Longitudinal wave experiment after Nikola Tesla

of

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Introduction

Scalar waves, which remain usually unconsidered or are neglected, are particularly interesting as consequence of their special characteristics for a information-technical and energy-technical use. The mathematical and physical derivations supported by practical experiments. It is demonstrated:

1. die wireless transmission of electricity,
2. die reaction of the receiver to the transmitter,
3. Freie energy with a Over Unity Effect of approximately 10,
4. Uebertragung of scalar waves with 1,5 facher speed of light,
5. die inefficacy of a Faraday cage for scalar waves.

Teslastrahlung

It is not consisting usual science, which is shown here, of five experiments, which are incompatible with text book physics. Following the lecture I demonstrate you the transmission of longitudinal electrical waves.

It is a historical experiment, because already before 100 years the famous experimental physicist Nikola Tesla measured the same wave characteristics, as I. From it a patent comes for the wireless transmission of energy (1900)[1]. Since also it had to state that with the receiver more energy arrives very much, than the transmitter takes up, it speaks of a "Magnifying transmitter".

By the reaction to the transmitter Tesla recognizes whether he found the earth resonance and this is appropriate for its measurement after with 12 cycles per second. Since the Schumann resonance of a wave, which runs with speed of light, is but with 7,8 cycles per second, Tesla comes to the conclusion that its wave 1,5-fache speed of light has[2].

As a founder of the diathermy Tesla already referred the biological effectiveness and to the possible employment in the medicine. The today's diathermy does not have to do with the Teslastrahlung anything; it uses the wrong wave and has as consequence hardly still another medical meaning.

The discovery of the Teslastrahlung is denied and is not no more mentioned in the text books. But there are two reasons:

1. No university ever copied a "Magnifying transmitter". The technology was simply too complex and too expensive. Thus the results were not reproduced, how it is essential for an acknowledgment. I solved this problem by the employment of modern electronics, by replacing the spark gap generator by a function table and the enterprise with high voltage by 2-4 V of low-voltage. So that the experiment is as often as possible reproduced, I sell it as set. A suit-case and it fits in the last four weeks was 50 times sold into. Some universities could already confirm the effects. The measured efficiencies lie between 500 and 1000 per cent.

2. The other reason, why this important discovery into oblivion could turn out, is to be seen in the absence of a suitable field description. The Maxwell' equations describe only transversal waves anyhow, with which the pointers of field swing perpendicularly to the direction of propagation.

