anything. According to the axiomatic principles of Sankhya⁶ - its elementary quantum is *Mulaprakrithi* ($k = +10$) which means that the ether is the first "coarse" level at which possibility becomes dynamic.

The classical ether was "expelled" from science because it is "too material".

What has nevertheless proven to be an experimental reality and why modern physics had to accept the following facts is that the vacuum is not empty and that the laws of physics depend on the structure of the vacuum because the **vacuum has: energy, fluctuations, phase states and topology. In other words, "something" still exists before particles, before forces, even before space in the classical sense. But that something must not have motion (through classical space), must not have speed and must not have (ponderable) substance.**

This is the point of the possible and apparently necessary return of the "new-ancient" ether to science. As shown here - This "new" ether is actually a "structure of possibility" and not a medium.

What is returned under other names in modern theory is: quantum vacuum, Higgs field, inflationary field, quintessence, zero field and cosmic background state. The common feature of all these phenomena is that they do not transmit motion — they (only) determine what is possible in general. This is a crucial difference and agreement with the structure of Akash, which in the Vedas is never a substance, energy or field in space. It is the "condition" for the appearance of space, time and fields. In modern language, it is the "configuration space of laws" or the "topology of possibilities". That is why the (new) ether – or **Quintessence as the cosmological potential of ether** – cannot be detected directly but only indirectly.

When different traditions and modern models "agree" without loss of precision despite different terminology - this means that they differ only in the level of description of the same Reality.

The truth is one and the "new thread" that appears in our considerations is the Bohm Aharon experiment that indicates a direct connection of the "new ether", quintessence and Tesla's "potential waves" (EMF) = scalar waves, i.e. longitudinal, expansion-contraction disturbances of the ether⁷.

This is actually **the best possible point** to merge the "new ether", quintessence and Bohm's physics into one scientifically - consistent framework.

What does the Aharonov–Bohm experiment REALLY prove?

This effect was put forward as a theoretical proposition by Aharonov and Bohm back in 1959, and already in 1960, R.G. Chambers experimentally confirmed this effect, which has been confirmed many times since then in numerous institutes around the world. It irrefutably proved that the electromagnetic potential exists and that it affects charged particles even in a part of space where the magnetic and electric fields are zero. (?!)

So the AB effect clearly and unequivocally shows that the potential is a more fundamental phenomenon than the field and has a physical reality independent of the local field.

⁴ In the terminology of other researchers, the phenomenon "K9" that I called "Teslion" corresponds to the term "microlepton" (Dr. A.F. Ohatin) or "etheron" (Prof. I.L. Popescu), etc.

⁵ Akasha - forerunner of Ether - "Superfluid quantum vacuum", http://users.beotel.net/~gmarjanovic/SpecFluid_e.pdf

⁶ <http://users.beotel.net/~gmarjanovic/VedPrTePir.pdf>

⁷ New York Times, April 8, 1934: 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"

This is a radical ontological change, but it is often overlooked because (in the strictest sense) the potential describes the structure of allowed phase relations. In other words: it does not say what happens but how something can happen.

This is the same formulation that we used for the ("new") aether: "the structure of allowed correlations".
This is no coincidence!

Bohm understood the AB effect as empirical confirmation that there is a deeper order than local fields, where this order is non-local and affects the behavior of particles without force. He calls it: implicit (hidden) order. So this phenomenon is non-energetic, non-particle and non-mechanical!

If we don't call this "ether", then we are just avoiding the word - not the concept.

Therefore, the connection with the "new ether" is direct.

AB potential - does not carry energy and does not create force, but conditions the phase and thus conditions the outcome => which is identical to the properties of the ether that we defined as *a dynamic structure of the possibility of relationships*, below the field and above pure possibility (Akasha).

In other words: potential = local projection of the etheric structure. The field is already a "materialized" version. The potential is still "pre-physical in the classical sense", but physically effective.

Here - "quite naturally" - **quintessence** also fits in.