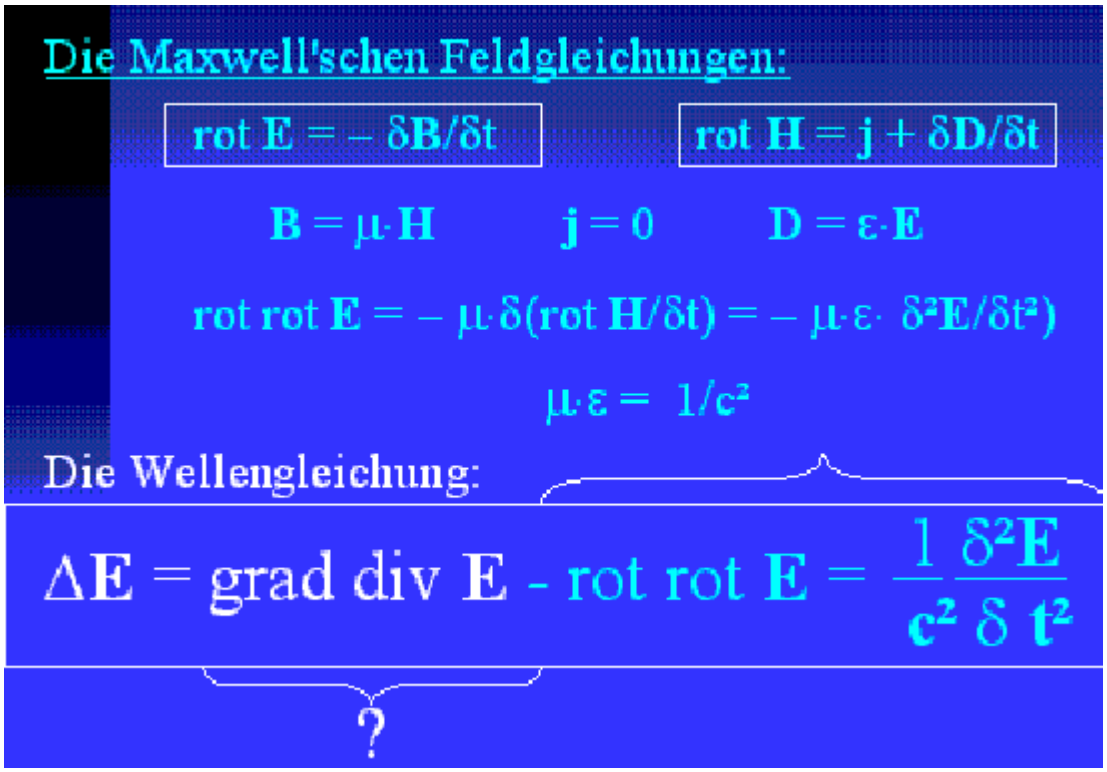


Fig. 1:The vectorial portion of the wave equation (deduced from the Maxwell equations)

Wave equation

Using the Laplace operator the well-known wave equation can be divided according to the rules of the vector analysis into two portions: into the vectorial portion (red red **E**), which results from the Maxwell equations and in scalar portion (degree div **E**), after the divergence of a pointer of field is a scalar. We must ask ourselves, has which characteristics these wave components, which justifies a scalar wave?

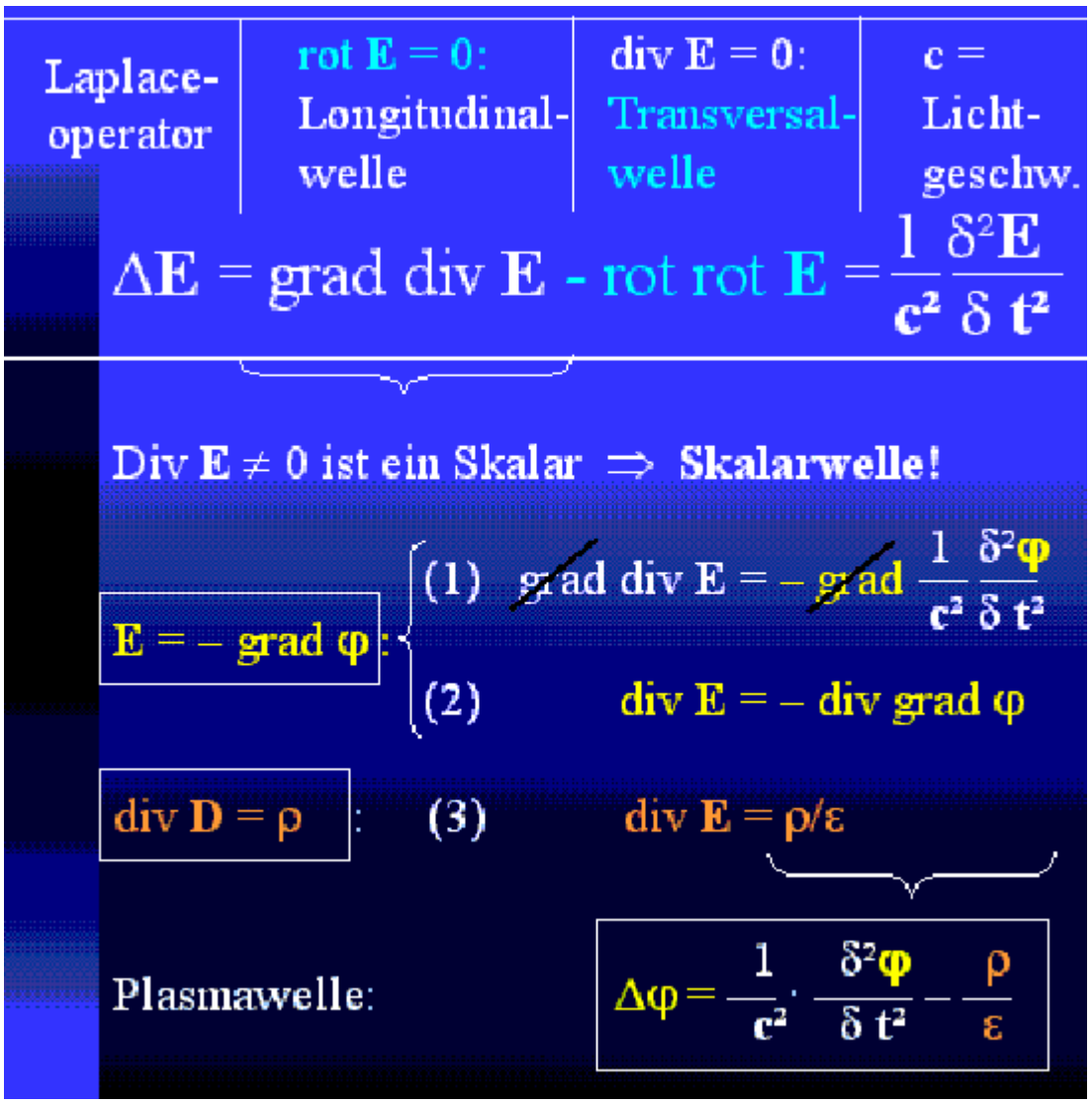


Fig. 2: Describes scalar portions of the wave equation longitudinal electrical waves (derivation of plasma waves).

If we derive the field vector from a scalar potential , then this beginning leads directly to an inhomogenous wave equation, which is called plasma wave. Solutions are well-known, like the electron plasma waves, and those are longitudinal oscillations of the electron density (Langmuir waves).

Eddy model

The Tesla experiment and my historical reproduction show however still more. Such longitudinal waves exist obviously also without plasma in air and even in the vacuum. Arises the question, which describes the divergence **E** in this case? How is the impulse passed on, so that a

longitudinal standing wave can be formed? How is a shock wave to come, if no particles are there, which can push?

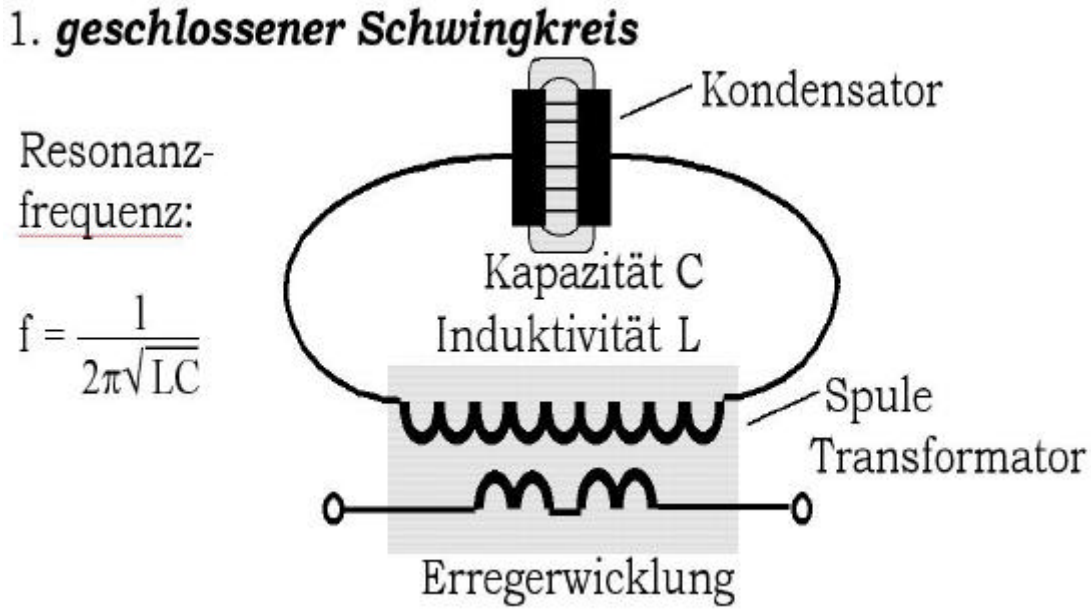
I solved this question, by extending the Maxwell' field theory by eddies of the electrical field. This sucked. Potential eddies are capable of a structure formation, and they spread due to their particle character as longitudinal shock wave in the area. The model conception is based on the ring eddy model of Hermann of Helmholtz, lord Kelvin made popular. In my books[3] the mathematical and physical derivation is described.