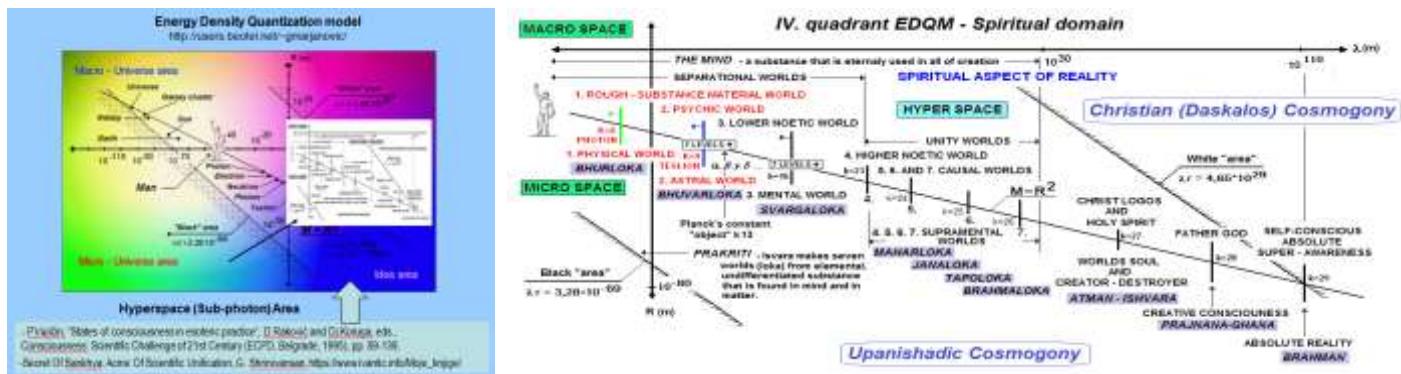
Quintessence (in cosmology) is not a particle; it is not a classical field; it is not localized; but it affects the global dynamics of space which is a "signature" of potential and not of field.. So:

- Akash → pure possibility
- Ether → structured possibility
- Potential → local manifestation of that structure
- Field → already "rough" realization

From where it follows that Quintessence = cosmological potential of ether.

Bearing in mind the considerations carried out in the following section, we will see how they fit into the assumptions of the QED Model.

The ancient insights presented in Mr. Petra Vujicin's text describing the structure of the "spiritual aspect" of Absolute Reality⁸ and the Secrets of Sankhya⁹ have enabled us to describe this - scientifically inaccessible - segment of reality using the same parameters with which modern science describes the macro and micro material segments. Details are presented in the text "The Relationship of Light, Ether and Akash"¹⁰ and here we will only briefly list the key moments.



Based on Tesla's recommendations set out in his Canadian patent No. 142352 (Art of Transmitting Electrical Energy Through the Natural Mediums), QEDM offers us the phenomenon of a Stable object $k = +9$ called the "Teslion"⁴ whose mass is 10^{-47} to 10^{-49} kg, radius $\sim 5 \cdot 10^{-25}$ m, and energy density of the order of 10^{-27} g/cm³. Its waveform: "Tesla waves" - according to the DeBroglie relation - have a Compton wavelength $\lambda_c = 2 \cdot 10^{-7}$ [m], i.e. a frequency of 14.8 Hz.

⁸ 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.

⁹ Secret Of Sankhya: Acme Of Scientific Unification, G. Shrinivansan, https://www.ivantic.info/Moje_knjige/

¹⁰ "The Relationship of Light, Ether and Akasha", http://users.beotel.net/~gmarjanovic/LightEtAk_e.pdf

Through mathematical analyses of the density of ether¹¹, carried out 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 ether:**

$$\rho_{\text{eth,Tesla,thor}} = 1,9 \cdot 10^{-27} \text{ g/cm}^3.$$

Tesla verified this value experimentally and by measuring it obtained the density of the etheric gaseous medium:

$$\rho_{\text{exp,Tesla}} = 2 \cdot 10^{-26} \text{ g/cm}^3$$

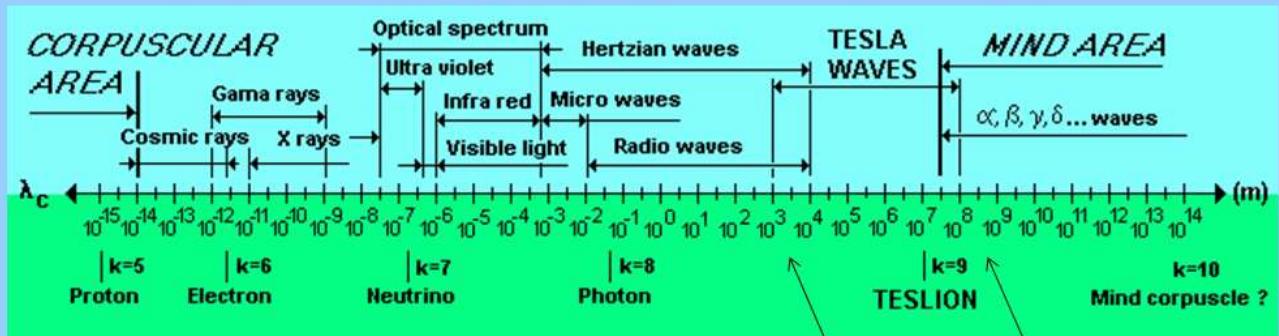
- which is very close to his theoretical prediction and according to QEDM corresponds to the quantum level $k = -9$, which is the inverse value of the stable object $k = +9$.

More precisely, according to QEDM, Tesla's "gaseous medium", the phenomenon $k = -9$, whose energy density corresponds to the density of "galactic clusters" is an "ETHER FLUID" composed of ELEMENTARY QUANTUMS OF ETHER, $k = +9$ - which is the "quantum carrier" of Tesla's waves - longitudinal, compressive-expansive disturbances of the ether fluid ($k = -9$).

So in accordance with Tesla's recommendations (Can.Patent No. 142352) the first more subtle phenomenon "below" the photon ($k = +8$) as the quantum carrier of EM interaction is: the Teslion⁴ ($k = +9$), elementary quantum of Tesla's "gaseous medium", the "Ether fluid" ($k = -9$) whose parameters he determined both theoretically and experimentally.

Tesla waves

(http://users.beotel.net/~gmarjanovic/Tesla_waves.pdf)



Canadian Patent 142,352, "Improvement in the Art of Transmitting Electrical Energy Through the Natural Mediums":

"... 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. To give an idea, I would say that the frequency should be smaller than twenty thousand per second, though shorter waves might be practicable. The lowest frequency would appear to be six per second, in which case there will be but one node, at or near the ground-plate, and paradoxical as it may seem, the EFFECT WILL INCREASE WITH THE DISTANCE and will be greatest in a region ..."

Frequency of **20 000 Hz** corresponds to a wavelength of **$1.5 \cdot 10^4 \text{ m}$** ,
lower frequency limit of **6 Hz** can be expressed as **$5 \cdot 10^7 \text{ m}$**

It is obvious that **Tesla's wavelength range recommendation is almost identical to the EDQ model predictions for stable object order $k=9$** , we named **Tesla waves!**

"Prostor, vreme, materija", © 98/1993; "Teslini Talasi i Teslion kao njihov kvant nosilac", © 26/2001

In an analogous way, it is possible to determine (virtual) parameter values for phenomena of an even higher level of quantization (subtlety), which is – according to Upanishadic cosmogony and the interpretations of H.P. Blavatsky¹² – the Akasha.

¹¹ New York Herald Tribune, September 22, 1929, <http://www.tfcbooks.com/tesla/1929-09-22.htm>

¹² According to the doctrine of H. P. Blavatsky, ether is the grossest form of akasha – or rather, akasha is a more subtle form of ether, https://theosophy.wiki/en/Helena_Petrovna_Blavatsky

According to the teachings of Sankhya, the most fundamental phenomenon of our reality is "Mulaprakriti" – the root of nature or the root of substance. It is the supracosmic root (foundation, primal cause) substance, the ethereal primal substrate, the main cause of material nature, the original root of matter that creates the initial homogeneous substrate from which the cosmos was created. According to Vedic axiomatic principles⁶, the mass of Mulaprakriti⁹ is $1.3 \cdot 10^{-51}$ kg, which (according to the postulates of QEDM) corresponds to a stable object: $k = (\log 1.34 \cdot 10^{-51})/(-5.2) = +9.78 \Rightarrow k = +10$

Akasha in Sanskrit comes from the root "kas" which means "to be" with the generic meaning of "open space, emptiness". In classical Sanskrit, this word can express the concept of "sky; 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 the "Universe" (QEDM).

Analogous to the previous example of the "coarser form of Akasha – ether, here we can also conclude that "Mulaprakriti", the root of matter, is an elementary quantum ($k = +10$) of the "Subtle fluid" Akasha ($k = -10$).