Regardless of the field-theoretical problem each physicist will look first for a conventional explanation. It will try two beginnings:

Resonant circuit interpretation

Tesla had its experiment among other things. Lord Kelvin demonstrated and these already spoke before 100 years of an eddy transmission. In the opinion of Kelvin it concerns however not at all around a wave, but radiation (radiation). It had clearly recognized that each broadcast-technical interpretation must fail, since the process of the lines of flux is alone already a completely different one.

It offers itself to proceed from a resonant circuit consisting of a condenser and an inductance.



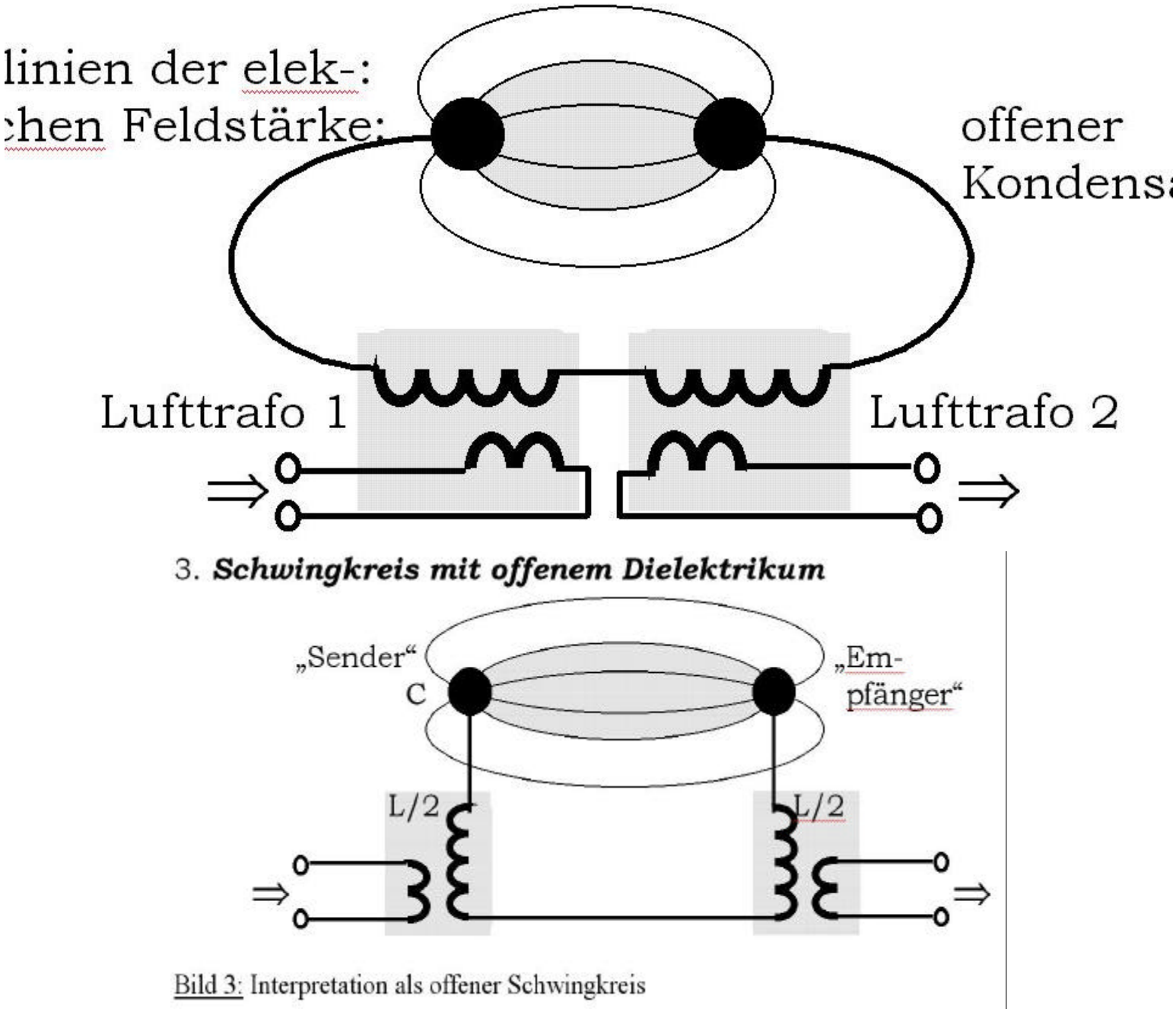


Bild 3: Interpretation als offener Schwingkreis

If the two electrodes of the condenser are pulled apart, then an electrical field stretches between both. The lines of flux begin at the ball, the transmitter, and they bundle themselves with the receiver again. Thus a high efficiency and a very firm coupling are to be expected. This way some the effects, but evenly not all can certainly be explained.

Inductance is divided in two air cored transformers, which are completely identically wound. If a fed sinusoidal tension is transformed up in the transmitter, then it is transformed again down with

the receiver. The output voltage should be smaller or maximum equal to the input voltage - it is however substantially larger!

An alternate circuit diagram can be drawn and calculated, but in no case the measurable result comes out that light emitting diodes shine with the receiver brightly (U>2Volt), while the appropriate light emitting diodes go out at the same time with the transmitter (U<2Volt)! As a check the two coils are exchanged.

The measured efficiency is despite permutation about 1000 per cent. If the principle of conservation of energy is not to be hurt, then only one interpretation remains: The open condenser takes off from its environment field energy. Without consideration of this circumstance the error deviation of each conventional model computation lies with over 90 per cent. There one should rather do without the computation.

Swinging fields, there the ball electrodes will concern with a frequency of approx.. 7 MHz to be commutated. They are operated in resonance. The resonance condition reads: identical frequency and opposite phase position. Obviously the transmitter modulates the field in its environment, while the receiver everything in-collects, which meets the resonance condition.

Also in the open question about the signal transmission speed the resonant circuit interpretation fails. But still another another explanation is appropriate for the HF technician on the tongue:

Near field interpretation

In the near field of an antenna effects are measured, which are considered on the one hand as unexplainable, since they extract themselves from the usual field theory, which come on the other hand scalar wave effects very close shown by me. A practical application knows everyone: e.g. at the entrance of department stores, where the customer between scalar wave detectors must pass through.

During my experiment the transmitter is in mysterioesen close range. Also Tesla always worked at close range. Who asks however for the causes, which will state that the near field effect is nothing different one, as that scalar wave component of the wave equation. My explanation reads as follows:

The charge carriers high frequency swinging in a flagpole antenna train longitudinal standing waves. As consequence also the fields are in close range of a Hertz' dipole longitudinal scalar wave fields. The picture shows clearly, how eddies form, and how they become detached from the dipole.

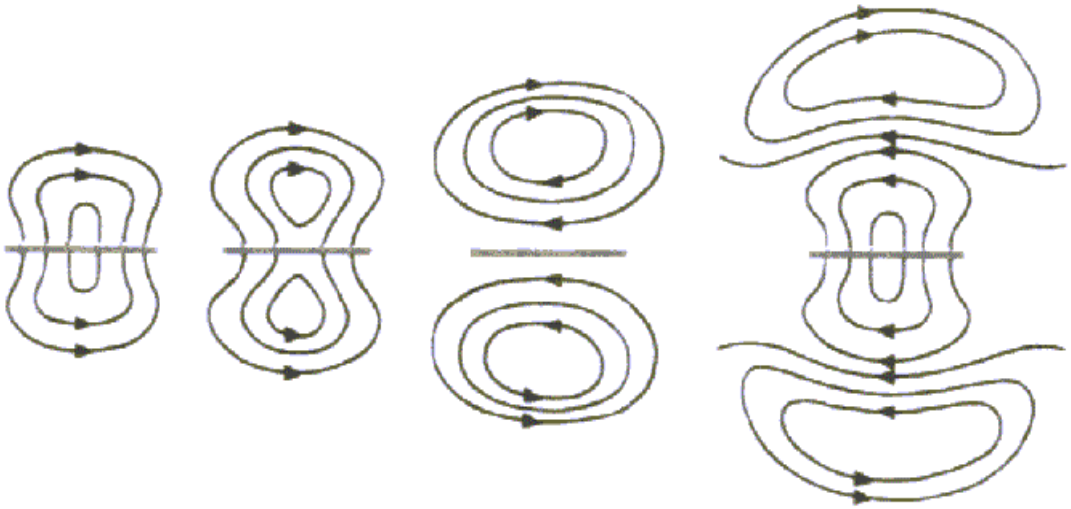


Fig. 4: The separation of the electrical lines of flux of the dipole.