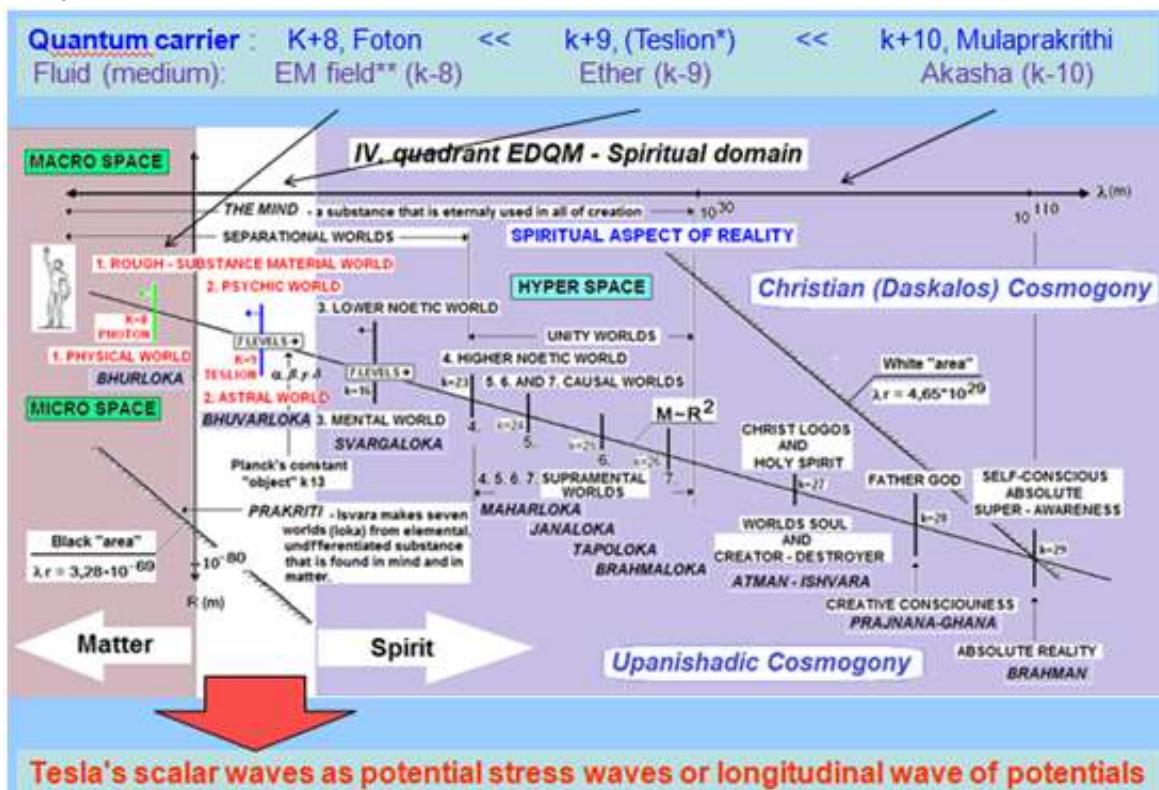
And – finally – we can present the "Hierarchy of subphoton phenomena. Based on the considerations we have made, we can definitely say that ether and akasha are not the same phenomenon, although they are often considered synonyms.

Akasha is the protoelement of ether, a phenomenon that is subtler than ether and represents an even more primary substance or precursor of ether!

Ether is the protoelement of electromagnetic fields, a phenomenon that is a more primary substance, a more subtle form, a precursor to the EM field - so we can say that the EM field ("medium"¹³) is a coarser form of the ether.

Based on the same analogies, we can say that "Mulaprakriti" is the precursor to the "Teslion"⁴, "Stable object $k = +9$ " acc to QEDM, which is the quantum carrier of Tesla's waves, his "longitudinal disturbances in the ether".

Graphically represented this hierarchy of "real-latent" fluids/substrates: EM Field - Ether - Akash and their elementary quanta: Photon - Teslion - Mulaprakriti would look like this:



So - Tesla's longitudinal - "potential waves" really make full scientific sense!

What's more – Tesla's etheric technologies are a "bridge" between "matter" and "spirit", "manifested" and "unmanifested" phenomena of Absolute Reality - and in fact - a link between science and spirituality.