As with the charge carriers in the flagpole antenna of the phase angles between river and tension 90 degrees, arises in the near field also electrical and magnetic field amounts to by 90 degrees out of phase. In the far field however the phase angle is zero. In my interpretation the eddies dissolve, them in ruins, and transversal broadcast waves forms.

Eddy interpretation

The eddy decay however depends on the propagation speed. With speed of light computed the eddies already disintegrated within the half wavelength. The faster the speed is the more stable, will it, in order to remain stable above the 1,6-fachen speed. These very fast eddies contract in the dimensions. They can now tunnels. Therefore trans-light velocity arises with the tunnel effect. Therefore no Faraday cage is able to shield fast eddies.

Since these field eddies with a particle character of the high frequency oscillation following constantly change their polarity from pluses to minus and back, they have no charge in the temporal means also. As consequence they penetrate firm of materials almost unhindered. Particles with this characteristic are called in physics neutrinos. The field energy, which is in-collected during my experiment, therefore originates from the neutrino radiation surrounding us. Since the source of this radiation is, it now artificially or natural origin, from my receiver is far distant, each attempt of a near field interpretation goes wrongly. Finally the transmitter set up within the near field range supplies only less than 10% of the received achievement. The 90% however, which here it concerns, cannot originate from the near field range!

Experiment

At the function table I stop frequency and amplitude of the sine signal, with which the transmitter is operated. At the frequency automatic controller I turn until the light emitting diodes shine with the receiver brightly, while those go out with the transmitter. Now a transfer of energy takes place.

If the amplitude is so far reduced, until it is guaranteed that no surplus energy is radiated, then takes place besides by energy reinforcement an increase at energy. If I detach the receiver, by pulling the grounding out, then lighting up the LED's signals the mentioned reaction to the transmitter. The transmitter feels thus, if its signal will receive. The periodic resonance of the Teslaspulen is according to frequency counter about 7 MHz. Now the frequency is driven down and sees there, with approx.. the receiver shines for 4.8 MHz again, however less brightly, easily shieldable and without recognizable reaction to the transmitter. Now we have to do it clearly with the transmission of the Hertz? portion and run with speed of light. Since the wavelength was not changed, the relationship of the frequencies determines that of the propagation speeds. The scalar wave therefore runs with (7/4.7 =) 1.5 facher speed of light! If I put the transmitter into the aluminum suit-case and if the Tuere closes, then nothing might arrive with the receiver. Specialized laboratories for electromagnetic compatibility can prove nothing in this case indeed and that, although the receiver small lamps shine nevertheless! By tricks of the receiving coil it can be tested that an electrical and no magnetic coupling are present, although the Faraday cage should shield electrical fields. The scalar wave obviously overcomes the cage with trans-light velocity, by it doing ELT!

Literatur

1Nikola Tesla: Apparatus for transmission of electrical energy. US-Patent No. 645,576 vom 20.3.1900.

2Nikola Tesla: Art of transmitting electrical energy through the natural mediums, US-Patent No. 787,412 vom 18.4.1905.

3Konstantin Meyl: Elektromagnetische Umweltverträglichkeit, Teil 1: Umdruck zur Vorlesung, Villingen-Schwenningen 1996, 3.Aufl. 1998

Teil 2: Energietechnisches Seminar 1998, 3. Auflage 1999,

Teil 3: Informationstechnisches Seminar 2002, auszugsweise enthalten in:

K. Meyl: Skalarwellentechnik, Dokumentation für das Demonstrations-Set,

alle 4 Bücher sind erschienen im INDEL-Verlag, Villingen-Schwenningen

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