¹³ Elektromagnetno polje ispunjava sve kriterijume i definicije materije i supstance. Pošto je „medijum“ supstanca koja nosi talas, može se reći da su elektromagnetna polja medijum za EM talase, <https://physics.stackexchange.com/questions/441466/>

Conclusion:

By simplifying the Original Maxwell equations and discarding the scalar term, physics essentially favored fields while leaving potential "on the sidelines" - with the ontological implications completely ignored.

Namely - J.C. Maxwell published his original theory¹⁴ in the form of 20 quaternion¹⁵ equations that described the dynamics of electromagnetic fields in detail since they contained a scalar term in addition to the vector term. Considering this mathematical form to be unnecessarily complicated, after Maxwell's death, Oliver Heaviside, Josiah Willard Gibbs and Heinrich Hertz, "simplified" these twenty quaternion equations into a set of only four vector equations that describe the dynamics of the EM field while the scalar component of the quaternions was discarded.

This group of four vector equations was originally known as the Hertz-Heaviside equations, but they are now universally known as Maxwell's equations - but this is not so. The Hertz-Heaviside equations, which are taught in textbooks and universities as Maxwell's equations, are not identical to those published by Maxwell in 1865 in quaternion form.

However - the Aharonov-Bohm experiment irrefutably proved that there REALLY IS a more fundamental phenomenon than fields - and that is the SCALAR POTENTIAL of the electromagnetic field.

The AB experiment is a simple experiment with enormous depth because it confirms the intuitiveness of Nikola Tesla, who - aware of the limitations of transverse-vector waves of the EM field - decided on a more subtle level of communication with Absolute Reality -> via longitudinal waves of potentials.

Namely, at the very beginning of his research in Colorado Springs, Nikola Tesla intuitively changed the concept of his (classical) high-voltage, high-frequency transformer with an air core¹⁶ patented in 1891 and instead of transferring energy and increasing voltage via inductive coupling, he made a "Copernican revolution", changed the concept, introduced a third - additional coil ("Extra coil") - a slow-wave $\lambda/4$ helicoidal resonator and developed his famous "Magnifying Transmitter". The evidence in support of our claim that the "New Tesla" - the Scientific Prometheus of the New Age was born in Colorado Springs is an entry from his diary¹⁷ (quote):

"There are two ways to achieve voltage through resonant overvoltage: either the secondary is placed in a loose coupling ($k < 0.2$) with the primary to allow free oscillations of the secondary (G.M: classic version) 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" - or inductance that is not inductively coupled to the primary. The latter method is more appropriate when we want to achieve very high EMF."

Favoring electromotive force (EMF = ElectroMotiveForce) at the very beginning of his research and CHOOSING PURE POTENTIAL INSTEAD OF VOLTAGE was a very important decision by Nikola Tesla, which, I am sure, was crucial for his success and for achieving the efficiency of the machine that Tesla was satisfied with (final measurements on December 14, 1899).

Potential is a scalar field, a term that, according to the above considerations, perfectly corresponds to the term "ether", while voltage (Voltage) is a vector field and actually the work required to move an electric charge...). So on July 7, 1899, Nikola Tesla founded his "longitudinal - "potential waves" !

So, Tesla is absolutely right in his ontological intuition because his "longitudinal waves" are not classical waves, they are not traveling energy - but modulations of potential. And potential does not travel - it configures itself. That is a huge and crucial difference.

The Aharonov-Bohm experiment PROVES that physical reality is not exhausted by fields and forces, but includes a deeper level of the space-time continuum - which perfectly coincides with the idea of the ether as a dynamic possibility of the manifestation of vacuum and quintessence as its cosmological expression.

All my previous knowledge, theoretical and practical research have strengthened my beliefs that traditional knowledge, holistic understandings, Tesla's scalar waves and his ether technologies are the basis of all future technologies and further progress of science.

In Belgrade, 21.01.2026.

Goran Marjanovic, BSc

¹⁴ A Dynamical Theory of the Electromagnetic Field" is a paper by James Clerk Maxwell on electromagnetism, published in 1865.

¹⁵ A quaternion represents a sum of scalars and vectors and is an ideal mathematical form for describing vortex phenomena

¹⁶ "System of Electric Lighting", U.S. Patent 454,622, June 23, 1891

¹⁷ Colorado Springs Notes, 1899–1900, Nolit Beograd, 1978, str. 76, 07. July 1899